

POLICYLAB

EVALUATION REPORT | FALL 2019

IMPROVING SCHOOL HEALTH SERVICES FOR CHILDREN IN PHILADELPHIA

AN EVALUATION REPORT FOR THE
SCHOOL DISTRICT OF PHILADELPHIA

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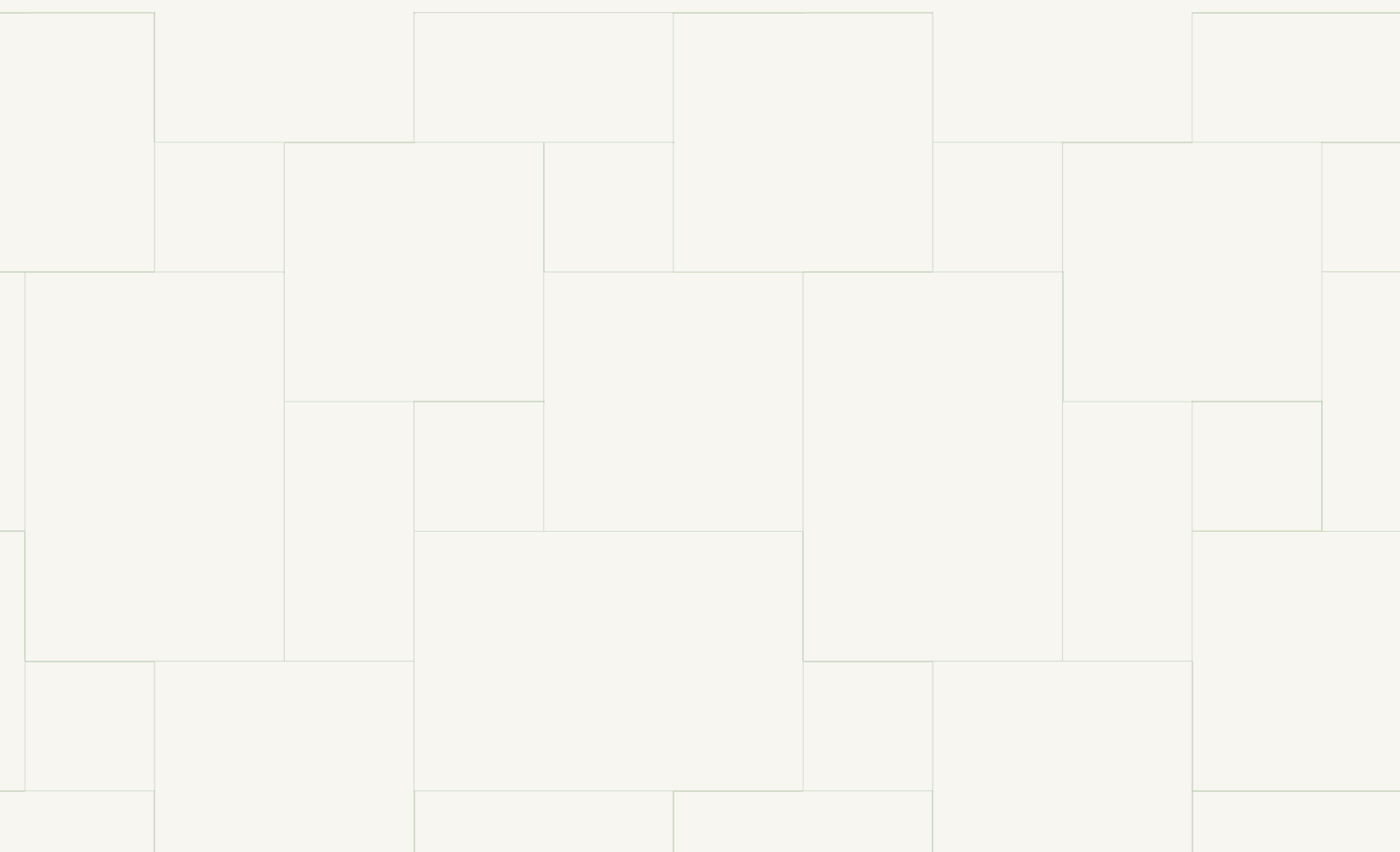
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EXECUTIVE SUMMARY

On behalf of the School District of Philadelphia (SDP), PolicyLab, a research center at Children's Hospital of Philadelphia, conducted an assessment and review of school health services offered by SDP in 2019. The assessment focused on the Office of Student Health Services and, most directly, on the role of the school nurse. This report offers key recommendations based on best practice and highlights innovative practice examples from external districts.

