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Final Reports of the Officers, Trustees, Councils, and Committees of the American Academy of Pediatric Dentistry

For the Academy Year
July 1, 2021 – June 30, 2022

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Final Reports of the Officers, Trustees, Boards, Councils, and Committees of the American Academy of Pediatric Dentistry

July 1, 2021 – June 30, 2022

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President 2021–2022

K. Jean Beauchamp
AAPD President

As the President of the AAPD, one of my major roles is to represent the AAPD at meetings of partner organizations and at our districts and states. Due to COVID-19 travel issues, many meetings were cancelled or were virtual.

Meetings attended in person:
AAPD Board of Trustee Meeting - Phoenix, AZ - May 15, 2021
AAPD Foundation Meeting - Phoenix, AZ - May 16, 2021
AAPD Board Orientation and Media Training - Chicago, IL – July 15-17, 2021
Dental Specialties Group Meeting - Chicago, IL – August 5, 2021
AAPD Executive Committee Retreat - Colorado Springs, CO – August 20-22, 2021
Annual Session and Scientific Program Meeting - San Diego, CA – August 23-26, 2021
Ad-Interim Board Meeting- Louisville, KY – 9/23-25, 2021
Maryland Society of Pediatric Dentistry - Baltimore, MD – 10/21-23, 2021
Greater New York Dental Meeting - New York, NY – 11/28-12/1, 2021
American Board of Pediatric Dentistry - Napa Valley, CA – 12/2-4, 2021
Leadership Institute- Kellogg- Chicago, IL – 12/9-12, 2021
Winter Board Meeting- Scottsdale, AZ – 1/12-16, 2022
Southwest Pediatric Dentistry Meeting - Vail, CO – 1/30-2/2, 2022
Executive Committee Meeting - Washington, DC – 3/12/2022
AAPD Advocacy Conference - Washington, DC – 3/12-15, 2022
Advanced Leadership Institute - Philadelphia, PA – 3/15-20, 2022
American Dental Education Association Dinner - Philadelphia, PA 3/20/2022
Western Society of Pediatric Dentistry/ CAPD Meeting - Scottsdale, AZ – 3/30-4/3, 2022
American Board of Pediatric Dentistry- Monterey, CA – 4/20-23, 2022
Annual Session - San Diego, CA – 5/22-30, 2022

Meetings attended virtually:
International Association of Paediatric Dentistry - 6/9-10, 2021
International Association of Dental Research - 7/21-24, 2022
Council on Dental Accreditation - 8/6/2021
Canadian Academy of Pediatric Dentistry - 9/20-23, 2021
AAPD Foundation - 11/12/2021
Media Tour - 1/27/2022
Western Society of Pediatric Dentistry - 1/24/2022
CODA/ DSG - 2/10-11, 2022
North Central Society of Pediatric Dentistry - 2/22/2022
ADEA - 3/9/2022
IADR/AADOCR - 3/17/2022

Other Zoom calls and meetings included:

President's Report, 2021–2022

Public/Private Dental
PPA quarterly
Councils
ADA Delegates
Governmental Affairs
Federal Services
Executive Committee
Program Directors

There were several Zoom calls for updates with headquarters and individual members.

Respectfully submitted,

Jeannie Beauchamp, D.D.S.
President

President-Elect 2021–2022

Amr M. Moursi
AAPD President-Elect

Meetings attended

- IADR Pediatric Dentistry Section, Virtual, June 25, 2021
- AAPD Foundation Board Meeting, Nashville, July 29-Aug 1, 2021
- Dental Specialty Group Meeting, Chicago, Aug. 5, 2021
- CODA meeting, Virtual, Aug. 6, 2021
- Executive Committee Retreat, Aug. 19-22, 2021
- Ad-Interim Executive Committee Meeting, Louisville, Sept. 24, 2021
- Ad-Interim Board of Trustees Meeting, Louisville, Sept. 25, 2021
- AAPD Western District of Pediatric Dentistry, Board Meeting, Seattle, Oct. 1, 2021
- AAPD Washington Academy of Pediatric Dentistry, Annual Meeting, Seattle, Oct. 2, 2021
- ABPD Oral Examinations, Raleigh, Oct. 3-4, 2021
- American Academy of Pediatrics Meeting, Virtual, Oct. 8-10, 2021
- AAPD Maryland Academy of Pediatric Dentistry Meeting, Baltimore, Oct. 21-22, 2021
- Scientific Program Committee Meeting, Annual Session Site Visit, Orlando, Nov. 16-18, 2021
- Winter Planning Meeting, Scottsdale, Jan. 12-16, 2022
- AAPD Advocacy Conference, Washington, DC, Mar. 12-15, 2022
- ADEA Pediatric Dentistry Section Meeting, Philadelphia, Mar. 19-22, 2022
- Curriculum for Special Care Dentistry Symp., Penn, Philadelphia, Mar. 23, 2022
- CA Soc. Of Ped. Dent. and Western Soc. Of Ped. Dent Board meetings, Mar. 30-April 3, 2022
- AAPD Annual Session, San Diego, May 22-30, 2022
- Executive Committee monthly meetings
- Multiple Pre- and Post-Doctoral Program Directors' Meetings

Councils, Committees, other roles:

Awards Committee, Chair (see report)
Strategic Planning Committee, Chair (see report)
Liaison to the American Academy of Pediatric Dentistry
Comprehensive Review, Course Director

Respectfully Submitted,

Amr Moursi, DDS, PhD

Vice President 2021–2022

Scott W. Cashion
AAPD Vice President

As Secretary/Treasurer this year I have met regularly with Dr. Rutkauskas and Mr. Jurczak to discuss the current 2020-21 budget and audit. In addition, we have met to discuss the 2021-22 Budget.

The Budgeting process has been challenging during the pandemic, due to the many unknowns but the AAPD Leadership and Staff have really worked hard this year and the AAPD is doing well financially.

The Budget and Finance committee met via Zoom on September 26, 2020 and March 29, 2021. The 2021-22 Budget was approved at the March 29th meeting and will be sent to the AAPD BOT for approval on May 15 and then to membership at the 2021 Generally Assembly that will be Virtual.

Meetings attended

- AAPD Board of Trustee Meeting - Phoenix, AZ - May 15, 2021
- AAPD Executive Committee Retreat - Colorado Springs, CO – August 20-22, 2021
- Annual Session and Scientific Program Meeting - San Diego, CA – August 23-26, 2021
- Ad-Interim Board Meeting- Louisville, KY – 9/23-25, 2021
- Winter Board Meeting- Scottsdale, AZ – 1/12-16, 2022
- Executive Committee Meeting - Washington, DC – 3/12/2022
- AAPD Advocacy Conference - Washington, DC – 3/12-15, 2022
- Annual Session - San Diego, CA – 5/22-30, 2022

Committees

- Constitution and Bylaws Committee, Chair
- Credentials and Ethics Committee, Chair
- Council on Annual Session, Chair
- Council on Annual Session, Scientific Program Committee, Board Liaison

Respectfully submitted,

Scott W. Cashion, D.D.S.

Secretary-Treasurer 2021–2022

Scott D. Smith
AAPD Secretary Treasurer

As Secretary/Treasurer this year I have met regularly with Dr. Rutkauskas and the AAPD Business Services office to discuss the current 2021-22 budget and audit. In addition, we have met to discuss the 2022-23 Budget.

The Budget and Finance committee met via Zoom on September 24, 2021 and April 29, 2022. The 2022-23 Budget was approved at the April 29th meeting and will be sent to the AAPD BOT for approval on May 24, 2022, and then to membership at the 2022 Generally Assembly.

Angela M. Stout
Trustee
Northeastern District
2019–2023

It is hard to believe that 3 years have gone by so quickly for my term as NE District Trustee. It has been a true privilege and honor being the NE Trustee! Unfortunately, COVID had prevented me from traveling to visit many of the states for a majority of my tenure, but I was happy to be able to "Zoom in" for many of the meetings. I have met so many wonderful and dedicated people throughout this process and appreciate all that I have learned and completed working with such an outstanding AAPD Board. Since there were no volunteers this past year to replace me in this position, I am thrilled to extend my term one more year! I hope to be able to visit more state meetings and residencies in the near future as meetings and gatherings begin to be in-person. I will continue to be available to our state leadership and Academy to bridge communications.

Over the past 6 months, I have spoken to several interested candidates in recruitment for the Trustee position. I feel that this summer there will be several nominees that will enter the selection process and a qualified successor will be chosen.

District News

Our new executive committee for the NESPD are a great team working on many projects and are excited to assist our district in any needs that exist in our states. The website is being upgraded, vNED's are being scheduled, a Facebook page is being created and plans for the Annual Session in San Diego are being finalized. The NESPD District Caucus is on Saturday, May 28th from 1-2 PM PT at the San Diego Convention Center in Room 8. I encourage all members to attend especially state executive committees. Also, our traditional After Hours Reception sponsored by the NESPD will be at the Union Kitchen & Tap in the Gaslamp District on Friday, May 27th from 10:30 PM to 12:00 AM PT after the Welcome Reception. It is an event that many of our district members look forward to. Our NESPD Executive Committee is:

President:	r. Max Sulla (NJ)
Vice President:	Dr. Vrutti Dave (NY)
Sec/Treasurer:	Dr. Bina Katechia (CT)
Past President:	Dr. Adam Silevitch (NY)

I will continue my goals to reach out to the states of the district to lend my support especially in the ongoing management of COVID-19 and challenges our district constituents are experiencing in practice and academics. Relations will continue with the state of Delaware to promote interests in the formation of an AAPD chapter.

Northeastern District Trustee's Report, 2021–2022

The main goals our District Leadership are:

- Continue Virtual District (vNED) webinars and looking at the timing of these webinars to maximize availability of speakers and participants
- Finalize the Strategic Plan for the NE District
- Complete the construction of the NESPD website or coordinate communications with the Academy.
- Support the State Chapters and residency programs by helping subsidize meetings and continuing education honorariums, have a presence at state meetings and improved communication among constituents.
- Host the annual NESPD Leadership meeting piggy-backed with a NE District state CE course in the future.
- Continue conversations with members from Delaware to discuss the development of a state chapter.
- Assist members in managing the residual stresses of COVID including staff shortages, supply chain challenges, etc.

Our Webinar (vNED) Series to date: (All webinars are scheduled at Noon.)

- TBA: "Timing and Sequencing of Surgical Treatment for CL/P Patients"
  Presented by: Roberto Flores, MD
- TBA: "Team-Based Interdisciplinary Pediatric Dental Practice"
  Presented by: Athanasios Zavras, DMD, MSc, DMSc, DDS
- July 12, 2021: "Diagnosis and Management of Development Defects"
- Presented by: John Timothy (Tim) Wright, DDS, MS June 14, 2021: "Pacifiers and Prosecco:
  Presented by: David Tesini, DMD, MS, FDS, RCSEd
- May 18, 2021: "Crossroads in Pediatric Dentistry: Is your practice evidence based?"
  Presented by: Vineet Dhar, BDS, MDS, PhD
- April 28, 2021: "Tooth Replacement for Pediatric Patients: The Case for Autotransplantation"
  Presented by: Lisa Lian, DMD
- April 2020: "Diagnosis & Management of Molar-Incisor Hypomineralization: Molar Substitution"
  Presented by: Lauren M. Feldman, DMD
- March 2020: "Pediatric Oral Surgery and Pathology"
  Presented by: Michael A Perrino DDS, MD, FACS
- Sept, 2019: "The Dentition & Speech Language Development"
  Presented by: Etoile M. LeBlanc, PhD
- Aug, 2019: "Pediatric Obstructive Sleep Apnea & Early Orthodontic Treatment"
  Presented by: George Cisneros, DMD, MMSc
- June, 2019: "Update on Pulp Therapy"
  Presented by: James A Coll, DDS, MS
- "Informed Consent, Informed Refusal, Standard of Care: What do these terms really mean"
  Presented by: Eric J. Ploumis, DMD, JD
- "Office Sedation Update"
  Presented by" Paul A. Bahn, III, DMD
- "Our Kids and Sports: What We Need to Know About Sports Dentistry"
  Presented by: Dr. Stephen Mills

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- "The Evidence of ECC Interventions"
  Presented by: Norman Tinanoff, DDS, MS
- "Caries Risk Assessment: Personalized Medicine and Pediatric Dentistry"
  Presented by: Christopher V. Hughes, DMD, PhD
- "The Hall Technique Has a Place in Pediatric Dentistry",
  Presented by: Paul S. Casamassimo, DDS, MS
- "Effective Caries Counseling in Practice: Possible? If so, How?"
  Presented by: Steven Chussid, DDS and Burton Edelstein, DDS, MPH
- "Silver Diamine Fluoride: What is its place in Oral Healthcare"
  Presented by: Dr. Cheen Loo, BS, MPH, PhD, DMD

Many thanks to Dr. George Cisneros and our speakers for providing a wide variety of topics and excellent presentations.

Trustee Responsibilities

My Trustee obligations:

- AAPD BOT - Budget and Finance Committee
- AAPD BOT - Strategic Planning Committee
- AAPD Board Liaison - Council on Government Affairs
- AAPD Board Liaison - Political Action Committee
- AAPD Board Liaison - Committee on Credentialing and Ethics
- Member, SOOH of the American Academy of Pediatrics

I will be attending the following meetings:

- Northeast District/vNED (webinars)
- Northeast District Annual Virtual Meeting (postponed Fall 2022)
- 2022 AAPD Annual Session, San Diego, CA (May 23-30, 2022)
- MdAPD Annual meeting (October 21, 2022)
- RCSI Faculty of Dentistry and AAPD Joint Symposium (October 28-29, 2022)

I attended the following meetings:

- AAPD Annual Session, Chicago IL (May 2019)
- AAPD Ad Interim Meeting, Chicago, IL (September 19-21, 2019)
- PAPD Annual Meeting, State College, PA (Oct 12, 2019)
- NYU Alumni Symposium and Anniversary Brunch (October 13, 2019)
- MdAPD meeting (October 25, 2019) Was unable to attend due to illness but my report was sent and given to participants by Dr. Shari Kohn
- Safety Symposium, Chicago, IL (November 8-9, 2019)
- AAPD/AAPD Foundation Dinner at GNYDM (December 3, 2019)
- AAPD Foundation Host Capital One Box, Washington, DC (January 11, 2020)
- AAPD Winter Meeting, San Diego, CA (January 16-18, 2020)
- Albert Einstein Pediatric Dental Meeting, Philadelphia, PA (February 28, 2020)
- AAPD Pediatric Oral Health Advocacy Conference, Washington, DC (March 1-4, 2020)
- NashVirtual AAPD Annual Session 2020 (May 11-25, 2020)
- OSAP Center for Disease Control Listening Meeting – Virtual (July 24, 2020)
- MdAPD Annual Session Virtual Meeting (October 30, 2020)
- Tethered Oral Tissues Symposium Virtual (November 13-14, 2020))
- DC AAPD Continuing Education Course (December 8, 2020)

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- NESPD Executive Committee Virtual Meeting (December 16, 2020)
- MdAPD Spoke on District Update for CE Program the COVID Vaccine (January 6, 2021)
- AAPD Council on Government Affairs (Virtual) (January 9, 2021)
- AAPD Strategic Planning Meeting (Virtual) (January 14, 2021)
- AAPD Winter BOT Meeting (Virtual) (January 15, 2021)
- AAPD PPA Meeting (Virtual) (January 25, 2021)
- AAPD Council on Membership Meeting (Virtual) (February 10, 2021)
- NESPD Executive Committee Virtual Meeting (February 22, 2021)
- AAPD PAC Steering Committee Meeting (Virtual) (February 28, 2021)
- AAPD Council on Government Affairs (Virtual) (February28, 2021)
- PAPD Annual Session Virtual Meeting and CE Sedation Course (5 sessions February to March 2021)
- Pediatric Oral Heath Virtual Advocacy Conference (March 1-5, 2021) PA Team Leader
- PA AAP Annual Session (Virtual) (March 20, 2021)
- AAPD Budget and Finance Committee Meeting (Virtual) (March 29, 2021)
- NYAPD Annual Meeting and Study Club Virtual (April 15, 2021)
- AAPD Annual Session 2021Virtual The HUB (May 2021)
- AAPD Early Career Pediatric Dentists Virtual Meeting (May 5, 2021)
- NJAPD Annual Meeting/CE Presentation Virtual (May 6, 2021)
- AAPD Board of Trustee Meeting Annual Session 2021 (May 15, 2021)
- AAPD Quarterly PPA Meeting (July 26, 2021)
- AAP Annual Conference Virtual (October 8-12, 2021)
- NESPD Executive Meeting Virtual (October 18, 2021)
- MAPD Annual Meeting (October 22, 2021)
- AAPD Dinner in NYC with the Greater NY Meeting (November 29, 2021)
- NYAPD Annual Meeting (December 9, 2021)
- AL3/Leadership Conference (January 15, 2022)
- PAPD Annual Meeting Virtual (January 22, 2022)
- NJAPD Meeting Virtual (January 26, 2022)
- Public Policy Advocate Meeting (January 31, 2022)
- POHAC Washington DC (March 12-15, 2022)
- Wharton Advanced Leadership Institute 3 Philadelphia, PA (March 16-18, 2022)
- AAPD/ADEA Dinner Philadelphia, PA (March 19, 2022)
- Public Policy Advocate Meeting (April 25, 2022)

Town Hall Meetings

- AAPD Town Hall: Sound Science for Reopening Your Practice (April 28, 2020)
- AAPD Town Hall: Access to PPE - Access for Children (June 24, 2020)
- AAPD Town Hall: Mental Health & Taking Care of You (August 26, 2020)
- AAPD Town Hall: Chapter Leadership (October 9, 2020)
- AAPD Town Hall: 1st Quarterly for Chapter Leaders on CERP Accreditation (March 27, 2021)
- AAPD Town Hall: Ambulatory Surgery Center Options for Pediatric Dentists (July 10, 2021)

My Trustee obligations/meetings attended:

- AAPD Annual Session 2019 BOT Meetings, Chicago, IL (May 21 and 26, 2019)

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- AAPD Ad-Interim BOT Meeting, Chicago, IL (September 20, 2019)
- AAPD BOT Budget and Finance Committee Meeting (Chicago, IL September 19, 2019) (Washington, DC February 29, 2020)
- AAPD BOT Strategic Planning Committee Meeting, San Diego, CA (January 16, 2020)
- AAPD Winter BOT Meeting, San Diego, CA (January 17, 2020)
- Political Action Committee (May 2019, January 2020, May 2020, February 28, 2021)
- Council on Government Affairs (May 2019, January 2020, May 2020, January 9, 2021, February 28, 2021)
- Committee on Early Career Pediatric Dentists (May 2019, January 2020, May 2020, February 10, 2021, May 5, 2021)
- AAPD NashVirtual Annual Session BOT Meetings (May 17 and May 24, 2020)
- AAPD Ad Interim BOT Meeting Virtual (September 26, 2020)
- AAPD BOT Budget and Finance Committee Meeting Virtual (September 26, 2020, March 29, 2021)
- AAPD BOT Strategic Planning Meeting, West Palm Beach, FL Virtual (January 14, 2021)
- AAPD Winter BOT Meeting, West Palm Beach, FL Virtual (January 15, 2021)
- AAPD Annual Session HUB Virtual (May 25-30, 2021)
- AAPD BOT Meetings Virtual (May 25, 2021 and May 30, 2021)
- AAPD BOT Budget and Finance Committee (September 24, 2021)
- Ad Interim BOT Meeting Louisville, Kentucky Virtual (September 24-25, 2021)
- AAPD Council on Government Affairs Meeting Virtual (January 6, 2022)
- AAPD BOT Winter Planning Meeting Phoenix, AZ (January 12-16, 2022)
- AAPD BOT Strategic Planning Committee Meeting (January 13, 2022)
- AAPD BOT Council of Government Affairs Committee Meeting (March 12, 2022)
- AAPD BOT Political Action Committee Meeting (March 12, 2022)
- AAPD Budget and Finance Committee Meeting (April 29, 2022)

Articles:

1. "When the Tooth Hurts: Kid's Mouths can be a magnet for trauma. What parents need to know about treating dental injuries." By Terri Akman. The Philadelphia Inquirer, February 21, 2021 (Cited in the ADA Morning Huddle February 22, 2021)
2. "The Dentist Will See You Now" by Caroline Cunningham. Philadelphia Magazine, March 2021 (Cited in the ADA Morning Huddle March 9, 2021)
3. "How Erdenheim Dental Practice Reacted to Pandemic" by Elspeth Lodge, The Chestnut Hill Local, March 25, 2021.

I look forward to continually meeting and working with the members of our Northeast District and the Board. I look forward to seeing everyone at the 75th Anniversary Annual Session in San Diego!!

Respectfully submitted,

Angela M. Stout, DMD, MPH
Northeastern District Trustee

Carlos A. Bertot
Trustee
Southeastern District
2020–2023

Trustee Responsibilities

Academy business is ongoing, and I am happy to report that more and more of our Councils and Committees are meeting in person.

I was fortunate to be involved with the AAPD Engagement Steering Committee during the Fall of 2021. This Committee was charged with helping develop a Membership Needs Assessment Survey. The results of this survey will be used to help the AAPD better understand and address the needs of our members.

In October 2021, I began my 4-year term as AAPD Representative to the ADA Commission for Continuing Education Provider Recognition. To date, I have participated in several meetings and co-reviewed all the applications assigned to me.

Lastly, as Local Co-Host for the future Annual Session in Orlando in May of 2023, I took part in the Council of Annual Session's Site Visit to Orlando in November of 2021. We visited several potential venues for the many events that will occur during the Annual Session and have since selected all the venues to be experienced during the Annual Session, most notably, the Welcome Reception, Appreciation Dinner, and President's Farewell.

Trustee Appointments/Obligations

- BOT Awards Committee
- BOT Strategic Planning Committee
- Board Liaison – Council on Scientific Affairs
- Board Liaison – Council on Scientific Affairs, Consumer Review Committee
- Board Liaison - Pediatric Oral Health Research and Policy Center, Safety Committee

Other Appointments/Obligations

- Co-Chair, Local Arrangements Committee, Council on Annual Session – Orlando 2023
- AAPD Representative, ADA Commission for Continuing Education Provider Recognition
- Member, AAPD Engagement Steering Committee, 2021

Trustee Activities

- AAPD Board of Trustees Meeting, Nashvirtual Annual Session, May 24th, 2020

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- Southeastern Society of Pediatric Dentistry Executive Committee Virtual Meeting, July 1st, 2020
- Council on Scientific Affairs Phone Conference Meeting, July 30th, 2020
- Southeastern Society of Pediatric Dentistry Executive Committee Virtual Meeting, September 15, 2020
- AAPD Board of Trustees Ad Interim Virtual Meeting, September 26th, 2020
- AAPD Chapter Leaders Virtual Townhall, October 2nd, 2020
- Southeastern Society of Pediatric Dentistry Executive Committee Virtual Meeting, October 5th, 2020
- Zoom Conference Call among CCA/CSA/EBD Chairs and Board Liaisons
- Florida Academy of Pediatric Dentistry Business Virtual Meeting, November 12th, 2020
- Tethered Oral Tissues Symposium, November 13-14, 2020
- Southeastern Society of Pediatric Dentistry Executive Committee Virtual Meeting, January 7th, 2021
- AAPD Awards Committee Meeting via ZOOM, January 11, 2021
- AAPD Strategic Planning Meeting via ZOOM, January 14, 2021
- AAPD Winter Meeting, West Palm Beach, Florida, January 13-16, 2021
- Southeastern Society of Pediatric Dentistry, Business Meeting via ZOOM, January 16, 2021
- Georgia Academy of Pediatric Dentistry, Annual Business Meeting via ZOOM, January 21, 2021
- Council on Scientific Affairs Spring Meeting via ZOOM, May 5th, 2021
- Safety Committee Meeting via ZOOM, May 11th, 2021
- AAPD Chapter Leaders Virtual Town Hall via ZOOM, July 10th, 2021
    - "Ambulatory Surgery Center Options for Pediatric Dentists"
- AAPD Engagement Steering Committee Meeting via ZOOM, August 4th, 2021
- AAPD Scientific Program Committee and Site Visit, San Diego, California, August 25-27, 2021 – in preparation for my role as Co-Chair, Local Arrangements Committee, Council on Annual Session - Orlando 2023
- AAPD Board of Trustees Ad Interim Meeting, Louisville, KY - September 24-25, 2021
- AAPD Engagement Steering Committee Meeting via ZOOM, November 15-16, 2021
- Council on Annual Session – Orlando Site Visit, November 17, 2021
- Safety Committee Meeting – Chicago, IL - December 3rd, 2021
- Winter Planning Meeting – Scottsdale, AZ - January 12-16, 2022
    - -Strategic Planning Committee Meeting January 13th, 2022
    - -Awards Committee Meeting January 14th, 2022
    - -BOT Meeting January 14th, 2022
    - - Wharton Advanced Leadership Cohort III January 15th, 2022
- SSPD Annual Meeting January 14-16, 2022
    - -Executive Committee Meeting via ZOOM January 14th, 2022
    - -Member's Breakfast Business Meeting via ZOOM January 15th, 2022
- Florida Dental Association – University of Florida College of Dentistry Residents Event – Gainesville, FL – January 27th, 2022
- Florida Academy of Pediatric Dentistry – Business Meeting – Orlando, FL – February 5th, 2022
- Safety Committee Meeting via ZOOM, February 23rd, 2022

Southeastern District Trustee's Report, 2021-2022

I plan on attending the following meetings:

- All Council and/or Committee Meetings involving my Board Liaison obligations
- AAPD Annual Session – San Diego, CA – May 26-29, 2022
- All upcoming ADA Commission for Continuing Education Provider Recognition Committee meetings.

Board Liaison Activities

I have monitored the activities and progress of the Council on Scientific Affairs, Consumer Affairs Committee and Safety Committee.

The standing charges for the Council on Scientific Affairs have either been met or are in progress. Board action is not required with any of the standing charges.

The standing charges for the Consumer Review Committee are ongoing; no licensing agreements have been submitted for review. Board action is not required with any of the standing charges.

The existing standing charges for the Safety Committee have either been met or are in progress and none currently require board action.

District Activities

Southeastern Society of Pediatric Dentistry Officers 2020
President – Dr. Stephen Greenleaf, Alabama
President Elect – Dr. Rodney Jackson, Kentucky
Vice President – Dr. Angie Baechtold, North Carolina
Secretary – Dr. Meredith Papadea, South Carolina
Immediate Past President – Dr. Chris Maestrello, Virginia

The SSPD Annual Meeting was held on January 14- 16, 2022 in Atlanta. The meeting was a Restorative Symposium, led by Dr. Kevin Donly. By all accounts, the meeting was a resounding success with better-than-expected attendance and heavy virtual participation was recorded as well. This despite an early end to the meeting due to an ice storm that threatened Atlanta and predicted to cause havoc with transportation.

Southeastern District Trustee's Report, 2021-2022

State Reports

Alabama
President – Dr. Sam Bush
Vice Pres. – Dr. Keri Miller
Secretary – Dr. Rosie Turner
Treasurer – Dr. Stephen Mitchell
Executive Director – N/A
SSPD Liaison – Dr. Jeff Flannery

Number of Pediatric Dentists in State - 120

Current State Legislation – Teledentistry is being explored but not at a legislative level. The Board of Dental Examiners of Alabama just settled a case brought by the Federal Trade Commission affecting Alabama's direct supervision rules and their impact on Smile Direct's operations in the State. No further movement can occur with teledentistry until this issue fully resolves.

Medicaid Issues - Medicaid's dental leadership is responsive to members. Alabama recently had a modest increase in some fees and the agency has continued paying a PPE supplement for each visit. While overall reimbursement will always be a concern, Alabama is in a better position than most states.

Other Items Affecting State Members - Rural Alabama is facing a dental provider crisis and pediatric services are also affected.

Florida
President – Dr. Matt Bright
Vice Pres. – Dr. Casey Lynn
Secretary/Treasurer – Dr. Yoshita Patel Hosking
Executive Director – Dr. Michael Roseff
SSPD Liaison – Dr. Rose Fishman/Dr. Manav Malik

Number of Pediatric Dentists in State - ~400

Current State Legislation – Did not detail

Medicaid Issues - OR access continues to be challenging at the very least. Very limited resource for GA cases.

Other Items Affecting State Members – Did not detail.

Georgia
President – Dr. Cara DeLeon
Vice Pres. – Dr. Janice Lee
Secretary/Treasurer – Dr. Anthea Mazzawi
Executive Director – Dr. Jonathon Jackson

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SSPD Liaison – Dr. James Lopez

Number of Pediatric Dentists in State - 266

Current State Legislation – The Georgia Dental Association is asking for a slight increase in Restorative and Oral Surgery Fees for Medicaid Patients. GAPD will know sometime next year if the efforts of the GDA including the GDA Medicaid Task Force are successful. The state provides GDA with a budget for the increase and GDA selects which fees they want increased. The amount is based upon the budget.

Medicaid Issues – See State Legislation for Medicaid Fees. The GDA has discussed OR issues with Envolve. The AAPD is also pursuing these issues around the country and Georgia is no different.

Other Items Affecting State Members – The GDA and the AAPD are addressing OR access issues.

For years GAPD has been trying to get a pediatric dentist on the Board of Dentistry through the GDA District recommendation process. David Bradberry and James Lopez have been recommended; however, the Governor appoints his person. For years the GDA cannot recall the Governor picking a name from the three names submitted by the district

Kentucky
President – Dr. Donna Klein
Vice Pres. – Dr. Jenna Schulten
Secretary/Treasurer – Dr. Jay Crews
Executive Director – N/A
SSPD Liaison – Drs. Rodney Jackson/Donna Klein
PPA – Dr. Kirby Hoetker

Number of Pediatric Dentists in State - 93

Current State Legislation – Legislation is reviewing activity regarding mobile unit regulations.

There are many questions being fielded regarding regulations of sedation (in office via oral/I.V. sedations and in office general/dental anesthesia providers).

Medicaid Issues - There was an increase in some of the fees. There was a decrease in the in-office sedation fee reimbursement, but there is a nice stipend for in office GA.

Access to care is always an issue, especially OR for the fragile children.

Other Items Affecting State Members - Operating Room access continues to be a concern and increasingly more challenging with time.

Southeastern District Trustee's Report, 2021-2022

Mississippi
President – Dr. Tiffany Green
Vice Pres. – Dr. Neil Quinton
Secretary/Treasurer – Dr. Joey Sessums
Executive Director – N/A
SSPD Liaison – Dr. Trice Sumner

Number of Pediatric Dentists in State - ~65

Current State Legislation – Every third legislative session there is a Medicaid reauthorization. MAPD's initial focus was on increased dental fees and greater accountability for managed care organizations. In 2021 MAPD saw success via a dental carve-out and fee increase for diagnostic and preventative services, while avoiding a 5% administrative withholding. MAPD is still seeking a requirement for peer-to-peer review in Medicaid audits. The legislature also required a study to assess the feasibility of having one Medicaid MCO vendor.

The following items in the bill pertain to reimbursement rates:
- increases dental rates on diagnostic and preventative services each of SFY 2022-2024 by 5% each year.
- deletes 5% provider withhold and requirement for the medical care advisory committee to study reimbursement rates
-prohibits Medicaid from increasing or decreasing reimbursement rates or limitations on services from the level in effect on July 1, 2021 unless authorized by the Legislature.

This bill also requires Medicaid and MCOs to adopt a standardized and expedited credentialing process by July 1, 2022.

Capitol Resources feels strongly that this bill will be reevaluated during the upcoming session as well. Capitol Resources is MAPD's lobbyist/governmental relations firm that they partnered with 4+ years ago. MAPD plans to continue to contractually work with them because the results of the partnership have proven to be an excellent example of how a personalized relationship with a well-connected lobby firm can support the needs of the organization and in turn aid in our goal of better care for the pediatric dental patient population.

Medicaid Issues - MAPD is continually working to create and maintain contacts in the DOM and with leadership of all 3 MCOs. One of the MCOs with Medicaid changed their dental provider. This was effective 10/01/21. However, the provider manual was not made available until 12/21. The transition has been bumpy; however, through Capitol Resources MAPD has contacted the new division leaders. MAPD had a meeting in October 2021 and another meeting was being planned for January of 2022 to discuss the new provider manual. At the time of collecting information for this report, this meeting had not yet happened.

Other Items Affecting State Members - MAPD is continuing to be vigilant with issues related to OR access for pediatric dentists across the state as well as "denials" of coverage

for those procedures (Dr. Neva Eklund (PPA), has been very involved and is continually submitting personal vignettes to Dr. Casamassimo as part of his national data survey). As a state chapter, MAPD claims to still have a great need that includes a greater percentage of PAC/govt relations contributions by membership to maintain lobbyist contract and remain influential and important in the eyes of those legislatures making decision that will critically affect dental practices and patient population.
MAPD is still searching for solutions to massive concerns related to ensuring a comprehensive dental home for children treated in "out-of-office"/school-based settings by mobile itinerate providers.

MAPD is in continual negotiations and discussions with DOM for more appropriate CDT procedure coverage/reimbursement to ensure the highest quality and current standards of care are understood, available, and compensated for all children regardless of payer source. Many of these changes/additions/inclusions have been halted due to legislative language that should be reconsidered and changed in the 2022 legislative session.

North Carolina
President – Dr. Jenny Jackson
Vice Pres. – Dr. Mike Ignelsi
Secretary/Treasurer – Dr. Michael Roberts
Executive Director – N/A
SSPD Liaison – Dr. Anne Baker

Number of Pediatric Dentists in State - 241

Current State Legislation/Medicaid Issues – NCAPD is looking to implement a Health Information Exchange (HIE) for providers participating in public funded insurances. The current deadline for participation in this system is January 1, 2023. There is considerable concern regarding implementing this system, especially the cost of it on small private practices trying to participate in Medicaid with already thin margins. NCAPD is concerned they may lose considerable access to care as the cost of participating in this HIE will likely be a barrier to many providers. NCAPD is also trying to update several codes and get them activated that reflect the state of care at this time. The process is slow but is progressing with the coding and fees going through the approval process.

Other Items Affecting State Members - Continued struggles finding team members is high on the list of difficulties – all positions, especially clinical. Issues with general dentists advertising to appear as specialists.

Puerto Rico
No Report submitted by Chapter

South Carolina
President – Dr. Shane Harpman
Vice Pres. – Dr. Rosa Barnes
Secretary – Dr. Karen Wolf
Treasurer – Dr. Beth Poag

Southeastern District Trustee's Report, 2021-2022

Executive Director – N/A
SSPD Liaison – Dr. Meredith Papadea

Number of Pediatric Dentists in State - 100

Current State Legislation – Dr. Hannah Rustin is SCAPD's public policy advocate. Lobbying efforts at the forefront, include advocating for better Medicaid access to care and reimbursement for children.

Medicaid Issues
Difficulty finding providers and adequate coverage for Special Needs children and adults. SCAPD claims to need more access to care for these individuals and GPR/AEGD programs or specialty offices willing and able to treat.

Other Items Affecting State Members - as detailed above.

Tennessee
President – Dr. Robert Caldwell
Vice Pres. – open
Secretary/Treasurer – Dr. Tim McNutt
Executive Director – Dr. Tim McNutt
SSPD Liaison – Dr. Joe Faiz
PPA – Dr. Joe Faiz

Number of Pediatric Dentists in State - 200

Current State Legislation – This year was relatively quiet with legislation mainly focusing on COVID-related matters.

Medicaid Issues - Reimbursement continues to be an issue and TAPD leadership is working to address this. OR access is becoming more limited. Direct contact with legislators has yielded some results, including remarks during session that pediatric dentists in Tennessee have not seen a fee increase in 10 years (our fees decrease each year- although we received a temporary COVID increase in certain codes!).

Other Items Affecting State Members - All expenses are up across the board- labor, materials, insurance premiums, professional services, etc. Many offices are experiencing hiring difficulty because the labor supply is scarce in dentistry.

Virginia
President – Dr. Kimberly Tran
Vice Pres. – open
Secretary/Treasurer – Dr. Robert Lunka
Executive Director – Shannon Jacobs
SSPD Liaison – Dr. Holly Lewis

Number of Pediatric Dentists in State – did not detail. AAPD reports 228.

Southeastern District Trustee's Report, 2021-2022

Current State Legislation – Ongoing from last year, the Virginia Board of Dentistry (BOD) has made a motion that would include, "setting an age range for requiring sedation and treatment of young children to be performed in a hospital setting." the Virginia Dental Association (VDA), Virginia Society of Oral & Maxillofacial Surgeons (VSOMS), Virginia Academy of Pediatric Dentistry (VAPD) and the Virginia Dentist Anesthesiologists sent letters to the BOD and spoke at the October 23rd, 2021 board meeting, warning them of the adverse impact on access to oral healthcare such an action could create. After considering the comments from representatives of these dental organizations, the committee unanimously voted against recommending that the BOD pursue this regulation.

Medicaid Issues - Did not detail

Other Items Affecting State Members – Did not detail

US Virgin Islands
No report submitted by Chapter

West Virginia
No report submitted by Chapter

Respectfully submitted,

Carlos A. Bertot, DMD
Southeastern District Trustee

Marilia Montero-Fayad
Trustee
NorthCentral District
2019–2022

Trustee Activities

It has been my greatest honor and privilege to serve you during the past 3 years as the NorthCentral Trustee. I hope we all continue to be healthy and recover personally and professionally from the all the changes COVID has brought to us.

Board Liaison, Presidential Task Force on Diversity, Equity and Inclusion. The task force was finalized in 2021. Dr. Jerome B. Miller Advanced Leadership Institute III will address DEI. I am also liaison to the Council on Government Affairs, Committee on Dental Benefit Programs and Pediatric Dental Medicaid and CHIP Advisory Committee.

Meetings attended:

- AAPD Annual Session -May 2021 *virtual*
- AAPD Ad Interim Board Meeting -September 2021 *virtual*
- AAPD Winter Session- January 2022 *virtual*
- NC district meeting- February 2022 *virtual*

District activities

District Leadership:
AAPD Trustee: Marilia Montero (IL)
Immediate Past President: Elise Sarvas (MN)
Executive Director: David Avenetti (IL)
President Matt Geneser (IA)
Vice-President: Scott Schwartz (OH)
Secretary/Treasurer: Risa Hurwich (IL)

North Central bylaws were approved AAPD and during NC 2020 caucus. We have now been collecting $30 membership.

Below is our membership table from 2020 and 2022 to highlight increase in membership in the North Central district.

NorthCentral District Trustee's Report, 2021-2022

		IA	IL	IN	MB	MI	MN	ND	NE	OH	ON	SD	WI		Grand Total
Active Member		52	148	92	1	117	81	14	43	149	11	14	87		809
Affiliate Member		3	9	5	1	7	3		2	5	1	2	7		45
Assocate Member							2			1			2		5
Friends of Pediatric Dentistry							1								1
International Member					1										1
(blank)															
Grand Total		55	157	97	3	124	87	14	45	155	12	16	96		865

Data from Suzanne Wester 2020

	IA	IL	IN	MB	MI	MN	ND	NE	OH	ON	SD	WI	Total
ACTIVE	66	218	124	5	156	97	15	51	201	22	17	103	1075
AFFIL	4	15	7	1	11	5		4	8	4	2	13	74
ASSOC						2			1			1	4
CANADIAN	1			11						80			92
(blank)													
Grand Total	102	326	189	24	253	142	18	76	302	129	22	148	1245

Data from Suzanne Wester 2022

State/Provincial Activities

Illinois

Component Name: Illinois Society of Pediatric Dentists
Officer Rotation: Annually
Officers
President - Maribel Reyes De Lobos, Email: mlobos4@gmail.com
President-Elect - Anne Ashley Compton, Email: anneashleyc@gmail.com
Secretary/Treasurer - Tehemina Richardson
AAPD Liaison - Marilia Montero-Fayad
Membership Contact - Roseanne Williamson, E-Mail: rosewill737@gmail.com
Advocacy PPA - Charlie Czerepak

State unit activities, i.e., C.E offerings, meetings:
Oct/Nov 2022: Fall CE course webinar: TBD

Legislative issues:
- IL Dental Practice Act now includes Dental Anesthesiology
- Effective January 1, 2022, Dept of HFS will regulate school based dental program which allows for out of office delivery of preventive services in school setting to children under 19 years of age.

State Medicaid Issues:
- Beginning January 1, 2022, $10,000,00. allocated to fund rated for Medicaid dental services.

NorthCentral District Trustee's Report, 2021-2022

- IL Public Aid code mandates specific dental codes and reimbursement rates be in effect

Indiana
Contact Email: Email: infoinspd@gmail.com
Spring Course Blood, Sedation and Business
Dr. Kumar: Hereditary Hemorrhagic Telangiectasia (HHT): Oral Manifestations
Dr. Saxen: Emergencies in the Pediatric Dental Office and In-Office Sedation
Stuart Wolff: The EOS and how to run a Dental Practice

Iowa
Officers
President - Michael Stuflebeam

Spring meeting 2022 - Dr. Kevin Donly

Legislative Issue s- Iowa dropped Legislation requiring pediatricians to consent on children going to hospital for dental rehabilitation.

We are working on Medicaid reimbursement.

Iowa Dental Board is addressing the work-force issue by loosening rules .

Michigan
Michigan Academy of Pediatric Dentistry
Officer Rotation: annually
President - Neeru Ramaswami Email: neeru@mydiscoversmiles.com
Past President - Veronica Hamilton
Public Policy Advocate - John Deppen

Minnesota
NC District Representative(s): Tyler Beinlich Email: tybeinlich@gmail.com
AAPD Component Information
Component Name: Minnesota Academy of Pediatric Dentistry
Officer Rotation: Secretary/Treasurer > Vice President > President
Officers
President - Tyler Beinlich, Email: tybeinlich@gmail.com
President-Elect - Xu Han, Email: xhandds@gmail.com
Secretary/Treasurer - Amelia Leuer
AAPD Liaison - Elise Sarvas
Membership Contact - Amelia Leuer,
Advocacy PPA - Elise Sarvas

State Medicaid Issues - Reimbursement

Access to care issues - Utilization of services after Medicaid reimbursement increase

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Other Issues - OR Access due to demand

Nebraska
No report received

North Dakota
NC District Representative(s) - Chad Hoge, Email:chadhoge@hotmail.com
AAPD Component Information
Component Name: North Dakota Association of Pediatric Dentists
Officers
President - Mikala Hoge, Email:mikalahoge@gmail.com
President-Elect - Chad Hoge, Email:chadhoge@hotmail.com
Vice President - Chad Hoge
Secretary-
Treasurer - Chad Hoge
Immediate Past President - Tyler Johnson
AAPD Liaison - Chad Hoge
Membership Contact - Chad Hoge

Who is collecting your dues: We do not collect dues at this time. I have asked our members if they were interested but I received very little interest from the membership.

Legislative issues:
State Medicaid Issues:
1) Issues with Medicaid patient responsibility plans and our inability to collect the patient payment
portion (at the time of service) due to the state's policies.

Ohio
Ohio Academy of Pediatric Dentistry
Officer Rotation: biannually
President - Erin Gross, Email: gross.222@osu.edu
President-Elect/Vice-President - Lucia Gerstmann, Email: lcgerstmann@gmail.com
Membership Contact - https://www.ohioapd.org/contact-us/
Secretary - Kyle Jackson, Email: dr.kyle@centervillepediatricdentistry.com
Public Policy Advocate - Homa Amini

Priorities for 2021-22
- Advocacy for Medicaid Fees
- Teledentistry code/reimbursement by Medicaid
- Access to OR time
- DentQuest policies

State Medicaid Issues: Low fees
Medicaid approvals:
D2941 Interim therapeutic restoration primary tooth 4/1/2021 $18.00
D7961 Buccal/labial frenectomy/frenulectomy 1/1/2021 $119.13

D7962 Lingual frenectomy /frenulectomy 1/1/2021 $119.13
Medicaid will pay for D 140 and 120 if performed via teledentistry. No Payment for teledentistry code.

Access to care issues: Low Medicaid reimbursement at 38 cents per dollar.
Low percentage of general dentist in the state accept Medicaid.

With transition of CareSource to DentaQuest, some providers have left the network due to administrative burdens.

Other Issues: State Oral Health Coalition is working on developing a state oral health plan.

South Dakota

Officers
President - Kelli Jobman DDS
Advocacy PPA - Karli Williams DDS

State unit activities, i.e., C.E offerings, meetings:
NONE

Other Issues: Reimbursement rates and OR access. Recently the main hospital in Rapid City (Monument Health) reduced block time for our practice. We have a huge population in western SD living at poverty level on reservations and OR access is critical to take care of this population. We are very concerned to see this happening now in our state!

Manitoba

No report received

Ontario

State/Province: Ontario
NC District Representative(s): Dr. Paul Andrews, mail: andrewsp@rogers.com
AAPD Component Information
Component Name: Ontario Society of Pediatric Dentists
Officer Rotation: 2 years
Officers
President - Dr. Edina Heder, Email: dinaheder@hotmail.com
Vice President - Dr. Azy Fini
Secretary - Dr. Amanda Huminicki
Immediate Past President - Dr. Vino Khanna
AAPD Liaison - Paul Andrews

Legislative Issues:
- No increase in equivalent to Medicaid (Healthy Smiles) in entire career
- No dental specialty groups outside of pediatric dentistry that will see these children
- GA access is good, but COVID has negatively impacted it

NorthCentral District Trustee's Report, 2021-2022

- Dramatic shortage of dental assistants but not hygienists

Respectfully submitted,

Marilia Montero-Fayad
NorthCentral District Trustee

Jeffrey D. Rhodes
Trustee
Southwestern District
2021–2024

I have been fortunate to be part of the Board of Trustees in time to celebrate AAPD's 75th Anniversary and during the return to in-person meetings. The past few months have been a relief as we are entering what is hoped to be a post-Covid phase of the pandemic. I think most feel that life has returned to a more normal pace with reduced masking requirements and practices getting back to busy. Despite the upset and turmoil of the past few years, I feel our profession and the AAPD as the organization that protects and promotes our skills and objectives is strong and focused on the best possible thing: optimal oral health for all kids. I am very thankful to have the opportunity to represent the Southwestern Society of Pediatric Dentistry.

Trustee Responsibilities

My Trustee obligations:

- AAPD Board of Trustees – Strategic Planning Committee
  - The previous Strategic Plan was reaffirmed during the winter meeting in Phoenix.
- AAPD Board Liaison – Council on Clinical Affairs, Committee for Special Health Care Needs
  - The SHCN committee has fulfilled its charges this year. The charges included promoting knowledge and education about patients in this category. Additionally, the group worked with other committees to develop teledentistry codes to be used to increase access to care. Full details can be found in the Committee Report.
- AAPD Board Liaison – Council on Clinical Affairs, Committee on Sedation and Anesthesia
  - The CSA committee has fulfilled its charges this year. Of special note is the recommendation of the PEARS course as an airway management course, review of the existing sedation record and the referral of the DAIRS program to the Safety Committee for study. More details can be found in the Committee Report.

Other Appointments/Obligations:

- Public Policy Advocate – AR
- AAPD Foundation Leadership Institute at Kellogg School of Business – Cohort VI
- American Board of Pediatric Dentistry – Committee for Oral Clinical Exam
  - Oral Board Examiner

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    - Examination Committee
- Southwest Society of Pediatric Dentistry Board of Directors (Ex-Officio)

Trustee Activities

My Trustee obligations/meetings attended:

- AAPD Winter Meeting, West Palm Beach, Florida (January 13-16, 2021)
- AAPD PPA Meeting – Virtual (January 25, 2021)
- POHAC Team Leaders Meeting – Virtual (February 19, 2021)
- Pediatric Oral Heath Virtual Advocacy Conference (March 1-5, 2021) AR Team Leader
- AAPD Special Health Care Needs Committee Meeting (May 11, 2021)
- AAPD Annual Session 2021 – Virtual The HUB (May 2021)
- AAPD BOT Meetings – Virtual (May 25, 2021 and May 30, 2021)
- SWSPD District Caucus – Virtual (May 26, 2021)
- AAPD Chapter Leaders Virtual Town Hall – Virtual (July 10th, 2021)
    - "Ambulatory Surgery Center Options for Pediatric Dentists"
- AAPD Board of Trustees Orientation (July 15-17, 2021)
- AAPD Quarterly PPA Meeting (July 26, 2021)
- AAPD Board of Trustees Ad Interim Meeting, Louisville, KY (September 24-25, 2021)
- SWSPD Board of Directors – Virtual (August 4, 2021)
- SWSPD Annual Business Meeting – Virtual (November 10, 2021)
- AAPD Foundation Leadership Institute Cohort VI (December 9-12, 2021)
- AAPD Board of Trustees Winter Planning Meeting, Scottsdale, AZ (January 12-16, 2022)
    - Strategic Planning Committee Meeting (January 13th, 2022)
    - Special Health Care Needs Committee (January 15th, 2022)
    - BOT Meeting (January 14th, 2022)
- SWSPD Winter Ski Meeting (January 30-February 4, 2022)
- SWSPD Board Meeting – Virtual (March 30, 2022)
- Pediatric Oral Health Advocacy Conference (March 13-15, 2022) AR Team Leader, Resident Trainer
- AAPD Special Health Care Needs Committee Meeting – Virtual (April 22, 2022)

I will be attending the following planned meetings:

- AAPD Annual Session (May 23-30, 2022)
    - Board of Trustees Meetings and Events
    - Committee on Sedation and Anesthesia
    - Committee on Special Health Care Needs
    - SWSPD District Caucus
- SWSPD Board Meeting (July 27, 2022)
- SWSPD Board Meeting (September 2022)
- SWSPD Business Meeting (November 2022)

District Activities

After a recent executive committee meeting with the new SWSPD leadership, there are renewed efforts to engage more members and grow involvement in organized dentistry. The Executive Board has selected and installed trustees and created a Board of Directors from many states in our region. Our new officers are:

Southwestern District Trustee's Report, 2021–2022

President:	Dr. Emily Fourmy (AR)
President Elect:	Dr Ben Curtis (TX)
Vice President:	Dr. David Sentelle (TX)
Sec/Treasurer:	Dr. Elizabeth Schick (CO)
Immediate Past President:	Dr. Mitch Glass (TX)

Directors:
Dr. Lesley Minton (AR)
Dr. Aaron Bumann (MO)
Dr. Janna McIntosh (OK)
Dr. Mary Fusilier (TX)
Dr. Paul Lambert (At Large)
Dr. Alexandra Otto (At Large)

CE Chairperson: Dr Janelle Plocheck (TX)
Ski Meeting Chairperson: Dr. Ryan Roberts (OK)

The SWSPD had a very successful Ski Meeting in Vail, CO January 30- February 4. The well attended CE included lectures from Cathy Jameson, Dr. LaRee Johnson and Dr. Jeannie Beauchamp, Dr. Yasmi Crystal, Dr. Cavin Brunsden and Dr Bruce Weiner. There were over 300 people in attendance. There are plans to repeat the excellent lecture from Jackie Plemmons this fall and there is a summer meeting scheduled in Jackson Hole.

I will continue my goals to reach out to the states of the district to lend my support especially in the challenges of acquiring OR time and challenges our district constituents are experiencing in practice and academics. Of particular concern to the members of the SWSPD is the discussion surrounding our affiliate members. I have fielded many texts, emails and calls concerning the possibility of some sort of acknowledgement or sanction of general dentists as trained by the AAPD. There is much emotion and confusion about what is happening with this charge to the Affiliate Committee.

CE offered by the Southwest District:

- "Dentistry and the Use of Controlled Substances" – Virtual (November 4, 2021)
- SWSPD Winter Ski Meeting, Vail, CO (January 30- February 4, 2022)
    - "10 Essentials for a Successful Pediatric Dental Practice" by Cathy Jameson
    - "Dotting All Your 'i's and Crossing All Your 't's... Patient Selection, Preparation, and Completion of Pediatric Conscious Sedation" by Dr. LaRee Johnson
    - "Minimal Intervention Approaches for Caries Management in Children: The Scientific Basis for the Specialist Approach" by Dr. Yasmi Crystal
    - "Functional Facial Development" by Dr. Cavan Brunsden
    - "Dentistry and the Use of Controlled Substances" by Dr. Bruce Weiner

Upcoming Meetings:

- SWSPD Summer Escape, Grand Tetons, WY
    - "Plethora of Oral Lesions I Caught from Pediatric Dentists During the Pandemic", Catherine M. Flaitz, DDS, MS

Southwestern District Trustee's Report, 2021–2022

State Unit Reports

Arkansas

State and Name of SWSPD Representative(s)
State: Arkansas
SWSPD Representative: Lesley Minton, Email: lam062089@gmail.com

AAPD Component Information
Component Name: Arkansas Academy of Pediatric Dentistry
Officer Rotation: None

Officers
President – Jason Havard, Email: jhavarddds@yahoo.com
President Elect –
Vice President –
Secretary –
Treasurer –
Immediate Past President –
AAPD Liaison – Jeff Rhodes, Email: jrhodes@smile-shoppe.com
Membership Contact – Jason Havard, Email: jhavarddds@yahoo.com

Number of pediatric dentists in your state
53

State unit activities, i.e. C.E offerings, meetings

- None

Who is collecting your dues
Jason Havard

Legislative considerations:
PPA Name: Jeff Rhodes
None- We do not have a formal organization

Colorado

State and Name of SWSPD Representative(s)
State: Colorado
SWSPD Representative: Elizabeth Shick, Email:lizshick@hotmail.com
AAPD Component Information
Component Name: Colorado Academy of Pediatric Dentistry
Officer Rotation: Elections will be held following our meeting April 8, 2023, for a new executive committee.
Officers
President – Dan Hoang, Email: ddanhoang@gmail.com
President Elect –
Vice President –
Secretary – Sati Khalsa, Email: skhalsadds@gmail.com
Treasurer – Jennifer Thompson, Email: JennThompsonDDS@hotmail.com

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Immediate Past President – Sarah Villasenor
AAPD Liaison – Jeff Kahl
Membership Contact – Dan Hoang, Email: ddanhoang@gmail.com

Number of pediatric dentists in your state
155
Faculty: 5 full time, 8-10 part-time at CHC
Associate: none
Affiliate: none
Active Member First Year: 15
Post and Pre-doctoral Student: 3-4
Retired: 6-7

State unit activities, i.e., C.E offerings, meetings

- Quarterly business meeting with one hour of CE per meeting.
- Annual day long CE course at Rocky Mountain Dental Convention (January).
- Annual pediatric continuing education speaker at the Colorado Dental Association Annual Session (June).
- Sponsorship of residents to attend AAPD Lobby Day.
- Sponsorship of CU SODM Guatemala Program (Furloughed due to COVID19 at this time).
- Scholarship for CU dental student interested in pediatric dentistry (Erin Lovell Scholarship).

Dues structure and collections:
Active Member: $125 collected by AAPD

Legislative considerations:
PPA Name: Jeff Kahl

- Dental Therapy Bill
    - Realizing that we were not in a position to defeat this bill we were able to negotiate amendments that assured accredited education and dentist supervision. Primarily we wanted to preserve the dentist as the head of the dental home and to remove all possibility of the independent practice of Dental Therapy.
- Dental Student Loan Repayment
    - A sizeable portion of COVID relief funding was moved into the current state program. We ensured that dentists who qualified would be prioritized before funding was used for anything else.
- We supported creation and incentivization of a geriatric and rural training programs for dental students.
- We continue to monitor Prior Authorization Reform Legislation in Medicine in hope that we can use this as a vehicle to address this problem in dentistry.
- Achieved another 2% increase in Medicaid funding. However, fees are not keeping up with inflation, so we have started conversations about fee benchmarking to adjust in "real time".

Southwestern District Trustee's Report, 2021–2022

Kansas

State and Name of SWPD Representative(s)
State: Kansas
SWPD Representative: John Fales, Email: jtf@kidzdentist.com

AAPD Component Information
Component Name: Kansas Association of Pediatric Dentists
Officer Rotation: Yearly??

Officers
President – John Fales, Email: jtf@kidzdentist.com
President Elect –
Vice President –
Secretary –
Treasurer –
Immediate Past President –
AAPD Liaison – John Fales. Email: jtf@kidzdentist.com
Membership Contact –

Number of pediatric dentists in your state
62

State unit activities, i.e., C.E offerings, meetings
None

Legislative considerations
As the 13-year-old battle over dental therapy continues in Kansas, the legislative session this year saw bills introduced yet again. There are two bills that are identical in both the House (HB 2179) and the Senate (SB 129) addressing dental therapy. The Senate held a hearing and the House did not. At this point, it does not appear that either bill will have any action.

State Medicaid Issues
Medicaid reimbursement rates have been slightly increased each of the past 3 legislative sessions. It remains to be seen whether that will happen again during this year's session. Efforts continue through dental lobbying efforts to see that occur.

Louisiana
No report received.

Missouri

State and Name of SWPD Representative(s)
State: Missouri
SWPD Representative: Craig Hollander, Email: craighdds@msn.com

AAPD Component Information
Component Name: Missouri Academy of Pediatric Dentistry

Southwestern District Trustee's Report, 2021–2022

Officers
President – Rachael Graue, Email: rachaelgraue@gmail.com
Vice President – Emily Hahn
Secretary/Treasurer – Craig Hollander
Immediate Past President – Ashley Popejoy
Membership Contact – Craig Hollander, Email: craighdds@msn.com
PPA Name: Aaron Bumann, Email: aaron.bumann@gmail.com

Number of pediatric dentists in your state
Active: 85
Life: 5
Retired: 5
Affiliate: 18
Student: 23 Graduate Residents and 8 Undergraduate Dental Students
MoAPD saw an increase of 15 new members this past year.

State unit activities, i.e., C.E offerings, meetings:
We had a hybrid state meeting Sept. 23, 2021, in Jefferson City both in person and by Zoom. Our CE speakers were Dr. Tim Wright and E. Laree Johnson who spoke on Facts, Features and Fixes for Molar Hypoplasias. Afterwards we had our annual business meeting to discuss leadership changes and to get reports from our dental schools, residencies, and advocacy activity. We recognized 2 MoAPD members who received the ADA 10 Under 10 Award, 1 member who received the Arthur J. Nowak award for the highest OCE score, 1 member who received the FCOD N. Sue Seale Dentistry research award, and we had new Fellows to the ACD and the ICD as well.

The MoAPD is continuing its efforts to cultivate a Medicaid toolbox which will allow new Medicaid providers to feel more comfortable with the credentialing and reimbursement process. The MoAPD still offers a Speaker' Bureau kit free of charge to members who want to provide presentations to physicians and parent groups in their community and has still been lending out the old DVDs of the Comprehensive review in Pediatric Dentistry for those individuals who are studying for boards, or just want to refresh their knowledge. There were no applicants for the Dental Mission Scholarship award this past year due to the pandemic. We continued our philanthropy by voting to sponsor both the 2022 Missouri Coalition for Oral Health symposium, and the Missouri Mission of Mercy which will be held July 15-16, 2022, in St. Louis, Missouri. We also voted to move our annual meeting each year to the side of the state where the MoAPD President practices, rather than continuously have it in the middle of the state.

We discussed the new dental school which will be in Joplin Missouri and serve the four-state area of Missouri, Kansas, Oklahoma, and Arkansas. The Kansas City University School of Osteopathic Medicine broke ground on the tenth anniversary of the EF5 tornado that hit that town and killed more than 160 people, left more than 1150 people injured, and underscored the need for broader health care services in that area. The first class of 80 students is projected to be seated in August 2023 and will support more than 200 jobs and generate at least $1.7 million in state and local taxes.

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Next year's meeting will be held in Kansas City on Saturday September 17, 2022. Our speaker and topic have yet to be determined.

Dues structure:
Active Member: $50
Affiliate: $50
Life: $25
Active Member First Year: $25
Post and Pre-doctoral Student: $0
Retired: $0

Legislative issues

State Medicaid Issues

- Locally, we have been dealing with hospitals that are restricting access to OR time, partially due to COVID, but also due to the fact that we have experienced at least one system that is dropping dental care entirely. A Missouri Dental Association (MDA) survey was sent out to all MDA members in order to understand the experiences with hospital coverage for Medicaid patients so that the MDA can help advocate for us.

Advocacy

- Continued participation in the MO coalition for Oral Health
- New state dental director - Dr. Guy Deyton. PPA is working to form a good relationship with the new director and advance pediatric oral health within the state oral health agenda.

New Mexico
No report received.

Oklahoma
AAPD Component Information
Component Name: Oklahoma Academy of Pediatric Dentistry
Officer Rotation: Elections will be held following our meeting April 8, 2023, for a new executive committee.

Officers
President: David Evans, Email: evansdmd@gmail.com
Vice president: Dominique Bowers, Email: dbowersdds@gmail.com
Secretary: Sarah Fox Broerman, Email: sarahmegfox@yahoo.com
Treasurer: Dirk Eckroat, Email: dbeckroat@gmail.com
PPA and AAPD liaison: Janna McIntosh, Email: mcnuttintosh@hotmail.com
OAPD advisor: Tim Fagan, Email: Timothy-Fagan@ouhsc.edu

Number of pediatric dentists in your state
OUCOD has three full-time pediatric dental faculty and six part-time.

Southwestern District Trustee's Report, 2021–2022

State unit activities, i.e. C.E offerings, meetings

- Business meeting/CE offering: Annual CE offering was on 4/8/2022. Speaker was Dr. L. Johnson of North Carolina, plus case presentations from OUCOD pediatric honors dental students.
- One scholarship was awarded to the student with the best presentation.
- We also held our business meeting that day.

Legislative considerations:

PPA Name: Janna McIntosh

- The Oklahoma Dental Association (ODA) pushed a bill to prohibit dental insurance companies from bundling, downcoding, and dictating fees on non-covered services. The ODA felt they had enough votes so the bill would pass, however, House leadership refused to let the bill be heard on the floor. The ODA plans to push a similar bill in the next session.
- Our governor wants to change our state managed Medicaid program to a managed-care model. He pushed his agenda last session and bypassed the legislature ODA and several other healthcare organizations filed suit, and the Oklahoma Supreme Court ruled that the governor cannot bypass the legislature to evoke massive changes in the Medicaid program. In the current session, our Senate has already passed a managed-care bill. The bill has gone to a House committee and will be heard on the House floor very soon. At the time of this writing, we don't know if the bill will pass. I can send our trustee an update when the information becomes available.

Texas

State and Name of SWPD Representative(s)

State: Texas

SWPD Representative: Dr. Mary Fuselie, Email: maryseawell.fuselier@gmail.com

AAPD Component Information

Component Name: Texas Academy of Pediatric Dentistry

Officer Rotation: Annually each May

Officers

President – Roberto Loar, DDS, Email: loar.roberto@gmail.com

Vice President –

Secretary/Treasurer –

Immediate Past President – Benjamin Morgan, DDS

AAPD Liaison – Jeff Rhodes, DDS, MS

Membership Contact – Monica Fairchild. Email: email@tapd.org

Number of pediatric dentists in your state

615

State unit activities, i.e. C.E offerings, meetings

3 CE courses/year, 3 Board Meetings/year and 1 General Assembly

Southwestern District Trustee's Report, 2021–2022

Dues structure and collections:
Active Member: $300
Faculty: $150
Associate: $150
Affiliate: $150
Active Member First Year: $150
Post and Pre-doctoral Student: $0
Retired: $0
Life: $150

State Component Actions

- Attempting to get a bill to have medical cover anesthesia costs for dental care under anesthesia.
- Being aggressive to make sure teledentistry is adjunctive to our practice and not harmful to children or put them in position to be monetized for their dental benefits.
- Polling membership on big topics coming our way: expanded function, local anesthetic for hygienists, how many of our members are working corporate or what working environment they are in.
- Complete rewrite of the Medicaid handbook with 3 pediatric dentists on the committee. We are very proud of this one!
- Had some meetings with the Texas Academy of Pediatricians and the Texas Hygienists Association to try to figure out issues that we might help each other with.

Respectfully Submitted,

Jeffrey D. Rhodes, DDS, MS
Southwest District Trustee

Jonathon E. Lee
Trustee
Western District
2021–2024

Trustee Activities

- Attended the AAPD Board of Trustees 2020-2021 Meeting May 15, 2021
- Attended the AAPD Board of Trustees 2021-2022 Meeting May 15-2021
- Attended the AAPD General Assembly May 30, 2021
- Submitted Western District Trustee Report to CSPD for Publication for the Fall CSPD Bulletin June 27, 2022
- Attended CSPD Summer Board Meeting July 10, 2021
- Attended AAPD Board Orientation and Media Spokesperson Training July 15-18, 2021
- Attended AAPD Board of Trustees September 25 2021
- Attended the WSPD Board of Trustees Meeting October 1, 2021
- Attended the Washington State Academy Membership Business Meeting and CE with UCLA's Dr Clarice Law October 2, 2021
- Attended CSPD Fall Board Meeting October 16, 2021
- Submitted Western District Trustee Report to CSPD for Publication for the Fall CSPD Bulletin November 3, 2022
- Attended the AAPD Winter Board of Trustees and Planning Meeting January 14-15, 2021
    - Attended the AAPD Awards Committee Meeting
    - Worked with AAPD Communications Committee Chair Reza Ardalan and reviewed charges of the committee
    - Followed up with AAPD CE Chair David Avinetti to see if there are any issues he has. There are none.
- Attended the California Society of Pediatric Dentistry Board of Directors Meeting January 22, 2022
- Attended the Alaska Academy of Pediatric Dentistry Meeting January 22, 2022
- Followed up with Reza Ardalan Regarding AAPD Communications Committee January 29, 2022
- Attended the Nevada Academy of Pediatric Dentistry Meeting January 29, 2022
- Received Affiliate Member Position Statement from Nevada Association of Pediatric Dentistry
- Submitted Western District Trustee Report to CSPD for Publication for the Winter CSPD Bulletin March 3, 2022
- Attended the California Society of Pediatric Dentistry Board of Directors Meeting March 31, 2022
- Attended the WSPD Board of Trustees Meeting April 2, 2021
- Submitted Western District Trustee Report to CSPD for Publication for the Spring CSPD Bulletin April 14, 2022.

Western District Trustee's Report, 2021-2022

- Received Email from WSPD President Dr Dennis Nutter on April 18, 2022 and Forwarded the email to AAPD President Jeannie Beauchamp, AAPD President Elect Amr Moursi and AAPD CEO John Rutkauskas for clarification.

Trustee Responsibilities

Board of Trustees Awards Committee (Trustee)
Council on Continuing Education (Board Liaison)
Chair: David Avenetti
Staff Liaisons: Kristi Casale, Rachael Haave, Colleen Bingle
Council on Continuing Education, Speakers Bureau Committee
Chair: Scott Goodman
Staff Liaisons: Kristi Casale, Rachael Haave
Council on Membership and Membership Services, Committee on Communications
Chair: Reza Ardalan
Staff Liaison: Cynthia Hansen

District Activities

To date, there is concern regarding the proposal for Affiliate Member Acknowledgement (which has not yet been submitted). The Western Society has issued the following Consensus Statement:

The Officers and Trustees of the Western Society of Pediatric Dentistry wish to express our opposition to a component of the Affiliate Track Program that is being developed by the Affiliate Advisory Committee (AAC). The "background and intent" of the Affiliate Track Program identifies that is has two components, an "acknowledgement" component and a "pre-defined activities" component.

The WSPD Board specifically opposes the "acknowledgement" component of the Affiliate Track Program. We are not opposed to the component of developing "pre-defined activities" for Affiliates as a part of AAPD's recruitment and retention process as long as those activities do not result in an AAPD endorsement of the Affiliate that could imply special expertise or training. We do not think that "acknowledgement" and "pre-defined activities" are necessarily linked.

In general, we oppose any program development for Affiliate members that would require a change in the current bylaws which prohibits Affiliates from using the "academy name, logo, membership status, or imply special expertise or training".

AAPD WESTERN DISTRICT TRUSTEE REPORT

WSPD & AAPD NEWS

Dr. Jonathon Lee - 11th AAPD Western District Trustee

It is a privilege to serve as your Western District Trustee for the American Academy of Pediatric Dentistry which began Sunday, May 30, 2021.

On Saturday, June 26, CSPD held its first in-person Board of Directors Meeting with Dr. Gila Dorostkar presiding.

It was great to see everyone. What a wonderful experience the Board meeting was.

As a CSPD Past President, it was beautiful to see a Board that reflects the membership it represents. It goes with the overriding social theme set forth by Arizona WSPD District member Dr. Laila Hinshaw and celebrates our broad experiences, viewpoints, inclusiveness, and respectful collaboration.

As such, the CSPD Board discussions were balanced and provided good perspectives from multiple points of view.

Gila with CSPD Leadership Development Committee member, Dr. Michael Suh, invited Past CDA Speaker of the House of Delegates, Dr. Craig Yarborough, to speak to the CSPD Board on Leadership. To paraphrase Dr. Craig Yarborough, Good Leaders are Honest and Do the Right Thing. Your leadership is doing just that.

It is excellent and healthful that CSPD is examining current issues and associated Legislation. For example, CSPD is examining Sugar-Sweetened Beverages and evaluating the current data. CSPD has been at the forefront of this, which aligns with our Mission and Vision of exemplary oral health for all infants, children and adolescents. For example, at the 2018 CSPD Annual Meeting in San Diego, our Keynote Speaker, Dr. Lustig, spoke of the health effects of sugar.

In three short years, it is apparent and undeniable that Sugar-Sweetened taxes have an impact. As such, the guarded unintended consequences need examination, such as the "nanny state" that requires negotiation, equity and ensuring revenue from those taxes goes to programs that will impact and encourage optimal health. As we know, caries and cardiovascular problems in society have many facets, so a well-rounded collaborative discussion and solutions beyond a simple taxation policy will help encourage optimal and exemplary health for children.

What Happens Out West Spreads to The Rest. Gila's efforts at getting more collaboration amongst stakeholders to participate in discussion at the table are showing and very important. California and the District have a remarkable history of setting precedent and being early adopters. As a State and District, we initiated the discussion at the AAPD BOT on things such as The AAPD Policy on School Absences. CSPD and the WSPD continue the excellent work, and I am proud to represent CSPD and the District at the National Level.

As an AAPD Trustee, I am also the AAPD Board Liaison to:

1. The AAPD Council of Continuing Education
2. The AAPD Council of Continuing Education, Speakers Bureau Committee
3. The AAPD Council on Membership and Membership Services, Communications Committee
4. AAPD BOT Awards Committee

What is Happening at WSPD and AAPD?

Both Our Districts - The Western Society of Pediatric Dentistry and Our National Parent Organization, The American Academy of Pediatric Dentistry - have been busy serving the membership and the public by advocating optimal oral health for infants, children and adolescents.

There is exciting news about Sedation Safety in the Pediatric Dental Office. The AAPD Board of Trustees and the Council of Continuing Education have endorsed the American Heart Association's (PEARS®) course as appropriate for Dental Auxiliaries.

The Current AAPD Sedation Best Practices for Monitoring and Management of Pediatric Patients Before, During, and After Sedation for Diagnostic and Therapeutic Procedures state that for support personnel during Minimal to Moderate Sedation that "[t]his individual should be trained in and capable of providing advanced airway skills" of which PEARS® fulfills. More details on this exciting news are below.

On Saturday May 29, 2021, The WSPD Board of Trustees virtually held both its Board of Trustees Meeting as well as the WSPD General Membership Meeting and District Caucus.

The WSPD Updated the Bylaws:

1. Added a New Officer Position: President Elect.
2. Vacancies Language was updated for clarification.
3. Treasurers and Secretary Term of office extended.

The New AAPD Board of Trustees has planned its orientation meeting and Media Spokespersons Training in Chicago on July 15-17, 2021.

AAPD held its Spring Board of Trustees Meeting on May 15, 2021 and held its General Assembly of the Membership Meeting on Sunday May 30, 2021.

On June 22, 2021, the AAPD Board of Trustees voted unanimously to approve the following motions:

Motion 1

To approve the minutes of the May 15, 2021, meetings of the Board of Trustees.

Of Significance, the AAPD Board of Trustees moved to approve the transfer of the PEARS® program From the Council of Continuing Education to the Scientific Program Committee so that it aligns with the Annual Session. The Council on Continuing Education reviewed the course and reported that it is an appropriate course offering for dental auxiliaries. The course could also be offered by state and district chapters. As such, both CSPD and WSPD could offer this course.

The AHA pediatric training program, Pediatric Emergency Assessment Resuscitation and Stabilization (PEARS®) teaches healthcare providers how to recognize respiratory distress, shock and cardiac arrest, and provide appropriate lifesaving interventions within the initial minutes of care for seriously ill or injured infants and children.

The AHA's PEARS® Course is a classroom-based, Instructor-led course, where participants learn how to use a systematic approach to quickly assess, recognize the cause, and stabilize a pediatric patient in an emergency situation.

It is designed for healthcare providers and others who might encounter pediatric emergency situations during their work, including: Dentists, Physicians, Nurses, Nurse practitioners, Physician assistant, Emergency medical technicians, Respiratory therapists, Prehospital and in-hospital healthcare providers (outside of critical-care areas), Outpatient clinic staff and School-based providers.

The goal of the PEARS® Provider Course is to improve outcomes for pediatric patients by preparing healthcare providers in assessment, early recognition, prompt communication, and initial intervention in patients with respiratory emergencies, shock, and cardiopulmonary arrest by using high-performance team dynamics.

The board minutes are now public, and have been posted in the Governance section of the Member Resources page of the AAPD website (https://www.aapd.org/resources/member/governance/).

https://www.aapd.org/globalassets/2021-05-15-2020-21board-minutes.pdf and https://www.aapd.org/globalassets/2021-05-15-2021-22board-minutes.pdf

Motion 2

To approve the minutes of the May 30, 2021, meeting of the General Assembly of the American Academy of Pediatric Dentistry.

The General Assembly minutes are now public, and have been in the Governance section of the Member Resources page of the AAPD website (https://www.aapd.org/resources/member/governance/).

https://www.aapd.org/globalassets/2021-general-assembly-minutes.pdf

Motion 3

To approve the appointments of Dr. Homa Amini as a consultant to the Council on Scientific Affairs and Dr. Catherine Flaitz as expert consultant to the Council on Clinical Affairs.

These members will receive letters of appointment and the appropriate forms.

Next Year the AAPD will be celebrating its Diamond Jubilee 75th Anniversary and the Annual meeting will be held in our State and District in San Diego. At the CSPD Board meeting it was announced that AAPD President Dr. Jeannie Beauchamp has appointed CSPD Past President and District Trustee-Dr. Jacob Lee and his son- Dr. Aaron Lee to serve as the AAPD Local Arrangements Co-Chairs for San Diego. I look forward to seeing everyone there. It is a pleasure serving as your AAPD Western District Trustee and Thank You for the opportunity.

AAPD WESTERN DISTRICT TRUSTEE REPORT

A LIGHT AT THE END OF THE PANDEMIC TUNNEL *COALITIONS ARE OUR FUTURE AND STRENGTH*

Dr. Jonathon Lee - 11th AAPD Western District Trustee

AAPD is the Umbrella of Organized Pediatric Dentistry under which the Western District and the State of California reside. In this period of inclusion, good leaders weigh breadth of opinion. Diversity of opinion is important because hearing different points of view prevents the reinforcement confirmation bias.

As the largest state and district, California and the Western District respectively have a long history of providing points of view to the leadership of AAPD that have advanced Pediatric Dentistry and supported its members.

Initiatives from the West have led to the establishment of Simplified Unified Tripartite Dues Collection, AAPD Policy on School Absences for Dental Appointments, and Clarification of the Role of the Midlevel Provider in Pediatric Dentistry, to name a few.

The same is true where AAPD has helped the State and District. For example, AAPD helped CSPD when developing The California Society of Pediatric Dentistry Position Statement and Legislative Policy Regarding Minimal, Moderate, and Deep/General Anesthesia used during Dental Treatment of Children when addressing Legislative Sedation issues in California such as SB501 in 2018.

The Affiliate General Dentist Member of AAPD has been an engaging topic through the years. According to District Numbers from WSPD Executive Assistant, Dr. Christine Roalofs, there are 61 General Dentist members of AAPD in California.

As far as the rest of the State and Province Chapters of our District, the General Dentist Affiliate Members are as follows: Alberta- 1, Alaska- 1, Arizona- 9, Idaho- 1, Hawaii- 1, Montana- 1, Nevada- 4, Oregon- 7, Utah- 3, and Washington State- 12.

Recently, as noted below in Action Item 19 of the published minutes of the AAPD BOT September 25, 2021 meeting, The AAPD BOT moved to charge the AAPD Affiliate Advisory Committee to investigate developing an affiliate track for affiliate members to earn acknowledgement.

The AAPD Leadership is interested in your thoughts regarding the GP Affiliate AAPD Membership Category and proposed earned acknowledgement. Please share your thoughts to the leadership of CSPD who will relay to the District, which will relay it to AAPD.

It is a pleasure to serve as your Western District Trustee.

Actions taken by the AAPD Board at the September 25, 2021 meeting:

No. 19: To charge the Affiliate Advisory Committee to investigate developing an affiliate track for affiliate members to earn acknowledgement. Action Carried.

- To accomplish the mission of advancing optimal oral health for all children, we need to help the general practitioners who treat children.
- Teaching GPs helps them recognize what they're not able to take care of and when it's time to refer to pediatric dentists.
- We need to attract more GP members so we can educate more GPs; to attract, we need to give them something.
- The more GPs who are AAPD members, the more control we have over what they learn and how they treat children.
- Need to be sensitive to potential effect on pediatric dentists.
- Report to the Board in January.

No. 21: The AAPD strongly urges our members and their staff to be vaccinated against COVID-19. Action Carried.

AAPD 2021-2022 Budget:

Summary of adjustments to the 2021-2022 budget approved by the Board of Trustees:

- Expenses, Original: $11,471,181.70
- Revenue, Original: $ 10,238,503.74
- Net loss: - $1.332,677.96

Adjustments Detail:

- Revised AAPD Annual Session Expenses: $2,877,009.49
- Revised AAPD Annual Session Revenue: $2,373,987.00
- Net loss for AAPD 2022: - 503,022.49
- $250 - IADR/AAPD Research Award (Motion 12)
- Expenses, Revised: $11,045,356.50
- Revenue, Revised: $9,657,731.94
- Net loss: - $1,387,624,56

To read the full account of AAPD Board Motions, visit the AAPD District Trustee Report at cspd.org.

AAPD WESTERN DISTRICT TRUSTEE REPORT

GENERAL DENTIST AAPD AFFILIATE MEMBER ACKNOWLEDGMENT

Dr. Jonathon Lee - 11th AAPD Western District Trustee

Recently, one of the Action Items from the September 25, 2021, meeting of the American Academy of Pediatric Dentistry (AAPD) Board of Trustees (BOT) has created concern amongst our District Pediatric Dental Specialist Members. The action item is for the Affiliate (General Dentist) Advisory Committee to investigate developing an affiliate track for affiliate members to earn AAPD acknowledgment.

As such, AAPD President Dr. Jeannie Beauchamp has asked me to clarify the process for addressing this topic, notify the District Membership, and reassure everyone that they will have ample opportunity to discuss this issue openly.

What is next, and what can you do to effectively share your perspectives with AAPD leadership and membership? **First, we need to see what the Affiliate Advisory Committee presents. President Beauchamp wrote to me that their report which is to be presented to the Board in May 2022 would be available to all members.** Second, we welcome your input and feedback. AAPD embraces the diversity of opinion, the inclusion of perspectives by AAPD Active and Life Members, and equity amongst the AAPD Active and Life Pediatric Dental Specialist Members and the AAPD Elected and Appointed Officers. In addition, AAPD welcomes input from the Leadership of the Districts, States, and Provinces. Remember, this is your Academy. As such, our founding fathers 75 years ago ensured AAPD has a place and time for these discussions.

Based on member input, the Board will determine, if any, action to take on the Committee Report. Following any Board action, there will be more opportunities for discussion throughout the year and then at the 2023 Reference Committee Hearings and General Assembly of the Membership, which happens every year at the Annual Session. Any changes to the Affiliate Membership category must then be approved by a majority vote of the Active and Life Members at the General Assembly.

My duty as your District Trustee is to keep you abreast of the issues addressed by the AAPD and the process for addressing those issues. It is also my responsibility to be your voice on the Board, so I welcome your input as this process moves forward.

I look forward to seeing everyone in San Diego for our annual session of the AAPD celebrating 75 years as an Association!

Western District Trustee's Report, 2021-2022

The Return of In-Person Membership Meetings and the AAPD General Assembly of the Membership

Thank you to the Volunteer Leadership of CSPD and WSPD for hosting a great membership meeting in Scottsdale, Arizona, from March 31 to April 3, 2022.

After a one-year hiatus of In-Person CSPD/WSPD Membership meetings due to the COVID-19 Pandemic, it was nice to reunite with friends and colleagues I have known and met over the past 25 years and meet new ones this year. Once again, the CE Program was Outstanding. There is something special about In-Person Membership Meetings.

Speaking of In-Person Meetings, I look forward to seeing everyone in San Diego for the AAPD Annual Session, celebrating 75 years as an Academy. Kudos to CSPD Past President Dr. Jacob Lee and his son Dr. Aaron Lee for chairing the Local Arrangements Committee.

One of the integral parts of the AAPD Annual Session is The General Assembly of the Membership. The General Assembly is the meeting of the Active and Life Pediatric Dental Specialist members of AAPD to conduct the business of the Academy.

The 2022 General Assembly will take place on Sunday, May 29, 2022, at 9:30 -11:30 AM local (Pacific) time in Room 6A at the San Diego Convention Center. AAPD provided notice of this General Assembly as required no less than thirty (30) days before the session, on page 25 of the March 2022 PDT.

This year, there are Constitution and Bylaws amendments to be discussed. In addition, there are proposed changes/additions to oral health policies and best practices of the American Academy of Pediatric Dentistry that the General Assembly of the Membership will consider.

AAPD printed and mailed these proposals in the March 2022 issue of PDT and posted them on the AAPD website. Note: due to the length of the oral health policies and best practices proposals, they are only available online. All members have been alerted to this availability via AAPD E-News.

Constitution and Bylaws Amendments

The proposal is for the deletion of the Leadership Development Committee of the Board of Trustees.

Background: In 2016, the Board of Trustees recommended and the General Assembly approved a Bylaws amendment to create a Leadership Development Committee. This recommendation stemmed from a report to the Board from the Talent Pool Task Force. Among many recommendations, this task force recommended that the AAPD establish a permanent committee of the Board of Trustees solely focused on leadership development opportunities for AAPD members. This committee would evaluate the current AAPD programs: the Leadership Institute at the Kellogg School of Management/Northwestern University and the Advanced Leadership Institute at the Wharton School of Business/the University of Pennsylvania, and make recommendations for their future continuation and direction. The committee would also actively work to identify volunteer leaders to assist the

Western District Trustee's Report, 2021-2022

President-elect in the annual process of making appointments to the various AAPD councils and committees.

The Board of Trustees has evaluated the committee's efforts and reached the following conclusions:

- The committee provided feedback on leadership development programs, enabling the Board of Trustees to evaluate their effectiveness. This work is complete.
- A separate committee has not proven necessary for consideration of future leadership development programs; that is within the purview and expertise of the Board of Trustees.
- Based on committee feedback, the AAPD has revamped and updated its process for identifying and recruiting volunteer leaders to serve on various councils and committees. This work is complete.

In conclusion, the Board of Trustees believes this committee has completed its work, AAPD has systemized the programs noted above, so the committee is no longer necessary.

For More Information on the Constitution and Bylaws Amendments, go to:
https://www.aapd.org/globalassets/2022marchpdt.cb.pdf

Oral Health Policies and Best Practices Proposals

In regards to the Oral Health Policies and Best Practices Proposals, go to:
https://www.aapd.org/globalassets/2022_policies_bestpractices.pdf

When Can Members Discuss their Concerns and Positions On the Proposals?

There are two opportunities. The first time is at the Reference Committee Hearings. The second and final time is at the General Assembly,

Reference Committee Hearings

Prior to the General Assembly, Reference Committee hearings will occur on Saturday, May 28, 2022, from 10:00 to 11:30 AM in Room 11AB. The hearings are open to all AAPD members, who are strongly encouraged to participate.

The Reference Committee Hearings is the venue for member discussion on any formal resolutions before the General Assembly. This year, the resolutions will be the Constitution and Bylaws amendments and proposed changes/additions to oral health policies and best practices recommendations of the American Academy of Pediatric Dentistry.

The Reference Committee Hearings is the opportunity for members to present testimony on these matters and other business before the General Assembly. In addition, AAPD will post the Reference Committee Hearing Reports online following the hearings.

Final action on recommendations from the Reference Committees takes place at the General Assembly, where the Active and Life members of AAPD will decide whether or not to approve those recommendations.

Western District Trustee's Report, 2021-2022

New and Other Business of The Academy
Members can bring up any new business to discuss with leadership. New business brought before the General Assembly requires approval by a two-thirds (2/3) majority vote to be considered. If the vote is successful for consideration, discussion of the new business will be open to the membership, and the membership will vote upon associated motions. A majority vote passes the motion.

Again, the 2022 General Assembly will take place on Sunday, May 29, 2022, at 9:30 - 11:30 AM local (Pacific) time in Room 6A at the San Diego Convention Center.

Thank you, and I look forward to seeing everyone in San Diego for our Annual Session of the AAPD celebrating 75 years as an Academy.

State Unit Reports

Alaska
Province/State: Alaska
WSPD Representative(s) - Rob McAlpine, Email: Robmcalpine7@yahoo.com
AAPD Component Information
Name: AKAPD
Officer Rotation: indefinite
Officers
President - Heidi Ostby
Immediate Past President- Christine Roalofs
Vice President - Megan Foster
Secretary - Susan Sergi
Treasurer - Allison Walsh
PPA-Jessy Blanco
Number of pediatric dentists
State Member Pediatric Dentists: 30+
State unit and related activities, i.e. C.E offerings, meetings
Had a great CE Course in January 2022 with 15 CE's offered.
At this meeting we were able to discuss the AAPD recognition of non-pediatric dentists.
Dues structure
Dues Structure: Active Member: $50 Faculty:
Associate:
Affiliate:
Active Member First Year: free Post and Pre-doctoral Student: free Retired: N/A
Unit Board Update
AAPD affiliate dentist recognition discussion.
State Board Issues
No news at this time.
Legislative issues
Dr. Jessy Blanco is the ADS President and as such has a seat on the government affairs committee.
Going through the state legislature at the moment is a two part dental bill (HB295) regarding radiologic inspections - requesting the state take that over - the second part is to reinstate specialty licenses. The bill was introduced early this session and on 2/22/22 it was

referred to the Health and Social Services Committee. It was scheduled for hearing and public comment today at 3pm where the public could call in and provide testimony but I just learned the meeting was canceled because covid has swept the capitol and all the legislators are going home, hitting the pause button on anything productive until probably next week.

Since this bill affects our practice, I will do a better job at notifying both of you in case you would like to spread the word or call in yourselves for testimony.

There is another dental related bill (HB111) from the dental hygienist association regarding their advanced practices.

"An Act relating to the practice of dental hygiene; relating to advanced practice permits for dental hygienists; relating to dental assistants; prohibiting unfair discrimination under group health insurance against a dental hygienist who holds an advanced practice permit; relating to medical assistance for dental hygiene services; and providing for an effective date." The hygienist bill was presented last year for the first time, 2/24/21. The last action on this bill was on 3/30/22 when it was referred to the Finance Committee.

State Medicaid

The Dental Medicaid advisory committee has been helping give professional feedback to Medicaid over the past 2.5 years as they have been rewriting and proposing the changes to both adult and pediatric Medicaid. Main topics over the past few years have been focused on decreasing fraud and overtreatment...they are trying to hone in on providers that abuse Medicaid which is great, but they didn't go about it the right way. They initially proposed not covering a bunch of things like sedations, multiple extractions, crowns, pulps, etc. The advisory committee helped them re-write their proposed changes and it has been going back and forth...the most recent DMAC meeting was Jan 28 led by Dr. Michaud a dental anesthesiologist. The most recent proposed changes by Medicaid has very concerning pre-auth requirements (i.e pre-auth for 2+ extractions and crowns). Public comment was open until Feb 7 I believe, and we have yet to hear back from them after we gave them our feedback (which obviously is requesting no pre-auth since that is not possible for so many of our kids but more specifically all urgent and village GA kids).

We have seen a drop in Orthodontists that accept Denali Kid Care over the last 1.5 years.

Advocacy

Dr. Blanco was able to visit DC to advocate for the AAPD this year:

The main issues advocated for were:

- HRSA TITLE VII dental cluster reserves no less than 14 million dollars for pediatric dentistry training programs. The second part to that is that faculty loan forgiveness received through that funding be non-taxable.
- The next topic was on the Ensuring Lasting Smiles Act (ELSA)
- The last issue was regarding OR Access

All of our Alaskan Congress members have always been supportive of any dental related issues I have discussed with them and this year was no different.

Access to care issues

There has been a decrease in medical travel throughout the state making it more difficult for patients to receive care outside rural Alaska. With Providence Hospital taking away block time and losing tons of staff it is difficult to get surgeries for medically compromised kids. Also difficult scheduling surgery for military children since Tricare no longer covers anesthesia unless it is in a surgical center/hospital (that change happened late 2019).

Western District Trustee's Report, 2021-2022

Children with Medicaid are struggling to receive ortho due to only one orthodontist now accepting it in Anchorage area. Also difficult for children with Medicaid to receive RCT/endo since there is only one provider that accepts it. Very limited perio access in the state as well.

Patients needing to be seen at health centers outside of Alaska such as Seattle Children Hospital seem to be hitting some barriers as well.

Other Issues

Many of Alaska's communities are non-fluoridated

Arizona

WSPD Reps: Bobby Yang and Abe Itty

Legislative Issues

SB1074 Dentist Scope of Practice; BOTOX - passed both house and senate, signed by the governor on 3/18, will take effect 90 days from the close of the legislative session

SB1112 Dental Hygienists Scope of Practice - never made it out of committee

HB2698, Insurance; Assignment of Benefits - this was passed last year but delta found a loophole and deemed the legislation passed in 2021 did not apply. This bill fixes that and AZ will be the first state to challenge utilizing the reversal of McCarron to a level playing field. bill has been Passed in House of Reps. and going to Senate

SB1240 dental board; access to records - Amendment - SB1568 health professionals; complaints; investigations. Fixes to dental practice act including clarifying licensing renewals to birthdays.

This was brought up due to dentist not submitting dental records to the board upon request and demanding to be paid for submitting the records. This would require dentist to submit required documents to investigate a board complaint without having to pay for those records.

California

Province/State: CALIFORNIA SOCIETY OF PEDIATRIC DENTISTRY

WSPD Representative(s): Gila Dorostkar, CSPD President

Province/State unit and related activities, i.e. C.E offerings, meetings

In our continued effort to provide online CE membership benefits, CSPD hosted a Lesion Sterilization and Tissue Repair webinar in March (LSTR) which was very well attended and recorded our highest registration numbers to date for any webinar during the 2021/2022 year. Other webinars offered this year focused on Cybersecurity for dental practices, COVID-19 protocol updates for pediatric dental practices, and an Early Career Dentist Financial Awareness webinar. All webinars were recorded and are available on the CSPD.org Online CE platform.

We are looking forward to our highly anticipated Annual Meeting in Scottsdale, Arizona at the Omni Montelucia Resort. In addition to an outstanding line-up of speakers, fabulous social events are planned on the property including an Early Career event at TopGolf.

State Board Issues

SB 501

The Dental Board of California is still in the regulation process of sedation bill SB 501. In December, all permits expiring in 2022 were given the chance to renew for another 2-year period since the law was not ready to go into effect on January 1. It is expected that the Board will finish implementation of SB501 by June.

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CSPD sent out periodic SB 501 membership advisory eblasts in the fall and winter to update our members on what was going with the bill as there was a great deal of confusion about dentists' requirements on the original January 1 effect date. CSPD will continue to keep our members informed as the process evolves and will continue to provide resources that will help our members understand the new law and its requirements.

Legislative Issues

SB 889

This bill would allow nurse anesthetists to provide deep sedation or general anesthesia to dental patients under the supervision of a dentist. The CSPD Board of Directors will be discussing our position on SB 889 during our Board meeting in Scottsdale.

AB 2276

To address workforce issues, this bill would authorize dental assistants to polish the coronal surfaces of teeth or apply pit and fissure sealants under the direct supervision of a licensed dentist when the dental assistant has completed specified training and provided evidence of the completion of that training to the board. This bill would allow dental assistants to perform certain duties without obtaining a formal Registered Dental Assistant license as is the case presently.

Access to Care Issues

The California Dental Association has requested CSPD's support of a FY 2022-2023 state budget appeal proposing underwriting grants for the establishment of dental facilities serving the sedation and general anesthesia needs of pediatric and patients with special healthcare needs. Specifically, they asked if CSPD was interested in being part of a CDA-led coalition of healthcare providers supporting the budget initiative. Proposed coalition activities include signing onto a coalition support letter, lobby meetings with key budget members of the legislature and Governor's office, assistance with story collection and identifying spokespersons for media contacts, and participation in virtual legislative staff briefings. CSPD has affirmed its support.

Hawaii

WSPD Representative(s): Lynn Fujimoto DMD

Province/State unit and related activities, i.e. C.E offerings, meetings

None since the last report

State Board Issues

None to report

Legislative Issues

Hawaii Dental Assn. will be asking dentists to submit testimony to our consultants Hawaii Public Policy Advocates (HPPA) in support of HB 1754 and SB 1294, the Adult Dental Medicaid funding bills.

HDA has also supported bills providing that dental assistants in a public health setting can work under the general supervision of a dentist (HB 1977, SB 2280) which was introduced at the request of the Oral Health Coalition. HDA's Legislative Program continues to support tobacco cessation measures and monitor bills related to telehealth and electronic prescription accountability system.

Advocacy

NYU Langone Pediatric Dentistry will have two residents, Drs. Liza Heron and Mika Katsura, attend the AAPD Public Oral Health Conference in Washington DC March 13 – 15, 2022. Dr.

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Katsura is sponsored by the WSPD Stamp fund. Appointments have been made with all four Hawaii legislators: Senator Brian Schatz, Mazie Hirono, Rep. Kai Kahele and Ed Case.

State Medicaid

Bill for reinstatement of adult dental benefits for Medicaid patients has passed the House and Senate.

Access to care issues

None; NYU Langone has exceptional opportunities to OR time at Shriner's Hospital for children. OR cases are booked almost every day of the week.

Other Issues

None to report

Idaho

WSPD Representative(s): Richard Manwaring

Province/State unit and related activities, i.e. C.E offerings, meetings

Annual Idaho Society of Pediatric Dentistry meeting on June 10th will be in conjunction with the Idaho State Dental Society Annual Session. Our meeting will include a CE lecture by Joel Berg on the topic of restorative dentistry updates in pediatric dentistry.

State Board Issues

No current issues

Legislative Issues

No updates from last meeting

State Medicaid

Working with Idaho Dept. of Health and Welfare regarding rate increases and a yearly re-assessment of reimbursement rates. A budgetary increase for Medicaid through legislation is a lengthy and difficult process in our state. Many pediatric dentists are dropping Medicaid due to reimbursement so it will become more problematic.

Advocacy

No changes from last meeting

Access to care issues

Becoming more and more difficult to find oral surgeons, endodontists, and general dentists to take patients with Medicaid. Many will "accept" it, but they will severely limit the number to where a wait list can be close to a year to be seen. Big issue especially is transitioning 18-year-olds on Medicaid to a general practice

Other Issues

None to report

Montana

WSPD Representative(s): Nate Stevenson

Province/State unit and related activities, i.e. C.E offerings, meetings

None to report

State Board Issues

The state board is debating changing how they license sedation offices. They're trying to put that on the office to hire an outside company and will be required to renew every couple of years. This includes small dental offices not just surgical centers. In that same proposal are restrictions on Nitrous: specifically any use of nitrous to require blood pressure cuff and pulse ox symmetry. We are curious to see what other states have done with this. A few years ago one of the other states was having the same issue

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Legislative Issues
Not in session this year
State Medicaid
New governor has stated privately his health department wants to send Medicaid dental to a private managed care model like other states.
Advocacy
Access to care issues

Nevada
WSPD Representative(s): Dr. Travis Neu
Province/State unit and related activities, i.e. C.E offerings, meetings
None to report
State Board Issues
General dentist affiliate member being worked on currently by everyone it seems. Currently waiting for updates.
Legislative Issues
None currently
State Medicaid
Currently in Nevada all anesthesia groups have decided to stop seeing children with Medicaid under general anesthesia at surgery centers. They cite low reimbursement for dental cases.
Advocacy
After speaking with the NVAPD president it was recommended to her that Nevada find a lobbyist. This has not been decided yet and just a recommendation currently.
Access to care issues
Medicaid and general anesthesia cases. Many offices are unable to perform treatment to those in need due to the anesthesia groups unwilling to do the cases.
Other Issues
None to report

Oregon
WSPD Representative(s): Natasha Bramley
Province/State unit and related activities, i.e. C.E offerings, meetings
No scheduled meetings at this time
Legislative Issues
Dental Therapy proponents did not receive their requested funding.
Oregon Dental Association did not receive their requested funding.
HB 4035 the Medicaid Redetermination/Bridge Plan bill- we successfully added a dental representative to the task force and the language requires the task force to: Provide, at a minimum, all essential health benefits, as defined in ORS 731.097 and, to the extent practicable, an option or options for dental coverage.
HB 4095 Veterans Benefits- passed.
SB 1538 COFA Dental- passed.
HB 4096 - Volunteer qualified health providers allowed to volunteer in Oregon without Oregon License for up to 30 days in a calendar year. (30 days was amended from 15.) This bill aligns all major health care licensing boards.
Advocacy

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I took a resident (Maria Choi, OHSU) to DC for the first time!

Utah
WSPD Representative: Edee Lin
AAPD Component Information
Name: UAPD
Dr. Clark Romney
Number of Pediatric Dentists:
Active members: 87 according to AAPD websites Affiliate members: 7
State unit and related activities, i.e. C.E offerings, meetings
UAPD had a meeting and CE class on 9/17/2021.The members agreed to have annal meeting in September (Second Friday of September).
UDA offers free CE (CQI seminar with 2 CE) to all UDA members once a year.
Dues structure and collections
No dues for UAPD yet.
Legislative issues
No more State dental representatives on the hill.
H.B. 359 Dental billing amendments
https://le.utah.gov/~2021/bills/hbillint/HB0359S01.pdf
State Medicaid:
Low reimbursement.
Advocacy
Non dentists can own dental practices. Low reimbursement
Access to care issues
None. Over saturated.

Washington
Province/State and Name of WSPD Representative(s)
Province/State: Washington State
WSPD Representative(s): Patricia Benton, Harlyn Susarla
Province/State unit and related activities, i.e. C.E offerings, meetings
Midwinter/Spring Meeting: WSAPD 2022 Meeting in collaboration with NuSmile, Saturday, March 26th, 2022 with Dr. LaRee Johnson at Salish Lodge & Spa
CERP certification in process
State Board Issues
Proposed rule changes regarding dental anesthesia rules
Legislative Issues
Legislation coming to address the workforce shortage, dental therapists will be discussed again
RDH/Workforce Shortage

- Proposed bill that will ask for the ability to hygienists to come into Washington and practice up to the level of their individual training
- Opposed by RDHs, do not want to remove the restorative requirement
- WA is the only state with restorative licensure requirements for RDH
- WSDA also trying to work with community colleges and other programs to increase the number of hygiene positions, possibly new programs- also considering take from 4 year program to 2-3 year program

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Rep. Michelle Caldier bill proposal: addressing DIY dentistry in our state

- Requires people who are receiving ortho treatment to see a dentist for an exam prior to starting care

State Medicaid

Pediatric Medicaid reimbursement fees will be increased by $42 million a year starting in Jan 2023. The last increase was in 2009.

Advocacy

WA State PPA, John Gibbons, is the WSDA President-Elect

WSDA "Stop Big Sugar" Campaign: WSDA-funded campaign to improve the transparency of public advocacy efforts in WA state

The Kellogg Foundation has spent millions in funding comprehensive advocacy campaigns pushing dental therapy in WA and across the country

Although separate, the Kellogg Foundation remains closely aligned with the Kellogg company- the makers sugary cereals and snacks.

The Kellogg Foundation have funded advocates of dental therapy and repeatedly dismiss or minimize real-world solutions that would improve access to care, because these proposals don't advance the dental therapy agenda for which they are paid to lobby.

Access to care issues

Adequate pediatric dentist work force, however, there is a shortage of dental assistants and hygienists

Other Issues

Quarterly water line testing is now being required

Provincial Unit Reports

Alberta

Province/State and Name of WSPD Representative(s)

Province/State: Alberta

WSPD Representative(s): Sarah Hulland

AAPD Component Information

Name: Alberta Academy of Pediatric Dentistry Officer Rotation:

Officers

President- Robert Barsky President-Elect- Farida Saher Vice President- Farida Saher Secretary- Sandy Schwann Treasurer- Sandy Schwann Immediate Past President- AAPD/WSPD Liaison- Sarah Hulland Membership Contact- Sarah Hulland Ph: 1-403-827-3207 E-Mail: sarah@slope2sky.ca

Number of pediatric dentists

Province/State Member Pediatric Dentists: 49

Province/State unit and related activities, i.e. C.E offerings, meetings

Annual meeting occurs in October/November

Dues structure and collections

AbAPD Dues Structure: $250 Active Member: 28

Faculty: 2 full time Associate: None Affiliate: None

Active Member First Year: Note a separate category Post and Pre-doctoral Student: None Retired: Not a separate category

Province/State Board Issues

1) Concerns have been raised to the ADA & C primarily under the umbrella of the Alberta Dental Specialist Society. An example of this would be the role of the Royal College of

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Dental of Canada in the examination of dental specialists for licensure by the DRA. There was no consultation by the DRA to the Specialist Societies. The Canadian Dental Specialists Association has reviewed the current discussion of Specialty License without examination as well as the CDPSI malpractice. Dr. Paul Andrews, President CDSA, also the Pediatric Board member continues to advise CAPD. Dr Croutze, Registrar ADA &C, was contacted with the concern the protection of the public was at risk, as licensure for General Practice would require examination but Specialty Licensure not? This issue is ongoing.
2) The ADA&C is trying to pass a regulation that mandates that the laundry from dental offices must be sent out to a licensed laundry facility. Many offices manage their own laundry with machines in their offices, as this was highly recommended at the outbreak of the CoVid pandemic. There is significant resistance to this proposed regulation.

Legislative issues

1) Pediatric concerns within our province have been a highlight of our meetings, certainly the proposal of the Canadian government for access to care will affect our practices. The CDA has published a comment suggesting the present provincial, but federally mandated programs in place such as the ACHB program that already exist should be appropriately funding to provide oral health care to our scope of practice.
2) CAPD, our national academy, has reviewed its Policy and Procedures Manual, which once approved in draft form by the Executive Committee, will be circulated for comment. It is imperative Alberta has a Regional Representative at the Executive Council meeting. This is a role I have been fulfilling as the Interim President of our provincial society.

State Medicaid

Increased social assistance coverage, in Calgary, for GA (facility and anaesthestist fees) rehabilitation for children under the age of 12 has been increased over the CoVid pandemic and has been extended for the next year. This is still under the unusual 1 hour rule.

Advocacy

1) Dental Access Network in Calgary is working to identify low income families, who a just above the poverty cut off level, who's children require dental restorative care. Many of the pediatric dentists have been providing this care at a low, fixed expense, fee.
2) The Burns Fund has started a program, aimed at children 12 years of age and less, to encourage dentist to provide emergency care for a token reimbursement of $250.
3) The Canadian Academy of Pediatric Dentistry is holding its annual meeting in Whistler, October 27-29, 2022. Please see the flyer below for those interested in attending this conference.

Access to care issues

The continuing recession, and CoVid, in Alberta is putting more pressure on families and the social system to enable access to dental care. We have seen a continued increase in unemployment.

EVENT NOTICE!!

The Canadian Academy of Pediatric Dentistry is extremely pleased to announce the details of the 2022 Annual Conference in Whistler, British Columbia, October 27-28-29

We invite you to attend an incredible weekend, complete with current and clinically relevant educational sessions, a Welcome Reception in the Grand Lobby of the Westin Resort & Spa and a Saturday evening President's Dinner and Dance at the amazing Audain Art Museum.

CONFERENCE THEME: THE MEDICAL MODEL FOR MANAGING DENTAL CARIES IN THE PEDIATRIC POPULATIION

Full Conference details are available at http://conference.capd-acdp.org

Thursday October 27, Pre-courses.

- NuSmile's **Progressive Esthetics Workshop, with Dr. David T. Evans.** 7:30 am to 4:30 pm (Breakfast and Lunch incl.) Only 32 spaces available. $249.99 + GST CAD (Regular price is $995.00 USD)
- **Communicating for Success, with Jennifer Campbell.** 1:00 pm to 5:00 pm Max. 40 attendees. (CAD) $120.00 + GST.
- **Alexion presents a pre-course on Hypophosphatasia, speakers and details to be announced** 4:30 pm to 6:00 pm. Complimentary—Max 40 attendees

Friday October 28

- **Dr. Brian Novy,** "The Plaque Monologues"
- **Dr. Brian Novy,** "The Potty Mouth Predicament"

Saturday October 29

- **The 3M Oral Care Graduate Student Research Presentations**
- **Dr. Man Wai Ng and Dr. Francisco Ramos-Gomez,** "ECC Disease Prevention and Management: Framework, Supporting Strategies and Practical Strategies".
- "Ask the Experts", Discussion and Q & A, with Drs. Brian Novy, Man Wai Ng and Francisco Ramos-Gomez, moderated by Dr. Anita Gärtner, Chair of the Whistler Organizing Committee.

Meeting Headquarters is at the **Westin Resort & Spa, Whistler, located steps from Whistler Village with its restaurants, bars, souvenir shops, mountains, and breathtaking scenery.** Details on Registration, the Program, accommodation, travel information and more are available at **http://conference.capd-acdp.org**.

We look forward to greeting you in Whistler!

For questions please contact **Steve, directorofoperations@capd-acdp.org**.

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British Columbia
Province/State: *British Columbia*
WSPD Representative(s): *Geoff Grant*
Province/State unit and related activities, i.e. C.E offerings, meetings
Outreach:
BC Children's Hospital in association with the University of British Columbia is relaunching an exciting Outreach Program called "Brighter Smiles" which was initially set up 16 years ago but has not been active during COVID. The aim is to bring teams of healthcare providers (pediatric dentistry, pediatrics, psychology, optometry, dieticians and others) to remote first nations communities in British Columbia. There are significant barriers to accessing dental care in these remote communities especially for children. The majority of children in many of these areas have never seen a dentist and many have advanced dental caries. The aim is to expand the program to include a pediatric dental resident, a CDA, nurse, anesthetist and a certified pediatric dentist. Brighter Smiles immerses dental personnel in the indigenous culture of BC and all participants will learn about the values and beliefs of the First Nation people.
CE Offerings:
CAPD Meeting in Whistler, BC October 27- 30, 2022. "The medical management of dental decay in the pediatric population" is the theme of the meeting.
Speakers:
Dr. Brian Novy: The Plaque Monologues, Part 1 & 2; The Potty Mouth Predicament, Part 1 &2
Dr. Man Wai Ng & Dr. Francisco Ramos-Gomez: ECC Disease Prevention and Management: Framework and Supporting Strategies
Jennifer Campbell : Communicating for Success
Detailed Conference information and registration: https://conference.capd-acdp.org/program-whistler-2022
State/Province Board Issues - None to report
Legislative Issues - None to report
State/Provincial Medicaid
In British Columbia children from low income families are covered under a program called "The Healthy Kids Program" up to $2000/year. The fee schedule provides remuneration at a significantly reduced amount compared to the regular fee schedule. This fee schedule is developed and agreed upon by a governmental department, the Ministry of Social Development and Poverty Reduction. This department, along with the Ministry of Health, are currently working with dental societies and community members to add new fees to increase the fee schedule for providers that service this underprivileged population.
Access to care issues
In the more urban centres of British Columbia, access to care is generally good as there are an adequate number of certified pediatric dentists serving these communities. The UBC graduate program graduates up to 4 new pediatric dentists each year and there are many new providers that relocate to the province each year. However, there is a real shortage of pediatric dentists to service remote communities.
For children requiring general anesthetic, that cannot be treated in private surgical centres due to compromised medical conditions or are under 3 years of age, the wait time is currently about 6 to 7 months.

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BCCH is reducing GA wait lists by contracting with certain out patient facilities and is hoping to expand these contracts province wide. There has also been an increase in funding from the Ministry of Health reducing wait lists.

Virtual consults at BCCH for patients that fulfil the adequate criteria are also resulting in a reduction in wait list time.

Children that can be treated in private surgical centres do not have as significant wait lists.

Respectfully submitted,

Jonathon Everett Lee, D.D.S.
Western District Trustee

James R. Boynton Academic At-Large Trustee 2021–2024

Pre-doctoral Pediatric Dentistry
Quarterly pre-doctoral director meetings: the Society of Pre-doctoral Program Directors have had quarterly Zoom meetings for general discussion and support. Several meetings have been combined with post-doctoral program directors for joint sessions. Topics have included predoctoral patient availability, competency assessment, accreditation concerns, and general support. Meetings have been well attended with 10-20 participants. Opportunities for 2022/2023 include assessment of needs and ensuring dissemination of scheduled meetings to all pre-doctoral directors. I would like to acknowledge the Council on Predoctoral Education; its chair, Dr. Lal; and all participating faculty for their leadership, participation, and valuable input.

2022 Joint Academic Day: A full schedule for pre-doctoral pediatric dentistry faculty has programmed (see Joint Academic Day schedule) based on suggestions and feedback from the faculty community. The planning committee (Drs. Ramos-Gomez, Avenetti, Cervantes Mendez, Puranik, and Gaeth) are to be commended for their dedication, leadership, and effort in programming a successful return to an in-person Joint Academic Day.

Council on Pre-doctoral Pediatric Dentistry: The council's activity in 2021/2022 has focused on programming Joint Academic Day, updating the list of integral experiences for predoctoral dental students, and recognition and development of predoctoral student chapters. I would like to thank the efforts of all members of the Council and its chair, Dr. Lal.

Graduate Pediatric Dentistry
Monthly residency program director meetings: The Society of Post-doctoral Program Directors have had monthly Zoom calls continue in 2021/2022. These monthly discussion, support, and informational sessions were established after the COVID-19 pandemic and have continued in 2021/2022. These calls routinely attract 40-60 residency program directors and have been an important opportunity for the community to learn from one another. Discussion topics have included pandemic-related challenges and solutions, ABPD updates, CODA updates, clinical education experiences and opportunities, resource sharing, faculty development, licensure, program/resident assessment strategies, Graduate Medical Education issues, virtual externships, and interview scheduling and virtual interview

approaches. Invited guests are warmly thanked for their time and input, including CODA Pediatric Dentistry Commissioner Dr. Joel Berg, attorney Lori Mihalich-Levin, and ABPD CEO Dr. Leila Younger, ABPD liaison Dr. Homa Amini, and Jordan Stoeger with Data Recognition Corporation and Susan Davis Becker with ACS Ventures discussing American Board of Pediatric Dentistry director-related issues. I would like to acknowledge the participation and input of program directors who make these sessions particularly valuable to the community.

Graduate education speaker series: Continuing in 2021/2022 has been a monthly seminar series for residents across the country. The pediatric seminar series was developed after COVID and has continued, offering specialized didactic education on discreet topics. Different speakers from across the country have contributed and the series is free to all academicians. All presentations are recorded with the consent of the speaker (legal document developed by the AAPD) and are archived on the AAPD website. The 2021/2022 seminar series schedule is listed below. The planning task force and all guest lecturers are warmly thanked for their effort in this area.

2022 Joint Academic Day: A full program for the 2022 Joint Academic Day has been developed (see Joint Academic Day schedule) based on suggestions and feedback from the faculty community. The joint session for pre-doctoral and post-doctoral directors includes guests Yi Hui Lu, MD, MPH (Structural Racism), Tracy Finlayson PhD (Behavioral Science), and Kelly Motadel, MD, MPH (COVID vaccination). We are grateful for the efforts of the planning committee (Drs. Ramos-Gomez, Avenetti, Cervantes Mendez, Puranik, and Gaeth) and look forward to a return to an in-person session.

2022 Chairs' Breakfast: Building on previous successful in-person Chairs' Breakfast prior to the pandemic, a 2022 Chairs' Breakfast has been planned prior to Joint Academic Day. The purpose of the Chairs' Breakfast is for support and discussion related to management and leadership of academic pediatric dentistry units.

Post-doctoral In-service Examination: The 2021/2022 post-doctoral in-service examinations have been continued to be refined. Examinations continue to be hosted and administered by the National Board of Osteopathic Medical Examiners. Out-going examinations were completed in a window in February 2022 and results provided to program directors prior to the ABPD Qualifying Examination. In-coming examinations are scheduled in July 2022. The Committee has no special requests for board action at this time. I would like to acknowledge the efforts of the post-doctoral in-service examination committee and its chair, Dr. Brenda Bohaty, for their dedication to item creation and development of a challenging and meaningful examination for ongoing program assessment.

Council on Post-doctoral Education: The Council on Post-doctoral Education has focused its efforts in 2021/2022 on development of programming Joint Academic Day and development and distribution of the core bibliography. The Council has no special requests for board action at this time. I would like to acknowledge the effort of all members of the Council on Post-doctoral Education and its chair, Dr. Cervantes Mendez.

I have had the opportunity to assist multiple program directors with general resident issues, accreditation questions/concerns, pandemic-related issues, and program development. It

has been a privilege to help colleagues find resources and brainstorm solutions through our Academy.

Of final note, I would like to enthusiastically acknowledge Ms. Leola Royston, Education Development and Academic Support Manager, for her tireless efforts to support the AAPD Councils on Pre- and Post-doctoral Education, the In-service Examination Committee, and the broad pediatric dentistry education community.

Respectfully submitted,

James R. Boynton

At-Large Trustee's Report – James R. Boynton – 2021–2022

2021/2022 Resident Seminar Series Schedule

June 15th	5pm EDT	Ms. Janet Brockman, Ms. Hannah Sanford-Keller, Oregon Health & Science Univ.	Speech and Language Deveopment
July 13th	8pm EDT	Dr Damion Grasso	Emotional Health and Well-being in the Context of the COVID-19 Pandemic
August 10th	8pm EDT	Dr. Lisa Knobloch	Craniofacial Abnormalities in the Growing Child
September 23rd THURS	8pm EDT	Dr Easwar Natarajan	Oral Ulcerative Lesions
October 19th	8pm EDT	Dr. Juan F. Yepes	Dental Management of Children with Kidney Disease: from infection to renal transplant and dialysis
November 9th	8pm EDT	Dr. Jim Coll	Pulp Therapy
December 14th	8pm EDT	Dr. Tom Stark	TMD Management
January 11th	8pm EDT	Haley Swedberg	Child Life Specialists
February 8th	8:15pm ET	Jacey Stauffer	Pediatric Obstructive Sleep Apnea
March 8th	8 PM EDT	Dr. Scott Peters	Oral Pathology Review
April 12th	8 PM EDT	Dr. F. John Firriolo	Management of Patients Receiving Cancer Chemotherapy and Hemophilia-A
June 8th	8 PM EDT	Dr. Stephen Wilson	"Are you sure you know why you are sedating a child?"

At-Large Trustee's Report – James R. Boynton – 2021–2022

2022 Joint Academic Day Informational Flier

AAPD JOINT ACADEMIC DAY ANNUAL CONFERENCE

SAN DIEGO, WEDNESDAY, MAY 25

AAPD Medical & Dental Integration Addressing Social Determinants of Oral Health

Yi Hui Liu MD, MPH is a Professor of Pediatrics Section Head, Developmental-Behavioral Pediatrics, University of California San Diego the Medical Director of the UCSD, DBP Clinic where she cares for children with complex developmental, learning, and mental health needs.

Tracy L. Finlayson, PhD, is Professor and Division Head of the Graduate Program in Health Management and Policy in the School of Public Health at San Diego State University. Her research focuses on oral health disparities, specifically exploring psychosocial determinants of oral health, and barriers to accessing dental services for underserved and vulnerable population groups.

Kelly Motadel MD, MPH is the Child Health Officer for the County of San Diego. Previously, she was the Chief Medical Officer at the Vista Community Clinic (VCC). Recently, she was appointed to the Medi-Cal Children's Health Advisory Panel as well as the American Academy of Pediatrics' Border Strategy Team.

Interested AAPD faculty experts on academics relevant to oral health, click the link to register:
https://annual.aapd.org/

For questions regarding Joint Academic Day, please contact Leola Royston, Education Development and Academic Support Manager, Lroyston@aapd.org

View Full Schedule on the AAPD Website here:
https://www.aapd.org/resources/member/resident-resources/residency-director-resources/

Paul A. Kennedy, III At-Large/Federal Services Membership Trustee 2021–2024

It has been an honor to serve as Trustee for my second of three years. I am excited about the successes of the Academy this year and I wanted to highlight a few of those successes. The Academy has reached an even stronger financial position and now has the level of reserves that we haven't seen in over 10 years including 100% of our annual expenses in reserve. Our membership numbers have replenished with new and rejoining members and we are increasingly close to reaching a record high number of overall Academy members. As we round out this year with a higher than expected attendance for the Annual Session in San Diego, I think it is important to acknowledge the driving force of these successes being a direct result of the Academy's leadership, strong volunteer leaders, and the value that we place on our members.

Trustee Activities

Trustee to the Budget and Finance Committee

- The Board of Trustees recommended and approved an increase to the current fiscal year budget by $30,000 to support the engagement of Powers, Pyles, Sutter and Verville PC, for the period of January 1, 2022-June 30, 2022. This is the firm that we have hired to help lobby for pediatric dentists' access to operating rooms.
- The Board of Trustees approved to sponsor two speakers, Drs. Jessica Lee and Amr Moursi, for the Egyptian Pediatric Dentistry Association meeting and pay for their airfare and honorarium at a budget impact of up to $10,000.
- 2021-2022 budget adjustments were approved at the Winter Meeting.
- The committee is working on the 2022-2023 budget to be presented at the Annual Session.

Trustee to the Policy and Procedure Committee

- Constitution and Bylaws Committee gave 2 recommendations for updates for the Board of Trustees and both were approved.
    - To remove the Leadership Development Committee from Chapter V, Section 18.

  - Deleting the Society of Post-Doctoral Program Directors and Pre-doctoral Program Directors Group and placing ongoing activities and opportunities for participation under the Post-doctoral and Pre-doctoral Councils.
- The Board of Trustees approved the committee's recommendation to extend a permanent invitation to the AAPD Foundation President to be present at every AAPD board of trustees meeting to provide a Foundation report. The Policy and Procedure Committee will make the necessary changes to reflect this permanent invitation.

Liaison to Council on Membership and Membership Services

- The council is using Little Teeth Chat forum to communicate and collaborate on charges.
- The council continues review and evaluation of AAPD membership benefits and services with a strong focus on membership retention and maintenance of active status after conversion of student membership.
- The site mychildrensteeth.org was re-launched this year.
- The AAPD's social media library has been updated and highlighted to members as a resource.

