

CHEO Medical Directive

1. Name of the Medical Directive: Physician Assistant medical directives at CHEO

Approval Status (Dates)

Version/Revision	MDC Submission	MDC Approval
New	May 2025	August 2025

Effective Date: September 2025

Directive Number: 2227

Renewal Frequency: 3 years Other (may not exceed 3 years): 1 Year

2. Purpose Statement

The Physician Assistant (PA) will provide direct clinical care to patients within CHEO. Under the CanMEDS-PA framework within the scope of practice established by the Physician-PA relationship, the PA will provide medical orders and prescriptions, as part of the medical team. The PAs ability to perform these tasks facilitates timely access to care for patients as part of the care plan established by the Most Responsible Physician (MRP) and members of the care team.

All orders entered by a PA for medications are being carried out as per a mutually-developed plan with the MRP who remains the Most Responsible Physician (MRP) for the patient. All orders placed by a PA are to be authorized by and delegated by the MRP, with whom, a review of the order will be discussed and agreed upon prior to entry by the PA.

3. Personnel Authorized to Implement the Medical Directive

- The PA must be successfully registered with the College of Physicians and Surgeons of Ontario (CPSO)
- The PA must have demonstrated to the MRP that they have the knowledge, skill, and judgment to implement the directive, prior to utilizing.
- The PA must demonstrate an understanding of their scope of practice and when to contact the MRP for clarification of a medical directive or assistance with patient management.

Co-Implementers

- Nurses will be involved in co-implementing this directive when providing patients with medication, obtaining blood/urine/other samples, as ordered by the PA in conjunction with the MRP
- Phlebotomists and members of the Vascular Access Team (VAT) will be involved in co-implementing this directive, in that they may be obtaining blood, urine and other samples from the patient for testing.
- Medical Radiation Technologists and Sonographers will be involved in co-implementing this directive, in that they may obtain the requested imaging. This may involve exposing the patient to ionizing radiation or contrast media.

4. Patient Population and Indications

The PA may implement this directive for patients under the care of a physician (MRP) at CHEO and who has reviewed and agreed with this directive and the patient's condition warrants treatment per the conditions of this directive.

The PA may:

- Initiate consultations for inpatient/outpatient services required for the ongoing treatment of patients as per **Table 1 (Consultations)**
- Order therapeutic interventions/continue ongoing therapeutic interventions as required for the

- ongoing treatment of patients as per **Table 2 (Ongoing management)**
- Initiate an order for diagnostic tests as required and indicated for assessment and treatment of patients as per **Table 3 (Laboratory)**, **Table 4 (Medical Imaging & Neurophysiology)** and **Table 5 (Other Diagnostic Investigations)**
- Initiate or alter medications as required for treatment, including discharges, as per **Table 6 (Pharmacotherapy)** and **Table 7 (Admission Medication Management)**

The PA will review all assessments, interventions, diagnostic tests, imaging, and medication plans with the MRP assigned to their services. Medications will be ordered in accordance with CHEO policy and any unit- or ambulatory care clinic-specific restrictions. Within prescribing, PAs may write prescriptions for leave of absences or discharge for patients discharged from hospital/ED/ambulatory care. This includes continuing a medication initiated by the MRP/care team that are intended to be continued after discharge. Unless otherwise specified, the duration of treatment for each medication will be determined in consultation with the MRP. The PA may discontinue or wean medications as appropriate in discussion with the MRP. All authorized orders, including relevant indications, and contraindications are listed in the accompanying tables.

5. Contraindications/Risks

General

- The patient or their legal Substitute Decision Maker (SDM) has refused the treatment
- The patient has had an acute change in status and a re-evaluation of the care plan with the MRP is required
- The patient has an allergy to the medication
- There is a clinical contraindication due to an underlying medical condition or known drug interaction that precludes the use of a medication

Medical Imaging

- PAs using this medical directive must be aware of the risk of ionizing radiation and will limit the number of studies/number of views to those medically necessary
- The patient is pregnant (medical imaging) - pregnancy should prompt a discussion with the MRP as it may be a relative contraindication (benefits may outweigh risk) rather than an absolute contraindication. MI may be ordered for pregnant patients upon discussion with the MRP

Medications

- Specific contraindications applicable to medications are identifiable in their respective tables.

