RÉSEAU DE SANTÉ Horizon HEALTH NETWORK

Memo

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Horizon Area Anti-Infective Stewardship Committees and Infectious Diseases Services

"Did You Know…"

Did You Know: Management of Severe Acute Respiratory Infection (SARI) when COVID-19 is suspected?

The following treatment recommendations are for cases of suspected or confirmed COVID-19 caused by the novel SARS-CoV-2 virus. For recommendations on management of Community Acquired Pneumonia and Influenza, see separate Regional or Provincial guidelines or Clinical Order Sets.

Empiric Management – Mild illness or Non-severe Pneumonia

Patients with uncomplicated upper respiratory tract viral infection with non-specific symptoms (i.e. fever, fatigue, cough, anorexia, malaise, muscle pain, sore throat, dyspnea, nasal congestion or headache) OR pneumonia without signs of severe pneumonia and no need for supplementary oxygenation.

- ⇨ **Supportive treatment only** – including rest, hydration, and as needed antipyretic therapy (i.e. acetaminophen is preferred; caution against the use of ibuprofen or other NSAIDs – preliminary reports from Europe suggest that NSAIDs may aggravate COVID-19 infection and NSAIDs would be contraindicated in most COVID-19 at risk groups such as older age, hypertension, diabetes, renal failure, cardiomyopathy etc.)
- ⇨ **Antivirals for treatment of SARS-CoV-2 virus not recommended** – none have been shown to have clinical activity against SARS-CoV-2 – this includes oseltamivir and ribavirin
- ⇨ **Seasonal Influenza** – if ongoing local circulation of seasonal influenza, initiate empiric therapy using oseltamivir if appropriate as per Horizon Influenza Treatment Clinical Order Set and then reassess based on laboratory results
- ⇨ **Corticosteroid therapy not recommended** – The role of corticosteroids in the management of COVID-19 is controversial. It is currently unclear if any benefit is clearly derived from their use, and they may also cause harm. Experience with other types of viral pneumoniae (e.g. influenza) has also suggested worse outcomes. The use of corticosteroids is not recommended at this time in the management of COVID-19, unless another compelling indication for their use is present (e.g. acute exacerbation of COPD or asthma, refractory septic shock, etc.). [1–11]
- ⇨ **Antibiotics not recommended** – antibiotics are not active against viruses and provide no benefit
- ⇨ **Isolation is necessary to prevent spread** – refer to latest public health recommendations

Empiric Management – Severe Cases

Patients presenting with severe pneumonia (fever or suspected respiratory infection plus one of the following: respiratory rate > 30 bpm, severe respiratory distress, or SpO2 ≤ 93% on room air); Acute Respiratory Distress Syndrome; sepsis or septic shock. Most common diagnosis in severe COVID-19 is severe pneumonia.

- ⇨ **Give empiric antimicrobials** to treat all possible pathogens causing SARI and sepsis within 1 hour of initial assessment. Select empirical antimicrobial therapy based on the clinical diagnosis (e.g. community-acquired pneumonia; hospital acquired pneumonia if an inpatient or sepsis). Use NB-ASC treatment guidelines and/or Horizon Clinical Order Sets to guide selection, for example:

- **Community Acquired Pneumonia** – initiate empiric therapy for Community Acquired Pneumonia for patients requiring admission, especially if requiring ventilatory and/or circulatory support (see NB-ASC guidelines for more detail).
  - If admitted to a ward: cefuroxime 1.5 g IV q8h plus doxycycline PO OR a macrolide
  - If admitted to ICU: ceftriaxone 2 g IV q24h plus azithromycin 500 mg IV q24h x 48 hours and reassess
  - If allergy or severe delayed reaction to a beta-lactam: moxifloxacin 400 mg IV/PO q24h x 48 hours and reassess
- **Hospital acquired pneumonia** – base treatment on severity and risk of multidrug resistance. Please refer to NB-ASC guidelines
- **Seasonal Influenza** – if ongoing local circulation of seasonal influenza, initiate empiric therapy using oseltamivir and then reassess based on laboratory results (see Influenza Treatment Clinical Order Set for details)
- **Continue antibiotics for 48 hours and then reassess, empiric therapy should be de-escalated** based on microbiology results and clinical judgement. **Discontinue antimicrobial therapy if COVID-19 is confirmed and bacterial infection is not suspected.** NOTE: Severe influenza is occasionally associated with a secondary bacterial pneumonia. The incidence of secondary bacterial pneumonia associated with COVID-19 appears to occur in 10 to 15% of patients.

⇨ **Corticosteroid therapy not routinely recommended** – only use if other compelling indications are present (e.g. refractory septic shock, asthma exacerbation, exacerbation of COPD, etc.), see above comments

⇨ **If a bronchodilator is required** (e.g. salbutamol), recommend using a meter dose inhaler (MDI) in place of nebulization – nebulization is an aerosol-generating medical procedure which may increase the risk of transmission to healthcare professionals and would require the use of airborne precautions

⇨ **Experimental/novel treatments may be warranted** for those with admitted to hospital with risk factors or severe disease. This should only be done in consultation with Infectious Disease, in the setting of a clinical trial or compassionate use, and after informed consent has been obtained from the patient or their caregiver. To date there is no current evidence to recommend any specific anti-COVID-19 treatment for patients with confirmed disease.

Considerations for the Inpatient Immunocompromised Host

⇨ Patients who are severely immunocompromised (e.g. hematological malignancies, transplantation, immunosuppressive agents, etc.):

- Presenting with suspected COVID-19 should receive the same empiric antimicrobial therapy as described above for severe cases admitted until COVID-19 is confirmed or bacterial infection is ruled out
- Presenting with febrile neutropenia should be managed according to the Horizon Adult Febrile Neutropenia Clinical Order Set until COVID-19 is confirmed or bacterial infection is ruled out – suggest a low threshold to continue antimicrobial therapy in this population

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Links to Coronavirus Resources:

Horizon Health: http://skyline/DepartmentsPrograms/EmergManag/Pages/Novel-Coronavirus-(2019-nCoV).aspx

NB Department of Health: https://www2.gnb.ca/content/gnb/biling/coronavirus.html

Public Health Agency of Canada: https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals.html#a5

Please don't hesitate to contact us if you have any questions or concerns:

Dr. Gordon Dow, Dr. Daniel Smyth, Dr. Duncan Webster, Dr. Steve Robinson, Dr. Jaclyn Leblanc, Dr. Chelsey Ellis, Dr. Timothy MacLaggan (Clinical Resource Pharmacist, Infectious Diseases), Chantal Michaud

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