

**Regional Order Set
Intensive Care Admission Orders
(For COVID-19 ONLY)**

Allergies: None known Unable to obtain

List with reactions: _____

*****Please refer to most recent version of the following documents:**

- Clinical Guideline for Care of Patients with Respiratory Failure with Suspected or Confirmed COVID-19
- NH Interim Therapeutic Guidance for Adult Patients with Suspected or Confirmed COVID-19

Note: Prescriber must obtain, complete and sign any of the referenced order sets below separately.

Admission Information

Admit under care of: _____ Referring physician: _____

Admitting diagnosis: _____ Code status: _____

Continue the following order sets: _____

Activity

Bed rest Bathroom privileges As tolerated Elevate head of bed to 30 degrees Spinal precautions

Other: _____

Vitals

Heart rate, BP, resps, O₂ sat q1h; temperature q4h

Cardiac monitor: Bedside Telemetry

Vitals q ____ h

Neuro vitals q ____ h x ____ h, then reassess

Blood pressure as per art line

Admission investigations

Procalcitonin (Note: frozen sample therefore only sent to processing lab on Wednesdays)

- | | | | |
|--|-------------------------------------|------------|---|
| <input type="checkbox"/> ECG | • Fibrinogen | • CK | • Lactate |
| <input type="checkbox"/> Osmolality | • BNP | • INR/PTT | • Baseline Chest x-ray (if not already done) |
| <input type="checkbox"/> ScVO ₂ | • CBC | • Troponin | • E7 (sodium, potassium, CO ₂ , chloride, creatinine, urea, glucose) |
| • D-dimer | • Ca, Mg, PO ₄ , albumin | • Ferritin | • AST, ALT, BILI, Alk Phos, GGT |

Other (specify): _____

Microbiology (if not already sent; collect prior to first dose of antimicrobials)

- Blood cultures x 2 • Sputum culture • Urine culture • Urine for legionella

Send nasopharyngeal swab for : • Influenza
• COVID-19
• Extended Respiratory Pathogen Panel (NAT)

Collect 2 NP swabs: 1 swab for Influenza and COVID-19, 1 swab for Respiratory Panel (NAT)

Other culture (specify): _____

Daily investigations

- E7 (sodium, potassium, CO₂, chloride, creatinine, urea, glucose) CBC Chest x-ray PRN Ca, Mg, PO₄ daily
 CK CRP Troponin AST, ALT, BILI, Alk Phos, GGT Other: _____
 Ferritin Fibrinogen

Physician signature: _____ **College ID:** _____ **Date:** _____ **Time:** _____



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Sedation/analgesia

Ventilated patients: Refer to Sedation and Analgesia Orders for Mechanically Ventilated Patients (See page 4)

- acetaminophen 1 g PO q6h Regularly scheduled or PRN for pain
- acetaminophen/caffeine/codeine 30 mg (Tylenol #3 or equivalent) 1 to 2 TABS PO q4h PRN for pain
- morphine _____ mg PO Subcutaneous IV q _____ h PRN for pain
- HYDROMORPHONE _____ mg PO Subcutaneous IV q _____ h PRN for pain
- Other: _____

Hemodynamic management

Goal: MAP: _____ Systolic blood pressure: _____
 ScVO₂: _____ (60 to 80%) Goal in sepsis equal to or greater than 70%

Goal: NS D5NS LR D5W ½NS

Other: _____ Run at _____ mL/h

Add KCl _____ mmol/L

Refer to Vasopressor and Inotrope Orders (see page 5)

Respiratory management

Corticosteroids: Indicated in critically ill patients for up to 10 days. *Note: Higher doses may be required for other indications (e.g. refractory septic shock).*

- dexamethasone 6 mg PO IV q24h x 10 days
- Other: _____

Ventilated patients: Refer to Ventilator Admission Orders (see page 6)

Non-ventilated patients:

