

 Department of Health Government of Nunavut		Medical Directives and Delegation	
		Community Health Nursing	
TITLE:		SECTION:	POLICY NUMBER:
Ondansetron use in pediatrics with gastroenteritis		Pharmacy	09-020-00
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APPLIES TO:			
Community Health Nurses			

## 1. BACKGROUND:

The Department of Health (Health) is committed to providing Nunavummiut with treatment options that align with current research and best practices.

Community Health Nurses (CHNs) in Nunavut work in an expanded role, utilising medical directives, policies, protocols, First Nations and Inuit Health Branch (FNIHB) Clinical Practice Guidelines (CPG) and FNIHB Clinical Care Pathways (CCP) in conjunction with the Nunavut Formulary to diagnose and treat medical conditions.

The Canadian Paediatric Society recommends that oral ondansetron be considered for infants and children age six months and older who present with vomiting related to suspected acute gastroenteritis, and who have mild to moderate dehydration or who have failed oral rehydration therapy.

This medical directive provides an authorising mechanism for CHNs to dispense a one-time weight-based oral dose of ondansetron to pediatric clients with mild to moderate dehydration in the context of vomiting from gastroenteritis.

## 2. MEDICAL DIRECTIVE:

- 2.1. CHNs may administer a one-time weight-based dose of **ondansetron 0.15 mg/kg** (to a max of 8 mg) to pediatric clients with mild to moderate dehydration in the context of vomiting from gastroenteritis.
- 2.2. The ondansetron must be administered orally. If the client is unable to tolerate oral and IV administration is required, an order must be obtained from the consulting physician or NP.
- 2.3. Clients with relative contraindications (section 5.3) require consultation with a physician or NP prior to the administration of ondansetron.
- 2.4. Refer to the FNIHB guidelines on management of moderate to severe dehydration and need to consult.

### 3. RECIPIENT CLIENTS:

- 3.1. Pediatric clients six months to 12 years of age in Community Health Centre settings.

### 4. AUTHORIZED IMPLEMENTERS:

- 4.1. Community Health Nurses or Supervisors of Community Health Programs who possess the knowledge, skill, and judgment to do so. The implementer is required to demonstrate competency to implement this medical directive through the standard orientation process.
- 4.2. Sub-delegation is not permitted to another health care provider or staff.

### 5. INDICATIONS, CONTRAINDICATIONS, AND ADVERSE EFFECTS:

#### 5.1. Indication:

- Pediatric clients six months to 12 years of age with mild to moderate dehydration in the context of vomiting from gastroenteritis.

#### 5.2. Absolute contraindications to ondansetron:

- Clients with a known past medical history of congenital long QT syndrome.
- Clients with a history of hypersensitivity to ondansetron.

#### 5.3. Relative contraindications to ondansetron:

- Clients who are on medications that can prolong the QT interval or who have risk factors for QT interval prolongation (see Definitions).

#### 5.4. Adverse side effects of ondansetron:

- Potential for QT prolongation. In otherwise healthy pediatric clients with no past medical history of congenital long QT syndrome there is no significant risk of a one-time oral dose of ondansetron. Increased risk of prolonged QT generally results from multiple/high doses of ondansetron, IV administration or clients with risk factors.
- A rare (3 per 100,000) but significant adverse event is the development of wide complex tachyarrhythmias. In all cases this event the patients had predisposing risk factors.
- Diarrhea, which is usually mild and self-limiting. It can occur up to 48 hours after administration of ondansetron. **Note:** Because of this side effect, ondansetron is not routinely recommended in children with gastroenteritis whose predominant symptom is moderate to severe diarrhea.

