Senate Committee
Education, Energy and the Environment

Written Testimony for SB 180:
"Public and Nonpublic Schools – Bronchodilator Availability and Use – Policy (Bronchodilator Rescue Inhaler Law)."

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Thank you for the opportunity to provide written testimony on this SB 180. My Name is Elaine M. Papp. I am a Master's prepared Registered Nurse. I retired from my full-time job in 2015. In 2017, through a contracting agency, I began working as a school health nurse in Baltimore City Schools, two to three days per week. After a serious asthma emergency at a high school in Baltimore City, I began advocating to place stock albuterol inhalers (bronchodilator rescue inhalers) in all Maryland schools as emergency medication.

Below, I share the circumstances that led to my advocacy, provide information on how our advocacy group developed, our rationale, some statistics on asthma in Maryland. In addition, I include my perspective as a nurse and advocate regarding training non-medical personnel to administer the bronchodilator rescue inhaler in an emergency and potential program costs.

CIRCUMSTANCES LEADING TO MY ADVOCACY FOR PLACING EMERGENCY ASTHMA INHALERS IN ALL MARYLAND SCHOOLS

In 2018, I saved a student's life, but lost my job! I was working as a school nurse, at Vivien T. Thompson Medical Arts Academy, a Baltimore City High School. A student with exercise-induced asthma experienced a serious asthma flare. She had an albuterol inhaler at school. But, as I learned from other students, her albuterol inhaler was locked in the gym teacher's desk. The gym teacher was not in the building. I have no idea why the gym teacher stored the student's inhaler without letting the health unit know. I can guess why the student did not have doctors orders in the health unit as I explain below. The result was that I, the school health nurse, I had no doctor's order for an inhaler in the students health file. even though she had a prescribed albuterol inhaler on the school premises. Without doctors orders in the health unit the student is considered to be undiagnosed for purposes of administering medication.

While the principal, teachers and other staff tried valiantly to find the keys to the gym teacher's office and desk, the student lost consciousness. I, without an asthma inhaler to administer, watched the unconscious student as she gasped for air at a rate of 70 breaths per minute and her heart raced at 124 beats per minute. I believed that the student was dying. I believed she would have a maximum of 15 minutes to live now that she had lost consciousness, unless she was treated with an albuterol inhaler.

I knew the situation was life threatening. As a school nurse, I had to act. The ambulance had not yet arrived. Waiting for it could have cost this student her life. Thus, I requested that the principal find me any student's rescue inhaler (albuterol inhaler). Because albuterol Inhalers are universally used as rescue inhalers for people with asthma and are given in a standard dose, I knew it would be safe and effective to provide her with another's inhaler. . I made the best choice at the time. I gave her another student's albuterol inhaler. I did this by placing the inhaler into the students wide-open mouth. depressed the canister, puffing the medication into the students's mouth. Because she was gasping for air so rapidly, the puffs of albuterol were

able to reach their target. The medication reached her lungs and immediately began to release the bronchospasm.

Within a few minutes after administering the albuterol, her respiratory rate lessened, and her heart rate came down. Soon the student regained consciousness. Her mother arrived, and I told her what I had done. She was grateful. By the time the ambulance arrived, the student was sitting in a chair, talking to her mother. The paramedic said, "I guess it was more important for the dispatcher to get a cup of coffee than to tell us where we needed to go.

I saved the student's life but lost my job. I made a choice. I broke the rules to save the student's life. The rules:

1) Never give a student another's medication.
2) Never give a medication if you do not have doctor's orders in the student health file.

Recognizing the problem was the system, I began a quest to get emergency rescue inhalers as stock medication in all schools in Maryland.

OTHER ORGANIZATIONS WHO SUPPORT PLACING ASTHMA INHALERS IN ALL MARYLAND SCHOOLS AS AN EMERGENCY MEDICATION

I began this grassroots effort as a political novice with an informal, ad hoc group of advocates. I began working with a pediatric pulmonologist from Johns Hopkins University (JHU), a pediatrician from JHU, and an emergency pharmacist from JHU. We obtained support from the Allergy Asthma Network, the American Lung Association. Our ad hoc group also worked with a nationally recognized researcher and expert on asthma in schools from the University of Arizona who was working on this issue nationwide. . Over the past two years we have enlisted the support of individual school health nurses, respiratory therapists and nurse practitioners.