Committee on Early Career Pediatric Dentists

- The committee is working on the FAQ (frequently asked questions) for the AAPD website and podcast topics. Suggested topics include:
  - Educational debt
  - Starting a practice with debt
  - ECPD Career Aspirations v. Realities, Etc…
- The committee has developed a new AAPD podcast with content specifically designed for residents and new graduates; hosted by Dr Joel Berg.
- The committee put together a panel of speakers and topics for the AAPD ECPD course at the Annual Session.

Pediatric Dental Resident Committee

- There were 276 new 1st year Residents registered for AAPD Membership this year.
- Six new members of the Committee were oriented and assigned charges.
- The Committee routinely contributes to the PDT Newsletter and has created a spreadsheet archive with prior topics to help them plan future contributions.
- The Committee worked on social media posts with topics related to dental students and residents.

Federal Services Activities

- Continued communication with the President of the Federal Services Society of Pediatric Dentistry, Dr Kim.
- The Federal Services Society of Pediatric Dentistry annual meeting will be Saturday, May 28th from 4:00-5:00pm at the San Diego Convention Center room 11 AB.
- The Military and Federal Services Reception will be held Saturday, May 28th from 5:00-6:00pm at the Convention Center Ballroom 10 terrace and lobby.
- I have contacted Brett Henson DMD Colonel, Dental Corps Chief, Dental Corps Branch, HRC at the recommendation of Min Kim DMD LTC, DC regarding the At-Large Federal Services Trustee volunteer position.

At-Large Trustee's Report – Paul A. Kennedy, III – 2021–2022

Respectfully submitted,

Paul A. Kennedy, III
At-Large Trustee

Anupama Rao Tate At-Large/International Membership Trustee 2019–2022

It has been a true privilege to serve as Trustee at large for the past three years. I have enjoyed learning about the processes, priorities, and decisions that face both the Academy and our profession. I have grown in my understanding of our members' needs.

As the At Large Trustee to International members, I'm very excited for our international colleagues to finally meet the 2022 AAPD Annual Session and to participate in any meetings that might be offered. I am grateful for the opportunity to have served these three years.

Trustee Responsibilities

- AAPD Winter meeting 2022
- AAPD CCA meeting 2021
- AAPD Foundation, Nominations committee meeting April 2022
- AAPD Policy Conference Feb 2022
- International Association of Pediatric Dentistry 2021 Annual Session

Service

- Member, BOT Awards Committee
    - Attended meeting to nominate and select 2022 award recipients

- Liaison to the Council on Clinical Affairs
    - Attended Nov CCA meeting. Review BOT charges for 2021-2022. All documents were reviewed, assignment of Review and Endorsements of Items in Resource Section was completed.
    - CCA discussed the addition of abstract to each of the best practice documents.
    - Overall, the council is very active, no challenges or difficulties reported at this time.

- Liaison to Pediatric Oral Health Research & Policy Center
    - Attended Policy Center meeting Jan 2022
        - Discussed projects in development and new proposed projects

- Liaison to EBD committee

At-Large Trustee's Report – Anupama Rao Tate – 2021–2022

- Attended EBD Committee meeting Nov 2021
  - Discussed projects in development and new proposed projects

- Fellow, Pediatric Oral Health Research and Policy Center
  - Served on workgroup for technical brief on Value Based Payment

- Member, Nominations, AAPD foundation
  - Attended April meeting of Nominations committee.
    - Confirmed executive committee nominations

- Member, SOOH of the American Academy of Pediatrics
  - Attended AAP annual session in October 2021
  - Chair of Membership for SOOH, AAP
  - Serve as a lead author for the revision of Joint AAP/AAPD Abuse and Neglect Clinical report.

- Member, Practice Analysis Task Force ABPD
  - Assisted in developed new Blueprint for QE, OCE, and ROC-P Exam

- Member, Commission of Dental Accreditation- Pediatric Review Committee
  - Attended January 2022 meeting – discussed on going program reviews.

Respectfully submitted,

Anupama Rao Tate, DMD MPH
At Large Trustee

Vanessa Carpenter Affiliate Trustee 2020–2023

Trustee Activities

I attended the Media Training in July
I attended the Ad-Interim BOT Meeting in September
I attended the Wither Planning Meeting in January.

Affiliate Membership Statistics

This year, the Affiliate membership has seen a slight increase, up 14 members, bringing the total Affiliate number to 461.

Update on Implementation Plan Activities from the Report of the Task Force on Enhancing the Value of General Dentist Membership

Six activities from the Implementation Plan of the Report of the Task Force on Enhancing the Value of General Dentist Membership were approved by the Board of Trustees at the October 2, 2015 Ad Interim meeting. They are:

- Establish Affiliate Membership (AM) leadership
- Affiliate Member leadership and district liaisons to establish AM protocols
- Establish modes of communication
- Continue to develop AM leadership opportunities within the AAPD
- Develop a**n "AAPD Pre-Doctoral Tool Kit"**
- Promote current Pre-doctoral member benefit of free attendance at AAPD annual session

Updates on each activity are as follows:

- Establish Affiliate Membership (AM) leadership
- Affiliate Member leadership and district liaisons to establish AM protocols

The 2021-2022 Committee members are:
Vanessa Carpenter, Chair and Board Liaison
Members
John Blake, W District
Rhonda Dawn Switzer-Nadasdi,SE District
Hal S Jeter, NC District
Twana Duncan, SW District
Kerry Maguire, Immediate Past Affiliate Trustee
Consultants
Nick Rogers
Council Liaisons

Affiliate Trustee's Report, 2021–2022

Anthea Mazzawi (Council on Annual Session, Scientific Program Committee)
David Avenetti (Council on Continuing Education)
Shantanu Lal, (Council on Pre-Doctoral Education)
Ex Officio Member
Jennifer Cully (Chair, Council on Membership and Membership Services)
Staff Liaison
Suzanne A. Wester, Membership and Marketing Director

- Establish modes of communication

The Affiliate Membership communications plan includes the "Affiliate Corner in the PDT, "Welcome" emails to all new members, and our Affiliate Caucus will again take place at the Annual Session. We are also working on ways to communicate to Affiliate members through "Little Teeth Chats".

- Continue to develop AM leadership opportunities within the AAPD

Currently, there is an Affiliate Member on most of AAPD's councils and committees. I will begin consulting with Dr. Moursi, as well as District Trustees and the Council and Committee Chairs, to see if there are positions that need to be filled.

An E-Blast has already been sent encouraging affiliate members to fill out the volunteer form to create a database of potential council and committee participants. We are hopeful we will continue to recruit good talent to serve on the Affiliate Committee.

- **Develop an "AAPD Pre-Doctoral Tool Kit"**
- Promote current Pre-doctoral member benefit of free attendance at AAPD annual session

To address this charge, fulfilling the recommendation of the Task Force on Enhancing the Value of General Practice Membership, a toolkit to guide the establishment and development of student chapters, including "best practices" for outreach, advocacy, treatment and scholarly activities geared towards the general dentistry student and potential pediatric dentistry residents was created. The framework for a Student Chapter Toolkit is now available on the AAPD website.

It can be found at: https://www.aapd.org/resources/member/predoc-toolkit/

It is a work in progress.

Currently there are 53 AAPD Student Chapters and we continue to work on creating more.

Development of an Affiliate Track

The Committee brought to the BOT at the ad-interim meeting, the idea of the development of a plan for an "Affiliate Track". The program would allow Affiliate Members to complete pre-defined activities to earn acknowledgement upon completion. The idea was not unanimously accepted, but after some "lively" discussion, there was consensus that the committee would work on developing an "Affiliate Track Program" and present the proposed track at the 2022 Winter Planning Meeting. Post ad-interim BOT meeting, there were discussions with member from various districts, BOT members, and Excom members to get

some direction as to components of the program that might be agreeable to all. Because of the extra time spent in discussions trying to find common ground for the program there was not sufficient time to develop a comprehensive program to present. The Committee asked and was granted an extension to present the program framework at the Annual Session in May of 2023.

Respectfully submitted,

Vanessa Carpenter
Affiliate Trustee

Congressional Liaisons 2021–2022

Heber Simmons Jr
AAPD Congressional Liaison Emeritus
Special Consultant to the Board of Trustees

Jade Miller
AAPD Congressional Liaison

Warren Brill
AAPD Congressional Liaison

As we all look forward to getting back in person for our 2022 Annual Meeting and life is showing semblance more like normal, the Academy's ongoing success in Washington DC is getting back on-track.

After a two+ years of no in-person visits to Congressional and Committee Offices we returned in November, 2021. Besides the meeting with Congressional Offices, a large focus was the ongoing transition of the responsibilities of the Academy's Congressional Liaison from Heber to Jade and Warren. There were also changes at Hogan Lovells, our lobbying team in Washington DC. As in the past we have an incredible DC team and we spend a great deal of time working with them. Anna Weinstein has tremendous experience and relationships with Congress Members and Staff and Kolo Rathburn has a very strong background in appropriations.

We also retuned to an in-person Washington DC Pediatric Oral Health Advocacy Conference in March 2022. The attendees experienced a hybrid of the various office meetings. Some were able to meet personally with their Member's and others met virtually. The experience was universal-there is nothing like be back together for the POHAC!

Warren and Jade are scheduled for another visit May 19 & 20 and several scheduled for the remainder of 2022. The plan is for the visits to vary with some where both Jade and Warren will go together and others separately.

The legislative priorities the Academy has this year is focused on:

1. Title VII Funding of $14 million for Pediatric Dentistry

2. Making funds from the Dental Faculty Loan Repayment Program non-taxable
3. Access to operating Rooms
4. The Ensuring Lasting Smile Act-whereby health plans cover medically necessary treatment of patients with congenital anomalies.

Editor in Chief 2021–2022

Noel K. Childers
AAPD Editor-in-Chief

I would like to thank the Board of Trustees for their support this year, especially with the continuing challenges experienced due to the COVID-19 pandemic. Despite the issues of this year, both journals functionalities have continued without interruption. The following are areas for update or report:

1. The impact factor for *Pediatric Dentistry* for 2021, based on 2018-2020 citation data is 1.87 (up from 1.59 last year). This slight increase compared to last year is good, and the 5 year impact average is a very respectable, 3.12. It is unclear how much the AAPD's response to open access for 45 days (March, April 2020) during the COVID- 19 pandemic affected citation data, however this may have improved the impact factor, especially the 5 year average. The JCR also reports impact factor without self-citation. *Pediatric Dentistry* has a factor of 1.72 without self-citations.
2. We modified our instructions to authors in June of 2021 in order to clarify the journal's scope and submission requirements. Changes were based on editorial staff, section editors and editorial board discussions aimed at improving and ensuring that the quality of submissions are good and that authors follow directions to provide consistency.
3. *Pediatric Dentistry* Open Access (OA) publications – citation data: The Editorial Board and Section Editors have been discussing the value of open access articles published in *Pediatric Dentistry*. Several years ago, the BOT approved making one manuscript per issue "open" for *Pediatric Dentistry*. One manuscript open access per issue has expanded to *Journal of Dentistry for Children*. Data indicates that this practice is associated with increased number of downloads and also number of citations (i.e., Impact Factor). Therefore, our leadership recommends opening our archived documents. The section editors and editorial board encourage consideration to provide OA for both *Pediatric Dentistry* and *Journal of Dentistry for Children* one (1) year after a full volume is has been published to improve the journal's general exposure for the scientific literature. Upon discussions with the AAPD Board of Trustees, this proposal is tabled for now, however the board approved providing option of authors paying a fee for open access of the *Journal of Dentistry for Children*. This process of offering this option is ongoing with some continued discussions with our publisher, Ingenta and therefore, will require more time to initiate. Open access has an excellent potential to increase the number of citations. Therefore, discussions of options will continue in 2022.

Editor in Chief, 2021-2022

Pediatric Dentistry

Journal statistics

Pediatric Dentistry received 433 submissions for the calendar year 2021, of which 241 were rejected outright for being inappropriate, compared with 604 submissions for calendar year 2020 of which 339 were rejected outright for being inappropriate.

Types of manuscripts submitted were 66 Case Reports, 188 Clinical (human subjects) Articles, 63 Scientific Articles (animal), 44 Systematic Reviews, 26 Brief Communications, 2 EBD Systematic Reviews, 1 Guideline, and 43 Other (see Figure 1 – *Pediatric Dentistry* – Number of Manuscripts by Type).

The journal statistics for decisions made on manuscripts indicate for 2021 there were: Sent for Review 99, Accepted 45, Reject following Review 48, and Reject Inappropriate 241 (see Figure 2 – *Pediatric Dentistry* – Number of Manuscripts by Decision).

Statistics for Pediatric Dentistry

Journal statistics	Prior 12 months
Avg. days from submission to first decision	55.3
Avg. Reviewer turnaround time (days) - Original	22.0
Avg. Reviewer turnaround time (days) - Revision	20.2
Avg. Time to Assign Reviewer (days) - Original	4.9
Avg. Time to Assign Reviewer (days) - Revision	3.3
Avg. Days from submission to final decision	83.4

The journal received submissions from 46 countries. The majority of submissions came from US (130), Brazil (81), India (75), Turkey (38), and China (14) (see Figure 3 – *Pediatric Dentistry,* Number of Manuscripts by Country).

IngentaConnect, the company that hosts our journals, reported that *Pediatric Dentistry* made the list of the top 100 downloads of more than 11,000 titles for the period of Oct. 1 to Oct. 31, 2021 *Pediatric Dentistry* ranks 10th with 2,902 downloads.

- *Pediatric Dentistry* had 25,961 abstract views.
- *Pediatric Dentistry* had 5,697 table of content views.
- *Pediatric Dentistry* had 486 open access article views.

From Jan. 1, 2021 to Oct. 31, 2021 there were 34,149 full-text *Pediatric Dentistry* downloads, compared with 78,161 (during the two-month full open access there were 24,830 downloads from 2020) for same period in 2020.

- *Pediatric Dentistry* had 271,156 abstract views.
- *Pediatric Dentistry* had 61,718 table of content views.

Editor in Chief, 2021-2022

- *Pediatric Dentistry* had 5,153 open access article views.

Section Editors, Editorial Board and Abstract Editors
Currently, all seven Section Editors were willing to continue for another 4 year term of service until 2026. Their specific and general expertise are crucial to the functioning of the editorial processes of the journal.

The following individuals will complete their 4-year terms on the Editorial Board of *Pediatric Dentistry* as of the 2022 Annual Session. I thank them for their dedication and service to the journal.

Chia-Yu Chen—Baltimore, MD–2022
Vineet Dhar—Baltimore, MD–2022
Martha Ann Keels—Durham, NC–2022
Lorne Koroluk—Chapel Hill, NC–2022
Anne O'Connell—Dublin, Ireland–2022
Michael Roberts—Chapel Hill, NC–2022
Kaaren Vargas—North Liberty, Iowa–2022
Martha Wells—Memphis, Tenn–2022

I am pleased to request that the Board of Trustees approve my nomination of the following individuals as oncoming members of the Editorial Board for a 4-year term beginning immediately after the annual session. Each has accepted my invitation to be nominated for this service:

Martha H. Wells—Memphis, TN
Jayakumar Jayaraman—Richmond, VA
Chia-Yu Chen—Seattle, WA
Vineet Dhar—Baltimore, MD
Martha Ann Keels—Durham, NC
Roopa Gandhi—Aurora, CO
Kaaren Vargas—North Liberty, IA
Clarice Law—Los Angeles, CA

I would also like to thank the 132 ad hoc reviewers within and outside of our specialty who graciously reviewed manuscripts for the journal. They were publicly acknowledged and named in the Nov/Dec 2021 issue of the journal.
I am pleased to request that the Board of Trustees approve my nomination of the following individuals as oncoming and returning Abstract Editors for a 1-year term beginning immediately after the annual session. Each has accepted my invitation to be nominated for this service.

Ronald Hsu
Janice Jackson
Ari Kupietzky
Robert Schroth
Sarat Thikkurissy

Editor in Chief, 2021-2022

Goals for 2022

The major goals for the coming year are:

1. In line with the scope and objectives of *Pediatric Dentistry*, continue to provide excellent quality publications for scientific and clinical literature for Pediatric Dentists and the general pediatric and dental community as a result of rigorous and scientifically qualified review from editorial board and ad hoc reviewers.
2. Maintain the shortened time between acceptance and publication to no more than two issues.
3. Continue to seek ways to improve the Impact Factor and evaluate how to keep focus on our journal's standards with objective criteria but also subjectively (reader satisfaction).

4. Continue to evaluate the potential benefits of opening access to *Pediatric Dentistry* (and *Journal of Dentistry for Children*) after a period of time (i.e., consider to provide open access by volume, one year after publication).

Journal of Dentistry for Children

Journal Statistics

Journal of Dentistry for Children received 246 submissions for the calendar year 2021 compared with 276 submissions during calendar year 2020.

Types of manuscripts submitted were 84 Case Reports, 23 Clinical Articles, 29 Clinical Human, 0 EBD Systematic Review, 1 Protocol, 19 Public Health, 42 Scientific Articles, 17 Scientific In Vitro and 11 Systematic Reviews, 20 Other (see Figure 4 – *Journal of Dentistry for Children* – Number of Manuscripts by Type).

The journal statistics for decisions made on manuscripts indicate for 2021 there were: Sent for Review 35, Accepted 30, Reject following Review 27 and Reject Inappropriate 154 (see Figure 5 – *Journal of Dentistry for Children* – Number of Manuscripts by Decision).

The number of manuscripts accepted for publication remained the same as 2020. The AAPD staff have put ads in our publications and an email will go out soon to program directors and department heads asking for papers to be submitted.

Editor in Chief, 2021-2022

Statistics for Journal of Dentistry for Children

Journal statistics	Prior 12 months
Avg. days from submission to first decision	33.5
Avg. Reviewer turnaround time (days) - Original	17.7
Avg. Reviewer turnaround time (days) - Revision	9.8
Avg. Time to Assign Reviewer (days) - Original	4.3
Avg. Time to Assign Reviewer (days) - Revision	0.6
Avg. days from submission to final decision	52.6

Editor in Chief, 2021-2022

The journal received submissions from 36 countries. The majority of submissions came from United States (59), Brazil (53), India (52), Turkey (12), Saudi Arabia (9), Iran (8) (see Figure 6 – *JDC* – Number of Manuscripts by Country).

IngentaConnect, the company that hosts our journals, reported that *JDC* again made the list of the top 100 downloads out of more than 11,000 titles for number of full text downloads in 2021 for the period of Oct. 1 to Oct. 31, 2021, *JDC* ranks 64th with 591 downloads.

- *Journal of Dentistry for Children* had 9,395 abstract views.
- *Journal of Dentistry for Children* had 2,633 table of content views.
- *Journal of Dentistry for Children* had 59 open access article views.

From Jan. 1, 2020 to Oct. 31, 2021 there were 9,077 full-text *JDC* downloads compared with 30,636 in 2020.

- *Journal of Dentistry for Children* had 96,533 abstract views.
- *Journal of Dentistry for Children* had 25,655 table of content views.
- *Journal of Dentistry for Children* had 653 open access article views.

I would also like to thank the 82 ad hoc reviewers within and outside of our specialty who graciously reviewed manuscripts for the journal. They were listed and acknowledged in the Sept/Dec issue of the journal.

There are three members on the Editorial Board whose term is expiring in 2022:

Raquel Assad–2022
David Avenetti–2022
Ian William Marion–2022

I am pleased to request that the Board of Trustees approve my nomination of the following individuals as incoming and ongoing members to the Editorial Board for a 4-year term beginning immediately after annual session. Each has accepted my invitation to be nominated.

Raquel Assad–2026
David Avenetti–2026
Ian William Marion–2026
Francisco Garcia de Paula-Silva–2026

As in the past, I welcome suggestions from the Board for the names of individuals interested in being on the Editorial Board in the future.

The major goals for the journal last year were:

1. Continue the tight adherence to publication schedule.
   Since Nov. 1, 2020, the average number of days from submission to first decision was decreased by 2.1 days, and the average number of days from submission to final decision was decreased by 5.4 days.
2. Increase communication with reviewers and establish specific areas of interest of reviewers to expedite the reviewing process. We continue to recruit reviewers from different areas of expertise (see above).

Editor in Chief, 2021-2022

Goals for 2022

The major goals of the *Journal of Dentistry for Children* for the coming year are:

1. Continue the tight adherence to publication schedule.
2. Increase the number of ad hoc reviewers to expedite the review process.
3. Increase communication with reviewers and establish specific areas of interest of reviewers to expedite the reviewing process.
4. Understand the reasons why it lost its impact factor and work on reestablishing it.
5. Continue to select one article per issue to be open access and propose *Journal of Dentistry for Children* be provided open access by volume, one year after publication.

Staff

Finally, I wish to acknowledge the dedication and efforts of the AAPD Communications Department:

Cindy Hansen, Senior Publications Director
Adriana Loaiza, Senior Publications Manager
Lily Snyder, Web and Social Media Manager
Camryn Schreiner, Web and Social Media Coordinator
Kenneth Berry, Publications Associate
Erik Martin, Copy Editor

I appreciate all that they do to ensure that our journals are recognized worldwide as quality publications.

Respectfully submitted,
Noel K. Childers, DDS, MS, PhD
Editor in Chief

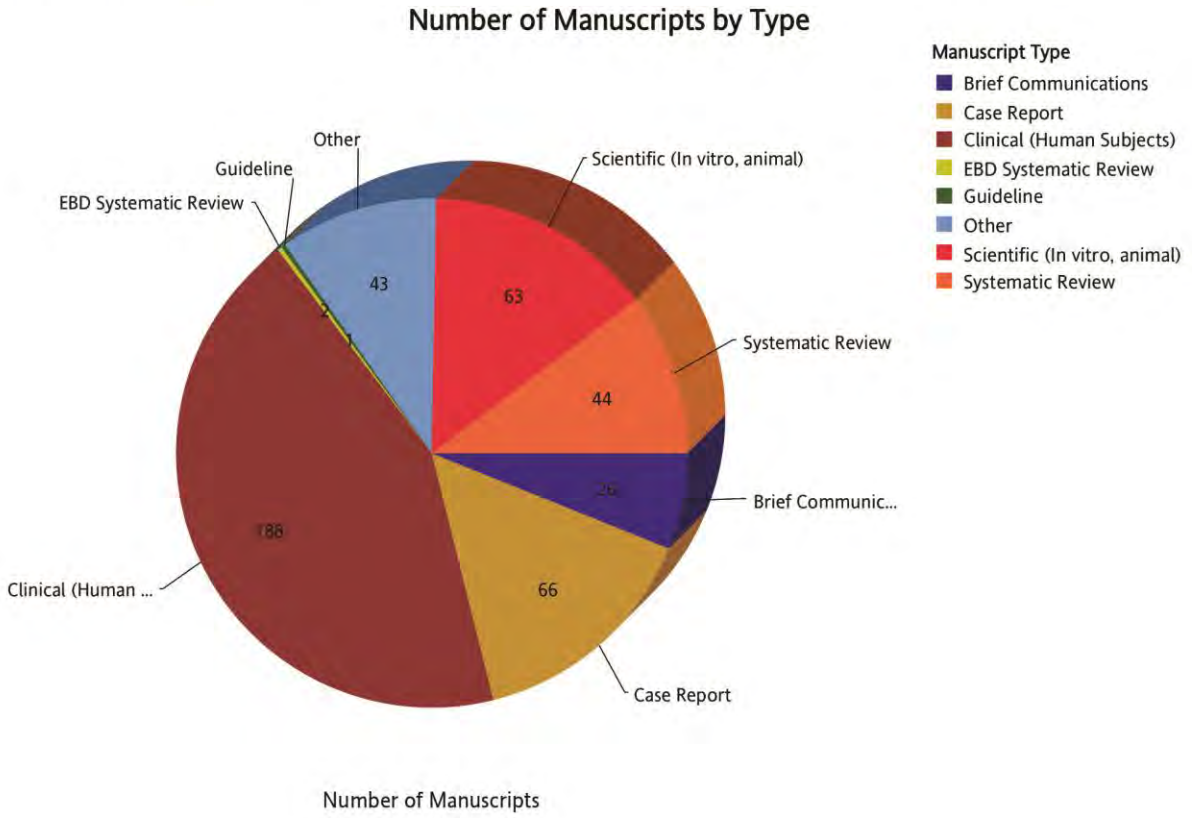
Figure 1

Manuscripts Decided for Pediatric Dentistry

Estimated Data Date: Dec 2, 2021 1:30:02 PM

Information based on all manuscripts whose submission date is Between Jan 1, 2021 and Dec 1, 2021 and decision date is Between Jan 1, 2021 and Dec 1, 2021

Grouped by: Manuscript Type



Manuscript Type	Number of Manuscripts	Percentage of Total
Brief Communications	26	6.0%
Case Report	66	15.2%
Clinical (Human Subjects)	188	43.4%
EBD Systematic Review	2	0.5%
Guideline	1	0.2%
Other	43	9.9%
Scientific (In vitro, animal)	63	14.5%
Systematic Review	44	10.2%
Total:	433	100.0%

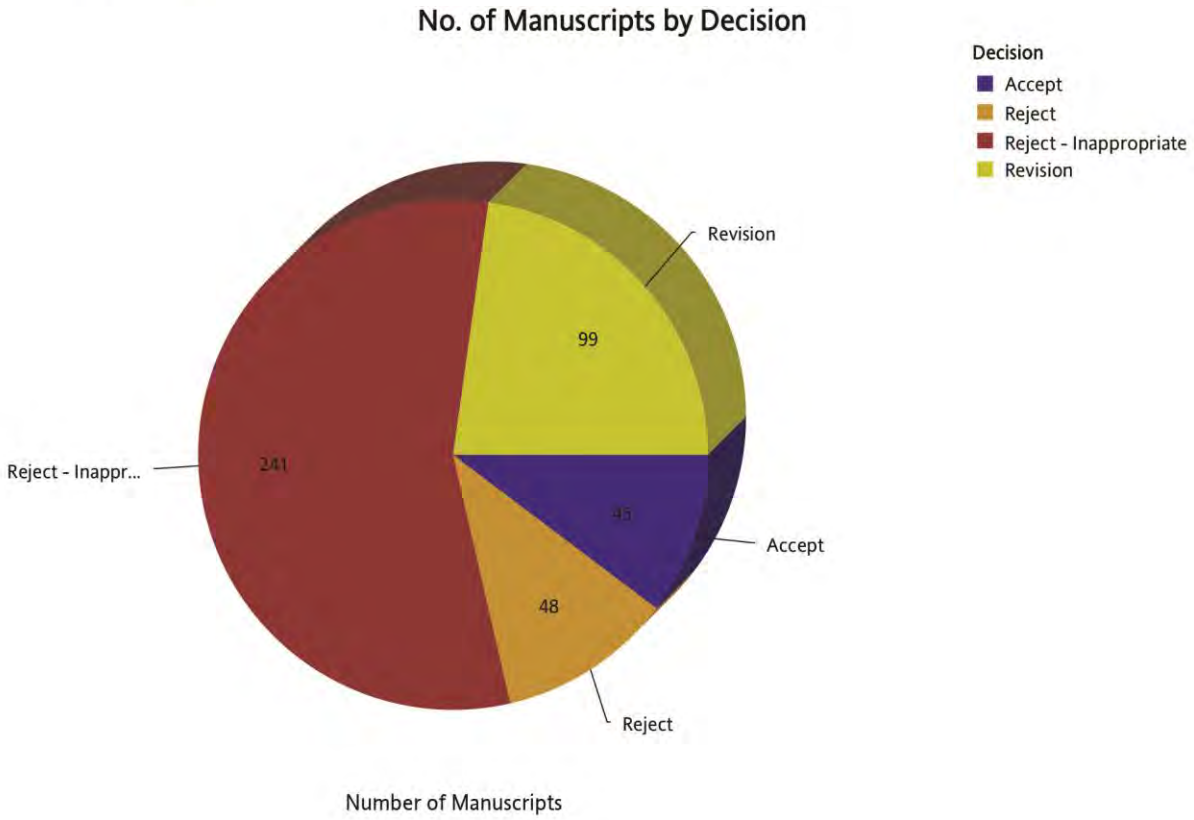
Figure 2

Manuscripts Decided for Pediatric Dentistry

Estimated Data Date: Dec 2, 2021 1:30:02 PM

Information based on all manuscripts whose submission date is Between Jan 1, 2021 and Dec 1, 2021 and decision date is Between Jan 1, 2021 and Dec 1, 2021

Grouped by: Manuscript Decision



Manuscript Decision	Number of Manuscripts	Percentage of Total
Accept	45	10.4%
Reject	48	11.1%
Reject - Inappropriate	241	55.7%
Revision	99	22.9%
Total:	433	100.0%

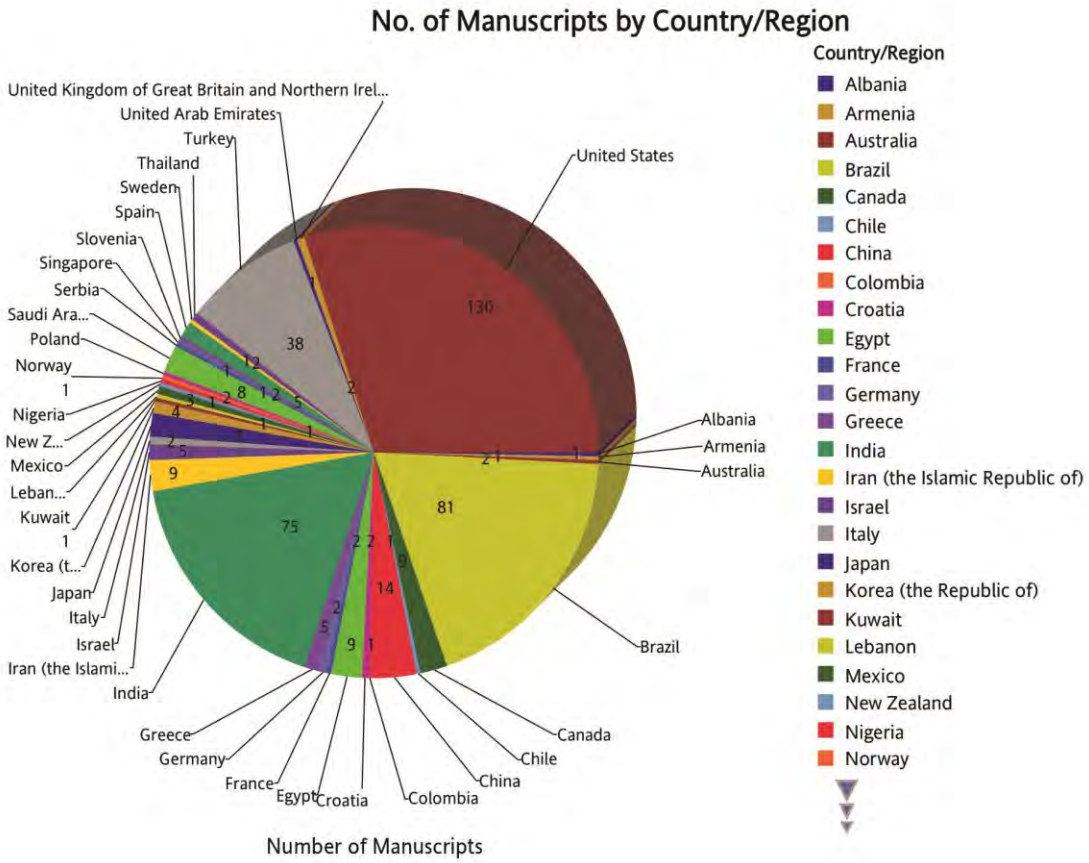
Figure 3

Manuscripts Decided for Pediatric Dentistry

Estimated Data Date: Dec 2, 2021 1:30:02 PM

Information based on all manuscripts whose submission date is Between Jan 1, 2021 and Dec 1, 2021 and decision date is Between Jan 1, 2021 and Dec 1, 2021

Grouped by: Country/Region Of Submission



Country/Region of Submitting Author	Number of Manuscripts	Percentage of Total
Albania	1	0.2%
Armenia	1	0.2%
Australia	2	0.5%
Brazil	81	18.7%
Canada	9	2.1%
Chile	1	0.2%
China	14	3.2%
Colombia	1	0.2%
Croatia	2	0.5%
Egypt	9	2.1%
France	2	0.5%
Germany	2	0.5%
Greece	5	1.2%
India	75	17.3%
Iran (the Islamic Republic of)	9	2.1%
Israel	5	1.2%
Italy	2	0.5%
Japan	7	1.6%
Korea (the Republic of)	4	0.9%
Kuwait	1	0.2%
Lebanon	1	0.2%
Mexico	3	0.7%
New Zealand	1	0.2%

Figure 3 – continued

Manuscripts Decided for Pediatric Dentistry

Estimated Data Date: Dec 2, 2021 1:30:02 PM

Information based on all manuscripts whose submission date is Between Jan 1, 2021 and Dec 1, 2021 and decision date is Between Jan 1, 2021 and Dec 1, 2021

Grouped by: Country/Region Of Submission

Country/Region of Submitting Author	Number of Manuscripts	Percentage of Total
Nigeria	1	0.2%
Norway	1	0.2%
Poland	2	0.5%
Saudi Arabia	8	1.8%
Serbia	1	0.2%
Singapore	1	0.2%
Slovenia	2	0.5%
Spain	5	1.2%
Sweden	1	0.2%
Thailand	2	0.5%
Turkey	38	8.8%
United Arab Emirates	1	0.2%
United Kingdom of Great Britain and Northern Ireland	2	0.5%
United States	130	30.0%
Total:	433	100.0%

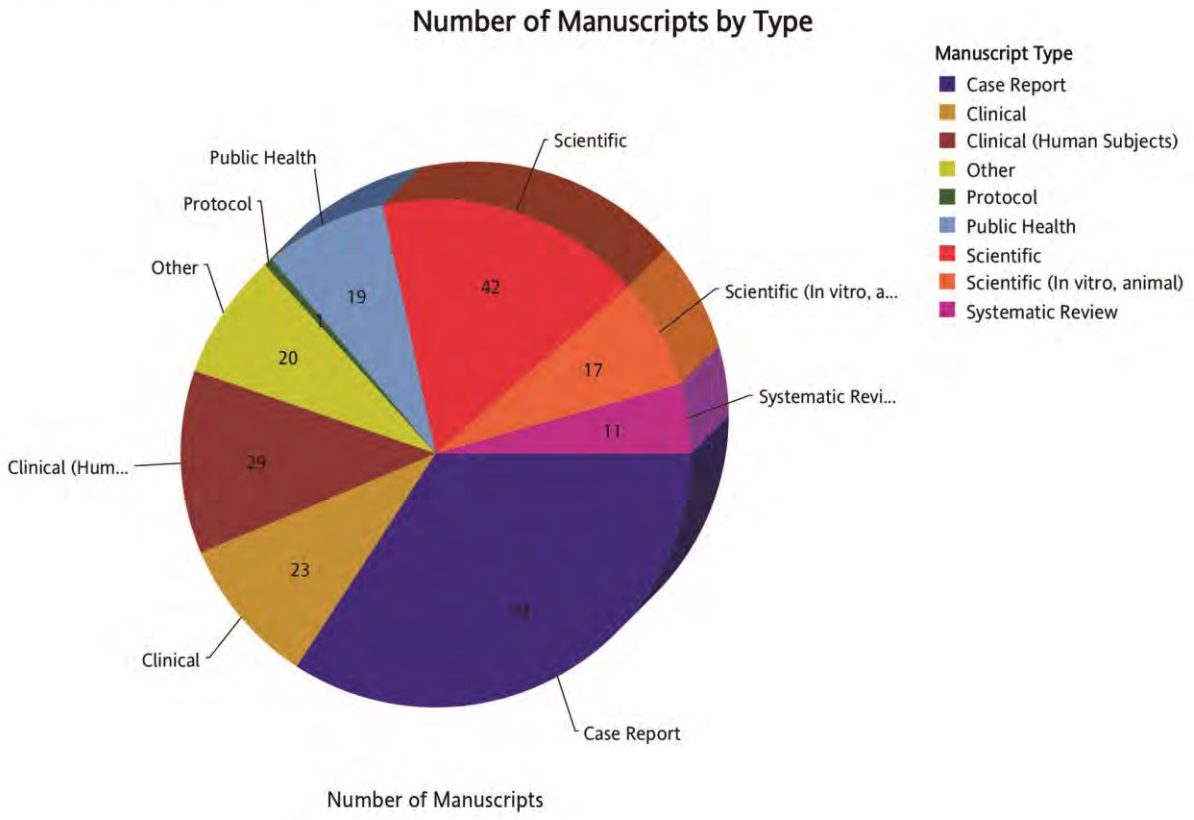
Figure 4

Manuscripts Decided for Journal of Dentistry for Children

Estimated Data Date: Dec 2, 2021 12:08:02 PM

Information based on all manuscripts whose submission date is Between Jan 1, 2021 and Dec 1, 2021 and decision date is Between Jan 1, 2021 and Dec 1, 2021

Grouped by: Manuscript Type



Manuscript Type	Number of Manuscripts	Percentage of Total
Case Report	84	34.1%
Clinical	23	9.3%
Clinical (Human Subjects)	29	11.8%
Other	20	8.1%
Protocol	1	0.4%
Public Health	19	7.7%
Scientific	42	17.1%
Scientific (In vitro, animal)	17	6.9%
Systematic Review	11	4.5%
Total:	246	100.0%

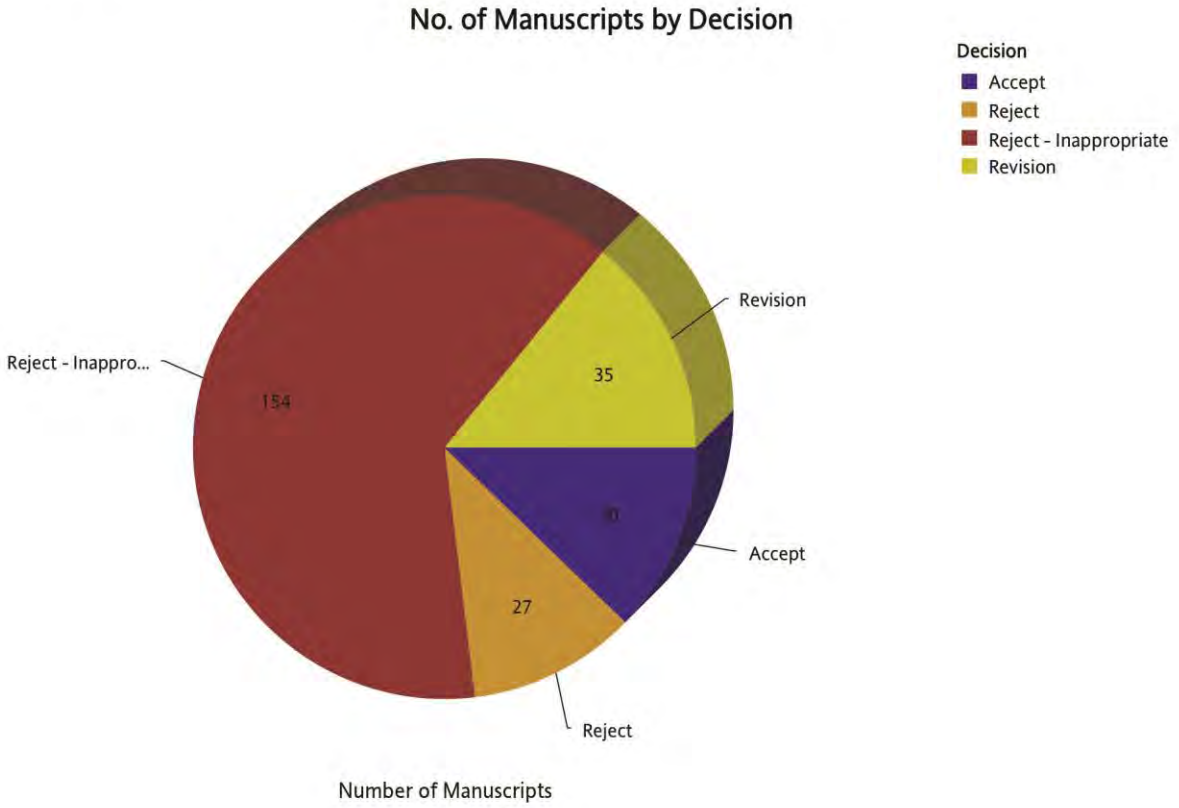
Figure 5

Manuscripts Decided for Journal of Dentistry for Children

Estimated Data Date: Dec 2, 2021 12:08:02 PM

Information based on all manuscripts whose submission date is Between Jan 1, 2021 and Dec 1, 2021 and decision date is Between Jan 1, 2021 and Dec 1, 2021

Grouped by: Manuscript Decision



Manuscript Decision	Number of Manuscripts	Percentage of Total
Accept	30	12.2%
Reject	27	11.0%
Reject - Inappropriate	154	62.6%
Revision	35	14.2%
Total:	246	100.0%

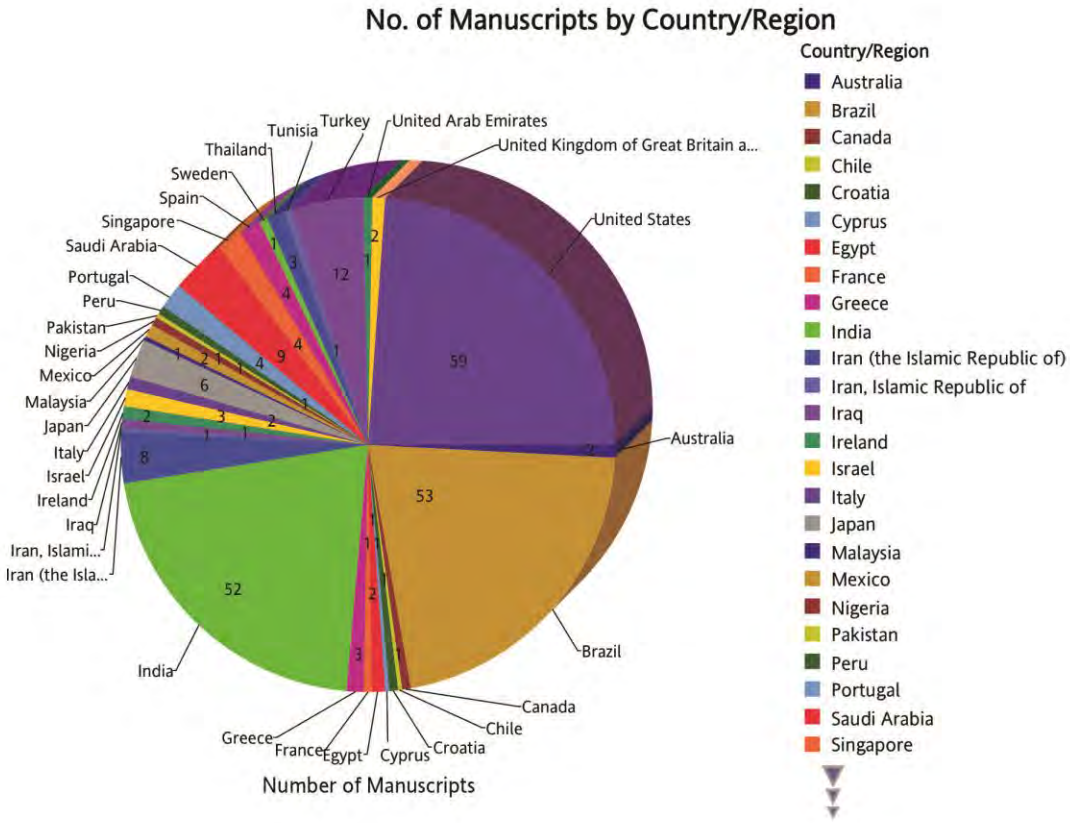
Figure 6

Manuscripts Decided for Journal of Dentistry for Children

Estimated Data Date: Dec 2, 2021 12:08:02 PM

Information based on all manuscripts whose submission date is Between Jan 1, 2021 and Dec 1, 2021 and decision date is Between Jan 1, 2021 and Dec 1, 2021

Grouped by: Country/Region Of Submission



Country/Region of Submitting Author	Number of Manuscripts	Percentage of Total
Australia	2	0.8%
Brazil	53	21.5%
Canada	1	0.4%
Chile	1	0.4%
Croatia	1	0.4%
Cyprus	1	0.4%
Egypt	2	0.8%
France	1	0.4%
Greece	3	1.2%
India	52	21.1%
Iran (the Islamic Republic of)	8	3.3%
Iran, Islamic Republic of	1	0.4%
Iraq	1	0.4%
Ireland	2	0.8%
Israel	3	1.2%
Italy	2	0.8%
Japan	6	2.4%
Malaysia	1	0.4%
Mexico	2	0.8%
Nigeria	1	0.4%
Pakistan	1	0.4%
Peru	1	0.4%
Portugal	4	1.6%

Figure 6 – continued

Manuscripts Decided for Journal of Dentistry for Children

Estimated Data Date: Dec 2, 2021 12:08:02 PM

Information based on all manuscripts whose submission date is Between Jan 1, 2021 and Dec 1, 2021 and decision date is Between Jan 1, 2021 and Dec 1, 2021

Grouped by: Country/Region Of Submission

Country/Region of Submitting Author	Number of Manuscripts	Percentage of Total
Saudi Arabia	9	3.7%
Singapore	4	1.6%
Spain	4	1.6%
Sweden	1	0.4%
Thailand	3	1.2%
Tunisia	1	0.4%
Turkey	12	4.9%
United Arab Emirates	1	0.4%
United Kingdom of Great Britain and Northern Ireland	2	0.8%
United States	59	24.0%
Total:	246	100.0%

Awards Committee 2021–2022

Amr M. Moursi, Chair (President-Elect)
Anupama R. Tate (Senior Trustee)
Carlos A. Bertot (Junior Trustee)
Jonathon E. Lee (Freshman Trustee)
John S. Rutkauskas (Chief Executive Officer)0

The Awards Committee has selected the following recipients:

Pediatric Dentist of the Year

Joseph B. Castellano

Merle C. Hunter Leadership Award

Jessica Y. Lee

Ann Page Griffin Humanitarian Award

Thomas R. Stark

Jerome B. Miller "For the Kids" Award

Colleen Collins Greene

Awards Committee, 2021–2022

Manuel M. Album Award

University of Pennsylvania, Dental Medicine, Care Center for Persons with Disabilities

Dr. Lewis A. Kay
Excellence in Education Award

Vineet Dhar

I want to thank the Awards Committee for their suggestions and dedication to evaluating and selecting these wonderful recipients.

Other awards to be presented in conjunction with the 74th AAPD Annual Session:

Paul P. Taylor Award

The AAPD Editorial Board has selected the following article:

Sheetal Manchanda, Divesh Sardana, Pei Liu, Gillian H.M. Lee, Edward C.M. Lo, and Cynthia K.Y. Yiu.Horizontal Transmission of Streptococcus mutans in Children and its Association with Dental Caries: A Systematic Review and Meta-Analysis. *Pediatr Dent* 2021;43(1):E1-E12

N. Sue Seale Coll Evidence-Based Dentistry Service Award

The Evidence-Based Dentistry Committee has selected the following recipient for 2022:
Dr. Vineet Dhar

Budget and Finance Committee 2021–2022

Scott D. Smith, Chair (Secretary-Treasurer)
Angela M. Stout (Senior Trustee)
Paul Kennedy (Junior Trustee)
James R. Boynton (Freshman Trustee)
John S. Rutkauskas (Chief Executive Officer)
Mary K. Purnell, Business Services

The Budget and Finance Committee has continued to guide our organization successfully primarily because of you—our members.

We recently completed our regular audit and once again received the status of "Unmodified Opinion", which is the highest level possible.

At its March meeting, the Committee developed the 2022 – 2023 Proposed Budget, which will go to the Board of Trustees for action at its May meeting.

The Budget and Finance Committee met on two occasions during the past year. Those meetings occurred in September 2021 and April 2022. The minutes of the September meeting are included below.

Minutes of the Regular Meeting of the Budget and Finance Committee

Meeting: Regular Meeting of the AAPD Budget and Finance Committee

Date: Friday, September 24, 2021

Place: Holly Room, The Galt House Hotel, Louisville, Kentucky and via Zoom

Presiding officer: Dr. Scott D. Smith, Secretary-Treasurer

Minute taker: Ms. Margaret A. Bjerklie, AAPD Governance and Operations Manager (via Zoom)

Budget and Finance Committee members present: Drs. Angel Stout, Senior Trustee; Paul A. Kennedy, III, Junior Trustee; and John S. Rutkauskas, AAPD Chief Executive Officer

Budget and Finance Committee member absent: Dr. James Boynton, Freshman Trustee

AAPD staff present for all or part of meeting: Mr. Thomas Jurczak, Director of Business Services; Ms. Maria Benitez, Accounting Coordinator; Mr. C. Scott Litch, Chief Operating Officer and General Counsel; Ms. Kristi Casale, Senior Meetings and Continuing Education Director; Mr. Paul Amundsen, Vice President for Charitable whatnots.

Guests present for all or part of meeting: Mr. Scott Martin, Martin and Martin CPAs; Mr. David Wuertz and Mr. Robert Skowronski, Associated Bank

Dr. Smith called the meeting to order at 10:01 a.m.

MOTION: To approve the agenda as presented.
Carried

Approval of Minutes

MOTION: To approve the minutes of the March 29, 2021, meeting of the Budget and Finance Committee.
Carried

Budget and Finance Committee, 2021–2022

Draft Audit Report

- Unmodified opinion - Clean audit, no issues.
- The only real debt is a COVID-19 Economic Injury Disaster Loan (EIDL) in the amount of $149,900.
  - Interest rate of 2.75% and a 30-year maturity.
  - Payments are deferred on the loan until July of 2022.
  - Payments will total $7,692 a year for 30 years once the payment deferral period ends.
- The Academy obtained a SBA Paycheck Protection Program (PPP) loan totaling $475,087. This loan is forgivable if the funds are used on certain expenses such as payroll, utilities and rent. The PPP loan has an interest rate of 1.00%. As of August of 2021, the entire PPP loan was forgiven.
- As of the end of June, $10.5 million available to meet obligations for the next 12 months.

ACTION: The Budget and Finance Committee accepted the 2020-2021 audit report.

Annual Session Budget

- Budgeted two scenarios: 70% "normal" attendance and 50% attendance.
- Budgeted for 50% reduction in exhibitor revenue over 2019.
  - Several companies are still on contract.
  - Messaging is that our members' busy season is right after this meeting, so they are on the exhibit floor looking to buy.
- Between now and our meeting, all the specialties will have had meetings, and we will see how they do.
- A hybrid opportunity has been discussed, but since all the sessions are recorded and offered through Education Passport after the session, the expense did not come close to the potential usage.
  - Note that most people who do not attend Annual Session because of a life event (graduations, for example); if that is the reason they don't attend, they won't live stream, either.

Joint Symposium with Canada

- Informational.
- The numbers are amazing; getting good feedback.
- Our Memorandum of Understanding gives each organization 50% of the net profits (right now, that is around $100,000 Canadian).
- CAPD has modest resources, and they've been doing most of the "heavy lifting" for the meeting.

- Proposal: to change the percentage of profit sharing to 75% to CAPD, 25% to AAPD.
- What COVID has taught us is that you can make a good profit in a virtual meeting; we might want to think about continuing the virtual meeting revenue stream.

Investment Update

- Market is volatile, with more of the same in the future.
- Portfolio is well positioned to perform to our goals.
- Recommend asset allocation should remain the same.

MOTION: To maintain the current asset allocation at Associated Bank of 40-65% equity, 35-55% fixed income, 0-15% cash.

Carried

Financial Reports

- The July financials are a continuation of what we were seeing in 2020-2021, so excellent.
- The PPP loan forgiveness will be reflected in the August financials as miscellaneous income.
- Investment contributions come from cash inflow, as we keep virtually nothing in cash; it is higher this year than in the past because there we no major meeting expenses.

Membership Statistics

- Informational.
- We are on target of meeting on membership numbers (as compared to 2019).
- We just sent out over $700,000 to the chapters for the chapter dues collected.

2021-2022 Budget

- Informational.
- The only modification will be replacing the placeholder numbers for Annual Session with the real numbers just approved.
- Need board approval.

Next Meeting

- Historically, the Budget and Finance Committee meets at the Pediatric Oral Health Advocacy Conference in Washington, DC.
- Last year, meeting via Zoom allowed us an extra month of data collection and evaluation.
- In terms of accuracy, the closer you submit a budget to its actual implementation date, the better it will be.

ACTION: The Budget and Finance Committee will meet via Zoom on Friday, April 8, 2022, at 4:00 p.m. Eastern time.

The meeting was adjourned at 11:37 a.m. on Friday, September 24, 2021.

Constitution and Bylaws Committee 2021–2022

Scott W. Cashion, Chair (Vice President)
Marilia Montero-Fayad (Trustee)
Scott D. Smith (Member at Large)
Beverly A. Largent (Consultant)
C. Scott Litch (Chief Operating Officer and General Counsel, non-voting member)

Attached are proposed Constitution and Bylaws modifications that will be presented to the membership at the Reference Committee then to the General Assembly for approval.

In accordance with the AAPD Bylaws, notice of this Bylaws amendment was mailed to the membership more than 60 days prior to the first day of the annual session. The notice was provided in the March 2022 issue of PDT, page 22. This issue was mailed on March 15, 2022. The proposed amendment has also been available on the AAPD website. You were alerted to this information via *AAPD E-News*.

The Reference Committee hearings will take place on Saturday, May 28, 2022, at from 10:00 to 11:30 AM in Room 11AB of the San Diego Convention Center. The hearings are open to all AAPD members, as well as non-members. Members are strongly encouraged to participate. Non-members will be polled and asked to identify themselves by the chair, who also has the authority to determine whether a non-member may comment. The Reference Committees are intended to be the venue for member discussion on any formal resolutions before the General Assembly: Constitution and Bylaws amendments, and proposed changes/additions to oral health policies and best practices recommendations of the American Academy of Pediatric Dentistry. This is an opportunity for members to present testimony on these matters and other business to come before the General Assembly..

The General Assembly is a meeting of Active and Life members for the purposes of conducting the business of the AAPD. Any AAPD member is welcome to attend, although only Active and Life members may vote. Final action on recommendations from Reference Committees takes place at the General Assembly.

The Awards Recognition and General Assembly will take place on Sunday, May 29, 2022, from 9:30 to 11:30 AM in Room 6A of the San Diego Convention Center.

NOTICE TO ACTIVE AND LIFE MEMBERS

Constitution and Bylaws Amendment before the 2022 General Assembly

These amendments will be considered the AAPD Annual Session in San Diego, California, during the Reference Committee hearings and the General Assembly.

Note to readers: All line numbers reference the current AAPD Constitution and Bylaws as printed in the 2022 Membership Directory.

~~Strikethrough~~ words are to be removed; **bold underlined** words are to be added.

1. DELETION OF LEADERSHIP DEVELOPMENT COMMITTEE OF BOARD OF TRUSTEES

The following proposed change to the Constitution and Bylaws was prepared by the Constitution and Bylaws Committee at the request of the Board of Trustees.

Background: In 2016, the Board of Trustees recommended and the General Assembly approved a Bylaws amendment to create a Leadership Development Committee. This stemmed from a report to the Board from the Talent Pool Task Force. Among a number of recommendations, this task force recommended that the AAPD establish a permanent committee of the Board of Trustees solely focused on leadership development opportunities for AAPD members. It was intended that among other duties, this committee would evaluate the current AAPD programs, the Leadership Institute at the Kellogg School of Management/Northwestern University and the Advanced Leadership Institute at the Wharton School of Business/University of Pennsylvania, and make recommendations for their future continuation and direction. The committee would also actively work to identify volunteer leaders to assist the President-elect in the annual process of making appointments to the various AAPD councils and committees.

Distinguished leaders have served on the Development Committee since its creation. The Board of Trustees has evaluated the committee's efforts and reached the following conclusions:

- The committee provided feedback on leadership development programs that has enabled the Board of Trustees to evaluate their effectiveness. This work is complete.
- A separate committee has not proven necessary for consideration of future leadership development programs; that is within the purview and expertise of the Board of Trustees.
- Based on committee feedback, the AAPD has revamped and updated its process for the identification and recruitment of volunteer leaders to serve on various councils and committees. This work is complete.

In conclusion, the Board of Trustees believes this committee's work has been completed, programs noted above systemized, and therefore the committee is no longer necessary.

Therefore, the proposed amendment would DELETE paragraph G under Chapter V, Section 18 (Committees of the Board of Trustees), and re-letter subsequent paragraphs in that section:

~~906 G. LEADERSHIP DEVELOPMENT COMMITTEE:~~
~~907 Composition:~~
~~908 The Leadership Development Committee shall consist of~~
~~909 five (5) members: four (4) pediatric dentist current and/or past~~
~~910 members of the Board of Trustees appointed by the President,~~
~~911 and the Chief Executive Officer, who shall serve ex officio with-~~
~~912 out a vote. The President shall appoint the chair. The committee may~~
~~913 also utilize outside consultants who have an understanding and~~
~~914 knowledge of the best practices in development of volunteer~~
~~915 leadership in professional membership associations.~~
~~916 Duties: The duties of this committee shall be to:~~
~~917 1. Evaluate results and outcomes from existing Academy~~
~~918 professional leadership programs. The committee shall~~
~~919 make recommendations to the Board of Trustees~~
~~920 regarding continuation or modification of such~~
~~921 programs.~~
~~922 2. Analyze other leadership training opportunities and~~
~~923 make recommendations to the Board of Trustees.~~
~~924 3. Identify potential future leaders and provide such names~~
~~925 to the President-elect during the annual appointments~~
~~926 process for AAPD councils and committees.~~
~~927 4. Regularly report to the Board of Trustees concerning~~
~~928 such activities.~~
~~929 5. Perform such other duties as assigned by the President~~
~~930 or the Board of Trustees.~~

Credentials and Ethics Committee 2021–2022

Scott D. Cashion, Chair (Vice President)
Vanessa Carpenter (Trustee)
Angela Stout (Trustee)
John S. Rutkauskas (Chief Executive Officer)

Several letters were sent concerning advertisements of affiliate members (general dentists), requesting deletion of reference to AAPD membership. One case was resolved, one is still pending.

Several letters were sent to pediatric dentists concerning advertisement of membership in AAPD and state chapter without currently maintaining membership. One was case successfully closed, two are still pending.

Leadership Development Committee 2021-2022

Joel H. Berg, Chair
Jessica Y. Lee (Immediate Past President, Board Liaison)
David K. Curtis
Beverly A. Largent
Jade Miller
William F. Vann, Jr.
John S. Rutkauskas (Chief Executive Officer)

AAPD Constitution and Bylaws, Chapter V. Board of Trustees; Section 18. Committees of the Board of Trustees; Paragraph G, Leadership Development Committee

Composition:
The Leadership Development Committee shall consist of five (5) members: four (4) pediatric dentist current and/or past members of the Board of Trustees appointed by the President, and the Chief Executive Officer, who shall serve ex officio without a vote. The President shall appoint the chair. The committee may also utilize outside consultants who have an understanding and knowledge of the best practices in development of volunteer leadership in professional membership associations.

Duties: The duties of this committee shall be to:
1. Evaluate results and outcomes from existing Academy professional leadership programs. The committee shall make recommendations to the Board of Trustees regarding continuation or modification of such programs.
2. Analyze other leadership training opportunities and make recommendations to the Board of Trustees.
3. Identify potential future leaders and provide such names to the President-elect during the annual appointments process for AAPD councils and committees.
4. Regularly report to the Board of Trustees concerning such activities.
5. Perform such other duties as assigned by the President or the Board of Trustees.

The Leadership Development Committee has been inactive once again this year. The Board of Trustees has evaluated the committee's efforts and reached the following conclusions:

- The committee provided feedback on leadership development programs that has enabled the Board of Trustees to evaluate their effectiveness. This work is complete.
- A separate committee has not proven necessary for consideration of future leadership development programs; that is within the purview and expertise of the Board of Trustees.
- Based on committee feedback, the AAPD has revamped and updated its process for the identification and recruitment of volunteer leaders to serve on various councils and committees. This work is complete.

Leadership Development Committee, 2021-2022

In conclusion, the Board of Trustees believes this committee's work has been completed, programs noted above systemized, and therefore the committee is no longer necessary. The membership will vote on a Bylaws amendment to dissolve the committee at the General Assembly on May 29, 2022.

Nominations Committee 2021–2022

Kevin J. Donly (Past President, AAPD), Chair
Jessica Y. Lee (Immediate Past President, AAPD)
Dorothy Pang (President, ABPD)
DELEGATES
(term end in parentheses)
Mario Ramos, Northeastern District (2024)
Edward H. Moody, Southeastern District (2024)
David Avenetti, NorthCentral District (2022)
Brenda S. Bohaty, Southwestern District (2022)
Jessica Webb, Western District (2024)

The Nominations Committee met in Scottsdale, Arizona, and via Zoom, on January 12, 2022. Committee members reviewed the candidate's applications, conducted interviews of the candidates, and then decided on the following slate of nominations:

President-Elect	Dr. Scott W. Cashion
Vice President	Dr. Scott D. Smith
Secretary/Treasurer	Dr. Thomas G. Ison
At-Large Trustee/International Membership Trustee	Dr. Gila Dorostkar
ABPD Director	Dr. Anupama R. Tate

Dr. Dr. Amr M. Moursi will succeed to AAPD President.

Dr. Colleen Collins Green has been selected by the members of the NorthCentral District to be the new Trustee to the AAPD Board of Trustees.

Candidate profiles were published in the March 2022 issue of *Pediatric Dentistry Today* (pages 20-21).

I want to thank the committee members for their dedication and hard work on this very important committee.

Policy and Procedure Committee 2021–2022

Jessica Y. Lee, Chair (Immediate Past President)
Thomas G. Ison (Parliamentarian)
Paul A. Kennedy, III (Trustee)
Marilia Montero-Fayad (Trustee)
James R. Boynton (Trustee)
John S. Rutkauskas (Chief Executive Officer)

The Policy and Procedure Committee responded to several requests by the Board of Trustees during the AAPD year 2021–22. The current edition of the AAPD *Administrative Policy and Procedure Manual* is posted in the Governance area of the Member Resources on the AAPD website.

The Board of Trustees approved the following changes to the AAPD *Administrative Policy and Procedure Manual* in 2021–22:

Amend Section 16 (Shared Interest Groups), Paragraph B (Specific SIGs) of the AAPD Administration Policy and Procedure Manual to add a SIG on sports dentistry

Amend Section 9 (Process for Development of AAPD Oral Health Policies and Best Practices) to update Policies, Best Practices and EBD Clinical Practice Guidelines Development for Consistency with Current Procedures -

Delete Society of Post-Doctoral Program Directors and Pre-doctoral Program Directors Group and placing ongoing activities and opportunities for participation under Post-doctoral and Pre-doctoral Councils. (Section 3 (Board of Trustees), C. (Policies Governing Recognition of Other Organizations); Section 8 (Councils and Committees), P. (Councils/committees), Paragraphs 10 and 12)

Strategic Planning Committee 2021–2022

Amr M. Moursi, Chair (President-Elect)
Angela M. Stout (Senior Trustee)
Carlos A. Bertot (Junior Trustee)
Jeffrey D. Rhodes (Freshman Trustee)
Scott D. Smith (Consultant)
John S. Rutkauskas (Chief Executive Officer)

The Strategic Planning Committee met in January in conjunction with the Winter board Meeting and reaffirmed the AAPD Strategic Plan (https://www.aapd.org/globalassets/media/policies_guidelines/i_strategicplan.pdf).

The AAPD Board of Trustees voted unanimously to reaffirm the American Academy of Pediatric Dentistry Strategic Plan for the period 2022-2027.

Council on Annual Session 2021–2022

Scott W. Cashion, Chair and Board Liaison
Ex-Officio Members
Anthea Drew Mazzawi, Chair, Council on Annual Session, Scientific Program Committee
Aaron S. Lee, Co-Chair, Council on Annual Session, Local Arrangements Committee
Jacob K. Lee, Co-Chair, Council on Annual Session, Local Arrangements Committee
Staff Liaison
Kristi Casale, Vice President for Meetings and Continuing Education

Vision

Duties
The duties of the Council on Annual Session, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to supervise and coordinate all aspects of the annual session.

Standing Charges

Charge 1

Establish criteria and deadlines for projects of the Scientific Program Committee and Local Arrangements Committee. Serve as advisors to the committees.
Background and Intent: The duties of the Council on Annual Session are to supervise and coordinate all aspects of the annual session.

Progress Report
Topics, speakers and most venues have been selected for AAPD 2023. The session grid for 2023 has been started and will be finalized in July 2022.

The following were selected as event venues by the Council on Annual Session:
Appreciation: Discovery Cove
Early Career Dentist Happy Hour: TBD
Welcome Reception: Seaworld
President's Farewell: Gaylord

Council on Annual Session, Scientific Program Committee 2021–2022

Anthea Mazzawi, SE District, Chair
Scott W. Cashion, Board Liaison
Members
Dan Fanikos, NE District
Martha Wells, SE District
Steven J. Hernandez, SW District
Cody C. Hughes, W District
Steven Pike, Affiliate Member
Consultants
Ann M. Bynum
Claudia Cavallino
Robert D. Elliott
Matthew Geneser
Lois A. Jackson
Ricardo A. Perez
Janice Townsend
Ex-Officio Members
David M. Avenetti, Ex-Officio (Chair, Council on Continuing Education)
Jung-Wei Chen, Ex-Officio (Chair, Council on Scientific Affairs)
Staff Liaison
Kristi Casale, Vice President for Meetings and Continuing Education

Vision

Duties

The duties of the Council on Annual Session, Scientific Program Committee, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to propose and develop the scientific program for the annual session.

Standing Charges

Charge 1

Complete planning for the current Annual Session, and begin planning for the following Annual Session. The programs and content of the Annual Session should be in conformity with the Strategic Plan of the AAPD and with the information gained from member needs surveys and member evaluations of prior meetings.

Background and Intent: The content of the Annual Session should reflect the Academy's Strategic Plan and membership needs.

Council on Annual Session, Scientific Program Committee, 2021–2022

Progress Report

After two years, Annual Session is back! The topics include:

- Pulp Therapy Update
- Space Management and Orthopedic Timing
- Social Media and Marketing
- AAP Section: Mental Health in Children and Adolescents
- Safety Committee: Here's to your Health! Strategies for Long Term Health in Pediatric Dentistry
- Office Staff Session
- 3D Scanning, Digital Dentistry and their Clinical Applications (Scientific Affairs Topic)
- Speed Learning: Restorative
- Marketing for dentists
- 2021 Benefits Symposium
- PALS/BLS/PEARS Skills Check
- Team Talk with Lilly and Dr. Bobby
- Early Career Dentist Course
- Sedation
- Practical Clinical Tips for Office Staff
- MiniClinics, String-of-Pearls, Learning Labs and International Oral Presentations will be back
- Practical Dental Care for Special Needs Patients? Treating Special Needs Patients Toolbox

The Preconference course is Diagnosis and Management of Dental Trauma in Children and Adolescents.

Council on Clinical Affairs 2021–2022

Thomas R. Stark, Chair
Anupama R. Tate, Board Liaison
Members
Mitali Y. Patel, NE District
Elizabeth S. Gosnell, NC District
Erica Ann Brecher, SE District
Elva V. Jordan, SW District
Thomas Tanbonliong NW District
Robert Schroth, Affiliate Member
Consultants
Erica M. Caffrey
Judith R. Chin
Charlie Clark
Carolyn B. Crowell
Jennifer Cully
Maria Regina (Ninna) P. Estrella
Scott Goodman
Carolyn A. Kerins
John W. Kersey, Jr.
Randall K. Lout
Priyanshi Ritwik
Brian J. Sanders
Rachael L. Simon
Janice A. Townsend
Karin Weber-Gasparoni
Sabina S. Yun
Derek S. Zurn
Enrique Bimstein, Expert Consultant (Periodontics)
Dan Burch, III, Expert Consultant (Diversity)
Matthew Cooke, Expert Consultant (Anesthesia)
Keri Discepolo, Expert Consultant (Diversity)
Kevin J. Donly, Expert Consultant (Restorative)
Catherine M. Flaitz, Expert Consultant (Periodontics)
Catherine Hong, Expert Consultant (Immunotherapy)
Janice Jackson, Expert Consultant (Abstracts)
William Stenberg, Expert Consultant (Periodontics)
Jenny Ison Stigers, Expert Consultant (Reference Manual)
Adriana Modesto Vieira, Expert Consultant (Diversity)

Staff Liaisons

Council on Clinical Affairs, 2021-2022

Robin Wright, Director, Pediatric Oral Health Research and Policy Center
Mary Essling, Dental Benefits Director
Rachel Wedeward, Research Project Manager
Staff Assistants
Adriana Loaiza, Publication Senior Manager
Margaret A. Bjerklie, Governance and Operations Manager

Vision

The vision of the Council on Clinical Affairs (CCA) is to be a critical and vital aspect of American Academy of Pediatric Dentistry continuing as the world leader on children's oral health. Formed from a group of passionate, committed, and bright pediatric dentists, this council draws on its long history and responsibility to the organization and the children its members serve. With the common goal of providing the best and most current evidence-based science, documents are drafted that are relevant to healthcare providers and organizations, governmental bodies, and other industry stakeholders. With that bold platform, CCA is an invaluable resource for all of those parties that seek to impact the lives of children by vastly improving their oral health.

Duties

The duties of the Council on Clinical Affairs, Committee on Sedation and Anesthesia, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to 1) advise the Board of Trustees on matters concerning the clinical practice of pediatric dentistry; 2) review and develop oral health policies and guidelines regarding the clinical practice of pediatric dentistry and submit recommendations through the Board of Trustees; 3) perform such other duties as assigned by the President of the Board of Trustees.

Standing Charges

Charge 1

Annually review the list of Reference Manual documents to be revised and provide a list of documents to be revised in the upcoming year to the board of trustees at its Winter Meeting. Include suggestions for new policies and best practices and tips for guidelines to be developed by the Evidence-Based Dentistry Committee.

Background and Intent: This is a standing charge to the Council. To be effective advocates for infants, children, adolescents, and persons with special health care needs, AAPD oral health policies and best practices must be supported by the best available evidence. Documents will be reviewed and revised/reaffirmed/retired in a cycle of not more than 5-year intervals. When there is sufficient reason (e.g., publications from a consensus conference), documents will be evaluated in advance of their scheduled review cycle. AAPD must delineate the organization's position on new and emerging health issues and translate science into clinical practice by developing new policies and best practices. CCA annually will monitor the policies and guidelines of other dental and medical healthcare organizations to determine when revisions have been made by the authoring group and the appropriateness of AAPD's continued endorsement. In addition, CCA will maintain a resource section within the Reference Manual that supplements AAPD oral health policies and best practices. An annual review will determine the accuracy of information and appropriateness for continued inclusion.

Council on Clinical Affairs, 2021-2022

Progress Report

The following is a list of documents approved by the board of trustees for development in 2021-2022. Members of the councils on Clinical Affairs and Scientific Affairs who comprised the workgroups are listed above.

2021-2022 CCA/CSA Documents
Definition of Dental Disability *The Council recommends retiring this document.* *Rationale: The decades-old definition was initially included in the Reference Manual before the American Disabilities Act. Following an exhaustive review, the definition was not found to be cited by professional organizations or used to inform health care policies. The consensus of the Workgroup and CCA/CSA members was that the definition was not relevant or necessary.*
Policy on Social Determinants of Health
Policy on Child Identification Programs
Policy on Mandatory School-entrance Oral Health Examinations
Policy on Role of Dental Prophylaxis in Pediatric Dentistry
Policy on Interim Therapeutic Restorations (ITR)
Policy on Management of the Frenulum in Pediatric Dental Patients
Policy on Dietary Recommendations for Infants, Children and Adolescents
Policy on Snacks and Beverages Sold in Schools
Policy on Use of Lasers for Pediatric Dental Patients
Policy on Acute Pediatric Dental Pain Management
Policy on Model Dental Benefits for Infants, Children, Adolescents, and Individuals with Special Health Care Needs
Policy on Third-party Reimbursement of Medical Fees Related to Sedation/General Anesthesia for Delivery of Oral Health Services
Policy on Third-party Fee Capping of Non-covered Services
Policy on Using Harvested Stem Cells
New Policy on Diversity, Equity, and Inclusion
New Policy on Use of Pacifiers
Endorsement, Healthy Beverage Consumption *The Council recommends retiring this document.* *Rationale: Workgroup and Council members pointed out that the Endorsement does not align with the format and reference style of the Reference Manual. The consensus was to combine text and recommendations from the endorsement with the Policy on Dietary Recommendations and move the charts to Resource Section of Reference Manual.*
Best Practices for Periodicity of Examination, Preventive Dental Services, Anticipatory Guidance/Counseling, and Oral Treatment for Infants, Children, and Adolescents

Council on Clinical Affairs, 2021-2022

2021-2022 CCA/CSA Documents
Best Practices for Caries-risk Assessment and Management for Infants, Children, and Adolescents
Best Practices for Pain Management in Infants, Children, Adolescents, and Individuals with Special Health Care Needs
Best Practices for Restorative Dentistry
Best Practices for the Use of Antibiotic Therapy for Pediatric Dental Patients *This document was added to the review cycle due to the 2021 American Heart Association Scientific Statement on the prevention of Viridans Group Streptococcal Infective Endocarditis*
Best Practices for Antibiotic Prophylaxis for Patients at Risk for Infection *This document was added to the review cycle due to the 2021 American Heart Association Scientific Statement on the prevention of Viridans Group Streptococcal Infective Endocarditis*
Best Practices for Dental Management of Pediatric Patients Receiving Immunosuppressive Therapy and/or Radiation Therapy
NEW Best Practices on Risk Assessment and Management of Pediatric Periodontal Conditions
Best Practices on Oral and Dental Aspects of Child Abuse and Neglect *This joint document with AAP is on the 2021-2022 CCA/CSA document cycle. The document is under development and has not been shared with the CCA/CSA to date.*

Charge 2

Review, revise, and update the AAPD Reference Manual annually according to the schedule prepared in Charge 1.
Background and Intent: This is a standing charge to the Council. To be effective advocates for infants, children, adolescents, and persons with special health care needs, AAPD oral health policies and best practices must be supported by the best available evidence.

Progress Report

Literature reviews were completed over the summer. Policies and Best Practice documents were discussed on November 5-6, 2021, during a hybrid in-person/virtual workshop. Post-Workshop revisions were completed for review by the Board of Trustees. The Board approved the Council's recommendation to retire *Definition of a Dental Disability* and to delete *Endorsement on Healthy Beverage Consumption in Early Childhood: Recommendations from Key National Health and Nutrition Organizations: Summary of Oral Health Considerations* from the AAPD Reference Manual but retained the charts from the *Endorsement on Healthy Beverage Consumption* as a new resource document in the Resource Section of the AAPD Reference Manual. The Board approved title changes from *Policy on Snacks and Beverages Sold in Schools* to "Policy on Snacks and Sugar-Sweetened Beverages Sold in Schools" and "*Policy on Acute Pediatric Pain*

Management" to "Policy on *Pediatric Pain Management*." Finally, the board approved the Council's recommendation to craft a document for the Resource Section of the AAPD Reference Manual on *Systemic Diseases and Conditions Related to Periodontal Disease.*

February 12, 2022 – CCA/CSA workgroup members provided feedback and comments on revised drafts of the documents during a 5-hour virtual workshop.

The Council on Dental Benefits provided feedback on the policies on *Third-party Reimbursement of Medical Fees Related to Sedation/General Anesthesia for Delivery of Oral Health Services* and *Third-party Fee Capping of Non-covered Services*.

March 29, 2022 - revisions submitted for review by the Membership 60 days before the General Assembly. Members were alerted to the availability of documents via AAPD E-news.

Charge 3

Advise the Committee on Communications of any updates to AAPD pamphlets, brochures, and other AAPD publications required for consistency with AAPD oral health policies and clinical recommendations.
Background and Intent: This is a standing charge to the Council to ensure that the publications and promotional and educational materials offered to our members, other professionals, and the public are scientifically accurate and consistent with our Policies and Guidelines.

Progress Report

No new AAPD pamphlets, brochures, or other AAPD publications were presented for review.

Charge 4

Review position papers prepared by the AAPD Pediatric Oral Health Policy and Research Center for consistency with AAPD oral health policies and clinical recommendations.
Background and Intent: This is a standing charge to the Council to ensure that any definition, policy, guideline, or other publication offered to our members, other professionals, and the public are scientifically accurate and consistent with our Policies and Guidelines.

Progress Report

Pediatric Oral Health and Research Policy Center documents were shared during the November 5-6, 2021 workshop. Policy Center documents including the recently published *Silver Diamine Fluoride Policy and Fact Summary*; *Are your Kids Covered? - Medicaid Coverage for the Essential Health Benefits;* and *Denial of Access to Operating Room Time in Hospitals for Pediatric Dental Care* were circulated and reviewed by CCA members for consistency with AAPD oral health policies and clinical recommendations. These documents were identified as potential resources and sources for additional references for the assigned documents.

The Council is anticipating involvement and collaboration with the EBD Committee regarding the document on behavior management and, eventually, the document on frenectomy and

lactation. The CCA expects to maintain close communication as the EBD process progresses.

CCA members were also directed to review the recently constructed "*Disaster Preparedness Resource Hub*" link on the AAPD website.

Charge 5

At the request of the Executive Committee of the AAPD, provide a timely review of children's oral health policies and clinical recommendations prepared by other organizations, with particular attention to conformity with AAPD oral health policies and clinical recommendations.

Background and Intent: This is a standing charge to the Council. This mechanism implements the intent of the Memorandum of Understanding with the AAP Section on Oral Health to review proposed documents for consistency with AAPD policies and guidelines. The Council will review these documents with sensitivity to the embargoed status of the drafts. A summary report will be submitted to the Executive Committee.

Progress Report

Best Practices on Oral and Dental Aspects of Child Abuse and Neglect. This joint document with AAP is on the 2021-2022 CCA/CSA document cycle. However, the paper is under development and has not been shared with the CCA/CSA to date. CCA decided to table the joint Best Practice for the 2022-2023 CCA/CSA document cycle.

Special Acknowledgment

The Council would like to recognize Dr. William Stenberg for sharing his time and expertise with the Council over the past several years. Dr. Stenberg's extensive clinical experience as a periodontist and vast knowledge of the periodontal literature helped shape the best practice documents for periodontal classification and risk assessment, and management of pediatric periodontal conditions.

Council on Clinical Affairs, 2021-2022

2022-2023 Documents

Council on Clinical Affairs
2022–2023

Definition of a Dental Home
Policy on Minimizing Occupational Health Hazards Associated with Nitrous Oxide
Policy on the Role of Pediatric Dentists as Both Primary and Specialty Care Providers
Policy on Use of Fluoride
Policy on the use of silver diamine fluoride
Policy on Prevention of Sports-related Orofacial Injuries
Policy on the Dental Home
Policy on Selecting Anesthesia Providers for the Delivery of Office-Based Deep Sedation/General Anesthesia
Policy on Patient's Bill of Rights and Responsibilities
Policy on Use of Dental Bleaching for Child and Adolescent Patients
Policy on Third-party Payor Audits, Abuse, and Fraud
Policy on School Absences for Dental Appointments
Best practice on Fluoride Therapy
Best practice on the use of Nitrous Oxide for Pediatric Dental Patients
Best practice on the use of Anesthesia Providers in the Administration of Office-based Deep Sedation/General Anesthesia to the Pediatric Dental Patient
Best practice on Monitoring and Management of Pediatric Patients During and After Sedation for Diagnostic and Therapeutic Procedures
Best practice on Informed Consent
Best practice on the use of Local Anesthesia for Pediatric Dental Patients
Best practice on behavior Guidance for the Pediatric Dental Patient
Endorsement on Management of Patients with Cleft Lip/Cleft Palate

This draft does not constitute an official AAPD health oral policy or clinical recommendation until approval by the General Assembly. Circulation is limited to AAPD members.

Policy on Social Determinants of Children's Oral Health and Health Disparities

~~Adopted~~Revised

~~2017~~ 2022

ABBREVIATIONS

AAPD: American Academy Pediatric Dentistry. **SDH**: Social determinants of health.

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) recognizes the influence of social factors on children's oral health including access to care, dental disease, behaviors, and oral health inequalities. The AAPD encourages oral health professionals and policymakers to formally acknowledge the role that social determinants of health (**SDH**) have in producing and perpetuating poor oral health and oral health inequalities in children. Moreover, AAPD encourages the implementation of oral health promotion strategies that account for ~~the~~ SDH and appropriate clinical management protocols informed by and sensitive to ~~the~~ SDH. All relevant stakeholders (e.g., health professionals, researchers, educators, policy makers) are encouraged to develop strategies that incorporate SDH-related knowledge to improve oral health behaviors, prevent dental disease, and address oral health inequalities in children.

Methods

This policy, developed by the Council on Clinical Affairs and adopted in 2017 (AAPD 2017), is based on a review of the current literature, including a search of PubMed®/MEDLINE database using the terms: social determinants AND dental; fields: all; limits: English, age birth-18 years. A total of 1485 ~~405~~ articles matched these criteria. Articles for review were selected from this list, the references within selected articles, and other articles from the literature.

Background

The World Health Organization defines social determinants of health as "the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life".(WHO 2021 ~~2016~~) ~~The concept of~~ Life circumstances are heavily influenced by social

behaviors, cultural practices, government policies, and economic and political systems (da Fonseca and Avenetti, 2017). The term SDH implies ~~is based on the premise~~ that improving social conditions is ~~a~~ necessary ~~precursor for improving~~ to ~~improve~~ optimize health outcomes for vulnerable populations, narrow ~~ameliorteing~~ inequalities, and achieve~~ing~~ health equity and social justice. Health equity may be ~~is~~ defined as the "fair and just opportunity to be as healthy as possible" (Braveman, P. 2019), a concept that requires elimination of those societal factors (e.g., poverty, discrimination, lack of access to healthcare) that unfairly result in poorer health for at-risk social groups. Social groups can be identified by many characteristics including ethnicity, religion, socioeconomic status, gender identity, age, disability status, sexual orientation, or geographic location (Braveman 2014; Baker 2018.)"~~the absence of systematic disparities in health between and within social groups that have different levels of under-lying social advantages or disadvantages".(Braveman & Bruskin 2003)~~ From a social justice perspective, addressing ~~the~~ SDH is essential to achieving ~~a longer-term aspirational goal to~~ improved oral health outcomes and ~~reduce~~ reducing inequalities for children from historically disadvantaged groups (Braveman, P. 2014). ~~socioeconomic vulnerable families and communities. A more immediate~~ One strategy is to prioritize ~~ensure that~~ interventions, programs, and policies that properly acknowledge and account for ~~the~~ SDH.

Past work has demonstrated gradients in oral health outcomes based on socioeconomic position.(Knorst et al, 2021; da Fonseca and Avenetti, 2017; Sabbah et al. 2007) Measures of socioeconomic position include income, educational attainment, occupation, and race/ ethnicity.(Chalub et al. 2014; Joury et al. 2016; Stein et al. 2021) SDH are influenced by socioeconomic position and more broadly embody the social environment and context in which individuals live and make health-related decisions over the life course (da Fonseca and Avenetti 2017; Schwendicke 2015). Various conceptual models from dentistry include SDH as upstream factors that influence oral health behaviors, dental disease rates, and oral health outcomes.(Patrick et al. 2006; Fisher-Owens et al. 2007; Marmot & Bell 2011; Chi 2013; Casamassimo et al. 2014; Lee & Divaris 2014) ~~From a social justice perspective, addressing the SDH is achieving a longer-term aspirational goal to improve oral health outcomes and reduce inequalities for children from socioeconomic vulnerable families and communities. (Braveman, P. 2014) An more immediate strategy is to ensure that interventions, programs, and policies properly acknowledge and account for the SDH~~. In 2013, the American Academy of Pediatrics published a policy statement ~~entitled *Community Pediatrics: Navigating the Intersection of Medicine, Public Health, and Social Determinants of Children's Health*~~ that acknowledged the influence of SDH on chronic diseases including dental caries. (Gorski et al. 2013) Since then, the body of scientific research addressing SDH and oral health has grown substantially. ~~This statement included a reference to dental caries, which is an important acknowledgement of SDH and~~

~~children's oral health. However, the statement did not include references from the scientific literature that provide empirical evidence for SDH, which has grown substantially in dentistry since 2013.~~ Findings from the social determinants of children's oral health literature can be organized into categories that provide guidance on how dentists, other health professionals, researchers, educators, and policy makers can account for ~~the~~ SDH to improve children's health outcomes. Examples are provided of past efforts and future opportunities to address children's oral health inequalities through SDH-based interventions, programs, and policies.

SDH are commonly measured at the caregiver- or household-level. The same SDH that affect a caregiver's oral health outcomes also affect his~~their~~ children's oral health directly and indirectly.(Moimaz et al. 2014) Caregiver level of education influences both material and non-material components of a child's oral health, including access to and utilization of preventive services, dental knowledge, and oral health behaviors (Schwendicke, 2015; Duijster 2014; Sun, 2020; Rai and Tiwari 2018). Socioeconomic status was found to mediate the influence of maternal psychological factors (e.g. depression, external locus of control, self-efficacy) on oral health in offspring (Knoblauch 2019; Pappas et al, 2020; Arora, A et al 2021; Costa, FDS et al 2017; Sun, L et al 2020). Examples of SDH at the household level include food insecurity (defined as reduced quality, variety, or desirability of diet, and disrupted eating patterns with or without reduced food intake)(US Dept of Agriculture) and overcrowding.(Chi et al. 2014; Paula et al. 2015) These factors can make it difficult for families to afford non-cariogenic food and preventive oral hygiene products or to have designated spaces in the home for important routines like toothbrushing (Angelopoulou, 2019; Hill, 2020; da Fonseca and Aveneti 2017). Children living in settings with multiple social risks are at substantially greater risk for caries.(Yang et al. 2016) SDH may be reflected by a heavy allostatic load (biological markers of chronic stress) among household members, with implications for poor oral health behaviors and higher caries rates (Masterson & Sabbah, 2015). This is particularly worrisome from a life course perspective (Boyce 2014). A small cross-sectional study suggests associations between the adverse effects of socioenvironmental stressors, neuroendocrine factors, and levels of intraoral cariogenic bacteria in children, ~~that chronic stress is related to higher levels of dental caries in children potentially by affecting intraoral bacteria,(~~Boyce et al. 2010), findings that need to be validated with additional studies. ~~There~~ Examples of ways in which chronic stress associated with socioeconomic status leads to negative physiologic effects on oral health include pro-inflammatory, endocrine, and microbiological responses. (Gomaa,2016). Furthermore, poverty and stress could influence child temperament (Strickhouser, 2020) and behaviors in dental settings (Quinonez 2020),

including the ability to cooperate for dental procedures, (da Fonseca 2014; Fisher-Owens 2014). ~~which has not yet been tested empirically. are other oral health examples of social and biological interactions.~~

~~Weak social ties and social networks are associated with poor oral health outcomes.(Zini et al. 2012; Duijster et al. 2014; Fontanini et al. 2015; Vettore et al. 2016, Vettore et al. 2019) Potential mechanisms include reduced health information that is transmitted through social ties and networks and increased allostatic load or stress, which is implicated in poor oral health behaviors and higher caries rates.(Masterson & Sabbah 2015) This is particularly worrisome from a life course perspective.(Boyce 2014) A small cross-sectional study suggests that chronic stress is related to higher levels of dental caries in children potentially by affecting intraoral bacteria,(Boyce et al. 2010) findings that need to be validated with additional studies. Furthermore, poverty and stress could influence child behaviors in dental settings, including the ability to cooperate for dental procedures,(da Fonseca 2014; Fisher-Owens 2014) which has not yet been tested empirically. There are other oral health examples of social and biological interactions.(Gomaa et al. 2016) Other examples of SDH include household food insecurity (defined as disrupted eating patterns with or without reduced food intake)(US Dept of Agriculture No date) and overcrowding.(Chi et al. 2014; Paula et al. 2015) These factors can make it difficult for families to purchase healthy foods and to have designated spaces in the home for important routines like toothbrushing. Children living in settings with multiple social risks are at substantially greater risk for caries.(Yang et al. 2016) Many of these relationships need to be elucidated with additional studies.~~

~~Weak social ties and social networks are associated with poor oral health outcomes.(Zini et al. 2012; Duijster et al. 2014; Fontanini et al. 2015; Vettore et al. 2016, Vettore et al. 2019) Potential mechanisms include reduced health information that is transmitted through social ties and networks and~~
SDH are also measured within neighborhoods and communities. Neighborhood income is positively associated with oral health-related behaviors like improved oral hygiene practices and lower dental disease levels for children.(Duijster et al. 2014; Martens et al. 2006; Mathur et al. 2014; Mathur et al. 2016; Priesnitz et al. 2016) In addition, higher levels of income inequality within a community are associated with poorer oral health outcomes.(~~Pattussi et al. 2001~~, Moeller 2017))

Social capital, a term that encompasses social support, social networks, and social cohesion, is an important SDH that affects both individuals and communities (Duh-Leong, C 2020). Social support is tied to emotional development in adolescents, including self-efficacy, trust, and avoidance of detrimental oral health behaviors (Fontanini, 2015). Weak social ties and social networks are associated with poor

oral health outcomes, (Zini et al. 2012; Duijster et al. 2014; Fontanini et al. 2015; Vettore et al. 2016, Vettore et al. 2019). ~~Another important SDH is social capital, which is defined as resources that result from networks(Carpiano 2006) and other sources like community centers.~~ Social capital may manifest as neighborhood resources such as community centers that benefit the oral health of members (Guedes et al. 2014) ~~Over 60 percent of women of childbearing age reside in neighborhoods with very poor or poor levels of social capital.(Ebrahim et al. 2009)~~ Studies generally have reported positive health outcomes associated with greater levels of social capital,(Iida & Rozier 2013; Santiago et al. 2013; Reynolds, JC 2015; Knorst, 2019) but at least one study found negative outcomes.(Chi & Carpiano 2013) These findings suggest that enhancing social capital is beneficial, but that social norms can influence the way in which resources are deployed, which can lead to suboptimal oral health behaviors and poor outcomes.

Structural determinants of health are formed by the economic, political, and social policies that modulate SDH (Baker, 2018). Economic policies affect employment to population ratios, standard of living, and individual cost of living, which in turn influence access to health insurance or ability to pay for healthcare expenses. Policies that have expanded Medicaid access, reduced influences of neighborhood poverty, and invested in education quality have demonstrated long-term positive health outcomes for youth (Venkataramani 2020). The determination of public insurance coverage for specific procedures, including the cost of general anesthesia during dental treatment, is at the discretion of individual states rather than the federal government. Depending on individual state Medicaid policies, out-of-pocket costs may be prohibitive and divert patients toward less ideal treatment options for behavior management (Edelstein, 2014). Inability to pay for services may preclude some children from receiving treatment at all. Sociolegal policies that regulate insurance coverage, including those related to preauthorization and informed consent, have been shown to delay or prevent adolescents from obtaining health services (Garney, 2021).

Translational science has led to the development of pediatric oral health interventions that address SDH. For example, *Baby Smiles* was a community-based randomized trial that implemented motivational interviewing in conjunction with age one dental visits for those with Medicaid (Milgrom, 2013). The program focused on improving the health of the mothers as well as on prevention for their at-risk children. Other initiatives, such as school-based sealant programs, have developed strategies to overcome socioenvironmental barriers to oral healthcare and reach at-risk children (Siegal, 2010). A recent evaluation found that school-based sealants programs resulted in benefits that outweighed costs, including reduced rates of dental caries, untreated decay, and school absenteeism (Griffin, 2017). It is imperative

that future oral health interventions account for SDH and aim to achieve greater health equity for all children.

~~An example of a public health intervention that circumvents the SDH is the Childsmile program in Scotland.(Gibson et al. 2016) The Childsmile program distributes free toothbrushes and toothpaste to children in communities during early childhood and to first and second graders living in disadvantaged areas. Within severely disadvantaged areas, at-risk children are referred to dental care support workers who provide dietary counseling. In addition, children in these areas receive twice yearly school-based fluoride varnish treatments. The Childsmile program does not attempt to modify SDH but circumvents the SDH by delivering more intense intervention activities within the neediest areas. The Bolsa Família Program is a conditional cash transfer program in Brazil, part of a larger initiative aimed at improving use of primary care services for disadvantaged children.(Petrola et al. 2016) It does not have a formal oral health component even though there is high support by local Bolsa Família Program supervisors. The study recommendation was to make child dental visits a mandatory precursor to participating families receiving cash transfer payments, which would provide additional opportunities to influence parent and child behaviors and improve oral health outcomes.~~

~~Similar programs requiring meaningful health care investments from central governments are more prevalent in countries in which there is less income inequality(Bhandari et al. 2015) as well as the political will to address oral health inequalities.~~

~~Directly addressing the SDH will involve~~ ~~s~~Systematic policies and environmental changes that improve living conditions and alleviate poverty are necessary to address SDH. Examples include universal housing programs, emergency rental assistance, public health insurance programs like Medicare, ~~for older Americans and~~ Medicaid, and Children's Health Insurance Program (CHIP), ~~for children~~, and programs that mediate ~~prevent~~ food insecurity such as Supplemental Nutrition Assistance Program (SNAP) and the National School Lunch Program (NSLP). Broader policies are likely to have the long-term impact needed to improve the conditions in which vulnerable families and children live.

Policy Statement

Recognizing the importance of the social determinants of oral health for children, the AAPD:

- supports broader policies and programs that help to alleviate poverty and social inequalities.
- encourages dentists and the oral health care team to collect a social history from patients, provide anticipatory guidance that is sensitive to ~~the~~ SDH, and connect patients with helpful resources

(e.g. social service organizations, food banks) as appropriate. ~~which involves collecting a social history from patients.(AAPD BP_Caries Risk Assessment)~~

- supports inter-professional educational approaches to train students as well as practicing dentists and health professionals on the social determinants of health.(Lapidos & Gwozdek 2016; Lévesque et al. 2015; Lévesque et al. 2016; Foster Page et al. 2016)
- endorses interdisciplinary ~~theory-based intervention~~ approaches to improve oral health that account for ~~the~~ social determinants of chronic diseases ~~oral health~~. (Newton 2012; Watt & Sheiham 2012)
- supports additional research to understand mechanisms underlying the social determinants of oral health.(Newton & Bower 2005)

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Policy on Child Identification Programs

Latest Revision

~~2017~~ 2022

ABBREVIATIONS

AAPD: American Academy Pediatric Dentistry. **CHIP**: Child Identification Program. **FBI**: Federal Bureau of Investigation.

Purpose

The American Academy of Pediatric Dentistry (**AAPD**), recognizing the role that dental records play in forensic identification, encourages dental practitioners and administrators of child identification programs to implement simple practices that can aid in identification of unknown infants, children, and adolescents. The AAPD recommends that parents establish a dental home, where clinical data is gathered, stored, and updated routinely and can be made available to assist in identification of missing and~~/or~~ abducted persons.

Methods

This document was developed by the Council on Clinical Affairs, ~~and~~ adopted in 2003(AAPD 2003), and last revised in 2017 (AAPD 2017). ~~The last revision occurred in 2008 and was reaffirmed in 2012.~~ This policy revision included a new literature search of the PubMed®/MEDLINE electronic database using the terms: child, forensic, dental, and identification; fields: all; limits: within the last 10 years, English. One hundred ~~twenty-nine~~ twelve articles matched these criteria. Papers for review were chosen from this list and from references within selected articles. When information from these articles did not appear sufficient or was inconclusive, policies were based upon expert and/or consensus opinion by experienced researchers and clinicians.

Background

~~More than 800,000 children in America are reported missing each year.(NCIP-About us)~~ Nearly 350,000 reports of missing children and approximately 900 unidentified person records were submitted to the Federal Bureau of Investigation's National Crime Information Center in 2021.(FBI 2022) Since the passage of the Missing Children Act in 1982 and the creation of the National Crime Information Center, the dental profession has provided much of the information used to compare missing persons with

unidentified individuals.(Sperber 1986; Kavanaugh & Filippi 2013) *The Manual on Forensic Odontology* utilized by the American Society of Forensic Odontology demonstrates the vital role of dentistry in identification of missing and unknown persons.(Kavanaugh & Filippi 2013) Numerous cases have been published in which law enforcement agencies called upon dentistry to provide information that proved vital to the identification process.(Chen & Jain 2008; Debnath et al. 2016) Dental records used for identification purposes have included dental radiographs (Du H et al 2021), facial photographs, study casts, dental examinations documenting teeth present and distinguishing features of oral structures, and histories documenting appliances (prosthetic and orthodontic) in place, orthodontic treatment, restored surfaces and materials used, and bite registrations.(Cardoza & Wood 2015; Berman et al. 2013; Shanbhag 2016)

Nondental sources of distinguishing information currently include fingerprints, photographs, physical descriptions, and DNA from blood, saliva, and other tissue. (Conceição et al. 2015) Some of these nondental sources have practical limitations. Few children have fingerprint records. DNA sampling, while being state of the art, can be difficult to access as well as protracted and costly. (Aidar & Line 2007) While not routinely collected, saliva may be useful tool in profiling age and gender determination for forensic experts. (Bhuptani D. et al. 2018). Dentists may provide many non-invasive tools that help in the identification and tracking of children. (Vij N et al. 2016) ~~can provide data without many of these limitations~~.

Many programs have been developed and sponsored by community groups that use various child identification methods. Examples are:

- Child Identification Program (**CHIP**), sponsored by the Masons. This program gathers a physical description and features ~~care,~~ fingerprinting ~~cared or scanned print~~, several still photos of various profiles, a video recording or mannerisms with voice interview, and various DNA samples collected on dental impressions and/or cheek swabs. (MYCHIP-No date)
- The National Child Identification Program, sponsored by the American Football Coaches Association with the Optimist International and Clear Channel Int. They provide an identification kit which includes an inkless fingerprinting card, DNA collection envelope, and cut out wallet card. (NCIP-ID Kit; NCIP-Swab Instructions)
- New England Kids Identification System (KIDS) sponsored by the Massachusetts Free Masons and the Massachusetts Dental Society, which incorporates dental bite impression and cheek

swabs to gather DNA material into the CHIP events. (MYCHIP-No date; Ellis et al. 2007; Tesini & Harte 2005)

- The Federal Bureau of Investigation (**FBI**) has a free mobile telephone application (app) "FBI Child ID", available for download on both iTunes and Google Play. This application provides an easily accessible means to electronically store photos and vital information about children. Additionally, there is a special tab on the app that allows quick and easily access to e-mail to send information to authorities, if necessary. (FBI-No date)

Policy statement

The AAPD recognizes the importance of dentistry's role in the provision of data for identification of missing ~~and/~~or deceased children and encourages dental professionals to assist in identifying such individuals through dental records and other mechanisms. The AAPD also encourages community identification programs to include a dental component documenting the child's dental home (AAPD P_Dental Home) and encouraging consistent dental visits. A dental home should be established for every child by 12 months of age. (AAPD P_Dental Home; AAPD BP_Perinatal/Infant) A detailed dental record, updated at recall appointments, economically establishes an excellent database of confidential, state-of-the-art child identification information that can be retrieved easily, stored safely, and up-dated periodically. The dental record may contain a thorough description of the oral cavity documenting all anomalies, a record of restorative care delivered including materials used, appropriate dental radiographs, (ADA 2012) photographs, study casts, and bite registration.

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Policy on ~~Mandatory~~ School-Entrance Oral Health Examinations

Latest Revision

~~2017~~ 2022

ABBREVIATIONS

AAPD: American Academy Pediatric Dentistry. **ECC**: Early childhood caries.

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) encourages policy makers, public health and education officials, and medical and dental communities to recognize that unmet oral health needs can impact a child's ability to learn. An oral health examination prior to matriculation into school may improve school readiness by providing a timely opportunity for prevention, diagnosis, and treatment of oral conditions.

Methods

This policy was developed by the Council on Clinical Affairs~~, and~~ adopted in 2003(AAPD 2003), and last~~. This document is an update of the previous version,~~ revised in 2017~~2~~(AAPD 2017). This revision included electronic database and hand searches of articles in the medical and dental literature using the terms: oral health examination, dental screening, dental examination, dental assessment, school oral health examinations, dental certificates AND school-entrance; fields: all; limits: within the last 10 years, humans, English, birth through age 18. Additionally, the U.S. Surgeon General's report *Oral Health in America*(Surgeon Gen) and websites for the American Academy of Pediatrics and AAPD were referenced.

Background

Professional care is necessary to maintain oral health.(~~US DHHS 2000~~ NIH2021) The AAPD "emphasizes the importance of initiating professional oral health intervention in infancy and continuing through adolescence and beyond. The periodicity of professional oral health intervention and services is based on a patient's individual needs and risk indicators."(AAPD BP_Periodicity) The American Academy of Pediatrics recommends that, beginning at age three, a child's comprehensive health assessment should include attention to problems that might influence school achievement.(AAP 2000

Ruff 2019) General health examinations prior to school entrance are mandated by many states. However, integration of general health and oral health care programs remains deficient.(IOM 2011) In the United States, approximately 23 percent of children aged 2-5 have experienced dental caries in the primary dentition, and 10 percent have untreated disease(Dye et al. 2015, CDC 2019) ~~.Only 30 percent of schools conduct oral health screenings once the child has matriculated.(CDC)~~While regulations may not guarantee that every child will be examined by a dentist, they do increase the likelihood of this happening.(CDHP 2019)

Caries is the most common chronic disease of childhood in the U.S.(US DHHS 2000) Early childhood caries (**ECC**) is a severe problem for young children, affecting 23 percent of children two to five years of age nationwide.(Dye et al. 2015; CDC 2019) By six to eight years of age, the prevalence of dental caries increases to 56 percent.(Dye et al. 2015, CDC 2019) Poverty remains one of the most important indicators of early childhood dental caries experience, with about one in three preschoolers living in poverty having some form of ECC.(NIH2021) ~~Low-income children are disproportionally affected, with 33 percent of low-income children experiencing 75 percent of dental caries.(Fisher-Owens et al. 2008)~~ Dental care remains as one of the greatest unmet needs for children. Untreated health conditions such as asthma, dental pain, and vision and hearing deficits are leading causes of chronic absence, and children with oral health problems are three times more likely than their peers to miss school. (CDC 2019 ,NASBE 2019) Safe and effective measures exist to prevent caries and periodontal diseases; however, dissemination and awareness of such measures do not reach the population at large.(~~US DHHS 2000~~ , NIH2021)More than one-~~third~~ fourth of the population of the United States does not benefit from community water fluoridation.(CDC 2018) Because the use of fluoride contributes to the prevention, inhibition, and reversal of caries,(CDC-Community Water Fluoridation 2018) early determination of a child's systemic and topical fluoride exposure is important. A dental home provides the necessary diagnostic, preventive, and therapeutic practices, as well as ongoing risk assessment and education, to improve and maintain the oral health of infants, children, and adolescents.(AAPD Dental Home) To maximize effectiveness, the dental home should be established within six months of eruption of a child's first tooth and no later than his~~/her~~ first birthday.(AAPD P_Dental home~~BP_Periodicity~~)

The public's lack of awareness of the importance of oral health is a major barrier to dental care~~.(US DHHS 2000~~ NIH2021) Oral health is integral to general health.(~~US DHHS 2000~~ NIH2021) Oral conditions can interfere with eating and adequate nutritional intake, speaking, self-esteem, and daily

activities.(Moynihan & Petersen 2004) Children with ~~ECC~~ untreated disease may be severely underweight because of associated pain and the disinclination to eat. Nutritional deficiencies during childhood can impact cognitive development.(~~Moynihan & Petersen 2004~~; Nyaradi et al. 2013) Rampant caries is one of the factors causing insufficient development in children who have no other medical problems.(~~Aes et al. 1992~~Colak 2013) Unrecognized disease and postponed care result in exacerbated problems, which lead to more extensive and costly treatment needs. ~~The World Health Organization has suggested that school dental screenings could enable early recognition and timely interventions, leading to savings of health care dollars for individuals, community health care programs, and third-party payors.(Kwan & Petersen 2003)~~

~~In 2000, the National Association of State Boards of Education recognized "health and success in school are interrelated. Schools cannot achieve their primary mission of education if students and staff are not healthy and fit physically, mentally, and socially."(Bogden & Vega-Matos 2000)~~ Health and education are closely related.(CDC Making the connection) Children with dental pain may be irritable, withdrawn, or unable to concentrate. Pain can affect test performance as well as school attendance. (Moynihan & Petersen 2004; Nyaradi et al. 2013) Data from the North Carolina Child Health Assessment and Monitoring Program showed that children with poor oral health status were nearly three times more likely to miss school as a result of dental pain than were their counterparts.(Jackson et al. 2011) In addition, absences caused by pain were associated with poorer school performance.(Jackson et al. 2011) Further analysis demonstrated that oral health status was associated with performance independent of absence related to pain.(~~Jackson et al.~~ CDC healthy schools)

Following a report by the U.S. Surgeon General,(US DHHS 2000) the Centers for Disease Control and Prevention launched the Oral Health Program Strategic Plan for 2011-2014.(CDC-Oral Health Program) This campaign aimed to provide leadership to prevent and control oral diseases at national level. The program helped individual states strengthen their oral health promotion and disease prevention programs. However, requirements for oral health examinations, implementation/enforcement of regulations, and administrative disposition of collected data vary both among and within states.(CDC-Oral Health Program) Since the 2008 report, four states have passed a dental screening law, and at least one state has legislation in process.(CDHP 2019) Although dental screening laws are used to help ensure that children's oral health does not impede their ability to learn, these laws also present an opportunity to connect children in need with a dental home.(CDHP 2019)

Policy statement

Early detection and management of oral conditions can improve a child's oral health, general health and well-being, and school readiness. Recognizing the relationship between oral health and education, the AAPD:

- ~~supports~~ advocates legislation ~~mandating~~ requiring a comprehensive oral health examination by a qualified dentist for every student prior to matriculation into school. The examination should be performed in sufficient detail to provide meaningful information to a consulting dentist and/or public health officials. This would include documentation of oral health history, soft tissue health/pathologic conditions, oral hygiene level, variations from a normal eruption/exfoliation pattern, dental dysmorphology or discoloration, dental caries (including ~~white-spot~~ noncavitated lesions), and existing restorations. The examination also should provide an educational experience for both the child and the parent. The child/parent dyad should be made aware of age-related caries-risk and caries-protective factors, as well as the benefits of a dental home.
- recognizes that without requiring, tracking, and funding appropriate follow-up care, requiring oral health examinations is insufficient to ensure school readiness and, therefore, advocates ~~supports~~ such legislation to include subsequent comprehensive oral examinations at periodic intervals throughout the educational process because a child's risk for developing dental disease changes and oral diseases are cumulative and progressive.
- encourages local leaders to establish a referral system to help parents obtain needed oral health care and establish a dental home for their children.
- encourages state and local public health and education officials, along with other stakeholders such as health care providers and dental/medical organizations, to document oral health needs, work toward improved oral health and school readiness for all children, and address related issues such as barriers to oral health care.
- ~~recognizes that without requiring, tracking, and funding appropriate follow-up care, requiring oral health examinations is insufficient to ensure school readiness~~.
- ~~encourages local leaders to establish a referral system to help parents obtain needed oral health care for their children.~~
- opposes regulations that would prevent a child from attending school due to noncompliance with ~~mandated~~ required examinations.

- encourages its members and the dental community at large to volunteer in programs for school-entry dental examinations to benefit the oral and general health of the pediatric community.

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Policy on the Role of Dental Prophylaxis in Pediatric Dentistry

Latest Revision

~~2017~~ 2022

Purpose

The American Academy of Pediatric Dentistry ~~presents this policy to assist practitioners in determining the indications and methods for dental prophylaxis~~ recognizes the dental prophylaxis as an integral component of periodic oral health assessment, education, and preventive care.

Methods

This policy was developed by the Clinical Affairs Committee, ~~and~~ adopted in 1986 (AAPD 1986), and last revised in 2017 (AAPD 2017). This ~~document is an update of the previous version, revised in 2012. The~~ revision included a new literature search of ~~databases~~ PubMed®/MEDLINE ~~and Google Scholar~~ using the terms: dental prophylaxis, tooth-brushing, professional tooth cleaning, fluoride uptake, and professional dental prophylaxis, limited to children (birth to 18 years), the last 10 years, and English language, resulting in 1,390 articles. This was further filtered to utilize randomized control studies and systematic reviews only, resulting in 109 papers for review. ~~Ppapers for review were chosen from relevant articles.~~ When necessary, hand searching for articles and Google Scholar searches were also utilized. Expert and/or consensus opinion by experienced researchers and clinicians also was considered.

Background

The aim of oral prophylaxis is to remove supragingival plaque, stain, and calculus from patients' teeth. NEW BP Perio 2021-2022) This may be accomplished utilizing hand instruments, ultrasonic scalers, rubber rotary cup, toothbrush, interdental cleaners (e.g., floss), and air polishing. Persistent gingival inflammation in young patients with reasonable supragingival home plaque control often is related to calculus deposits previously not detected or only partially removed (Clerehugh & Tugnait, 2001). Attachment loss due to chronic subgingival calculus in young children has been reported (Roberts-Harry & Clerehugh, 2000). Thus, a dental prophylaxis is an important component of initial and recall dental appointments. (NEW BP Perio 2022) The instrumentation (e.g. toothbrush prophylaxis, hand-scaling) needed for each patient is determined on an individual basis. In example, in the young or pre-cooperative patient, patients with special health care needs, or patients with no calculus, a toothbrush prophylaxis may

be utilized by the dental professional. ~~The term dental prophylaxis encompasses several techniques that are used by dental personnel to professionally remove plaque, stain, and calculus from patients' teeth.~~

Limited evidence suggests that, although prophylaxis may lead to short-term reductions in plaque levels and gingival bleeding, it may not lead to the prevention of gingivitis (Horowitz 2012; Azarpazhooh & Main 2009). Nevertheless, prophylaxis is an important component of pediatric oral health care and, among other benefits detailed below, facilitates the conduct of a high-quality comprehensive oral examination. The coronal polish procedure typically entails the application of a dental polishing paste to tooth surfaces with a rotary rubber cup or bristle brush to remove plaque and stains from teeth. ~~Often, the~~ A toothbrush coronal polish (i.e., toothbrush and toothpaste) is a procedure that is used to remove plaque from tooth surfaces and demonstrate brushing techniques to caregivers for young children and for patients with special needs who cannot tolerate the use of a rotary rubber cup.(Ramos-Gomez et al. 2010) ~~The rubber cup coronal polish is a procedure in which a dental polishing paste is applied to tooth surfaces with a rotary rubber cup or rotary bristle brush to remove plaque and stains from teeth. (Wilkins 2009)~~ Air polishing uses a mix of pressurized air, abrasive powder, and water to remove supragingival stains, plaque, and deposits from teeth. (Graumann 2013) Dental scaling is a procedure in which hand or ultrasonic instruments are used to remove calculus and stain. Full mouth debridement may be necessary as a preliminary treatment for those whose medical, psychological, physical, or periodontal condition result in calculus accumulation beyond the scope of routine prophylaxis.

These procedures facilitate the clinical examination and introduce dental procedures to the patient. Additionally, the accompanying preventive visit demonstrates proper oral hygiene methods to the patient and/or caregiver. Professional oral hygiene instruction and reinforcement can lead to behaviors that reduce both plaque and gingivitis (Chapple et al, 2015), but in the absence of patient oral hygiene instruction, professional supra-gingival and sub-marginal plaque and calculus removal has little value in gingivitis prevention (Tonetti et al, 2015). (BP Perio 2022)

The frequent disruption or removal of bacterial dental plaque, known as biofilm, from various areas of the oral cavity is crucial to oral disease prevention and is achieved through regular personal oral hygiene and professional prophylaxis. (Larsen, 2017) Accurate detection of biofilm is critical to effective removal and special dyes of iodine, gentian violet, erythrosine, basic fuchsin, fast green, food dyes, fluorescein, and two-tone disclosing agents are available in the forms of tablets, solutions, wafers, lozenges, or mouthrinses. (Dipayan, 2017) Biofilm staining allows for effective personalized oral health guidance

from healthcare providers. Severe dental caries is most strongly associated with biofilm in the upper posterior palatal, lower posterior buccal, and lower posterior lingual spaces, as well as on the tongue. (Fasoulas 2019) Disclosing agents for both professional and personal use can supplement a personal oral hygiene protocol.

Flossing is an important part of the prophylaxis that removes interproximal and subgingival plaque, aids ~~ing~~ in educating the patient, and facilitates ~~ing~~ the oral examination. Since interdental plaque biofilm is not completely removed after brushing (Chapple et al, 2015; Perry et al, 2019) interdental cleaning is indicated when interdental spaces are filled with gingiva or contacts are closed (Drummond, 2017; Silva et al, 2019). Different devices are used to remove plaque interdentally (e.g. dental floss, interdental brushes, oral irrigations) (Chapple et al, 2015; Perry et al, 2019). The benefits of various prophylaxis options are shown in the Table below.

Numerous reports have shown plaque and pellicle are not a barrier to fluoride uptake in enamel and, consequently, ~~there is no evidence of a difference in caries rates or fluoride uptake in subjects~~ patients who receive rubber cup dental prophylaxis~~coronal polish~~ or a tooth-brush prophylaxis ~~coronal polish~~ before fluoride treatment exhibit no difference in caries rates. (Azarpazhooh & Main 2009; Weyant et al. 2013, Horowitz 2012) Rubber cup prophylaxis is not required prior to the topical application of fluorides.

A patient's risks for caries and~~/~~ periodontal disease, as determined by the patient's dental provider, can ~~should~~ help determine the interval of the prophylaxis or periodontal maintenance. An individualized preventive plan increases the probability of good oral health ~~by demonstrating~~through proper oral hygiene methods and techniques as demonstrated by oral health professionals. In addition, removing plaque, stain, calculus, and the factors that influence their buildup increases the probability of good oral health. Patients who exhibit higher risk for developing caries ~~and/~~or periodontal disease ~~should have~~can benefit from recall visits at more frequent intervals.(Patel et al. 2010; AAPD BP_Periodicity 2021)

Policy statement

The American Academy of Pediatric Dentistry supports a ~~P~~professional prophylaxis during new patient comprehensive and periodic examinations to: ~~is indicated to:~~

- instruct the caregiver and child or adolescent in proper oral hygiene techniques.
- remove dental plaque, extrinsic stain, and calculus deposits from the teeth.
- facilitate the examination of hard and soft tissues.

- introduce dental procedures to the young child and apprehensive patient.

~~A patient's risk for caries/ and periodontal disease helps determine the interval for recall~~. ~~Those who exhibit higher risks should have recall visits more frequently than every six months.~~ Determination of interval for periodic examinations takes into consideration a patient's assessed risk for caries and periodontal disease (APPD BP Caries-risk Assessment 2022; AAPD Risk Assessment 2022)

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Table. BENEFITS OF PROPHYLAXIS OPTIONS

	Plaque removal	**Stain removal**	**Calculus removal**	**Education of patient/~~parent~~ caregiver**	**Facilitate examination**
Toothbrush	Yes	No	No	Yes	Yes
Rubber cup	Yes	Yes	No	Yes	Yes
Hand instruments	Yes	Yes	Yes	Yes	Yes
Ultrasonic scalers	Yes	Yes	Yes	Yes	Yes
Air polishing	Yes	Yes	Yes	Yes	Yes
Flossing/interdental cleaning	Yes	No	No	Yes	Yes

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Policy on Interim Therapeutic Restorations (ITR)

Latest Revision

~~2017~~ 2022

ABBREVIATIONS

AAPD: American Academy Pediatric Dentistry. **ART**: Atraumatic/ alternative restorative techniques. **ITR**: Interim therapeutic restorations.

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) recognizes that unique clinical circumstances can result in challenges in restorative care for infants, children, adolescents, and persons with special health care needs. When circumstances do not permit traditional cavity preparation and/or placement of traditional dental restorations or when caries control is necessary prior to placement of definitive restorations, interim therapeutic restorations (**ITR**)(AAPD BP_Restorative) may be beneficial and are best utilized as part of comprehensive care in the dental home.(Nowak & Casamassimo 2002; AAPD P_Dental Home) This policy will differentiate ITR from atraumatic/alternative restorative techniques (**ART**)(Frencken et al. 1997) and describe the circumstances for its use.

Methods

This policy was developed by the Council on Clinical Affairs, ~~and~~ adopted in 2001(AAPD 2001). ~~This document is a revision of the previous version,~~and revised in 2017~~3~~.(AAPD 2017) This updated ~~policy~~ is based upon electronic database and hand searchesof medical and dental literature using PubMed®/Medline and the terms: dental caries, cavity, primary teeth, deciduous teeth, atraumatic restorative treatment, interim therapeutic restoration, AND glass ionomer; fields: all; limits: within the last 10 years, humans, English, birth through age 18. Two hundred ninety-one articles met these criteria. Articles were screened by viewing titles and abstracts. Articles were chosen for review from these searches and from the references within selected articles. Additionally, websites for the AAPD and the American Dental Association were reviewed. Expert and/or consensus opinion by experienced researchers and clinicians was also considered.

Background

ART has been endorsed by the World Health Organization as a means of restoring and preventing caries in populations with little access to traditional dental care.(Frencken et al. 1997; WHO 2017~~ No date~~; Frencken 2010) In many countries, practitioners provide treatment in non-traditional settings that restrict restorative care to placement of provisional restorations. Because circumstances do not allow for follow-up care, ART mistakenly has been interpreted as a definitive restoration. ITR utilizes similar techniques but has different therapeutic goals. Interim therapeutic restoration more accurately describes the procedure used in contemporary dental practice in the United States.

ITR may be used to restore, arrest or prevent the progression of carious lesions in young patients, uncooperative patients, or patients with special health care needs or when traditional cavity preparation and/or placement of traditional dental restorations are not feasible and need to be postponed.(Deery 2005; Gryst & Mount 1999; Canares et al 2018) Additionally, ITR may serve useful~~be used~~ for step-wise excavation in children with multiple open carious lesions prior to definitive restoration of the teeth, in erupting molars when isolation conditions are not optimal for a definitive restoration, or for caries control in patients with active lesions prior to treatment performed under general anesthesia.(Vij et al. 2004; Antonson 2012; de Amorim et al 2018) ITR may be beneficial for patients that require additional acclimatization or increased cooperation to complete definitive restorative treatment. (Lim et al 2017) The use of ITR has been shown to reduce the levels of cariogenic oral bacteria (e.g., Mutans streptococci, lactobacilli) in the oral cavity immediately following its placement.(Bönecker et al. 2003; Roshan et al. 2010; Wambier et al. 2007) However, this level may return to pretreatment counts over a period of six months after ITR placement if no other treatment is provided.(Roshan et al. 2010) ITR also may help reduce the risk of decay in teeth adjacent to the interim restoration. (Ruff & Niederman 2018) This technique serves as a viable tool when circumstances (e.g., coronavirus disease 2019 [COVID-19] pandemic) call for minimizing the generation of aerosols during restorative care.(Al-Halabi et al. 2020; Yang et al 2021.)

