

Athletic Trainers Are Not Prepared for Traumatic Dental Injuries

Cullen E, Schwartz S, Kossak C, Thikkurissy S, Cincinnati Children's Hospital Medical Center, Cincinnati, OH



Background

- One-third of childhood dental injuries are sports-related – injury rates vary depending on patient's gender, age, sport, and competition intensity
- Dental prognosis is associated with the time between accident and obtaining emergency care
- Tooth-saving kits/dental emergency kits can be useful on-site to improve trauma outcomes
- Previous research demonstrates that non-dental healthcare providers have limited ability and awareness to manage time-sensitive traumatic dental injuries

Methods

- IRB-approved cross-sectional survey (IRB #2024-0746)
- Survey developed in coordination with members and research leadership from the National Athletic Trainers' Association (NATA), composed through Qualtrics
- Survey composed of 12 required multiple choice and select all that apply questions with two optional short answer questions
- Distributed survey to 3,000 NATA Certified & Associate Members, Corporate Members, and Board of Certification Approved Providers
- 6-week collection window with bi-weekly reminders
- 135 completed responses were received (4.5% response rate)



Results

Demographics of athletic trainers

- 91% have masters or doctorate degree
- Approximately half of respondents provide coverage for high school athletes
- Additional coverages to consider – middle school, recreational sports, performing arts

