





Imperative Issues Affecting School Nurse Practice

IMPLICATIONS FOR THE FUTURE OF SCHOOL NURSING AND CHILD HEALTH IN WASHINGTON STATE

By Robin Fleming, PhD, RN, NCSN

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About the author

Robin Fleming is an independent researcher and school health consultant whose expertise is in school nursing and school health practice and policy. Dr. Fleming also has conducted research on health and educational disparities, and on immigrant populations in schools. She speaks frequently on these topics and has published research in peer reviewed journals including Public Health Nursing, the Journal of School Health, the Journal of School Nursing, and Teacher Education and Practice. Dr. Fleming received her doctorate in Education and Leadership Policy Studies from the University of Washington in 2008. She serves as the Washington State Director for the National Association of School Nurses, and continues to work full time as a school nurse at Franklin High School in Seattle.

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Executive Summary

he practice of school nursing, both in Washington State and in the nation, is beset with a multitude of growing challenges. Over the past decade rates of diabetes, anaphylactic food allergies, seizure disorders, asthma, obesity, mental health problems, and other health conditions have substantially increased in the student population. Growing numbers of children who qualify for services under federal laws require more nursing time to fulfill the requirements of their accommodations. Immigrant children now account for one of every five students, bringing unique cultural, health, social, and emotional issues to school nurses' offices. The numbers of poor and ethnic minority children who shoulder disproportionate levels of chronic health conditions and lack access to health care, also are increasing in schools.

Within this context the need for the provision of more school nurse services has increased. Additionally the complexity of those services required constitutes an even greater need. However, structural, political, and economic constraints challenge nurses' abilities to ensure that service delivery happens in a safe, effective, and consistent manner. The need for children to receive nursing care in schools and the limitations placed on school nurses, whose focus is to ensure safe and effective delivery of these services, create conflict in establishing a balance between optimizing student health and learning in a way that does not compromise student safety. This conflict is further exacerbated by the supervisory duties that school nurses must maintain to ensure safe delegation by unlicensed assistive personnel (UAP) when nurses are off site. In addition, tensions can flare between school nurses and educational administrators who often supervise school nurses and who at times attempt to enforce or promote practices that are in opposition to nursing judgment and protected by state laws and nurse practice acts.

This paper is a response to the growing conflicts created by reduced support for school nurses, lack of awareness of nursing authority, and inappropriate supervision of school nurses in a time when their professional services in schools are urgently needed to help reduce long-standing health and educational disparities. The primary areas of concern addressed in this paper are medication delegation, ratios of school nurses to students, nursing supervision in the context of educational settings, and issues of nursing authority and legal parameters (or lack of them) that guide and define nursing practice in the school setting.

This paper summarizes the literature and other data to describe these issues, both in Washington State and nationally. It provides an overview of state responses to these challenges, and concludes with recommendations to stakeholder groups for ways to promote child health and safety by strengthening the practice of school nursing.

RECOMMENDATIONS

Recommendations are made for school nurses, employers, higher education, research needed, and possible policy development.

School Nurse Actions

As the gatekeepers of child health throughout the nation's schools, school nurses have the breadth of perspective and the depth of experience to qualify as the chief experts at identifying and prioritizing issues to promote child and public health, as well as identifying ways in which health status impacts student learning. School nurses must:

- Lend expertise, money, and time to state and national organizations that lobby on their behalf and on behalf of the children, families, and communities that they serve.
- Shelter school nursing from the deleterious effects of the current and continued nursing shortage by being open to acting as preceptors for nursing students, and by lending their expertise to the colleges and universities that are producing future nurses.
- Attend staff, special education and school board meetings to advocate on behalf of students and to explicitly and publicly define practice priorities that can promote increased understanding of the unique way in which school nurses contribute to the common goals shared by their educational colleagues.

Employer Actions

- School districts should be required to have a school nurse as an advisory and/or voting representative to ensure child safety and to better inform and enact nursing's role in decreasing educational disparities and improving academic outcomes.
- School districts should be required to utilize nurses to supervise and evaluate school nurses.
- Employers should support standardized training for health care aides as well as for school nurses delegating medication administration to unlicensed assistive personnel (UAP).

Higher Education

- Institutions of higher learning both those who train nurses and those who train teachers – should have interdisciplinary curricular components that educate teachers about health issues that impact academic achievement and nurses about the specialized role and requirements of working within an educational setting.
- School nurses should, at a minimum, have a bachelors of science degree, and should receive specialized curricular instruction about school nursing practice and school health programs as part of a four-year degree program.

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Research and Policy

Leading U.S. health agencies collectively recommend nurse-to-student ratios of 1:750 for regular education students (American Academy of Pediatrics, 2008; Centers for Disease Control, 2008; National Association of School Nurses, 2010). Because achieving these recommendations will take time for the majority of school districts who do not yet meet these recommendations, the following stopgap measures may be put in place to better safeguard student safety until these best practices can be attained:

- In the absence of a bachelor's trained school nurse, medication
 administration is most safely conducted by other licensed health
 personnel, such as LPNs or two year degree RNs. If UAP are
 administering medications, this must be done with consistency
 and standardized training. Penalties up to and including corrective action, should be taken in instances where safety is compromised by not following established procedures for medication
 delegation and administration.
- Bachelor trained school nurses must have authority over their practice as reflected in the Washington State Nurse Practice Act.
 Employers of school nurses should write this into school nurse job descriptions along with written policies and procedures for student care including medication administration.
- Licensed health personnel should be evaluated exclusively by other licensed health personnel. Educational administrators specialize in teaching and learning, and are not qualified to evaluate nursing practice, policy, or authority.

When best practice has been achieved, and a bachelors (or higher) trained nurse is working in or available to every school every day within reasonably defined ratios, other health partners such as two-year trained RNs, LPNs and certified aides may help to fulfill some of the functions currently conducted by school nurses that impede their ability to work to the full extent of their licensure. From a financial perspective, policy makers should be made aware that adding more school nurses in schools is likely to save money – potentially millions of dollars in health care annually.

Research should be conducted that builds on prior research that addresses the economic and health benefits conferred by school nurse services to children and communities. Such research can help inform prioritization and configuration of health services resulting in more efficient service delivery and cost savings – potentially millions of dollars in health care and social services annually.

