

# CHEO Asthma Program Newsletter

SPRING 2020

## CHEO Asthma Program

Asthma is the most common chronic disease in children. The incidence of asthma amongst children is 1 in 10 in Canada and 1 in 5 in Ontario. The CHEO Asthma Program was launched in April 2018. Our goal is to develop a more formalized partnership with community asthma providers with the aim of improving the health of children with asthma in Ottawa and surrounding communities. Our team includes Respirologists, Physicians from the Emergency Department & Inpatient Department, Nurses, Certified Asthma Educators, Respiratory Therapists, Ambulatory Care Managers, a pharmacist and a Program Coordinator.

## CHEO Asthma Program Core Team



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## Questions and Answers about Asthma and COVID-19

### Dear Community Pediatricians and Providers:

In light of the COVID-19 pandemic and questions raised by you and our patients on how to best manage asthma in children during these challenging times, we hope this edition of the CHEO Asthma Program Newsletter will provide helpful information. The question and answers below are based on information contained in the Canadian Thoracic Society Position statement on asthma and COVID-19 <https://cts-sct.ca/covid-19/>.

### 1) *Are children with asthma at higher risk of developing COVID-19?*

According to current evidence, there does not appear to be an increased risk for asthma patients to acquire SARS-CoV-2 infection (COVID-19) compared to the general population.

### 2) *Are children with asthma at higher risk of complications from COVID-19?*

Current studies have not shown complications from COVID-19 to be more frequent among patients with asthma. One report from Italy reporting 481 deaths and one from China reporting 54 deaths did not identify asthma as a co-morbid risk factor.

Overall, morbidity and mortality from COVID-19 is very low in children.

### 3) *Should children with asthma continue inhaled corticosteroids (ICS) even during the COVID-19 pandemic?*

There is currently no evidence that SARS-CoV-2 (COVID-19) impacts the safety and efficacy of current asthma therapies, including ICS. There is also no evidence that ICS increase the risk of acquiring SARS-CoV-2 (COVID-19), so we recommend management of asthma as per current national and international treatment guidelines. Optimal asthma control is expected to be the best protection against a SARS-CoV-2 asthma exacerbation.

### 4) *How should asthma exacerbations be treated during the COVID-19 pandemic?*

We suggest using short acting beta agonists (e.g. salbutamol) and prednisone/systemic corticosteroids if needed, to treat severe asthma exacerbations. Treatment of exacerbations should follow recommendations in existing Canadian guidelines, even during the COVID-19 pandemic, whether or not the exacerbation is triggered by SARS-CoV-2.

There is no evidence of harm caused by using prednisone/systemic corticosteroids 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 sufficiently to increase chances of acquiring SARS-CoV-2 and/or developing COVID-19.

**5) *What is the risk that asthma exacerbations will be triggered by SARS-CoV-2 (COVID-19)?***

It is probable that SARS-CoV-2 can trigger asthma exacerbations, as viral respiratory tract infections (including non-pandemic coronaviruses) are a common cause of asthma exacerbations. Improving asthma disease control through adherence to controller medications is expected to reduce the frequency and severity of asthma exacerbations.

**6) *How should exacerbations suspected or known to be triggered by SARS-CoV-2 be treated?***

There is a concern that prednisone may prolong viral replication of SARS-CoV-2. However, severe asthma exacerbations, even if triggered by SARS-CoV-2, should still be treated with short courses ( 3-5 days) of systemic steroids.

**7) *Should "puffer holidays" be recommended for children who normally do well off their controller medication during the spring/summer months?***

Given we do not yet know the seasonal pattern of SARS-CoV-2, we would recommend that children remain on their asthma controller medications over the spring/summer months during the COVID-19 pandemic.

**8) *Should nebulized medications be used in patients with asthma?***

We suggest that nebulizers be replaced by metered dose inhalers with spacing devices or dry powder inhalers (for children 6 and older who can demonstrate correct inhalation technique) for administration of inhaled-corticosteroids and short-acting bronchodilators.

Administration of nebulized medications may cause aerosolization of SARS-CoV-2, and increase the risk of transmission of infection. Nebulization of medications should be avoided in all patients with suspected COVID-19 infection, especially within healthcare facilities ( e.g. hospitals, nursing homes) to reduce the risk of aerosol spread of virus particles.

Patients who are already using nebulizers to administer therapy at home should continue until such time as their provider can discuss switching to metered dose inhalers with a spacing device or dry powder inhalers. Metered dose inhalers with spacing devices are more effective than nebulization and the preferred method of delivery even for acute exacerbations in the emergency department and hospital. Dry powder inhalers are another alternate for children 6 and older, after demonstration of correct inhalation technique.

**9) *What are the recommendations for physical distancing in children with asthma?***

We suggest that all patients with asthma follow current local, national public and global health advisories with respect to the indications for physical distancing and isolation.

If you have additional questions about managing your pediatric patient with asthma, please contact any of us at the CHEO Asthma Program. CHEO respirologists are also continuing to provide consultation through eConsult during the pandemic. <https://otn.ca/patients/econsult/>

Please feel free to circulate this newsletter widely, and Stay Safe everyone!

Next Newsletter: Fall 2020