The ITR procedure involves removal of caries using hand or rotary instruments with caution not to expose the pulp. Leakage of the restoration can be minimized with maximum caries removal from the periphery of the lesion. Following preparation, the tooth is restored with an adhesive restorative material such as glass ionomer or resin-modified glass ionomer cement.(Yip et al. 2001) ITR has the greatest success when applied to single surface or small two surface restorations.(Mandari et al. 2003; da Franca et al. 2011; de Amorim et a 2018) Inadequate cavity preparation with subsequent lack of retention and insufficient bulk can lead to failure.(da Franca et al. 2011; van Gemert-Schriks et al. 2007) Follow-up

care with topical fluorides and oral hygiene instruction may improve the treatment outcome in high caries-risk dental populations, especially when glass ionomers (which have fluoride releasing and re-charging properties) are used.(Tam et al. 1997; Scherer et al. 1990; Tyas 1991)

Policy statement

The AAPD recognizes ITR as a beneficial provisional technique in contemporary pediatric restorative dentistry. The AAPD supports the use of ITR ~~may be used~~ to restore and prevent the progression of dental caries in young patients, uncooperative patients, patients with special health care needs, and situations in which traditional cavity preparation ~~and/~~or placement of traditional dental restorations is~~are~~ not feasible. Furthermore, ITR may be used for caries control in children with multiple caries~~carious~~ lesions prior to definitive restoration of the teeth.

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Policy on Management of the Frenulum in Pediatric ~~Dental~~ Patients

~~Adopted~~ Revised

~~2017~~ 2022

Abbreviations: AAPD: American Academy of Pediatric Dentistry.

Purpose

The American Academy of Pediatric Dentistry (AAPD) recognizes that a restrictive oral frenulum may affect a child's health by hindering the ability to breastfeed or speak. The frequency of ~~frenotomy/ frenectomy~~ surgical intervention is increasing exponentially ~~with reports indicating as much as a 90~~ over the last two decades.(CADTH 2016; Walsh et al. 2017; Messner 2021; Tadros 2022). ~~The American Academy of Pediatric Dentistry~~AAPD recognizes an evidence-based policy on frenula would make information ~~and recommendations~~ more accessible to dentists, physicians, ~~and~~ other allied health professionals and parents ~~in an evidence-based format~~ and help reduce the number of unnecessary or incorrectly timed procedures.

Methods

This policy, developed by the Council of Clinical Affairs in 2017(AAPD 2017), is based on a review of current dental and medical literature and sources of recognized professional expertise and stature, including both the academic and practicing health communities, related to frenula/frenotomies. In addition, literature searches of PubMed®/MEDLINE, Web of Science, and Google Scholar databases were conducted using the terms: ankyloglossia, ankyloglossia AND breastfeeding outcomes, breast-feeding with ankyloglossia and/or upper lip tie, gastroesophageal reflux, frenotomy, frenulotomy, frenulectomy, frenectomy, systematic reviews of ankyloglossia other than breastfeeding, lip-tie, superior labial frenulum, maxillary lip-tie, breastfeeding cessation, frenulum, frenum, tongue-tie, speech articulation with lingual frenulum, frenuoplasty, midline diastema, lactation difficulties, nipple pain with breastfeeding, Hazelbaker Assessment Tool for Lingual Frenulum Function (ATLFF), Infant Breast-feeding Assessment Tool (IBFAT), LATCH grading scales, mandibular labial frenulum, periodontal indications for frenectomy, gingival recession associated with midline diastema; fields: all; limits: within

the last ~~15~~10 years, English. One thousand six hundred twenty-two ~~seventeen~~ articles matched these criteria. Papers for review were chosen from this list and from references within selected articles. Expert and/or consensus opinion by experienced researchers and clinicians also was considered.

Definitions

Ankyloglossia: a congenital developmental anomaly of the tongue characterized by a short, thick lingual frenulum resulting in limitation of tongue movement (partial ankyloglossia) or by the tongue appearing to be fused to the floor of the mouth (total ankyloglossia).(John et al. 2016; Amir et al. 2005)

Frenectomy/frenulectomy: ~~excision of the frenulum left to heal by secondary intention.~~ the complete removal of the frenum/frenulum including its attachment to underlying bone.

Frenotomy/frenulotomy: simple cutting or incision of the frenulum.

Frenuloplasty: an extensive frenulum excision that usually involves repositioning of aberrant muscle and closed by Z-plasty or a local flap with placement of sutures ~~excisions involving sutures releasing the frenulum and correcting the anatomic situation.~~ (CDT manual 2021)

Frenulum: a mucosal attachment containing muscle and connective tissue fibers which connect intraoral structures such as the lip and cheek to the alveolar mucosa, gingiva, or periosteum. (Devishree 2012)

Background

Typically, seven frenula are present in the oral cavity, most notable the maxillary labial frenulum, the mandibular labial frenulum, the lingual frenulum, and four buccal (cheek) frenula.(Priyanka et al. 2013) Their primary function is to provide stability of the upper lip, lower lip, and tongue.(Mintz et al. 2005) Frenulum attachments and their impact on oral motor function and development ~~have become~~ are topics of ~~emerging~~ interest within the dental community as well as various healthcare specialties ~~of healthcare providers~~. Studies have shown differences in treatment recommendations among pediatricians, otolaryngologists, lactation consultants, speech pathologists, surgeons, and dental specialists.(Delli et al. 2013; Segal et al. 2007; Boutsi & Tatakis 2011; John et al. 2016; Finigan & Long 2013; O'Callahan et al. 2013; Webb et al. 2013; Suter & Bornstein 2009 LeTran et al 2019;) ~~Clear indications and timing of surgical treatment remain controversial due to lack of consensus regarding accepted anatomical and diagnostic criteria for degree of restriction and relative impact on growth, development, feeding, or oral motor function.(Delli et al. 2013; Segal et al. 2007; Boutsi & Tatakis 2011; John et al. 2016; Finigan & Long 2013; O'Callahan et al. 2013; Webb et al. 2013; Suter & Bornstein 2009)~~

~~Although the etiology of this condition restremains unknown, the predilection of anomalies of frenulum attachments, whether ankyloglossia (tongue-tie) or a hypertrophic/restrictive maxillary labial frenulum, appears to be higher in males.(Webb et al. 2013; Suter & Bornstein 2009; Huang & Creath 1995; Knox 2010; Walsh & Tunkel 2017) Typically, seven frenula are present in the oral cavity, most notable the maxillary labial frenulum, the mandibular labial frenulum, the lingual frenulum, and four buccal (cheek) frenula.(Priyanka et al. 2013) Their primary function is to provide stability of the upper lip, lower lip, and tongue.(Mintz et al. 2005))~~ Regardless of the etiology, a 734 percent increase in diagnosed cases of ankyloglossia and an 869 percent increase in frenulum procedures have been reported from 1997 to 2012 (Walsh 2017a) When the data is examined more closely over this timespan, the average percent of patients diagnosed with ankyloglossia undergoing surgical procedures is 33 percent. More recently, in 2009, 35 percent of patients received surgery and, in 2012, 38 percent did. In 2020, a panel of pediatric otolaryngologists released a consensus statement on the diagnosis, management, and treatment of ankyloglossia in children less than 18 years old. (Messner 2020 consensus)

Maxillary frenulum

A prominent maxillary frenulum in infants, children, and adolescents, although a common finding, ~~is often~~ can be a concern to parents. The maxillary labial frenulum attachment can be classified with respect to its anatomical insertion level: (Priyanka et al. 2013)

1. mucosal (frenal fibers are attached up to the mucogingival junction);
2. gingival (frenal fibers are inserted within the attached gingiva);
3. papillary (frenal fibers are extending into the inter-dental papilla); and
4. papilla penetrating (frenal fibers cross the alveolar process and extend up to the palatine papilla).

The most commonly observed types are mucosal and gingival.(Webb et al. 2013; Boutzi 2011) However, a maxillary frenulum is a dynamic structure that presents changes in position of insertion, architecture ~~structure~~, and shape during growth and development.(Webb et al. 2013) Evidence suggests apical migration of the insertion as the alveolar process grows and descends and the frenulum remains in place. (Boutsi et al 2011; Pizan et al 2006) Infants have the highest prevalence of papillary penetrating phenotype.(Webb et al. 2013) In severe instances, a restrictive maxillary frenulum attachment has been associated with breastfeeding and bottle-feeding difficulties among newborns. ~~in a number of studies.~~(Neville et al. 2016; Coryllos et al. 2004; Pransky et al. 2014; Ghaheri et al. 2017) However, in a prospective study, anatomical classification of the maxillary frenulum alone was not correlated with

breastfeeding success or difficulty, pain, or maternally-reported poor latch. (Shah et al.2021)~~It has been suggested~~ Studies suggest~~ed that~~ a restrictive maxillary frenulum may inhibit an airtight seal on the maternal breast through "flanging" of both lips.(Knox 2010; Coryllos et al. 2004; Pransky et al. 2015; Ghaheri et al. 2017) For this reason, future studies focusing on assessment of upper lip flexibility and the ability to flange rather than just anatomical point of insertion may provide more information. (Shah et al, 2021) The maxillary frenulum can contribute to reflux in babies due to the intake of air from a poor seal at the breast or bottle leading to colic or irritability.(Ghaheri et al 2017; Seigal 2016) With the lack of understanding of the function of the labial frenulum, the universality of the labial frenulum, and level of attachment in most infants, ~~there lease~~ the release of the maxillary frenulum based on appearance alone cannot be endorsed ~~at this time~~.(Santa Maria et al. 2017) ~~A hyperplastic labial frenulum that inserts into the free or marginal gingiva has been suggested to interfere with proper oral hygiene measures, potentially leading to facial cervical caries as well as initiation and progression of gingival/periodontal disease,(Minsk 2002) although, to date, no evidence supports this. Further research is required to substantiate this cause-and-effect relationship. When release of the maxillary frenulum is considered due to higher caries risk, anticipatory guidance and other preventive measures need to be emphasized first.~~ Although a causal relationship between a hyperplastic maxillary frenum and facial caries has not been substantiated, anticipatory guidance for patients with restrictive tissues may include additional oral hygiene measures (e.g., swabbing the vestibule after feeding).(Naimer 2021).

Surgical removal of the maxillary midline frenulum ~~also is~~ may be related to presence or prevention of midline diastema formation, prevention of post orthodontic relapse, esthetics, and psychological considerations.(Finigan & Long 2013; O'Callahan et al. 2013; Webb et al. 2013; Gkantidis et al. 2008) Treatment options for midline diastema and sequence of care vary with patient age and can include orthodontics, restorative dentistry, frenectomy, or a combination of these.(Gkantidis et al. 2008) Treatment is suggested (1) when the attachment exerts a traumatic force on the gingiva causing the papilla to blanch when the upper lip is pulled, or (2) if the attachment causes a diastema wider than two millimeters, which is known to rarely close spontaneously during further development.(Webb et al. 2013; Gkantidis et al. 2008; Ochi 2014) When a diastema persists into the permanent dentition, the objectives for treatment involve managing both the diastema and its etiology.(Gkantidis et al. 2008) ~~If orthodontic treatment is indicated, the need for surgical management of a frenulum is assessed and coordinated with orthodontic closure of the diastema to achieve stable results.(Gkantidis 2008; Ochi 2014; Mallya & Lurie 2014) There is general agreement between p~~Pediatric dentists and orthodontists generally agree that most diastemas in the primary and mixed dentitions are normal, are multifactorial, and tend to close with

maturity; therefore, any surgical manipulation of the frenulum ~~that a frenectomy~~ ~~should not be performed~~ is not recommended before the permanent canines erupt and ~~that the operation~~ ~~should~~ only following orthodontic closure of the space(Gkantidis 2008; Wheeler et al. 2018) or in conjunction with orthodontic treatment (Suter et al, 2014). This was recently affirmed in a systematic review.(Tadros 2022) Certain surgical interventions, when performed too early, may result in orthodontic relapse due to scarring. (Devishree 2012). A recent retrospective cohort study saw a decrease in maxillary midline diastema width when laser labial frenectomy was performed in both the primary and mixed dentitions. (Baxter 2022). Whether or not this early treatment can prevent the need for orthodontic closure of a persistent diastema in adolescence would best be demonstrated by a prospective study utilizing controls with long-term follow up, which was not present in this study (Baxter 2022).

Mandibular labial frenulum

A high frenulum sometimes can present on the labial aspect of the mandibular ridge. This most often is seen in the permanent central incisor area but also can be found by the canine ~~and frequently occurs in individuals having a shallow vestibule~~.(John et al. 2016) The mandibular labial frenulum occasionally inserts into the free or marginal gingival tissue.(John et al. 2016) Movements of the lower lip can cause the frenulum to pull on the fibers inserted into the free marginal tissue, which creates pocket formation that, in turn, can lead to food and plaque accumulation. (John et al. 2016) ~~Early treatment~~ Surgical intervention can be considered to prevent subsequent inflammation, recession, pocket formation, and possible loss of alveolar bone and/or teeth.(John et al. 2016) However, if factors causing gingival/ periodontal inflammation are controlled, the degree of recession and need for treatment decreases.(Segal et al. 2007; John et al. 2016) ~~Again, wWhen treatment of the frenulum is considered due to higher caries, anticipatory guidance and other preventive measures are indicated.~~

Lingual frenulum

The World Health Organization has recommended mothers worldwide exclusively breastfeed infants for the child's first six months to achieve optimum growth, development, and health.(WHO 2016) Thereafter, they ~~should~~ may be given complementary foods and continue breastfeeding up to the age of two years or beyond.(WHO 2016) The American Academy of Pediatrics in 2018 reaffirmed its recommendation of exclusive breastfeeding for about six months, followed by continued breastfeeding as complementary foods are introduced, with continuation of breastfeeding for one year or longer as mutually desired by mother and child.(AAP 2012) Lingual frenula, in addition to the maxillary labial frenula, have been associated by some practitioners with impedance to successful breastfeeding, thereby leading to

recommendations for frenotomy. The most common symptoms that babies and mothers experience from tongue- and lip-tie are poor or shallow latch on the breast or bottle, slow or poor weight gain, reflux and irritability from swallowing excessive air, prolonged feeding time, milk leaking from the mouth from a poor seal, clicking or smacking noises when nursing/ feeding, and painful nursing.(Ghaheri et al 2017; Ghaheri et al. 2018).

An anatomical dissection study determined the lingual frenulum in neonates is not formed by a discrete submucosal midline string or band as previously thought; rather, it is a dynamically formed midline fold created in a layer of fascia spanning the floor of the mouth and characterized by morphology that varies with tongue movement similar to that in adults. (Mills 2019). This fascia runs from the inner surface of the mandible to join with the connective tissue on the ventral surface of the tongue. It is the height of the fascial attachment on the ventral surface of the tongue that alters the visual prominence of the frenulum when placed under tension as seen when elevated. (Mills 2019). The lingual frenulum does not have direct connection to the posterior tongue (also known as the tongue base). Therefore, the term "posterior tongue-tie" is misleading and anatomically incorrect. Ankyloglossia can perhaps be considered an imbalance of the fascial roles, where its provision of tongue stability impacts tongue movement. (Mills 2019).

~~**Ankyloglossia (tongue-tie)**~~

~~Ankyloglossia is a congenital developmental anomaly of the tongue characterized by a short, thick lingual frenulum resulting in limitation of tongue movement (partial ankyloglossia) or by the tongue appearing to be fused to the floor of the mouth (total ankyloglossia).(John et al. 2016; Amir et al. 2005)~~ A methodological review of the term ankyloglossia shows the use of multiple diagnostic criteria, leading to variations in the reported prevalence of ankyloglossia between ~~four~~4.2 and 10.7 percent of the population. (Zoon 2017 Segal et al. 2007; Boutsi & Tatakis 2011) Several diagnostic classifications have been proposed based on anatomical and functional criteria, but none has been universally accepted. (Visconti 2021; Segal et al. 2007) No single anatomical variable of the frenulum has been shown in isolation to correlate directly with impaired tongue function. As such, the use of grading systems simply describes appearance rather than serving as an objective tool to diagnose or categorize the frenulum as ankyloglossia.(Mills 2019) The tongue's ability to elevate rather than protrude is the most important quality for nursing, feeding, speech, and development of the dental arches. (Yoon et al. Orthod Craniofac Res 2017; Yoon et al. Sleep Breath 2017)

Ankyloglossia has been associated with breastfeeding and bottle-feeding difficulties among neonates, limited tongue mobility and speech difficulties, malocclusion, and gingival recession.(Delli et al. 2013; Segal et al. 2007; Boutsi & Tatakis 2011; John et al. 2016; Finigan & Long 2013; O'Callahan et al. 2013; Webb et al. 2013; Suter & Bornstein 2009; Ochi 2014) An ultrasound study has shown that patterns of tongue motions differed both in infants with ankyloglossia (with breastfeeding problems) and those without ankyloglossia (Geddes 2008), but, because no anatomical variables of the lingual frenulum were included in that study, it is not possible to correlate frenum morphology to changes demonstrated on the ultrasound. (Mills 2019). A short frenulum can inhibit tongue movement and create deglutition problems. (Segal et al. 2007; Dollberg et al. 2006; Geddes et al. 2008) ~~During breastfeeding, a restrictive frenulum can cause ineffective latch, inadequate milk transfer and intake, and persistent maternal nipple pain, all of which can affect feeding adversely and lead to early cessation of breastfeeding.(Delli et al. 2013; Segal et al. 2007; Boutsi & Tatakis 2011; John et al. 2016; Finigan & Long 2013; O'Callahan et al. 2013; Webb et al. 2013; Suter & Bornstein 2009; Huang & Creath 1995; Ochi 2014; Amir et al. 2005; Dollberg et al. 2006; Geddes et al. 2008; Ballard et al. 2002; Srinivasan et al. 2006)~~ Systematic literature review articles acknowledge the role of frenotomy/frenectomy for demonstrable frenal constriction in order to reduce maternal nipple pain (O'Shea 2017) and improve successful breastfeeding when the procedure is provided in conjunction with support of other allied healthcare professionals.(Segal et al. 2007; Boutsi & Tatakis 2011; John et al. 2016; Finigan & Long 2013; Suter & Bornstein 2009; ~~O'Shea et al. 2017~~) A Cochrane Review (O'Shea 2017) noted the included randomized control trials were small and had multiple limitations. Due to those limitations, the review was unable to determine whether frenotomy in infants younger than 30 days who had ankyloglossia and feeding difficulties correlated with longer-term breastfeeding success. Similarly, the Canadian Agency for Drugs and Technologies in Health (CADTH) questioned whether frenectomy provides a meaningful incremental benefit over other treatments or procedures to improve breastfeeding, particularly in the longterm due to studies' designs. (CADTH 2016). Because breastfeeding is a complex relationship dyad, ankyloglossia may be only one of multiple possible deficiencies contributing to difficulty breastfeeding (Hazelbaker) Therefore, predicting which infants will have improved breastfeeding following frenectomy may be difficult. (Briddel 2020) Some studies show decrease in surgical intervention in infants with feeding difficulties when a team of allied healthcare professionals is involved using consistent multidisciplinary assessment and incorporating alternative intervention strategies. (Walsh et al 2019, Dixon et al., 2018)

Limitations in tongue mobility and pathologies of speech ~~pathology~~ have been associated with ankyloglossia.(Segal et al. 2007; Messner & Lalakea 2002; Kupietzky & Botzer 2005) However, opinions

vary among health care professionals regarding the correlation between ankyloglossia and speech disorders. Speech articulation is largely perceptual in nature~~;, and differences in pronunciation often are evaluated subjectively. Variability~~ variations in the speech assessment outcomes is very high among individuals and specialists from different medical backgrounds. ~~is very high.(~~Suter & Bornstein 2009) The difficulties in articulation for individuals with ankyloglossia are evident for consonants and sounds like / *s* /, / *z* /, / *t* /, / *d* /, / *l* /, / *sh* /, / *ch* /, / *th* /, and / *dg* /, and ~~it is especially difficult to~~ rolling an *R* is especially challenging.(Suter & Bornstein 2009; Messner & Lalakea 2002) Because parents often do not report speech issues accurately, an evaluation by a speech-language pathologist ~~trained in~~ skilled in assessing tongue-ties (although consensus on assessment techniques has not been established) is ~~recommended~~ suggested ~~to assess for speech or language errors~~ prior to recommending a tongue-tie release.(Hazelbaker 2010) Speech therapy in conjunction with frenuloplasty, frenulotomy, or frenulectomy can be a treatment option to improve tongue mobility and speech.(Messner & Lalakea 2002; Kupietzky & Botzer 2005) One pilot study reported children with moderate and moderate-to-severe speech and language impairment attained better speech and language outcomes after frenulectomy when compared with children with mild and mild-to-moderate impairments. (Daggumati 2019) However, other studies hint at the subjective improvement when parents were surveyed (Baxter 2020; Messner & Lalakea 2002). Nevertheless, further evidence is needed to determine the benefit of surgical correction of ankyloglossia and its relation to speech pathology as many children and individuals with ankyloglossia ~~are~~ may be able to compensate and do not appear to suffer from speech difficulty.(Visconti 2021; Melong 2021; Segal et al. 2007; Finigan & Long 2013; Kummer 2005; Salt et al., 2020).

A high-arched palate, reduced palate width, and elongated soft palate have been associated with tongue-tie.(Yoon et al. Orthod Craniofac Res 2017; Yoon et al. Sleep Breath 2017) Evidence ~~to show that~~ relating ankyloglossia and abnormal tongue position ~~may affect~~ to skeletal development ~~and be associated~~ of ~~with~~ Class III malocclusion is limited.(~~Geddes et al. 2008~~; Lalakea & Messner 2003; Jang 2011) ~~A high-arched palate, reduced palate width, and elongated soft palate have been associated with tongue-tie.(Yoon et al. Orthod Craniofac Res 2017; Yoon et al. Sleep Breath 2017)~~ A complete orthodontic evaluation, diagnosis, and treatment plan are necessary prior to any surgical intervention.(Lalakea & Messner 2003)

Localized gingival recession on the lingual aspect of the mandibular incisors has been associated with ankyloglossia in some cases where frenal attachment causes gingival retraction.(Segal et al. 2007; John et al. 2016) As with most periodontal conditions, elimination of plaque-induced gingival inflammation can

minimize gingival recession without any surgical intervention.(Segal et al. 2007) When recession continues even after oral hygiene management, surgical intervention may be indicated.(Segal et al. 2007; John et al. 2016)

Treatment considerations

Although evidence in the literature to promote the timing, indication, and type of surgical intervention is limited, frenulotomy/frenulectomy for functional limitations and symptomatic relief ~~should~~ may be considered on an individual basis.(Segal et al. 2007; Suter & Bornstein 2009; Geddes et al. 2008; Srinivasan 2006; Kupietzky & Botzer 2005; Buryk et al. 2011) Evaluation for other potential head and neck sources (e.g., nasal obstruction, airway obstructions, reflux, craniofacial anomalies) for breastfeeding problems before performing a frenulotomy on a patient who has feeding difficulties (Messner 2020) may prevent unnecessary surgeries especially in very young neonates less than two weeks of age. When indicated, frenuloplasty, frenulectomy, and frenulotomy may be ~~a~~ successful approaches in alleviating the problem.(Segal et al. 2007; Webb et al. 2013; Suter & Bornstein 2009; Devishree et al. 2012) Each of these procedures involves surgical incision or excision, establishing hemostasis, and wound management.(Kaban & Troulis 2004) With regards to anatomy, the lingual nerve has been shown to pass immediately beneath the fascia on the ventral surface of the tongue with smaller branches continuing into the lingual frenum. (Mills 2019) As such, sensory input necessary for tongue shape may be compromised if the lingual nerve is damaged. (Mu and Sanders, 2010) Additional complications may occur during or following frenulum surgical procedures and include excessive bleeding, formation of a mucus retention cyst, reattachment, hematoma formation, numbness or paresthesia, infection, scar tissue formation, and restriction in tongue movement. (Varadan 2019) Dressing placement or the use of antibiotics is not necessary. (Kaban & Troulis 2004) In older patients, post-operative care may ~~recommendations~~ include maintaining a soft diet, regular oral hygiene, and analgesics as needed. Post-operative pain has been reported in some studies and found to persist as a moderate level (6.5 on a scale of 10) for three days. (Zaghi 2019). ~~Post-operative exercises for a child/adolescent are necessary to prevent reattachment of the wound and relapse of the previous symptoms associated with the tongue or lip-tie.(Ghaheri et al. 2018; Lalakea & Messner 2003)~~ Although otolaryngologists' expert opinion (Messner 2020 consensus) and the Canadian Agency for Drugs and Technologies in Health (CADTH 2019) do not support a standard post-procedure regimen including stretching, massaging, or other exercises to prevent reattachment of the frenulum, others have concluded that exercises after tongue-tie release have elicited functional improvements in speech, feeding, and sleep. (Baxter 2020; Zaghi 2019) These studies have been limited by patient numbers and lack of control groups. Post-operative pain,

especially in the neonate, may further inhibit post-surgical stretching and exercises and can lead to oral aversion. (Gilliland et al., 2020) Oral exercises have been advocated as a safe and potentially effective adjunct to improve tongue movements with or without surgical intervention in school aged patients. (Zaghi 2019)

The use of electrosurgery or laser technology for frenulotomies/frenulectomies has demonstrated a shorter operative working time, ~~a better ability to control bleeding~~ improved hemostasis, reduced intra- and post-operative pain and discomfort, fewer postoperative complications (e.g., swelling, infection), no need for suture placement ~~removal~~, and increased patient acceptance.(Olivi e al. 2010; Sezgin 2019) These procedures require extensive training as well as skillful technique and patient management, especially in the neonate. (Segal et al. 2007; Webb et al. 2013; Suter & Bornstein 2009; Kupietzky & Botzer 2005; Devishree et al. 2012; Hogan et al. 2005; Díaz-Pizán et al. 2006; Gontijo et al. 2005; Kara 2008) As with all surgical procedures, an informed consent ~~should be obtained~~ is essential. Informed consent includes relevant information regarding assessment, diagnosis, nature and purpose of proposed treatment, and potential benefits and risks of the proposed treatment, along with professionally-recognized or evidence-based alternative treatment options – including no treatment – and their risks.(AAPD BP_Informed Consent)

Policy statement

~~Recognizing evidence is limited,~~The ~~American Academy of Pediatric Dentistry~~ AAPD supports additional research on the causative association between ankyloglossia and difficulties in breastfeeding ~~difficulties~~ or speech articulation, ~~problems and~~ between a hyperplastic labial frenulum and increased risk of caries or periodontal disease, and upper lip restriction and difficulties with breastfeeding/latch.~~due to interference with adequate oral hygiene.~~ The AAPD recognizes that causes other than ankyloglossia are more common for breastfeeding difficulties and that, while frenulotomy for an infant with ankyloglossia can lead to an improvement in breastfeeding, not all infants with ankyloglossia require surgical intervention.(Messner 2020). Due to the broad differential diagnosis, a team-based approach including consultation with other specialists can aid in treatment planning. Further randomized controlled trials and other prospective studies of high methodological quality are necessary to determine the indications and long-term effects of frenulotomy/frenulectomy.~~. With all surgical procedures, an informed consent is necessary. Informed consent includes relevant information regarding assessment, diagnosis, nature and purpose of proposed treatment, and potential benefits and risks of the proposed treatment, along with~~

~~professionally-recognized or evidence-based alternative treatment options—including no treatment—and their risks.(AAPD BP_Informed Consent)~~

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This draft does not constitute an official AAPD health oral policy or clinical recommendation until approval by the General Assembly. Circulation is limited to AAPD members.

Policy on Dietary Recommendations for Infants, Children, and Adolescents

Latest Revision

~~2017~~ 2022

ABBREVIATIONS

AAP: American Academy of Pediatrics. **AAPD**: American Academy Pediatric Dentistry. **AND**: Academy of Nutrition and Dietetics. **AHA**: American Heart Association. **BMI**: Body mass index. **LCS**: Low-calorie sweeteners. ~~**OTC**: Over-the-counter.~~ **SCBs**~~**s**~~: Sugar-containing beverages. **SSBs**~~**s**~~: Sugar-sweetened beverages. **USDA**: U.S. Department of Agriculture.

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) recognizes its role in promoting well-balanced, low caries-risk, and nutrient-dense diets for infants, children, adolescents, and persons with special health care needs. A healthy diet is essential to optimal growth and development and prevention of chronic diet-related diseases such as caries, obesity, and cardiovascular disease.

Methods

This policy was developed by the Clinical Affairs Committee, ~~and~~ adopted in 1993(AAPD 1993), and~~.~~ ~~This document is an update from the~~ last revised~~ion~~ in 2017~~2~~(AAPD 2017). ~~The current revision includes searches of articles published in English between 1995 and 2017 using PubMed®/MEDLINE, Embase®, and Google Scholar. Key terms included~~ This revision is based upon a review of current dental and medical literature, including a search of the PubMed®/MEDLINE database using the terms: childhood, obesity, dental caries, diet, ~~and~~ nutrition, health education, breast-feeding, food habits, dietary guidelines, sugar, sugar-sweetened beverages, and body mass index; fields: all; limits: within the last 10 years, humans, English, clinical trials, and ages birth through 18. Papers for review were chosen from the resultant lists and from hand searches. Expert and consensus opinions by experienced researchers and clinicians, including recommendations(Lott 2019 Consensus) developed through a collaboration of the Academy of Nutrition and Dietetics (**AND**), the AAPD, the American Academy of Pediatrics (**AAP**), and the American Heart Association (**AHA**) under the leadership of Healthy Eating Research, also were

considered. ~~Additional terms included health education, breast-feeding, food habits, dietary guidelines, sugar, sugar-sweetened beverages, and body mass index. After conducting the literature searches, articles were screened by viewing titles and abstracts. Data from 194 articles were abstracted and used to summarize dietary policies and research on diet and nutrition for infants, children, and adolescents.~~

Background

~~**Dietary behaviors and prevalence of dental caries and obesity in children**~~

A healthy diet in early childhood is essential to supporting optimal growth and development and preventing chronic diet-related diseases. Experts across health care disciplines recognize the importance of breast-feeding during infancy.(Lott Consensus, Lott Tech Report) Human milk and breast-feeding of infants provide general health, nutritional, developmental, psychological, social, economic, and environmental advantages while significantly decreasing risk for a large number of acute and chronic diseases.(AAP 2012) A systematic review of cariogenic potential of milk and infant formulas in animal models found that cow's milk and human milk are less cariogenic than sucrose solutions.(Aarthi et al. 2013) Another systematic review concluded that children exposed to long durations of breast-feeding up to age 12 months had reduced risk of caries.(Tham 2015) However, children breastfed more than 12 months had an increased risk of caries, and those children breastfed nocturnally or more frequently had a further increased caries risk.(Tham 2015) The causes of dental caries and obesity are multifactorial, with both having significant dietary components. Beverages contribute significantly to the early diet. A 2019 consensus statement, *Healthy Beverage Consumption in Early Childhood: Recommendations from Key National Health and Nutrition Organizations,* was developed through a collaboration of AND, AAPD, AAP, and AHA under the leadership of Healthy Eating Research, a nutrition research organization.(Lott Consensus, Lott Tech Report) These organizations recommend breast milk, infant formula, water, and plain milk for children under age five.(Lott Consensus) They suggest that plain (i.e., not flavored, sweetened, or carbonated) fluoridated water should be introduced beginning at six months of age for children who have started solid foods to familiarize the child with water as well as with drinking from a cup; the volume of water offered is based on the intake of other recommended beverages.(Lott Consensus, Lott Tech Report) Drinking fluoridated water is a safe and effective method of reducing caries.(CDC Fluoride 2001) Fluoridated water is preferred beverage for children one to five years of age when consumed outside of meals or snacks.(Lott Tech Report) The consensus statement cautioned against beverages that are sources of added sugars, including flavored milks (e.g., chocolate, strawberry), or contain low-calorie sweeteners (**LCS**).(Lott Consensus) Because the long-term health effects of consumption of LCS by children is unknown(Lott Tech Report, AAP Council), the statement

recommended against consumption of LCS through age five.(Lott Consensus) In addition, it advised against a wide variety of new beverages on the market targeted to children (e.g., toddler formulas) and caffeinated beverages.(Lott Consensus) Plant-based/non-dairy milks (e.g., almond, rice, oat) were noted to provide no unique nutritional value, but unsweetened varieties may be useful when medically indicated (e.g., allergy or intolerance to cow's milk) or to meet specific dietary preferences (e.g., vegan).(Lott Consensus, Lott Tech Report) ~~One of the behaviors associated with dental caries and obesity in children is the consumption of large quantities of sugar-sweetened foods and beverages.~~

Food and flavor preferences may be established during the early years (Lott Tech Report, Saavedra). Establishing health dietary patterns during the first two years of life can have lifelong health benefits. (Saavedra) The AHA recommends that children less than two years of age avoid added sugars in their diets.(Vos) Sugar-sweetened beverages (**SSBs**) ~~are defined by the Centers for Disease Control and Prevention to~~ include any liquid (e.g., regular ~~soft drinks (~~soda~~ or pop)~~, fruit drinks, sports drinks, tea and coffee drinks, energy drinks~~, sweetened milk or milk alternatives, and any other beverages to which~~ with added sugar~~, generally high~~ (e.g., fructose, corn syrup, ~~or~~ sucrose ~~(~~[table sugar])~~, has been added~~.(CDC Get the facts) A longitudinal study found introduction of SSB before age one was associated with obesity at age six.(Pan) Sugar-containing beverages (**SCBs~~s~~**) include SSB~~s~~ as well as beverages in which sugar, generally glucose or fructose, is naturally present, such as 100 percent fruit juice. In 2017, the AAP reaffirmed that 100 percent juice and juice drinks have no essential role in a healthy diet for children and contribute to excessive calorie intake and risk of dental caries in children.(Heyman 2017) AAP recommendations include: juice should not be introduced to infants before one year of age; intake of juice should be limited to four ounces a day for children one through three years of age, 4-6 ounces for children four through six years of age, and eight ounces for children seven through 18 years of age; toddlers should not be given juice in containers that foster easy consumption; and toddlers should not be given juice at bedtime.(Heyman 2017). The mentioned volumes are recommended maximums, not daily requirements, and fresh fruit is preferred to fruit juice.(Heyman 2017)

Unfortunately, many parents do not adhere to evidence-based dietary recommendations for their children. For example, many infants are provided 100 percent juice and cow's milk before age one, which can increase their risk for nutrient (e.g., iron ZIEGLER) deficiencies.(HER) Nearly half of two- to five-year olds consume a SSB daily, with the prevalence increasing throughout childhood.(Lott Tech Report) Children~~'s~~ and adolescent~~'s~~ ~~consumption of SSBs~~ in the United States consumed an average of ~~is high, and it increased from 242~~ 143 calories/day from SSB between 2011-2014, and 7.3 percent of their daily

energy intake came from SSB.(Rosinger 2017) Significant differences in beverage intake by race/ethnicity and income groups in early childhood have been noted.(Lott Tech Report)~~1988-1994 to 270 calories/day between 1999-2004.(Wang et al. 2008) Additionally, adolescents with low-educated parents have higher total SSBs consumption and higher energy intake from SSBs.(Han & Powell 2013)~~

Dental caries prevalence in children has been variable, but remains high.(Fleming) The prevalence of dental caries (untreated and treated) in primary or permanent teeth among children aged two through 19 years has been estimated at 45.8 percent (Fleming 2018) ~~For instance, prevalence of dental caries in primary teeth for children aged 2-5 increased from 22 percent to 30 percent between 1988-1994 and 1999-2004 and then decreased to 23 percent in 2011-2012.(Dye et al. 2015)~~ The causes of dental caries involve a combination of factors and include diet, bacteria capable of fermenting carbohydrates, fluoride exposure, and a susceptible host.(Slayton et al. 2016) While sugar, especially high frequency consumption, contributes ~~is a factor contributing~~ to dental caries, a systematic study of sugar consumption and caries risk concluded that the relationship between sugar consumption and caries risk is weaker after the introduction of fluoride exposure.(Burt & Pai~~Satishchandra~~ 2001)

The causes of obesity include genetic components, lifestyle, and environmental variables, as well as nutritional factors. (Lee 2019) When consumed in excess, beverages containing sugar or saturated fats can be harmful.(Lott Consensus) Health initiatives in the United States and other countries have specifically targeted ~~reducing consumption of~~ SSBs in an effort to reduce~~lower~~ the number of calories that children and adolescents consume per day.(von Philipsborn 2019) Data from the 2017–2018 National Health and Nutrition Examination Survey (NHANES) indicate that ~~F~~for children and adolescents aged 2-19, the prevalence of obesity is an estimated 19.3 percent, including 6.1 percent with severe obesity and another 16.1 percent overweight.(Fryar 2020) ~~has remained constant at about 17 percent, with obesity affecting about 12.7 million children and adolescents for the past decade.(Ogden et al. 2012)~~ Children and adolescents who are obese are likely to be obese as adults and, in adulthood, at risk for health problems such as heart disease, type 2 diabetes, stroke, several types of cancer, and osteoarthritis.(US DHHS/Dept. Ag. 2016)

While dental caries and obesity are both significant pediatric health problems, the relationship between caries and anthropometric measurements is complex. Multiple systematic reviews have reported inconsistent and inconclusive evidence on the relationship between caries and body mass index (BMI). .(Alshehri 2020, Paisi 2019, Chen 2018, Hayden 2013) BMI is a simple, non-invasive means to monitor

growth patterns and help assess the risk of obesity. Forms to record BMI for age and gender can be downloaded from the website of the Centers for Disease Control and Prevention at "https://www.cdc.gov/growthcharts/clinical_charts.htm#Set1":(CDC growth charts) Because of the persistent high prevalence of dental caries and childhood obesity, the need remains for research, policy, advocacy, education, and professional engagement to further advance healthy dietary practices for infants, children, and adolescents.

~~**National and international dietary guidelines**~~

The U.S. Department of Health and Human Services and the U.S. Department of Agriculture **(USDA)** develop dietary guidelines every five years to help Americans aged two and older make healthy food choices to help prevent chronic disease and enjoy a healthy diet. The ~~2015~~ 2020-2025 *Dietary Guidelines for Americans*(US DHHS/Dept. Ag. 2021~~2016~~) includes four overarching guidelines:

- "Follow a healthy dietary pattern at every life stage.
- Customize and enjoy nutrient-dense food and beverage choices to reflect personal preferences, cultural traditions, and budgetary considerations.
- Focus on meeting food group needs with nutrient-dense foods and beverages, and stay within calorie limits.
- Limit foods and beverages higher in added sugars, saturated fat, and sodium, and limit alcoholic beverages."

~~emphasize consuming a healthy pattern that includes a variety of vegetables, fruits, grains, fat-free or low-fat dairy products, a variety of protein foods, and oils, with limits on saturated and trans fats, added sugars, and sodium.~~ *The Dietary Guidelines for Americans* also provides~~give~~ specific quantitative recommendations including:

- "Limiting added sugars* to less than 10% of calories per day for ages 2 and older and to avoid added sugars for infants and toddlers;
- Limiting saturated fat to less than 10% of calories per day starting at age 2;
- Limiting sodium intake to less than 2,300 mg per day (or even less if younger than 14)"(USDA 2021)

~~guidelines for consumers, such as consuming less than 10 percent of calories per day from added sugars, consuming less than 10 percent of calories per day from saturated fats, and consuming less than 2,300 milligrams per day of sodium.(US DHHS/Dept. Ag. 2016) In addition~~To prevent unhealthy weight gain, the World Health Organization recommends energy intake and expenditure be balanced, with a goal of

total fat not exceeding 30 percent of energy intake and a shift from away from saturated fat and trans-fats.(WHO) ~~reducing the intake of sugar to less than 10 percent of total energy intake, and to reduce children's risk of weight gain and dental caries,~~ ~~l~~Limiting ~~the~~ intake of free sugars to less than five percent of total energy intake per day offers additional health benefits~~(less than 16 grams of sugar for children aged 4-8)~~.(WHO ~~2015~~) Additionally, the American Heart Association recommends ~~reducing sugar~~ limiting consumption of added sugars to no more than six percent of calories (AHA website); for~~in~~ children and adolescents, their recommended limit is ~~to~~ less than 25 grams (100 calories or approximately six teaspoons) of added sugar per day.(Vos et al. 2017) One should note that eight ounces (i.e., one measured cup) of regular soft drink contain approximately 26 grams of sugar; a 12 ounce can of regular soda contains approximately 10 teaspoons of sugar and has no nutritional value(AHA website).

Snacking can help a child meet daily nutritional requirements. More than 25 percent of children's daily caloric intake may come from snacks.(USDA smart snacks) The AAP recommends that toddlers be given two to three healthy snacks daily to supply nutrients that the child cannot consume at mealtime; they should be consumed at a planned time while seated with adult supervision.(AAP 2015) The AAP cautions against confusing snack time with treats for fun as well as continuous/all day snacking.(AAP 2015) Frequent (more than three times/day) exposure to between-meal sugar-containing snacks or beverages categorizes a child at high risk for dental caries.(AAPD Caries risk assessment) If a child is given continuous access to a bottle or cup, it should contain only water. The USDA has established guidelines for healthy snacks at school.(USDA smart snacks) Standards for foods to qualify as a school "smart snack" include:

- "Be a grain product that contains 50 percent or more whole grains by weight (have a whole grain as the first ingredient); or
- Have as the first ingredient a fruit, a vegetable, a dairy product, or a protein food; or
- Be a combination food that contains at least ¼ cup of fruit and/or vegetable; and
- The food must meet the nutrient standards for calories, sodium, sugar, and fats".(USDA)

Using 2017-2018 NHANES data, the USDA reported approximately 20 percent of youth aged 12 through 19 years consumed more than three snacks daily, (USDA NHANES)

~~**Dietary recommendations in dental practice**~~

~~Dietary choices affect oral health as well as general health and well-being.~~ Establishment of a dental home by 12 months of age provides time-critical opportunities to assess caries risk and implement ~~allows the institution of~~ individualized caries-preventive strategies, including dietary recommendations and

appropriate oral hygiene instruction, as the primary teeth begin to erupt.(AAPD P_Dental Home) A diet that avoids frequent consumption of liquids and foods containing sugar is essential to good oral health. The dental home also can influence general health by instituting additional practices related to general health promotion, disease prevention, and screening for non-oral health related concerns. For example, ~~Epidemiological research shows that human milk and breast-feeding of infants provide general health, nutritional, developmental, psychological, social, economic, and environ-mental advantages while significantly decreasing risk for a large number of acute and chronic diseases.(AAP 2012) A systematic review of cariogenic potential of milk and infant formulas in animal models found that cow's milk and human milk are less cariogenic than sucrose solutions.(Aarthi et al. 2013) Another systematic review concluded that children exposed to long durations of breast-feeding up to age 12 months had reduced risk of caries. However, children breastfed more than 12 months has an increased risk of caries; and those children breastfed nocturnally or more frequently had a further increased caries risk.(Tham et al. 2015)~~

~~A June, 2017 recommendation of the Committee on Nutrition of the American Academy of Pediatrics (**AAP**) has reaffirmed that 100 percent juice and juice drinks have no essential role in a healthy diet for children, and contribute to excessive calorie intake and risk of dental caries in children.(Heyman & Abrams 2017) Their recommendations include: juice should not be introduced to infants before one year of age; intake of juice should be limited to four ounces a day for children ages 1-3 years of age; 4-6 ounces for children 4-6 years of age; eight ounces for children 7-18 years of age; toddlers should not be given juice in containers that foster easy consumption; and toddlers should not be given juice at bedtime.(Heyman & Abrams 2017)~~

~~It has been shown that nearly 54 percent of U.S. preschool children were given some form of over-the-counter (**OTC**) medications, most commonly as analgesics, antipyretics, and cough and cold medications.(Kogan et al. 1994) Numerous OTC and prescribed oral liquid medications have been found to have a high sugar content to increase palatability and acceptance by children.(Kenny et al. 1989; Maguire et al. 1996; Bigeard 2000) Frequent ingestion of sugar-sweetened medications is associated with dental caries in chronically ill children.(Kenny et al. 1989; Maguire et al. 1996; Foster & Fitzgerald 2005) To motivate children to consume vitamins, numerous companies have made sugar containing jelly, gummy, and candy-like chewable vitamin supplements, and cases of vitamin A toxicity have been reported as a result of excessive consumption of candy-like vitamin supplements.(Lam et al. 2006) The AAP has recommended that the optimal way to obtain adequate amounts of vitamins is to consume a healthy and well-balanced diet.(Gidding et al. 2006)~~

~~With regard to obesity~~, oral health professionals can calculate and monitor BMI to help ~~need to be more engaged in~~ identify~~ing~~ children at risk for obesity and provide appropriate referral to pediatric~~ians~~ or nutritional specialists. A 2016 survey of pediatric dentists reported that 17 percent offer childhood obesity interventions, while 94 percent offer information or other interventions on the consumption of sugar sweetened beverages.(Wright & Casamassimo 2017) Barriers to providing healthy weight interventions including fear of offending the parent, appearing judgmental, creating parent dissatisfaction, and lack of parental acceptance of advice about weight management from a dentist.(Wright & Casamassimo 2017)

Policy statement

The AAPD recognizes a healthy diet in early childhood is essential to optimal growth and development and prevention of chronic diet-related diseases such as caries, obesity, and cardiovascular disease. Through dietary and nutritional counseling, dentists assume an important role in preventing oral disease and promoting overall health among children. The AAPD especially recognizes the importance of and supports:

- ~~the recommendation of national and international organizations to reduce the consumption of sugar to less than 10 percent of total energy intake and, to reduce children's risk of weight gain and dental caries, sugar intake should be less than five percent of total energy intake (less than 16 grams of sugar for children aged 4-8).~~
- breast-feeding of infants prior to 12 months of age to ensure the best possible health and developmental and psychosocial outcomes for infants.
- the introduction of plain, fluoridated water to the infant's diet beginning at age six months for hydration, to familiarize the child with the taste, and for the caries-protective benefits of fluoride.
- fluoridated water as the preferred beverage for children from one to five years of age when not part of a meal or snack.
- avoiding added sugars in the diet of children younger than age two and minimizing exposure to sweet-tasting drinks and foods during early life to reduce taste preferences for sweets.
- recommendations from the USDA for individuals aged two and older to consume a diet of nutrient-dense, lean or low-fat foods from across five food groups (i.e., fruits, vegetables, protein, grains, and dairy) that are prepared without added salt, starches, sugars, or fat.
- limiting consumption of sugar to less than five percent of total energy intake to reduce children's risk of weight gain and dental caries.

- establishing healthy beverage consumption patterns during the first five years to promote intake of healthy nutrients, limit excess intake of sugars and saturated fats, and initiate beneficial long-term dietary habits.
- non-sweetened nutrient-dense snacks that supplement meals to meet daily nutritional requirements.
- additional health practices such as meal portion control and energy balance to help prevent overweight and obesity.
- ~~the AAP recommendations on fruit juice in infants, children, and adolescents.~~

Furthermore, the AAPD encourages

- education of health professionals and the public~~parents~~ regarding healthy beverage choices and daily sugar-consumption recommendations, as well as the sugar content of foods and~~,~~ beverages ~~and oral liquid medications~~.
- ~~•~~ dental professionals to~~becoming more engaged in~~ identify~~ing~~ children whose dietary patterns place them at increased ~~consume frequent or large quantities of sugar-containing foods and beverages, and who are at~~ risk for dental caries and obesity and~~.~~
- ~~dental professionals' engagement in nutrition education and provision~~, when necessary, ~~of appropriate~~ referral for dietary counseling from a pediatric~~ian~~ or nutritional specialist.
- a healthy, active lifestyle so energy consumption and energy expenditure promote general health and well-being.
- additional research on the benefits and effects of long-term use of low-calorie sweeteners by children.

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Policy on Snacks and Sugar-Sweetened Beverages Sold in Schools

Latest Revision

~~2017~~ 2022

ABBREVIATIONS

AAP: American Academy of Pediatrics. **AAPD**: American Academy Pediatric Dentistry. **SSBs**: Sugar-sweetened beverages. **USDA**: U.S. Department of Agriculture.

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) recognizes that targeted marketing and easy access to ~~sweetened~~ foods and beverages with added sugars ~~(acidulated carbonated and noncarbonated)~~ by children and adolescents may increase the amount and frequency of their consumption which, in turn, may contribute to an increase in caries risk and a negative influence on overall nutrition and health.

Methods

This document was developed by the Council on Clinical Affairs, ~~and~~ adopted in 2002(AAPD 2002), and last revised in 2017(AAPD 2017). ~~The last revision occurred in 2009 and was reaffirmed in 2012.~~ This revision is based upon a review of current dental and medical literature, including a search of the PubMed®/MEDLINE database using the terms: schools, vending machines, AND caries; fields: all; limits: within the last 10 years, humans, English, clinical trials, and ages birth through 18. The update also included a review of the American Academy of Pediatrics' (**AAP**) policy statement: *Soft Drinks in Schools*,(AAP 2004) the AAP's policy statement: *Snacks, Sweetened Beverages, Added Sugars and Schools*,(AAP 2015) and the U.S. Department of Agriculture (**USDA**) policies on school meals. (USDA Nutrition Standards ~~Standards for School Meals; USDA Standards for Food Sold in Schools Final Rule~~) Papers for review were chosen from the resultant lists and from hand searches. Expert and/or consensus opinion by experienced researchers and clinicians also was considered.

Background

Contemporary changes in beverage consumption patterns have the potential to increase dental caries rates in children. Vending machines provide ready access to ~~highly refined carbohydrates~~ excess calories from

added sugars, especially ~~soft drinks*~~ sugar-sweetened beverages (SSBs) . Consumption of ~~regular~~ SSBs in the form of sodas ~~pop~~, ~~powdered beverages~~ or sport, energy, and fruit-flavored drinks, and to a lesser extent 100 percent juice, has been associated with an increased ~~caries~~ risk for developing dental caries.(Marshall et al. 2003, Rosinger 2017, Muth 2019, Laniado 2020) The acids present in carbonated beverages can have a greater deleterious effect (i.e., erosion) on enamel than the acids generated by oral flora from the sugars present in sweetened drinks.(ADA CAPIR/CSA 2001) Analysis of the ~~third~~ National Health and Nutrition Examination Survey (NHANES 2011-2014) ~~III data(CDC 2012)~~ indicated that ~~13 percent~~ two-thirds of children aged ~~two through 10~~ 2-19 years consumed at least one SSB on a given day, ~~had diets high in consumption of carbonated soft drinks~~, and ~~these~~ children who consumed SSBs had ~~a~~ significantly higher dental caries experience and untreated dental caries ~~in the primary dentition~~ than did children ~~with other fluid consumption patterns~~ who consumed other beverage types (~~Sohn et al. 2006~~ Laniado 2020, Rosinger 2017) A significant increase in caries scores has been reported for children who attended schools that had vending machines.(Maliderou et al. 2006)

There is ~~growing~~ significant concern that vending machine items ~~with limited~~ which provide little to no nutritional value are competitive foods~~,~~ and result~~ing~~ in snack options ~~that are considered to be~~ of poor nutritional quality.(US GAO 2005; Kakarala et al. 2010; Pasch et al. 2011) As teenage girls' ~~have increased their~~ consumption of ~~soft drinks~~ SSBs increases, their consumption of milk decreases ~~has decreased by 40 percent~~, which may contribute to a decrease in bone density, subsequent increase in fractures, and future risk of osteoporosis.(~~Wyshak 2000; Ludwig et al. 2001~~ Kalkwarf 2003, Ahn 2021) Increased ingestion of SSBs~~sugar-sweetened drinks~~ also has been linked to the increased incidence of childhood obesity.(Fox et al. 2009, Luger 2017) Of all beverages, increasing soda consumption predicted the greatest increase of body mass index (BMI) and the lowest increase in calcium intake.(Striegel-Moore et al. 2006) Carbonated soda consumption was negatively associated with vitamin A intake in all age strata, calcium intake in children younger than 12 years, and magnesium intake in children aged 6 years and older.(Ballew et al. 2000) Many soft drinks also contain significant amounts of caffeine which, if consumed regularly, may lead to increased, even habitual, usage.(Majewski 2001)

In 2013, the USDA initiated smart snacks standards prompting school districts to offer healthier food and beverages in vending machines, school stores, and à la carte cafeteria lines.(USDA Nutrition Standards

~~* *For the purposes of this statement, the term soft drinks refers to such beverages as sodas, fruit juices, and sports drinks.*~~

~~Standards for Food Sold in Schools Proposed Rule~~) The final rules released by the USDA in July, 2016 state that schools must continue to meet strong nutritional guidelines for snacks/drinks sold to children, and they prevent marketing of foods and drinks inconsistent with those standards.(USDA Nutrition Standards ~~Standards for Food Sold in Schools Final Rule~~) The USDA's rules establish a national baseline of these standards with the overall goal of improving health and nutrition of our children.

Policy statement

The AAPD:

- Encourages collaboration with other dental and medical organizations, governmental agencies, education officials, parent and consumer groups, and corporations to increase public awareness of the adverse effects of frequent and/or inappropriate intake of sugar-sweetened beverages and low nutrient dense snack foods on children's oral health and general health.
- Promotes educating and informing the public regarding the importance of good nutritional habits as they pertain to consumption of items available in vending machines.
- Encourages school officials and parent groups to consider the importance of maintaining healthy choices in vending machines in schools and encourages the promotion of food and beverages of high nutritional value; bottled water and other more healthy choices should be available instead of ~~soft drinks~~ sugar-sweetened beverages.
- Opposes any arrangements that may decrease access to healthy nutritional choices for children and adolescents in schools.

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Policy on the Use of Lasers for Pediatric Dental Patients

Latest Revision

~~2017~~ 2022

ABBREVIATIONS

AAPD: American Academy Pediatric Dentistry. **CO_2**: Carbon dioxide. **Er, Cr:YSGG**: Erbium-chromium-yttrium-scandium-garnet. **Er:YAG**: Erbium-yttrium-aluminum-garnet. **Nd:YAG**: Neodymium-yttrium-aluminum-garnet. **PBM**: photobiomodulating.

Purpose

The American Academy of Pediatric Dentistry (**AAPD)** recognizes the judicious use of lasers as a beneficial instrument in providing dental restorative and soft tissue procedures for infants, children, and adolescents, including those with special health care needs. This policy is intended to support safe and evidence-based use of lasers through a review of ~~inform and educate dental professionals on~~ the fundamentals, types, diagnostic and clinical applications, benefits, and limitations of laser use in pediatric dentistry.

Methods

This policy was developed by the Council on Clinical Affairs, ~~and~~ adopted in 2013 (AAPD 2013), and last revised in 2017(AAPD 2017). ~~It~~ The revision is based on a review of current dental and medical literature related to the safety and use of lasers. This document included database searches using the term: laser dentistry, dental lasers, laser pediatric dentistry, laser soft tissue treatments, and laser restorative dentistry. Articles were evaluated by title and/or abstract and relevance to pediatric dental care. Expert and/or consensus opinion by experienced researchers and clinicians also was considered.

Background

Medicine began integrating lasers in the mid 1970s for soft tissue procedures. Oral and maxillofacial surgeons incorporated the carbon dioxide (CO_2) laser into practice for removal of oral lesions in the 1980s.(Frame 1985; ~~Coluzzi 2005~~) The first laser specifically for dental use was a neodymium-yttrium-aluminum-garnet (**Nd:YAG**) laser, developed in 1987 and approved by the United ~~-~~States~~.~~ Food and Drug

Administration in 1990.(Myers et al. 1989) Since then, laser technology has advanced significantly. Currently, lasers used in dentistry include Nd:YAG, argon, erbium (Er, Cr:YSGG and Er:YAG), diode, and two CO_2 wavelengths. The use of lasers ~~is contributing~~ contributes to many areas of dentistry including periodontics, (Boj et al. 2011) pediatrics, endodontics, oral surgery, (Boj et al. 2011) restorative dentistry ~~(Parker 2016)~~ and dental hygiene, cosmetic dental whitening, and pain management.(Fornaini 2019, Parker 2016, Suresh 2020, Coluzzi 2016, Olivie 2009) ~~of temporomandibular joint pain to name a few.~~

Laser basics

While a detailed description of how lasers work is beyond the scope of this document, ~~it is important to understand~~ the basics of laser physics are important to understand prior to selecting a laser for dental treatment. The term laser is an acronym for light amplification by stimulated emission of radiation. ~~Lasers are classified by the active medium that is used to create the laser energy~~. Within a laser, an active medium (e.g., erbium crystal, CO_2 gas, a semiconductor) is stimulated to produce photons of energy that are delivered in a beam of unique wavelength ~~that is~~ measured in nanometers.(~~Fasbinder 2008~~ Coluzzi 2016) The wavelength of a dental laser is the determining factor of the level to which the laser energy is absorbed by the intended tissue.(Coluzzi 2016, Parker 2020)Target tissues differ in their affinity for specific wavelengths of laser energy depending on the presence of the chromophore or the laser-absorbing elements of the tissue.(~~Fasbinder 208~~; Coluzzi 2016, Parker 2020 ~~Green et al. 2011~~; Martens 2011) Oral hard and soft tissues have a distinct affinity for absorbing laser energy of a specific wavelength.(Coluzzi 2016, Parker 2020) For this reason, selecting a specific laser unit depends on the target tissue the practitioner wishes to treat.

The primary effect of a laser within target tissues is photo-thermal,(~~White et al. 1992~~) meaning that the laser energy is transformed into heat. (Coluzzi 2016) When the temperature of the target tissue containing water is raised above 100 degrees Celsius, vaporization of the water occurs, resulting in soft tissue ablation. (~~Frame 1985~~ Coluzzi 2016, Parker 2020) Since soft tissue is made up of a high percentage of water, excision of soft tissue initiates at this temperature. ~~Hard tissue composed of hydroxyapatite crystals and minerals are not ablated at this temperature, but the water component is vaporized and the resulting steam expands and then disperses the encompassing material into small particles. (Martens 2011)~~ Dental hard tissue is composed of hydroxyapatite, mineral, and water. Erbium lasers do not ablate hard tissues directly, but vaporization of the water component causes the resulting steam to expand and then disperses

the encompassing material into small particles, a process known as spallation. (Martens 2011; Parker 2020) The 9300 nm CO_2 wavelength targets absorption within the water component, as well as the phosphate and hydrogen phosphate anions of the hydroxyapatite mineral molecule and is, therefore, capable of ablating enamel and dentin. (Parker 2020, Parker 2016)

Laser operating parameters such as power, frequency, emission mode, thermal relaxation time, and air and water coolant used affect the clinical abilities of a laser. (Coluzzi 2016 ,Parker 2020) Additionally, the delivery system of laser unit as well as the tissue concentration of the chromophore greatly influence the laser-tissue interactions.(Coluzzi 2016 ,Parker 2016)

Clinical applications of the lasers commonly used in pediatric dentistry are listed in the Table.

Laser safety

Adherence to safe laser practices is a duty of every laser practitioner, but identification of a laser safety officer for a clinical facility can maximize safe and effective operation of the laser. This person would provide all necessary information, inspect and maintain the laser and its accessories, and ensure that all safety procedures are implemented. (Coluzzi 2016) Because reflected or scattered laser beams may be hazardous to unprotected skin or eyes, wearing wavelength-specific protective eyewear is required at all times by the dental team, patient, and observers during laser use.(Coluzzi 2016) Laser plume results from the aerosol byproducts of laser-tissue interaction and may contain particulate organic and inorganic matter (e.g., viruses, toxic gases, chemicals) which may be infectious or carcinogenic.(Coluzzi 2016) ~~Laser plume, a mixture of gases as well as debris, is generated during the use of lasers.~~ When using dental lasers adherence to infection control protocol, including wearing a 0.1*u*m filtration mask, and utilization of high-speed suction are imperative. (Coluzzi 2016) ~~as the vaporized aerosol may contain infective tissue particles.(Coluzzi 2005;Piccone 2004)~~ Sparks from lasers can contribute to patient fire in the presence of an oxidizer enriched atmosphere and combustible agents (e.g., dry gauze, throat pack, paper, cotton products; hair; petroleum-based lubricants; alcohol-based products; rubber dam and nitrous mask). (AAPD safety 2020, Chen 2019, Bosack et al. 2016, Weaver 2012) Safe laser practices reduce the risk of fire.(AAPD safety 2020)

~~The practitioner should exercise good clinical judgment when p~~Providing soft tissue treatment of viral lesions in immunocompromised patients has the ~~potential~~ risk of disease transmission from laser-generated aerosol ~~exists~~.(Parker 2007; Garden et al. 2002) ~~To prevent viral transmission,~~ Palliative

pharmacological therapies may be more acceptable and appropriate in this group of patients in order to prevent viral transmission.(Garden et al.) ~~Reflected or scattered laser beams may be hazardous to unprotected skin or eyes.~~ ~~Wavelength-specific protective eyewear should be provided and consistently worn at all times by the dental team, patient, and other observers in attendance during laser use.(Coluzzi 2005)~~ Many states have well-defined laser safety regulations, and information can be obtained from ~~and practitioners should contact their specifi~~ state boards ~~to obtain this information~~.

Benefits of lasers in pediatric dentistry

One of the benefits of laser use in pediatric dentistry is the selective and precise interaction with diseased tissues.(~~Coluzzi 2005~~ Coluzzi 2016) Less thermal necrosis of adjacent tissues is produced with lasers than with electrosurgical instruments.(~~Coluzzi 2008~~Coluzzi 2016)During soft tissue procedures, hemostasis can be obtained without the need for sutures in most cases.(~~Coluzzi 2005~~;Coluzzi 2016 Boj et al. 2011;Parker 2020) ~~With the benefit of hemostasis during soft tissue treatments,~~ This may allow wound healing ~~can~~ to occur more rapidly with less post-operative discomfort and a reduced need for analgesics.(Martens 2011; Coluzzi 2016 ~~Coluzzi 2008~~; Boj et al. 2011; Olivi et al. 2009;Parker 2020) Little to no local anesthesia is required for most soft-tissue treatments.(Martens 2011; Boj et al. 2011; Olivi et al. 2009; ~~Convissar & Goldstein 2003~~) Reduced operator chair time has been observed when soft tissue procedures have been completed using lasers.(Boj et al. 2011; Olivi et al. 2009) Lasers demonstrate decontaminating and bacteriocidal properties on tissues, requiring less prescribing of antibiotics post-operatively.(Martens 2011; Boj et al. 2011; Olivi et al. 2009;Parker 2020~~) Lasers can provide relief from the pain and inflammation associated with aphthous ulcers and herpetic lesions without pharmacological intervention.(Green et al. 2011; Boj et al. 2011; Olivi et al. 2009)~~

Laser therapeutics can occur without a photothermal event, and these effects are known as photobiomodulating (**PBM**) or low-level laser effects. (Fornaini 2019) PBM therapy has been used in children for prevention and treatment of oral mucositis associated with immunosuppressive therapy (chemotherapy, radiation, and transplants). (AAPD Imunosuppressive therapy 2022, Elad 2020, Miranda-Silva 2021, Zadik 2019) PMB may reduce postsurgical or traumatic oral pain(Formaini, 2019), and pain during cavity preparation.(Tanboga 2011) Laser therapy, (PBM as well as application of erbium and CO_2 laser energy)(Yilmaz et al. 2017, Suter et al. 2017) ,can provide relief from the pain and inflammation associated with aphthous ulcers and herpetic lesions without pharmacological intervention;(Green et al. 2011; Boj et al. 2011; Olivi et al. 2009, Bardellini 2020) however, more studies are needed to establish

the laser type and therapeutic parameters (e.g. applied energy, wavelength, power outlet) recommended for children. (Suter et al. 2017)

Nd:YAG, erbium, and 9300 nm CO_2 lasers have been shown to have an analgesic effect on hard tissues, reducing or eliminating the use of local anesthesia during tooth preparations.(Caprioglio 2017;Martens 2011; Olivi & Genovese 2011; van As 2004; Matsumoto et al. 2002; Den Besten, et al. 2001 Parker 2016) The mechanism for laser analgesia is not known; however, proposed explanations include that the photo-acoustic effect of laser energy acts within the gate control pathway blocking pain sensations, direct and indirect influences of laser energy on nerves and nociceptors, and modifications of the sodium/potassium pump systems inhibiting nerve transmission. (Poli 2020,Parker 2016)During restorative procedures. conventional dental handpieces produce noise and vibrations which have been postulated as stimulating discomfort, pain, and anxiety for the pediatric patient.(Martens 2011; Olivi & Genovese 2011; Takamori et al. 2003; Tanboga et al. 2011) The non-contact of lasers with hard tissue eliminates the vibratory effects of the conventional high-speed handpiece and may reduce anxiety related to rotary instruments.(Merigo et al. 2015) Lasers can remove caries effectively with minimal involvement of surrounding tooth structure because caries-affected tissue has a higher water content than healthy tissue.(~~Coluzzi 2008~~ Coluzzi 2016, Parker 2016) ~~The noise and vibration of the conventional high-speed dental handpiece has been postulated as stimulating discomfort, pain, and anxiety for the pediatric patient during restorative procedures.(Martens 2011; Olivi & Genovese 2011; Takamori et al. 2003; Tanboga et al. 2011) The non-contact of erbium lasers with hard tissue eliminates the vibratory effects of the conventional high-speed handpiece allowing tooth preparations to be comfortable and less anxiety provoking for children and adolescents.(Martens 2011; Olivi & Genovese 2011; Tanboga et al. 2011) Nd:YAG ,and erbium have been shown to have an analgesic effect on hard tissues, eliminating injections and the use of local anesthesia during tooth preparations.(Martens 2011; Olivi & Genovese 2011; van As 2004; Matsumoto et al. 2002; Den Besten, et al. 2001)~~

~~Limitations~~ Disadvantages of lasers in pediatric dentistry

~~There are some disadvantages of l~~Laser use in pediatric dentistry has some disadvantages. Since different wavelengths are necessary for various soft and hard tissue procedures, the practitioner may need more than one laser.(~~Coluzzi 2005~~ Coluzzi 2016) Laser use requires additional training and education for the various clinical applications and types of lasers.(~~Coluzzi 2005~~;Coluzzi 2016 Olivi et al. 2009; Olivi & Genovese 2011; van As 2004) High start-up costs are required to purchase the equipment, implement the

technology, and invest in the required education and training.(~~Coluzzi 2005~~; Coluzzi 2016 ; Olivi et al. 2009) Laser manufacturers provide training on their own units, but most laser education is obtained through continuing education courses. Few dental schools and graduate programs provide comprehensive laser education at this time. Most dental instruments are both side- and end-cutting; lasers are exclusively end-cutting, and lasers are unable to ablate metallic restorations. (Coluzzi 2016, Parker 2016) Cavity preparations are slower to make with a laser than with a highspeed handpiece, (Parker 2016) and ~~When using lasers,~~ modifications in clinical technique along with additional preparation with ~~high-speed~~ handpieces may be required to finish tooth preparations. (~~Coluzzi 2005~~; Coluzzi 2016;Olivi & Genovese 2011)

Policy statement

The AAPD:

- recognizes the use of lasers as an alternative and complementary method of providing soft and hard tissue dental procedures for infants, children, adolescents, and persons with special health care needs.
- advocates the dental professional receive additional didactic and experiential education and training on the use of lasers before applying this technology on pediatric patients.
- encourages dental professionals to research, implement, and utilize the appropriate laser specific and optimal for the indicated procedure. Understanding the technology and clinical implications is necessary before practitioners utilize lasers in patient care.
- encourages additional research regarding the safety, efficacy and application of lasers for dental care for pediatric patients.
- supports patient, visitor, and staff safety through identification of a laser safety officer, supplementation of infection control practices, and use of wavelength-specific protective eyewear when a dental facility employs laser technology ~~Endorses use of protective eyewear specific for laser wavelengths during treatment for the dental team, patient, and observers~~.

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Table. LASER BASICS IN PEDIATRIC DENTISTRY

Laser type	Wavelength	Applications
Diode	450 - 655 nm	1. Laser fluorescence – diagnostic applications, detection of occlusal caries, detecting calculus in periodontal pockets, detection of dysplastic cells during oral cancer screening (Coluzzi 2016, Parker 2016)
Diode	810 - 980 nm	1. Soft tissue ~~ablation~~ procedures – gingival contouring for esthetic purposes, frenectomy, gingivectomy, operculectomy, biopsy (Boj 2011, Coluzzi 2016) 2. Photobiomodulation – proliferation of fibroblasts and enhancing the healing of oral lesions (mucositis, aphthous ulcers, herpetic lesions,), or surgical wounds (Fornaini 2019, Sutter et al., 2017) 3. Periodontal procedures – laser bacterial reduction, elimination of necrotic epithelial tissue during regenerative periodontal surgeries (Low 2016) 4. Enamel ~~W~~ whitening (Suresh 2020)
Er, Cr:YSGG*	2,780 nm	1. Hard tissue procedures –enamel etching, caries removal and cavity preparation in enamel and dentin (Boj 2011, Coluzzi 2016, Parker 2016) 2. Osseous tissue procedures – bone ablation (Boj 2011, Coluzzi 2016) 3. Soft tissue ~~ablation~~ procedures – incision, excision, vaporization, coagulation and hemostasis; gingival contouring for esthetic purposes, frenectomy, gingivectomy, operculectomy, biopsy (Boj 2011, Coluzzi 2016) 4. Endodontic therapy – pulp cap, pulpotomy, pulpectomy, root canal preparation (Nazemisalman 2015) 5. Periodontal procedures – laser bacterial reduction, elimination of necrotic epithelial tissue during regenerative periodontal surgeries (Low,2016)

		6. Treatment of oral ulcerative lesions (Yilmaz et al. 2017)
Er:YAG**	2,940 nm	1. Hard tissue procedures – caries removal and cavity preparation in enamel and dentin (Boj 2011, Coluzzi 2016, Parker 2016) 2. Endodontic therapy – root canal preparation (Nazemisalman 2015)
CO2†	9,300 nm	1. Hard tissue procedures –enamel etching, caries removal and cavity preparation in enamel and dentin (Parker 2020) 2. Osseous tissue procedures – bone ablation 3. Soft tissue procedures ~~– incision, excision, vaporization, coagulation and hemostasis~~ – gingival contouring for esthetic purposes, frenectomy, gingivectomy, operculectomy, biopsy (Boj 2011, Coluzzi 2016)
CO2	10,600 nm	1. Soft tissue ~~ablation~~ procedures – gingival contouring for esthetic purposes, frenectomy, gingivectomy, biopsy (Boj 2011, Coluzzi 2016, Nazemisalman 2015) 2. Treatment of oral ulcerative lesions (Nazemisalman 2015, Suter et al. 2017) 3. Periodontal procedures – elimination of necrotic epithelial tissue during regenerative periodontal surgeries (Nazemisalman 2015)

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281 * Er, Cr:YSGG – erbium, chromium, yttrium, scandium, gallium, garnet. ** Er:YAG – erbium, yttrium,
282 aluminum, garnet. † CO_2: Carbon dioxide.

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Policy on ~~Acute~~ Pediatric Dental Pain Management

Latest Revision

~~2017~~ 2022

ABBREVIATIONS

AAPD: American Academy Pediatric Dentistry. **FDA**: U.S. Food and Drug Administration. **NSAIDs**: Nonsteroidal anti-inflammatory drugs.

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) recognizes that children vary greatly in their cognitive and emotional development, medical conditions, and responses to pain and interventions. This policy is not intended to provide clinical recommendations, which can be found in AAPD's best practice on pain management; rather, the purpose of this document is to support efforts to prevent or alleviate pediatric pain and complications from pain medications. Infants, children, adolescents, and those with special health care needs can and do experience pain;~~, and the majority of~~ dental-related pain in most patients ~~in the dental setting~~ can be prevented or substantially relieved. The AAPD further recognizes ~~that there are~~ many therapeutics are available to treat pain with varying ~~dosages and/or~~ regimens. Recent concerns have developed about toxicities associated with codeine and the adverse effects of opioid analgesics.

Methods

This policy was developed by the Council on Clinical Affairs~~, and~~ adopted in 2012(AAPD 2012), and last revised in 2017(AAPD 2017). This document is an update of the previous version and is based on a review of current dental and medical literature pertaining to pediatric pain management including a search with PubMed®/MEDLINE using the terms: pediatric dental pain management, pediatric pain management, pediatric postoperative pain management, pediatric analgesic overdose; fields: all; limits: within the last ten years, humans, all children zero to 18 years, English, clinical trials, and literature reviews. The search returned ~~3,388~~ 8,031 articles. ~~The reviewers agreed upon the inclusion of 12 new~~ 16 ~~documents that met the defined criteria. Nine additional documents were retained from the previous version of the policy for historical purposes.~~ When data did not appear sufficient or were inconclusive,

information included in this ~~police~~ policy was based upon expert and/or consensus opinion by experienced researchers and clinicians

Background

Pain assessment is an integral component of the dental history and comprehensive evaluation. ~~When symptoms or signs of orofacial/dental pain are evident, a~~ A detailed pain assessment ~~should be conducted and documented in the patient's record. This assessment~~ helps the dentist to derive a clinical diagnosis, develop a prioritized treatment plan, and better estimate analgesic requirements for the patient (deLeeuw 2018). Assessment of pain indicates the need for intervention and appropriateness of treatment (deLeeuw 2018). Assessment of pediatric pain may significantly improve the patient's comfort and quality of life. (Zielinski, 2020) Research suggests that undertreatment of pediatric pain can amplify future pain experience. (Cramton, 2012). Effective pain management is important in both the short and the long-term (deLeeuw 2018). Children with an established dental home have better access for acute and chronic orofacial pain management. A dental home provides comprehensive care which can assess and manage acute and chronic oral pain and infection. (AAPD Policy on Dental Home 2018)

~~Pain is difficult to measure due to its subjectivity, especially in children,(Barrêtto et al. 2004; Jain 2012) and often relies on the report of parents. There are several pain scale indicators that can be used with children, including the Faces Pain Scale and the Wong-Baker FACES® Pain Rating Scale.(Barrêtto et al. 2004; Jain 2012) The method of assessing pain selected by the practitioner must accurately reflect pain intensity. Pain experienced by children with special health care needs or developmental disabilities is more challenging to assess accurately and may require utilization of scales that rely on observations such as vocalization, facial expressions, and body movements.(IOM 2016; Feldt 2000; Merkel et al. 1997)~~

~~In addition to documenting pain severity, it is important to assess pain onset, pattern, location, and quality; aggravating and relieving factors; previous treatment and its effect; and barriers to assessment.(Chou et al. 2016) When assessing pain in a child, the patient's psychological status should be considered. The dentist also should account for the intensity and duration of pain that may be perceived from a given dental procedure.(AAP/APS 2001; Needleman et al. 2008)~~

Pain management may range from nonpharmacologic modalities to pharmacological treatment. Nonpharmacologic therapy includes maintaining a calm environment, encouraging deep breathing, and employing guided imagery, distraction, play therapy, hypnotherapy, virtual reality, and other (e.g.

acupuncture, transcutaneous nerve stimulation) techniques ~~tell-show-do~~.(Lee et al. 2014, BP-Pain 2022) Pharmacologic therapy may consist of administration of topical and local anesthesia, analgesic medications, and/or mild, moderate, or deep sedation regimens.(Lee et al. 2014; AAPD BP_Use of Local Anesthesia) ~~The extent of treatment affects post-operative pain. It has been reported that 95 percent of children undergoing full-mouth dental rehabilitation, regardless of extent of treatment, report pain of moderate intensity.(Needleman et al. 2008) Pain scores usually are highest immediately postoperatively while the patient is in the post-anesthesia recovery unit.(Needleman et al. 2008) Due to analgesics and/or local anesthetics administered intra-operatively during dental rehabilitation, some patients may be delayed in their pain response and report greater intensity of pain at home following the procedures. Patients who had extractions, as well as those who had 12 or more dental procedures, were more likely to experience pain at home.(Needleman et al. 2008)~~ ~~The selection of an appropriate~~ Analgesic selection depends on the individual patient, the extent of treatment, the duration of the procedure, psychological factors, and the patient's medical history (Laskarides 2016). ~~Physiologic factors such as bleeding disorders, liver problems, and kidney problems should be given particular attention since some analgesics may promote bleeding.(Becker 2010)~~ If moderate to severe postoperative pain is considered likely, ~~an analgesic should be~~ administering an analgesic on a regular schedule ~~during the first~~ for 36 to 48 hours helps to maintain a ~~create~~ stable plasma level~~s~~ of the agent and ~~analgesics and~~ decreases risk for ~~the chance of~~ breakthrough pain.(Chou 2016~~Becker 2010;~~ Sutters et al. 2010)

~~Treatment of postoperative pain may include opioid analgesics and non-opioid analgesics.~~Many therapeutics are available for the prevention of pain. Acetaminophen and ~~Since most cases of postoperative pain include an inflammatory component,~~ nonsteroidal anti-inflammatory drugs (**NSAIDs**), such as ibuprofen, are considered first line agents in the treatment of acute mild to moderate postoperative pain.(Laskarides 2016~~Becker 2010) Aspirin-containing analgesics are contraindicated for pediatric pain management in most situations because, if administered during a viral illness, the potential exists for a serious condition known as Reye syndrome.(Ruest & Anderson 2016) Acetaminophen lacks anti-inflammatory properties but can be a non-opioid alternative when NSAIDs are contraindicated.(Becker 2010) Acetaminophen is found as a single agent and also in combination with other drugs. Overdose of acetaminophen is a potential pediatric emergency, and the maximum daily dose should be observed, especially when combination medications are used.(Am Assn Poison Control Centers 2006)~~ Alternating administration of ibuprofen and acetaminophen is another strategy for pain management in children and may allow lower doses of each individual medication to be used.(Chou et al. 2016; Liu & Ulualp 2015, Moore, 2013) Many analgesics have multiple modalities of administration, such as oral, rectal or

intravenous, to accommodate a wide patient population. (Ruest & Anderson 2016) Consideration of these modalities may be pertinent when treating patients in different environments such as an office-based outpatient setting versus in the hospital.

Certain analgesics are contraindicated in the pediatric population due to concerns for toxicity and adverse reactions. NSAIDs may prolong bleeding time and exacerbate kidney or liver impairment, and acetaminophen overuse may be associated with hepatotoxicity. (Laskarides 2016) Aspirin-containing analgesics are contraindicated for pediatric pain management in most situations because, if administered during a viral illness, the potential exists for a serious condition known as Reye syndrome, a condition that causes swelling of the liver and brain.(Ruest & Anderson 2016). ~~Practitioners may be hesitant to prescribe opioid analgesics for pediatric patients for fear of addiction. Because opioid use for dental pain should be of short duration, physical dependence is unlikely and its use should be considered.(Sutters et al. 2010)~~ Although opioid analgesics ~~are~~ can be effective for moderate to severe postoperative pain, ~~but have~~ there are potential ~~for~~ adverse effects (e.g., nausea, emesis, constipation, sedation, respiratory depression) and diversion.(Liu & Ulualp 2015; Yaksh & Wallace 2010; Dionne & Moore 2016) From 2006 to 2018, the opioid dispensing rate for the pediatric population steadily decreased. (Renny 2021) Persistent opioid use among children and adolescents is a major concern and represents an important pathway to opioid misuse. (Harbaugh, 2018) A 2013 systematic review found a combination of acetaminophen and ibuprofen provided effective analgesia without the adverse side effects associated with opioids; the combination of acetaminophen and ibuprofen was shown to be more effective in combination than either medication alone. (Moore, 2013) In April, 2017, the United States Food and Drug Administration (**FDA**) issued a warning to restrict the use of codeine and tramadol in children and breastfeeding mothers.(US FDA Codeine Use Breastfeeding) ~~Parental anxiety about postoperative pain and potential adverse effects of pain medications may influence administration of analgesics at home.(Chou et al. 2016; AAP/APS 2001) Strategies that educate parents about anticipated postoperative discomfort and the benefits of pain medication have been associated with reduced reports of pain in pediatric patients.(AAP/APS 2001) Parental education, expectation management, and effective use of non-opioid analgesics are keys in reducing adverse effects of opioid analgesics. Opioid analgesics such as hydrocodone and oxycodone are often combined with acetaminophen. Concomitant or alternating opioid administration with ibuprofen can reduce opioid consumption. Codeine, a prodrug that is metabolized into morphine in the liver, has been removed from many hospital formularies due to safety concerns.(US FDA Codeine Use; Tobias et al. 2016; Crews et al. 2014)~~ s~~Individual response to codeine ranges from high sensitivity to no effect at all due to genetic variability.(Tobias et al. 2016; Crews et al. 2014) A genetic~~

~~polymorphism of the liver cytochrome enzyme CYP2D6 causes some patients to be ultra-rapid metabolizers of codeine.(US FDA Codeine Use) Ultimately, these patients convert codeine into high levels of morphine very quickly. For this reason, postoperative use of codeine has been associated with undesirable consequences including death in infants and children.(US FDA Codeine Use; Tobias et al. 2016; Crews et al. 2014) Another variant of CYP2D may cause patients to be poor metabolizers of codeine and, consequently, under-respond to the opioid. (Crews et al. 2014) Repeated doses, of codeine-containing analgesics in these patients fail to result in adequate analgesia, since codeine is not effectively broken down into the active metabolite morphine.(Crews et al. 2014) Tests cleared by the U.S. Food and Drug Administration (**FDA**) are available and could be considered to identify both ultra-rapid and poor metabolizers of codeine and other opioid analgesics.(US FDA Codeine) Tramadol and, to a lesser extent, hydrocodone and oxycodone, also are influenced by CYP2D6 activity. (Crews et al. 2014) In April, 2017, the FDA issued a warning to restrict the use of codeine and tramadol medicines in children and breastfeeding mothers.(US FDA Tramadol) Morphine and non-opioid alter-natives are not influenced by CYP2D6 metabolism.(Crews et al. 2014)~~

Policy statement

The AAPD recognizes that pediatric dental patients ~~children~~ may experience pain ~~and exhibit~~ as a direct result of their oral condition or secondary to invasive dental procedures. ~~variability in the expression of pain. and that I~~nadequate pain control ~~management may have~~ has the potential for significant physical and psychological consequences, including altering future pain experiences for these children. Furthermore, pharmacologic agents used in pediatric pain management have potential for toxicity and adverse reactions, with narcotics at risk for diversion to unintended recipients. ~~for the patient.~~ Therefore, the AAPD encourages ~~health care professionals to~~:

- healthcare professionals to emphasize preventive oral health practices and to implement safe and effective pre-, intra-, and post-operative approaches to minimize the patient's risk for pain.
- healthcare practitioners to follow evidence-based recommendations regarding analgesic use by pediatric patients to minimize untoward reactions and potential for substance misuse.
- additional research to determine safe and effective treatment modalities for acute pain.
- ~~recognize, assess, and document symptoms of pain in the patient's record.~~
- ~~consider preoperative, intraoperative, and postoperative pain management options.~~
- ~~use non-pharmacologic and pharmacologic strategies to reduce pain experience.~~
- ~~utilize drug formularies in order to accurately prescribe medications for the management of pain.~~

- ~~choose agents compatible with the patient's medical history.~~
- ~~comprehend the consequences, morbidities, and toxicities associated with the use of specific therapeutics.~~
- ~~consider non-opioid analgesics as first line agents for pain management.~~.
- ~~consider simultaneous use of analgesics with different mechanisms of action to optimize pain management. Combining opioid analgesics with NSAIDs or acetaminophen for moderate to severe pain may decrease overall opioid consumption.~~
- ~~support additional clinical research to extend the understanding of the risks and benefits of both opioid and nonopioid alternatives for orally-administered, effective agents for acute and chronic pain. (Tobias et al. 2016)~~

~~The AAPD supports the FDA's April, 2017 safety communication (US FDA Tramadol) which states that codeine and tramadol are contraindicated for treatment of pain in children younger than 12 years.~~

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Policy on Model Dental Benefits for Infants, Children, Adolescents, and Individuals with Special Health Care Needs

Revised

~~2017~~ 2022

ABBREVIATIONS

AAPD: American Academy Pediatric Dentistry.

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) believes that all infants, children, adolescents, and individuals with special health care needs must have access to comprehensive preventive and therapeutic oral health care benefits that contribute to their optimal health and well-being. This policy is intended to assist policy makers, third-party payors, and consumer groups/benefits purchasers to make informed decisions about the appropriateness of oral health care services for these patient populations.

Methods

This policy was developed by the Council on Dental Benefit Programs and Council on Clinical Affairs, ~~and~~ adopted in 2008 (AAPD 2008), ~~-~~ and last revised in 2017(AAPD 2017). This policy is based upon a review of the AAPD's ~~systematically-developed~~ oral health policies, best practices, and clinical practice guidelines as well as clinical practice guidelines that have been developed by other professional organizations and endorsed by the AAPD.

Background

The AAPD advocates optimal oral health and health care for all infants, children, adolescents, and individuals with special health care needs, regardless of race, ethnicity, religion, sexual or gender identity, medical status, disability, family structure, or financial circumstances. (AAPD P. Vul Pop 2021) Oral diseases are progressive and cumulative; ignoring oral health problems can lead to needless pain and suffering, infection, loss of function, increased health care costs, and lifelong consequences in educational, social, and occupational environments. A dental benefit plan should be actuarially sound and fiscally capable of delivering plan benefits without suppressing utilization rates or the delivery of

services. When a benefits plan, whether for a commercial or government program, is not actuarially sound and adequately underwritten, access and appropriate care under the plan are placed at risk. When oral health care is not accessible, the health implications, effects on quality of life, and societal costs are enormous.(~~US DHHS 2000~~, National Institutes of Health. Oral Health in America: Advances and Challenges 2021) The AAPD's oral health policies, best practices, and clinical practice guidelines(AAPD Reference Manual 2022) encourage the highest possible level of care to children and patients with special health care needs. The AAPD also sponsors a national ~~consensus conference or~~ symposium each year on pediatric oral health care ~~and those proceedings are published in a special issue of *Pediatric Dentistry*.~~ Those sources, ~~documents(AAPD Reference Manual; AAPD Restorative Consensus Conference 2015; AAPD Symposium on Behavior Guidance 2014; AAPD Symposium on Prevention 2006; AAPD/AAE Symposium on Pulp Therapy; 2008; AAPD Symposium on Trauma 2009; AAPD/AAE Symposium on Trauma 2013)~~ as well as clinical practice guidelines from other organizations with recognized professional expertise and stature(~~AAPD Symposium on Trauma 2009; AAPD/AAE Symposium on Trauma 2013;~~ AAE Guide to Clinical Endodontics 2013; ~~AAPeriod 2003;~~ Caton et al 2018; ADA 2012; ACP-CA ~~2009~~2018; NFED 2003; Rozier et al. 2010; Clark & Slayton 2014; Carter et al. 2008), serve as the basis for the recommendations below. Such recommendations ideally are evidence based but, in the absence of conclusive evidence, may rely on expert opinion and clinical observations.

Policy statement

The AAPD encourages all policy makers and third-party payors to consult the AAPD in the development of benefit plans that best serve the oral health interests of infants, children, adolescents, and individuals with special health care needs. These model services are predicated on establishment of a dental home, defined as the ongoing relationship between the dentist (i.e., the primary oral health care provider) and the patient, inclusive of all aspects of oral health care, starting no later than 12 months of age.(AAPD D_Dental Home 2021)

Value of services is an important consideration, and the AAPD encourages all stakeholders to recognize that a least expensive treatment is not necessarily the most beneficial or cost effective plan in the long term for the patient's oral health.

The following services are essential components in health benefit plans.

A. Preventive services:

1. initial and periodic orofacial examination, including medical, dental, and social histories, furnished in accordance with the attached periodicity schedule(AAPD Reference Manual 2022) or when oral screenings by other health care providers indicate a risk of caries or other dental or oral disease. (AAPD Best Practices for Caries-Risk Assessment and Management 2022; AAPD Policy on Social Determinants 2022)
2. education for the patient and the patient's family on measures that promote oral health as part of initial and periodic well-child assessment. (AAPD Best Practice for Perinatal and Infant Oral Health Care 2021; AAPD Best Practice for Periodicity, Anticipatory Guidance \ Counseling 2022; AAPD Best Practice for Management of Dental Patients with Special Healthcare Needs 2022)
3. age-appropriate anticipatory guidance and counseling on non-nutritive habits, injury prevention, intraoral \ perioral piercing, human papilloma virus, and tobacco use/substance abuse. (AAPD Best Practice for Periodicity, Anticipatory Guidance \ Counseling 2022; AAPD Policy on Intraoral \ Perioral Piercing and Oral Jewelry \ Accessories 2021; AAPD Policy on Human Papilloma Virus Vaccinations 2021; AAPD Policy on Substance Misuse 2021; AAPD Policy on Electronic Nicotine Delivery Systems 2021; AAPD Policy on Tobacco Use 2021; AAPD Policy on Use of Pacifiers 2022)
4. application of topical fluoride at a frequency based upon caries risk factors. (AAPD Policy on Use of Fluoride 2021; AAPD Best Practices for Fluoride Therapy 2021)
5. prescription of a high-concentration fluoridated toothpaste for patients over six years old who are at moderate to high caries risk. (AAPD Best Practice for Fluoride Therapy 2021)
6. prescription of dietary fluoride supplement (Clark & Slayton 2014) based upon a child's age and caries risk as well as fluoride level of the water supply or supplies and other sources of dietary fluoride.
7. application of pit and fissure sealants on primary and permanent teeth based on caries risk factors, not patient age.(Crall & Donly 2015; AAPD Clinical Practice Guidelines: Use of Pit-and-Fissure Sealants 2016)
8. dental prophylactic services at a frequency based on caries and periodontal risk factors.(AAPD Best Practices Caries-risk, AAPD Policy on Role of Dental Prophylaxis in Pediatric Dentistry 2022; AAPD Best Practices for Risk Assessment and Management of Pediatric Periodontal Conditions 2022)

B. Diagnostic procedures consistent with guidelines developed by organizations with recognized professional expertise and stature, including radiographs in accordance with recommendations by the American Academy of Oral and Maxillofacial Radiology, U.S. Food and Drug Administration and the American Dental Association.(ADA 2012; Carter et al. 2008; AAPD BP Radiographs 2021) When necessary and appropriate, use of teledentistry for orofacial evaluation. (AAPD Policy on Teledentistry 2021).

C. Medically-necessary care, ~~R~~restorative and endodontic services to relieve pain, resolve infection, restore teeth, and maintain dental function and oral health. This would include interim therapeutic restorations, a beneficial provisional technique in contemporary pediatric restorative dentistry.(AAPD Reference Manual 2022; AAPD Def. Medically-Necessary Care 2021; AAPD Policy on Medically-Necessary Care 2021; AAPD Policy on Interim Therapeutic Restorations 2022)

D. Orthodontic services including space maintenance and services to diagnose, prevent, intercept, and treat malocclusions, including management of children with cleft lip or palate and/or congenital or developmental defects, and obstructive sleep apnea (OSA). These services include, but are not limited to, obturators, initial appliance construction, and replacement of appliances as the child grows. (AAPD Reference Manual 2022; AAPD Policy on Obstructive Sleep Apnea (OSA)2021: Reisberg 2000; AAPD Policy on Use of Pacifiers 2022)

E. Dental and oral surgery including sedation/general anesthesia and related medical services performed in an office, hospital, or ambulatory surgical care setting. (AAPD Policy on Hospitalization and Operating Room Access 2021; AAPD Best Practices for Use of Anesthesia Providers in the Administration of Office-Based Deep Sedation / General Anesthesia 2021)

F. Periodontal services to manage gingivitis, periodontitis, and other periodontal diseases or conditions in children.(AAPD Best Practice for Risk Assessment and Management of Pediatric Periodontal Conditions 2022)

G. Prosthodontic services, including implants with restorations to restore oral function~~.~~ as well as maxillofacial prosthetics \ prosthodontics as recommended \ supported by a craniofacial team. (Reisberg 2000; Wermker et al 2014)

H. Diagnostic and therapeutic services related to the acute and long-term management of orofacial trauma. When the injury involves a primary tooth, benefits should cover complications for the developing succedaneous tooth. When the injury involves a permanent tooth, benefits should cover long-term complications to the involved and adjacent or opposing teeth including cosmetic \ esthetic treatment that could impact social health. (AAPD Best Practice for Pediatric Restorative Dentistry 2022)

I. Drug prescription for preventive services, relief of pain, or treatment of infection or other conditions within the dentist's scope of practice. (AAPD Useful Medications for Oral Conditions 2022; AAPD Best Practice for Pain Management 2022; AAPD Best Practice for Use of Antibiotic Therapy 2022)

J. Medically-necessary services for preventive and therapeutic care in patients with medical, physical, or behavioral conditions. These services include, but are not limited to, the care of hospitalized patients, sedation, and general anesthesia in outpatient or inpatient hospital facilities. (Best Practices for Management of Dental Patients with Special Healthcare Needs 2021;AAPD Policy on Hospitalization and Operating Room Access 2021)

K. Behavior guidance services necessary for the provision of optimal therapeutic and preventive oral care to patients with medical, physical, or behavioral conditions. These services may include both pharmacologic and non-pharmacologic management techniques. (AAPD Best Practices for Behavior Guidance for the Pediatric Dental Patient 2021)

L. Consultative services provided by a pediatric dentist when requested by a general practitioner or another dental specialist or medical care provider. (AAPD Policy on the Role of Pediatric Dentists as both Primary and Specialty Care Providers 2021)

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Recommended Dental Periodicity Schedule on the next page.

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Recommended Dental Periodicity Schedule for Pediatric Oral Health Assessment, Preventive Services, and Anticipatory Guidance/Counseling

(AAPD Periodicity 2022, AAPD Recommended Periodicity Chart)

Recommended Dental Periodicity Schedule for Pediatric Oral Health Assessment, Preventive Services, and Anticipatory Guidance/Counseling

Since each child is unique, these recommendations are designed for the care of children who have no contributing medical conditions and are developing normally. These recommendations will need to be modified for children with special health care needs or if disease or trauma manifests variations from normal. The American Academy of Pediatric Dentistry emphasizes the importance of very early professional intervention and the continuity of care based on the individualized needs of the child. Refer to the text of this best practiceguideline for supporting information and references. Refer to the text in the Recommendations on the Periodicity of Examination, Preventive Dental Services, Anticipatory Guidance, and Oral Treatment for Infants, Children, and Adolescents (*www.aapd.org/policies/*) for supporting information and references.

	AGE				
	6 TO 12 MONTHS	12 TO 24 MONTHS	2 TO 6 YEARS	6 TO 12 YEARS	12 YEARS AND OLDER
Clinical oral examination [1]	•	•	•	•	•
Assess oral growth and development [2]	•	•	•	•	•
Caries-risk assessment [3]	•	•	•	•	•
Radiographic assessment [4]	•	•	•	•	•
Prophylaxis and topical fluoride [3,4]	•	•	•	•	•
Fluoride supplementation [5]	•	•	•	•	•
Anticipatory guidance/counseling [6]	•	•	•	•	•
Oral hygiene counseling [3,7]	Parent	Parent	Patient /parent	Patient /parent	Patient
Dietary counseling [3,8]	•	•	•	•	•
Counseling for nonnutritive habits [9]	•	•	•	•	•
Injury prevention and safety counseling [9,10]	•	•	•	•	•
~~Counseling for nonnutritive habits [10]~~	•	•	•	•	•
Assess ~~Counseling for~~ speech/language development [11]	•	•	•		
Assess~~ment and treatment of~~ developing ~~mal~~occlusion [12]			•	•	•
Assessment for pit and fissure sealants [13,14]			•	•	•
Periodontal risk assessment [3,14]			•	•	•
Counseling for tobacco, vaping, and substance misuse ~~abuse counseling~~				•	•
Counseling for human papilloma virus/vaccine				•	•
Counseling for intraoral/perioral piercing				•	•
Assess~~ment and/or removal of~~ third molars					•
Transition to adult dental care					•

1 First examination at the eruption of the first tooth and no later than 12 months. Repeat every 6 months or as indicated by the child's risk status/susceptibility to disease. Includes assessment of pathology and injuries.

2 By clinical examination.

3 Must be repeated regularly and frequently to maximize effectiveness.

4 Timing, typeselection, and frequency determined by child's history, clinical findings, and susceptibility to oral disease.

5 Consider when systemic fluoride exposure is suboptimal. Up to at least 16 years.

6 Appropriate discussion and counseling should be an integral part of each visit for care.

7 Initially, responsibility of parent; as child matures, jointly with parent; then, when indicated, only child.

8 At every appointment; initially discuss appropriate feeding practices, then the role of refined carbohydrates and frequency of snacking in caries development and childhood obesity. Monitor body mass index beginning at age 2.

9 At first, discuss the need for non-nutritive sucking: digits vs pacifiers; then the need to wean from the habit before malocclusion or deleterious effect on the dentofacial complex.occurs. For school-aged children and adolescent patients, counsel regarding any existing habits such as fingernail biting, clenching, or bruxism.

10 Initially play objects, pacifiers, car seats, play objects, electric cords; secondhand smoke; when learning to walk; then with sports and routine playing, including the importance of mouthguards, then motor vehicles and high-speed activities.

10 At first, discuss the need for additional sucking: digits vs pacifiers; then the need to wean from the habit before malocclusion or skeletal dysplasia occurs. For school-aged children and adolescent patients, counsel regarding any existing habits such as fingernail biting, clenching, or bruxism.

11 Observation for age-appropriate speech articulation and fluency as well as achieving receptive and expressive language milestones

12 Identify: transverse, vertical, and sagittal growth patterns; asymmetry; occlusal disharmonies; functional status including temporomandibular joint dysfunction; esthetic influences on self-image and emotional development

13 For caries-susceptible primary molars, permanent molars, premolars, and anterior teeth with deep pits and fissures; placed as soon as possible after eruption.

14 Periodontal probing should be added to the risk-assessment process after the eruption of the first permanent molars.

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Policy on Third-Party Reimbursement of Medical Fees Related to Sedation/General Anesthesia for Delivery of Oral Health Care Services

Latest Revision

~~2016~~ 2022

ABBREVIATIONS

AAPD: American Academy Pediatric Dentistry. **ACA**: Affordable Care Act. **ADA**: American Dental Association. **ECC**: Early childhood caries. **QOL**: Quality of life

Purpose

The American Academy of Pediatric Dentistry (**AAPD**)~~,~~ wants to ensure that all children have access to the full range of oral health delivery systems.~~,~~ It advocates that if sedation or general anesthesia and related facility fees are payable benefits of a healthcare plan, these same benefits shall apply for the delivery of oral health services.

Methods

This policy was developed by the Dental Care Committee, adopted in 1989 (AAPD 1989), and last revised in 2016 (AAPD 2016) by the Council of Clinical Affairs. This document is ~~an update of the previous policy, revised in 2011, and is~~ based on a review of the current dental literature related to guidelines for sedation and general anesthesia, as well as issues pertaining to medically-necessary oral health care. The update included a PubMed®/MEDLINE search using the terms: general anesthesia/ sedation costs, general anesthesia/sedation reimbursement, general anesthesia/ sedation insurance coverage, general anesthesia and medically necessary dental care, and general anesthesia/oral health-related quality of life and limit: within the last 10 years, as well as relevant articles from dental and medical literature. The search returned 300 ~~95~~ articles. ~~The reviewers agreed upon the inclusion of 24 articles that met the defined criteria.~~ Relevant policies and best practices~~guidelines~~ of the AAPD and the American Dental Association (**ADA**) are included. Additionally, expert opinions and best current practices were relied upon when clinical evidence was not available.

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Background

For some infants, children, adolescents, and persons with special health care needs, treatment under sedation/general anesthesia in a hospital, outpatient facility, or dental office or clinic represents the optimal~~only viable~~ method to deliver necessary oral health care.(AAPD D_Medically Necessary Care 2020; AAP 2013~~2005~~; Glassman et al. 2009) The patient's age, dental treatment needs, limited ~~dis~~abilities, medical conditions, ~~and/~~or acute situational anxiety may preclude the patient from being treated ~~safely~~ in a traditional outpatient setting.(Glassman et al. 2009; White et al. 2008; AAPD 2012; Escanilla-Casal et al. 2014; AAPD Sedation Guideline; AAPD BP_Use of Anesthesia Personnel) These patients may be denied access to oral health care when insurance companies refuse to provide reimbursement for sedation/general anesthesia and related facility services. When oral health care is not accessible, the health implications, effects on quality of life, and societal costs are enormous. (Oral Health in America, 2021)

Dental care is medically necessary to prevent and eliminate orofacial disease, infection, and pain, to restore the form and function of the dentition, and to correct facial disfiguration or dysfunction. Medically necessary care includes all supportive health care services that, in the judgment of the attending dentist, are necessary for the provision of optimal quality therapeutic and preventive oral care.(AAPD MNC) Some medical insurance plans may not view dental care and adjunctive services requiring hospital/anesthesia related fees as ~~Most denials cite the procedure as not~~ medically necessary. ~~This determination appears to be based on inconsistent criteria.(White 1995; Cameron et al. 1995; Crall 2004) For instance,~~ Although medical policies often provide reimbursement for sedation/general anesthesia ~~or~~ and facility fees related to myringotomy for a three-year-old child~~, but deny~~ these benefits may be denied when related to treatment of dental disease ~~and/~~ or infection for the same patient. This determination at times appears to be based on inconsistent and poorly-defined criteria.(White 1995; Cameron et al. 1995; Crall 2004) While states or third-party payors may require prior authorization for such procedures in an effort to control healthcare expenditures, this can be a time-consuming burden for practitioners. By establishing well-defined criteria (e.g., patient's age, treatment requirements, behavior, and medically-compromising condition; failed attempts at in-office treatment) and a streamlined preauthorization process, the dental practitioner is provided an opportunity to justify the need for anesthesia services and all parties can be assured of transparency, access to the full range of services available through a patient's benefits plan, and improved timeliness of treatment and reimbursement.

Delays in care can result in needless pain and suffering, infection, loss of function, and increased health care costs. Additionally, indiscriminate prescription of antibiotics for infections contributes to antibiotic resistance, and chronic use of acetaminophen for pain control can lead to hepatotoxicity. Less-effective management of these patients may result in a higher disease burden for the patient (i.e., more teeth requiring treatment and more invasive treatment needs) (Okuji 2021) as well as the patient's avoidance of oral health professionals in the future and increased likelihood of seeking care in the emergency department. (AAPD 2012) Furthermore, this could also place an increased demand on practitioners, emergency departments, and hospitals to treat patients with urgent and emergent dental needs. In the event the insurer denies the preauthorization or claim citing lack of medical necessity, an appeals process to allow the practitioner to advocate on the patient's behalf through peer-to-peer conferences is essential.

Some patients may have dental developmental disorders such as dentinogenesis imperfecta, osteogenesis imperfecta, or molar-incisor hypoplasia which require extensive dental treatment that may exceed the capability of the patient to be treated in the normal clinic setting. Dental rehabilitation of early childhood caries (**ECC**) has shown a significant improvement in oral health-related quality of life (**QOL**) in children.(White et al. 2008; Jankauskiene et al. 2010; Jankauskiene et al. 2015; Gaynor & Thomson 2012; Yawary et al. 2016; Baghdadi et al. 2015; Malden et al. 208; Cantekin et al. 2014; Klaassen et al. 2009; Antunes et al. 2013; Cunnion et al. 2010; Lanlan 2017) Children undergoing comprehensive dental treatment under general anesthesia exhibited improvement in several areas such as sleeping, eating, and pain.(White et al. 2008; Jankauskiene 2014; Gaynor & Thomson 2012; Yawary et al. 2016; Baghdadi 2015). Parents reported their children to have a better perceived QOL one to four weeks following dental rehabilitation under general anesthesia.(Malden et al. 2008) ~~Dental treatment under general anesthesia is associated with significant improvements in the patient's QOL and~~ Such treatment also has been reported to have a positive impact on the family's quality of life.(Jankauskiene et al. 2010)

ADA Resolution 1989-546 states that insurance companies should not deny benefits that otherwise would be payable "solely on the basis of the professional degree and licensure of the dentist or physician providing treatment, if that treatment is provided by a legally qualified dentist or physician operating within the scope of his or her training and licensure".(ADA 2014) Recently, the ADA adopted Resolution 3-H (2021) which addressed anesthesia coverage under health plans. It "supports the position that all health plans, including those governed by the Employee Retirement Income Security Act, should be required to cover general anesthesia and/or hospital or outpatient surgical facility charges incurred by covered persons who receive dental treatment under anesthesia, due to a documented complexity,

behavioral, physical, mental or medical reason as determined by the treating dentist(s) and/or physician." (ADA Unofficial 2021)

A majority of states have enacted legislation requiring medical insurers to reimburse for hospital charges associated with provision of dental care for children in the operating room.(AAPD 2012) Such legislation has resulted in increased access to care, with more children receiving services in an operating room setting after enactment of legislation.(White et al. 2008) However, this increased access has recently come in jeopardy due to multiple factors including the implementation of the Essential Health Benefits package under the Affordable Care Act (**ACA**) (AAPD 2012; Grace 2014). While most ACA plans included "oral health" as a benefit, oral health was not defined. States play a major role in determining the content of their ACA plans, and fewer states included dental anesthesia (15) than orthodontic care (32) as a benefit for children.(Grace AM 2014) Lower reimbursement of hospital facility and anesthesia fees also has reduced access to dental care under general anesthesia (Vo 2021).

Per an analysis commissioned by the AAPD, no suitable mechanism for billing rehabilitation services for Medicare or Medicaid beneficiaries having complex dental needs requiring operating room access exists. (AAPD OHPRC 2021) Coding for dental procedures is limited to a miscellaneous code (CPT 41899) which falls in the Ambulatory Payment Class 5161. The mean reimbursement nationally for this class was less than $250, which is grossly insufficient as this rate does not cover the facility's overhead, equipment costs, or anesthesia services. (AAPD OHPRC 2021) Therefore, hospitals may have financial incentive to provide operating room time to surgeons whose cases are associated with higher reimbursement levels. Hospital financial and staffing challenges including those caused by the severe acute respiratory syndrome coronavirus 2 (SARS-Cov-2)/coronavirus disease 2019 (COVID-19) pandemic have limited patient care and severely decreased hospital revenue. (AAPD POHRPC 2021; Berlin 2020; Best 2020.). Due to these obstacles, dental cases reportedly have been delayed as long as six months to a year. (AAPD POHC 2021; Vo, 2021)

Regardless of the insurer and hospital challenges, with dental caries as the most common chronic disease of childhood, access to dental care remains one of the most frequently cited unmet needs.(Benjamin 2010) Less availability of the operating room for pediatric dental patients has far reaching implications. Until this situation is rectified, third party payors may be faced with patients seeking medically-necessary oral health care in more expensive locations such as emergency departments. (Moron 2019; Owens 2018 Cohen 2003)

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Policy statement

The AAPD encourages all policy makers and third party payors to consult the AAPD in the development of benefit plans that best serve the oral health interests of infants, children, adolescents, and individuals with special health care needs.

The AAPD strongly believes that the treating dentist determines the medical necessity for sedation/general anesthesia consistent with accepted guidelines on sedation and general anesthesia.(AAPD D_Medically Necessary Care; AAPD Sedation Guideline)

The AAPD strongly encourages third-party payors to:

1. recognize that sedation or general anesthesia is necessary to deliver compassionate, quality oral health care to some infants, children, adolescents, and persons with special health care needs.
2. include sedation, general anesthesia, and related facility services as benefits of health insurance without discrimination between the medical or dental nature of the procedure.
3. end denial of reimbursement for sedation, general anesthesia, and facility costs related to the delivery of oral health care.
4. regularly consult the AAPD and the ADA with respect to the development of benefit plans that best serve the oral health interests of infants, children, adolescents, and patients with special care needs.(AAPD P_Model Dental Benefits)

The AAPD encourages all states to enact ~~general anesthesia~~ legislation that requires third party payors to reimburse for facility and/~~or~~ sedation/ general anesthesia costs associated with providing oral health care for children.

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Policy on Third-Party Fees Capping of Non-Covered Services

Latest Revision

~~2017~~ 2022

ABBREVIATIONS

ADA: American Dental Association. **AAPD**: American Academy Pediatric Dentistry.

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) supports dental benefit plan provisions designed to meet the oral health needs of patients by facilitating, beginning at birth, the delivery of diagnostic, preventive, and therapeutic services in a comprehensive, continuously accessible, coordinated and family-centered manner.(AAPD P_DentalHome) A well-constructed dental benefit plan respects and meets the needs of the plan purchaser, subscriber/patient, and provider.

Methods

This policy was developed by the Council on Dental Benefits Programs, ~~and~~ adopted in 2012 (AAPD 2012), and last revised by the Council on Clinical Affairs in 2017 (AAPD 2017). This revision ~~by the Council of Clinical Affairs~~ included a review and analysis of state laws and pending legislation prohibiting the capping of non-covered services by third-party providers, related federal legislation, and the American Dental Association's Policy on Maximum Fees for Non-Covered Services.(ADA 2015)

Background

The American Dental Association (**ADA**) defines covered service as "any service for which reimbursement is actually provided on a given claim" and noncovered service as "any service for which the third-party provides no reimbursement". Capping of non-covered services occurs when an insurance carrier sets a maximum allowable fee for a service ineligible for third-party reimbursement. While most contractual matters between insurers and providers are those of a private business relationship, this particular business practice is contrary to the public interest for the following reasons.:

- lLarger dental benefit carriers with greater market share and more negotiating power are favored in this arrangement. While dentists may refuse to contract with smaller plans making this requirement, they are unable to make the same decision with larger plans controlling greater

numbers of enrollees. Eliminating this practice levels the playing field for all insurers and encourages greater competition among dental plans. If smaller plans and insurers are unable to survive, the group purchaser and subscriber are ultimately left with less market choice and potentially higher insurance cost.

- ~~i~~It is unreasonable to allow plans to set fees for services in which they have no financial liability, and that may not cover the overhead expense of the services being provided. When this provision precludes dentist participation in a reimbursement plan, subscribers realize less choice in their selection of available providers. In many cases, especially in rural or other areas with limited general or specialty practitioners, this adversely affects the care. This is particularly true for vulnerable populations, including individuals with special health care needs.
- ~~f~~For dentists forced to accept this provision, the artificial pricing of uncovered services results in cost-shifting from those covered under a particular plan to uncovered patients. Thus, the uninsured and those covered under traditional indemnity or other plans will shoulder the costs of these provisions. Capping of non-covered services is not cost saving; it is cost-shifting – often to the most vulnerable populations and to those least able to afford healthcare.
- ~~t~~The ability to cap non-covered services allows insurance plans to interfere with the patient-doctor relationship.

The House of Delegates of the ADA in 2020~~2009~~ adopted Resolution ~~59H~~ 19H-2020 Maximum Fees for Non-Covered Services which opposed third party contract provisions that establish fee limits for non-covered services and called for state and federal legislation to prohibit such practices.(ADA ~~2010~~2020,) Legislation to prohibit a dental insurer or dental service plan from limiting fees for services not covered under the plan, is the law in 41~~35~~ states(~~AAPD 2016,~~ ADA 2020) and has been introduced in most other states. Such legislation allows the dentist to utilize the usual and customary fee for services not covered by the plan.

Policy statement

The AAPD believes that dental benefit plan provisions which establish fee limitations for non-covered services are not in the public's interest and should not be imposed through provider contracts.

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Policy on Using Harvested Dental Stem Cells

Latest Revision

~~2017~~ 2022

Abbreviations: **DPSC**: dental pulp stem cells. **MSCs**: Mesenchymal stem cells.

Purpose

The American Academy of Pediatric Dentistry recognizes the emerging field of regenerative medicine and encourages dentists to follow evidence-based literature in order to educate parents about the collection, storage, viability, and use of dental stem cells with respect to autologous regenerative therapies. The American Academy of Pediatric Dentistry also recognizes that harvested dental stem cells is an emerging science which may have application for oral health care but at present there are no treatments available using harvested dental stem cells in humans. This policy is related to the use of harvested dental stem cells from a tooth or follicle.

Methods

This policy was developed by the Council on Clinical Affairs~~, and~~ adopted in 2010 (AAPD 2010), and last~~. This document is an update of the previous version,~~ revised in ~~2013~~2017(AAPD 2017). This revision included a review of current dental and medical literature and sources of recognized professional expertise related to dental stem cells. A literature search of the PubMed®/MEDLINE data-base was conducted using the terms: dental stem cell, harvested tooth cell; fields: all; limits: within the last 10 years, humans, English, birth through age 99~~.~~, resulting in 151 papers that were reviewed by title and abstract. ~~Twenty articles matched these criteria.~~ Papers for review were chosen from this list and from the references within selected articles. Expert and/or consensus opinion by experienced researchers and clinicians was also considered.

Background

Stem cells are pluripotential cells that can divide and multiply for an extended period of time, differentiating into a diverse range of specialized cell types and tissues. ~~Adult mesenchymal stem cells, of which dental stem cells are a subset, are highly proliferative and have the ability to differentiate into many cell lines.(Govindasamy et al. 2011)~~ Dental stem cells are a minor population of mesenchymal stem

cells existing in specialized dental tissues, such as dental pulp, periodontium, apical papilla, and dental follicle. (Govindasamy et al. 2011; Shuai et al. 2018) Numerous types of stem cells have been isolated from dental tissue, such as dental pulp stem cells (DPSC), stem cells isolated from human pulp of exfoliated deciduous teeth (SHED cells), periodontal ligament stem cells (PDLSC), stem cells from apical papilla (SCAP), and dental follicle cell. All these cells can regenerate the tissue of tooth to provide theoretical basis for clinical treatments. (Zhai et al 2018),(Bansal and Jain 2015) ~~The most familiar application of adult stem cell therapy is bone marrow transplantation to treat hematopoietic cancers, metabolic disorders, and congenital immunodeficiency syndromes. Stem cell therapy is undergoing clinical testing for other conditions such as Parkinson's disease, diabetes, and brain trauma/spinal cord injuries.(Kadar et al. 2009; Nourbakhsh et al. 2011) Suggested applications related to oral health care have included wound healing and regeneration of dental and periodontal tissues as well as craniofacial structures (e.g., repair of cleft lip/palate).(Nishino et al. 2011)~~ DPSC have received special attention because they represent a readily accessible source of stem cells. Their high plasticity and multipotential capacity to differentiate and produce a variety of dental tissues can be explained by its neural crest origin, which supports applications beyond the scope of oral tissues. (Anitua,Troya Zalduendo 2018). Stem cells used for regenerative endodontics and scaffolding have shown successful regeneration in laboratory and animal studies.(Conde et al. 2016; Hynes et al. 2015; Yang et al. 2016) Dental stem cells-based regenerative medicine provides the possibility to repair damaged dental tissues or generate new teeth. (Shuai et al 2018; Morsczek and Reichert 2018) Clinical studies for pulpal regeneration and periodontal tissue generation using dental tissue-derived stem cells have been published, and evidence that these cells could be beneficial in therapies beyond oral tissues is growing. (Campanela 2018).

Due to their differentiation potential, oral-derived mesenchymal stem cells are promising for tissue engineering and regenerative medicine. (Tatullo, Codispoti, Paduano et al.2019), (Morsczek and Reichert 2018). The most familiar application of adult stem cell therapy is bone marrow transplantation to treat hematopoietic cancers, metabolic disorders, and congenital immunodeficiency syndromes. Dental stem cells with high potentials such as ability of self-renewal, mesenchymal stem cell characteristics, multilineage differentiation, and immunomodulation are promising tools for *in vitro* and *in vivo* differentiation studies as well as the therapy of immune-related diseases. (Ayadin, Sahin 2019). Dental mesenchymal stem cells (**MSCs**) are not only easily accessible but are also expandable *in vitro* with relative genomic stability for a long period of time.(Gan et al 2020)Several preclinical studies and clinical trials have been performed using dental MSCs in the treatment of multiple ailments, ranging from dental diseases to nondental diseases, (Gan et al 2020); these are a promising treatment alternative for

neurological disease including stroke. (Gancheva et al 2019) Some clinical trials with dental MSCs have demonstrated the efficacy and safety of dental MSC-based therapy for oral diseases. (Gan et al 2020). Human exfoliated deciduous teeth stem cells have shown promise in an initial small safety-phase clinical trial for treating a non-dental disease. (Li et al 2021)

Parents may elect to preserve umbilical cord blood of their child for future harvesting of stem cells if autologous regenerative therapies are indicated. Pulpal tissue of exfoliating primary teeth, oral mucosa fibroblasts,(Miyoshi et al. 2010) surgically removed third molars, periodontal ligament,(Wada et al. 2011) and gingival fibroblasts(Wada et al. 2011) may serve as a source of mesenchymal stem cells.(Hynes et al. 2015; Eslaminejad 2010)

The public is increasingly aware of this emerging science, and more parents are expressing interest in harvesting/banking dental stem cells. While sources of dental stem cells are readily accessible, those cells must be secured and stored properly to maintain the potential to proliferate and differentiate.(Perry et al. 2008; Yildirim et al. 2016) Ongoing clinical trials using human dental pulp stem cells may be searched using the web-based resources of the National Library of Medicine at the National Institutes of Health (NIH).

Policy statement

While no treatment using harvested dental stem cells in humans is currently available, the American Academy of Pediatric Dentistry recognizes that this is an emerging science which may have application for oral healthcare. As the technology continues to evolve, the process of procurement of dental stems cells should be accomplished only with deliberate integrity and appropriate informed consent to assure the highest ethical standards and quality of outcomes.

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Policy on Pacifiers

Adopted

2022

Abbreviations

AAP: American Academy of Pediatrics; AAPD: American Academy of Pediatric Dentistry; SIDS: Sudden infant death syndrome

Purpose:

The American Academy of Pediatric Dentistry (**AAPD**) encourages health care providers to follow evidence-based literature to educate parents about the safe practices, benefits, and risks of pacifier use by infants and children in order to promote healthy growth and development.

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Methods:

This policy, developed by the Council on Clinical Affairs, is based on review of current dental and medical literature, including a search of the PubMed®/MEDLINE database using the terms: pacifier AND emotional development, safety, benefits, malocclusion, crossbite, open bite, fields: all; limits: within the last 10 years, English. Five hundred forty-nine articles met these criteria. Papers for review were chosen from this list and from references within selected articles.

Background:

Sucking behaviors in infants can be a natural reflex to satisfy a physiological (i.e., nutritive) or psychological (i.e., non-nutritive) need. The non-nutritive drive may be satisfied by sucking a finger or thumb or an available object such as a pacifier. Pacifier use is common among infants in the United States (Sexton 2009). Cultural background may play a role in pacifier introduction. (Feştilă 2014) Considerations when counseling parents on introducing pacifiers include-safety and potential risks and benefits of pacifier use. Although the American Academy of Pediatrics (**AAP**) has recommended delaying pacifier use in breastfed infants until breastfeeding is established to prevent breastfeeding disruption (AAP 2012), a recent Cochrane systematic review found pacifier use, whether started from birth or after lactation, did not affect the prevalence or duration of breastfeeding in healthy, term infants up to four months of age (Jaafar 2016).

