

# Patterns in Pediatric Dental Emergencies in the BronxCare Emergency Department

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## Purpose

To determine trends and statistics in Pediatric Dental Emergencies in the BronxCare Health System Pediatric Emergency Department (ED). By knowing the characteristics of these trauma patients, dental care providers will be more aware of the factors that precipitate these injuries and be better able to handle them.

## Background

The most prevalent unmet healthcare need in US children is dental care.<sup>1</sup> Those having difficulty with access to dental care are children from low income families, special needs and minorities.<sup>1</sup> Without regular dental visits, more dental emergencies may arise. When a child does not have a dental home, parents are more likely to turn to a hospital emergency department for dental emergencies.<sup>1</sup>

Emergency department visit numbers have increased over the last two decades for pediatric dental care.<sup>2</sup> Traumatic dental injuries often occur in preschool, school age and adolescents where close to 50% of children by the age of 4 will have experienced dental trauma.<sup>3,4</sup>

The American Academy of Pediatric Dentistry recommends that a child's first dental visit should occur within the first year.<sup>5</sup> 25.7% of children's first dental visits are due to emergencies.<sup>6</sup>

As a dental provider, it is pivotal to educate parents about oral health and trauma prevention as emergency department visits can be difficult and emotional experiences.

## Methods

- Retrospective chart review of ED trauma logs
- Duration: January 2016 to December 2020
- Inclusion criteria: ASA I-II children under 11 years
- Patient demographics and trauma traits included:
  - Gender
  - Age (0-3 years, 4-7 years, 8-11 year age groups)
  - Trauma type: dental, non-dental, both
  - Month and season of emergency
  - Follow up rates