6. Description of the Procedure

- The PA will familiarize themselves with the patient's history (by reviewing chart and/or assessment with patient/caregivers) and ensure all information is up to date. This can include discussion with team members and MRP. This will include a thorough review of the patient's medications and allergies.
- The PA will document all interactions with the patient/patient's SDM as it pertains to discussion surrounding medication and orders that will be placed in the patient's chart.
- All orders entered by a PA for medications are being carried out as per a mutually-developed plan with the MRP. All orders placed by a PA are to be considered authorized by and delegated by the MRP, with whom, a review of the order will be discussed and agreed upon prior to entry by the PA.
- When ordering medications in Epic (for use in hospital and outpatient prescriptions), these will include the name of the authorizing physician and the medical directive number
 - For outpatient prescriptions (when applicable) these will include: the PAs name, designation, CCPA number, and CPSO number (once applicable), the authorizing physician's name, CPSO/billing number, contact information, and the medical directive number, as applicable
 - Example: J. Smith, CCPA (CAPA#1234, CPSO#12345) for Dr. B. Jones

(CPSO#54321, clinician #65432) as per medical directive number #2222,
Clinic Name, Tel#123-456-789, Fax#123-456-000

- For medications that the patient requires that are not included in the medical directive, the PA may take a verbal order from the physician that can be entered as “verbal order” (which will be signed by the MRP via InBasket within 24 hours) for situations that are outlined in the CHEO Verbal and Telephone Order Policy. Ie, 1) in a situation requiring immediate medical intervention(s) when it is impractical for the provider to enter the order electronically, or be physically present to write the order (where written orders are applicable); and 2) only if it is within the scope of practice of the receiving health provider to carry out the order
- No controlled substances will be prescribed as these cannot be delegated to a non-physician nor placed in a medical directive as per the Health Canada Controlled Drugs and Substances Act

7. Consent and Documentation

- The PA will ensure consent is obtained verbally (or written where required) from the patient or legal SDM.
- The PA will document all consent interactions in the patient’s chart.
- All interventions using the medical directives will be clearly documented with the name and number of the medical directive, the name of the MRP responsible for the patient addressed by the directive, and the name, credentials, and signature of the PA implementing the directive.

8. Quality Management Process

- The PA will thoroughly review this medical directive and ensure competency and knowledge with all aspects prior to implementation
- The PA will advise the MRP of any areas of need and defer to their judgment for any questions or concerns
- Incident reports related to the use of this medical directive will be communicated to the appropriate Director, Clinical Manager, Educator, Medical Lead and the PA by filling out the on-line Safety Reporting System (SRS). A copy will also be sent to the Chair of the Medical Directive Committee. The appropriate Leadership Team will address issues related to process and outcomes related to this medical directive.
- Prior to this medical directive’s renewal, an audit will be conducted to verify that it is being applied correctly.

9. References and Resources

- CHEO
 - CHEO "Do Not Use" List: Abbreviations, Acronyms, and Symbols
 - CHEO Pediatric Doses of Commonly Prescribed Medications
 - Incident Reporting Policy
 - Medical Directives Policy
 - Patient Identification Using Two Patient Identifiers Policy
 - Virtual Care Policy
 - Verbal and Telephone Orders
 - CHEO Formulary
 - CHEO Pediatric Prescribing Brochure
 - CHEO Parenteral Manual
 - CHEO Neonatal Drug Therapy Manual
 - CHEO Therapeutic Drug Monitoring
 - CHEO Antimicrobial Guidelines App
- Canadian Association of Physician Assistants
 - [CanMeds-PA](#). 2015
 - [Competency Framework](#). 2021.
- College of Physicians and Surgeons of Ontario
 - [Delegation of Controlled Acts](#). Updated 2021
 - [Prescribing Drugs](#) Updated 2019.

- o [CPSO - Physician Assistants](#) as of April 1, 2025
- o [Information about Physician Assistant Regulation](#) March 2025
- College of Nurses of Ontario
 - o [Working with physician assistants](#)
- The Regulated Health Professions Act (RHPA): Scope of Practice, Controlled Acts Model (2018)
- Federation of Health Regulatory Colleges of Ontario (FHRCO)
 - o [An Interprofessional Guide on the Use of Orders, Directives and Delegation for Regulated Health Professional in Ontario](#)
- Ontario College of Pharmacists (OCP)
 - o [Medical Directives and the Delegation of Controlled Acts](#), OCP Policy, Published Oct 2007, Last revised June 2014.
 - o [Ontario's Physician Assistants – An Update](#) (OCP), Last revised June 2014
- [Pharmacy Connect: The Ontario Physician Assistant Initiative](#). Last update: June 2009 (project working document)
- [College of Medical Radiation and Imaging Technologists](#)
 - o CMRITO annual report 2022 [annual-report-2022.pdf \(cmrito.org\)](#)
 - o CMRITO performing procedures [performing-procedures.pdf \(cmrito.org\)](#)
- Evidence-based imaging in pediatrics optimizing imaging in pediatric patient care (2010). Medina L.S., Applegate KE., and Blackmore C.C (Eds), New York: Springer
- Lexicomp
- Sick Kids Drug Handbook and Formulary

