Evidence-Based Clinical Practice Guideline for the Temporary Pharmacologic Management of Acute Dental Pain: Toothache in Adolescents, Adults, and Older Adults With No Immediate Access to Definitive Dental Treatment

GRADE Certainty of the Evidence

High	We are very confident that the true effect lies close to that of the estimate of the effect.
Moderate	We are moderately confident in the effect estimate. The true effect is likely to be close to the estimate of the effect.
Low	Our confidence in the effect estimate is limited.
Very Low	We have very little confidence in the effect estimate.

GRADE Interpretation of Strength of Recommendations

Implications	Strong Recommendations	Conditional Recommendations
For Patients	Most individuals in this situation would want the recommended course of action and only a small proportion would not.	The majority of individuals in this situation would want the suggested course of action, but many would not.
For Clinicians	Most individuals should receive the intervention.	Recognize that different choices will be appropriate for individual patients and that you must help each patient arrive at a management decision consistent with his or her values and preferences.
For Policy Makers	The recommendation can be adapted as policy in most situations.	Policy making will require substantial debate and involvement of various stakeholders.

Guideline Panel Recommendations

1. For the **temporary** management[1] of **toothache**[2] before to definitive dental treatment in adolescents, adults, and older adults[3], the guideline panel suggests the use of a short-acting local anesthetic (e.g., 2% lidocaine **plus** 1:100,000 epinephrine or 4% articaine **plus** 1:100,000 epinephrine) for **immediate pain relief** (Conditional, Very low certainty).
2. For the **temporary** management[1] of **toothache**[2] prior to definitive dental treatment in adolescents, adults, and older adults[3], the guideline panel recommends the post-visit use of non-opioid analgesics[4] as **first-line therapy** instead of opioid analgesics (Conditional, Low certainty).
    - 2.1. For the temporary management[1] of **toothache**[2], the guideline panel suggests initiating post-visit pain management using a nonsteroidal anti-inflammatory drug (NSAID) alone (e.g., 400 mg ibuprofen or 440 mg naproxen sodium) **OR** in combination with acetaminophen (e.g., 500 mg) (Conditional, Low certainty).
    - 2.2. In the rare instances when post-visit pain control using NSAIDs alone proved inadequate, the guideline panel suggests the **addition** to the previous first-line therapy (i.e., NSAID) prescription of 325 mg acetaminophen **plus** a combination of 325 mg acetaminophen with an opioid[5,6,7] (e.g., 5-7.5 mg hydrocodone or 5 mg oxycodone) at the lowest effective dose, fewest tablets, and the shortest duration, which rarely exceeds three days (Conditional, Low certainty).
    - 2.3. In the rare instances when post-visit pain control using NSAIDs in combination with acetaminophen (e.g., 500 mg) proved inadequate, the guideline panel suggests **replacing** the initial first-line therapy prescription with an NSAID (e.g., 400 mg ibuprofen or 440 mg naproxen sodium) and 325 mg acetaminophen **plus** a combination of 325 mg acetaminophen with an opioid[5,6,7] (e.g., 5-7.5 mg hydrocodone or 5 mg oxycodone). The opioid prescription should consider the lowest effective dose, fewest tablets, and the shortest duration, which rarely exceeds three days (Conditional, Low certainty).
    - 2.4. When NSAIDs are contraindicated[8], the guideline panel suggests the post-visit use of acetaminophen alone at full therapeutic dose (e.g., 1,000 mg) **OR** 325 mg acetaminophen **plus** a combination of 325 mg acetaminophen with an opioid[5,6,7] (e.g., 5-7.5 mg hydrocodone or 5 mg oxycodone) at the lowest effective dose, fewest tablets, and the shortest duration, which rarely exceeds three days (Conditional, Low certainty).
3. For the **extended**[9] temporary management[1] of **toothache**[2] prior to definitive dental treatment in adolescents, adults, and older adults[3], the guideline panel suggests the supplemental use of 0.5% bupivacaine **plus** 1:200,000 epinephrine by block or infiltration injection **OR** 4% articaine **plus** 1:100,000/1:200,000 epinephrine by infiltration injection (Conditional, Very low certainty).
4. For the short-term temporary management[1] of **toothache**[2] prior to definitive dental treatment in adolescents, adults, and older adults[3], the guideline panel suggests the use of 10% **OR** 20% topical benzocaine compared with not using topical benzocaine (Conditional, Low certainty).

