

Guidance for children returning to school or day care - during COVID-19 pandemic

COVID-19 will be part of our lives for a long time and measures to balance risk of infection and risk of continued confinement will need to be evaluated continually.

Lifting of restrictive public health measures including gradual reopening of schools will occur – at different times and with varying interventions. The risk of acquiring COVID-19 varies across Canada and in each jurisdiction. It is a dynamic process and it will be important to continue to follow public health recommendations over time. The return to school in Quebec, planned for May 11 2020 is currently optional, particularly for children with “underlying health conditions.” In Ontario, schools remain officially closed until May 31st. This decision will be re-evaluated in the coming weeks and school closure may continue.

Goal:

- Minimize risk of serious illness and death in infants, children and adolescents related to COVID-19
- Identify the children at greater risk of serious illness and death from COVID-19

What is known about COVID-19 in children:

Current epidemiologic data and studies consistently report that infants, children and adolescents virtually never develop serious disease from COVID 19, in contrast to adults and elderly. Even in studies looking at the impact of pediatric underlying conditions on COVID, the disease remained mild to moderate in virtually all cases. Death from COVID 19 in pediatrics has been extremely rare. A scan of the literature up to April 26 reveals that proportions of children infected with COVID-19 range between 1.2% to 5% (CPS statement, see ref). Among the few children admitted to a pediatric intensive care unit (PICU), one study suggested that the proportion of children who had an underlying lung or heart condition or immune deficiency was slightly increased. This study did not indicate exactly what these conditions were.

The vast majority of children infected with COVID-19 have had mild to moderate disease, with clinical symptoms very similar to any other viral upper respiratory tract infection.

In addition, current data suggests that school transmission may not be common. In a recent study (NWS report), where there were 18 confirmed cases, no teacher or staff member contracted COVID-19 from any of the initial school cases (735 students and 128 staff were close contacts of these initial 18 cases).

As of May 2020, we are currently in a period where there is no vaccination, herd immunity or readily available antibody testing. **The return to school or lifting of restrictive public health measures should be associated with the continued promotion of principles of infection prevention and control within the schools and outside the home. Physical distancing, hand hygiene, cloth masking, cough etiquette and limiting large gatherings should be maintained as best as possible during this time.**

Specific populations:

At this time, it may be cautious to consider certain specific groups of patients as potentially being more vulnerable, although not reported, to developing serious illness with COVID-19. These may include the following patients:

High level immunosuppression from medication:

- High dose corticosteroids – prednisone equivalent > 20 mg per day or 2 mg/kg/day for > 14 days
- Patients receiving combination immunosuppressive therapies (\geq 1 class agents)

Higher risk of serious illness due to underlying condition:

- Malignancy on active chemotherapy
- Post HSCT (especially in first 2 year and on immunosuppression and/or evidence of GVHD)
- Post Solid organ transplant (within 2 months)
- Combined primary immunodeficiency (ex: SCID, CID, etc)
- Any patients with chronic lung disease, including asthma, cystic fibrosis and bronchopulmonary dysplasia, bulbar dysfunction or impaired airway clearance
- Any patients receiving home oxygen, BiPAP or with a tracheostomy
- Severe chronic liver disease
- HIV with CD4 T cells < 200 in children >5 years or < 15% in children \leq 5 years of age
- Certain patient with cardiac conditions:
 - o unrepaired cyanotic congenital heart disease, single ventricle palliation, severe pulmonary hypertension, post-heart transplant, moderately to severely decreased heart function/failure, severe hypertrophic cardiomyopathy, unstable ventricular arrhythmias, Kawasaki disease with giant aneurysms or severe coronary stenosis
- Certain patients with inflammatory diseases (including inflammatory bowel disease and rheumatologic diseases):
 - o Newly diagnosed
 - o Have severe active inflammation
 - o Taking steroid medications (>0.5 mg/kg/day prednisone equivalent dose) (excluding steroid enemas/creams or budesonide)