School districts and other entities that employ health care providers working in schools throughout Washington State should be required to submit information on the type of licensure, and numbers and types of health care employees to state agencies such as the Office of the

Superintendent of Public Instruction. Individual student data within the Comprehensive Education Data and Research System should be required to include student health conditions. Schools also should be required to implement electronic student health records, including coding specific for nursing intervention and related student outcomes. This data is important to informing policies, programs, and future research. Such data can help serve to identify, plan, evaluate, and analyze school nursing services in a variety of demographic contexts, thus illuminating and ultimately improving the health infrastructure, the quality of health care delivered, and the health outcomes of unique communities.

Background

Approximately 55,000 school nurses nationwide serve the health needs of some 60 million students. A growing body of research provides evidence that school nurses promote the health, safety, attendance, and academic achievement of children by providing a multitude of clinical, public health, health education, and legally mandated tasks. Dramatic social and cultural changes that have occurred in Washington State and throughout the nation, particularly during the past decade, have significantly altered the practice environment for school nurses. Increasing numbers of immigrant students, students with chronic health conditions, and laws that mandate inclusion of growing numbers of special needs children into regular education programs, tax the resources and the ability of school nurses to safely and effectively meet growing demands for increasingly complex care in schools.

One component of school nurse practice that is currently under scrutiny both nationally and in Washington State is school nurses' delegation of student medications to unlicensed assistive personnel (UAP) in school settings. Because most school nurses are not funded to be present in their schools every day, medication administration and some other nursing tasks and procedures that are required for the health and optimal academic and social functioning of children, must be delegated. To promote the health, safety, and welfare of children who may need medications delivered at school, Washington State's Nurse Practice Act expressly prohibits the delegation of medications for which nursing assessment and judgment is required (RCW 18.79).

The need for children to receive nursing care in schools and the limitations placed on school nurses whose focus is to ensure safe and effective delivery of these services, create conflict in establishing a balance between optimizing student health and learning in a way that does not compromise student safety. This conflict is further exacerbated by the supervisory duties that school nurses must maintain to ensure safe delegation by UAP when nurses are off site. In addition, tensions can flare between school nurses and educational administrators who often supervise school nurses and who at times attempt to enforce or promote practices that are in opposition to nursing judgment and protected by state laws and nurse practice acts.

This paper is a response to the growing conflicts created by reduced support for school nurses, lack of awareness of nursing authority, and inappropriate supervision of school nurses in a time when their professional services in schools are urgently needed to help reduce long-standing health and educational disparities. This paper seeks to clarify the complex nature and requirements of school nurse practice in the United States and in Washington State by exploring the central elements that inform it. These elements can be categorized as: 1) Health status and characteristics of student populations; 2) Legal mandates required of school nurses to care for a variety of populations; 3) The working environment and culture in educational settings where health care is not the primary concern; 4) School nurse competencies and practice requirements necessary to effectively improve child health and academic outcomes in the context of the elements listed above; and 5) The relationships among laws, nursing practice, and advocacy groups, all of which seek to promote child health through overlapping and sometimes contradictory means. Following discussion of these elements, recommendations are made addressing alternatives that can enhance the safety of children who both need and require school nurse services at school.

Health Status and Characteristics of Student Populations

GROWING NUMBERS OF CHILDREN WITH HEALTH CONCERNS

In the past decade, dramatic changes have occurred nationwide and in Washington State with respect to the growing numbers of children with health concerns, and with the increasing severity of those conditions (Charting Nursing's Future, 2010; Thronson and Conner, 2007). Amidst growing caseloads, school nurses must prioritize practice responsibilities to ensure that emergency plans and daily care management protocols are in place to meet the needs of increasing numbers of students with serious health conditions such as asthma, diabetes, anaphylactic allergies, and seizure disorders.

On a national level, asthma prevalence has increased from 7.6% in 2001, to 8.4% in 2009 (Centers for Disease Control (CDC), 2009). Children are hit particularly hard in terms of asthma prevalence: In 2009, in children ages 15 and under, 9.8% of them had asthma compared to 8.0% of people ages 15-34 (CDC, 2009). In Washington State, asthma rates of children in Class II school districts (those with student enrollments of 2,000 or less) increased from approximately 3600 in the 2002-03 school year, to 5000 in the 2005-06 school year (Thronson and Conner, 2007).

Similar upward trends occurred with other chronic health conditions such as diabetes and obesity. Nationwide, 0.22% of children under age

20 – or 186,300 children – have diabetes, and another 2 million children ages 12-19 are pre-diabetic (American Diabetes Association, 2010)¹. In Washington State, rates of diabetes have inched upward each year, with approximately 300 diagnosed diabetic children in Class II school districts (Thronson and Conner, 2007). As obesity is implicated in soaring rates of diabetes, this underscores the important preventive work that school nurses conduct in regard to improving population health. This work is particularly urgent given that children with diabetes or pre-diabetic conditions will join the ranks of adults whose prevalence of diabetes has nearly quadrupled in the past three decades, from 5.6 million in 1980 to 18.1 million in 2008 (CDC, 2010). These rates are similar to those in Washington State, in which 1.4 million residents have diabetes or pre-diabetic conditions (Washington State Department of Health (WSDOH), 2007).

From 1997 to 2007, the prevalence of food allergies in children increased 18% nationwide, representing 3 million children (Branum and Luckacs, 2008). Seizure disorders also affect a growing number of children: 45,000 children under the age of 15 are diagnosed with epilepsy each year, adding to the 326,000 who are currently diagnosed (Epilepsy Foundation, 2011). Lewis (2010) reported the following increases from 2001 through 2009 in Seattle Public Schools (SPS), the largest school district in Washington State: The numbers of children with asthma increased from 2353 to 3561; seizure disorders increased from 256 to 334; children with potentially life-threatening allergies rose from 235 to 1024; and numbers of diabetic children increased from 58 to 103. During the same period, the number of total health concerns swelled from 8865 in 2001 to 18,225 (Lewis, 2010). These increases, and those of the special education population - which grew in SPS from 5,768 in 1998 to 6,394 in 2010 - occurred during a time when enrollment was decreasing in the school district (total enrollment in SPS decreased from a peak of 47,609 in 1998 to 46,400 in 2004) (SPS Demographic Outlook, 2004-2014). Enrollment projections call for continued increases, both in Seattle and in Washington State. Growth in SPS is projected to reach 46,040 by 2014, and enrollment is expected to increase between 5% and 15% in Washington State by 2019 (National Center for Education Statistics, 2011). While a comparable source to predict trends for overall health concerns in schools could not be found, given that health concerns have increased in Washington State and in

SPS during times of decreased enrollment, it stands to reason that gains in health concerns will most certainly increase along with enrollments.

