Introduction

Patients with acute dental abscesses frequently present to the Paediatric Emergency Department (ED) with acute onset of facial swelling, warranting urgent assessment and therapy. Management of these patients involves surgical elimination of the source of infection, with adjunctive antibiotic therapy.

This patient population remains clinically stable and typically demonstrates rapid response to therapy with dental extraction and antibiotics. Given the predictable clinical course and limited nursing care required, previously healthy paediatric patients with dental abscesses and associated facial swelling can be managed in an ambulatory setting.

This Clinical Pathway is intended to guide the ambulatory management of patients who present to SickKids with a dental abscess and associated facial swelling.

Objectives:

In the target population, the objectives of this guideline are to:

- Emphasize the surgical elimination of the source of infection as the initial priority where possible;
- Streamline the care of these patients from hospital arrival to discharge;
- Decrease the use of unnecessary diagnostic studies;
- Outline each service’s role and responsibilities, as well as facilitate clear communication and handover among parties;
- Optimize the patient experience when presenting to the hospital with this condition;
- Increase hospital bed capacity for acutely ill patients

Target Patient Population

- Clinically stable children with a dental abscess and associated facial swelling and no significant comorbidities or chronic health conditions

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Target users

Target Users include, but are not limited to:

- Emergency Medicine physicians, nurses, nurse practitioners, and trainees
- Paediatric Medicine physicians, nurse practitioners, and trainees,
- Nurses in the Alternate Care Environment
- Dentistry team
- Pharmacists
- Patients and families

Exclusion Criteria

This Pathway is not intended for use in patients who:

- Are systemically ill (ill-appearing, hemodynamically unstable);
- Have an immunodeficiency;
- Have a metabolic disorder;
- Have significant comorbidities*;
- Are in significant pain requiring IV analgesia; or
- Are unable to maintain adequate oral hydration or tolerate oral antibiotics

* Exceptions may be made on a case-by-case basis and require discussion with and acceptance by the Dentistry and Intake Physicians
Clinical pearls for discharge from ACE:

- Surgical elimination of the source of infection via extraction or endodontic treatment and drainage of pus is recommended as soon as clinically possible.
- Systemically ill, immune-deficient, and metabolic patients warrant admission.
- Life-threatening complications include sepsis, airway compromise, toxic shock syndrome, cavernous sinus thrombosis, descending necrotizing mediastinitis, brain abscess, and Ludwig’s angina.
- In children who appear unwell, including signs and symptoms above, blood cultures are recommended.
- Amoxicillin/ampicillin is recommended as the first-line treatment due to the polymicrobial anaerobic nature of dental infections. Clindamycin is recommended should the patient have an allergy.
- Consider consultation with Infectious Diseases team should there be no evidence of improvement within 48 hours.
- **Discharge criteria:** Considerable improvement on IV antibiotics, afebrile > 24 hours, well-controlled pain, tolerating oral intake and oral medications well.

**Related Documents**

- Guideline on Paediatric Oral Surgery: American Academy of Paediatric Dentistry, 2020
- Guideline on use of Antibiotic Therapy for Paediatric Dental Patients: American Academy of Paediatric Dentistry, 2022
- Cellulitis and Abscess Pathway: Seattle Children's Hospital, 2020
- Antimicrobial Guidelines for Dental Abscess, Royal Children’s Hospital Melbourne, 2020

**References**


Guideline Group and Reviewers

Guideline Revision Group Membership (2022)
1. Dr. Gabriella Garisto, Staff Paediatric Dentist, Dentistry
2. Dr. Shangeetha Gunasekaran, Fellow, Dentistry
3. Dr. Julie Johnstone, Paediatric Medicine
4. Dr. Tania Principi, Emergency Medicine
5. Noel Wong / Aubrey Sozer, Clinical Practice and Quality Lead, 7BCD Paediatric Medicine

Guideline Revision Group Membership (2019)
1. Aliya Jaffer, Paediatric Nurse Practitioner, Paediatric Medicine
2. Dr. Julie Johnstone, Paediatric Medicine
3. Dr. Tania Principi, Emergency Medicine
4. Dr. Michael Casas, Staff Paediatric Dentist, Dentistry
5. Fatma Rajwani, PT, Quality Analyst

- Aliya Jaffer, Paediatric Nurse Practitioner, Paediatric Medicine
- Louise Rudden, Paediatric Nurse Practitioner, Paediatric Medicine
- Dr. Deena Savlov, Staff Physician, Paediatric Medicine
- Dr. Ari Bitnun, Staff Physician, Infectious Diseases
- Dr. Ed Barrett, Staff Paediatric Dentist Dentistry
- Dr. Michael Casas, Staff Paediatric Dentist, Dentistry
- Dr. Kelly Jane Oliver, Fellow, Dentistry
- Dr. Trent Mizzi, Staff Physician, Emergency Medicine
- Carrie Glenfield, Nurse Educator, Emergency Medicine
- James Tjon, Clinical Pharmacist
- Dr. Joseph Wiley, Resident Physician, Paediatric Medicine
- Robert Davidson, Clinical Support Nurse, Emergency Medicine
- Cindy Capstick, Clinical Manager, Emergency Medicine
- Stephanie Lappan-Gracon, Clinical Senior Manager, Dentistry
- Amanda Hurdowar, Quality Analyst, Quality Management
- Marina Strzelecki, Pharmacy, Quality Analyst, Quality Management
- Fatma A. Rajwani, PT, Quality Analyst, Quality Management

Internal Reviewers for Revised Guideline:
- Dr. Carolyn Beck, Staff Physician, Paediatric Medicine
- Nadia Tavernese, Clinical Manager, Ward 7D/Streamlined Care Unit/Alternative Care Environment

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• Iris Liu, Nurse Practitioner, Paediatric Medicine
• Paediatric Medicine Alternate Care Environment RNs

Implementation
• Pathway has been implemented since 2015 with good effect and no patient safety concerns have arisen during this time
• Divisions of Paediatric Medicine and Emergency Medicine need to continue to build awareness during new trainee orientation
• ED and Inpatient Medical Director to communicate any updates in practice to ED and Paediatric Medicine Divisions respectively.

Evaluation
• Ongoing monitoring of adherence to the pathway

Attachments:

Dental Abscess Pathway Jan. 2022 FINAL.docx

Dental Abscess Pathway Jan. 2022 FINAL.pdf