- 393 of 436** subjects were eligible for this study

## Results

### Type of Emergencies

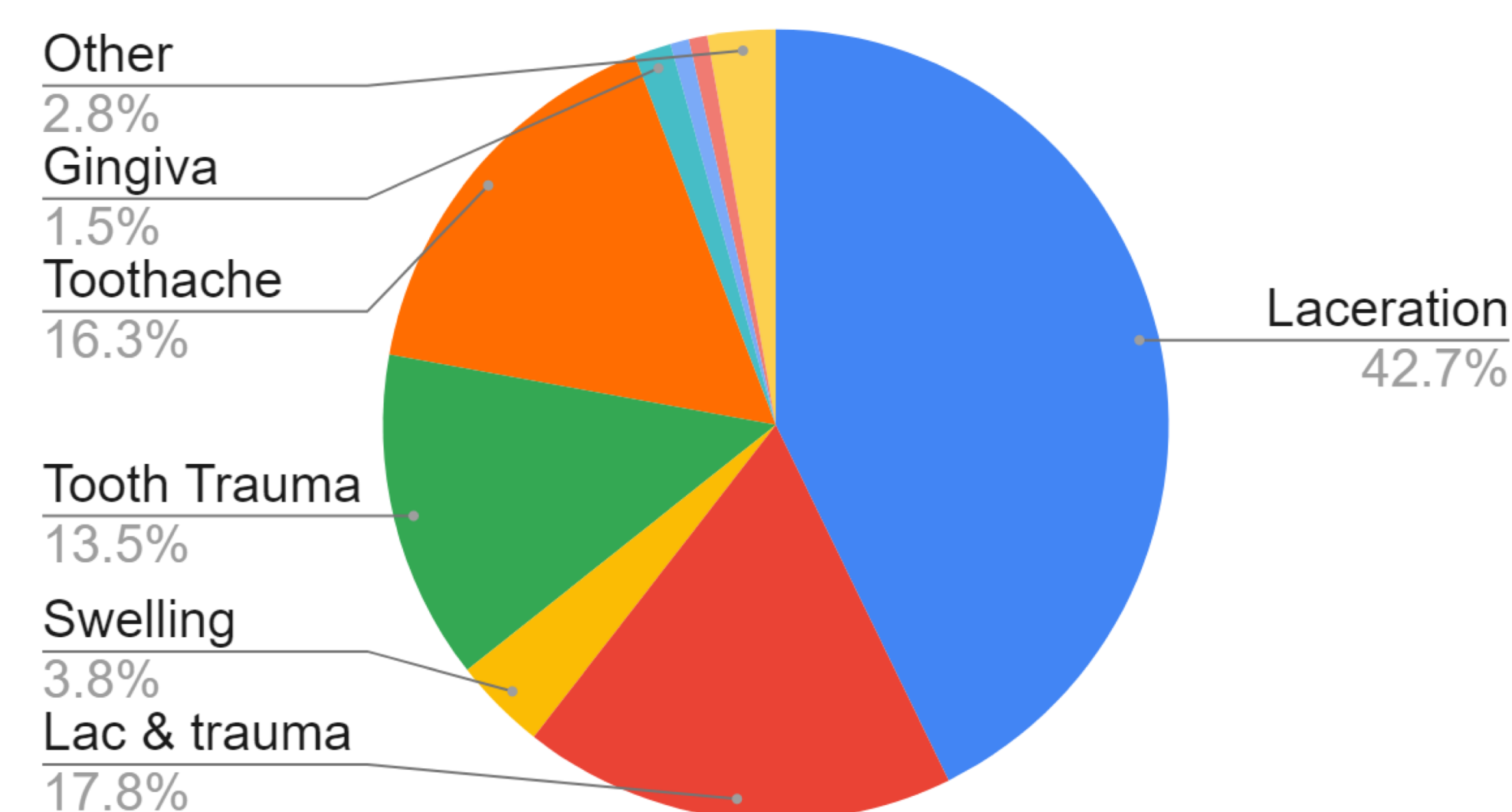


Figure 1

- Most common: Laceration (42.7%)
  - Location/type: lip, nose, chin, forehead, ear, eyebrow, labial mucosa, cheek, tongue, dog bite
    - Lip most common laceration location (fig. 1)
- Second: Laceration with tooth trauma (17.8%)
  - Trauma included: concussion, subluxation, enamel fracture, enamel dentin fracture, avulsion, extrusive luxation (fig. 1)
- Ages 0-3 and 4-7 years had nearly equivalent visits with 39% and 38% respectively (fig. 2).