Given the increasing numbers and acuity of student health conditions, the issue of medication delegation to UAP takes on new urgency. Of the four most common health concerns in schools – diabetes, asthma, seizure disorders, and anaphylactic allergies -all can be emergently treated with medications delegated by school nurses to UAP with the exception of Diastat, a medication used to treat severe seizures. The preclusion of school nurses to delegate this sedative - one that is viewed by nurses as requiring nursing judgment and assessment to monitor potentially lethal side effects - is at the heart of the delegation debate of how to best protect the health and safety of students in the absence of nursing care in schools and in an environment of increasing health mandates that compete for nursing time. While asthma, diabetes, anaphylactic allergies, and seizure disorders continue to grow, they represent only a fraction of the health concerns that school nurses must address. The plethora of chronic and acute health conditions that confront school nurses on a daily basis, and the increasing federal and state mandates they are required to fulfill, demand more school nurse time as well as increasingly specialized skill and knowledge to adequately address children's health at school.

CHILDREN WITH SPECIAL HEALTH CARE NEEDS

The U.S. Department of Health and Human Services (2008) defines children with special health care needs as those "who have, or are at increased risk for, chronic physical, developmental, behavioral, or emotional conditions and who also require health and related services of a type or amount beyond that required by children generally." Of the 1,535,630 of children ages 0-17 in Washington State, 17.8% are reported to have special health care needs (National Survey of Children's Health, 2007). This is an increase from 13.7% reported in 2005 (Washington State Department of Health, 2005).

As of October 2009, enrollment in Washington State public schools in children ages 3-21 was 1,029,294 (Office of the Superintendent of Public Instruction (OSPI), 2009). In its 2009 data report for students receiving special education services mandated under the Individuals with Disabilities in Education Act (IDEA), OSPI reported 112,166 children receiving such services. This reflects a national trend with an increasing percent of the public school population qualifying for services under IDEA. In 1976, 8.3% of the school population received services under IDEA. That percentage has steadily increased every year and constituted 13.4% of the public school population in the 2007-08 school year. (U.S. Department of Education, 2010).

¹ Pre-diabetes is diagnosed in individuals when blood glucose levels are higher than normal, yet not high enough to warrant a diagnosis of either Type I (insulin dependent) or Type II diabetes. Pre-diabetes is a strong precursor to development of Type II diabetes. Those who are pre-diabetic are 50% likelier than people with normal blood glucose levels to develop cardiovascular disease independent of an eventual diagnosis of diabetes (American Diabetes Association, 2010).

Of the 14 categories under which special needs children are served in Washington State, at least 10 of them reflect health conditions for which school nursing expertise is required and/or would greatly enhance the child's educational experience. These include health impairments (19.5%), communication disorders (15.2%), developmental delays (6.6%), autism (6.18%), emotional/behavioral disabilities (4.29%), mental retardation (4.23%), hearing impairment (0.68%), orthopedic impairments (0.48%), traumatic brain injury (0.30%), and deaf/blindness (0.02%) (OSPI, 2009).

POOR AND ETHNIC MINORITY CHILDREN

Public schools are increasingly populated with poor, ethnic minority, and immigrant children (Aud, Fox, and KewalRamani, 2010; U.S. Census, 2005). It is well established that these populations are at higher risk of having compromised health status, higher health risk factors, and lack of health insurance or access to care (Callahan, Hickson, and Cooper, 2006; Children's Defense Fund, 2006; DeNavus-Walt, Proctor, and Lee, 2006; Guendelman, Schauffler, and Pearl, 2001; Guendelman, Angulo, Weir, and Oman, 2005; Huang, Yu and Ledsky, 2006; Washington CAN!, 2011). With a revenue shortfall of more than \$12 billion in the Washington State 2009-2011 biennium, the hardest hit in cuts to critical health programs are immigrants and people of color (Washington CAN!, 2011). Therefore, children in these populations receive much of their health care in the school setting, mostly from school nurses (Fleming, 2011). Further, while more than half of the child population in Washington State has in recent years received state assistance for services that addressed both economic and health needs, cuts to these services have drastically increased (Department of Social and Health Services, 2010; Washington State Public Health Association, 2011). Many of these children are attending - or will attend - public schools, where school nurses will be challenged to fill the burgeoning clinical and educational health care holes created by state budget cuts while maintaining already oversized caseloads.

COMMUNICABLE DISEASE

Although measles was declared eliminated from the U.S. in 2000, multiple importation outbreaks have occurred creating a potential threat of re-establishing endemic status of the disease in the U.S., as has occurred in England (Centers for Disease Control, 2008). Pertussis outbreaks also are on the rise. The highest number of pertussis cases in the U.S. in 63 years occurred from January to December 15 of 2010 with more than 7,800 cases reported (including 10 infant deaths) in California alone (CDC, 2010). While the cases of tuberculosis in the U.S. are the lowest since reporting began in 1953, wide disparities in case rates exist among populations. Rates for Whites, for example, are 0.9 cases per 100,000 people, while they are 23.3 for Asians, 16.7 for Native Hawaiians and Pacific Islanders, and 7.6 for Blacks (CDC, 2009).

With tuberculosis as the exception, most other vaccine-preventable diseases, such as pertussis and measles, largely infect unvaccinated school-age children (CDC, 2010; CDC, 2008). In addition to the import of disease, another potential reason for the resurgence of vaccine preventable disease is the number of parents or guardians who exempt their vaccine eligible children from receiving immunizations (Omer, Pan, and Halsey, 2008).

Current immunization data shows that 76.1% of U.S. children ages 19-35 months are fully vaccinated (CDC, 2009), which means that nearly 25% of their peers are not (CDC data does not include school-age children nor the immunization status of immigrant children who comprise one-fifth of the school-age population). Measles is considered to be a "bellwether" disease, i.e. it is among the first to increase in populations when vaccination rates decrease (CDC, 2008). This may portend subsequent increases in other preventable communicable diseases.

A major responsibility of school nurses is to increase immunization compliance rates. This task is complicated by loose enforcement policies; vaccine hesitancy among some parents; focus on other urgent health priorities and legal mandates; increased numbers of immigrant children with incomplete immunization histories; and, competing ethical (but not legal) obligations to enact measures to reduce the transmission of other communicable diseases, such as seasonal influenza, and extensive rates of sexually transmitted diseases. As providers who work with those most vulnerable to contracting and spreading communicable disease, school nurses have unparalleled access and opportunity not only to increase overall immunization compliance rates, but also to reduce communicable disease disparities among populations. Failure to invest in the resources necessary to adequately address this issue constitutes a threat to child and population health.

