



Delaware Child Death Review Commission

State of Delaware

Chronic Health Conditions of School-Age Children Committee

Final Report

February 26, 2021

Membership

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Dr. Susan Haberstroh, Department of Education (DOE), 2018-2020

Dr. Linda Wolfe, (former chair), DOE, 2017

Committee Physicians

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Executive Summary

On September 9, 2016, the Child Death Review Commission (CDRC) reviewed several deaths of school-age children who were enrolled in Delaware public schools. These child deaths were related to chronic health conditions. Therefore, CDRC recommended developing a subcommittee to explore the issue of procedures within the Delaware public schools involving children with chronic health conditions.

As a result of this subcommittee's work (Chronic Health Conditions of School-Age Children), it was discovered that there were variations in care for children with chronic health conditions in the Delaware public schools. Primary factors contributing to this variation include the following: changes in funding for maintenance and supplies of AED's in the schools, the need for clear guidance for public school nurses in caring for children with Asthma, and improvement in the coordination of care for children with chronic health conditions. While identifying these challenges, the subcommittee was able to recommend processes and guidelines for best practice. As with any medical practice, the best practice will evolve with new data and informed scientific research. This committee's work concluded at the end of 2019, and this report was slated for release in March 2020. However, due to the global pandemic of COVID-19, the report was delayed and updated to include modified guidelines for best practice during COVID-19. The CDRC commissioners added these additional changes. This report will be utilized as a benchmark to go forward, but as the CDRC becomes aware of new protocols, they will be added to the CDRC website along with this report. This valuable information will be available for all public and private schools to ensure Delaware's children's health and safety.

The subcommittee identified several areas for continued improvement.

Recommendations include the following:

- 1. All Delaware public schools should coordinate electronic health records or consider standardization between schools and Nemours or pediatricians/providers for improved communication.**

- 2. The Division of Public Health and the Department of Education should consider a state-funded contracted medical consultant to provide oversight of the delivery of healthcare in the school system and disseminate information in the schools and the Department of Education School Health Services Education Specialists and lead nurses.**
- 3. The Division of Public Health and the Department of Education should consider a media campaign related to Asthma for laypersons.**
- 4. The Department of Education, in collaboration with local school districts and charter schools, should explore the possibility of implementing school-based telehealth in public schools as an additional resource for children.**
- 5. By 2022, the Department of Education should finalize an Asthma Management for School Nurses document after collaboration and approval from various entities such as the Delaware Asthma Consortium, the Division of Public Health, the Department of Education, local hospital(s), private physician(s) and the Delaware School Nurse Association.**
- 6. The Division of Public Health and the Department of Education should make annual educational training mandatory related to chronic health conditions for public school nurses to improve quality of care and develop statewide-standardized nursing care.**

Background and Committee Purpose

The Child Death Review Commission (CDRC) 's primary purpose is the prevention of future child deaths. This process involves a retrospective system review intended to provide meaningful, prompt, system-wide recommendations to prevent future deaths and improve services to children.

On September 9, 2016, the CDRC reviewed several deaths of school-age children who were enrolled in Delaware public schools. One case reviewed revealed a child (who was between the ages of 10-15) with a known cardiac history who collapsed while attending school. The school nurse started cardiac arrest procedures, but all resuscitation efforts were unsuccessful. After analyzing the case by the CDRC, the committee reported the following finding: The Automated External Defibrillator (AED) did not work correctly in the school. The Delaware statute does not mandate AED's in public schools. In 1998-1999, the Office of Emergency Medical Services (OEMS) had received funds (tobacco monies) from Delaware legislators to place AED's in public schools. The Department of Education (DOE) tracked how many schools received the AED's including private schools. Some of the public schools were able to receive a second AED because of a second grant. However, since these grants, there have been no additional funds provided by the State to the districts or charter schools for batteries, replacement parts, or new AED's for new schools. The Delaware Early Defibrillation Program (DEDP)¹ does offer AED's initially through the Health Fund Advisory Committee². The DEDP, however, will not provide additional supplies or additional training beyond the initial AED and training, as it is the responsibility of the individual school to secure supplies and ongoing training. The DOE does not track or monitor AED's in the public-school system currently as this falls under the responsibility of each district/school. In another case, upon medical record review of a child (between the ages of 10-15) who died at home from Asthma, it was revealed the child had over 154 visits to the school nurse for issues with Asthma and 63 notes

¹Delaware Early Defibrillation Program: AED Corner, <https://www.dhss.delaware.gov/dph/ems/aed.html>

² Delaware Health Fund Advisory Committee <https://www.dhss.delaware.gov/dhss/healthfund/>

sent home to mother. The committee posed questions to the DOE regarding asthma protocols and procedures. In addition, the CDRC had previously reviewed several similar cases.

Therefore, after the CDRC reviewed multiple cases of children with deaths related to Chronic Health Conditions (CHC) who received care in the Delaware public school system, the CDRC recommended developing a subcommittee to explore the issue of procedures within the Delaware public schools.

Recommendations:

1. CDRC will develop a subcommittee to explore the issue of action plans and procedures within the schools. The CDRC Executive Director will take the lead on this and assist the nominated chair Dr. Margaret Rose Agostino. During the first meeting, a mission statement will be developed along with the charge from the CDRC.

Members shall include a designee from the following:

- ***Delaware American Academy of Pediatrics***
- ***Department of Education***
- ***Delaware School Nurses Association***
- ***CDRC Commissioner (Marg Agostino/Chair)***

Per Appendix 1: Data Summary (October 17, 2019-see page 20), the Summary of School Health Services 2018-2019 revealed that the most common CHC of school-age children in Delaware most frequently includes Asthma, diabetes type 1, and diabetes type 2³, seizures, and life-threatening allergies⁴. At the time of the CDRC recommendation, other than CDR cases, statistics were unavailable to determine the numbers of children in the public schools with the most indicated CHC.

According to the American Academy of Pediatrics Council on School Health (2016)⁵, chronic illnesses are rising. In 2010, 215 000 people younger than 20 years in the United States had a diagnosis of either type 1 or type 2 diabetes. The prevalence of food allergies⁶ among children younger than 18 years increased from 3.4% in

³ Diabetes Statistics (2019). Retrieved from <https://www.diabetes.org/resources/statistics/statistics-about-diabetes>

⁴ DOE Allergy Prevention and Emergency Response Plan. <https://www.doe.k12.de.us/site/default.aspx?PageType=3&ModuleInstanceID=6508&ViewID=ed695a1c-ef13-4546-b4eb-4fefcdd4f389&RenderLoc=0&FlexDataID=16623&PageID=2803&Comments=true>

⁵ AAP Council on School Health. *Role of the School Nurse in Providing Health Services*. Pediatrics, (2016), 137(6):e20160852, <https://pediatrics.aappublications.org/content/137/6/e20160852>

⁶ Allergies (2019). Retrieved from <https://www.cdc.gov/healthyschools/foodallergies/index.htm>

1997–1999 to 5.1% in 2009–2011.²¹ An average of 1 in 10 school-aged children has Asthma⁷, contributing to more than 13 million missed school days per year. As the number of students with chronic conditions grows, the need for health care at school has increased. The rise in enrollment of students with special health care needs increases the demand for school nurses and school health services⁸.

