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School Nurses Bloom Where They are Planted

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Abstract

School nurses are an integral part of our education system. They play a critical role in the overall wellbeing and health of school-aged children across the country. The provide daily care for a wide range of health needs and utilize a vast array of nursing skills, planning skills, and homemade gumption based on their medical knowledge and experience. School nurses follow federal, state and district statutes, as well as adopt core values and ethical codes of their profession. Evidence based research affirms the value of a school nurse to the education process, through results regarding improved attendance, immunization compliance, management of chronic health conditions, emergency preparedness, and cost effectiveness. Also covered in this paper is an overview of the history, statistics, myths, staffing concerns, challenges, and collaborative partnerships of the school nurse.

Keywords: school nurse, chronic health conditions, accommodation, collaboration

School Nurses Bloom Where They are Planted

The nursing profession can be defined as a calling, a commitment to helping others, a respect for human dignity, a compilation of medical skills and knowledge, and a desire to help others with that knowledge and skills. According to the American Nurses Association (ANA), "the nursing profession was founded to protect, promote, and improve health for all ages." The ANA also describes nursing as "an art and a science, one that involves both the heart and the mind" (ANA, n.d.).

The National Association of School Nurses (NASN) serves as the professional organization of school nurses and has partner organizations throughout the country (e.g., Kentucky School Nurses Association, KSNA). It is the go-to organization for the latest health information that's relevant to all school nurses. The NASN website provides recommendations, position statements, and advice on best practice that the school nurse needs to know. They define a school nurse as:

> A specialized practice of professional nursing that advances the wellbeing, academic success, and lifelong achievement of students. To that end, school nurses facilitate positive student responses to normal development; promote health and safety; intervene with actual and potential health problems; provide case management services; and actively collaborate with others to build student and family capacity for adaptation, self-management, self-advocacy, and learning. (American Academy of Pediatrics [AAP], 2008, p. 1052)

Research shows the school nurse makes a huge difference in the lives of students, families and communities. They seek to be a part of a team of educators who make it possible for every child to thrive and learn in a caring, compassionate, and healthy environment. A rich

educational environment makes it possible for a school nurse to be planted with the hope of blooming. The school nurse profession is complex, but integral to the education of millions of school children.

Historical Overview

The role model that nurses most often associate with and describe as "the founder of modern nursing" is Florence Nightingale (History.com, 2019). She was born in Florence, Italy in 1820 into a distinguished, affluent family. Her family was wealthy, so she never would have needed to work. They felt she should settle down and marry a man of means. She was forbidden to pursue a nursing career, but despite her parent's objection she followed her dream and became a nurse. Florence is known for changing the view of nursing in the 1800's and early 1900's. Nursing was once considered menial labor, but after her contributions to nursing during the Crimean War, it became viewed as an honorable vocation. Several years into her career, she had made such an impact in the field of nursing that she was asked to organize a group of nurses to care for injured and hospitalized soldiers during the war.

One of her most significant contributions was to improve hygiene practices when she realized that more soldiers were dying from infectious diseases than from their battle wounds. Florence spent countless days and nights caring for the soldiers. She was known as "the Lady with the Lamp" or the Angel of Crimea because she'd make rounds at night through the dark halls of the hospitals carrying a lamp and caring for each soldier. The death rate of the soldiers was reduced by two-thirds and attributed to the improvement in sanitary conditions. She received many honors after the war and used her knowledge, money and influence to fund hospitals, start training schools for nurses, and write revolutionary reports on health reform (History.com, 2019).

In 1893, the Florence Nightingale Pledge was written as words of admiration. The pledge was written by Lystra E. Gretter and a group of student nurses. It is thought of as a modified "Hippocratic Oath," as noted by the Vanderbilt School of Nursing (2010). Nurses everywhere utter the Florence Nightingale Pledge during their graduation or pinning ceremonies. With lamp and candle in hand, they recite these words:

> I solemnly pledge myself before God and in the presence of this assembly, to pass my life in purity and to practice my profession faithfully. I will abstain from whatever is deleterious and mischievous. And will not take or knowingly administer any harmful drug. I will do all in my power to maintain and elevate the standard of my profession, and will hold in confidence all personal matters committed to my keeping and all family affairs coming to my knowledge in the practice of my calling. With loyalty will I endeavor to aid the physician in his work, and devote myself to the welfare of those committed to my care. (Vanderbilt School of Nursing Communications, 2010, para. 2)

Florence Nightingale's example for future nurses is one of endless compassion for those who couldn't take care of themselves.

According to Bergren (2017), the Henry Street Settlement in New York City was where school nursing began. In 1900, two nurses were appointed to care for the ill and impoverished of the community. Immigrants and children were among those most in need of treatment for illnesses and diseases. Public health nursing was the focus, including school health inspections, which screened children for infectious diseases and excluded those considered contagious. There was a lack of treatment for those children who were excluded, so truancy persisted and diseases remained unaddressed. This event was a cycle that needed to be broken. In 1902, Lina Rogers was the first school nurse in the United States. Nurse Rogers was assigned to four schools in

New York City, which included close to 10,000 students. She and a doctor worked in these schools to screen and treat those who could be sent back to class. Students who were considered infectious were sent home. They promoted illness prevention and taught hygiene practices in order to decrease the incidence of infectious diseases. By the end of the first month, there was a fifty percent reduction in school absences and an improvement in the overall health of the children. This improvement led to the hiring of dozens of school nurses by New York City's Board of Health. Other large cities soon followed suit and began hiring school nurses to manage communicable disease through detection and treatment, as well as enforcing better hygiene practices in the communities where they worked (Bergren, 2017).

Not long after school nurses became effective in the cities of the United States, rural nursing began as public health nurses. Johnson (2017) reported these nurses visited schools on horseback to carry out infection control and student health screenings. This approach was also positive because, in the process of visiting schools, they became aware of many health issues within a student's family. They reached out to build trust and relationships with these families. The rural nurses then taught them about immunization against communicable diseases and were in a position to manage illness in the family, resulting in an improvement in the health of the entire community.

The Need for School Nurses

According to the NASN (2017), there were about 96,000 full-time school nurses in the United States. Full-time school nurses (e.g., > 35 hours per week) were present in 39% of schools, part-time school nurses (e.g., <35 hours) were present in 35% of schools, and 25% of schools did not use a school nurse. Public schools were more than twice as likely to have a part-time or full-time school nurse as a private school. The American Academy of Nursing reports

98% of children in the US attend school, which comes to around 70 million school-aged children.

A more recent national study by Maughn (2018) showed that there were 121,300 school nurses in public schools and 86,800 of those worked full-time. According to the study, 56% of the full-time school nurses in the country provide coverage for more than one school. The statistics vary across the country as well. It is more common to see a full-time school nurse in schools across the Northeast, while schools in the West typically have one nurse covering two or more schools, and in some cases not even employ a nurse. More evidence shows there are policy differences by state and by individual school districts within a state. Of the districts reporting, 33% had a policy necessitating they employ a full-time school nurse and 18% had a policy for only a part-time school nurse.

These figures show that individual states and districts do not follow the recommendations of the NASN. They suggest "that students have daily access to, at a minimum, a full-time baccalaureate-prepared registered nurse" (NASN, 2017). However, some states only hire registered nurses (RN), some can hire a licensed practical nurse (LPN), some require the RN to have a bachelor's degree in nursing (BSN). The National Board for Certification of School Nurses (NBCSN) provides a national certified school nurse accreditation, but it is voluntary, and most districts don't reward or recognize this credential (Fauteux, 2010).

Since NASN's position is that "every child have access all day, every day to a full-time registered professional nurse" (NASN, 2016b), the fact is that only a third of the nation follow this recommendation. Since many districts have a full-time RN who travels between schools, they may hire the RN with the BSN, but that doesn't mean students have all day access to the

RN. Over the past 16 years, district polices that require a school nurse to be an RN have decreased by 16%.

Why is this the trend when the recommendations by NASN remain unchanged? Funding seems to be the reason. In 2017, the NASN reported that most school nurses are employed by the Departments of Education and funded by special education dollars. Other means of funding include hospitals, health departments, local, state and federal organizations. When a school nurse job is eliminated, an aide or LPN is often the replacement. One analogy noted in the research compared this to a teacher's aide doing the job of the teacher. The aide does not have the education or expertise to teach a class, but can be there to assist the teacher. The same applies to the LPN or health aide who works in a school. They can help support and assist an RN, but not replace an RN. They lack the knowledge, skills, and license to meet all of a student's health care needs. There are assessments, treatments, medications, referrals, and healthcare plans needed that only fall under a registered nurse's scope of practice.

According to the research, after the home, a child's school is the second most significant environment to their development. A visit to a school nurse is most often a child's first interaction with health care services. A nurse who covers only one school is able to form a strong bond with their students and community, which improves their nursing judgment. "The World Health Organization (WHO) has found that schools are one of the most consistent and appropriate locations to address young people's health needs" (Maughan, 2018). The school nurse is in a unique position to benefit the health status of the child, family, and community.

Over a century ago, the focus of the school nurse was to manage communicable diseases, to teach children how to be healthy and stay healthy. In turn, the nurse should see an improvement in the absenteeism rate. The focus has definitely changed over the past century.