The controlled action of sucking promotes feelings of security (Staufert Gutierrez) and allows infants to self-soothe (Staufert Gutierrez; Augustyn 2009) and to initiate the process of self-regulation.(Augustyn 2009) Pacifiers continue to provide comfort in the toddler years. Cessation may be carried out either through self-implementation or caregiver mediation.(Borrie 2015) A recent review found evidence that psychological interventions such as positive and negative reinforcement effectively improve non-nutritive sucking habits in children.(Borrie) Positive reward for pacifier cessation (e.g., recognition or incentive for each day of non-use) is preferable to negative reinforcement (e.g., criticism, restraint) which can inadvertently cause power struggles and extend the duration of non-nutritive sucking habits.(Augustyn 2009)

Pacifier risks

Practitioners can provide counseling and anticipatory guidance regarding pacifier selection and safe usage to parents of infants and children who utilize a pacifier. Pacifiers of single piece construction are less likely to break apart and become a choking hazard.(AAP 2018) For safety, AAP recommends a pacifier shield be firm, have ventholes, and measure at least 1.5 inches across (i.e., large enough not to pass completely into the mouth).(AAP 2018) Additionally, the U.S. Consumer Product Safety Commission prohibits straps, cords, or attachments that could pose a danger to infants or children.(US CPSC) Regular inspection of the pacifier by caregivers is recommended to evaluate for any structural wear that poses a safety risk.(AAP 2018)

Pacifier use is a risk factor for otitis media in infants and children.(Stone 2000, Warren et al 2001, Gederi 2013, Salah 2013, Nowak 2021) The AAP suggests the incidence of acute otitis media may be reduced by decreasing or eliminating use of a pacifier in the second six months of life.(Lieberthal 2013) Evidence linking pacifier use to issues with speech development or speech delay is limited.(Nelson 2012, Burr 2021) Recent research suggested that while prolonged day-to-day pacifier use lasting several hours may have significance with atypical speech errors, a strong speech-related justification against pacifier use is not evident.(Strutt 2020) The U.S. Food and Drug Administration recommends that infants and young children not be given pacifiers containing or dipped in honey.(FDA) Honey contains spores of a particular bacterium, *Clostridium botulinum*, that produces a neurotoxin capable of causing respiratory difficulty, paralysis, and even death.(FDA) Recent cases of infant botulism in Texas were attributed to commercially-available honey-filled pacifiers.(FDA)

Pacifiers can serve as a reservoir for microbes, and their use is linked to oral yeast infections.(Comina 2006, Nowak 2021) Sterilization/disinfection, either by boiling in water for 15 minutes or preferably spraying an antimicrobial agent (e.g., 0.12 percent chlorhexidine), can minimize and eliminate microbes such as Staphylococcus, *Candida albicans*, and *Streptococcus mutans*.(Nelson 2012, Lopes et al 2019, Nelson-Fihlo 2015)

Children using a pacifier 36 months or longer had a significantly higher incidence of anterior open bite compared to those not using a pacifier. (Warren 2002, Gederi 2013, Duncan 2008, Larsson 1994, Adair 1995, Zardetto 2002, Germa 2016,Bueno 2013,Schmid 2018,Lima 2017, Ling 2018) Pacifier usage beyond one year (Adair 1995) lead to a significantly higher incidence of anterior open bite. An anterior open bite will improve after elimination of the pacifier before age three. (Warren 2002, Duncan 2008, Bishara 2006).

Increased pacifier use also leads to posterior crossbite (Warren 2002, Gederi 2013, Duncan 2008, Adair 1995, Schmid 2018, Zardetto 2002, Montaldo 2011, Lima 2017, Lima Vasquez 2013), including crossbite with midline deviation.(Melink 2010, Lopes Freire 2016, Larsson 2001, Cenci 2015) Increased overjet and a class II malocclusion are more strongly associated with a finger habit versus a pacifier habit.(Bishara 2006, Cenci 2015) A prospective study examining pacifier use beyond age four concluded the transverse occlusal relationship should be evaluated before three years of age (Bishara 2006). To limit the development of a posterior crossbite, discontinuing or limiting pacifier use when canines emerge (approximately 18 months of age) (Melink 2010) has been recommended (Larsson 2001, Bishara 2006) The malocclusion was affected by duration more than frequency, (Cenci 2015, Lima 2017) and the percentage of open bite was significantly greater as the duration of non-nutritive sucking continued beyond three years of age. (Montaldo 2011)

A systematic review noted orthodontic pacifiers induce less open bite compared to conventional pacifiers (Schmid 2018). While one study showed conventional pacifiers use exhibited higher odds of posterior crossbite and anterior open bite compared to orthodontic pacifiers(Lima 2017), another found pacifier usage had a significantly higher incidence of posterior crossbite versus non-habit children although the difference between pacifier types with regards to posterior crossbite was not significant.(Zardetto 2002) A prospective study introduced a pacifier with a thin neck to children (average age 20 months) who had a diagnosed anterior open bite and already used a conventional pacifier; the study group was compared to not only the original pacifier group but also to children not using any pacifier for at least three

months.(Wagner 2016) A significant difference regarding overbite and overjet changes between pacifier groups was reported, p less than 0.001 (i.e. the thin neck pacifier resulted in less increase in the overbite and open bite compared to the conventional pacifier); however, no improvement in either pacifier group compared to cessation of pacifier use was found.(Wagner 2016) Two reviews comparing orthodontic versus conventional pacifiers stated evidence was insufficient to support a preference for orthodontic pacifiers preventing malocclusions.(Correa 2016, Medeiros 2018)

The pacifier design (orthodontic, conventional, or physiologic) and shield design (conventional or flare) have implications for the use and function of different brand pacifiers. Pacifiers interact with the palate differently based on their fit (i.e., design and size) regardless whether they are labeled conventional or orthodontic.(Tesini et al 2022) Pacifier sizing has been brought into focus for the role it plays in providing palatal support to prevent loss of transverse palatal dimensions and causing palatal collapse. (Lindner 1991, Warren 2002, Levrini 2006, Lima 2016, Tesini 2022) Palatal collapse contributes to the early development of posterior crossbites.(Levrini 2007,Dogrammaci 2016, Schmid 2018) The use of biometrics to aid pacifier selection has shown promise in recent research. (Lee 2022, Tesini et al 2022)

Benefits of pacifiers use:

Based on "good-quality patient-oriented evidence", the AAP recommends offering a pacifier when an infant is placed to sleep due to its protective effect on the incidence of sudden infant death syndrome (SIDS), but a pacifier should not be forced on resistant infants.(AAP SIDS 2016). This recommendation is supported by other organizations such as the International Society for the Study and Prevention of Perinatal and Infant Death (ISPID) and the Safe to Sleep® campaign of the U.S. Department of Health and Human Services (USDHHS 2017).

Pacifier use may be beneficial when mothers cannot breastfeed due to medication or severe illness, if infants need early oral stimulation to develop or maintain the sucking reflex, or in neonatal intensive care environments when infants need calming, pain relief, or decreased stress. (Lubbe 2017) The benefits of pacifier use also include adjunctive pain relief in newborns and infants undergoing common, minor procedures in the emergency department and reducing the likelihood of a digit-sucking habit.(Gederi 2013, Campos 1994, Marter 2007, Nelson 2009, Sexton 2009, Vu-Ngoc et al 2020). Children who started using an orthodontic pacifier before four months old had a lower risk of developing a finger/thumb sucking habit compared to children who began after four months. (Caruso 2019) Because early forced

cessation of pacifier usage has been associated with prolonged finger sucking, allowing the habit to continue beyond 14 months of age may help prevent a persistent finger habit. (Fukumoto 2013)

Policy Statement.

The AAPD supports parents in the decision to introduce a pacifier based on their infant's needs and parental preference. During the first few months of life, pacifiers may be beneficial in helping premature infants develop the sucking reflex, offering comfort and soothing, providing an analgesic effect during minor invasive procedures, decreasing the incidence of SIDS, and preventing a persistent finger-sucking habit. However, a prolonged pacifier habit after 12 months of age can increase the risk of acute otitis media. Pacifier use beyond 18 months can influence the developing orofacial complex, leading to anterior open bite, posterior crossbite, and class II malocclusion. Understanding the safety, benefits, and risks is critical to counseling parents on the use of pacifiers.

The AAPD encourages additional research regarding the biometrics for pacifier selection to minimize disturbances of the developing orofacial complex.

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This draft does not constitute an official AAPD health oral policy or clinical recommendation until approval by the General Assembly. Circulation is limited to AAPD members.

Policy on Diversity, Equity, and Inclusion

Adopted

2022

Abbreviations: **AAPD**: American Academy of Pediatric Dentistry. **DEI**: Diversity, equity, and inclusion.

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) advocates for the health and well-being of all infants, children, and adolescents, regardless of their race, ethnicity, religion, sexual or gender identity, medical status, family structure, or financial circumstances (AAPD P. Vul Pop 2021) and supports efforts to increase health equity among youth. Diversity, equity, and inclusion (**DEI**) are critical to achieve the AAPD'S vision of optimal oral health for all children (AAPD Def & Scope of Ped Dent 2021). The intent of this policy is to review the published literature on how race, ethnicity, and other identifiers are related to children's oral health and health inequities, to identify barriers to DEI within the dental profession, and to encourage clinicians, educators, researchers, and policy makers to advance DEI within the specialty of pediatric dentistry.

Methods

This policy was developed by the Council on Clinical Affairs. A review of current dental and medical literature and sources of recognized professional expertise related to diversity, equity, and inclusion was completed. The literature search of the PubMed®/MEDLINE database was conducted using the terms: diversity, equity, inclusion; fields: all; limits: within the last 10 years, English. Papers for review were chosen from this list and from the references within selected articles. Expert and/or consensus opinion by experienced researchers and clinicians was also considered.

Definitions

Diversity constitutes "a broad range of individual, population, and social characteristics, including but not limited to age; sex; race; ethnicity; sexual orientation; gender identity; family structures; geographic locations; national origin; immigrants and refugees; language; physical, functional, and learning abilities;

religious beliefs; and socioeconomic status" (AACN Position Statement 2017). In addition, other characteristics of diversity include body/size image, veteran status, housing status, and mental health status (Buchanan & O'Connor 2020).

Equity is defined as "the state, quality or ideal of being just, impartial and fair." The concept of equity is synonymous with fairness and justice. To be achieved and sustained, equity needs to be thought of as a structural and systemic concept (Race Equity and Inclusion Action Guide 2015). Moreover, health equity is described as the "attainment of the highest level of health for all people. Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities" (Healthy People 2020).

Inclusion is "a dynamic state of operating in which diversity is leveraged to create a fair, healthy, and high-performing organization, or community. An inclusive environment ensures equitable access to resources and opportunities for all. It also enables individuals and groups to feel safe, respected, engaged, motivated, and valued, for who they are and for their contributions toward organizational and societal goals" (O'Mara & Richter 2017).

Background

Marked oral health disparities exist by race and ethnicity for children and adolescents in the United States. (Lau 2012; McLaren 2016; Como 2019; CDC 2021). Children of American Indian and/or Alaska Native descent and Native Hawaiian children have the highest documented prevalence of early childhood caries, and a significantly higher percentage of non-Hispanic Black and Mexican American children have dental caries, compared to non-Hispanic white children (Edelstein & Chinn 2009; Deguchi et al. 2013**;** Matsuo et al. 2015; Holve et al. 2021). Reasons such as consumption of more added sugars and less utilization of preventive dental care have been used to explain the higher caries risk assigned to racial and ethnic minorities (Chi et al. 2015; Choi et al. 2022). While behavior modification strategies are important to improve oral health, the overarching role of social determinants of health must be addressed if oral heath disparities are to be reduced in a long-lasting and meaningful way (AAPD SDOH 2021; NIH 2021).

Structural racism (i.e., processes that are embedded in laws, policies, and institutions) (Williams et al. 2019; National Academics of Sciences, Engineering, and Medicine 2021) impacts social determinants of oral health (Jamieson et al 2021; Bastos et al. 2021). Discriminatory policies such as unfair lending

practices, employment standards, and workplace policies heavily influence factors such as income level, insurance coverage, quality of education, food security, housing, chronic stress, and neighborhood resources that lead to poorer oral health outcomes for marginalized populations (Lee 2014; Braveman 2014; Mclaren 2016; Como 2019; AAPD SDOH 2021). Access to dental services, nutritious food, and safe and fluoridated drinking water (Como 2019; Braveman 2014) are significantly hindered by barriers such as housing instability, food deserts, inflexible work schedules, lack of transportation, and high costs of care that disproportionately affect non-Caucasian families (Cao 2017; da Fonseca & Avenetti 2017; Chi 2018; Vujicic & Fosse 2022). Recognition of the influence of discrimination on the social determinants of oral health is necessary to advocate for greater health equity (Braveman 2014; Evans & Smith 2021).

Available literature has discussed more direct effects of bias on oral health. Racial minorities often receive lower quality health care than their white counterparts even when accounting for factors related to access, socioeconomic status, and education. (Smith 2007; Como 2019) Negative effects on self-perceptions of oral health status (Smith 2007; Schwartz et al. 2019), diminished oral health-related self-efficacy (Gibson 2016), and avoidance of dental appointments due to fear of maltreatment (Schwartz 2017; Como 2019) have been reported. Caregivers of minority children have expressed unmet dental needs and inattentiveness from dental providers (Como 2019).

Heightened awareness of oral health inequities and related social injustices have inspired professional efforts to enhance diversity and inclusion in the pediatric dental workforce and to combat discrimination that leads to oral health inequities. Dental schools and professional organizations have created strategies to increase diversity among their students, members, and leadership (ADEA ADI Strategic Framework 2018; ADEA 2019-22 Strategic Framework; ADA 2020-25 D&I Plan). The increased presence of underrepresented populations among healthcare professionals is important for building trust between providers and marginalized families (Como 2019, NIH 2021). AAPD legislative priorities align with aims to increase professional diversity and health equity through the support of provider training programs, recommended Medicaid reform, and expansion of the dental workforce (AAPD Legislative Priorities 2021; AAPD P. on Workforce Issues 2021).

Both intentional and non-intentional provider biases affect the health care that children receive. The Surgeon General's Report *Oral Health in America: Advances and Challenges* calls for a new framework in dental education that emphasizes the social determinants of health, inequities, and population diversity

(NIH 2021). Improved cultural competency training in practices, residency programs, dental schools, universities, and other institutions relevant to the practice of dentistry is necessary to address discriminatory assumptions and behaviors among dental providers (ADEA 2019-22 Strategic Framework; Goodman et al. 2020, Forsyth et al. 2020; Nousi et al. 2020; CODA Standards 2021). Relevant training may encourage providers to be mindful of the ways in which personal and professional biases influence practice settings, treatment decisions, office policies, and patient relationships (Jamieson et al. 2021) and motivate them to create an inclusive and respectful environment for all children in their care. Barriers to implementation of DEI principles, including lack of social supports to help manage children's needs, have been reported (HHS Action Plan; Olzmann 2020).

Policy statement

The AAPD acknowledges and celebrates the increasing diversity of children, including their racial and ethnic backgrounds, national origin and citizenship, languages spoken, religious beliefs, abilities, gender and sexual identities, and cultural norms. Additionally, the AAPD welcomes greater diversity within the profession and appreciates the personal experiences, skills, and knowledge possessed by each of its individual members. The AAPD supports broader inclusivity in leadership, membership, education, and practice and deeper engagement with communities to promote necessary collaboration, respect, and dignity for all children and families. Programs, initiatives, and policies that address and overcome social barriers, including racism and other forms of discrimination, are necessary to achieve greater health equity and the AAPD's vision of optimal oral health for children.

Recognizing the importance of DEI to pediatric dentistry, the AAPD:

- supports social and economic policies, research, and initiatives to address social determinants of oral health that result in racial and ethnic oral inequities.
- encourages providers to implement diversity, equity, and inclusion training within the dental office.
- urges dental educators to implement strategies to mitigate bias in applicant and trainee evaluation processes and to enhance institutional DEI curricula.

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Periodicity of Examination, Preventive Dental Services, Anticipatory Guidance/Counseling, and Oral Treatment for Infants, Children, and Adolescents

Latest Revision

~~2018~~ 2022

Abstract

This best practice presents recommendations about anticipatory guidance and timing of other clinical modalities which promote oral health during infancy, childhood, and adolescence. The guidance, though modifiable to children with special health needs, focuses on healthy, normal-developing children and addresses comprehensive oral examination, assessment of caries risk, professional preventive procedures, fluoride supplementation, radiographic examination , anticipatory guidance, preventive counseling, sealant placement, treatment of dental disease, trauma, treatment of developing malocclusions, evaluation of third molars, and transition to adult care. These preventive recommendations may be applied for the following age groups: six to 12 months, 12 to 24 months, 24 months to six years, six to 12 years, and 12 years and older. The guidance emphasizes the importance of very early professional intervention and continuity of care based upon the individualized needs of the child.

The document was developed through a collaborative effort of the American Academy of Pediatric Dentistry Councils on Clinical Affairs and Scientific Affairs to offer updated information and recommendations regarding preventive oral health services and counseling for pediatric dental patients.

KEYWORDS: ANTICIPATORY GUIDANCE, PERIODICITY OF EXAMINATION, PREVENTIVE DENTISTRY, ADOLESCENT DENTISTRY, CARIES RISK ASSESSMENT, FLUORIDE SUPPLEMENT, ORAL HYGIENE COUNSELING, DENTAL REFERRAL

ABBREVIATIONS

AAP: American Academy of Pediatrics. **BMI**: Body mass index. **CRA**: Caries-risk assessment. **ECC**: Early childhood caries. **HPV**: Human papilloma virus. **PRA**: Periodontal risk assessment. **SHCN**: Special health care needs.

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Purpose

The American Academy of Pediatric Dentistry (**AAPD**) intends these recommendations to help practitioners make clinical decisions concerning preventive oral health interventions, including anticipatory guidance and preventive counseling, for infants, children, and adolescents.

Methods

This document was developed by the Clinical Affairs Committee~~, and~~ adopted in 1991 (AAPD 1991), and~~. This document is a revision of the previous version,~~ last revised by the Council on Clinical Affairs in 2018~~3~~(AAPD 2018). This~~e~~ update used electronic database and hand searches of articles in the medical and dental literature using the terms: periodicity of dental examinations, dental recall intervals, preventive dental services, anticipatory guidance and dentistry, caries risk assessment, early childhood caries, dental caries prediction, dental care cost effectiveness and children, periodontal disease and children and adolescents U.S., pit and fissure sealants, dental sealants, fluoride supplementation and topical fluoride, dental trauma, dental fracture and tooth, non-nutritive oral habits, treatment of developing malocclusion, removal of wisdom teeth, removal of third molars; fields: all; limits: within the last 10 years, humans, English, and clinical trials; birth through age 18. From this search, 2,502~~1,884~~ articles matched these criteria and were evaluated by title and/or abstract~~. Information from 49 articles was chosen for review to update this document.~~ When data did not appear sufficient or were inconclusive, recommendations were based upon expert and/ or consensus opinion by experienced researchers and clinicians.

Background

Professional dental care is necessary to maintain oral health.(US DHHS 2003) The AAPD emphasizes the importance of initiating professional oral health intervention in infancy and continuing through adolescence and beyond.(AAPD BP_Perinatal/Infant) The periodicity of professional oral health intervention and services is based on a patient's individual needs and risk indicators.(Pienihakkinen 2005; Beil & Rozier 2010; Fontana 2016; Fontana González-Cabezas 2015; Patel et al. 2010; Pahel et al. 2011) Each age group, as well as each individual child, has distinct developmental needs to be addressed at specific intervals as part of a comprehensive evaluation.(AAPD BP_Perinatal/Infant; AAPD BP_Adolescent; AAPD P_Prophylaxis; Ramos-Gomez et al. 2010) Continuity of care is based on the assessed needs of the individual patient and assures appropriate management of all oral conditions, dental disease, and injuries.(AAPD BP_Restorative; AAPD BP_Acquired TMD; AAPD BP_Oral Surgery; AAPD P_Orofacial Injuries; Bourguignon et al 2020; Fouad 2020; Day 2020~~Diangelis et al. 2012;~~

~~Andersson et al. 2012; Malmgren et al. 2012~~) The early dental visit to establish a dental home provides a foundation upon which a lifetime of preventive education and oral health care can be built. The early establishment of a dental home has the potential to provide more effective and less costly dental care when compared to dental care provided in emergency care facilities or hospitals.(AAPD P_Dental Home; AAP 2014; AAP 2005; Berg& Stapleton 2012; Kempe et al. 2000) Anticipatory guidance and counseling are essential components of the dental visit.(AAPD BP_Perinatal/Infant; AAPD BP_Adolescent; AAPD P_Prophylaxis; AAPD P_Dental Home; AAP 2014; Berg & Stapleton 2012; AAPD P_ECC-Classifications; AAPD BP_Caries Risk Assessment; AAPD P_Dietary Recommendations; AAPD BP_Developing Dentition) The dental home also can influence general health by instituting additional practices related to general health promotion, disease prevention, and screening for non-oral health related concerns. For example, oral health professionals can calculate and monitor body mass index (**BMI**) to help identify children at risk for obesity and provide appropriate referral to pediatric or nutritional specialists.(AAPD P_Dietary 2022)

Collaborative efforts and effective communication between medical and dental homes are essential to prevent oral disease and promote oral and overall health among children. Medical professionals can play an important role in children's oral health by providing primary prevention and coordinated care. Equally, dentists can improve the overall health of children not only by treating dental disease, but also by proactively recognizing child abuse, preventing traumatic injuries through anticipatory guidance, preventing obesity by longitudinal dietary counseling, and monitoring of weight status.(Tseng et al. 2010) In addition, dentists can have a~~n important~~ significant role in assessing immunization status and developmental milestones for potential delays, as well as making appropriate referral for further neurodevelopmental evaluations and therapeutic services.(Scharf et al. 2016) The unique opportunity that dentists have to help address overall health issues strengthens as children get older since frequency of well child medical visits decreases at the same time the frequency of dental recall visits increases. Research shows that children aged six- to 12-years are, on average, four times more likely to visit a dentist than a pediatrician.(Brown 2006; Selden 2016)

Recommendations

This document addresses periodicity and general principles of examination, preventive dental services, anticipatory guidance/ counseling, and oral treatment for children who have no contributory medical conditions and are developing normally. Accurate, comprehensive, and up-to-date medical, dental, and social histories are necessary for correct diagnosis and effective treatment planning. Recommendations

may be modified to meet the unique requirements of patients with special health care needs (**SHCN**).(AAPD BP_SHCN)

Clinical oral examination

The first examination is recommended at the time of the eruption of the first tooth and no later than 12 months of age.(AAPD BP_Perinatal/Infant; AAPD P_Dental Home; AAP 2014; Berg & Stapleton 2012) The developing dentition and occlusion should be monitored throughout eruption at regular clinical examinations.(AAPD BP_Developing Dentition) Evidence-based prevention and early detection and management of caries/oral conditions can improve a child's oral and general health, well-being, and school readiness.(Fontana 2016; AAPD P_ECC-Classification; AAPD P_ECC-Challenges; Clarke et al. 2006; Dye et al. 20072004; Jackson et al. 2011) ~~It has been reported that t~~The number and cost of dental procedures among high-risk children is less for those seen at an earlier age versus later, confirming the fact that the sooner a child is seen by a dentist, the less treatment needs they are likely to have in the future.(Nowak et al. 2014) On the other hand, delayed diagnosis of dental disease can result in exacerbated problems which lead to more extensive and costly care.(Pahel et al. 2011; AAPD P_ECC-Challenges; Davis et al. 2010; Kobayashi et al. 2005; Lee et al. 2006; AAP 2011) Guidance of eruption and development of the primary, mixed, and permanent dentitions contributes to a stable, esthetic, and functional occlusion. ~~Early diagnosis of developing malocclusions may allow for timely therapeutic intervention.~~(AAPD BP_Adolescent; AAPD BP_Developing Dentition)

Components of a comprehensive clinical~~oral~~ examination include ~~assessment of~~:

- general health/growth assessment (e.g., height, weight, BMI calculation, vital signs);~~.~~
- Pain assessment;~~.~~
- extraoral soft tissue examination;~~s.~~
- temporomandibular joint assessment;~~s.~~
- intraoral soft tissue examination;~~s.~~
- oral hygiene and periodontal risk~~health~~ assessment;~~.~~
- intraoral hard tissue examination;~~s.~~
- assessment of the developing occlusion;~~.~~
- radiographic assessment, if indicated;
- caries risk assessment; and~~.~~
- assessment of cooperative potential/behavior of child~~.~~. (AAPD BP_Recordkeeping)

Based upon the visual examination, the dentist may employ additional diagnostic aids (e.g., ~~radiographs,~~ photographs, pulp vitality testing, laboratory tests, study casts).(Pahel et al. 2011; AAPD BP_Acquired TMD; AAPD BP_Recordkeeping; Dean 2016; Fontana 2018)

The interval of examination should be based on the child's individual needs or risk status/susceptibility to disease; some patients may require examination and preventive services at more or less frequent intervals, based upon historical, clinical, and radiographic findings.(Beil & Rozier 2010; Patel et al. 2010; Pahel et al. 2011;Bourguignon et al 2020, Day et al.2020 ~~Diangelis et al. 2012; Malmgren et al. 2012~~; AAPD P_ECC-Classifications; AAPD BP_Radiographs; ADA 2012;~~ Califano 2003; Clerehugh 2008~~; AAPD BP Perio Diseases) While the prevalence of caries has decreased in primary teeth, the prevalence of having no caries in the permanent dentition remains unchanged; caries remains a ~~Caries and its sequelae are among the most prevalent~~ health problem~~s~~ facing infants, children, and adolescents in America.(Dye et al. 201~~0~~7) Caries lesions are cumulative and progressive and, in the primary dentition, are highly predictive of caries occurring in the permanent dentition.(Fontana & González-Cabezas 2015; Tagliaferro et al. 2006) Reevaluation and reinforcement of preventive activities contribute to improved instruction for the caregiver of the child or adolescent, continuity of evaluation of the patient's health status, and ~~repetitive exposure to dental procedures,~~ potentially allaying anxiety and fear for the apprehensive child or adolescent.(AAPD BP_Behavior Guidance) Individuals with SHCN may require individualized preventive and treatment strategies that take into consideration the unique needs and disabilities of the patient.(AAPD BP_SHCN)

Caries-risk assessment (CRA)

Risk assessment is a key element of contemporary preventive care ~~for infants, children, adolescents, and persons with SHCN~~. CRA~~It~~ should be performed~~carried out~~ as soon as the first primary tooth~~teeth~~ erupts and be reassessed periodically by dental and medical providers.(Fontana & González-Cabezas 2015; AAPD BP_Caries Risk Assessment) The~~Its~~ goal is to prevent disease by ~~(1)~~ identifying patients~~children~~ at high risk for caries and~~, (2)~~ developing individualized preventive measures and caries management, as well as ~~(3) aiding the practitioner in~~ determining appropriate periodicity of services.(AAPD BP_Caries Risk Assessment; Crall et al. 2016; Fontana & Zero 2006) Given that the etiology of dental caries is multifactorial and complex, current caries-risk assessment models entail a combination of factors including diet, fluoride exposure, host susceptibility, and microflora analysis and consideration of how

these factors interact with social, cultural, and behavioral factors. More comprehensive models that include social, political, psychological, and environmental determinants of health also are available.(AAPD P_Social Determinants; Fisher-Owens et al. 2007; Lee & Divaris 2014; Seow 2012) Caries risk assessment forms and caries management protocols ~~are available and~~ aim to simplify and clarify the process.(AAPD BP_Caries Risk Assessment; Domejean et al. 2011; Ramos-Gomez & Ng 2011; Fontana &Gonzalez-Cabezas)

Sufficient evidence demonstrates certain groups of children at greater risk for development of early childhood caries (**ECC**) would benefit from infant oral health care.(~~AAPD P_ECC-Classifications; AAPD P_ECC-Challenges;~~ Harris et al. 2004; Ramos-Gomez 2014; Southward et al. 2008; Nunn et al. 2009; Weber-Gasparoni et al. 2010) Infants and young children have unique caries-risk factors such as ongoing establishment of oral flora and host defense systems, susceptibility of newly erupted teeth, and development of dietary habits. Because the etiology of ECC is multi-factorial and significantly influenced by health behaviors,(Jiang et al 2020~~Albino & Tiwari 2016~~) preventive messages for expectant parents and parents of very young children should target factors known to place children at a higher risk for developing caries (e.g., early Mutans streptococci transmission, poor oral hygiene habits, nighttime feeding, high sugar consumption frequency).(AAPD P_ECC-Classifications; AAPD P_ECC-Challenges; Seow 2012; Plutzer & Keirse 2011) Motivational problems may develop when parents/patients are not interested in changing behaviors or feel that the changes require excessive effort. Parental attitude, self-efficacy, and intention have a strong correlation to oral hygiene practices in preschoolers. (Jiang et al) Therefore, ~~it is important that~~ health care professionals should utilize preventive approaches based on psychological and behavioral strategies. Moreover, they should ~~be sensitive to how they can~~ effectively communicate their recommendations so ~~that~~ parents/patients ~~can~~ perceive them~~their recommendations~~ as behaviors worth pursuing. ~~Two e~~Examples of effective motivational approaches used for caries prevention that share similar psychological philosophies are motivational interviewing and self-determination theory.(Halvari et al. 2012; Harrison et al. 2012; Ismail et al. 2011; Miller & Rollnick 2012; Riedy et al. 2015; Weber-Gasparoni, Reeve et al. 2013; Weber-Gasparoni, Warren et al. 2013)

Studies ~~consistently~~ have reported caries experience in the primary dentition as a predictor of future caries.(Mejàre et al. 2014, Lin, Chou, Lin 2021) Early school-aged children are at a transitional phase from primary to mixed dentition. These children face challenges such as unsupervised toothbrushing and increased consumption of cariogenic foods and beverages while at school, placing them at a higher risk for developing caries.(AAPD P_Snacks; Marshall et al. 2003; Chankanka et al. 2011) Therefore, special

attention should be given to school-aged children regarding their oral hygiene and dietary practices. The use of newer technology including cellular telephones (e.g., text messaging, apps) may provide an additional intervention to improve adherence to oral hygiene protocols in children and adolescents.(Sharif et al 2019)

Adolescence can be a time of heightened caries activity due to an increased number of tooth surfaces in the permanent dentition and intake of cariogenic substances, as well as low priority for oral hygiene procedures.(AAPD BP_Adolescent; Fisher-Owens et al. 2007; Lee & Divaris 2014) Risk assessment can assure preventive care (e.g., water fluoridation, professional and home-use fluoride and antimicrobial agents, frequency of dental visits) is tailored to each individual's needs and direct resources to those for whom preventive interventions provide the greatest benefit.(AAPD BP_Adolescent; Featherstone J, Chaffee 2018) Because a child's risk for developing dental disease can change over time due to changes in habits (e.g., diet, home care), oral microflora, or physical condition, risk assessment must be documented and repeated regularly and frequently to maximize effectiveness.(Ramos-Gomez et al. 2010; AAPD BP_Caries Risk Assessment)

Periodontal risk assessment (PRA)

Periodontal risk assessment is an important component of the routine examination of pediatric patients. The gingival and periodontal tissues are subject to change due to normal growth and development. PRA identifies risk factors that place individuals at increased risk of developing gingival and periodontal diseases and pathologies, as well as factors that influence the progression of the disease. Risk factors for periodontal disease may be biological, environmental (social), and behavioral (Elangovan et al, 2019). Probing assessments should be initiated after the eruption of the first permanent molars and incisors as tolerated by the child.(BP_Risk Perio) Probing of primary teeth may be indicated when clinical and radiographic findings indicate the presence of periodontal pathology. Bleeding on probing primary teeth during early childhood, even at a low number of sites, is indicative of high susceptibility to periodontal diseases due to the age-dependent reactivity of the gingival tissues to plaque.(Bimstein, 2013) PRA can improve clinical decision making and allow the implementation of individualized treatment planning and proactive targeted interventions.(Douglass 2006) Maintenance of gingival and periodontal health during childhood and adolescence can help assure healthy periodontal health as an adult. (AAPD BP_Periodon)

Prophylaxis and professional topical fluoride treatment

The interval for frequency of professional preventive services is based upon assessed risk for caries and periodontal disease.(Pienihakkinen et al. 2005; Beil & Rozier 2010; Patel et al. 2010; Pahel et al. 2011; AAPD P_Prophylaxis; Ramos-Gomez et al. 2010; AAPD BP_Caries Risk Assessment; Domejean et al. 2011; Ramos-Gomez & Ng 2011; Harris et al. 2004; BP_Perio Risks) Prophylaxis aids in plaque, stain, and calculus removal, as well as in educating the patient on oral hygiene techniques and facilitating the clinical examination.(AAPD P_Prophylaxis) Gingivitis is common~~, which is nearly universal~~ in children and adolescents and~~,~~ usually responds to the implementation of therapeutic measures and routine maintenance.(AAPD BP Perio). ~~thorough removal of bacterial deposits and improved oral hygiene.(Califano 2003; AAPerio 2001/2003; AAPerio 2011~~) Hormonal fluctuations, including those occurring during the onset of puberty and pregnancy~~,~~ can modify the gingival inflammatory response to dental plaque.(~~Califano 2003; Clerehugh 2008;~~ AAPD BP_Pregnant Adolescent~~) Children can develop any of the several forms of periodontitis, with aggressive periodontitis occurring more commonly in children and adolescents than adults.(Califano 2003; Clerehugh 2008; AAPerio 2011)~~Therefore it is important to recognize modifying factors that may result in the development of periodontal disease. (AAPD BP Perio)

Children who exhibit higher risk of developing caries ~~and/~~ or periodontal disease would benefit from recall appointments at greater frequency than every six months (e.g., every three months). (Pienihakkinen et al. 2005; Beil & Rozier 2010; Pahel et al. 2011; AAPD P_Prophylaxis; Ramos-Gomez et al. 2010; AAPD BP_Caries Risk Assessment; Ramos-Gomez & Ng 2011; AAPD BP_Perio Risk) This allows increased professional fluoride therapy application, professional assessment of oral hygiene, and opportunity to foster improvement of oral health by demonstrating proper oral hygiene techniques, in addition to microbial monitoring, antimicrobial therapy reapplication, and reevaluating behavioral changes for effectiveness.(Pienihakkinen et al. 2005; AAPD P_Prophylaxis; Clerehugh 2008; Ramos-Gomez & Ng 2011; Anderson & Shi 2006; Featherstone 2006; Clerehugh & Tugnait 2001) An individualized preventive plan increases the probability of good oral health by demonstrating proper oral hygiene methods/ techniques and removing plaque, stain, and calculus.(Beil & Rozier 2010; ~~Clerehugh 2008~~; Clerehugh & Tugnait 2001)

Fluoride contributes to the prevention, inhibition, and reversal of caries.(AAPD BP_Fluoride Therapy; Adair 2006; Tinanoff 2016) Professional topical fluoride treatments should be based on caries risk assessment.(AAPD P_Dental Home; AAPD BP_Caries Risk Assessment; Adair 2006; Weyant et al. 2013) Plaque and the enamel pellicle are not a barrier to topical fluoride uptake~~ in enamel~~.(AAPD P_Prophylaxis) Consequently, ~~there is no evidence of a difference in caries rates or fluoride uptake in~~

patients who receive rubber cup dental prophylaxis or a tooth-brush prophylaxis before fluoride treatment exhibit no differences in caries rates.(Azarpazhooh & Main 2009; Weyant et al. 2013) Precautionary measures should be taken to prevent swallowing of any professionally-applied topical fluoride. Children at high caries risk should receive greater frequency of professional topical fluoride applications (e.g., every three months).(AAPD BP_Fluoride Therapy; Weyant et al. 2013; Featherstone et al. 2003; Axelsson et al. 2004; Källestål 2005) Ideally, this would occur as part of a comprehensive preventive program in a dental home.(AAPD P_Dental Home)

Fluoride supplementation

The AAPD encourages optimal fluoride exposure for every child, recognizing ~~fluoride in the~~ community water fluoridation ~~supplies~~ as the most beneficial and cost-effective preventive intervention.(AAPD BP_Fluoride Therapy) Fluoride supplementation should be considered for children at moderate to high caries risk when fluoride exposure is not optimal.(~~AAPD BP_Fluoride Therapy~~, BP_Caries risk assessment) Determination of dietary fluoride sources (e.g., drinking water, toothpaste, foods, beverages) before prescribing supplements is required and can help reduce intake of excess fluoride.(AAPD BP_Fluoride Therapy) In addition, supplementation should be in accordance with the guidelines recommended by the AAPD(AAPD BP_Fluoride Therapy) and the American Dental Association.(ADA 2006; Rozier et al. 2010)

Radiographic assessment

Radiographs are a valuable adjunct in the oral health care of infants, children, and adolescents to diagnose and monitor oral diseases and evaluate dentoalveolar trauma, as well as monitor dentofacial development and the progress of therapy.(AAPD BP_Radiographs, ADA/FDA) Timing of initial radiographic examination should not be based on the patient's age, but upon each child's individual circumstances.(AAPD BP_Radiographs; ADA 2012) The need for dental radiographs can be determined only after consideration of the patient's medical and dental histories, completion of a thorough clinical examination, and assessment of the patient's vulnerability to environmental factors that affect oral health.(AAPD BP_Radiographs) Every effort must be made to minimize the patient's radiation exposure by applying good radiological practices (e.g., use of protective aprons, ~~and~~ thyroid collars, rectangular collimation ~~when appropriate~~) and by following the as low as reasonably achievable (ALARA principle).(AAPD BP_Radiographs; Campbell et al)

Anticipatory guidance/counseling

Anticipatory guidance is the process of providing practical and developmentally-appropriate information about children's health to prepare parents for significant physical, emotional, and psychological milestones.(AAPD BP_Perinatal/Infant; AAPD BP_Adolescent; AAPD P_Dental Home; AAP 2014; Casamassimo & Nowak 2016; Sigurdsson 2013) Individualized discussion and counseling should be an integral part of each visit. Topics should include oral hygiene practices, ~~to be included are~~ oral/dental development and growth, speech/language development, nonnutritive habits, diet and nutrition, injury prevention, tobacco/nicotine product use, substance misuse~~/abuse~~, and intraoral/perioral piercing and oral jewelry/accessories. (AAPD BP_Perinatal/Infant; AAPD BP_Adolescent; AAPD P_Orofacial Injuries; AAPD P_Dental Home; AAPD BP_Developing Dentition; Casamassimo & Nowak 2016; Sigurdsson 2013; AAPD P_Tobacco; AAPD P_Electronic Cigarettes; AAPD P_Piercing; AAPD P_Substance Misuse; American Speech-Language-Hearing Association (no date); Lewis et al. 2000; AAPD P_Emergency OralCare; American Lung Association (no date))

Anticipatory guidance regarding the characteristics of a normal healthy oral cavity should commence ~~occur~~ during infant oral health visits and continue throughout follow-up dental visits. This allows parents to quantify~~measure against~~ any changes such as, but not limited to, growth delays, traumatic injuries, and poor oral hygiene or presence of caries lesions. Educating parents or guardians regarding ~~T~~tooth development and chronology of eruption can help them~~parents~~ better understand the implications of delayed or accelerated tooth emergence. Parents also need to be informed about the benefits ~~and the role~~ of topical fluorides for~~in~~ newly erupted teeth which~~that~~ may be at greater~~higher~~ risk of developing caries, especially during the post-eruption maturation process.(Casamassimo & Nowak 2016) Assessment of each child's developmental milestones (e.g., fine/gross motor skills, language, social interactions) is crucial for early recognition of potential delays and appropriate referral to therapeutic services.(Scharf et al. 2016) Speech and language are integral components of a child's early development.(American Speech-Language-Hearing Association (no date)) Abnormal delays in speech and language production can be recognized early with referral made to address these concerns. Communication and coordination of appliance therapy with a speech and language professional can assist in the timely treatment of speech disorders.(American Speech-Language-Hearing Association (no date)

Oral habits (e.g., nonnutritive sucking: digital and pacifier habits; bruxism; tongue thrust swallow and abnormal tongue position; self-injurious/self-mutilating behavior) may apply forces to teeth and dentoalveolar structures. Although early use of pacifiers and digit sucking are considered normal, pacifier use beyond 18 months can influence the developing orofacial complex(AAPD P_Pacifier). Increased

overjet and class II malocclusion are more strongly associated with a finger habit versus a pacifier habit.(Bishara 2006, Cenci 2015). Children having a non-nutritive sucking habit beyond age three have a higher incidence of malocclusions. ~~habits of sufficient frequency, intensity, and duration can contribute to deleterious changes in occlusion and facial~~ (AAPD BP_Developing Dentition; AAPD Pacifier) ~~It is important to discuss the need for early pacifier and digit sucking, then the need to wean from the habits before malocclusion or skeletal dysplasias occur.(AAPD BP_Developing Dentition)~~ Early dental visits provide an opportunity to counsel ~~encourage~~ parents to help their children stop sucking habits ~~age three years or younger~~ before malocclusion or skeletal dysplasias occur.(AAPD P_Pacifiers, BP_Devel Dentition) For school-aged ~~children~~ and adolescent patients, counseling regarding any existing habits (e.g., fingernail biting, clenching, bruxism), including the potential immediate and long-term effects on the craniofacial complex and dentition, is appropriate.(AAPD BP_Developing Dentition) ~~Parents should be provided with information regarding the potential immediate and long-term effects on the craniofacial complex and dentition from a habit. If treatment is indicated, it~~ Management of an oral habit can include patient/parent counseling, behavior modification techniques, appliance therapy, or referral to other providers including, but not limited to, orthodontists, psychologists, or otolaryngologists.(AAPD BP_Developing Dentition)

Oral hygiene counseling involves the parent and patient. Initially, oral hygiene is the responsibility of the parent. As the child develops, home care can be~~is~~ performed jointly by parent and child. When a child demonstrates the understanding and ability to perform personal hygiene techniques, the health care professional should counsel the child. The effectiveness of home care should be monitored at every visit and includes a discussion on the consistency of daily oral hygiene preventive activities, including adequate fluoride exposure.(Pienihakkinen 2005; Beil & Rozier 2010; AAPD BP_Adolescent; AAPD BP_Caries Risk Assessment; AAPD BP_Fluoride Therapy; AAPD P_Fluoride)

The development of dietary habits and childhood food preferences appears to be established early and may affect the oral health as well as general health and well-being of a child.(Kranz et al. 2006) The establishment of a dental home no later than 12 months of age allows dietary and nutrition counseling to occur early. This helps parents ~~to~~ develop proper oral health habits early in their child's life, rather than trying to change established unhealthy habits later. During infancy, counseling should focus on breastfeeding, bottle or no-spill cup usage, concerns with nighttime feedings, frequency of in-between meal consumption of sugar-sweetened beverages (e.g., sweetened milk, ~~100 percent juice,~~ soft drinks, fruit-flavored drinks, sports drinks) and snacks, as well as special diets.(AAPD P_Dietary

Recommendations, Lott 2019) Excess consumption of carbohydrates, fats, and sodium contribute to poor systemic health.(Drewnowski 2010; Ervin et al. 2012; Mobley et al. 2009) Dietary analysis and the impact ~~role~~ of dietary choices on oral health, malnutrition, and obesity(Davidson et al, Schroth et al), as well as quality of life, should be addressed through nutritional and preventive oral health ~~counseling at periodic visits~~.(AAPD P_Dietary Recommendations; USDA 2020~~2015~~) The U.S. Departments of Health and Human Services and Agriculture provide dietary guidelines for~~every five years to help~~ Americans two years of age and older every five years to promote a healthy diet and~~make healthy choices to~~ help prevent chronic diseases~~ and guidance for parents and their children and promote a healthy diet~~.(US DHHS 2015~~2016~~)

Traumatic dental injuries in the primary and permanent dentition occur with great frequency with a prevalence of one third of pre-school children and one fourth of school age children.(Glendor 2008, Day 2020)~~Traumatic dental injuries that occur in preschool, school-age children, and young adults comprise five percent of all injuries for which treatment is sought.(Andreasen et al. 2007)~~ Facial trauma that results in fractured, displaced, or lost teeth can have significant negative functional, esthetic, and psychological effects on children.(Lee & Divaris 2009) Practitioners should provide age-appropriate injury prevention counseling for orofacial trauma.(AAPD P_Orofacial Injuries; Sigurdsson 2013) Initial~~ly,~~ discussions ~~w~~should include advice regarding play objects, pacifiers, car seats, and electrical cords. As motor coordination develops and the child grows older, the parent/patient should be counseled on additional safety and preventive measures, including use of protective equipment (e.g., athletic mouthguards helmets with faceshields) for sporting and high-speed activities (e.g., baseball, bicycling, skiing, four-wheeling). Dental injuries could have improved outcomes not only if the public were aware of first-aid measures and the need to seek immediate treatment, but also if the injured child had access to emergency care at all times. Caregivers report that, even though their children had a dental home, they have experienced barriers to care when referred outside of the dental home for emergency services.(Meyer et al. 2017) Barriers faced by caregivers include availability of providers and clinics for delivery of emergency care and the distance one must travel for treatment. Therefore, ~~it is important that all~~ primary care providers should inform parents about ways to access emergency care for dental injuries and provide telephone numbers to access a dentist, including for after-hours emergency care.(AAPD P_Emergency Oral Care) Teledentistry may serve as an adjunct with time-sensitive injuries or when unexpected circumstances result in difficulties accessing care.(AAPD P_Teledentistry)

Smoking and smokeless tobacco use almost always are initiated and established in adolescence. (American Lung Association (no date); Albert et al. 2006; US DHHS 2012) In 2020, 6.7~~2016, 7.2~~ percent of middle school students and 23.6~~20.2~~ percent of high school students reported current tobacco product use.(CDC 2020~~2017~~) The most common tobacco products used by middle school and high school students were reported to be e-cigarettes, cigarettes, cigars, smokeless tobacco, hookahs, pipe tobacco, and bidis (unfiltered cigarettes from India).(CDC 2020~~2017~~) E-cigarette deceased from 27.5 to 19.6 percent among high school students and from 5.3 to 4.7 percent among middle school students from 2019 to 2020.(CDC 2020) The recent decline reversing previous trends may be attributable to multiple factors including increasing the age of sale of tobacco products from 18 to 21 years.(CDC 2020) ~~E-cigarette use rose from 1.5 percent to 16.0 percent among high school students and from 0.6 percent to 5.3 percent among middle school students from 2011 to 2015.(CDC 2017) During this time period,~~ eChildren may be exposed to opportunities to experiment with other substances that negatively impact their health and well-being. Practitioners should provide education regarding the serious health consequences of tobacco use and exposure to secondhand smoke.(AAPD P_Tobacco; CDC 2020~~2017~~) The practitioner may need to obtain information regarding tobacco use and alcohol/ drug misuse~~abuse~~ confidentially from an adolescent patient(AAPD BP_Adolescent; AAPD P_Substance Misuse) When tobacco or substance abuse has been identified, practitioners should provide brief interventions for encouragement, support, and positive reinforcement for avoiding substance use.(AAPD P_Tobacco; AAPD P_Substance Misuse) If indicated, dental practitioners should provide referral to primary care providers or behavioral-health/addiction specialists for assessment and/or treatment of substance use disorders.(AAPD P_Substance Misuse)

Human papilloma virus (**HPV**) is associated with several types of cancers, including oral and oropharyngeal cancers. (Jiang, National Cancer Institute HPV, 2021) Seventy percent of oropharyngeal cancers in the United States are caused by HPV, and the number of oropharyngeal cancers is increasing annually.(National Cancer Institute HPV, 2021) Evidence supports the HPV vaccine as a means to lessen the risk of oral HPV infection.(Jiang, National Cancer Institute, Oral 2021) The vaccine provides the greatest protection when administered at 9-12 years of age.(National Cancer Institute HPV, 2021) As adolescent patients tend to see the dentist twice yearly and more often than their medical care provider, this is a window of opportunity for the dental professional to counsel patients and parents about HPV's link to oral cancer and the potential benefits of receiving the HPV vaccine. (AAPD P_HPV).

Complications from intraoral/perioral piercings can range from pain, infection, and tooth fracture to life-threatening conditions of bleeding, edema, and airway obstruction.(AAPD P_Piercing) Education regarding pathologic conditions and sequelae associated with piercings should be initiated for the preteen child/parent and reinforced during subsequent periodic visits. The AAPD strongly opposes the practice of piercing intraoral and perioral tissues and use of jewelry on intraoral and perioral tissues due to the potential for pathological conditions and sequelae associated with these practices.(AAPD P_Piercing)

Treatment of dental disease/injury

Health care providers who diagnose oral disease or trauma should either provide therapy or refer the patient to an appropriately-trained individual for treatment.(AAPD P_Ethical Responsibility) Immediate intervention is necessary to prevent further dental destruction, as well as more widespread health problems. Postponed treatment can result in exacerbated problems that may lead to the need for more extensive care.(Berg & Stapleton 2012; Clarke et al. 2006; Dye et al. 2004; Lee et al. 2006) Early intervention could result in savings of health care dollars for individuals, community health care programs, and third-party payors.(AAP 2005; Scharf et al. 2016; Brown 2006; Clarke et al. 2006)

Treatment of developing malocclusion

Guidance of eruption and development of the primary, mixed, and permanent dentitions is an integral component of comprehensive oral health care for all pediatric dental patients.(AAPD BP_Developing Dentition) Dentists have the responsibility to recognize, diagnose, and manage or refer abnormalities in the developing dentition as dictated by the complexity of the problem and the individual clinician's training, knowledge, and experience.(AAPD P_Ethnical Responsibility) Early diagnosis and successful treatment of developing malocclusions can have both short-term and long-term benefits, while achieving the goals of occlusal harmony and function and dentofacial esthetics.(Dean & Walsh 2020~~Kranz et al. 2006; Drewnowski 2010; Ervin et al. 2012; Mobley et al. 2009; USDA 2015~~) Early treatment is beneficial for many patients, but is not indicated for every patient. When there is a reasonable indication that an oral habit will result in unfavorable sequelae in the developing permanent dentition, any treatment must be appropriate for the child's development, comprehension, and ability to cooperate. Use of an appliance is indicated only when the child wants to stop the habit and would benefit from a reminder. (AAPD BP_Developing Dentition) At each stage of occlusal development, the objectives of intervention/ treatment include: (1) ~~reversing~~ managing adverse growth, (2) ~~preventing~~ correcting dental and skeletal disharmonies, (3) improving esthetics of the smile and the accompanying positive effects on~~, (4) improving~~ self-image, and (~~5~~4) improving the occlusion.(AAPD BP_Developing Dentition)

Sealants

A 2016 systematic review concluded sealants are effective in preventing and arresting pit-and-fissure occlusal caries lesions of primary and permanent molars in children and adolescents and can minimize the progression of noncavitated occlusal caries lesions.(Wright et al. 2016) They are indicated for primary and permanent teeth with pits and fissures ~~that are predisposed to plaque retention.(Beauchamp et al.2008~~ Wright et al. 2016) At-risk pits and fissures should be sealed as soon as possible. Because caries risk may increase at any time during a patient's life due to changes in habits (e.g., dietary, home care), oral microflora, or physical condition, unsealed teeth subsequently might benefit from sealant application. (Sasa & Donly 2010) The need for sealant placement should be reassessed at periodic preventive care appointments. Sealants should be monitored and repaired or replaced as needed.(Beauchamp et al. 2008; Sasa & Donly 2010; AAPD P_Third Party Reimbursement/Dental Sealants)

Third molars

Panoramic or periapical radiographic assessment is indicated during late adolescence to assess the presence, position, and development of third molars.(AAPD BP_Radiographs; ADA 2012) Impacted third molars are potentially pathologic; a 2016 study found the incidence of cysts or tumors associated with impacted mandibular third molars to be 0.41 - 0.71 percent in patients younger than 30 years.(Shin et al) A decision to remove or retain third molars should be made before the middle of the third decade.(Lieblich et al. 2017; AAOMS 2016) ~~Impacted third molars are potentially pathologic. Pathologic conditions generally are more common with an increase in age. Evaluation and treatment may re-quire removal, exposure, and/or repositioning. In selected cases, long-term clinical and radiographic monitoring may be needed. Treatment should be provided before pathologic conditions adversely affect the patient's oral and/or systemic health.(Dean 2016; Lieblich et al. 2017; AAOMS 2016)5~~ Consideration should be given to removal when ~~there is~~ a high probability of disease or pathology exists~~and/~~ or the risks associated with early removal are less than the risks of later removal.(AAPD BP_Developing Dentition; Klene et al 2020 ~~Dean 2016~~; AAOMS 2016) Treatment should be provided before pathologic conditions adversely affect the patient's oral or systemic health.(Lieblich et al. 2017; AAOMS 2016) Postoperative complications for removal of impacted third molars are low when performed at an early age.(Blondeau & Daniel 2007) A Cochrane review in 2012 reported ~~there was~~ no difference in late lower incisor crowding with removal or retention of asymptomatic impacted third molars.(Mettes et al. 2012) When the decision is made to maintain disease free impacted wisdom teeth, clinical and radiographic monitoring is appropriate to prevent undesirable outcomes.(Ghaeminia et al)

Referral for regular and periodic dental care

As adolescent patients approach the age of majority, ~~it is important to~~ educatinge the patient and parent on the value of transitioning to a dentist who is experiencedknowledgeable in adult oral health and can help minimize disruption of high-quality, developmentally-appropriate health care. At the time agreed upon by the patient, parent, and pediatric dentist, the patient should be referred to a specific practitioner in an environment sensitive to the adolescent's individual needs.(AAPD BP_Adolescent; AAPD P_Transitioning) Until the new dental home is established, the patient should maintain a relationship with the current care provider and have access to emergency services. For the patient with SHCN, in cases where it is not possible or desired to transition to another practitioner, the dental home can remain with the pediatric dentist and appropriate referrals for specialized dental care should be recommended when needed.(AAPD P_Transitioning) Proper communication and records transfer allow for consistent and continuous care for the patient.(AAPD BP_Recordkeeping)

Recommendations by age

Six to 12 months

1. Complete the clinical oral examination with adjunctive diagnostic tools (e.g., radiographs as determined by child's history, clinical findings, and susceptibility to oral disease) to assess oral growth and development, pathology, and/or injuries; provide diagnosis.
2. Complete a caries risk assessment.
3. Provide oral hygiene counseling for parents, including the implications of the oral health of the caregiver.
4. Clean teeth and remove supra- and sub-gingival stains or deposits as indicated.
5. Assess the child's exposure to systemic and topical fluorides ~~status~~ (including type of infant formula used~~), if any,~~ and exposure to fluoridated toothpaste~~)~~ and provide counseling regarding fluoride.
6. Assess appropriateness of feeding practices, including bottle and breast-feeding, and provide counseling as indicated; provide dietary counseling related to oral health.
7. Provide age-appropriate injury prevention counseling for orofacial trauma.
8. Provide counseling for nonnutritive oral habits (e.g., digit, pacifiers).
9. Provide required treatment and/or appropriate referral for any oral diseases or injuries.
10. Provide anticipatory guidance.

11. Assess overall growth and development~~,~~ and make appropriate referral to therapeutic services if needed.
12. Consult with the child's physician as needed.
13. Determine the interval for periodic reevaluation.

12 to 24 months

1. Repeat the procedures for ages six to 12 months every six months or as indicated by the child's individual needs or risk status/susceptibility to disease.
2. Assess appropriateness of feeding practices (including bottle, breast-feeding, and no-spill training cups) and provide counseling as indicated.
3. Review patient's fluoride status and provide parental counseling.
4. Provide topical fluoride treatments every six months or as indicated by the child's individual needs or risk status/susceptibility to caries~~disease~~.

Two to six years

1. Repeat the procedures for 12 to 24 months every six months or as indicated by the child's individual needs or risk status/susceptibility to disease, including periodontal conditions. Provide age-appropriate oral hygiene instructions.
2. Assess diet and body mass index to identify patterns placing patients at increased risk for dental caries or obesity. Provide counseling or appropriate referral to a pediatric or nutritional specialist as indicated.
3. Scale and clean the teeth every six months or as indicated by individual patient's needs.
4~~3~~. Provide pit and fissure sealants for caries-susceptible anterior and posterior primary and permanent teeth.
5~~4~~. Provide counseling and services (e.g., mouthguards) as needed for orofacial trauma prevention.
6~~5~~. Assess developing dentition and occlusion and ~~P~~provide assessment/treatment or referral of ~~developing~~ malocclusion as indicated by individual patient's needs.
7~~6~~. Provide required treatment and/or appropriate referral for any oral diseases, habits, or injuries as indicated.
8~~7~~. Assess speech and language development and provide appropriate referral as indicated.

Six to 12 years

1. Repeat the procedures for ages two to six years every six months or as indicated by child's individual needs.
2. Complete a periodontal risk assessment that may include radiographs and periodontal probing with eruption of first permanent molars.
3. Provide substance misuse~~abuse~~ counseling (e.g., smoking, smokeless tobacco) and~~/or~~ referral to primary care providers or behavioral health/addiction specialists if indicated.
4. Provide education and counseling regarding HPV and the benefits of the HPV vaccine.
5. ~~3~~. Provide counseling on intraoral/perioral piercing.

12 years and older

1. Repeat the procedures for ages six to 12 years every six months or as indicated by the child's individual needs or risk status/susceptibility to disease.
2. During late adolescence, assess the presence, position, and development of third molars, giving consideration to removal when there is a high probability of disease or pathology ~~and/~~or the risks associated with early removal are less than the risks of later removal.
3. At an age determined by patient, parent, and pediatric dentist, refer the patient to a general dentist for continuing oral care.

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Recommended Dental Periodicity Schedule for Pediatric Oral Health Assessment, Preventive Services, and Anticipatory Guidance/Counseling

Since each child is unique, these recommendations are designed for the care of children who have no contributing medical conditions and are developing normally. These recommendations will need to be modified for children with special health care needs or if disease or trauma manifests variations from normal. The American Academy of Pediatric Dentistry emphasizes the importance of very early professional intervention and the continuity of care based on the individualized needs of the child. Refer to the text of this best practiceguideline for supporting information and references. Refer to the text in the Recommendations on the Periodicity of Examination, Preventive Dental Services, Anticipatory Guidance, and Oral Treatment for Infants, Children, and Adolescents (*www.aapd.org/policies/*) for supporting information and references.

	AGE				
	6 TO 12 MONTHS	12 TO 24 MONTHS	2 TO 6 YEARS	6 TO 12 YEARS	12 YEARS AND OLDER
Clinical oral examination [1]	•	•	•	•	•
Assess oral growth and development [2]	•	•	•	•	•
Caries-risk assessment [3]	•	•	•	•	•
Radiographic assessment [4]	•	•	•	•	•
Prophylaxis and topical fluoride [3,4]	•	•	•	•	•
Fluoride supplementation [5]	•	•	•	•	•
Anticipatory guidance/counseling [6]	•	•	•	•	•
Oral hygiene counseling [3,7]	Parent	Parent	Patient /parent	Patient /parent	Patient
Dietary counseling [3,8]	•	•	•	•	•
Counseling for nonnutritive habits [9]	•	•	•	•	•
Injury prevention and safety counseling [9,10]	•	•	•	•	•
~~Counseling for nonnutritive habits [10]~~	•	•	•	•	•
Assess ~~Counseling for~~ speech/language development [11]	•	•	•		
Assess~~ment and treatment of~~ developing ~~mal~~occlusion [12]			•	•	•
Assessment for pit and fissure sealants [13,~~14~~]			•	•	•
Periodontal risk assessment [3,14]			•	•	•
Counseling for tobacco, vaping, and substance misuse ~~abuse counseling~~				•	•
Counseling for human papilloma virus/vaccine				•	•
Counseling for intraoral/perioral piercing				•	•
Assess~~ment and/or removal of~~ third molars					•
Transition to adult dental care					•

1 First examination at the eruption of the first tooth and no later than 12 months. Repeat every 6 months or as indicated by the child's risk status/susceptibility to disease. Includes assessment of pathology and injuries.

2 By clinical examination.

3 Must be repeated regularly and frequently to maximize effectiveness.

4 Timing, type~~selection~~, and frequency determined by child's history, clinical findings, and susceptibility to oral disease.

5 Consider when systemic fluoride exposure is suboptimal. Up to at least 16 years.

6 Appropriate discussion and counseling should be an integral part of each visit for care.

7 Initially, responsibility of parent; as child matures, jointly with parent; then, when indicated, only child.

8 At every appointment; initially discuss appropriate feeding practices, then the role of refined carbohydrates and frequency of snacking in caries development and childhood obesity. Monitor body mass index beginning at age 2.

9 At first, discuss the need for non-nutritive sucking: digits vs pacifiers; then the need to wean from the habit before malocclusion or deleterious effect on the dentofacial complex.occurs. For school-aged children and adolescent patients, counsel regarding any existing habits such as fingernail biting, clenching, or bruxism.

10 Initially ~~play objects,~~ pacifiers, car seats, play objects, electric cords; secondhand smoke; when learning to walk; ~~then~~ with sports and routine playing, including the importance of mouthguards, then motor vehicles and high-speed activities.

~~10 At first, discuss the need for additional sucking: digits vs pacifiers; then the need to wean from the habit before malocclusion or skeletal dysplasia occurs. For school-aged children and adolescent patients, counsel regarding any existing habits such as fingernail biting, clenching, or bruxism.~~

11 Observation for age-appropriate speech articulation and fluency as well as achieving receptive and expressive language milestones

12 Identify: transverse, vertical, and sagittal growth patterns; asymmetry; occlusal disharmonies; functional status including temporomandibular joint dysfunction; esthetic influences on self-image and emotional development

13 For caries-susceptible primary molars, permanent molars, premolars, and anterior teeth with deep pits and fissures; placed as soon as possible after eruption.

14 Periodontal probing should be added to the risk-assessment process after the eruption of the first permanent molars.

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	AGE				
	6 TO 12 MONTHS	12 TO 24 MONTHS	2 TO 6 YEARS	6 TO 12 YEARS	12 YEARS AND OLDER
Clinical oral examination [1]	•	•	•	•	•
Assess oral growth and development [2]	•	•	•	•	•
Caries-risk assessment [3]	•	•	•	•	•
Radiographic assessment [4]	•	•	•	•	•
Prophylaxis and topical fluoride [3,4]	•	•	•	•	•
Fluoride supplementation [5]	•	•	•	•	•
Anticipatory guidance/counseling [6]	•	•	•	•	•
Oral hygiene counseling [3,7]	Parent	Parent	Patient /parent	Patient /parent	Patient
Dietary counseling [3,8]	•	•	•	•	•
Counseling for nonnutritive habits [9]	•	•	•	•	•
Injury prevention and safety counseling [9,10]	•	•	•	•	•
~~Counseling for nonnutritive habits [10]~~	•	•	•	•	•
Assess ~~Counseling for~~ speech/language development [11]	•	•	•		
Assess~~ment and treatment of~~ developing ~~mal~~occlusion [12]			•	•	•
Assessment for pit and fissure sealants [13,~~14~~]			•	•	•
Periodontal risk assessment [3,14]			•	•	•
Counseling for tobacco, vaping, and substance misuse ~~abuse counseling~~				•	•
Counseling for human papilloma virus/vaccine				•	•
Counseling for intraoral/perioral piercing				•	•
Assess~~ment and/or removal of~~ third molars					•
Transition to adult dental care					•

1 First examination at the eruption of the first tooth and no later than 12 months. Repeat every 6 months or as indicated by the child's risk status/susceptibility to disease. Includes assessment of pathology and injuries.

2 By clinical examination.

3 Must be repeated regularly and frequently to maximize effectiveness.

4 Timing, type~~selection~~, and frequency determined by child's history, clinical findings, and susceptibility to oral disease.

5 Consider when systemic fluoride exposure is suboptimal. Up to at least 16 years.

6 Appropriate discussion and counseling should be an integral part of each visit for care.

7 Initially, responsibility of parent; as child matures, jointly with parent; then, when indicated, only child.

8 At every appointment; initially discuss appropriate feeding practices, then the role of refined carbohydrates and frequency of snacking in caries development and childhood obesity. Monitor body mass index beginning at age 2.

9 At first, discuss the need for non-nutritive sucking: digits vs pacifiers; then the need to wean from the habit before malocclusion or deleterious effect on the dentofacial complex.occurs. For school-aged children and adolescent patients, counsel regarding any existing habits such as fingernail biting, clenching, or bruxism.

10 Initially ~~play objects,~~ pacifiers, car seats, play objects, electric cords; secondhand smoke; when learning to walk; ~~then~~ with sports and routine playing, including the importance of mouthguards, then motor vehicles and high-speed activities.

~~10 At first, discuss the need for additional sucking: digits vs pacifiers; then the need to wean from the habit before malocclusion or skeletal dysplasia occurs. For school-aged children and adolescent patients, counsel regarding any existing habits such as fingernail biting, clenching, or bruxism.~~

11 Observation for age-appropriate speech articulation and fluency as well as achieving receptive and expressive language milestones

12 Identify: transverse, vertical, and sagittal growth patterns; asymmetry; occlusal disharmonies; functional status including temporomandibular joint dysfunction; esthetic influences on self-image and emotional development

13 For caries-susceptible primary molars, permanent molars, premolars, and anterior teeth with deep pits and fissures; placed as soon as possible after eruption.

14 Periodontal probing should be added to the risk-assessment process after the eruption of the first permanent molars.

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Caries-risk Assessment and Management for Infants, Children, and Adolescents

Latest Revision

~~2019~~ 2022

Abstract

This best practice reviews caries-risk assessment and patient care pathways for pediatric patients. Caries-related topics presented include caries-risk assessment, active surveillance, caries prevention, sealants, fluoride, diet, radiology, and non-restorative treatment. Caries-risk assessment forms are organized by age: 0-5 years and ≥6 years old, incorporating three factor categories~~:~~ (social/ behavioral/medical, clinical, and ~~biological risk indicators,~~ protective factors) and ~~clinical findings~~ disease indicators appropriate for the patient age. Each factor category lists specific conditions to be graded yes if applicable~~or no~~, with the answers tallied to render a caries-risk assessment score of high, moderate, or low. The care management pathway presents clinical care options beyond surgical or restorative choices and promotes individualized treatment regimens dependent on patient age, compliance with preventive strategies, and other appropriate strategies. Caries management forms also are organized by age: 0-5 years and ≥6 years old, addressing risk categories of high, moderate, and low, based on treatment categories of diagnostics, interventions (fluoride, diet counseling, sealants), and restorative care. Caries-risk assessment and clinical management pathways allow for customized periodicity, diagnostic, preventive, and restorative care for infants, children, adolescents, and individuals with special needs.

This document was developed through a collaborative effort of the American Academy of Pediatric Dentistry Councils on Clinical Affairs and Scientific Affairs to offer updated information and recommendations regarding assessment of caries risk and risk-based management protocols.

KEYWORDS: CARIES-RISK ASSESSMENT, CARIES PREVENTION, CLINICAL MANAGEMENT PATHWAYS, DENTAL SEALANTS, FLUORIDE

Purpose

The American Academy of Pediatric Dentistry recognizes that caries-risk assessment and caries management protocols, also called care pathways, can assist clinicians with decisions regarding treatment based upon child's age, caries risk, and patient compliance and are essential elements of contemporary

clinical care for infants, children, and adolescents. These recommendations are intended to educate healthcare providers and other interested parties on the assessment of caries risk in contemporary pediatric dentistry and aid in clinical decision-making regarding evidence- and risk-based diagnostic, fluoride, dietary, and restorative protocols.

Methods

This document was developed by the Council on Clinical Affairs and adopted in 2002 (AAPD Use of a CAT, 2002) and last revised in ~~2014~~ 2019(AAPD Caries-risk Assessment ~~2014~~ 2019~~).~~ To update this best practices document, an electronic search was conducted of publications from 2012 to 2021 that included systematic reviews/meta-analyses or reports from expert panels, clinical guidelines, and other relevant reviews ~~was conducted from 2012 to 2018 2021~~using the terms: caries risk assessment with, diet, sealants, fluoride, radiology, non-restorative treatment, active surveillance, caries prevention. ~~There were four systematic reviews that informed this update on caries risk assessment.(ADA 2018; Fontana 2015; Cagetti et al. 2018; Moyer 2014 ; Schmoeckel 2020)There were 10 systematic reviews and clinical practice guidelines that inform this update on care pathways for caries.(FDA/ADA/DHHS 2012; Rotter et al. 2012; Santos et al. 2013; Weyant et al. 2013; Wright et al. 2014; Scottish Intercollegiate Guidelines Network 2014; Crystal et al. 2017; Slayton et al. 2018; Wright et al. 2016; Vercammen et al. 2018 ,Canares 2018~~) Five hundred ninety-two articles met these criteria. Papers for review were chosen from this list and from references within selected articles. When data did not appear sufficient or were inconclusive, recommendations were based upon expert and/or consensus opinion by experienced researchers and clinicians.

Background

Caries-risk assessment

Risk assessment procedures used in medical practice generally have sufficient data to accurately quantitate a person's disease susceptibility and allow for preventive measures. However, in dentistry there ~~still~~ are limited~~is a lack of~~ sufficiently validated multivariate screening tools to determine which children are at a higher risk for dental caries.(Cagetti et al. 2018; Moyer 2014) Two caries risk assessment tools have been validated in clinical trials and clinical outcomes studies, namely the Cariogram and CAMBRA tools. (Bratthall 2005, Featherstone 2007) Several other published caries- risk assessment tools utilize similar components but have not been clinically validated. (Bratthall 2005, Featherstone 2021) Nevertheless, caries-risk assessment:

1. fosters the treatment of the disease process instead of treating the outcome of the disease.
2. allows an understanding of the disease factors for a specific patient and aids in individualizing preventive discussions.
3. individualizes, selects, and determines frequency of preventive and restorative treatment for a patient.
4. anticipates caries progression or stabilization.
5. determines different treatment plan options and tailors the specific individualized self-management goals.

Caries-risk assessment is part of a comprehensive treatment plan approach based on age of the child, starting with the age one visit. Caries-risk assessment models currently involve a combination of factors including diet, fluoride exposure, a susceptible host, and microflora that interplay with a variety of social, cultural, and behavioral factors. Caries-risk assessment is the determination of the likelihood of the increased incidence of caries (i.e., ~~the number of~~ new cavitated or incipient lesions) during a certain time period (~~Santos et al. 2013~~ Fontana 2020) or the likelihood that there will be a change in the size or activity of lesions already present. With the ability to detect caries in its earliest stages (i.e., non-cavitated or white spot lesions), health care providers can help prevent cavitation.(ADA 2018)

Caries risk factors~~indicators~~ are variables that are thought to cause the disease directly (e.g., microflora) or have been shown useful in predicting it (e.g., life-time poverty, low health literacy) and include those variables that may be considered protective factors. The most commonly used caries risk factors~~indicators~~ include ~~presence of caries lesions,~~ low salivary flow, visible plaque on teeth, high frequency sugar consumption, presence of appliance in the mouth, health challenges, socio-demographic factors, access to care, and cariogenic microflora.(ADA 2018). The presence of caries lesions, either non-cavitated or cavitated, also has been shown in numerous studies to be a strong indicator of caries risk. Clinical observation of existing caries lesions or restorations recently placed as a result of such lesions are best thought of as disease indicators rather than risk factors since these lesions do not cause the disease directly or indirectly but, very importantly, indicate the presence of the factors that cause the disease. Protective factors in caries risk include a child's receiving optimally-fluoridated water, having teeth brushed daily with fluoridated toothpaste, receiving topical fluoride from a health professional, and having regular dental care.(ADA 2018, Machiulskiene, 2020)

Some limitations~~issues~~ with the ~~current~~ risk factors ~~indicators~~ include the following:

- ~~p~~Past caries experience is not particularly useful in young children and activity of lesions may be more important than number of lesions.
- Low salivary flow is difficult to measure and may not be relevant in young children.(Alaluusua and Malmivirta 1994)
- Frequent sugar consumption is hard to quantitate.
- Socio-demographic factors are just a proxy for various exposures/behaviors which may affect caries risk.
- Predictive ability of various risk factors across the life span and how risk changes with age have not been determined.(Divaris~~ (ADA~~ 201~~8~~)
- ~~Furthermore, g~~Genome-level risk factors may account for substantial variations in caries risk.(Divaris~~ (ADA~~ 201~~8~~)

Risk assessment tools can aid in the identification of specific behaviors or risk factors for each individual ~~reliable predictors~~ and allow dentists and other health care professionals ~~dental practitioners, physicians, and other non-dental health care providers~~ to become more actively involved in identifying and referring high-risk children. Tables 1 and 2 incorporate available evidence into practical tools to assist dental practitioners, physicians, and other non-dental health care providers in assessing levels of risk for caries development in infants, children, and adolescents. As new evidence emerges, these tools can be refined to provide greater predictably of caries in children prior to disease initiation. Furthermore, the evolution of caries-risk assessment tools and care pathways can assist in providing evidence for and justifying periodicity of services, modification of third-party involvement in the delivery of dental services, and quality of care with outcomes assessment to address limited resources and work-force issues.

Care pathways for caries management

Care pathways are documents designed to assist in clinical decision-making; they provide criteria regarding diagnosis and treatment and lead to recommended courses of action. (Rotter et al. 2012) The pathways are based on evidence from current peer-reviewed literature and the considered judgment of expert panels, as well as clinical experience of practitioners. Care pathways for caries management in children aged 0-2 and 3-5 years old were first introduced in 2011.(Ramos-Gomez and Ng 2011) Care pathways are updated frequently as new technologies and evidence develop.

Historically, the management of dental caries was based on the notion that it was a progressive disease that eventually destroyed the tooth unless there was surgical/restorative intervention. Decisions for intervention often were learned from unstandardized dental school instruction and then refined by clinicians over years of practice. It is now known that surgical intervention of dental caries alone does not stop the disease process. Additionally, many lesions do not progress, and tooth restorations have a finite longevity. Therefore, modern management of dental caries should be more conservative and includes early detection of non-cavitated lesions, identification of an individual's risk for caries progression, understanding of the disease process for that individual, and active surveillance to apply preventive measures and monitor carefully for signs of arrest or progression.

Care pathways for children further refine the decisions concerning individualized treatment and treatment thresholds based on a specific patient's risk levels, age, and compliance with preventive strategies (Tables 3 and 4). Such clinical pathways yield greater probability of success, fewer complications, and more efficient use of resources than less standardized treatment.(Rotter et al. 2012)

Content of the present caries management protocol is based on results of systematic reviews and expert panel recommendations that provide better understanding of and recommendations for diagnostic, preventive, and restorative treatments. Recommendations for the use of fluoridated toothpaste are based on the ~~three~~four systematic reviews,(Santos et al. 2013; Wright et al. 2014; Scottish Intercollegiate Guidelines Network 2014,Walsh 2019) and dietary fluoride supplements are based on the Centers for Disease Control and Prevention's fluoride guidelines;(CDC 2001) professionally-applied and prescription strength home-use topical fluoride are based on two systematic reviews;(Weyant et al. 2013; Scottish Intercollegiate Guidelines Network 2014) the use of silver diamine fluoride to arrest caries lesions also is based on two systematic reviews.(Crystal et al. 2017; Slayton et al. 2018) Radiographic diagnostic recommendations are based on the uniform guidelines from ~~the three~~ national organizations.(FDA/ADA/ DHHS 2012) Recommendations for pit and fissure sealants, especially regarding primary teeth, are based on the American Dental Association Council on Scientific Affairs' systematic review of the use of pit-and-fissure sealants.(Wright et al. 2016,Ahova-Saloranta 2017) Dietary interventions are based on a systematic review of strategies to reduce sugar-sweetened beverages.(Vercammen et al. 2018) Caries risk is assessed at both the individual level and tooth level. Treatment of caries with interim therapeutic restorations is based on the American Academy of Pediatric Dentistry policy and recommended best practices.(AAPD P_ITR ~~2018~~ 2022; AAPD Pediatric Restorative Dentistry ~~2019~~2022) Active surveillance (prevention therapies and close monitoring) of enamel lesions is based on the concept that

treatment of disease may only be necessary if there is disease progression,(Parker 2004) and that caries can arrest without treatment.(Ekstrand et al. 2010)

Other approaches to the assessment and treatment of dental caries will emerge with time and, with evidence of effectiveness, may be included in future guidelines on caries-risk assessment and care pathways.

Recommendations

1. Dental caries-risk assessment, based on a child's age, social/behavioral/medical ~~biological~~ factors, protective factors, and clinical findings, should be a routine component of new and periodic examinations by oral health and medical providers.
2. While there is not enough information at present to have quantitative caries-risk assessment analyses, estimating children at low, moderate, and high caries risk by a preponderance of risk and protective factors and disease indicators will enable a more evidence-based approach ~~to medical provider referrals~~ for referrals by medical providers , as well as establish periodicity and intensity of diagnostic, preventive, and restorative services.
3. Care pathways, based on a child's age and caries risk, provide health providers with criteria and protocols for determining the types and frequency of diagnostic, preventive, and restorative care for patient-specific management of dental caries.

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Table 1. Caries-risk Assessment Form for 0-5 Years Old ~~(Ramos-Gomez et al. 2007)~~

Use of this tool will help the health care provider assess the child's risk for developing caries lesions. In addition, reviewing specific factors will help the practitioner and parent understand the variable influences that contribute to or protect from dental caries.

	High risk	Moderate risk	Low risk
Risk factors, social/behavioral/medical/~~biological~~			
Mother/primary caregiver has active dental caries	Yes		
Parent/caregiver has lifetime of poverty, low health literacy	Yes		
Child has frequent exposure (>3 times/day) between-meal sugar-containing snacks or beverages per day	Yes		
Child uses bottle or non-spill cup containing natural or added sugar frequently, between meals and/or at bedtime	Yes		
Child is a recent immigrant		Yes	
Child has special health care needs[α]		Yes	
Risk factors, clinical			
Child has visible plaque on teeth	Yes		
Child presents with dental enamel defects	Yes		
Protective factors			
Child receives optimally-fluoridated drinking water or fluoride supplements			Yes
Child has teeth brushed daily with fluoridated toothpaste			Yes
Child receives topical fluoride from health professional			Yes
Child has dental home/regular dental care			Yes
Disease indicators[β] ~~Clinical findings~~			
Child has non-cavitated (incipient/white spot) caries ~~or enamel defects~~	Yes		
Child has visible ~~cavities~~ caries lesions ~~or fillings or missing teeth due to caries~~	Yes		
Child has recent restorations or missing teeth due to caries~~visible plaque on teeth~~	Yes		

α Practitioners may choose a different risk level based on specific medical diagnosis and unique circumstances, especially conditions that affect motor coordination or cooperation.

β While these do not cause caries directly or indirectly, they indicate presence of factors that do.

INSTRUCTIONS

Circle YES that corresponds with those ~~Circling those~~ conditions applying to a specific patient ~~helps the practitioner and parent understand the factors that contribute to or protect from caries. Risk assessment categorization~~ Use the circled responses to visualize the balance among risk factors, protective factors, and disease indicators. Use this balance or imbalance, together with clinical judgment, to assign a caries risk level of low, moderate, or high ~~is~~ based on the preponderance of factors for the individual. ~~However,~~ ~~c~~Clinical judgment may justify the weighting ~~use~~ of one factor (e.g., heavy plaque on the teeth~~frequent exposure to sugar-containing snacks or beverages, more than one decayed missing filled surfaces [dmfs]) in determining overall risk.~~ more than others.

Overall assessment of the child's dental caries risk: High ☐ Moderate ☐ Low ☐

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Table 2. Caries-risk Assessment Form for ≥6 Years Old ~~(Featherstone et al. 2007)~~

(For Dental Providers)
Use of this tool will help the health care provider assess the child's risk for developing caries lesions. In addition, reviewing specific factors will help the practitioner and patient/parent understand the variable influences that contribute to or protect from dental caries.

Factors	High risk	Moderate risk	Low risk
Risk factors, social/behavioral/medical/~~biological~~			
Patient has lifetime of poverty, low health literacy	Yes		
Patient has frequent exposure (>3 times/day) between-meal sugar-containing snacks or beverages per day	Yes		
~~Child~~Patient is a recent immigrant		Yes	
Patient uses hyposalivatory medication(s)		Yes	
Patient has special health care needs[α]		Yes	
Risk factors, clinical			
Patient has low salivary flow	Yes		
Patient has visible plaque on teeth	Yes		
Patient presents with dental enamel defects	Yes		
Patient wears an intraoral appliance		Yes	
Patient has defective restorations		Yes	
Protective factors			
Patient receives optimally-fluoridated drinking water			Yes
Patient has teeth brushed daily with fluoridated toothpaste			Yes
Patient receives topical fluoride from health professional			Yes
Patient has dental home/regular dental care			Yes
Disease indicators[β] ~~*Clinical findings*~~			
Patient has ~~≥1~~ interproximal caries lesion(s)	Yes		
Patient has new non-cavitated (white spot) caries ~~or enamel defects~~	Yes		
Patient has new cavitated caries lesions or lesions into dentin radiographically	Yes		
Patient has restorations that were placed in the last 3 years (new patient) or in the last 12 months (patient of record)	Yes		
~~Patient has low salivary flow~~	~~Yes~~		
~~Patient has defective restorations~~		~~Yes~~	
~~Patient wears an intraoral appliance~~		~~Yes~~	

α Practitioners may choose a different risk level based on specific medical diagnosis and unique circumstances, especially conditions that affect motor coordination or cooperation.
β While these do not cause caries directly or indirectly, they indicate presence of factors that do.

INSTRUCTIONS
Circle YES that corresponds with those ~~*Circling those*~~ *conditions applying to a specific patient* ~~*helps the practitioner and parent understand the factors that contribute to or protect from caries. Risk assessment categorization*~~ *Use the circled responses to visualize the balance among risk factors, protective factors, and disease indicators. Use this balance or imbalance, together with clinical judgment, to assign a caries risk level of low, moderate, or high* ~~*is*~~ *based on the preponderance of factors for the individual.* ~~*However, c*~~*Clinical judgment may justify the weighting* ~~*use*~~ *of one factor (e.g., heavy plaque on the teeth*~~*frequent exposure to sugar-containing snacks or beverages, more than one decayed missing filled surfaces [dmfs]) in determining overall risk.*~~more than others.*

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Overall assessment of the dental caries risk: High □ Moderate □ Low □

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Table 3. Example of a Caries Management Pathways for 0-5 Years Old

Risk category	Diagnostics	Interventions			Restorative
		Fluoride	Dietary counseling	Sealants	
Low risk	– Recall every six to 12 months – Radiographs every 12 to 24 months	– Drink optimally fluoridated water – Twice daily brushing with fluoridated toothpaste	Yes	Yes	– Surveillance
Moderate risk	– Recall every six months – Radiographs every six to 12 months	– Drink optimally-fluoridated water (alternatively, take fluoride supplements with fluoride-deficient water supplies) – Twice daily brushing with fluoridated toothpaste ~~– Fluoride supplements~~ – Professional topical treatment every six months	Yes	Yes	– Active surveillance of non-cavitated (white spot) caries lesions – Restore ~~of~~ cavitated or enlarging caries lesions
High risk	– Recall every three months – Radiographs every six months	– Drink optimally fluoridated water (alternatively, take fluoride supplements with fluoride-deficient water supplies) – Twice daily brushing with fluoridated toothpaste – Professional topical treatment every three months – Silver diamine fluoride on cavitated lesions	Yes	Yes	– Active surveillance of non-cavitated (white spot) caries lesions – Restore ~~of~~ cavitated or enlarging caries lesions –Interim therapeutic restorations (ITR) may be used until permanent restorations can be placed

~~*Refer to notes below Table 4.*~~

Notes for caries management pathways tables:

Twice daily brushing: Parental supervision of a "smear" amount of fluoridated toothpaste twice daily for children under age 3, pea-size amount for children ages 3-6.

Surveillance: Periodic monitoring for signs of caries progression; Active surveillance: Active measures by parents and oral health professionals to reduce cariogenic environment and monitor possible caries progression.

Silver diamine fluoride: Use of 38 percent silver diamine fluoride to assist in arresting caries lesions; Informed consent particularly highlighting expected staining of treated lesions.

Sealants: The decision to seal primary and permanent molars should account for both the individual-level and tooth-level risks.

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Table 4. Example of a Caries Management Pathways for ≥6 Years Old

Risk category	Diagnostics	Interventions			Restorative
		Fluoride	Dietary counseling	Sealants	
Low risk	– Recall every six to 12 months – Radiographs every 12 to 24 months	– Drink optimally fluoridated water – Twice daily brushing with fluoridated toothpaste	Yes	Yes	– Surveillance
Moderate risk	– Recall every six months – Radiographs every six to 12 months	– Drink optimally fluoridated water (alternatively, take fluoride supplements with fluoride-deficient water supplies) – Twice daily brushing with fluoridated toothpaste ~~– Fluoride supplements~~ – Professional topical treatment every six months	Yes	Yes	– Active surveillance of non-cavitated (white spot) caries lesions – Restore of cavitated or enlarging caries lesions
High risk	– Recall every three months – Radiographs every six months	– Drink optimally fluoridated water (alternatively, take fluoride supplements with fluoride-deficient water supplies) – Brushing with 0.5 percent fluoride gel/paste – Professional topical treatment every three months – Silver diamine fluoride on cavitated lesions	Yes	Yes	– Active surveillance of non-cavitated (white spot) caries lesions – Restore of cavitated or enlarging caries lesions –Interim therapeutic restorations (ITR) may be used until permanent restorations can be placed

Notes for caries management pathways tables:

Twice daily brushing: Parental supervision of a "~~smear" amount of fluoridated toothpaste twice daily for children under age 3,~~ pea-size amount for children ~~ages 3-~~6 years of age.

~~Optimize dietary fluoride levels: Ideally by consuming optimally fluoridated water; alternatively by dietary fluoride supplements, in a non-fluoridated area, for children at high caries risk.~~

Surveillance ~~and active surveillance~~: Periodic monitoring for signs of caries progression; ~~and~~ Active surveillance: aActive measures by parents and oral health professionals to reduce cariogenic environment and monitor possible caries progression.

Silver diamine fluoride: Use of 38 percent silver diamine fluoride to assist in arresting caries lesions. Informed consent particularly highlighting expected staining of treated lesions.

~~Interim therapeutic restorations: also may be called protective restorations.(AAPD P_ITR 2018)~~

Sealants: Although studies report unfavorable cost/benefit ratio for sealant placement in low caries risk children, expert opinion favors sealants in permanent teeth of low-risk children based on possible changes in risk over time and differences in tooth anatomy. The decision to seal primary and permanent molars should account for both the individual-level and tooth-level risks.

This draft does not constitute an official AAPD health oral policy or clinical recommendation until approval by the General Assembly. Circulation is limited to AAPD members.

Pain Management in Infants, Children, Adolescents, and Individuals with Special Health Care Needs

Abstract

This statement provides dentists and stakeholders with current best practices for pediatric pain management. Infants, children, adolescents, and individuals with special health care needs may experience pain resulting from dental/orofacial injury, infection, and dental procedures. Dental pain is an inflammatory condition that can be categorized as somatic (i.e., periodontal, alveolar, mucosal) or visceral (i.e., pulpal). Dental professionals should consider pain assessment for all patients. Inadequate pain management may lead to significant physical and psychological consequences for patients. Perioperative pain management approaches include pre-emptive pain management (e.g., anesthetics), use of local anesthesia during general anesthesia for post-operative pain control, non-pharmacological anxiolytic interventions (e.g., providing a calm environment, emotional support), distraction and imagery (e.g., counting, video games), and pharmacological pain control agents including non-opioid analgesics (e.g., nonsteroidal anti-inflammatory drugs, acetaminophen) and opioid analgesics. Acetaminophen and nonsteroidal anti-inflammatory medications are first line pharmacologic therapies for pain management. Use of opioids for pediatric dental patients should be rare, and steps to mitigate opioid misuse are discussed.

This document was developed through a collaborative effort of the American Academy of Pediatric Dentistry Councils on Clinical Affairs and Scientific Affairs to offer updated information and guidance on pain management in infants, children, adolescents, and individuals with special health care needs.

KEYWORDS: FACIAL PAIN; TOOTHACHE; PAIN MANAGEMENT; ACUTE PAIN; CHRONIC PAIN; PAIN, POSTOPERATIVE

~~Adopted~~Revised

~~2018~~ 2022

ABBREVIATIONS

AAP: American Academy of Pediatrics. **AAPD**: American Academy of Pediatric Dentistry. **APAP**: Acetyl-para-aminophenol. **APS**: American Pain Society. **CDC**: Centers for Disease Control and Prevention. **COX**: cyclo-oxygenase. CNS: Central nervous system. **FDA**: U.S. Food and Drug Administration. **IV**:

Intravenous. **NSAIDs**: Nonsteroidal anti-inflammatory drugs. ~~**VAS**: Visual analogue scale.~~ **WHO:** World Health Organization

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) recognizes that infants, children, adolescents, and individuals with special health care needs can and do experience pain due to dental/orofacial injury, infection, and dental procedures, and that inadequate pain management may have significant physical and psychological consequences for the patient. Appreciation of pediatric pain can help practitioners develop clinical approaches to prevent or substantially relieve dental pain. When pharmacological intervention is necessary to manage pain, the practitioner must understand the consequences, morbidities, and toxicities associated with the use of specific therapeutic agents. These recommendations are intended to provide dental professionals and other stakeholders with current best practices for pain management in pediatric dentistry.

Methods

This document was developed by the Council on Clinical Affairs and adopted in 2018 (AAPD BP_Pain 2018). It is based on a review of current dental and medical literature pertaining to pain management in pediatric dental patients. Review of existing federal and professional pain management guidelines and consensus statements were used to assist with this document. An electronic search was conducted in the PubMed®/MEDLINE database using the terms: dental pain management, pediatric pain assessment, pre-emptive analgesia, paracetamol, pediatric and acetaminophen, adolescent and acetaminophen, pediatric and nonsteroidal anti-inflammatory drugs (**NSAIDs**), adolescent and NSAIDs, pediatric and opioids, adolescent and opioids, opioid risk, adolescent orofacial pain, pediatric and adolescent chronic pain, non-pharmacologic pain management; fields: all; limits: within the last 10 years, humans, English, systematic review, and clinical trials. There were 3,698 ~~1395~~ articles that met these criteria. Papers for review were chosen from this list and from references within selected articles. When data did not appear sufficient or were inconclusive, recommendations were based upon expert and/or consensus opinion by experienced researchers and clinicians.

Background

Pain is defined by the International Association of the Study of Pain as "an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage. ~~or described in terms of such damage.~~"(Raja et al. 2020~~IASP 2018~~) Their expanded definition includes six items that provide further context to the complex topic of pain: pain is always a personal experience; pain is different from nociception; pain is learned through life experiences; a person's report of pain should be respected; pain can have adverse effects on function and well-being; and, verbal description is one of several behaviors used to express pain. (Raja et al. 2020 IASP 2020).

Intraoral pain presenting as a toothache is a common source of orofacial pain in children. (Santos 2022) An estimated 95 percent of orofacial pain results from odontogenic causes (Tecco et al. 2018) and, according to a recent systematic review and meta-analysis, an overall pooled prevalence of toothache in children and adolescents was 36.2 percent. (Santos 2022) Pain experienced during dental procedures can be distressing for the provider, the child, and his parents and can also lead to difficult behavior, dental fear, and avoidance behavior in the child. (Randall et al. 2020) Moreover, p~~P~~ain experience in childhood may shape future pain experiences in adulthood.(Baccei & Fitzgerald 2013).

Pain from dental pulp arises when functional nerves are stimulated by bacteria or trauma (De Leeuw 2018). Periodontal pain occurs when infectious or traumatic insults to the gingiva, periodontal ligament, and alveolar bone stimulate free nerve endings (De Leeuw 2018). Other sources of orofacial pain include temporomandibular disorders (e.g., joint pain, masticatory muscle pain), headaches (e.g., migraine, tension type), or other non-odontogenic causes (e.g., pathologic jaw lesions, oral ulcers, neuralgia). Pain may be divided into diagnostic categories such as somatic, visceral, and neuropathic Zeltzer et al. 2019) Pain encountered in dentistry is typically inflammatory and categorized as somatic (i.e., periodontal, alveolar, mucosal) or visceral (i.e., pulpal) pain.(De Leeuw & Klasser 2018~~3~~)

Pain management includes pharmacologic and nonpharmacologic strategies to treat both acute and chronic pain. Due to the increased appreciation for pediatric pain and because of the national opioid crisis, recommendations for professional education and approaches for therapeutic management are being reviewed at the national, state, and local levels.(Schaefer et al. 2016; AAP/APS 2001; Assn. Paediatric Anaesthetists. 2012; Pogatzki-Zahn et al. 2007) ~~This document discusses pain processing, pain assessment, pain categories, pre-emptive analgesia, non-pharmacologic pain management, pharmacologic pain management, and best practices for prescribing opioids.~~

~~**Pain processing**~~ Understanding nociception (i.e., pain processing) is essential for the management of pain. ~~Pain experience in childhood may shape future pain experiences in adulthood.(Baccei & Fitzgerald 2013).~~ ~~Dental pain is an inflammatory condition resulting from tissue damage, infection, or invasive treatment.(Drew 2015) Swelling, hyperthermia, and activation of biochemical cascades are hallmarks of inflammatory pain.(Drew 2015; Brennan 2011)~~ Following tissue injury, infection, or invasive treatment, t~~T~~hermal, mechanical, and chemical stimuli activate receptors on free nerve endings in vital structures in the orofacial region.(Latremolier & Woolf 2009~~.(Dostrovsky 2014;~~ Dawes et al. 2013) In turn, s~~S~~ensory signals travel along afferent trigeminal nerve fibers and relay information to the brainstem and higher structures involved with the perception of pain.(Kaufman et al. 2005) Under normal conditions the perception of pain persists until the stimulus is removed. ~~*Peripheral sensitization*~~ Sensitization of central and peripheral nervous system circuits occurs following significant tissue damage or prolonged neuronal stimulation (Latremolier & Woolf 2009). Terminal nerve endings at the site of tissue injury exhibit an enhanced neuronal response to noxious stimuli in the peripheral nervous system.(Latremolier & Woolf 2009~~.(Dostrovsky 2014~~) This local increase in nerve membrane excitability is referred to as peripheral sensitization.(Latremolier & Woolf 2009) The exaggerated response to stimuli in the region of tissue damage is called primary hyperalgesia.(Kaufman et al. 2005, Latremolier & Woolf 2009)

~~*Central sensitization*~~ Central sensitization refers to enhanced functional status of pain circuits and pain processing at the level of the central nervous system (**CNS**).(Brennan 2011; Latremoliere & Woolf 2009; Woolf 2011) Both secondary hyperalgesia, which is an increase in

pain intensity to noxious stimuli outside of the area of tissue damage, and allodynia, which refers to pain perception following innocuous stimuli such as light touch, are characteristics of central sensitization.(Woolf 2011) ~~*Pain modulation*~~ Modulation of pain pathways occurs through CNS excitatory and inhibitory processes. Ascending facilitating and descending inhibitory processes enhance or suppress the pain experience, respectively.(Latremoliere & Woolf 2009) Both pharmacologic and nonpharmacologic methods target these processes to alter pain processing.(Stinson et al. 2016; Buvanendran et al. 2013)

~~**Pain assessment** Ethnic, cultural, and language factors may influence expression and assessment of pain.(Lee et al. 2014)~~ Pain assessment is an integral component of the dental history and comprehensive evaluation. When symptoms or signs of orofacial/dental pain are evident, a detailed pain assessment helps the dentist to derive a clinical diagnosis, develop a prioritized treatment plan, and better estimate analgesic requirements for the patient. Pain is difficult to measure due to its subjectivity, especially in children, (Jain 2012; Randall et al. 2020) and often relies on the report of parents or caregivers. In clinical practice, pain assessment is largely non-standardized and based on signs and symptoms rather than specific tools. (Randall et al. 2020)

Pain ~~is~~ can be assessed using self-report, behavioral (vocalization, facial expression, body movement), and biological (heart rate, transcutaneous oxygen, sweating, stress response) measures.(McGrath & Unruh, 2013) Direct questioning or a structured, comprehensive pain assessment can be clinically beneficial for pediatric and adolescent patients.(McGrath & Unruh 2013; Gouri et al. 2010) Conducting a structured interview begins with asking specific questions regarding pain onset, provoking factors, palliative factors, quality or character, region or location, severity or intensity, timing or duration, and impact on daily activities(Chou 2016). Obtaining information through self-report can be aided by asking the child to make comparisons, using temporal anchors and facilitating communication through objects or gestures.(McGrath & Unruh 2013) Assessing behavioral reactions and physiological reactions to pain are required in non-verbal patients, ~~and~~ young patients, and patients with special health care needs.(McGrath & Unruh 2013) Pain experienced by children with special health care needs or developmental disabilities is more challenging to assess accurately, and assessment may benefit from the

utilization of scales that rely on observations such as vocalization, facial expressions, and body movements.(Jain 2012)~~Four- to 12-years-old patients can likely quantify pain based on a series of faces.(McGrath et al. 2008) Patients older than seven should be able to mark pain using a visual analogue scale (**VAS**) or numeric scale.(McGrath et al. 2008; Hauer & Jones 2020)~~

Validated instruments available for assessing pain in verbal or nonverbal patients include: Wong-Baker FACES®, Faces Pain Scale (Revised), visual analogue scale (VAS), numeric rating scale (NRS), Faces, Legs, Activity, Cry, and Consolability score (FLACC), Revised Faces, Legs, Activity, Cry and Consolability (r-FLACC), and the McGill Pain Questionnaire.(McGrath et al. 2008; Hain et al. 2012; ~~AAPD P_Pain Management;~~ Jain 2012; Hauer & Jones 2020)

Additionally, ~~E~~ethnic, cultural, and language factors may influence the expression and assessment of pain.(Lee et al. 2014)

~~**Pain categories** Pain may be divided into diagnostic categories such as somatic, visceral, and neuropathic.(Kent et al. 2017; Fillingim et al. 2014; Betsch et al. 2017; Zeltzer et al. 2016) Pain encountered in dentistry is typically inflammatory and categorized as somatic (i.e., periodontal, alveolar, mucosal) or visceral (i.e., pulpal) pain.(De Leeuw & Klasser 2013)~~

Pain also may be categorized as acute or chronic. Acute pain that fails to respond to treatment may become chronic over time.(Batoz et al. 2016) Chronic pain refers to pain that is dysfunctional and persists beyond the time for typical tissue healing.(IASP 1986, Palmero et al. 2012; ~~Dowell et al. 2016; Grégoire & Finley 2013; Sessel 2014~~) Chronic pain is a costly public health problem that is difficult to treat (Gewandter 2015, WHO Guideline 2021).

Temporomandibular disorder (TMD) is an example of a chronic pain condition encountered in dentistry.(AAPD BP_Acquired TMD)

Pain management

Pre-emptive pain management

Pre-emptive pain management refers to the administration of an anesthetic agent, medication, or technique prior to a surgical event with the goal of decreasing pain. Goals of pre-emptive pain management include attenuating central sensitization, decreasing postoperative pain, improving

recovery, and reducing postoperative analgesic consumption.(Kaufman et al. 2005; Buvanendran et al. 2013; Raslan and Zouzou 2021; Ashley et al. 2016) Postoperative pain management in pediatric patients has been suboptimal in large part because ~~of the misconception that children do not feel pain as severely as adults do~~ parents frequently do not adequately treat pain that is experienced at home (Rony et al. 2010~~Kankkunen et al. 2003~~) and ~~the~~ fear ~~of~~ adverse events.(Finley et al. 2005) Pain after dental treatment under general anesthesia frequently is related to the total number of teeth treated. (Hu et al. 2018). ~~It has been shown that n~~Nearly 50 percent of patients undergoing dental rehabilitation describe moderate to severe pain(Wong et al. 2015), and data supports pre-emptive measures to optimize pain control for a variety of dental and surgical procedures.(Chou et al. 2016; Raslan and Zouzou 2021; Kaye et al. 2017, Kharouba 2019) ~~However, level of evidence is low due to sparse well-controlled trials.(Shirvani et al. J Oral Rehab 2017; Ashley et al. 2016; Kaye et al. 2017)~~

Achieving profound anesthesia prior to initiating invasive treatment decreases central sensitization.(Chou et al. 2016) Topical anesthetics are used in ~~a~~ dentistry to minimize pain; however, these medicaments alone may not be sufficient for dental procedures.(Boyce et al. 2016; Shavit et al. 2017) Topical anesthetics and over-the-counter products containing benzocaine have been used for minor procedures and to manage oral pain, teething, and ulcers (Malamed 2019). However, benzocaine use in children has been linked to methemoglobinemia, a life-threatening condition. (Gutenberg et al. 2013) In 2018, the U.S. Food and Drug Administration (**FDA**) issued a post-market warning against the use of these products for children younger than two years and that the products must have warning labels regarding methemoglobinemia. (US FDA Risks) Local anesthetic administration techniques, the anesthetic properties, and the needle used during injection ~~Other factors that~~ may contribute to a patient's pain experience ~~are the anesthetic properties and the needle used during the injection~~.(Glass et al. 2015) Distraction techniques made at the time of the injection (e.g. jiggling the patient's cheek, applying pressure to the palate with a mirror handle) take advantage of Aß-fiber signal dominance and can significantly reduce the intensity of pain-related C-fiber signaling.(Glass et al. 2015, Malamed 2019) Buffering or decreasing acidity of local anesthetic using sodium bicarbonate can decrease injection site pain and postoperative discomfort by

increasing the pH of the anesthetic. (Tirupathi 2020) . A recent systematic review demonstrated lower pain scores following inferior alveolar block injections in children when buffered versus non -buffered local anesthesia was used; however, there was no difference in observer-reported pain behavior (Tirupathi 2020). ~~This is a well-accepted technique in medicine but has not been commonly used in dentistry.(Glass et al. 2015; Malamed et al. 2013)~~ Finally, decreasing anesthetic delivery rate also has demonstrated pain reduction during injection.(Garret-Bernardin et al. 2017)

~~In one study, the~~ The use of pre-emptive analgesics in conjunction with local anesthetics has been shown to increase ~~increased~~ the ability to achieve pulpal anesthesia in patients with irreversible pulpitis when compared with placebo.(Shirvani et al. Clin Oral Investig 2017) and to suppress the intensity of injection pain and reduce pain following extractions. (Raslan and Zouzou 2021, Kharouba 2019) The pre-emptive analgesics most commonly used in dentistry are NSAIDs (e.g., ibuprofen) and acetaminophen, either alone or in combination.(~~Baygin 2011~~ Raslan and Zouzou 2021) Analgesics with sedative properties are often administered during the pre-, peri-, or~~and~~ post-operative periods when moderate to severe pain is anticipated.(Pacheco & Ferayorni 2013; AAPD BP_Use of N2O; Laskarides 2016; Conner et al. 2017)

Use of local anesthesia during general anesthesia

Although pain is not experienced during general anesthesia, central sensitization occurs when peripheral nerves are stimulated.(Chou et al. 2016; ~~Needleman et al. 2008~~; Keles & Kocaturk2017) Operating without local anesthesia may result in priming of CNS neurons and increased future pain sensitivity.(Baccei & Fitzgerald 2013) Central sensitization is minimized with pre-emptive analgesia or anesthesia. For this reason, regional block or infiltration anesthesia is commonly performed prior to surgical procedures to decrease postoperative pain.(Kaufman et al. 2005; Townsend et al. 2009; AAPD BP_Local Anesthesia) However, pharmacologic and cardiac considerations along with avoiding the numb sensation and potential for self-inflicted oral trauma are reasons providers may choose not to provide local anesthesia during general anesthesia.(AAPD BP_Local Anesthesia; Parekh et al. 2014)

Non-pharmacologic approaches to pain management

Studies suggest that nonpharmacologic interventions may be effective alone or as adjuncts to pharmacological interventions in managing procedure-related pain, anxiety, and distress with minimal risk of adverse effects.(Dostrovsky 2014; Landier & Tse 2010; Fein et al. 2012; Lewin & Dahl 1999) Fear and anxiety activate circuits within the CNS that facilitate pain.(Palmero et al. 2012) Creating a safe, friendly environment may help a child feel more comfortable and less stressed.(Fein et al. 2012; Ruest & Anderson 2016) The American Academy of Pediatrics (**AAP**) and the American Pain Society (**APS**) recommend that providers reduce distress-producing stimulation and provide a calm environment for procedures to improve pain management. (AAP/APS 2001) ~~Emotional support is a key component in creating a comfortable environment. (Sinha et al. 2006) Although there is no evidence that the presence of parents decreases pain, there is data to support that it may decrease the child's anxiety and distress.(Ruest & Anderson 2016) Conversely, parental catastrophizing has been associated with poor outcomes for pediatric pain management.(Rabbitts et al. 2017)~~ ~~The AAP and APS jointly advise expectation management for parents along with preparation for comforting their children when pain is anticipated.(AAP/APS 2001)~~ Individual studies have shown the efficacy of psychologic techniques, including preparation and information, parent coaching or training, suggestion, memory alteration or change, and coping self-statements.(Lyons 2009; Birnie et al. 2018 ~~Uman et al. 2007~~; Goettems 2017) ~~However, a 2013 Cochrane review concluded that there is no strong evidence available to support the efficacy of preparation and information, combined cognitive or behavioral strategies, parent coaching plus distraction, or suggestion for reducing needle-related pain and distress.(Uman et al. 2013)~~

Distraction and imagery

Distraction is an effective method of pain management in the pediatric population.(Lee et al. 2014; Davidson et al. 2016) It can be cognitive (e.g., counting, non-procedural talk) or behavioral (e.g., videos, games), both of which aim to shift attention away from pain. Distraction techniques such as bubbles, counting, conversation, music, television, toys, and video games may be used by health care providers or the child's caregiver.(Fein et al. 2012; Ruest Anderson 2016) ~~There is s~~Strong evidence support~~s~~ing the efficacy of distraction techniques for needle-

related pain and distress in children and adolescents.(Uman et al. 2013) Distraction ~~has been shown to be~~ is significantly effective when measuring pulse rates, respiratory rates, and self-reported pain.(AAP/APS 2001; Ruest & Anderson 2016) ~~Additionally, distraction intervention has been shown to lower the perception of pain distress in younger children as reported by parents.(Sinha et al. 2006)~~ Distraction techniques may be of great use with patients with special needs ~~that~~ who have shortened attention spans and ~~are unable to~~ cannot understand verbal reasoning or reassurance.(Lyons 2009) Distraction, hypnosis, combined cognitive behavior therapy (CBT), and breathing interventions have been effective in reducing children's needle-related pain or distress, or both. (Birnie et al. 2018)

Imagery guides the child's attention away from the procedure by harnessing imagination and storytelling. Imagery in combination with distraction has~~ve~~ been shown to ~~be~~ help~~ful in~~ decrease~~ing~~ postoperative pain in children.(Davidson et al. 2016; Bukola & Paula 2017) ~~This technique requires the active cooperation of the patient and is most effective when used for children over eight years old.(Landier & Tse 2010)~~

~~*Hypnosis*~~ *Hypnotherapy*

Hypnotherapy aims to alter sensory experiences and dissociate from pain experiences, and hypnosis is best for children of school age or older (Birnie et al 2018, Kohen 2014). ~~school-aged or older children.(Zeltzer et al. 2016~~) There is ~~strong~~ evidence ~~that hypnosis~~ hypnotherapy is effective in reducing needle-related pain and distress in children and adolescents;~~.~~(Birnie et al 2018, Uman et al. 2013; Ramírez-Carrasco et al. 2017) however, t~~T~~here is no evidence ~~that hypnosis~~ hypnotherapy alone is capable of producing an anesthetic effect necessary for invasive dental procedures.~~; therefore, it should always be combined with profound local anesthesia~~.(Ramírez-Carrasco et al. 2017)

Virtual reality and smart phone applications

The use of digital distraction can provide distraction and reduction in pain and distress for children undergoing painful procedures. (Gates et al. 2020; Cunningham et al. 2021) The use of virtual reality, video games, and smartphone applications has shown a reduction in self-reported

and observer-reported pain and distress during common procedures such as venipuncture and dental and burn treatments. (Gates et al. 2020). Further studies are needed to assess the benefits of distraction with a tablet compared to audiovisual glasses during dental procedures. (Cunningham et al. 2021)

Other techniques

Studies have shown efficacies for pediatric pain management with other techniques such as relaxation and breathing exercises, transcutaneous electrical nerve stimulation, acupuncture, counterstimulation, ~~virtual reality~~, video modelling, and music therapies.(Goettems et al. 2017; Davidson et al. 2016; Eccleston et al. 2014; Brown et al. 2017; Munshi et al. 2000; Kasat et al. 2014; ~~Aminabadi 2008~~ Monteiro et al. 2020; Klassen et al. 2008) Additional research is need on these interventions to measure their effectiveness. (Monteiro et al. 2020)

Pharmacologic/therapeutic a~~A~~gents

Management of pain in children is changing rapidly as a result of improvements in the appreciation of pediatric pain and pharmacologic knowledge. However, randomized controlled trials are lacking in children so the use of many pain medications ~~are~~ is ~~still~~ considered off label.(Hartling et al. 2016; Walco et al. 2017) ~~Acetaminophen, ibuprofen, and opioids are common medication choices for the treatment of acute pain in children.(Lee et al. 2014; Hartling et al. 2016).~~ Acetaminophen and ibuprofen are recommended as first-line medication choices for the treatment of acute pain in children. (Kelley JAM 2021; Lee et al. 2014; Hartling et al. 2016; Koh et al. 2019). Both have been shown to have good efficacy and safety and are also cost-effective analgesics. (Koh et al 2019; Timmerman and Parashos 2020) The use of opioids in children carries risks. (Kelley JAM 2021,Teoh 2020; Scrivani et al. 2021)

Non-opioid analgesics

Nonsteroidal anti-inflammatory drugs. NSAIDs are among the most commonly used class of drugs and have anti-inflammatory, analgesic, antipyretic, and antiplatelet properties.(Kokki 2003) They inhibit prostaglandin synthesis, with specific action on cyclooxygenase (COX), the enzyme responsible for converting arachidonic acid into pro-inflammatory mediators that drive postoperative pain, swelling, and hyperalgesia.(Laskarides 2016; Teoh 2020) Representatives of

the major categories of NSAIDs are salicylic acids (aspirin), acetic acids (ketorolac), proprionic acids (ibuprofen, naproxen), and cyclooxygenase-2 selective (celecoxib). Ibuprofen in oral or intravenous (**IV**) form is a safe and commonly used analgesic and antipyretic agent in pediatrics. (Kokki 2003; Koh et al. 2019). Ketorolac, an IV or intranasal NSAID, is useful in treating moderate to severe acute pain in patients unable or unwilling to swallow oral NSAIDs.(Zeltzer et al. 20192016; Keles & Kocaturk 2017; Neri et al. 2013) Some of the adverse effects associated with NSAIDs include: rash, inhibition of bone growth and healing, gastritis with pain and bleeding, decreased renal blood flow and kidney dysfunction, reversible inhibition of platelet function, hepatic dysfunction, and increased incidence of cardiovascular events.(Zeltzer et al. 20192016; Gosnel and Thikkurissy 2019) A specific concern with NSAIDs is the potential to exacerbate asthma due to a shift in leukotrienes.(Hartling et al. 2016). Due to shared pathways, combined NSAIDs and corticosteroid steroidal anti-inflammatory medications (e.g. prednisone) use may increase the potential for gastrointestinal bleeding should not routinely be co-administered.(Moore 2015,Becker 2010)

Acetaminophen (acetyl-para-aminophenol [APAP], paracetamol). Acetaminophen is an analgesic with efficacy for mild to moderate pain and is also an antipyretic.(Becker 2010) Unlike NSAIDs, acetaminophen is centrally-acting and does not have anti-inflammatory effects or an effect on gastric mucosal lining or platelets.(Becker 2010) Its mechanism of action is the blockade of prostaglandin and substance P production. Allergic reactions are rare, (Gosnell and Thikkurissy 2019) but toxicity from overdose may result in acute liver failure (Drew 2015). Acetaminophen is can be administered in tablets, capsules, and liquid but also is also available as oral disintegrating tablets, oral disintegrating films, and rectal and IV forms.(Laskarides 2016) Studies have shown that rRectal administration has somewhat higher bioavailability and faster onset than the oral route since it partially bypasses hepatic metabolism.(Shah et al. 2014) Pain control can be optimized when acetaminophen and NSAIDs are alternated or staggered, a technique known as multimodal therapy.(Hartling et al. 2016; Becker 2010; Ong et al. 2010)

Opioid analgesics

Opioid analgesics historically have been used ~~for many years~~ to produce profound pain relief in all age groups. Opioid analgesics are considered for acute moderate to severe pain refractory to other therapies. However, opioids only interrupt the nociceptive pathway to inhibit pain perception and do not target inflammation (Teoh 2020), which is an integral part of managing dental pain. Common uses in pediatric patients include pain associated with cancer, sickle cell disease, osteogenesis imperfecta, epidermolysis bullosa, and neuromuscular disease.(Schechter & Waldo 2016; Cooper et al. 2017; Fortuna et al. 2010) Limited studies are available regarding postoperative opioid use in pediatric dentistry, ~~but it is also rare~~perhaps because it is rare that pediatric dental patients ~~should~~ require opioid analgesics following dental treatment.(Laskarides 2016) However, opioid/nonopioid combination mediations followed by oxycodone and morphine were the most common analgesics prescribed to children during post-operative emergency room encounters (Stake 2022). Major concerns of opioid analgesics in the pediatric population are efficacy, safety, misuse, and accidental deaths.(Walco et al. 2017; Van Cleve Grigg 2017; Rudd et al. 2016)

Opioids interact differentially with μ, κ, and δ receptors in the central nervous system. Opioid agonists act on receptors located in the brain, spinal cord, and digestive tract. ~~Pathways of opioid receptor signaling are multiple and include G-protein receptor coupling, cyclic adenosine monophosphate inhibition, and calcium channel inhibition.(Laskarides 2016)~~ Activation of opioid receptors can cause respiratory depression, pupil constriction (miosis), euphoria, sedation, physical dependence, endocrine disruption, and suppression of opiate withdrawal.(Zeltzer et al. 2019~~2016~~) Pruritus (itching) may ~~also~~ occur due to histamine release that accompanies some opioid analgesics.(Pacheco & Ferayorni 2013) Naloxone is a μ opioid receptor competitive antagonist usually administered parenterally to counter opioid overdose.(Laskarides 2016) Pain medicine specialists (e.g. pain physicians, anesthesiologists) are experienced in continuing, tapering, or discontinuation of opioids in ~~If~~ patients who are actively prescribed opioids for cancer or ~~non-cancer~~other pain~~, providers should choose another agent for analgesia or consult with a specialty provider (e.g., pain medicine practitioner, anesthesiologist) regarding opioid dosing~~.(Walco et al. 2017, WHO 2020)

~~Opioids with active metabolites.~~ Codeine has more adverse effects and limited efficacy for dental pain when compared to over-the-counter analgesics. (Teoh 2020) Codeine, tramadol, and hydrocodone, and to a lesser extent oxycodone and fentanyl, are ~~opioids that are~~ broken down in the liver to active metabolites by the highly variable cytochrome enzyme, CYP2D6.(~~AAPD P – Pain Management; Becker 2010~~; US FDA 2017; Tobias et al. 2016, Crews 2021) Some opioid analgesics~~These drugs~~ are ineffective in certain~~some~~ children due to poor drug metabolism. (Dostrovsky et al. 2014; Tobias et al. 2016) Yet, other patients known as hyper-metabolizers hydrolyze ~~break these~~ prodrugs to their active forms too quickly, potentially resulting in overdose, respiratory depression, and even death.(US FDA 2017; Tobias et al. 2016) The ~~U.S. Food and Drug Administration (~~FDA~~)~~ and AAP ~~and European Medicines Agency have~~ issued warnings and safety communications ~~contraindications statements~~ on codeine and tramadol over the past few years because of this.(US FDA safety communication ~~2017~~; Tobias et al. 2016 ~~European Medicine Agency~~) Hydrocodone and oxycodone also rely~~ies~~ on cytochrome p450 metabolism and have~~s~~ the potential for similar adverse effects.(Crews 2021) Although systematic reviews have demonstrated that these medications ~~might~~ provide appropriate analgesia when compared to placebo, evidence is not convincing they outperform non-opioid analgesics, and safety concerns exist.((Schnabel et al. 2015; Dancel et al. 2017) In 2017, the FDA issued a warning specifically for codeine and tramadol ~~in all patients less than 12 years of age~~, stating they are no longer considered safe to use in all patients less than 12 years of age~~in this age group~~.(US FDA 2017) Deaths have occurred in children using these medicines for post tonsillectomy and/or adenoidectomy pain management, general pain, sore or strep throat pain, and cold and cough.(US FDA 2017; Tobias et al. 2016) The FDA warns that in the 12-17-year age group, these medications should not be used in high-risk patients (e.g., those with obesity, obstructive sleep apnea, lung tissue disease).(US FDA 2017) Furthermore, tramadol and codeine should not be used if breastfeeding since active metabolites are present in breastmilk.(US FDA safety communication ~~2017~~)

~~**Opioids without active metabolites.** Inactive metabolites refer to metabolites that do not have a noticeable effect on the CNS. Naturally-occurring morphine and the synthetics oxycodone and fentanyl do not have CYP2D6 considerations since they do not contain active~~

metabolites.(Becker 2010) Although morphine causes respiratory depression and histamine release, it consistently provides rapid relief of severe pain for 2-3 hours (Zeltzer 2019). To that point, the pPotency of all opioids is compared to morphine using a morphine milligram equivalent dose (Zeltzer 2019, CDC). Considering the variability of drug metabolism, safety concerns, and the experience of pain, the "right dose" for everyone does not exist (Zeltzer 2019). Morphine provides rapid relief of severe pain for 2-3 hours and is associated with histamine release and respiratory. For example, fentanyl is 100 times more potent than morphine, ultra-short acting, and used for invasive procedures and sedations.(Zeltzer et al. 20192016) Chest wall rigidity is a well-known adverse reaction to fentanyl.(Zeltzer et al. 20192016) Rapidly-acting oxycodone has a longer half-life than morphine and is more potent (Zeltzer 2019). Oxycodone is available as a single agent or is combined with aspirin, ibuprofen, or acetaminophen. It comes in tablets, capsules, oral solution, and oral concentrate, and use is considered off label in children 12 years of age and younger.(Laskarides 2016,Stake 2022)

Opioid concerns and Centers for Disease Control and Prevention (CDC) and World Health Organization (WHO) recommendations. Trends in opioid overdose, opioid misuse, and concerns for opioid addiction prompted the CDC and the World Health Organization (WHO) to issue guidelines for prescribing opioids for chronic pain.(Dowell et al. 2016) The CDC guideline focuses on adults while the WHO guideline relates specifically to children (Dowell 2016, WHO 2020). Although chronic pain is the focus of the guidelines, bothThe guideline aims to improve prescribing practices and to ultimately benefit patient safety, emotional well-being, health and quality of life.(Tompkins et al. 2017, Dowell, WHO) Although the guidance is specific for adults with chronic pain, all prescribers should be mindful of high-risk prescribing practices.(Tompkins et al 2017) The topics covered in the guidelines include recommends limiting opioids for moderate to severe pain, restricting opioid prescriptions to three days, and providing concurrent pharmacologic and non-pharmacologic therapy, and following accepted protocols for procurement, storage, and the disposal of unused opioids.(Dowell et al. 2016, WHO 2020) The CDC guideline also advises against overlapping benzodiazepines and opioids prescriptions because of the increased potential for respiratory depression.(Dowell et al. 2016) Dentists can

~~have a role in decreasing the overall availability of opioids for nonmedical use and abuse in the home and community.(DePhillips et al. 2017)~~

Deaths due to opioid overdoses ~~are at~~ reached record highs prompting the CDC to declare an opioid epidemic in 2011.(Rudd et al. 2016; DePhillips et al. 2019 ~~2017~~) The pediatric mortality rate for opioid p~~P~~oisoning ~~deaths~~ increased ~~of opioids~~ nearly threefold ~~quadrupled~~ from 1999 to 2016~~11~~, with nearly 9,000 children and adolescents in the United States dying as a result of opioids ~~the most recent data at 5.4 per 100,000 individuals~~.(DePhillips et al. 2019 2017) A trend towards increased pediatric emergency department visits due to opioid ingestion and a greater than ~~5~~fivefold increase in overdose death rates in the 15-24-year age group also have been demonstrated.(DePhillips et al. 2019 ~~2017~~) ~~Since commercial opioids often are combined with acetaminophen, the potential for hepatic failure from toxic levels of acetaminophen also must be considered.(Drew 2015) As previously stated, providers treating pediatric and adolescent populations should avoid prescribing opioid analgesics when patients are using benzodiazepines.(Dowell et al. 2016)~~ Risky use of opioids among children and adolescents is a growing trend, and the concern for opioid use disorder in adolescents is significant.(Allareddy et al. 2017; McCabe et al. 2017) Since commercial opioids often are combined with acetaminophen, the potential for hepatotoxicity~~ic failure from toxic levels of acetaminophen also must be considered~~is an accompanying concern.(Drew 2015) In 2016, the A~~merican A~~cademy of P~~ediatrics~~ released a policy statement that recommended timely intervention to curb opioid use disorder with the goal of eliminating long-term medical, psychiatric, and social consequences of ongoing substance abuse.(~~Citation needed~~ Tobias et al.2016)

Opioid r~~R~~isk mitigation involves ~~begins with understanding how to~~ recognize~~ing~~ drug-seeking behavior.(Shaefer et al. 2016) To address the potential risk of opioid misuse~~/abuse~~, screening patients prior to prescribing opioids ~~should be~~ has been advocated as standard practice.(Dowell et al. 2016) ~~Screening commonly is performed with adult patients using a variety of screening tools.(Smith et al. 2015) Although screening adolescents for opioid abuse or misuse has been suggested~~However, a standardized assessment for adolescents has not been identified.(Walco et al. 2017; Smith et al. 2015) Therefore, ~~the practitioner should,~~ at a minimum, ~~perform~~ a thorough

review of medical history including analgesics used in the past is indicated before prescribing. (Walco et al. 2017) Despite the fact that screening of parents is recommended by the AAP, this is not a common practice.(Lane et al. 2007; Spehr et al. 2017) Nonetheless, screening is essential for identifying children at risk of opioid exposure in the home. ~~It also is known that c~~Children of parents who abuse opioids are at an increased risk for neglect and often suffer from parental instability and lack of structure in the home.(Spehr et al. 2017) ~~Therefore, behavioral health support may be required for emotional disturbances such as drug abuse, depression, or post-traumatic stress disorder.(Spehr et al. 2017)~~

For professionals who suspect patients have misuse~~/abuse~~ issues, the FDA, National Institutes of Health, National Institute on Drug Abuse, the American Dental Association, and state prescription drug monitoring programs have resources available to review the history of prescriptions for controlled substances which may decrease their diversion.(NIH 2014) Transparent discussion about the potential for physical and/or psychological dependence is a critical component of safe opioid practices in the adolescent population. ~~of medication use with teens is important.~~(AAPD P_Substance Misuse,Kelley 2020) Furthermore, discussion regarding the proper disposal of unused controlled medications is key to reducing availability/diversion of opioids~~substances with the potential for abuse or for physical and/or psychological dependence~~.(AAPD P Substance Misuse, Kelley JAM 2020). Safeguarding of opioids stored in offices for sedation can be accomplished by following security requirements for dispensers of controlled substances (21CFR 1301-75 Title Drug Enforcement Administration Dept of Justice).