On February 28, 2017, the subcommittee convened, and meetings ensued. After review of the types of deaths reviewed by the CDRC and the most common CHC of school-age children, the committee was able to examine the gaps in emergency procedures and communication, develop recommendations for the use and maintenance of AED's, develop current draft Asthma guidelines for school nurses, and identify ongoing recommendations for continued improvement for this student population.

This report identifies the practices and processes implemented during the committee's term, the current CHC's current Delaware public school children's current data and describes in-depth additional resources and recommendations.

Summary of Meetings

This committee's objectives were to improve emergency treatment and education, promote standardized communication and evidence-based practice programs to improve our school-age children's health services. The subcommittee, evidenced by the data after the term, provided improvements in several high priority areas for all children served, especially those with CHC. Also, the committee explored several recommendations for future consideration. What follows are summaries of the Committee's meetings, where the current health care practices were discussed. The committee's findings and recommendations follow the summary of these meetings.

⁷ United States Environmental Protection Agency. Retrieved from [Health Effects of Ozone in Patients with Asthma and Other Chronic Respiratory Disease | Ozone and Your Patients' Health | US EPA](#)

⁸ National Association of School Nurses. (2017). *Students with chronic health conditions: The role of the school nurse* (Position Statement). Silver Spring, MD: <https://www.nasn.org/nasn/advocacy/professional-practice-documents/position-statements/ps-chronic-health>

The meeting of February 28, 2017

After introductions, the group reviewed de-identified cases from the CDRC, leading to this subcommittee's formation. The group began to review some of the schools' standards and discuss the variation related to care and treatment.

The first discussion reviewed the certification requirements and the use of AED's and CPR training. It was noted there is variation in school health depending upon public or private schools. The group would need to assess and develop strategies.

The group identified the importance of data collection (numbers of students with CHC and the use of nebulizers in students). The DOE does not currently collect these data. Several additional gaps identified at the meeting included: lack of standing orders for epinephrine, gaps in Medicaid coverage if a child loses an inhaler, and questions regarding medical neglect.

The meeting adjourned with the decision to include stakeholders/representative from Nemours Children's Health System, a representative from the Department of Services for Children, Youth and Their Families (DSCYF), and a representative from the American Academy of Pediatrics. These members will be invited to participate in the next meeting.

The meeting of May 11, 2017

During this meeting, the current chair stepped down due to other commitments, and Dr. Linda Wolfe was nominated as the new chair. CDRC staff presented data from all chronic illness deaths, and the next steps were developed. The next meeting was scheduled for the fall of 2017; however, the chair retired from state service. Therefore, Dr. Haberstroh was asked to participate and began this work as the new chair at the next meeting.

The meeting of March 9, 2018

The new meeting began with an overview and history of the subcommittee by the new chair. A

review of the Sudden Death in the Youth (SDY) and CDC grant was explained to the committee, and the data from the CDRC related to the cases reviewed by the SDY committee.

With additional new members, this meeting included a review and discussion of the CDRC cases that led to the creation of this subcommittee with the presentation of the top five deaths of school-age children.

The school nurse caseload was discussed. Due to the nature and increase in chronic illnesses in school-age children, the school nurses revealed a caseload of 50-60 sick visits daily. This high caseload does not account for students' medication delivery multiple times every day and additional school-required responsibilities.

"Delaware statutes and regulations govern and shape the practice of school nursing. Regulations promulgated by the Delaware Department of Education address the "health and physical welfare of public school students in the State. The regulations address requirements for immunizations, tuberculosis screening, and health examinations. They additionally articulate schools' responsibilities for periodic health screenings, medication administration, and school health records. For details regarding Delaware health regulations, review the Delaware Department of Education Health & Safety Regulations⁹."

Overall, there were opportunities considered for an enhancement of communication and coordination between school nurses, providers, and families with the care of children with these conditions. The committee felt a shared social worker or ombudsman might be helpful to assist in following students who need additional follow-up. In addition, a data-sharing agreement with Nemours, pediatric offices¹⁰, Delaware Health Information Network (DHIN), and others should exist so the school nurse could access records and provide appropriate communication with providers.

⁹ Delaware Department of Education Health & Safety Regulations, <https://www.doc.k12.de.us/Page/2863>

¹⁰ Currently, there is NemoursLink which is designed to help community-based health care providers monitor patients they have referred to Nemours. <https://www.nemours.org/health-professionals/nemourslink.html>

Dr. Haberstroh discussed continued progress on a Center for Disease Control (CDC) grant, Improving Student Health and Academic Achievement, that was being submitted. Unfortunately, Delaware was not selected to receive this grant.¹¹

The meeting of May 14, 2018

The meeting was started with a discussion of the application to several grants to assist with some of the schools' current health issues. Mental health was a concern of the committee. The chair informed the committee about grants collaborating with the DSCYF regarding mental health issues in the schools.

The committee then focused on emergency management and the importance of ensuring safety for all students. There was recognition of the absence of standardized protocols for care, maintenance, and use with AEDs currently in the schools and the evidence-based recommendations by the American Heart Association (AHA). In an attempt to measure the status of AEDs in the schools, an AED survey was sent out by DOE with the following questions:

- 1) When was the last time you upgraded your AED's?
- 2) Do you have a response team and written protocols?
- 3) What are they supposed to be?
- 4) How do you use them?
- 5) Are all administrators trained to use?
- 6) Who is trained in Cardiopulmonary resuscitation (CPR)?

The results of the survey would be provided to the committee at a future meeting. Continued discussion regarding the use of a social worker or an ombudsman was to be researched. The Committee thought it might

¹¹ Improving Student Health and Academic Achievement through Nutrition, Physical Activity and the Management of Chronic Conditions in Schools, <https://www.cdc.gov/healthyschools/fundedpartners.htm>

help families understand the school-based health centers and work on rebranding or re-educating the community.

The meeting of July 16, 2018

The superintendents were unable to send out the AED surveys at this time. Dr. Haberstroh would provide the committee's concerns/questions at a staff meeting in August to discuss the AED progress and provide information about the Heart in the Game information about sudden cardiac arrest.

School-based health centers (SBHC) by Christiana Care were rebranded and hired a community health worker. Nurses on this committee were hopeful there would be a valued added benefit for their students who may need this service.

It was reported that statewide districts and schools collaborated with other school districts regarding vendor information and other district processes. According to the Lead School Nurse present, Christina School District purchased their new replacement AED's and related supplies in 2017. The Colonial and Red Clay Districts had their new replacement AED's and replacement supplies in 2018. Additionally, it was reported that one district expanded CPR/AED training expanded by offering classes for the school transportation department. By June of 2018, this district had over 44 elementary school staff, and over 50 school transportation staff trained.