School nurses still monitor for communicable diseases, but with medical advances they can now enforce mandatory immunizations and focus more on chronic diseases and their impact on education. It is a fact that more children with chronic health conditions attend school today. “Students enter school with a variety of mental and physical health needs, and school nurses are on the front line of addressing them” (Maughan, 2018). The research shows that about 25% of school-aged children have a chronic health condition. Examples of these conditions include asthma, obesity, severe allergies, diabetes, and seizure disorders.

The number of students with chronic conditions has risen because laws have changed, making school an accessible option for medically fragile students. Some such laws are the “Rehabilitation Act of 1973, Individuals with Disabilities Education Act of 1990, No Child Left Behind Act of 2001, and Every Student Succeeds Act of 2015” (Hull, 2008, p.12). Simply stated, schools can no longer deny chronically ill and disabled children access to schools. The children have rights and schools need to make accommodations for those with complex health conditions (Hull, 2008). It isn’t uncommon to see tracheostomy tubes, feeding tubes, oxygen tanks, and ventilators in the schools today. There are more walkers, wheelchairs, and rare diseases than ever before.

Another reason for the increase in students with chronic health conditions in schools today is “improved survival rates of premature infants and infants with disabilities” (Bergren, 2017, p. 2). The Centers for Disease Control and Prevention (CDC) reported the rate of prematurely as 1 in 8 children. Premature infants are more likely to have physical and neurological consequences. Once they are school age, this population of children may need health and academic accommodations. Due to language and developmental delays, students may be nonverbal or unable to explain signs and symptoms, which causes a challenge for caregivers.

Naturally, medical advancement has affected the role of school nurses by increasing the number of students with special medical needs. Childhood cancer is increasingly survivable, these and other students with life-threatening conditions return to school sooner than they would have in the past. Many of these students need special nursing services and the schools can accommodate when a full-time nurse is on staff. In an article in USA Today Carolyn Duff, the president of NASN, says "professional duties have not changed overall," but "what has changed is the increasing numbers of students with chronic health conditions, including asthma, diabetes, and severe allergies" (Sonnenberg, 2013, para. 15). Often, it's the nurse who detects health and learning issues of young students and is able to refer them for treatment.

In 2018, the CDC determined that autism spectrum disorder (ASD) occurs in one in 59 children, which is a 15% increase in prevalence since 2016. A large percentage of autistic students take daily medications at school and require nursing services for any behavior out of the norm, since that may be the only sign of an acute illness. From 2002 to 2008, there was a 60% rise in the percentage of children in special education with some form of health impairment. Within the six-year period, the incidence of autism has also doubled (Bergren, 2012).

The health of children is correlated to their ability to learn. If health needs are not met, students will not be able to fully participate in learning. "Healthy children are healthy learners" (Troop, 2008, p. 484). In addition to providing hands-on care to students, the school nurse must also "address the physical, mental, emotional, and social needs of students and support their achievement in the learning process" (NASN, 2016b, p. 1). According to the NASN, almost 25% of all school-age children are from homes that are below the federal poverty level. Therefore, it's necessary for the nurse to address social influences on the students, families, and communities. The hierarchy of needs comes to mind. It is difficult for a child to learn if they are sick, hungry,

lack clothing and hygiene products, or have a toothache. It's unfortunate that children who live in poverty often attend schools in districts that cannot afford a school nurse (Camera, 2016).

The 21st century school nurse is a member of two separate entities, health care and education. They must be able to collaborate and communicate with professionals in two fields. They use their health expertise when assisting school administrators with plans to reduce a student's health related barriers to learning, such as Section 504s and Individualized Education Plans (IEP). According to an article by Maughan et al. (2018), the value of the school nurse related to chronic disease management and health promotion is supported by the AAP, the NASN, and the Healthy People 2020 initiative. The school nurse is one of the most extensive nursing roles, providing hands-on direct care of students, as well as dealing with the health needs of the school community and beyond.

Budget cuts are the reason that so many school districts have had to cut school nurse positions. Since the early 2000s, many of these districts have chosen to rotate the nurses they do have among schools, instead of hiring more nurses. The research shows that this "scarcity of nurses comes amid an all time high in the incidence of childhood chronic illnesses" (Camera, 2016, para. 7). Thus, all children are affected. Parents need to know who is meeting the health care needs of their children while they are in school, especially if the child has special medical needs. Hull (2008) describes school nurses as either "mobile nurses" (e.g., being responsible for multiple locations) or "stationary nurses" (e.g., remaining at a single school every day). In my 13 years of experience as a school nurse, I have been a one-on-one nurse, hired to meet the needs of one medically fragile student. I have been the "mobile nurse" who covered two to three schools, with an assistant working in each school under my license. Most recently, I am a "stationary nurse" covering one school, which has been the most demanding of all the positions I've held.

Mobile nursing has fueled the need for school nurses to train unlicensed assistive personnel (UAP), since they cannot be available in every school they cover for the necessary procedures that are more prevalent today. Most states have nurse practice acts that determine their delegation practices, as per each state's board of nursing (e.g. Kentucky Board of Nursing, KBN, via ky.gov). If allowed, the school nurse can train a UAP to administer medications and perform certain procedures. In Kentucky and many other states, the staff member must take a 6-hour course on medication administration. A drawback is that UAPs tend to make more medication errors than nurses. These errors include missed doses, incorrect doses, failing to complete records, and the use of expired drugs. All of which are dangerous and could result in legal action (Hull, 2008).

Other tasks that can be delegated include catheterizations, tube feedings, and colostomy care. The RN must train these tasks to the specific student, based on physician orders. Following a demonstration of the skills and return demonstration by the UAP, the school nurse must use an approved checklist to show they are competent to perform the task. The school nurse must do this first, and then regularly observe and record whether the correct procedures have been followed. The UAP works under the RN's license, so the school nurse is responsible (Hull, 2008).

Delegation to UAP helps the RN manage large caseloads and coordinate care of chronic health conditions. The school nurse must have a physician's order and parental consents in place for medication administration or procedures to be done, regardless of who does them. From personal experience, I have learned that insulin injections and the calculation of the correct dosage of insulin for diabetics cannot be delegated. According to the Kentucky School Nurse Association (KSNA) and Kentucky Department of Education (KDE), diabetes management is

one nursing activity that can't be shared. "The delegation of care in schools must be supervised by an RN, just as in other health care settings" (Johnson, 2017, p. 3).

In the hospital, for example, two RNs must check the amount of insulin for a diabetic patient in order to be safe and legal. Two sets of eyes are better than one. So, it only makes sense that this same amount of cautiousness occurs with children in the school setting. An assistant can count carbohydrates in a meal and monitor the delivery of insulin, if the student self-administers or an insulin pump delivers the insulin. Otherwise, the registered nurse must calculate and approve the proper amount of insulin. They are also the only individual who can administer an insulin injection, other than a parent. The policy continues until the student has the comfort level and skill level to self-administer their own insulin. Once a diabetic student can self-administer their insulin, the RN does not have to be physically present, but must be available by phone to approve an insulin dose.

Roles of the School Nurse

The role of the school nurse needs to have an active balance between health and educational goals. It's clear that the main roles apply to school nurses at all levels, whether elementary, middle or high school-aged students. Ironically, the school nurse must be physically present to adequately undertake and commit to the responsibilities of the profession. An article published by the AAP in 2008 states "the NASN has identified 7 Core Roles the school nurse fulfills to foster child and adolescent health and academic success."

1. "The school nurse provides direct care to students" (AAP, 2008, p.1053).

The school nurse must be available "to work directly with students to assess symptoms and provide treatment to increase students' time in the classroom and parents' time at work" (NASN, 2016b, p. 2). The direct care of students includes injuries, acute illnesses, and hands-on

treatment of students who have special health care needs. Some of the most challenging health office visits are those involving psychosomatic symptoms, such as headaches or stomachaches. The school nurse office is a triage center for whatever walks through the door. The school nurse must be flexible and prepared for a wide-variety of needs with various degrees of severity.

The administration of daily scheduled medications is one of the main duties of the school nurse. The literature shows that "14% of children age 5-11 are on regular medication and an estimated 4-6% of school-age children receive medication in school on a typical day" (Bergren, 2012, p. 48). In 2014, one study looking at the top 5 procedures performed by school nurses on a monthly basis was found to be "blood glucose testing, lung auscultation, carbohydrate insulin calculation, insulin pump care, and IV infusion care" (Kennedy, 2014, p. 7). Routine treatments and procedures fall under the direct care role. Examples are breathing treatments, inhaler use before engaging in activities, and blood glucose monitoring before meals, before activity, and before dismissal.

A large percentage of direct care services are unexpected, but anticipated. My favorite unexpected visits from the past year have been a male Kindergarten student who declared "I have a tick on my ding ding!," the crying Kindergarten girl who had a green Skittle stuck up her nose, and the autistic 6-year old boy who had enthusiastically stuffed his ear with blue Play Dough. The nurse office is a busy, crowded place at times, filled with health needs ranging from a nosebleed, a breathing treatment, an injury from the playground, to a student wanting Chap Stick, a temperature check, or medication for a headache. There is never a dull moment.

