

Aerosol Generating Medical Procedures

What is an Aerosol Generating Medical Procedure (AGMP)?

Aerosol Generating Medical Procedures (AGMPs) are procedures that can generate aerosols when an infected person’s airway is manipulated.¹ The risk of viral transmission (including SARS-CoV-2) during AGMPs is likely increased as a larger burden of respiratory aerosols are either generated from the infected person or the virus is spread over a greater distance than would occur with natural dispersion patterns.²

What procedures constitute an AGMP?

Currently, there is some debate in the literature as to what constitutes an AGMP. Much of the existing knowledge comes from studies during the Severe Acute Respiratory Syndrome (SARS), H1N1, and SARS-CoV-2 (Covid-19) viral outbreaks or through experimental laboratory studies. Current evidence continues to evolve.

It is important to know what your healthcare authority or institution defines as an AGMP and to follow local guidelines ([BC](#), [YK](#), [NWT](#), [AB](#), [SK](#), [NVT](#), [MB](#), [ON](#), [QC](#), [NL](#), [NS](#), [NB](#), [PEI](#)).

Aerosol Generating	Possibly Aerosol Generating
<ul style="list-style-type: none"> • Intubation and associated procedures, such as manual ventilation and open endotracheal suctioning*^{3,4,5} • Extubation⁵ • Bag-mask ventilation^{3,4,5} • Non-invasive positive pressure ventilation (continuous or bilevel positive airway pressure)^{3,4,6} • Sputum induction^{3,5,6} • Bronchoscopy^{3,5,6} 	<ul style="list-style-type: none"> • Use of humidified high-flow oxygenation systems (e.g., AIRVO™, Optiflow™, etc.)^{4,5} • Chest compressions^{6,7} • Nebulized therapy^{4,5,6} • Tracheotomy⁴ and tracheostomy care³

*NB: at the time of publication, nasopharyngeal and oropharyngeal suctioning are *not* considered an AGMP



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Reducing Risk of Viral Transmission

It is important to be familiar with local infection control and prevention practices. As more information becomes available, recommendations may evolve. At this time, national and international guidelines recommend the following strategies to mitigate the risk of transmission when performing AGMPs:^{3,8,9,10}

- » Only perform AGMPs when medically necessary
- » Perform a time out before performing an AGMP to ensure all health care workers are aware an AGMP is being performed and all are wearing appropriate airborne personal protective equipment
- » Limit the number of personnel to the minimum number required (a caregiver is usually required in the pediatric setting)
- » Perform AGMPs in an airborne infection isolation room or a private room with the door closed
- » Consider having the patient wear a medical mask over simple or high-flow nasal cannula
- » Place a viral filter on exhalation ports of nebulizers, bag-valve masks, and ventilators
- » Consider using a 2-person technique to maintain an adequate seal when ventilating with a bag-valve mask
- » Have the most experienced person perform the procedure
- » When intubating, consider using video laryngoscopy to maintain greater distance from the patient, pause chest compressions during this time, and use a cuffed endotracheal tube (inflate the cuff prior to bagging)
- » Utilize closed endotracheal suction systems
- » If opening the ventilation circuit, clamp the endotracheal tube prior to disconnecting
- » Disinfect the room and all equipment after use; follow institutional protocols to allow sufficient clearance time prior to next use

Patient Interaction

Staff entering a room wearing full protection can be scary for a conscious child (or caregiver). If there is time, warn the child and caregiver about the extra protection and why it is necessary (for younger patients you can use words like ‘to not spread germs’). If safe to do so, the caregiver (or another staff they may have met) can show their face from under the protection before the start of the procedure to help alleviate this fear.

The purpose of this document is to provide healthcare professionals with key facts and recommendations for performing AGMPs when caring for children in the ED. This summary uses the best available knowledge at the time of publication. However, healthcare professionals should continue to use their own judgement and take into consideration context, resources and other relevant factors. The TREKK Network is not liable for any damages, claims, liabilities, costs or obligations arising from the use of this document, including loss or damages arising from any claims made by a third party. The TREKK Network also assumes no responsibility or liability for changes made to this document without its consent.

For a complete list of the evidence that informed the creation of this resource visit our website [here](#). To learn more about the development, see the References & Development Team sections below.

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