10. Contact Information

Area of Practice: CHEO, Physician Assistants

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Extension: 8031

The Physician Assistant (PA) on the authority of this medical directive may initiate an order for the following as clinically indicated:

Table 1 – Referrals & Consultation

Consult or Referral	Indications
Inpatient consult orders (ex: cardiology, infectious disease, neurology, etc)	As indicated for ongoing clinical treatment of the patient
Emergency department consult orders (ex: medicine, orthopedics, etc)	As indicated for ongoing clinical treatment of the patient
Outpatient CHEO ambulatory consult orders (ex: ambulatory care: endocrine clinic, genetics clinic, etc)	As indicated for ongoing clinical treatment of the patient from discharge from ED, ambulatory care clinic, or inpatient unit
Outpatient community referrals (ex: Royal Ottawa Hospital program, community pediatrician, community hospital sleep study, etc)	As indicated for ongoing clinical treatment of the patient from discharge from ED, ambulatory clinic or inpatient unit
Internal CHEO ambulatory care orders (ie, Kids Come First clinic, etc)	As indicated for ongoing clinical treatment of the patient

Table 2 – Ongoing Management

Intervention or Order	Indications
Admission Orders	Admission to an inpatient ward from home, ED, CHEO ambulatory care clinic
Activity Levels	Appropriate level of activity for patient based on individual needs
Blood pressure parameters	As indicated to maintain perfusion, limit hypertension, or for parameters required for specific pharmacotherapy indications
Body Measurements	As for monitoring of height, weight, other measurements upon admission, if required for pharmacotherapy dosing
Diet Order	Appropriate diet order for patient, based on individual needs and appropriate for intake
Discharge Orders	Discharge of patient to home/community or another facility outside of CHEO
Discontinuation or changing orders when no longer required	For discontinuing orders as indicated by clinical assessment of patient
Intake and outtake monitoring/parameters	For monitoring of patient intake/outtake
IV access (including extra IV access)	For patients requiring insertion and discontinuation of peripheral IVs for fluid or IV medication administration
Leave of absence passes	Patient safe to have a leave of absence pass as verified by completed safety planning
Level of Supervision	Adjustment of level of observation as per patient safety and review with clinical staff, based on Policy for specific department
Nasogastric tube	For ordering of nasogastric (or nasojejunal) tube insertion or removal
Nursing communication	For personal items, requests, flowsheets
Oxygen therapy	For ordering or adjusting oxygen therapy as indicated by clinical assessment of patient
RT communication	For personal items, requests, flowsheets to RT team
Specialized Monitoring Including: Glasgow Coma Scale, Check Pupils, Orthostatic Blood Pressure, ICP monitoring, Strict Intake and Output, Weight, Height, Head Circumference	Order and adjustment of monitoring as indicated by clinical assessment of patient
Transfer Orders	Transfer to an alternate ward within CHEO
Urinary catheter (in/out)	For monitoring of urinary intake and outtake
Vital Signs and Neuro Vital Signs	Order and adjustment of vital sign frequency as indicated by clinical assessment of patient

Table 3 – Laboratory

Test or Intervention	Indications
Inpatient laboratory orders	As indicated for ongoing clinical treatment of the patient
ED laboratory orders	As indicated for ongoing clinical treatment of the patient
CHEO ambulatory clinic laboratory orders	As indicated for ongoing clinical treatment of the patient
Community requisitions	As indicated for ongoing clinical treatment of the patient from discharge from ED, clinic or inpatient unit

Table 4 – Medical Imaging & Neurophysiology

Test or Intervention	Indications
Inpatient: ultrasound, x-ray, CT, MRI	As indicated for ongoing clinical treatment of the patient
ED: ultrasound, x-ray, CT, MRI	As indicated for ongoing clinical treatment of the patient
Ambulatory Care: ultrasound, x-ray, CT, MRI	As indicated for ongoing clinical treatment of the patient
<i>Contrast Investigations*</i>	Contrast to be ordered if indicated for the specific modality (CT, MRI), full assessment of appropriateness for contrast to occur including assessment of contraindications such as hypersensitivity to contrast, contrast reaction history, kidney assessment, implants such as electrical devices or foreign bodies