### 6. DEFINITIONS:

#### Risk factors for QT interval prolongation and TdP:

Cardiac (underlying conditions)	Metabolic	Other
<ul style="list-style-type: none"><li>• Bradycardia (&lt; 50 bpm)</li><li>• <b>Cardiomyopathy</b></li><li>• <b>Congenital long QT interval</b></li><li>• Family history of long QT syndrome</li></ul>	<ul style="list-style-type: none"><li>• Altered nutritional status:<ul style="list-style-type: none"><li>- <b>Anorexia</b></li></ul></li><li>• Diabetes</li><li>• Electrolyte disturbances:<ul style="list-style-type: none"><li>- <b>Hypokalemia</b></li><li>- <b>Hypomagnesemia</b></li><li>- Hypocalcemia</li></ul></li><li>• Hypoglycemia</li><li>• Hypothermia</li></ul>	<ul style="list-style-type: none"><li>• <b>Certain Herbs</b> (e.g., aloe, echinacea, ginkgo, ginseng, licorice, St. John's work)</li><li>• <b>Renal disease</b></li><li>• Liver disease</li><li>• <b>Medications (see below)</b></li></ul>

Risk factors of greatest significance are **bolded**. Adapted from RxFiles: QT Prolongation and Torsades de Pointes. **Note:** Please consult additional references for complete list of risk factors for QT interval prolongation in adults.

**Medications which can prolong the QT interval:** Many medications from a variety of classes have been associated with QT interval prolongation. Common examples include macrolides, fluoroquinolones, antidepressants, antipsychotics, antiemetics, antifungals, ADHD medications and antiarrhythmics. Consult additional references for details. A recommended resource is Credible Meds which is available at <https://www.crediblemeds.org/>. Note: This is a free educational resource with full access to the QT Drug Lists following registration.

## **7. PROCEDURE:**

- 7.1. The CHN conducts a comprehensive history and physical assessment, including documentation of relevant past medical history and allergies.
- 7.2. The CHN is responsible for determining if the conditions of this directive have been met before enacting it. The CHN will refer to the FNIHB CPGs to determine a diagnosis of gastroenteritis along with the hydration status.
- 7.3. Once the CHN has determined that the client has a diagnosis of mild to moderate dehydration in the context of gastroenteritis, they will refer to section 5.1-5.4 if it is appropriate and safe to administer ondansetron.
- 7.4. Clients with relative contraindications (section 5.3) require consultation with a physician or NP prior to the administration of ondansetron.
- 7.5. In an otherwise healthy pediatric client with no risk factors for QT interval prolongation and not on any medications known to prolong the QT interval, there is no evidence to suggest a baseline ECG is needed prior to administration.
- 7.6. After reviewing the most up-to-date Nunavut Drug Formulary and Community Health Nursing Policy 09-005-00 (Dispensing Medications), and when it is safe to do so based on the client's medical history, the CHN may administer a one-time oral weight-based dose of ondansetron 0.15 mg/kg (to a max of 8 mg).
- 7.7. Ondansetron is available in the community health centres in two oral formulations:
  - 0.8 mg/mL oral liquid. Measure the required dose with an oral syringe. The liquid may be mixed with a small amount of water or milk.
  - 4 mg orally disintegrating tablet. Place the tablet on top of the client's tongue. It will melt in a few seconds and then the client should swallow.
- 7.8. If the patient is unable to tolerate oral ondansetron, unable to control vomiting after the one-time oral dose or unable to tolerate oral fluids after the one-time oral dose then the CHN is required to consult a physician or NP.
- 7.9. The CHN will continue to follow the rehydration recommendations outlined in the FNIHB CPGs. The CHN will consult a physician or NP as directed based on the gastroenteritis and dehydration FNIHB CPGs.

## **8. DOCUMENTATION:**

- 8.1. At a minimum, the following must be documented in the client's health record:
  - The client's history and physical assessment findings.
  - Reason for enacting this medical directive including clinical findings and differential diagnoses. The CHN must cite the medical directive name along with the CPG used to enact this medical directive.
  - The medication name, dose, route, frequency, time of administration and clinical response.

**9. RELATED POLICIES, PROTOCOLS AND LEGISLATION:**

Community Health Nursing Manual:	09-006-00	Administering or Dispensing Pharmaceuticals - Documentation
Community Health Nursing Manual:	09-006-00	Dispensing Medications
Community Health Nursing Manual:	09-001-00	Documentation of Allergies
Community Health Nursing Manual:	09-002-00	RN Initiated Drug Therapy
Community Health Nursing Manual:	07-001-00	Community Health Nursing
Community Health Nursing Manual:	07-031-00	CHN Expanded Role: Diagnosing, initiating lab and x-ray tests and initiating drug treatment
Community Health Nursing Manual:	06-008-00	Documentation Standard