In order to provide the services required by a school nurse, they need to have a working knowledge of pediatric and adolescent health, chronic health conditions, mental health, infectious diseases, and emergency care. One of the most helpful resources is School Health

Alert's (2013) *Clinical Guidelines for School Nurses* (8th ed.). The manual includes many resources and contains an A to Z format of diseases and health conditions, as well as etiology, signs and symptoms to look for, and guidelines for best practice. It has helpful tips on how to manage and treat acute and chronic diseases, emergencies, and minor issues that are common to the school-aged child. It does not take the place of conditions that have a written physician's order, individual care plan, or a state/district's policy, such as an individual district's policy on head lice. "Registered nurses apply their professional skills and judgment in the management of each individual case, but each school and district/system should provide care for all students in a consistent manner guided by local policies and procedures, such as the criteria for referral or exclusion and return to class" (School Health Alert, 2013, p. iv).

In addition to providing the direct care, many visits warrant a message to the teacher, a call to a parent, a referral to the school counselor, the need to send a student home or for a medical referral, or even a call to 9-1-1. Each visit must also be documented, either on paper or in an online charting database, e.g., Infinite Campus. As the saying goes, if you don't document that you did it, then you didn't do it! The documentation of an individual health office visit includes: student's name, date, time in and time out, complaint, assessment/observation, intervention (e.g., whether comfort measures or medication), and discharge (e.g., sent home or back to class). The visits are saved and become a part of the student's permanent record. Documentation is a time-consuming process, but essential to the practice of school nursing. Further communication involves a written nurse's note given to the student, which shows most of the same information. The nurse's note provides a means of communication for the teacher, as well as the parent/guardian. Nurse notes don't always make it back to class, much less home with a student. There are many reasons a student may "lose" their nurse note, however, in case it does

make it home, it needs to reflect the student's reason for coming and what was noted at the time of the visit.

2. "The school nurse provides leadership for the provision of health services" (AAP, 2008, p.1053).

The school nurse plans for the delivery of health services and then shares those plans with staff via email, telephone call, text, or entering information in a database under the student's name, as a means of flagging significant information or diagnoses. The most common program is called Infinite Campus, which is used by all school nurses in Kentucky. When entering health information into the system, a search window will help the nurse select the correct health condition. Space for personalized details about the student's health needs is then completed. Once the information is saved, the health alert is flagged by a caduceus that appears by the student's name every time their page is opened. The health alert serves as an informative reminder of a student's health care need, unless resolved when no longer an issue. The nurse also does individualized healthcare plans (IHP), emergency response & disaster plans (ERP), confidential communications with parents and/or staff, as well as the scheduling of future visits according to their IHP or doctor's orders for medications and treatments.

3. "The school nurse provides screening and referral for health conditions" (AAP, 2008, p.1053).

When I was in nursing school 25 years ago, one of my favorite clinical experiences was going into an elementary school in rural Christian County, Ky. to screen students for lice and scoliosis. These public health screenings were done in a large gymnasium or cafeteria and in large groups, such as one grade level at a time. These types of screenings can no longer be done in large groups. They are done in private, behind closed doors for confidentiality and privacy of

the student. The school nurse now must have a legitimate reason to screen a child for lice, for example. Students must complain of an itchy head, or be seen scratching and digging at their scalp, then the teacher will send them for a head check.

As in the case of scoliosis, a school nurse can screen for it if scoliosis is suspected based on signs and symptoms exhibited by a student. However, it is no longer a routine school screening because it was found that it was most often diagnosed by pediatricians long before a school nurse would screen for it (which was usually during the 8th grade). Health screenings performed by school nurses include vision, hearing, and BMI assessments. Kentucky (per KDE recommendations) requires vision and hearing to be checked before entry into Kindergarten or Preschool, whichever comes first for the student. Also, when a student enrolls in a school for the first time and annually for every first and third grade student. Many of these screenings are performed at the request of the teacher because the student may be exhibiting difficulties with hearing or vision. Finally, these are commonly requested for children who may need special education services and will be included in their referral to special education and their Individualized Education Plan (IEP).

Other methods of screening are for referral of suspicious health conditions. It's a crucial role that a school nurse identify potential underlying medical problems that a student may be having and to refer them for treatment. Examples of these might include asthma, migraines, gastric ulcers, reflux, serious allergies, mental illness, dental disease, and diabetes. When a school nurse identifies and refers a student to a physician early, they are decreasing the negative effects of medical issues on education. Not to mention ensuring continuous treatment and intervention for students through communication and follow-up. The school nurse serves as an advocate for the student, focusing is on what is best for the student's health and education.

4. "The school nurse promotes a healthy school environment" (AAP, 2008, p.1053)

The health and safety of the school starts with immunization compliance. One critical role of the school nurse is to make sure that students are up-to-date on their state-mandated immunizations. When there isn't a full-time school nurse there is a rise in immunization exemptions, thus a rise in communicable diseases such as measles and pertussis, which leads to decreased herd immunity (Maughan et al., 2018). However, parents are less likely to choose immunization exemptions when a nurse is present to provide education in favor of immunizations. Nurses enforce the use of compulsory vaccines for a student's first entry into school, to protect the school community from infectious disease (Bergren, 2017). The school nurse also monitors for infectious illnesses, ensuring they are excluded for the appropriate amount of time, as well as reporting communicable diseases to their local health department.

The health of the school environment includes mental health measures. School nurses can work with school counselors to create and enforce plans for management and prevention of bullying, suicide prevention, safe touch programs, and school violence. "With 13 to 20% of students suffer from bullying, anxiety, stress, depression and similar concerns, school nurses are on the front line of addressing mental health problems…one third of all visits to school nurses have to do with mental health issues" (Maughan, 2018, p. 4).

The Child Nutrition and WIC Reauthorization Act of 2004 required those schools that receive federal funding for meals to "develop and implement local wellness policies that address nutrition and physical activity by the start of the 2006-2007 school year" (Bergren, 2017, p. 3). School nurses not only completed health surveys, but also advocated for more nutritious school food, and a greater focus of physical education. All school nurses must challenge themselves to promote changes to improve the health of the child, family, and community.

5. "The school nurse promotes health" (AAP, 2008, p.1053).

School nurses possess the health expertise to educate students, staff, families, and their community. "School nurses are an incredibly valuable resource for promoting the health of both children and staff through case finding, ensuring environmental safety, infection control…any-one in the education system who is unwilling to take advantage of this resource is doing a major injustice to the students, parents, and community" (Moffa, 2009, para. 7). Other subjects the school nurse can educate on are hand-washing techniques, nutrition, exercise, oral health, puberty, hygiene, immunizations, first aid, universal precautions, bloodborne pathogens, and cardiopulmonary resuscitation (CPR). The school nurse has the responsibility to educate and train staff to recognize and respond to health emergencies. Safety measures are crucial for teachers, especially when a student with asthma, epilepsy, or a risk of anaphylaxis is in their grade or homeroom. Employees need to know that signs and symptoms are common in exacerbations of each health condition. These are different for each student, so individual signs and symptoms are crucial to share.

Finally, the school nurse can model healthy behavior. The school nurse will be exponentially more effective when educating others if they practice what they preach. The most obvious areas are eating healthy (as displayed by the lunch and water bottle on their desk), exercise (as displayed by walking the halls of the school or on the walking trail on the campus grounds during break-time), practicing good hygiene and frequent hand washing in the presence of students and staff, and a clean health office. Opposite behaviors would be a dirty, overweight, cigarette-smelling appearance, and a visibly dirty, messy office, with a bag of Cheetos and a Mountain Dew on their desk. Possibly an over-exaggeration! However, it is a fact that the school

nurse is in a unique position to make a positive impact by promoting a healthy lifestyle. Thus, it is incumbent on them to do so themselves.

6. "The school nurse serves in a leadership role for health policies and programs" (AAP, 2008, p.1053).

As the health care expert in the school, the school nurse becomes a leader in the school's health policies. Other ways the school nurse can assume a leadership role is by participating in safety committees, providing staff wellness days, and promoting school health. They promote school health by implementing mandatory immunization and health screening compliance, promoting the prevention and management of infectious disease, and organizing emergency medical plans. "School nurses, as part of a coordinated school health program, contribute to meeting the needs of the whole child and supporting their success in school" (AAP, 2008, p.1054).

Having a good working knowledge of their district, state, and federal policies and procedures is critical to being a good leader. This is accompanied by time in the school nurse job. They must know where to locate such policies and procedures when they need to and keep them in an easily accessible location. The school nurse can also collaborate with the school counselor, family resource staff member, and the physical education teacher to promote health and wellness among students, staff and beyond.

7. "The school nurse is a liaison between school personnel, family, health care professionals, and the community" (AAP, 2008, p.1053).

Being a liaison means the nurse initiates and maintains the connection between those with a vested interest in a student's health and education. The school nurse participates in the development of IEPs and 504s by contributing to the health section of these documents. These

are the documents, as previously mentioned, that help the student with a diagnosed health condition that may create barriers to learning. They can act as case managers for students with health conditions by ensuring that there is adequate, timely, and ongoing communication and collaboration among a student's family, physician and teachers. Often the school nurse can explain the challenge that a student's health condition can have on their education process and academic success. Striving to make the appropriate accommodations for the student is vital to being a liaison in the school health arena. "Keeping children healthy, safe, and ready to learn" is considered an essential role for the school nurse and should be a top priority for educators as well (NASN, 2016b, p. 2).

