Policy on Tobacco Use

Latest Revision

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Purpose

In order to reduce pain, disability, and death caused by nicotine addiction, the American Academy of Pediatric Dentistry (**AAPD**) supports and encourages routine screening for tobacco use, treating tobacco dependence, preventing tobacco use among children and adolescents, and educating the public on the enormous health and societal costs of tobacco use and exposure. Considerations specific to electronic nicotine delivery systems are provided in greater detail in the AAPD's *Policy on Electronic Nicotine Delivery Systems (ENDS)*.[1]

Methods

This policy was developed by the Council on Clinical Affairs, adopted in 2000,[2] and last revised in 2020.[3] This policy revision is based upon a review of current dental, medical, and public health literature related to tobacco use which included a search of the PubMed/MEDLINE database using the terms: *child* AND *adolescent tobacco use*, *smokeless tobacco* AND *oral disease*, *adolescent pregnancy* AND *tobacco*, *secondhand smoke*, *and caries* AND *smoking*; fields: all; limits: within the last 5 years, humans, English, clinical studies, meta-analysis, systematic reviews, birth through age 18. The search returned 311 articles that matched the criteria and were evaluated by title and/or abstract. Websites for the American Lung Association, American Cancer Society, Centers for Disease Control and Prevention, Environmental Protection Agency, Campaign for Tobacco Free Kids, and the US Department of Health and Human Services also were reviewed.

Background

Tobacco is a risk factor for 6 of the 8 leading causes of deaths globally, and it kills nearly 8 million people a year.[4] Tobacco use is considered one of the largest public health threats the world has ever faced.[4,5] Annually, more than 1.3 million deaths are the result of nonsmokers being exposed to secondhand smoke.[4] Up to half of current tobacco users eventually will die of a tobacco-related disease.[4] The US Surgeon General's reports state that smoking is the single greatest avoidable cause of death.[5,6] According to 1 report, "The epidemic of smoking-caused disease in the twentieth century ranks amongst the greatest public catastrophes of the century, while the decline of smoking consequent to tobacco control is one of public health's greatest successes."[5(p33)]

Youth use of tobacco

The Centers for Disease Control and Prevention has conducted a National Youth Tobacco Survey for the years 1999, 2000, 2002, 2004, 2006, 2009, and 2011 through 2021 as part of the Healthy People 2010, 2020 and 2030, objectives on tobacco use.[7] The National Youth Tobacco Survey also serves as a baseline for comparing progress toward meeting select Healthy People 2030 goals for reducing tobacco use among youth, especially in adolescents in grades 6-12. Data show

- smoking and smokeless tobacco use are initiated and established primarily during adolescence with nearly 9 out of 10 smokers starting smoking by age 18, and 98% started by age 26.[5(p12)]
- each day in the US, about 1600 people younger than 18 years smoke their first cigarette, and nearly 200 youth under 18 years become daily cigarette smokers.[8]
- if smoking persists at the current rate among youth in this country, 5.6 million of today's population younger than 18 years are projected to die prematurely from a smoking-related illness.[5(p12)]
- in 2019, 23% of students grades 6-12 currently used tobacco products, including cigarettes, cigars, smokeless tobacco, pipe tobacco, bidis (unfiltered cigarettes from India), hookas, and electronic cigarettes.[7]
- from 2011 to 2021, current use of smokeless tobacco decreased among middle and high school students.[9] Nearly 2 of every 100 middle school students (1.8%) reported in 2019 that they had used smokeless tobacco in the last 30 days, a decrease from 2.2% in 2011.[9] Nearly 6 of every 100 high school students (5.9%) reported in 2019 that they used smokeless tobacco in the last 30 days, a decrease from 7.9% in 2011.[9] Smokeless tobacco use remains a mostly male behavior, being seen in 7.5% of male high school students and 1.8% of females.[9]

