

The Most Common Pediatric Dental Emergencies at NYU Langone- Brooklyn: An Analysis of Walk-In Emergencies



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INTRODUCTION

Pediatric dental emergencies

- Common source of acute care utilization
- Reflect gaps in:
 - Preventive care
 - Treatment completion
 - Access to routine dental services

Role of emergency visits

- Entry point for children without a dental home
- May strain clinic efficiency and resources

PURPOSE

This study aims to:

- Characterize pediatric dental emergency visits by:
 - Age
 - Chief complaint
 - Treatment rendered
 - Dental home status
- Identify:
 - Barriers to treatment completion
 - Gaps in follow-up adherence
 - Access-to-care limitations

FIGURE 1

Number of patients with pain with infection

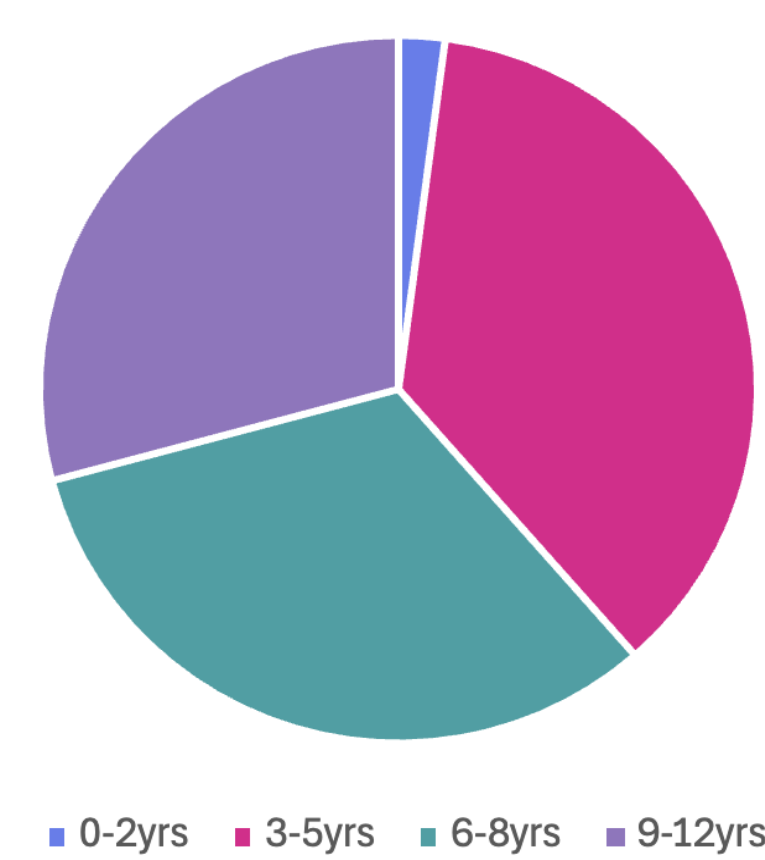
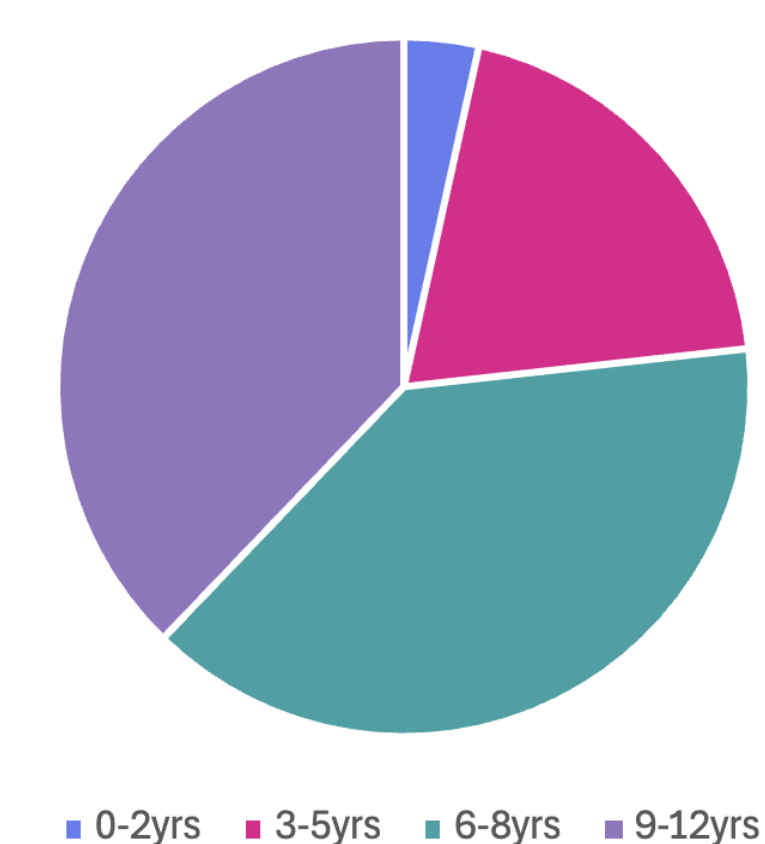