In order to serve the community, research shows that health is closely tied to people's homes, schools, and workplaces. To be effective, a school nurse must consider this when assessing the health needs of the student. According to a NASN position statement, the school nurse "should work across sectors, professions, and disciplines to build a culture of health and improve student and community health outcomes by providing leadership, advocacy, care coordination, critical thinking, and mitigation of barriers to health" (NASN, 2018). School nursing is a branch of public health nursing, which makes it more similar to a health department than a hospital. Their role is focused on improving the overall health of the community.

Education, Licensure & Certification

After graduating from an accredited college or university, the person must pass the National Council Licensure Examination for the RN (NCLEX-RN) in their state (NASN, 2016a). Upon passing and receiving a license, the RN must earn a minimum of 14 continuing education units (CEUs) annually, receive a positive work evaluation, and pay to renew their license each year. The RN is typically required to keep a Basic Life Support (BLS) for Health Providers

certification. Once employed, the nurse must obtain certifications that are required by their employer. For example, it is crucial for the school nurse to be a certified instructor of CPR and first aid, in order to keep other school employees trained. Like most certifications, the BLS and Heart Saver Instructor certifications must be renewed biannually.

In the 1980s, the NASN established the NBCSN, which is a national certification program for school nurses. Currently, the process is a six-month voluntary program, but having this certification means that nurses have expertise in school nursing. The purposes are to acknowledge and give merit to school nursing as a practice and to ensure that experts in the field are guiding the examination and certification process. In 2010, the Institute of Medicine (IOM) recommended that to meet the increasing demands of the profession, a school nurse obtain advanced education. “School nursing requires advanced skills included in a baccalaureate program, which consists of the ability to practice autonomously, supervise others, and delegate care in a community, rather than a hospital or clinic setting if allowed by state laws” (NASN, 2016a, para. 5).

Laws and Regulations

School nurses must comply with their state’s licensing boards and Nurse Practice Acts, as well as the privacy laws that provide security for every student’s health records. As a school nurse bridges the gap between health and education, they must follow laws and regulations involving both systems. A school must protect a student’s confidential private information, abiding by Federal laws and regulations. The Family Educational Rights and Privacy Act (FERPA) is “a Federal law that protects the privacy of students’ records” (Trimis, 2020, para. 2). If the school receives any funding from the United States Department of Education, then FERPA applies to them. These are records that are directly relevant to a student, as well as those that are

retained by an educational institution. The immunization records and any health records kept by school nurses belong to this privacy law.

The Health Insurance Portability and Accountability Act (HIPAA) of 1996, protects the school nurse's records. The purpose of HIPAA is to "improve the efficiency and effectiveness of the health care system through the establishment of national standards and requirements for electronic health care transactions and to protect the privacy and security of individually identifiable health information" (Trimis, 2020, para. 4). HIPAA is a federal law that has had a major impact on the immunization practices of school nurses. The sharing of some public health information, such as reporting a communicable disease to their health department, is allowed without authorization from the parent or guardian.

Confidentiality is a huge part of any nurse's education and an important aspect of any nursing specialty. Employers stress the importance of confidentiality and it's known that their job is at risk if private health information is shared. Children are curious by nature, so it is crucial to keep every student's health information private. I have been asked the same questions many times: What's wrong with them? Are they sick? or Why do they have to go home? My answers always depend on the student asking, but are commonly: Worry about yourself! That is their business! or I can't tell you that! The nurse's office is considered a "safe" place to go for all types of complaints and concerns. This idea makes it even more important for the nurse to be trustworthy, so the student feels comfortable to share.

Immunization Compliance

According to the NASN (2015a, para. 1), "Immunizations are essential to primary prevention of disease from infancy through adulthood. Promotion of immunizations by the school nurse is central to the public health focus of school nursing practice." The nurse's role is

to spread awareness, provide vaccine education, dispel myths about vaccines, and remind families about vaccine schedules. Research by the CDC shows the vaccines required for school entry have a high compliance rate, but the rate is still below the Healthy People 2020 goal. There continue to be groups of unvaccinated children in the U.S., which cause outbreaks of diseases that were nearly eliminated, such as pertussis and measles. The CDC reports "the impact of vaccines in reducing and eliminating vaccine-preventable diseases has been one of the 10 great public health achievements in the U.S." "The vaccination of children born between 1994 and 2013 will prevent 322 million illnesses, help avoid 732,000 deaths, and save nearly $1.4 trillion in total societal costs" (NASN, 2015a, para. 2).

Over the past decade or more, there has been a change in society's focus from the danger and risks associated with communicable diseases to a danger of the vaccines. Negative press has linked autism and vaccinations, causing many parents and guardians to seek exemptions for mandatory immunizations. The vaccines are mandated for a reason, they've been tested, studied, and proven safe. It is a huge role of the school nurse to advocate for vaccinations and educate the public on how many lives they save. Historically, the school nurse has always been a champion for immunization compliance. It is an evolving role of the school nurse because they are required to review immunization certificates, enter them into their school database, contact parents of students with missing vaccines, monitor expiration dates of certificates, and assist families who are struggling with the decision to vaccinate.

Each state has an immunization registry or state IIS (Internet Information Service). However, getting access to accurate vaccine information is a challenge because the records are often not recorded or are incomplete. Doctor's offices are not staffed for entering immunizations into the registry, even though they provide the majority of vaccines. Clinics and health

departments also provide immunizations, but when there is a lack of continuous care, record keeping becomes inadequate, and parents frequently misplace or lose health records. People relocate and natural disasters occur making it hard for them to keep up with their child's vaccine schedules, not to mention the hard copies of the records. Ideally, immunization certificates would be standardized nationally and easily retrievable by schools and healthcare providers. Even if started with all newborns now, we would eventually reach a point of standardization for the nation.

In the mid 19th century, public health officials determined a crucial strategy for disease prevention would be laws requiring immunizations for school entry. "It was not until 1980 that all 50 states had laws requiring immunizations for school entry. Although sometimes difficult to enforce, mandatory school immunization requirements have proven effective in reducing the incidence of vaccine preventable disease" (Toole, 2004, p. 203-204). According to the AAP, vaccines have had a vital role in improving the health of children over a short period of time. In fact, my and my parents' generation's had to deal with childhood infectious diseases, such as chicken pox and measles. Today, these diseases have been basically eradicated.

Proof is in the results, which make it easy for a school nurse to promote the immunization guidelines of the AAP. On the AAP's website, healthychildren.org, they list at least 16 vaccine preventable diseases: Diptheria, Haemophilus influenza (Hib), Hepatitis A, Hepatitis B, Human Papillomavirus (HPV), Influenza (Flu), Measles, Meningococcal Infections, Mumps, Pertussis (Whooping Cough), Pneumococcal Infections, Polio, Rotavirus, Rubella (German measles), Tetanus, and Varicella (Chicken Pox) (AAP, 2020, para. 2). The HPV vaccine is one that is newer on the scene and was optional when my children were preteens. They received the 2 shots,

6 months apart, much to their dismay. Now, it is a common vaccine for all students beginning around age 9, until 26 years of age.

School Nurse-to-Student Ratios

The ratio of one nurse to a specific amount of students was first endorsed in the 1970s, when the laws were instituted to protect the inclusion of all students in public schools, specifically those with special health needs and/or disabilities. Healthy People 2020 and the AAP acknowledged the need to have an efficient ratio, thus supporting the NASN's position.

> The NASN recommends a formula based approach with minimum ratios of nurses-to-students, depending on the needs of the student populations, as follows: 1:750 for students in the general population, 1:225 in the student populations requiring daily professional school nursing services or interventions, 1:125 in student populations with complex health care needs, and 1:1 may be necessary for individual students who require daily and continuous professional nursing services (Sloop, 2014, para. 4).

It would be ideal to have this ratio enforced in every state. However, the time it takes to care for special health needs is impossible to guesstimate, it is too subjective and individualized. In some cases, the ratio used would be inadequate and in others it would be too much. It would be difficult to develop a universal method to determine the appropriate ratio. More than half of nurses care for more students than the recommended ratio. Many nurses cover multiple schools or even an entire district on their own, making them responsible for thousands instead of hundreds of students. As a result, the distribution of school nurses is pitiful. One source reported school nurse caseloads can range from 300 to 6,000 per nurse. "School nurses practice independently in a non-health setting, often in professional isolation, sometimes referred to as a silo" (Johnson, 2017, p. 6).

In an article in the American Journal of Nursing (Kennedy, 2014), it was reported that 7,000 school nurses were surveyed by the NASN in 2013. Survey results showed 16% of the school nurses said they were in jeopardy of losing their positions. More than 5% of the school nurses said that assistants or LPNs would inherit their jobs. According to Carolyn Duff, the NASN president, a significant change in a school nurse's role has occurred since the late 90s, largely due to the change in a student's needs. She comments that there are "more immigrant students, more children living in poverty, more children likely to have a food insecurity and poor health because of lack of access. And there are more students with chronic health conditions who need support to manage their illness to stay in school. Schools can't afford not to have a school nurse" (Kennedy, 2014, p.7). Donna Mazyck, the Executive Director of NASN, said "the school nurse shortage is a national crisis" (Woodford, 2019, para. 7).