Discussion of providing education to families at "back to school nights" about the differences between services provided and offered by school nurses and SBHC's to provide information about this valuable resource. (See Appendix 2)

The meeting of October 22, 2018

It was reported at this meeting that the initial response to the "Heart in the Game survey" regarding AED's was not as robust as desired. Therefore, the DOE Education Specialist from the subcommittee developed a survey for school nurses. The survey had 33 questions, with 159 responses returned. The DOE Education Specialist shared the survey findings at the meeting.

1. Every school nurse has an Emergency Go Bag. The AED does not go with the bag. If there is an emergency evacuation of the school, the police will respond and carry AED's.
2. Athletic trainers keep AED's with them; school nurses do not use theirs for sporting events. Athletic trainers, and even some coaches, receive AED's and training through DIAA (Delaware Interscholastic Athletic Association). Please note individual school districts also purchase AED's for their trainers. Christina School District purchased their AED in 2017.
3. Most responded that AED's are kept in cabinets that alarm but are not locked.

Maintaining AED's findings:

1. 132 responses – the school nurse is responsible
 2. 23 charter schools handled differently
 3. 115 responses reported a monthly inspection in place, including checking batteries, electrodes, gloves, and razors
 4. 141 responses indicated knowing their AED's were not expired
 5. 154 responses indicated knowing their batteries were not expired
 6. Is there a written protocol for the care and maintenance of AED's?
 - 37 – Yes
 - 62 – No
 - 60 – Don't Know
6. Has a team been trained at the school?
- 80% of respondents were trained to train others in the use of AED's.
 - 117 had not trained a team on the use of AED's
 - 147 do not conduct mock drills on the use of AED's.
 - Age of units range from 2007 to brand new.
 - AED's are only good for a maximum of 12 years.

The results revealed the varying management, training, maintenance, and care of the equipment. The DOE did not have a protocol for the care and maintenance of AED's. This information led the committee to decide there was an opportunity to standardize. The committee agreed to create and manage recommendations for AED's.

Asthma Action Plans (AAPs) were discussed.¹² The DOE Education Specialist shared a draft of the document "Asthma Management in the School Setting: Suggested Delaware Public School Nursing Actions for

¹² Centers for Disease Control and Prevention (2020). *Asthma action plan*. Retrieved from [Asthma Action Plan | CDC](https://www.cdc.gov/asthma/action-plan/)

Providing Care for a Student with Asthma Symptoms." It is a recommendation to have individual student AAP's and to work with the Asthma Action Consortium. There is currently no data demonstrating having the AAPs affect health outcomes for children with Asthma. Yet, school nurses are encouraged to obtain and use them to treat students presenting with asthma symptoms. The committee agreed that there was value in pursuing standing orders (emergency asthma medications) for school nurses and the development of a protocol for asthma management in the school setting. The Committee will focus for the next meeting on determining the emergency medical treatments for the top five chronic diseases that result in emergency medical situations facing school-aged children.

The meeting of January 28, 2019

The draft CPR-AED's recommendations were presented and reviewed at this meeting. It was discussed that it would be up to the school to determine which AED manufacturer they would like to use and follow those specific manufacturer guidelines. The purpose of the document was to inform the key best practice information regarding AED's. It was suggested that the maintenance process would be added to the document.

Discussion ensued that although an AAP is not required, it is best practice to have one for the individual student. Through this committee's work, standing orders were put in place for Albuterol inhalers and nebulizers for students diagnosed with asthma within the past two years. Although the data was not readily available, one lead school nurse informed the committee of a decrease in 911 calls due to having albuterol as a standing medication.

National Association of School Nurses (2015). *School nurse asthma care checklist*. Retrieved from [Asthma - National Association of School Nurses \(nasn.org\)](http://www.nasn.org)

National Asthma Education and Prevention program (2011). *Management of asthma exacerbations: School treatment*. Retrieved from [Management of Asthma Exacerbations: School Treatment Steps to Follow for an Asthma Episode in the School Setting When a Nurse is Not Available Poster | NHLBI, NIH](http://www.nhlbi.nih.gov)

Taliaferro, V. & Resha, C. (Eds)(2016). Asthma. In *2016 school nurse resource: A guide to practice*, 9th edition, pp. 28-34. Nashville, TN: School Health Alert.

Seizure action plans were discussed as well as emergency action plans. Mental health issues in schools were addressed. The possibility of tracking dental health conditions was also reviewed.

DOE statewide data was beginning to be collected on the top 5 chronic conditions- Asthma, diabetes type 1, diabetes type 2, seizures, and life-threatening allergies. (See Attachment 1)

The meeting of May 13, 2019

The final draft of the CPR-AED recommendations was presented to the committee (See Appendix 3). The plan was for all schools to access and use it as a reference based on the American Heart Association Guidelines. The document included clear practices and recommendations for the process of maintenance.

The CPR/AED document was finalized in spring 2019 and is available on the DOE [website](#)¹³. The purpose of the document is to support school districts and charter schools as they develop written, school-level protocols for CPR and AED's. The process was outlined on how to obtain and replace existing AED models, training, maintenance, monitoring, and development of a Cardiac Emergency Response Communication Plan.

It was discussed that the DOE Education Specialist would continue to work with DPH to have albuterol standing orders for the 2019-2020 school year. DOE and the Division of Public Health (DPH) provided a three-hour asthma training session at the statewide DOE service day training for school nurses on October 11, 2019.

The DOE continued data collection statewide for the top five medical conditions seen in the Delaware public school children. A nurse practitioner from a high school wellness center shared a comprehensive website (Passport2health)¹⁴ that she and a colleague developed for high school students transitioning out of high school.

The meeting of October 21, 2019

At the final subcommittee meeting, the team produced completed documents leading to an improvement in several areas of opportunities identified in the early meetings. The following were the deliverables completed by this subcommittee:

¹³ Cardio Pulmonary Resuscitation (CPR)/ Automated External Defibrillator (AED) Recommendations, <https://www.doe.k12.de.us/Page/2870>

¹⁴ Campanelli, O & Felicia, S. (n.d.). Retrieved from <https://seniorstudentpassport2health.com>

- National and State research that reviewed best practices in school settings for children with CHC.
- CPR and AED recommendations based on the AHA standards, with AED inspection plan provided to all school districts and accessible under resources/support on the DOE website.¹⁵ See Appendix 3.
- The Asthma Management for School Nurses document was drafted. Upon further input from school nurse representation on the committee, the rollout process will need to be further vetted and discussed. The draft will be sent by DOE to the Delaware Asthma Consortium¹⁶ for review and be made available as a resource.
- Albuterol Standing Orders for Asthma as provided by the DPH.
- Training and education were implemented by the American Lung Association, DOE, and DPH to school nurses on CHC and the new protocols.
- DOE started the Summary of School Health Services Data Summary in 2019. (Please see Appendix 1)

This subcommittee's final meeting proposed recommendations that continue to necessitate support from the DOE, DPH, and the DSCYF. These recommendations are discussed in the final summary and recommendations section of this report.

