

TITLE

INTRANASAL MEDICATION ADMINISTRATION - PEDIATRICS

SCOPE

Provincial: Emergency Departments and Urgent Care Centres

DOCUMENT

HCS-239-01

APPROVAL AUTHORITY

Vice President Research, Innovation & Analytics

INITIAL EFFECTIVE DATE

May 13, 2019

SPONSOR

Emergency Strategic Clinical Network

REVISION EFFECTIVE DATE

Not applicable

PARENT DOCUMENT TITLE, TYPE, AND NUMBER

Not applicable

SCHEDULED REVIEW DATE

May 13, 2022

NOTE: The first appearance of terms in bold in the body of this document (except titles) are defined terms – please refer to the Definitions section.

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OBJECTIVES

- This guideline is intended for pediatric **patients** who present to the Emergency Department (ED) or Urgent Care Centre (UCC) and require the administration of **intranasal (IN)** medication.
- To assist **health care professionals** with facilitating the correct administration of medications via IN route for pediatric patients.

APPLICABILITY

Compliance with this document is required by all Alberta Health Services employees, members of the medical and midwifery staffs, students, volunteers, and other persons acting on behalf of Alberta Health Services (including contracted service providers as necessary).

ELEMENTS**1. Points of Emphasis**

- 1.1 IN administration is well established as a safe and effective route of medication delivery in the pediatric population for pain management, seizure control, and sedation.
- 1.2 IN medication route is associated with rapid medication absorption when timely administration is required.
- 1.3 IN medication administration is non-invasive and generally well tolerated.

2. Intranasal Administration of Medications

- 2.1 In circumstances when speed of onset and/or ease of administration is required, IN may be preferred route.
- 2.2 Health care professionals should refer to Alberta Health Services (AHS) approved medication resources (e.g., Lexicomp) prior to the ordering and/or administration of IN medications to confirm appropriate dose and route.
- 2.3 Prior to administering IN medication, a patient-specific **order** from a Physician or Nurse Practitioner (NP) is required.

3. Inclusion Criteria

- 3.1 IN route administration may be considered for:
 - a) pain management;
 - b) pre-procedural anxiolytic;
 - c) initial seizure management; or
 - d) narcotic antagonist.

4. Exclusion Criteria

- 4.1 IN medications should not be used in the following patient conditions:
 - a) altered level of consciousness or head injury;
 - b) altered respiratory rate;
 - c) hemodynamically unstable;
 - d) known allergy, hypersensitivity, or intolerance to the medications to be administered;
 - e) narcotic medication administration within the previous 30 minutes;
 - f) evidence of recent vasoconstrictive IN drug use (e.g., xylometazoline [which may be found in over the counter nasal sprays], cocaine, and phenylephrine); and/or
 - g) bilateral occluded nasal passages (e.g., swelling due to injury); congenital structural anomaly, nasal trauma or active epistaxis.
- 4.2 IN medications should not be used when:
 - a) the volume of the medication exceeds the recommendations for IN application;

- b) the medication is not indicated for IN use; and/or
- c) dosing information is unavailable.

5. Assessment and Treatment

- 5.1 A complete nursing assessment is required including Provocation, Quality, Radiation, Severity, and Time (PQRST) assessment of the pain and associated symptoms. Obtain a full set of vital signs including blood pressure, temperature, pulse, respiratory rate and oxygen saturation (refer to the *AHS Assessment and Reassessment of Patients* Guideline).
- 5.2 When IN medication is administered for pain management, document the pediatric patient's pre and post pain score using an age appropriate pain scale.
- 5.3 Inspect the nare(s) for blood and/or mucous. Suctioning may be required to ensure the delivery of adequate medication.
- 5.4 As appropriate, the health care professional should ensure reversal agents are immediately accessible and reversal dose is pre-calculated prior to medication administration.

6. Medication Delivery Options

- 6.1 The use of a **nasal atomizer** optimizes medication delivery and absorption.
- 6.2 To minimize volume and to maximize absorption, it is recommended the health care professional use the most concentrated form of medication available.
- 6.3 The health care professional should divide the medication dose volume in half for administration into to each nare:
 - a) ideal volume is 0.2 – 0.3 millilitres (mL) per nare with a maximum volume of one (1) mL per nare.
 - b) If the medication volume is greater than two (2) mL, prepare one (1) mL aliquots and administer maximum one (1) mL volume to each nare. For the remaining volume, allow a period of two (2) minutes for remaining medication instillations between each administration in order to allow for effective absorption.
 - (i) Example: A medication requires a total volume of three (3) mL. Administer the first two (2) mL with one (1) mL to each nare, then wait two (2) minutes and administer the remaining one (1) mL.
- 6.4 If an atomizer is not available, medication may be administered intranasally using a syringe and slow drip technique. Lay the patient in a supine position. Slowly drip the medication into nare allowing for absorption between each drop.

7. Monitoring

- 7.1 The health care professional shall:
- a) assess and document patient's response to the medication delivery;
 - b) monitor and document the patient's vital signs, pain levels (if applicable) and their level of consciousness pre and post medication administration (refer to *AHS Assessment and Reassessment of Patient's* Guideline and *AHS Provincial Parenteral Monograph*);
 - c) notify Physician or NP if the patient's vital signs or level of consciousness are abnormal and/or with an increase in pain level; and
 - d) refer to appropriate drug monograph, *AHS Procedural Sedation Policy* Suite or site specific protocols for specific monitoring requirements.

8. Documentation

- 8.1 The health care professional shall document the following on the patient's **health record**:
- a) assessments;
 - b) treatments;
 - c) interventions;
 - d) medication administration (including indications); and
 - e) the patient's response.

DEFINITIONS

Health care professional means an individual who is a member of a regulated health discipline, as defined by the *Health Disciplines Act* (Alberta) or the *Health Professions Act* (Alberta), and who practises within scope and role.

Health record means the Alberta Health Services legal record of the patient's diagnostic, treatment and care information.

Intranasal (IN) means route of administration in which drugs are insufflated through the nose.

Nasal Atomizer means a device for emitting liquids in a fine spray.

Order means a direction given by a regulated health care professional to carry out specific activity(-ies) as part of the diagnostic and/or therapeutic care and treatment to the benefit of a patient. An Order may be written (including handwritten and or electronic), verbal, by telephone or facsimile.

Patient means an adult or child who receives or has requested health care or services from Alberta Health Services and its health care providers or individuals authorized to act on behalf of Alberta Health Services. This term is inclusive of residents, clients and outpatients.

REFERENCES

- Alberta Health Services Governance Documents:
 - *Assessment and Reassessment of Patients* Guideline (#HCS-181-01)
 - *Procedural Sedation Policy* (#PS-21)
 - *Procedural Sedation Procedure* (#PS-21-01)
- Alberta Health Services Resources:
 - *Provincial Parenteral Monographs*
- Non-Alberta Health Services Documents:
 - *0-10 Numeric Pain Intensity Scale*
 - *Faces Pain Scale – Revised*
 - *FLAAC Behavioral Scale*

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