Emergency Preparedness

Obviously many school districts do not meet the AAP recommendation of at least one RN in every school. However, school nurses are typically the first person called to emergencies and are the most adept at handling such emergencies. If there is not enough nursing staff on hand, it may cause fatal consequences. According to Woodford (2019), CBS This Morning featured a series called "School Matters," which revealed that several children have died after medical emergencies that occurred when no school nurse was present. Hence, it is necessary to have trained staff members in schools, especially when their school nurse is mobile or shared by other schools in the district.

School staff must be trained by the school nurse to recognize and handle emergencies in their absence. Performing this training and developing the emergency care plans is part of the job description of school nurses. "Emergency responses range from acute injury or illness of a

student or staff member, to community wide catastrophes, including accidents, natural disasters, and lockdowns due to criminal activity." When a school nurse responds they assess and facilitate "a rapid, coordinated, effective emergency response" (Johnson, 2017, p. 5). However, "a quarter of all school districts in the nation don't have nurses," therefore, "medical emergencies are typically handled by a school's front office staff" (Sonnenberg, 2013, para. 3).

Each district has different requirements in emergency response training. I have worked in a district that required two staff members per building, in addition to the nurse, that are certified in CPR, AED and First Aid. The district I am currently in has a school nurse present at each school campus every day. It requires one teacher from each grade level to be trained, in addition to at least one administrator per school. The training takes 2-3 hours, every other year and can count as continuing education for staff members. The goal is that every state will someday require all certified employees to be trained to save a life. These are skills that would reach beyond the school walls and impact the community, not to mention their own families.

Pediatrics, a journal published by the AAP, reported the results of a study showing that 3.7 million children suffer a serious injury during the school day, causing around $3.2 billion in medical costs every year. The focus of the article was to survey school nurses and determine the preparedness of schools for emergency situations. The American Heart Association (AHA) and the AAP have published guidelines emphasizing the need for all schools in the U.S. to create and practice medical emergency response plans (MERP). Goals of having an effective MERP include: having a communication plan in place; involving school nurses, physicians, EMS, and athletic coaches/trainers; training staff and students in CPR, AED use, and first aid interventions; and identifying those students and staff at high risk for life-threatening medical emergencies (AAP, 2008).

An article in Pediatrics by Olympia et al. (2005) published the results of a questionnaire that was mailed to 1000 school nurses. The findings, related to emergency management in schools, were the following: 68% of school nurses had to call EMS for a life-threatening emergency in the past year; sprains and breathing difficulties were the most common school emergencies; 86% of schools have a MERP, but 35% do not practice the MERP. Also in the questionnaire, 78% of school nurses had access to rescue inhalers for students with asthma, 32% had access to AEDs, and 76% had access to a source of epinephrine for anaphylaxis. When students with special healthcare needs were present, 64% of schools had a school nurse present throughout the day, and 90% of schools had a MERP. However, when the school had a part-time nurse, 17% did not have a MERP, and 17% did not identify a staff member to make medical decisions when an emergency occurred (Olympia et al., 2005, p. 738-744).

Areas for improvement that were reported were practicing the MERP several times a year, an improved system for calling EMS, more training in CPR and emergency management, and the need to increase access to an AEDs in schools. The results indicated that only 83% of school nurses were certified in CPR, which comes as a surprise and is definitely an area for improvement. It also recommended that school nurses participate in mock-emergency training sessions to increase their level of preparedness. The training sessions would serve as a review for the nurse based on the needs of their student population. As a school nurse, it takes years to learn what they don't know. Some emergencies they may never have seen, whereas with others they may have experience. This survey shows that the two most documented causes for calling EMS were dyspnea and seizures. Trauma-related emergencies account for 4 of the 6 most common school emergencies. A staff emergency is also a reality. The training material used by the AHA, now covers cardiac arrest and stroke.

The AHA and NASN strongly encourage all schools to install at least one AED in each building. The risk of sudden cardiac arrest in a child or young adult is low, at less than 1 per 100,000 children. However, the AHA emphasizes the importance of having an AED on site, due to a potential for a sudden cardiac arrest in adults who are in the school. According to the survey, only one-third of school nurses reported an AED in their schools.

In an article by the AHA (2018), we learn that when a bystander (whether a school staff member or school nurse in our case) uses an AED during a cardiac arrest, the chance of survival is doubled. In fact, "for every minute without CPR, the chance of death increases by 10%" (AHA). Emergency medical services (EMS) take an average of 4 to 10 minutes to reach someone in cardiac arrest. Therefore, intervention is the key! The first step in the chain of survival is to call 911, followed by immediate CPR. The third step is to use an AED. According to the AHA, less than half of those experiencing a cardiac arrest get the necessary help they need before EMS arrives (AHA). The AAP recommends "school nurses take a leadership role in the preparation of schools for life-threatening emergencies by developing a strong partnership with local EMS, school personnel, and local primary care physicians" (Olympia, 2005, p. 742).

Myths and Truths about School Nursing

An article written by Gerber (2017), called Six Myths about Working as a School Nurse is an interesting perspective on the profession. The public often has misconceptions about what a school nurse does. It involves a lot more than lice, ice, and Band-Aids. The following list of myths comes directly from a blog post in Sunbelt Staffing by Gerber in 2017. After each myth or misunderstanding, there is a reality check, or evidence-based conclusion.

"Myth 1: School nurses mostly pass out Band Aids and cough drops." As previously described, it is clear that school nurses perform many skill-based nursing procedures for students

with complex medical needs. They care for daily boo-boos, as well as bona fide illnesses, such as fevers, rashes, sore throats, diarrhea, and vomiting. However, it's far from a cushy, glamorous desk job. It involves assessing and treating acute illnesses, emergency response, employee illnesses and health problems, health education, mandatory screenings, and immunization requirements.

"Myth 2: You don't need any experience to work as a school nurse." Because a school nurse works alone most of the time, they don't have time to stop and contact their supervisor or another school nurse every time a novel health visit occurs. From previous research, it's apparent that having a seasoned nurse is vital. At the very least, they need the knowledge and confidence to deal with a wide range of emergencies, as well as the existing health conditions of their student population.

"Myth 3: School nursing is not challenging." Of course, that never has been and never will be the case. Most public schools are busting at the seams and the nurse-to-student ratio is most likely inadequate. The school nurse has to juggle, assess, triage, reassess, delegate, and prioritize their duties. From experience, I can say it is the most challenging nursing job I've ever had. In fact, show up with your running shoes on is my best advice to other school nurses. The motto of the Boy Scouts of America is "Be Prepared." This is an excellent motto for the school nurse too.

"Myth 4: School nurses only work in elementary schools." They work with all ages, from preschool to graduation, as well as in public, private, and boarding schools. College and university campuses also employ school nurses. The older student population has a whole new set of health problems. In addition to normal complaints and health conditions, the high school

nurse deals with teen pregnancy, drug & tobacco use, sexually transmitted diseases, and student altercations.

"Myth 5: School nursing never changes." Research shows the opposite is true. Nurses deal with more medically fragile children and chronic health conditions, including autism, traumatic brain injuries (TBI), and mental health issues. There are many rare conditions and health issues, past and present, which a child may have to deal with. Nurses must educate themselves on many of these rare diseases. In these cases, they look to the specialists, pediatricians, and practitioners to dictate their management in the school.

"Myth 6: School nurses work in isolation." School nurses work with a team of school professionals, so they are not practicing in isolation. They are also a part of a school health team in most cases, since a large number of districts employ more than one nurse. Collaboration with others on those teams is an important role, even when they are the only employee with health expertise in a school.

Views of a School Nurse

The daily caseload and responsibility placed on a school nurse is different from their colleagues in a hospital, clinic, or physician's office. In a blog post of the American Journal of Nursing by Moffa (2009), the school nurse said she was "treated poorly by administrators, students, and teaching staff," which is often the case due to common misconceptions. According to the blog, the nurse said she "realized that school nurses are considered glorified Band-Aid distributors or the place where children went to avoid classes they didn't enjoy." From the student's she cared, she would hear that "all nurses can do is apply ice to injuries" (Moffa, 2009).

In another blog post of the American Journal of Nursing by Hansen (2018), the school nurse comments on how triage begins as soon as students step off the school bus and come

directly to the nurse. During the morning ritual of getting children ready for school, parents often say something that gives the student hope of going back home. Students enter the health office saying things like, “My mother said if I didn’t feel good to come to the nurse’s office.” The nurse then feels like she has to put on her “Sherlock hat” to determine whether an illness really exists. The school nurse checks temperatures, asks questions, and encourages the child to try eating breakfast or give it some time. It’s often a mystery as to why a child comes in, especially when the complaints are vague or don’t make sense. The nurse may discover that a sibling might be at home sick, homework might not be done, the child might have stayed up too late, or a parent could be out of town. The nurse who posted the blog said “ice packs and Band-Aids have miraculous powers” and that it was not uncommon for her to hand out “psychological ice packs” (Hansen, 2018, p. 66).