- O₂ to maintain saturations equal to or greater than _____
- ipratropium 20 mcg metered dose inhaler (MDI) with spacer 2 puffs q4h q _____ h PRN dyspnea
- salbutamol 100 mcg metered dose inhaler (MDI) with spacer 2 puffs q4h q _____ h PRN dyspnea
- ABG on admission ABG PRN per RRT

Nutrition

Access: NG OG NJ Other (specify): _____

NPO Diet (specify): _____

TPN as per dietitian Enteral feeds as per dietitian

Daily weight

Glycemic control (glucose target 6 to 10 mmol/L)

Glucometer reading qid or q _____ h

Insulin Infusion (See page 7)

Site-specific subcutaneous insulin orders

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Page 3 of 8 PATIENT LABEL

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Anti-nausea medications

dimenhyDRINATE 25 to 50 mg PO/IV/IM q4h PRN

ondansetron 4 to 8 mg PO/IV q8h PRN

Other: _____

Stress ulcer prophylaxis

raNITidine 150 mg PO/NG q12h (usual renal dysfunction **raNITidine** dose: 150 mg PO q24h)

pantoprazole 40 mg PO daily or **pantoprazole** 40 mg IV q24h or **esomeprazole** 40 mg via tube daily

Other: _____

GU

Insert Foley catheter

Call MD if urine output less than 30 mL/h x 2 consecutive hours

Electrolyte Replacement Protocol (see page 8)

VTE prophylaxis:

enoxaparin 30 mg subcutaneous q12h (for patients 100 kg or less)

enoxaparin 40 mg subcutaneous q12h (for patients over 100 kg)

enoxaparin 30 mg subcutaneous q24h (for CrCl less than 30 mL/min)

Medication reconciliation: Complete Pharmanet medication reconciliation report

Other medications: See physician order sheets

- Ensure Pharmanet form is on the chart
- Reassess antibiotics in 72 hours

Referrals:

Physiotherapy

Social Worker

Spiritual/Religious Care

Aboriginal Patient Liaison Worker

Allergies: None known Unable to obtain

List with reactions: _____

Sedation and Analgesia Orders for Mechanically Ventilated Patients

1. Physician's to review all previous narcotic and benzodiazepine orders prior to initiating the sedation protocol
2. Evaluate and document patient's RASS score q4h to assess sedation goal
3. Richmond Agitation Sedation Scale (RASS) goal (default is 0 to -1 unless otherwise ordered)
 - RASS 0 to -1
 - Other RASS target: _____

***Usual criteria for deep sedation**

(if goal is -4 or -5 document reason)

- Deeper sedation needed to improve patient/ventilator synchrony
- To prevent patient movement
- As management of high intracranial pressure
- Ensure adequate sedation for all patients on neuromuscular blocker infusions

| Score | Term | Description |
|---------|-------------------|---|
| +1 to 4 | Restless/agitated | Non-purposeful movements, pulls tubes, aggressive, combative |
| 0 | Alert and calm | Alert and calm |
| -1 | Drowsy | Awakens to name with sustained eye contact (more than 10 seconds) |
| -2 | Light sedation | Awakens to name with eye opening/contact, not sustained |
| -3 | Moderate sedation | Any movement in response to voice but no eye contact |
| -4 | *Deep sedation | Any movement in response to physical stimulation |
| -5 | *Unarousable | No response to any stimulation |

Management

A) Sedation

Continuous IV infusions (preferred): Choose one

- Daily sedation hold at 0800 unless otherwise ordered
- propofol** 5 mcg/kg/minute initial infusion, titrate up by 5 mcg/kg/minute until target sedation achieved (reassess continued use after 48 hours; maximum 50 mcg/kg/minute unless written otherwise)
- or
- midazolam** 0 to 20 mg/h IV, titrate q15minutes to achieve target sedation

