

If children with asthma use “breathing treatments” or peak flow meters, do schools need to be concerned about aerosolizing the virus that causes COVID-19?

First, students with symptoms of COVID-19 should not attend school. Symptoms of asthma and COVID-19 may overlap, including cough and shortness of breath. Therefore, students experiencing acute asthma attacks should not be attending school without approval by a healthcare provider; if an asthma attack starts at school, a student may need a bronchodilator treatment before being sent home or before an ambulance arrives. The American Lung Association’s Model Policy for School Districts: Stock Bronchodilators [PDF](#) [external link](#) recommends using inhalers with disposable spacers/mouthpieces and nebulizers with disposable tubing with mask/mouthpieces. Inhalers and nebulizers should be used and cleaned according to the manufacturer’s instructions.

During this COVID-19 pandemic, asthma treatments using inhalers with spacers (with or without face mask, according to each student’s individualized treatment plan) are preferred over nebulizer treatments whenever possible. Based on limited data, use of asthma inhalers (with or without spacers or face masks) is not considered an aerosol-generating procedure.

Due to limited availability of data, it is uncertain whether aerosols generated by nebulizer treatments are potentially infectious.¹ During this COVID-19 pandemic, nebulizer treatments at school should be reserved for children who cannot use or do not have access to an inhaler (with or without spacer or face mask).

Use of peak flow meters, including in the school setting, includes forceful exhalation. Based on limited available data¹, forceful exhalation is not considered an aerosol-generating procedure associated with increased risk of transmitting the virus that causes COVID-19. However, for some people with asthma, using a peak flow meter can trigger cough.

Schools should obtain the appropriate personal protective equipment (PPE) for staff who administer nebulizer treatments and peak flow meters to students with asthma. PPE for use when administering nebulizer treatments or peak flow meters to students with asthma consists of gloves, medical or surgical facemask and eye protection. School staff should be trained on when to use PPE, what PPE is necessary, where this PPE is stored, how to properly don (put on), use, and doff (take off) PPE, and how to properly dispose of used PPE. CDC has information on using PPE. Staff should also be trained on how to administer nebulizer treatments and peak flow meters.

During this COVID-19 pandemic, if a nebulizer treatment or use of peak flow meter is necessary at school for a student, the number of people present in the room should be limited to the student and the staff member administering the treatment or peak flow meter. If appropriate based on the student’s age and level of maturity, the staff member could leave the room and return when the nebulizer treatment is finished. After the nebulizer treatment or use of peak flow meter, this room should undergo routine cleaning and disinfection. CDC has information on how to clean and disinfect and how to prevent asthma attacks triggered by cleaning and disinfecting activities.

People with moderate to severe asthma may be at higher risk of severe COVID-19. CDC has more information on COVID-19 for schools and healthcare providers (including school nurses).

¹ Reference related to aerosol generating procedures:

Tran K, Cimon K, Severn M, Pessoa-Silva CL, Conly J (2012) Aerosol Generating Procedures and Risk of Transmission of Acute Respiratory Infections to Healthcare Workers: A Systematic Review. PLoS ONE 7 (4); <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3338532/#!po=72.2222> [external link](#)