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These guidelines are intended to help inform clinical decision making by prescribers and patients. They are not intended to be used for the purposes of restricting, limiting, delaying, or denying coverage for, or access to, a prescription issued for a legitimate medical purpose by an individual practitioner acting in the usual course of professional practice.

1. These recommendations are applicable only to settings in which definitive dental treatment is not available. Definitive dental treatment includes pulpectomy, nonsurgical root canal treatment, incision for drainage of abscess, and tooth extraction. Patients should be instructed to call if their pain fails to lessen over time or to call if the referral to receive definitive dental treatment within 2-3 days is not possible.
2. Toothache means symptomatic pulpitis [i.e., reversible or symptomatic irreversible pulpitis with or without symptomatic apical periodontitis] or pulp necrosis with symptomatic apical periodontitis or acute apical abscess).
3. The guideline panel defined the following age ranges: Adolescents (aged 12-<17 years), adults (aged 17-<65 years), and older adults (≥65 years).
4. To minimize adverse effects, analgesic prescriptions should follow the principle of minimum effective dosage to achieve pain relief. The maximum daily dose is 2,400 mg of ibuprofen, 1,100 mg of naproxen sodium, and 4,000 mg of acetaminophen.
5. This option should NOT be offered to patients taking gabapentinoids, central nervous system active medications (e.g., benzodiazepines, antidepressants, anticonvulsants, and narcotics), or patients already taking opioids for other medical reasons.
6. When opioids are prescribed, clinicians should obtain informed consent from the patient (or the parent or guardian in the case of minors) with detailed information about potential opioid undesirable effects (e.g., physiological dependence, risk of substance misuse, respiratory depression, and adverse effects on driving or operating machinery). This is particularly critical in adolescents and young adults, who are at increased risk of subsequent misuse and substance use disorder even after a single prescription.
7. Alert patients on risks of cumulative acetaminophen dose and that acetaminophen + opioid combination contains both drugs in one pill. The total dose of acetaminophen should not exceed 4,000 mg per day.
8. "A drug should be contraindicated only in those clinical situations for which the risk from use clearly outweighs any possible therapeutic benefit. Only known hazards, and not theoretical possibilities, can be the basis for a contraindication." (Citation from: Guidance for industry. Warnings and Precautions, Contraindications, and Boxed Warnings Sections of Labeling for Human Prescription Drug and Biological Products- Content and Format. U.S. Department of Health and Human Services, Food and Drug Administration. October 2011).
9. Blocking or infiltrating using a local anesthetic right before the patient is discharged is one additional complementary intervention to provide extended pain relief. This does not replace the need for pain management using analgesics.