The Child Death Review Commission meeting of September 11, 2020

The original draft report, as developed by the subcommittee, was brought before the CDRC for approval. However, given the COVID-19 pandemic, the report was interpreted through a different lens, and several suggestions were made to the chair of this subcommittee and Executive Director. Over the course of the COVID-19 pandemic, several practices were put in place to expand communication between the school nurses, Division of Public Health, and Department of Education. These practices include the sharing of additional guidance and a dedicated [webpage](#)¹⁷ to resources. These resources include but are not limited to the following:

¹⁵ Cardio Pulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) Recommendations, <https://www.doe.k12.de.us/Page/2870>

¹⁶ Delaware Asthma Consortium, <http://www.deasthma.org/about/>

¹⁷ [School Health Services / COVID-19 School Health Forms & Resources \(doe.k12.de.us\)](#)

- Supporting student, staff socio-emotional and behavioral health needs - This document helps districts and charters assess, plan, and implement strategies to support student and staff well-being and mental health when reopening.
- School health return-to-school additional guidance - Provides supplemental information for school nurses for reopening, including aerosol procedures.
- Considerations for students with special healthcare needs - Supplements information found in the Returning to School guidance and school health return-to-school additional guidance. Primarily for use by school nurses collaborating with school personnel providing care for students with special healthcare needs.
- Mitigation strategies: Working with students with special needs - Answers frequently asked questions (FAQs) related to students with disabilities or special healthcare needs who cannot wear face coverings or practice social distancing.
- Parent Letter Regarding Asthma Inhaler vs. Nebulizer during COVID-19 -This document encourages parent to work with the school and medical provider to ensure their child has the necessary medication. (See Appendix 4)

Final Summary and Recommendations

In summary, the subcommittee Chronic Health Conditions of school-age children found variations in care for children with chronic health conditions in the Delaware public schools. Primary factors contributing to this variation include the following: changes in funding for maintenance and supplies of AED's in the schools, the need for clear guidance for public school nurses in caring for children with Asthma, and improvement in the coordination of care for children with chronic health conditions. During the course of identifying these challenges, the subcommittee created processes and guidelines for best practice.

However, there is still work to be done to ensure Delaware's public school children's health and well-being. In addition, CDRC recommends that private schools adopt these policies/procedures as well, if feasible. The subcommittee identified several areas for continued improvement.

Recommendations include the following:

- 1. All Delaware public schools should coordinate electronic health records or consider standardization between schools and Nemours or pediatricians/providers for improved communication.**

With the availability of Delaware Health Information Network (DHIN), NemoursLink, and the ease of communication with nearly all medical providers and acute care hospitals in Delaware, it is the desire of this committee to link the medical school records to provide access and communication between the care teams. In addition, the committee supports that the parents and guardians should have the option to choose to coordinate this care.

Although not required by federal law, some school districts invite parents to sign authorizations for exchanging health information with the child's health care providers on an annual basis. The Health Insurance Portability and Accountability Act (HIPAA) compliant authorization is included along with other registration materials before the start of the school year (Pohlman, 2004)¹⁸.

- 2. The Division of Public Health and the Department of Education should consider a state-funded contracted medical consultant to provide oversight of the delivery of healthcare in the school system and disseminate information in the schools and the DOE School Health Services Education Specialists and lead nurses.**

¹⁸ Pohlman, K., Schwab, N. & Dewey Bergen, M. (2004). Privacy Questions from Practicing School Nurses. *The Journal of School Nursing*, 20 (5), 199-123. <https://journals.sagepub.com/doi/full/10.1177/10598405040200050901>

According to the American Academy of Pediatrics Council on School Health (2016),¹⁹ "By understanding the benefits, roles, and responsibilities of school nurses working as a team with the school physician, as well as their contributions to school-aged children, pediatricians can collaborate with, support, and promote school nurses in their communities, thus improving the health, wellness, and safety of children and adolescents. As more children with special health care needs attend school, the school nurse plays a vital role in disease management, often working closely with children and their parents to reinforce the medical home's recommendations and provide treatment(s) during the school day. Feedback mechanisms regarding student response to the treatment plan in school are critical to timely medical management in areas such as attention-deficit/hyperactivity disorder, diabetes, life-threatening allergies, asthma, seizures, and the growing population of children with behavioral health concerns. School nurses play an important role in interpreting medical recommendations within the educational environment and, for example, may participate in the development of action plans for epilepsy management and safe transportation of a child with special health care needs. School nurses may also provide insight to a student's pediatrician when attendance concerns, parental noncompliance with medical home goals, or even neglect or abuse is suspected. School nurses, working with pediatric patient-centered medical homes, school physicians, and families, are critical to identifying the unmet health needs of large populations of children and adolescents in the school setting. Promoting the presence of a qualified school nurse in every school and a school physician in every district fosters the close interdependent relationship between health and education. Academic achievement, improved attendance, and better graduation rates can be a direct result of a coordinated team effort among the medical, family, and educational homes all recognizing that good health and strong education cannot be separated". This information poses the question from this committee- "Would it be beneficial to have a consulting physician available to the Delaware schools?"

¹⁹ AAP Council on School Health. Role of the School Nurse in Providing Health Services. *Pediatrics*, (2016) 137(6):e20160852, <https://pediatrics.aappublications.org/content/137/6/e20160852>

3. The Division of Public Health and the Department of Education should consider a media campaign related to Asthma for laypersons.

"Steps to a Healthier NY used social marketing strategies to design a media campaign called "Could It Be Asthma?" to educate parents and caregivers about the symptoms of Asthma. The campaign used television advertising, brochures, and posters to educate parents and caregivers in rural Jefferson County, New York, about asthma symptoms. Results were consistent, with a significant increase in the percentage of people who were familiar with the campaign. This social marketing campaign successfully reached parents in a rural community with important educational messages; similar strategies should be considered in educating the public about Asthma and other health issues".²⁰ The committee agreed a campaign might improve families' message regarding the importance of ongoing primary care and medication adherence. This campaign could expand the current American Lung Association partnership with DOE.

4. DOE, in collaboration with local school districts, should explore the possibility of implementing school-based telehealth in public schools as an additional resource for children.²¹

Telehealth is growing in utilization across the country in public schools, including California, Florida, Georgia, Michigan, Missouri, New Mexico, South Carolina, and Texas. In 2016, the Nemours Children's Health System implemented its first school-based telehealth platform in Miami, Florida.²² Many states have implemented laws that allow them to utilize Medicaid for funding these programs. Nationally, it is often used in rural areas and expanded to assist families with having their child evaluated by a primary care physician. Telehealth may address student absenteeism if a child can be assessed and then sent back to class if appropriate. It also assists

²⁰ Briones, K., Lustik, F. & LaLone, J. (2010). Could it be asthma? Using social marketing strategies to increase parent and caregiver knowledge of asthma symptoms in a rural community. *Health Promotion Practice, 11(6)*:859-66. doi: 10.1177/1524839909348735. Epub 2009 Oct 28. <https://journals.sagepub.com/doi/10.1177/1524839909348735>

²¹ The Use of Telehealth in School-Based Health Centers, (2019), Hayley Love, PhD, Nirmita Panchal, MPH, and John Schlitt MSW, <https://journals.sagepub.com/doi/10.1177/2333794X19884194>

²² Factors behind the adoption of school based telehealth, (2016), <https://mhealthintelligence.com/features/factors-behind-the-adoption-of-school-based-telehealth>

the school when a nurse cannot be physically present on a particular day. However, possible barriers may include legal issues and funding.²³

- 5. By 2022, DOE should finalize an Asthma Management for School Nurses document after collaboration and approval from various entities such as the Delaware Asthma Consortium, DPH, DOE, local hospital(s), private physician(s), and the Delaware School Nurse Association.**

The asthma management for school nurses was drafted. Still, upon further input from school nurse representation on the committee, the process's rollout will need to be further vetted and discussed. There is currently an action plan from the American Lung Association on the DOE [website](#)²⁴, but this is not Delaware-specific.

