

Care of Children with Medical Complexity in the School Setting During the COVID-19 Pandemic

FEBRUARY 8, 2021



Updated Guidance for [COVID-19: Guidelines for the Delivery of Home and Community Care Services for Children with Medical Complexity at School](#)

Children with medical complexity are defined by their underlying medical fragility and may be reliant on multiple medical technologies, including respiratory support, leading to daily aerosolized generating medical procedures (AGMPs) for their routine care. As a result, these children have unique infection prevention and control considerations in the school setting during the COVID-19 pandemic.

The original recommendations from September 2020 provided recommendations to decrease the risk of transmission when children with medical complexity return to school amid relatively low community prevalence of SARS-CoV-2. Community infection rates of SARS-CoV-2 in Ontario and most of Canada remain high, and new variants of concern (e.g., B.1.1.7 variant) have been detected, posing a higher risk of infections for schools. In response, the Government of Ontario declared a second provincial state of emergency on Jan. 12 and stay-at-home order on Jan. 14, 2021. While schools in northern Ontario reopened on Jan. 5, 2021, schools in southern Ontario were closed to in-person learning were closed for several weeks. Across the province, many schools designated for children with special needs have remained open throughout this period to promote their participation and necessary access to in-person learning.

As outlined in the [COVID-19: Updated Guidance for School Operation during the Pandemic document](#), for all students, the initial prolonged school closure (to in-person learning) had a significant negative impact on children and youth. Therefore, an in-person school model coupled with recommended risk-mitigation interventions is the best option from an overall health and learning perspective for children with medical complexity and technology dependence, who frequently have exceptional learning needs and require access to specialized school-based therapies. However, emphasis needs to be placed on reducing community transmission and strengthening the previously recommended school risk-mitigation measures for children with medical complexity requiring aerosol generating medical procedures (AGMPs) in school (see Table 1 below).

From an operational standpoint, risk-mitigation interventions for the school setting for children with medical complexity should continue to follow the original document COVID-19: Guidelines for the Delivery of Home and Community Care Services for Children with Medical Complexity at School, issued September 2020 (<https://www.sickkids.ca/siteassets/news/news-archive/2020/covid19-school-guidelines-medical-complexity.pdf>) and include daily screening of children and staff for symptoms (staying home if sick); cohorting with the smallest numbers possible (facilitated by reduced in-person class sizes and as few staff assigned as possible); frequent hand hygiene; consistent physical distancing; and enhanced environmental cleaning procedures and school/classroom ventilation.

For the small population of children at school who require AGMPs, significant changes to the original document are included here in response to the increased community prevalence and increased transmission risk for this unique student population.

Updates and reinforcement to previous recommendations for children with medical complexity at school regarding AGMPs in school are summarized below:

- AGMPs should be performed in a separate space, preferably in a designated treatment room.
- The ventilation in the room(s) where AGMPs are being performed should be optimized in consultation with experts in physical plant design and modification (e.g., portable filtration units, open windows)
- Minimize the number of staff present in the room when the AGMP is performed.
- Heightened cleaning protocols of all spaces used for AGMPs should be considered using appropriate cleaning products (with a drug identification number). See website for more: <https://www.canada.ca/en/health-canada/services/drugs-health-products/disinfectants/covid-19/list.html>
- Promote frequent hand hygiene through easy access and availability to alcohol-based hand rub (ABHR) or soap and water at point of care.

Given the current high rates of community transmission, difficulty identifying symptom changes in some children with medical complexities, and the potential for asymptomatic infection, the following recommendations should be considered:

- **When performing an AGMP, droplet and contact precautions (eye protection, gloves and gowns) with the addition of an N95 respirator (fit tested, seal checked), or approved equivalent, should be worn by all health-care providers and staff present in the room.**
- The use of droplet and contact precautions (with a medical/surgical mask) to perform AGMPs can be considered if there is a screening testing strategy in place to detect asymptomatic infection.
- Policies and procedures around staff personal protective equipment (PPE), storage and access should be developed.

If a separate room is not available or children who require frequent or continuous AGMPs, decisions for in-person learning need to take into consideration local epidemiology and safety within the school setting. The following strategies can be considered:

- Maximize physical distancing (at least six feet/two meters) between the student requiring the AGMP and all other staff and students not in full personal protective equipment at all times.
- Recommend the use of certified medical/surgical masks for students and staff in the classrooms.
- Cohorting is recommended to minimize the number of staff and students in classrooms.
- Creation of separate spaces (e.g., marking off with tape) and barriers (e.g., portable plexiglass stations) that enable separation and promote visibility and participation.
- A regular screening-testing strategy for SARS-CoV-2 may be complementary for risk-mitigation for children with medical complexity using AGMPs.

Table 1: Reference list of AGMPs used by children with medical complexity

CONTINUOUS AGMP PROCEDURES	INTERMITTENT AGMP PROCEDURES
Mechanical ventilation with circuit leak and a tracheostomy tube	Tracheostomy procedures (insertion/open suctioning/removal)
Non-invasive ventilation with a mask (e.g., continuous positive airway pressure therapy (CPAP) and bi-level positive airway pressure (BiPAP) therapy	Induction of sputum with nebulized saline Nebulized medications by a tracheostomy tube or face mask*
High flow nasal cannula (e.g., airvo)	In/exsufflation therapy (e.g. cough assist device)*
High flow air used in conjunction with oxygen delivery systems*	Manual ventilation with a bag-valve mask

*not included in Public Health Ontario's list of AGMPs but considered possible by the authors

As the pandemic continues to evolve, there will be continual review of emerging evidence to understand the most appropriate risk-mitigation measures to take for children with medical complexity. This will continue to be done in collaboration with education and health system partners.