Recommendations

Infants, children, and adolescents can and do experience pain due to dental/orofacial injury, infection, and dental procedures. Inadequate pain management may have significant physical and psychological consequences for the patient. Adherence to the following recommendations can help practitioners prevent or substantially relieve pediatric dental pain and minimize risk of associated morbidities. Practitioners should:

1. assess p~~P~~ain ~~assessment should be considered~~ for all patients as part of the dental history.

2. avoid sensitization by using ~~Careful~~ techniques ~~should be used~~ to minimize stimulation and tissue damage when providing dental treatment.
3. achieve p~~P~~rofound anesthesia ~~should be achieved~~ prior to invasive treatment.
4. use ~~of~~ pre-emptive analgesia ~~should be considered~~ when moderate to severe postoperative pain is anticipated.
5. manage odontogenic and non-odontogenic pain with combined n~~N~~onpharmacologic ~~techniques~~ (e.g., distraction) and pharmacologic ~~should carefully be considered as potentially valuable interventions for~~ pain management.
6. use APAP/NSAIDs ~~should be used~~ as first-line pharmacologic therapy for pain management.
7. ~~U~~use caution and carefully assess benefits and risks of adverse events when considering prescribing ~~of~~ opioids ~~should be rare~~ for pain management in~~for pediatric~~ children and adolescents~~dental patients~~.
8. ~~To help~~ minimize the risk of opioid misuse~~abuse~~, ~~pediatric patients and their parents should be screened~~ by screening patients and parents regarding previous/current opioid use before prescribing opioid analgesics.
9. ~~To avoid diversion of controlled substances, practitioners should~~ utilize prescription monitoring databases and ~~encourage~~inform parents~~patients~~ to properly discard ~~any~~ unused medications to avoid diversion of controlled substances.
10. inform parents of ~~Providers should be knowledgeable of~~ risks associated with prescribed and over-the-counter analgesic medications and anticipate and manage adverse effects (e.g., asthma and NSAIDs, sedation and opioids.)
11. ~~S~~seek~~ing~~ expert consultation for patients with chronic pain or other complicated pain condition ~~should be considered~~.
12. ~~Providers should~~ be familiar with analgesic properties of agents when used in conjunction with ~~during~~ sedation or general anesthesia.
13. ~~Prescribing opioid analgesics should be avoided~~ strongly advise against opioids in high-risk patients (e.g. obesity, obstructive sleep apnea, lung tissue disease, ~~if the patient is using~~ benzodiazepine~~s~~ use).

14. use an alternating schedule of APAP and NSAIDS for multi-modal pain management if single-agent therapy is ineffective ~~Synergistic effects from multiple medications (multimodal analgesia) may be considered~~.

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This draft does not constitute an official AAPD health oral policy or clinical recommendation until approval by the General Assembly. Circulation is limited to AAPD members.

Pediatric Restorative Dentistry

Latest Revision

~~2019~~ 2022

Abstract

This best practice provides clinicians with guidance to form decisions about restorative dentistry, including when treatment is necessary and which techniques and materials are appropriate for restorative dentistry in pediatric patients. Not every caries lesion requires restoration, and restorative treatment of caries alone does not stop the disease process. Further, restorations have finite lifespans. Restorative approaches and supporting evidence for the excavation and restoration of deep caries lesions, including complete excavation, stepwise (i.e., two-step) excavation, partial (i.e., one-step) excavation, and no removal of caries prior to restoration, are discussed. Further research on long-term effectiveness of resin infiltration for small, non-cavitated interproximal lesions is recommended. The evidence for and against the use of amalgam, composite, glass ionomer and resin-modified glass ionomer cements, compomers, stainless steel crowns, and anterior crowns has been summarized. Practitioners should familiarize themselves with such evidence to inform their clinical decisions regarding pediatric restorative dentistry.

This document was developed through a collaborative effort of the American Academy of Pediatric Dentistry Councils on Clinical Affairs and Scientific Affairs to offer updated information and guidance regarding restorative dental care for children.

KEYWORDS: DENTISTRY, OPERATIVE, DENTAL MATERIALS, DENTAL RESTORATION, PERMANENT, DENTAL RESTORATION, TEMPORARY, EVIDENCE-BASED DENTISTRY

ABBREVIATIONS

AAP: American Academy of Pediatrics. **ART**: Alternative restorative technique. **BPA**: Bisphenol A. **FDA**: Food and Drug Administration. **GIC**: Glass ionomer cement. **HT**: Hall technique. **ITR**: Interim therapeutic restoration. **MIH**: Molar-incisor hypomineralization **MTA**: Mineral trioxide aggregate. **PMC:** Preformed metal crown(s). **RCTs**: Randomized controlled trials. **RMGIC**: Resin modified glass ionomer cements. **SDF**: Silver diamine fluoride. **SSC**: Stainless steel crown(s). **UK**: United Kingdom.

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) intends these recommendations to help practitioners make decisions regarding restorative dentistry, including when it is necessary to treat and what the appropriate materials and techniques are for restorative dentistry in children and adolescents.

Methods

These recommendations originally were developed by the Restorative Dentistry Subcommittee of the Clinical Affairs Committee and adopted in 1991.(AAPD 1991) The last ~~comprehensive~~ revision by the Council on~~f~~ Clinical Affairs ~~of this document was~~ occurred in 2019~~2014,(AAPD BP_Restorative) and an addition regarding the Hall technique (**HT**) for preformed metal crowns was added in 2016.~~(AAPD G_Restorative ~~2016~~2019) A thorough review of the scientific literature in the English language pertaining to restorative dentistry in primary and permanent teeth was completed to revise the previous guide-line. Electronic database ~~and hand~~ searches using PubMed®/Medline, for the most part between the years ~~2000-~~2012-2022~~2019~~, were conducted using the terms: dental caries, intra-coronal restorations, restorative treatment decisions, caries diagnosis, caries excavation, dental amalgam, glass ionomers, resin modified glass ionomers, conventional glass ionomers, glass ionomer cements, atraumatic/alternative restorative technique (**ART**), interim therapeutic restoration (**ITR**), resin infiltrations, resin based composite, dental composites, compomers, full coverage dental restorations, stainless steel crowns (**SSC**), Hall technique, primary molars, preformed metal crowns **(PMC)**, strip crowns, pre-veneered crowns, zirconia crowns, esthetic restorations; parameters: humans, English, birth through age 18, clinical trials, randomized controlled clinical trials (**RCTs**). This search yielded 1,671 articles. Articles were screened by viewing titles and abstracts. Articles were chosen for review from these searches and from the references within selected articles. When data did not appear sufficient or were inconclusive, recommendations were based upon expert and/or consensus opinion by experienced researchers and clinicians.

~~Full evaluation and abstraction included examination of the clinical efficacy on specific restorative dentistry topics, research methods, and potential for study bias (e.g., patient recruitment, randomization, blinding, subject loss, sample size estimates, conflicts of interest, statistics). Research that was considered deficient or had high bias was eliminated. In those topic areas for which there were rigorous meta-analyses or systematic reviews available, only those clinical trial articles that were not covered by the reviews were subjected to full evaluation and abstraction.~~

~~The assessment of evidence for each topic was based on a modification of the American Dental Association's grading of recommendations: strong evidence (based on well-executed RCTs, meta-analyses, or systematic reviews); evidence in favor (based on weaker evidence from clinical trials).(ADA 2013)~~

Background

~~**When to restore**~~

Historically, the management of dental caries was based on the belief that caries was a progressive disease that eventually destroyed the tooth unless there was surgical and restorative intervention.(AAPD Caries Risk Assessment 2018~~Tinanoff & Douglass 2001~~) It is now recognized that restorative treatment of dental caries alone does not stop the disease process(~~Sheiham 1997~~) and restorations have a finite lifespan.(AAPD Caries Risk Assessment 2018) Conversely, some caries lesions may not progress and, therefore, may not need restoration.

Contemporary management of dental caries includes identification of an individual's risk for caries progression, understanding of the disease process for that individual, and active surveillance to assess disease progression. ~~and~~ ~~m~~Management with ~~appropriate~~targeted preventive services~~,~~ and therapy such as silver diamine fluoride are supplemented by restorative therapy when indicated.(AAPD BP_Car~~r~~ies Risk Assessment; Urquhart et al. 2019; AAPD P_Silver Diamine Fluoride,)

Molar-incisor hypomineralization **(MIH)** is a developmental defect involving any number of the permanent first molars and possibly the permanent incisors as well. This condition presents esthetic and restorative challenges due to the range of clinical variation, including hypersensitivity, altered resin bond strength, potential for tooth structure loss and a caries presentation that can be unusual. (Giuca et al 2020; Somani et al 2021) Restorative treatment options and overall management of MIH depends on the degree of affected teeth, potential for breakdown of tooth structure, sensitivity, severity and quality of the dental defect in addition to patient preferences and behavior.(Martignon et al 2021; Somani et al 2021)

When to restore

~~With the exception of reports of dental examiners in clinical trials, studies of reliability and reproducibility of detecting dental caries are not conclusive.(NIH 2001) There also is minimal information regarding validity of caries diagnosis in primary teeth,(Tinanoff & Douglass 2001) as~~

~~primary teeth may require different criteria due to thinner enamel and dentin and broader proximal contacts.(Nelson 2010)~~

Among the objectives of restorative treatment are to repair or limit the damage from caries, protect and preserve the tooth structure, and maintain pulp vitality whenever possible. The AAPD's *Use of Vital Pulp Therapies in Primary Teeth with Deep Caries Lesions* (Dhar et al. 2017) and *Pulp Therapy for Primary and Immature Permanent Teeth*(AAPD 2020 state the treatment objective for a tooth affected by caries is to maintain pulpal vitality, especially in immature permanent teeth for continued apexogenesis.

~~Furthermore~~, ~~i~~Indications for restorative therapy only have been examined superficially because such decisions generally have been regarded as a function of clinical judgment.(Bader & Shugars 1992) Decisions for when to restore caries lesions should include at least clinical criteria of visual detection of enamel cavitations, visual identification of shadowing of the enamel, and/or radiographic recognition of enlargement of lesions over time.(AAPD BP_Caries Risk Assessment; Ismail et al. 2007; Beauchamp et al. 2008)

The benefits of restorative therapy include: removing cavitations or defects to eliminate areas that are susceptible to caries; stopping the progression of tooth demineralization; restoring ~~the integrity of~~ tooth structure and function; preventing the spread of infection into the dental pulp; and preventing the shifting of teeth due to loss of tooth structure. The risks of restorative therapy include reducing the longevity of teeth by making them more susceptible to fracture, recurrent lesions, restoration failure, pulp exposure during caries excavation, future pulpal complications~~, and~~ in addition to the risk of iatrogenic damage to adjacent teeth.(Downer et al. 1999; Lenters et al. 2006; Slayton 2015)

Primary teeth may be more susceptible to restoration failures than permanent teeth.(Hickel et al. 2005) Additionally, before restoration of primary teeth, one needs to consider the length of time remaining prior to tooth exfoliation.

Recommendations:

1. Management of dental caries should include~~s~~ identification of an individual's risk for caries progression, understanding of the disease process for that individual, and active surveillance to assess disease progression and manage with appropriate preventive services, supplemented by restorative therapy when indicated.

2. Decisions for when to restore carious lesions should include at least clinical criteria of visual detection of enamel cavitation, visual identification of shadowing of the enamel, and/or radiographic recognition of progression of lesions.

Deep caries excavation and restoration

~~Among the objectives of restorative treatment are to repair or limit the damage from caries, protect and preserve the tooth structure, and maintain pulp vitality whenever possible. The AAPD's *Use of Vital Pulp Therapies in Primary Teeth with Deep Caries Lesions*(Dhar et al. 2017) and *Pulp Therapy for Primary and Immature Permanent Teeth*(AAPD 20202018) state the treatment objective for a tooth affected by caries is to maintain pulpal vitality, especially in immature permanent teeth for continued apexogenesis.(Bjørndal 2010)~~

With regard to the treatment of deep caries, three methods of caries removal have been compared to complete excavation, where all carious dentin is removed. Stepwise excavation is a two-step caries removal process in which carious dentin is partially removed at the first appointment, leaving caries over the pulp, with placement of a temporary filling. At the second appointment, all remaining carious dentin is removed and a final restoration placed.(Bjørndal 2010) Partial, or one-step, caries excavation removes part of the carious dentin, but leaves caries over the pulp, and subsequently places a base and final restoration.(Maltz et al. 2012; Maltz et al. 2013) No removal of caries before restoration of primary molars in children aged three to 10 years also has been reported.(Innes et al. 2011)

Evidence from ~~RCTs and a systematic review~~ multiple studies show~~s~~ that pulp exposures in primary and permanent teeth are significantly reduced when using incomplete caries excavation compared to complete excavation in teeth with a normal pulp or reversible pulpitis. Two trials and a Cochrane review found that partial excavation resulted in significantly fewer pulp exposures compared to complete excavation.(Lula et al 2009; Orhan et al 2010; Ricketts et al. 2013) One five-year RCT evaluated the pulpal vitality of teeth treated with partial excavation compared to stepwise excavation and found that the success rate was significantly higher in partial excavation (80 percent) versus stepwise excavation (56 percent). (Maltz et al 2018) Two trials of step-wise excavation showed that pulp exposure occurred more frequently from complete excavation compared to stepwise excavation. (Bjørndal 2010; Orhan 2010) There also is evidence of a decrease in pulpal complications and post-operative pain after incomplete caries excavation compared to complete excavation in clinical trials, summarized in a meta-analysis.(Schwendicke 2013)

Additionally, a meta-analysis found the risk for permanent restoration failure was similar for incompletely and completely excavated teeth.(Schwendicke et al. 2013) With regard to the need to reopen a tooth with partial excavation of caries, one RCT that compared partial (one-step) to stepwise excavation in permanent molars found higher rates of success in maintaining pulp vitality with partial excavation, suggesting there is no need to reopen the cavity and perform a second excavation.(Maltz et al. 2012) Interestingly, two RCTs suggest that restoration without excavation can arrest dental caries so long as a good seal of the final restoration is maintained.(Innes et al 2011; Mertz-Fairhurst et al. 1998)

Recommendations:

1. ~~There is evidence from~~ Multiple RCTs and systematic reviews determined that incomplete caries excavation in primary and permanent teeth with normal pulps or reversible pulpitis, either partial (one-step) or stepwise (two-step) excavation, results in fewer pulp exposures and fewer signs and symptoms of pulpal disease than complete excavation. Incomplete caries removal should be considered in primary and permanent teeth with deep caries and normal pulp status or reversible pulpitis when complete caries removal is likely to result in pulp exposure.
2. ~~There is evidence from t~~Two systematic reviews reported that the rate of restoration failure in permanent teeth is no higher after incomplete rather than complete caries excavation.
3. ~~There is evidence that~~ Numerous studies concluded that partial (one-step) excavation followed by placement of final restoration leads to higher success in maintaining pulp vitality in permanent teeth than stepwise (two-step) excavation.

Resin infiltration

Resin infiltration is used primarily to arrest the progression of non-cavitated interproximal caries lesions.(Paris et al. 2010; Meyer-Lueckel et al. 2012) The aim of the resin infiltration technique is to allow penetration of a low viscosity resin into the porous lesion body of enamel caries.(Paris et al. 2010) Once polymerized, this resin serves as a barrier to acids and theoretically prevents lesion progression. (Dorri et al. 2015; Lee et al 2016)

A systematic review and meta-analysis evaluating~~ed~~ the effectiveness of enamel infiltration in preventing initial caries progression in proximal surfaces of primary and permanent teeth~~. This review identified eight studies for inclusion for quantitative analysis.(Faghihian et al. 2019) Seven of the eight studies~~ found that infiltration was significantly more effective than placebo treatment. (Faghihian et al. 2019) ~~The meta-analysis compared 470 teeth in the resin infiltration group and 473 in the control group. Caries~~

~~progression was seen in 61 of the infiltration group and 185 of the control group.~~ In three randomized clinical trials, resin infiltration, when used as an adjunct to preventive measures, was found to be more effective in reducing the radiographic progression of early or incipient proximal lesions on primary molars than preventive measures alone over a 24 month period. (Bagher et al 2018; Jorge et al 2019; Sarti et al 2020; Tellez et al 2013) Current American Dental Association **(ADA)** clinical practice guidelines for non-restorative treatment for non-cavitated interproximal caries lesions conditionally recommends enamel infiltration for treatment of these lesions, (low to very low certainty).(Slayton et al. 2018) Few RCTs evaluate the long-term effectiveness of resin infiltration~~, and further research is recommended~~. An additional use of resin infiltration has been suggested to restore white spot lesions ~~formed during orthodontic treatment~~. Based on a RCT, resin infiltration significantly improved the clinical appearance of such white spot lesions and visually reduced their size.(~~Tellez et al. 2013;~~ Senestraro et al. 2013)

Recommendation:

1. ~~There is low to moderate evidence in favor of resin infiltration as a treatment option for small, non-cavitated interproximal caries lesions in primary and permanent teeth.~~ Resin infiltration is indicated as an adjunct to preventive measures for primary and permanent teeth with small, non-cavitated interproximal caries lesions to reduce lesion progression and for white spot lesions to improve their clinical appearance.
2. Further research regarding long-term effectiveness of resin infiltration is needed.

Dental amalgam

Dental amalgam ~~has been the most commonly used restorative material in posterior teeth for over 150 years.(Beazoglou et al. 2007) Amalgam~~ contains a mixture of metals such as silver, copper, and tin, in addition to approximately 50 percent mercury.(US DHHS 2010) Dental amalgam has declined in use ~~over the past decade,(Beazoglou 2007)~~ perhaps due to the controversy surrounding perceived health effects of mercury vapor, environmental concerns from its mercury content, and increased demand for esthetic alternatives. (Beazoglou 2007)

~~With regard to safety of dental amalgam, a comprehensive literature review of dental studies published between 2004 and 2008 found insufficient evidence of associations between mercury release from dental amalgam and the various medical complaints.(ADA 2009~~) Two independent RCTs in children have examined the effects of mercury release from amalgam restorations and found no effect on the central and peripheral nervous systems and kidney function.(Belliger et al. 2006; DeRouen et al. 2006) However, ~~on July 28,~~ in 2009, the U.S. Food and Drug Administration (**FDA**) issued a final rule that reclassified

dental amalgam to a Class II device (having some risk) and designated guidance that included warning labels regarding: (1) possible harm of mercury vapors; (2) disclosure of mercury content; and (3) contraindications for persons with known mercury sensitivity. Also in this final rule, the FDA noted ~~that there is limited~~ information regarding dental amalgam and the long-term health outcomes in pregnant women, developing fetuses, and children under the age of six is limited.(US DHHS 2010)

In 2020, the FDA published recommendations on the use of dental amalgam in certain populations considered high-risk, such as pregnant women, women planning to become pregnant, nursing women, children under six years old, and people with pre-existing neurological disease among others. (FDA 2020) The FDA recommended providers avoid the use of dental amalgam in these high-risk populations and consider alternative restorative materials. (FDA 2020) However, the ADA immediately reaffirmed that amalgam is a durable, safe and effective restorative option and that the FDA's recommendations did not cite any new scientific evidence. (ADA 2020) The ADA encourages providers review all options for restorations with their patients and review the risks and benefits of amalgam. (ADA 2020) Both organizations recommend that existing amalgam fillings in good condition should not be removed or replaced unless medically necessary. (US FDA 2020, ADA 2020)

With regard to clinical efficacy of dental amalgam, results comparing longevity of amalgam to other restorative materials are inconsistent. The majority of meta-analyses, evidence-based reviews, and RCTs report comparable durability of dental amalgam to other restorative materials,(Heintze & Rousson 2012; Mickenautsch & Yengopal 2012; Yengopal et al. 2009; Manhart et al. 2004; Soncini et al. 2007; Mandari et al. 2003) while others show greater longevity for amalgam.(Bernardo et al. 2007; Qvist et al. 2004) The comparability appears to be especially true when the restorations are placed in controlled environments such as university settings.(Heintze & Rousson 2012)

Class I amalgam restorations in primary teeth have shown in a systematic review and two RCTs to have a success rate of 85 to 96 percent for up to seven years, with an average annual failure rate of 3.2 percent. (Hickel et al. 2005; Soncini et al. 2007; Qvist et al. 2004) Efficacy of Class I amalgam restorations in permanent teeth of children has been shown in two independent RCTs ~~randomized controlled studies~~ to range from 89.8 to 98.8 percent for up to seven years.(Soncini et al. 2007; Bernardo et al. 2007)

With regard to Class II restorations in primary molars, a 2015~~2007~~ systematic review recommended ~~concluded~~ that amalgam could be utilized in preparations that do not extend beyond proximal line angles.

(Fuks 2015) ~~should be expected to survive a minimum of 3.5 years and potentially in excess of seven years.(Kilpatrick & Neumann 2007)~~ For Class II restorations in permanent teeth, one meta-analysis and one evidence-based review conclude that the mean annual failure rates of amalgam and composite are equal at 2.3 percent.(Heintze & Rousson 2012; Manhart et al. 2004) The meta-analysis comparing amalgam and composite Class II restorations in permanent teeth suggests that higher replacement rates of composite in general practice settings can be attributed partly to general practitioners' confusion of marginal staining for marginal caries and their subsequent premature replacements. (Heintze & Rousson 2012) Otherwise, this meta-analysis concludes that the median success rate of composite and amalgam are statistically equivalent after ten years, at 92 percent and 94 percent respectively.(Heintze & Rousson)

The limitation of many of the clinical trials that compare dental amalgam to other restorative materials is that the study period often is short (24 to 36 months), at which time interval all materials reportedly perform similarly.(de Amorim et al. 2014; Kavvadia et al. 2004; Fuks et al. 2000; Duggal et al. 2002; Donly et al. 1999) Some of these studies also may be at risk for bias, due to lack of true randomization, inability of blinding of investigators, and, in some cases, financial support by the manufacturers of the dental materials being studied.

Recommendation:

1. ~~There is strong evidence that d~~Dental amalgam ~~is efficacious in the~~ may be used to restore~~ation of~~ Class I and Class II cavity restorations in primary and permanent teeth.
2. Providers should review the risks and benefits of amalgam restorations with patients.

Composites

Resin-based composite restorations were introduced in dentistry about a half century ago as an esthetic restorative material(Leinfelder 1988; Minguez et al. 2003), and composites increasingly are used in place of amalgam for the restoration of ~~carious~~caries lesions.(~~Opdam et al. 2010~~ Heintze & Rousson 2012; Lynch et al 2014) Composites consist of a resin matrix and chemically bonded fillers.(Heintze & Rousson 2012) They are classified according to their filler size, because filler size affects physical properties, polishability/esthetics, polymerization depth~~,~~ and polymerization shrinkage~~, and physical properties~~. (Dhar et al 2015) Hybrid resins combine a mixture of particle sizes for improved strength while retaining esthetics.(Burgess et al. 2002) The smaller filler particle size allows greater polishability and esthetics, while larger size provides strength. Flowable resins have a lower volumetric filler percentage than hybrid resins.(Pallav et al. 1989)

Several factors contribute to the longevity of resin composites, including operator experience, restoration size, and tooth position.(Bernardo et al. 2007) Resins are ~~more~~ technique sensitive ~~than amalgams~~ and require longer placement time than amalgams. (Donly & Garcia-Godoy 2015) In cases where isolation or patient cooperation is in question, resin-based composite may not be the restorative material of choice. (Antony et al 2008; Donly, Garcia-Godoy 2015) Additionally, composite may not be the ideal restorative material for primary posterior teeth requiring large multi-surface restorations or high-risk patients with poor oral hygiene, numerous carious teeth and demineralization.(Donly, Garcia-Godoy 2015)

Bisphenol A (**BPA**) and its derivatives are components of resin-based dental sealants and composites. Trace amounts of BPA derivatives are released from dental resins through salivary enzymatic hydrolysis and increase from baseline at 24 hours post-treatment, but return to baseline by 14 days and remain at baseline six months after treatment.(Marzouk 2019) ~~may be detectable in saliva up to three hours after resin placement.(Fleisch et al.2010)~~ Evidence is accumulating that certain BPA derivatives may pose health risks attributable to their ~~estrogenic~~endocrine-disrupting properties, but no established thresholds for safety and exposure have been determined. (Marzouk 2019) BPA exposure reduction is achieved by cleaning filling surfaces with pumice and cotton roll and rinsing. Additionally, potential exposure can be reduced by using a rubber dam.(Alves dos Santos 2010) Considering the proven benefits of resin based dental materials and minimal exposure to BPA and its derivatives, ~~it is recommended to~~ continued use~~ing~~ of these products, while taking precautions to minimize BPA exposure, has been recommended.(Fleisch)

There is strong evidence from a meta-analysis of 59 RCTs of Class I and II composite and amalgam restorations showing an overall success rate about 90 percent after 10 years for both materials, with rubber dam use significantly increasing restoration longevity.(Heintze & Rousson 2012) ~~Other isolation techniques (e.g., dental isolation suction systems) may be used.~~ Strong evidence from RCTs comparing composite restorations to amalgam restorations showed that the main reason for restoration failure in both materials was recurrent caries.(Soncini et al. 2007; Bernardo et al. 2007; Alves dos Santos et al. 2010)

In primary teeth, there is strong evidence that composite restorations for Class I restorations are successful.(Hickel et al. 2005; Soncini et al. 2007) ~~There is only o~~One RCT showed~~ing~~ success in Class II composite restorations in primary teeth that were expected to exfoliate within two years.(Fuks et al. 2000) Another RCT comparing total caries removal versus selective caries removal with composite restorations showed a statistically significant higher survival rate with total caries removal after 36 months (81 percent to 57 percent). (Liberman et al 2020) In permanent molars, composite replacement after 3.4 years was no

different than amalgam,(Soncini et al. 2007) but after seven to 10 years the replacement rate was higher for composite.(Antony et al. 2008) Secondary caries rate was reported as 3.5 times greater for composite versus amalgam.(Bernardo et al. 2007) ~~There is evidence from a~~A meta-analysis ~~showing~~concluded that etching and bonding of enamel and dentin significantly decreases marginal staining and detectable margins in composite restorations.(Heintze & Rousson 2012) Regarding different types of composites (packable, hybrid, nanofilled, macrofilled, and microfilled), there is strong evidence showing similar overall clinical performance for these materials.(Dijken & Pallesen 2013; Krämer et al. 2011; Shi et al. 2010; Ernst et al. 2006)

Recommendations:

1. Resin-based composites can be used as Class I and Class II restorations in primary and permanent molars. ~~In primary molars, there is strong evidence from RCTs that composite resins are successful when used in Class I restorations~~. ~~For Class II lesions in primary teeth, there is one RCT showing success of composite resin restorations for two years.~~
2. ~~In permanent molars, there is strong evidence from meta-analyses that composite resins can be used successfully for Class I and II restorations.~~
3. ~~3.~~ Evidence from a meta-analysis shows enamel and dentin bonding agents decrease marginal staining and detectable margins for the different types of composites.
3. Precautions should be used in conjunction with placement of resin-based composites to help minimize BPA exposure.

Glass-ionomer cements (GIC)

Glass-ionomers cements have been used in dentistry as restorative cements, cavity liner/base, and luting cement since the early 1970s.(Wilson & Kent 1972) Originally, glass ionomer materials had long setting times and~~were difficult to handle,~~ low fracture strength and exhibited poor wear resistance.~~, and were brittle~~. (Berg and Croll 2015) Advancements in conventional glass ionomer formulation led to better properties, including the formation of resin-modified glass ionomers. These products showed improvement in handling characteristics, decreased setting time, increased strength, and improved wear resistance.(Mitra & Kedrowski 1994; Douglas & Lin 1994) All glass ionomers have several properties that make them favorable for use in children including: chemical bonding to both enamel and dentin; thermal expansion similar to that of tooth structure; biocompatibility; uptake and release of fluoride; and decreased moisture sensitivity when compared to resins. (Berg and Croll 2015)

Fluoride is released from glass ionomer and taken up by the surrounding enamel and dentin, resulting in teeth that are less susceptible to acid challenge.(Tam 1997; Tyas 1991) ~~One study has shown that fluoride release can occur for at least one year.(Swartz et al.)~~ Glass ionomers can act as a reservoir of fluoride, as uptake can occur from dentifrices, mouth rinses, and topical fluoride applications.(Forsten 1998; Donly & Nelson 1997) This fluoride protection, useful in patients at high risk for caries, has led to the use of glass ionomers as luting cement for SSCs, space maintainers, and orthodontic bands.(Donly et al. 1995)

~~Regarding use of conventional glass ionomers in primary teeth,~~ ~~o~~One RCT showed the overall median time from treatment to failure of conventional glass- ionomer restored primary teeth was 1.2 years.(Qvist et al. 2004) Based on findings of a systematic review and meta-analysis, conventional glass ionomers ~~are~~have not been recommended for Class II restorations in primary molars.(Chadwick & Evans 2007; Toh & Messer 2007) Conventional glass ionomer restorations have other drawbacks such as poor anatomical form and marginal integrity.(Dao et al. 2009; Mickenautsch et al. 2009) Composite restorations were more successful than GICs where moisture control was not a problem.(Toh & Messer 2007)

Resin-modified glass-ionomer cements (**RMGICs~~s~~**), with the acid-base polymerization supplemented by a second resin light cure polymerization, have been shown to be efficacious in primary teeth. (Sidhu 2011) Based on a meta-analysis, RMGIC is more successful than conventional glass ionomer as a restorative material.(Toh & Messer 2007) A systematic review supports the use of RMGIC in small to moderate sized Class II cavities.(Chadwick & Evans 2007) Class II RMGIC restorations are able to withstand occlusal forces on primary molars for at least one year.(Toh & Messer 2007) Because of fluoride release, RMGIC may be considered for Class I and Class II restorations of primary molars in a high caries risk population.(Mickenautsch et al. 2009) ~~There is also some evidence that c~~Conditioning dentin improves the success rate of RMGIC.(Chadwick & Evans 2007) According to one RCT, cavosurface beveling leads to high marginal failure in RMGIC restorations and is not recommended.(Alves dos Santos 2010)

With regard to permanent teeth, a meta-analysis review reported significantly fewer ~~carious~~caries lesions on single-surface glass ionomer restorations in permanent teeth after six years as compared to restorations with amalgam.(Mickenautsch et al. 2009) Data from a meta-analysis shows that RMGIC is more caries preventive than composite resin with or without fluoride.(Yengopal & Mickenautsch 2011) Another meta-analysis showed that cervical restorations (Class V) with glass ionomers may have a good retention rate but poor esthetics.(Heintze et al 2010) For Class II restorations in permanent teeth, one RCT showed unacceptable high failure rates of conventional glass ionomers, irrespective of cavity size. (Frankenberger

2009) However, a high dropout rate ~~was observed~~ in this study limits~~ing its~~ significance.(Frankenberger) ~~In general, there is insufficient evidence to support the use of RMGIC as long-term restorations in permanent teeth.~~

Silver diamine fluoride (**SDF**) application has been used prior to or in conjunction with GIC and RMGIC restorations in primary and permanent teeth. A systematic review and meta-analysis that evaluated the influence of SDF on the dentin bonding of adhesive materials included eleven and ten studies, respectively.(Frohlich et al. 2019) The systematic review found that prior application of SDF does not have a negative effect on the bond strength between glass ionomer cement and dentin. (Frohlich et al. 2019) Another systematic review of thirteen studies that examined the effect of SDF application on the bond strength between dentin and adhesives and dentin and glass ionomer cements was inconclusive due to the inconsistent results from the included studies. (Jiang et al 2020) Further research examining the effect of SDF application to the bond strength of glass ionomers, as well as the advantages of its use prior to the application of glass ionomers, is needed.

Glass ionomers can be utilized for caries control in patients with high caries risk and restoration repair. (Berg, Croll 2015) Other applications of glass ionomers where fluoride release has advantages are for ITR and ART. These procedures have similar techniques but different therapeutic goals. ITR may be used in very young patients,(Wambier et al. 2007) uncooperative patients, or patients with special health care needs(Mandari et al. 2003) for whom traditional cavity preparation ~~and/~~or placement of traditional dental restorations ~~are~~is not feasible or needs to be postponed. Additionally, ITR may be used for caries control in children with multiple open caries~~ous~~ lesions, prior to definitive restoration of the teeth.(Dulgergil 2005) In-vitro, leaving caries-affected dentin does not jeopardize the bonding of glass ionomer cements to the primary tooth dentin.(Alves et al. 2013). ART, endorsed by the World Health Organization and the International Association for Dental Research, is a means of restoring and preventing caries in populations that have little access to traditional dental care and functions as definitive treatment. (Frencken et at 2009)

According to a meta-analysis, single surface ART restorations ~~showed high survival rates in both primary and permanent teeth.(van't Hof et al)~~ had a high survival percentage over the first three years in primary teeth and a high survival percentage over the first five years in permanent teeth. (de Amorim et al 2018) One RCT supported single surface restorations irrespective of the cavity size and also reported higher success in non-occlusal posterior ART compared to occlusal posterior ART.(Frencken et al 2007) With

regard to multi-surface ART restorations, there is conflicting evidence. Based on a meta-analysis, ART restorations presented similar survival rates to conventional approaches using composite or amalgam for Class II restorations in primary teeth.(Raggio 2013; Tedesco et al 2017) ~~However, another meta-analysis showed that m~~Multi-surface ART restorations in primary teeth exhibited a medium survival percentage over two years.(de Amorim et al 2018) A recent RCT that compared modified ART to preformed metal crowns on primary teeth reported major failures on 21 percent of modified ART restorations at six months and 34 percent at twelve months.(Ebrahimi et al 2020). More research is needed on the survival percentage of multi-surface ART restorations in permanent teeth.~~high failure rates.(van't Hof et al. 2006)~~

Recommendations:

1. ~~There is evidence in favor of~~ GICs may be used for Class I restorations in primary teeth.
2. ~~From a systematic review, there is strong evidence that~~ RMGICs may be used for Class I restorations ~~are efficacious,~~ and expert opinion supports Class II restorations in primary teeth.
3. ~~There is insufficient e~~Evidence is insufficient to support the use of conventional or RMGICs as long-term restorative material in permanent teeth.
4. ~~From a meta-analysis, there is strong evidence that~~ ITR/ART using high viscosity glass ionomer cements ~~has value~~ may be used as single surface temporary restoration for both primary and permanent teeth. Additionally, ITR may be used for caries control in children with multiple open carious lesions, prior to definitive restoration of the teeth.
5. Further research is needed examining the effect of SDF application on the bond strength of glass ionomers to dentin.

Compomers

Polyacid-modified resin-based composites, or compomers, were introduced into dentistry in the mid-1990s. They contain 72 percent (by weight) strontium fluorosilicate glass and the average particle size is 2.5 micrometers.(Nicholson 2007) Moisture is attracted to both acid functional monomer and basic ionomer-type in the material. This moisture can trigger a reaction that releases fluoride and buffers acidic environments.(Cildir & Sandalli 2005; Peng et al. 2000) Considering ~~the~~its ability to release fluoride, esthetic value, and simple handling properties, ~~of~~ compomer~~, it~~ can be useful in pediatric dentistry. (Nicholson 2007)

Based on a ~~recent~~ 2007 RCT, the longevity of Class I compomer restorations in primary teeth was not statistically different compared to amalgam, but compomers were found to need replacement more frequently due to recurrent caries.(Soncini 2007) In Class II compomer restorations in primary teeth, the

risk of developing secondary caries and failure did not increase over a two-year period in primary molars.(Duggal et al. 2002; Daou et al. 2009) Compomers also have reported comparable clinical performance to composite with respect to color matching, cavo-surface discoloration, anatomical form, and marginal integrity and secondary caries.(Attin et al. 2000; Attin et al. 2001) Compomers are available in a variety of non-conventional colors which, when polymerized, can cause varying pulp chamber temperatures. (Ertugrul and Ertugrul 2019; Bakkal et al. 2019) Most RCTs showed that compomer tends to have better physical properties compared to ~~glass ionomer~~GIC and ~~resin modified glass ionomer cements~~RMGIC and in primary teeth, but no significant difference was found in cariostatic effects of compomer compared to these materials.(Qvist et al. 2004; Daou et al. 2009; Welbury et al. 2000; Baba et al. 2021; Sagmak et al. 2020, Francois et al. 2020)

Recommendations:

1. Compomers can be an alternative to other restorative materials in the primary dentition in Class I and Class II restorations.
2. There is not enough data comparing compomers to other restorative materials in permanent teeth of children.

Bioactive Materials

A recently recognized category of materials is termed bioactive. Bioactive restorative materials release ions, typically calcium, fluoride or phosphate (Skrtic and Atonucci 2011) yet at times antibacterial monomers, silver particles or strontium particles. (Slowikowski et al 2014) The materials also can absorb ions at their surface. Although they may not meet true ionic equilibrium, the ion exchange still can help prevent adjacent tooth demineralization and enhance remineralization. (May et al 2017; Donly et al 2018)

Bioactive dental restorative materials are available for sealants, adhesive bonding agents, cements, resin-based restorations, GIC and RMGIC restorations, as well as pulp capping agents. Since each bioactive material interacts with hard tissue differently, a modified surface treatment may be required. (Xu 2019)

Recommendations:

1. Bioactive materials can be used for remineralization and pulp capping.
2. Further research examining the basic properties and long-term effect of bioactive materials and comparing bioactive materials to other restorative materials is needed.

Preformed metal crowns

Preformed metal crowns (PMC), also known as SSCs, are prefabricated crown forms that are adapted to individual teeth and cemented with a biocompatible luting agent. PMC~~reformed metal crowns~~ have been indicated for the restoration of primary and permanent teeth with extensive caries, cervical decalcification, ~~and/~~or developmental defects (e.g., hypoplasia, hypocalcification), when failure of other available restorative materials is likely (e.g., interproximal caries extending beyond line angles, patients with bruxism), following pulpotomy or pulpectomy, for restoring a primary tooth that is to be used as an abutment for a space maintainer , for the intermediate restoration of fractured teeth, and for definitive restorative treatment for high caries-risk children. (Seale & Randall 2015) They are used more frequently in patients who exhibit high caries risk and whose treatment is performed under sedation or general anesthesia.(Attari & Roberts 2006; Randall 2002; Innes et al. 2007)

~~There are v~~Very few prospective RCTs compare~~ing~~ outcomes for ~~preformed metal crowns~~PMC to intra-coronal restorations.(Atieh 2008; Hutcheson et al. 2012) A Cochrane review and additional studies, including two systematic reviews, concluded that the majority of clinical evidence for the use of PMC ~~preformed metal crowns~~ has come from nonrandomized and retrospective studies. (Hickel et al. 2005; Attari, Roberts 2006; Randall 2002; Innes et al 2007) However, this evidence suggests that ~~preformed metal crowns~~PMC showed greater longevity than amalgam restorations,(Hickel et al. 2005) despite possible study bias of placing SSCs on teeth more damaged by caries.(Randall 2002; Innes et al. 2007; Randall et al. 2000) Five studies which retrospectively compared Class II amalgam to PMC~~preformed metal crowns~~ showed an average five year failure rate of 26 percent for amalgam and seven percent for PMC~~preformed metal crowns~~.(Randall 2002) In a recent retrospective study, SSC were shown to have a higher survival rate compared to multi-surface restorations and may be considered when treating multi-surface caries in children younger than four years old in order to avoid possible retreatment.(Wu 2021)

A two-year RCT regarding restoration of primary teeth that had undergone a pulpotomy procedure found a non-significant difference in survival rate for teeth restored with PMC~~preformed metal crowns~~ (95 percent) versus ~~resin modified glass ionomer~~RMGIC/composite restoration (92.5 percent).(Atieh 2008) ~~In another prospective study, significantly fewer restoration failures and improved calcium hydroxide pulpotomy success were found with preformed metal crowns (79.7 percent) versus amalgam restorations (60 percent) after one year.(Sonmez & Duruturk 2010) However, a systematic review did not show strong evidence that preformed metal crowns were superior over other restorations for pulpotomized teeth.(Bazargan et al. 2007)~~ A one-year RCT comparing primary molars treated with mineral trioxide aggregate (**MTA**) pulpotomies and restored with either multi-surface composite restorations or PMC

showed no difference in radiographic success over a 12-month follow up period. (Hutcheson et al 2012) However, the pulpotomy treated teeth with multi-surface composite restorations had more marginal change and required more maintenance than the pulpotomy treated teeth with PMC and a majority turned gray up to 12 months later even with the use of white MTA. (Hutcheson et al 2012) A systematic review on the use of SSC determined that the outcomes of primary teeth with pulpal therapy are reported as best in teeth treated with SSC. (Seale & Randall 2015).

With regards to gingival health adjacent to PMC~~preformed metal crowns~~, a one year RCT showed no difference in gingival inflammation between PMC~~preformed metal crowns~~ and composite restorations after pulpotomy.(Innes et al. 2007) Yet, a two-year randomized clinical study showed more gingival bleeding for PMC~~preformed metal crowns~~ ~~vs~~.versus composite/glass ionomer restorations.(Atieh 2008) Inadequately contoured crown and residues of set cement remaining in contact with the gingival sulcus ~~are~~have been suggested as reasons for gingivitis associated with preformed metal crowns, and a preventive regime including oral hygiene instruction ~~is~~has been recommended to be incorporated into the treatment plan.(Randall 2002)

The~~re is~~ one RCT on PMC~~preformed metal crowns~~ versus cast crowns placed on permanent teeth, (Zagdwon et al. 2003) ~~and this report~~ found no difference between the two restoration types for quality and longevity after 24 months. A recent retrospective cohort study that focused on the long-term clinical outcomes of SSCs compared to amalgam and composite restorations in permanent teeth on special needs populations concluded that posterior permanent teeth restored with SSCs can be expected to last for 10 years and represent a viable treatment option for severely carious or fractured posterior permanent teeth.(Sigal et al 2020) The remaining evidence is case reports and expert opinion concerning indications for use of PMC~~preformed metal crowns~~ on permanent molars. The indications include teeth with severe genetic/developmental defects, grossly carious teeth, and traumatized teeth, along with tooth developmental stage or financial considerations that require ~~re-quire~~ semi-permanent restoration instead of a permanent cast restoration.(Attari et al. 2006; Randall et al. 2000; Zagdwon et al. 2003) The main reasons for PMC~~preformed metal crowns~~ failure reportedly is~~are~~ crown loss(Hickel et al. 2005; Sonmez & Duruturk 2010; Roberts et al. 2005) and perforation.(Roberts et al. 2005)

~~One~~ A recent method of providing preformed metal crowns is known as the Hall technique (**HT**).(Innes et al. 2006). The Hall technique ~~is method~~ calls for cementation of a SSC over a caries-affected primary molar without local anesthetic, caries removal, or tooth preparation. ~~It is a~~A less invasive ~~caries~~

management procedure for treating carious primary teeth, ~~and~~**HT** involves ~~the concept of~~ caries control by managing the activity of the biofilm.(Santamaria et al. 2018) In essence, bacteria sealed into the tooth and denied of substrate will die rather than result in caries progression and the best way of producing an effective marginal seal is with a crown. (Welbury 2017) ~~This technique was developed for use when delivery of ideal treatment was not feasible.~~

Using the HT may reduce discomfort from local anesthetic and caries removal at the time of treatment compared to fillings,(Innes et al. 2006) but it may add the discomfort of placement of separator bands prior to the SSC, as well as the pain from biting the crown into place.(Page et al. 2014) In a randomized split mouth clinical trial with general dentists as providers, sealing in caries by using HT significantly outperformed the general dentists' standard restorations to restore caries interproximally and was more effective in the long term. (Innes et al 2011) HT may be considered as a treatment modality for carious primary molars when traditional stainless steel crown technique is not feasible due to limitations such as poor cooperation or barriers to care (Ebrahimi et al 2020) Additional studies that compare this technique to traditionally placed PMC using long term follow-ups, radiographic assessment and caries removal are needed.(Ebrahimi et al 2020; Fontana et al. 2012)

~~The HT has gained some popularity in the United Kingdom (**UK**),(Innes et al. 2006) primarily from use by general dentists (who provide the majority of care for young children).(Roberts et al. 2018) All prospective investigations on the effectiveness of HT have been~~ conducted ~~by general dentists in UK, and comparison groups include restorative treatment as traditionally provided in~~ UK ~~those settings.,~~ ~~where traditional use of SSCs to restore caries in primary teeth has not been a popular or a frequently used technique.(Roshan et al. 2003; Threlfall et al. 2005; Blinkhorn & Zadeh-Kabir 2003; Maggs-Rapport et al. 2000; This is in spite of the existence of guidelines and policy statements from the British Society of Paediatric Dentistry that SSCs are the restoration of choice for primary molars with multi-surface lesions or extensive caries or when pulp treatment has been performed.(Kindelan et al. 2008; Fayle et al. 2001 Results of a 2003 repeat questionnaire of general dentists in the UK showed that the use of amalgam had declined with an increase in the use of GIC and very little change in the use of SSCs.(Roshan et al. 2003) Placement of GIC restorations or observation without treatment was the management approach of choice, and the use of local anesthesia to provide dental care to children was infrequent.(Threlfall et al. 2005) Given the differences in treatment approaches in health care settings and system between countries, the HT has not been widely adopted in the U.S., and it usually is limited to individual situations where proven methods of caries management cannot be used.(Fontana et al. 2012) Studies that compare this technique~~

~~to traditionally placed preformed metal crowns using radiographic assessment and caries removal are needed.(Fontana et al. 2012)~~

~~Recent retrospective studies (BaniHani et al. Int J Paediatr Dent 2018; BaniHani et al. Caries Res 2018) for cost-effectiveness combined with a cross-sectional evaluation of patient acceptance showed that 95.8 percent of primary teeth restored using the HT remained asymptomatic after a follow-up period of up to 77 months, compared to 95.3 percent in the conventional methods (caries removal with placement of SSC or other restoration); they did not, however, report a breakdown by follow-up time. Although HT and conventional restorative methods had similar successful outcomes, using the HT was associated with reduced treatment costs if general anesthesia or sedation is considered. Both approaches were accepted favorably by the children and care providers.(BaniHani et al. Caries Res 2018)~~

SSCs continue to offer the advantage of full coverage to combat recurrent caries and provide strength as well as long-term durability with minimal maintenance, which are desirable outcomes for caries management for high-risk children.(Seale & Randall 2015)

Recommendations:

1. ~~There is evidence from~~ ~~r~~Retrospective studies reported ~~showing~~ greater longevity of PMC~~preformed metal crown~~ restorations compared to amalgam or resin-based restorations for the treatment of caries lesions in primary teeth. Therefore, use of SSCs is ~~supported on~~ indicated for high-risk children with large or multi-surface cavitated or non-cavitated lesions on primary molars, especially when children require advanced behavioral guidance techniques(AAPD BP_Behavior Guidance) including general anesthesia for the provision of restorative dental care.
2. ~~There is evidence from case reports and one RCT supporting the use of~~ PMC~~preformed metal crowns~~ may be indicated in permanent teeth as a semi-permanent restoration for the treatment of severe enamel defects or grossly carious teeth.
3. Further research comparing Hall Technique to traditionally-placed PMC is needed.

Posterior Esthetic Crowns in Primary Teeth

The interest by clinicians and patients in esthetic options for full coverage restoration of primary posterior teeth is increasing ~~by clinicians and patients~~.(Holsinger et al. 2016; Davette et al. 2016) Scientific studies that evaluate esthetic options for restoring posterior primary teeth with large caries lesions are not widely reported in the literature. ~~The most popular options are opened-face SSCs, pre-veneered SSCs, and zirconia crowns.(Planells & Fuks 2014)~~ While opened-faced SSC or pre-veneered SSC are not ideal based on minimum evidence, zirconia crowns are an option that has been used by pediatric dentists. ~~There~~

~~are~~ ~~s~~Several preformed pediatric zirconia crowns are available on the market, and ~~each~~ brands ~~has~~ differ~~ent~~ in material composition, fabrication, surface treatment, retentive feature, and cementation method. (Alrashdi 2022) ~~The amount of tooth reduction and technique for tooth preparation varies significantly.(Clark et al. 2016)~~ ~~There is need for m~~More circumferential tooth reduction ~~requirements~~is needed for proper fit and placement of~~for~~ zirconia crowns compared to SSC~~s~~ (Clark et al 2016) and for proper retention, the minimum abutment height is two millimeters. (Jing 2019) The indications for the preformed esthetic crowns are generally the same as those of the preformed SSC~~s~~ but with consideration of esthetics.(Donly et al. 2018) ~~SSCs have comparatively better retention, but recent studies demonstrate that the gingival health and plaque accumulation around~~ Clinical parameters between zirconia crowns ~~are better than~~ and SSC~~s~~ are similar except for retention and gingival health; SSC have comparatively better retention and zirconia crowns have relatively better gingival health.(Donly et al. 2018; Taran, Kaya 2018)

Recommendations:

1. Evidence is limited on the use of zirconia crowns as esthetic crowns for primary posterior teeth. When SSC would otherwise be indicated, zirconia crowns may be considered in lieu of SSC to due to esthetic considerations.

Anterior esthetic restorations in primary teeth

With increasing demand for esthetics in children by their parents, treatment of dental caries of primary anterior teeth remains one of the biggest challenges in pediatric dentistry.(Hamrah 2021) ~~Despite the continuing prevalence of dental caries in primary maxillary anterior teeth in children, the esthetic management of these teeth remains problematic.(Shah et al. 2004)~~ Esthetic restoration of primary anterior teeth can be especially challenging due to: the small size of the teeth; close proximity of the pulp to the tooth surface; relatively thin enamel; lack of surface area for bonding; and issues related to child behavior.(Waggoner ~~2006~~ 2015)

~~There is little scientific support~~Most of the evidence for ~~any of~~ the clinical techniques ~~that clinicians have~~ utilized ~~for many years~~ to restore primary anterior teeth~~, and most of the evidence~~ is regarded as expert opinion. While a lack of strong clinical data does not preclude the use of these techniques, it points out the strong need for well-designed, prospective clinical studies to validate their use ~~of these techniques~~. (~~Waggoner 2002~~ Waggoner 2015) ~~Additionally, there is limited information on the potential psychosocial impact of anterior caries or unaesthetic restorations in primary teeth.(Shah et al. 2004)~~

Class III (interproximal) restorations of primary incisors can be prepared with labial or lingual dovetails to incorporate a large surface area for bonding to enhance retention.(Waggoner ~~2002~~ 2015) Resin-based restorations are appropriate for anterior teeth that can be adequately isolated from saliva and blood. **RMGIC**~~Resin-modified glass ionomer cements~~ have been suggested for this category, especially when adequate isolation is not possible.(Croll et al. 2001; Donly 2013; Berg & Croll 2015) ~~It has been suggested that p~~Patients considered at high-risk for ~~future~~ caries may be better served with placement of full tooth coverage restorations.(Donly 2013; Waggoner 2015)

Class V (cervical) cavity preparations for primary incisors are similar to those in permanent teeth. Due to the young age of children treated and associated cooperation~~behavior guidance~~ difficulty, it is sometimes impossible to isolate teeth for the placement of composite restorations. In these cases, GIC or RMGIC is suggested.(Croll et al. 2001; Donly 2013)

Full coronal restoration of carious primary incisors may be indicated when: (1) caries is present on multiple surfaces, (2) the incisal edge is involved, (3) there is extensive cervical decalcification, (4) pulpal therapy is indicated, (5) caries may be minor, but oral hygiene is very poor, or (6) the child's behavior makes moisture control very difficult.(Waggoner ~~2002~~2015) ~~Successful full-coronal restorations of extensively decayed primary anterior teeth have been reported; however, due to the lack of available clinical studies, it is difficult to determine whether certain techniques of restoring carious primary anterior teeth are effective.(Waggoner 2006 ; Lee 2002 A retrospective study showed that 80 percent of strip crowns were completely retained after three years, and 20 percent were partially retained, with none being completely lost.(Kupietzky et al. 2005) Another retrospective study, with 24-74 months follow-up, reported 80 percent retention of strip crowns.(Ram & Fuks 2006)~~ Currently, full coronal restorations of primary teeth are bonded to existing tooth structure, or cemented in place. (Waggoner 2015) Resin strip crowns are bonded to the tooth, and two retrospective studies show that 80 percent are retained after three years.(Kupietzky 2005; Ram, Fuks 2006) Resin strip crowns are esthetic and parental satisfaction is high. They are technique sensitive and require sufficient tooth structure to provide surface area for bonding. Hemorrhage or saliva can interfere with bonding of the materials and hemorrhage can affect the color of the crown. (Waggoner 2015; Alrashdi 2022)

Preveneered SSCs also are among the options of restoring primary anterior teeth with full coronal coverage. Three retrospective studies report excellent clinical retention of this~~e~~ type~~s~~ of crowns, yet ~~with~~ a high incidence of partial or complete loss of the resin facings.(Shah et al. 2004; Roberts et al. 2001~~;~~

~~MacLean et al. 2007~~) The crimping of preveneered SSC on the metal side does not affect the fracture resistance.(Gupta et al 2008) Preveneered SSC~~s~~ have the concerns of color stability and surface roughness changes,(Truong et al. 2017) so long term clinical studies are required to establish their comparative effectiveness. Preformed SSC~~s~~ and opened-face SSC~~stainless steel crowns~~ are still options for treatment on primary anterior teeth, but published studies reporting their effectiveness and use are sparse(Roshan et al. 2003) given the availability of more esthetic and easier-to-use alternatives.

Preformed ~~pediatric~~ zirconia crowns have been available in pediatric dentistry since 2010.(Alrashdi 2022) Zirconia crowns are strong, esthetic, and biocompatable.(Gill 2020; Waggoner 2015) Zirconia crowns placed in a university clinic displayed survival probability at 12, 24 and 36 months of 93, 85, and 76 percent respectively. (Seminario 2019) Parental esthetic satisfaction has been shown to be higher for zirconia crowns than resin strip crowns or preveneered SSC. (Gill 2020) Disadvantages of zirconia crowns include a steep learning curve for dentists and since the crowns cannot be adjusted, the tooth must be reduced in order to fit the crown. The amount of tooth reduction is greater than that required for a SSC and reduction of 1.5 to two millimeters with a feather margin is required to passively seat the zirconia crown. (Clark et al 2016)~~are another option for esthetic full coronal coverage restoration. (Planells & Fuks 2014) As they require a passive fit, the amount of tooth reduction is greater than that required for SSC (minimum of 1.5-2.0 mm), and technique for tooth preparation does vary significantly among different brands.(Clark et al. 2016) Although a RCT with a follow-up of only six months suggests that zirconia crowns gave significantly better results than the others with regard to gingival health and crown fractures(Donly et al. 2018), a systematic review on the topic(Taran & Kaya 2018) concluded that due to the small number of RCTs on this topic and their risk of bias, future RCTs with better study design are required to compare differences between the different types of pediatric preformed zirconia crowns and between other esthetic treatment options~~.

Recommendations:

1. ~~There is expert opinion that suggests the use of r~~Resin-based composites may be used as a treatment option for Class III and Class V restorations in the primary and permanent dentition.
2. ~~There is e~~Expert opinion ~~that suggests~~ finds the use of **RMGIC** as a treatment option for Class III and Class V restorations for primary teeth, particularly in circumstances where adequate isolation of the tooth to be restored is difficult.
3. There is expert opinion that suggests that strip crowns, pre-veneered SSC~~s~~, preformed SSC~~s~~, ~~and~~ opened-face SSC~~s,~~ and zirconia crowns are a treatment option for full coronal coverage restorations in primary anterior teeth.

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Table 1. EVIDENCE OF EFFICACY OF VARIOUS DENTAL MATERIALS/TECHNIQUES IN PRIMARY TEETH WITH REGARD TO CARIES LESION CLASSIFICATIONS

Strong evidence – based on well executed randomized control trials, meta-analyses, or systematic reviews; Evidence in favor – based on weaker evidence from clinical trials; Expert opinion – based on retrospective trials, case reports, in vitro studies and opinions from clinical researchers; Evidence against – based on randomized control trials, meta-analysis, systematic reviews.

	Class I	**Class II**	**Class III**	**Class IV**	**Class V**
Amalgam	Strong evidence	Strong evidence	No data	No data	Expert opinion
Composite	Strong evidence	Strong evidence	Expert opinion	No data	Evidence in favor
Glass ionomer	Strong evidence α	Evidence against β	Evidence in favor γ	No data	Expert opinion γ
RMGIC	Strong evidence	Expert opinion δ	Expert opinion	No data	Expert opinion
Compomers	Evidence in favor	Evidence in favor	No data	No data	Expert opinion
SSC	Evidence in favor ε	Evidence in favor ε	No data	No data	No data
Anterior φ crowns	N/A	N/A	Expert opinion	Expert opinion	Expert opinion

RMGIC = resin modified glass ionomer cement. SSC = stainless steel crown.

α Evidence from ART trials.

δ Small restorations; life span 1-2 years.

β Conflicting evidence for multisurface ART restorations.

ε Large lesions.

γ Preference when moisture control is an issue.

φ Strip crowns, stainless steel crowns with/without facings, zirconia crowns.

Table 2. E VIDENCE OF EFFICACY OF VARIOUS DENTAL MATERIALS/TECHNIQUES IN PERMANENT TEETH WITH REGARD TO CARIES LESION CLASSIFICATIONS

	Class I	Class II	Class III	Class IV	Class V
Amalgam	Strong evidence	Strong evidence	No data	No data	No data
Composite	Strong evidence	Evidence in favor	Expert opinion	No data	Evidence in favor
Glass ionomer	Strong evidence α	Evidence against	Evidence in favor β	No data	Expert opinion β
RMGIC	Strong evidence	No data	Expert opinion	No data	Evidence in favor
Compomers	Evidence in favor γ	No data	Expert opinion	No data	Expert opinion
SSC	Evidence in favor δ	Evidence in favor δ	No data	No data	No data
Anterior φ crowns	N/A	N/A	No data	No data	No data

RMGIC = resin modified glass ionomer cement. SSC = stainless steel crown.

α Evidence from ART trials.

γ Evidence from studies in adults.

β Preference when moisture control is an issue.

δ For children and adolescents with gross caries or severely hypoplastic teeth.

φ Strip crowns, stainless steel crowns with/without facings.

This draft does not constitute an official AAPD health oral policy or clinical recommendation until approval by the General Assembly. Circulation is limited to AAPD members.

Use of Antibiotic Therapy for Pediatric Dental Patients

Abstract

This best practice provides clinicians with guidance in the appropriate use of antibiotics to treat oral infections in children. When correctly prescribed and administered, antibiotics can be effective in the treatment of oral bacterial infections. Antibiotic stewardship is important given the rise in antibiotic-resistant microorganisms and potential for adverse drug reactions. This document addresses the following clinical conditions: oral wounds, pulpitis/apical periodontitis/draining sinus tract/localized intraoral swelling, acute facial swelling of dental origin, dental trauma, periodontal diseases, and salivary gland infections and offers guidance on the judicious use of antibiotics in their management. Antibiotics are not indicated in the management of conditions of viral origin. Potential interactions between antibiotics and oral contraceptives are addressed. Health care providers must be prudent in their prescribing practices to maximize effectiveness and minimize bacterial resistance and adverse reactions.

This document was developed through a collaborative effort of the American Academy of Pediatric Dentistry Councils on Clinical Affairs and Scientific Affairs to offer updated information and guidance on the use of antibiotic therapy for pediatric dental patients.

KEYWORDS: ANTIBIOTICS; ANTIMICROBIAL RESISTANCE; DENTAL INFECTION CONTROL; BACTERIAL INFECTIONS

Latest Revision

~~2019~~ 2022

ABBREVIATIONS

AAPD: American Academy of Pediatric Dentistry. **JRP**: Juvenile recurrent parotitis.

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) recognizes the increasing prevalence of antibiotic-resistant microorganisms and potential for adverse drug reactions and interactions. These recommendations are intended to provide guidance in the proper and judicious use of antibiotic therapy in the treatment of oral conditions. The use of antibiotic prophylaxis for dental patients at risk for infection is addressed in a separate best practices document.(AAPD Antibiotic Prophylaxis 2021

~~2019~~) Information regarding commonly prescribed antibiotics can be found in the AAPD's *Useful Medications for Oral Conditions*.(AAPD Useful medications ~~2019~~ 2021)

Methods

Recommendations on the use of antibiotic therapy were developed by the Council on Clinical Affairs ~~and~~ adopted in 2001, (AAPD 2001) ~~This document is a revision of the previous version,~~and last revised in ~~2014~~2019.(AAPD Antibiotic therapy ~~2014~~2019) The revision was based upon a new literature search of the PubMed®/~~MEDLINE~~ database using the terms:pediatric dental antibiotic therapy and ~~antibiotic therapy,~~ antibacterial agents, antimicrobial agents, dental trauma, oral wound management, orofacial infections, periodontal disease, viral disease, and oral contraception; fields: all; limits: within the last 10 years, humans, English, clinical trials, birth through age 18. Four hundred seventy-eight ~~Three hundred forty-three~~ articles matched these criteria. Papers for review were chosen from this search and from hand searching. When data did not appear sufficient or were inconclusive, recommendations were based upon expert and/or consensus opinion by experienced researchers and clinicians.

Background

Antibiotics are beneficial to patient care when prescribed and administered correctly for bacterial infections. However, the widespread use of antibiotics has permitted common bacteria to develop resistance to drugs that once controlled them.(CDC A/A Resistance ~~2013~~2019; Costelloe et al. 2010) Drug resistance is prevalent throughout the world.(CDC Antibiotic/ Antimicrobial Resistance 2020 ~~2013~~; Costelloe et al. 2010) ~~In the United States,more~~ More than 2.8 million antibiotic-resistant infections occur in the United States each year, and more than 35,000 people die. (CDC A/A Resistance-2019) At least two million people are infected by antibiotic-resistant bacteria per year.(CDC A/A Resistance-~~2013~~2019) Some microorganisms may develop resistance to a single antimicrobial agent, while others develop multidrug-resistant strains.(Costelloe et al. 2010) To diminish the rate at which resistance is increasing, health care providers must be prudent in the use of antibiotics.(CDC A/A Resistance-~~2013~~2019; Aidasani et al. 2019) A study showed 80 percent of prescriptions of antibiotics before dental procedures were unnecessary as risk-factors were not present.(Suda et al. 2019) This highlights a concern on the appropriateness for prescribed antibiotic prophylaxis for dental procedures. (Suda et al. 2019) While use of antibiotic prophylaxis is indicated for certain patients undergoing invasive dental procedures, over-all emphasis should focus on establishment of a dental home, the prevention of disease, establishment and maintenance of good

oral health care habits, and regular dental care. (Wilson et al 2021; Squire et al 2019) Conservative use of antibiotics is indicated to minimize the risk of developing resistance to current antibiotic regimens.(CDC A/A Resistance ~~2913~~2019; Costelloe et al. 2010; Wilson et al. 2021)

Adverse events such as allergic reactions, development of *Clostridium difficile*, or drug interactions and side effects can occur.(CDC A/A Resistance ~~2013~~2019~~;~~ CDC Antibiotic prescribing 2017, page 39) ~~The Centers for Disease Control and Prevention reports that every year there are 140,000 emergency department visits for reactions to antibiotics, and that antibiotics~~ Antibiotic adverse drug events are ~~the most~~ a common cause of emergency department visits for adverse drug events in children under the age of 18 years, with amoxicillin as the most commonly implicated drug in children less than nine years and sulfamethoxazole-trimethoprim in children aged 10-19.(Lovegrove et al. 2019~~CDC Antibiotic/Antimicrobial Resistance 2013~~)

Amoxicillin, considered the first drug of choice for dental infections in non-allergic children (Ahmadi 2021), is effective against a wide variety of gram-positive bacteria and offers greater gram-negative coverage than penicillin (Akhavan 2021). It has been shown to be effective against oral flora, (Fouad et al. 2020), be well absorbed from the gastrointestinal tract(Wilson 2021), provide high, sustained serum concentrations(Wilson 2021), and have a low incidence of adverse effects(Fouad et al. 2020).

The American Heart Association no longer recommends clindamycin for prophylaxis against infective endocarditis due to frequent and severe reactions. (Wilson et al. 2021) Clindamycin has been associated with significant adverse drug reactions related to community-acquired *C. difficile* infections. (Thornhill et al. 2015) Up to 15 percent of community-acquired *C. difficile* infection has been attributed to antibiotics prescribed for dental procedures. (Wilson et al. 2021) Doxycycline is recommended as an alternative to penicillin, cephalosporin, and macrolide allergy. (Wilson et al. 2021) Short-term use (<21 days) of doxycycline had not been associated with tooth discoloration in children under eight years of age. (Todd et al 2015, AAP 2018, Stultz and Eiland 2019.) Azithromycin is one of the safest antibiotics for patients allergic to penicillins, but there are risks of cardiac complications including cardiotoxicity. (Zeng et al, 2020) The small, heightened risk appears to be related to pre-existing cardiovascular risk factors including prior myocardial infarction, diabetes, age, and gender (Bartold et al, 2013). Cardiac risk in pediatric patients seems to be due to an increased risk of QT prolongation associated with higher dosage levels (Zeng et al, 2020).

Recommendations

Practitioners should adhere to the following general principles ~~when prescribing antibiotics~~for antibiotic usage for the pediatric dental patient~~population~~. (Wilson et al. 2021, CDC 2019. https://www.cdc.gov/antibiotic-use/community/downloads/dental-fact-sheet-FINAL.pdf)

- Prevention of dental diseases should be stressed in order to reduce the need for antibiotic intervention.
- Antibiotics should be prescribed only when truly needed for a bacterial infection and only as an adjunct to, not an alternative for, other interventions (e.g., pulp therapy, extraction, scaling and root planing) implemented to control the infection source.
- Antibiotics should be selected based on properties of the agent (e.g., spectrum of coverage, safety), previous antibiotic use and patient considerations (e.g medical history, drug allergies, current medication use, ease of use) and then prescribed at an adequate pediatric dose.
- The most effective route of drug administration (intravenous versus intramuscular versus oral) must be considered. If the patient is receiving parenteral antimicrobial therapy for treatment of existing infections, the same antibiotic can be continued. (Wilson et al 2021) Consultation with an infectious disease physician is recommended if there is concern for resistant infections.
- The traditional minimal duration of drug regimen is five days beyond the point of substantial improvement (e.g., improved healing of wound, reduction of erythema or swelling, reduction of signs and symptoms). Usually a five- to seven-day course of treatment is dependent upon the specific drug selected.(Kuriyama et al.(Kuriyama et al.2000; Prieto-Prieto & Calvo 2004)
- However, in light of the growing problem of drug resistance, discontinuation of antibiotics should be considered following determination of either ineffectiveness or cure prior to completion of a full course of therapy.(AAP RedBook Group A Streptococcal Infections 2021,Engleberg, Schaechter's Mechanisms of Microbial Disease. 2022).)
- If an infection is not responsive to the initial drug selection, a culture and sensitivity testing from the infection site or, in some cases, a blood microbiology and culture and sensitivity may be indicated. (CDC A/A Resistance 2019 pages 43-47, Engleberg, Schaechter's Mechanisms of Microbial Disease. 2022).
- Prescriptions should be documented in the patient's dental record.(AAPD Recordkeeping)
- Individuals suspected to have an allergy to antibiotics should receive testing to confirm or refute the presence of a true allergy.

Additional considerations for specific clinical circumstances are discussed below.

Oral wounds

Factors related to host risk (e.g., age, systemic illness, co-morbidities, malnutrition) and type of wound (e.g., laceration, puncture) must be evaluated when determining the risk for infection and subsequent need for antibiotics. Wounds can be classified as clean, potentially contaminated, or contaminated/ dirty. Facial lacerations and puncture wounds may require topical antibiotic agents.(Nakamura and Daya 2007) Intraoral puncture wounds and lacerations that appear to have been contaminated by extrinsic bacteria, debris (e.g., dirt, soil, gravel), foreign body, open fractures, and joint injury have an increased risk of infection and should be managed by systemic antibiotics.(Nakamura and Daya 2007) Tetanus immunization status should be determined. If ~~it is~~ antibiotics ~~would be~~ are deemed beneficial to the healing process, the timing of their administration ~~of antibiotics~~ is critical to supplement the natural host resistance in bacterial killing. The drug should be administered as soon as possible for the best result. (CDC A/A Resistance-2019 pages 36-38) ~~The most effective route of drug administration (intravenous vs. intramuscular vs. oral) must be considered. The clinical effectiveness of the drug must be monitored. The minimal duration of drug therapy should be five days beyond the point of substantial improvement or resolution of signs and symptoms; this is usually a five- to seven-day course of treatment dependent upon the specific drug selected.(Kuriyama et al.(Kuriyama et al.2000; Prieto-Prieto and Calvo 2004) In light of the growing problem of drug resistance, the clinician should consider altering or discontinuing antibiotics following determination of either ineffectiveness or cure prior to completion of a full course of therapy.(Flynn 2011). If the infection is not responsive to the initial drug selection, a culture and sensitivity testing of a swab from the infective site or, in some cases, a blood microbiology and culture and sensitivity may be indicated.~~

Pulpitis/apical periodontitis/draining sinus tract/localized intra-oral swelling

Bacteria can gain access to the pulpal tissue through caries, exposed pulp or dentinal tubules, cracks into the dentin, and defective restorations. If a child presents with acute symptoms of pulpitis, treatment (i.e., pulpotomy, pulpectomy, or extraction) should be rendered. Antibiotic therapy ~~usually~~ is not indicated nor effective if the dental infection is contained within the pulpal tissue or the immediate surrounding tissue. In this case, the child will have no systemic signs of an infection (i.e., no fever, ~~and~~ no facial swelling).(Fluent et al. 2016)

Consideration for use of antibiotics should be given in cases of advanced non-odontogenic bacterial infections such as staphylococcal mucositis, tuberculosis, gonococcal stomatitis, and oral syphilis. If

suspected, ~~it is best to refer patients~~ referral for microbiology, culture and sensitivity, biopsy, or other laboratory tests for documentation and definitive treatment is indicated.

Acute facial swelling of dental origin

A child presenting with a facial swelling or facial cellulitis secondary to an odontogenic infection should receive prompt dental attention. The clinician should consider age, cooperation, the ability to obtain adequate anesthesia (local versus general), the severity of the infection, the medical status, and any social issues of the child.(Johri and Piecuch 2011; Thikkurissy et al. 2010) ~~In most situations where there is a large~~ For odontogenic infections with non-localized and progressive swelling and systemic manifestations (e.g., fever, difficulty breathing or swallowing), immediate surgical intervention and medical management with intravenous antibiotic therapy ~~is appropriate and~~ contribute to a more rapid cure.(~~Johri and Piecuch 2011~~; Thikkurissy et al. 2010, Adewumi et. al 2019, Baker et al 2010, Solankis 2019) Signs of systemic involvement and septicemia (e.g., fever, malaise, asymmetry, facial swelling, lymphadenopathy, trismus, tachycardia, dysphagia, airway compromise, respiratory distress) warrant emergency treatment.(Adewumi et. al 2019, Baker et al 2010) Additional imaging (e.g. radiographs, ultrasound, ~~and~~ CT scan) and testing ~~such as a~~ (e.g., complete blood examination, c-reactive protein, ~~blood cultures, and~~ bacterial culture and sensitivity can aid in assessment and diagnosis. ~~Intravenous antibiotic therapy medical management is indicated.~~(Johri and Piecuch 2011; Thikkurissy et al. 2010) Penicillin derivatives remain the empirical choice for odontogenic infections; however, consideration of additional adjunctive antimicrobial therapy ~~(i.e.,~~ such as metronidazole~~)~~ can be given ~~where there is~~ for anaerobic bacterial involvement.(~~Flynn 2011~~; AAP RedBook Group A Streptococcal Infections 2021,Zirk et al. 2016) Cephalosporins could be considered as an alternative choice for management of odontogenic infections, especially when a child has had previous course(s) of penicillin/amoxicillin or if the child has a penicillin allergy.(Zirk et al. 2016)

Dental ~~trauma~~ Avulsions

Systemic antibiotics have been recommended as adjunctive therapy for avulsed permanent incisors with an open or closed apex.(Fouad et al. 2020; DiAngelis et al. 2012; Andersson et al. 2012) ~~Tetracycline (doxycycline twice daily for seven days)~~ Amoxicillin or penicillin is the drug of choice due to effectiveness against oral flora and low incidence of adverse effects~~,~~ . (Fouad et al. 2020 – IADT Guidelines ~~Anderrson et al 2012~~) ~~but consideration of the child's age must be exercised in the systemic use of tetracycline due to the risk of discoloration in the developing permanent dentition.18~~

Doxycycline is recommended as an alternative to penicillin. (Fouad et al. 2020). Doxycycline exhibits antimicrobial, anti-inflammatory, and anti-resorptive properties which makes its use appropriate for dental trauma. (Andreason, Storgaard Jensen, Sae-Lim 2006; Fouad et al. 2020) ~~Penicillin V or amoxicillin can be given as an alternative in patients under 12 years of age.(Andersson et al. 2012; Malmgren et al. 2012) The use of~~ Using topical antibiotics (minocycline or doxycycline) to enhance pulpal revascularization and periodontal healing in immature non-vital traumatized teeth has shown potential in animal studies, (Andersson et al. 2012; Malmgren et al. 2012; McIntyre et al. 2007) ~~has~~ but usage has not been proven effective in human studies, remains controversial, and has not been recommended by the International Association of Dental Traumatology. (Fouad et al 2020) ~~shown some potential. (Andersson et al. 2012; Malmgren et al. 2012; McIntyre et al. 2007) However, f~~Further randomized clinical trials are needed.(~~Hargreaves et al 2013; Shabahang 2013~~ Fouad et al 2020) ~~For luxation injuries in the primary dentition, antibiotics are not indicated.(Andersson et al. 2012)~~ Antibiotics can be warranted in cases of concomitant soft tissue injuries (see **Oral wounds**) and when dictated by the patient's medical status.

Pediatric periodontal diseases

~~Gingival inflammation due to the presence of bacterial plaque accumulation is a key factor in the development of periodontal disease and must be controlled.(Murakami et al. 2018) However, a distinction must be made between a site of gingival inflammation versus a gingival case, diagnosed at the patient level, using specific criteria, including bleeding on probing.(Trombelli et al. 2018) Periodontal diseases recently have been classified into three groups: 1) periodontal health, gingival diseases, and conditions; 2) periodontitis and; 3) other conditions affecting the periodontium;(Caton et al. 2018) periodontitis is further classified as necrotizing periodontal disease, periodontitis as manifestation of systemic diseases, and periodontitis.(Caton et al. 2018) Prior terms of chronic or aggressive periodontitis are now included in the single category of periodontitis.(Papapanou et al. 2018)~~ Three distinct forms of periodontal disease have been defined as: (1) periodontitis (grouping the two forms formerly recognized as prepubertal, aggressive or chronic); (2) necrotizing periodontitis; and (3) periodontitis as a manifestation of systemic conditions (Caton et al, 2018). ~~Dental plaque-induced gingivitis is managed by appropriate local therapeutic interventions (Shabahang 2013) including professional oral hygiene and re-enforcement of brushing twice daily for at least two minutes.(Chapple et al. 2015)~~ Patients diagnosed with what formerly was known as aggressive periodontal disease may require adjunctive antimicrobial therapy in conjunction with localized treatment.(~~American Academy of Periodontology Research 2003~~; AAPD Perio

Classification, Keestra et al. 2015; Rabelo et al. 2015; ~~Merchant et al. 2014~~) In pediatric periodontal diseases associated with systemic ~~disease~~ conditions (e.g., severe congenital neutropenia, Papillon-Lefèvre syndrome, leukocyte adhesion deficiency), the immune system is unable to control the growth of periodontal pathogens and, in some cases, treatment may involve antibiotic therapy or antibiotic prophylaxis.(~~American Academy of Periodontology Research 2003; Schmidt et al. 2013~~ AAPD Classification of Perio, 2021; Squire et al. 2019) ~~In severe and refractory cases, extraction is indicated.(American Academy of Periodontology Research 2003; Schmidt et al. 2013)~~ Culture and susceptibility testing of isolates from the involved sites are helpful in guiding the drug selection. (~~American Academy of Periodontology Research 2003;~~ Schmidt et al. 2013). In severe and refractory cases, extraction is indicated.(~~AAP Research 2003~~; Schmidt et al. 2013)

Viral diseases

Conditions of viral origin such as acute primary herpetic gingivostomatitis should not be treated with antibiotic therapy.(CDC Antibiotic Prescribing 2017)

Salivary gland infections

For acute salivary gland swellings of bacterial nature, antibiotic therapy is indicated.(Patel and Karlis 2009) If the patient does not improve in 24-48 hours on antibiotics alone, incision and drainage may be warranted.(CDC A/A Resistance ~~2013~~ 2019 Amoxicillin/clavulanate is used as empirical therapy to cover both staphylococcal and streptococcal species as most bacterial infections of the salivary glands originate from oral flora.(Patel and Karlis 2009) ~~Clindamycin is appropriate for penicillin-allergic patients.(Rabelo et al. 2015)~~

The most common inflammatory salivary gland disorder in the U.S. is juvenile recurrent parotitis (JRP), with first onset of symptoms between ages 3-6 years old, continuing to puberty.(Garavello 2018~~Patel and Karlis 2009~~)The etiology of JRP remains unknown and treatment varies depending on severity. Although JRP is self-limiting, administration of β-~~lacatam~~lactam antibiotics ~~can~~ may shorten symptom duration.(Garavello 2018)~~Patel and Karlis 2009)~~ For both acute bacterial submandibular sialadenitis and chronic recurrent submandibular sialadenitis, antibiotic therapy is included as part of the treatment.(Carlson 2009)

Oral contraceptive use

Although caution previously was ~~is~~ advised with the concomitant use of antibiotics and oral contraceptives, (DeRossi and Hersh 2002; Becker 2011), a 2018 systematic review of drug

interactions between non-rifamycin antibiotics and hormonal contraception found that most women can expect no reduction in hormonal contraceptive effect with the concurrent use of non-rifamycin antibiotics.(Simmons et al. 2018) The World Health Organization also reported in 2015 that most broad-spectrum antibiotics do not affect the contraceptive effectiveness of combined oral contraceptives, combined contraceptive patch, or the combined contraceptive vaginal ring.(WHO 2015) In addition, no differences in ovulation were found when oral contraceptives were combined with ampicillin, doxycycline, temafloxacin, ofloxacin, ciprofloxacin, clarithromycin, roxithromycin, dirithromycin, or metronidazole.(Simmons et al. 2018) Women should be encouraged to take oral contraceptives correctly and consistently at all times, including during ~~periods of~~ illness.(Simmons et al. 2018) Rifamcyin antibiotics, such as rifampin or rifabutin, induce hepatic enzymes that are required for hormonal contraceptive metabolism, which could compromise the contraceptive or antibiotic effect.(Simmons et al. 2018; WHO 2015) Consultation with the medical practitioner regarding use ~~Use~~ of other contraceptives is recommended ~~should be advised~~ with long-term use of these medications.(WHO 2015)

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This draft does not constitute an official AAPD health oral policy or clinical recommendation until approval by the General Assembly. Circulation is limited to AAPD members.

Antibiotic Prophylaxis for Dental Patients at Risk for Infection

Abstract

This best practice offers recommendations regarding antibiotic prophylaxis to minimize or eliminate transient bacteremia in at-risk dental patients undergoing invasive dental procedures. Evidence supporting the efficacy and use of antibiotic prophylaxis is limited among children. Considering the potential to contribute to antibiotic-resistant microorganisms and possible risk of adverse events, prudence is needed when determining whether prophylaxis is necessary. Antibiotic prophylaxis is warranted for some patients with cardiac conditions and compromised immunity when undergoing dental procedures that involve the manipulation of gingival tissue or the periapical region of teeth or perforation of oral mucosa. While recommendations for certain conditions are discussed within the document, consultation with the patient's physician is recommended for management of other patients potentially at risk due to immune compromise, indwelling vascular catheters or shunts, or implanted devices. Dentists should be familiar with current evidence-based antibiotic prophylaxis recommendations, and specific antibiotic regimens aimed at the microorganisms mainly implicated in infective endocarditis are included.

This document was developed through a collaborative effort of the American Academy of Pediatric Dentistry Councils on Clinical Affairs and Scientific Affairs to offer updated information and guidance on antibiotic prophylaxis for dental patients at risk for infection.

KEYWORDS: PREMEDICATIONS, ANTIBIOTICS; ANTIBIOTIC PROPHYLAXIS; ENDOCARDITIS; ANTIMICROBIAL RESISTANCE

Latest Revision

~~2019~~ 2022

ABBREVIATIONS

AAPD: American Academy of Pediatric Dentistry. **ADA**: American Dental Association. **AHA**: American Heart Association. **CIED**: Cardiovascular implantable electronic device. **GI**: Gastrointestinal. **GU**: Genitourinary. **IE**: Infective endocarditis. **VGS**: Viridans group Streptococcal

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) recognizes that numerous medical conditions predispose patients to bacteremia-induced infections. ~~Because it is not possible to predict when a~~

~~susceptible patient will develop an infection, p~~ Prophylactic antibiotics are recommended when ~~these~~ patients with a high risk of adverse outcomes from bacteremia and infection undergo invasive oral/dental procedures. ~~that are at risk for producing bacteremia~~. These recommendations are intended to help practitioners make decisions regarding antibiotic prophylaxis for dental patients at risk.

Methods

Recommendations on antibiotic prophylaxis for dental patients at risk for infection were developed by the Clinical Affairs Committee, ~~and~~ adopted in 1990.(AAPD Boston Mass 1990) ~~This document by the Council of Clinical Affairs is a revision of the previous version,~~ and last revised in 2019.~~2014~~ (AAPD Antibiotic Prophylaxis 2019~~2014), and~~ This revision is based on a review of *Prevention of Infective Endocarditis: Guidelines from the American Heart Association* (Wilson et al. 2007), *Infective Endocarditis in Childhood: 2015 Update: A Scientific Statement From the American Heart Association* (Baltimore et al. 2015), the American Dental Association (**ADA**) report *The Use of Prophylactic Antibiotics Prior to Dental Procedures in Patients with Prosthetic Joints*(Sollecito et al. 2015) and the 2021 guideline on *Prevention of Viridans Group Streptococcal Infective Endocarditis: A Scientific Statement From the American Heart Association* (Wilson et al 2021-updated). ~~current dental and medical literature pertaining to post-procedural bacteremia-induced infections. This revision~~ It also included PubMed®/MEDLINE database searches using key terms: infective endocarditis (**IE**), bacteremia, antibiotic prophylaxis, and dental infection. Articles were evaluated by title and/or abstract and relevance to dental care for children, adolescents, and those with special health care needs. Two hundred forty-three articles met these criteria. ~~Thirty-five citations were chosen from this method and from references within selected articles.~~ When data did not appear sufficient or were inconclusive, recommendations were based upon expert and/or consensus opinion by experienced researchers and clinicians. ~~In addition, *Prevention of infective endocarditis: Guidelines from the American Heart Association*,(Wilson et al. 2007) *Infective Endocarditis in Childhood: 2015 Update: A Scientific Statement From the American Heart Association*,(Baltimore et al. 2015), and the American Dental Association (**ADA**) report *The Use of Prophylactic Antibiotics Prior to Dental Procedures in Patients with Prosthetic Joints*(Sollecito et al. 2015) were reviewed.~~

Background

Bacteremia (bacteria in the bloodstream) is anticipated following invasive dental procedures and can lead to complications in an immunodeficient patient.(Lockhart at al. 2004; Roberts et al. 2006) High risk cardiac disease, immunosuppression, and immunodeficiencies may compromise one's ability to

fight simple infection. The rationale for antibiotic prophylaxis is to reduce or eliminate transient bacteremia caused by invasive dental procedures.(Daly 2017; Lafaurie et al. 2019)

Antibiotic usage may result in the development of resistant organisms.(~~Wilson et al. 2007; Lockhart et al. 2004; Roberts et al. 2006; Fluent et al. 2016 Dajani et al. 1997;~~ CDC Antibiotic/Antimicrobial Resistance) Utilization of antibiotic prophylaxis for patients at risk does not provide absolute prevention of infection. Post-procedural symptoms of acute infection (e.g., fever, malaise, weakness, lethargy) may indicate antibiotic failure and need for further medical evaluation.

The decision to use antibiotic prophylaxis should be made on an individual basis. Some medical conditions that may predispose patients to post-procedural infections (Buonavoglia et al. 2021) are discussed below. This list is not intended to be ~~an~~ exhaustive ~~list~~; rather, the categorization should help practitioners identify children who may be at increased risk. If a patient reports a syndrome or medical condition with which the practitioner is not familiar, it is appropriate to discuss the risk and susceptibility to bacteremia-induced infection with ~~contact~~ the child's physician prior to any invasive dental procedures. ~~to determine susceptibility to bacteremia-induced infections.~~

To date, randomized controlled clinical trials ~~the evidence base~~ supporting the efficacy and use of antibiotic prophylaxis are ~~is~~ limited, especially in the pediatric population. Many recommendations ~~of the indications~~ are based on expert consensus.(Baltimore et al. 2015; Glenny et al. 2013; Cahill et al. BMJ 2017; Cahill et al. Heart 2017, Wilson et al 2021, NICE 2008, Lafaurie et al 2019) A study found 80 percent of pre-procedural antibiotic prescriptions unnecessary as risk-factors were not present, highlighting a concern regarding the appropriateness of prescribed prophylaxis. (Suda et al. 2019) ~~The c~~ Conservative use of antibiotics ~~is indicated to~~ helps minimize the risk of developing resistance to current antibiotic regimens.(Wilson et al. 2007; Fluent et al. 2016; Watters et al. 2013; ~~da Sa et al. 2010~~ Baddour et al. 2021; Buonavoglia et al. 2021) Given the increasing number of organisms that have developed resistance to ~~current~~ antibiotic regimens, as well as the potential for an adverse anaphylactic reaction to the drug administered,(Thornhill et al. 2015) ~~it is best to be~~ antibiotic/antimicrobial stewardship and the judicious ~~in the~~ use of antibiotics for the prevention of IE~~3~~ or other distant-site infections are critical for safe and effective care.(Fluent et al. 2016; CDC Antibiotic/Antimicrobial Resistance; ~~Thornhill et al. 2015;~~ Wilson 2021; Suda 2019) While use of antibiotic prophylaxis is indicated for certain patients undergoing invasive dental procedures, the prevention of oral disease by maintenance of good home care habits and regular dental care is

considered more important. (Wilson et al 2021; Squire et al 2019) This may prevent the frequent need for the use of antibiotic therapy and, thus, decrease the risks of resistance and adverse events related to use of antibiotics.(Daly 2017; Habib et al. 2009; National Institute for Health and Care Excellence)

Recommendations

Antibiotic prophylaxis for patients at the highest risk of adverse outcomes from bacteremia-induced infections is recommended with certain dental procedures,(Wilson et al. 2007; Baltimore et al. 2015; Lockhart et al. 2004; Daly 2017; National Heart Foundation of New Zealand; NICE, Wilson 2021) ~~but this~~ and should be directed against the most likely infecting organism. Antibiotic stewardship and judicious use are integral to preventing adverse reactions and resistance. Table 1 shows the recommended antibiotic regimen for at-risk patients undergoing invasive procedures, with amoxicillin as the first choice. (Wilson et al 2021, Lafaurie et al 2019) Recent changes to the AHA Guidelines have removed the use of clindamycin due to frequent and severe reactions. (Wilson et al. 2021). Clindamycin has been associated with significant adverse drug reactions related to community-acquired *C. difficile* infections. (Thornhill et al. 2015) Doxycycline is recommended as an alternative for patients unable to tolerate a penicillin, cephalosporin, or macrolide. (Table 1) (Wilson et al. 2021) Short-term use (less than 21 days) of doxycycline had not been associated with tooth discoloration in children under eight years of age. (Todd et al 2015, AAP 2018, Stultz and Eiland 2019) Antibiotic prophylaxis should be given 30-60 minutes prior to the procedure; however, it can be given up to two hours after a dental procedure. (Wilson et al. 2021) A different class of antibiotics is indicated if the patient is already on oral antibiotic therapy or has an allergy or anaphylactic reaction. (Wilson et al 2021) If unsure of a reported history of an allergic reaction, consultation with an allergy specialist and skin testing can help determine severity of allergic reactions and course of antibiotic regimen. (Wilson et al 2021). If the patient is receiving parenteral antimicrobial therapy for IE or other infections, the same antibiotic can be continued for the dental procedure. (Wilson et al 2021) If possible, elective procedures should be delayed 10 days after completion of short course antibiotic therapy. (Wilson et al 2021). When procedures involve infected tissues or are performed on a patient with a compromised host response, additional doses or a prescribed pre- and post-operative course ~~regimen~~ of antibiotics may be necessary. ~~Emphasis should be placed on the prevention of disease, establishment of good oral health care habits, and routine oral health assessments through a dental home. This may prevent the frequent need for the use of antibiotic therapy and, thus, decrease the risks of resistance and adverse events relation to use of antibiotics.(Daly 2017; Habib et al. 2009; National Institute for Health and Care Excellence)~~

Table 1. ANTIBIOTIC REGIMENS FOR A DENTAL PROCEDURE REGIMEN: SINGLE DOSE 30 TO 60 MINUTES BEFORE PROCEDURE

Situation	Agent	Adults	Children
Oral	Amoxicillin	2g	50 mg/kg
Unable to take oral medication	Ampicillin OR Cefazolin or ceftriaxone	2 g IM or IV 1 g IM or IV	50 mg/kg IM or IV 50 mg/kg IM or IV
Allergic to penicillin or ampicillin —oral	Cephalexin* OR Azithromycin or clarithromycin OR Doxycycline	2 g 500 mg 100 mg	50 mg/kg 15 mg/kg <45 kg, 2.2 mg/kg >45 kg, 100 mg
Allergic to penicillin or ampicillin and unable to take oral medication	Cefazolin or ceftriaxone†	1 g IM or IV	50 mg/kg IM or IV

Clindamycin is no longer recommended for antibiotic prophylaxis for a dental procedure.

IM indicates intramuscular; and IV, intravenous.

* Or other first-or second-generation oral cephalosporin in equivalent adult or pediatric dosing.

† Cephalosporins should not be used in an individual with a history of anaphylaxis, angioedema, or urticaria with penicillin or ampicillin.

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Patients with cardiac conditions

The American Heart Association (**AHA**) has published guidelines for the prevention of IE and reducing the risk of producing resistant strains of bacteria.(Wilson et al. 2007; Wilson et al. 2021) ~~Infective endocarditis~~ IE is an example of an uncommon but life-threatening complication resulting from bacteremia. The incidence of pediatric admissions due to IE ~~infective endocarditis~~ was between 0.05 and 0.12 cases per 1000 admissions in a multicenter study of U.S. children's hospitals from 2003- 2010.(Baltimore et al. 2015). Although there is no high-quality data showing mortality from or frequency of viridans group streptococcal (**VGS**) infective endocarditis in children, there also has been no convincing evidence of an increase in these cases among high-risk patients since the publication of the 2007 AHA guidelines. (Wilson et al 2021; Dayer et al 2015, Laufarie et al 2019).

Only a limited number of bacterial species have been implicated in resultant postoperative infections; Viridans group streptococci, *Staphylococcus aureus* and *Enterococcus* species are the main microorganisms implicated in IE.(Wilson et al. 2007; Baltimore et al. 2015; Baddour et al. 2021) Enterococcal and other organisms such as *Haemophilus* species, *Aggregatibacter* species, *Cardiobacterium hominis*, *Eikenella corrodens*, and *Kingella* species are less common.(Baltimore et al. 2015) Routine daily activities such as toothbrushing, flossing, and chewing contribute more to the incidence of bacteremia when compared to dental procedures.(Baltimore et al. 2015) Thus, focus for

preventing IE has shifted from antibiotic prophylaxis to an emphasis on oral hygiene and the prevention of oral diseases with regular dental care.(Baltimore et al. 2015; Daly 2017; Cahill et al. BMJ 2017; Cahill et al. Heart 2017; National Heart Foundation of New Zealand; National Institute for Health Care and Excellence, Wilson 2021)

~~In 2007, the American Heart Association (**AHA**) revised its guidelines for the prevention of IE and reducing the risk for producing resistant strains of bacteria.(Wilson et al. 2007) The significant reasons for the revision include(Wilson et al. 2007):~~

- ~~"IE is much more likely to result from frequent exposure to random bacteremias associated with daily activities than from bacteremia caused by a dental, [gastrointestinal] **GI** tract, or [genitourinary] **GU** tract procedure."(Wilson et al. 2007) Daily activities would include toothbrushing, flossing, chewing, using toothpicks, using water irrigation devices, and other activities.~~
- ~~"Prophylaxis may prevent an exceedingly small number of cases of IE if any, in individuals who undergo a dental, GI tract, or GU tract procedure.~~
- ~~The risk of antibiotic-associated adverse events exceeds the benefit, if any, from prophylactic antibiotic therapy.~~
- ~~Maintenance of optimal oral health and hygiene may reduce the incidence of bacteremia from daily activities and is more important than prophylactic antibiotics for a dental procedure to reduce the risk of IE."(Wilson et al. 2007)~~

A summary of key findings and suggestions by the AHA 2021 scientific statement writing group are outlined in Table 2.

TABLE 2. SUMMARY OF FINDINGS AND SUGGESTIONS
Key findings
VGS IE is much more likely to develop as a result of transient VGS bacteremia attributable to routine daily activities such as chewing food and toothbrushing than from a dental procedure.
An exceedingly small number of cases of VGS IE could be prevented by AP for a dental procedure, even if prophylaxis is 100% effective.
If AP for a dental procedure is effective in preventing a very small number of cases of VGS IE, it should be suggested only for those patients with the highest risk of adverse outcome from VGS IE.
There is no convincing evidence of an increased frequency of or morbidity or mortality from VGS IE in patients at low, moderate, or high risk of adverse outcome since publication of the 2007 document.
AP for a dental procedure is not suggested solely on the basis of an increased lifetime risk of acquisition of VGS IE
Suggestions
AP for a dental procedure that involves manipulation of gingival tissues, periapical region of teeth, or perforation of the oral mucosa is suggested only for patients with the highest risk of adverse outcome from VGS IE.
Maintenance of good oral health and regular access to dental care are considered more important to prevent VGS IE than AP for a dental procedure. We suggest that patients have biannual dental examinations when such care is available.
Shared decision making is important between patients and health care providers. There may be instances when a health care provider and a patient disagree with the suggestions in the 2021 scientific statement. In these cases, the

health care provider should be familiar with and understand the 2021 suggestions to adequately inform patients of the risks and benefits of AP for a dental procedure so that an informed decision may be made.

The AHA guidelines recommend ~~focus on~~ antibiotic prophylaxis prior to certain dental procedures (see Table 3) for patients with the highest risk of adverse outcomes from VGS IE ~~in the highest risk group~~ (See Table ~~1~~4).(~~Wilson et al. 2007; Baltimore et al. 2015; Lockhart et al. 2004~~; Wilson et al 2021; Baddour et al. 2021) Comorbidities such as obesity, diabetes, cardiopulmonary disease, vascular disease, hemodialysis, lack of access to tertiary hospitals or immunosuppression affect the morbidity and mortality of patients with IE. (Wilson et al 2021; Baddour et al 2021) Global~~ly, there is still a lack of~~ consensus with regards to the benefit of antibiotic prophylaxis for prevention of IE is lacking.~~infective endocarditis~~. (Wilson et al 2021; NICE; National Heart Foundation of New Zealand; Daly 2017; Dayer et al 2015) ~~Since the change in recommendations, the rate and incidence of IE have been low.(Baltimore et al. 2015)~~

TABLE 3. DENTAL PROCEDURES AND AP
AP suggested
All dental procedures that involve manipulation of gingival tissue or the periapical region of teeth or perforation of the oral mucosa
AP not suggested
Anesthetic injections through noninfected tissue, taking dental radiographs, placement of removable prosthodontic or orthodontic appliances, adjustment of orthodontic appliances, placement of orthodontic brackets, shedding of primary teeth, and bleeding from trauma to the lips or oral mucosa

The antibiotic regimens suggested for prophylaxis for a dental procedure in patients at a high risk of adverse outcome from viridans group streptococcal infective endocarditis are shown in Table 1.
AP indicates antibiotic prophylaxis.

Table 4. AP FOR A DENTAL PROCEDURE: UNDERLYING CONDITIONS FOR WHICH AP IS SUGGESTED*
Prosthetic cardiac valve or material
Presence of cardiac prosthetic valve
Transcatheter implantation of prosthetic valves
Cardiac valve repair with devices, including annuloplasty, rings, or clips
Left ventricular assist devices or implantable heart
Previous, relapse, or recurrent IE
CHD
Unrepaired cyanotic congenital CHD, including palliative shunts and conduits.
Completely repaired congenital heart defect with prosthetic material or device, whether placed by surgery or by transcatheter during the first 6 mo after the procedure.
Repaired CHD with residual defects at the site of or adjacent to the site of a prosthetic patch or prosthetic device.
Surgical or transcatheter pulmonary artery valve or conduit placement such as Melody valve and Contegra conduit.
Cardiac transplant recipients who develop cardiac valvulopathy
AP for a dental procedure not suggested
Implantable electronic devices such as a pacemaker or similar devices
Septal defect closure devices when complete closure is achieved
Peripheral vascular grafts and patches, including those used for hemodialysis
Coronary artery stents or other vascular stents
CNS ventriculoatrial shunts
Vena cava filters
Pledgets

* AP indicates antibiotic prophylaxis; CHD, congenital heart disease; CNS, central nervous system; and IE, infective endocarditis.

Children with cyanosis with specific periodontal concerns may have an increased risk of IE~~, which makes optimum oral hygiene very important~~.(Wilson et al. 2021; Wilson et al. 2007; Baltimore et al. 2015~~; Gewitz and Taubert 2016~~) At-risk patients with poor oral hygiene and gingival bleeding after routine activities (e.g., toothbrushing) have shown an increased incidence of bacteremia as a measure for risk of IE.(Wilson et al. 2007; ~~Gewitz and Taubert 2016;~~ Baddour et al. 2010) ~~The focus should be on maintaining good oral hygiene, routine dental examinations, infection control to reduce bacteremia, and discouraging tattooing or piercing rather than relying on antibiotic prophylaxis for patients at risk.(Cahill et al. BMJ 2017; Cahill et al. Heart 2017; National Heart Foundation of New Zealand; Habib et al. 2009; National Institute for Health Care and Excellence; Baddour et al. 2010)~~ These patients and their parents need to be educated and motivated to maintain personal oral hygiene ~~through daily plaque removal,~~ including flossing and regular professional preventive dental care and to be discouraged from getting tattoos or piercings.(Wilson et al. 2021; Cahill et al. BMJ 2017; Cahill et al. Heart 2017; National Heart Foundation of New Zealand; Habib et al. 2009; National Institute for Health Care and Excellence; Wilson et al. 2007) ~~There is a shift in the emphasis on improved access to dental care and oral health in patients with underlying cardiac conditions at high risk for IE and less focus on a dental procedure and antibiotic coverage.(Baltimore et al. 2015;)~~ Professional prevention strategies should be based upon the individual's assessed risk for caries and periodontal disease. (AAPD Periodicity)

In addition to those diagnoses listed in the AHA guidelines, patients with a reported history of injection drug use may be considered at risk for developing IE ~~in the absence of cardiac anomalies~~. (Baddour et al. 2021 ~~Gewitz and Taubert 2016~~) ~~Patients also should be discouraged from tattooing and piercing.(Cahill et al. BMJ 2017; Cahill et al. Heart 2017; Lick et al. 2005)~~ Consultation with the patient's physician may be necessary to determine susceptibility to bacteremia-induced infections.

Antibiotics are recommended for all dental procedures that involve manipulation of gingival tissue or the periapical region of teeth or perforation of the oral mucosa for cardiac patients with the highest risk for adverse outcomes from IE (Wilson et al. 2007; Wilson et al 2021) (see Tables ~~1~~3 and ~~2~~4). Specific antibiotic regimens can be found in Table 3. Practitioners and patients/ parents can review the entire AHA guidelines in the AHA Circulation archives(Wilson et al 2021) (available at " https://www.ahajournals.org/doi/10.1161/CIR.0000000000000969")~~Wilson et al. 2007) (available at "http://circ.ahajournals.org/ cgi/content/full/116/15/1736")~~ for additional background information as

well as discussion of special circumstances (e.g., patients already receiving antibiotic therapy, patients on anticoagulant therapy).

Patients with shunts, indwelling vascular catheters, or medical devices

The AHA found no convincing evidence that microorganisms associated with dental procedures cause infection of cardiovascular implantable electronic devices (CIED) and nonvalvular devices at any time after implantation.(Baddour et al. 2010; Lockhart et al. 2007; Wilson et al 2021) The infections occurring after device implantation most often are caused by *Staphylococcus aureus* and coagulase-negative staphylococci or other microorganisms that are non-oral in origin but are associated with surgical implantation or other active infections.(Baddour et al. 2010; Hong et al. 2010) The AHA does not recommend antibiotic prophylaxis for prosthetic cardiovascular devices such as CIED, septal defect closure devices, peripheral vascular grafts and patches, central nervous system ventriculoatrial shunts, vena cava filters and pledgets. (See table 4) Consultation with the child's physician is recommended for management of patients with nonvalvular devices.

Ventriculoatrial (VA), ventriculocardiac (VC), or ventriculovenus (VV) shunts for hydrocephalus were considered at risk of bacteremia-induced infections due to their vascular access (Lockhart et al. 2007; Baddour et al. 2003) while ventriculoperitoneal (VP) shunts were not deemed vulnerable.(Lockhart et al. 2007; Baddour et al. 2003) Antibiotic prophylaxis is no longer recommended for patients with VA and VP shunts. (Wilson et al 2021; Baddour et al. 2003). If concerned, consultation with the child's physician is recommended for management of patients with vascular shunts.

Patients with compromised immunity

Non-cardiac patients with a compromised immune system may be at risk for complications of bacteremia and distant site infection following invasive dental procedures. Existing evidence does not support the extensive use of antibiotic prophylaxis; prophylaxis should be limited to immunocompromised patients and those at high risk for adverse outcomes from distant site infection.(Habib et al. 2009) Consultation with the patient's physician is recommended for management of patients with a compromised immune system. ~~Although there is not enough data to support its use, h~~High-risk patients who should be considered for use of prophylaxis includes, but is not limited to, those with(Cahill et al. BMJ 2017; Cahill et al. Heart 2017; Lockhart et al. 2007; Wilson et al. 2021; Squire et al. 2019):

1. Immunosuppression~~*~~ secondary to: (Squire et al. 2019)
    a. human immunodeficiency virus (HIV);
    b. severe combined immunodeficiency (SCIDS) and other primary immunodeficiency diseases;
    c. neutropenia and other neutrophil related disorders (e.g., severe congenital neutropenia, leukocyte adhesion deficiency, Chediak-Higashi syndrome);
    d. cancer chemotherapy, immunosuppressive therapy and/or radiation therapy; or
    e. hematopoietic stem cell or solid organ transplantation.
2. History of head and neck radiotherapy. (Squire et al. 2019)
3. Autoimmune disease (e.g., juvenile arthritis, systemic lupus erythematosus).
4. Sickle cell anemia.(Tate et al. 2006; Hsu et al. 2020)
5. Asplenism, ~~or~~ status post splenectomy or complement deficiencies. (Squire et al. 2019)
6. Chronic high dose steroid usage.
7. Uncontrolled diabetes mellitus.
8. ~~Bisphosphenate therapy~~ Medication-related osteonecrosis of the jaw (MRONJ) (Montefusco et al. 2008; Yarom et al. 2019 ~~Rogers et al. 2009~~)
9. Hemodialysis.

~~* *Discussion of antibiotic prophylaxis for patients receiving immunosuppressive therapy and/or radiation therapy appears in a separate AAPD document.*(AAPD Immunosuppressive Therapy)~~

~~**Patients with shunts, indwelling vascular catheters, or medical devices**~~

~~The AHA recommends that antibiotic prophylaxis for nonvalvular devices, including indwelling vascular catheters (e.g., central lines) and cardiovascular implantable electronic devices (**CIED**), is indicated only at the time of placement of these devices in order to prevent surgical site infection.(Baddour et al. 2010; Lockhart et al. 2007) The AHA found no convincing evidence that microorganisms associated with dental procedures cause infection of CIED and nonvalvular devices at any time after implantation.(Baddour et al. 2010; Lockhart et al. 2007) The infections occurring after device implantation most often are caused by *Staphylococcus aureus* and coagulase negative staphylococci or other microorganisms that are non-oral in origin but are associated with surgical implantation or other active infections.(Baddour et al. 2010; Rogers et al. 2009; Hong et al. 2010) Consultation with the child's physician is recommended for management of patients with nonvalvular devices.~~

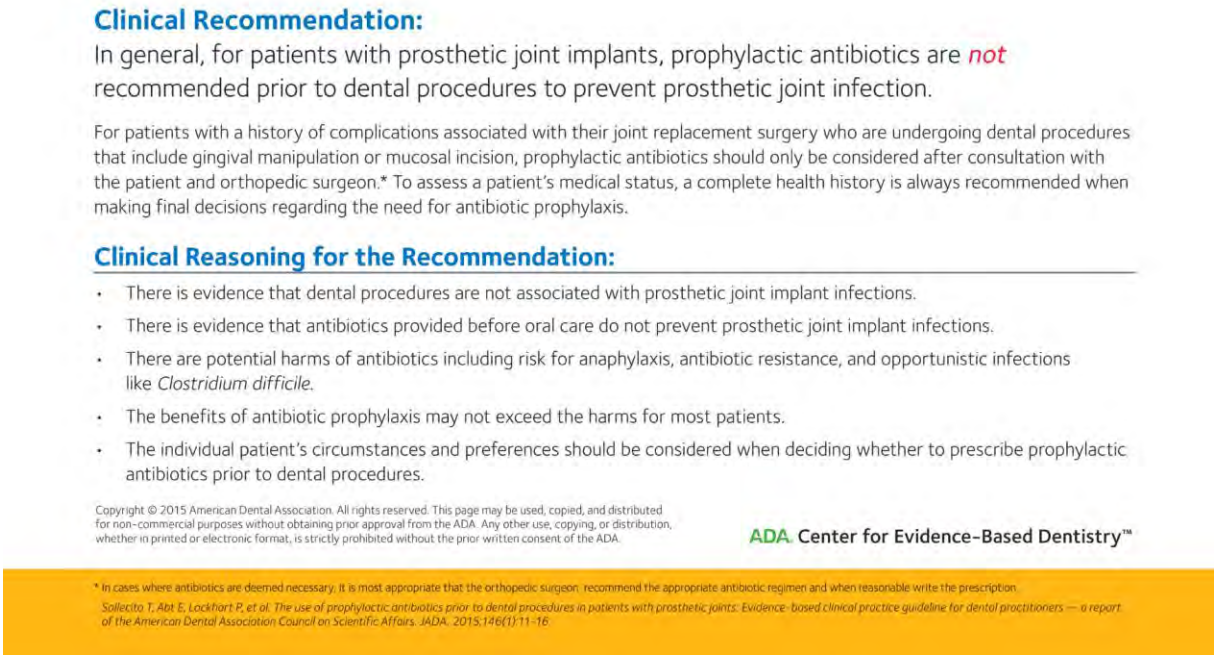
~~Ventriculoatrial (VA), ventriculocardiac (VC), or ventriculovenus (VV) shunts for hydrocephalus are at risk of bacteremia-induced infections due to their vascular access.(Lockhart et al. 2007; Baddour et~~

~~al. 2003) In contrast, ventriculoperitoneal (VP) shunts do not involve any vascular structures and, consequently, do not require antibiotic prophylaxis.(Lockhart et al. 2007; Baddour et al. 2003) Consultation with the child's physician is recommended for management of patients with vascular shunts.~~

Patients with prosthetic joints

Given the lack of evidence and recognizing the increase in antibiotic resistance and adverse drug reactions, antibiotic prophylaxis prior to dental procedures is no longer recommended for patients with a history of total joint arthroplasty or prosthetic joint infections.(See Table 5) (Sollecito et al. 2015; Suda et al. 2019; Rethman et al. 2013) ~~For patients with a history of total joint arthroplasty, deep hematogenous infections can lead to life threatening complications such as a loss of the prosthetic joint or even increased morbidity and mortality.(Aminoshariae and Kulild 2010; Rethman et al. 2013) Given the increasing risk of developing antibiotic resistance and adverse reactions, antibiotic prophylaxis prior to dental procedures is not recommended in the prevention of prosthetic joint infections.(Sollecito et al. 2015).~~ If unsure of medical history or risk, consultation ~~Consultation~~ with the child's physician is recommended ~~may be necessary~~ for invasive dental management. ~~of at-risk patients as well as patients with other implanted devices (e.g., Harrington rods, external fixation devices).~~(Lockhart et al. 2007; ~~Aminoshariae and Kulild 2010;~~ Rethman et al. 2013; Sollecito et al 2015; Berbari et al. 2010; ~~Little et al. 2010~~)

Table 5. MANAGEMENT OF PATIENTS WITH PROSTHETIC JOINTS UNDERGOING DENTAL PROCEDURES(Sollecito et al. 2015)



Clinical Recommendation:

In general, for patients with prosthetic joint implants, prophylactic antibiotics are *not* recommended prior to dental procedures to prevent prosthetic joint infection.

For patients with a history of complications associated with their joint replacement surgery who are undergoing dental procedures that include gingival manipulation or mucosal incision, prophylactic antibiotics should only be considered after consultation with the patient and orthopedic surgeon.* To assess a patient's medical status, a complete health history is always recommended when making final decisions regarding the need for antibiotic prophylaxis.

Clinical Reasoning for the Recommendation:

- There is evidence that dental procedures are not associated with prosthetic joint implant infections.
- There is evidence that antibiotics provided before oral care do not prevent prosthetic joint implant infections.
- There are potential harms of antibiotics including risk for anaphylaxis, antibiotic resistance, and opportunistic infections like *Clostridium difficile*.
- The benefits of antibiotic prophylaxis may not exceed the harms for most patients.
- The individual patient's circumstances and preferences should be considered when deciding whether to prescribe prophylactic antibiotics prior to dental procedures.

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* In cases where antibiotics are deemed necessary, it is most appropriate that the orthopedic surgeon recommend the appropriate antibiotic regimen and when reasonable write the prescription.

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Dental Management of Pediatric Patients Receiving Immunosuppressive Therapy and/or Head and Neck Radiation ~~Therapy~~

Abstract

This best practice provides recommendations for oral health care for children undergoing immunosuppressive therapy and/or head and neck radiation. ~~whose medical therapies result in a lowered immune response~~. These children have unique oral health needs and are at risk of developing ~~several~~ multiple associated oral and systemic complications. Dentists play an essential role in diagnosing, preventing, stabilizing, and treating oral health problems that can compromise ~~their~~ a patient's quality of life before, during, and following such ~~immunosuppressive~~ therapies. All children undergoing immunosuppressive therapy and/or head and neck radiation ~~therapy~~ should have an oral examination before such treatments commence~~s~~. Dental interventions must be performed promptly, efficiently, and with attention to the patient's unique circumstances and treatment protocol. Preventing new dental problems and treating existing dental conditions before immunosuppressive therapy and/or head and neck radiation is paramount. Preventive strategies include oral hygiene, diet, fluoride, and patient education. When completing all dental care prior to therapy is not feasible, priorities should be treatment of odontogenic and periodontal infections, extractions, periodontal care, and removal of sources of tissue irritation. Recommendations for ~~managing~~ management of ~~caries~~ caries lesions, pulp therapy, orthodontia, periodontal conditions, and extractions are included. ~~Elective dental care during immunosuppression is not recommended. Management of~~ Strategies to manage oral conditions related to immunosuppressive therapies and head and neck radiation ~~(e.g., mucositis, xerostomia, trismus)~~ ~~is~~ are addressed. For children undergoing hematopoietic cell transplantation, all dental treatment should be completed before the patient becomes immunosuppressed and elective care postponed until immunological recovery has occurred. ~~is completed.~~

This document was developed through a collaborative effort of the American Academy of Pediatric Dentistry Councils on Clinical Affairs and Scientific Affairs to offer updated information and guidance regarding dental management of pediatric patients receiving immunosuppressive therapy and/or head and neck radiation ~~therapy~~.

KEYWORDS: IMMUNOSUPPRESSION; DENTAL CARE; RADIATION THERAPY; MUCOSITIS; TREATMENT PROTOCOL; PHOTOBIOMODULATION

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Latest Revision

~~2018~~ 2022

ABBREVIATIONS

AAPD: American Academy Pediatric Dentistry. **ANC**: Absolute neutrophil count. ~~**BRONJ**: Bisphosphonate-related osteonecrosis of the jaw.~~ **CBC**: Complete blood count. **GVHD**: Graft versus host disease. **HCT**: Hematopoietic stem cell transplantation. ~~**LLLT**: Low-level laser therapy~~. **MASCC/ISOO**: The Multinational Association of Supportive Care in Cancer/ International Society of Oral Oncology. **/mm^3**: per cubic millimeter. **MRONJ**: Medication-related osteonecrosis of the jaw. **OM:** Oral mucositis. **PBM**: Photobiomodulation.

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) recognizes that the pediatric dental professional plays an important role in the diagnosis, prevention, stabilization, and treatment of oral and dental problems that can compromise ~~the~~ a child's quality of life before, during, and after immunosuppressive ~~immuno-suppressive~~ therapy and/or head and neck radiation. ~~which lowers the body's normal immune response~~. ~~This can be deliberate as in lowering the immune~~ ~~response~~ Immunosuppression may be the intended goal of therapies to prevent rejection of a donor organ or hematopoietic cell transplantation* (**HCT**), ~~or it can be incidental as in a side effect of~~ or it may be a consequence of anti-neoplastic chemotherapy~~,~~ ~~radiation therapy,~~ or HCT conditioning. Children undergoing such therapies will benefit from ~~D~~dental interventions that are ~~with certain modifications must~~ ~~be~~ ~~done~~ prompt~~ly~~ ~~and~~ efficient~~ly,~~ and modified according ~~with attention~~ to the patient's medical history, cancer treatment protocol~~,~~ and health status.

Immunosuppressive therapy and/or head and neck radiation may cause many acute and long-term side effects in the oral cavity. Furthermore, any existing or potential sources of oral/dental infection~~s~~ and/or soft tissue trauma can compromise ~~the~~ medical treatment, leading to greater morbidity and mortality, ~~and~~ as well as higher hospitalization costs. It is imperative that the pediatric dentist be familiar with the patient's medical history and ~~as well as~~ associated oral manifestations ~~of the underlying conditions~~., and appropriately address dental concerns in conjunction with the patient's medical team.