Bolus doses

- propofol** 10 to 20 mg IV q5minutes PRN to achieve target sedation (caution can cause hypotension)
- midazolam** 1 to 5 mg IV q5minutes PRN to achieve target sedation

B) Analgesia (must be considered in all patients)

Continuous IV infusions (preferred): Choose one

- fentaNYL** 0 to 200 mcg/h IV, increase by 5 to 25 mcg/h q15minutes PRN to achieve adequate pain control
- or
- HYDRomorphone** 0.2 to 3 mg/h IV, increase by 0.1 to 0.5 mg/h q15minutes PRN to achieve adequate pain control
- or
- morphine** 0 to 10 mg/h IV, increase by 1 to 5 mg/h IV q15minutes PRN to achieve adequate pain control
- or
- ketamine** 0.1 to 0.5 mg/kg/h IV, increase by 0.1 mg/h q30minutes to achieve adequate pain control (caution can cause tachycardia and hallucinations)

Bolus doses

- fentaNYL** 25 to 50 mcg IV q5minutes PRN to achieve adequate pain control
- HYDRomorphone** 0.2 to 0.4 mg IV q15minutes PRN to achieve adequate pain control
- morphine** 1 to 5 mg IV q5minutes PRN to achieve adequate pain control
- ketamine** 5 to 20 mg IV q15minutes PRN to achieve adequate pain control

If unable to achieve target sedation, consider ICU delirium (May refer to **11-111-5032 Intensive Care Delirium Orders for guidance**)

Note: These orders will self terminate on extubation. Order additional analgesia as required after extubation.

Physician signature: _____ College ID: _____ Date: _____ Time: _____

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Vasopressor and Inotrope Orders

Note: Vasopressors can be started via a peripheral IV (in the antecubital fossa or external jugular vein) in urgent situations for up to 4 hours. All vasopressors and inotropes should be given via central venous access when possible

- Insert an arterial line
- Central line (site: _____)

Management

- Initiate vasopressors/inotropes in the following order: _____

Management

- Mean arterial pressure (MAP) greater than: _____ (suggested greater than 65 mmHg for most patients)
- Systolic blood pressure greater than: _____
- SvO₂ of 65 to 75%
 - To be measured q6h to q12h PRN

Vasopressors

- norepinephrine** 0 to 20 mcg/minute continuous IV infusion
- vasopressin** 0.02 to 0.04 units/minute continuous IV infusion
(as secondary vasopressor when indicated)
- EPINEPHrine** 0 to 10 mcg/minute continuous IV infusion
(caution in tachycardic patients and those with arrhythmias)
- phenylephrine** 0 to 200 mcg/minute continuous IV infusion
(Not first line vasopressor in septic shock. Can be used for patients with tachyarrhythmia.)
- DOPamine** 10 to 20 mcg/kg/minute continuous IV infusion
(as alternative to norepinephrine in patients with absolute or relative bradycardia)

Inotropes

- DOBUTamine** 2.5 to 20 mcg/kg/minute continuous IV infusion
- milrinone**
 - Loading dose: 50 mcg/kg IV over 10 minutes (optional)
 - Maintenance dose: 0.125 to 0.75 mcg/kg/minute continuous IV infusion
 - Start infusion at _____ mcg/kg/minute

Directions for weaning of vasopressors/inotropes: _____

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Ventilator Admission Orders

Ventilation

- All patients to have their actual height measured/predicted body weight calculated
- **ABG goals:** PH ____ PCO₂ ____ PaO₂ ____ SpO₂ ____ Frequency q ____ h and q ____ h PRN

Ventilator associated pneumonia prevention orders

- HOB greater than 30° • Mouth care • Assess EVAC ETT q2h and q ____ h PRN

Non-invasive positive pressure ventilation (NIPPV)

Initial settings: IPAP ____ EPAP ____ FiO₂ ____ PAV% ____ RR ____

- Changes as per Registered Respiratory Therapist (RRT)
 - Adjust to keep patient comfortable
- Contact physician for NIPPV changes