The way these nurses presented their daily experiences is something that definitely rings true. They find that a little encouragement, such as a hug, kind words, or a simple ice pack, can make a difference. It’s validation for the child, even if the complaint is psychological or just displaying the need for attention. Understandably, many nurses would agree to feeling like an ignored and devalued staff member in their schools. This can be true of any setting. Of course, when they are needed, they become an urgent commodity, such as in an emergent situation or acute health crisis.

Once they’ve been in a school for a while, they develop terms such as “frequent flyers” and the daily dilemma of reaching parents is ever present. All school nurses spend hours of their workweek just trying to reach a parent or family member, by phone, voicemail, email, or text. There are school employees, such as family resource employees, who have to track parents down by making house calls. Many ill students fall asleep in the health office while waiting to be

picked up by a relative or friend of the family. Some parents don't have the freedom to leave work and often don't have a support system in place for when their child becomes ill or injured. At the end of the day, the school nurse meets the needs of the student, family, and school, by keeping the sick student away from other students and providing a safe place for rest and nourishment to occur. A challenge exists when there is more than one ill or injured child needing to rest. Many school health rooms are the size of a broom closet and I've only seen a few that have more than one cot. Large schools, such as a high school, might have 2 cots, but there is little privacy or protection from germs for the students.

Attendance and Absenteeism

According to the NASN (2015c), adequate school nurse staffing results in improved student attendance and academic achievement. Research shows that the higher the ratio of nurse-to-students, the higher the attendance rate. School nurses help to increase immunization compliance, which results in a stronger herd immunity of the school population and community. They also make improvements in vision correction, dental health, safety, nutrition, and identification of life-threatening conditions. Lower medical costs and improved productivity of parents and teachers are also attributable to the presence and intervention of school nurses.

"Chronic absenteeism, which has a profoundly negative effect on student achievement, is closely correlated with ongoing and/or unmet health care needs" (Maughan, 2018, p. 1). Students who have access to a school nurse are more likely to go back to class, than those who are seen by a non-licensed staff member. A nurse's scope of practice includes assessing and managing a student's health concerns, enabling them to return to class. When non-health personnel see a student who feels ill, they have no choice but to send the children home. A school nurse can detect illnesses and prevent their spread through early intervention measures.

As reported by the Robert Wood Johnson Foundation (RWJF): Health Policy Snapshot Series in 2016, “physical health, mental health, safety issues, and social factors all cause children to be chronically absent from school.” The article published by the foundation seeks to discover the causes of chronic absenteeism, which is “a critical national problem putting more than 6.5 million school children at risk academically.” When a student is absent 15 days or more per school year or about 3 days a month, they are considered to be chronically absent. There is a proven correlation between attendance and future issues in life with health, money, and employment. A student is 7 times more likely to drop out of school when there is a problem with absenteeism after 8th grade. There is evidence to show that students who are “chronically absent in Preschool, Kindergarten and first grade are much less likely to read at grade level by 3rd grade, which makes them 4 times more likely to drop out of high school than proficient readers” (RWJF, 2016, p 2).

According to a review of the literature in the Journal of School Nursing (Yoder, 2020), school nurses can decrease school absences, particularly those children who live in poverty, or children who have a chronic illness or disability. The school nurse may be the first to notice and address a student’s chronic absences from school. They can speak to parents to investigate whether there is an underlying health issue (physical or mental), or if an unmet need or social risk factor is connected to the absences. Once the cause of the absenteeism is determined, the proper resources can be offered to assist the student.

“Students with chronic health conditions struggle with chronic absenteeism, missing about 10% or a month’s worth of school in a school year” (CDC, 2017a, para. 5). Chronic health conditions, such as asthma and diabetes, affect school attendance. Asthma is the most common condition, causing about 14 million missed days of school each year. Another common physical

issue is dental pain, caused by untreated tooth decay. School children in the United States miss at least 2 million school days a year for dental issues. Research also shows that mental health issues can cause a student's attendance to suffer. Social factors in the family, such as instability with housing, transportation, food, employment, and health insurance, can negatively impact a student's attendance. Consequently, "education is a social determinant of lifelong health" (Yoder, 2020, p. 49). For example, "a college graduate is likely to live about 9 years longer than someone who has not completed high school" (RWJF, 2016, p. 4). Children must be healthy to be educated, as well as educated to be healthy people, because the ramifications are life altering.

Impact of Chronic Health Conditions on Education

Despite their state of health, a school nurse can help guarantee that all children have the opportunity for educational success. Between 1960 and 2010, the rates of children who have a chronic health concern or disability that impacts their daily lives have increased by 400% (Johnson, 2017). Since these students are now educated alongside their peers, the importance of a nurse to assist them in their educational process is greater than ever. Students with chronic health conditions are "entitled to an education in the least restrictive environment…the school nurse collaborates with education staff to promote a safe and accommodating school environment." The school nurse begins by educating their coworkers about the "impact of the chronic health condition on the student's ability to engage in their education" (NASN, 2017a, para. 3).

Research shows that 86% of children with special healthcare needs (SHCN) need prescription medications and nearly 30% require specialized healthcare therapies. "A student with a disability will fit into one of two categories: a) student's whose disability affects their educational progress, and b) student's whose disability restricts access to their education"

(Johnson, 2017, p. 4). For the first group, they can receive special education services. The second group (e.g. severe food allergies or Type 1 Diabetes) is eligible to receive accommodations through the development of a 504 plan.

Type 1 Diabetics do not make up a very large percentage of the chronic health conditions seen in schools, with 2 to 3 diabetics out of every 1,000 school children, or 0.3% of children. However, diabetes is a lifelong chronic health challenge and needs close monitoring at school to prevent complications and stave off problems these individuals may face as adults. The care provided by a school nurse "is related to better monitoring of blood glucose levels and lower A1C levels…and better at detecting low blood sugars" (Bergren, 2012, p. 48). Even though there may only be a few diabetics in a school, they spend a great deal of time in a nurse's office. It is crucial that these students have a medical 504 plan, which allows them time to deal with their health condition, and not miss out academically. Students with diabetes come to the nurse for frequent blood glucose monitoring, carb counting, insulin administration, and treatment of high or low blood sugars before returning to the classroom. They are at the top of the priority list, when it comes to triaging health needs.

A detailed Diabetes Care Plan from their physician must be followed and good communication between the parents and physician are critical to successful management of these students. They need safe management by having emergency medication on hand for severely low blood sugars, adequate supplies on hand for monitoring and treatment of symptoms/blood glucose numbers, and a buddy system in place to ensure they are not walking to the nurse's office alone. An article related to projections in the incidence of Type 1 and Type 2 diabetics was published by the American Diabetes Association (ADA) in 2012. They project that between

2010 and 2050, the numbers of students with Type 1 Diabetes will almost triple, and those with Type 2 Diabetes will quadruple in that 40 year timespan (Giuseppina et al., 2012).

According to the CDC, epilepsy often has a negative effect on academic performance. Children and teens with a seizure disorder are more likely to have impaired cognitive abilities. The result is lower IQ scores, language difficulties, behavior problems, and decreased cognition. It is unknown as to whether the condition or the medications that treat the condition are to blame for these impairments. In 2010 the Epilepsy Foundation found that "more than 326,000 school children have epilepsy, which cannot be effectively treated in a third of the cases" (Bergren, 2012). Children who have a known seizure disorder, in which they've had a grand mal or convulsive seizure, are frequently prescribed diazepam. Diastat (diazepam) is a rectal gel, which is a sedative emergency medication that is given for a prolonged seizure or for repetitive seizures that occur back to back. The emergency medication and Seizure Action Plan signed by the physician must be in the nurse's office before the students can safely attend school. There is a wide spectrum of seizure types and an even wider range of signs and symptoms. Seizure disorders usually have auras or warning signs and are unique to the individual in triggers, appearance, and symptoms. The school nurse's role in teaching staff is crucial, they train staff on what to watch for, first aid measures to apply, when to call for help, and how to administer the emergency medication.

Roughly 7 million children in the U.S. have asthma, which is over 9% of all school-aged children. Although one of the most common health conditions seen in schools, it is not related to a decrease in academic performance alone. However, if associated with other social risk factors, such as low income, it can affect school attendance and disease management. Research by the CDC (2017b) shows that having a full-time school nurse who provides asthma education

programs at the school can improve the outlook for these students, especially in terms of attendance. Many students do not know how to use their inhalers properly and need extra coaching from the school nurse. Finally, the nurse can connect the student with a resource coordinator who can buy needed medications if there is no health insurance or a lack of funds to cover those expenses. It's also possible for the older, responsible student to take one inhaler back and forth from their home. Accommodations can be made for them to carry their medication on their person, when approved by their physician in writing.

