Testimony for House Bill 226

March 22, 2023

Public and Nonpublic Schools – Bronchodilator and Epinephrine Availability and Use – Policies

Dear Committee Members:

Thank you for allowing me to provide my testimony in support of this bill but with amendments. My name is Sara Choi, and I am a pediatric pharmacist at the Johns Hopkins Pediatric Emergency Department. As a health care provider who sees first hand many children presenting to the emergency department due to respiratory distress, I am testifying today to the safety and efficacy of albuterol inhalers and to the necessity of this legislation.

In the event of an asthma attack, inflammation and constriction of the small, microscopic airways in the lungs can lead to difficulty breathing, wheezing, and respiratory distress. Albuterol is a medication that works quickly to relax the smooth muscles in these small airways, which opens them up and makes it easier for a person to breathe. Patients with asthma refer to this medication as their "rescue inhaler," and it is an essential medication for them to have access to at all times. Immediate interventions are necessary in anyone presenting with severe respiratory distress because, if untreated, an asthma attack can lead to cardiorespiratory arrest and potentially death. Albuterol was first approved by the FDA in 1981**,** so it is a familiar medication to the health care community and the general population[1]. There is inaccurate information that albuterol can kill a patient. This is false information as albuterol is extremely effective and one of the safest medications we use. Albuterol has a quick onset of action of less than 5 minutes and has minor adverse effects including tremor, increased heart rate (tachycardia), and nervousness. The only contraindication to administering albuterol is a previous anaphylactic reaction to albuterol, which is extremely rare.

This bill should add language that the Maryland Department of Health and the Maryland Department of Education must consult pediatric asthma specialists to develop an updated guideline for the use of bronchodilators in public and nonpublic schools. There has been constant discussion of allowing an EpiPen as the first line of treatment when children present with respiratory distress, but this is inappropriate therapy. There is patient harm in providing epinephrine which is the drug in an EpiPen to someone who does not present with anaphylaxis. Epinephrine can cause heart arrythmias and has far greater adverse effects than albuterol. Anaphylaxis and asthma exacerbations are very different presentations and disease states that are not treated in the same way. Providing albuterol to someone in anaphylaxis will not cause harm, but administering epinephrine to someone in an asthma exacerbation may cause harm. Additionally, epinephrine is not within the national asthma treatment guidelines and is not FDA approved as a treatment for asthma exacerbations. Anaphylaxis and asthma exacerbations present differently, and health care providers teach guardians and patients how to differentiate between the two, so school personnel can too.

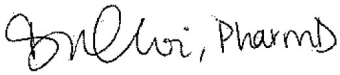
Interventions for a child in respiratory distress from asthma is time sensitive, vital, and directly impacts medical outcomes. Although albuterol will be most effective if the breathing emergency is due to asthma, it is important that this law is written in a way that any child presenting with respiratory distress can be treated with albuterol which includes children that are not yet diagnosed with asthma. Albuterol should not be limited to specific indications as some children have undiagnosed asthma. A child's first asthma attack may occur at school or perhaps the child may have experienced an asthma attack but not yet received the appropriate diagnosis of asthma by a healthcare provider. Additionally, a child may have a past medical history of asthma, but for some reason, the school

is not aware. A diverse number of other examples can be imagined, but the bottom line is that the vast majority of children exhibiting respiratory distress at school will be having these symptoms due to asthma. To require a student to have paperwork to prove that he/she has been diagnosed with asthma is unfair and an equity issue as not all children have the resources and privilege to have this on record. If this bill only supports albuterol for diagnosed children, we are missing a large portion of the pediatric population which is likely the most vulnerable children.

Working in the pediatric emergency department, I frequently see children presenting with difficulty breathing throughout all seasons of the year. Sometimes these children are not yet diagnosed with asthma but present with the typical symptoms of asthma including, but not limited to, wheezing, coughing, shortness of breath, and/or chest tightness. Some children, whether they are known asthmatics or newly diagnosed with asthma, present in extreme respiratory distress leading to intubation and mechanical ventilator use due to the severity of the asthma exacerbation. Thankfully, the pediatric emergency department is a well-equipped environment and has the abundant resources a child needs to receive necessary treatment as well as physicians and nurses who are able to appropriately prescribe and administer therapy. Although a school environment has minimal resources, the provision to administer albuterol can be a life-saving treatment when a physician assessment is delayed. Additionally, in a school setting, there are multiple factors that can further delay the medical care for a child such as the wait for an ambulance to arrive and the transportation time to the hospital. The time between when a child shows respiratory distress and to when the child arrives to a hospital are critical moments that must be taken advantage of.

Thank you again for the opportunity to testify in support of this bill with amendments. I urge you as a pediatric pharmacist and a healthcare advocate for children, to please be in favor of this legislation with amendments in order to provide a safe medical plan in schools for our vulnerable pediatric population. Albuterol is a safe, effective, and necessary tool for all children, whether diagnosed or not yet diagnosed with asthma, to have access to in schools.

Sincerely,



Sara Choi, PharmD, BCPPS
Pediatric Emergency Medicine Clinical Pharmacy Specialist
The Johns Hopkins Hospital
Department of Pharmacy
1800 Orleans St., Bloomberg 7234
Baltimore, MD 21287

Disclosure: The views expressed in this testimony are my own and do not necessarily reflect the policies or positions of my employer, Johns Hopkins Hospital.

References:

1. Accessdata.fda.gov. 2022. Drugs@FDA: FDA-Approved Drugs. [online] Available at: https://www.accessdata.fda.gov/scripts/cder/daf/index.cfm?event=reportsSearch.process&rptName=1&reportSelectMonth=5&reportSelectYear=1981&nav. Accessed 6 February 2023.
2. Albuterol. Lexi-Drugs. Lexicomp. Wolters Kluwer Health, Inc. Riverwoods, IL. Available at: http://online.lexi.com. Accessed 6 February 2023.