- 6. DPH and DOE should make annual educational training mandatory related to CHC's for public school nurses to improve quality of care and develop statewide-standardized nursing care.**

This training should include asthma management and related respiratory educational sessions for all Delaware Public school nurses.

²³ National School Boards Association, Telehealth in Schools, (2019), Erin D. Gilsbach, Esq., <https://www.nsba.org/ASBJ/2019/December/Telehealth-in-Schools>

²⁴ American Lung Association Asthma Action Plan, [School Health Services / Delaware School Nurse Manual Forms \(doe.k12.de.us\)](#)

Appendix 1

Data Summary (October 17, 2019)

Summary of School Health Services 2018 – 2019

Why do we do this summary?

This annual summary report is created by the Delaware Department of Education (DOE) on school health services that have been provided and electronically documented by school nurses. Data from the previous school year is collected from Delaware's pupil accountability system eSchoolPLUS after August 15. Any district or charter using an alternative electronic health record submits an electronic version of the Summary of School Health Services report to the Department by August 31 of each year.

What data do we collect with this summary?

1. Nurse Office Visits: students, staff, visitors:
 - Length of office visit
 - # visits
 - Disposition: Return to Class, Sent to School Staff, Sent to Wellness Center, Sent Home, Went Home Parent Directed, Exclusion for Communicable Disease, Sent for Immediate Evaluation/Treatment, 911, Not Seen, Other
2. Contacts/Notifications: Parent/Guardian, School, Community
3. Nursing Care: Assessment & Interventions
4. Nursing Services/Health Screenings: Athletic Exam (DIAA), Blood Pressure, BMI, Dental, Dental by External Provider, Developmental, Immunization, Hearing*, Hearing by External Provider, Physical Exams, Record Review, Tuberculosis Questionnaire/Reading, Screening by Outside Provider (except Vision & Dental), Posture/Gait*, Vision*, Vision by External Provider.
 - * Hearing, Vision and Posture/Gait are required screenings
 - # screened
 - # referred
 - # completed referrals
 - # required to be screened
5. Chronic Health Conditions

What was new this year?

For the 2018-2019 School Year, statewide data was collected around 5 chronic health conditions (Asthma, Diabetes Type I, Diabetes Type II, Life Threatening Allergies, and Seizures) identified by the National Association of School Nurses.

- Student has a written documented diagnosis by a licensed health care provider
- 2018-2019 is baseline year for statewide numbers
- Each school and district have access to their own data

What does DOE do with this data?

- Identifies trends in chronic health conditions
- Targets educational trainings and educational programs in the schools such as the October 11, 2019 Statewide Professional Development Day *Asthma Management in the School Setting* for school nurses
- Makes districts and schools aware of the health care needs of the school
- Secures resources for chronic health conditions such as the Division of Public Health albuterol standing order and initial supply of albuterol sulfate 0.083% nebulizer medication for schools

Data Summary Continued (October 17, 2019)

Findings:

Table 1 Hearing, Vision, Postural/Gait Screening Results

	# Screened for Hearing	# Hearing Referred	% Referred for Hearing	# Screened for Vision	# Vision Referred	% Referred for Vision	# Screened for Posture/Gait	# Posture/Gait Referred	% Screened for Posture/Gait
Kent County	16679	333	2.00%	20208	1697	8.40%	14317	729	5.09%
New Castle County	35358	468	1.32%	41311	4064	9.84%	31786	1272	4.00%
Sussex County	13937	219	1.57%	17787	1516	8.52%	11758	715	6.08%
State	65974	1020	1.55%	79306	7277	9.18%	57861	2716	4.69%

Table 2 Chronic Health Conditions (CHC) Numbers

	Total Students Counted	Asthma	Diabetes Type I	Diabetes Type II	Life Threatening Allergies	Seizures
Kent County	31721	4300 13.55%	115 (<1%	18 <1%	260 <1%	331 1.04%
New Castle County	79164	10671 13.48%	160 <1%	22 <1%	174 <1%	473 <1%
Sussex County	28259	2983 10.55%	64 <1%	15 <1%	146 <1%	268 <1%
State	139144	17954 12.90%	339 <1%	55 <1%	580 <1%	1072 <1%

How do we compare to other states with CHCs?

To date there is no school nurse national data to compare; however, the national rates of students with chronic conditions vary greatly.

National data is more accurate by condition. The following are the common conditions with national estimates with reference:

- Asthma: 8.8%-11.1% https://ftp.cdc.gov/pub/Health_Statistics/NCHS/NHIS/SHS/2017_SHS_Table_C-1.pdf
- Diabetes: .24% (<20years) <https://www.diabetes.org/resources/statistics/statistics-about-diabetes>
- Seizures: .6%: <https://www.cdc.gov/healthyschools/npao/epilepsy.htm>
- Allergies including non-life threatening: 8%: <https://www.cdc.gov/healthyschools/foodallergies/index.htm>

Data Summary Continued (October 17, 2019)

Albuterol Use in the Public Schools

- The Delaware Division of Public Health has provided Albuterol Standing Orders for Students with Existing Asthma Diagnosis for use by School Nurses (Registered Nurses) Working in Delaware Public and Charter Schools.
- This standing order is written for students with an existing diagnosis of Asthma on file in the school nurse's office documented by a licensed healthcare provider dated within the past two years.
- This standing order can be used for either of the following:

- Albuterol inhaler for prevention before physical activity when no student prescribed medication is available OR
- Albuterol sulfate solution 0.083% via nebulizer for rescue purposes
- In mid-September, a hard copy of the Delaware Division of Public Health's albuterol standing order and 10 doses of the of the albuterol sulfate solution 0.083% for each of the 222 schools were delivered to the 19 Lead School District to deliver to their district nurses and the 23 Charter School Nurses.
- Districts and charter schools are responsible for obtaining the albuterol inhalers, additional albuterol sulfate solution 0.083% doses to be used via nebulizer and associated respiratory equipment.
- An *Albuterol Summary Sheet* for each incident (administration of albuterol) is submitted to Jane Boyd, Delaware Department of Education and Lisa Henry, Delaware Division of Public Health for tracking.
- Appoquinimink, Christina, Colonial and Red Clay Consolidated School Districts have a standing order from a private physician and have been encouraged to use the Delaware Division of Public Health's standing order.
- Albuterol nebulizer doses administered from 9/11/2019 - 10/15/2019:
 - 21 doses administered to 20 students (1 Middle School student received doses on 9/12 & 9/16)
 - 12 Elementary, 7 Middle School, 2 High School
 - 9 Returned to class
 - 5 Sent for Immediate Evaluation/Treatment
 - 2 Sent to Emergency Room via Ambulance
 - 5 Sent home

Appendix 2

Working Together for Student Success

SCHOOL-BASED HEALTH CENTERS & SCHOOL NURSES



What Do They Do?