Reports show that most people who use cigarettes begin smoking as a teen.[5(p12),10] Aggressive marketing of tobacco products by manufacturers,[10-14] smoking by parents,[13-15] peer influence,[10,13,14] a functional belief in the benefits and normalcy of tobacco,[13,14,16] availability and price of tobacco products,[13,14]

ABBREVIATIONS

AAPD: American Academy of Pediatric Dentistry. **ETS:** Environmental tobacco smoke.

low socioeconomic status,[14] low academic achievement,[10,14] lower self-image,[14] and a lack of behavioral skills to resist tobacco offers[14] all contribute to the initiation of tobacco use during childhood and adolescence. Teens who use tobacco are more likely to use alcohol and other drugs[14] and engage in high-risk sexual behaviors.[17]

If youth can be discouraged from starting smoking, it is less likely that they will start smoking as an adult, as 88% of adult smokers who smoke daily reported they started smoking by the age of 18.[10] The 2012 report of the Surgeon General *Preventing Tobacco Use Among Youth and Young Adults*[10] concluded that there is a large evidence base for effective strategies to prevent and minimize tobacco use by children and young adults by decreasing the number of children who initiate tobacco use and by increasing the current users who quit. Oral health professionals can have success with tobacco cessation by counseling patients during the oral examination component of dental visits.[18]

Consequences of tobacco use

Smoking increases the risk for: coronary heart disease by 2 to 4 times, stroke by 2 to 4 times, men developing lung cancer by 25 times, and women developing lung cancer 25.7 times.[19] Smoking causes diminished overall health, increased absenteeism from work, and increased health care utilization and cost.[20] Other catastrophic health outcomes include cardiovascular disease; reproductive effects (eg, infertility, ectopic pregnancy); pulmonary disease; leukemia; cataracts; and cancers of the cervix, kidney, pancreas, stomach, larynx, bladder, oropharynx, and esophagus.[19] Additionally, smoking at a young age decreases cognitive performance[21], increases psychotic-like experiences[22], and increases anxiety-related behaviors[23]. Smoking and exposure to tobacco during pregnancy may increase the infant's risk for birth defects (low birth weight, cleft lip and palate)[5(p101),24] and decreased intelligence quotient (IQ)[25]; paternal smoking may increase the risk of certain childhood cancers[26].

Environmental tobacco smoke ([**ETS**]; secondhand or passive smoke) imposes significant risks as well. Exposure to secondhand smoke results in the death of 41,000 nonsmoking US adults and 400 infants each year.[27] The Surgeon General reported a 25% to 30% increased risk for coronary artery disease for nonsmokers exposed to secondhand smoke and a 20% to 30% increased risk for lung cancer for those living with a smoker.[28] Infants and children who are exposed to smoke are at risk for sudden infant death syndrome (SIDS),[4,19,28,29] acute respiratory infections,[29] middle ear infections,[29] bronchitis,[29] pneumonia,[29] asthma,[29-31] allergies,[32,33] poor cardiorespiratory fitness,[34] and infections during infancy.[35] In addition, caries in the primary dentition, particularly early childhood caries, is related to secondhand smoke exposure.[36-40] Systematic reviews have shown that the association between early childhood caries and maternal smoking during pregnancy was equivocal[41] in one study and significantly associated[42] in another. Enamel hypoplasia in both the primary and permanent dentition may be related to secondhand cigarette smoke exposure during childhood.[43] Prenatal exposure to secondhand smoke has been associated with cognitive deficits[29] (eg, reasoning abilities) and deficits in reading, mathematics, and visuospatial relationships.[44]

Thirdhand smoke refers to the particulate residual toxins that are deposited in layers all over the home after a cigarette has been extinguished.[45] These volatile compounds emit gas into the air over months.[46,47] Since children are more likely to inhabit these low-lying contaminated areas and because the dust ingestion rate in infants is more than twice that of an adult, they are even more susceptible to thirdhand smoke. Studies have shown that these children have associated cognitive deficits in addition to the other associated risks of secondhand smoke exposure.[45]