Invasive positive pressure ventilation (IPPV)

Initial settings: Mode ____ VT ____ Pressure ____ RR ____ PEEP ____ FiO₂ ____

- Changes as per Registered Respiratory Therapist (RRT)
 - Plateau pressure less than 30 cm H₂O
 - Vt goal: 6 to 8 mL/kg based on calculated predicted body weight
- Recruitment maneuver q4h x 48 hours as per protocol
- Contact physician for ventilator changes

Specified protocol

- 10-111-5078 Mechanical Ventilation in Patients with Acute Lung Injury (ARDS Protocol)**
- 1-32-2-010 Airway Pressure Release Ventilation**

Note - Prescriber must obtain, complete and sign any selected/referenced order set above or below separately.

Weaning

- **While sedation on hold in AM as per Intensive Care Sedation and Analgesia Orders for Mechanically Ventilated Patients (see page 4)**
- Spontaneous breathing trial (SBT) as per **1-32-2-020 Spontaneous Breathing Trial**

Extubation

- Difficult intubation: Yes No
 - Extubate when extubation criteria met as per (protocol/guidelines)
- or
- Notify physician when extubation criteria met

Treatment

- salbutamol** 100 mcg MDI 8 to 10 puffs through ventilator q ____ h and/or q ____ h PRN for shortness of breath
- ipratropium** 20 mcg MDI 8 to 10 puffs through ventilator q ____ h and/or q ____ h PRN for shortness of breath
- lidocaine** endotracheal 10 mg/spray 1 to 2 sprays via endotracheal tube q1h PRN for cough/comfort

Physician signature: _____ **College ID:** _____ **Date:** _____ **Time:** _____

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Insulin Infusion

Target range for glucose is 6 to 10 mmol/L

= If glucose measurement is greater than 10 mmol/L repeat in 2 hours. If still greater than 10 mmol/L initiate orders below.

= This order set is not to be used for patients with diabetic ketoacidosis.

Glucose monitoring and adjustments

- Measure glucose and adjust **insulin** as per orders below q2h until 3 glucose levels within range then q4h
- **If glucose decreases by 50% or by greater than 2 ranges, or is less than 6 mmol/L.**
 - Measure glucose and adjust **insulin** as per orders below q1h until 3 glucose levels within range.
- Increase frequency if nutritional intake, sympathomimetic use or patient stability changes, or steroids are administered.
- If neurological status decreases, suspect hypoglycemia and perform STAT glucose check.
- Prime tubing with **insulin** solution prior to starting. **insulin** should be administered through a dedicated line.
- For patients without a previous history of diabetes mellitus, who have been stable for at least 48 hours on an infusion of less than 2 units/h, attempt to wean **insulin** off. Restart if glucose increases above target range.

| Medication Orders | | | |
|---|--|--|---------------------------------------|
| 1. Regular insulin infusion 1 units/mL concentration in NS. | | | |
| 2. Glucose greater than 10, start at 2 units/h; Glucose greater than 13 start at 4 units/h. | | | |
| Glucose | | | |
| Less than 3 - Hold insulin infusion <ul style="list-style-type: none"> • Give 50 mL D50W Less than 4 - Hold insulin infusion <ul style="list-style-type: none"> • Give 25 mL D50W Recheck q15 to 30min and follow restart guidelines for 4 to 5 glucose | 4 to 5 Hold insulin infusion <ul style="list-style-type: none"> • Check blood sugar q30min to q45min • Give 10 mL D50W Restart when glucose greater than 7, according to Rate change "B" | If greater than 4 and decreased greater than 50% <ul style="list-style-type: none"> • Decrease infusion rate by 50% and recheck in 1 hour | |
| Ranges | Increased from a lower range | Is within same range | Decreased from a higher range |
| 5.1 to 8 | No change | No change | ↓ Infusion (Rate change "B") |
| 8.1 to 10 | Increase by 0.5 units/h | No change | ↓ Infusion (Rate change "A") |
| Ranges | Decreased by less than 2 mmols or increased | Decreased by 2 to 4 mmols | Decreased by greater than 4 mmols |
| 10.1 to 12 | Increase by 1 units/h | No change | ↓ Infusion (Rate change "A") |
| 12.1 to 18 | Increase by 2 units/h | Increase by 1 units/h | No change |
| 18.1 to 24 | Increase by 3 units/h | Increase by 2 units/h | No change |
| Greater than 24 | Increase by 3 units/h and call physician | | |
| Current rate of infusion | Rate change "A" | Rate change "B" | |
| Less than 5.5 units/h | Reduced by 0.5 units/h | Reduced by 1 units/h | |
| 5.5 to 8 units/h | Reduced by 1 units/h | Reduced by 2 units/h | |
| Greater than 8 units/h | Reduced by 2 units/h | Reduced by 3 units/h | |

