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House Testimony for House Bill 86
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Public and Nonpublic Schools – Auto-injectible Epinephrine and Bronchodilators --Use, Availability, Training and Policies

Thank-you for the opportunity to present this written testimony. I am Dr. Lynn Gerald, Assistant Vice Chancellor for Population Health, and Research Professor of Medicine at the University of Illinois Chicago. I am the national expert in stock albuterol policy guidelines and implementation of stock albuterol programs. My 30-year career has focused on working with schools to help them improve the health of children with asthma and I have maintained continuous funding from the National Institutes of Health to study school-based asthma programs such as stock inhaler programs.

I was the senior author and Chair of the national stock albuterol policy guidelines (*American Journal of Respiratory and Critical Care Medicine, 202*1) and the primary advocate for the stock inhaler law which was passed in Arizona in 2017. I have also advised groups from many other states who have either passed or are working on passing or updating their legislation including Illinois, Texas, Utah, California, Hawaii, and many others. The reason I have been actively involved in this area is that the passage of stock inhaler laws and implementation of such programs has been the most impactful intervention for children with asthma that I have seen in my 30 years of working with schools.

I am here to provide my strong support for this bill that would provide emergency albuterol in schools for children who experience respiratory distress and to encourage you to follow the national guidelines created for such legislation. More than 1 in 10 children in the US have asthma. Each year, more than half of them will experience a sudden attack that makes it difficult for them to breathe. These attacks will lead to 750,000 emergency department visits and 200,000 hospitalizations. Unfortunately, about 200 children will die following such an attack.

Because attacks can occur without warning and can occur anytime, anywhere, children with asthma should always have access to medication that can quickly reverse the blockages in their lungs. This life-saving medication, called a short-acting bronchodilator, is easy to administer, inexpensive, and very safe. Despite the need for this medication, my research indicates that 80% of children with asthma do not have it at school (*Journal of Pediatric Allergy, Asthma, and Immunology, 2012 & Annals of the American Thoracic Society 2012*). This problem affects all children: rich or poor, private-schooled, or public-schooled, urban or rural. There are many reasons why they might not have medication: they forgot it; they couldn't afford it; they unexpectedly ran out; it might have expired.

When children do not have medication, schools have few options. A parent may not be immediately accessible or close enough to respond promptly. Even if they can, there is a delay during which the attack often worsens. In such cases, the school must call 911. Doing so is likely to lead to an ambulance transport and emergency department visit or hospitalization. Such events take children out of the classroom for days at a time and further impede their learning. These adverse events are, in many cases, avoidable with a simple low cost solution: stock inhalers. Schools can purchase a single inhaler containing a short-acting bronchodilator that can be used for anyone who experiences the sudden onset of cough, shortness-of-breath, and chest tightness that signals an asthma attack.

My research indicates that stock inhaler programs can reduce 9-1-1 calls for respiratory distress by 20% and EMS transports by 40% (*Annals of the American Thoracic Society 2016*). Furthermore, my research in Arizona, Illinois and Missouri has indicated that about 80% of children are able to return to class after administration of stock albuterol (*Journal of Allergy, Asthma, and Immunology, 2021*). This research also indicated that 84% of students were able to return to class after administration of the stock inhaler. Therefore, this medication allows children to return to their learning environment. If the stock inhaler was not available, schools would have to

call a parent to bring medication or call 9-1-1. This delay in treatment can cause the respiratory distress to worsen.

As Chair of the national guidelines statement on ensuring access to albuterol in schools (*American Journal of Respiratory and Critical Care Medicine, 202*1), I urge you to follow these guidelines in crafting your legislation. These guidelines were created and approved by the American Thoracic Society (a 15,000 member pulmonary physician organization), the National Association of School Nurses, the American Lung Association, and the Allergy and Asthma Network. They were also endorsed by the Pediatric Pharmacy Association. The guidelines recommend the following important components of legislation:

