

# Key Highlights From the Canadian Thoracic Society Position Statement on the Optimization of Asthma Management During the Coronavirus Disease 2019 Pandemic



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**KEY WORDS:** asthma; Canadian Thoracic Society; COVID-19

This commentary summarizes the Canadian Thoracic Society (CTS) position statement on managing asthma during the coronavirus disease 2019 (COVID-19) pandemic<sup>1</sup> in an easy, frequently asked question (FAQ) format. The full asthma position statement as well as other valuable clinical tools, including links to online self-management tools, can be found at the CTS

website.<sup>2</sup> In general, asthma maintenance and exacerbation management should continue according to national and international guidelines during the COVID-19 pandemic; however, treatment decisions should be individualized on the basis of patient characteristics. Optimal asthma control is expected to be

**ABBREVIATIONS:** COVID-19 = coronavirus disease 2019; CTS = Canadian Thoracic Society

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**FINANCIAL/NONFINANCIAL DISCLOSURES:** The authors have reported to CHEST the following: C. L. reports grants and personal fees from AstraZeneca Canada Ltd. (AZ), grants and personal fees from Boehringer Ingelheim Canada Ltd, grants and personal fees from Novartis, personal fees from GlaxoSmithKline Canada Ltd (GSK), and grants and personal fees from Pfizer, outside the submitted work. C. L. Y. reports grants and personal fees from Covis and Novartis, outside the submitted work. F. M. D. reports unrestricted grants from Novartis, Teva, and Trudell Medical; grants from GSK and MEDTEQ in partnership with Thorasys Inc.; fees for consultancy work from Covis Pharma and Teva; and fees as invited speaker from Covis Pharma and Pharmacy Brunet, outside the submitted work. D. R. reports grants from the Canadian Institutes of Health Research (CIHR), Children's Hospital Academic Medical Organization, and Ontario Thoracic Society, outside the submitted work. D. P. reports speaker fees from AZ, outside the submitted work. C. R. reports fees for Continuing Medical Education (CME) from Astra Zeneca and GSK, outside of the submitted work. T. S. reports personal fees from Covis Pharma, outside the submitted work. A. C. reports grants from the Fondation Québécoise en Santé Respiratoire, grants and personal fees from GSK, and personal fees from AstraZeneca and Sanofi, outside of the submitted work. M. D. L. reports grants from the Lung Association-Ontario, Ontario Thoracic Society, Government of Ontario's Innovation Fund, AllerGen NCE, Queen's University, CIHR (subgrant from the University of Ottawa), GSK, Hoffmann-LaRoche, Janssen, and Novartis; personal fees from the Lung Association-Ontario and the Canadian Thoracic Society; and a grant and personal fees from AZ, outside the submitted work. M. M. reports personal fees from AZ, GSK, and Novartis and a grant from the CIHR.

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**DOI:** <https://doi.org/10.1016/j.chest.2020.05.551>

the best protection against a severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) exacerbation.<sup>3-6</sup>

The pandemic is a rapidly evolving situation. Health-care professionals are advised to monitor the national/international society websites, including that of the CTS, for resources and links to asthma action plans and tutorial videos for children and adults on the proper use of inhalers and puffers as well as updates on COVID-19 and lung diseases. A link to recommendations regarding the clinical treatment of patients in the event of a salbutamol metered dose inhaler shortage can also be found on the CTS website.<sup>2</sup>

### Are Patients With Asthma More at Risk of Acquiring SARS-CoV-2 Infection?

No. Most studies to date suggest that patients with asthma have no greater risk of acquiring COVID-19 than the general population. In the largest studies published to date, with 44,672 patients (China) and 5,700 patients (United States), respectively, the prevalence of asthma in the COVID-19 population was below or approximated the expected general population prevalence; patients with asthma were not overrepresented.<sup>7-9</sup>

### Are Patients With Asthma at Risk of Experiencing an Exacerbation Triggered by SARS-CoV-2 (COVID-19)?

Probably yes, but there is no direct evidence. Viral respiratory tract infections are a common cause of asthma exacerbations.<sup>10</sup> Exacerbations requiring ED visits and hospitalizations increase annually at times when viral infections increase, typically week 38 on the calendar.<sup>11</sup> Nonpandemic coronaviruses have been associated with asthma exacerbations.<sup>12,13</sup>

### Is Asthma a Chronic Medical Condition That Is Associated With a Higher Risk of Severe Illness or Death From COVID-19?

