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SERVICE CORRECTIONNEL CANADA

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COVID-19 Clinical Corner

Treatment Considerations for Specific Patient Populations

Key Takeaways

- Older adults are at a higher risk of experiencing severe illness from COVID-19.
- Older adults and those on immunosuppressive therapies may present with atypical symptoms.
- Inhaled corticosteroids is a cornerstone of asthma therapy and should be continued to minimize exacerbations by keeping asthma under control.
- Instead of nebulization, use metered dose inhalers, dry powder inhalers (e.g., Turbuhaler, Twisthaler) or soft mist inhalers (e.g., Respimat)*

Older adults, 65 years and older, are at higher risk for severe illness from COVID-19.

Older adults, 80 years and older, have the highest mortality rate due to COVID-19 in Ontario.

Source: Center for Effective Practice. COVID-19: Clinical and Practical Guidance for Primary Care Providers. Retrieved from: <https://tools.cep.health/tool/covid-19/#specific-populations-new>

Clinical management may be guided by the WHO (3,4) and Public Health Agency of Canada (5) and adapted to comorbidities, polypharmacy and frailty of older patients (2). COVID-19 resources can be found on the the Regional Geriatric Program of Toronto website including for assessment and management, delirium, mobility, and communication.

Clinical guidance, tools, and links for health providers caring for older adults during the COVID-19 Pandemic can be found here:
<https://www.rgptoronto.ca/resources/covid-19/>

A discussion on the outbreak of COVID-19 in a long-term care facility in Seattle, Washington, may shed some light on clinical presentation of COVID-19 in the older adult population, especially frail older adults with multiple chronic conditions (6). Signs and symptoms may include tachpnea, altered mental status or delirium, and unexplained tachycardia or decrease in blood pressure (6). Clinicians need to be aware that older adults with COVID-19 may present atypically.

Atypical COVID-19 Presentation in Frail Older Adults

- Fever, cough and dyspnea may be absent despite respiratory disease
- Atypical symptoms may include milder symptoms, delirium or acute functional decline, little or no temperature elevation, mild hypoxia (O₂ sat<90%) without respiratory symptoms

Source: COVID-19 in Older Adults, available at: https://www.rgptoronto.ca/wp-content/uploads/2020/04/COVID-19-Presentations-in-Frail-Older-Adults-U-of-C-and-U-fo-T.pdf?utm_source=link.cep.health&utm_medium=urlshortener&utm_campaign=covid-mat

What are the risks for older adults?

A case series of hospitalized patients with COVID-19 from China found that most critically ill patients were older with underlying conditions (median age 66 years; comorbidities in 72.2% of cases) than patients not admitted to the ICU (median age 51 years, comorbidities in 37.3%) (1,2). Comorbidities associated with severe clinical features were hypertension, diabetes, cardiovascular disease and cerebrovascular disease (1). Given that those 70 years and older had shorter median days from first symptom to death compared to younger adults (11.5 days vs. 20 days) (1,2), this suggests faster disease progression in older adults, underlying the importance of implementing prevention measures to limit the risk of spreading the virus in older adults and in those with underlying medical conditions (3,4).



Should inhaled corticosteroids be continued for asthma control?

The World Health Organization (WHO) currently recommends against the use of ORAL corticosteroids for the treatment of viral pneumonia due to reports of no survival benefit and possible harms (e.g., avascular necrosis, psychosis, delayed viral clearance) (7). For INHALED corticosteroids (ICS), there is currently no evidence of the relationship between its use and COVID-19 infection. ICS is a cornerstone of asthma management. It improves asthma control by improving symptoms, pulmonary function and reducing exacerbations (and perhaps the need for ORAL corticosteroids) (8). Discontinuing low-dose ICS in patients with well-controlled asthma may increase their risk of an asthma exacerbation compared with those who continue with their therapy (9).

The Canadian Thoracic Society (10) recommends:

- Patients with asthma should restart or continue to use their prescribed inhaled maintenance therapy to improve disease control and to reduce the severity exacerbations
- There is no current evidence that inhaled corticosteroids increase the risk of acquiring COVID-19 or that they increase the severity of infection
- There is no available evidence of harm caused by using prednisone to treat asthma exacerbations
- Biologics should be continued during COVID-19 pandemic. If biologic therapies are interrupted temporarily, it is suggested to step-up other controller therapies on an individualized basis. Where available, family physicians/ primary care nurse practitioners may consider switching patients to self-administration of biologics
- Against the use of nebulized therapy. Alternatives to nebulized therapy include dry powder inhaler or a metered dose inhaler (MDI) with spacing device

Advise patients to continue taking their ICS to maintain good symptom control and to report any changes in symptoms, e.g., dyspnea, wheeze, and cough (10,11). Continue to review pneumococcal status and offer pneumococcal vaccines to at-risk patients.

Please send any other clinical questions related to COVID-19 to the following email account: GEN-NHQ Pharmacy (Pharmacy.GEN-NHQ@csc-scc.gc.ca).

COVID-19 and COPD

The Canadian Thoracic Society (12) recommends:

- Continuation of inhaled maintenance therapies which help minimize risk of a COPD exacerbation and optimize lung function.
- The usual guidelines for prompt initiation of systemic glucocorticoids for a COPD exacerbation should be followed, as delaying therapy can increase the risk of a life-threatening exacerbation
- Against the use of nebulized therapy. Alternatives to nebulized therapy include metered dose inhaler (MDI) with spacing device, dry powder inhaler or a soft mist inhaler

Managing chronic medications: Immunosuppressive therapy

At this time, there is limited information on the pathogenesis and risk factors for severe disease or death due to COVID-19 and how patients who are immunocompromised are affected by COVID-19 (13-15). Relative to those who are not compromised, patients on immunosuppressive medications, may be at higher risk of contracting and suffering from serious complications if infected by COVID-19 (14).

At this time, there is no guidance available to inform stopping, delaying or interrupting immunosuppressive therapies (e.g., infliximab, methotrexate); the risk of infection varies from patient to patient. As such, clinical decisions should be personalized, emphasizing individual patient clinical factors, reviewing the goals of treatment and weighing the benefits (e.g., maintaining control of the condition) and risks (e.g., flare-ups and loss of efficacy upon discontinuation, severity of the condition being treated, comorbidities) through shared decision making (16-20). Patient on immunosuppressive therapies may have atypical clinical presentations in that they may not display normal, high spiking fevers, and their white blood cell counts may not be as high. Clinicians may need to follow-up with these patients closely and bring them in for an appointment should there be any concerns (21).

Stay tuned as more data becomes available.

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Resources

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Soft mist inhalers. Please see Instruction for use for Respimat in the following link: <https://www.lungsask.ca/file/1926/download?token=LI7NGeE>