CHEST

Key Highlights of the Canadian Thoracic Society's Position Statement on the Optimization of COPD Management During the Coronavirus Disease 2019 Pandemic

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ABBREVIATIONS: COVID-19 = coronavirus disease 2019; CTS = Canadian Thoracic Society; ICS = inhaled corticosteroid; LABA = long-acting beta-2-agonist; SARS-CoV-2 = severe acute respiratory syndrome coronavirus 2

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Patients living with COPD represent a vulnerable population during the coronavirus disease 2019 (COVID-19). Physicians and patients have many questions regarding the acute and chronic management of COPD during the pandemic. This commentary summarizes the Canadian Thoracic Society's (CTS) position statement on managing COPD during the COVID-19 pandemic[1] in an easy FAQ format. The full COPD position statement, and other valuable clinical tools including links to online patient support programs for self-management and exercise/pulmonary rehabilitation, can be found online (https://cts-sct.ca/covid-19/).

General Recommendations for All Patients With COPD

Patients with COPD should stay at home as much as possible, including working from home, if feasible. If you must leave the home, we suggest that all patients follow current local, national, and global public health advisories with respect to the indications for physical distancing and isolation. Patients should wash their hands with soap and water frequently for 20 s or use alcohol-based hand sanitizer containing at least 60% alcohol. Consider having at least a 30-day supply of all medications on hand to reduce the need for leaving the home, or select delivery options at your pharmacy, or have trusted individuals pick up your medication.

Longitudinal experience with seasonal influenza and preliminary data in severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection (subsequently discussed) suggests that patients with chronic lung disease are at risk for severe complications of SARS-CoV-2 infection (COVID-19). Physical distancing is an important public health measure to flatten the curve of community spread of the virus. The workplace is a social environment which may expose patients to others in their community, particularly if physical distancing in the workplace setting is difficult to implement. There is also increasing concern regarding the challenges of implementing physical distancing measures in congregated living situations such as retirement homes and long-term care facilities that need to be urgently addressed by health-care providers and health systems to limit the spread of the virus in this vulnerable population. Until we fully understand the risks associated with

SARS-CoV-2 infection in patients with chronic lung disease, we have placed a high value on limiting exposure based on prior experience with influenza.

Patients living with COPD, particularly those with severe disease and/or if associated with advanced frailty, should complete or update their advance care plans and indicate if they would accept transfer to hospital or admission to critical care (eg, for mechanical ventilation) in the event of a severe COVID-19-related illness. If patients lack the capacity to complete this document, we recommend that a discussion with the patient's most responsible designate occur to establish goals of care.

Are Patients With COPD at Higher Risk of Acquiring SARS-CoV-2 Infection?

Viral respiratory tract infections are a common cause of COPD exacerbations.[2] However, according to current available data, patients with COPD are not at an increased risk of acquiring SARS-CoV-2 infection. Published literature on the clinical characteristics of patients admitted to hospital for a SARS-CoV-2 infection suggest that patients with COPD are not overrepresented when compared with the general population.[3-6]

Will Patients With COPD Have More Severe Symptoms or Disease Course Because of COVID-19?

Patients with COPD hospitalized because of COVID-19 are more likely to require ICU support and have higher mortality when compared with other patient groups.[7,8] A meta-analysis by Lippi and Henry[9] shows that patients with COPD with COVID-19 have over a fivefold risk of having severe disease.

What Should Patients With COPD Do With Their Current Inhaled Therapies During the COVID-19 Pandemic?

We recommend that usual maintenance and exacerbation management for COPD be continued according to current CTS treatment guidelines.[10] Based on what we know about viral respiratory infections in patients with COPD, optimal pharmacologic treatment is the best way to prevent exacerbations and/or reduce the severity of exacerbations. Maintenance inhaled therapies have been shown to improve lung function, symptoms, and quality of life and decrease the risk of future exacerbations, including those precipitated by viral infections.

Is There Any Risk of Using Inhaled Corticosteroids for COPD Treatment During the COVID-19 Pandemic?

There is no evidence that inhaled corticosteroids (ICSs) increase the risk of acquiring SARS-CoV-2 infection or complicate/worsen this infection, such as increasing the need for hospitalization, intubation for mechanical ventilation, or death. This includes patients using their ICSs in combination inhalers with long-acting bronchodilators (ie, long-acting muscarinic antagonist, long-acting beta-2-agonist [LABA]), such as ICS/LABA or ICS/LABA/long-acting muscarinic antagonist combination inhalers. Patients should

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continue their maintenance and exacerbation management for COPD according to CTS treatment guidelines.[10,11]

Are Systemic Corticosteroids Safe to Use in Acute Exacerbations of COPD Caused by SARS-CoV-2 Infections?

This question needs careful consideration because we need to separate the use of systemic corticosteroids for treatment of acute exacerbations of COPD from the use of systemic corticosteroids in a more general setting of COVID-19.

In the absence of evidence of harm and an expectation of a low risk of harm, we prioritized the high value of current evidence-based recommendations to treat acute exacerbations of COPD with prednisone to reduce the need for urgent health service utilization. The high value to reduce acute care utilization supersedes the low risk of concern that prednisone may prolong viral replication.[1]

It remains unclear as to whether systemic steroids (such as prednisone) are helpful or harmful in the treatment of COVID-19. Most of what we know comes from studies on SARS-CoV-2 acute lung injury. Russel et al[12] reviewed observational data and concluded there was no benefit to using prednisone to treat SARS-CoV-2-related acute lung injury. However, this literature is evolving and the evidence of the benefit/risk of systemic steroids may change.

Is a Nebulizer Safe to Use During the Pandemic?

We do not recommend the use of a nebulizer during the pandemic because there is an increased risk of aerosol spread of virus particles.[13] Instead, patients should use metered dose inhalers with spacing devices, soft mist inhalers, or dry powder inhalers to administer all COPD medications at home, and inside health-care facilities and nursing homes. Patients who are already using nebulizers at home should continue to do so until they can be switched to alternative delivery methods. However, they should consider nebulizing their medicines in a separate room from others in the house, and implement other infection control recommendations.

Is Self-Management Education, Pulmonary Rehabilitation, and Exercise for Patients With COPD Still Available During the Pandemic?

In-person programs are closed until further notice; however, self-management and pulmonary rehabilitation counseling can still be done by telephone or tele-health technologies in some institutions.

Patients should remain physically active (eg, daily walks while physical distancing, functional resistance exercises for strength training) and continue their treatment plan (regular medications and self-management using their action plan with additional treatment in the event of an exacerbation).

The CTS COVID-19 webpage (https://cts-sct.ca/covid-19/) provides links to online resources that can help facilitate the teaching and implementation of self-management and rehabilitation strategies.

Should Patients With COPD Continue to Use Oxygen at Home?

Yes. Patients who currently are on home oxygen should continue to use it as prescribed. They should follow the manufacturer's instructions for cleaning and maintenance of their equipment. If the patient has had to increase the flow rate, they should inform the physician, and/or case manager. If in extreme distress, they should call emergency medical services.

The COVID-19 pandemic is a rapidly evolving situation. Health-care professionals are advised to monitor the CTS website for additional COPD resources (action plans and tutorial videos for adults for the proper use of inhalers, etc). Updates on COVID-19 and other lung diseases (eg, asthma) and a link to recommendations regarding the clinical management of patients in the event of a salbutamol metered dose inhaler shortage can also be found on this webpage.

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