Possibly yes, but there is no direct evidence to answer this question. The Centers for Disease Control and Prevention identify people with asthma as a group that may be at higher risk for severe illness from COVID-19.<sup>14</sup> Although comorbid illness is common in people who are admitted to hospital and in people who die of COVID-19, asthma has not been identified as an independent risk factor for severe illness or death. Regarding severe illness leading to hospitalization, two studies from China, one from Korea, and one from the

United States did not find that hospitalized patients with asthma were overrepresented in the COVID-19 populations studied.<sup>9,15-17</sup> Regarding the risk of death from COVID-19, the Chinese Centre for Disease Control and Prevention reported a higher than average case-fatality rate for patients with “chronic respiratory disease” but did not evaluate asthma as an independent risk factor.<sup>8</sup> In contrast, a report from Italy reporting 481 deaths and one from China reporting 54 deaths did not identify asthma as a comorbid risk factor.<sup>18,19</sup>

### Should Patients With Asthma Change Treatment During the COVID-19 Pandemic?

No. Patients with asthma should restart or continue their prescribed inhaled corticosteroid or inhaled corticosteroid plus long-acting  $\beta_2$ -agonist maintenance therapy to improve disease control and to reduce the severity of exacerbations, including exacerbations that may be caused by SARS-CoV-2.

### Is It Safe to Continue Using Corticosteroids (Prednisone) During the COVID-19 Pandemic?

So far, yes. There is no evidence of harm caused by using prednisone to treat asthma exacerbations during the pandemic. The brief course of prednisone used to treat acute asthma exacerbation is not expected to compromise the immune system enough to increase chances of acquiring SARS-CoV-2 and/or developing COVID-19. Patients should use prednisone to treat severe asthma exacerbations, whether or not the exacerbation is triggered by SARS-CoV-2.

### Is It Safe to Use Inhaled Steroids?

Yes. There is no evidence that inhaled corticosteroids increase the risk of acquiring COVID-19 or that inhaled corticosteroids increase the severity of infection. Most importantly, inhaled corticosteroids are key to maintaining disease control in most patients with asthma, and well-controlled asthma is probably the best protection against a SARS-CoV-2-induced asthma exacerbation.

### Should Patients Continue to Use Biologics to Manage Severe Asthma?

Yes. Biologics are not expected to adversely affect the immune response to viral infection. In fact, omalizumab may protect against virus-induced exacerbations.<sup>20</sup> Patients should continue using anti-IgE, anti-IL-5, and

anti-IL-4/IL-13 monoclonal antibodies during the COVID-19 pandemic because they reduce the frequency of severe asthma exacerbations and, therefore, the likelihood of entering the health-care system. (Note: Anti-IL-4/IL-13 monoclonal antibody therapy is not currently approved in Canada for the management of severe asthma.)

### Should Patients With Asthma Use Nebulizers Inside of Health-Care Facilities?

No, except for patients who are unable to use a metered dose inhaler with a spacing device or a dry powder device. Nebulizers may increase the risk of aerosol spread of viral particles and the risk of infection for health-care workers and caregivers.<sup>21</sup> The recommendation to avoid nebulization applies to all patients, not only to patients who have confirmed or suspected COVID-19. Patients should continue using or switch to metered dose inhalers with spacing devices, or dry powder inhalers, to administer inhaled corticosteroids and short-acting bronchodilators. For patients unable to use a metered dose inhaler with spacing devices, or a dry powder inhaler, nebulizers may be used cautiously in compliance with applicable contact and droplet infection control standards.

### Should Patients With Asthma Follow Physical Distancing Advisories?

Yes. Patients with asthma should follow current local, national public, and global health advisories on physical distancing and isolation. Patients should work from home, if possible. If not possible, patients with severe asthma should stay away from work until the World Health Organization or local public health authorities declare that physical distancing is no longer necessary or appropriate work accommodations can be made.

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