- Medication can be administered in good faith to any child in respiratory distress. The guidelines do not recommend restricting use to children with a diagnosis of asthma. Many children experience their first exacerbation at school so may not have a diagnosis of asthma. Furthermore, administration of albuterol for respiratory distress is time sensitive; valuable time should not be wasted by asking school staff to determine if the child has a diagnosis of asthma on file at school. Albuterol is an incredibly safe medication. There are few causes of respiratory distress that would not respond to albuterol and, if a child who does not have albuterol is administered the medication, there are no harmful effects to that child. Several states' original legislation was passed with this restriction and two (Missouri and Texas) have modified their laws because school staff lobbied that this restriction was impeding their ability to administer timely, life-saving medication to children with respiratory distress. In Arizona, we conducted a pilot study of stock inhalers where the protocol restricted use to only those children with a previous diagnosis of asthma (*Annals of the American Thoracic Society 2016*). School nurses participants reported that stock inhalers provided an important stopgap when personal inhalers were not available, as was the case for 70% of students. Nurses felt comfortable using a stock inhaler but were concerned that administering it in emergency situations in the absence of a documented physician diagnosis could expose them to liability. After similar concerns were raised with Missouri's stock inhaler law, Missouri amended it to indemnify "good faith" use in all students and school personnel. Therefore, it is important that use not be restricted to only children with an asthma diagnosis. Currently 18 states have adopted stock inhaler legislation and we have had no major issues with medication administration in any stock albuterol program around the country.
- Ensure immunity for civil liability for staff and prescribers.
    - Providers who sign orders, pharmacists who dispense and staff or agents who have training and administer in good faith.
- Ensure that pharmacy laws allow medication dispensing to schools.
- Use metered dose inhalers with VHCs/spacers; nebulizers are not recommended.

Some nursing groups in Maryland have created a lot of fear around this bill by confusing the preferred treatments for asthma and anaphylaxis. These individuals have advocated for an Epi-pen as first line treatment for asthma. This is not best practice and is not in line with national guidelines. As Chair of the national guidelines, I can say that this issue was briefly discussed and discarded. Furthermore, this is the only state which I have worked with where this issue has been raised. Many families across the country have children who have both asthma and food allergies and these families have been trained to distinguish the difference between the symptoms for these two events and successfully use the correct medication for these events. School staff can also be successfully trained to do so.

In a Senate session last week, I heard a group testify that the Asthma and Allergy Foundation of American says that an Epi-pen can be used for an asthma attack. The AAFA website contains the following information after a question was asked about using an epi-pen for a severe asthma attack (https://community.aafa.org/db/ask-the-allergist/record/can-i-use-an-epipen-for-a-severe-asthma-attack).

QUESTION

I had a doctor in the past tell me to use an epi-pen for a severe asthma attack if my Albuterol inhaler wasn't working. He's retired and my new pulmonologist told me to just go straight to the hospital. Is it unsafe to use the epi-pen for an asthma attack?

ANSWER

In the past, injectable epinephrine was used in the emergency room as a treatment for acute asthma attacks or exacerbations that were not responding to standard treatments. Today, there are many new quick relief and controller medicines available to manage asthma symptoms.

In situations where typical asthma treatments are not working to control symptoms, epinephrine may help patients with severe asthma exacerbations. This would be a unique situation. This would typically be done in the emergency room while the patient is monitored.

If no other treatments are working to control asthma symptoms and an Epi-Pen is available, it could be administered. 9-1-1 should be called to activate Emergency medical services. The patient will need to be evaluated and managed in an emergency room.

Finally, there are some patients who have a history of anaphylaxis (e.g. due to a food, venom, or medication) and asthma. It would be fine for these patients to use epinephrine first and then appropriate asthma medications if the patient is not sure if their symptoms are due to an anaphylactic reaction, asthma, or both. Again, the patient would need to be evaluated in the emergency room after these treatments.

Answer provided by John M. James, MD, a board-certified allergist. He is also President of Food Allergy Consulting and Education Services, LLC. He has worked as a medical specialist in the field of allergy, asthma, and immunology for over 30 years. Dr. James received his bachelor's degree from the University of Arkansas and his Doctor of Medicine degree from the University of Tennessee. He is board certified by the American Board of Allergy and Immunology.

As you can see, AAFA is not advocating for use of an epi pen first. Their expert says that it can be done as a last resort and is usually not done outside of a medical facility where monitoring is available. Furthermore, this use of an epi-pen is not covered by stock epi laws and is not in the national or international guidelines for treatment of asthma exacerbations (https://www.nhlbi.nih.gov/resources/2020-focused-updates-asthma-management-guidelines & https://ginasthma.org/2023-gina-main-report/).

I urge you to support the proposed stock inhaler legislation without modifications that would restrict the use of stock albuterol. This legislation would be in-line with national guidelines and would provide a safe, inexpensive solution for an important health challenge faced by children and the schools that educate them.

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4. Lowe, Ashley A, Joe K. Gerald, Conrad J. Clemens, Debra A. Stern, & **Lynn B. Gerald.** Managing Respiratory Emergencies at School: A County-Wide Stock Inhaler Program. *Journal of Allergy and Clinical Immunology* (2021) Feb 10:S0091-6749(21)00175-5. PMID: 33581200 https://doi.org/10.1016/j.jaci.2021.01.028