On-site preparedness

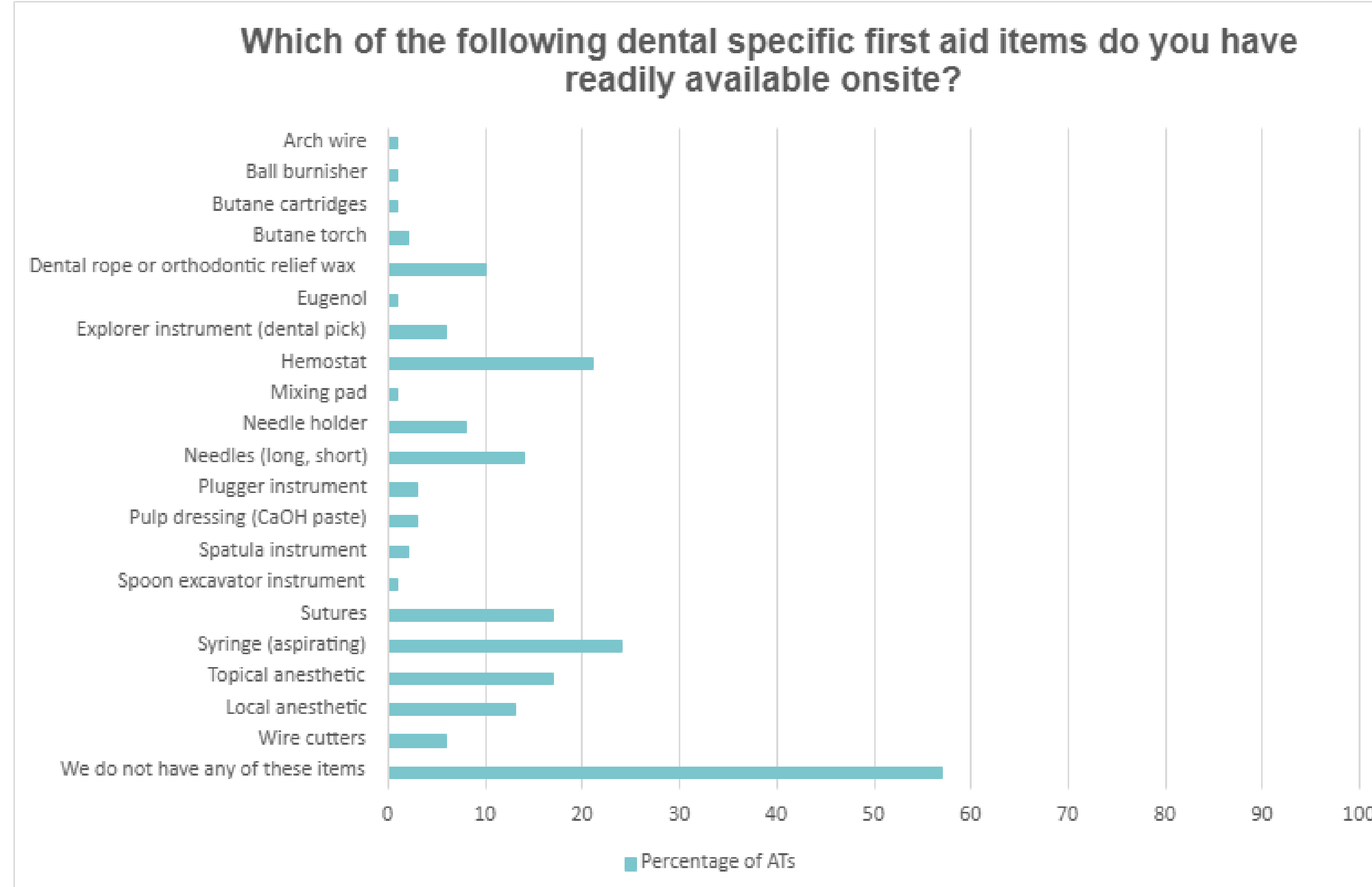
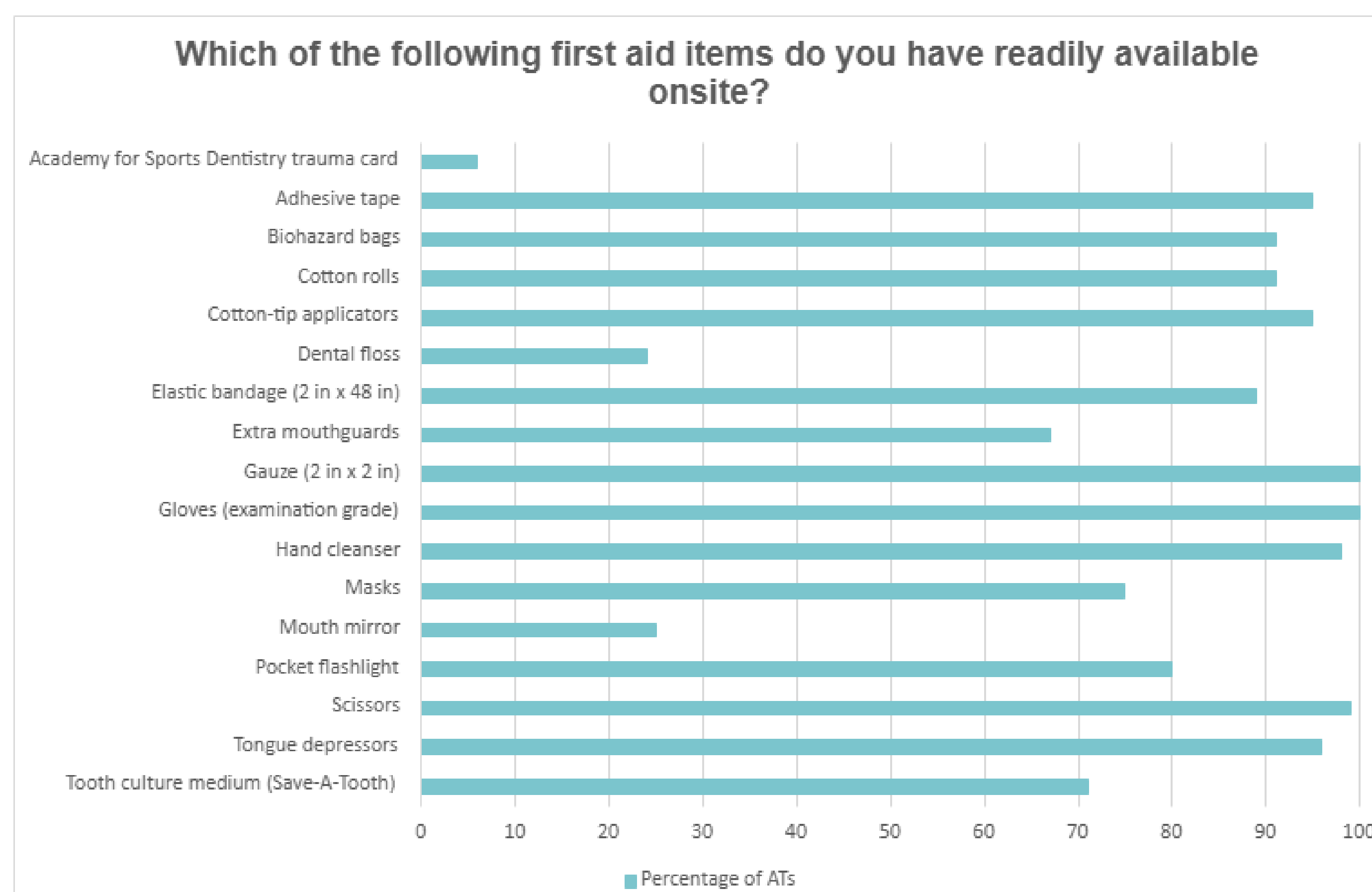
- Less than half (43%) of athletic trainers have on-site dental emergency kit supplied
- 71% had a tooth culture medium (Save-A-Tooth)
- **Of recommended on-site first-aid items by NATA position statement, respondents had an average of 77% of medical items and 10% of dental-specific items**