Methods

This draft does not constitute an official AAPD health oral policy or clinical recommendation until approval by the General Assembly. Circulation is limited to AAPD members.

Developed by the Clinical Affairs Committee as Management of Pediatric Dental Patients Receiving Chemotherapy and/or Radiation and adopted in 1986 (AAPD Immun 1986), this best practice ~~document~~ was last revised in 2018.(AAPD P. Immunosuppressive 2018) ~~2013~~. The revision of the best practice is based upon a review of current dental and medical literature related to immunosuppressive therapy, head and neck radiation and best current practice. The revision by the Council of Clinical Affairs included a new literature search of the PubMed®/ MEDLINE database using the terms: pediatric cancer, pediatric oncology, hematopoietic cell transplantation, bone marrow transplantation, immunosuppressive therapy, mucositis, stomatitis, chemo-therapy, ~~radiotherapy~~radiation therapy, acute effects, long-term effects, dental care, oral health, pediatric dentistry, practice guideline; field: all; limits: within the last 10 years, humans, English, birth through age 18. Two thousand sixty-five articles matched these criteria. Additional strategies such as Google scholar and hand searches were employed. ~~Ninety-five p~~Papers were chosen for review from these searches ~~from this list~~ and from the references within selected articles. When data did not appear sufficient or were inconclusive, recommendations were based upon expert and/or consensus opinion by experienced researchers and clinicians.

Background

A multidisciplinary approach involving physicians, nurses, dentists, social workers, dieticians, and other related health professionals is essential to ~~in caring~~ care for the child before, during and after ~~any~~ immunosuppressive therapy and/or head and neck radiation.(PDQ® NCI ~~National Cancer Institute~~ 2016; NIDCR 2016) Acute and chronic oral~~Oral and associated systemic~~ complications that may occur as ~~a~~ sequelae of such therapies ~~immunosuppressive therapy and/or radiation therapy~~ include ~~pain,~~ oral mucositis and associated pain, ~~oral ulcerations~~, bleeding, taste dysfunction, ~~secondary~~ opportunistic infections (e.g., candidiasis, herpes simplex virus), dental caries, dry mouth, (e.g., salivary gland dysfunction, xerostomia), neurotoxicity, mucosal fibrosis, gingival hypertrophy, ~~post-radiation~~ osteoradionecrosis, ~~bisphosphonate~~ medication-related osteonecrosis, soft tissue necrosis, ~~temporomandibular dysfunction (e.g.,~~ trismus~~),~~ and craniofacial and dental developmental anomalies. and oral graft versus host disease (**GVHD**). PDQ® NCI 2016; Chaveli-Lopez 2014; ~~Hong et al. 2009;~~ Gandi 2017; da Fonseca 2018, Gawade 2014)

All patients undergoing immunosuppressive therapy and/or head and neck radiation should have an oral examination prior to initiation of treatment (PDQ® NCI 2016; NIDCR 2016) to identify ~~Prevention and treatment of~~ any ~~pre-~~existing or potential source of ~~or concomitant~~ oral disease or infection ~~is essential~~ that may complicate ~~to minimize complications~~ the patient's medical treatment ~~in this population~~.(Elad et

al. 2008~~15~~; Velten 2017) Every patient requires an individualized management approach. Consultations with the patient's physicians and, when appropriate, other dental specialists, should be sought before dental care is instituted (PDQ® NCI 2016). Additionally, t~~T~~he key to success in maintaining a healthy oral cavity during therapy is patient compliance. Educating ~~T~~the child and the parents regarding the possible acute and long-term side effects of cancer therapies is essential, as this may improve patient motivation to adhere to oral care protocols during cancer therapy. ~~should be educated regarding the possible acute side effects and the long-term sequelae of immunosuppressive therapies in the oral cavity~~ (~~Hong et al. 2009~~; Elad et al. 2008~~15~~; ~~Hong et al. Support. Care Cancer 2010;~~ Kwok et al. 2017; ~~Lalla et al. 2011~~; Schubert & Peterson ~~2009~~ 2016; Hong & da Fonseca 2008, Gawade 2014). ~~Every patient should be managed on an individual basis.; Cconsultations with the patient's physicians and, when appropriate, other dental specialists, should be sought before dental care is instituted (Lalla et al. 2011).~~

Recommendations

Dental and oral care before the initiation of immunosuppressive therapy or head and neck radiation

Objectives (Hong & da Fonseca 2008; Ritwik, 2020)

The objectives of a dental/oral examination before therapy starts are three-fold: ~~(Hong & da Fonseca 2008)~~

- to identify and stabilize or eliminate existing and potential sources of infection and local irritants in the oral cavity—without needlessly delaying the treatment or inducing complications.
- to communicate with the medical team regarding the patient's oral health status, plan, and timing of treatment.
- to educate the patient and parents about the importance of optimal oral care in order to minimize oral problems~~/~~and discomfort before, during, and after treatment and to inform them about the possible acute and long-term effects of the therapy in the oral cavity and the craniofacial complex.

Initial evaluation

Medical history review: should include~~, but not be limited to,~~ disease/condition (type, stage, prognosis), treatment protocol (conditioning regimen, surgery, chemotherapy, location and dose of radiation, ~~transplant~~), medications (including bisphosphonates and other bone modifying agents), allergies, surgeries, secondary medical diagnoses, hematological status (e.g. complete blood count [**CBC**]), ~~coagulation status~~, immuno-suppression status, presence of an indwelling venous access line, and contact

of medical team/primary care physician(s).(PDQ® NCI 2016) For HCT patients, ~~include~~ the type of transplant, HCT source (i.e., bone marrow, peripheral stem cells, cord blood stem cells), matching status, donor, conditioning protocol, expected date of transplant, and GVHD prophylaxis should be elicited. ~~Patients with a compromised immune systems may not be able to tolerate a transient bacteremia following invasive dental procedures. The decision regarding the need for antibiotic prophylaxis for dental procedures should be made in consultation with the child's physician. Unless advised otherwise by the physician, the American Heart Association's standard regimen to prevent endocarditis is an accepted option. (NIDCR 2016; AAPD Antibiotic prophylaxis 2018)~~

Dental history review: includes~~s~~ information such as fluoride exposure, habits, trauma, symptomatic teeth, previous care, preventive practices, oral hygiene, and diet. ~~assessment~~.

Oral/dental assessment: should include a thorough head, neck, and intraoral examination~~s~~, oral hygiene assessment, ~~and training,~~ and radiographic evaluation based on history and clinical findings.

Preventive strategies

Oral hygiene: ~~Oral hygiene includes~~ B~~b~~rush~~ing~~ of the teeth and tongue two to three times daily should be done with a regular soft nylon-bristled ~~brush~~ or electric toothbrush, regardless of ~~the~~ hematological status.(~~Lalla et al. 2011~~; Kwok et al. 2017; Schubert & Peterson ~~2009~~ 2016; Peterson et al. 2015; Wilson et al. 2021 ~~2007~~) Ultrasonic brushes and dental floss should only be allowed ~~only~~ if the patient is properly trained.(Schubert & Peterson ~~2009~~ 2016) If capable, the patient's teeth should be gently flossed daily. If pain or excessive bleeding occurs, the patient should avoid the affected area, but floss the other teeth.(PDQ NCI 2016) Patients with poor oral hygiene and/or periodontal disease may use chlorhexidine rinses ~~daily~~ until the tissue health improves or mucositis develops.(~~Hong et al. Am. J. Med. 2010~~ Elad 2015; Hong et al 2019) The high alcohol content of commercially-available chlorhexidine mouthwash may cause discomfort and dehydrate the tissues in patients with mucositis. ~~; thus,~~ ~~an~~ An alcohol-free chlorhexidine solution is indicated in this situation.

Diet: Dental practitioners should discuss the importance of a healthy diet to maintain nutritional status and emphasize ~~with an emphasis on~~ food~~s~~ choices that do not promote caries. Patients and parents should be advised about the high cariogenic potential of carbohydrate-rich dietary supplements ~~in carbohydrates~~ and sucrose-sweetened ~~oral~~ ~~pediatric~~ medications ~~rich~~ ~~in sucrose~~.(~~Hong et al. Support Care Cancer 2010~~; Weng 2021; Nirmala 2015) They should also be instructed that sharp, crunchy, spicy, and highly acidic

foods and alcohol should be avoided during chemotherapy, head and neck radiation, and HCT. (PDQ® NCI 2016)

Fluoride: Preventive measures include the use of fluoridated toothpaste, fluoride supplements if indicated, neutral fluoride gels/rinses, or applications of fluoride varnish for patients at risk for caries and/or dry mouth~~xerostomia~~.~~6,8~~ A brush-on technique is convenient and may increase the likelihood of patient compliance with topical fluoride therapy.(Schubert & Peterson~~2009~~ 2016)

Lip care: Lanolin-based creams and ointments are more effective in moisturizing and protecting against damage than petrolatum-based products.(~~Schubert & Peterson 2009~~ Santo et al. 2013)

Trismus prevention/treatment: Patients who receive head and neck radiation ~~therapy to the masticatory muscles~~ may develop trismus. Thus, daily oral stretching exercises/physical therapy should start before radiation is initiated and continue throughout treatment.(~~Lalla et al. 2011;~~ Kowk et al. 2017; Little et al. 2018)

Reduction of head and neck radiation to healthy oral tissues: I~~n cases of radiation to the head and neck, the~~ The use of lead-lined stents, prostheses, and shields, as well as salivary gland sparing techniques (e.g., three-dimensional conformal or intensity modulated radiotherapy, concomitant cytoprotectants, surgical transfer of salivary glands), should be discussed with the radiation oncologist.

Education: Patient and parent education includes the importance of optimal oral care in order to minimize oral problems and discomfort before, during, and after treatment and the possible acute and long-term effects of the therapy in the craniofacial complex. (Hong et al, 2019; PDQ NCI 2016)

Dental care

Hematological considerations:

Dental providers should be aware of the patient's hematologic status and related risks of bacteremia and excessive bleeding. Hematologic management of the patient should be directed by the patient's oncologist, and consultation with the medical team is necessary to determine the need for prophylactic interventions prior to dental treatment.

In particular, patients who are immunosuppressed may not be able to tolerate ~~a~~ transient bacteremia following invasive dental procedures. A decision regarding the need for antibiotic prophylaxis prior to dental treatment should be made in consultation with the child's physician. Unless advised otherwise, the American Heart Association's standard regimen to prevent endocarditis is an acceptable option for the immunocompromised patient. (NIDCR 2016; Wilson et al. 2021). The following parameters may be used to guide decisions regarding need for antibiotic prophylaxis:

- Absolute neutrophil count (**ANC**):
  - — >2,000 per cubic millimeter (/**mm^3**): no need for antibiotic prophylaxis;(PDQ NCI 2016; Little et al. 2018)
  - — 1000 to 2000/mm^3: Use clinical judgment based on the patient's health status and planned procedures. Some authors(PDQ® NCI 2016; ~~Lalla et al. 2011~~) suggest that antibiotic coverage ~~(dosed per AHA recommendations [Hong et al. Am J Med 2010])~~ may be prescribed when the ANC is in this range ~~between 1,000 and 2,000/mm^3~~. If infection is present at the site of the planned procedure, ~~or unclear~~, a more aggressive prophylactic antibiotic therapy regimen may be ~~indicated and should be~~ discussed with the medical team; and
  - — <1,000/mm^3: defer elective dental care.(da Fonseca 2018; Levi et al 2018) In dental emergencies~~y cases~~, discuss management with a course of antibiotic therapy versus one dose of antibiotics for prophylactic coverage. ~~antibiotic coverage (antibiotic prophylaxis versus antibiotic coverage for a period of time)~~ with the medical team before proceeding with treatment. ~~The patient may need hospitalization for dental management.~~

Patients undergoing cancer treatments are at risk for thrombocytopenia. The following parameters may be used to determine need for pre- and post-operative interventions:

- Platelet count:~~(Lalla et al. 2011)~~ (~~Little et al. 2018~~)
  - — <60,000/mm^3: Defer elective treatment and avoid invasive procedures when possible. When medically-necessary dental treatment is required, a hospital setting is most appropriate. Discuss supportive measures (e.g., platelet transfusions pre- and post-operatively, bleeding control, hospital admission and care) with the patient's physician before proceeding. Localized hemostatic measures to manage prolonged bleeding may be utilized (e.g., sutures, hemostatic agents, pressure packs, microfibrillar collagen, topical thrombin and/ or gelatin foams). Systemic measures (e.g., aminocaproic acid, tranexamic acid) may be recommended by the hematologist/oncologist. If platelet transfusions are administered, the dentist should consult with the hematologist regarding the need for a post-transfusion platelet count before the commencement of dental treatment.

Additional transfusions would ideally be available in the event of excessive and persistent intraoperative or postoperative bleeding (Schiffer et al. 2018).

- Other coagulation tests (e.g., prothrombin time, partial thromboplastin time, international normalized ratio, platelet function) may be recommended for certain patients with other coagulopathies.

~~>75,000 /mm^3: no additional support needed.;~~

~~40,000 to <75,000/mm^3: Platelet transfusions may be considered pre- and 24 hours post-operatively. Z, Localized procedures to manage prolonged bleeding may include (e.g. sutures, hemostatic agents, pressure packs, and/ or gelatin foams); and.~~

~~<40,000/mm^3: defer care. In dental emergency cases, contact supportive measures the patient's physician to discuss (e.g., platelet transfusions bleeding control, hospital admission and care) before proceeding. Additional localized procedures (e.g., microfibrillar collagen, topical thrombin) and additional medications as recommended by the hematologist/oncologist (e.g., aminocaproic acid, tranexamic acid) may help control bleeding.(PDQ NCI 2016).~~

~~• Other coagulation tests may be in order for individual patients.~~

Dental procedures:

- Ideally, all dental care should be completed before immunosuppressive therapy is initiated. When that is not feasible, temporary restorations may be placed and non-acute dental treatment may be delayed until the patient's hematological status is stable.(PDQ NCI 2016; Hong et al. 2018; ~~Lalla et al. 2011~~) The patient's blood counts typically ~~normally~~ start falling five to seven days after the beginning of treatment cycle~~,~~ and stay~~ing~~ low for approximately 14 to 21 days~~,~~ before rising ~~again~~ to normal levels. ~~for a few days until the next cycle begins~~. Patients who require an organ transplant are best able to tolerate dental care at least three months after transplant when overall health improves (NIDCR 2016).
- Prioritizing procedures: ~~When all dental needs~~ In the event that definitive dental care would result in a delay of oncologic treatment and a resultant poorer medical prognosis, ~~cannot be treated before therapy is initiated, priorities should~~ providers may prioritize treatment of symptomatic or potentially symptomatic caries lesions (risk of irreversible pulpitis), ~~be~~ infections, hopeless teeth (e.g., root tips, non-restorable teeth) and removal of ~~extractions, periodontal care (e.g., scaling, prophylaxis), and~~ sources of tissue irritation before the treatment of asymptomatic carious teeth (e.g., incipient, small asymptomatic caries lesions), root canal therapy for asymptomatic

permanent teeth, and replacement of faulty restorations.(Hong et al. 2018; da Fonseca 2018; Little et al. 2018) It is important for the practitioner to be aware that the signs and symptoms of periodontal disease and infection may be decreased in immunosuppressed patients.(Kwok et al. 2017, Little et al. 2018)

- ~~Pain and the risk for pulpal infection determine which carious lesions should be treated first.(Schubert & Peterson 2009) Incipient to small carious lesions may be treated with fluoride, silver diamine fluoride, and/or sealants if until definitive care can be accomplished.(Lalla et al. 2011 Some patients requiring an organ transplant will be best able to tolerate dental care at least three months after transplant when overall health improves.(NIDCR 2016) It is important for the practitioner to be aware that the signs and symptoms of periodontal disease may be decreased in immunosuppressed patients.(Lalla et al. 2011)~~
- Pulp therapy in primary teeth: Few studies have evaluated the safety of performing pulp therapy in primary teeth prior to the initiation of chemotherapy and/or head and neck radiation~~otherapy~~. Many clinicians choose to extract pulpally involved carious teeth ~~provide a more definitive treatment in the form of extraction~~ because of the potential for pulpal/periapical/furcal infections ~~during immunosuppression periods~~ to ~~can~~ become life-threatening during periods of immunosuppression.(~~Lalla et al. 2011~~; Schubert and Peterson ~~2009~~ 2016) Asymptomatic ~~T~~teeth that are already ~~have been~~ treated pulpally and are clinically and radiographically sound should be monitored periodically for clinical and radiographic signs of ~~internal resorption or~~ failure. ~~due to pulpal/ periapical/furcal infections.~~
- Endodontic treatment in permanent teeth: Symptomatic non-vital permanent teeth ideally should receive root canal treatment in a single visit at least one week before initiation of immunosuppressive therapy to allow sufficient time to assess treatment success. ~~before the chemotherapy~~.(da Fonseca 2018; ~~Lalla et al. 2011~~; Little et al. 2018) If that is not possible, alternative options include pulpectomy and closure with an antibacterial agent or extraction. ~~is indicated. Extraction is also the treatment of choice for teeth that cannot be treated by definitive endodontic treatment in a single visit.~~ The need for antibiotics is determined by the patient's health status and should be discussed with the patient's physician. ~~In that case~~, ~~the extraction should be followed by antibiotic therapy (penicillin or, for penicillin-allergic patients, clindamycin) for about one week is indicated.(Lalla et al. 2011; Little et al. 2018)~~ Endodontic treatment of asymptomatic non-vital permanent teeth may be delayed until the ~~hematological~~ immunologic status of the patient is stable.(da Fonseca 2018; Little et al. 2018) ~~It is important that the~~ The etiology of periapical radiolucencies ~~lesions~~ associated with previously

endodontically treated teeth should be determined because they may represent ~~can be due to a number of factors including~~ pulpal infections, inflammatory reactions, apical scars, cysts, ~~and~~ or malignancies~~y~~.(Schubert & Peterson ~~2009~~ 2016) Periapical lesions that are asymptomatic and most likely depict apical scars do not need retreatment.(Hong et al, 2018) ~~If a periapical lesion is associated with an endodontically treated tooth and no signs or symptoms of infection are present, there is no need for retreatment or extraction since the radiolucency likely is due to an apical scarYamagata et al. 2006)~~

- Orthodontic appliances and space maintainers: Poorly-fitting appliances can ~~abrade oral mucosa~~ result in a breach of oral mucosa and increased the risk of microbial invasion into deeper tissues. (Levi et al. 2018; ~~Lalla et al. 2011~~) Fixed ~~A~~appliances should be removed if the patient has poor oral hygiene and/or if the treatment protocol ~~or~~ (e.g., HCT conditioning regimen, head and neck radiation) carries a risk for the development of moderate to severe mucositis.(da Fonseca 2018) Simple appliances (e.g., band and loops, fixed lower lingual arches) that are not irritating to the soft tissues may be left in place in patients with ~~who present~~ good oral hygiene. (da Fonseca 2018; Schubert & Peterson ~~2009~~ 2016) Removable appliances and retainers that fit well may be worn as long as tolerated by the patient with ~~who maintains~~ good oral care.(~~Lalla et al. 2011~~; Schubert & Peterson ~~2009~~ 2016) Patients should be instructed to clean their appliance daily and routinely clean appliance cases with an antimicrobial solution to prevent contamination and reduce the risk of appliance-associated oral infections.(~~Lalla et al. 2011~~) Consider removing orthodontic bands or adjusting prosthes~~is~~es that approximate gingival tissue if a patient is expected to receive cyclosporine or other drugs known to cause gingival hyperplasia. If band removal is not possible, vinyl mouth guards or orthodontic wax should be used to decrease tissue trauma.(Schubert & Peterson ~~2009~~ 2016)
- Periodontal considerations: Extraction is the treatment of choice for teeth with a poor prognosis (e.g., non-restorable teeth, periodontal pockets greater than five millimeters, significant bone loss, furcation involvement, mobility, infection) that cannot be treated by definitive periodontal therapy. Partially erupted molars can become a source of infection because of pericoronitis. The overlying gingival tissue should be excised if the dentist believes it is a potential risk and if ~~the~~ hematological status permits.(Schubert & Peterson ~~2009~~ 2016; Little et al. 2018) ~~Extraction is the treatment of choice for teeth with a poor prognosis that cannot be treated by definitive periodontal therapy~~. ~~If the patient has had bisphosphonates and an invasive periodontal procedure is indicated, risks must be discussed with the patient, parents, and physicians prior to the procedure.~~

- Third molars and other impacted teeth: Some practitioners prefer to extract all third molars that are not fully erupted, particularly prior to HCT. Others favor a more conservative approach and only recommend extraction of third molars at risk for pulpal infection, with significant pathology, infection, periodontal disease, or pericoronitis, or when malposed or non-functional.(Schubert & Peterson 2016; AAPD Oral surgery 2020; AAOMS 2016)
- Primary teeth that are mobile due to natural exfoliation may be left alone.
- Extractions: ~~There are no clear recommendations for the use of antibiotics for extractions. (da Fonseca 2018) Recommendations generally have been empiric or based on anecdotal experience.~~ Surgical procedures must be as atraumatic as possible, with no sharp bony edges remaining and satisfactory closure of the wounds. These extractions are ideally performed three weeks (or at least ten to fourteen days) before cancer therapy is initiated to allow for adequate healing (~~Lalla et al. 2011;~~Schubert & Peterson ~~2009~~2016; Little et al. 2018) If the patient is immunocompromised and at risk of infection from transient bacteremia, antibiotic prophylaxis should be discussed with the patient's physicians. ~~If~~ Regardless of hematologic status, if there is documented infection associated with the extracted tooth, antibiotics (ideally chosen with the benefit of sensitivity testing) should be administered for about one week post-operatively.(~~Lalla et al. 2011;~~ Schubert & Peterson ~~2009~~ 2016; Little et al. 2018)

- ~~To minimize the risk of development of osteonecrosis, osteoradionecrosis, or bisphosphonate-related osteonecrosis of the jaw (**BRONJ**), patients who will receive radiation to the jaws or bisphosphonate treatment as part of the cancer therapy must have all oral surgical procedures completed before those measures are instituted.(Saad et al. 2012; Kuhl et al. 2012; Dodson 2009) If the patient has received bisphosphonates or radiation to the jaws and an oral surgical procedure is necessary, risks must be discussed with the patient, parents, and physician prior to the procedure. In patients undergoing long-term potent, high-dose intravenous bisphosphonates, there is an increased risk of BRONJ after a tooth extraction or with periodontal disease,(Saad et al. 2012; Kuhl et al. 2012; Dodson 2009 although most of the evidence has been described in the adult population.(Kuhl et al. 2012) Patients with a high risk of BRONJ are best managed by a dental specialist in coordination with the medical team in the hospital setting.~~
  ~~Loose primary teeth should be allowed to exfoliate naturally. Nonrestorable teeth, root tips, teeth with periodontal pockets greater than six millimeters, symptomatic impacted teeth, and teeth exhibiting acute infections, significant bone loss, involvement of the furcation, or mobility should~~

~~removed ideally two weeks (or at least seven to 10 days) before therapy is initiated to allow adequate healing.(Lalla et al. 2011; Schubert & Peterson 2009; Little et al. 2018)~~

~~Some practitioners prefer to extract all third molars that are not fully erupted, particularly prior to HCT, while others favor a more conservative approach, recommending extraction of third molars at risk for pulpal infection or those associated with significant pathology, infection, periodontal disease, or pericoronitis or if the tooth is malpositioned or non-functional.(Schubert & Peterson 2009; AAPD Oral surgery 2018; AAOMS 2016)~~

- In pediatric patients who are on bone modifying agents (e.g., bisphosphonates, anti-resorptive, anti-angiogenic agents) as part of their cancer treatment, or in those who have had head and neck radiation are at an increased risk of medication-related osteonecrosis of the jaw (**MRONJ**) or osteoradionecrosis,(Yarom et al. 2019; Migliorati 2019; Ruggerio et al. 2014) although most of the evidence has been described in the adult population (Migliorati 2019). Patients deemed to be at a significant risk of MRONJ or osteoradionecrosis are best managed by a dentist in coordination with the medical team in a hospital setting. To minimize the risk of development of ~~osteonecrosis,~~ osteoradionecrosis~~,~~ or MRONJ, ~~bisphosphonate-related osteonecrosis of the jaw~~ (~~**BRONJ**~~), patients would ideally have ~~who will receive radiation to the jaws or bisphosphonate treatment as part of the cancer therapy must have~~ all oral surgical procedures (e.g., extractions and periodontal treatment) completed before those therapies ~~measures~~ are instituted.(~~Saad et al. 2012; Kuhl et al. 2012~~; ~~Dodson 2009~~ Yarom et al. 2019; Migliorati 2019~~)~~ In patients who have been on anti-resorptive (e.g., bisphosphates, denosumab) or anti-angiogenic agents as part of their cancer treatment or have had ~~If the patient has received bisphosphonates or~~ radiation to the jaws, and an oral surgical procedure or invasive periodontal procedure is necessary, ~~risks must be discussed~~ it is important to discuss risks with the patient~~,~~ and caregivers~~, and physician~~ prior to the procedure. ~~In patients undergoing long-term potent, high-dose intravenous bisphosphonates, there is an increased risk of BRONJ after a tooth extraction or with periodontal disease,(Saad et al. 2012; Kuhl et al. 2012; Dodson 2009) although most of the evidence has been described in the adult population.(Kuhl et al. 2012) Patients with a high risk of BRONJ are best managed by a dental specialist in coordination with the medical team in the hospital setting.~~

Communication:

It is vital that the dentist communicate the comprehensive oral care plan with the medical team. Information to be shared includes the extent of non-elective dental treatment needed, need for supportive

care (e.g., hospital admission, blood product replacement, antibiotic coverage) and the amount of time needed for stabilization of oral disease and healing from the dental procedures. ~~the severity of dental caries (number of teeth involved and which teeth need immediate treatment), endodontic needs (pulpal versus periapical infection), periodontal status, number of teeth requiring extraction, soft tissue pathology, and any other urgent care needed. Furthermore~~, ~~it is important for the dentist to discuss~~ Discussions with the medical team can ensure ~~how much time is needed for the stabilization of oral disease and~~ ideal coordination between needed dental services and planned cancer therapy. ~~as this will also affect the timing of the or conditioning protocols~~.(PDQ NCI 2016)

~~Dental and o~~Oral care during immunosuppression periods and radiation therapy

Preventive strategies

Oral hygiene: ~~Intensive~~ Maintenance of good oral care ~~is of paramount importance~~ in patients undergoing immunosuppressive therapy and head and neck radiation is necessary to ~~because it~~ reduce~~s~~ the microbial load in the oral cavity. This may decrease the host inflammatory response and subsequent severity of OM. Furthermore, a clean oral cavity reduces the risk of opportunistic infections. ~~risk of developing moderate/severe mucositis without causing an increase in septicemia and infections in the oral cavity.~~ ~~(~~PDQ NCI 2016; ~~Hong et al. 2009;~~ Elad et al. 2015~~08~~; ~~Hong et al. Support Care Cancer 2010~~; ~~Lalla et al. 2011~~; Kwok et al. 2017; Schubert & Peterson ~~2009~~ 2016; Peterson et al. 2015; Little et al. 2018; ~~Stiff et al. 2006~~ Levi et al. 2018) ~~Thrombocytopenia should not be the sole determinant of oral hygiene as patients are able to brush without bleeding at widely different levels of platelet count.(Schubert & Peterson 2009)~~ Patients should use a soft nylon brush two to three times daily and replace it ~~on a regular (~~every two to three months~~) basis~~.(Schubert & Peterson ~~2009~~ 2016; Peterson et al. 2015)

Thrombocytopenia is not the sole determinant of oral hygiene as patients are able to brush without bleeding at widely different levels of platelet counts.(Schubert & Peterson ~~2009~~ 2016) Fluoridated toothpaste is effective for caries prevention ~~can be used, but,~~ and a mildly flavored toothpaste may be better tolerated during periods of OM. ~~if the patient does not tolerate it during periods of mucositis due to oral burning or stinging sensations, it may be discontinued and the patient should switch to mild-flavored non-fluoridated toothpaste.~~ If moderate to severe OM ~~mucositis~~ develops and the patient cannot tolerate a regular soft nylon toothbrush or an end-tufted brush, foam brushes or super soft brushes soaked in chlorhexidine may be used.(Hong and da Fonseca 2008; Ritwik 2020) Otherwise, foam or super soft brushes are ~~should be~~ discouraged because they do not allow for effective cleaning. The use of a regular brush should be resumed as soon as the OM ~~mucositis~~ improves.(Schubert & Peterson ~~2009~~ 2016;

Peterson et al. 2015) Brushes should be air-dried between uses.(Schubert & Peterson ~~2009~~ 2016) Electric or ultrasonic brushes are acceptable if the patient is capable of using them without causing trauma and irritation. If patients are skilled at flossing without traumatizing the tissues, it is reasonable to continue flossing throughout treatment. Toothpicks and water irrigation devices should not be used when the patient is pancytopenic to avoid tissue trauma.(Schubert & Peterson ~~2009~~ 2016; ~~AAPD Antibiotic prophylaxis 2018~~)

Dental care

During immunosuppression, elective dental care should be deferred. ~~should not be provided~~. If a dental emergency arises, the treatment plan should be discussed with the patient's physician who will make recommendations for supportive medical therapies (e.g., antibiotics, platelet transfusions, analgesia). The patient should be ~~seen~~ reevaluated every six months (or in shorter intervals if there is a risk of dry mouth ~~xerostomia~~, caries, trismus, ~~and/~~or chronic oral GVHD) ~~for an oral health evaluation~~ during treatment, in times of stable hematological status and always after reviewing the medical history.

Management of oral mucositis and associated pain ~~oral conditions~~ related to immunosuppressive therapies

Oral mucositis (**OM)**: The Multinational Association of Supportive Care in Cancer/International Society of Oral Oncology (**MASCC/ ISOO**) has published guidelines for treatment of OM.~~mucositis~~.(Peterson et al. 2015; ~~Lalla et al. 2014~~Elad et al. 2020) Currently, data for the pediatric population is limited; thus, recommendations are based largely on adult studies. The recommended ~~most common~~ prescriptions for prevention ~~management~~ of ~~mucositis~~ OM include good oral hygiene, bland mouth rinses (saline or sodium bicarbonate), benzydamine mouthrinse, cryotherapy, palifermin, and photobiomodulation therapy (**PBM**). (Elad et al 2020, Miranda-Silva 2021). ~~analgesics, non-medicated oral rinses (e.g., 0.9 percent saline or sodium bicarbonate mouth rinses four to six times/day), and parenteral nutrition as needed.(NCI 2016; Peterson et al 2015; Stiff et al. 2006)~~ Mucosal coating agents (e.g., ~~Amphojel®, Kaopectate®,~~ hydroxypropylmethylcellulose) and film-forming agents ~~(e.g., Zilactin® and Gelclair®)~~ also have been suggested.(PDQ NCI 2016) ~~Effective interventions for mucositis prevention include the use of palifermin, low-level laser therapy (**LLLT**), and cryotherapy.(Lalla et al. 2014)~~ The use of sucralfate, antimicrobial lozenges, chlorhexidine, pentoxifylline, and granulocyte–macrophage colony stimulating factor mouthwash for ~~oral~~ ~~mucositis~~ are not recommended.(Peterson et al. 2015~~ Lalla et al. 2014~~Elad et al. 2020)

Oral cryotherapy, the cooling of intraoral tissue with ice, ~~during chemotherapy treatment,~~ is recommended as OM ~~mucositis~~ prophylaxis for patients receiving bolus infusion of chemotherapy drugs with short half-lives.(~~Lalla et al. 2014~~Elad et al. 2020; Peterson et al. 2013) ~~This includes patients treated with fluorouracil as well as patients receiving high-dose melphalan as conditioning for HCT.(Lalla et al. 2014)~~ Oral cryotherapy reduces the blood flow to the mouth by narrowing the blood vessels, thus limiting the amount of chemotherapy drugs delivered to the tissues. Cryotherapy is inexpensive and readily available, but further research is needed to confirm the effectiveness of oral cryotherapy in children ~~pediatric oncology.(~~Peterson et al. 2013; Miranda-Silva et al. 2021)

Palifermin (keratinocyte growth factor-1) is a drug approved by the U.S. Food and Drug Administration for the prevention ~~and treatment~~ of oral mucositis.~~(~~U.S. FDA 2015 ~~2013~~) ~~It is recommended for mucositis prophylaxis for~~ in patients undergoing conditioning with high-dose chemotherapy and total body irradiation followed by HCT.(~~Lalla et al. 2014~~Elad et al. 2020) Palifermin ~~is believed to~~ exerts its effect by stimula~~tea~~ting epithelial cell reproduction, growth, and development so that mucosal cells damaged by chemotherapy and radiation are replaced quickly, accelerating the healing process.(~~U.S. FDA 2013~~ (Kwok et al, 2017; Logan et al. 2020)

The current MASCC/ISOO guidelines support the use of PBM ~~low-level laser~~ therapy to prevent OM~~oral mucositis for~~ in patients undergoing H~~SC~~CT conditioning with high-dose chemotherapy with or without total body irradiation as well as patients undergoing radiation treatment for head and neck cancer.(~~Lalla et al. 2014~~Elad et al. 2020 ~~LLLT~~ PBM can decrease pain and the duration and severity of chemo-therapy-induced OM ~~mucositis~~ in children.(He et al. 2018; Amadori et al. 2016; ~~Kuhn et al. 2009~~ Eduardo et al. 2015) ~~LLLT~~ PBM may not be available at all cancer treatment centers due to the cost of the equipment and the need for trained personnel. Appropriate protocol must be followed when using ~~LLLT~~ PBM to prevent contamination and occupational risks to the child and dental team.

~~Oral cryotherapy, the cooling of intraoral tissue with ice during chemotherapy treatment, is recommended as mucositis prophylaxis for patients receiving bolus infusion of chemotherapy drugs with short half-lives.(Lalla et al. 2014Elad et al. 2020; Peterson et al. 2013) This includes patients treated with fluorouracil as well as patients receiving high-dose melphalan as conditioning for HCT.(Lalla et al. 2014Elad et al. 2020) Oral cryotherapy reduces blood flow to the mouth by narrowing the blood vessels, limiting the amount of chemotherapy drugs delivered to the tissues. Cryotherapy is inexpensive and~~

~~readily available, but further research is needed to confirm the effectiveness of oral cryotherapy in pediatric oncology.(Peterson et al. 2013; Miranda-Silva et al. 2021)~~

~~Studies on the use of chlorhexidine for mucositis have given conflicting results.~~ With regard to chlorhexidine, ~~M~~most studies have not demonstrated a prophylactic impact or a reduction in the severity of OM ~~mucositis~~ Worthington et al. 2011; Kwok et al. 2017, Little et al. 2018; ~~Clarkson et al. 2010~~; Cardona et al. 2017), ~~although reduced colonization of candidal species has been shown.~~ Chlorhexidine is not ~~no longer~~ recommended for prevent~~ing~~ion of oral mucositis in patients undergoing head and neck radiation~~otherapy~~.(Peterson et al. 2015; ~~Lalla et al. 2014~~Elad et al. 2020; ~~McGuire et al. 2013~~)

Patient-controlled analgesia ~~has been~~ is helpful in relieving pain associated with OM~~mucositis~~, reducing the requirement for oral analgesics. (~~Lalla et al. 2014, McGuire et al. 2013~~) The use of topical anesthetics and mixtures containing topical anesthetics (e.g., Philadelphia mouthwash, magic mouthwash) ~~has~~ has been suggested for pain management~~,~~.(Peterson et al. 2015; Saunders et al. 2020) ~~although there are no studies available to assess the benefit and potential for toxicity~~. However, topical ~~Topical~~ anesthetics only provide short term pain relief.(Peterson et al. 2015; ~~McGuire et al. 2013~~) ~~Lidocaine~~ In addition to possible cardiovascular and central nervous system effects, their use may obtund or diminish taste and the gag reflex(~~McGuire et al. 2013~~ Kwok et al. 2017) and/or result in a burning sensation~~., in addition to possible cardiovascular and central nervous system effects.~~ Currently, the evidence for its benefit is lacking (Hong et al. 2019) and potential for toxicity is a concern in young children.

Oral mucosal infections: The signs of oral mucosal inflammation and infection may be ~~greatly~~ diminished during neutropenic periods. Thus, the clinical appearance of infections may differ significantly from the expected ~~normal~~.(Little et al. 2018) Close monitoring of the oral cavity allows for timely diagnosis and treatment of fungal, viral, and bacterial infections. Oral cultures and/or biopsies of all suspicious lesions are appropriate if medical status permits. While waiting for the results, empiric therapy typically is initiated until laboratory results dictate more specific medications.(PDQ NCI 2016; Schubert & Peterson 2016; Little et al. 2018) Of note, ~~Prophylactic~~ nystatin is not effective for the prevention and/or treatment of fungal infections.(~~Lalla et al. 2011~~; Kwok et al. 2017; Gøtzche and Johansen 2014 ~~2002~~) ~~Oral cultures and/or biopsies of all suspicious lesions be performed. and prophylactic medications should be initiated until more specific therapy can be prescribed.(_NCI 2016; Lalla et al. 2011; Schubert & Peterson 2009; Little et al. 2018)~~

Oral bleeding: Oral bleeding in patients undergoing immunosuppressive therapy commonly occurs due to thrombocytopenia~~, disturbance of coagulation factors,~~ and/or damaged vascular integrity. Management ~~should~~ consists of local ~~approaches~~ (e.g., pressure packs, antifibrinolytic rinses or topical agents, gelatin sponges) and systemic measures (e.g., platelet trans-fusions, aminocaproic acid).(~~Lalla et al. 2011~~ Kwok et al. 2017); Schubert & Peterson ~~2009~~ 2016; Little et al. 2018)

Dental sensitivity/pain: Tooth sensitivity ~~could~~ may be related to dry mouth ~~decreased secretion of saliva~~ during chemotherapy or head and neck radiation therapy and the lowered salivary pH.(~~Lalla et al. Kwok~~ et al. 2017; Schubert & Peterson ~~2009~~ 2016; Little et al. 2018) Patients who are using plant alkaloid chemotherapeutic agents (e.g., vincristine, vinblastine) may experience neurotoxicity that presents as~~with~~ deep, constant jaw pain (affecting the mandibular molars with greater frequency) or paresthesia in the absence of odontogenic pathology. The pain usually is transient and generally subsides shortly after dose reduction and/or cessation of chemotherapy.(~~Lalla et al. 2011~~; Kwok et al. 2017; Schubert & Peterson ~~2009~~ 2016; Little et al. 2018)

~~Xerostomia~~Dry mouth: Sugar-free chewing gum or candy, sucking tablets, special dentifrices for oral dryness, saliva substitutes, frequent sipping of water, alcohol-free oral rinses, and/or oral moisturizers are recommended.(Schubert & Peterson ~~2009~~ 2016; Carvalho et al. 2018; Chaveli-Lopez 2014 ~~Nieuw Amerongen and Veerman 2003~~) Placing a humidifier by the child's bedside at night may be useful.(Little et al. 2018) ~~Saliva stimulating drugs are approved for use in children~~. Fluoride rinses and gels are highly recommended ~~highly~~ for caries prevention in these patients.

Trismus: Daily oral stretching exercises/physical therapy should be implemented ~~must continue~~ during head and neck radiation treatment. Management of trismus may include prosthetic aids to reduce the severity of fibrosis, trigger-point injections, analgesics, muscle relaxants, and other pain management strategies.(~~Lalla et al. 2011~~; Kwok et al. 2017; Levi et al. 2018; Jensen et al. ~~2010~~ 2017)

Hematopoietic cell transplantation

Hematopoietic cell transplantation ~~can be~~ is used in children to treat malignancies and hematologic disorders, as well as certain metabolic syndromes. Examples include:(Majhail et al. 2015)

- malignant disorders treated with autologous HCT
  - brain tumors.
  - Ewing sarcoma.

559 – germ cell tumors.
560 – Hodgkin lymphoma.
561 – leukemia.
562 – neuroblastoma.
563 – non-Hodgkin lymphoma.
564 – Wilms tumor.
565 • malignant disorders treated with allogenic HCT
566 – acute lymphocytic leukemia.
567 – acute myeloid leukemia.
568 – high-risk solid tumors.
569 – juvenile myelomonocytic leukemia.
570 – myelodysplastic syndrome.
571 • non-malignant disorders treated with allogenic HCT
572 – bone marrow failure syndromes.
573 – chronic granulomatous disease.
574 – Fanconi anemia.
575 – metabolic storage disorders.
576 – osteopetrosis.
577 – severe aplastic anemia.
578 – sickle cell anemia.
579 – thalessemia.
580 – Wiskott-Aldrich syndrome.
581
582 Specific oral complications can be correlated with phases of HCT. (PDQ NCI 2016; NIDCR 2016; Hong
583 et al. 2009; da Fonseca 2018; Elad et al. 20~~08~~15; ~~Hong et al. Support Care Cancer 2010~~; ~~Lalla et al. 2011~~;
584 Schubert & Peterson ~~2009~~ 2016)
585
586 *Phase I: Preconditioning*
587 The oral complications are related to the patient's current systemic and oral health, oral manifestations of
588 the underlying condition, and oral complications of recent medical therapy. Oral complications observed
589 include ~~oral~~ opportunistic infections, gingival leukemic infiltrates, bleeding~~,~~ and ulceration~~.~~, ~~and~~
590 ~~temporomandibular dysfunction~~.(PDQ NCI 2016) Most of the principles of dental and oral care before the
591 transplant are similar to those discussed for ~~pediatric~~ patients undergoing immunosuppressive cancer

therapy.(Hong and da Fonseca 2008) The two major differences in HCT are: 1) the patient receives ~~all the~~ extremely high dose chemotherapy and/or total body irradiation ~~in just~~ immediately prior to (a few days before) the transplant, and 2) there will be prolonged immunosuppression following the transplant. Elective dentistry will need to be postponed until immunological recovery has occurred, at least 100 days following HCT.~~, or~~ This may be longer if chronic GVHD or other complications (e.g., persistent immunodeficiency) are present.(~~Lalla et al. 2011~~; Schubert & Peterson ~~2009~~ 2016) Therefore, all dental treatment should be completed before the patient undergoes HCT.~~the patient becomes immunosuppressed~~.

Phase II: Conditioning neutropenic phase

In this phase, which encompasses the day the patient is ad~~-~~mitted to the hospital to begin the transplant conditioning to 30 days post-HCT, the majority of oral complications are related to the conditioning regimen and supportive medical therapies.(Schubert & Peterson ~~2009~~ 2016) Mucositis, dry mouth~~xerostomia~~, oral pain, hemorrhage, opportunistic infections, taste dysfunction, neurotoxicity (including dental pain, muscle tremors), and temporomandibular dysfunction (including jaw pain, headache, joint pain) may be present.~~seen, typically with a high prevalence and severity of oral complications.~~(PDQ NCI 2016) Oral mucositis usually begins seven to 10 days after initiation of conditioning, and symptoms continue approximately two weeks after the end of conditioning.(PDQ NCI 2016) Among allogeneic transplant patients, ~~hyper~~acute GVHD can occur, causing more severe inflammation and severe mucositis symptoms. Acute GVHD may begin as early as two to three weeks after the start of HCT and continue up to two months post-transplant. The timing of this presentation may help distinguish acute GVHD from chemotherapy-induced OM. ~~although its clinical presentation is difficult to diagnose~~.(PDQ NCI 2016) The patient may ~~should~~ be followed closely to monitor and manage the oral changes and to reinforce the importance of optimal oral care. Avoid elective dental ~~Dental~~ procedures ~~usually are not allowed~~ in this phase due to the patient's severe immunosuppression. If emergency treatment is necessary, the dentist should consult and coordinate with the attending transplant team.

Phase III: Engraftment to hematopoietic recovery

The intensity and severity of acute complications observed in Phase II usually begin to decrease ~~normally~~ three to four weeks after transplantation. ~~Oral fungal infections and herpes simplex virus infection are most notable.(NCI 2016)~~ During this phase, acute ~~Acute~~ GVHD can become a concern for allogeneic graft recipients. ~~Xerostomia~~ Dry mouth, hemorrhage, neurotoxicity, temporomandibular dysfunction, and

granulomas/papillomas ~~sometimes~~ are also observed sometimes.(PDQ NCI 2016) With regard to opportunistic infections, oral fungal infections and herpes simplex virus infection are most likely.(PDQ NCI 2016) HCT patients are particularly sensitive to intraoral thermal stimuli between two and four months post-transplant.(Schubert & Peterson 2016) The mechanism is not well understood, but the symptoms usually resolve spontaneously within a few months. Topical application of neutral fluoride or desensitizing toothpastes helps reduce the symptoms.(Schubert & Peterson 2016). A dental/oral examination should be performed and invasive dental procedures, including dental cleanings and soft tissue curettage, should be done only if authorized by the HCT team because of the patient's continued immunosuppression.(Schubert & Peterson 2009 2016) Patients should be encouraged to optimize oral hygiene and avoid a cariogenic diet. ~~Attention to xerostomia and oral GVHD manifestations is crucial. HCT patients are particularly sensitive to intraoral thermal stimuli between two and four months post-transplant.(Schubert & Peterson 2009) The mechanism is not well understood, but the symptoms usually resolve spontaneously within a few months. Topical application of neutral fluoride or desensitizing toothpastes helps reduce the symptoms.(Schubert & Peterson 2009)~~

Phase IV: Immune reconstitution/recovery from systemic toxicity

After day 100 post-HCT, the oral complications are predominantly ~~are~~ related to the chronic toxicity associated with the conditioning regimen, including dry mouth, ~~salivary dysfunction~~, craniofacial growth abnormalities, late viral infections, chronic oral ~~chronic~~ GVHD, and oral squamous cell carcinoma.(PDQ NCI 2016; Schubert & Peterson ~~2009~~ 2016) ~~Xerostomia and relapse-related oral lesions also may be observed.(NCI 2016)~~ Unless the patient is neutropenic or with severe chronic GVHD, mucosal bacterial infections are less frequently seen. Periodic dental examinations with radiographs can be performed, but invasive dental treatment ~~should~~ is to be avoided in patients with persistent profound impairment of immune function.(Schubert & Peterson ~~2009~~ 2016) Consultation with the patient's physician and parents regarding the risks and benefits of orthodontic care is recommended.

Dental and oral care after ~~the~~ immunosuppressive therapy and head and neck radiation ~~is~~ have been completed:

Objectives

The objectives of a dental/oral examination after immunosuppressive therapy ends are three-fold:

- to maintain optimal oral health.
- to reinforce to the patient/parents the importance of optimal oral and dental care for life.

- to address ~~and/or treat~~ any dental issues that may arise as a result of the long-term effects of immuno-suppressive therapy and/or head and neck radiation.

Dental care

Periodic evaluation: The patient should be seen ~~at least~~ every six months (~~or in shorter intervals~~ or more frequently if issues such as chronic oral GVHD, dry mouth~~xerostomia~~, or trismus are present). Patients who have experienced moderate or severe mucositis and/or chronic oral GVHD should be followed closely for signs of malignant transformation of their oral mucosa (e.g., oral squamous cell carcinoma).(Elad et al. 20~~08~~15; PDQ NCI 2016; Inamoto, 2015~~Euvrard et al. 2003~~)

Education: The importance of optimal oral and dental care for life must be reinforced. It is also important to emphasize the need for regular follow-ups with a dental professional, especially for patients who are at risk for or have developed GVHD and/or ~~xerostomia~~ dry mouth and those who were younger than six years of age during treatment due to potential dental developmental problems.

Orthodontic treatment: Orthodontic care may start or resume after completion of all therapy and after at least a two-year disease-free survival when the risk of relapse is decreased and the patient is no longer using immunosuppressive drugs.(da Fonseca 2018) A thorough assessment of any dental developmental disturbances caused by the therapy must be performed before initiating orthodontic treatment. The following strategies ~~should~~ may be considered when providing orthodontic care for patients with dental sequelae: (1) use appliances that minimize the risk of root resorption, (2) use lighter forces, (3) terminate treatment earlier than normal, (4) choose the simplest method for the treatment needs, and (5) do not treat the lower jaw. (Zahrowski 2007) However, specific guidelines for orthodontic management, including optimal force and pace, remain undefined. Patients and their families may be made aware of the potential for a higher risk of orthodontic relapse among cancer survivors (Mitus-Kenig, 2021). Patients who were on intravenous antiresorptive or anti-angiogenic agents as part of their cancer treatment, or in those who have had head and neck radiation, may ~~have used or will be given medications associated with osteonecrosis of the jaw in the future~~ present a challenge for orthodontic care. Although bisphosphonate inhibition of tooth movement has been reported in animals, it has not been quantified for any dose or duration of therapy in humans.(Zahrowski 2007, Bhatt et al. 2014) Consultation with the patient's ~~parent~~caregivers and physician regarding the risks (e.g. prolonged treatment time, MRONJ, treatment modifications) (Bhatt et al. 2014) and benefits (e.g., reduced root resorption, anchorage, less relapse) (Bhatt et al 2014) of orthodontic care in this situation is recommended.

Oral surgery and invasive periodontal therapy: Patients at risk for MRONJ or osteoradionecrosis should be managed in coordination with the oncology team in the hospital setting. ~~Consultation with an oral surgeon and/or periodontist and the patient's physician is recommended for non-elective oral surgical and invasive periodontal procedures in patients who have used or are using bisphosphonates or those who received radiation therapy to the jaws in order to devise strategies to decrease the risk of osteonecrosis and osteoradionecrosis, respectively.~~(~~Saad et al. 2012;~~ Kuhl et al. 2012; ~~Dodson 2009~~ Yarom et al. 2019; Migliorati 2019) Elective invasive procedures are best ~~should be~~ avoided in these patients.(Yarom et al. 2019; Bhatt et al. 2014)~~Dahllöf et al. 2001)~~ ~~Patients with a high risk of BRONJ are best managed by in coordination with the oncology team in the hospital setting.~~

Long-term concerns

Craniofacial, skeletal, and dental developmental issues are some of the complications faced by survivors (NCI 2016; da Fonseca 2018; Schubert & Peterson ~~2009~~ 2016, Gawade 2014) and usually develop among children who were less than six years of age at the time of their cancer therapy.(da Fonseca 2018; Schubert & Peterson ~~2009~~ 2016) Long term effects of immunosuppressive therapy may include tooth agenesis, microdontia, crown disturbances (size, shape, enamel hypoplasia, pulp chamber anomalies), root disturbances (early apical closure, blunting, changes in shape or length), reduced mandibular length, reduced alveolar process height, and reduced vertical growth of the face.(da Fonseca 2018, Gawade 2014; Chaveli-Lopez 2014) The severity of the dental developmental anomaly will depend on the age and stage of development during exposure to cytotoxic agents or ionizing radiation . Patients may experience permanent salivary gland hypofunction/dysfunction or xerostomia.(Jensen et al. 2017 ~~2010~~) Relapse or secondary malignancies can develop at this stage.(PDQ NCI 2016, Inamoto 2015) Routine periodic examinations are necessary to provide comprehensive oral healthcare. Careful examination of extra-oral and intra-oral tissues (including clinical, radiographic, and/or additional diagnostic examinations) are integral to diagnosing any secondary malignancies in the head and neck region. Dental treatment may require a multidisciplinary approach, involving a variety of dental specialists to address the treatment needs of each individual. Consultation with the patient's physician is recommended if relapse occurs or the patient's immunologic status declines.

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Best Practices for Risk Assessment and Management of Periodontal Diseases and Pathologies in Pediatric Dental Patients

Adopted
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Abstract

This best practice supports clinicians in assessing risk for and clinical decision-making in the management of periodontal diseases and pathologies in pediatric dental patients. This document highlights principles of periodontal disease diagnosis, risk assessment, and therapies to be applied to pediatric dental patients with special considerations for individuals with special health care needs when indicated. Recommendations on the management of contributing factors and conditions that increase the risk of periodontal disease and pathologies, as well as treatment considerations on the use of adjunctive antibiotics and surgical therapies are reviewed. Special attention is focused on care coordination, collaborations and/or referral of care to specialists. In cases where the published data regarding periodontal diseases and pathologies among children and adolescents was limited, recommendations were extrapolated from evidenced-based literature among adult patients, as well as on the consensus opinions of the working group.

This document was developed through a collaborative effort of the American Academy of Pediatric Dentistry Councils on Clinical Affairs and Scientific Affairs to offer updated information and guidance regarding risk assessment and management of periodontal diseases and pathologies in pediatric dental patients.

KEYWORDS: CHILD, ADOLESCENT, PERIODONTAL DISEASE, PERIODONTAL RISK ASSESSMENT, ANTIBIOTIC THERAPY, PERIODONTAL THERAPY

Abbreviations

AAPD: American Academy of Pediatric Dentistry. **BoP**: Bleeding on probing. **CAL**: Clinical attachment loss. **CEJ**: Cementoenamel junction. **CHX**: Chlorhexidine. **MM**: Millimeter.

NSAIDs: Nonsteroidal anti-inflammatory drugs. **PDL**: Periodontal ligament. **PPD**: Periodontal pocket depth. **PRA**: Periodontal risk assessment. **SHCN**: Special health care needs. **SIB**: Self-injury behavior. **SRP**: Scaling and root planning. **TDI**: Traumatic dental injuries.

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) recognizes the importance of periodontal health and its effect on the well-being of pediatric patients, including those with special health care needs (**SHCN**). Periodontal risk assessment (**PRA**) and management protocols are essential elements of contemporary clinical care for pediatric dental patients. These recommendations are intended to assist practitioners in assessing risk for and clinical decision-making in the management of periodontal diseases and pathologies in pediatric dental patients.

Methods

This best practice document was developed utilizing the resources and expertise of AAPD members and an expert consultant in periodontics operating through the Council on Clinical Affairs. Literature searches of PubMed®/MEDLINE and Google Scholar databases were conducted using the terms: periodontitis as a manifestation of systemic diseases, necrotizing periodontitis, aggressive periodontitis, localized periodontitis; fields: all; limits: within the last 10 years, human, English, clinical study, clinical trial, comparative study, multicenter study, observational study, randomized clinical trial, meta-analysis, and systematic reviews. The search returned 1,222 articles that matched the criteria. The articles were evaluated by title and/or abstract and relevance to dental care for children and adolescents. When data did not appear sufficient or were inconclusive, recommendations were based upon expert and/or consensus opinion by experienced researchers and clinicians.

Background

A periodontal examination and risk assessment are important parts of the routine dental examination of pediatric dental patients. The gingival and periodontal tissues in the primary, mixed, and permanent dentition are subject to morphological changes due to normal patterns of oral growth and development. Gingivitis occurs in half of the population by age of four or five years and peaks nearly to 100 percent at puberty (Perry et al, 2019; Stenberg, 2017). Distinguishing normal physiological changes during growth and development from gingival and periodontal diseases helps prevent erroneous diagnoses and unnecessary treatment.

Maintenance and restoration of gingival and periodontal health during childhood and adolescence will facilitate healthy gingival and periodontal health at older ages.

Diagnostic phase

The diagnostic criteria for gingivitis are based on clinical features, taking into consideration the presence of plaque and that the inflammatory response to plaque is an age-dependent phenomenon. Three distinct forms of periodontal disease have been defined as: (1) periodontitis (single category grouping the two forms of the disease formerly recognized as aggressive or chronic); (2) necrotizing periodontitis; and (3) periodontitis as a manifestation of systemic conditions (Caton et al, 2018). Early diagnosis ensures more promising treatment outcomes and effective periodic maintenance protocols (Alrayyes & Hart, 2011).

Periodontal risk assessment (PRA)

In health care, risk is defined as the probability that an individual will develop a disease during a specific time period (Bouchard et al, 2017; Elangovan et al, 2019). Risk factors are defined as characteristics of individuals that increase their probability to developing the disease (Bouchard et al, 2017; Elangovan et al, 2019). Risk factors for periodontal disease are complex and may be biological, environmental (social), and behavioral (Elangovan et al, 2019). PRA identifies risk factors that place individuals at an increased risk of developing gingival and periodontal diseases and pathologies, as well as factors that influence the progression of the disease. PRA can improve clinical decision making and allow the implementation of individualized treatment planning and proactive targeted interventions (Douglass CW, 2006). Evidenced-based PRA tools have been developed based on studies conducted among adult patients (Chapple, 2020). Due to the limited literature regarding PRA among children and adolescents, factors associated with elevated risk were extrapolated from evidence from adult patients (Tables 1 and 2)(Lang et al, 2015; Sai Sujai et al, 2015; Mullins et al, 2016; Bouchard et al, 2017; Trombelli et al, 2017; Petsos et al, 2020).

Prognosis and treatment planning

Determination of the prognosis follows the diagnostic phase and is a dynamic process to be reevaluated at all therapeutic phases (i.e., systemic, behavioral, non-surgical, surgical, maintenance). Prognosis, basedon the probability of disease progression and clinical parameters, can be categorized as favorable, questionable, unfavorable, and hopeless (Kwok & Caton, 2007).

Treatment planning

Table 1. Factors Associated with the Development and Progression of Periodontal Diseases and Pathologies for < 13 Years Old

Factors	High Risk	Moderate Risk	Low Risk
Biological Factors			
Systemic conditions/genetic susceptibility (e.g., family history of aggressive periodontitis) and syndromes[a]	Yes		
Immunosuppressive or radiation therapy		Yes	
Medication(s) known to affect the periodontal tissues		Yes	
History of traumatic injury to the periodontal apparatus (e.g., avulsion, luxation)		Yes	
Traumatic gingival/oral mucosa lesions		Yes	
Nutritional deficiencies		Yes	
Social and Behavioral Factors			
Socioeconomic stability (e.g., adequate health literacy, regular dental care)			Yes
Adequate daily at-home oral hygiene either performed or supervised by caregiver			Yes
Tobacco or marijuana smoking/smokeless tobacco use	Yes		
Clinical and Radiographic Factors			
Adequate attached gingiva and normal frenum attachments			Yes
Tooth-related factors contributing to plaque retention and physical barriers for proper oral hygiene		Yes	
Generalized gingivitis (≥30% of teeth affected)		Yes	
Disproportional gingival inflammation in relation to age, amount of plaque accumulation, or oral and systemic developmental changes	Yes		
Presence of calculus	Subgingival	Supragingival	None
Bleeding on probing	Yes		
Periodontal probing depths > 3mm	Yes		
Chronic pericoronitis		Yes	
Abnormal tooth mobility	Yes		
Furcation involvement	Yes		
Radiographic alveolar bone loss	Yes		
Tooth loss due to periodontitis	Yes		

Circling those conditions that apply to a specific patient helps the practitioner and caregiver understand the factors that contribute to the development and progression of periodontal diseases and pathologies. Clinical judgment may justify the use of one or more factors in determining the overall risk.

Overall assessment of the child's risk: High □ Moderate □ Low □

[a] Most common examples include, but are not limited to, agranulocytosis, Chédiak-Higashi syndrome, cyclic neutropenia, diabetes, Ehlers-Danlos syndrome, human immunodeficiency virus infection, hypophosphatasia, idiopathic immune disorders, Langerhans cell histiocytosis, leukemia, leukocyte adherence deficiency, osteoporosis, neutropenia, trisomy 21, Papillon Lefèvre syndrome, plasminogen deficiency, and respiratory diseases.

This draft does not constitute an official AAPD health oral policy or clinical recommendation until approval by the General Assembly. Circulation is limited to AAPD members.

Table 2. Factors Associated with the Development and Progression of Periodontal Diseases and Pathologies for ≥ 13 Years Old

Factors	High Risk	Moderate Risk	Low Risk
Biological Factors			
Systemic conditions/genetic susceptibility (e.g., family history of aggressive periodontitis) and syndromes[a]	Yes		
Immunosuppressive or radiation therapy		Yes	
Medication(s) known to affect the periodontal tissues		Yes	
History of traumatic injury to the periodontal apparatus (e.g., avulsion, luxation)		Yes	
Traumatic gingival/oral mucosa lesions		Yes	
Nutritional deficiencies		Yes	
Mental health disorders (e.g., stress, depression)		Yes	
Pregnancy		Yes	
Social and Behavioral Factors			
Socioeconomic stability (e.g., adequate health literacy, regular dental care)			Yes
Adequate daily at-home oral hygiene			Yes
Tobacco or marijuana smoking/smokeless tobacco use	Yes		
Drug abuse (e.g., crack cocaine, methamphetamine)	Yes		
Intraoral/perioral piercing and oral jewelry/accessories		Yes	
Individuals with special health care needs living in supported community (group) homes		Yes	
Clinical and Radiographic Factors			
Adequate attached gingiva and normal frenum attachments			Yes
Adequate plaque biofilm control			Yes
Tooth-related factors contributing to plaque retention and physical barriers for proper oral hygiene		Yes	
Generalized gingivitis (≥30% of teeth affected)		Yes	
Disproportional gingival inflammation in relation to age, amount of plaque accumulation, or oral and systemic developmental changes	Yes		
Presence of calculus	Subgingival	Supragingival	None
Bleeding on probing	> 25% of sites	10% to 25% of sites	0% to 9% of sites
Periodontal probing depths	> 5mm	3.5mm to 5mm	< 3.5mm
Chronic pericoronitis		Yes	
Abnormal tooth mobility	Yes		
Furcation involvement	Yes		
Radiographic alveolar bone loss over 25% of sites	Yes		
Tooth loss due to periodontitis	Yes		

Circling those conditions that apply to a specific patient helps the practitioner and caregiver understand the factors that contribute to the development and progression of periodontal diseases and pathologies. Clinical judgment may justify the use of one or more factors in determining the overall risk.

Overall assessment of the child's risk: High □ Moderate □ Low □

[a] Most common examples include, but are not limited to, agranulocytosis, Chédiak-Higashi syndrome, cyclic neutropenia, diabetes, Ehlers-Danlos syndrome, human immunodeficiency virus infection, hypophosphatasia, idiopathic immune disorders, Langerhans cell histiocytosis, leukemia, leukocyte adherence deficiency, osteoporosis, neutropenia, trisomy 21, Papillon Lefèvre syndrome, plasminogen deficiency, and respiratory diseases.

Table 3. Example of Management Pathways for Periodontal Diseases and Pathologies

Risk Category	Diagnostics	Non-surgical therapy						Surgical therapy	Counseling					
		Oral prophylaxis: supragingival plaque and calculus removal	Debridement, scaling and root planing	Systemic antibiotics and/or use of adjunctive topical anti-microbials	Management of plaque retentive factors[a]	Monitor previous traumatic injuries to the periodontal apparatus	Management of oral conditions and side effects from therapies, medications, infections, gingival injuries, etc.	Plastic, aesthetic, resective, and/or regenerative procedures	Twice daily brushing and daily flossing	Healthy diet and nutrition	Injury prevention[a]	Tobacco use and drug misuse[b]	Use of oral hygiene adjuncts[C]	Compliance with medical care and/or periodontal treatment or maintenance
Low Risk	- Recall every six to 12 months - Radiographs every 12 to 24 months	Every six to 12 months							YES	YES	YES	Prevention		
Medium Risk	- Recall every six months - Radiographs every six to 12 months - Monitoring of systemic conditions by laboratory analysis and consultation with medical specialists, if indicated	Every six months	Every six months	YES	YES	YES	YES	YES	YES	YES	YES	Prevention or cessation	YES	YES
High Risk	- Recall every three months - Radiographs every six months - Close monitoring of systemic conditions by laboratory analysis and consultation with medical specialists, if indicated - Consultation with and/or referral to periodontist, if indicated	2-4 months depending on disease severity and disease response to treatment	2-4 months depending on disease severity and disease response to treatment	YES			YES	YES	YES	YES	YES	Prevention or Cessation	YES	YES

[a] Plaque retentive factors include, but are not limited to, caries lesions, enamel defects, dental anatomical anomalies, malposed teeth, defective restorations, inadequate contoured crowns, orthodontic appliances, dental prostheses.

[b] Prevention of injuries resultant of accidents, piercings, habits.

[C] Oral hygiene adjuncts include, but are not limited to, powered toothbrushes, interdental brushes, or oral irrigation; chemical anti-plaque and anti-calculus agents.

The treatment plan is formulated after completing a comprehensive examination, establishing a diagnosis, determining the prognosis, and identifying the individual needs and desires of the patient and caregiver. It addresses immediate, intermediate, and long-term goals to arrest or slow down the periodontal disease progression. Initial treatment plans may be subject to modifications based on unforeseen developments during care (Do et al, 2019A). Other important considerations include emergency treatment for pain or infections, need for exodontia, and esthetic demands (Do et al, 2019A).

General considerations

- A periodontal assessment includes a discussion of the chief complaint, detailed medical, dental, and social history reviews, extra- and intra-oral examinations, radiographs, and periodontal probing as indicated. Further investigations (e.g., genetic, microbiological, gingival biopsy, and biochemical tests) may be needed on an individual basis to differentiate types of periodontal diseases.
- Bleeding on probing (**BoP**) in primary teeth during early childhood, even at a low number of sites, is indicative of high susceptibility to periodontal diseases, due to the age dependent reactivity of the gingival tissues to plaque (Bimstein & Eidelman, 1988; Bimstein et al, 2013).
- Probing assessments may be initiated after the eruption of the first permanent molars and incisors and only if tolerated by the child. Pseudo pockets (> 3mm) may be present around partially and newly erupted teeth (Cole, 2014). Probing assessment on primary teeth are required before the eruption of the first permanent molars and incisors when clinical and radiographic findings indicate the presence of periodontal diseases.
- Assessing for generalized (i.e., involving ≥30 percent of the teeth) gingivitis may be performed for patients unable to undergo probing due to age, anxiety, or SHCN (Murakami, 2018).
- Alveolar bone loss in the primary dentition indicates increased susceptibility to periodontal disease (Bimstein & Soskolne, 1988; Sjödin & Matsson, 1994; Drummond et al, 2017).
- Good quality bitewing radiographs are necessary for diagnosing alveolar bone loss (Bimstein & Soskolne, 1988; Bimstein et al, 1994, Al Jamal et al, 2011). While bitewing radiographs are useful with assessing abnormal molar mobility (Bimstein & Soskolne, 1988; Al Jamal et al, 2011; Bimstein, 2018; Drummond et al, 2017), periapical radiographs may help rule out any other associated pathology (e.g. root resorption). For abnormal anterior tooth mobility, periapical radiographs are the most appropriate images. (Tugnait et al, 2000)

- 1 ± 0.5 millimeter (**mm**) distance from the most coronal portion of the alveolar bone crest to the cementoenamel junction (**CEJ**) is considered a normal alveolar bone height in the *primary dentition* (Bimstein & Soskolne, 1988; Sjödin & Matsson, 1994; Needleman et al, 1997), while a distance of more than two mm is considered to represent bone loss (Sjödin & Matsson, 1994). A distance of more than two mm may be considered normal when the bone is adjacent to exfoliating primary teeth or erupting permanent teeth (Bimstein and Matsson, 1999).
- 2-mm distance (on average, varying between 1.0 and 3.0 mm) from the most coronal portion of the alveolar bone crest to the CEJ is considered a normal alveolar bone height in the *permanent dentition* (Al Jamal et al, 2011).

Recommendations

- For patients in the primary dentition, a visual assessment of the gingiva should be part of every comprehensive examination. All dental radiographs should be examined for evidence of caries, alveolar bone loss, developmental anomalies, and other pathologies.
- A simplified basic periodontal examination is recommended for individuals aged seven to 17 years (Cole, 2014). After the eruption of the first permanent molars and incisors, six index teeth (the first permanent molars, the permanent maxillary right central incisor, and the permanent mandibular left central incisor) are assessed for: (1) BoP; (2) presence of calculus; (3) plaque retention factors; (4) periodontal pocket depth (**PPD**); (5) furcation involvement; and (6) recession. PRA, based on a child's age and biological, social/behavioral, and clinical/radiographic factors, should be a routine component of new and periodic oral examinations.
- Practitioners may use the estimated risk level to establish a periodicity and intensity of diagnostic, counseling, and therapeutic interventions (See Table 3).
- The treatment plan should be used to establish the methods and sequence of delivering periodontal treatment and include:
    - periodontal procedures to be performed;
    - medical consultation or referral for treatment when indicated;
    - consideration of diagnostic testing that may include genetic, microbiological, gingival biopsy, or biochemical tests or monitoring during the course of periodontal therapy;
    - consideration of adjunctive restorative, prosthetic, orthodontic, and/or endodontic consultation or treatment;
    - consideration of chemotherapeutic and antibiotic agents for adjunctive treatment;

- provision for re-evaluation during and after periodontal or dental implant therapy; and
- periodontal maintenance program.

Behavioral Phase

The success of both prevention and treatment of periodontal diseases and conditions relies significantly on the ability of the patient/caregivers to comply with requested oral hygiene and dietary practices (e.g., brushing, flossing, adequate nutrition) and to change behaviors regarding harmful risk factors (e.g. smoking, drug use). Psychological models and theories of motivation (e.g., health belief model, motivational interviewing, self-determination theory) may be used to help patients adopt healthier behaviors (Renz & Newton, 2009; Chang et al, 2018).

Nutrition

The role of nutrition and, more specifically, the relevance of vitamins on periodontal health (Najeeb et al, 2016; Valera-López et al, 2018; Cagetti et al, 2020) are thought to be related to the effect on inflammation. Persistent lack of vitamin C, an essential nutrient for collagen synthesis, in the diet has been associated with more severe periodontitis (Luo et al, 2018). This deficiency, known as scurvy, manifests with gingival bleeding and swelling, proceeds to tooth loss, and can result in death.

Systematic reviews show a positive association between periodontal disease and obesity in children and adolescents (Li et al, 2015; Martens et al, 2017; Klokkevold & Mealey, 2019A).

Smoking and substance misuse

The association between smoking and drug use and periodontal diseases is clear (Goultchin el al, 1990; Akef et al, 1992; Machuca et al, 2000; Bergestrom et al, 2000; Antoniazzi et al, 2016; Shariff et al, 2017). Compelling evidence supports the significant benefits of tobacco use prevention and cessation on the periodontal and oral health in general, across all ages (Shibly 2008; Warnakulasuriya et al, 2010; Chaffee BW 2016).

Recommendations

Dental professionals should utilize psychological theories of motivation to help patients adopt healthier behaviors and counsel their pediatric patients and parents on:

- the role of diet in the development and progression of periodontal conditions;
- the harms of all tobacco products to help prevent or cease tobacco use; and

- the serious health consequences of drug misuse, as well as refer to an appropriate provider for cessation when the habit is identified.

Informed consent

Informed consent is essential in the delivery of healthcare. As part of the informed consent process, the clinician shares information and answers questions about the patient's oral health conditions and the nature, risks, and benefits of recommended and alternative treatments, including no treatment. For periodontal conditions, the discussion would also include the need for maintenance treatment due to the possibility of disease recurrence or progression. Written consent is advisable as it may decrease the liability from miscommunication, especially if risks, complications, or possibility of failure are expected with the proposed therapy. Referral is indicated when treatment needs are beyond the treating dentist's scope of practice. Patients should also be informed if referrals to other specialists are needed (Klokkevold, Takei, Carranza, 2019C).

Non-surgical periodontal therapy (Phase I Therapy)

"The major goal of phase I therapy is to control the factors responsible for periodontal inflammation; this involves educating the patient in the removal of bacterial plaque biofilm. Phase I therapy also includes scaling, root planing, and other therapies such as caries control, replacement of defective restorations, occlusal therapy, orthodontic tooth movement, and cessation of confounding habits such as tobacco use." (Takei, 2019A).

Management of bacterial plaque biofilm and calculus

Controlling gingival inflammation is the primary preventive strategy for periodontitis, as well as the secondary preventive strategy for recurrence of periodontitis (Trombelli et al, 2018). A systematic review demonstrated anti-plaque effectiveness for toothpastes containing stannous fluoride or chlorhexidine (**CHX**) (Chapple et al, 2015; Graziani et al, 2017). Toothpastes containing pyrophosphates reduce the formation of new supragingival calculus (Perry et al, 2019; Sambunjak et al, 2011), but no improvements have been reported in gingival inflammation and subgingival calculus. Mouthrinses with anti-plaque agents significantly improve gingival inflammation and plaque levels when compared to toothpastes with such agents (Chapple et al, 2015). The use of 0.12 percent CHX gluconate can help improve dental plaque, gingival bleeding, and gingival inflammation indexes (Montiel-Company & Almerich-Silla, 2002; Clavero et al, 2003; Featherstone et al, 2012; Varoni et al, 2012; James et al, 2017; Featherstone et al, 2018). Adverse effects of use (e.g, alteration in taste sensation; unpleasant taste; calculus formation;

brown staining of teeth, tongue, and restorations) compromise patient acceptance (Chapple, 2015; Graziani et al, 2017; Zhang et al, 2019; Quirynen et al, 2019) and are most common when used for four weeks or longer (Varoni et al, 2012; James et al, 2017). Rinses have higher anti-plaque efficacy than sprays (Zhang et al, 2019). The CHX-containing mouthrinse may be applied via toothbrush for patients unable to spit or at risk of aspirating the agents. Different proposed regimens of CHX include: (1) once or twice a day for one week every month; and (2) once or twice a day for two weeks every three months (Featherstone et al, 2012; Varoni et al, 2012; James et al, 2017; Featherstone et al, 2018). Preferred active agent, patients' preference, economic cost, compliance, and adverse effects influence selection of delivery system (Chapple et al, 2015). Although CHX allergy is extremely rare, prolonged exposure to CHX may lead to contact sensitization, allergic contact dermatitis or stomatitis, or even anaphylactic shock when used during surgery (Liippo et al, 2011; Pemberton et al, 2012; Chiewchalermsri et al, 2020)

Oral prophylaxis along with scaling and root planing (**SRP**) are the basis of professional mechanical plaque control. (Clerehugh & Tugnait, 2001; Drummond et al, 2017; Graziani et al, 2017; Takei, 2019A). Oral prophylaxis removes supragingival plaque and calculus via hand or powered instruments. Subgingival instrumentation, considered the gold standard of periodontal treatment, is divided into three procedures: (1) debridement (removal of subgingival plaque); (2) scaling (removal of supra- and sub-gingival plaque, calculus, and stains); and (3) root planing (removal of cementum or surface dentin that is rough, impregnated with calculus, or contaminated with toxins or microorganisms) (Takei, 2019A). Supra- and sub-gingival instrumentation is an important component of initial and recall dental appointments. When comparing subgingival instrumentation modes, hand instruments (e.g., curettes) remove a significantly greater amount of calculus and leave a smoother root surface than ultrasonic scalers (Graziani et al, 2017). On the other hand, ultrasonic devices cause less soft tissue trauma, require a shorter treatment time, and are less technique and operator sensitive (Graziani et al, 2017).

Recommendations:

- Dental professionals should provide oral self-care instructions that are individualized and include appropriate adjuncts.
- For adolescents and individuals with SHCN who exhibit poor oral hygiene, clinicians should consider the use of chemical anti-plaque agents in mouthrinses or incorporated into fluoridated toothpastes to control plaque accumulation and gingival inflammation, along with instituting more frequent recall appointments.

- Because plaque or biofilm and calculus serve as physical barriers for proper home oral hygiene execution, a dental prophylaxis and SRP should be performed at both initial and recall dental appointments when necessary.
- Use of ultrasonic devices and mouthrinses may be contraindicated for patients who are unable to expectorate and at risk for aspiration.

Management of local factors for periodontal disease and pathologies

In addition to plaque or biofilm and calculus, other local factors can contribute to plaque retention and physical barriers for proper oral hygiene execution increasing the risk of periodontal disease and pathology initiation and progression among pediatric patients (Clerehugh & Tugnait, 2001; Gorbunkova et al, 2016; Yu & Abbott, 2016; Drummond et al, 2017; Takei, 2019A, Kanellis et al, 2018, Silva et al, 2019).

Caries lesions: Caries prevention and adequate restoration of dental caries lesions are of great importance for the periodontal health of pediatric patients. Gingival inflammation is highly associated with dental caries and dependent on the degree of tooth destruction, the presence of bacteria in the biofilm, and host response (Drummond et al, 2017). Gingivitis and interproximal alveolar bone loss have been observed in young children with severe caries (Bimstein, 1992, Bimstein et al, 1996). The alveolar bone loss occurs with extensive interproximal caries due to food impaction and biofilm retention in the interdental area (Bimstein et al, 1996). Due to the dysbiotic nature of the caries-association microbiome, temporary or permanent restorations remove the reservoir of bacteria in these lesions helping to maximize the healing of the periodontal tissues (Takei, 2019A). Restorations with adequate proximal contour will promote healing of alveolar bone defects (Bimstein et al, 1996).

Defective restorations: The use of minimally-invasive restorative dentistry, when clinical conditions allow, can help avoid negative effects of restorations on the periodontal tissues. Gingivitis and clinical attachment loss (**CAL**) have been associated with defective restorations and crowns (i.e., subgingival restorations, margin discrepancies, overhanging restorations) (Takei, 2019A). In addition, a study among 354 children aged six to nine years revealed radiographic interproximal alveolar bone loss adjacent to proximal surfaces in the primary molar area in 30.8 percent of the sites without an adequate amalgam restoration and 25.8 percent of the sites with inadequate crown restoration (Bimstein et al, 1996). Inadequately contoured stainless steel crowns and residues of set cement remaining in contact with the gingival sulcus also may cause gingival inflammation and abnormal bone resorption (Bimstein, 1992;

Bimstein et al, 1996). If meticulous oral hygiene is not maintained, interproximal lesions of posterior teeth treated with caries-arresting agents (e.g., silver diamine fluoride, silver nitrate) but not restored are capable of "packing food" that can potentially cause severe gingival inflammation, bleeding, and patient discomfort (Kanellis et al, 2018). Arrested cavitated lesions may benefit from receiving a restoration in order to prevent food impaction or future caries lesion progression (Ng & Sulyanto, 2018).

Malocclusion and orthodontic appliances: An increased risk for periodontal disease has been associated with malocclusion, especially in cases of severe anterior teeth crowding and gingivitis among children and adolescents wearing orthodontic appliances (Clerehugh & Tugnait, 2001; Gorbunkova et al, 2016; Bernhardt et al, 2019). Gingival overgrowth, recession, and invagination are among the most cited soft tissues changes during orthodontic treatment (Gorbunkova et al, 2016). Due to dental plaque accumulation around appliances, patients undergoing orthodontic treatment with deficient oral hygiene are at higher risk of gingival inflammation, development of white spot lesions, and dental caries. Inflammatory changes associated with puberty gingivitis may be exacerbated in adolescent patients undergoing orthodontic treatment (Silva et al, 2019).

Dental enamel defects and other dental anomalies: Children and adolescents with dental defects (e.g., enamel hypoplasia, amelogenesis imperfecta) may present with less ideal oral hygiene due to the sensitivity associated with the condition. Desensitizing toothpastes containing remineralization compounds, fluoride varnishes, and toothbrushes with soft bristles (Elhennawy & Schwendicke, 2016; Drummond et al, 2017) may minimize the sensitivity and, consequently, allow better oral hygiene (Elhennawy & Schwendicke, 2016; Drummond et al, 2017).

Many teeth with dental defects are prone to fractures close to the gingival margin; crown-lengthening surgery is sometimes necessary to facilitate the placement of restorations with cleansable margins (Drummond et al, 2017). Other dental anomalies, such as enamel projections, enamel pearls, proximal and palatogingival grooves, and fused and supernumerary teeth, may impact the periodontal health. Some of these dental anomalies, for instance, are associated with gingivitis and CAL due to the impediment of proper oral hygiene or mucogingival problems as a consequence of developmental aberrations in eruption and deficiencies in the thickness of the periodontium (Clerehugh & Tugnait, 2001; Silva et al, 2019).

Recommendations:

- Defective or failing restorations should be corrected by smoothing rough surfaces, removing overhangs with burs and/or hand instruments, or replacement (Clerehugh & Tugnait, 2001; Takei, 2019A).
- When placing preformed crowns, well-adapted restorations stainless steel crowns (i.e., contoured, well-fitted and crimped) are recommended to maintain the health of the periodontium.
- Clinicians should consider restoring open, arrested cavitated lesions when food impaction occurs causing gingival inflammation, bleeding, or patient discomfort.
- Because orthodontic appliances often hinder brushing and flossing, clinicians should:
    - consider more frequent recall appointments and prophylaxis depending on home oral hygiene compliance and degree of periodontal inflammation, and
    - consider suspension of the orthodontic treatment if patient is not able to maintain proper oral hygiene.
- In cases of sensitivity associated with dental defects, desensitizing toothpastes, fluoride varnishes, toothbrushes with soft bristles, and sealing the enamel of the teeth should be considered.

Topical antimicrobial adjuncts and systemic antibiotics

Topical (local) agents, available as fibers, gels, chips, microspheres, and solutions, are delivered directly inside the periodontal pocket and present fewer side effects than systemic agents (Feres et al 2015; Graziani et al, 2017; Kinane et al, 2017; Herrera et al, 2020). Compared to systemic agents, they utilize a smaller total dosage and provide higher localized concentration of the drug (Feres et al 2015; Graziani et al, 2017; Kinane et al, 2017; Herrera et al, 2020) but lack the capability to reach different oral surfaces and saliva (Feres et al 2015; Graziani et al, 2017; Kinane et al, 2017; Herrera et al, 2020). Although systematic reviews have reported that adjunctive local antibiotics improve PPD and CAL in short-term studies and PPD in long-term studies, their use is controversial due to high cost and small magnitude of clinically-relevant benefits (Feres et al 2015; Herrera et al, 2020). Local antibiotic therapies have been used more commonly during the maintenance phase to treat remaining and isolated recurrent pockets (Herrera et al, 2020).

SRP is effective in improving clinical parameters (e.g., BoP, PPD, CAL) for most patients with periodontitis, but not those with advanced periodontitis and deep periodontal pockets (Drisko, 2014; Feres et al, 2015; Graziani et al, 2017; Dar-Odeh et al, 2018). Several clinical trials, systematic reviews, and meta-analyses support the adjunctive effect of systemic antibiotics to improve the outcomes of SRP

during both non-surgical and surgical therapies (Feres et al, 2015; Keestra et al, 2015; Dar-Odeh et al, 2018; Miller et al, 2017; Herrera et al, 2020; Nibali et al, 2019; Pretzl et al, 2019; Teughels et al, 2020). Systemic antibiotic therapy will be most effective if the disruption of subgingival biofilm by SRP occurs immediately before or during the antibiotic therapy (Keestra et al, 2015; Graziani et al, 2017). Stand-alone antibiotic therapy, however, is not effective in the treatment of periodontal disease (Drisko, 2014; Graziani et al, 2017). Systemic antibiotics are indicated when patients exhibit moderate periodontitis with three to four millimeters of CAL and PPD of less than five millimeters (Pretzl et al, 2019). Younger patients with periodontitis characterized by rapid attachment and bone loss (Drisko, 2014; Feres et al, 2015; Graziani et al, 2017; Dar-Odeh et al, 2018; Teughels et al, 2020), patients with necrotizing periodontitis (Drisko, 2014; Dar-Odeh et al, 2018), and those with periodontitis as a manifestation of systemic conditions (Graziani et al, 2017; Albandar et al, 2018; Dar-Odeh et al, 2018; Giannetti et al, 2020; Moghaddasi et al, 2021) may benefit significantly from adjunctive antibiotic therapies in combination with SRP. Several factors (e.g., patient's clinical parameters, health history, dental history, drug allergy, medication compliance, personal/parental preferences, adverse effects, bacterial resistance, treatment response in primary versus permanent dentitions) influence the decision to use topical or systemic antibiotic adjuncts to SRP (Merchant et al, 2014; Keestra et al, 2015; Miller et al, 2017; Kinane et al, 2017; Montenegro et al, 2020).

Systemic antibiotics have the advantage of reaching all oral surfaces and fluids, as well as the potential to reach periodontal pathogens that ultimately invade the host's tissues (Feres et al, 2015; Teughels et al, 2020). In addition, antibiotic therapy may reduce bacterial endotoxins helping to minimize the local inflammatory response (Kalash et al, 2015; Allin et al, 2016). Disadvantages of systemic administration include adverse drug effects (e.g., gastrointestinal symptoms, allergic reaction), poor patient compliance, and, very importantly, development of bacterial resistance due to indiscriminate use (Feres et al, 2015; Teughels et al, 2020). When compared to SRP alone, the combination of amoxicillin and metronidazole (and to a lesser degree, azithromycin and metronidazole) as an adjunctive therapy has shown to reduce the number of major periodontopathogenic bacteria, significantly improve CAL gain, and promote higher percentage of pocket closure, as well as reduce BoP, PPD, and frequency of pockets of $\geq$4 mm (Sgolastra et al, 2012; Feres et al, 2015; Keestra et al, 2015; Sgolastra et al, 2014; Rabelo et al, 2015; Miller et al, 2017; Herrera et al, 2020; Nibali et al, 2019; Pretzl et al, 2019; Teughels et al, 2020). Regimen durations of one to two weeks have been cited in the literature with respective advantages and disadvantages (Keestra et al, 2015; Graziani et al, 2017). For patients allergic to penicillin, antibiotic regimen using metronidazole alone is an alternative treatment (Rabelo et al, 2015). Additionally, azithromycin is

effective against periodontal pathogens with positive immunomodulatory properties and has been proven effective in treating aggressive periodontitis in young patients (Haas et al. 2008) as well as adults (Zhang et al, 2016). Azithromycin is one of the safest antibiotics for patients allergic to the penicillins, but there are risks of cardiac complications including cardiotoxicity (Araújo & Demoly, 2008; Bartold et al, 2013). Cardiac risk in pediatric patients seems to be due to an increased risk of QT prolongation associated with higher dosage levels (Zeng et al, 2020) and caution should be exercised in patients with cardiac risk factors. *The Reference Manual of Pediatric Dentistry* includes information on recommended antibiotic dosage for children and adolescents, as well as for adults, available at https://www.aapd.org/globalassets/r_usefulmeds.pdf (AAPD Useful Meds 2022). Having the child drink a small cup of grape soda immediately after ingesting liquid antimicrobials may help mask the unpleasant smell and taste of the medication and increase compliance with the antibiotic regimen (Marek & Timmons, 2019).

Recommendations:

- Stand-alone antibiotic therapy is not recommended in the treatment of periodontal disease.
- Adjunctive antibiotic therapy to SRP should be considered for patients with advanced and/or aggressive periodontal disease.
- When adjunctive antibiotic therapy to SRP is indicated, the decision to use topical or systemic antibiotics should be carefully evaluated and based on patient's general health status, periodontal disease severity, compliance, and response to SRP.

Re-evaluation (determining success or lack of success of non-surgical therapy)

After procedures of phase I (e.g., debridement, scaling, root planing, caries control, correction of defective restorations) are completed, the periodontal tissues will go through a process of healing that may take four or more weeks to occur (Takei, 2019A). Transient tissue sensitivity is often observed during the healing process and usually diminished with good home plaque or biofilm control (Takei, 2019A). Re-evaluation findings help determine the need for any further non-surgical therapy procedure or periodontal surgery (Takei, 2019A).

Recommendations:

- Components of re-evaluation appointments should include probing the periodontal tissues, examining all related anatomic structures, reinforcing home care regimens, and discussing existing harmful habits with a goal of cessation.
- The frequency of supportive periodontal therapy must be individualized and based on the patient's symptoms, clinical and radiographic findings, risk factors, the initial severity of the disease, as well as residual diseased sites at the end of the active periodontal treatment in relation to the patient's age, treatment outcome, caries risk, and plaque or biofilm control.

Systemic phase

The Reference Manual of Pediatric Dentistry includes information on several genetic and non-genetic systemic diseases and pathologies that are associated with manifestations on periodontal tissues (AAPD New resource pending). General characteristics, case definitions and/or diagnostic criteria, clinical and/or radiographic findings, as well as treatment considerations are presented for some of the conditions observed in pediatric patients.

Recommendations:

- Clinicians should consider systemic diseases and conditions that can affect the periodontal attachment apparatus or the course of periodontal diseases in order to achieve accurate diagnoses and plan treatment. (Albandar et al, 2018; Jepsen et al, 2018)
- Consultation with the patient's medical care provider may be necessary for management of at-risk patients. (Albandar et al, 2018; Jepsen et al, 2018)

Special management considerations

Respiratory diseases affecting the periodontium

Health of the periodontium depends on saliva's mechanical cleansing and antimicrobial properties. Respiratory diseases, either directly (e.g., mouth breathing) or through side effects (e.g., xerostomia) of therapeutic agents, may alter salivary flow (Ballikaya et al, 2018; Moraschini et al, 2018). Nasopharyngeal obstruction from adenoid and tonsillar hypertrophy, as well as significant neuromuscular weakness with a history of snoring, can also affect periodontal health (Ballikaya et al, 2018). Depending on the individual oral/dental needs of patients with respiratory diseases, the pediatric dentist plays an important role in early diagnosis of general and oral health problems associated with respiratory diseases, care management, and establishment of a multidisciplinary approach that may include, but is not limited to,

orthodontists, primary care providers, otolaryngologists, and speech pathologists (Ballikaya et al, 2018). Regular dental check-ups with proper oral hygiene instructions for home plaque control, mouth rinsing after medications, and use of fluoride toothpaste are important preventive regimens to reduce the risk of periodontal disease and dental caries among patients with respiratory diseases (Ballikaya et al, 2018).

Recommendations:

- Clinicians should carefully evaluate the patient's health history and medications in order to identify respiratory conditions and medications that impact salivary flow and dental and periodontal health.
- If airway obstruction is determined to affect periodontal health, an evaluation by an otolaryngologist is recommended.
- Clinicians should consider a multidisciplinary approach, referral and/or care coordination for patients with general and/or oral health problems associated with respiratory diseases.

Oral conditions related to immunosuppressive or radiation therapies

Patients undergoing immunosuppressive and/or radiation therapies may present with periodontal problems associated with treatment. Gingival bleeding, soft tissue necrosis, salivary gland dysfunction, opportunistic infections (e.g., candidiasis, herpes simplex virus), and oral graft versus host disease are among the many acute and long-term complications associated with these therapies (Hong & da Fonseca, 2008; Epstein et al, 2012; da Fonseca, 2018; da Fonseca, 2019; AAPD Dental Management of Pediatric Patients Receiving Immunosuppressive Therapy and/or Radiation Therapy, 2021). Special attention should be given to partially-erupted molars that may be at risk for pericoronitis (Hong et al, 2018, da Fonseca, 2019). When definitive periodontal therapy cannot be rendered, extraction of hopeless peridontally-involved teeth is the treatment of choice (Hong & da Fonseca, 2008; da Fonseca, 2019; AAPD Dental Management of Pediatric Patients Receiving Immunosuppressive Therapy and/or Radiation Therapy, 2021). A periodontal assessment and appropriated therapy are indicated before patients undergoing cancer treatment receive bisphosphonates (AAPD Dental Management of Pediatric Patients Receiving Immunosuppressive Therapy and/or Radiation Therapy, 2021). Refer to Dental Management of Pediatric Patients Receiving Immunosuppressive Therapy and/or Radiation Therapy (AAPD Dental Management of Pediatric Patients Receiving Immunosuppressive Therapy and/or Radiation Therapy, 2021) for additional information on managing of periodontal considerations in these circumstances.

Recommendations:

Clinicians should work closely with the patient and his caregivers, as well as with his multidisciplinary health care team, to ensure that any medically-necessary dental treatment is integrated, coordinated, and delivered in a timely and safe manner before, during, and after immunosuppression or radiation therapy (Epstein et al, 2012).

Drug-influenced gingival enlargements

Drug-influenced gingival enlargements have been associated with three types of medications: anticonvulsants (e.g., phenytoin, sodium valproate), calcium channel blockers (e.g., veramapil, diltiazem), and immunosuppressants (e.g., cyclosporine) (Camargo et al, 2019; Mawardi et al, 2021). In most cases, the gingival enlargement is induced by the combination of the drugs (i.e., fibrotic aspect) and the bacterial biofilm (i.e., inflammatory aspect) (Camargo et al, 2019). Treatment options may include: (1) possible drug discontinuation or change; (2) biofilm control by means of home oral hygiene, use of antimicrobial agents (e.g., CHX), frequent professional cleaning and SRP, removal of plaque-retentive areas (e.g., faulty restorations); and (3) surgical removal of enlarged gingiva (e.g., gingivectomy using a scalpel or laser-assisted therapy, flap surgery, or electrosurgery) (Murakami et al, 2017; Camargo et al, 2019; Mawardi et al, 2021).

Periodontal flap surgery to manage gingival enlargements are favored over gingivectomy in terms of minimizing the amount of tissue and time recurrences (Camargo et al, 2019). However, in general, gingivectomy is indicated for small areas of gingival enlargement (i.e., up to six teeth) where there is no evidence of CAL or the need for osseous surgery; while flap surgery is indicated for larger areas (i.e., more than six teeth) with evidence of CAL or the need for osseous surgery (Camargo et al, 2019). Antibiotic therapy as an adjunctive antimicrobial and anti-inflammatory agent has been proposed as another step in the management of gingival enlargements (Camargo et al, 2019; Mawardi et al, 2021).

Recommendations:

- Clinicians should understand the etiology of gingival enlargements before considering the best management approach.
- Biofilm control, SRP, and timely evaluation of the initial treatment response should occur before considering surgical therapy.

Oral soft-tissue and tooth-supporting structure injuries

Orofacial trauma can result in extraoral and intraoral soft tissue injuries such as lacerations, contusions, abrasions, and avulsions (Bourguignon et al, 2020; Levin et al, 2020). Traumatic dental injuries (**TDI**) (Drummond, 2017) almost always involve the periodontal tissues which may undergo ischemia, crushing, or loss. (Yu & Abbott, 2016; Drummond, 2017). Injuries to the periodontal ligament (**PDL**) may range from minor lacerations with dental concussion, tearing of the fibers with subluxation, to partial or complete separation with luxation or avulsion, (Hermann et al, 2012 [A]; Hermann et al, 2012 [B]) and loosening and displacement of the tooth can occur (Hermann et al, 2012 [A]; Hermann et al, 2012 [B]). When foreign bodies (e.g., gravel, tooth fragments) may be embedded within the injured soft tissues, clinical inspection is supplemented by a soft-tissue radiograph (Bourguignon et al, 2020). Removal of foreign bodies is necessary to avoid tissue infection, scarring, or tattooing (Andersson & Andreasen, 2018; Elias and Bauer, 2009). Cleansing, debridement, hemostasis, and closure are the major steps in managing soft tissue injuries with the goals to maintain tissue vascularity, enhance healing, and prevent tissue devitalization, as well as to minimize the risk of gingival recession and bone/root exposure (Elias and Bauer, 2009). Reapproximated soft tissue wounds are sutured using the minimal amount of small-diameter sutures (Andersson & Andreasen, 2018; Elias and Bauer, 2009). Because determining which wounds are tetanus prone is not possible, need for tetanus prophylaxis is based on the patient's current immunization status (Rhee et al, 2005). A decision for antibiotic prophylaxis is based on the severity and contamination status of the tissue injury (Day et al, 2019).

Splinting stabilizes traumatized teeth with the goals to optimize PDL reattachment and healing and to protect the teeth against further insult (Goswami & Eranhikkal, 2020; Sobczak-Zagalska & Emerich, 2020). Characteristics of an ideal splint for mobile traumatized teeth include being passive, flexible, and non-irritating to surrounding soft tissues as well as allowing for physiological tooth mobility and proper oral hygiene (Goswami & Eranhikkal, 2020; Sobczak-Zagalska & Emerich, 2020). Alveolar bone fractures require a more rigid splint with longer splinting time (Fouad et al, 2020).

The risk of PDL healing complications is very low for concussion, subluxation, extrusive and lateral luxation injuries and significantly more for TDI involving multiple teeth and teeth with full root development (Hermann et al, 2012 [A]; Hermann et al, 2012 [B]). The most common complications are "repair-related resorption (surface resorption), infection-related resorption (inflammatory resorption), ankylosis-related resorption (replacement resorption), marginal bone loss, and tooth loss" (Hermann et al, 2012 [B]). Ankylosis-related root resorption is an expected outcome in replanted teeth, especially with an extra-alveolar dry time longer than 60 minutes or transport medium other than one capable of maximizing

the vitality of the PDL cells (e.g., milk, Hanks' Balanced Salt Solution) (Is Khinda et al, 2017; Fouad et al, 2020).

Recommendations:

- Management of orofacial soft tissue injuries should include cleansing, debridement, establishing hemostasis, and closure of wounds in a manner that maintains tissue vascularity, enhances healing, and prevents tissue devitalization.
- The clinician should determine the need for tetanus prophylaxis based on the patient's current immunization status. When immunization status is in doubt, evaluation by a physician within 48 hours is indicated. (Andersson & Andreasen, 2018; Day et al, 2019; Fouad et al, 2020; Callison & Nguyen, 2021).
- A decision for antibiotic prophylaxis should be based on the severity and contamination status of the tissue injury (Andersson & Andreasen, 2018; Day et al, 2019). Because the PDL of an avulsed tooth may have been contaminated by oral or environmental bacteria, systemic prophylactic antibiotics are recommended following tooth replantation (Fouad et al, 2020).
- Depending on the extent of the injury suffered by the periodontium, collaboration between the primary care dentist and a periodontologist may be needed to allow effective and successful clinical outcomes following dentoalveolar trauma.

Infections of bacterial, fungal, and viral origins

The gingiva may demonstrate a variety of lesions that are not caused by plaque and usually do not resolve after plaque removal (Caton et al, 2018). Infections of bacterial (e.g., necrotizing gingivitis), fungal (e.g., candidiasis), and viral (e.g., primary herpetic gingivostomatitis, recurrent intraoral herpes simplex infection) origins are some examples of non-plaque induced gingival lesions observed in the pediatric population (Silva et al, 2019). Successful treatment of infectious lesions requires clinicians to perform a thorough medical history appraisal, assessment of local and systemic contributing factors, and comprehensive oral examination aimed to achieve appropriate diagnoses and treatment plan. Elimination or reduction of all local and systemic risk factors that contribute to the infection initiation or progression is needed for treatment completeness, followed by close monitoring to assess treatment effectiveness, patient compliance, and risk of recurrence.

Recommendations:

- Initial therapy should focus on alleviating acute symptoms of pain and distress. This could include oral analgesics to control fever, malaise, and pain, as well as fluids to prevent dehydration.
- Antimicrobial therapy should be considered when an infection is not self-limiting or if there are frequent recurrences.

Traumatic gingival and oral mucosa lesions

Traumatic lesions can be accidental, iatrogenic, or self-inflicted and are physical (e.g., oral piercing, aggressive toothbrushing), chemical (e.g. dental materials, topical cocaine), or thermal (e.g. overheated foods and drinks) in nature (Rawal et al, 2004; Holmstrup et al, 2018). The appearance of the lesion (e.g., acute ulcerations vs chronic gingival defects) and a detailed history are crucial in achieving a diagnosis. Self-injury behavior (**SIB**) has been reported among individuals with psychiatric illnesses (e.g., personality disorders, bipolar disorder, major depression, anxiety disorders, obsessive-compulsive disorder) and congenital insensitivity to pain (e.g., familial dysautonomia), as well as a variety of developmental and intellectual disabilities (e.g., autism) (Romer & Doughtery, 2009). Gingival picking/ scratching is among the most common oral SIB (Krejci, 2000; Medina et al, 2003; Rawal et al, 2004; Dilsiz & Aydinb, 2009; Romer & Doughtery, 2009; Malaga et al, 2016). Management of self-inflicted traumatic lesions may be complicated due to lack of patient's compliance. The patient's primary care provider may help rule out any medical reasons for SIB (e.g., otitis media, infection, pneumonia) or specific genetic disorders (e.g., Lesch-Nyhan syndrome) or determine comorbid psychiatric conditions. An approach that includes medical and behavioral specialists may be indicated. Periodontal plastic surgery (e.g., placing a graft to create or widen the attached keratinized tissue) (Takei, 2019B), may be necessary for permanent gingival defects (Krejci, 2000; Rawal et al, 2004; Dilsiz & Aydinb, 2009).

Recommendations:

- Management of traumatic oral lesions requires removal of the offending agent and symptomatic therapy.
- Treatment of SIB should be individualized; diagnosis and treatment of the underlying mechanism comprise the most successful approach (Malaga et al, 2016).
- Behavior modification, pharmacotherapy, immobilization devices, oral appliances to control harmful habits, and/or psychological or psychiatric support may be beneficial (Romer & Dougherty, 2009; Malaga et al, 2016).

- Re-evaluation and monitoring management approaches should occur while treating self-inflicted traumatic lesions.

Pericoronitis

Pericoronitis refers to an inflammatory lesion developed when food debris and bacteria are present beneath the excess flap of soft tissue surrounding partially-erupted teeth, most frequently involving mandibular third molars (Klokkevold & Carranza, 2019B). The pericoronal flap of soft tissue may be chronic without any symptoms; however, when acute, patients may experience severe pain, mouth opening restriction, gingival abscess, cellulitis, fever, lymphadenopathy, and presence or risk for systemic complications (Schmidt et al, 2021). A rare complication is Ludwig's angina, a life-threatening condition that occurs when infection spreads to submandibular, sublingual, and submental spaces thereby compromising the patient's airway (Schmidt et al, 2021). The first course of treatment for acute pericoronitis is infection and pain management (Klokkevold & Carranza, 2019B; Schmidt et al, 2021). Nonsteroidal anti-inflammatory drugs (NSAIDs) are the analgesics of choice since the control of inflammation helps to control acute pain (Moussa & Ogle, 2022). Patient compliance for home oral hygiene is also key for treatment success (Schmidt et al, 2021). Once acute symptoms resolve, decisions can be made regarding the need for further treatment (e.g., pericoronal tissue surgery or tooth extraction) (Klokkevold & Carranza, 2019B; Schmidt et al, 2021).

Recommendations:

- Management during the acute phase should consist of (Klokkevold & Carranza, 2019B); Schmidt et al, 2021):
  - debridement and irrigation of the pericoronal area,
  - drainage of purulence to relieve pressure,
  - occlusion evaluation to determine the need to reduce soft tissue or adjust occlusion of opposing tooth,
  - pain control using NSAIDs,
  - antibiotics if the infection is not localized and/or if there are systemic signs and symptoms, and
  - home care plan to include oral cleaning, warm saline rinses, antiseptic agents (e.g., CHX), and sufficient fluid intake.

- After the acute phase, practitioners should (Klokkevold & Carranza, 2019B; Schmidt et al, 2021): evaluate prognosis and likelihood that the tooth involved will either erupt without complications or continue to pose a risk for pericoronitis recurrence and decide to either remove the pericoronal flap (if not removed during the acute phase) or extract the tooth to prevent recurrence.
- Ludwig's angina requires early recognition, immediate intervention (e.g., early and aggressive antibiotic therapy, surgical drainage, nutrition, hydration), and close monitoring. Due to the threat of rapid airway compromise, emergency referral to otolaryngology or oral maxillofacial surgery should occur without delay (Bridwell et al, 2021).

Considerations for treatment, coordination, and/or referral of care with a periodontist

Most pediatric patients will attain periodontal disease control with non-surgical therapy and not require further surgical intervention. When PPD are >5 mm, referral to a periodontal specialist may be indicated. Periodontal surgery may improve tooth support through pocket reduction, bone augmentation, and regeneration procedures (Takei, 2019A). Other considerations for referral include: (1) extent of the disease (generalized or localized periodontal involvement); (2) presence of short-rooted teeth; (3) teeth hypermobility; (4) difficulty in SRP deep pockets and furcations; (5) possibility of damage to the developing permanent successor tooth; (6) restorability and importance of particular teeth for reconstruction; (7) lack of resolution of inflammation after thorough plaque or biofilm removal and excellent SRP; (8) presence of systemic diseases and other conditions that compromise the host response; and (9) very importantly for the pediatric population, the age of the patient (Takei, 2019A). Younger patients, both systemically healthy and compromised, with extensive CAL are more likely to have aggressive forms of periodontitis that can be rapidly destructive necessitating timely advanced therapy. Early loss of primary teeth and bone loss visible on posterior bitewing radiographs are important indicators of aggressive forms of periodontitis that require further follow-up and/or referral (Devi et al, 2015). The possibility of an underlying systemic disease cannot be discarded.

The treatment for periodontitis as a manifestation of systemic conditions is dependent on the systemic disorder. Two fundamental treatment differences exist: (1) patients for whom the systemic disease and a conservative periodontal treatment approach do not represent grave danger to life; and (2) patients for whom the systemic disease (e.g., hypophosphatasia, leukocyte adhesion deficiency syndrome, neutropenia) and a conservative periodontal treatment approach may represent grave danger to life. Managing the periodontal diseases in these children, even when extractions of primary teeth at an early

age is the treatment of choice, is crucial since such systemic diseases may endanger the children's lives (Delcourt-Debruyne et al, 2000; Lozano et al, 2014; Thumbigere et al, 2018; Ajitkumar et al, 2021).

In terms of coordination and referral of care with a periodontist, important considerations include (Kraut, 1996; Kraut et al, 2010):

- the primary care dentist will be working closely with the medical team, and all pertinent patient information needs to be available to the periodontist to determine the necessity of advanced periodontal therapies;
- the level and frequency of communication between the primary care dentist and the periodontist will be more than is required for healthy patients. Timely communication before and after each diagnostic and surgical appointment is essential; and
- the types and levels of behavioral and pharmacologic pain and anxiety control available in the periodontal office may not be ideal for the young patient. Seeing the patient together may help meet these needs.

Recommendations:

- The treatment of periodontitis as a manifestation of systemic disease where a conservative periodontal treatment approach may represent grave danger to the child's life should include communication with pediatrician or medical specialist, as well as a periodontist, to consider the risk and benefit of conservative periodontal treatment versus tooth extractions. Extraction may be the best treatment with a continuing periodontal infection causing severe destruction of bone and developing permanent teeth and endangering the child's life.
- The treatment of periodontitis as a manifestation of systemic disease where a conservative periodontal treatment approach does not represent grave danger to the child's life should include:
  - communication with the child's pediatrician or medical specialist about the systemic condition, its diagnosis based on the oral, laboratory analyses, and systemic findings, as well as coordination of systemic and periodontal treatments;
  - consultation, coordination, and/or referral of care with a periodontist if beyond the scope of pediatric dentistry practice;
  - nutritional evaluation and counseling;
  - assessment of traumatic gingival lesions, harmful habits, and self-injurious behavior;
  - oral prophylaxis, SRP, and individualized patient oral hygiene instruction;

- consideration of chemical adjunctive anti-plaque and anti-calculus agents;
- management of risk factors (e.g., caries lesions, defective restorations, dental trauma);
- consideration of topical antimicrobial adjuncts and systemic antibiotics;
- consideration of periodontal surgery for severe gingival or periodontal diseases; and
- recall appointments based on each individual compliance and treatment achievements.

Surgical Therapy (Phase II Therapy)

Periodontal surgical therapy, which includes "plastic, aesthetic, resective, and regenerative procedures, becomes necessary when access for root therapy is required or correction of anatomic or morphologic defects is necessary" (Takei, 2019B). Placement of dental implants can also be part of phase II therapy. The main goals of surgical therapy are to improve prognosis of the teeth and their replacements, as well as improve aesthetics (Takei, 2019B). During this phase, the role of the primary care dentist is to provide treatment or refer/coordinate the care with a periodontal specialist when the needed treatment exceeds the practitioner's scope of practice. Prior to any surgical therapy, clinicians should provide the patient an opportunity to have questions answered and obtain written informed consent to proceed with the therapy proposed. Following are some surgical therapy considerations.

Pocket reduction surgery

The primary goal of surgical pocket reduction is to create access for professional SRP and reduce PPD (Graziani et al, 2017; Takei 2019B). It is especially useful for areas with bony defects and/or with furcation involvement (Takei 2019B) and best limited for pockets depths > 5mm (Graziani et al, 2017). If successful, surgery will enable the patient to perform adequate home cleaning and maintain long-term periodontal health. The most common pocket reduction surgical procedures are resective (e.g., gingivectomy and flaps) and regenerative (e.g., flaps with graphs or membranes) (Takei 2019B).

Resective surgery

Gingivectomy The indication of gingivectomy in the treatment of periodontal disease is to remove the soft tissue of the pocket wall in order to create visibility and access for complete SRP. In combination with gingivoplasty (i.e., recontouring of the gingiva), gingivectomy can achieve a favorable environment for soft-tissue healing and physiological gingival contour (Deas et al, 2016; Takei 2019B). The two main advantages of gingivectomy are the ease and simplicity of this surgical procedure (Camargo et al, 2019). Due to secondary wound closure, gingivectomy procedures cause more postoperative discomfort and bleeding when compared to periodontal flap surgeries (Camargo et al, 2019). With advances in flap

surgeries, gingivectomy is less utilized (Takei 2019B) but remains beneficial in the treatment of gingival enlargements and supra-bony pockets when the pocket wall is firm and fibrous (Deas et al, 2016; Do et al, 2019B). Gingivectomy is not indicated in cases when access to bone is required, the keratinized tissue zone is narrow, aesthetics is a concern, and risk for postoperative bleeding is increased (Camargo et al, 2019; Do et al, 2019B).

Flap surgery Periodontal flap surgery, the most widely used procedure for pocket therapy, provides great access for SRP, periodontal regeneration, and gingival and osseous resections (Takei 2019B) in moderate and deep posterior pockets. Due to esthetic concerns, non-surgical periodontal treatment in the anterior maxillary area is preferred; however, surgery is indicated when better visualization and SRP access are needed (Camargo et al, 2019; Takei 2019B). In addition, flap surgery allows primary closure improving both wound healing and patients' post-surgical discomfort (Deas et al, 2016; Takei 2019B). Conversely, the periodontal flap approach is more technically difficult compared to gingivectomy (Camargo et al, 2019).

Regenerative surgery

Periodontal regeneration aims to restore the lost periodontal tissues and their respective functions by the formation of new alveolar bone, cementum, and PDL (Larsson et al, 2016; Reynolds et al, 2015; Kao et al, 2019; Aimetti et al, 2021). In addition to managing intrabony and furcation defects resultant of periodontal diseases (Kao et al, 2019), regeneration may correct undesirable outcomes associated with resective surgical techniques such as loss of CAL and soft tissue recession (Stavropoulos et al, 2021). In cases of hopeless teeth, regeneration therapy is less costly when compared to extractions and dental implants (Cortellini et al, 2020). Several regeneration therapies including guided tissue regeneration and bone grafts (e.g., autogenous, allogenic, xenogenic, synthetic or alloplastic) have been studied (Larsson et al, 2016, Kao et al, 2019; Stavropoulos et al, 2021; Aimetti et al, 2021). Systematic and meta-analysis reviews have shown periodontal regeneration in intrabony defects results in shallower residual PPD and greater CAL gain than flap surgeries (Stavropoulos et al, 2021; Aimetti et al, 2021). In addition, a combination of regenerative approaches appears to be more effective when compared to regenerative monotherapies (Stavropoulos et al, 2021). Disadvantages of regenerative therapies include their technically-demanding surgical procedures and dependence on patients' compliance with home oral hygiene and professional maintenance care, as well as the need for longitudinal randomized clinical trials to provide more evidence regarding their long-term benefits (Kao et al, 2019; Stavropoulos et al, 2021; Aimetti et al, 2021).

Laser therapy

Lasers have been used successfully in several periodontal therapies such as gingivectomy/gingivoplasty, frenectomy, drug-induced gingival overgrowth reshaping, crown lengthening and exposure, depigmentation, and management of excess tissue in gummy smile and pericoronitis (Klokkevold et al, 2019D; Mossaad et al, 2021). Advantages associated with the use of lasers include better visualization during the surgical procedure due to hemostasis and coagulation, easier use than scalpels, reduced need of sutures, wound detoxification, enhanced healing, better patient acceptance, and post-operative pain control (Behdin et al, 2015; Jha et al, 2018, Klokkevold et al, 2019D; Protásio et al, 2019). Laser-assisted new attachment procedure (LANAP) has shown to initiate regeneration and improve clinical outcomes in the non-surgical treatment of moderate to advanced periodontitis, as either a monotherapy or as an adjunct to SRP (Jha et al, 2018, Klokkevold et al, 2019D), due to its benefits of detoxification, calculus removal, minimally invasive access for SRP, and killing of periodontal pathogens (Behdin et al, 2015; Jha et al, 2018, Klokkevold et al, 2019D). However, more data is needed to support the use of lasers as adjuncts to resective and regenerative therapies (Behdin et al, 2015, Jha et al, 2018). The greatest risk associated with lasers is unintentional tissue necrosis due to excessive temperatures (Klokkevold et al, 2019D). The use of laser in labial frenectomies has shown to be superior to scalpel regarding post-operative pain and discomfort during speech and mastication (Protásio et al, 2019), while its use for lingual frenotomies has not shown to be superior to other techniques (Messner et al, 2020).

Extractions of teeth due to periodontal reasons

Extraction of periodontally-compromised teeth may be the best management for some patients. Important considerations include previous unsuccessful therapies, dental implants as an alternative, cost-effectiveness of periodontal procedures, as well as the patient's systemic health, compliance, and finances (Larsson et al, 2016; Kao et al, 2019; Cortellini et al, 2020; Aimetti et al, 2021). For pediatric patients, extraction of primary teeth may be indicated if the periodontal lesion approximates the developing permanent successor, endangering the dental development.

Dental Implants

The placement of dental implants in younger patients requires a carefully coordinated and multidisciplinary team approach. In general, conservative treatment is indicated for growing patients with missing teeth. Important considerations include:

- the number of missing teeth along with soft and hard tissue anatomy,

- growth and development,
- systemic conditions and psychological and behavioral maturity (Bohner et al, 2019), and
- alternative therapies such as orthodontic and prosthetic treatments.

Assessment of growth and development is key to successful outcomes for dental implants in pediatric patients. Early placement of implants in the growing patient can result in rotation of the dental implant and infra-occlusion as the adjacent teeth continue to erupt and the jaw grows (Bohner et al, 2019). Patients vary considerably in their growth patterns, and individual patients may have periods of rapid and slower growth (Gross & Nowak, 2019). Thus, chronological age is not a good indicator of completion of growth. In contrast, skeletal maturation, assessed by cephalometric analysis or hand wrist radiographs, is a good determinant (Kamatham et al, 2019). While age is not the determining factor for when implants are appropriate and the evidence from long-term studies is still evolving, case reports give some indication of success (Lambert et al, 2017; Kamatham et al, 2019). A general recommendation exists for the age of 15 in girls and 17 for boys for implants in the maxillary anterior region (Kraut 1996; Lambert et, 2017; Bohner et al, 2019).

Recommendations:

- If PPD inhibits subgingival access or anatomic/morphologic defects require correction, the clinician should inform the patient of the need for and benefits/risks of periodontal surgical therapy, as well as treatment alternatives.
- Extraction of periodontally-compromised teeth may be the best management for some patients.
- Clinicians should consider referral to a specialist when the surgical interventions are beyond their scope of practice.
- Determination for advisability and timing of implant placement must be based on the specific circumstances of the individual patient. The patient's stage of growth and development is critical to treatment success.

Maintenance Phase

The long-term success of periodontal therapy outcomes is highly associated with the quality of recall maintenance (Graziani et al, 2017; Trombelli et al, 2020). Following are some considerations of the maintenance therapy phase:

- Determination of recall procedures (i.e., prophylaxis, periodontal maintenance)

- Determination of recall interval based on risk factors and history of disease
- Use of antimicrobial adjuncts during maintenance
- Individualized home care reinforcement
- Decision to when re-enter Phase I or Phase II therapy

A classic study (Axelsson & Lindhe, 1981) assessing the efficacy of a maintenance care program demonstrated that patients placed on a three-month recall maintained excellent oral hygiene parameters and stable periodontal attachment levels for two to six years following periodontal therapy, while the non-recall control group demonstrated significant periodontal attachment loss. A 30-year outcome report (Axelsson, Nyström et al. 2004) from this study (Axelsson & Lindhe, 1981) demonstrated that patients placed on an individualized maintenance program with a three to 12-month recall interval maintained stable periodontal conditions for 30 years. A review (Trombelli, et al. 2020) assessing predefined periodontal recall intervals conducive to periodontal health and stability concluded that evidence supports a two to four month recall interval for patients affected by moderate to advanced periodontal disease. Moreover, evidence supports a maintenance therapy program with at least 12-month interval recalls for patients who are periodontally healthy, are stable periodontally, or have mild forms of periodontitis (Trombelli, et al. 2020).

Recommendations:

- Clinicians should educate their patients and caregivers about the importance of supportive periodontal therapy to prevent disease relapse and provide individualized periodontal supportive care when needed.
- Every two to four months and at least every 12-month interval recalls are recommended for patients with higher and lower periodontal disease risk, respectively.

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Council on Clinical Affairs, Committee on Sedation and Anesthesia 2021–2022

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Jeffrey D. Rhodes, Board Liaison
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Richard F. Stafford, Expert Consultant
Stephen Wilson, Expert Consultant
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Leola Mitchell-Royston, Education Development and Academic Support Manager

Vision

Duties

The duties of the Council on Clinical Affairs, Committee on Sedation and Anesthesia, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to: 1) provide technical assistance to state licensing boards drafting or modifying sedation or general anesthesia legislation or regulation; 2) review AAPD Guidelines and Policies on sedation and anesthesia for scientific and clinical accuracy and make recommendations for updates; 3) maintain information on state statutes and regulations concerning the administration of sedation and general anesthesia in the dental office; 4) perform such other duties as assigned by the President or the Board of Trustees.

Council on Clinical Affairs,
Committee on Sedation and Anesthesia, 2021–2022

Standing Charges

Charge 1

Serve as subject matter experts for sedation and anesthesia to AAPD councils, individual members, state units and district organizations. Review AAPD policies and best practices for scientific and clinical validation, best practices and patient safety. Maintain liaison status with the Council on Clinical Affairs to provide expert advice for development or reaffirmation of AAPD guidelines. Provide technical assistance to state licensing boards pertaining to sedation and anesthesia.

Background and Intent: This is a standing charge to the committee. State sedation and general anesthesia regulations and statutes impact the delivery and access of oral health care services to infants, young children and patients with special healthcare and developmental needs. It is important such regulations and statutes preserve patient safety, be based upon sound scientific and clinical principles, and not impose unnecessary or false barriers to the delivery of care.

As the recognized experts in pharmacologic management of the minor dental patient in the office environment, we should endeavor to provide expertise when other healthcare organizations are attempting to draft parameters of care in this arena. This may be achieved by assuming and maintaining liaison or appointment to appropriate committees or other bodies of such organizations as the American Dental Society of Anesthesiology (ADSA), American Dental Association, American Academy of Oral and Maxillofacial Surgeons (AAOMS), American Society of Anesthesiologists and the American Academy of Pediatrics.

Progress Report

As committee Chair, Dr. Nelson was reappointed to a final term as AAPD representative to the ADA CDEL Sedation/Anesthesia Committee (ending 10/22)

The committee reviewed pediatric airway assessment form as requested by CCA and CSA.

Drs. Thikkurissy and Nelson reviewed and provided recommendations on GA and ND Boards of Dentistry proposed changes to sedation rules, referencing AAPD/AAP Joint Guideline and new ADA Pediatric Sedation Teaching Guideline.