Food Allergies are an increasingly common chronic health condition. Schools are inundated with large numbers of students with some form of food allergies. There is a wide gamut ranging from those with mild reactions to one food to those with extensive lists of allergens that can cause life-threatening reactions, called anaphylaxis. According to results from the NASN, "8% of all children have a food allergy, with 40% having a history of a severe reaction. Peanut allergy doubled in children from 1997 to 2007. Fatal food anaphylaxis is most often caused by peanuts (50-62%) and tree nuts (15-30%)" (Bergren, 2012, p. 48). Some school districts enforce strict food allergy policies that eliminate food as a reward, as well as not allowing school parties where food is brought in from outside the school. In districts that do not have such policies, there is no one to police the food going into the classroom, except the nurse and/or teacher. Therefore, communication between school nurses, parents, physicians, and cafeteria employees is essential. Finally, epinephrine (e.g., EpiPen or Auvi-Q) is the most common emergency medication in the nurse's office. Some students carry their epinephrine on their person as ordered by their physician. The cost of this life saving medication is unrealistically high, but essential. In recent years, pharmaceutical companies have been called out for the outrageous prices of EpiPens. However, many nurses must require the medication to

be in place before the student can attend school, which can result in a financial burden on a family.

As to the effects these chronic health conditions have on attendance, it has been shown that poor oral health and asthma have the greatest impact on attendance. Poor oral health occurs in at least 16% of all school children. It is associated with a decreased ability to learn due to the pain from toothaches. Of course, social and economic factors play a role in dental health, which has further implications of future health and success after graduation.

"The services of a school nurse support readiness to learn, classroom participation, and academic progress…improved health outcomes too" (NASN, 2017, paras. 5-6). According to the NASN, there are 6 areas in which a school nurse plays a vital role when managing students with chronic health conditions. These roles are:

> 1.) Interpreting a student's health status; 2.) Explaining the health impairment to the school team; 3.) Translating the healthcare provider orders into the school setting by developing individualized healthcare plans (IHP); 4.) Providing assessment, direct care, coordination, and evaluation of care; 5.) Providing nursing delegation that aligns with state nurse practice acts, rules, and regulations; and 6.) Advocating for appropriate accommodations in the educational setting (NASN, 2017, para. 4).

Time and money are saved every time a school nurse manages a chronic health condition. Teachers are not sidetracked by student health issues and are able to focus their time and efforts on teaching. According to the CDC, "chronic conditions consumed 75 cents of every health care dollar spent in the US in 2005" (Fauteux, 2010, p.3). Further evidence by the CDC reports that medical costs are "an additional $1,377 to 9,059 for each child who has asthma, diabetes, or seizure disorders" (Maughan, 2018, p. 4). Most states have a Medicaid law that allows schools to

pay for and receive reimbursement for special medical services provided by a school nurse or UAP. The CDC reports that more than half of these schools do so (Maughan, 2018, p.4). Finally, a recent study by the CDC has reported "for every dollar invested in a school nursing program, society gains $2.20" (CDC, 2017a, p. 1).

Individualized Healthcare Plans (IHP)

The NASN (2017) reports that an important school nurse duty is to develop, implement, and evaluate individualized health care plans. The students who require an IHP are those who have a chronic health condition or medical diagnosis needing nursing services or a diagnosis that could result in an emergency situation. Websites by the ADA, the Epilepsy Foundation, the Food Allergy Research and Education (FARE), and the American Lung Association publish standardized care plans for physicians and nurses. The school nurse often uses these standardized plans because they meet all the criteria for the student who has diabetes, epilepsy, food allergies, and asthma. Then, physicians and school nurses individualize these plans to meet the health care needs of the student in the school environment. However, when a student has a rare disease or a less common condition, they must use the nursing process to develop the IHP. All IHPs must be signed by the parent or guardian of the student and the treating physician or nurse practitioner in order to be legal. Their signatures imply consent for and agreement with the plan for school purposes.

The ANA and NASN hold the position that the "scope and standards of practice outline how implementation of each step of the nursing process strengthens and facilitates educational outcomes for students." The steps used are: "Assessment, Nursing Diagnosis, Outcome Identification, Planning, Implementation, and Evaluation" (NASN, 2015b, para. 5). The school nurse develops a new plan for each school year, as they are only approved for the school year in

which they are developed. It is their responsibility to review the plan often and make revisions when a student's health status changes. The IHP is not a nursing task that can be delegated to unlicensed school personnel. These plans are part of a student's confidential medical record. Hence, they are only shared with staff members who have direct contact with the student.

One of the most important school professionals in need of the completed IHP is the cafeteria manager when a student is diagnosed with a life-threatening food allergy. They are responsible for providing food for each student and need to know what a student must avoid in their diet. It is a critical accommodation and must include the student's picture, food allergy, and any other accommodation (e.g., sitting at an allergy-free table during meals) that is included in the 504. School nurses are required to ensure that the complete Food Allergy Emergency Action Plan is attached to the 504, and the information in both is the latest information in the school database. There are also large numbers of food intolerances, such as lactose intolerance, that require physician's statements indicating what food(s) the student is to avoid and what substitutions are to be made.

The IHP takes a great deal of time and effort for the school nurse at the beginning of the new school year. Obtaining parent and physician signatures is a challenge. In addition, they are making the required copies, e-mailing employees, and updating digital records as some of their most important roles. Most school nurses are contracted to work the days that students are in school, with an additional 8 to 10 days for training, creating plans, taking medications, and organizing their office. When a district's school nurse is a mobile nurse, the caseload is doubled, tripled, or worse. Spread too thin is an understatement. The additional days are insufficient for the mobile nurse and they typically put in overtime during the first few weeks of school. For safety's sake, every school and every student deserves their own school nurse.

School Nurse Collaborations

School nurses must get all of their ducks in a row for the collaboration process to be successful. They collaborate with persons inside the school (e.g., teachers, administrators, and counselors) and outside the school (e.g., parents or guardians, physicians, practitioners, and other nurses) to come up the best medical plan for the student. Teachers and critical school personnel have the right to be informed of students who have medical problems. It's fair to say, notification before the first day of school is ideal. However, it is challenging to send everyone an email on every student with a health issue. There is a level of priority to plan for when informing others. School nurses learn the best process for them through trial and error. I have found that a student who will be demanding of a nurse's time and resources every day is a good starting point. For example, the diabetic student typically comes to the nurse more than any other student. Following diabetes, students with epilepsy, severe allergies, asthma, and daily medications are the main five in importance for the school nurse.

Online registration for school enrollment is the norm. Registration opens several months before school starts in the fall, which allows parents to enroll their child/children at their convenience. There is a medical component to the registration application, which a parent must complete before they can save the application and complete the enrollment. The nurse then has access to this information as soon as the parent completes it. As previously reported, electronic documentation allows teachers to see students with health conditions when they generate and review their rosters. The caduceus indicating a health alert is on each student's main demographic page in the database. Individual classroom rosters show the caduceus, as well as any other pertinent services or accommodations needed for the student. A health condition alert can also be generated by the grade and given to every teacher, so they can see information on

more than just their homeroom students. The health alert is crucial for teachers who teach a specialty class (e.g., music, art, physical education, and library) since they teach every student and every grade. Hence, it is a vital duty of the school nurse to enter all health conditions and keep them updated. The school nurse also shares copies of doctor's orders and IHPs with teachers. The best scenario is for each teacher to maintain a subfolder that contains their daily schedule, homeroom roster, health alert, emergency response plan, and doctor's orders or IHPs.

A vital part of being a liaison between a student's family, school personnel, and the health care professional is to be an excellent communicator. The school nurse must contact the parent or guardian of students who have an existing health condition from the previous year to see if any changes have occurred. Furthermore, the nurse must make contacts for students with newly documented health conditions to get initial plans in place. Physicians and practitioners take the lead in diagnosing and coordinating care for their patients in the school environment. The school nurse often has to obtain consent from the parent/guardian to discuss their child's health issues with the doctor's office. Communication with doctor's offices involves phone calls, faxes, emails, and in-person visits to ensure current orders and plans are in-hand before the first day of school. The rule of thumb is to have the signed plans and consents in place before day one, on any student needing daily medications, treatments, invasive procedures, and emergency medications for their condition. However, orders and plans for students who need prn care from the nurse (e.g., as needed drugs or treatments) can be obtained after school starts, since their needs are usually less severe. Finally, doctor's orders and IHPs can upload to Infinite Campus for teachers to view, or hard copies can be given to those who prefer them. Either way, sharing information promptly and on a need to know basis is an essential responsibility for the school nurse.

Research on collaborations between school nurses and special education teachers shows that these are the two most significant and decisive school employees surrounding student's with special healthcare needs (SHCN). It is a fact that, when a student needs specialized care in order to attend school, coordination of care is critical. Depending on the severity of the needs, a student with SHCN is placed in a general education classroom or a special needs classroom. In health conditions, such as asthma, diabetes, and food allergies, the student requires specialized care, plans, and accommodations, but these usually occur in general education classes. Those in special needs classes are often students with severe disabilities who have an IEP and will achieve a certificate of completion (instead of a diploma) when they graduate. Students with severe disabilities, such as traumatic brain injury (TBI), Down's syndrome, ASD, cerebral palsy, tracheostomies, tube feedings, and sometimes epilepsy, make up the special education roster. Thus, the school nurse collaborates with both sets of teachers.

According to the American Federation of Teachers (AFT), "it is not appropriate for special or regular education teachers to provide nursing services for children with special healthcare needs, and only in very special circumstances should teachers provide personal care services" (Pufpaff et al., 2015, p. 685). Special education teachers benefit from a basic knowledge of health conditions they may care for, as well as how to perform a variety of procedures, administer medications, provide first aid, and emergency care. These teachers play a critical role in arranging the services needed by students with SHCN. Their partnership with the school nurse is integral to a student's success.

