

Dental Injuries, Traumatic

FAST FACTS

25%

of all school-aged children have experienced dental trauma of some sort

luxation

most common trauma in primary teeth

fractures

most common trauma in permanent teeth

33%

of adults have experienced a dental trauma before age 19

WHEN TO REFER

When in doubt, contact patient's dentist, page the Cincinnati Children's on-call dental resident, or, if after hours, refer to Cincinnati Children's Emergency at Burnet ONLY.

For primary teeth, refer to Cincinnati Children's dentistry when there is visible pulp exposure in a fracture, teeth are moved out of position and interfering with biting down on back teeth, or where there is risk for aspiration of extremely loose teeth.

For permanent teeth, refer to Cincinnati Children's dentistry for avulsions (for reinsertion), complicated crown fractures, teeth out of position (for repositioning).

For true dental emergencies, page the Cincinnati Children's dental resident on-call at 513-636-4200.

Traumatic dental injuries (TDI) account for 5% of all injuries to children and adults. Dental trauma to the primary teeth can affect developing permanent teeth. TDIs are split into two categories: (1) Luxations are TDIs that move a tooth out of place, including avulsions where the tooth is completely out of socket and (2) Fractures occur when a tooth is broken at the crown or root level and may be complicated (exposed nerve) or uncomplicated (nerve is not exposed). Multiple injuries can occur at the same time. Concomitant soft tissue injuries may also be present.

ASSESSMENT

Perform a standard history and physical exam (HPE) focused on the method and timing of the dental injury. Rule out concussion of any type. Confirm tetanus status and rule out child abuse (trauma to head/neck region). Determine if injury is to a primary (baby) or permanent (adult) tooth. Check for soft tissue lacerations/punctures or bruising.

Assess displaced tooth for:

- **Concussion** — normal mobility, tender to touch, not out of place
- **Subluxation** — increased mobility, tender to touch, not out of place
- **Intrusion** — appears pushed into gingiva, immobile
- **Extrusion** — displaced out of socket, appears elongated, increased mobility
- **Lateral luxation** — displaced laterally and out of place, usually not mobile, may seem locked in place, usually associated with a bony alveolar fracture

If a tooth is missing, assess for:

- **Avulsion** — tooth completely out of socket. Determine if caregiver has the tooth. If not, consider foreign body/chest film to rule out aspiration. If permanent tooth, immediately replant or place in Save-A-Tooth solution and call Cincinnati Children's dentist immediately; never replant a primary tooth
- **Intrusion** — severe displacement of tooth into gingiva and bone, no longer visible

If a tooth is fractured, assess for:

- **Uncomplicated** — fracture does not involve pulp (nerves/blood vessels of tooth), only involves enamel and dentin
- **Complicated** — tooth itself appears to be bleeding, from nerve/blood vessels of tooth, may present as a pinpoint area or larger

Some dental traumas can only be diagnosed with x-ray (root fracture) but may present as a mobile tooth.