Dental access to care

- Over half (62%) of athletic trainers do not have a dental contact provided by their employer
- For athletic trainers that do have a dental contact, only ~25% of those contacts are immediately available for evaluation or treatment
- Common dental contacts: community/private practice dentist, hospital/emergency room dentist, team dentist

Athletic trainers who covered exclusively high school sports were significantly less likely ($p < .0001$) to have dental contact than those who exclusively covered collegiate sports.

Results



Conclusion

1. Many athletic trainers lacked on-site dental emergency resources recommended by NATA
2. Most athletic trainers did not have established, reliable dental referral contacts for the timely management of traumatic dental injuries
3. AAPD members are encouraged to reach out to local middle and high schools as a dental contact, as younger athletes (compared to college or professional athletes) are less likely to receive time-sensitive dental care following trauma

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Emergency Treatment of Athletic Dental Injuries

LUXATION (Tooth in socket, but wrong position)

THREE POSITIONS
EXTRUDED TOOTH - Upper tooth hangs down and/or lower tooth has been pushed up.
 1. Reposition tooth in socket using firm finger pressure like replantation.
 2. Stabilize tooth by gently biting on towel or wet paper tissue.
 3. TRANSPORT IMMEDIATELY TO DENTIST.

LATERAL DISPLACEMENT - Tooth pushed back or pulled forward.
 1. No treatment at accident scene as tooth is locked in bone.
 2. TRANSPORT IMMEDIATELY TO DENTIST.

INTRUDED TOOTH - Tooth pushed into gum-looks short
 1. No treatment at accident scene as tooth is locked in bone.
 2. TRANSPORT IMMEDIATELY TO DENTIST.

FRACTURE (Broken tooth)

1. If tooth is in pieces, save the broken portion and bring to the dental office in water or milk.
 2. The nerve of the tooth may be exposed causing pain from cold, heat and air passage. Analgesics are recommended.
 3. THE PATIENT MAY COMPLETE THE GAME OR ACTIVITY BUT WILL REQUIRE DENTAL TREATMENT WITHIN 24 HOURS TO SAVE OR TREAT THE DENTAL PULP. SOONER IS BETTER.

PROPERLY FITTED MOUTHGUARDS SHOULD BE STANDARD EQUIPMENT

Academy for Sports Dentistry Trauma Card (NATA Position Statement)

Objectives

To evaluate if athletic trainers (ATs) have resources available on-site to triage and manage traumatic dental injuries.