Federal Mandates and the Role of School Nurses

As previously described, IDEA is one federal program that guarantees public school students with disabilities that affect their ability to learn the right to a free and appropriate public education at public expense. On a national level, IDEA serves approximately 6.8 million children and youth with disabilities (U.S. Office of Special Education, 2010). In Washington State, children who are entitled to services as mandated by IDEA have Individualized Education Plans (IEPs) that specify accommodations which must be adhered to and reviewed annually in order to meet legal obligations. Because most children with IEPs have physical, cognitive, or emotional health issues that qualify them for special education, school nurses are essential in informing IEPs and in developing accompanying individual health plans (IHPs) to meet these students' health needs and educational objectives. This can require hours of uncompensated time at meetings before or after school in addition to performing thousands of screenings for both initial and annual re-evaluations, and providing assistive care during the school day to ensure the individual health needs of special education children are met. This time vies for other essential duties that school nurses must carry out such as state mandated vision and hearing screenings, and participation in the development and evaluation of plans to allow for accommodations for students who are eligible for services under Section 504 of The Rehabilitation Act of 1973.

Section 504 prohibits discrimination on the basis of ability. Children who do not meet criteria for special education under IDEA, but who have a physical or mental impairment that substantially limits one or more major life activities, have a right to receive academic accommodations under this law (Schwab and Gelfman, 2005; U.S. Department of Education, 2010). Data on the number of children in Washington State who have 504 plans is not yet publicly available. However, many children qualify for 504 accommodations because learning is often the life activity substantially impacted by, for example, a diagnosis such as attention-deficit hyperactivity disorder, chronic migraine headaches, or any number of the anxiety or mood disorders which are abundant in public school populations. Mental health disorders affect more than one-fifth of all students, 79% of whom are not receiving treatment for them (National Institute for Health Care Management Research, 2005). These conditions can be accommodated annually with updated 504 plans or with IHPs that guide educational responses to health conditions. While all children with IHPs may be eligible for 504 accommodations, not all parents elect to partake of them. Regardless of whether a 504 accompanies a health plan, the school nurse is the professional who invests time and expertise into ensuring that health conditions have the least interference possible in children's access to, and success in, educational endeavors.

School Nurse Work Environments and Educational Culture

AN ERA OF ACCOUNTABILITY, REFORM, AND ECONOMIC ADVERSITY

In addition to fulfilling the legal mandates required to ensure that equitable access to educational services is available to thousands of children with health concerns in Washington State and to millions in the nation, school nurses are operating in an increasingly pressured environment. The educational colleagues and administrators with whom school nurses work operate in a challenging environment in which they are charged with improving student academic performance or losing funding or facing other sanctions. Such tunnel vision, particularly as embodied by the No Child Left Behind Act (NCLB) of 2001, forces educators to seek short-term solutions for long-established disparities, which schools alone and educational interventions alone, cannot successfully address. In schools' forced attempts to hurry up and stop the bleeding, the proximal causes which underlie the achievement gap - among them optimal health, and family and community social and economic supports - are further excluded from their necessary places in supporting student achievement. The combined emphasis on academic interventions to raise academic achievement, and the increased mandates and complex health conditions that compete for school nurse time, create a cycle that diminishes the broad supports necessary to reducing educational disparities. As school nurse time becomes increasingly limited, schools become more vulnerable to economic sanctions. A potential opportunity of NCLB is that it allows local uses of funds for programs to hire and support school nurses under "Title V, Innovative Programs", though many other programs and services compete for these funds (U.S. Department of Education, 2002).

Co-existing within the pressured environment of public education is the emphasis on interventions that have direct effects on academic outcomes. This means that funding is allotted for quality teaching, curricula, smaller class sizes, tutoring services, books, and other effective, but strictly academic, means and materials. In a high stakes era of reform, the use of what are believed to be ancillary supports, such as school nurse services, are often viewed as helpful but non-essential, and therefore do not garner the support or the money commensurate with the important attendance and academic outcomes that mounting research evidence illustrates school nurse services achieve.

Because of the unique educational culture in which school nurses operate, investments in student health by school systems are nominal. Before discussing the current practices that exist in schools to attend to children's health in the absence of school nurses, a brief overview of school nurse roles and competencies is presented.

School Nurse Standards of Practice, Competencies, and Roles

he National Association of School Nurses (NASN) (2005) has identified six standards of school nursing practice. These standards are components of the nursing process and include assessment, diagnosis, outcomes identification, planning, implementation, and evaluation. In order to execute and evaluate the standards, certain competencies are required (Selekman, 2005). A school nurse's ability to demonstrate these competencies is the barometer on which she or he is evaluated with respect to meeting the standards of practice. Measurement standards, in turn, create a role which school nurses fill with regard to their position as expert providers of nursing care in educational settings.

In addition to practice standards, NASN has identified 10 standards of professional performance which emphasize professional competencies that inform the qualities and characteristics expected of the professional school nurse. These include areas such as ethics, research, advocacy, collegiality, leadership, education, self-evaluation, quality of practice, and program management.

As is evident from the preceding discussion, school nurses enact competencies by demonstrating required knowledge, skills, and competence in a breadth of areas. On a clinical level, these duties include creating health plans and carrying out daily interventions for children with mental and physical health conditions and disabilities; providing health education for students and staff on a variety of topics; overseeing emergency management and response; providing communicable disease surveillance and reporting; providing case management and coordination; overseeing environmental safety; tending to emergencies; and providing daily care and interventions for children with chronic and acute illnesses and injuries (American Academy of Pediatrics (AAP), 2008; NASN, 2005). To fulfill these varied duties, school nurses must demonstrate competence in a variety of clinical areas, be familiar with child development and community health, and have a firm working knowledge of standards and laws that govern their practices including those informing medication delegation.

The school nursing standards of practice, and the competencies used to fulfill them, create a unique and specialized role for school nurses that make nurses critical partners in advancing comprehensive school health programs (AAP, 2008). This role is marked by clinical and professional expertise that is acknowledged by numerous state and federal health entities as critical to improving public health, advancing child health and academic achievement, reducing health disparities, and creating a critical bridge to health care for millions of vulnerable children and families (AAP, 2008; American Nurses Association, 2007; NASN, 2006; NASN, 2002).