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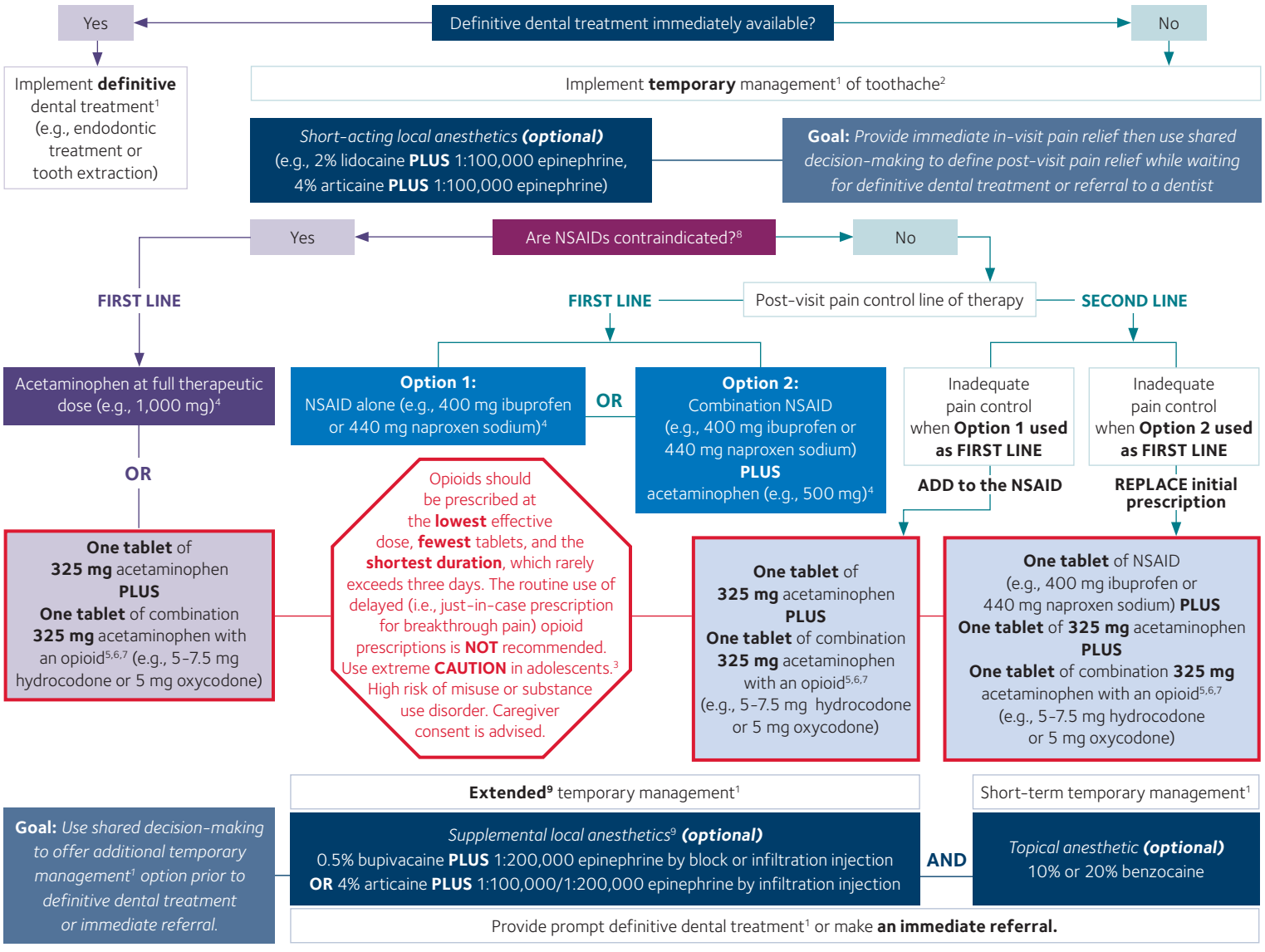
Guideline Panel Good Practice Statements

- The guideline panel advises clinicians to counsel patients that they should expect some pain and the analgesics should make their pain manageable. The guideline panel also recommends discussing with the patient their past experiences, preferences, and values regarding managing acute dental pain before prescribing.
- The guideline panel reminds users of these recommendations that they only apply to settings in which definitive dental treatment is not immediately available. These pharmacological strategies will temporarily alleviate dental pain until a referral for definitive dental treatment is in place.
- The guideline panel recommends clinicians thoroughly review the patient's medical and social history (including illicit and recreational drug use) and current medications and supplements to avoid overdose and adverse drug-drug interactions.
- To minimize adverse effects, analgesic prescriptions should follow the principle of minimum effective dosage to achieve pain relief and avoid the routine use of delayed (i.e., just-in-case prescription for breakthrough pain) opioid prescriptions.
- If an NSAID alone or in combination with acetaminophen fails to provide adequate pain relief, and if opioids are prescribed, counsel patients regarding appropriate storage and disposal.
- The guideline panel recommends clinicians review the state's prescription drug monitoring program (PDMP) when available to determine the co-prescribing of other controlled substances (e.g., opioids, benzodiazepines). If the patient with acute dental pain is already receiving opioids to manage chronic pain (i.e., long-term use of opioids), clinicians should prioritize the use of nonopioid analgesics (i.e., first-line analgesic therapy).
- Special care should be taken when prescribing opioids to a patient with a substance use disorder, including communication with patient's other healthcare providers.



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