In September of 2021, the American Thoracic Society (ATS) published its policy on Asthma in schools. ATS recommends that all schools in the United Staes have asthma rescue inhalers as a stock emergency medicine. They also recommend all the provisions we include in our SB180 bill. We are in the forefront of an important movement.

OUR RATIONALE

The most common scenarios in which stock emergency albuterol inhalers will be needed school are variations of the situation I experienced. Other examples are: a student who does not turn in paperwork or provide an inhaler to the school nurse, or teenagers who carry their own medication but forgot to bring it that day or a student whose inhaler is malfunctioning or empty. There are many examples like these. . Data form the program in Arizona support this , showing that 78% of students who received the stock albuterol inhaler had asthma. Children cannot be diagnosed with asthma until they have had their first asthma flare, commonly called an "asthma attack. We do not have a test that can predict if a child will have asthma. A child is diagnosed with asthma based on their physical exam and any history of asthma symptoms or asthma attacks. This means that they need to have already had symptoms to be diagnosed. We need to make sure our schools are ready to treat theses students, too, if this occurs.

Our advocates are dedicated to the idea of helping students, families, school personnel and school health staff cope with asthma emergencies in school to:

- reduce number of lost days from school,
- reduce number of 911 calls,

- reduce the number of hospitalizations and the length of hospital stay by providing effective and efficient emergency care at the moment of an asthma flare.

We believe that instituting a stock albuterol inhaler program in schools will lead to better health outcomes for school age children and adolescents who suffer from asthma flares in school. In addition, we believe that the reductions listed above will lead to reduction in costs to the school system, the EMS system, families, and the schools.

STATISTICS

In 2010, the US the lifetime prevalence of childhood asthma was ***9.4%. In Maryland it was 16.4%*** (lifetime asthma prevalence in 2010 - approximately 216,000 children). In Baltimore in 2010, the rate of asthma in school-age children was approximately ***20%, with pockets of the city higher than 20%.*** One of the areas of the city with a 20% rate of asthma at the was the community Vivian T Thompson high school saved. Currently 7.6 % of Maryland youth have asthma, with 3,490 children being hospitalized this year.

At the time of the event, there were over 400 students enrolled at Vivien T Thompson. Thus, if 20% of the students had asthma, I should have had a minimum of 80 doctor's orders on file in the health unit. I had none. Yet, I often saw students with inhalers in the school hallways. I contacted students and gave them forms to complete and return. I called parents and asked them to bring in doctor's orders. I did not receive any doctor's orders. I had no authority to require compliance with the requirements.

THE PROBLEM AS I SEE IT

Part of the problem related to asthma inhalers and school health clinics is the complexity of the annual paperwork parents must provide. For example, in Baltimore City, each year the parents of the student with asthma must visit the physician, obtain written doctor's orders, and complete several forms The parents must bring the forms to the school and sign them while the school school witnesses the signature. In addition, unless the doctor writes permission for the student to carry his/her own inhaler, the parent must provide an inhaler to be kept at the school health unit. Thus, the family must obtain at a minimum two inhalers - one for the student to use when not in school and one to be kept at the school. Problems with this system are many —1) Several parents in Baltimore City do not have cars and must use the bus or other transportation to go to the school. 2) Many work more than one job and cannot take time from work to go to the school to deliver paperwork. 3) It is expensive for parents or guardians to have to buy two or more inhalers. 4) Parents whose children have had asthma for several years do not understand why, every year, even though there have not been any changes in their child's asthma nor its treatment, they must provide 8 or more completed forms to the school.

Bottom line. Many parents are non-compliant. Doctors orders are not on file. Yet,, many students carry inhalers. The system is cumbersome and expensive , inconvenient for parents.

Asthma is the most common chronic illness in children. Yet, as a school health nurse I had no emergency medication to treat a student if: 1) their own inhaler was empty or didn't work; 2) they forgot their inhaler; or 3) if, as in my case, their inhaler was inaccessible.

I am a registered nurse. I had access to Maryland's guidelines on how to manage asthma in school age children. I had expertise in recognizing asthma emergencies and treating them. However, without albuterol to use in an asthma emergency, I was handicapped.