Note: Changes of glucose readings less than 1 may be within CBGM measurement error and should not be considered a significant change

Allergies: None known Unable to obtain
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Electrolyte Replacement Orders

Items with check boxes must be selected (✓) to be ordered

Potassium replacement protocol (central line required for IV replacement)

Caution: Do not use potassium replacement protocol if the following are met (review daily):

- **SCr greater than 200 mmol/L**
- Urine output less than 30 mL/h x 2 consecutive hours
- Patient on hemodialysis

| Serum potassium (mmol/L) | |
|--------------------------|---|
| 3.4 to 3.5 | potassium chloride 20 mmol IV x 1 dose over 1 hour or potassium chloride elixir 20 mmol PO x 1 dose |
| 3 to 3.3 | potassium chloride 40 mmol IV x 1 dose over 1 hour or potassium chloride elixir 40 mmol PO x 1 dose |
| 2.5 to 2.9 | potassium chloride 40 mmol IV x 1 dose over 1 hour; then 20 mmol IV x 1 dose over 1 hour |
| Less than 2.5 | Notify doctor and give potassium chloride 40 mmol IV over 1 hour x 2 doses 1 hour apart |

- Check serum potassium 2 hours after the end of the final replacement dose
- If potassium refractory to replacement doses, check magnesium level and follow protocol

Calcium replacement protocol (do not use if digoxin received within the last 7 days)

- Albumin level twice weekly while on replacement protocol

| Corrected calcium* (mmol/L) | |
|------------------------------------|--|
| Greater to or equal to 2.15 mmol/L | Repeat calcium measurement the next morning |
| 1.9 to 2.14 | Give calcium chloride 1 g IV x 1 dose and repeat calcium measurement the next morning |
| 1.6 to 1.89 | Give calcium chloride 2 g IV x 1 dose and repeat calcium measurement 1 hour after dose infused |
| Less than 1.6 | Give calcium chloride 2 g IV x 1 dose, repeat calcium measurement 1 hour after dose infused and notify doctor with result |

*Corrected calcium = [(40 - albumin) x 0.02] + calcium Use most recent albumin from current admission

Magnesium replacement protocol

| Serum magnesium (mmol/L) | |
|--------------------------|--|
| 0.5 to 0.7 | Give magnesium sulfate 2 g IV x1 dose over 1 hour |
| Less than 0.5 | Give magnesium sulfate 5 g IV x 1 dose over 3 hours |

- Check serum magnesium 6 hours after end of dose

Phosphate replacement protocol

| Serum phosphate (mmol/L) | |
|--------------------------|---|
| 0.6 to 0.79 | Give sodium phosphate 15 mmol IV x 1 dose over 2 hours |
| Less than 0.6 | Give sodium phosphate 30 mmol IV x 1 dose over 4 hours |

Physician signature: _____ College ID: _____ Date: _____ Time: _____