Table 5 – Other Diagnostic Investigations

Test or Intervention	Indications
Inpatient: ECG, EEG	As indicated for ongoing clinical treatment of the patient
ED: ECG, EEG	As indicated for ongoing clinical treatment of the patient
Ambulatory Care: ECG, EEG	As indicated for ongoing clinical treatment of the patient

Table 6 – Pharmacotherapy

Dosing of medications will be established or guided, as applicable, using standard order sets or therapy plans, where applicable, or through use of the following resources:

- CHEO Dosing Guidelines
- CHEO Formulary
 - CHEO Parenteral Manual
 - CHEO Neonatal Drug Therapy Manual
 - CHEO Antimicrobial Guidelines App
- Lexicomp
- Sick Kids Drug Handbook and Formulary
- Health Canada approved Canadian Drug Monograph
- Firstline – Clinical Decision Support Antibiotics

In the event of conflicting recommendations between resources, the case will be reviewed with the MRP. If necessary, pharmacy will be consulted to reconcile the information prior to initiation of treatment.

Individual dose assessments will be based on the patient, medication, condition, and indications/contraindications for each intervention. Weight-based dosing will be used when indicated and applicable. In general, prescribed doses must be confirmed by the PA as within the usual prescribing limits according to the clinical indication, CHEO Lexicomp, and per the approved product monograph. Doses outside of usual dose ranges must be approved by the delegating physician.

Medication	Route	Indications	Contraindications/Monitoring
Acetaminophen tablet, chewable tablet, or suspension	PO	<ul style="list-style-type: none"> • Pain • Fever • Alcohol, nicotine, benzodiazepine, cannabis, inhalant withdrawal 	<ul style="list-style-type: none"> • Hypersensitivity reaction • Suspected overdose or toxic ingestion • Liver function abnormalities
Acyclovir	PO IV	<ul style="list-style-type: none"> • Herpes simplex virus • Prevention of HSV encephalitis 	<ul style="list-style-type: none"> • Hypersensitivity reactions • Monitor creatine, fluids • Nephrotoxic medications
Antacid + Local Anesthetic “Pink Lady” Aluminum hydroxide-magnesium hydroxide-simethicone mixed with lidocaine 2% mucosal solution	PO	<ul style="list-style-type: none"> • Heartburn with acid indigestion • GERD • Epigastric pain • Stomach pain 	<ul style="list-style-type: none"> • Hypersensitivity reaction to any aspect of formulation • Concern for cardiac or pulmonary causes of chest pain
Antimicrobial therapy, Penicillins: <ul style="list-style-type: none"> • Amoxicillin • Amoxicillin clavulanate • Ampicillin 	PO IV	<ul style="list-style-type: none"> • Streptococcal pharyngitis • Community-acquired pneumonia • Acute otitis media • Suspected or confirmed Lyme disease • Acute sinusitis • Tooth infection or dental abscess • Confirmed appendicitis • Retropharyngeal or parapharyngeal cellulitis or abscess 	<ul style="list-style-type: none"> • History of amoxicillin or penicillin reaction or allergy • Use caution in renal impairment, dosage adjustment may be required. Use with caution in patients with a history of colitis or severe cephalosporin allergy.