For consideration

- Neurological or neurodevelopmental conditions – (neuromuscular, neurovascular, neurodegenerative and neurodevelopmental conditions and seizure disorders).
- Patients with sickle cell anemia

Importance of optimizing underlying medical condition:

SARS-CoV2, like any other viral infection can worsen an underlying disease or trigger a flare of an underlying condition. As such, it is crucial at this time that children with chronic medical conditions continue their maintenance medication and optimize the underlying illness. While it remains controversial whether steroids worsen or help COVID-19 disease, national expert opinion has been that the benefits of good disease control (such as inhaled steroids for asthma) outweighs the theoretical risks of steroids. It has not been shown that Type 1 diabetes or asthma patients have more critical COVID-19 disease; however, a viral infection could lead to acute diabetes related complications during illness or an acute asthma exacerbation.

This document will be updated as new information and evidence is available. Last revised May 8th 2020

While it may sound intuitive that any immune modulating or suppressing medication would increase the risk of severe COVID-19, this is not the case in general. For example, pediatric patients on monoclonal antibody medication for IBD and rheumatologic conditions appear to have no worse outcomes than same-age peers with only mild COVID-19 disease observed in these patients to date. However, patients with very active inflammatory diseases who are on higher than usual dosages of immune modulating medications, or those with other coexisting conditions, may be at higher risk. When in doubt, it is best to confer with your subspecialist on specific advice.

For consideration:

- Delay school start for those patients until school has organized physical distancing/infection control measures as to minimize risk.
- If your child is healthy but living with a vulnerable household contact (sibling/parent or adult caregiver with high risk condition or elderly) – a delay in the return to school may be considered.
- Adults at schools (teachers, administrative and support staff) with underlying medical conditions or other risk factor for severe disease could potentially acquire COVID in the school or daycare setting. Additional precautions may be warranted and they should consult with their primary care provider and/or specialist.
- Prior to return to school – for children with potential high risk conditions – consultation with their primary care physician or specialist may be warranted – to review clinical status and medications.
- Review of immunization status – to avoid vaccine-preventable diseases.

In Summary

- There are tremendous benefits from children attending school.
- There are potential risks from children not attending school for prolonged periods of time.
- COVID-19 does not appear to cause severe disease in children
- Until broad molecular and antibody testing are available to better understand the seroprevalence of COVID-19 in our community, it may be prudent for a select group of patients to remain at home.
- We recommend remaining up-to-date about COVID-19 using reputable web resources
- The ultimate decision should be made by family, with support and guidance from their primary care team and/or subspecialist.

References:

1. Lifting of restrictive public health measures - Recommendations from the F/P/T Special Advisory Committee on COVID-19 (Accessed at: <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/canadas-reponse/recommendations-lifting-restrictive-public-health-measures.html>)
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3. AAP guidance on school reopening addresses physical and mental health, instructional time (Accessed at: <https://www.aappublications.org/news/2020/05/05/covid19schoolopening050520>) and

<https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/covid-19-planning-considerations-return-to-in-person-education-in-schools/>

4. Parri N, Lenge M, Buonsenso D; Coronavirus Infection in Pediatric Emergency Departments (CONFIDENCE) Research Group. Children with Covid-19 in Pediatric Emergency Departments in Italy. *N Engl J Med*. 2020 May 1.
5. COVID-19 in schools—the experience in NSW. Prepared by the National Centre for Immunisation Research and Surveillance (NCIRS) 26 April 2020 (not peer-reviewed). (Accessed at: http://ncirs.org.au/sites/default/files/2020-04/NCIRS%20NSW%20Schools%20COVID_Summary_FINAL%20public_26%20April%202020.pdf)
6. Information from Crohn's and Colitis Canada. (Accessed at: <https://crohnsandcolitis.ca/About-Crohn-s-Colitis/COVID-19-and-IBD/Guidance/Reopening-of-Schools-and-Economy> and <https://crohnsandcolitis.ca/covid19>)