Distributed final published version of new ADA Sedation Teaching Guideline to committee members and AAPD leadership on 6/17/21. Of note, PEARS is called out as a recommended airway course on p 17 and p 20.

https://www.ada.org/~/media/ADA/Education%20and%20Careers/Files/ADA_Guidelines_Teaching_Pediatric_Sedation.pdf?la=en

The Committee is currently reviewing and providing feedback on the AAPD Sedation Record, as requested by the Council on Clinical Affairs.

Charge 2

Assist the Council on Post-Doctoral Education with its biennial review the AAPD Core Curriculum Reading List; make recommendations for additions and/or deletions to the list on the topic of "sedation". The Committee will provide this information to the Council in time for the Council to report to the Board of Trustees at the relevant Winter Meeting.

Council on Clinical Affairs,
Committee on Sedation and Anesthesia, 2021–2022

Background and Intent: The Committee on Sedation and Anesthesia has the knowledge and resources to make the best recommendations for modifications and updates in the Core Curriculum Reading List.

Progress Report

The 2021 Core Curriculum Reading List was recently published. There has been no new action on this item in this reporting cycle.

Charge 3

Review all aspects of the clinical content and organization of the sedation and anesthesia courses provided by the Academy and other entities. Make recommendations to the Council on Continuing Education for changes to Academy courses.
Background and Intent: This is a standing charge to the committee. The Anesthesia and Sedation Committee developed a course in contemporary sedation for the membership based on the need for education specific to our practices. The content, layout, and organization must be continually updated because of changes in drugs and techniques. Reviews by attendees have been used to modify existing course content.

Progress Report

During 2019-2020, the committee created a plan for thorough review of the Fall and Spring Course offerings. This in-depth review was successfully completed. The committee will now assist with review of the AAPD course offerings on a recurring basis to be established by the leadership (e.g. every 5 years).

Dr. Nelson will be traveling to Chicago for a full-day review of the current sedation course offering with course faculty in 6/2022.

Project Charges

Charge 4

Continue to work with AAOMS and AAPD leadership regarding roll-out and promotion of the DAIRS sedation morbidity and mortality database to Academy membership.
Background and Intent: Currently, no data exists to support morbidity and mortality claims for pediatric dental treatment; medical data is usually quoted for these claims. With the new CODA standards requiring a set number of sedations, it is essential that relevant data be used to evaluate outcomes. The Academy partnered with AAOMS to adapt the DAIRS database for use by our membership. The DAIRS database has not yet been made widely available.

Progress Report

Please see Appendix A for a Chronology of the AAPD Morbidity and Mortality Database Project. Dr. Nelson presented this at the December 2021 meeting of the AAPD Safety Committee in Chicago. Currently a MOU has been routed to the AAOMS legal team and was scheduled to be reviewed/approved by AAOMS board by end of 2021.In consideration of the use of the DAIRS instrument to inform on safe practices, the Safety Committee would like the DAIRS program to be under the purview of the Safety Committee.

Council on Clinical Affairs,
Committee on Sedation and Anesthesia, 2021–2022

Appendix A

Chronology of the AAPD Morbidity and Mortality Database Project	
2016	**Original Project Charge:** Develop plans to create a database to examine sedation-related morbidity and mortality associated with pediatric sedation. **Strategic Plan Objective(s):** Clinical Expertise, Patient Care and Access, Workforce and Practice Transformation, Advocacy. **Background and Intent:** Currently, no data exists to support morbidity and mortality claims for pediatric dental treatment; medical data is usually quoted for these claims. With the new CODA standards requiring a set number of sedations, it is essential that relevant data be used to evaluate outcomes. The Academy is currently seeking to partner with another group to include our members' data so the database will be useful for pediatric dentistry. The committee will advise and participate in planning.
2017 Dr. Liu Sed Committee Chair	Worked with **The Society for Pediatric Sedation (SPS)** and Dartmouth University to develop a data collection form specific to Pediatric Dental Sedation. Concept: reporting and tracking of all pediatric dental sedations (procedure/encounter register), as per SPS model used for pediatric sedation and anesthesia cases Representatives from 6 University programs volunteered to participate in pilot testing the database. Each university pursued an Institutional Review Board authorization to input patient data into the system. Dr. Liu first introduced option to collaborate with AAOMS on Dental Anesthesia Incident Reporting System (DAIRS):

	AAOMS is developing 1) an incident reporting database –DAIRS and 2) a procedure/encounter *register*. DAIRS is now active for AAOMS members, and the *register* is under development. DAIRS is only intended to report adverse outcomes.
2018 Dr. Liu Sed Committee Chair	The AAPD was invited to be a partner/financial contributor to SPS. If the Dartmouth/SPS tracking system was utilized, the AAPD would have become a partner organization. In August 2018 AAOMS issued a formal invitation to the AAPD to participate in DAIRS. Committee members Drs. Chen, Nelson, Liu, Stafford, and Thikkurissy evaluated the DAIRS system and provided feedback. DAIRS staff incorporated suggested changes.
2019 Dr. Nelson Sed Committee Chair	In May 2019 AAOMS requested a retest of database to determine if modifications were adequate. Committee reviewed and provided feedback-indicating that it would require considerable modification before returning to the sedation committee for review. At annual session Dr. Nelson informed the committee that AAPD leadership has decided to abandon collaboration with SPS due to communication challenges and finances. In September 2019 AAOMS again requested AAPD retest of the database. Dr. Nelson completed it and submitted comments and subsequently participated in a conference call with AAOMS
2020 Dr. Nelson Sed Committee Chair	Two additional reviews of DAIRS were completed by committee members in Spring and Fall of 2020 after AAOMS updates. 2020 Winter Progress Report: P*roject goal will be to test the database again inside the committee and then submit the finalized database to AAPD leadership. The leadership will then have the tool and can provide it to members. They can determine the most appropriate way to make it available.* Dr. Nelson informed AAPD Leadership that DAIRS is ready for review and subsequent implementation.

Council on Clinical Affairs,
Committee on Sedation and Anesthesia, 2021–2022

2021 Dr. Nelson Sed Committee Chair	**2020-2021 Committee Charge:** Continue to work with AAOMS and AAPD leadership regarding roll-out and promotion of the DAIRS sedation morbidity and mortality database to Academy membership. **Strategic Plan Objective(s)**: Clinical Expertise, Patient Care and Access, Advocacy **Background and Intent:** Currently, no data exists to support morbidity and mortality claims for pediatric dental treatment; medical data is usually quoted for these claims. With the new CODA standards requiring a set number of sedations, it is essential that relevant data be used to evaluate outcomes. The Academy partnered with AAOMS to adapt the DAIRS database for use by our membership. The DAIRS database has not yet been made widely available. **Feb:** AAPD Requested from AAOMS-examples or suggestions for how to pitch tool to members, including information about the system, importance of data, and what can/will be done with it **Mar:** AAOMS informed AAPD that they have not marketed heavily due to need for improved user report **April:** AAPD received additional input from AAOMS: • **Which states are requiring these types of reports?** While no states currently require DAIRS submissions, 42 states require dentists to file a report or notify the state dental board of a morbidity or mortality within a specified period. Nearly all of these require the same information captured via DAIRS. AAOMS has encouraged all individual dental boards and the American Association of Dental Boards to promote DAIRS and encourage DAIRS submissions so data may be captured nationally. • **How does unique identifier/patient report actually work?** Before a provider submits their incident, they are prompted with the option to save or print a copy of their incident which

will have an identifier assigned. It would be the provider's responsibility to track the patient to the identifier since it is a deidentified submission. Once the provider submits the incident an email containing the incident report is auto-generated to Karin and I. Arbor Metrix, the DAIRS vendor, will also send a formatted accumulative report of all incidents received for archival purposes. We will share this report with you once received.

In an April conference call with Ms. Royston, and Drs. Castellano, Nelson, and Rutkauskas it was decided that communication to a "test group" of AAPD members will be drafted. After gathering feedback, AAPD would determine messaging for roll-out to the broader membership. The plan was to roll-out July 2021-Dec 2021.

June: AAPD Asked for and Received Additional input from AAOMS

CURES Act:
Apparently the effects of the law are starting to make their way into practice at some hospitals. One takeaway from the meeting is that CURES allows patients much more immediate and unrestricted access to their medical records. The concern would be whether providers would want to report via DAIRS with increased patient access. However, even if they did, how would CURES affect submission of deidentified, anonymous data to state boards, insurers, etc. and the need to also provide the same information to the affected patient. The CURES Act does not require all data be available for access by patients via the portal. As such, anesthesia notes may not be included depending on how that information is maintained in the patient's record. The CURES Act would not impact DAIRS except it prohibits data blocking. As such, down the road, an API may be able to be developed to immediately submit a DAIRS report, but that does not currently exist. The ADA is asking for clarification on how much of the CURES Act/data blocking rules affect dentistry as there are currently no dental EHRs certified under the program and dental codes are not yet included in the USCDI, which is the data standard being used by the ONC to enforce the data blocking provisions. Further, the CURES Act provides no mechanism for data to be consolidated and studied. Regardless of the CURES Act, providers will still be required to follow their dental practice acts and most require individual submission of morbidity/mortality reports directly to their offices. DAIRS would ensure this data is standardized and reported to a central repository for

	analysis and reporting. If a state dental board named DAIRS as the submission portal for these incidents it would support the dental practice acts. DAIRS reporting is intended for an untoward event which should be in the medical record and therefore patients would have access this way. DAIRS collects no PHI and it is all anonymously reported. DAIRS simply offers a resource for providers to share experiences to say they submitted to a national repository – if required – and for patient improvement through learning. **Access to Data:** In regard to access to the data collected, would AAPD have access to the full database for research purpose, or only access to data submitted by our members? There is no database to access, instead a spreadsheet containing the details of the incident is auto-generated and sent to AAOMS. AAOMS originally agreed to send any data that was identified as being performed in a pediatric office. Your board may wish to request our board for more detail – although to date we've had almost zero submission. **MOU or Letter of Agreement:** What are your thoughts on establishing an MOU or a Letter of Agreement? If this is something you'd be amiable to, Scott can work on a draft. Yes, please ask Scott to work on a draft and send to us for consideration. **June:** Scott Litch, Leola Royston, and Drs. Castellano, Nelson, Rutkauskas weighed in on MOU **October:** AAOMS completed final updates to the DAIRS User Report (last feature waiting for vendor to complete) MOU completed over the summer was routed to AAOMS legal team. MOU scheduled to be reviewed/approved by AAOMS board in November

Council on Clinical Affairs, Committee on Special Health Care Needs 2021–2022

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John S. Rutkauskas, Chief Executive Officer
Leola Mitchell-Royston, Education Development and Academic Support Manager

Vision

Duties

The duties of the Council on Clinical Affairs, Committee on Special Health Care Needs, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to: 1) develop recommendations for future AAPD action based on the Symposium on Lifetime Oral Health Care for Patients with Special Needs; 2) review AAPD policies and guidelines related to patients with special health care needs, and make recommendations for updates and revisions; 3) regularly review scientific literature in this area; 4) perform such other duties as assigned by the President or the Board of Trustees.

Council on Clinical Affairs,
Committee on Special Health Care Needs, 2021–2022

Standing Charges

Charge 1

Assist the Council on Post-Doctoral Education with its biennial review the AAPD Core Curriculum Reading List; make recommendations for additions and/or deletions to the list on the topic of "care for special needs patients".
Background and Intent: The Committee on Special Health Care Needs has the knowledge and resources to make the best recommendations for modifications and updates in the Core Curriculum Reading List.

Progress Report

The committee submitted recommendations for the 2021 Core Curriculum Reading List review.

Charge 2

Facilitate education and exposure to clinical experience in the care of patients with special needs for pre-doctoral and post-doctoral students and practicing general and pediatric dentists.
Background and Intent: Access to dental care for adults with developmental disabilities continues to be a challenge. A major barrier is having inadequate general dentists to care for the adults and for pediatric dentists to transition patients to. Increasing pre-doctoral experience with patients with developmental disabilities will increase the number of general dentists willing and able to care for adults with special needs. The Committee on Special Health Care Needs will provide recommendations and assistance in developing and providing high quality post-doctoral and continuing educating on treating persons with special health care needs.

Progress Report

Committee consultant, Dr. Jessica Webb to present a session at Annual Session 2022, *Through the Looking Glass – Practical Dental Care for the Medically, Dentally, and Behaviorally Complex Patient*, Sunday, May 29, 2022. We are also pleased to see another SHCN session on the agenda, *Finding Our Way Towards Caring for Special Needs Patients*, Friday, May 27, 2022.

The Committee will continue to work with the Scientific Affairs to inquire on future opportunities.

Charge 3

Develop a plan to educate membership on the vital nature of raising awareness of care for patients with special health care needs in pediatric dentistry and to provide information regarding care for this patient population. Disseminate information on care for patients with special health care needs through journal articles and editorials.
Background and Intent: It is important the membership continue to be informed about care for patients with special health care needs. The committee desires that relevant topics on special health care needs receive continued awareness and appreciation in the pediatric dental community and general dentistry community.

Council on Clinical Affairs,
Committee on Special Health Care Needs, 2021–2022

Progress Report

1) Publication in October 2021 in the American Journal of Preventive Medicine, editorial: 'Importance of oral health for adolescents and adults with down syndrome'. Martha Ann Keels, Elizabeth Gosnell, Paul Casamassimo, Jay Shirley.

2) Chair will request for ideas from members to submit to PDT or other publications on various topics.

Project Charges

Charge 4

Conduct a needs assessment of three specific groups—general membership, pre-doctoral directors, post-doctoral directors—to assess what they would deem to be beneficial resources, support, and education in the area of caring for patients with special needs. Background and Intent: The committee is charged with providing recommendations and assistance in developing and provide high quality post-doctoral and continuing education on treating persons with special needs. This assessment process will facilitate an improvement process to begin and would allow the committee to make valid recommendations for Charge #2. This process would be conducted with an electronic survey tool.

Progress Report

Leola Royston is working to get the Pre and Post Doc surveys out to the respective groups and is working with the Membership Department to determine a plan for dissemination to the general membership.

Additional Information

In 2020-2021, the Committee was charged to work with the Committee on Dental Benefit Programs and the Council on Clinical Affairs to develop a list of dental benefit codes for teledentistry, by state. In June 2021, the Policy Center published an updated technical brief, "Are Your Kids Covered: Medicaid Coverage for Essential Oral Health Benefits" by Erica Caffrey, Jessica Lu, Robin Wright, Scott Litch and Paul Casamassimo, which includes CDT teledentistry codes.

Council on Continuing Education 2021–2022

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Kristi Casale, Vice President for Meetings and Continuing Education
Colleen Bingle, Senior Meetings, Exhibits, and Sponsorship Manager
Rachael Haave, Meetings Services Manager

Vision

Duties

The duties of the Council on Continuing Education, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to: 1) monitor member needs and desires regarding continuing education courses sponsored by AAPD; 2) plan and implement AAPD continuing education courses in collaboration with the Headquarters Office; 3) make recommendations to the Board of Trustees regarding the continuing education activities of AAPD; 4) recommend faculty for continuing education courses; 5) perform such other duties as assigned by the President or the Board of Trustees.

Standing Charges

Charge 1

Provide a variety of new and ongoing continuing education opportunities aligned with the Strategic Plan to meet the needs and desires of the pediatric dental community. Monitor

the dental professional needs and desires regarding AAPD continuing education and propose at least annually to the Board of Trustees such offerings.
Background and Intent: This is a standing charge to the Council, based on future membership needs assessment surveys. It is the Academy's desire to regularly offer continuing education opportunities of unique content. This is a membership benefit as well as a potential source of non-dues revenue. The Council on Continuing Education will develop questions to be utilized in electronic surveys and other sources to measure the needs and desires of our members.

Progress Report

Sedation Course: The Safe & Effective Sedation of the Pediatric Dental Patient was March 24-26, 2022 in Tampa, FL and the Management of Pediatric Sedition Emergencies: Simulation was March 27, 2022 in Tampa, FL. The Sedation Course had 69 attendees and the Simulation course had 23 attendees. The next Safe & Effective Sedation of the Pediatric Dental Patient target date is October 7-9, 2022- location TBD.

QE Prep Course: After surveying Program Directors and residents it was determined it was best to offer the Qualifying Examination Prep Course virtually in 2022. The intent is to go back to in-person in 2023 as this is a member benefit and shows the residents the value of the AAPD. For 2022, Dr. Nelson the course chair worked with the speakers Drs. Law, Sarvas, and Nelson to create 5-10 minute mini recordings on specific topics that are released weekly until May. In addition, there is a virtual QE Prep Exam day on April 23, 2022 from 10:00am-2:00pm CST. This is an opportunity to connect with the speakers and ask questions. Furthermore, we offered very large discounts of pre-recorded QE prep materials in the passport. Since January 1, 2022 there have been 135 registrations for the QE Exam Prep Bundle.

OCE/Comprehensive Review Course: The fall Oral Clinical Exam Review Couse and Comprehensive Review is August 18-21, 2022 in New York. For the second year, College of Diplomates is sponsoring the Mock Oral Exam Interviews and Oral Exam Review Course.

Sedation and Simulation of the Pediatric Dental Patient:
Date and location still tbd.

RCS Joint Symposium: Registration is open for the Royal College of Surgeons Meeting in Dublin, Ireland October 28-29, 2022.

Continuing EDge is distributed monthly. The click-through rate remains high, showing that membership actively receives and reads communication about CE opportunities.

Charge 2

Offer a variety of digital learning opportunities. The Council on Continuing Education will solicit the input of Councils on Clinical Affairs and Scientific Affairs as needed.
Background and Intent: Currently, a majority of pediatric dental residents receive a portion of their training electronically. Younger dentists communicate electronically for a majority of their professional and non-professional encounters. The Academy needs to be prepared to engage this group professionally through electronic continuing education.

Council on Continuing Education, 2021–2022

Progress Report

AAPD Annual Session: The AAPD will offer session recordings from AAPD 2022 available in the Education Passport following the meeting. The meeting is not virtual/synchronous participation since it will be a live event.

Pedo Teeth Talk: is still very popular and being released the first Tuesday of the month. There are more than 600 listeners on each release day.

Newly Erupted is released the second Thursday of the month, and there are more than 200 listeners are each release day. Hu-Friedy is the sponsor of Pedo Teeth Talk. There have been more than 200,000 all-time downloads of podcasts.

Other meetings/CE remain available through the education passport, and members regularly purchase these recordings. Since January 1, 2022 there have been 460 registrations in the Education Passport.

AAO/AAPD Joint Webinars: Due to transitions in the AAO, this project was postponed and will be revisited in Summer 2022.

Council on Continuing Education, Journal-Based Continuing Education Committee 2021–2022

Phil W. Chung, Chair
James R. Boynton, Board Liaison
Members
Ehsan Azadani
Camille Vera Gannam
Amy L. Goodwin
Catherine H. Hong
Vijay Prakash Mathur
Staff Liaison
Leola Royston, Educational Affairs Manager

Vision

Duties
The duties of the Council on Continuing Education, Journal-Based Continuing Education Committee, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to: 1) develop, monitor, implement and evaluate the Journal-Based Continuing Education Program; 2) promote participation in the Journal-Based Continuing Education Program by AAPD members; 3) perform such other duties as assigned by the President or the Board of Trustees.

Progress Report
The chair reviews manuscripts for each issue of *Pediatric Dentistry* prior to publication and selects four articles for CE designation. For designated articles, CE questions are developed and edited by the Committee, then made available to the membership. Five to six questions for each of the identified articles are published for subscriber participation in earning continuing education credits. The program is being promoted via various AAPD resources including the E-news.

In AAPD 2021 Journal-based CE Program, there were a total of 187 subscribers, which included some subscribers who purchased the 2022 package. 2021 total revenue of $21,420 includes $8,640 from January to June 2021 and $12,780 in fiscal year 2021-22 (July 2021 to March 2022). There has been a noticeable decline in participation from our membership most likely due to live CE participation following the lifting of pandemic restrictions and widespread availability of free and reduced-cost live and recorded online CE courses. Strategies to increase participation include promotion of the program in E-blast messages to members and reminding subscribers when new tests are available.

Council on Continuing Education, Speakers Bureau Committee 2020–2021

Scott D. Goodman, Chair
Jonathon E. Lee, Board Liaison
Members
Homa Amini
Kevin J. Donly
John T. Fales
Janice A. Townsend
Ex Officio Member
David M. Avenetti, Chair, Council on Continuing Education
Staff Liaisons
Kristi Casale, Vice President for Meetings and Continuing Education
Rachael Haave, Meetings Services Manager

Vision

Duties

The duties of the Council on Continuing Education, Speakers Bureau Committee, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to: 1) identify and recruit the most competent content area experts to meet the needs of AAPD and district and state chapters for exceptional continuing education program speakers; 2) maintain an AAPD Speakers Bureau listing that is conveniently accessible by AAPD, district and state chapter leadership, with periodic updates; and 3) manage an ongoing process for speaker evaluation, recruitment, and monitoring.

Standing Charges

Charge 1

Populate the speakers bureau to serve as a resource for those seeking experts on various topics pertaining to pediatric dentistry and the treatment of children. The committee will evaluate the speakers and the process annually to continually improve the quality and variety of speakers. The submission process is available online and the Speakers Bureau Committee will maintain the current list of speakers and update the list on an ongoing basis.

Background and Intent: The background and intent of the Speakers Bureau are defined and found within the duties and charges of the committee. The primary role is an ongoing commitment to recruit and select experts on various topics pertaining to pediatric dentistry and the treatment of children and/or special needs patients, thereby establishing and maintaining a resource directory of quality speakers that support a

diverse collection of continuing education programs. The protocol to recruit and evaluate speakers is continuously reviewed, analyzed and improved when necessary.

Progress Report

There are a total of 86 topics and 63 speakers accepted into the Speakers Bureau. There were zero submissions in the last cycle. The committee should reach out to those who have incomplete submissions to finalize. Here are the 2022 deadlines:

Submissions Due: July 8, 2022
Reviews Due: July 29, 2022
Committee Decisions Emailed: August 12, 2022
Submissions Due: November 4, 2022
Reviews Due: November 25, 2022
Committee Decisions Emailed: December 9, 2022

Council on Government Affairs 2021–2022

Jessica L. Robertson, W District, Chair
Angela M. Stout, Board Liaison
Members
Keri Discepolo, NE District
Matthew K. Geneser, NC District
Barrett W. R. Peters, SE District
Aaron Michael Bumann, SW District
Nick Rogers, Affiliate Member
Consultants
John A. Bogert
James J. Crall
Lauren Maxime Feldman
John Gibbons
Douglas B. Keck
Shari C. Kohn
BJ Larson
J. Miles Mazzawi
Jessica A. Meeske
Kara M. Morris
Heber Simmons, Jr.
Elisa J. Velazquez
Amanda Wolf
Patrice B. Wunsch
Jason A. Zimmerman
Ex-Officio Members
Scott B. Schwartz, Ex Officio (Chair, Council on Membership and Membership Services, Early Career Pediatric Dentist Committee)
James D. Nickman, Ex Officio (Chair, Committee on Dental Benefit Programs)
Scott W. Cashion, Ex Officio (Chair, Pediatric Dental Medicaid and CHIP Advisory Committee)
Warren A. Brill, Ex Officio (Co-Congressional Liaison)
Jade Miller, Ex Officio (Co-Congressional Liaison)
Amr M. Moursi, Ex Officio (Liaison to AAP)
Staff Liaisons
C. Scott Litch, Chief Operating Officer and General Counsel
John S. Rutkauskas, Chief Executive Officer

Vision
The vision of the Council on Government Affairs is that all children have access to quality dental care within the dental home. To attain this vision the Council will educate

membership and advocate on the national level for fair and equitable treatment for all children.

Duties
The duties of the Council on Government Affairs, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to: 1) monitor legislative and regulatory activities at the national level that may affect the health of children and make recommendations to the Board of Trustees regarding AAPD policy on these matters; 2) collaborate with related organizations on legislative and/or regulatory matters of mutual interest, including the ADA's legislative offices in Washington, D.C. and Chicago; 3) provide information to district organizations and state units that would be of benefit in their regional and local legislative and regulatory efforts; 4) make recommendations to the Board of Trustees concerning the Academy's legislative and regulatory priorities and additionally recommend activities related to these priorities; 5) perform such other duties as assigned by the President or the Board of Trustees.

Standing Charges

Charge 1

Annually develop, and recommend to the Board of Trustees at the Winter Planning Meeting, AAPD Legislative and Regulatory issue priorities for the ensuing calendar year, and coordinate all elements of advocacy resources to support these priorities.
Background and Intent: This is a standing charge to the council.

Progress Report
A summary of 2021 AAPD legislative and regulatory outcomes was reported in the March 2022 PDT, and will also be included in the CEO's 2022 Annual Report and the 2022 PAC Annual Report. CGA developed priorities for 2022 that were approved by the Board of Trustees on January 14, 2022 and are available at:
https://www.aapd.org/globalassets/2022-legislative-priorities-for-website.pdf

Charge 2

Develop and maintain an effective AAPD advocates' structure by encouraging membership participation in our advocacy and legislative training programs, including the annual Public Policy Advocacy Conference in Washington, D.C. Utilize the New Pediatric Dentist Committee in recruitment efforts, and encourage these committee members to attend such programs while identifying and informing those with an interest in government affairs and activities of the CGA.
Background and Intent: This charge relates to the continuing effectiveness and improvement of AAPD advocacy training.

Progress Report
The July 2022 PDT will include a summary of the highly successful Pediatric Oral Health Advocacy Conference that took place in Washington, D.C. from March 12-15, 2022. There were over 250 attendees, including over 160 pediatric dental residents, who visited their Senate and House Members. Congressional fact sheets and other briefing materials were provided to attendees via the AAPD website, and are available to any interested AAPD

member: https://www.aapd.org/advocacy/grassroots-advocacy/Pediatric-Oral-Health-Advocacy-Conference/

Charge 3

Maintain a close collaboration with the AAPD Political Action Committee related to evaluating candidates for AAPD PAC support, taking into account the advice of AAPD's Washington lobbyist and the Congressional Liaison. CGA will present a written report to the PAC Steering Committee in Congressional election years to facilitate recommendations for candidate financial support.
Background and Intent: The PAC has two functions: to raise money and to disburse it. This charge creates a formal mechanism for the Academy to identify those seeking office it wishes to support utilizing the Council most familiar with issues that are deemed important for children's oral health.

Progress Report

For the fourth straight year, Congresswoman Julia Brownley (D-Calif. 26th) circulated a Dear Colleague letter (for FY 2022) in March 2021 in support of Title VII Pediatric Dentistry funding. CGA recommended that all House Members who signed this letter receive AAPD PAC support for the 2022 mid-term Congressional election cycle. This was approved by the AAPD PAC Steering Committee. The letter, and list of co-signers, is available on the AAPD website:
https://www.aapd.org/advocacy/legislative-and-regulatory-issues/latest-advocacy-news/57-house-members-sign-congressional-dear-colleague-letter-in-support-of-title-vii-pediatric-dentistry-funding/

The FY 2023 appropriations process was delayed due to the FY 2022 process not being completed until early March, 2022. CGA is hopeful that Congresswoman Brownley will again spearhead a Dear Colleague letter for FY 2023 Title VII Pediatric Dentistry funding.

Charge 4

Monitor and assist state chapters and their Public Policy Advocates (PPAs) with state legislative activities related to AAPD legislative and regulatory policies. Disseminate AAPD Pediatric Oral Health Research and Policy Center and ADA Health Policy Institute analyses and reports that will assist PPAs in their duties. Encourage PPAS to report to CGA on a regular basis, including submission of an annual written report and updates on state legislative and regulatory news than can be including in AAPD publications such as PDT and the website.
Background and Intent: While the CGA deals primarily with national concerns, there are many issues that arise in the states that may influence national legislation. In addition, the same issue may arise in several states and communication between them could be of paramount importance.

By the district members of the Council monitoring activities within their states via the PPA network and reporting back to the Staff Liaison and Board of Trustees, our members will have the opportunity to learn what is happening throughout the country and thus be more efficient and effective within their own locales.

Council on Government Affairs, 2021-2022

Progress Report

There are currently PPAs in 46 states plus the District of Columbia. The current listing is available at:
https://www.aapd.org/advocacy/grassroots-advocacy/public-policy-advocates-initiative/.

CGA continues to host quarterly PPA Zoom meetings for information sharing and strategizing. The next Biennial Chapter Leadership Summit and PPA Workshop will be held in Chicago from September 9-10, 2022.

Annual Reports submitted by state PPAs are attached to this report.

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Dr. Jessica Blanco

State Chapter Name: Alaska Pediatric Dental Society (APDS)

PPA's practice or teaching location (city or town): Juneau Pediatric Dentistry, Alaska

Key legislative and/or regulatory priorities for state chapter and current status

In addition to supporting AAPD priorities as the Alaska PPA this year, APDS priorities center around state Medicaid proposed changes and current access to care issues.

State Medicaid/ Denali Kid Care (DKC)- the changes proposed are partly a reaction to egregious over-billing practices by one particular dentist. This story, particularly the trial, was mainstream news from 2018 through 2019; In response, the state decided to overhaul the check and balances built into Alaska Medicaid. Dr. Hiedi Ostby, a Pediatric Dentist and President of our state society, is on the Dental Medicaid Advisory Committee (DMAC) and has done a great job of keeping our members up to speed and seeking input. Primarily, the committee aims to decrease fraud and over-treatment. The most recent iteration of proposed changes suggested pre-auth requirements (i.e pre-auth for 2+ extractions and crowns). Public comment was solicited and most comments advised against pre-auth requirements; DMAC has yet to respond.

https://www.adn.com/alaska-news/crime-courts/2020/09/15/anchorage-dentist-who-defrauded-medicaid-and-extracted-patient-tooth-while-riding-hoverboard-sentenced-to-prison/

Access to care: There is a confluence of factors impeding efficient access to care in Alaska; like the rest of the country, COVID-19 created a backlog of elective surgeries that are now competing with dental. Additionally, hospital staffing shortages and schedule changes are creating further roadblocks. Other access to care issues stem from changes in covered services, such as Tricare not covering anesthesia in the office. Furthermore, other coverage is sparse in Anchorage, AK, and the outlying areas, with as little as one orthodontist accepting DKC in the area.

Exacerbating these issues is the lack of *fluoridated water* in most outlying Alaskan communities.

Misc: Additionally significant at the state level are the following bills relating to all dentistry. This year I am the Alaska Dental Society President (ADS), and as such, I am automatically part of the government affairs committee. Going through the state legislature is a two-part dental bill (HB295) regarding radiologic inspections -

requesting the state take that over - the second part is to reinstate specialty licenses. The bill was introduced early this session, and on 2/22/22, it was referred to the Health and Social Services Committee. A public hearing was scheduled for last week on the matter, the hearing was delayed due to a large number of the legislative staff contracting COVID, an alternative date has not been established.

There is another dental-related bill (HB111) from the dental hygienist association regarding their advanced practices. HB111 would allow dental hygienists who have practiced under the supervision of a dentist for a minimum of 4,000 hours to practice under an advanced practice permit and eliminate the requirement for a collaborative agreement." The hygienist bill was presented last year for the first time, 2/24/21. The last action on this bill was on 3/30/22 when it was referred to the Finance Committee.

I attached the most recent ADS lobbyist report, Confluence Strategies is the name of our lobbyist group - not much relevant information in there but it summarizes most current state dental issues the state lobbyist is tracking.

Joint or coordinated efforts with state dental association, such as dental lobby day at the state capitol, legislative testimony, regulatory efforts, etc.

Coordinated efforts between our pediatric dental society and the state dental association is highlighted above. This year I am the president of our state dental society and part of the government affairs committee. Our government affairs chair, Dr. Heather Willis, a general dentist from Fairbanks, AK updates the GA committee and together we decide on who can be available for public testimony on dental related bills when they come up.

All APDS and ADS coordination efforts are generally seamless with an emphasis on collaboration regarding topics of mutual interest. Testimony on the state level is expected by APDS members with regard to specialty licenses. No date is set but testimonies are expected to take place in the next month.

Confluence Strategies

Alaska Dental Society

Weekly Session Report

2022 Alaska Legislative Session
32nd Legislature

March 27, 2022

Legislature

***Majority press releases & announcements*:**

House Majority

Increased State Revenue
By Rep. Ortiz

P.O. Box 110190, Anchorage, AK 99511
423 Seward Street, Juneau, AK 99801

How is the House considering using those extra funds?

An Energy Relief Check for Every Alaskan *- Alaskans are paying significantly more at the gas pump and for home utility costs. This one-time check of $1,300 would help mitigate those costs. There was a similar Energy Assistance Program in 2008, when the price per barrel hit $120. Likewise, the price per barrel exceeded $120 earlier this month.*

Additional Funds for Education *- The House's current budget includes additional funding for the Student Base Allocation (BSA), which is the base number for the school funding formula. The BSA hasn't changed in seven years, despite seeing huge increases in fixed costs and inflation. Schools' money doesn't go as far, and many districts are having to let go teachers and increase class sizes in order to pay for heating, maintenance, and healthcare costs.*

The House's current budget also includes forward funding into Fiscal Year 2024 for education. This additional year of funding will give school districts more stability as they create their own local budgets.

A More Robust Capital Budget *- It's time to bolster our Capital budget, which has been minimal in past years. Funding a larger capital budget will address on-going state maintenance costs, one-time projects that will benefit local municipalities, and most importantly, will open up more jobs for Alaskans during this critical time. Although this revenue increase is likely temporary, a robust capital budget can have positive long-term affects.*

Legislation Update
Rep. Snyder

HB 234

Confluence Strategies

Many of you have reached out to me with concerns after the APOC decision earlier this month that eliminated campaign contribution limits. Unless the Legislature were to act, unlimited amounts of money could flood all future elections. Please know that I am in complete support of contribution limits and the role they play in ensuring free and fair elections. I am glad to say that the House took the first steps to reinstating contribution limits by passing out HB 234: POLITICAL CONTRIBUTION LIMITS.

HB 234 establishes contribution limits for individuals of up to $2,000 per election for state and local campaigns, while also establishing limits on out-of-state donations to ensure the voices of Alaskans are not drowned out by outside funders. The bill also requires these limits to be adjusted every ten years based on inflation. Additionally, it changes campaign contribution limits to "per campaign period" instead of a "per year" basis, ensuring all candidates are on the same playing field, regardless of when they enter the race. Fundraising totals are a strong indicator of a candidate's ability to win – something that should be earned through the candidate's quality of work and efforts to connect with their community. Big corporations have enough advocates, it is communities that need to be represented.

…

Executive Order 121 (EO 121) - Re-organizing the Department of Health and Social Services

EO 121 was officially enacted as of Saturday, Mar. 19. Properly vetting and going through the process of disapproving an EO was always a matter of policy and not politics. As I have said throughout the process, it is the Legislature's prerogative to approve or disapprove an Executive Order. It is also our responsibility to ensure that such a decision is made in an informed and deliberate manner based off policy and not politics. That was always our goal in reviewing the Executive Order.

We went through the proper procedures, and I do wish we had had the chance to properly convene with the Senate so individual legislators could cast their vote. But now our responsibility as Legislators is to ensure that the split is implemented as smoothly as possible and does not negatively impact the many Alaskans who rely on the services the Department of Health and the Department of Family and Community Services will provide.

I believe this is best done by adequately funding key programs and recruiting and retaining staff. We passed many amendments in the House Health & Social Services budget

subcommittee to address these issues. Pairing the bifurcation with the approval of these budget amendments will give me confidence that improving the quality and accessibility of critical health services is a goal shared by the legislature and the administration.
https://akhouse.org/snyder/032522_newsletter.htm

Minority press releases & announcements:

House Minority

ALASKA UNDERTAKES PROCESS TO REPLACE CONGRESSMAN YOUNG

(JUNEAU) – The confusion and complication of the special election resulting from the unfortunate passing of Congressman Young highlights how misguided and shortsighted the 2020 ballot measure two was. Many Alaskans voted for it under the guise of ridding "dark, outside money" from Alaska politics, not realizing that the campaign was funded by "dark, outside money".

Now, Alaska is facing the prospect of being without congressional representation for nearly six months. Because of U.S. constitutional provisions, federal law, existing state statute and provisions of ballot measure two, we will have to conduct a special primary election as an "all mail" election and a special general election that won't likely be certified until sometime in September. To add further confusion, the special general election will be held concurrently with the regular primary election.

The House Republican Caucus supports the ability of Alaskans to have a direct hand in crafting Alaska's laws through the initiative and referendum processes. However, the 2020 ballot measure two reminds us, once again, of the shortcomings of ballot measures. Unlike legislation passed by the legislature following a lengthy and thorough review by policy committees and debated extensively by both bodies of the legislature, ballot measures go through no such vetting.

The House Republican Caucus will work diligently to provide accurate and timely information to Alaskans about both the mechanics and timeline of the special congressional elections and the ranked-choice scheme under which the 2022 regular election will be conducted.

Bills Introduced This Week:

SENATE

Confluence Strategies

SB 237	AMBULATORY SURGICAL EMPLOYEES: OVERTIME	SENATE RULES BY REQUEST OF THE GOVERNOR
SB 238	MONEY TRANSMISSION; VIRTUAL CURRENCY	SENATE RULES BY REQUEST OF THE GOVERNOR
SB 239	APPROVE PETRO STAR INC. ROYALTY OIL SALE	SENATE RULES BY REQUEST OF THE GOVERNOR
SB 240	APPROVE MARATHON PETRO ROYALTY OIL SALE	SENATE RULES BY REQUEST OF THE GOVERNOR

HOUSE

HB 403	AMBULATORY SURGICAL EMPLOYEES: OVERTIME	HOUSE RULES BY REQUEST OF THE GOVERNOR

Bills Tracked:

BILL	SHORT TITLE	SPONSOR(s)	STATUS	DATE
HB 4	BUSINESS/PROF. LICENSE IMMUNITY COVID-19	JOHNSON	(H) L&C	02/18/21
HB 9	INCOME TAX; PFD PAYMENT/CREDIT	HANNAN	(H) STA	02/18/21
HB 14	NURSING: LICENSURE; MULTISTATE COMPACT	THOMPSON	(H) HSS	02/18/21
HB 15	TEMP PERMITS & LICENSES; MILITARY LICENSE	THOMPSON	(H) L&C	02/18/21

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HB 20 REQ'S OF MEDICAL ASSISTANCE PROGRAM JOSEPHSON (H) HSS 02/18/21

HB 37 INCOME TAX; PERMANENT FUND; EARNINGS RES. WOOL (H) FIN 02/28/22

HB 76 EXTENDING COVID 19 DISASTER EMERGENCY RLS BY REQUEST OF THE GOVERNOR CHAPTER 2 SLA 21 04/30/21

HB 111 DENTAL HYGIENIST ADVANCED PRAC PERMIT SPOHNHOLZ (S) L&C 02/22/22

HB 113 HEALTH INS. ALL-PAYER CLAIMS DATABASE RLS BY REQUEST OF THE GOVERNOR (H) L&C 02/24/21

HB 130 CORP. TAX: REMOVE EXEMPTIONS/CREDITS WOOL (H) RES 03/10/21

HB 181 APPROP: SPECIAL; AMERICAN RESCUE PLAN ACT RLS BY REQUEST OF THE GOVERNOR (H) FIN 04/19/21

HB 186 PROHIBITING PROOF OF COVID-19 VACCINATION RAUSCHER (H) CRA 04/21/21

HB 221 POWER OF GOVERNOR IN EMERGENCY VANCE (H) STA 05/19/21

HB 295 DENTIST SPEC. LICENSE/RADIOLOGIC EQUIP ORTIZ (H) HSS 02/16/22

SB 10 FREE/REDUCED TUITION FOR ESSENTIAL WORKER BEGICH (H) FIN 02/28/22

Confluence Strategies

SB 26 REPEAL CERTIFICATE OF NEED PROGRAM WILSON (S) FIN 02/22/22

SB 41 HEALTH INSURANCE INFO.; INCENTIVE PROGRAM HUGHES (S) L&C 01/25/21

SB 56 EXTENDING COVID 19 DISASTER EMERGENCY RLS BY REQUEST OF THE GOVERNOR (S) FIN 02/12/21

SB 65 LIABILITY CONSULTING HEALTH CARE PROVIDER KIEHL CHAPTER 24 SLA 21 08/16/21

SB 67 NURSING: LICENSURE; MULTISTATE COMPACT RLS BY REQUEST OF THE GOVERNOR (S) HSS 02/03/21

SB 70 OPIOID OVERDOSE DRUGS WILSON CHAPTER 14 SLA 21 06/29/21

SB 93 HEALTH INS. ALL-PAYER CLAIMS DATABASE RLS BY REQUEST OF THE GOVERNOR (S) FIN 04/21/21

SB 106 TAX ON INCOME: O&G S-CORP, P'SHIP WIELECHOWSKI (S) RES 03/10/21

SB 128 APPROP: SPECIAL; AMERICAN RESCUE PLAN ACT RLS BY REQUEST OF THE GOVERNOR (S) FIN 04/19/21

SB 173 DENTIST SPEC. LICENSE/RADIOLOGIC EQUIP WILSON (S) FIN 02/11/22

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Hearing Schedule Next Week:

(S)LABOR & COMMERCE

Mar 28 Monday 1:30 PM — *BELTZ 105 (TSBldg)*

+ = *HB 111* — *DENTAL HYGIENIST ADVANCED PRAC PERMIT*

-- Testimony <Invitation Only> --

+ *Bills Previously Heard/Scheduled*

Streamed live on AKL.tv

(H)FINANCE

Mar 29 Tuesday 1:30 PM — *ADAMS 519*

+ = *HB 265* — *HEALTH CARE SERVICES BY TELEHEALTH*

(H)FINANCE

Mar 31 Thursday 9:00 AM — *ADAMS 519*

+ = *HB 306* — *EXTEND BOARD OF PHARMACY*

Streamed live on AKL.tv

(S)HEALTH & SOCIAL SERVICES

Mar 31 Thursday 1:30 PM — *BUTROVICH 205*

+ = *SB 175* — *HEALTH CARE SERVICES BY TELEHEALTH*

-- Testimony <Invitation Only> --

(H)HEALTH & SOCIAL SERVICES

Confluence Strategies

Mar 31 Thursday 3:00 PM		*DAVIS 106*
+ =	*HB 295*	*DENTIST SPEC. LICENSE/RADIOLOGIC EQUIP*
		-- Invited & Public Testimony --
+		*Bills Previously Heard/Scheduled*

Hearing materials/ Documents of interest:

House Finance Committee FINAL version of HB281 – FY23 Operating Budget
http://www.akleg.gov/basis/get_documents.asp?session=32&docid=91855

03.25.2022	***House Finance Operating Budget Reports***
03.25.2022	***House Finance Supplemental Budget Reports***

HB111- DENTAL HYGIENIST ADVANCED PRAC PERMIT

HB 111 v. I Sponsor Statement 2.10.2022.pdf

HB 111 v. I Sectional Analysis 2.10.2022.pdf

HB 111 Supporting Document - FAQs 2.16.22.pdf

Administration

Governor's Office:
Governor's Press Releases ~

Dunleavy Administration Issues a Proclamation for Special Election Dates

Confluence Strategies

March 23, 2022

Alaska Governor Mike Dunleavy has issued a proclamation declaring a vacancy in the Office of the United States Representative and calling for a special election.

The special primary shall be held on Saturday, June 11, 2022. The special election shall be held on Tuesday, August 16, 2022, to fill the vacancy in the office of the United States Representative.

The proclamation is published online here.

For more information, please contact the Division of Elections by emailing elections@alaska.gov or call (907) 465-4611.

Agencies Announcements~
Press Releases/Reports:

Work begins to restructure the Alaska Department of Health and Social Services

March 21, 2022 ANCHORAGE – Now that Executive Order 121 (EO 121) has become law, the Alaska Department and Health and Social Services (DHSS) will be focused on the ongoing organizational work needed to create two separate departments by the implementation date of July 1, 2022.

Restructuring DHSS will allow for a stronger alignment of missions across divisions and programs within the two departments, and the time and space for each department to work with beneficiaries, providers and partners to improve the system of care.

On July 1, 2022, the two departments will be two separate legal entities.
"This has been a long, deliberate process to get to this point, and I appreciate all of the stakeholders who engaged with us and helped shape this process," said DHSS Commissioner Adam Crum. "I'd like to thank the Legislature for their thoughtful review of the Executive Order. This process has spanned two legislative sessions and the end result is stronger because of the legislative review process."

EO 121 was proposed by Governor Dunleavy at the start of this legislative session under the constitutional authority in Article 3 Section 23, which also grants the legislature a period of 60 days to evaluate executive orders and vote to disprove them in a joint session. Absent legislative action, executive orders become law.

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"This is only the beginning," Crum added. "Over the next few months, we will continue to engage with stakeholders to make sure the transition plan covers what it needs do. Post-implementation we will be conducting regular reviews of the process to ensure Alaskans continue to be served by these smaller, more nimble departments."

EO 121 restructures the state's department with the largest budget and number of employees into two departments aligned by key functions. The restructuring was designed to ensure continuity of services to beneficiaries and timely payments to providers. Services to the public were kept intact so operations could continue uninterrupted.

While both departments serve Alaskans, they have different focus areas and missions:

Department of Family and Community Services (DFCS)
Mission Statement: To provide support, safety and personal well-being for vulnerable Alaskans.
DFCS aligns the facility-based divisions and around the clock community work of the Office of Children's Services. DFCS will focus on providing direct care services to Alaskans.
Includes these divisions:

- *Division of Juvenile Justice*
- *Alaska Psychiatric Institute*
- *Alaska Pioneer Homes*
- *Office of Children's Services*

Department of Health (DOH)
Mission Statement: Promoting the health, well-being and self-sufficiency of Alaskans.
DOH oversight includes program eligibility, public health, and the Medicaid program. DOH's alignment of payment, processes and programs will provide time and space for necessary stakeholder conversations and negotiations for future innovations within Medicaid and Public Health, improving health outcomes for all Alaskans.
Includes these divisions:

- *Division of Public Health*
- *Division of Public Assistance*
- *Division of Behavioral Health*
- *Division of Health Care Services*
- *Division of Senior and Disabilities Services*

Individuals with questions regarding the reorganization may send them via email to dhssreorg@alaska.gov.
For more information, visit reorg.dhss.alaska.gov.

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Major News Articles / Political Items of Interest

Health

Governor announces official split of Alaska health and social services department
The Alaska Department of Health and Social Services will be split into two separate departments in July. Gov. Mike Dunleavy proposed a similar change last year that he withdrew after nonprofit and tribal leaders, as well as legislators, raised concerns.
https://www.ktoo.org/2022/03/21/alaska-splits-department-of-health-and-social-services/

The historic split of Alaska's massive health department is now law. What's next?
Gov. Dunleavy enacted the change by executive order, an action unprecedented in scale

Moderna says its low-dose COVID shots work for kids under 6
Juneau, Alaska (KINY) - Moderna says its COVID-19 vaccine works in babies, toddlers and preschoolers.

The statewide unemployment for Alaska during February was 5 point 4 percent, down from 5 point 6 percent in January.
State Labor Economist Karienne Wiebold says there was growth pretty much across the board in most industries. The leisure and hospitality sector had 2,600 more jobs than last February, but 3,300 fewer than February 2020. The trade, transportation, and utility sector was up by 1,800 jobs over the year and up 200 from 2020. Oil and gas had 7,200 jobs, 700 above last year, but 3,000 below the level in 2020.

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https://www.kinyradio.com/news/news-of-the-north/alaskas-unemployment-rate-falls-in-february/

Politics/Policy Calls

OPINION: There are bigger problems than filling our gas tanks
The Anchorage Daily News recently reported that the average sales price for a house in Anchorage in 2021 was $420,000. Accordingly, anyone who buys, sells, or for that matter, owns a house, would appear to be in pretty good financial shape. And "pretty good," means "could be doing a lot worse." More on that below.
https://www.adn.com/opinions/2022/03/20/opinion-there-are-bigger-problems-than-filling-our-gas-tanks/

State constitutional convention measures stoke partisan fear
JUNEAU — Simmering public anger in Alaska over the Legislature's failure to settle the state's most radioactive issue — how big a check residents should receive from the state's oil wealth fund — is colliding with a once-a-decade opportunity for political activists: The chance for voters to call a convention to amend the state's constitution.
https://www.adn.com/politics/2022/03/20/state-constitutional-convention-measures-stoke-partisan-fear/

Will Palin jump in for congressional race? Maybe.
Former Gov. Sarah Palin said today she would love to be the next congressional representative for Alaska — if asked. Palin, who in 2008 joined the presidential ticket of Sen. John McCain, told Newsmax host Eric Bolling, "If I were asked to serve in the House and take his place I would be humbled and honored … In a heartbeat, I would. We will see how this process goes in filling that seat – it would be an honor."
https://mustreadalaska.com/will-palin-jump-in-for-congressional-race-maybe/

After Don Young's death, Alaska political world braces for sea change and elections marathon
Elections officials are planning a by-mail special primary to fill Young's U.S. House seat. At least one big-name candidate, former U.S. Senate hopeful Al Gross, is getting in the race.

Special election challenges mean special primary will be by mail, special general will be on Aug. 16 primary ballot
Thanks, Ballot Measure 2. The crazy voting system designed by liberal lawyers Scott Kendall and Jahna Lindemuth has created a nightmare for Alaska voters...

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Special election dates announced to fill Alaska's sole seat in US House
Alaska's sole seat in the U.S. House of Representatives is vacant following the death of Rep. Don Young. Under the U.S. Constitution, vacancies in the House of Representatives must be filled by elections
https://www.ktoo.org/2022/03/22/alaska-special-election-to-fill-don-young-house-seat/

Dunleavy bill on Russian 'profiteering' by financial companies is a slapdash campaign stunt
Dunleavy has been complaining about the refusal of Goldman Sachs, JP Morgan Chase and other banks to finance Arctic oil and gas projects for years. He's also been promising that he would do something, but hasn't. Now he wants to go after the banks under false pretenses.
Read More

Emails show former Permanent Fund CEO had extensive political consultations and personal alliance with Sen. von Imhof
A series of emails obtained through a public records request show that former CEO of the Alaska Permanent Fund Angela Rodell had extensive email...

Dunleavy's public meltdown: Fear and Loathing of the coming vote-by-mail election
What Dunleavy did not say at his latest staged press event was that he secretly tried to get the Legislature to do away with the special primary election for the U.S. House race by passing an emergency bill to amend the election ballot measure approved in 2020. Instead Dunleavy tried to belittle a reporter who was just doing his job. The Legislature refused to do away with the special primary election.
Read More

OPINION: The good, the bad and the ugly in Alaska's renewable energy bill
Gov. Mike Dunleavy has introduced a renewable portfolio standard bill to the Alaska Legislature. Renewable portfolio standards require electrical utilities to generate a defined portion of their electricity from renewable sources. As the state director for an environmental nonprofit, I'm cautiously excited, because the bill has some good, but it also has some bad, and a little bit of ugly.
https://www.adn.com/opinions/2022/03/23/opinion-the-good-the-bad-and-the-ugly-in-alaskas-renewable-energy-bill/

Revak to file for Congress to replace Don Young
State Sen. Josh Revak, a Republican legislator from Anchorage, leaked to a leftwing blogger on Wednesday that he is running for the seat left empty by Congressman Don Young, who

passed last week. Revak sees himself as the heir apparent to the position, and he has the support of many D.C. lobbyists who often darkened the congressman's door.
https://mustreadalaska.com/revak-to-file-for-congress-to-replace-don-young/

OPINION: Who was Don Young? There's no single right answer.
Writing about Don Young in the past tense is unsettling. The self-anointed Congressman for All Alaska was such a vivid, verbose actor on the Alaska public stage for more than half a century that, like the four seasons, he seemed part of the natural order.
https://www.adn.com/opinions/2022/03/23/opinion-who-was-don-young-theres-no-single-right-answer/

OPINION: We must protect Alaska's elections from unlimited money and outside special interests
Today, as a result of the *Thompson v. Hebdon* court decision, Alaska has no contribution limits for state and local elections. Without action, individuals and special interests from anywhere in the country can now give unlimited amounts of money directly to political candidates in Alaska. This is despite Alaskans 'strong interest in protecting our state from undue influence and unlimited donations in our elections.
https://www.adn.com/opinions/2022/03/24/opinion-we-must-protect-alaskas-elections-from-unlimited-money-and-outside-special-interests/

Anchorage Democrat Elvi Gray-Jackson ends campaign for Alaska US Senate seat
Gray-Jackson had been the only Democrat who had so far filed to run for the Senate seat held by Republican Lisa Murkowski, who is seeking reelection.

Alaska Supreme Court finds Anchorage state Senate map is 'unconstitutional political gerrymander
The Alaska Supreme Court ruled Friday that a new map of state Senate districts in Anchorage "constituted an unconstitutional political gerrymander violating equal protection under the Alaska Constitution" and must be redrawn before its use in this year's statewide election.
https://www.adn.com/politics/2022/03/25/alaska-supreme-court-finds-anchorage-state-senate-map-is-unconstitutional-political-gerrymandering/

What will happen now to the $630,798 in Don Young's campaign account?

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The next few months will be chaotic and confusing in Alaska as those who aspire to replace the late Rep. Don Young in Washington, D.C. try to raise money and generate publicity for themselves with little time for either activity. They will have weeks to accomplish tasks that require many months or years.
https://www.dermotcole.com/reportingfromalaska/2022/3/25/what-will-happen-now-to-the-630798-in-don-youngs-campaign-account

Jesse Bjorkman files for Senate, raising speculation that Kenai's Sen. Peter Micciche may be out this cycle

A member of the Kenai Borough Assembly has filed for Alaska Senate for Senate Seat D, previously known as Senate Seat O. Jesse Bjorkman, a personal friend to Senate President Peter Micciche of Kenai, has put his name on the list at the Alaska Public Offices Commission and has publicly stated he wants to give Kenai Peninsula voters someone else to vote for other than Tuckerman Babcock, who has already filed for the seat.
https://mustreadalaska.com/jesse-bjorkman-files-for-senate-raising-speculation-that-kenais-sen-peter-micciche-may-be-out-this-cycle/

Array of Alaskans ponder runs for Congress in 'absolute jungle' of elections to replace U.S. Rep. Don Young

One week ago, the race for Alaska's sole seat in Congress was shaping up as a sleepy contest between long-serving incumbent Republican Don Young, conservative challenger Nick Begich III and a Democrat, Chris Constant.
https://www.adn.com/politics/2022/03/26/an-array-of-alaska-politicians-ponder-bids-in-the-absolute-jungle-of-elections-to-replace-us-rep-don-young/

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Jessica Robertson

State Chapter Name: Arizona

PPA's practice or teaching location (city or town): Flagstaff

Key legislative and/or regulatory priorities for state chapter, and current status

SB1074 Dentist Scope of Practice; BOTOX - passed both house and senate, signed by the governor on 3/18, will take effect 90 days from the close of the legislative session

SB1112 Dental Hygienists Scope of Practice - never made it out of committee

HB2698, Insurance; Assignment of Benefits - this was passed last year but delta found a loophole and deemed the legislation passed in 2021 did not apply. This bill fixes that and AZ will be the first state to challenge utilizing the reversal of McCarron to a level playing field. bill has been Passed in House of Reps. and going to Senate

SB1240 dental board; access to records - Amendment - SB1568 health professionals; complaints; investigations. Fixes to dental practice act including clarifying licensing renewals to birthdays. This was brought up due to dentist not submitting dental records to the board upon request and demanding to be paid for submitting the records. This would require dentist to submit required documents to investigate a board complaint without having to pay for those records.

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.

Our state is forming a task force to clarify duties by auxiliary in the dental practice act.

State lobby day 2/16/22

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Dr. Brianna Muñoz

State Chapter Name: Connecticut Society of Pediatric Dentists (CSPD)

PPA's practice or teaching location (city or town): I currently reside in Suffield, CT and work full-time in private practice at CT Pediatric Dentistry, which has office locations in West Hartford, North Windham, and Unionville. I am a guest lecturer at the UConn Health Center in Farmington, CT and have been invited by the Dean of the UConn School of Public Health to work on an oral health advocacy course in the future.

Key legislative and/or regulatory priorities for state chapter, and current status:

- Public Act 21-149: Extend the period in which children can retain dental insurance coverage on their parents' policies to age 26.
  - Passed on July 7, 2021, this policy was a major legislative win for the oral health community. I led this advocacy campaign in 2019 and was honored with the Oral Health Champion Award at the Connecticut Oral Health Initiative (COHI) Annual Meeting. Senator Matt Lesser was also honored at this event for his support of the bill. I have continued to advocate on behalf of this legislation each year by providing oral as well as written testimony and lecturing to pediatric dental residents to further incite support. While the AAPD Public Policy Advocacy Conference focuses on legislative priorities at the federal level, I had the idea to also teach residents about statewide initiatives that would directly impact access to oral health care for Connecticut residents. As an additional component of the 2021 Advocacy Conference, I delivered a presentation about this bill and taught the residents how to write their own testimony. I reviewed these documents and offered constructive feedback. The project culminated in the UConn residents submitting testimony to the Connecticut General Assembly. Several residents reached out to me following this exercise and expressed gratitude for the opportunity to learn about oral health advocacy and to actively participate in the legislative process at the state level.

- H.B. 5037: Increase adult dental reimbursement rates for Medicaid to improve provider participation and subsequently to expand oral health care access.
  - There is currently a supply and demand crisis in the state Connecticut. With the increase in HUSKY eligibility, there are more insured adults now than ever before. However, less providers are accepting Medicaid due to reimbursement rates that are comparatively only 37% of private insurance rates and have remained stagnant since 2008. With the rising cost of supplies, Medicaid providers are losing money when treating this high-risk population. As a result, provider accessibility has diminished

and only two out of three adults enrolled in HUSKY have been found to utilize any type of dental benefits. Based upon the multigenerational approach of public health, parents having a dental home will increase the likelihood of children developing an ongoing relationship with oral health care providers. The Governor is aware of this issue and has included a 25% increase to adult Medicaid reimbursement rates as part of the proposed state budget. A further increase is recommended with the goal of achieving parity with pediatric rates. In support of increasing Medicaid provider reimbursement, I submitted written testimony to the Appropriations Committee in regard to the state budget. I have attached my testimony to this report.

- State Plan Amendment: Remove the HUSKY age restriction for silver diamine fluoride (SDF) coverage.
    - Currently, only children under the age of 6 or those with special health care needs are eligible for SDF coverage. In 2020, I contacted the Director of Integrated Care for DSS about this topic multiple times under the framework of presenting SDF as a non-aerosolizing procedure. While there was no policy change, it was the first step in a very important dialogue. On April 1, 2021, I had a meeting with the Dental Director of DSS about this issue. Since she had a particular interest in addressing oral health disparities associated with long-term care facilities, the clinical efficacy of SDF was extrapolated for use with elderly adults who are unable to receive traditional restorative treatment. Since then, I have shared policy recommendations with her and have served as a subject matter expert as we continue to fight for removing the age restriction on SDF coverage. A State Plan Amendment (SPA) has been submitted and approval is anticipated to be granted in the upcoming months. The Dental Director provided me with a verbal promise for May 2022.

- Unbundle FQHC dental financing.
    - As it currently stands, FQHC reimbursement is based upon payment per visit on an encounter rate. Quite frequently, separate visits are scheduled unnecessarily to maximize revenue. For example, prophies are being scheduled on separate days than periodic exams. DSS is working to close this billing loophole.

- Expand HUSKY for immigrants to include medical and dental coverage.

- Extend executive orders for telehealth services to be reimbursed beyond the COVID-19 pandemic.

- Dental therapy was authorized during the 2019 legislative session for dental hygienists seeking dual training with an additional 18m of educational requirements.
    - Under this policy, dental therapists can practice under the supervision of a dentist only in public health settings. With the goal of developing a more culturally competent workforce drawn directly from underserved communities, advocacy efforts have sought to modify the practice structure by creating a direct educational path and eliminating the redundancy as well as the unnecessary cost of dual-training.

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.

- Connecticut Oral Health Initiative (COHI)
  - o 2019-Present
  - o In 2022, I accepted the position of President and currently serve on the Public Policy Committee. The Board of Directors is comprised of an interdisciplinary group of stakeholders from a wide array of community sectors. I am responsible for leading board meetings, engaging stakeholders, and advocating for various legislative issues.
  - o COHI was founded in 2000-2001 as an outgrowth of both a Connecticut State Dental Association (CSDA) Committee and as a result of the Surgeon-General's issuance of the first-ever report on Oral Health in America. This organization has obtained 501(c)3 designation and advocates to strengthen and safeguard access to quality, affordable oral health services for all Connecticut residents.

- Connecticut Dental Sealant Advisory (CDSA)
  - o 2019-Present
  - o I was nominated by the CSDA to serve on this committee.
  - o The Connecticut Department of Public Health (DPH) Office of Oral Health has been convening the CDSA under the Centers for Disease Control and Prevention DP18-1810 cooperative agreement. CDSA is a statewide inter-professional advisory group comprised of representatives from public and private organizations whose mission is to improve child health and oral health outcomes in Connecticut's elementary and middle school-aged children.

- Medicaid/CHIP Oral Health Affinity Group
  - o 2020-Present
  - o I currently serve on Team Connecticut with an interdisciplinary group of stakeholders from different sectors, including the CT Public Policy Advocate of the American Academy of Pediatrics (AAP), the DSS Health Program Liaison, and the Director of External Relations of the CT Dental Health Partnership. I am the only dentist involved on this state team and have had meetings with the CMS Dental Officer, Dr. Natalia Chalmers.
  - o The Advancing Prevention and Reducing Childhood Caries in Medicaid and CHIP Affinity Group (oral health affinity group, or OH AG) has engaged 14 state teams across the country. To facilitate collaborative learning, staff from the Centers for Medicare & Medicaid Services, quality improvement (QI) advisors, and subject matter experts (SME's) have been working with state teams to achieve the goal of improving the oral health among beneficiaries of Medicaid and the Children's Health Insurance Program (CHIP).

Testimony before the Appropriations Committee

H.B. 5037 An Act Adjusting the State Budget for the Biennium Ending June 30, 2023 - Dental Reimbursement Rates

February 23, 2022

Dr. Brianna Muñoz, DMD, MPH
Suffield, CT
AAPD Public Policy Advocate

Dear Senators Kushner, Cicarella, Osten, Hartley, and Miner, Representatives Abercrombie, Betts, Walker, Dathan, Nolan, and France, and distinguished members of the Appropriations Committee,

My name is Dr. Brianna Muñoz, and I am a board-certified pediatric dentist. On behalf of the American Academy of Pediatric Dentistry (AAPD), I fulfill the role of public policy advocate for the state of Connecticut and serve on the Pediatric Dental Medicaid & CHIP Advisory Committee. As a registered voter in the Town of Suffield, it is my personal and professional goal to promote the oral health of all Connecticut residents irrespective race, ethnicity, or socioeconomic status.

In advancing this aim, I am testifying in support of increasing the adult dental reimbursement rates to achieve parity with the pediatric rates.

With the expansion of HUSKY eligibility, there are more patients enrolled in Medicaid now than ever before. In fact, there are about 40 thousand more. While expanding HUSKY coverage was the first step in improving access to care by reducing the gap of uninsured adults, this robust increase in the number of Medicaid recipients must be met with a subsequent increase in the number of Medicaid providers. Unfortunately, this has not been the case and there is a stark supply and demand crisis in Connecticut. Only two out of three adults enrolled in HUSKY utilize their dental benefits because they cannot access a provider.[1]

The shortage of Medicaid providers has been directly attributed to the low reimbursement rates. While the 25% proposed increase is greatly appreciated, there is concern that this will fall short from inciting increased provider participation. The reimbursement rates have remained stagnant since 2008, so a minimal increase certainly would not be enough to alleviate the hardships brought about by these unprecedented times. As a result of the COVID-19 pandemic, the rising cost to run a small business has been astronomical and debilitating to many dentists. In addition to the mandated closure of dental offices for several months, returning to work in light of the new CDC recommendations has inherently changed the practice of dentistry. To minimize the transmission of COVID-19 in a high risk environment such

as a dental office, dentists have limited aerosol-generating procedures, increased personal protective equipment (PPE) for staff, and decreased the number of patients treated per day to facilitate social distancing as well as appropriate disinfection. PPE is essential to ensure a safe working environment, and this cost alone has increased to $16 per patient for each encounter. Masks and gloves have doubled and tripled in cost, respectively.[2] For oral health providers, the reimbursement rates have been so low and the supply costs so high that treating adults on Medicaid has equated to losing money. Yet, there is a distinct disparity between adult and pediatric reimbursement.

With a separate fee schedule, the Medicaid reimbursement rates for serving adult patients is significantly lower than for pediatric patients. Consequently, more pediatric dentists accept Medicaid.[3] It is estimated that 70% of pediatric dentists treat children on Medicaid, the Children's Health Insurance Program (CHIP), or both. This is more than any other dental specialty and comprises about one third of the patient population.[4] Until now, there has been only one endodontist in the entire state who accepts Medicaid. The proposed increase in the endodontic rate to match the pediatric rate is very much appreciated and is anticipated to make a profound impact in the accessibility of care.

For these reasons, I urge you to increase the adult dental reimbursement rates for parity with the pediatric rates. Please help providers better serve this high-risk population so that adult Medicaid patients can receive the comprehensive dental care that they so desperately need. Thank you for your time and for supporting the oral health of families in Connecticut.

Dr. Brianna Muñoz, DMD, MPH
Public Policy Advocate
American Academy of Pediatric Dentistry
E-mail: brmunoz19@gmail.edu

References:

(1) Medical Assistance Program Oversight Council Presentation by the Connecticut Dental Health Partnership.
(2) American Dental Association's Health Policy Institute. https://www.ada.org/publications/ada-news/2021/november/dentists-say-they-need-more-staff-to-see-same-number-of-patients-compared-to-pre-pandemic.
(3) Connecticut Department of Social Services Provider Fee Schedules. https://www.ctdssmap.com/CTPortal/Provider/Provider-Fee-Schedule-Download.
(4) American Academy of Pediatric Dentistry (2021). HRSA Title VII Pediatric Dentistry Appropriations and DFLRP Tax Relief [Fact Sheet]. https://www.aapd.org/advocacy/legislative-and-regulatory-issues/legislative-and-regulatory-fact-sheets/.

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Matt Geneser

State Chapter Name: Iowa

PPA's practice or teaching location (city or town)

University of Iowa College of Dentistry and Dental Clinics
Department of Pediatric Dentistry
Iowa City, IA

Key legislative and/or regulatory priorities for state chapter, and current status

Dental Medicaid program transitioned from FFS to MCO (two of them) – took place on July 1, 2021. Has been a very rough transition. Multiple providers stopped seeing patients with XIX, some altogether and some only enrolled with one MCO. Has resulted in a large increase in patients at safety net clinics/college of dentistry.

GA pre-auth barriers were set up by one medical MCO in spring 2021 – Amerigroup surprised everyone by beginning to deny many GA cases on the grounds that medical necessity did not extend to healthy children under age 5 unable to cooperate in the dental setting. They also required a licensed physician to attest to the necessity of GA. After numerous conference calls/zoom sessions with the IDA, IME, and the director of the Medicaid program in Iowa, Amerigroup ultimately agreed to drop these barriers in October 2021, but since there has been no change in laws or dental code, it's likely just a matter of time before the issue re-surfaces.

Bill introduced to increase Medicaid reimbursement – worked jointly with the IDA and the top legislative priority (really the only priority of the session) was to get Medicaid reimbursement increased for the first time in over 20 years. This bill failed and no changes to the Medicaid budget were made. Very unfortunate outcome despite having the full force of the IDA's lobby arm behind us and two dentists in the Iowa House.

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.

The IDA and our state association has worked very closely this past year dealing with the issues above. Mike Stufflebeam, a pediatric dentist and past president of our state group, sits on the board and has been instrumental in dealing with these issues. We have the support of IDA and the ear of the Medicaid director, but it's going to take a lot more to see positive changes in our Medicaid program, I fear.

Reporting Form for AAPD

State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Stephen C Mills, DDS

State Chapter Name: Maine

PPA's practice or teaching location (city or town): Scarborough, ME, Waterville, ME, Augusta ME.

Key legislative and/or regulatory priorities for state chapter, and current status

LD1501. This is a legislative initiative which seeks to expand the school oral health program for the State of Maine and to reintroduce a state "Oral Health Coordinator". This will greatly expand the ability of children to access dental care and could potentially lead to the development of leather in person or virtual dental homes for many children. It has been 7-8 years since we had a state designated oral health coordinator and this has led to a decreased presence in schools as w3ll as a reduction in the ability too generate data dealing with the oral Health of our state. It has been universally applauded but the actual funding for it has been a problem which we are trying to address currently.

Teledentistry. The legislature haws approved Teledentistry as a legitimate feature of the oral health for people in our State. It is now in the hands of the Board of Dental Practice (Examiners) to formalize definitions and requirements in the State. This is ongoing with a stakeholders meeting on March 25.

Virtual Dental Home Initiative. Largely oversee by an excellent non Profit organization, Maine's Children's Oral Health Network, there has been a significant program of, to date, eight separate groups which are using community settings to connect children in HeadStart Programs with dental care. The outreach is manned by a hygienist for data collection, preventive treatment , and then active treatment if appropriate. The Data is sent electronically using asynchronous teledentistry to an actual dentist who then completes the "examination" and is responsible for any treatment needs which are discovered. This dentist also has committed to be the point of contact for any emergency needs which arise. This is truly a comprehensive setting for children who otherwise cannot access care. Through the efforts of Congresswoman Chellie Pingree, Senator Susan Collins, and Senator Angus King, this initiative has been awarded a federally guaranteed earmark of $650.000 which will truly fund the entire start up of the [project and make it long enough until it can become self sustaining.

Operating Room Access. This has become an issue but I doubt if a change to the Medicaid rules will change this problem to a significant degree. The hospitals that are

dental care active all try hard to fit us in but priorities have made this more difficult. The biggest local issue is in the Greater Portland Area which has the highest number of pediatric dentists utilizing one main hospital. Outside of Portland the problem does not seem as great. This lack of easy access is one reason, though not at all the only one, that in office IV sedation has become dramatically increased over the last ten years. The main problem is that Medicaid access through private offices is still difficult for IV sedation services and that population (the one which most needs OR care it seems) is still potentially underserved.

Adult Dental Benefit. Maine has expanded it s adult dental benefit and this will be a benefit to children as it has been shown that if parents receive dental care, they are much more likely to include their children to dental interactions.

Maine Branch of the American Academy of Pediatrics. The MeAAP is having their annual gathering in early May and one significant feature will be a focus on oral health and panel presentation and discussion on Oral Health.. Stephen Mills, Pediatric Dentist, will be moderating the presentation.

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.

The Maine Society of Pediatric Dentistry has not been active yet in any Statewide initiatives. In the past ten years the number of Pediatric Dentists in the State has grown significantly and hopefully we can become more organized and actually be a factor in this State but up until now, we a very loose organization and have not met as a Group in several years. Several of our pediatric dental members are active individually both with the Maine Dental Association, the Board of Dental Practice and the American Board of Pediatric Dentistry but these are individual activities. They are however, in a small state like ours (in terms of population) very important.

The MDA has partnered with the Children’s Oral Health Network on issues like the Adult Dental Benefit and LD 1501. They have a new executive director and time will show how this will increase cooperation

Reporting Form for AAPD
State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Dr. Shari C. Kohn

State Chapter Name: Maryland Academy of Pediatric Dentistry

PPA's practice or teaching location (city or town): Hunt Valley, MD

Key legislative and/or regulatory priorities for state chapter and current status

Expanded Function Dental Auxiliaries

SB 714/HB 968. Sponsor: Senator Ed Reilly/Delegate Nic Kipke.

This bill prescribes a methodology for regulating dental assistants based on certification for various functions, including placing of dental sealants, application of silver diamine fluoride, coronal polishing under specific guidelines and monitoring nitrous oxide.

UPDATE - EFDA Bill HB 968 passed 130-0 in house and now crosses over to Senate. Looking good! EFDA's are not to do the "prophys". This is limited to coronal polishing.

The House Health and Government Operations (HGO) Committee cleared our Expanded Functions Dental Assistants bill (HB 968) after the Health Occupations and Long-Term Care Subcommittee passed the bill with amendments that we had agreed to through numerous conversations with dental hygienists, the Dental Assisting National Board, and anesthesiologists. We reluctantly agreed to allow intraoral photography. However, we required that supervision be by a Maryland dentist who reviews the photography and authorizes the treatment plan.

Adult Dental Medicaid

SB 150/HB 6. Sponsor: Senator Malcolm Augustine/Delegate Bonnie Cullison.

This bill requires that the state, subject to budgetary constraints, provide comprehensive dental care for adults whose annual household income is at or below 133 percent of the federal poverty level.

UPDATE - Adult Dental Medicaid HB 6 passed 114-14. Passage of this bill in no way effects the current Maryland Health Smiles program for children. Now their parents can get some help!

Both the Senate Finance Committee and the House HGO Public Health Subcommittee cleared a version of the Adult Dental Medicaid bill (HB 6). The bill is smaller in scope by taking out comprehensive coverage and instead providing diagnostic, preventive, restorative and periodontal care to those at or below 133% of poverty. Coverage would begin Jan. 1, 2023, subject to the availability of funds, but this is a great step forward in our efforts to provide quality care to all Marylanders.

The Governor is expected to sign this if it passes both chambers.

Dental Hygiene Consultations
SB 306/HB 219. Sponsor: Senator Clarence Lam/Delegate Ariana Kelley.
This bill seeks to add to the list of health care practitioners with whom a dental hygienist may consult, and where they may provide certain treatment, to a dental patient to include a patient's registered nurse practitioner, certified nurse midwife, or licensed certified midwife. MSDA amendments make clear that the dental hygienist is to consult with the supervising dentist and with the treating physician, nurse practitioner, or midwife when there is a change in, or concerns about, a patient's medical history or medical condition.
UPDATE – Passed both chambers – going to the Governor where he is expected to sign it.

State Board of Dental Examiners, Membership, Training, Disciplinary Processes
SB 611/HB 969. Sponsor: Senator Pam Beidle/Delegate Ariana Kelly.
The bill can be broken into four sections. The nominations provisions under the bill make the process confusing, restricts who may be a member of the Board, undermines the Board's authority, and may violate HIPPA. The second section regarding training, is important, but in reality, the costs associated with the bill's proposal are unnecessary. Currently, the Board does receive training under the auspices of the Maryland Attorney General's Office. The third section requiring the Board to make timely decisions, is also good, and important, but there must be some allowances for unforeseen circumstance such as pandemics or delays out of their hands. The final section on summary suspensions, is also needed, but the provisions here would hinder, if not prevent, the Board's ability to suspend incompetent practitioners, stop unsanitary or infection prone practices, or take action for prescriptive and opioid abuses in an expeditious and timely manner. While agreeing with the premises for several sections of the bill, it must be heavily amended for MSDA support.
UPDATE - MSBDE Bill HB 969 passed 131-0 with our amendment to keep the board nominating system the same. We may ask for additional amendments in the Senate on board training and not to let bad actors off Scott free for delaying judicial proceedings in ways that are out of the boards control.

The HGO Committee also passed the State Board of Dental Examiners, Membership, Training, Disciplinary Processes (HB 969) in the same fashion as passed by the Senate Finance Committee. This means that the changes to the nomination process and composition of the Board were removed, but the rest of the bill on training, timeliness of decisions, and summary suspensions all remain the same.

COVID
Bills are plentiful regarding COVID in regards to workforce issues, licensure and liability. For example: a bill has been introduced that say first responders, public safety employees, and health care workers are presumed to have an occupational disease that is compensable under workers' compensation law after a positive test or diagnosis for COVID-19; assuming the employee contracted COVID-19 in the office place.

Joint or coordinated efforts with state dental association, such as dental lobby day at the state capitol, legislative testimony, regulatory efforts, etc.

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: John H. Deppen

State Chapter Name: Michigan (MAPD)

PPA's practice or teaching location (city or town): Augusta, MI (Kalamazoo)

Key legislative and/or regulatory priorities for state chapter, and current status

1. Michigan 2022-23 state budget (see attachment) – In committee*
2. Public Act 261-Dental Oral Health Assessment (Pre-K or Grade 1) – Signed into Law on December 29, 2020 (see attachment 2)
3. MDA monthly Zoom calls (Bill Sullivan, J.D., April Stopczynski)
4. Spectrum Hospital monthly Zoom call (Dr. Dennenberg)
5. MAPD Board reports
6. Monitoring MOHC-MHA-MiCDS
7. Numerous communications with Southwestern Michigan legislators re: MDHHS Facility fees, anesthesia fees.
8. 2022 AAPD Pediatric Oral Health Advocacy Conference

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.

*MDA and MDHHS have been in negotiations for months but inexplicably, MAPD was not notified of House/Senate Appropriations Committee meetings and was not allowed to give testimony in person. Our president, Dr. Ramaswarmi, submitted a one-page letter at Senate meeting with only two days' notice. When I questioned MDA strategy, we were told that MDA was going to handle it.

STATE BUDGET

Michigan 2022-23 State Budget Report

In February, Gov. Gretchen Whitmer announced her executive budget for the upcoming budget cycle. The MDA reported on this proposal, which was very favorable to dentistry, in a Feb. 11 e-alert as well as in the March *Journal*.

Every year, the governor's proposal begins the budget cycle, which culminates in the appropriation of billions of dollars to fund our state government and the many programs that serve Michigan residents. The budget cycle is a legislative process that requires months of committee hearings, public testimony, and negotiation before the state House and Senate pass a bill for the governor to sign. The MDA actively participates in this process by educating legislators about dental issues and testifying in the Legislature to advocate for the MDA's budget priorities.

Whitmer

The MDA's budget priorities include new funding for the Healthy Michigan Plan, Adult Medicaid Fee-for-Service, and addressing the backlog of Medicaid patients who are unable to receive dental care because of inadequate facilities and anesthesia reimbursements. Additionally, the MDA's Michigan Donated Dental Services (DDS) program is funded by a grant that allows the MDA to employ full-time case coordinators and connect eligible patients with participating dentists. The MDA's advocacy has ensured that the DDS program has continued to be funded, which has resulted in more than $25 million in care being delivered by MDA dentists through the program. Finally, the MDA has advocated for continued funding of the Healthy Kids Dental plan.

The governor's executive budget touches on all of the MDA's budget priorities and has opened the door for members like you to play an important role in our advocacy efforts. Take a look at the updates below to make sure you know where dentistry stands as we take on these challenges.

Dental Medicaid reform

The cornerstone of the governor's proposal for investment in health care is a $243.3 million investment ($69.8 million from the state general fund) that would consolidate the Healthy Kids Dental program, Healthy Michigan Dental program, and Adult Medicaid Fee-for-Service into a single program established directly with dental health plans. The remaining investment is made with federal funds. This investment would be in addition to the ongoing funding that is in place for these programs. The proposal seeks to use the Healthy Kids Dental program as a model to improve reimbursements, while providing patients a robust network of providers from which to choose.

The shortcomings of the existing Healthy Michigan Dental program and Adult Medicaid Fee-for-Service are no secret. The MDA was pleased to see that addressing this issue is a priority for the governor, and we will be working with legislators to ensure the input of dentists is heard through the process.

Hospital access and general anesthesia

The governor's executive budget proposes a $4.3 million investment ($1.2 million from the state general fund) to increase the Medicaid reimbursement for outpatient hospital and ambulatory surgical center facility fees. The remaining investment is made with federal funds. The recognition of this issue in the governor's proposal is an important step in finding a solution to providing care to the 10,000 patients, primarily young children, individuals with disabilities, and the elderly, who have been unable to receive treatment due to the level of care they require. This issue was apparent before COVID-19 and has been exacerbated by the strains placed on hospitals over the last two years.

The MDA's position is that the solution to this issue also requires an investment in the fee for the anesthesiologist for these patients. Additionally, it is imperative that rates be increased to a level that will ensure hospitals and anesthesiologists are not providing services at a financial loss. The MDA will continue working closely with the governor and legislators to find a solution that will address the problem as it exists today and avoid its recurrence in the future.

Michigan Donated Dental Services (DDS)

The governor's executive budget maintains the $150,000 grant that funds the Donated Dental Services program. The MDA will be seeking an additional $50,000 to bring the grant to a total of $200,000. This increase will be used to fully cover anticipated operating expenses and expand awareness of the program among dentists and prospective patients.

Compiled by MDA legislative staff. Questions? Contact Neema Katibai, manager of government and insurance affairs, at nkatibai@michigandental.org. Sign up for MDA Legislative Text Alerts by texting MDA to 52886.

Katibai

MDA-Supported State Oral Screening Bill Becomes Law

On Dec. 29, 2020, Michigan Gov. Gretchen Whitmer signed Public Act 261 of 2020 into law. The Michigan Dental Association and other advocates helped promote the passage of this law, which was created to ensure that kindergarten or first grade students entering school in Michigan have a dental oral health assessment prior to enrollment. The new dental oral health assessment program will be managed by the Michigan Department of Health and Human Services and is in the initial stages of program development.

Although the program is still being developed, dentists and dental hygienists in Michigan will likely be approached by parents and guardians of new students to complete "Section V—Dental Exam" or "Assessment Recommendations" (see below) on the MDHHS Health Appraisal form. This form is the document that is completed by a variety of health professionals at the time of school enrollment to ensure the school can work with the parent/guardian to meet the physical, intellectual, and emotional needs of the child.

Following are answers to some commonly asked questions pertaining to this new school requirement.

Why was Public Act 261 signed into law?

Tooth decay is a significant public health problem in Michigan. More than one in three Michigan Head Start children (35%) have already experienced tooth decay, and almost one out of four Head Start children (22%) in Michigan have untreated tooth decay.[1] Students in Michigan need healthy teeth and to be pain-free to ensure they can achieve their highest individual learning potential while in school.

Are other screenings completed for students?

Yes. Michigan law also requires that students are also screened for hearing and vision to support their individual learning potential, as these are also linked to overall health.

Are the dental exam or assessments required for each student enrolling in school?

No, the law states that this is a recommendation, and therefore Section V of the MDHHS Health Appraisal document is clearly identified as optional.

What will happen with the data collected on the MDHHS Health Appraisal form, and how will this help students in Michigan?

The law states that it is a requirement for school administrators to submit a summary of any dental reports to the MDHHS on a form provided by the department. In Public Act 87 of 21, Section 620, funds are allocated for a dental oral assessment database. The database will help implement the dental oral assessment program. Once this database is implemented, then the expectation is that dental offices, local health departments, and other dental programs completing an oral health assessment will enter the findings from the dental exam or assessment portion of the school health appraisal form into the database. The MDHHS will provide more information, including training, as the database is developed and implemented.

How will I get the MDHHS Health Appraisal form?

It is likely that the parent or guardian will bring it to your office to have you complete the form. They will take it back with them, as it is their responsibility to submit the form to the school in which they are enrolling.

Who can complete the MDHHS Health Appraisal form?

Under the law, any dentist, Registered Dental Hygienist, or dental therapist licensed in Michigan can complete the form. *(Continued)*

SECTION V — DENTAL EXAM OR ASSESSMENT RECOMMENDATIONS (OPTIONAL)

Child's Name	Has received ☐ Dental Exam	☐ Dental Assessment
Findings and Recommendation (Check all that apply)		
☐ No Urgent	☐ Routine Care Needed	☐ Treated Decay
☐ Restorative/Urgent Needs for Dental Care	☐ Untreated Decay	☐ Further Referral for Specialist
Signature		Date
Check One		
☐ Dentist	☐ Dental Therapist	☐ Dental Hygienist

New form — Sample of Section V dental exam box.

#8

AAPD WASHINGTON DC POHAC REPORT
Zoom calls

Tuesday March 15 2:30 pm
Senator Gary Peters (D-MI)= Kaitlin_Johnstone@peters.senate.gov 202-224-6221

Tuesday March 15 2:00 pm
Senator Debbie Stabenow (D-MI) Sarah_Jamgotch@stabenow.senate.gov 202-244-4822
Alex_Graf@stabenow.senate.gov

Monday March 14 10:00 am
Rep. Brenda Lawrence (D-MI-14) Zachary.Wever@mail.house.gov 947-517-2431

Monday March 14 2:00 pm
Rep. John R. Moolenaar (R-Mi-4) Edwardkim@mail.house.gov 202-225-4071

Tuesday March 17 3:00 PM
Rep Debbie Dingell (D-MI-12) KAITLIN JOHNSTONE@MAIL.HOUSE.GOV 202-225-4071

Monday March 14 Noon
Rep. Fred Upton (R-MI-6) Mark.Ratner@mail.house.gov 202-225-3761

Monday March 14 10:30 am
Rep Dan Kildee (D-MI-5) Maggie.Herman@mail.house.gov 202-308-3063

MAPD

CC: Dr. James Stenger
Dr. Jordan Nosis
Dr. Dina Tanbakuchi
MS Lynn Aronoff
MS. MARGARET BJERKLIE (AAPD)

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Elise Sarvas

State Chapter Name: Minnesota

PPA's practice or teaching location (city or town): Minneapolis, MN

Key legislative and/or regulatory priorities for state chapter, and current status

- AAPD Priorities:
  - Title VII Funding
  - Faculty Loan Repayment Tax-Exemption
  - Ensuring Lasting Smiles Act
  - OR accessibility
    - Emailed survey to all Minnesota pediatric dentists to assess OR access. Currently most are not seeing issues, but appreciated being aware of potential changes.
- Minnesota Priorities
  - Increase in Medicaid reimbursement went into effect January 1, 2022. As part of the increase, efforts will be made to measure impact (i.e. increase in utilization) after 2 years.
  - This is currently not a budget year (although the state is sitting on an ~8 billion dollar surplus!!), so few issues can be brought forth.

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.

- Federal
  - We have virtual visits with 5 offices and 4 in person visits during Public Policy Advocacy Week (MN-1 office is currently vacant due to the death of Rep. Jim Hagedorn in February). Residents from the University of Minnesota (5) and Hennepin County Medical Center (2) participated along with two faculty members (Drs. Andrea Leyland and Elise Sarvas).
  - All members of the Minnesota House and Senate delegations have signed on to the Ensuring Lasting Smiles Act
- State
  - As this is not a budget year, there are no priorities currently in front of the Minnesota legislature.

Reporting Form for AAPD
State Public Policy Advocates

2022 Annual Report to AAPD Membership

PPA Name: Neva Penton Eklund, DMD

State Chapter Name: Mississippi Academy of Pediatric Dentistry

PPA's practice or teaching location (city or town): Mississippi Band of Choctaw Indians; Choctaw Health Center Dental Dept; Choctaw, MS

Key state legislative and/or regulatory issues worked on during the past year / Specific outcomes of note

Sedation/Anesthesia Regulation #30 Rewrite/Safety Advocacy with MS State Board of Dental Examiners (continued)

-Regulation rewritten, submitted and approved/codified; application transition for licensees now complete in this annual cycle

Expanded Scope of Practice for Dental Hygienists in MS (General Supervision/Local Anesthetic Admin) Regulation #13 with MSBDE

-MAPD wrote a position statement that affirmed our standard of comprehensive care with appropriately delegated duties for dental assistants, expanded function/duty dental assistants and hygienists following comprehensive examination and treatment planning and assessment within the concept of the dental home directed by the community or practice appropriately trained dentist. MAPD took a non-opposed/neutral stance on the proposed new regulation. This regulation has now been sent to the Governor's oversight committee but has not yet been placed on agenda for discussion. MAPD and our lobby firm perceive that this may be a legislative vs. regulatory issue and we will monitor for progress through the current process or next steps.

Continued Advocacy Re: Access To ASC/Hospitals for Pediatric Dentists and Reimbursements for Providers/Hospitals/ Anesthesia Providers

-Accountability meetings held based on legislation from last session between MS pediatric dentists and the MS DOM/Medicaid managed care companies re: concerns related to surgical cases prior approvals/denials as well as requests for peer to peer pre- (and post-) treatment evaluation vs current routine non-pediatric dentist consultants (including pediatricians, neonatologists, general dentists, and nurses)

Continued Advocacy for Uniform and Seamless Reimbursement Fee Schedules and Mandatory Approvals/Prior Approvals/Denial Systems as Well as Uniform Credentialing and Timely Response Mandates for All Division of Medicaid Payers (Including MCO Corporate Dental Payers)

- Accountability meetings held based on legislation from last session (mandatory uniform credentialing, standardized timely response re: claims) between MS pediatric dentists and the MS DOM/Medicaid managed care companies and KEY Committee

Chairmen re: increasing specific reimbursements of most common CDT coded procedures and making attempts to align all managed care plans to common periodicity schedules, specifications/limitations, limitations/allowances using Medicaid FFS as standard.
-Goal for MAPD is to fully participate in the MS DOM's annual review of CDT codes/reimbursements providing best practices/standards of care and suggestions for change to the published schedules.

-**LEGISLATIVE VICTORY** March 2022 successful inclusion in Medicaid Technical Amendment of increased fees annually for CDT restorative dental codes in addition to last year's increased fees for diagnostic and preventive codes with guaranteed increases in following fiscal years.

Communication Via Member Listserve Re: Advocacy and Government/Practice Updates; Allows Our Lobbyist/Government Relations Team Constant Input/Support and Demonstrates Value of Lobbying at Local, State and National Levels on Behalf of Practitioners and Patients (Safety/AAPD Standards)

Continued Alliance/Partnership with MS AAP (Pediatricians) on Behalf Of Safety/Child Health Advocacy)

Biggest challenges

Continuing Efforts to Establish MAPD as the "Leading Authority for Pediatric Oral Health and Safety" in the State
-Traditional state dental organizations/associations are becoming more accepting of our state organization (MAPD) and even deferential with regard to children's dental concerns as are KEY legislators/governmental agency leaders. This can be attributed to now years of relationship building via our lobbying firm, Capitol Resources, LLC for the best outcomes for our patients and our profession/specialty.

Any joint efforts with state dental association (including dental lobby day at state capitol)

We are in constant contact with the leaders of the MS dental association and our MAPD president serves on their board of trustees; our MAPD immediate past president serves as the MDA District I president. We currently have several MAPD members serving in leadership in the state dental association districts and we are always advocating/supporting community pediatric dentist representation within MDA district societies as well as leadership/participation within MDA committees especially those that affect our patient population and practices i.e. governmental affairs, insurance benefits, Medicaid committees; we meet as a state specialty organization at the annual MS dental Association meeting; we advocate alongside the MDA for legislative agenda items related to Medicaid and healthcare/safety for children.

We continue to support and advocate for representation of pediatric dentistry within the state dental board (appointed by the governor); additionally, we are championing some of our leaders for appointment to oversight/input committees appointed by the governor including the medical/Medicaid advisory panel. These committees have traditionally been led by or generally involved physicians, nurses, and general dentists

even though pediatric dentists are one of the highest participating providers for all government/publicly funded 3rd party payer programs as well as private/corporate dental health insurance plans.

We have held MAPD lobby day at the state capitol for four consecutive year in partnership with Capitol Resources. This year two of our members met directly with the key state legislative committee chairs and we feel this was instrumental in them adding the additional fee/reimbursement increases to Medicaid technical amendment this year.

MAPD contributes to our government relations team's (Capitol Resources, LLC) PAC fund; MAPD participates in fundraisers and meet/greets, town halls, etc., in addition to financially supporting the campaigns of most all of the state leaders (i.e. governor, lt. gov, secretary of state, attorney general, health/public health/Medicaid committee chairs and key leaders in state government

Plans for 2021-22

We will continue all activities above and of course work closely with the MSBDE (dental board) and MSDH (health department) to ensure our members are supported in their profession as they provide essential care for children and families.

We will continue to hold our annual meeting at SSPD in January, which is the meeting with the highest concentration of MS pediatric dentists in attendance. Each year MAPD officer elections are held, bylaws changes or questions are discussed and the advocacy and working agenda for the year are finalized and provided to all members.

MAJOR GOALS/PROJECTS INCLUDE:

We continue to advocate for more specific regulatory guidance with MSBDE related to specialty advertising, specialty licensure for all specialists (12 ADA specialties), "truth in advertising" regulation or at the least we request a board determination to ensure the public is made aware of the specialties' unique training and concerns.

We continue to advocate for access to ASCs/hospital operating-surgical suites for pediatric dentists as specialists of highest value for child oral healthcare.

We continue to advocate for streamlined and understandable billing/reimbursement for hospitals/ASCs and anesthesia providers (MD, CRNA, DA) including "universally acceptable" facility fee that makes our procedures/cases attractive for acceptance/provision within the highest level safety facility necessary.

We continue to advocate for the concept of a comprehensive dental home. MAPD feels strongly that the dental home is not replaced by nor in competition with a child's school healthcare system that may include mobile/portable school healthcare systems for oral examinations/screenings/education.

MAPD advocates for increased health/oral health interventions with children and families but strongly advocates that the comprehensive family oriented relationship is required for best outcomes and a child's future health. The dental home relationship is

built and sustained with families by the family's community provider of choice especially community pediatric dentists

We continue to advocate for appropriate/fair and regionally acceptable reimbursement for primary prevention procedures as well as restorative/surgical intervention procedures. This would additionally require adding coverage to previously "no fee" minimally invasive treatment options, e.g. SDF/Icon/ART/ITR/protective restorations.

MAPD wants to ensure appropriately reimbursed care versus reimbursements that may lend themselves to overuse/abuse of these procedures outside of a dental home relationship

Overall goal: ensuring that we are the leaders in advocacy for pediatric and compromised dental patient oral healthcare and safety and to provide oversight where necessary to prevent abandonment of patients and/or overtreatment of vulnerable populations including Medicaid beneficiaries, public school children of all payer groups, special needs populations; ensuring that our members are available and provide the highest level of specialty and primary care as well as safety for Mississippi's pediatric dental patients and their families .

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Aaron Bumann

State Chapter Name: Missouri

PPA's practice or teaching location (city or town): Liberty, Missouri

Key legislative and/or regulatory priorities for state chapter, and current status

We have been working hard this year on Medicaid reimbursement. We have built a successful coalition that has been able to make an impact! We have been having weekly meetings since before Thanksgiving 2021 with our coalition and the state dental director. When the governor released his budget request, Medicaid dental reimbursement is to be funded at 80% of UCR. We are thrilled!! This would be a sea change for children with Medicaid benefits in the state of Missouri. It still needs to go through both the house and senate, so it is by no means a done deal but we are hopeful. We have laid the groundwork in prior years to ramp up Medicaid participation if we do indeed get a meaningful increase, more to come there I hope. We continue to support community water fluoridation as well as licensure modernization.

Our work with the state dental director has never been more important. I was approached by the director with questions on how to improve access to OR/general anesthesia. We formulated a survey and polled our membership about their experiences and he was able to use that data to illustrate the need that our patients have in finding adequate care and coverage. The relationship I have been able to build with our state dental director has been key to the wins we have seen this year and I hope to continue that relationship for years to come.

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.

We participate extensively with the Missouri Dental Association as well as the Missouri Coalition for Oral Health. I have worked with each group's advocacy events this year and am on the policy committee for the MCOH. This year was also the first year I started doing more with the MDA and their advocacy than just attending lobby day, when I was able to attend the ADA DC meeting as an action team leader for the MDA. I am working to build stronger connections with state leadership to bring children's oral health needs to the table on a consistent basis.

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Holly Randone

State Chapter Name: Nebraska

PPA's practice or teaching location (city or town): Hastings/Grand Island, NE

Key legislative and/or regulatory priorities for state chapter, and current status

1. Nebraska Dental Association is starting a Medicaid Reform task force that is going to work on making the Medicaid system better for our state, and a top priority would be trying to get fees raised.

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.

1. I am working on a proposal for the state to approve an ABCD Program; it is modeled similarly to Washington's program.
2. There is a Medicaid Reform task force that is starting through our state dental association.
3. Working with state to get in-office anesthesia covered for Medicaid children. In-office anesthesia is fairly new to our state (within the last few years) and is quickly becoming more popular because of the difficulty for OR time. Currently the in-office anesthesia is only being utilized for private insurance or FFS patients because the Dental Anesthesiologists are not credentialed as Medicaid providers. The challenge to changing the system is due to how the anesthesia costs fall under the medical side for payment of services, so it would need to get changed on that end.

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Roger A. Achong, DMD, MS.

State Chapter Name: New Hampshire Academy of Pediatric Dentistry

PPA's practice or teaching location (city or town): Concord, New Hampshire

Key legislative and/or regulatory priorities for state chapter, and current status

-A New Hampshire House bill seek to ban community water fluoridation in the entire state. On January 6, 2022, the House, acting on the overwhelming input of dentists, voted to table HB.611-FN for the remainder of the session.

-In New Hampshire there is a dental hygienist and a dental assistant shortage that was particularly worsened during the 2020 shutdown. The New Hampshire Dental Society is proactively trying to address this ongoing problem and may have some dental office to start formally training dental assistants.

-On 8 March, the House Finance Committee voted, 14-5, in favor of the bipartisan compromise framework for an adult dental Medicaid benefit. The Committee also adopted a Senate amendment that would fully fund the bill using monies from the recent Centene settlement as well as a $1500 cap for services. Furthermore, the House measure includes provisions for patient cost-sharing and accountability. Meanwhile, the Senate unanimously voted in favor of SB.422, its own version of the bill. The bill will make its way to the Committee of Conference and, ultimately, the Governor's desk.

As a pediatric dentist, my concern with this bill was it was a distraction from addressing the so many deficiencies of the Medicaid benefit for the pediatric population. The dental society members felt good about themselves and so did the politicians with the success of the adult Medicaid benefit but there is no mention to improve the already deficient and severely underfunded Medicaid benefit for the children.

-HB.1244-L: Basically, this bill would require parental consent for any medical procedure (including the application of dental sealants) conducted in a school setting. Although school-based dental programs take place under dental supervision and with the written consent of parents, it is concerning that redundant consent systems (particularly for screenings) may create barriers to access to children's dental care.

The bill's sponsors, taking into account these concerns, offered an amendment that would require the same consent for simple screenings. However, that amendment was rejected by the House Health, Human Services and Elderly Affairs Committee. The bill now moves before the full House.

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.

-The NH Academy of Pediatric Dentistry officers should consider crafting an official letter to the NH Director of Dental Medicaid and the Director of NH Health and Human Services informing them of the severe access to care barrier caused by the very poor low reimbursement Medicaid fees especially since the cost of maintaining a dental office / business overhead has significantly increased. Also the hospitals are not allowing the dental treatment to be done in their operating rooms due to the low reimbursement rates. When in office sedation is considered the anesthesiologists and nurse anesthetists generally do not accept the poor Medicaid payments for their professional services etc.

-The NH Academy of Pediatric Dentistry should really consider spearheading the AAPD Policy on Mandatory School Entrance Oral Health Examinations to become a law in New Hampshire requiring an actual dental examination prior to matriculation into school which will improve school readiness by providing a timely opportunity for diagnosis and

treatment of oral conditions. This has been done in a very few states. NH can learn from those states to make that happen in NH. And also be one of the first few states in the country to make this a state law.

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Rajesh Adhia

State Chapter Name: NYAPD

PPA's practice or teaching location (city or town):
Brooklyn, NY

Key legislative and/or regulatory priorities for state chapter, and current status
-Expanded SDF Coverage - Medicaid now covers. Exploring OR access issues. AAPD annual advocacy conference and lobby.

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.
Part of NY Dental Medicaid stakeholder group.

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Dr. Homa Amini

State Chapter Name: Ohio Academy of Pediatric Dentistry

PPA's practice or teaching location (city or town): Columbus

Key legislative and/or regulatory priorities for state chapter, and current status

- HB344 Regarding limitations imposed by health insurers on dental care services (non-covered services legislation); House Insurance, (Third Hearing)
- State dental board review of anesthesia and sedation rules; ongoing
- Medicaid Reimbursement Rates; ongoing
- Managed care procurement – contract renewal for the state; will go in effect in July 2022; single credentialing portal and single pharmacy plan, 6b MCOs
- Episodes of Care payment model (incentives and penalties)
- DentaQuest take-over for CareSource as their administrator resulting in more administrative burden on providers and unfair practices
- Medical Oral Expanded (MORE) Care pilot will be implemented in Ohio in the Spring of 2022 (value-based effort with risk assessment and varnish application)

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.

- Attended Ohio Dental Association Dental Lobby day
- Member of Ohio Dental Association Medicaid Advisory board, multiple meetings with CareSource regarding issues for dental providers as the result of DentaQuest becoming the administrator; submitted an ODA workgroup letter to Ohio Department of Medicaid regarding Episodes of Care roll-out and lack of information; member of ODA Council to Access to Care
- Part of planning group (attended monthly meeting) with Ohio Oral Health Coalition to develop agenda for statewide oral health symposium (scheduled for Oct 2022)

- Participated in Oral Health Advisory Committee for the State Oral Health Plan process
- Attended Ohio Legislator Cancer Caucus discussing HPV link to oral cancer and the critical role of dentistry in treating patients, and the role of Medicaid and Medicare in access to treatment.
- Attended and presented at State Office of Rural Health Conference on behalf of Ohio Oral Health Coalition
- Ohio sub-district Rep; attended meetings related to ODA activities at state level

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Janna McIntosh

State Chapter Name: Oklahoma

PPA's practice or teaching location (city or town): McAlester, OK

Key legislative and/or regulatory priorities for state chapter, and current status

The Oklahoma dentists are currently fighting two battles: HB 3023 was introduced early in March 2022. If passed, HB 3023 will regulate dental insurance companies engaging in downcoding (altering an insurance claim to a lesser procedure, so as to decrease reimbursement), bundling (grouping multiple procedures and only pay one billing code), and non-covered services (dictating fees for procedures that are not covered). The Oklahoma Dental Association (ODA) has been encouraging members to contact their legislators to push for the bill to be heard, and to passed.
UPDATE: HB 3023 was not heard on the floor of the legislature. The ODA has pledged to resubmit the bill next session.

The second battle is currently taking a back seat to HB 3023, but will likely affect pediatric dentists more than HB 3023. Our current Medicaid program is essentially a fee-for-service program. They pay quickly, require very few pre-authorizations for most procedures for children, including general anesthesia, and operate at approximately four percent overhead. Our governor wants to change our Medicaid program to managed-care, and contract with several dental insurance companies to run the program for approximately fifteen percent overhead. He pushed this agenda last year without legislative approval. The ODA, medical association, and several other health care associations filed a lawsuit that this was illegal since the legislators did not pass the change. ODA and its fellow organizations won the lawsuit, and our state supreme court dissolved all agreements with the managed care groups. However, we suspect that this issue is not dead.

On Monday, 3/28/2022, the Oklahoma senate introduced and passed a bill to change the Medicaid program to a managed-care program. They acted so quickly, the ODA did not have time to respond. However, the ODA rapidly sent a blast e-mail to members, informing them to contact their state house member and request they vote NO when the bill goes to the House. I forwarded the information to our Oklahoma pediatric dental officers, and it has since been distributed to our members. We would appreciate any help that the AAPD can offer.

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.

The ODA annually hosts a "Dentists Day at the Capitol". This was on February 15, 2022. On December 2, 2021, the ODA hosted several legislators and senators to donate PAC funds.

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Karli Williams

State Chapter Name: South Dakota

PPA's practice or teaching location (city or town): Rapid City, SD

Key legislative and/or regulatory priorities for state chapter, and current status

-Increasing Medicaid reimbursement rates and number of providers accepting Medicaid patients.

- House Bill 1103 An Act to provide a reimbursement schedule for chiropractic, dental, and optometric services under the Medicaid program. This allows dentist to have a seat at the table each year and requires Medicaid to review and adjust fees yearly. Bill was passed and signed by Governor. Next is advocating at the rules hearing when rates are determined.

-Continue to work on increasing OR access for dental patients and providers

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.

Working on the above bill with the state dental association and lobbying for the bill at the state capitol

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Dr. Joseph Faiz

State Chapter Name: Tennessee Academy of Pediatric Dentistry

PPA's practice or teaching location (city or town): Murfreesboro

Key legislative and/or regulatory priorities for state chapter, and current status

Hygienists trying to expand their scope of practice to diagnose. (Did not pass)
Hygienists wanting to use SDF without Dentist present in the office to do an exam. (Did not pass)
Helped Tenncare better serve the children of Tennessee by having quarterly meetings.

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.

-We have consistently improved the relationship with the TDA where we work hand in hand together on issues to better the care that Tennesseans receive.
Our lobby firm continues to fight for the Children of Tennessee on our behalf and maintains us as the authority in our state when it comes to pediatric dental care.

As PPA, I am in constant contact with our lobby firm and weekly we review our state bills that may affect our profession and the children of Tennessee.

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Emily Rosenberg

State Chapter Name: Virginia

PPA's practice or teaching location (city or town): Falls Church, VA

Key legislative and/or regulatory priorities for state chapter, and current status

Increasing the age for general anesthesia coverage for Medicaid patients and increasing Medicaid reimbursement. See below for joint efforts with VDA.

Continuing to work toward improving access to OR/hospital general anesthesia. PPA asked VAPD officers to send stories of access to care problems as well as refer pediatric dentists to PPA to voice concerns so true scope of state problem can be determined. Many officers informed PPA verbally in meeting of long OR wait lists but none have submitted testimony via email (offered option to generalize/do so anonymously).

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.

The VAPD worked with the VDA at their annual lobby day to advocate for increasing Medicaid reimbursement and the age for general anesthesia coverage.

Medicaid reimbursement has remained stable since 2005 in Virginia. Virginia was 48th out of 50 states in dental Medicaid participation in 2020. Increasing Medicaid reimbursement would help improve access to care and prevent costly emergency room visits. When fees were last increased for Virginia's Smiles for Children Program in 2005, dentist participation more than doubled which resulted in a jump from 29% to 51% of children ages 3-20 years old accessing dental care. Increasing Medicaid reimbursement is important to both patients and dentists across Virginia and has bipartisan majority support in the senate.

Currently, private dental plans and Medicaid cover general anesthesia for patients under age 5 or those with special healthcare needs in Virginia. Neighboring states have higher age restrictions including Maryland (8 years old) and North Carolina (9 years old). The VDA asked for budget language that would require Medicaid to cover general anesthesia for patients age 10 or younger.

The Virginia state general assembly has not finalized their budget yet and we are waiting to hear the final result of their special session that was called by the governor.

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Dr. John L. Gibbons

State Chapter Name: Washington State Academy of Pediatric Dentistry (WSAPD)

PPA's practice or teaching location (city or town): Silverdale, WA

Key legislative and/or regulatory priorities for state chapter, and current status

- Dental Therapy (Senate Bill 5142 and House Bill 1885)
  This past session marked the 12th year that legislation seeking to authorize the practice of dental therapists statewide was introduced. Neither Senate Bill 5142 nor House Bill 1885 received a hearing this session.
- Pediatric Medicaid Reimbursement Rate Increase – Approximately $21.1 in Additional Funding for Fiscal Year (FY) 2023

Beginning January 1, 2023, reimbursement rates for pediatric Apple Health services will increase in accordance with the language below:

- The rates for codes for the ABCD program will be increased by 40 percent.
- The rates for codes for children's dental program for persons aged zero to 20 years old that have a corresponding ABCD code will be increased to the current ABCD code rate, plus an additional 10 percent rate increase.
- The rates for codes for children's dental program for persons aged zero to 20 years old without a corresponding ABCD code will be increased to 70 percent of the medical assistance rates on a fee-for- service basis for adult dental services in effect on January 1, 2022. This increase does not apply to codes with rates already greater than 70 percent of the adult dental services rate.

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.

Currently I hold the following positions:

PPA, WSAPD. As such, attend all WSAPD Board meetings, attended the 2022 AAPD POHAC and all quarterly PPA Conference calls. At every WSAPD sponsored meeting I speak briefly on latest legislative and regulatory updates that affect practicing in Washington state.

President-Elect, Washington State Dental Association (WSDA) and attend all WSDA Board Meetings

Member, WSDA Legislative Task Force. Attend all meetings and have input on 2022 legislative priorities

Chair, WSDA Medicaid Task Force. Attend all meetings and interact with state agencies related to Dental Medicaid.

Dental Action Day was canceled for the second year in a row due to COVID.

Reporting Form for AAPD State Public Policy Advocates

2022 Annual Reports to AAPD Membership

PPA Name: Colleen Greene DMD MPH

State Chapter Name: Wisconsin Academy of Pediatric Dentistry

PPA's practice and teaching location: Milwaukee, WI

Key legislative and/or regulatory priorities for state chapter, and current status

I will excerpt a December 28 2021 email update from the WDA regarding legislative activities of the year. It was truly a history year for Wisconsin oral health policy initiatives!

WDA Year in Review: Tremendous Progress in Madison

As we close out 2021, the Government Services team wanted to provide a brief overview of the legislative successes the WDA achieved in 2021. These would not have been possible without you, our grassroots army. We truly are more optimistic than ever for the future!

Historic Medicaid Rate Increase

The WDA flexed its grassroots muscle during the 2021-23 budget deliberations. Dentists from every corner of the state flooded the State Capitol with over 500 calls, emails, letters, and meetings, urging lawmakers to support increased Medicaid reimbursement rates. As a result of this monumental advocacy effort, the state budget included an additional $45 million for Medicaid rate increases – a 40% rate increase! It was the first substantial rate increase in two decades.

Gov. Tony Evers signed the 2021-23 state budget, including a historic increase in dental Medicaid reimbursement rates, in July at an elementary school in Whitefish Bay.

Expanding Dentists' Scope of Practice

One of the first bills Gov. Evers signed into law in 2021 was the WDA-championed dental vaccination bill. Wisconsin is now one of only a few states in the nation that allow dentists to administer COVID and influenza vaccines. This is just the first step – we hope to use this momentum to tackle HPV vaccines in the near future!

EFDA Legislation Moving Forward

Our Expanded Function Dental Auxiliary legislation is closer than ever to being signed into law. Affording our best-qualified dental assistants an avenue to grow their career is pivotal as we battle workforce shortages. Earlier this year, the State Senate passed this legislation unanimously and we are anticipating the State Assembly sends this bill to the governor in early 2022!

[NOTE: EFDA LEGISLATION PASSED THE LEGISLATURE AND ANTICIPATED TO BE SIGNED INTO LAW BY GOVERNOR, AS OF APRIL 1 2022]

Insurance Reform on the Horizon

Now that we have addressed numerous issues on our agenda and registered neutral on dental therapy, we are poised to finally begin working to reforming dental insurance in Wisconsin. Make no mistake, this will be a heavy lift. The insurance lobby is powerful, well-funded, and aggressive in their defense of their unfair practices. That's why it's more important than ever that we support candidates who support us through contributions to WIDPAC, the Wisconsin Dental Political Action Committee. Support of WIDPAC allows WDA dentists to attend important fundraisers so we can connect with lawmakers and educate them on these unfair practices.

*From left, WDA Director of Government Services Chris Borgerding, WIDPAC chair **Dr. Matt Roggensack** (Madison), Assembly Speaker Robin Vos, **Dr. Eric teDuits** (Madison) and State Rep. Alex Dallman at the RACC at the Trap golf fundraiser.*

Joint or coordinated efforts with state dental association, such as dental lobby day at state capitol, legislative testimony, regulatory efforts, etc.

-WAPD is a small organization currently led by Dr. Britney Bries (President), Dr. Stacy Michels (President-Elect) and Dr. Macaire Hulderman (Secretary-Treasurer). We typically align fully with support of legislative priorities of the Wisconsin Dental Association. 2021 was no exception to this. We are grateful for the momentum of WDA legislative strategy in 2021 and the (decades long!) volunteer leadership of AAPD members, e.g. WDA President Dr. Cliff Hartmann, Legislative Advocacy committee member (and past Chair) Dr. Eric teDuits. I am currently serving as Vice Chair of the Legislative Advocacy Committee.

-In March 2021, our first-year residents at Children's Wisconsin participating in AAPD's POHAC and later in the month, the four second-year pediatric dental residents and I participated in WDA virtual advocacy day. Hopefully the WDA event may return to in-person 2023.

-Mid-September 2021, two first-year residents and I traveled to state capitol Madison WI in person for the first time since January 2020 and met with the WDA Legislative Advocacy Committee, Political Action Committee and a number of legislative offices. (see picture →)

-Later in September 2021, I was invited to present to Marquette dental students on campus, "An Orientation to Advocacy" for an evening dinner talk, which was an honor.

-We recently learned that our staff government relations director for the WDA (Mr. Chris Borgerding) is leaving the organization to become a lobbyist for a DSO organization, which is sad news for us. He has been highly effective in the role in just a short time.

WISCONSIN DENTAL ASSOCIATION
6737 W. Washington St., Suite 2360, West Allis, WI 53214

FOR IMMEDIATE RELEASE
March 8, 2022

FOR INFORMATION CONTACT:
Brenna Sadler
414-755-4108 or bsadler@wda.org

WDA President Dr. Cliff Hartmann Praises Legislature for Passing EFDA Legislation; Will Make Quality Oral Health Care Available for More Wisconsin Residents

*The Wisconsin Dental Association today released the following statement from WDA President **Dr. Cliff Hartmann** (New Berlin):*

"On behalf of the 3,100 members of the Wisconsin Dental Association, I want to thank both houses of the legislature for passing SB 392, which authorizes the use of Expanded Function Dental Auxiliaries (EFDAs) in Wisconsin. We are especially grateful to Senator Mary Felzkowski and Representative Jon Plumer for their continued passion and dedication toward addressing oral health challenges in Wisconsin.

"EFDAs are used in nearly half of the nation and the military. Once trained, they are able to perform an expanded scope and can only perform these procedures while under the direct supervision of the supervising dentist. An EFDA can be used to improve access to care for underserved populations, and provide a way to deal with potential dental workforce shortages, like those we are currently seeing around the state.

"This is just the first step; we hope to build upon this legislation next session.

"We greatly appreciate the increased attention being paid to oral health in Wisconsin. We all agree that getting more people quality oral healthcare will require a multi-pronged approach, utilizing a variety of solutions. The WDA strongly believes creating EFDAs in Wisconsin is one of the prongs to do just that.

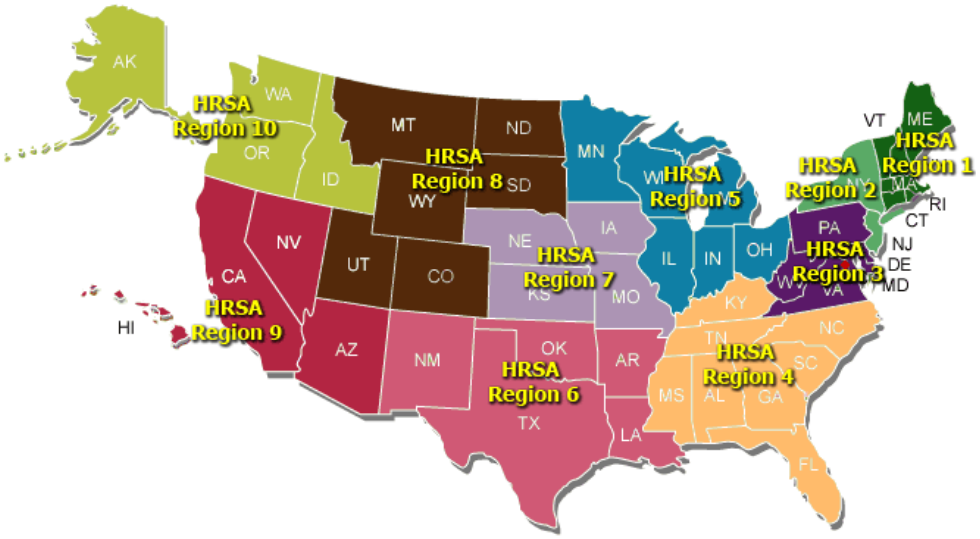
"This concludes a monumental legislative session for the WDA, which includes legislation authorizing dentists to administer COVID and influenza vaccines, a historic 40% Medicaid rate increase, and most recently our EFDA legislation.

"We look forward to seeing Gov. Tony Evers sign this important bill into law!"

***

About the Wisconsin Dental Association
The Wisconsin Dental Association, with 3,100 member dentists and a number of dental hygienists, is the leading voice for dentistry in Wisconsin. WDA members are committed to promoting professional excellence and quality oral health care. Established in 1870, the WDA is headquartered in West Allis and has a legislative office in Madison. The WDA is affiliated with the American Dental Association - the largest and oldest national dental association in the world. For more information, call 414-276-4520, visit WDA.org and find us on Facebook, Twitter, Instagram and LinkedIn.

Council on Government Affairs, Pediatric Dental Medicaid and CHIP Advisory Committee 2021–2022



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Francisco J. Ramos-Gomez (HRSA Region 9, AAPD W District)
Joseph R. Wilson (HRSA Region 10, AAPD W District)
Sahar M. Alrayyes, Expert Consultant
James J. Crall, Expert Consultant
Douglas Keck, Expert Consultant
Beau D. Meyer, Expert Consultant
Robin Wright, Director, Research and Policy Center, Staff Liaison

Council on Government Affairs, Pediatric
Dental Medicaid and CHIP Advisory Committee, 2021–2022

The Medicaid/CHIP State Dental Association (MSDA) has had an eventful year. The leadership decided to move the annual symposium to January 11-12, 2022, titled Advancing Oral Health Equity through Inclusion, Access, Accountability, and Artificial Intelligence. The conference was virtual again this year due to continuing COVID concerns and thus limited travel for state members.

On December 3, the MSDA round table convened in Washington, D.C., bringing together our corporate partners. We had presentations from multiple foundations and from the American Academy of Development Medicine and Dentistry. A discussion was held about treatment and coverage of patients with intellectual and developmental disabilities. The afternoon was spent hearing updates from states on innovative programs they have implemented in their state programs.

On December 4, the MSDA board met to begin the strategic planning process. This will continue into 2022. The board also conducted the business of the association.

The annual business meeting for MSDA was held on December 6, 2021. Dr. Scott Cashion was the presiding officer. Reports from Dr. Cashion, our Executive Director Mary Foley and partners were given. The nominations for new officers were presented, and the voting process was reviewed.

Dr. Cashion finished his two-year term at the end of the annual business meeting but will continue to be on the board representing the AAPD.

The MSDA board has continued to have regular monthly meetings with Dr. Cashion as the presiding officer and Dr. Sid Whitman as a board member. In January, 2022, Mrs. Alani Jackson from California became the presiding officer.

AAPD continues to have a presence and influence with this organization. MSDA continues to value this relationship.

Thank you for the opportunity to represent the AAPD on the MSDA board.

Respectfully submitted,
Scott W. Cashion, DDS, MS

Council on Government Affairs, Committee on Dental Benefit Programs 2021–2022

James D. Nickman, NC District, Chair
Marilia Montero-Fayad, Board Liaison
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Santos Cortez, Jr.
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Emily Rosenberg
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Sallie Lau
Oariona Lowe
Hubert Park
Elise Watson Sarvas
Jasmine Yesil
Acting Staff Liaison
C. Scott Litch, Chief Operating Officer and General Counsel

Vision
The vision of the Council on Dental Benefit Programs is that all infants, children, and adolescents have access to meaningful dental benefits, thereby affording them the opportunity of lifetime optimal oral health.