		<ul style="list-style-type: none"> • Acute mastoiditis 	
Antimicrobial therapy, cephalosporins: • Cefazolin • Cefuroxime • Cephalexin • Ceftriaxone	PO IM IV	<ul style="list-style-type: none"> • Cervical adenitis • Cellulitis • Osteomyelitis • Septic arthritis • Acute mastoiditis • Acute or chronic sinusitis • Retropharyngeal or parapharyngeal cellulitis or abscess • Pneumonia • Uncomplicated urinary tract infections/cystitis 	<ul style="list-style-type: none"> • Hypersensitivity to cephalexin, any component of the formulation, or other cephalosporins • Renal Impairment
Azithromycin	PO IV	<ul style="list-style-type: none"> • Atypical pneumonia due to mycoplasma or Chlamydophila • Pertussis suspected or confirmed • Post exposure prophylaxis to pertussis • Urethral, endocervical, rectal, or conjunctival chlamydia infection 	<ul style="list-style-type: none"> • Hypersensitivity to azithromycin, erythromycin, other macrolide antibiotics or any component of the formulation • History of cholestatic jaundice/hepatic dysfunction associated with prior azithromycin use
Benztropine	PO/IM	<ul style="list-style-type: none"> • Extrapiramidal side effects from antipsychotic treatment such as akathisia, akinesia, dyskinesia, acute dystonia, rigidity, tremor • Inhalant withdrawal 	<ul style="list-style-type: none"> • Monitor for anticholinergic side effects
Betamethasone	Topical	<ul style="list-style-type: none"> • Treatment of localized skin inflammation, irritation, or eczema 	<ul style="list-style-type: none"> • Hypersensitivity reactions • Systemic or topical fungal infections
Bisacodyl	PO Rectal	<ul style="list-style-type: none"> • Constipation 	<ul style="list-style-type: none"> • Hypersensitivity reactions • Rectal bleeding, fistulas
Budesonide (Turbuhaler) Budesonide-formoterol (Symbicort)	Inhalation Intranasal	<ul style="list-style-type: none"> • Asthma exacerbation and maintenance • Eosinophilic Esophagitis 	<ul style="list-style-type: none"> • Hypersensitivity reactions • Monitor for adrenal suppression/adrenal insufficiency when withdrawn • Monitor in immunosuppressive patient population
Celecoxib	PO	<ul style="list-style-type: none"> • Pain 	<ul style="list-style-type: none"> • Hypersensitivity reactions • Avoid in gastritis, peptic ulceration, IBD exacerbation, renal failure, bleeding risk
Cetirizine	PO	<ul style="list-style-type: none"> • Pruritic rash • Non-anaphylactic allergic reaction 	<ul style="list-style-type: none"> • Hypersensitivity reactions • Monitor for sedation
Clarithromycin	PO	<ul style="list-style-type: none"> • Atypical pneumonia due to Mycoplasma or 	<ul style="list-style-type: none"> • Hypersensitivity to clarithromycin, erythromycin, other macrolide antibiotics or any component of the formulation

		<ul style="list-style-type: none"> Chlamydia is confirmed or suspected Suspected of confirmed pertussis infection Post-exposure prophylaxis for known pertussis exposure Acute otitis media as second line due to IgE mediated penicillin allergy Acute pharyngitis as second line due to IgE mediated penicillin allergy 	<ul style="list-style-type: none"> History of cholestatic jaundice/hepatic dysfunction associated with prior clarithromycin use
Clotrimazole	Topical	<ul style="list-style-type: none"> Vulvo-vaginal candidiasis Tinea cruris Tinea corporis Tinea pedis 	<ul style="list-style-type: none"> Hypersensitivity reactions
Dexamethasone	PO	<ul style="list-style-type: none"> Asthma Suspected croup 	<ul style="list-style-type: none"> Systemic corticosteroid administration within past 24 hours Hypersensitivity reactions Suspected foreign body aspiration
Dietary Nutrition Supplements - Fortified shakes, smoothie, milkshake	PO	<ul style="list-style-type: none"> Reduced caloric intake Requirement for increased caloric support 	<ul style="list-style-type: none"> Monitor intake
Dimenhydrinate (Gravol)	PO IM IV	<ul style="list-style-type: none"> Nausea and vomiting 	<ul style="list-style-type: none"> Hypersensitivity reactions Observe for sedation and fatigue Anticholinergic co-administrations Concurrent use or within 14 days of MAOI
Diphenhydramine (Benadryl)	PO IM	<ul style="list-style-type: none"> Extrapyramidal side effects from antipsychotic treatment such as akathisia, akinesia, dyskinesia, acute dystonia, rigidity, tremor Alcohol, benzodiazepine, cannabis, opioid withdrawal 	<ul style="list-style-type: none"> History of diphenhydramine reaction or allergy Evidence of decreased level of consciousness Monitor for sedation and fatigue Monitor for anticholinergic side effects
Doxycycline	PO	<ul style="list-style-type: none"> Post-exposure prophylaxis or treatment for known or suspected Lyme disease 	<ul style="list-style-type: none"> Hypersensitivity to doxycycline, other tetracyclines, or any component of the formulation Myasthenia gravis
EMLA patch	Topical	<ul style="list-style-type: none"> Pain control for patients undergoing procedures including, but not limited to lumbar puncture, incision and drainage, and port access. 	<ul style="list-style-type: none"> Hypersensitivity reactions Children with known or suspected G6PD deficiency Children at risk of methemoglobinemia

