

# Policy on Acute Pain Management in Pediatric Dentistry

## Latest Revision

2026

## Abbreviations

AAPD: American Academy of Pediatric Dentistry.

FDA: US Food and Drug Administration

Majr: Medical subject headings major topic.

NSAIDs: Nonsteroidal anti-inflammatory drugs.

Tiab: Title and abstract.

\* *Used in the PubMed search to identify all terms that begin with this truncated base.*

## Purpose

The American Academy of Pediatric Dentistry (AAPD) recognizes that children vary greatly in their responses to pain-evoking stimuli and related interventions. This policy is not intended to provide clinical recommendations, which can be found in AAPD's best practice on acute pain management.<sup>1</sup> The purpose of this document is to support strategies to prevent or alleviate pediatric pain while minimizing adverse events associated with analgesics and other modalities designed to reduce pain. It also underscores the importance of thorough pain assessment, responsible prescribing practices, and awareness of the potential for opioid misuse and abuse. Infants, children, adolescents, and those with special health care needs can and do experience pain; however, through comprehensive preventive dental care, early intervention of disease, and appropriate management, most dental-related pain can be prevented or substantially relieved.

## Methods

This policy was developed by the Council on Clinical Affairs, adopted in 2012,<sup>2</sup> and last revised in 2022.<sup>3</sup> This update 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: (*evidence based dentistry* [Majr] OR *pediatric dentistry* [Majr] OR *dental care for children* [Majr] OR *paediatric dentistry* [Tiab] OR *dental health services* [Majr] OR *dentistry* [Majr] OR *public health dentistry* [Majr] OR *community dentistry* [Majr] OR *oral health* [Majr]) AND (*dental pain management* [Tiab] OR *postoperative pain management* [Tiab] OR *pediatric pain management* [Tiab] OR *analgesic overdose*\* OR *NSAIDs* [Tiab] OR *nonsteroidal anti-inflammatory drug*\*); fields: all; limits: within the last 10 years, humans, all children zero to 18 years, English, clinical trials, and literature reviews. The search returned 327 articles that were reviewed by title and abstract. When data were insufficient or inconclusive, information included in this policy was based upon expert and/or consensus opinion by experienced researchers and clinicians.

## Background

Pediatric patients experience pain and discomfort from various orofacial conditions, traumatic injuries, and dental procedures. Therefore, pain assessment is an integral component of the dental history and clinical evaluation. This facilitates diagnosis, treatment prioritization, and estimation of analgesic needs, leading to improved patient outcomes.<sup>4p37</sup> In the pediatric population, proper assessment of pain enables practitioners to significantly improve the patient's comfort and quality of life and mitigate risks of long-term pain sensitization associated with undertreatment.<sup>5</sup> Pain is a subjective experience; obtaining information about the location, quality, intensity, and alleviating or aggravating factors is necessary for effective pain assessment. Individual self-reporting is often favored; however, ensuring a child is competent to provide accurate information is essential.<sup>6</sup> For children with developmental disabilities, cognitive impairment, or other conditions that limit communication, caregiver reports and observational pain scales may be necessary adjuncts to the patient self-report. Effective pain management is critical in both the short- and the long-

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term.<sup>7p4</sup> Children with an established dental home benefit from anticipatory guidance and education regarding prevention of dental disease that can result in orofacial pain and improved access to care if such conditions occur.<sup>8</sup>

Pain management may range from nonpharmacologic modalities to pharmacological treatment. Nonpharmacologic therapy includes maintaining a calm environment, providing emotional support, encouraging deep breathing, and employing supplemental techniques such as guided imagery, distraction, play therapy, hypnotherapy, virtual reality, smartphone applications, acupuncture, and transcutaneous nerve stimulation.<sup>9,10</sup> Pharmacologic therapy may consist of administration of topical and local anesthetics; analgesic medications; mild, moderate, or deep sedation regimens; or general anesthetics.<sup>10,11</sup> An individualized postoperative analgesic plan would factor in the patient's medical history and psychological considerations, clinical findings including the presence and severity of trauma or infections, and the extent and duration of treatment procedures.<sup>12</sup> Combining nonpharmacologic and pharmacologic pain management can yield superior outcomes, maximizing both patient comfort and treatment success.<sup>13</sup>

Several therapeutic options are available to treat acute pain. Nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen and naproxen, are considered first line agents in the treatment of acute mild to moderate postoperative pain.<sup>12,14,15</sup> Alternating administration of NSAIDs and acetaminophen may provide synergistic benefits. For example, alternating or combining ibuprofen and acetaminophen is a well-recognized strategy for pain management in children and may allow lower doses of each medication.<sup>9,15,16</sup> Different routes of administration, such as oral, rectal, or intravenous, accommodate a wide range of patients and settings.<sup>17</sup>

Certain analgesics are contraindicated in the pediatric population due to well-documented risks of toxicity, US Food and Drug Administration (FDA) warnings, and adverse reactions.<sup>14,15,18-21</sup> Although opioid analgesics can be effective for severe pain, possible adverse effects (eg, nausea, emesis, constipation, sedation, respiratory depression), diversion, and misuse have been associated with them.<sup>16,22</sup> Persistent opioid use among children and adolescents is a major concern as it represents an important pathway to opioid misuse.<sup>23</sup> In a recent study, approximately 1 in 10 pediatric dental visits that involved an opioid prescription was linked to subsequent opioid-related overdose or persistent use, with the greatest risk among younger children.<sup>24</sup> In 2017, FDA issued a warning to restrict the use of codeine and tramadol in children and breastfeeding mothers.<sup>19</sup> The following year, the FDA announced that use of cough medication containing codeine and hydrocodone should be limited to patients ages 18 years and older due to safety risks and abuse potential.<sup>25</sup> Some analgesics warrant careful considerations in patients with special health care needs or disease considerations. For example, NSAIDs may prolong bleeding time and exacerbate kidney or liver impairment.<sup>26</sup> Aspirin-containing analgesics may be associated with potentially fatal brain swelling in patients with certain viral illnesses.<sup>17</sup> Furthermore, the overuse of some analgesics (eg, acetaminophen) may be associated with hepatotoxicity.<sup>12,25</sup>

### Policy statement

The AAPD recognizes that pediatric dental patients may experience pain as a direct result of their oral condition or as a secondary effect of invasive dental procedures. Inadequate pain control has the potential for significant physical and psychological consequences, including altering future pain experiences for these children. Careful selection of pharmacologic agents is necessary to avoid toxicity and adverse reactions as well as misuse and diversion associated with opioids. Therefore, the AAPD supports the following.

- Consistent use of validated pediatric pain scales to assess and evaluate pain, accompanied by clear and objective documentation of all findings in the patient record
- Familiarity with and implementation of current evidence-based recommendations for prescribing analgesics to minimize adverse reactions and the risk of misuse
- Pain management with NSAIDs as effective first-line options unless medically contraindicated

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- Further research to identify effective nonpharmacologic modalities as well as safe evidence-based routes of administration for pharmacologic agents to optimize the management of acute and postoperative pain in pediatric patients
- Personalized guidance for parents and caregivers about different pain management options and their potential side effects
- Equitable access to pain management when medically necessary

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