Mission
The mission of the Council on Dental Benefit Programs is to maintain and expand access to oral health services for infants, children and adolescents through the support and promotion of robust and equitable third party payment systems. We accomplish this by enabling our members to assist their patients in obtaining dental benefits to which they are entitled and by working with other professional organizations and the dental benefits industry to continually improve dental benefit programs.

Duties
The duties of the Committee on Dental Benefit Programs as listed in the AAPD *Administrative Policy and Procedure Manual* are to: 1) formulate and recommend official AAPD policies to the Board of Trustees related to pediatric oral health care in various health care insurance programs for children and SHCN patients and reimbursement mechanisms; 2) monitor and investigate developing trends impacting pediatric oral health in health care

programs and reimbursement mechanisms; 3) provide review and feedback to AAPD staff assisting individual members with third party insurance matters; 4) provide review and feedback to the AAPD's CMC representative on all matters related to dental coding, including development of code proposals by the AAPD and review of code proposals submitted by other organizations; 5) Serve in a support capacity or as faculty for AAPD coding workshops offered at the state level or during the annual session; 6) Closely coordinate all activities related to publicly subsidized health insurance programs (such as Medicaid, CHIP, and ACA) and government regulated private health insurance programs, with the Council on Government Affairs; 7) perform such other duties as assigned by the President or the Board of Trustees.

Standing Charges

Charge 1

Report no less than annually to the Board of Trustees on options and opportunities to communicate with the dental benefits industry and major dental benefit purchasers our perspective on appropriate oral health benefits for children and concerns with third party reimbursement programs. Explore and report to the Board the options, logistics, feasibility, and success of formal and informal meetings and presentations on an annual or biannual basis in conjunction with the American Association of Dental Consultants, the National Association of Dental Plans, America's Health Insurance Plans, and other similar organizations and benefit carriers.
Background and Intent: This is an ongoing effort to reflect and resolve member concerns with third party reimbursement coverage This meets members' needs by educating and influencing third party carriers concerning pertinent pediatric dentistry issues.

Progress Report

With the retirement of staff liaison, Mary Essling, in December 2021, Jim Nickman started in January as the AAPD Insurance Consultant. He will attend and network with all of the key dental benefit industry organizations at their organizational meetings. Dr. Nickman participated in a CIGNA dental panel on March 2022 and presented on dentistry for individuals with Special Health Care Needs and the OR access issue being experienced by members. Both Mary (AADC board member) and Dr. Nickman are planning on attending the AADC workshop in May 2022. Due to the transition, the AAPD decided to defer the 2022 insurance summit and will be hosting a payer issue summit at the 2023 meeting. Dr. Nickman will also attend the fall NADP workshop.

Charge 2

Act as a liaison between the AAPD and the ADA Council on Dental Benefit Programs and the ADA Code Maintenance Committee (CMC). Provide, with the approval of the Board of Trustees, a voting representative from AAPD to the annual meeting of the CMC. Prior to the meeting, review the submitted Code Revision Requests and, through a report to the Board, formulate voting positions in so far as possible. Generate and submit to the CMC, as authorized by the Board of Trustees, Code Revision Requests reflecting membership interests and changes in pediatric dental practice. Act also to monitor the dental benefit program activities and concerns of the other ADA-recognized specialty organizations, and those of other professional organizations, keeping informed the Board of Trustees and interacting as appropriate.

Council on Government Affairs,
Committee on Dental Benefit Programs, 2021–2022

Background and Intent: This is a standing charge to the Committee. The Academy's goal is to protect and advance patient interests in dental benefit programs. Chief among these activities is full participation in the ADA procedure code revision process.

Progress Report

The CDT 2023 Batch has been released and includes the AAPD's requests to revise/delete the D1355 CDT code. Jim Nickman attended the CMC 2023 Batch meeting held in March 2022. Results are attached.

Charge 3

Identify the subject matter and appropriate speaker(s) for a Dental Benefits Workshop at each Annual Session, reporting on CDT code revisions as well as commercial and public (Medicaid and CHIP) sector benefit program issues.
Background and Intent: CDT procedure codes are revised annually, which require changes in practice management administration and billing systems to ensure that correct billing codes are submitted to third party payers. The coding portion of the workshops will explain the code revision process and delineate the changes taking effect that year. The balance of the workshop will spotlight a topic or topics pertinent to understanding and negotiating commercial and public sector benefit programs and the changing dental benefits landscape.

Progress Report

The CDBP committee has identified Dr. Mary Lee Conicella (Aetna, Columbia University) as a speaker for the Dental Benefits Workshop at the annual session with the topic of "Teledentistry – post COVID-19". A preview CDT 2022 changes and coding issues will also be presented.

Charge 4

Advise AAPD staff in the annual update of the AAPD Coding and Insurance Manual (now provided by corporate underwriting without cost in hard copy every three years with annual updates distributed digitally) so long as the Committee and the Board determine the continued value in the production of this membership benefit.
Background and Intent: This is a standing charge to the Committee. This manual meets member needs for assistance on coding, claims, and related third party reimbursement issues and serves as a source of non-dues revenue by corporate support of printing and distribution costs.

Progress Report

An update of the AAPD Coding and Insurance Manual is scheduled for release electronically in 2023. A print version was scheduled in 2020-2021 but postponed due to sponsorship concerns due to COVID. The timing of a print version update will be revisited this year.
Updates from the CDT2023 meeting in March 2022 will be provided in PDT when available Spring 2022.

Council on Government Affairs,
Committee on Dental Benefit Programs, 2021–2022

Project Charges

Charge 5

Assist the Council on Membership and Membership Services Committee on Communications in creating an AAPD-branded dental insurance educational brochure. Background and Intent: The committee feels that the AAPD Membership would benefit with the production of a patient education brochure on dental insurance that (1) explains the difference between dental and medical insurance and (2) promoting the message that optimal dental care is best determined by the patient and dentist than by the insurance coverage. The description of dental insurance would include information such as: Dental insurance has annual maximums; the Explanations of Benefits and Pre-Determinations are no guarantee of payment or reimbursement; dental insurance is more like a pre-payment plan; and the difference between In-network and Out of Network.

Currently, the American Dental Association and the Canadian Dental Association have similar brochures. An AAPD-branded brochure would build upon those brochures.

Progress Report

A potential draft brochure was submitted to the Council of Membership and Membership Service Committee on Communications for review and revision.

December 22, 2021

To: AAPD Board of Trustees

Cc: AAPD CGA CDBP committee

Fr: Jim Nickman

Re: Results for CDT-2023 code submissions of interest to the AAPD.

Folks,

Attached are the code proposals included in the March 2022 CDT-2023 batch and proposed positions. Here are the potential code issues which may impact our membership.

Req	Action	CDT Code	Change	Result	Sponsor
05	Revise	D9110	Treatment that relieves pain	Passed	ADA CDBP
06a	Revise	D1355	Eliminate SDF	Failed	AAPD
06b	Delete	D1355	Remove CDT code	Failed	AAPD
07	Revise	D2990	Generic Infiltration Code to allow use of other materials	Failed	CareQuest (Horst)
20a	Revise	D1110	Oral Prophylaxis Adult (word smithing)	Failed	Dental Codeology Consortium
20b	Revise	D1120	Oral Prophylaxis Child (word smithing)	Failed	Dental Codeology Consortium
21	Revise	Category	Clinical Oral Evaluations – revise to allow eval including Dx and Tx Plan by all qualified healthcare providers vs DDS	Failed	Dental Codeology Consortium
20a	Revise	D1110	Oral Prophylaxis Adult (word smithing)	Failed	Dental Codeology Consortium
22a – 22e	Delete and revise	D0351 New codes	Delete 3D photographic image and create codes for scanning arches and facial images	Passed	AAO
23	Revise	D0393	Virtual treatment simulation using 3D image volume	Passed with mods	AAO
24a	Revise	Category	Delete adolescent dentition and revise primary, transitional, and permanent	Withdrawn	AAO
24b	Delete	D8030	Delete limited ortho for adolescent dent	Withdrawn	AAO
24c	Revise	D8040	Limited ortho for permanent dentition	Withdrawn	AAO
24d	Delete	D8080	Comprehensive ortho for adolescent dentition	Withdrawn	AAO
24e	Revise	D8090	Comprehensive ortho of the perm dent	Withdrawn	AAO
25a	Delete	D8704	Replacement of lost/broken Mn retainer	Fail	AAO
25b	Revise	D8703	Separate generic code to document retainer not included with ortho treatment	Fail	AAO
26a	Delete	D8697	Repair of ortho appliance MN	Fail	AAO

Req	Action	CDT Code	Change	Result	Sponsor
26b	Revise	D8696	Repair of orthodontic appliance	Fail	AAO
27	Revise	D9450	Allows same day case presentation	Passed	AAO
28	New	DXXXX	Therapeutic antimicrobial treatment – allows use of new composite(Infinix) with antimicrobial properties	Fail	Nobio
29	New	DXXXX	Vaccine administration – HPV	Passed	AAPHD/ODA
34a	Revise	D1701	Pfizer first done adults 12 and older	Passed with mods	AAPHD/ODA
34b	Revise	D1702	Pfizer second done adults 12 and older	See above	AAPHD/ODA
34c	Revise	D1703	Moderna first done adults 18 and older	See above	AAPHD/ODA
34d	Revise	D1704	Moderna second done adults 18 and older	See above	AAPHD/ODA
34e	Revise	D1705	Janssen adults 18 years and older	See above	AAPHD/ODA
35	New	DXXXX	13 new Vax codes for third dose and peds	See above	AAPHD/ODA
36	Revise	D4355	Full Mouth Debridement – may not pass as workgroup could not come to consensus. AAP opposed. Would allow same day exam as debridement	Passed with mods	AAOM

Please let me know if you have any questions.

Take care,

Jim

Substantive Requests Inventory CDT 2023 March 2022

Inventory		Submitted By	Action			Procedure Code / Category Affected (Revisions and Deletions Only)	CID
#	01a	Philip Uffer	New	Revise	Delete	**DXXXX**	None Assigned
			X				
Nomenclature Text (additions in **blue underline**; deletions in ~~**red strike-through**~~; unchanged in **black**)							
close endodontic access opening							
Descriptor Text (additions in **blue underline**; deletions in ~~**red strike-through**~~; unchanged in **black**)							
Filling in an access opening by removing temporary filling material and replacing with a permanent filling material							
AAPD	Position: Support Rationale: Clarification of procedure reporting Comment: None.						

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
0	**22**				

Remarks / Rationale for “Decline” / Explanation of “Other”
01a and 01b are related. AAE opposes as adequately covered by exiting codes.

Substantive Requests Inventory CDT 2023 March 2022

Inventory		Submitted By	Action			Procedure Code / Category Affected (Revisions and Deletions Only)	CID
#	01b	National Association of Dental Plans (NADP)	New	Revise	Delete	**DXXXX**	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
replacement of restorative material to close an access opening of a screw-retained implant supported crown or implant supported FPD retainer

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Per tooth location of the screw-retained implant supported crown or implant supported FPD retainer. Not to be used at the time of initial implant restoration placement or in conjunction with other implant procedures ~~place of D6080~~. DXXXX – replacement of restorative material used to close an access opening of a screw retained implant supported prosthesis, per implant Delete descriptor

AAPD	Position: Support Rationale: Creation of a code to report procedure Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
20	**2**				

Remarks / Rationale for “Decline” / Explanation of “Other”
01a and 01b are related. Amended 15/7 (in conjunction), Approved second amendment

Substantive Requests Inventory CDT 2023 March 2022

Inventory		Submitted By	Action			Procedure Code / Category Affected (Revisions and Deletions Only)	CID
			New	Revise	Delete		
#	02	David Liberman	**X**			**DXXXX**	None Assigned

Nomenclature Text (additions in **blue underline**; deletions in ~~**red strike-through**~~; unchanged in **black**)
deep margin elevation
Descriptor Text (additions in blue underline; deletions in ~~red strike-through~~; unchanged in black)
Placement of a restorative material to elevate a subgingival margin to a supragingival or equigingival location prior to completing the definitive restoration

AAPD	Position: Neutral Rationale: Creation of a code to report procedure Comment: Likely successful as not tied to a specific product.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
0	**22**				

Remarks / Rationale for “Decline” / Explanation of “Other”
ADA Opposes as covered by existing procedure.

Substantive Requests Inventory CDT 2023 March 2022

Inventory		Submitted By	Action			Procedure Code / Category Affected (Revisions and Deletions Only)	CID
#	03a	Dr Allen Finkelstein	New	Revise	Delete	**DXXXX**	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~**red strike-through**~~; unchanged in **black**)

tele-brushing – asynchronous tooth brushing monitoring utilizing short-range wireless technology by exchanging data from enhanced mechanical toothbrush

Descriptor Text (additions in **blue underline**; deletions in ~~**red strike-through**~~; unchanged in **black**)

None

AAPD	Position: Neutral Rationale: Creation of a code to report procedure Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
0	**22**				

Remarks / Rationale for “Decline” / Explanation of “Other”

Proposals 3a and 3b are related

Substantive Requests Inventory CDT 2023 March 2022

Inventory		Submitted By	Action			Procedure Code / Category Affected (Revisions and Deletions Only)	CID
#	03b	Henry Schein One	New	Revise	Delete	**DXXXX**	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~**red strike-through**~~; unchanged in **black**)
review of patient at-home brushing

Descriptor Text (additions in **blue underline**; deletions in ~~**red strike-through**~~; unchanged in **black**)
Provider review of patient's at-home brushing data, in combination with their oral health data, for the sake of patient coaching that links the current state with their daily routine.

AAPD	Position: Support Rationale: Better version than 3a to report review procedure. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
0	**22**				

Remarks / Rationale for "Decline" / Explanation of "Other"
Proposals 3a and 3b are related

Substantive Requests Inventory CDT 2023 March 2022

Inventory		Submitted By	Action			Procedure Code / Category Affected (Revisions and Deletions Only)	CID
#	04	American Dental Association CDBP	New	Revise	Delete	**DXXXX**	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~**red strike-through**~~; unchanged in **black**)
Reline custom sleep apnea appliance (indirect)
Descriptor Text (additions in **blue underline**; deletions in ~~**red strike-through**~~; unchanged in **black**)
Resurface dentition side of appliance with new soft or hard base material as required to restore original form and function.

AAPD	Position: Support Rationale: Creation of a code to report procedure Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**	**0**			

Remarks / Rationale for “Decline” / Explanation of “Other”
ADA, ACP Supports. AHIP supports but wants to know if a direct code is needed.

Substantive Requests Inventory CDT 2023 March 2022

Inventory		Submitted By	Action			Procedure Code / Category Affected (Revisions and Deletions Only)	CID
#	05	American Dental Association CDBP	New	Revise	Delete	**D9110**	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Palliative ~~(emergency)~~ treatment of dental pain – per visit ~~– minor procedure~~
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Treatment that relieves pain but is not curative; services provided do not have distinct procedure codes. ~~This is typically reported on a "per-visit" basis for emergency treatment of dental pain.~~

AAPD	Position: Support Rationale: Clarification of procedure reporting Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**	**0**			

Remarks / Rationale for "Decline" / Explanation of "Other"
ADA. Amended per visit 22-0

Substantive Requests Inventory CDT 2023 March 2022

Inventory		Submitted By	Action			Procedure Code / Category Affected (Revisions and Deletions Only)	CID
#	06a	American Academy of Pediatric Dentistry	New	Revise	Delete	**D1355**	None Assigned
				X			
Nomenclature Text (additions in **blue underline**; deletions in ~~**red strike-through**~~; unchanged in **black**)							
caries preventative medicament application – per tooth							
Descriptor Text (additions in **blue underline**; deletions in ~~**red strike-through**~~; unchanged in **black**)							
For primary prevention or remineralization. Medicaments applied do not include topical fluorides or silver diamine fluoride (SDF).							
AAPD	Position: Support Rationale: Clarification of procedure reporting Comment: None.						

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
1	**21**				

Remarks / Rationale for “Decline” / Explanation of “Other”
06a and 06b are related. Amendment 1-21 failed. Proposal 1-21 fail. Problem is that CDT is not an avenue for EBD, only for reporting. Also, the CMC does not want to limit the clinical discretion of the practitioner

Substantive Requests Inventory CDT 2023 March 2022

#	06b	American Academy of Pediatric Dentistry	New	Revise	Delete	D1355	None Assigned
					X		

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~caries preventive medicament application – per tooth~~
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~For primary prevention or remineralization. Medicaments do not include topical fluorides.~~

AAPD	Position: Support Rationale: Elimination of procedure due to lack of EBD materials for use. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
1	**21**				

Remarks / Rationale for “Decline” / Explanation of “Other”
06a and 06b are related. Moot after 6a eliminated.

Substantive Requests Inventory CDT 2023 March 2022

#	07	CareQuest Institute (Horst)	New	Revise	Delete	D2990	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~resin~~ **infiltration of a material ~~incipient smooth surface~~ into an initial caries lesion~~s~~**
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Placement ~~of an infiltrating resin restoration~~ for strengthening, stabilizing and/or limiting the progression of the lesion.

AAPD	Position: Oppose as distinctly different procedure Rationale: Clarification of procedure reporting Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
4	**17**	**1**			

Remarks / Rationale for “Decline” / Explanation of “Other”
Substitution – DXXXX – hydroxyapatite denerating infiltration treatment – per tooth. Failed 4-17-1. Overall failed as adequately reported with 1354

Substantive Requests Inventory CDT 2023 March 2022

#	08	American Academy of Periodontology	New	Revise	Delete	D4240	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

gingival flap procedure, including root planing – four or more contiguous teeth or tooth bound spaces per quadrant

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

A soft tissue flap is reflected or resected to allow debridement of the root surface and the removal of granulation tissue. Osseous recontouring is not accomplished in conjunction with this procedure. May include open flap curettage, reverse bevel flap surgery, modified Kirkland flap procedure, and modified Widman surgery. This procedure is performed in the presence of moderate to deep probing depths, loss of attachment, need to maintain esthetics, need for increased access to the root surface and alveolar bone, or to determine the presence of a cracked tooth, OR fractured root, ~~or external root resorption.~~ Other procedures may be required concurrent to D4240 and should be reported separately using their own unique codes.

AAPD	Position: Support Rationale: Clarification of procedure reporting Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**	**0**			

Remarks / Rationale for “Decline” / Explanation of “Other”

#	09	American Academy of Periodontology	New	Revise	Delete	D4241	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

gingival flap procedure, including root planing – one to three contiguous teeth or tooth bound spaces per quadrant

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

A soft tissue flap is reflected or resected to allow debridement of the root surface and the removal of granulation tissue. Osseous recontouring is not accomplished in conjunction with this procedure. May include open flap curettage, reverse bevel flap surgery, modified Kirkland flap procedure, and modified Widman surgery. This procedure is performed in the presence of moderate to deep probing depths, loss of attachment, need to maintain esthetics, need for increased access to the root surface and alveolar bone, or to determine the presence of a cracked tooth, OR fractured root, ~~or external root resorption~~. Other procedures may be required concurrent to D4241 and should be reported separately using their own unique codes.

AAPD	Position: Support Rationale: Clarification of procedure reporting Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**	**0**			

Remarks / Rationale for “Decline” / Explanation of “Other”

05a and 05b are related.

Substantive Requests Inventory CDT 2023 March 2022

#	10a	American Academy of Periodontology	New	Revise	Delete	D4266	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
guided tissue regeneration, natural teeth – resorbable barrier, per site
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
This procedure does not include flap entry and closure, or, when indicated, wound debridement, osseous contouring, bone replacement grafts, and placement of biologic materials to aid in osseous regeneration. This procedure can be used for periodontal defects around natural teeth ~~and peri-implant defects~~.

AAPD	Position: Support Rationale: Clarification of procedure reporting Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**				

Remarks / Rationale for “Decline” / Explanation of “Other”
10a, 10b, and 10c are related.

Substantive Requests Inventory CDT 2023 March 2022

#	10b	American Academy of Periodontology	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
guided tissue regeneration, edentulous area – resorbable barrier, per site
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
This procedure does not include flap entry and closure, or, when indicated, wound debridement, osseous contouring, bone replacement grafts, and placement of biologic materials to aid in osseous regeneration. This procedure may be used for ridge augmentation, sinus lift procedures, and after tooth extraction.

AAPD	Position: Support Rationale: Clarification of procedure reporting Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**				

Remarks / Rationale for “Decline” / Explanation of “Other”
10a, 10b, and 10c are related.

Substantive Requests Inventory CDT 2023 March 2022

#	10c	American Academy of Periodontology	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

guided tissue regeneration – resorbable barrier, per implant

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

This procedure does not include flap entry and closure, or, when indicated, wound debridement, osseous contouring, bone replacement grafts, and placement of biologic materials to aid in osseous regeneration. This procedure is used for periimplant defects and during implant placement.

AAPD	Position: Support Rationale: Clarification of procedure reporting Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**				

Remarks / Rationale for “Decline” / Explanation of “Other”

10a, 10b, and 10c are related.

Substantive Requests Inventory CDT 2023 March 2022

#	11a	American Academy of Periodontology	New	Revise	Delete	D4267	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
guided tissue regeneration, natural teeth – non-resorbable barrier, per site (includes membrane removal)
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
This procedure does not include flap entry and closure, or, when indicated wound debridement, osseous contouring, bone replacement grafts, and placement of biologic materials to aid in osseous regeneration. This procedure can be used for periodontal defects around natural teeth ~~and peri-implant defects~~.

AAPD	Position: Neutral Rationale: Clarification of procedure reporting Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**				

Remarks / Rationale for “Decline” / Explanation of “Other”
11a-11c are related. Ammended the 11’s to remove barrier removal and passed DXXXX -removal of non-resorbable barriers.

Substantive Requests Inventory CDT 2023 March 2022

#	11b	American Academy of Periodontology	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
guided bone regeneration, edentulous area – non-resorbable barrier, per site (includes membrane removal)
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
This procedure does not include flap entry and closure, or, when indicated wound debridement, osseous contouring, bone replacement grafts, and placement of biologic materials to aid in osseous regeneration. This procedure may be used for ridge augmentation, sinus lift procedures, and after tooth extraction.

AAPD	Position: Support Rationale: Clarification of procedure reporting Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**				

Remarks / Rationale for “Decline” / Explanation of “Other”
11a-11c are related

Substantive Requests Inventory CDT 2023 March 2022

#	11c	American Academy of Periodontology	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
guided bone regeneration – non-resorbable barrier, per implant (includes membrane removal)
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
This procedure does not include flap entry and closure, or, when indicated wound debridement, osseous contouring, bone replacement grafts, and placement of biologic materials to aid in osseous regeneration. This procedure is used for periimplant defects and during implant placement.

AAPD	Position: Support Rationale: Clarification of procedure reporting Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**				

Remarks / Rationale for “Decline” / Explanation of “Other”
11a-11c are related

#	12	American Dental Association CDBP	New	Revise	Delete	D4921	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
gingival irrigation with a medicinal agent – per quadrant
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Irrigation of gingival pockets with a prescription medicinal agent. Not to be used to report use of over the counter (OTC) mouth rinses or non-invasive chemical debridement.

AAPD	Position: Support Rationale: Clarification of procedure reporting Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
21	**1**				

Remarks / Rationale for “Decline” / Explanation of “Other”
Amended as above 17-4-1. Passed as amended.

Substantive Requests Inventory CDT 2023 March 2022

#	13	American Association of Oral and Maxillofacial Surgeons	New	Revise	Delete	**DXXXX**	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
removal of implant body not requiring bone removal nor flap elevation

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
None

AAPD	Position: Support Rationale: Clarification of procedure reporting Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**	**0**			

Remarks / Rationale for “Decline” / Explanation of “Other”
Revisited and amended to clean up language on “non-surgical” from passed submission. Both passed 22-0.

Substantive Requests Inventory CDT 2023 March 2022

#	14	American Association of Oral and Maxillofacial Surgeons	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

marsupialization of odontogenic cyst

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

Surgical decompression of a large cystic lesion by creating a long-term open pocket or pouch.

AAPD	Position: Support Rationale: Clarification of procedure reporting Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**	**0**			

Remarks / Rationale for “Decline” / Explanation of “Other”

#	15	American Association of Oral and Maxillofacial Surgeons	New	Revise	Delete	D7251	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
coronectomy – intentional partial tooth removal, impacted teeth only
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Intentional partial tooth removal is performed when a neurovascular complication is likely if the entire impacted tooth is removed.

AAPD	Position: Support Rationale: Clarification of procedure reporting Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**	**0**			

Remarks / Rationale for “Decline” / Explanation of “Other”

Substantive Requests Inventory CDT 2023 March 2022

#	16a	Surround Medical Systems	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
stationary intraoral tomosynthesis – complete series of radiographic images
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
A radiographic survey of the whole mouth, usually consisting of 14-22 periapical and posterior bitewing tomosynthesis images intended to display the crowns and roots of all teeth, periapical areas and alveolar bone.

AAPD	Position: Defer to AAOMR Rationale: Reporting of new procedure Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
19	**3**				

Remarks / Rationale for “Decline” / Explanation of “Other”
16a – 16h are related. AAMOR supports. They recommend 6 codes 3 for capture and 3 for capture with interpretation. Amended passed 22-0

Substantive Requests Inventory CDT 2023 March 2022

#	16b	Surround Medical Systems	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
stationary intraoral tomosynthesis periapical first radiographic image

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
None

AAPD	Position: Defer to AAOMR Rationale: Reporting of new procedure Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other

Remarks / Rationale for “Decline” / Explanation of “Other”
16a – 16h are related. See 16a

Substantive Requests Inventory CDT 2023 March 2022

#	16c	Surround Medical Systems	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
stationary intraoral tomosynthesis periapical each additional radiographic image
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
None

AAPD	Position: Defer to AAOMR Rationale: Reporting of new procedure Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other

Remarks / Rationale for “Decline” / Explanation of “Other”
16a – 16h are related. See 16a

Substantive Requests Inventory CDT 2023 March 2022

#	16d	Surround Medical Systems	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
stationary intraoral tomosynthesis bitewing – single radiographic image

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
None

AAPD	Position: Defer to AAOMR Rationale: Reporting of new procedure Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other

Remarks / Rationale for “Decline” / Explanation of “Other”
16a – 16h are related. See 16a

#	16e	Surround Medical Systems	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
stationary intraoral tomosynthesis bitewings – two radiographic images

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
None

AAPD	Position: Defer to AAOMR Rationale: Reporting of new procedure Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other

Remarks / Rationale for “Decline” / Explanation of “Other”
16a – 16h are related. See 16a

Substantive Requests Inventory CDT 2023 March 2022

#	16f	Surround Medical Systems	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
stationary intraoral tomosynthesis bitewings – three radiographic images

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
None

AAPD	Position: Defer to AAOMR Rationale: Reporting of new procedure Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other

Remarks / Rationale for “Decline” / Explanation of “Other”
16a – 16h are related. See 16a

Substantive Requests Inventory CDT 2023 March 2022

#	16g	Surround Medical Systems	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
stationary intraoral tomosynthesis bitewings – four radiographic images

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
None

AAPD	Position: Defer to AAOMR Rationale: Reporting of new procedure Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other

Remarks / Rationale for “Decline” / Explanation of “Other”
16a – 16h are related. See 16a

Substantive Requests Inventory CDT 2023 March 2022

#	16h	Surround Medical Systems	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
stationary intraoral tomosynthesis vertical bitewing – 7 to 8 radiographic images
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
This does not constitute a full mouth intraoral radiographic series.

AAPD	Position: Defer to AAOMR Rationale: Reporting of new procedure Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other

Remarks / Rationale for “Decline” / Explanation of “Other”
16a – 16h are related. See 16a

Substantive Requests Inventory CDT 2023 March 2022

#	17a	Doyle Williams, DDS	New	Revise	Delete	D9630	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
drugs or medicaments dispensed in the office for home use, single product

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Includes but is not limited to oral antibiotics, antimicrobials, enamel remineralization products, oral analgesics, and topical fluoride; does not include writing prescriptions.

AAPD	Position: Neutral Rationale: Revision to improve reporting accuracy Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
5	**17**				

Remarks / Rationale for “Decline” / Explanation of “Other”
Covered well as currently in CDT

Substantive Requests Inventory CDT 2023 March 2022

#	17b	Doyle Williams, DDS	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
drugs or medicaments dispensed in the office for home use, each additional
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Includes but is not limited to oral antibiotics, antimicrobials, enamel remineralization products, oral analgesics, and topical fluoride; does not include writing prescriptions.

AAPD	Position: Neutral Rationale: Revision to improve reporting accuracy Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
5	**17**				

Remarks / Rationale for “Decline” / Explanation of “Other”
Covered well in current CDT code

Substantive Requests Inventory CDT 2023 March 2022

#	18a	Robert Thorup, DDS	New	Revise	Delete	D	None Assigned
					X		

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
N/A – Requested action affects the "D2000-D2999 Restorative" Category of Service descriptor
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~Local anesthesia is usually considered to be part of Restorative procedures.~~

AAPD	Position: Reject Rationale: Not likely to pass Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
0	**22**				

Remarks / Rationale for "Decline" / Explanation of "Other"
Considered part of restorative treatment

Substantive Requests Inventory CDT 2023 March 2022

#	18b	Robert Thorup, DDS	New	Revise	Delete	D	None Assigned
					X		

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
N/A – Requested action affects the "D3000-D3999 Endodontics" Category of Service descriptor
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~Local anesthesia is usually considered to be part of Endodontic procedures.~~

AAPD	Position: Reject Rationale: Not likely to pass Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
0	**22**				

Remarks / Rationale for "Decline" / Explanation of "Other"
Part of procedure

Substantive Requests Inventory CDT 2023 March 2022

#	18c	Robert Thorup, DDS	New	Revise	Delete	D	None Assigned
					X		

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
N/A – Requested action affects the "D4000-D4999 Periodontics" Category of Service descriptor
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~Local anesthesia is usually considered to be part of Periodontic procedures.~~

AAPD	Position: Reject Rationale: Not likely to pass Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
0	**22**				

Remarks / Rationale for "Decline" / Explanation of "Other"

#	18d	Robert Thorup, DDS	New	Revise	Delete	D	None Assigned
					X		

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
N/A – Requested action affects the “D6000-D6199 Implant Services” Category of Service descriptor
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~Local anesthesia is usually considered to be part of Implant Services procedures.~~

AAPD	Position: Reject Rationale: Not likely to pass Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
0	**22**				

Remarks / Rationale for “Decline” / Explanation of “Other”

#	18e	Robert Thorup, DDS	New	Revise	Delete	D	None Assigned
					X		

Nomenclature Text (additions in **blue underline**; deletions in ~~**red strike-through**~~; unchanged in **black**)

N/A – Requested actions affect: a) the "D7000-D7999 Oral and Maxillofacial Surgery" Category of Service descriptor; and b) the "Extractions" subcategory of service title

Descriptor Text (additions in **blue underline**; deletions in ~~**red strike-through**~~; unchanged in **black**)

~~a) Local anesthesia is usually considered to be part of Oral and Maxillofacial Surgical Procedures.~~
b) Extractions ~~**(Includes Local Anesthesia, Suturing If Needed, and Routine Postoperative Care).**~~

AAPD	Position: Reject Rationale: Not likely to pass Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
0	**22**				

Remarks / Rationale for "Decline" / Explanation of "Other"

Substantive Requests Inventory CDT 2023 March 2022

#	19a	Dental Codeology Consortium	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
crown preparation
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
The procedure for preparing a tooth where there is not enough tooth structure to support a restoration (amalgam, resin, or other dental material); therefore, a crown (full coverage or ¾ coverage) must be placed to support the remaining tooth structure.

AAPD	Position: Reject Rationale: Not likely to pass Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
0	**22**				

Remarks / Rationale for “Decline” / Explanation of “Other”
Part of procedure

Substantive Requests Inventory CDT 2023 March 2022

#	19b	Dental Codeology Consortium	New	Revise	Delete	See List	None Assigned
					X		

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

~~**D2710 crown – resin-based composite (indirect)**~~
~~**D2712 crown – ¾ resin-based composite (indirect)**~~
~~**D2720 crown – resin with high noble metal**~~
~~**D2721 crown – resin with predominantly base metal**~~
~~**D2722 crown – resin with noble metal**~~
~~**D2740 crown – porcelain/ceramic**~~
~~**D2750 crown – porcelain fused to high noble metal**~~
~~**D2751 crown – porcelain fused to predominantly base metal**~~
~~**D2752 crown – porcelain fused to noble metal**~~
~~**D2753 crown – porcelain fused to titanium and titanium alloys**~~
~~**D2780 crown – ¾ cast high noble metal**~~
~~**D2781 crown – ¾ case predominantly base metal**~~
~~**D2782 crown – ¾ cast noble metal**~~
~~**D2783 crown – ¾ porcelain/ceramic**~~
~~**D2790 crown – full cast high noble metal**~~
~~**D2791 crown – full cast predominantly base metal**~~
~~**D2792 crown – full cast noble metal**~~
~~**D2794 crown - titanium and titanium alloy**~~

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

~~**D2712 crown – ¾ resin-based composite (indirect)**~~
~~This procedure does not include facial veneers.~~
~~**D2783 crown – ¾ porcelain/ceramic**~~
~~This procedure does not include facial veneers.~~

AAPD	Position: Reject Rationale: Not likely to pass Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other

Substantive Requests Inventory CDT 2023 March 2022

0	**22**				

Remarks / Rationale for “Decline” / Explanation of “Other”

Substantive Requests Inventory CDT 2023 March 2022

#	20a	Dental Codeology Consortium	New	Revise	Delete	D1110	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
oral prophylaxis – adult
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Disruption of oral biofilm and the ~~R~~removal of plaque, calculus and stains from ~~the~~ tooth structures and ~~implants~~ fixed prosthetics in the permanent ~~and transitional~~ dentition. It is intended to control local irritational factors.

AAPD	Position: Neutral Rationale: Clarification of procedure Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
0	**22**				

Remarks / Rationale for “Decline” / Explanation of “Other”
Amend to add “and mixed” to dentition - failed 1-20-1. Failed as wordsmithing without concrete change to intent of code.

Substantive Requests Inventory CDT 2023 March 2022

#	20b	Dental Codeology Consortium	New	Revise	Delete	D1120	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
oral prophylaxis – child
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Disruption of oral biofilm and the ~~R~~removal of plaque, calculus and stains from ~~the~~ tooth structures and ~~implants~~ fixed prosthetics in the primary and transitional dentition. It is intended to control local irritational factors.

AAPD	Position: Neutral Rationale: Clarification of procedure Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
0	**22**				

Remarks / Rationale for “Decline” / Explanation of “Other”
wordsmithing

Substantive Requests Inventory CDT 2023 March 2022

#	21	Dental Codeology Consortium	New	Revise	Delete	D	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Clinical Oral Evaluations
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
The codes in this section recognize the cognitive skills necessary for patient evaluation. The collection and recording of ~~some~~ data and components of the ~~dental examination may be delegated; however, the evaluation, which includes diagnosis and treatment planning, is the responsibility of the dentist~~ clinical oral evaluations, including diagnosis and treatment planning, are to be performed by qualified healthcare providers as determined by their state practice acts. ~~As with all ADA procedure codes, there is no distinction made between the evaluations provided by general practitioners and specialists.~~ Report additional diagnostic and/or definitive procedure separately.

AAPD	Position: Reject Rationale: Original language is acceptable. Regardless of CDT language, state dental practice acts dictate scopes of practice. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
3	**19**	**0**			

Remarks / Rationale for “Decline” / Explanation of “Other”
National push by ADHA to allow coding for oral eval by hygienist, dental therapists and other non-dental professionals.

Substantive Requests Inventory CDT 2023 March 2022

#	22a	American Association of Orthodontists	New	Revise	Delete	D0351	None Assigned
					X		

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~**3D photographic image**~~

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~This procedure is for diagnostic purposes. Not applicable for a CAD/CAM procedure.~~

AAPD	Position: Support Rationale: New codes to clarify language of procedures reported. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
17	**5**				

Remarks / Rationale for “Decline” / Explanation of “Other”
Requests 22a – 22e are related. Since D0351 removed, should D0704 be deleted? D0704 deleted 19-1-2 after voting to allow vote.

#	22b	American Association of Orthodontists	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
3D dental image scan – direct

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
None

AAPD	Position: Support Rationale: New codes to clarify language of procedures reported. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
17	**5**	**0**			

Remarks / Rationale for “Decline” / Explanation of “Other”
Requests 22a – 22e are related. Amended 22b-e to delete image and replace with surface.

#	22c	American Association of Orthodontists	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
3D facial image scan – direct

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
None

AAPD	Position: Support Rationale: New codes to clarify language of procedures reported. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
17	**5**	**0**			

Remarks / Rationale for “Decline” / Explanation of “Other”
Requests 22a – 22e are related.

Substantive Requests Inventory CDT 2023 March 2022

#	22d	American Association of Orthodontists	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
3D dental image scan – indirect

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
An image scan of a diagnostic cast

AAPD	Position: Support Rationale: New codes to clarify language of procedures reported. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
17	**5**	**0**			

Remarks / Rationale for “Decline” / Explanation of “Other”
Requests 22a – 22e are related.

#	22e	American Association of Orthodontists	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
3D facial image scan – indirect
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
An image scan of constructed facial features.

AAPD	Position: Support Rationale: New codes to clarify language of procedures reported. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
17	**5**	**0**			

Remarks / Rationale for “Decline” / Explanation of “Other”
Requests 22a – 22e are related.

#	23	American Association of Orthodontists	New	Revise	Delete	D0393	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

virtual t~~T~~reatment simulation using 3D image volume or surface scan

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

~~The use of 3D image volumes for~~Virtual simulation of treatment including, but not limited to, dental implant placement, prosthetic reconstruction, orthognathic surgery and orthodontic tooth movement. The simulation may be used for CAD/CAM design.

AAPD

Position: Support

Rationale: New codes to clarify language of procedures reported.

Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**				

Remarks / Rationale for “Decline” / Explanation of “Other”

Amend to add “or surface scan”. Approved 22-0. Amended to remove the last CAD/CAM sentence (19-2-1). Motion to remove descriptor failed 5-17.

#	24a	American Association of Orthodontists	New	Revise	Delete	D	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~**red strike-through**~~; unchanged in **black**)

D8000-D8999
Dentition

Descriptor Text (additions in **blue underline**; deletions in ~~**red strike-through**~~; unchanged in **black**)

Primary Dentition: Teeth developed and erupted first in order of time. All of these teeth will exfoliate and be replaced by permanent teeth.

Transitional Dentition: ~~The final phase of the transition from primary to adult teeth, in which the deciduous molars and canines are in the process of shedding and the permanent successors are emerging~~. The dentition comprised of both primary and permanent teeth.

~~Adolescent Dentition: The dentition that is present after the normal loss of primary teeth and prior to cessation of growth that would affect orthodontic treatment.~~

~~Adult~~Permanent Dentition: The final dentition that is present after the ~~cessation of growth that would affect orthodontic treatment~~ transition from primary teeth to nondevelopmentally replaced teeth.

All of the following orthodontic treatment codes may be used more than once for the treatment of a particular patient depending on the particular circumstance. A patient may require ~~more than one interceptive procedure or~~ more than one limited procedure depending on their problems.

Amended
Primary Dentition: Teeth developed and erupted first in order of time.

Transitional Dentition: The final phase of the transition from primary to adult teeth, in which the deciduous molars and canines are in the process of shedding and the permanent successors are emerging.

Adolescent Dentition: The dentition that is present after the normal loss of primary teeth and prior to cessation of growth that would affect orthodontic treatment.

Adult Dentition: The dentition that is present after the cessation of growth that would affect orthodontic treatment.

All of the following orthodontic treatment codes may be used more than once for the treatment of a particular patient depending on the particular circumstance. A patient may require more than one interceptive procedure or more than one limited or comprehensive procedure depending on their problems.

AAPD	Position: Support Rationale: New codes to clarify the definitions of dentition.

Substantive Requests Inventory CDT 2023 March 2022

	Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**				

Remarks / Rationale for “Decline” / Explanation of “Other”
Requests 24a – 24e are related. Submissions 24b-e are withdrawn.

#	24b	American Association of Orthodontists	New	Revise	Delete	D8030	None Assigned
					X		

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~**limited orthodontic treatment of the adolescent dentition**~~

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
None.

AAPD	Position: Support Rationale: Elimination of obsolete terminology/codes. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
Withdrawn					

Remarks / Rationale for “Decline” / Explanation of “Other”
Requests 24a – 24e are related. Withdrawn

#	24c	American Association of Orthodontists	New	Revise	Delete	D8040	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
limited orthodontic treatment of the ~~adult~~ permanent dentition

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
None.

AAPD	Position: Support Rationale: Revision to current terminology. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
Withdrawn					

Remarks / Rationale for “Decline” / Explanation of “Other”
Requests 24a – 24e are related.

Substantive Requests Inventory CDT 2023 March 2022

#	24d	American Association of Orthodontists	New	Revise	Delete	D8080	None Assigned
					X		

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~**comprehensive treatment of the adolescent dentition**~~

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
None.

AAPD	Position: Support Rationale: Deletion due to current terminology. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
Withdrawn					

Remarks / Rationale for “Decline” / Explanation of “Other”
Requests 24a – 24e are related.

#	24e	American Association of Orthodontists	New	Revise	Delete	D8090	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
comprehensive treatment of the ~~adult~~ permanent dentition

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
None.

AAPD	Position: Support Rationale: Revision to current terminology. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
Withdrawn					

Remarks / Rationale for “Decline” / Explanation of “Other”
Requests 24a – 24e are related.

#	25a	American Association of Orthodontists	New	Revise	Delete	D8704	None Assigned
					X		

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~**replacement of lost or broken retainer - mandibular**~~

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
None.

AAPD	Position: Support Rationale: Elimination of arch designation in the descriptor, still indicated on the claim which arch. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
2	**22**				

Remarks / Rationale for “Decline” / Explanation of “Other”
Requests 25a – 25b are related. Created a generic retainer code which failed as majority wanted Mx/Mn codes.

Substantive Requests Inventory CDT 2023 March 2022

#	25b	American Association of Orthodontists	New	Revise	Delete	D8703	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~**replacement of lost or broken**~~ **retainer** ~~**- maxillary**~~
Descriptor Text (additions in blue underline; deletions in ~~red strike-through~~; unchanged in black)
Retainer which is a lost or broken replacement, supplemental, or is not part of orthodontic therapy or provided by dentist that did not perform the orthodontic therapy.

AAPD	Position: Support Rationale: Revision to separate from orthodontic treatment. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
2	**20**				

Remarks / Rationale for “Decline” / Explanation of “Other”
Requests 25a – 25b are related. Motion failed to amend 25a/25b. Original submissions failed and likely will be brought back next year after rethinking submissions.

Substantive Requests Inventory CDT 2023 March 2022

#	26a	American Association of Orthodontists	New	Revise	Delete	D8697	None Assigned
					X		

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~**repair of orthodontic appliance – mandibular**~~

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~Does not include bracket and standard fixed orthodontic appliances. It does include functional appliances and palatal expanders.~~

AAPD	Position: Support Rationale: Elimination of code (see 26b). Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
5	**17**				

Remarks / Rationale for “Decline” / Explanation of “Other”
Requests 26a – 26b are related.

Substantive Requests Inventory CDT 2023 March 2022

#	26b	American Association of Orthodontists	New	Revise	Delete	D8696	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
repair of orthodontic appliance ~~– maxillary~~
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Does not include ~~bracket and~~ standard fixed orthodontic appliances (brackets, arch wires). It does include ~~functional appliances and palatal expanders~~ fixed or removable adjunctive appliances.

AAPD	Position: Support Rationale: Revision to reflect repair of appliances which are not arch dependent or may involve both arches. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
5	**17**				

Remarks / Rationale for “Decline” / Explanation of “Other”
Requests 26a – 26b are related.

Substantive Requests Inventory CDT 2023 March 2022

#	27	American Association of Orthodontists	New	Revise	Delete	D9450	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
case presentation, subsequent to detailed and extensive treatment planning
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~Established patient. Not performed on same day as evaluation.~~

AAPD	Position: Support Rationale: Revision to allow presentation on the same day. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
18	**4**				

Remarks / Rationale for “Decline” / Explanation of “Other”

Substantive Requests Inventory CDT 2023 March 2022

#	28	Nobio Inc.	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
therapeutic antimicrobial treatment; for inhibiting demineralization at tooth – restoration interface and potential reduction of secondary caries

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
None

AAPD	Position: Oppose separate code Rationale: New composite properties, not technique. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
0	**22**				

Remarks / Rationale for “Decline” / Explanation of “Other”

Substantive Requests Inventory CDT 2023 March 2022

#	29	AAPHD / ODA / OHSU	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
vaccine administration – human papillomavirus
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Gardasil 9 0.5mL intramuscularly vaccine injection.

AAPD	Position: Support Rationale: New code to report usage of new procedure. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
20	**2**				

Remarks / Rationale for “Decline” / Explanation of “Other”
Revised to three submissions for three doses.

Substantive Requests Inventory CDT 2023 March 2022

#	30	National Association of Dental Plans (NADP)	New	Revise	Delete	D0210	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~intraoral – Intra-oral – complete~~comprehensive **series of radiographic images**
Descriptor Text (additions in blue underline; deletions in ~~red strike-through~~; unchanged in black)
A radiographic survey of the whole mouth~~, usually consisting of 14-22 periapical and posterior bitewing images or~~ intended to display the crowns and roots of all teeth, periapical areas, interproximal areas and alveolar bone including edentulous areas.

AAPD	Position: Support (Supported by AAOMR) Rationale: Revision to allow for different technology and methodology. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**				

Remarks / Rationale for “Decline” / Explanation of “Other”
Amended to add back intraoral and add “including edentulous areas”. Passed 22-0

Substantive Requests Inventory CDT 2023 March 2022

#	31	National Association of Dental Plans (NADP)	New	Revise	Delete	D3333	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
internal root repair of perforation defects
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Non-surgical seal of perforation caused by resorption and/or decay but not iatrogenic by same provider ~~filing claim~~.

AAPD	Position: Support Rationale: Clarification of current procedure to not cover iatrogenic perforations. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
13	**8**	**1**			

Remarks / Rationale for “Decline” / Explanation of “Other”
Wordsmithing.

Substantive Requests Inventory CDT 2023 March 2022

#	32a	National Association of Dental Plans (NADP)	New	Revise	Delete	D5725	None Assigned
					X		

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~**rebase hybrid prosthesis**~~
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~Replacing the base material connected to the framework.~~

AAPD	Position: Support Rationale: Replaced by new code proposal 32b and 32c to reflect arch. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
Withdrawn					

Remarks / Rationale for “Decline” / Explanation of “Other”
Submissions 32a – 32c are related. 32b and 32c withdrawn.

Substantive Requests Inventory CDT 2023 March 2022

#	32b	National Association of Dental Plans (NADP)	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
rebase hybrid prosthesis - maxillary
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Replacing the base material connected to the framework.

AAPD	Position: Support Rationale: Replaced by new code proposal 32b and 32c to reflect arch. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
Withdrawn					

Remarks / Rationale for “Decline” / Explanation of “Other”
Submissions 32a – 32c are related. Withdrawn

Substantive Requests Inventory CDT 2023 March 2022

#	32c	National Association of Dental Plans (NADP)	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
rebase hybrid prosthesis - mandibilar
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Replacing the base material connected to the framework.

AAPD	Position: Support Rationale: Replaced by new code proposal 32b and 32c to reflect arch. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
Withdrawn					

Remarks / Rationale for “Decline” / Explanation of “Other”
Submissions 32a – 32c are related. Withdrawn

Substantive Requests Inventory CDT 2023 March 2022

#	33a	National Association of Dental Plans (NADP)	New	Revise	Delete	D5765	None Assigned
					X		

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
~~**soft liner for complete or partial removable denture – indirect**~~
Descriptor Text (additions in blue underline; deletions in ~~red strike-through~~; unchanged in black)
~~A discrete procedure provided when the dentist determines placement of the soft liner is clinically indicated.~~

AAPD	Position: Support Rationale: Replaced by new code proposal 33b and 33c to reflect arch. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
Withdrawn					

Remarks / Rationale for “Decline” / Explanation of “Other”
Submissions 33a – 33c are related.

Substantive Requests Inventory CDT 2023 March 2022

#	33b	National Association of Dental Plans (NADP)	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
soft liner for complete or partial removable denture – indirect, maxillary
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
A discrete procedure provided when the dentist determines placement of the soft liner is clinically indicated.

AAPD	Position: Support Rationale: Replaced by new code proposal 33b and 33c to reflect arch. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
Withdrawn					

Remarks / Rationale for “Decline” / Explanation of “Other”
Submissions 33a – 33c are related.

Substantive Requests Inventory CDT 2023 March 2022

#	33c	National Association of Dental Plans (NADP)	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
soft liner for complete or partial removable denture – indirect, mandibular
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
A discrete procedure provided when the dentist determines placement of the soft liner is clinically indicated.

AAPD	Position: Support Rationale: Replaced by new code proposal 33b and 33c to reflect arch. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
Withdrawn					

Remarks / Rationale for “Decline” / Explanation of “Other”
Submissions 33a – 33c are related.

#	34a	AAPHD / ODA	New	Revise	Delete	D1701	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Pfizer-BioNTech Covid-19 vaccine administration – first dose; adults 12 yrs and older
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
SARSCOV2 COVID-19 VAC mRNA 30mcg/0.3mL IM DOSE 1

AAPD	Position: Support Rationale: Provides a method to document vaccine administration by the dental team. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
withdrawn					

Remarks / Rationale for “Decline” / Explanation of “Other”
Submissions 34a – 34e are related.

Substantive Requests Inventory CDT 2023 March 2022

#	34b	AAPHD / ODA	New	Revise	Delete	D1702	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Pfizer-BioNTech Covid-19 vaccine administration – second dose; adults 12 yrs and older
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
SARSCOV2 COVID-19 VAC mRNA 30mcg/0.3mL IM DOSE 2

AAPD	Position: Support Rationale: Provides a method to document vaccine administration by the dental team. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
withdrawn					

Remarks / Rationale for “Decline” / Explanation of “Other”
Submissions 34a – 34e are related.

Substantive Requests Inventory CDT 2023 March 2022

#	34c	AAPHD / ODA	New	Revise	Delete	D1703	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Moderna Covid-19 vaccine administration – first dose; adults 18 yrs and older
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
SARSCOV2 COVID-19 VAC mRNA 100mcg/0.5mL IM DOSE 1

AAPD	Position: Support Rationale: Provides a method to document vaccine administration by the dental team. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
withdrawn					

Remarks / Rationale for “Decline” / Explanation of “Other”
Submissions 34a – 34e are related.

Substantive Requests Inventory CDT 2023 March 2022

#	34d	AAPHD / ODA	New	Revise	Delete	D1704	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

Moderna Covid-19 vaccine administration – first dose; adults 18 yrs and older – (SHOULD REFLECT 2ND DOSE – ERROR)

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

SARSCOV2 COVID-19 VAC mRNA 100mcg/0.5mL IM DOSE 1 (ERROR – SECOND DOSE)

AAPD

Position: Support

Rationale: Provides a method to document vaccine administration by the dental team.

Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
withdrawn					

Remarks / Rationale for “Decline” / Explanation of “Other”

Submissions 34a – 34e are related.

Substantive Requests Inventory CDT 2023 March 2022

#	34e	AAPHD / ODA	New	Revise	Delete	D1705	None Assigned
				X			

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Janssen Covid-19 vaccine administration; adults 18 yrs and older
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
SARSCOV2 COVID-19 VAC Ad26 5x1010 VP/.5mL IM SINGLE DOSE

AAPD	Position: Support Rationale: Provides a method to document vaccine administration by the dental team. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
withdrawn					

Remarks / Rationale for “Decline” / Explanation of “Other”
Submissions 34a – 34e are related.

#	35	AAPHD / ODA	New	Revise	Delete	DXXXX	None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

This is a request for the addition of 13 Covid-19 Vaccine Administration procedure codes – nomenclatures and descriptors for each follow.
Pfizer-BioNTech Covid-19 vaccine administration – third dose; adults 18 yrs and older, Immunocompromised
SARSCOV2 COVID-19 VAC mRNA 30mcg/0.3mL IM DOSE 3
Pfizer-BioNTech Covid-19 vaccine administration – booster dose; adults 18 yrs and older, 65 yrs older, or high risk category
SARSCOV2 COVID-19 VAC mRNA 30mcg/0.3mL IM DOSE BOOSTER
Moderna Covid-19 vaccine administration – third dose; adults 18 yrs and older, Immunocompromised
SARSCOV2 COVID-19 VAC mRNA 100mcg/0.5mL IM DOSE 3
Moderna Covid-19 vaccine administration – booster dose; adults 18 yrs and older, 65 yrs older, or high risk category
SARSCOV2 COVID-19 VAC mRNA 50mcg/0.25mL IM DOSE BOOSTER
Janssen Covid-19 Vaccine Administration - booster dose; adults 18 yrs and older
SARSCOV2 COVID-19 VAC Ad26 5x1010 VP/.5mL IM DOSE BOOSTER
Pfizer-BioNTech Covid-19 vaccine administration tris-sucrose – first dose; pediatric; adults 12 yrs and older
SARSCOV2 COVID-19 VAC mRNA 30mcg/0.3mL tris-sucrose IM DOSE 1
Pfizer-BioNTech Covid-19 vaccine administration tris-sucrose – second dose; pediatric; adults 12 yrs and older
SARSCOV2 COVID-19 VAC mRNA 30mcg/0.3mL tris-sucrose IM DOSE 2
Pfizer-BioNTech Covid-19 vaccine administration tris-sucrose pediatric – first dose; children 5 yrs to <12 yrs
SARSCOV2 COVID-19 VAC mRNA 10mcg/0.2mL tris-sucrose IM DOSE 1
Pfizer-BioNTech Covid-19 vaccine administration tris-sucrose pediatric – second dose; children 5 yrs to <12 yrs
SARSCOV2 COVID-19 VAC mRNA 10mcg/0.2mL tris-sucrose IM DOSE 2
Pfizer-BioNTech Covid-19 vaccine administration tris-sucrose pediatric – first dose; children ? mos/yrs to <5 yrs
SARSCOV2 COVID-19 VAC mRNA tris-sucrose dose/strength TBD
Pfizer-BioNTech Covid-19 vaccine administration tris-sucrose pediatric – second dose children ? mos/yrs to <5 yrs
SARSCOV2 COVID-19 VAC mRNA tris-sucrose dose/strength TBD
Moderna Covid-19 vaccine administration – first dose; Children 6 yrs to <12 yrs children ? mos/yrs to <5 yrs
SARSCOV2 COVID-19 VAC mRNA dose/strength TBD
Moderna Covid-19 vaccine administration – second dose; Children 6 yrs to <12 yrs
SARSCOV2 COVID-19 VAC mRNA dose/strength TBD

Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

Descriptors for each requested new code are in 2a) above (in regular font, not bold face)

Substantive Requests Inventory CDT 2023 March 2022

AAPD	Position: Support Rationale: Provides a method to document vaccine administration by the dental team. Comment: None.

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
20	**2**				

Remarks / Rationale for “Decline” / Explanation of “Other”
Revised by brand and dose for Pfizer, moderna, jannsen. Simplified to third dose and Pfizer peds first and second dose.

Substantive Requests Inventory CDT 2023 March 2022

Substantive Requests Inventory CDT 2023 March 2022

#	CMC2	CMC	New	Revise	Delete		None Assigned
			X				

Nomenclature Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)
Make vaccine codes part of CDT2022
Descriptor Text (additions in **blue underline**; deletions in ~~red strike-through~~; unchanged in **black**)

AAPD	

Code Maintenance Committee Action (e.g., Motion to Accept)

Vote			Decision		
Yea	Nay	Abstain	Accept	Decline	Other
22	**0**				

Remarks / Rationale for “Decline” / Explanation of “Other”

Council on Membership and Membership Services 2021–2022

Jennifer Cully, NC District, Chair
Paul A. Kennedy, III, Board Liaison
Members
Craig E. Elice, NE District
Meredith Gentry Byrd, SE District
Matthew Schieber, NC District
Oshmi Dutta, SW District
Michael Suh, W District
Tonya Fuqua, Affiliate Member
Consultants
Christian Cabello
Paula Coates
Lauren Maxime Feldman
Tanesha M. Francis
Dylan Stewart Hamilton
Kaitlin Elizabeth Jennison
Jarod William Johnson
Shari C. Kohn
Anthea Drew Mazzawi
Adam R. Silevitch
Derek S. Zurn
Willie Chao, International Consultant
Staff Liaison
Suzanne A. Wester, Senior Membership and Chapter Relations Director

Vision

The vision of the Council on Membership and Membership Services is to evaluate, address and support the needs of the membership and to promote the growth and longevity of the Academy.

Duties

The duties of the Council on Membership and Membership Services, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to: 1) monitor membership trends; 2) make recommendations to the Board of Trustees regarding mechanisms for recruiting and retaining members; 3) perform such other duties as assigned by the President or the Board of Trustees.

Council on Membership and Membership Services, 2021–2022

Standing Charges

Charge 1

Provide an ongoing review and evaluation of AAPD membership benefits and services, including the proposal of new or additional benefits and services, including the online and printed membership directory reporting to the Board of Trustees on an annual basis, using the data from the current Member Needs Assessment. Provide an annual report on the current value and benefits of Academy membership along with a statement regarding the anticipated need for any unusual increase in funds necessary to maintain or increase those services.

Background and Intent: This is a standing charge to the Council. Recognizing that 92 - 94% of eligible pediatric dentists belong to the Academy, the council should focus on membership retention and maintenance of active status after conversion of student membership. Membership benefits and services are important to this effort. The Council will develop mechanisms for tracking demographics of membership benefits and include this information in its annual report to the Board.

Progress Report

The council has been using the Little Teeth Chat forum to discuss possible new membership benefits. Especially interesting to the council is the use of the AAPD's Social Media Library. The council was waiting on the re-launch of mychildrensteeth.org which is now complete. The council's plan is to promote the use of the Social Media Library in an article in Pediatric Dentistry Today (PDT).

Charge 2

Encourage and support the development of new pre-doctoral chapters, with the assistance and advice of the Council on Pre-Doctoral Education. Create the "Predoctoral Tool Kit" as outlined by the Task for Enhancing the Value of General Dentists Membership. Report annually to the Board at the May meeting on these pre-doctoral chapters as to their numbers and activities.

Background and Intent: This is a standing charge to the Council. Increasing numbers of pediatric dental training positions require an increasing pool of qualified applicants. Pre-doctoral membership in AAPD serves to increase student interest and awareness of the pleasures, rewards and opportunities of treating children, whether as a general dentist or specialist. It also offers opportunities for contact and mentoring with pediatric dentists early in the educational process.

Progress Report

This charge will be removed from the Council on Membership and Membership Services and moved to the Resident Committee for 2022-2023, as it does not fit the scope of this council.

Charge 3

To periodically review and make recommendation on criteria, recognition and process for AAPD Fellow status.

Background and Intent: As the revised fellow program continues to grow new criteria may need to be added based on new and evolving programs.

Progress Report

Per suggestion from council members, the council recommended extending the renewal process for fellows who have been affected by COVID-19. Some fellows were not able to participate in volunteer events, CE events, etc., that would have contributed to their fellow renewal and we felt it was best for the membership to extend the deadline to renew.

Charge 4

Coordinate and oversee a work group that will oversee the electronic revision of the New Dentists Beginning Guide to Practice.
Background and Intent: Follow through on the recommendation of the Millennial Members Task Force.

Progress Report

The Committee on ECPD has been working to establish a "Frequently Asked Questions" section to replace the Guide for Early Career Pediatric Dentist. Per ECPD Chair Scott Schwartz's report this charge is ongoing.

We will be utilizing information gained from the Membership Survey to continue development of this charge.

Charge 5

Create recruitment ideas and membership reinstatement strategies for former AAPD constituents whose dues have lapsed during the last year.
Background and Intent: AAPD membership numbers have been affected by COVID-19. The Council will develop ideas and strategies to reinstate those members who have let their dues lapse either intentionally or unintentionally due to the pandemic.

Progress Report

The council has been using the Little Teeth Chat platform to discuss ideas to increase recruitment. Members commented on LTC about why AAPD Membership is important to them and what they perceived as benefits. Suzanne Wester will be using this information when reaching out to members who have allowed their membership to lapse.

Council on Membership and Membership Services, Committee on Early Career Pediatric Dentists 2021–2022

Scott B. Schwartz, NC District, Chair
Paul A. Kennedy, III, Board Liaison
Members
Lynda Susan Asadourian, NE District
D. Kennon Curtis, Jr., SE District
Brittaney Hill, NC District
Mitchell Glass, SW District
Alexis Bailey Capeci, SW District
Catherine Ashley Orynich, SW District
Consultants
Suzanne D. Baker
Premjeet K. Brar
Lynne Cataldo
Daniel B. Claman
Ziyad Effendi
Christine L. Hammer
D. Harvey Lee
Tehemina Gagrat Richardson
Hassam Sultan
Harlyn K. Susarla
Courtney P. Uselton
Erin R. Wilson
Ex Officio Members
Jennifer Cully (Chair, Council on Membership and Membership Services)
Jessica Baron/Nicholas Rodriguez (Chair, Pediatric Dental Residents Committee)
Staff Liaison
Suzanne A. Wester, Senior Membership and Chapter Relations Director

Council on Membership and Membership Services,
Committee on Early Career Pediatric Dentists, 2021–2022

Vision

Duties

The duties of the Council on Membership and Membership Services, New Pediatric Dentist Committee, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to: 1) encourage the participation of new pediatric dentists in AAPD activities; 2) make recommendations to the Board of Trustees regarding issues of interest to new pediatric dentists; 3) perform such other duties as assigned by the President or the Board of Trustees.

Standing Charges

Charge 1

In conjunction with the Councils on Annual Session and Continuing Education, provide planning and execution for a continuing education course directed to the early career pediatric dentist. The committee will recommend speakers to the Councils on Annual Session and Continuing Education, based on a targeted-needs assessment of early career pediatric dentists.
Background and Intent: This is a standing charge to the Committee. The intent of this charge is to attract early career pediatric dentists to annual session and AAPD membership.

Progress Report

The full line-up has been finalized. There was difficulty in recruiting speakers for this Annual Session, as many individuals are uncertain of attendance in-person given the pandemic. Nevertheless, we have a diverse array of subject areas that should produce an interesting and thought-provoking course.

ECPD Course 2022 Speakers:

- Mamiko Kuriya – Mesiodens Extractions: Why, When, and How
- David Rothman – Dispelling Dental Myths
- Justin Welke – Frenotomies
- Stephen Wilson – Sedation Drugs
- Jennifer Cully – Working with Medical Colleagues and Pediatric Specialists
- Patrick Ruck – Zirconia is Hard, but the Preps Don't Have To Be!
- Corey Hastings – Practice Bootcamp

Charge 2

Provide input to the Council on Annual Session and AAPD staff to enhance the experience of events specific for early career pediatric dentists at Annual Session.
Background and Intent: This is an update to this charge to the Committee. We will take on a more active role by making recommendations to the Council on Annual Session on events specific to early career pediatric dentists, such as the New Dentists Happy Hour. It is the intent of the Board to encourage membership in the Academy beyond the years of graduate education and to build a sense of "community" with the Academy and with pediatric dental colleagues. A social occasion for early career pediatric dentists at the

annual session can provide recognition of the importance we place on our future colleagues and leaders. It is important to provide a structure to the occasion which emphasizes the elements of active Academy membership, attendance at our annual meetings, and the inclusiveness of our organization.

Progress Report

No feedback was solicited from the ECPD regarding the New Dentist Happy Hour for the 2022 AS. Post-meeting feedback will be delivered as normal.

Charge 3

Assist the Council on Membership with updating the "Guide for Early Career Pediatric Dentists." This will continue to be a member benefit, and will be updated as needed.
Recommend methods of gathering information on the professional needs and expectations of these groups in an effort better meet their perceived needs and make them aware that addressing their needs are important to the Academy.
Background and Intent: In an effort to keep the conversion and retention rates of the young pediatric dentists at optimal values it is important not only to be aware of their needs and desires if we are to address them but also to have readily available talking points to educate these groups on the value of an AAPD membership for their lifetime.

Progress Report

There has been some difficulty in getting FAQ off the ground, but there has been some movement. Additional attempts will be made to engage the committee to continue this work.

Charge 4

Develop meaningful ways for the Early Career Pediatric Dentist Committee to collaborate with the Resident Committee to reach members as they transition from training to practice.
Background and Intent: The Early Career Pediatric Dentist Committee supports members for their first ten years out of practice, which represents a large cohort of individuals in various states of their career. Providing meaningful collaboration between new graduates and ECPDs will provide members in this transitional window unique support and opportunities to become acquainted with the AAPD.

Progress Report

A Wufoo form has been developed for individuals to submit new ideas for *Newly Erupted*. In a virtual meeting during the Winter Planning Meeting, Resident Committee and ECPD Committee discussed having Town Halls with panel discussions on various topics.

Council on Membership and Membership Services, Pediatric Dental Resident Committee 2021–2022

Chairs:
Jessica Baron, NE District – October 2020-October 2021
Nicholas Rodriguez, NE District – October 2021-October 2022
Paul A. Kennedy, III, Board Liaison
Members
Fredrick Harris (St. Joseph's University Medical Center, 2022) – NE District
Kelechi Okereke (Howard University, 2022) – SE District
David Danesh (OSU/Nationwide Children's Hospital, 2022) – NC District
Christina Nunez (University of Illinois at Chicago, 2022) – NC District
Christy Tran (NYU Langone-Springfield, MO, 2022) – NC District
Naheed Ahmad (NYU Langone-San Diego, CA, 2022) – W District
Freshman Consultants
Jennifer K. Chou (New York Presbyterian/Columbia University, 2023)
Sydney Shapiro (New York Presbyterian/Columbia University, 2023)
Chinelo Eke (Virginia Commonwealth University/ Children's Hospital of Richmond PD, 2023)
Jennifer Lee (Ohio State University, Nationwide Children's Hospital, 2023)
Brittany Schweiger (Ohio State University, Nationwide Children's Hospital, 2023)
Raymond Lee (University of Washington, 2023)
Senior Consultants
DeJa Alexander, SE District
Amber Renee Clark, W District
Joshua Daniel Evans, NC District
Sarah Khan, NE District
Nehemiah Deonte Lawson, SW District
Jillian Muhlbauer, NE District
Maya Thompson, NE District
Michelle Zin, SW District
Ex Officio Member
Jennifer Cully (Chair, Council on Membership and Membership Services)
Staff Liaison
Suzanne A. Wester, Senior Membership and Chapter Relations Director

Council on Membership and Membership Services, Pediatric Dental Resident Committee, 2021–2022

Vision

The vision of the Resident Committee is to evaluate, address, and support the needs and desires of residents in order to establish a lifelong relationship with the AAPD.

Duties

The duties of the Council on Membership and Membership Services, Pediatric Dental Resident Committee, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to: 1) provide a forum for residents' issues and a communications mechanism to link residents across the country; 2) facilitate opportunities for residents to contribute to AAPD activities and initiatives; 3) assist residents' education about the AAPD as well as current issues facing pediatric dentistry on a local, national, and global level; and 4) cultivate future pediatric dentistry leaders.

Standing Charges

Charge 1

Evaluate every two (2) years the results of the two surveys distributed to new residents in the first year and to graduating residents, that would address what residents are looking for that would promote continued membership. Present to the Board at its Winter meeting.

Background and Intent: The intent of this charge is to gain information from incoming and outgoing residents about needs specific to the pediatric dental resident.

Progress Report

Graduating resident survey to be sent out around April/May 2022-will be finalizing questions by early Spring 2022.

Charge 2

Evaluate residents' resources on the AAPD website, print and in email communications; and advise and suggest content.

Background and Intent: The intent of this charge is to promote greater awareness of and interest in using the AAPD website and the residents' community page.

Progress Report

Social media presence has made progress. Articles for the PDT have been consistently written highlighting residents and other important topics.

Charge 3

Present a list of interested first year residents to the Board of Trustees every October for approval to be members of the Residents Committee. Members must understand that this a two to three year commitment. Continue to review and update as necessary methods to increase continuity and improve participation.

Background and Intent: The intent of this charge is to maintain higher levels of productivity within the constantly changing Residents Committee make-up so that residents are adequately represented within the AAPD.

Council on Membership and Membership Services,
Pediatric Dental Resident Committee, 2021–2022

Progress Report
New members were selected. We used a new rubric to select the members.

Charge 4

Coordinate and evaluate solicitation by residents of brief articles featuring residents doing innovative and interesting activities in their training programs for the Residents Recognition Award. Up to four awards will be given each year. The winners will published on the AAPD website and in PDT on a quarterly basis. Present guidelines for article submission and scoring criteria to the Board of Trustees annually in May.
Background and Intent: The intent of this charge is to promote greater awareness of and interest in using the AAPD website and residents' community page.

Progress Report
Three residents are in the process now for selection.

Charge 5

Document duties and responsibilities of chair. Documents instructions for all standing charges for future members to follow.
Background and Intent: To give future resident committee members instructions for the standing charges.

Progress Report
A Google drive was established to lay the groundwork for the roles of each person per charge as well as other helpful information. Document will continue to be updated.

Project Charges

Charge 6

Select several members of the resident's committee to serve on an AAPD committee for the podcast "Newly Erupted." New members will be selected each year to serve on the committee.
Background and Intent: The intent of this charge is to engage residents, new graduates, and the organization at large in relevant topics geared specifically towards residents and new graduates.

Progress Report
Members have been in contact with the newly erupted committee.

Charge 7

Contribute, manage and edit the "Resident's Corner," of Pediatric Dentistry Today. The committee members will be responsible for finding relevant content and writers.
Background and Intent: The intent of this charge is to engage and educate AAPD on topics relevant to residents.

Progress Report
Content has been continuously created for the PDT that engages audiences.

Council on Membership and Membership Services,
Pediatric Dental Resident Committee, 2021–2022

Charge 8

Develop meaningful ways for the Residents Committee to collaborate with the Pre-Doctoral Chapters to reach dental students interested in pediatric dentistry.
Background and Intent: Providing meaningful collaboration between dental students and resident members interested in AAPD and pediatric dentistry.

Progress Report

Starting groundwork communication with doctoral programs through social media outlets.

Council on Membership and Membership Services, Committee on Communications 2021–2022

Reza Ardalan, SE District, Chair
Jonathon E. Lee, Board Liaison
Members
Jonelle Grant Anamelechi, NE District
Teresa Fong, NC District
C. Ashley Orynich, SW District
Ryan S. Roberts, SW Disrict
Felicity Hardwick, W District
Tory McFarlin, Affiliate Member
Consultants
Lisa B. Bienstock
Mary Elizabeth Bisese
Lauren Maxime Feldman
Cesar D. Gonzalez
Kristoffer A. Norbo
Andrew S. Zale
Ex Officio Member
Jennifer Cully (Chair, Council on Membership and Membership Services)
Staff Liaison
Cynthia Hansen, Publications Director

Vision

The vision of the Committee of Communications is to interact as an advisory body to the AAPD staff and serve as consultants when required.

Duties

The duties of the Council on Membership and Membership Services, Committee on Communications, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to: 1) periodically review communications concerning AAPD member services and make recommendations for enhancement of such communications; 2) periodically review PDT (Pediatric Dentistry Today) and assist with the development of reader surveys and other feedback mechanisms to enhance the magazine's quality-- with an ultimate goal of making PDT the premier magazine for children's oral health care issues; 3) make recommendations and justifications regarding the need for the development of new AAPD publications, including books; 4) perform such other duties as assigned by the President or the Board of Trustees.

Council on Membership and Membership Services,
Committee on Communications, 2021–2022

Standing Charges

Charge 1

Interact as an advisory body to the staff in charge of all publications (including online presence) and serve as consultants when required or at the request of the staff.
Background and Intent: This is a standing charge to the committee.

Progress Report

A new and updated brochure for SDF has been commissioned by the AAPD. Initial text was given to the Communications Committee to compare with the existing brochure text. Communications Committee has reviewed and made comments and suggestions and submitted. Currently, we are waiting to review the final draft once it has been given to us.

Charge 2

Seek out and determine AAPD members to serve as Social Media Influencers.
Background and Intent: A social media influencer is a user who has established credibility in a specific industry, has access to an extensive audience and can persuade others to act based on their recommendations. An influencer has the tools and authenticity to attract many viewers consistently and can motivate others to expand their social reach. Influencer marketing is an effective way to reach interested consumers.

Progress Report

No progress has been made from this committee as of the last report. Previously, the AAPD BOT Moved to Develop a Draft AAPD Social Media Influencer Policy and Procedure that includes Role Description and an AAPD Critical Response Communications Flow Chart for which AAPD Social Media Influencers can reference when communicating issues between the membership and AAPD.

Project Charges

Charge 3

Working with the Council on Government Affairs Dental Benefits Committee, create an AAPD-branded dental insurance educational brochure.
Background and Intent: The committee feels that the AAPD Membership would benefit with the production of a patient education brochure on dental insurance that (1) explains the difference between dental and medical insurance and (2) promoting the message that optimal dental care is best determined by the patient and dentist than by the insurance coverage. The description of dental insurance would include information such as: Dental insurance has annual maximums; the Explanations of Benefits and Pre-Determinations are no guarantee of payment or reimbursement; dental insurance is more like a pre-payment plan; and the difference between In-network and Out of Network.

Currently, the American Dental Association and the Canadian Dental Association have similar brochures. An AAPD-branded brochure would build upon those brochures.

Council on Membership and Membership Services,
Committee on Communications, 2021–2022

Progress Report

Copy of text for the Insurance Brochure was given to the Communications Committee Chair and was disseminated to the Committee for review. Comments were tabulated and given to the AAPD in order to assist in the creation of the brochure. Currently, we are waiting for final review of the brochure once it is ready..

Council on Membership and Membership Services, Affiliate Advisory Committee 2021–2022

Chair:
Vanessa G. Carpenter, Chair and Board Liaison
Members
Rhonda Dawn Switzer-Nadasdi, SE District
Hal S. Jeter, NC District
Twana Duncan, SW District
John Blake, W District
Kerry Maguire, Immediate Past Affiliate Trustee
Consultants
Nick Rogers
Council Liaisons
Matthew Geneser (Council on Annual Session, Scientific Program Committee)
Ronald H. Hsu (Council on Continuing Education)
Beau Meyer (Council on Pre-Doctoral Education)
Ex Officio Member
Jennifer Cully (Chair, Council on Membership and Membership Services)
Staff Liaison
Suzanne A. Wester, Senior Membership and Chapter Relations Director

Mission
To develop, strengthen and promote the complimentary roles of general dentist and specialist members as trusted colleagues in caring for children and persons with special needs, in congruence with the vision of the American Academy of Pediatric Dentistry.

Vision
To advance optimal oral health for children and persons with special needs in partnership with all members of the American Academy of Pediatric Dentistry.

Duties
The duties of the Council on Membership and Membership Services, Pediatric Dental Resident Committee, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to: 1) identify Affiliate members interested in participating in councils and committees of the AAPD, and convey this information to the President-elect for consideration during the appointments process; 2) identify and inform the Council on Membership and Membership Services on issues and concerns of Affiliate members, and make appropriate recommendations; 3) implement marketing strategies for maintaining and growing Affiliate

membership, based on recommendations of the 2015 Affiliate Task Force Report per the timeline approved by the Board of Trustees; 4) assist in the content development of any annual session or other CE programming targeted to Affiliate members; and 5) assist in support of Predoctoral Student Chapters, in collaboration with the Council on Predoctoral Education.

Standing Charges

Charge 1

Identify and develop Affiliate members for participation in AAPD Councils and Committees and at all levels of volunteer leadership. Report to the Board at its Winter meeting.

Background and Intent: The Affiliate Advisory Committee provides category infrastructure and leadership for Affiliate members nationwide. Affiliate member participation across AAPD Councils and Committees develops leadership potential, promotes diversity in member participation and builds relationships between general dentist and specialist colleagues.

Progress Report

Currently, there is an Affiliate Member on most of AAPD's councils and committees.
I have been consulting with Dr. Moursi as he makes his appointments, as well as with the District Trustees and the Council and Committee Chairs to fill any necessary vacancies and make sure we have an affiliate representation on each council and committee.
We have sent an E-Blast to recruit volunteers from the Affiliate membership.

Charge 2

Create robust avenues of communication across the membership category to identify Affiliate concerns. Inform and make recommendations to the Council on Membership and Membership Services to address issues and improve member relations.

Background and Intent: The "virtual" nature and nationwide (versus District) distribution of the Affiliate member category necessitates multiple avenues for communication.

Progress Report

The Affiliate Membership communications plan includes the "Affiliate Corner in the PDT, "Welcome" emails to all new members, and our Affiliate Caucus at the Annual Session.
We are also working on ways to communicate to Affiliate members through "Little Teeth Chats".

<u>The committee development of an "Affiliate Track".</u>
The Committee brought to the BOT at the ad-interim meeting, the idea of the development of a plan for an "Affiliate Track". The program would allow Affiliate Members to complete pre-defined activities to earn acknowledgement upon completion. The idea was not unanimously accepted, but after some "lively" discussion, there was consensus that the committee would work on developing an "Affiliate Track Program" and present the proposed track at the 2022 Winter Planning Meeting. Post ad-interim BOT meeting, there were discussions with member from various districts, BOT members, and Executive Committee members to get some direction as to components of the program that might be agreeable to all. Because of the extra time spent in discussions trying to find common ground for the

program there was not sufficient time to develop a comprehensive program to present. The Committee asked and was granted an extension to present the program framework at the Annual Session in May of 2023.

Charge 3

Collaborate with the Scientific Program Committee of the Council on Annual Session and the Council on Continuing Education to develop course material targeted to Affiliate members. Report to the Board at its May meeting.
Background and Intent: The AAPD is the recognized authority in oral care for children. AAPD–sponsored continuing education programs geared to the general dentist that incorporate emerging evidenced –based practices is a valued member benefit.

Progress Report

The Committee will continue to look at ways we can enhance the education of our affiliate members.

Charge 4

Work in collaboration with the Council on Pre-Doctoral Education to build interest in and advocacy for children's dental health during dental school. Promote the benefits of involvement with the AAPD through Student Chapter activities and subsequent conversion to Affiliate membership post-graduation. Report to the Board at its May meeting.
Background and Intent: Outreach activities at many dental schools are often focused on children's oral health, and hold broad appeal for students interested in general, pediatric and public health dentistry. Every dental student planning a career in general dentistry is a potential AAPD Affiliate member. Because the majority of U.S. children receive care from a family dentist, the AAPD is a key resource for general practitioners throughout their careers.

Progress Report

The framework for a Student Chapter Toolkit is now available on the AAPD website. It can be found at: https://www.aapd.org/resources/member/predoc-toolkit/.

Council on Post-Doctoral Education 2021–2022

Maria-Jose Cervantes Mendez, SW District, Chair
James R. Boynton, Board Liaison
Members
Tammy L. Thompson, NE District
Ruth W. Bol, SE District
David Avenetti, NC District
Jessica R. Webb, W District
Consultants
Stephen K. Brandt
Vineet Dhar
Suzanne Fournier
Cynthia Hipp
Janice G. Jackson
Thomas Tanbonliong, Jr.
Janice A. Townsend
Ex-Officio Members
Francisco Ramos-Gomez, Ex-Officio, Co-Chair, Society of Post-Doctoral Program Directors
Cynthia Wong, Ex-Officio, Co-Chair, Society of Post-Doctoral Program Directors
Staff Liaison
Leola Mitchell-Royston, Education Development and Academic Support Manager

Vision

To assist, support, and provide resources for post-doctoral pediatric dentistry programs to help assure that all advanced education students in pediatric dentistry receive optimal didactic and clinical education.

Duties

The duties of the Council on Post-Doctoral Education, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to: 1) recommend criteria for establishment of acceptable training for the current practice of pediatric dentistry; 2) monitor and recommend to the Board of Trustees activities concerning workforce issues; 3) perform such other duties as assigned by the President or the Board of Trustees.

Council on Post-Doctoral Education, 2021–2022

Standing Charges

Charge 1

Working with the Society of Post-Doctoral Program Directors (SPPD), plan and implement the Program Directors' Symposium (Academic Day) at the Annual Session.
Background and Intent: This is a standing charge to the Council to facilitate the meeting of the program directors in conjunction with the Annual Session. As the SPPD is an independent body, the charge from the Board of Trustees must be made to the Council on Post-Doctoral Education.

Progress Report

The 2022 Joint Academic Day (JAD) agenda features a combined session approach for pre- and post-doctoral program directors for the morning session and individual pre and post doc sessions in the afternoon. Presentations focus on medical and dental integration addressing social determinants of oral health. The agenda also includes updates from the American Board of Pediatric Dentistry, the International Association for Dental Research/American Association for Dental Research, and the AAPD In-Service Examination Committee.

Charge 2

Prepare and present to the Board of Trustees a biennially updated "core bibliography" of historical and contemporary literature citations appropriate for distribution to post-doctoral pediatric dental education programs and general membership. Consult with and seek input from the Committees on Sedation and Anesthesia and Special Health Care Needs for those sections of the bibliography needing review and updating.
Background and Intent: This list is updated biennially. The council shall seek subject experts from the committee on sedation and anesthesia, committee on special health care needs and others for input to the sections of the bibliography. The intent of the Council is to disseminate this information through the AAPD website and the post-doctoral directors' list serve.

Progress Report

Charge completed Summer 2021. Due to copyright regulations no hard copies of the articles will be distributed or sold. Only references to the articles will be distributed. Next update will be done in 2023.

Charge 3

Continue to assist the Society of Post-Doctoral Directors (SPDD) in advocating sufficient federal funding of grants such as faculty loan repayment programs and encourage applications and document faculty beneficiaries and asses the long term impact of such funding on recruitment of pediatric dental faculty.
Background and Intent: Resources are needed to address the income discrepancy between contemporary private practice and academics. It is important to develop ways to ease the financial burden of those entering academic careers. A critical method is to advocate for sufficient funding of this program and help document its impact.

Council on Post-Doctoral Education, 2021–2022

Progress Report

Ongoing charge, will continue to work with AAPD staff. Report will share deadlines and application information as received. Will review advocacy efforts to support Title VII funding and faculty loan repayment programs.

Project Charges

Charge 4

Working with the Council on Pre-Doctoral Education, create pathways for faculty mentorship and bring recommendations back to the Board by the Winter Meeting. Background and Intent: The intent of this charge is to improve junior faculty mentorship.

Progress Report

Working with the Pediatric Dentistry Seminar Series Task force to formalize the collaborative effort to offer a nationwide seminar series to support all pediatric programs. Ongoing program directors' monthly meetings. Will work in collaboration with the predoc council to support quarterly virtual joint meetings.

The council will work alongside the Academic Trustee and AAPD Educational staff to review applications for the Leadership in Education and Administration Program (LEAP).

Council on Post-Doctoral Education, Post-Doctoral Inservice Examination Committee 2021–2022

Brenda S. Bohaty, Chair
James R. Boynton, Board Liaison
Members
Fall and Spring Writers:
Clarice Law
Jillian A. Wallen
Fall Writers:
David M. Avenetti
Giulia Castrigano
Ann L. Greenwell
Spring Writers:
Lori R. Barbeau
Lina M. Cardenas
Scott Goodman
Jennifer Hill
Staff Liaison
Leola Mitchell-Royston, Education Development and Academic Support Manager

Vision

To support advanced education programs in Pediatric Dentistry by providing outcome measures for post-doctoral students which enable graduates to meet the oral health needs of infants, children, adolescents and those with special health care needs.

Duties

The duties of the Council on Post-Doctoral Education, Post-Doctoral In-Service Examination Committee, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to: 1) develop, monitor, implement and evaluate the Post-doctoral In-service Examination; 2) promote participation in the Post-doctoral In-service Examination among program directors; 3) perform such other duties as assigned by the President or the Board of Trustees.

Council on Post-Doctoral Education, Post-Doctoral Inservice Examination Committee, 2021–2022

Standing Charges

Charge 1

In conjunction with the National Board of Osteopathic Medical Examiners (NBOME) and the AAPD Headquarters Office staff, develop, market and analyze a standardized, psychometrically validated examination that measures residents' knowledge at the onset and completion of their advanced education program.

Background and Intent: A survey of program directors indicated strong support for the development of a standardized examination to be administered to entering and exiting post-doctoral students. Such a tool is necessary for outcomes measurements required by CODA and offers:

1) An outcome measure for each resident of their education
2) An outcome measure for each program of its residents relative to a national standard.

An examination was developed by the Inservice Examination Committee of the Council on Education and administered for the first time in 1999. The intent of this charge is to direct the Committee to continue to oversee the administration and grading of the exam, the assessment of exam validity, the communication with program directors, and the continual updating of the examination.

Progress Report

The committee has functioned virtually this year with collaboration with NBOME.

The examination continues to go well with administration through NBOME. Results for the outgoing class of 2022 were released on April 4th, 2022.

With guidance from NBOME staff, the Spring virtual meeting was used to draft the 2023 exam. This exam will be reviewed and readied for the next cycle. The fall meeting is expected to be held in person at NBOME and at that meeting we will be writing and revising items.

Dr. Stuart Josell and Dr. Ann Greenwell requested to discontinue working on the committee as they have both retired from practice/academics. Dr. Scott Goodman joined the committee as has experience/ training in orthodontics and pediatric dentistry. Dr. Jill Wallen has requested to remain on the committee and will participate as she can due to her recent move to become Dean, Creighton College of Dentistry.

Although the committee has functioned reasonably well during the Pandemic we are hopeful to return to "in-person" meetings beginning in the Fall, 2022 as the creativity and test item discussions are more robust using that forum is valuable.

Council on Pre-Doctoral Education 2021–2022

Shantanu Lal, NE District, Chair
James R. Boynton, Board Liaison
Members
Zameera Fida, NE District
Timothy B. Followell, SE District
Tad Mabry, NC District
Priyanshi Ritwik, SW District
Neda Modaresi, W District
Joan Kowolik, Affiliate Member
Consultants
Diana M. Capobianco
Mehedia Haque
Beau D. Meyer
Bruce Riggs
Liliana Rozo Gaeth
Adriana Modesto Vieira
Brenda S. Bohaty, Expert Consultant
Alton G. McWhorter, Expert Consultant
John B. Thornton, Jr., Expert Consultant
Staff Liaison
Leola Mitchell-Royston, Education Development and Academic Support Manager

Vision

To promote the oral health of children by supporting pre-doctoral pediatric dental education to assure that graduating general dentists can provide the highest level of pediatric dental care.

Duties

The duties of the Council on Pre-Doctoral Education, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to: 1) monitor and recommend to the Board of Trustees activities concerning pre-doctoral pediatric dentistry education; 2) perform such other duties as assigned by the President or the Board of Trustees.

Standing Charges

Charge 1

Facilitate the meeting of pediatric pre-doctoral program directors at the AAPD Annual Session. Report on the agenda and other particulars of the previous meeting to the

Board of Trustees at its Ad Interim meeting and on plans for the following meeting as developed.
Background and Intent: The pediatric pre-doctoral program directors will serve as an intellectual resource for the Council on Pre-Doctoral Education. This meeting will serve as a vehicle for collaborative information exchange.

Progress Report

We identified new leader to lead the Predoctoral Program Directors: Chaitanya Puranik DDS (chair). A draft agenda item for Predoc JAD is being finalized.

The Predoc council and Predoc directors also engaged on a conference call with the ADA Department of testing services to discuss the Integrated National Board Dental Examination (INBDE) and ADAT with a focus on curricular changes and impact on timing of student applications to residency programs. The meeting was most informative and helped the predoc community better understand the changes that lie ahead. A recording of the session is available for review as needed.

The predoc council and directors meet virtually every month to review current topics and charges.

Charge 2

Distribute to predoctoral directors within Departments of Pediatric Dentistry or their academic counterparts an Advisory List of Integral Experiences that constitute a predoctoral pediatric dental education curriculum that meets or exceeds the basic requirements for clinical competency and disseminate the AAPD Predoctoral Literature Review List comprised of references (books and articles) to supplement the predoctoral curriculum. Both lists are to be reviewed biannually.
Background and Intent: Competent and qualified general dental practitioners are integral to the AAPD's vision to provide the highest level of care to all children. It is the intent of this charge to develop a dynamic literature review list in pediatric dentistry to which pre-doctoral dental students should be exposed during their education. It is the intent of the Council to disseminate this information via the AAPD website and pre-doctoral directors' list serve.

Progress Report

Subcommittees were formed by topic to review and suggest updates to the literature review list. This process is currently underway. The Chair is working on updating the Integral Experiences list.

The integral experiences were based on CODA standards that may have since been modified. The literature review list may need to include current topics such as SDF and other updates to the AAPD guidelines.

Project Charges

Charge 3

Working with the Council on Post-Doctoral Education, create pathways for faculty mentorship and bring recommendations back to the Board by the Winter Meeting.
Background and Intent: The intent of this charge is to improve junior faculty mentorship.

Council on Pre-Doctoral Education, 2021–2022

Progress Report

Quarterly joint meetings with the Pre- and Post-doc groups serve as an opportunity to collaborate on mentorship for faculty.

Council on Scientific Affairs 2021–2022

Jung-Wei Anna Chen, W District, Chair
Carlos A. Bertot, Board Liaison
Members
Yasmi O. Crystal, NE District
Kimon Divaris, SE District
Soraya M. Beiraghi, NC District
Erin Ealba Bumann, SW District
Jessica Webb, W District
Amy Kim, Affiliate Member
Consultants
Homa Amini
Tegwyn H. Brickhouse
Donald L. Chi
Vineet Dhar
Jennifer Hill
Gajanan Kulkarni
Naomi Lane
Man Wai Ng
Kimberly Kay Patterson
R. Glenn Rosivack
Allison Scully
Julio E. Sotillo
Harlyn Kaur Susarla
Anne R. Wilson
J. Timothy Wright
Patrice B. Wunsch
Matina Angelopoulou, International Consultant
Shijia Hu, International Consultant
Anne C. O'Connell, International Consultant
Francisco J. Ramos-Gomez, Expert Consultant
Ex-Officio Members
Anthea Mazzawi, (Chair, Scientific Program Committee)
Staff Liaisons
Robin Wright, Director, Research and Policy Center
Leola Mitchell-Royston, Education Development and Academic Support Manager

Council on Scientific Affairs, 2021–2022

Mission

The mission of the AAPD's Council on Scientific Affairs (CSA) is to ensure that the organization's policies, guidelines and programs are evidenced based and supported by the most recent and up to date science. The CSA also sets AAPD Research Agenda, which is used for allocation of research funding support.

Duties

The duties of the Council on Scientific Affairs, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to: 1) investigate research activities appropriate for AAPD involvement and make recommendations to the Board of Trustees; 2) administer the Graduate Student Research Competition; 3) plan and conduct the Contemporary Clinical Issues Workshop at the AAPD annual session in collaboration with the Scientific Program Committee; and 4) perform such other duties as assigned by the President or the Board of Trustees.

Standing Charges

Charge 1

Annually update and affirm the AAPD research agenda. Select the two or three highest ranked topic areas for concentrated investigation and report annually to the Board. Background and Intent: This is a standing charge to the Council. The Council on Scientific Affairs' list of research topics of relevance reflects areas of clinical inquiry of significance across the broad spectrum of the specialty of pediatric dentistry. The research agenda is to be shared annually with interested parties and the Pediatric Oral Health Research and Policy Center (POHRPC) for advocacy, education, and identification of research opportunities.

Progress Report

CSA members revised, reviewed and approved the final draft of the 2021 Research Agenda. It was approved by the Board of Trustees at the 2021 Ad Interim Meeting.

Charge 2

Annually submit to the Scientific Program Committee a list of potential topics for a contemporary clinical issues program to be presented at the Annual Session. Background and Intent: This is a standing charge to the Council, updated yearly, that uses the Council's expertise in planning a portion of the Annual Session. It was the feeling of the both the Council on Scientific Affairs and the Scientific Program Committee that the potential topics for this kind of course should come from the Council on Scientific Affairs but planning and execution of this course should come from the Scientific Program Committee.

Progress Report

The following topic ideas were submitted to the Annual Session Scientific Program Committee: COVID impacts in our practice; new therapies for conditions such as hypophosphatasia and osteogenesis imperfecta; microbiome research; 3D scanning/digital dentistry; remineralizing agents for caries; sedation safety/management; caring for transgender youth; and mental health of patients and practitioners.

The topics selected for the 2022 Annual Session are: Pulp Therapy Guideline Update (Jim Coll and Vineet Dhar) Intraoral Scanning, Milling, & 3D Printing for Pediatric Dentists (Brian Goodacre and Jung-Wei Chen) and Speed learning - restorative topics (Tim Wright and Taiseer Sulaiman). Topics for the 2023 Annual Session will be discussed at the CSA spring meeting.

Charge 3

Review research awards to include, but not be limited to, the GSRA competitions. Additionally, the Chair will review each application for appropriate and relevant content prior to release for Council review.

Background and Intent: This is a standing charge to the Council. This charge calls upon the Council's scientific expertise reviewing the AAPD's research awards.

Progress Report

Call for GSRA abstracts was issued with the submission window open from November 1, 2021 to January 12, 2022.

Homa Amini, Soraya Beiraghi, Yasmi Crystal, Jennifer Hill, Glenn Rosivack, and Anna Chen are the GSRA Judging Committee. On February 10th, 2022, 12 semi-finalists were identified; 11 submitted manuscripts for review. The judging to identify eight finalists will occur at the end of March, 2022. The GSRA competition will be held on May 27, 2022 in San Diego, and the recipient of the Ralph McDonald Award will be announced.

The decision was made to only include GSRA finalists' abstracts in the Journal (not the semi-finalist as well). Since the finalists are determined later, the abstracts will now be published in the May/June issue instead of March/April.

A document was drafted to review the GSRA Judges' qualification, workload, process and term of service. This document will be discussed in CSA meeting.

Charge 4

Assist the Council on Clinical Affairs in identifying relevant scientific evidence to inform the policies and guidelines developed for the AAPD Reference Manual.

Background and Intent: This is a standing charge to the Council. The Council on Scientific Affairs will be asked to provide input to the Council on Clinical Affairs as the council revises the policies and guidelines each year. Ad hoc advisors to the Council on Scientific Affairs, with specific expertise on particular areas under development, will be asked to work early on with the Council on Clinical Affairs as these policies and guidelines are developed or revised. This input will help to ensure that the guidelines and policies in the Reference Manual are supported by current science. Council on Scientific Affairs as a body will be asked to review the final drafts of policy and guidelines for comment before submission to the Board of Trustees.

Progress Report

The Council on Clinical Affairs and Council on Scientific Affairs held a joint in-person/virtual Reference Manual workshop in Chicago on November 5-6, 2021, and a virtual meeting on February 12, 2022. The list of Reference Manual items covered during the workshops can be found at the conclusion of this report.

Due to the number of new CSA/CCA members working on the Reference Manual, the two Councils are working with the EBD Committee to establish a set of educational opportunities in evidence-based research and writing for Council members and thus strengthen the development of policies, recommendations and clinical guidelines.

In addition, CSA members reviewed the new AAPD Safety Toolkit to confirm its content is supported by current science and in keeping with AAPD policies and recommendations. The Safety Toolkit and video can be seen here:
https://www.aapd.org/resources/member/safety-toolkit/

Charge 5

Identify and review topics for clinical guideline development using evidence-based approaches; make recommendations to the Evidence-Based Dentistry Committee; participate in the development of evidence-based clinical guidelines.

Background and Intent: This is a standing charge to the Council. The Council on Scientific Affairs will be asked to provide input clinical relevant topics. The Council will then rank topics to be considered for evidence-based guideline development based on evidence available.

Progress Report

Topics for the development of new workgroups on clinical guidelines will be considered at the 2022 Annual Session CSA Meeting. Now that the Research Project Manager position has been filled, action can be taken on new topics for clinical practice guideline development.

Charge 6

Develop a methodology for input and collaboration on proposed pediatric research projects using the National Practice Based Network.

Background and Intent: NIDCR has announced the funding of a National Practice Based Research Network. The clinical pediatric dentist offers an untapped opportunity to address and capture the wealth of information and patients advance research. The AAPD would like to encourage principle investigators to engage the National PBRN and to assist with this effort will support scientifically sound clinical research endeavors.

Progress Report

Following the Zoom meeting in August, 2021 with Dr. Veerasathpurush Allareddy from NPBRN and a research interest group within the CSA, Drs. Chen and Allareddy continue to communicate about research possibilities in pediatric Dentistry. However, no pediatric dentistry-related PBRN projects are being conducted at this time. The CSA will disseminate NIDCR funding announcements to Pediatric Dentistry Department Chairs and Program Directors.

Charge 7

Build shared knowledge and international collaboration in research efforts focused on the oral health of infants, children and adolescents worldwide.

Background and Intent: This is a standing charge to the Council. The CSA will promote the knowledge and interest of pediatric dentists worldwide in scientific research to

improve the oral health and well-being for all children. The International Association of Dental Research (IADR) Pediatric Oral Health Research Group will serve as one of the primary partners in meeting this charge.

Progress Report

At the Ad Interim Board Meeting, the CSA proposed the AAPD sponsor and fund an IADR/AAPD Research Award through the IADR Pediatric Oral Health Research Group to promote the interest of pediatric dentists, clinicians, and academicians in research on the oral health of children and adolescents, and to acknowledge excellence of the research conducted by these individuals. The motion carried; the AAPD will allocate an additional $250 to the IADR POHR group for the purpose of funding an IADR/AAPD Research Award with total of $1000 award. On 3/17/2022 AADOCR annual business meeting, AAPD president and president-elect were invited to present and discuss future possible projects.

Council on Scientific Affairs, Consumer Review Committee 2021–2022

David K. Curtis, Chair
Carlos A. Bertot, Board Liaison
Members
Indru C. Punwani
Hani Eid
David A. Tesini
John B. Thornton, Jr.
Staff Liaison
Robin Wright, Director, Research and Policy Center

Mission

The mission of the AAPD's Consumer Review Committee is to ensure that an organization's consumer messaging is scientifically accurate and supported by AAPD policies, guidelines and best practices before the organization is permitted use of the AAPD logo.

Duties

The duties of the Council on Scientific Affairs, Consumer Review Committee, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to: 1) implement licensing agreements with such organizations permitting use of the AAPD logo in exchange for an appropriate organization commitment to the AAPD Foundation; 2) regularly report to the Board of Trustees concerning such reviews and agreements; and 3) perform such other duties as assigned by the President or Board of Trustees.

Standing Charges

Charge 1

Determine whether the AAPD should review or develop scientifically accurate consumer messaging adjunct to marketing a consumer product or included in a commercial print or electronic publication.

Background and Intent: The committee has developed a protocol consistent with the Principles for Interaction with Industry and Other Organizations, described in Section 13.K of the *AAPD Administrative Policy and Procedure Manual*. This protocol will be the guideline for completing the charge.

Council on Scientific Affairs, Consumer Review Committee, 2021–2022

Charge 2

Determine when the AAPD logo should accompany consumer messaging that has been approved by the committee based upon its scientific accuracy and congruence with AAPD policies, guidelines and best practices.

Background and Intent: The committee will ensure that in all cases the following phrase should be included in a prominent location immediately adjacent to the AAPD logo:

> "The information presented in this _____ has been reviewed [or provided] by the American Academy of Pediatric Dentistry and is consistent with the current science related to oral health care for children. This does not represent any endorsement by the AAPD of the product [or service or publication]."

Progress Report

No consumer products or documents were submitted for review in 2021–2022.

Pediatric Oral Health Research and Policy Center, Evidence-Based Dentistry Committee 2021–2022

J. Timothy Wright, Chair
Anupama R. Tate, Board Liaison
Members, Council on Scientific Affairs
Donald Chi
Members, Council on Clinical Affairs
Carolyn Crowell
Randall K. Lout
Consultants
James A. Coll
Ex-Officio Member
Noel K. Childers, Editor-in-Chief
Staff Liaison
Robin Wright, Director, Pediatric Oral Health Research and Policy Center
Rachel Wedeward, Research Project Manager, Pediatric Oral Health Research and Policy Center

Vision
Ensuring optimal oral health for children through promotion of evidence based practices.

Mission
To promote optimal pediatric oral health through evidence-based clinical guidelines that improve patient outcomes.

Duties
The duties of the Evidence Based Dentistry Committee, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to provide oversight and management of the clinical practice guideline development process, and in the course of its activities shall:

- Attend EBD Committee meeting(s) at AAPD Headquarters.
- Participate in conference calls before and after the meeting.
- Determine whether specific topics are a high priority for the EBD process, a lower priority, or not appropriate.
- Review/evaluate any existing guidelines and systematic reviews.
- Make recommendations for an endorsement if appropriate.
- Nominate a workgroup for each specific clinical practice guideline.
- Prioritize a list of guidelines and the timing for production of such guidelines, for review and approval by the Board of Trustees.
- Approve a Protocol and PICO (P-Patient, Population, or Problem, I-Intervention,

Prognostic Factor, or Exposure, C-Comparison or Intervention, O-Outcome you would like to measure or achieve) for each guideline.
- Based on a summary of findings, grade the overall quality of evidence across outcomes and make recommendations.
- Review each guideline and coordinate external review.

Standing Charges

Charge 1

Identify and select list of topics related to oral health care of pediatric and special health care needs individuals that would benefit from guideline development to help inform practitioners in their clinical care decisions.
Background and Intent: Clinicians treating children are more likely to select and deliver optimal health care when informed by evidence of best practices. The Academy of Pediatric Dentistry has a long history of supporting this process including the relatively recent formation of the Evidence Based Dentistry Committee. The Committee has been involved in developing several oral health care guidelines and it is engaged in helping identify areas when evidence can help inform clinicians as to best practices and to work with councils and committees to bring this information to the Academy members and other health care providers. The intent of this effort is to provide clinicians with the up-to-date and relevant scientific information to help inform them in providing oral health care to the pediatric and special health care needs populations.

Progress Report

The EBD Committee is standing by its current list:
- Behavior Management
- Frenectomy and lactation
- Vital treatment of immature permanent teeth
- Caries risk assessment and oral health determinants

Additional topics for guideline development will be considered at the EBD Committee meeting in May 2022. This will allow Rachel Wedeward, the new Research Project Manager, to provide focused support to the current workgroups.

Charge 2

Assess topic areas for adequate publications including clinical trials necessary to develop evidence-based clinical practice guidelines of care.
Background and Intent: The provision of clinical oral health care for the pediatric and special needs populations continues to evolve through the acquisition of new therapies, techniques, materials and knowledge. Clinicians benefit from guidance informing them of the scientific evidence supporting adopting specific practices. Oral health care topics are identified by AAPD members, Council Members and members of the EBD committee. Topical areas are evaluated by literature searches to determine if there are adequate studies to allow for guideline development either using existing systematic reviews or to conduct a new systematic review.

POHRPC Evidence-Based Dentistry Committee, 2021–2022

Progress Report

- The Behavior Guidance Workgroup will conduct a systematic review in conjunction with the clinical practice guideline. The systematic review is entitled "Non-pharmacological behavior guidance interventions in pediatric dental patients" and is estimated to complete in October 2022. The Clinical Practice Guideline is estimated to be complete in October 2022.
- Dr. Chia-Yu Chen was nominated to be a member of the Behavior Guidance workgroup.
- The Behavior Guidance workgroup will meet on Sunday, May 29, 2022 at the Annual Session.
- The Behavior Guidance Workgroup is considering the development and distribution of a survey on use of behavior guidance techniques by AAPD members. This survey would not only provide useful data for a practical focus on the clinical guidelines, but would offer a valuable informational report/article for members treating patients needing well-chosen behavior guidance techniques.
- Survey results to be published in June/July 2022.

Charge 3

Work towards developing and publishing clinical practice guidelines to inform decision making to improve pediatric oral health care.
Background and Intent: Developing and publishing clear clinical practice guidelines provides a valuable mechanism to inform clinicians as to best practices and the science supporting them. Current guideline development requires that they be based on a systematic review and that they are updated periodically. The EBD Committee helps develop work groups that develop and publish guidelines related to pediatric dentistry clinical practice.

Progress Report

- The Pulp Therapy workgroup continues to meet monthly to semi-monthly. An draft of the systematic review/meta-analysis is currently under review by the workgroup.
- The Pulp Therapy Workgroup will be meeting on Thursday May 26, 2022, at the Annual Session.
- The American Association of Endodontics (AAE) will announce its three selected representatives to review the draft of a jointly supported guideline in spring 2022. AAE and the Pulp Therapy workgroup are expected to meet in-person in June 2022 to begin drafting the clinical practice guidelines.

Pediatric Oral Health Research and Policy Center, Safety Committee 2021–2022

Joseph Castellano, Chair
Carlos Bertot, Board Liaison
Members
Paul Casamassimo
Charles Czerepak
Kevin Donly
Brian Hodgson
Jacob Lee
Jade Miller
Travis Nelson
District Reviewers
Robert Moreau, NE District
Robert D. Elliott, SE District
Robert S. Jones, NC District
John Fales, SW District
Alexander Alcaraz, W District
Staff Liaisons
John Rutkauskas, Chief Executive Officer
Leola Mitchell-Royston, Education Development and Academic Support Manager
Clare Conte, Project Coordinator, Research and Policy Center

Vision

To champion the safest possible oral health care delivery system to protect the health and well-being of patients and their providers. The mission of the Committee is to apply the diverse resources of the AAPD in aiding dentists to create a culture of safety for both patients and providers in the dental setting. This is done by building and incorporating systems of safety into all aspects of the delivery of oral health.

Duties

The duties of the Safety Committee, as listed in the *AAPD Administrative Policy and Procedure Manual*, are to periodically develop and maintain a portfolio of safety recommendations.

POHRPC Safety Committee, 2021–2022

Standing Charges

Charge 1

Create a Culture of Safety within AAPD and its members. Ensure all departments, councils and committee's guiding principles include safety, where applicable. Encourage recognition of safety considerations in AAPD policies, guidelines, and best practices to ensure safety issues are addressed.
Background and Intent: This is a standing charge to the Committee. It is our belief that as a professional society we should make a visible commitment to patient safety. Working toward establishing a national focus to create leadership, research, tools and protocols to enhance the knowledge base about safety.

Progress Report

Ongoing consideration of safety in all areas of the Academy.

Charge 2

Develop a plan to educate membership on the vital nature of creating a culture of safety in pediatric dentistry. Disseminate information on safety and safety issues to members through special sessions at annual conferences, journal articles and editorials, newsletters, publications and websites on a regular basis.
Background and Intent: It is important the membership gain understanding of the importance and potential impact of safety on various aspects of pediatric dentistry. The Board desires that relevant safety topics receive a greater awareness and appreciation in the pediatric dental community.

Progress Report

Safety SIG for #Safety discussion board on Little Teeth Chat. The Safety Committee would like to move forward with a new activity to allow members to discuss safety issues that occur during treatment. This would ideally take place on the Little Teeth Chat discussion board and would be under its own category "Safety". The Safety Committee would also like to request that the board consider approving a SIG as the member content specialist for the LTC discussions.

Safety Labs. These are very short dramas that highlight a safety issue in dental practice. Members are asked to consider the issue in their practice, are directed to a solution to the particular scenario and are then directed to the Safety Toolkit. They began being distributed in E-News in February 2022.

Survey of Program Directors on Safety. The survey has been submitted for publication in Pediatric Dentistry. Revisions are being done before resubmission. Findings of the survey will be presented at Joint Academic Day at AAPD Annual Session 2022. The results provided the impetus to move forward on request to CODA regarding the development of a safety standard.

Annual Session 2022: The Scientific Programs Committee has approved a safety session for the 2022 Annual Session in San Diego. "Helping Healers Heal: Resiliency Resources for Now,

Later and Long-term", presented by Jeremy Segall of NYC Health and Hospitals is Friday, May 27, 2022 from 1:30 – 3:00 PM.

Practice Safety Website. The Practice Safety website was completed in November 2021. The Practice Safety webpage features the Safety Toolkit, Beyond Re-emergence Pediatric Dentistry Practice Checklist, New Science Highlights and the Latest Practice Safety News. This page will need regular review and updating from staff.

- An additional section was added to the webpage from the POHRPC, "Disaster Preparedness Hub" in late February 2022.
- The first "New Science Highlight" was published late February 2022.

Ongoing: Beyond Re-emergence: Pediatric Dentistry Practice Checklist. Beyond Re-emergence: Pediatric Dentistry Practice Checklist is the American Academy of Pediatric Dentistry's (AAPD) online resource for relevant issues affecting practice in post-COVID pediatric dentistry. The site has demonstrated a continued interest from members since its inception in March 2020, welcoming 6,628 visitors between March 2021-March 2022. It is regularly reviewed and updated as the COVID-19 pandemic persists. Members can access Beyond Re-emergence resources on the new AAPD Practice Safety webpage, or by clicking the Practice Checklist graphic on the AAPD homepage. https://www.aapd.org/about/about-aapd/news-room/aapd-practice-checklist-resources/

Ongoing: COVID-19 Infection Control Resource Pages: Continuous updating of timely information is done while the pandemic is occurring. https://www.aapd.org/about/about-aapd/news-room/infection-control/

Ongoing: PDT, E-News, Podcasts: Articles in publications will continue to occur with each issue of PDT and other media opportunities that become available. This is an ongoing effort to insert safety into all available media opportunities.

PDT Articles May 2021-May 2022

- Addressing Hidden Dangers for Children by Dr. Paul Casamassimo, September 2021 PDT
- Systems and Safety in Dentistry by Dr. Charles Czerepak, November 2021 cover story
- Are Disinfectants Safe? by Dr. Paul Casamassimo, May 2022 PDT

Articles Scheduled

- Case Review of an Anesthesia Mishap
- Common Preventable Errors in the Dental Office
- Checklists in the Dental Office

Future podcasts

Seeking 2 Pedo Teeth Talk guests and 2 Newly Erupted guests for 2022

- Dr. Alexadra Otto was invited to interview with Dr. Berg on starting up a practice while championing safety. Aired April 26, 2022.

E-News May 2021-May 2022

- Respiratory Syncytial Virus (RSV) Resurging Off-Season, June 16, 2021
- Be Advised and Be Wise, August 4, 2021
- Considering Outpatient Pediatric Dentistry Accreditation? August 18, 2021
- Be Advised and Be Wise, August 18, 2021

- Helping kids get back to school safely and confidently during COVID-19, August 31, 2021
- Practice Safety webpage promo, January 2022 Communicating with Patients When Things Go Wrong in Dentistry, January 19, 2022
- Safety Lab #1, February 2, 2022
- Safety Lab #2, February 16, 2022
- New Science Highlights: Nitrous Oxide for Dental Procedures in Pediatric Patients with Sickle Cell Disease: A Pilot Study and Practice Safety website promo, February 16, 2022
- Tylenol Toxicity in Children, March 2, 2022
- PEARS training registration promo, March 2, 2022
- Safety Lab #3, March 16, 2022
- PEARS training registration promo, March 16, 2022

Project Charges

Charge 3

Develop a safety resource manual/toolkit for membership.
Background and Intent: As awareness of safety in pediatric dentistry rises, it is important the membership have pertinent information regarding safety topics and resources readily available to them.

Progress Report

Online Safety Toolkit
Ongoing: The Safety Committee is facilitating the collection of resources to strengthen and develop sections of the toolkit that are currently lacking tools and information, including the following areas: 1) Scientific documentation; 2) Training Tools; and 3) Library. The Safety Committee decided to add another category, "Dentist Safety" to the Safety Toolkit, to be completed Spring 2022.

Safety Toolkit Project (STKP). The Safety Committee has involved 11 volunteers to do reviewing of safety abstracts to stay current on safety science. The project group completed populating all of the sections of the safety toolkit in November 2021. They have begun article scanning related to topic assignments to report on emerging the emerging safety science. The group working with the Safety Committee on the project is made up of Ehsan Azadani, Dan Burch, Daniel Claman, Jayakumar Jayaraman, Christina Leon-Pineda, Michael Lieberman, Allison Scully, Chelsea Shellhart, Sujatha Sivaraman, Rosalyn Sulyanto, and Megan Weber. This is an ongoing effort.

Charge 4

Develop a facility/provider anesthesia accreditation model specific to pediatric dentists. Periodically review accreditation model standards and guidelines to ensure they are in line with AAPD policies and guidelines and the latest scientific findings.
Background and Intent: Increasingly, state agencies across the country are requiring the documentation of an independent accreditation process for in-office deep sedation/ general anesthesia services, in addition to the Provider Permit now required by virtually all states. We want to be ahead of the game for our members by giving them accreditation options to consider. It is not a far stretch to imagine accreditation will

become a requirement for moderate sedation as well. The accreditation process will be specific to anesthesia services delivered within dental offices.

Progress Report

- Ongoing: AAPD has begun promotion of the voluntary accreditation program and partnership with AAAASF. The latest promotion was in AAPD E-News on 8/18/2021. The AAPD and AAAASF would like to do a PDT article in the near future.
- AAAASF will be an exhibitor at the AAPD Annual Session 2022
- The 2nd Surveyor Training is still postponed due to the COVID-19 pandemic.

Charge 5

Develop a curriculum on safety and encourage its adoption into training programs and certification requirements.

Background and Intent: In order to create a culture of safety in pediatric dentistry, new dentist must be included. There is a need to formalize the science of decision making and the inclusion of safety into the practice of pediatric dentistry.

Progress Report

- The Safety Committee discussed the development of CE and safety certification at the last Safety Committee meeting on December 3, 2021. Consideration of a partnership with a safety program such as that at Northwestern was discussed as well as partnership with IHI and OSAP.
- Additionally, because ABPD includes safety requirements in the board exam, the Safety Committee will consider partnering to incorporate safety in the board exam review course that may align with ABPD safety goals.
- The Safety Committee has a strong interest in developing boilerplate items in safety so that CODA may incorporate safety into their education standards to be adopted in pediatric dentistry education. The next step will be meeting with Elsbeth Kalenderian on this direction. Dr. Berg will be brought in on the discussion as the AAPD CODA representative. The Advanced Pediatric Dentistry Program Director Survey on safety may be helpful in encouraging the next steps of the discussion.

  A letter signed by AAPD President, Dr. Jeanie Beauchamp, was sent to CODA Director, Dr. Sherine Tooks in late February but the AAPD hasn't yet received a reply.

AAPD Political Action Committee (PAC) Steering Committee 2021–2022

Clifford R. Hartmann, Chair (2023)
Lynn K. Fujimoto, Vice Chair (2023)
John S. Rutkauskas, Treasurer
Kerry Dove, Assistant Treasurer (2023)
C. Scott Litch, Secretary
Robert J. Moreau (NE) (2025)
Chad S. Eslinger (SE (2026)
Colleen Greene (NC) (2025)
Jason A. Zimmerman (SW) (2024)
J. Kyle House (W) (2024)
Angela M. Stout, Board Liaison

2021 Member Contributions to AAPD PAC and District Competition
Below are AAPD PAC contribution figures for 2021, broken down by districts, along with 2020 figures for comparison.

In 2021, the AAPD PAC had an eight percent decline in the number of contributors, and a 25 percent decline in hard dollars received. We recognize various contributing factors , including political divisiveness, no in-person AAPD Annual Sessions in 2021 and 2020, and the lingering financial impact on pediatric dental practices from the COVID-19 pandemic.

We are hopeful to regain momentum in 2022 via the following PAC promotional activities:

- The in-person 2022 Annual Session in San Diego will feature a PAC information kiosk in the registration area, and a PAC reception.
- We are preparing video testimonials about the importance of contributing to the AAPD PAC.
- The online PAC contribution page on the AAPD website has been updated and streamlined for ease of use.
- There will be a series of e-mails and promotional videos sent to PAC-eligible members in advance of the 2022-23 dues cycle.

AAPD Political Action Committee
Steering Committee, 2021–2022

- We have officially designated July 29, 2022 as PAC Day of Giving. This denotes the date that AAPD was incorporated: July 29, 1947. We plan to repeat the promotion each year on this date.

The 2021 District competition winners are the Western Society of Pediatric Dentistry for most total hard dollars contributed, and the Southeastern Society of Pediatric Dentistry for most contributors.

2021 Contributions by District
924 Contributions from 871 Contributors

District	HARD DOLLARS	SOFT DOLLARS	#DONORS	$/DONOR
Northeastern (including Federal Services & OUS)	$17,310	$18,725	162	$222.44
Southeastern	$15,025	$26,045	197	$208.44
NorthCentral	$18,650	$17,125	155	$230.81
Southwestern	$15,025	$21,292	169	$232.79
Western	$19,216	$24,346	188	$231.71
TOTALS	$88,251	$107,533	871	$224.78

2020 Contributions by District
1003 Contributions from 942 Contributors

DISTRICT	HARD DOLLARS	SOFT DOLLARS	#DONORS	$/DONOR
Northeastern (including Federal Services & OUS)	$21,575	$14,875	164	$222.26
Southeastern	$28,880	$22,985	218	$237.91
NorthCentral	$22,125	$16,425	177	$217.80
Southwestern	$19,450	$22,694	184	$229.04
Western	$23,370	$25,350	199	$244.82
TOTALS	$115,400	$102,329	942	$232.13

AAPD Political Action Committee
Steering Committee, 2021–2022

PAC Annual Report

For the sixth straight year, a detailed AAPD PAC Annual Report was developed for eligible member contributors. This includes a listing of all 2020 donors, charts of PAC finances, lists of policy achievements, and photos of your PAC in action. The report was again disseminated via e-mail with a link to the AAPD website.[1]

Recognition of Patriot Level Contributors in 2021

Recognition of Patriot Level Contributors in 2021

The AAPD PAC salutes the nine individual donors at the Patriot Level ($1000 and above) listed below. All 2021 contributors at all levels are listed in the May 2022 *PDT* and will be displayed at the PAC kiosk in San Diego.

Northeastern District
Warren A. Brill, Baltimore, Maryland
Deven V. Shroff, Ellicott City, Maryland
Angela M. Stout, Erdenheim, Pennsylvania

Southeastern District
K. Jean Beauchamp, Clarksville, Tennessee

NorthCentral District
Clifford R. Hartmann, New Berlin, Wisconsin
James D. Nickman, North Oaks, Minnesota

Southwestern District
Jason A. Zimmerman, Fort Worth, Texas

Western District
Jacob K. Lee, San Clemente, California
Jade Miller, Reno, Nevada

At the AAPD PAC reception on Friday afternoon in San Diego from 4:00 to 5:00 PM, we will salute these 2021 Patriot Level contributors plus those who contributed at the Patriot Level in 2019 and 2020.

2022 Congressional Mid-term Elections

The AAPD PAC thanks all the AAPD members who are helping deliver PAC checks during the 2022 Congressional mid-term election cycle, whether locally or in Washington, D.C. After a year of mostly Zoom events, fund-raisers are coming back in-person in full swing. Look for highlights in upcoming issues of PDT, plus the 2022 PAC Annual Report.

In Conclusion

It has been my distinct honor to serve as your PAC Chair over the past year.

Respectfully submitted,

Clifford R. Hartmann, DDS, FAAAPD
Chair, PAC Steering Committee

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[1] https://www.aapd.org/globalassets/pac-annual-report-2021-final.pdf