

TITLE

TREATMENT OF PAIN AND/OR FEVER WITH ACETAMINOPHEN OR IBUPROFEN

SCOPE

Provincial: Emergency Departments and Urgent Care Centres

DOCUMENT

HCS-251-01

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Not applicable

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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

- To provide **health care professionals** with direction regarding timely, safe, and effective pain management for all patients presenting with minor injuries/illness such as fever, ear ache, minor burns, or musculoskeletal injuries.
- To assist health care professionals when initiating specific diagnostics, therapeutics, and interventions for **patients**, prior to the initial assessment by the Physician or Nurse Practitioner (NP). This protocol can be implemented at triage or once the patient has been assigned to a treatment space.

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 An **order** from an **authorized prescriber** is not required for acetaminophen and/or ibuprofen when administered as outlined in this protocol.
- 1.2 Weigh or use a length-based resuscitation tape measure for all pediatric patients. Reported weights are not accepted.
- 1.3 Patients with dehydration are at risk for acute renal failure; ibuprofen administration prior to rehydration may induce renal compromise.

- 1.4 Route of administration shall be oral, or via gastric tube for those patients ordinarily fed via this route.

2. Inclusion Criteria

- 2.1 This protocol applies to patients presenting with pain and/or discomfort due to one or more of the following:
- a) fever, defined as a temperature of 38 degrees Celsius (°C) or greater;
 - (i) If suspected sepsis, refer to the AHS Suspected Sepsis Assessment and Treatment in the Adult Patient Protocol [ESCN];
 - b) ear aches, where patients are able to communicate and/or demonstrate that they have ear pain;
 - c) minor burn injury: less than 10% of total body surface area (TBSA) in adults; less than 5% in adults over 50 years of age, and less than 5% TBSA in a child which may include:
 - (i) superficial burn (first degree) - skin appears pink, dry, and tender; may be painful; heals spontaneously in three (3) to five (5) days with minimal systemic involvement; or
 - (ii) partial thickness (second degree) - skin appears dark pink, intact blister(s), and may be very painful;
 - d) minor musculoskeletal injuries / soft tissue injuries or pain, including suspected fractures - patients showing signs of discomfort from trauma to upper or lower extremities;
 - (i) Oral analgesia should not delay treatment by a Physician or NP in cases where there is obvious deformity or evidence of open fracture or any signs of impaired sensory or motor function.
 - e) headaches that are generalized in nature, not related to trauma, and not sudden in onset; and/or
 - f) flank pain related to suspected renal colic. For additional care, refer to the AHS *Flank Pain* Protocol (Emergency Strategic Clinical Network [ESCN]).

3. Exclusion Criteria

- 3.1 This protocol is not intended for:
- a) pediatric patients with one (1) or more of the following:
 - (i) altered level of consciousness;
 - (ii) delayed capillary refill; or

- (iii) increased work of breathing.
 - b) patients with facial burns or any signs or history of smoke inhalation.
- 3.2 Patients listed in Section 3.1 above shall be assessed by a Physician or NP prior to medication administration.

4. Medication Exclusions

- 4.1 Acetaminophen shall not be administered to patients with the following unless a patient-specific order is obtained from an authorized prescriber:
- a) an allergy to acetaminophen;
 - b) three (3) months of age or younger;
 - c) known or potential liver dysfunction (elevated liver enzymes, coagulopathy);
 - d) who have received a full dose (15 milligrams per kilogram [mg/kg]) acetaminophen in the last four (4) hours; and/or
 - e) who have received a maximum daily dose of 75 mg/kg to a maximum total of four (4) grams in 24 hours.
- 4.2 Ibuprofen shall not be administered to patients with the following unless a patient-specific order is obtained from an authorized prescriber:
- a) an allergy to ibuprofen;
 - b) three (3) months of age or younger;
 - c) 65 years of age or older;
 - d) pregnancy;
 - e) known decreased kidney or liver function;
 - f) asthma and a known sensitivity to acetylsalicylic acid (ASA);
 - g) dehydration with or without a history of vomiting and/or diarrhea;
 - h) history of gastritis/peptic ulcer disease or gastrointestinal bleeding;
 - i) known or potential low platelet counts, as with a bleeding disorder or chemotherapy patient;
 - j) who have received a full dose (10 mg/kg) of ibuprofen in the last six (6) hours;

- k) who have received a maximum daily dose of 40 mg/kg to a maximum total of 2400 mg in 24 hours; and/or
- l) use of other non-steroidal anti-inflammatory medication within the last 12 hours.