FIGURE 2

Number of patients with pain without infection



METHOD

- Retrospective chart review (WISDOM/EPIC) of patients ages 0–12 at NYU–Brooklyn Dental Clinic (Jan 1–July 1, 2025)
- Included walk-in visits coded D0140 (problem-focused evaluation); excluded referrals and follow-ups
- 519 charts reviewed; 150 excluded → 369 true emergency visits analyzed
- Data collected included:
 - Age groups: 0–2, 3–5, 6–8, 9–12 years
 - Chief complaint categories: pain with infection, pain without infection, trauma, space maintainer issues, lost restorations, other non-pain complaints
 - Dental home status and referral status (outside dentist vs. emergency-only care use)

RESULTS

Study Sample

- Total of 6739 visits
- 369 pediatric dental walk-in emergency visits (5% of total visits)
- Highest volume: 6-8 year age group

Chief complaints and Treatment Rendered

- **Pain without infection:** 172 (46.6%) - most common
 - Extraction: 61
 - Anesthesia Consultation: 21
 - Palliative treatment: 44
 - Endodontic treatment: 27
- **Pain with infection:** 96 (26.0%)
 - Extraction: 53
 - Anesthesia consultation: 12
 - Endodontic treatment: 14
- **Trauma:** 28 (7.6%)
- **Space maintainer:** 21 (5.7%)
- **Lost restorations:** 9 (2.4%)
- **Other (no pain):** 43 (11.7%)

Age Trends

- **0-2 yrs:** Trauma (36.8%)
- **3-5 yrs:** Pain with infection (42.2%, see figure 1)
- **6-8 yrs:** Pain without infection (50%, see figure 2)
- **9-12 yrs:** Pain without infection (48.8%)

Dental Home and Referrals

- 34/369 patients presented with outside referrals
- 228/369 patients were patients of record (see figure 3)

Recurrent Visits

- 36/369 visits were recurrent visits

DISCUSSION

KEY FINDINGS

- Pain driven visits (increased in school-aged children)
- Clear age-related patterns
 - Younger patients: Trauma
 - Older patients: endodontic pain
- Increased endodontic complaints leads to limited access and longer wait times
- Repeat visits were uncommon
 - Repeat visits were often linked to non-compliant patients