School-Based Health Centers (SBHCs):

- ▶ Are located in schools or on school grounds
- ▶ Work cooperatively with schools
- ▶ Focus of culturally competent, patient-centered care to school-age children (and sometimes families) using a medical model to provide primary care with a multidisciplinary team to provide:
 - Laboratory services and diagnosis
 - Illness treatment including prescription services
 - Comprehensive health assessments
 - Screening and early interventions
 - And may include oral and mental health care
- ▶ Reduce health disparities & improves health outcomes for underserved youth who are enrolled
- ▶ Integrate increased access to primary care in the public
- ▶ Receive funding from billing third party payors (including Medicaid) and support by foundations or healthcare systems
- ▶ Serve the school and the surrounding community
- ▶ **Learn more at www.sbh4all.org**

School Nurses

- ▶ Are registered nurses (Generalist to Specialist) who practice in schools
- ▶ Serve the entire school population
- ▶ Coordinates the development of individualize student health (IHP) and emergency plans (ECP)
- ▶ Member of school health teams
- ▶ Collaborates on school education teams (e.g., IEP, 504)
- ▶ Typically employed or contracted by local school districts
- ▶ Promote health and well-being through:
 - Health promotion
 - Health education
 - Immunization compliance
- Securing insurance and access to a medical home
- ▶ Mitigate potential health issues with:
 - Health screenings
 - Healthcare provider referrals
 - Ongoing health issue surveillance
 - Preparation for school emergencies
- ▶ Provide care coordination and case management:
 - Chronic and communicable diseases
 - Life threatening allergies
 - First aid and emergencies
- ▶ **Learn more at www.nasn.org**



What Happens When They Work Together?

Expertise in the intersection of health AND education fosters an environment that is culturally competent and patient-centered, supporting academic success

- Better attention to social determinants of health and health disparities
- Complimentary planning & implementing school-based health promotion and disease prevention programs
- Increases disease management and supports disease self-management
 - Provides seamless care when school nurses triage and refer to the school health center
 - Enhances continuity of care through information sharing
 - Supports transition from pediatric to adult healthcare
 - Further reduces student absences and increases classroom seat time
- Supports faculty and school administrators allowing them to teach and lead
 - Saves school dollars when students progress toward graduation
 - Reduces emergency room and medical office visits
 - Decreases time parents/guardians must miss work for medical office visits
 - Enhances students' health, overall well-being, and academic success

Questions & Answers

Q: When budgets are already tight, how can funding both school nurses and school health centers be justified?

A: Care provided by school nurses and school health centers are complementary – one does not replace the other. School nurses are salaried with dollars from education, local public health, grants, foundations, or hospital systems. School health centers are funded by state and federal dollars, grants, or foundations. Some, but not all, schools bill for reimbursable school nursing services. School health centers are more likely to seek for reimbursement from public and private insurance. Current funding models vary; potential new models to fund health services must be explored.

Q: What is the effect on the students when both school nurses and school health centers are in place?

A: Healthy students learn better. Collaboration between school nurses and school health centers can reduce disparities that prevent children from reaching their health and academic potential. Students spend more time in school, in class, and test scores and graduation rates improve; care coordination enhances disease management, increases symptom-free days, and reduces unnecessary emergency room visits; teachers and school administration can teach and lead; and parents/guardians do not lose time at work.

Q: How does the role of a school health center differ from the role of the school nurse?

A: The school nurse is responsible for the day-to-day oversight and management of the school population's health. School health centers – which may include primary, behavioral, and oral care providers – serve as a medical home providing primary care for an enrolled student and sometimes his/her family.

Q: Should schools have both a school nurse and school health center?

A: Yes! With 98% of school-age children in the U.S. attend school and many come with known and unknown health issues. Health promotion, disease prevention, and disease management can more effectively be delivered in the school setting when both school nurses and school health centers are accessible. School nurses can provide health education, health screening, care coordination for chronic disease management, collaboration with families for enrollment in public insurance programs, and referrals to school health centers for complex issues. School health centers diagnose and treat illnesses, prescribe and dispense medication, and may provide oral and mental health care services.

References

1American Nurses Association & National Association of School Nurses. (2011). *School nursing: Scope and standards of practice* (2nd ed.). Silver Spring, MD: Nursebooks.org.; Institute of Medicine of the National Academies – Committee on Integrating Primary Care and Public Health Board of Population Health. (2012). *Primary care and public health: Exploring integration to improve population health*. Washington D.C.: The National Academies Press.

2Cowell, J. (2013). Interprofessional practice and school nursing. *Journal of School Nursing*, 29(5), 327-328.

3American Nurses Association & National Association of School Nurses. (2011). *School nursing: Scope and standards of practice* (2nd ed.). Silver Spring, MD: Nursebooks.org

4Maughan, E. (2003). The impact of school nursing on school performance: A research synthesis. *Journal of School Nursing*, 19, 163-171.

Contact: National Association of School Nurses: www.nasn.org / School-based Health Alliance: www.sbh4all.org

Appendix 3

Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) Recommendations

Purpose: To support school districts and charter schools as they develop written, school-level protocols for Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillators (AEDs). All written protocols should include the following components:

The process to obtain an AED and/or replace existing AED model(s);

- 1) The training of staff to perform CPR and to use the AED;
 - 2) The maintenance of the AED and related equipment;
 - 3) The monitoring of the AED and related equipment; and
 - 4) The development of *Cardiac Emergency Response Communication Plan*.
-
- 1) The process to obtain an AED and/or replace existing AED model(s).
 - a) Each public school or charter school shall have defibrillator equipment that meets the defibrillation equipment standards in Title 16 Health and Safety Delaware Administrative Code 4303 Automatic External Defibrillation.
 - b) Each public-school district or charter school should obtain and/or replace existing AED(s) based on the manufacturer's warranty description on how long the manufacturer expects the AED to operate successfully.
 - c) The budget for AEDs, related equipment and training will be determined by the district or charter school.
 - d) The AED vendor will be determined by the district or charter school.
 - e) The district or charter school can access the American Heart Association for additional information regarding *AED Implementation* at https://cpr.heart.org/idc/groups/heart-public/@wcm/@ecc/documents/downloadable/ucm_480036.pdf
 - f) See AED Proposal examples from Christina School District (See Appendix A) and Red Clay Consolidated School District (See Appendix B).
 - 2) The training of staff to perform CPR and to use the AED will be determined by the district or charter school.
 - a) Training to consider include: Who will be responsible for staff training? For example, designated CPR/AED Coordinator, School Nurse, other school employee, outside CPR/AED instructor, or AED Vendor.
 - b) Will there be a designated CPR/AED Instructor(s) for the district or charter school?
 - c) Who will be trained?
 - i. Mandated Staff: Athletic Trainer, Certified Coaches, Emergency Coaches, Physical Therapists and School Nurse.
 - ii. Optional Staff: School Crisis Team members, other educators, or school staff, "Trained Person" and/or volunteers.
 - d) How often will the school staff be trained in CPR/AED use? For example, it is recommended by the American Heart Association for training to be every two years.