SUPERVISION OF SCHOOL NURSES

Due to the complex clinical and professional competencies that are required to deliver excellence in school nurse practice, assessment of these practices may be legitimately performed only by a professional with the complete understanding and perspective required to evaluate such performance (NASN, 2008). Full knowledge of the unique duties, competencies, and laws that govern independent school nurse practice are required in order to guide school nurses, evaluate their performance, and maintain compliance with respect to best practices and standards of care. In the absence of supervision by another registered nurse who has complete knowledge of the unique role and functions of the school nurse specialty, the National Association of State School Nurse Consultants (NASSNC) (2007) maintains that student safety and health outcomes are compromised.

Even with the strong evidentiary basis for such recommendations, nearly half (49%) of school nurses nationwide are evaluated and/or supervised by non-nurse educational administrators (School Health Alert, 2008). Only one-fifth (20%) of school nurses are exclusively supervised by registered nurses; the remainder are supervised and evaluated by a combination of nurses and/or educational administrators.

The potential for improved health and academic outcomes that have yet to be fully realized from the unique contributions of school nurses are threatened by lack of appropriate guidance and supervision. They are further compromised as increased mandates for nurse time, lack of funding, competition for resources, and sparse staffing chip away at nursing presence in schools.

A fundamental issue of critical import to children's safety in schools is the appropriate availability and delivery of necessary life-saving medications. With increased numbers of children requiring these medications, and the limited availability of school nurses present to deliver them, the issue of medication administration and delegation in the school setting demands safe, effective, and timely responses.

Informing Medication Delegation in Schools

elegation is defined by the ANA (2005, p. 4) as "the transfer of responsibility for the performance of an activity to another, with the former retaining accountability for the outcome." The delegation of medications by registered nurses is a critical competency (Hudspeth, 2007) guided most comprehensively by principles jointly articulated by the American Nurses Association and the National Council of State Boards of Nursing (ANA, 2010). These principles emphasize patient safety as the priority for medication delegation, and identify multiple patient safety criteria that nurses, following state nurse practice acts, must judge as the basis for safely delegating medication. These include following the "five rights" of delegation: 1) The right task conducted under 2) the right circumstances, to 3) the right person, with 4) the right directions and communication, and 5) under the right supervision and evaluation. (Selekman, 2006)

While such guidance is critical to maximizing student safety and health, delegating medications in schools is not without risks. The convergence of a number of elements creates the impetus for urgent review and resolution to address medication delegation in schools in a way that optimizes patient safety and outcomes while maximizing all children's rights to equitably access educational opportunities. These elements are now discussed in more depth.

INCONSISTENCIES IN STATUTORY LAW

Lack of clarity and consistency in Washington State education and health laws create uncertainty among nurses in how to best promote patient safety and reduce school nurses' liability in delegating nursing tasks and medication administration. In a letter to the Washington State Nursing Care Quality Assurance Commission, G. Hilsinger (personal communication, June 5, 2009) cites "conflicting information between the Washington Nurse Practice Act regarding nurse delegation and common school law regarding unlicensed school staff performing nursing tasks." At issue is conflicting use of terms "supervise and train" in regard to nurses' delegation to UAP as referenced in common school law, and the absence of these verbs in the Nurse Practice Act, which instead refers to "delegation" of duties. This leads to confusion as school nurses lack clarity on what is allowed and the extent to which they are accountable.

In addition to inconsistencies in statutory law, some laws are vague and open to interpretation. This creates conflict when different parties advocate for different interpretations. Writing laws that leave no room for interpretation, however, may not be completely avoidable, as "nursing practice is dynamic (and) it is generally impractical for the law and

rules to list all the specific duties or tasks that licensed nurses may or may not perform" (Ohio Board of Nursing, 2004).

Such is the case in regard to nursing delegation of Diastat, a rectal gel containing Diazepam used to arrest serious seizures. While Washington State law does not prohibit UAP from administering this medication, neither does it explicitly allow for delegation of Diastat. When there is clear lack of direction, the law allows for nurses - and only nurses - to determine whether a task is delegable. Nurses do not have the authority to delegate elements of the nursing process, and the assessment and evaluative components of the nursing process are required to monitor respiratory function after the administration of Diastat. O'Dell, O'Hara, Kiel, and McCullough (2007, p. 163) write that the role of the school nurse post administration of Diastat includes "monitoring vital signs, seizure activity, potential adverse events and postictal conditions." Advocates for delegation of Diastat administration to students with seizure disorders in schools are lobbying to put in place delegation guidelines similar to those used to allow non-nurses to administer insulin and conduct blood glucose monitoring in the school setting. Parents of children who need life-saving or sustaining medications at school have become wellorganized to defend their children's rights to receive needed medications at school. Consistent with federal mandates, these parents want their children to have full access to educational programs to which other children without need for medications are entitled. Two of the most active groups advocating for the rights of children to receive medications and treatments at school are the American Diabetes Association and the Epilepsy Foundation.

NON-LICENSED STAFF, MEDICATION ROUTES, AND PROCEDURES

Another delegation issue concerns the inability of non-nurses to deliver medications - with certain exceptions - by non-oral routes. Washington law (RCW 28A.210.260) allows for oral medications to be delegated to UAP, but does not compel them to do so. Clean, intermittent catheterization also may be delegated if in compliance with the state Nursing Care Quality Assurance Commission and school district policies. Diabetic students who need blood glucose monitoring and insulin injections at school may receive these services in the absence of a school nurse as permitted by RCW 28A.210.330 which allows for parents to designate an adult who has received training by a health care professional or an expert in diabetic care to provide this care for their children. Because provisions are not made for the delegation of medications given by other routes (with the exception of injectable epinephrine used for emergency treatments), such delegation is currently disallowed. The inability of school nurses to delegate medications such as eye drops, ear drops, and topical treatments befuddles administrators and other school staff who generally view such treatments as innocuous and not requiring of special skills or knowledge to safely administer.

NURSE STAFFING AND RATIOS

Delegation of medication administration to UAP would be a moot point if school nurses were always present and available to deliver them. The NASN, AAP, American School Health Association (ASHA), and CDC all recommend school nurse-to-student ratios of 1:750 for children in regular education. In all but two states (Delaware and the District of Columbia) there are no mandated ratios.