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* [ESCN]).

- a) For any patient under 12 years of age, attempt to obtain a blood pressure reading with the appropriate sized cuff at least twice and if unable to obtain, document the reason(s) why.

5.2 Complete a comprehensive pain assessment. Document the patient's description of their pain and if possible ask the patient to rate their pain/discomfort on an age-appropriate pain scale of zero (0) (no pain) – 10 (worst pain).

6. Medication Administration and Pain Management

6.1 Acetaminophen

- a) Initial administration of acetaminophen:
 - (i) 15 mg/kg up to 50 kg patient weight. Patients weighing greater than or equal to 50kg may receive a dose of 975 to 1000mg as a one-time dose orally or via in situ enteral feeding tube; or
 - (ii) **Dose Banding** dose as per current site process.
- b) Supplemental administration of acetaminophen:
 - (i) If acetaminophen was taken in the last one (1) hour, and it was less than 15 mg/kg (sub-therapeutic), a supplemental one-time dose of acetaminophen can be given to reach 15 mg/kg to a maximum of 1000 mg.
- c) If patient is not eligible for a supplemental or full dose of acetaminophen, consider giving ibuprofen (if appropriate).

6.2 Ibuprofen

- a) Initial administration of ibuprofen:
 - (i) 10 mg/kg to a maximum of 400 mg per dose orally or via in situ enteral feeding tube; or

- (ii) Dose Banding dose as per current site process.
- b) Supplemental administration of ibuprofen:
 - (i) If ibuprofen has been taken in the last one (1) hour and it was less than 10 mg/kg (sub-therapeutic), a one-time supplemental dose of ibuprofen can be given to reach 10 mg/kg to a maximum of 400 mg.
- c) If patient is not eligible for a supplemental or full dose of ibuprofen, consider giving acetaminophen (if appropriate).

7. Reassessment

- 7.1 Reassess patient including a set of vital signs measures (heart rate, respiratory rate, blood pressure, temperature) within one (1) hour (if measured temperature is greater than 40°C – recheck in 30 minutes) of receiving medication.
 - a) Document patient response to medication (include pain scale score).
- 7.2 If there is improvement after the first agent is given but not complete resolution of fever/pain upon reassessment, consider using the other agent, if appropriate. If there is no change or symptoms worsen, consult with the Physician or NP.
 - a) Document rationale for giving the second medication and notify the Physician or NP of the same.

8. Documentation

- 8.1 The health care professional shall document on the patient's **health record**:
 - a) initiation of this protocol;
 - b) assessments, including allergies;
 - c) interventions/treatments, including medication administration;
 - d) reassessments; and
 - e) the patient's responses to interventions/treatments.
- 8.2 Medication orders shall be written/entered on the patient's health record and attributed as per protocol.
- 8.3 Medication administration shall be documented on the patient's health record and shall include the signature and designation of the health care professional who administered the medication.

DEFINITIONS

Authorized prescriber means a health care professional who is permitted by federal and provincial legislation, their regulatory college, Alberta Health Services, and practice setting (where applicable) to prescribe medications.

Dose Banding means a system whereby drug doses that are calculated by any method are grouped and rounded to a set of predefined doses for the convenience of the 'users'. Each series of consecutive dose(s) is called a 'band', with the dose to which they are rounded towards being the 'banded dose.'

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 practices within scope and role.

Health record means the collection of all records documenting individually identifying health information in relation to a single person.

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 all persons, inclusive of residents and clients, who receive or have requested health care or services from Alberta Health Services and its health care providers. Patient also means, where applicable: a) a co-decision-maker with the person; or b) an alternate decision-maker on behalf of the person.

REFERENCES

- Alberta Health Services Governance Documents:
 - *Assessment and Reassessment of Patients* Guideline (ESCN) (#HCS-181-01)
 - *Consent to Treatment/Procedure(s)* Policy (#PRR-01)
 - *Flank Pain* Protocol (ESCN) (#HCS-09-08)
 - *Suspected Sepsis Assessment and Treatment in the Adult Patient* Protocol (ESCN) (#HCS-09-19)

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