Tobacco use can result in oral disease. Oral cancer,[4,5(p67),19,48] periodontitis,[5(p87),29,49-53] caries,[54] reduced saliva secretion while smoking and changes in quality of saliva,[55] compromised wound healing, a reduction in the ability to smell and taste,[29] smoker's palate (red inflammation turning to harder white thickened tissues observed in inhaled tobacco products only), melanosis (dark pigmenting of the oral tissues), coated tongue, staining[29,53] of teeth and restorations, implant failure,[5(p87)] and leukoplakia[48,53] are all seen in tobacco users.[56] Use of smokeless tobacco is a risk factor for oral cancer, leukoplakia, and erythroplakia, loss of periodontal support, and staining of teeth and composite restorations.[53]

The monetary costs of tobacco addiction and resultant morbidity and mortality are staggering. Annually, cigarette smoking costs the US $600 billion, based on lost productivity (more than $185 billion) and health care expenditures (nearly $240 billion).[57] Lost productivity due to exposure to secondhand smoke is estimated to be $5.6 billion annually.[57] Meanwhile, the tobacco industry expenditures on advertising and political promotional expenses in the US were $7.62 billion in 2019.[57]

Current trends indicate that tobacco use will cause more than 8 million deaths a year by 2030.[4] It is incumbent on the health care community to support preventive measures, educate the public about the risks of tobacco, and screen for tobacco use and nicotine dependence in order to reduce the burden of tobacco-related morbidity and mortality.

Policy statement

The AAPD opposes the use of all forms of tobacco including cigarettes, pipes, cigars, bidis, kreteks, and smokeless tobacco and alternative nicotine delivery systems, such as tobacco lozenges, nicotine water, nicotine lollipops, or heated tobacco-cigarette substitutes (electronic cigarettes). The AAPD supports national, state, and local legislation that eliminates tobacco advertising and promotions that appeal to or influence children, adolescents, or special groups. The AAPD supports prevention efforts through merchant education and enforcement of state and local laws prohibiting tobacco sales to minors. As ETS is a known human carcinogen and there is no evidence to date

of a safe exposure level to ETS,[29] the AAPD also supports the enactment and enforcement of state and local clean indoor air and/or smoke-free policies or ordinances prohibiting smoking in public places.

Furthermore, the AAPD encourages oral health professionals to

- determine and document tobacco use by patients and the smoking status of their parents, guardians, and caregivers.
- provide anticipatory guidance and substance abuse counseling (eg, smoking, smokeless tobacco) and referral to primary care providers or behavioral health/addiction specialists if indicated.
- routinely examine patients for oral signs of and changes associated with tobacco use.
- promote and establish policies that ensure dental offices, clinics, and/or health care facilities, including property grounds, are tobacco free.
- support tobacco-free school laws and policies and work with school boards to increase tobacco-free environments and events.
- serve as role models by not using tobacco and urging staff members who use tobacco to stop.
- educate patients, parents, guardians, and caregivers on the serious health consequences of tobacco use and exposure to ETS in the home.
- work to ensure all third-party payors include best practice tobacco cessation counseling and pharmacotherapeutic treatments as benefits in health packages.
- work with school boards to increase tobacco-free environments for all school facilities, property, vehicles, and school events.
- work on the national level and within their state and community to organize and support anti-tobacco campaigns and to prevent the initiation of tobacco use among children and adolescents, eliminate cigarette sales from vending machines, and increase excise tax on tobacco products to reduce demand.
- work with government organizations, legislators, community leaders, and health care organizations to ban tobacco advertising, promotion, and sponsorships.
- organize and support efforts to pass national, state, and local legislation prohibiting smoking in businesses such as daycare centers where children routinely visit and other establishments where adolescents frequently are employed.
- establish and support education/training activities and prevention/cessation services throughout the community.
- recognize the US Public Health Service's clinical practice guideline *Treating Tobacco Use and Dependence*[58] and the American Academy of Pediatrics' *Policy Statement on Protecting Children and Adolescents from Tobacco and Nicotine*[59] as valuable resources.

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