Electrolyte Replacement: <ul style="list-style-type: none">• Calcium Carbonate• Calcium Gluconate• Magnesium Glycinate• Magnesium Glucoheptonate• Magnesium Sulphate• Potassium Chloride• Potassium Phosphate• Sodium Phosphate• Sodium Chloride	PO IV	<ul style="list-style-type: none">• Heartburn• Indigestion• Nausea• Potassium replacement• Magnesium replacement• Calcium replacement• Phosphate replacement	<ul style="list-style-type: none">• Monitor electrolyte levels• Monitor QTc• Caution in heart block, neuromuscular disease, renal impairment• Caution in pregnancy/breastfeeding
Erythromycin	Ophthalmic	<ul style="list-style-type: none">• Treatment of superficial eye infections involving the conjunctiva or cornea	<ul style="list-style-type: none">• Hypersensitivity reactions
Epinephrine	IM	<ul style="list-style-type: none">• Anaphylaxis	<ul style="list-style-type: none">• Hypersensitivity reactions• Patient monitoring and activation of SPOT team per CHEO order set
EnemaFleet - sodium phosphate Sodium citrate Mineral oil	Rectal	<ul style="list-style-type: none">• Constipation• Fecal loading	<ul style="list-style-type: none">• Not to be used more than once every 24 hours• Monitor dehydration• Monitor renal function and hydration status
Fluconazole	PO	<ul style="list-style-type: none">• Vaginal candidiasis	<ul style="list-style-type: none">• Hypersensitivity reactions
Fluorescein Dye 2%	Ophthalmic	<ul style="list-style-type: none">• Examination of the eye for suspected corneal abrasion or foreign body	<ul style="list-style-type: none">• Hypersensitivity reactions• Suspected globe rupture
Fluticasone	Inhaled	<ul style="list-style-type: none">• Asthma	<ul style="list-style-type: none">• Hypersensitivity reactions• Severe hypersensitivity to milk proteins or lactose• Primary treatment of status asthmaticus or other acute episodes of asthma requiring intensive measures
Fucidin	Topical Ophthalmic	<ul style="list-style-type: none">• Treatment of mild skin infections• Superficial infection of eye and conjunctiva	<ul style="list-style-type: none">• Hypersensitivity reactions
Glycerin suppository	Rectal	<ul style="list-style-type: none">• Constipation	<ul style="list-style-type: none">• Patients with neutropenia
Hydrocortisone	Topical	<ul style="list-style-type: none">• Skin inflammation, irritation• Eczema	<ul style="list-style-type: none">• Hypersensitivity reaction• Systemic or topical fungal infections
Ibuprofen tablet, chewable tablet, or suspension	PO	<ul style="list-style-type: none">• Fever• Pain• Nicotine, alcohol, benzodiazepine, cannabis, opioid, inhalant withdrawal	<ul style="list-style-type: none">• Hypersensitivity reaction• Suspected overdose or toxic ingestion• History of bleeding disorder, platelet disorder• Patient receiving anticoagulants or antiplatelet therapy• Not to be given if on lithium therapy• Caution in renal, hepatic impairment, asthma if previous bronchospasm reported

