

School Attendance, Asthma and COVID-19

Considerations for school nurses.



In the current COVID-19 pandemic, certain evaluation procedures (peak flow measurements) and treatment recommendations (nebulizer treatments) for students with asthma while attending school are not consistent. This reflects the lack of objective data to guide recommendations and the variety of approaches currently taken at the local, state, and federal level based on this lack of knowledge. The purpose of this document is to summarize current overall recommendations that may be modified in the future as we learn more about COVID-19.

CONSIDERATIONS:

- The highest level of face mask and eye protection should be used during all health visit encounters by both the student and the school nurse or unlicensed assistive personnel (UAP).
 - In-person learning remains a personal decision based on family needs that may be based on the student's level of asthma control, complexity of the individual management plan, local virus activity, school administration, and guidance provided by the Centers for Disease Control and Prevention (CDC). A diagnosis of asthma that is well controlled does not preclude children from attending in-person learning. Asthma that is not well controlled should be treated appropriately to gain control by the child's asthma health provider prior to the child resuming in-person learning.
 - Children with asthma should follow the recommendations for the wearing of face coverings as indicated by the CDC while at school.
- Children should continue their daily controller medications, including inhaled corticosteroids. These medications have not been shown to increase risk of COVID-19 infection or disease severity. Children should therefore continue their medications as prescribed by their asthma health provider.
- To treat respiratory distress or premedication prior to physical activity:
 - Nebulizers should be discouraged from being used routinely in the school setting. If absolutely necessary, please see CDC and World Health Organization (WHO) web links in the reference section for guidance.
 - Rescue inhalers such as albuterol can be used with the student's own spacer, or appropriate disposable spacers. Disposable spacers should be discarded after use.
 - Follow CDC guidelines for other considerations when treating a sick child (e.g., placing in isolation room with adequate medical supervision until parent arrives for pick up).
 - Although CDC recommendations on the use of peak flow meters indicate that they are unlikely to generate aerosols, the accuracy of results can be questionable and the effort may produce coughing, so this is not recommended.
- It is not possible to distinguish between an impending viral-induced asthma exacerbation and the symptoms of COVID-19 in students who do or do not have asthma. Thus, all symptomatic students should be considered to have COVID-19 until testing proves otherwise.

- Every effort should be made to ensure that all students with asthma have an updated [Asthma Action Plan \(AAP\)](#) or Individualized Healthcare Plan (IHP).
- Children with asthma should be allowed to participate in all physical activity that has been deemed safe in terms of social distancing etc. by the school administration. Children may continue use of their premedication with albuterol to prevent exercise-induced asthma if appropriate.

REFERENCES:

- CDC: <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/schools-faq.html#Administrators>
- WHO: <https://www.who.int/news-room/commentaries/detail/transmission-of-sars-cov-2-implications-for-infection-prevention-precautions>
- School-based Asthma Management Program (SAMPRO): Lemanske RF, Jr., Kakumanu S, Shanovich K, Antos N, Cloutier MM, Mazzyk D, et al. Creation and implementation of SAMPRO: A school-based asthma management program. *J Allergy Clin Immunol* 2016; 138:711-23. SAMPRO comprehensive program for schools: www.aaaai.org/SAMPRO
- Shaker, M., Oppenheimer, J., Grayson, M., Stukus, D., Hartog, N., Hsieh, E.,...Greenhawt, M. (2020). Special Article: COVID-19: Pandemic contingency planning for the allergy and immunology clinic https://education.aaaai.org/resources-for-a-i-clinicians/Update-for-AI_COVID-19
- Matsumoto K, Saito H. Does asthma affect morbidity or severity of COVID-19? *J Allergy Clin Immunol* 2020; 146:55-7.
- Dong X, Cao YY, Lu XX, Zhang JJ, Du H, Yan YQ, et al. Eleven faces of coronavirus disease 2019. *Allergy* 2020; 75:1699-709. PMID 7228397.
- Kumar P, Goyal JP. Management of Asthma in Children during COVID-19 Pandemic. *Indian Pediatr* 2020; 57:684-5.
- Oreskovic NM, Kinane TB, Aryee E, Kuhlthau KA, Perrin JM. The Unexpected Risks of COVID-19 on Asthma Control in Children. *J Allergy Clin Immunol Pract* 2020. PMID 7263244.
- Castro-Rodriguez JA, Forno E. Asthma and COVID-19 in children: A systematic review and call for data. *Pediatr Pulmonol* 2020. PMID 7323291.
- Gupta A, Bush A, Nagakumar P. Asthma in children during the COVID-19 pandemic: lessons from lockdown and future directions for management. *Lancet Respir Med* 2020. PMID 7316451.
- Chavasse RJ. Covid-19: reduced asthma presentations in children. *BMJ* 2020; 370:m2806.
- Ruano FJ, Somoza Alvarez ML, Haroun-Diaz E, Vazquez de la Torrem M, Gonzalez PL, Prieto-Moreno A, et al. Impact of the Covid-19 Pandemic in Children with Allergic Asthma. *J Allergy Clin Immunol Pract* 2020.

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CASE SCENARIO

A child/adolescent student attending school with documented asthma complains of cough and shortness of breath and seeks evaluation by a school nurse or unlicensed assistive personnel (UAP). The following should be evaluated:

1. The school nurse or UAP should immediately apply appropriate facial covering (PPE grade) and eye covering and apply a mask to the student, if not already in place.
2. Inquire about the presence of other symptoms: sore throat, headache, nasal congestion, new loss of taste or smell, chills, stomach upset or diarrhea.
3. Inquire as to whether or not the student has had recent exposure to coronavirus in their family or their friends.
4. Perform brief physical exam (including checking for fever) to evaluate the presence or absence of respiratory distress based on staff role and job description. (School nurses would provide an exam, while UAP would be limited to a temperature check and obvious signs of illness/distress.)
5. If respiratory distress is present, determine if the child has an AAP/IHP on file with the school.
 - a. If yes, follow AAP/IHP guidance only if coronavirus exposure/illness is not suspected.
 - i. If the student's rescue albuterol inhaler is not readily available, use stock albuterol inhaler with disposable spacer device if available and authorized according to state regulations and local school board policy.
 - ii. If AAP/IHP is not available for guidance on dosing of albuterol, administer 2 puffs, wait 10 minutes and reassess respiratory status. 2-4 puffs of albuterol can be administered every 10 minutes until a total of 8-10 puffs have been given.
 - iii. If respiratory distress does not improve, call 911.
 - iv. The stock albuterol inhaler should be cleansed after use based on manufacturer's instructions. Preferably, the inhaler should be sent home with the student and a replacement inhaler obtained for use in the school.
 - b. If coronavirus exposure and illness is suspected, asthma care provider should move the student to an isolation room if possible (<https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/symptom-screening.html>) and treat the child with albuterol as noted above.
 - i. If the respiratory distress improves and the child appears to be stable, parents should be notified immediately and the child sent home for appropriate referral to their asthma care provider.
 - ii. If respiratory distress does not improve after a total of 8-10 puffs of albuterol, 911 should be called.

DISCLAIMER: This document provides a summary of currently available resources that school nurses can consult as they formulate independent nursing judgement for their practice or when participating in policy discussions in their districts. This document is not intended to provide clinical standards or guidelines. The school nurse is responsible for complying with applicable federal, state, and local laws, regulations, ordinances, executive orders, policies, and any other applicable sources of authority, including any applicable standards of practice.