"The AFT takes a strong stand that nursing services must be provided by the school nurse, LPN, or well-trained and competent health assistant working under the direction of the school nurse" (Pufpaff et al., 2015, p. 685). However, the likelihood that the school nurse will be

available 100% of the time is small. Therefore, the school nurse must decide which procedures to delegate and to whom. It is the nurse's responsibility to ensure hands-on training, written procedures, and continuous supervision. The delegation and training are even more critical when the school nurse is mobile and must divide their time between schools.

Students with SHCN are commonly at risk for frequent changes in their conditions. They may experience hospitalizations due to exacerbations in their conditions or acute infections/ illnesses. Nurses rely on teachers to communicate these changes, so the student can safely return. When the nurse isn't aware of the health changes, they are not able to make changes in accommodations or addendums to IHPs. Even a small change to a procedure or medication needs to be reflected by written doctor's orders. The teacher, nurse, and parent are not allowed to make adjustments to prescribed care. Only the physician or practitioner may order changes. Thus, deliberate, continuous communication between teachers and nurses is essential.

In the Journal of School Nursing (2017), one study focused on the experiences faced by regular education teachers when dealing with chronic health conditions. When a school nurse was not present, the teachers in one state indicated they spent between 36 to 73 minutes per day on health issues. However, when a school nurse was present, 80% of regular education teachers felt confident that students with SHCN were safer, communication with the nurse was helpful, and they were able to focus on teaching. Also, teachers reported a 75% decrease in the amount of time they spent on healthcare issues per day (Selekman, 2017, pp. 308-313).

Students in regular education classrooms are suffering when a school nurse is not present to handle such issues. A teacher should be able to focus on academic instruction, while the nurse, or another well-trained employee, takes care of healthcare needs. Teachers reported two main concerns. They felt they needed better communication and were often frustrated when it took

weeks or months until they were told about a student's chronic condition. Secondly, they felt "pre-teacher education must address the significant issues of children with chronic conditions in the classroom" (Selekman, 2007, p. 313). Over 52% reported no training on children with chronic conditions during their pre-teacher education programs. They expressed a demand for more training in medical emergencies, CPR, EpiPen use, examples of real-life scenarios, as well as learning about chronic health conditions. Thus, the challenges faced by the teacher and nurse need a resolution. Nurses can help teachers and need to be present to do that.

"The top five health problems in children in the U.S. are now mental health problems not physical problems…one in five children have a diagnosable mental health disorder," and "5% have impairment in functioning that is extreme" (Bergren, 2012, p. 48). As previously mentioned, a school nurse devotes one-third of their time on mental health issues. There is an overlap in student needs that can be addressed by either the school counselor or the school nurse. Thus, these two "helping professions" make up an obvious collaborative team. The American School Counselor Association (ASCA) and the NASN agree that "both professions support students and provide students with the skills to promote success within the school in areas such as academics, career development, and social-emotional domains, as well as maintaining healthy dispositions" (Tuttle et al., 2018, p. 3). Both professionals are aware of confidential information about students. They must work together to support and assist students by providing a "safe, nonjudgmental environment" (Tuttle).

School counselors and school nurses both provide services to students that promote positive mental and physical health. Children with anxiety, fear, abuse or neglect issues, and problems with bullying, as well as those with diagnosed mental health issues, will sometimes want to see the nurse for physical manifestations of their problems. There are times that past

experiences with students help to direct them to the school counselor for early intervention. However, it's often weeks or months before the physical complaints are discovered to be psychosomatic. Frequent visits to the nurse's office must be investigated to rule out a physical origin. Referrals between nurses and counselors are helpful to determine how to serve the student best. "The ASCA National Model infuses collaboration as a major role of school counseling" (Tuttle et al., 2018, p. 14). When everyone works together to remove barriers to a student's academic progress, a better quality of life is an attainable goal within the school walls. The school nurse should be considered a vital member of this team, wherein collaboration equals success.

Legal Issues and Ethical Codes

Licensing boards, nurse practice acts, codes of ethics, physicians orders (standing orders or individual orders) affect a school nurse's job, and held accountable for any negligence or malpractice. They can be legally liable for making mistakes, whether intentional or unintentional. The school nurse is responsible when they don't do things they are supposed to, as well as when they do something they shouldn't have done. According to a NASN survey, the school nurse yearns to know more about legal issues and how they affect their practice.

> The article goes on to list the top "7 must-know legal facts for school nurses: 1.) Failing to question or challenge an administrator could result in liability. 2.) Most negligence cases against schools frequently relate to injuries. 3.) School nurses are at a higher risk for liability compared to their colleagues. 4.) If a nurse attends an out-of-state field trip, they must meet the nursing license and practice laws of that state. 5.) Student health records should be kept under lock and key. 6.) Not every school staff member should

have access to all student health information. 7.) Everything should be documented" (Chandler, 2014).

Looking at them individually, the school nurse must speak up if a student's health or safety is at risk. If they do not speak up, they are negligent in terms of not doing something they are supposed to do. When parents sue schools, it's often "based on allegations that actions taken or not taken do not meet the standards of care" (Chandler). The school nurse must be vigilant when following dual regulations and working in a location as the only healthcare provider. They should stay updated on pertinent federal and state laws.

Student records should always be guarded from view and secured with a physical lock. A confidentiality breach is grounds for termination, so privacy laws are critical safeguards. Any school employee who is privy to confidential information must have a "legitimate educational interest" for access to information to be allowed (Chandler, 2014). According to FERPA, "if any approved school staff person besides the nurse needs to see student health information, their access should be logged with their name and title, date, and legitimate interest" (Chandler). Documentation ensures everyone's liability stays in check and confidentiality is secured.

Another area of legal importance is in cases of child abuse or neglect. The failure to report even suspected abuse or neglect is a liability resulting in possible criminal charges. States and Departments of Education enforce such laws and train school employees. The districts in Kentucky have an online Safe Schools Training Program that includes sessions on our duty to report, which is required for every new employee and is reviewed annually. All persons are obligated to report dependency, neglect, abuse, or human trafficking. In cases of abuse or neglect, the school nurse must provide social service caseworkers with private health

information. They are normally allowed access to an entire student file during their investigations.

Licensing laws are taken into account for out-of-state field trips. A nurse's license is only good for the state they're licensed in, with the exception of compact states. A compact state allows a nurse with a multistate license to practice in their state. When the nurse complies with the Nurse Licensure Compact (NLC), they can legally provide nursing duties in the state they are visiting, as if they were in their home state. The nursing duties include delegation to UAPs or teachers. However, not all states are compact states (NASN, 2019). "The school nurse is the expert healthcare provider in the school setting who can support and guide students and staff in meeting the healthcare needs of students both at school and on school-sponsored trips" (NASN, 2019). Likewise, students with disabilities or SHCNs must receive the same accommodations to attend a field trip as they would to attend school. Teachers can invite parents to participate with their child, but never require them to go. The school nurse must provide the services themselves, or delegate someone else to offer specialized services.

NASN believes in "a commonality of moral and ethical conduct" (NASN, 2015d). In 2015, the ANA established the *Code of Ethics for Nurses with Interpretive Statements*, which the NASN adopts, in addition to ethical guidelines set forth by the state boards of nursing. School nurses must build their practice on the NASN core values and NASN Code of Ethics. The core values are "child well-being, diversity, excellence, innovation, integrity, leadership, and scholarship" (NASN, 2015d, p. 217).

One article, in the Online Journal of Issues in Nursing by Savage (2017), discusses that nurses and medical professionals should adhere to 4 ethical principles. These principles are "autonomy, beneficence, non-beneficence, and justice." "Autonomy means self-rule," which

means the healthcare provider honors the decisions of the patient/student. The school nurse can give the student the ability to make decisions, when feasible. However, they are minors and subject to the decisions made by their parents or guardians. “Beneficence is doing good or bringing about good,” which is a goal in caring for another’s health needs. “Non-beneficence means preventing harm.” A nursing action can be both, one that does good and prevents harm. Finally, “justice means fairness.” Practicing justice means treating people equally and distributing resources equally or fairly (Savage, 2017). These principals are summarized in the Florence Nightingale Pledge from more than a century ago, which proves that the most fundamental principles are unchanging and indisputable.

Conclusion

Research has shown that growth and change has occurred in the field of nursing, specifically school nursing. The landscape has changed. Thus, adjustments in methods and standards of practice have evolved to go along with it. Student populations now include a mainstreaming of chronic health conditions. If the law states that every child deserves an equal opportunity for an education, then, every child deserves access to a school nurse. Only a full-time school nurse can provide for the full spectrum of specialized care needed in today’s schools.

“The health of our nation’s youth affects the health of the nation now and in the future, and is a critical investment.” Research has shown “a strong return on investment, especially in areas of immunizations, mental health services, and the treatment of chronic conditions” (Maughan et al., 2018). An investment in children is always worth more than a job title or income. It’s a ministry. It’s a beautiful calling. Yes, a school nurse belongs in every school! Where they can ensure a safe and healthy environment, one where they and those they care for can bloom.

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