			<ul style="list-style-type: none"> Do not use in patients with IBD, active PUD, increased risk for bleeding or thrombotic events
Intravenous Fluids (Bolus) Normal Saline (0.9% sodium chloride)	IV	<ul style="list-style-type: none"> Dehydration Sepsis 	<ul style="list-style-type: none"> Heart failure Renal insufficiency Cirrhosis Edema Suspected or known electrolyte abnormalities
Intravenous Fluids (maintenance) <ul style="list-style-type: none"> Normal Saline (0.9% sodium chloride) 5% dextrose Sodium chloride 	IV	<ul style="list-style-type: none"> Patients unable to tolerate oral intake NPO patients 	<ul style="list-style-type: none"> Heart failure Renal insufficiency Cirrhosis Edema <p>Suspected or known electrolyte abnormalities</p>
Iron supplementation <ul style="list-style-type: none"> Ferrous fumarate Ferrous sulfate Ferrous gluconate 	PO	<ul style="list-style-type: none"> Iron deficiency anemia 	<ul style="list-style-type: none"> Hypersensitivity to iron or any iron salts Patients with hemochromatosis Avoid in patients with peptic ulcers, ulcerative colitis
Fucidin	Topical	<ul style="list-style-type: none"> Mild localized bacterial skin infection 	<ul style="list-style-type: none"> Hypersensitivity reaction
Ketorolac	IM	<ul style="list-style-type: none"> Pain 	<ul style="list-style-type: none"> Caution in renal, hepatic impairment, known hyperkalemia Hypersensitivity to ketorolac Do not use in patients with IBD, active PUD, increased risk for bleeding or thrombotic events
Lactulose	PO	<ul style="list-style-type: none"> Constipation 	<ul style="list-style-type: none"> Hypersensitivity reactions Suspected bowel obstruction
Lansoprazole	PO	<ul style="list-style-type: none"> GERD Adjuvant treatment for duodenal ulcers associated with <i>Helicobacter pylori</i> 	<ul style="list-style-type: none"> Hypersensitivity reactions to any PPIs
Lidocaine Lidocaine with/without epinephrine	Topical SC	<ul style="list-style-type: none"> Pain control for procedures such as laceration repair, superficial wound debridement, foreign body removal, incision and drainage 	<ul style="list-style-type: none"> Known hypersensitivity to lidocaine, epinephrine, tetracaine, prilocaine, or any component of the formulation.
Loperamide	PO	<ul style="list-style-type: none"> Diarrhea Alcohol withdrawal 	<ul style="list-style-type: none"> Monitor for drowsiness Constipation, abdominal pain, distension, blood in stool, ileus QT prolongation Caution in hepatic dysfunction Do not use in acute ulcerative colitis or acute bacterial enterocolitis
Metoclopramide	PO IV IM	<ul style="list-style-type: none"> Nausea Reduced GI motility 	<ul style="list-style-type: none"> Hypersensitivity reactions Increased risk of EPS, NMS, tardive dyskinesia Prolonged QT

			<ul style="list-style-type: none"> • Insomnia, drowsiness, restlessness
Melatonin	PO	<ul style="list-style-type: none"> • Insomnia 	<ul style="list-style-type: none"> • Metabolized by CYP450 1A2 – monitor for interactions with inducers or inhibitors
Metronidazole	PO IV	<ul style="list-style-type: none"> • Appendicitis • H. Pylori 	<ul style="list-style-type: none"> • Hypersensitivity to metronidazole or any component of the formulation
Mupirocin 2%	Topical	<ul style="list-style-type: none"> • Mild localized bacterial skin infection 	<ul style="list-style-type: none"> • Hypersensitivity reactions
Naloxone Kit Dispense	Intranasal	<ul style="list-style-type: none"> • Opioid overdose risk 	<ul style="list-style-type: none"> •
Naproxen	PO	<ul style="list-style-type: none"> • Pain 	<ul style="list-style-type: none"> • Hypersensitivity reactions • Avoid in gastritis, peptic ulceration, IBD exacerbation, renal failure, bleeding risk
Nicotine Replacement • Nicotine gum • Nicotine lozenge • Nicotine patch	PO Transdermal	<ul style="list-style-type: none"> • Nicotine withdrawal • Dosing per CHEO order set calculated on daily nicotine exposure or as clinically appropriate 	<ul style="list-style-type: none"> • Hypersensitivity reactions • Monitor VS, nicotine withdrawal or toxicity per CHEO order set
Nystatin (Swish and Swallow)	PO	<ul style="list-style-type: none"> • Treatment of candidiasis in the oral cavity 	<ul style="list-style-type: none"> • Hypersensitivity reactions
Ondansetron	ODT PO	<ul style="list-style-type: none"> • Nausea • Vomiting 	<ul style="list-style-type: none"> • Hypersensitivity reactions • Allergy to any 5-HT3 receptor antagonist • Administration of another 5-HT3 receptor antagonist within the past 24 hours • Liver transplant patient • History of arrhythmia or cardiac dysfunction – prolonged QTc monitoring • Concurrent use of apomorphine (absolute contraindication)
PEG Lyte	PO	<ul style="list-style-type: none"> • Constipation • Fecal loading • Bowel clean out 	<ul style="list-style-type: none"> • Hypersensitivity reactions • Monitor renal function, hydration status, dehydration
Pico-salax sodium picosulfate-magnesium oxide-citric acid powder	PO	<ul style="list-style-type: none"> • Constipation • Fecal loading • Bowel clean out 	<ul style="list-style-type: none"> • Hypersensitivity reactions • Monitor renal function, hydration status, dehydration
Prednisone/Prednisolone	PO	<ul style="list-style-type: none"> • Asthma • Nephrotic syndrome • Kawasaki disease 	<ul style="list-style-type: none"> • Hypersensitivity reactions • Administration of live or live attenuated vaccines with immunosuppressive doses of prednisone • Systemic fungal infections • Systemic corticosteroid administration within past 24 hours • Suspected foreign body aspiration • Immunocompromised patients
Salbutamol	Inhalation	<ul style="list-style-type: none"> • Bronchospasm • Asthma 	<ul style="list-style-type: none"> • Hypersensitivity reactions • Known cardiac disease such as arrhythmia or tetralogy of fallot • Suspected foreign body aspiration • Significant tachycardia