In Washington State, the nurse-to-student ratio is estimated at 1:1479 (OSPI, 2009). Given the lack of nurse availability, unfunded state mandates, and the increasing numbers of children with health concerns that nurses must attend to, delegating medication to UAP at present is a necessity. There are drawbacks and benefits of delegation that directly relate to school nurse staffing and student ratios. The obvious benefit of delegation in the absence of nursing care is that children who need medications while at school receive them regardless of whether a school nurse is present. The caveats, however, are many. Nurses who have very high student ratios, or who cover multiple schools in large geographic areas, may not be as available to provide the compulsory monitoring and evaluation needed to assess UAP's level of competency (Resha, 2010; Washington State Quality Care Assurance Commission and Office of the Superintendent of Public Instruction (OSPI), 2005). Nurses working in rural areas who cover multiple sites experience pressure to delegate because students who are not able to receive emergency medicines at school may experience delayed response times from emergency medical services. Another drawback to delegation related to insufficient nurse staffing is the burden of placing this responsibility on UAP who, despite training and monitoring from nurses, are generally hesitant to fill a role for which they have little training and is not part of the duties that they were hired to do (Price, Dake, Murnan, and Telljohann, 2003). UAP also are more than three times as likely as a school nurse is to make a medication error (McCarthy, Kelly, and Reed, 2000).

While Washington State does not have mandated school nurse-to-student ratios, it does have staffing recommendations based on a severity coding system jointly developed by the Washington State Quality Care Assurance Commission and OSPI (2005). This coding system is a national model in its creation of staffing requirements based on a severity coding system, and reflects recommendations made by NASN in regard to staffing based on student acuity levels.

NURSING WORKFORCE SHORTAGE

Increasing nurse staffing and decreasing nurse-to-student ratios may prove to be a challenging undertaking as national and state nursing shortages loom. It is estimated that by 2020 the nursing workforce shortage will result in a need for approximately 400,000 to 808,000 nurses, at a critical time of population aging (Keenan, 2010). This shortage is expected to adversely affect patient care and outcomes in hospitals as well as in community and school settings (Keenan, 2010). The school nurse workforce is projected to be hit particularly hard as nurses are lured to employers who offer sign on bonuses, and better pay and benefits (NASN, 2004). In addition, in a time of economic decline, school budgets have tightened, resulting in fewer resources being allocated to areas that are not viewed as central to academic achievement (NASN, 2004).

LEGISLATIVE ACTIONS

To address the nursing workforce shortage, as well as to reduce school nurse-to-student ratios, Rep. Carolyn McCarthy of New York introduced the Student-to-School-Nurse Ratio Act (HR 2730) in June of 2009. The Senate version of this bill (S 2750) was introduced in April 2010 by Sen. Charles Schumer of New York. While neither of these bills passed, similar legislation to reduce nurse-to-student ratios continues to be pursued by NASN and by legislators who have shown support for the former bills. Other legislative efforts have focused on recruitment and retention policies to address the nursing shortage. In 2002, President Bush signed into law the Nurse Reinvestment Act (P.L. 107-205). This law builds on existing nurse workforce programs enacted as part of Title VIII of the Public Health Service Act in response to previous nursing shortages (Keenan, 2010).

MEDICATION DELEGATION IN COMMUNITY SETTINGS

Unlike school settings, the primary purpose of community based care settings is to provide health care rather than education. For this reason, community based care centers such as home health or hospice agencies are staffed with a variety of licensed professionals, including registered nursing assistants, certified nursing assistants, licensed practical nurses, and registered nurses. Registered nurses may delegate nursing care tasks in these settings only to registered or certified nursing assistants (RCW 18.79.260). In the school setting, nearly 70% of medications and tasks that must be delegated are to school secretaries, who are swamped with secretarial deadlines, and frequently interrupted with telephones, staff requests, and other duties (Price, Dake, Murnan, and Telljohann, 2003). In addition, many school secretaries are not certified in basic CPR (cardio-pulmonary resuscitation) or first aid.

State Responses to Medication Delegation

Due to a lack of a universal definition of what constitutes "school nurse services," there is wide variability among the states regarding what is delegable in terms of nursing tasks and procedures (Schwab and Gelfman, 2005). The majority of states and other municipalities either have no applicable provisions for nursing delegation (10 states); or authorize or require school boards or districts to formulate their own policies around medication delegation within the parameters of existing statutory law (25 states) (Find Law, 2010).

To help understand state responses to issues of medication delegation in schools, four documents were analyzed and coded according to the issues of interest in this paper, by using established qualitative research methods (Miles and Huberman, 1994). The documents analyzed included a survey conducted by the National Association of State School Nurse Consultants (NASSNC) (2003); a document compiling state laws on schools' authority to administer medications (Find Law, 2010); Diastat in Schools – State Law Summary (Epilepsy Foundation, 2011); and the State by State Summary of School Health Policies and Programs Study (CDC, 2000). Additional supporting documents were used to clarify conflicting information in these documents or to update known outdated information (California Department of Consumer Affairs, 2010; Ohio Board of Nursing, 2004; Tennessee Department of Health and Tennessee Department of Education, 2009).

Themes that emerged from the analysis included jurisdiction of the oversight of medication delegation and administration in schools; whether medications may be delegated, which medications may be delegated, by whom, and under what circumstances; and whether explicit language existed that either allowed for or prohibited the administration of Diastat, insulin, and glucagon. These themes are now explored in more detail.

WHO CREATES MEDICATION DELEGATION POLICIES IN SCHOOLS?

Preceding discussion provided rationale for the importance of nurses to assume authority over nursing practice and evaluation. Despite evidence that justifies nursing autonomy over nursing practice, school nurses are lone practitioners of health care working within large systems focused on education. Because of this unique condition, there may be a propensity toward systemic control of functions that occur within educational settings, irrespective of particular specialty practices that participate within them.

In analyzing data from the sources referenced above, a pattern emerged that illustrated the sources of authority used to determine nursing policy in schools. While the data for each state from these sources does not provide complete, nor always consistent, information, it does give a broad view into the origins of authority that influence the nursing role in schools. While it is not within the scope of this paper to conduct statutory research on individual states that would reveal the complete diversity and/or commonalities in state practices, research in this area would benefit nursing knowledge and procedures to better promote autonomous and safe nursing practices in schools.

Table 1 illustrates the breakdown of states into three designations that were developed during data coding and analyses. The first designation for sources of authority is labeled "educational authority." This means that states listed under this heading primarily rely on educational authorities, with or without the input of health specialists and/or school nurses, to guide decisions on nursing practices, medication administration, and delegation of medication in schools. The second designation is "shared authority," meaning that schools mostly work in collaboration with health departments and/or school nurses in informing these policies. The third designation is "nursing authority," meaning that nurses have the primary influence over policies in regard to school nurse practice, medication administration, and delegation of medication administration.