- e) How often will CPR/AED drills be performed, how coordinated and how this will be documented? For example, in the fall and spring in coordination with local EMS and documented on forms provided by EMS or developed by the district.
 - f) Where to obtain training equipment such as manikins, face shields and AED and training materials.
- 3) The maintenance for the AED and related equipment will be the responsibility of the district or charter school.
- a) Replacement parts to consider include:
 - i. How to replace AED equipment such as the AED pads, batteries, alarm cabinet? For example, obtain replacement parts through AED service provider.
 - ii. How to replace First Responder Kit items such as latex free gloves, razor, scissors, and pocket face mask?
 - b) Technical support for maintenance to consider include:
 - i. Does the vendor for AED model provide technical support?
 - ii. Can the district designated CPR/AED Coordinator provide technical support?
 - iii. Are there other providers such as Emergency Medical Services or other CPR/AED Instructors that can provide technical support?
- 4) The monitoring of the AED and related equipment will be the responsibility of the district or charter school.
- a) Monitoring items to consider include:
 - i. Who will be responsible for monitoring the AED equipment? For example, designated CPR/AED Coordinator, School Nurse, other school employee or through a contracted company.
 - ii. Monitoring documentation:
 - a. Who will document the AED Equipment Checklist or other checklist utilized by the district or charter school?
 - b. How often will the AED and related equipment be checked? For example, per the AED Manufacturer's guidelines or Monthly/Quarterly.
 - c. Does the AED vendor or company provide software upgrades? If so, what are the costs?
 - iii. The location & accessibility of the AED equipment will be determined by the district or charter school. Things to consider include the building size, the number of levels and staircases, location of athletic fields, other educational facilities on the school campus and the number of students and staff.
- 5) It is recommended that each public-school district or charter school develop a *Cardiac Emergency Response Communication Plan*. See Appendix C.

Christina School District AED Proposal October 2016

- AED Lifespan is 10-12 years
- CSD AED's are 10-12 years old
- CSD AED's are from multiple manufacturers, many parts not available
- CSD nurses are spending approximately 2 hours/months maintaining AED's
- Lead Nurse is spending 20-30 hours/month collecting data on aging AED's & ordering and replacing parts
- Information presented to Robert Silber, Chief Financial Officer
- Decision made to replace ALL AED's in the CSD district

Solution

- Multiple AED's reviewed and tested, process simplified by School Health, bringing all different AED's onsite to CSD, AED's reviewed by CSD nurses
- Research on All AED's
- Decision : Cardiac Science G5
- Rationale: G5 met DE state regulation of a semiautomatic AED (you must push a button to initiate the shock), simple to operate, voice commands in Spanish and English, onsite service program and CSD had previous excellent experience with the Cardiac Science G3

Addition

- Purchase the Mastertrak AED Monitoring Program
- Assist with customizing the program for Christina School District
- Description of Mastertrak:
 - AED's are checked daily, weekly and monthly (wireless)
 - Nurses open and close the AED once a month between the 1st and the 10th
 - Nurses receive an email to check the AED, and verify by checking the email
 - On the 15th, the Lead nurse receives an email from Mastertrak with the name
 - Of the nurse and the school delinquent in checking their AED
 - Yearly onsite checks of the AED's by Cardiac Science
 - Warranty 8 years

Purchase

2016	39 Cardiac Science G5 AED's	(1495)	Total (58,305)
	Mastertrak Monitoring Program	(10,916/yr)	

2017	6 Cardiac Science G5 AED's	(1475)	Total (8847)
	Mastertrak Monitoring Program	(1095/yr)	

Conclusion:

Christina School District has a total of 52 AED's, 43 Cardiac Science G5's and 2 Cardiac Science G3's. These AED's have exceeded all expectations. In our district, 2 lives have been saved. The Mastertrak Monitoring system guarantees that all AED's are in working order, all of the time. Finally, the 20-30 hours a months I was spending on updating parts, ordering etc, has been decreased to less than 30 minutes a month.

Appendix A within Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) Recommendations

AED Proposal

Mandy Pennington
District Lead Nurse
Red Clay Consolidated School District
1502 Spruce Ave.
Wilmington, DE 19805

Summary

Early effective CPR including early use of an Automated External Defibrillator (AED) is proven to more than double a person who is suffering from a sudden cardiac arrest chances of survival. More than 350,000 cardiac arrests happen outside of the hospital setting each year. Answers by Heart (2017) Retrieved from https://www.heart.org/-/media/data-import/downloadables/pe-abh-what-is-an-automated-external-defibrillator-ucm_300340.pdf

Concept

Our district obtained Automated External Defibrillators from the 2002 Tobacco Settlement monies. The estimated shelf life of an AED is approximately 10 years per manufacturer recommendations. A sustainable plan is needed to maintain current AED's and plan for future replacements.

Location

Elementary Schools: 1 AED, Middle Schools: 2 AEDs (including one for Athletic Trainer) High Schools 2-3 AEDs (including one for Athletic Trainer).

Market Research

Physio control has a long history of consistent durable, stable equipment both in and out of the hospital. Physio Life Pack Express is consistent with EMS systems throughout the county and state. Acquiring similar products allows for safe patient transfers and ease of use.

Initial Costs

AED	\$1040.00
AED Trade In Program	\$-200.00
Pediatric Pads	\$0
Total Cost	\$840.00

Project Replacement Costs

Adult Pads 2 sets & battery (q2-2.5yr)	\$85.32
Pediatric Pads (q2-2.5yr)	\$88.44
Total Cost 9q2-2.5yr)	173.76

Supplier

Jim Springer, Jr.
Senior Sales Representative
Stryker
C 410 984 8234
jim.springer@stryker.com
physio-control.com

Cardiac Emergency Response Communication Plan

Appendix C within Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) Recommendations

The _____ (District/Charter) *Cardiac Emergency Response Communication Plan* aligns with the Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) Recommendations suggested by the Delaware Department of Education and the District/Charter is the owner of the devices listed herein.