			<ul style="list-style-type: none"> • Oxygen saturation less than 90% • Concurrent or recent (within 2 weeks) administration of tricyclic antidepressants, MAO inhibitors or B-adrenergic blockers (e.g., propranolol) • Patient receiving medications that may cause hypokalemia (e.g. thiazides, diuretics, furosemide) • Altered level of consciousness with inability to protect their airway
Senna	PO	<ul style="list-style-type: none"> • Constipation 	<ul style="list-style-type: none"> • Hypersensitivity reactions • Constipation secondary to intestinal obstruction or acute intestinal inflammation, ulcerative colitis, appendicitis
Sulfonamide (TMP-SMX)	PO	<ul style="list-style-type: none"> • Treatment of cellulitis with suspected MRSA infection or uncomplicated urinary tract infection (cystitis) 	<ul style="list-style-type: none"> • Hypersensitivity to any component of the medication • History of drug induced immune thrombocytopenia with use of sulfonamides or trimethoprim • Megaloblastic anemia due to folate deficiency • Marked hepatic damage or severe renal disease
Terbinafine	Topical	<ul style="list-style-type: none"> • Tinea pedis, tinea cruris, tinea corporis • Pityriasis versicolor 	<ul style="list-style-type: none"> • Hypersensitivity reactions
Tetracaine 0.5%	Ophthalmic	<ul style="list-style-type: none"> • Local analgesia of the eye to facilitate examination and/or irrigation of the eyes 	<ul style="list-style-type: none"> • Hypersensitivity reactions • Suspected globe rupture
Tobramycin	IV	<ul style="list-style-type: none"> • Appendicitis with signs of peritonitis • Pyelonephritis 	<ul style="list-style-type: none"> • Hypersensitivity • Renal impairment
Vitamins <ul style="list-style-type: none"> • Multivitamin Pediatric (Flinstones with Iron) chewable tablet • Multivitamin-mineral tablet (age more than 12yo) • Multivitamin-mineral (Centrum Forte Essentials) for patients with higher nutritional requirements that can swallow tablets • Multivitamin-mineral (Centrum Select) for patients with higher nutritional requirements that cannot swallow 	PO	<ul style="list-style-type: none"> • Vitamin deficiency • Nutritional status 	<ul style="list-style-type: none"> • Hypersensitivity reactions • Formulation selection per nutritional status

tablets • Vitamin B complex • Vitamin D (Cholecalciferol) • Vitamin C (Ascorbic acid)			
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Table 7 - Admission Medication Management

When a patient is admitted to an inpatient service, they may be taking medications at home that will need to be ordered at the time of admission that are not within the scope listed in Table 1. The PA may order these medications (with the exception of controlled substances) however will not make changes to any medications not listed in Table 1 without consultation to the MRP and appropriate consultation services, if indicated (such as endocrinology, for insulin). All medications are to be reviewed by Pharmacy as part of the home medication reconciliation following admission. Prescribed doses must be confirmed by the PA as within usual prescribing limits according to clinical indication and per approved product monograph. Doses outside of the usual dose range must be approved by delegating physician. The medications that may need to be ordered may include, but are not limited to (this is not an exhaustive list):

Medication	Examples, not exclusive list
Asthma Medications	Salbutamol (Ventolin), Fluticasone (Flovent)
Seizure Medications	Levetiracetam (Keppra), Lamotrigine (Lamictal) *no controlled substances, such as benzodiazepines*
Oral Contraceptives	
Diabetes Medications	Metformin, Insulin
Topical Medications	Acne creams, steroid ointments
Anti-infectives	Topical antifungal or antibacterials Oral antibacterials prescribed for acne or to complete an acute course of therapy using home supply
Non-opioid analgesics	Gabapentin, Pregabalin, NSAIDs, etc
Non-formulary medication	<i>At discretion of care team in consultation with pharmacy, a home medication not available at CHEO</i>
OTC medications and supplements regulated by Health Canada (ie DIN or NP number associated)	<i>For various health related conditions</i>