Table 1 Sources of Authority in Guiding Medication Administration and Delegation in Schools by State

	EDUCATIONAL	SHARED	NURSING
	Authority	Authority	Authority
Number of States	15*	6**	5***

- * Arizona, Connecticut, Florida, Indiana, Iowa, Maine, Maryland, Montana, Nebraska, North Carolina, Tennessee, Texas, West Virginia, Wisconsin, Wyoming,
- ** California, District of Columbia, Massachusetts, Minnesota, Oregon, Pennsylvania
- *** Hawaii, Louisiana, Nevada, New Mexico, Vermont

While the above table is neither exhaustive nor complete, it does illustrate a potentially worrisome pattern in which an industry without specialization in school nursing imposes regulations on school nursing in the absence of the requisite knowledge and skills necessary to make sound judgments and legal decisions affecting the lives of children.

STATE PRACTICES IN MEDICATION ADMINISTRATION AND DELEGATION

The majority of states (42) allow delegation of medication administration to UAP with varying conditions. The most common conditions are associated with training and supervision requirements for UAP, conformance with state and nurse practice laws, and the prohibition of delegation of any aspect of the nursing process. Two states (Massachusetts and Nebraska) lie outside the somewhat vague norms adopted by

most states that allow UAP to administer medication. In Nebraska, the Medication Aide Act of 1999 allows parents and nurses to train health aides (who are not supervised by school nurses) to administer medications, including insulin (NASSNC, 2003). Massachusetts adopted a more rigorous policy that requires school districts to register with the public health department prior to enacting UAP delegation. This registration entails a staffing review to determine whether sufficient nursing services exist within the district to ensure safety in supervising UAP in delegating medications (NASSNC, 2003). In Scranton, Pennsylvania, a law recently was passed that allows only licensed nurses to dispense medications (Hofius Hall, 2010). This model of care will require LPNs to be present in Scranton's 13 elementary schools when they are not staffed by registered nurses at the times that students take medications.

Irrespective of the authority of UAP to administer medications, most states either allow or require that students with life-threatening conditions be allowed to self-administer medications, within prescribed limits.

Table 2 Comparison of State Laws in Medication Administration in Schools

	MEDICATION Administration: Nurses only*	MEDICATION Administration: UAP May Administer (With Conditions)	UAP MAY Administer Diastat**	UAP MAY Not Administer Diastat***	DELEGATION TO Uap allowed only For emergency Medications****
Number of States	5	42	7	4	6

- * Delaware, Hawaii, Mississippi, New Mexico, South Dakota
- ** Kentucky, Oregon, Louisiana, Montana, Ohio, Tennessee, Virginia
- *** Alabama, California, Iowa, Washington
- **** Hawaii, Georgia, New Jersey, New York, Rhode Island, South Carolina

The diversity in state approaches to issues of medication delegation and administration may reflect states' needs to maintain flexibility based on community needs and resources. It also, however, may reveal a pattern of influence of one sector (education) over another (school nursing) that diminishes the effect of safe nursing practices and procedures, and ultimately promote academic achievement over health programs. Research is needed to determine the reasons behind states' variability in medication delegation practices to promote policies that value child health and safety as paramount.

It is evident from this multi-state analysis that Washington State is not alone in its conflicting and confusing laws and policies in which education, nursing, and state laws are out of sync. This state of affairs is not lost on the authors of The Future of Nursing (Institute of Medicine, 2010, p. 1-8), who state that "outdated regulations, attitudes, policies, and habits continue to restrict the innovations the nursing profession can bring to health care at a time of tremendous complexity and change."

Health Reform and Emerging Opportunities for School Nurses

assage of the Affordable Care Act (ACA) of 2010 ushers in sweeping changes in the delivery, cost, access, and quality of health care services in the U.S. Offering coverage to 32 million people who previously were denied all or partial access to health care presents both challenges and opportunities for the practice of nursing in general, and for school nursing in particular. The comprehensive research and recommendations contained in the policy-guiding document The Future of Nursing (Institute of Medicine, 2010) offer a vision for nursing leadership and participation in informing the policies that will eventually result in permanent structural change of the U.S. health care system. The opportunities for nurses to participate in shaping this emerging system are enormous. School nurses should seize this timely chance to contribute to improving the system of health in schools throughout Washington State and the nation.

As part of health reform, the Obama administration has allocated more than \$200 million over the next four years for nearly 2000 school-based health centers (SBHCs). This money is earmarked for capital improvements, with another \$50 million available in grants to pay for salaries and operating costs for SBHCs (National Assembly on School-Based Health Care, 2010). While SBHCs provide comprehensive primary care for approximately 1.7 million children nationwide, they rely heavily on school nurses for referral and other supports. In comparison to SBHC providers, school nurses care for tens of millions of children and are struggling to keep up with large and complex caseloads due to high nurse-to-student ratios and lack of sustainable funding. It is somewhat perplexing, then, that school nurses in general were not included in, nor eligible for, federal health reform monies.

As health reform progresses, school nurses have fresh and abundant opportunities to advocate for decreased nurse-to-student ratios in schools, for policy that provides stable funding, and for fair compensation to nurses to fulfill the state mandated duties required of them. "Nurses must see policy as something they can shape rather than something that happens to them. Nurses should have a voice in health policy decision making and be engaged in implementation efforts related to health care reform." (Institute of Medicine, 2010, p. 8)

Recommendations

hris Phillips, the Chair of Scranton's personnel committee, stated that the mandate to allow nurses exclusive authority to administer medications in schools brings the city one step closer to having a full-time nurse in every school (Hofius Hall, 2010). In a national and state environment marked by rising numbers of students with health concerns, increased severity of chronic and mental health problems, and growing health disparities experienced disproportionally by public school students, a full time nurse in every school every day is a solution worth seeking. In the immediate absence of this solution, adults have the legal and ethical obligation to ensure that the safety and health of all children are protected. Meeting these obligations is a shared responsibility that calls for collective actions by professional nursing and health organizations, education administrators, and special interest groups that lobby for child health, academic achievement, and safety. Specific recommendations involve school nurses, employers, higher education, research, and policy development.