### Age of Emergency

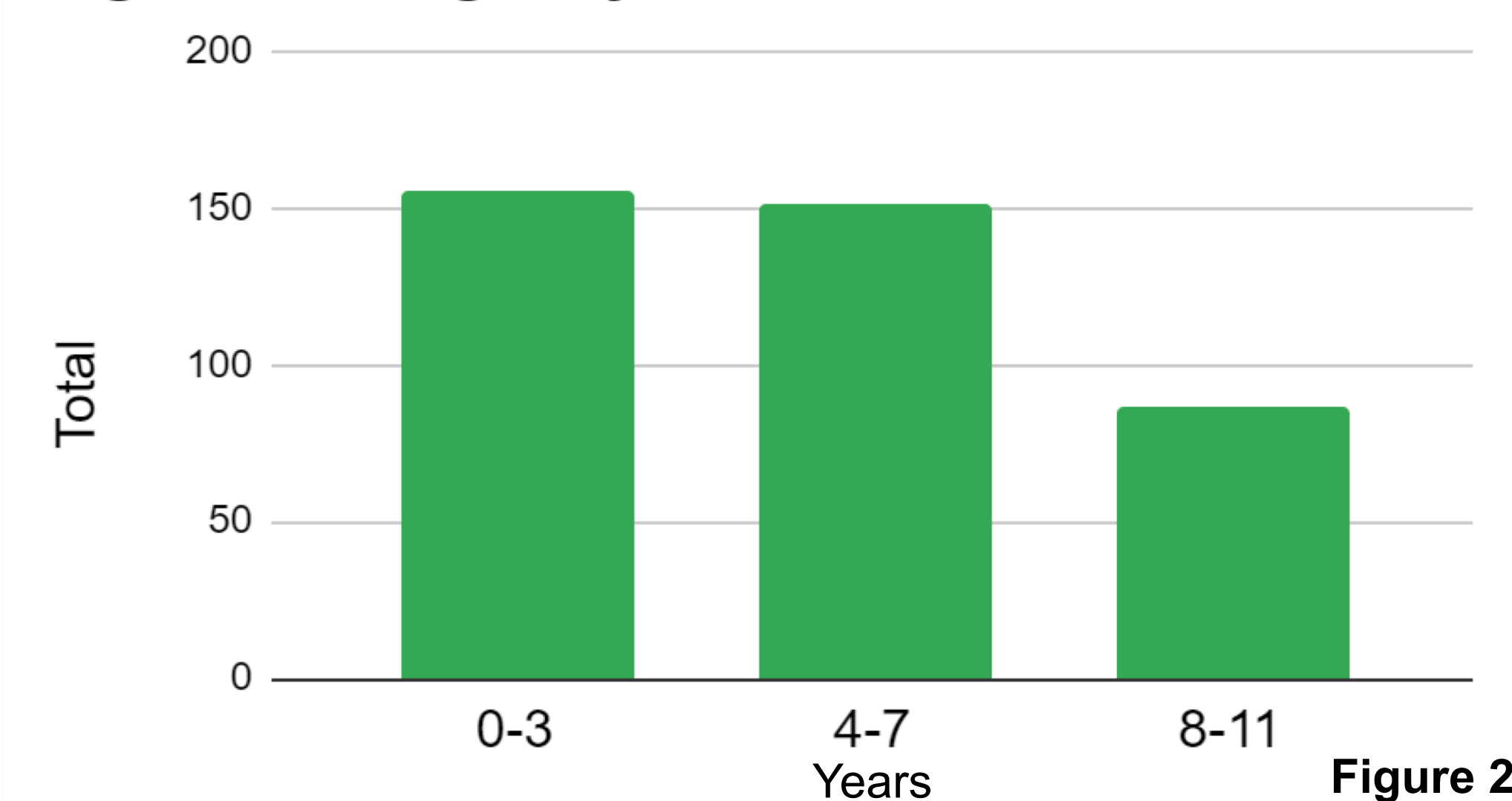


Figure 2

### Total Emergencies per month

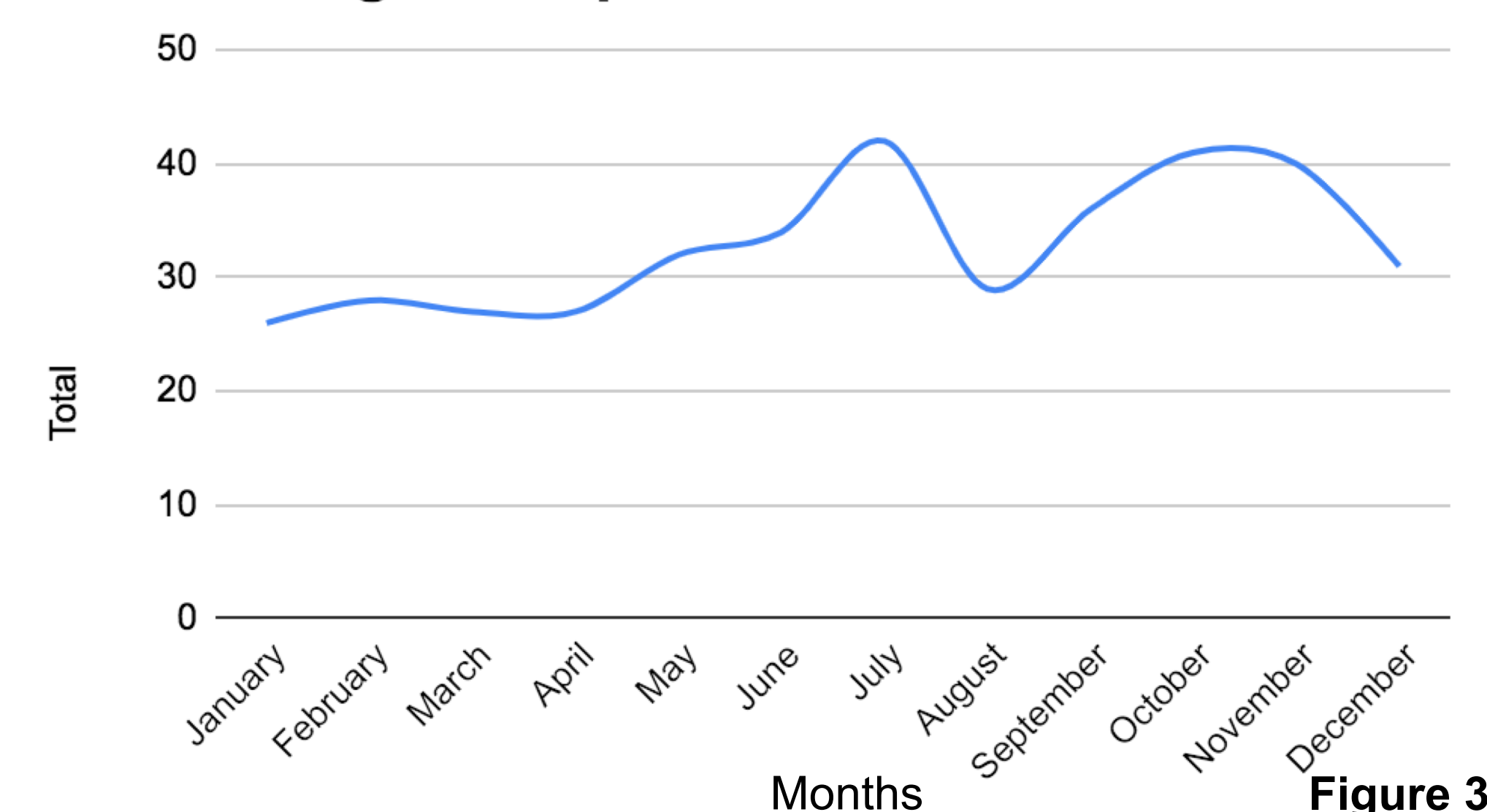


Figure 3

### Season Emergencies Occur

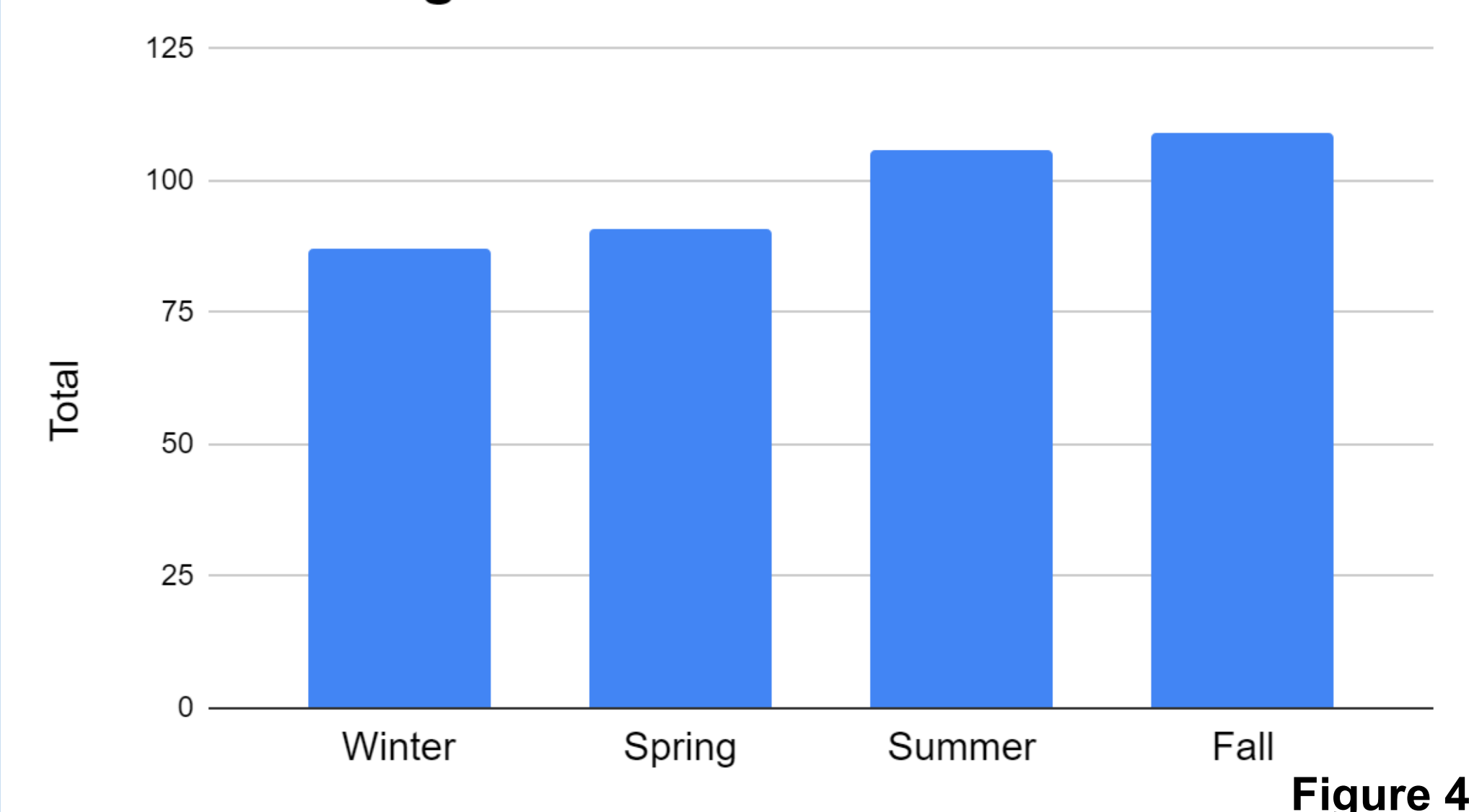


Figure 4

- Overall follow-up rate: 67%
- Highest follow up rate: Lacerations (55%)

## Discussion

Males (60%) had higher incidence of ED visits compared to females (40%). Most frequent ED visits were in July, followed by October and then November (fig. 3). More frequent visits are seen in the summer and fall seasons, and this may be due to more outside activities (fig. 4).

More trauma was non-dental related (50%), Tooth trauma was 13.5%. This suggests that when children present to the ED, there may be the possibility of oral area trauma, and thus this area should be thoroughly evaluated.

Limitations to this study are that some patients may have had an existing dental home elsewhere, and thereby not followed up in our clinic.

## Conclusions

In the Bronx, many ED dental visits are due to lacerations.

When children present to the ED after sustaining an head and neck injury, the oral area should always be examined.

Establishment of a dental home is key.

## References

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