HPE RED FLAGS

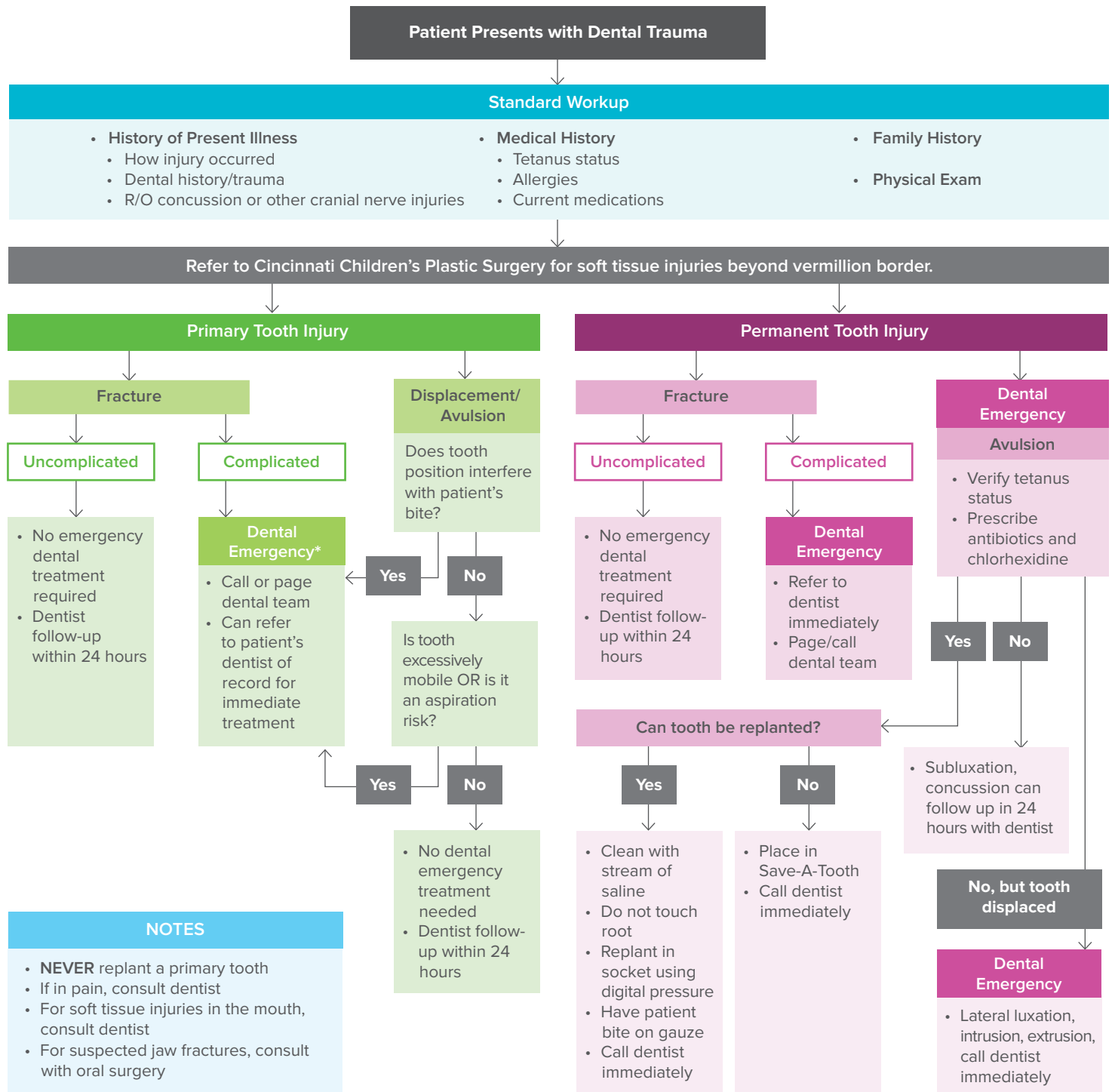
- If trauma seems inconsistent, rule out possible child abuse
- If floor of mouth shows bruising, consider jaw fracture

MANAGEMENT/TREATMENT

Treatment varies depending on injury and whether a primary or permanent tooth is involved. See algorithm on reverse for details.

If you would like additional copies of this tool, or would like more information, please contact the Physician Outreach and Engagement team at Cincinnati Children's.

Dental Injuries, Traumatic



Yes

No, but tooth displaced

Dental Emergency

- Lateral luxation, intrusion, extrusion, call dentist immediately

NOTES

- NEVER** replant a primary tooth
- If in pain, consult dentist
- For soft tissue injuries in the mouth, consult dentist
- For suspected jaw fractures, consult with oral surgery

*Cincinnati Children's dentistry is always available for consultation, but if the trauma does not require immediate treatment, patient can be referred back to their dentist of record if they have one.