SCHOOL NURSES

As the gatekeepers of child health throughout the nation's schools, school nurses have the breadth of perspective and the depth of experience to qualify as the chief experts at identifying and prioritizing issues to promote child and public health, as well as identifying ways in which health status impacts student learning. Members of the School Nurse Organization of Washington (SNOW) who participated in a recent survey (n=158) identified stable funding for school nurses (89.2%), reduction of school nurse-to-student ratios (81.7%) and children's health care coverage (65.0%) as leading legislative priorities. In order to see these priorities to fruition, school nurses must lend their expertise, their money, and their time to the state and national organizations that lobby on their behalf and on behalf of the children, families, and communities that they serve.

Because school nurses provide health care for many of the nation's children who receive no other source of care, it is vital that efforts be made to shelter school nursing from the deleterious effects of the current and continued nursing shortage. School nurses can do their part to address this by being open to acting as preceptors for nursing students, and by lending their expertise to the colleges and universities that are producing future nurses.

Continued efforts at role definition are essential within the school setting. Attending staff, special education, and school board meetings to advocate on behalf of students is essential. Explicitly and publicly defining practice priorities can promote increased understanding of the unique way in which school nurses contribute to the common goals shared by their educational colleagues.

EMPLOYER ACTIONS

It is concerning that authority over, and evaluation of, nursing practice is dictated, in most states, by education administrators who lack nursing knowledge or credentials. At a minimum, school districts should be required to have a school nurse as an advisor and/or voting representative to ensure child safety and to better inform and enact nursing's role in decreasing educational disparities and improving academic outcomes. School districts also should be required to utilize nurses to supervise and evaluate school nurses. Employers also should support standardized training for health care aides, as well as for school nurses delegating medication administration to UAP.

HIGHER EDUCATION

Students in nursing school generally receive clinical rotations that emphasize inpatient care. Frequently, a public health component exists, and school nursing is a sub-category within public health. The specialty practice of school nursing, however, warrants its own curriculum as it addresses both public health and education – twin areas in which population disparities exist, and which school nurses are uniquely positioned to address. Institutions of higher learning – both those who train nurses and those who train teachers – should have interdisciplinary curricular components that educate teachers about health issues that impact academic achievement, and nurses about the specialized role and requirements of working within an educational setting.

The profession of school nursing is one that requires a high degree of independence, critical thinking, and a multitude of clinical and public health competencies. Because of these requirements, and to address long-standing actual and perceived issues around uniformity and competency in nursing practice, school nurses should, at a minimum, have a bachelors of science degree. They also should receive specialized curricular instruction about school nursing practice and school health programs as part of a four-year degree program. In conjunction with the education and expertise of a bachelor's trained nurse, there is a role for other certified or licensed health providers to contribute to the delivery of comprehensive health services in schools.

RESEARCH AND POLICY

The caring ethic, clinical skills, and professional judgment that nurses bring to the school setting are more relevant than they ever have been to academic achievement and population health. It is vital, therefore, that the judgment and skills nurses bring to educational endeavors be supported by sound and informed policy.

Leading U.S. health agencies collectively recommend nurse-to-student ratios of 1:750 for regular education students (AAP, 2008; CDC, 2008;

NASN, 2010). In addition, the American Public Health Association (2004) recommends that community and population variables be considered in informing the level and type of school nurse services required. Using these recommendations as a guide, perhaps policy can be developed that addresses the distinct needs of rural and urban communities in Washington State. School districts that elect not to employ full time bachelor trained school nurses in every building, or to abide by recommended nurse-to-student ratios, must do so with the knowledge that this will entail risks for student safety, population health, and academic achievement. Because achieving these recommendations will take time for the majority of school districts who do not yet meet these recommendations, the following stopgap measures may be put in place to better safeguard student safety until these best practices can be attained:

- In the absence of a bachelor trained school nurse, medication
 administration is most safely conducted by other licensed health
 personnel, such as LPNs or two year degree RNs. If UAP are
 administering medications, this must be done with consistency
 and standardized training. Penalties, up to and including corrective action, should be taken in instances where safety is compromised by not following established procedures for medication
 delegation and administration.
- Bachelors prepared school nurses must have authority over their
 practices as reflected in the Washington State Nurse Practice Act.
 Employers of school nurses should write this into school nurse
 job descriptions, along with written policies and procedures for
 student care, including medication administration. This is similar
 to what currently exists in community health settings.
- Licensed health personnel can only be evaluated by other licensed health personnel. Educational administrators specialize in teaching and learning, and are not qualified to evaluate nursing practice, policy, or authority.

When best practice has been achieved and a bachelors (or higher) trained nurse is working in or available to every school every day within reasonably defined ratios, other health partners such as two-year trained RNs, LPNs and certified aides may be able to fulfill some of the functions currently conducted by school nurses that impede their ability to work to the full extent of their licensure. Such a division of labor would assist in assuring that all providers are working to the extent of, and within the confines of, their licenses in school buildings, thus improving efficiencies and maximizing benefits to students. For example, hiring LPNs to administer medications and tend to "health room traffic" would free the full-time bachelors trained school nurse to focus on mandated tasks, health care plans, health education, case management, health

screenings and assessments, and other duties that can be neglected while they confront the daily blizzard of activity.

From a financial perspective, policy makers should be made aware that adding more school nurses in schools is likely to save money – potentially millions of dollars in health care annually. In a study of visits to school nurses in Boston Public Schools, Schainker et al (2005) reported that each nurse averaged 7,714 encounters per year, or 43 encounters per school day. This is almost double the approximate 23 patient visits per day conducted by the average clinic physician (Gabriel, 2001). School nurses prevent unnecessary visits to emergency rooms and to primary care providers. They also keep children in school, thus preventing parents from losing employment dollars or even facing disciplinary action for taking time off work. Research that analyzes cost-benefit ratios of increasing school nurse time in buildings should be conducted.

State agencies such as the Office of the Superintendent of Public Instruction should collect data on the numbers of school nurses and other health providers working in schools throughout the state. In tandem with data collected by health departments and/or school districts that pertain to visits to school nurses, this will help inform policies and programs. Specifically, such data can serve to identify, plan, evaluate, and analyze school nursing services in a variety of demographic contexts, thus improving the health infrastructure and the health outcomes of unique communities.

As student health and safety is of paramount importance, any policy change must be guided by the scope and standards of nursing practice (ANA, 2010). Using the guidance and expertise that inform the positions of the nation's other preeminent experts in school and pediatric health (ANA, CDC, NASN, ASHA, AAP) by putting school nurses in schools every day, Washington State can lead the way to setting a new standard for the health, safety, and life opportunities of the nation's children.

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Washington State Nurses Association 575 Andover Park West, Suite 101 Seattle, WA 98188

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