I had Narcan for opiate emergencies (which I never used). I had Epipen for allergic reactions (which I never used). Since Epipen is not approved by the FDA for treatment of asthma flares and since there are no written doctor's orders in the school health units for treating asthma with Epipen, I could not use it treat as student with asthma, nor should I have. I was truly at a disadvantage. Albuterol is the gold standard and first line treatment fro asthma.

I am not the only nurse that has experienced using someone else's asthma inhaler to treat a student suffering an asthma flare. Though, I may be one of the few who has reported it. I base this on the results of a study conducted in Pima County, Arizona where school health nurses were asked, anonymously, if they had ever given one student another's inhaler. Many said, "yes." However, they stated that they had not reported it. When asked, "why," they replied, "fear of losing my job."

School health nurses are placed in a position of responsibility without authority. I had no way to enforce the requirement to bring in a doctor's order. I was the only health care professional on site. But I had no emergency medications to administer for asthma exacerbations.

I strongly advocate for passage of SB180 to remedy this problem. Please give nurses and others in the school system a way to cope with a serious life-threatening emergency.

TRAINING NON-MEDICAL SCHOOL PERSONNEL TO ADMINISTER ASTHMA EMERGENCY INHALERS

SB 180 contains provision for training non-medical school personnel to administer an albuterol inhaler during an emergency. This provision is not intended that a non-medical person treat the student if the school health nurse is available. It is intended for times when the school health nurse is not on the premesis - after hours, etc.

Although some have expressed concern over this provision, I believe it is important. First, training non-medical personnel to administer albuterol inhalers is not new to Maryland schools. When I worked as a school nurse, it was routine to train a teacher or a coach to use an albuterol inhaler, if a student with asthma was going on a field trip or to a sporting event off campus. In fact, the Maryland State School Health Services Guideline for Management of Students with Asthma, has specific procedures for training non-medical personnel in administering rescue inhalers when the student is on a field trip. Thus, the concept of non-medical school personnel being trained to administer and, then, possibly, administering a rescue inhaler in an emergency situation, is not new.

Second, medical personnel are not always available. The health clinic closes at the end of the school day. Yet, many children stay after school for extra-curricular activities such as, sports practices and events. It is vital to have a coach trained to administer an albuterol in haler in asa of respiratory distress when the school health nurse is unavailable.

In the case of SB 180, this training would be extended to designated staff. It would focus on recognizing respiratory distress in a child and administering albuterol while calling emergency medical personnel and avoiding adverse outcomes, including worsening asthma and even death. There is precedent for training other personnel to recognize respiratory distress and provide albuterol nationally, as most states with stock albuterol inhaler laws include these provisions Without them, vulnerable children, who do not have a school nurse in attendance, will suffer As you will hear from other advocates, albuterol is essential to treat asthma, yet, is a very safe medication to administer with only few and minor side effects.

We have proposed updating the existing EpiPen legislation, as others have in many states that have successfully passed stock albuterol legislation. It is not because the two drugs are interchangeable for asthma, but because their rationale is similar: they are both used in life-threatening emergency situations that nurses and school personnel can be trained to recognize, they are simple to administer, and they are safe and effective.

COST CONCERNS

As we are all aware, the COVID-19 pandemic has wreaked havoc with budgets. Some have expressed concern about the cost of this program. But, we expect the cost to be minimal for the following reasons.

1) Each school needs only one inhaler per school year.
   Small inhalers hold 60-200 puffs or 30-100 doses (2 puffs per doses). Thus, 30 -100 students could be treated per year with one albuterol sulfate inhaler. Inhalers have a shelf life of one year.
2) Disposable spacers with one-way valves can be attached to the emergency inhaler for each use and then discarded. The one-way valve prevents the inhaler from being contaminated. The inhaler can be safely and effectively used another time.
3) Forms for reporting the use of the inhaler and programs to train for non-medical school personnel in the emergency use of asthma inhalers do not need to add additional cost. For example, the American Lung Association and the University of Arizona have on-line training that is available to us and is that is free and.
4) Total cost of supplies per year: $60.00 per school
   - Average cost of an albuterol inhaler is approximately $40.00.
   - The cost of a package of 25 disposable spacers is approximately$18.95.

In addition, we have included a provision to allow schools to receive donations to successfully administer the emergency bronchodilator program, which has also occurred in other states.

I intend to offer oral testimony as well as this written testimony. I am available for questions. I encourage you to vote yes on SB180. Thank you for your consideration.

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