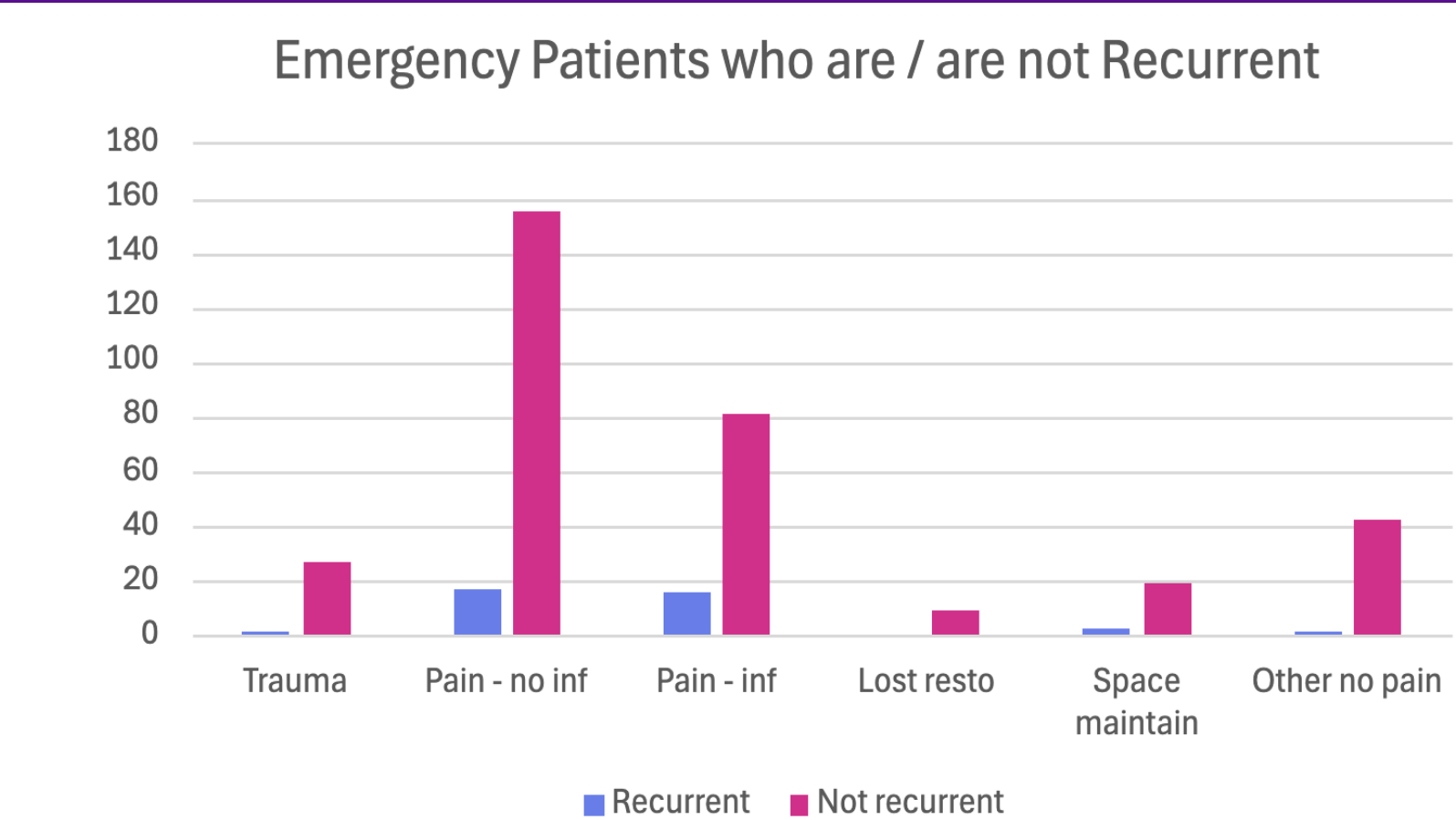
CONTRIBUTING FACTORS

- High patient volume
- Barriers to multi-visit care
- Behavior challenges (patients on GA waitlist)
- Non-compliant patients

CLINICAL APPLICATIONS

- Treatment coordinator to improve follow up and ensure scheduling
- Endodontic rotation to improve access to care and reduce delays

FIGURE 3



CONCLUSION

- Pediatric dental visits are largely pain-driven and follow clear age-based patterns
- High volume of walk-in emergencies underscores the role of hospital-based clinics in urgent care access
- Emergency utilization reflects both disease burden and gaps in timely treatment and continuity of care
- **Improving outcomes:**
 - Strengthening preventive care
 - Enhancing follow-up systems
 - Increasing access to definitive treatment
 - These efforts may reduce preventable emergency visits and improve overall patient outcomes

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