- 1) District/Charter Responsibilities:
 - a) The District/Charter should identify the following:
 - i. A *CPR/AED Coordinator* who will coordinate the CPR/AED program.
 - ii. The mandated *CPR/AED Responders* who will be trained in CPR/AED according to current CPR/AED training guidelines.
 - b) Ensure that training and recertification of all *CPR/AED Responders* will be completed initially, then every two (2) years.
- 2) Designated *CPR/AED Coordinator* Responsibilities:
 - a) Annual review and update of the *Cardiac Emergency Response Communication Plan* with District/Charter guidance.
 - b) Maintenance of a list of the designated *CPR/AED Responders* who are currently trained at the school building level. See Appendix D.
 - c) Facilitate the training of the *CPR/AED Responders*.
 - d) Determine who will need to respond to the situation and identify specific roles.
 - i. Who announces the alert/situation?
 - ii. Who calls 911?
 - iii. Who responds to all alerts?
 - e) Maintenance of AED Information:
 - i. Each building will maintain AED documents including AED location(s), manufacturer(s), model number(s), signage type(s) and signage location(s). See Appendix E.
 - f) Maintenance of AED related record keeping documents that are recommended to be kept on-site at each building as follows:
 - i. Procedures and guidelines for AED use.
 - ii. AED manufacturer's "Instructions for Use" booklet(s).
 - iii. Periodic maintenance, repair, and self-inspection records/log of AED(s). See Appendix F.
 - iv. CPR/AED training and documents.
 - v. Other records as defined by equipment manufacturer.
 - vi. Completion of CPR/AED Post-Incident Report(s). See Appendix G.
 - vii. Copy of building *Cardiac Emergency Response Communication Plan*.
 - g) Operational Checks and Maintenance of equipment:
 - i. AED(s) will be maintained, inspected, and tested by the *CPR/AED Coordinator* in compliance with the manufacturer's instructions and best practices.
 - h) Submission of CPR/AED Post-Incidence Reporting form in the process identified by the District/charter.
 - i) AED Equipment Return to Service check once used:
 - i. Check and replenish supplies as appropriate, including purchase of spare pads.

- ii. Clean and disinfection of the device.
- iii. Check batteries and replace as needed.
- iv. Check device and casing for cracks or other damage.
- v. Return the device to its designated location.
- vi. Debrief with *CPR/AED Responders* and others as needed.

3) Other things to consider include:

- 1. Notification of building occupants of the presence and location(s) of AEDs such as signage, staff training and/or written notification.
- 2. Notification of the *CPR/AED Responder* about the emergency and building specific notification processes.
- 3. Notification of building administrator and district office about the situation.
- 4. Notification of the *CPR/AED Coordinator* about the emergency.
- 5. Follow up with district office about the situation and outcome.

Appendix D within Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) Recommendations
CPR/AED Responders

(School/Building)

AED Responder's Name	Position	Training Provider	Training Method (e.g., American Heart Association (AHA) Heartsaver, AHA Basic Life Support, etc.)

Printed Name _____ Signature _____ Initials _____ Title _____

Appendix E within Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) Recommendations
AED Information

(School/Building)

AED	AED Model	AED Signage	AED/Signage Location

Signature _____ Title _____ Date _____

Appendix F within Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) Recommendations
AED and Emergency Equipment Inspection Log

AED Type/Unit Serial Number _____ Location _____

Check Monthly. In each column enter your Initials to indicate that item has been checked.

Month	Date	Check Readiness Display for "OK" indicator	Check Expiration date on Electrodes Package	Check supply kit: razor, gloves, dry cloth, scissors, pocket mask	Check Defibrillator for: damage, cracks, missing parts, foreign	Comments
August						
September						
October						
November						
December						
January						
February						
March						
April						
May						
June						
July						

Check Quarterly: In each column enter your Initials to indicate that item has been checked.

Month	Date	Oxygen Tank *location	Disaster Bag location	Emergency Binder with Health Alerts	AED Battery
August					
December					
April					

Printed Name _____ Signature _____ Initials _____ Title _____

Appendix G within Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) Recommendations
CPR/AED Post-Incident Report

This form is to be completed by the individual who initiates CPR/AED and one copy is submitted to the *CPR/AED Coordinator*.

Responder's Name _____ School Building _____

AED Location: _____ AED Director: _____

AED Model #: _____ AED Serial # _____ Date of use: _____

How were you notified of the emergency? _____

PM Client Name: _____ Staff Student Grade ___ Visitor Birthdate: _____

Describe the incident:

Client Condition Upon Your Arrival

Breathing Not Breathing

Conscious Unconscious

Pulse No Pulse

AED Responder Action(s) Taken

CPR Attached AED

AED Shock—Total number Shocks (if known):

___ Time of Initial Shock: ___-___ AM PM

Patient Condition Upon EMS Arrival

Breathing Not Breathing

Conscious Unconscious

Pulse No Pulse

Patient Outcome

Survival Unknown Death

EMS/Unit Name Responding: _____

Facility Transferred to: _____

CPR/AED Responder Printed Name: _____ Signature: _____ Date: _____

CPR/AED Responder Printed Name: _____ Signature: _____ Date: _____

APPENDIX 4

Parent Letter Regarding Asthma Inhaler vs. Nebulizer during COVID-19

September 17, 2020

Dear Parent/Guardian,

The Delaware Department of Education and Delaware Department of Health and Social Services' Division of Public Health offer the following information regarding practices related to COVID-19 and asthma management in schools.

Symptoms of Asthma and COVID-19 may overlap, including cough and shortness of breath. Therefore, students experiencing any symptoms of COVID-19, including cough and shortness of breath, should not attend school.

To manage students' Asthma during this COVID-19 pandemic, the Centers for Disease Control and Prevention recommend that students use inhalers with spacers (with or without face mask, according to each student's individualized treatment plan) over nebulizer treatments whenever possible. Based on limited data, use of asthma inhalers (with or without spacers or face masks) are not considered an aerosol-generating procedures.²⁵

Quick-relief medicine using a nebulizer is not recommended as a first option this school year due to potential increased risk of the transmission of COVID-19 by droplets that are expelled in the air. If your child requires nebulizer treatments, this should be discussed with the school nurse and your child's primary healthcare provider.²⁶ Additional information on managing Asthma during COVID-19 may be found in the [Asthma and Allergy Foundation of America's COVID-19 Asthma Toolkit for Schools](#).

As soon as possible, please let the school nurse know if your child has Asthma, as well as your student's treatments, which may require quick-relief medicine during the school day to relieve symptoms. In preparation for the school year, please work with your student's doctor to provide:

- An updated written [Asthma Action Plan](#)
- An updated medication permission form for school use/self-use, as required.
- A quick-relief inhaler with spacer or valved holding chamber dedicated for school use

If you have any questions or concerns, please contact your student's school nurse.

For more information on how to prepare for the upcoming 2020-2021 school year and stay up to date on COVID-19 visit [Lung.org/covid-19](https://www.lung.org/covid-19).

²⁵ Centers for Disease Control and Prevention. (2020). K-12 schools and childcare programs. FAQs for administrators, teachers and parents. [COVID-19: K-12 Schools and Childcare Programs | CDC](#)

²⁶ <https://www.lung.org/blog/back-to-school-with-asthma-during-covid>