The body of this report is structured using the National Association of School Nurses' (NASN) Framework for 21st Century School Nursing Practice (the *Framework*), which guided the focus of the literature and practice review and the stakeholder interview guide. Nursing staff interviews identified the successes, challenges, and opportunities of the school nursing role and work.

MAIN FINDINGS



FINDING 1:

School nurses and nurse leadership need greater access to data to efficiently and effectively perform job responsibilities and to facilitate quality improvement initiatives.



SUGGESTED SOLUTIONS:

- Optimize the current electronic health record (EHR) in order to support standardized data collection, data sharing, and timely, accessible data aggregation and dashboarding
- Leverage school health data to support appropriate staffing models
- Evaluate data-informed decision-making when completing performance appraisals (this requires supervisory certifications for health services leadership)



FINDING 2:

Nurse staffing and support levels can be optimized to respond to the range of school nurse responsibilities and the volume and health complexity of the student population.



SUGGESTED SOLUTIONS:

- Use acuity analysis to build staffing models that accurately predict nursing needs and allow for effective distribution of resources
- Determine an appropriate number of substitute nurses for full-time employment and hire accordingly via the district
- Delegate non-medical tasks to qualified nursing assistants to prioritize school nurse time for addressing complex student health care needs while balancing other responsibilities such as data and records management



FINDING 3:

Health-related departments and programming should prioritize a collaborative approach to the delivery of health services.



SUGGESTED SOLUTIONS:

- Assess the current organization of health service-related departments and programming and align where appropriate using the Whole School, Whole Community, Whole Child (WSCC) model as a guide
- Create a resource guide that spans physical and behavioral health services to serve as a tool for school staff who are tasked with coordinating care
- Emphasize nurse participation on interdisciplinary care teams and consider using the current tier structure to implement school wellness committees



FINDING 4:

Health service policies and procedures should reflect current roles and practice and be an active resource in the delivery of services.



SUGGESTED SOLUTIONS:

- Create a readily available policy manual that includes descriptions of policies and the procedural steps required for their implementation
- Involve nurse leadership, and all appropriate stakeholders, in the creation of student health policies
- Allocate resources to professional development for trainings specific to policies and procedures and the nursing profession on an ongoing basis
- Cross-train school nurses and behavioral health professionals so they can learn about each other's fields and better understand the overlap between physical and behavioral health



FINDING 5:

Infrastructure supports, including staffing and data accessibility, are needed for school nurses to achieve targeted population-based care, a core tenant of school nurse practice.



SUGGESTED SOLUTIONS:

- Promote immunization compliance through nurse-initiated strategies
- Establish a standardized process and/or consistent messaging regarding nurses' involvement in health education and family engagement
- Implement "mass screening days" in order to assist nurses in focusing more intentionally on individual student needs as well as larger community and public health initiatives
- Support nurse leadership in using data to expand their focus beyond individual students to populations with similar health concerns



INTRODUCTION & RATIONALE

In 2011, confronted with a budget deficit of more than \$700 million, the School District of Philadelphia (SDP) downsized its nursing staff by more than 100 school nurses.¹ Since then, however, the district has made great strides in securing school nurse staffing. Most public schools in the district now follow the American Academy of Pediatrics (AAP) recommendation of one nurse for every building, and SDP increased the number of full-time nurses it employs from 100 in 2011 to 265 in 2019.

SDP also invested substantial resources in building a strong school health administrative team, which includes the addition of a medical director, nursing director, nurse educator and nurse coordinator. In addition to these gains, SDP has maintained strong community partnerships, ensuring that all children have access to services such as dental and vision care providers on-site at schools throughout the school year.

In the midst of this progress, and per request by SDP leadership, PolicyLab, a research center at Children's Hospital of Philadelphia, conducted an evaluation and review of school health services within Philadelphia and comparable districts with the aim of delivering a comprehensive report reflective of the diverse health needs of SDP students and the multiple stakeholders involved in

the provision of care for children in Philadelphia. In order to accomplish this, we chose to leverage the National Association of School Nurses' (NASN) Framework for 21st Century School Nursing Practice, a guiding structure for districts seeking to achieve high-quality school nurse practice.² The *Framework* aligns with the Whole School, Whole Community, Whole Child (WSCC) model that calls for a collaborative approach to learning and health. According to WSCC, "central to the framework is student-centered care that occurs within the context of the students' family and school community."³

We categorized our findings in this report using the *Framework's* five overlapping principles: *standards of practice, quality improvement, care coordination, leadership and community/public health.*⁴

FRAMEWORK FOR 21ST CENTURY SCHOOL NURSING PRACTICE™

Principles and accompanying practice components:



STANDARDS OF PRACTICE

- Clinical Competence
- Clinical Guidelines
- Code of Ethics
- Critical Thinking
- Evidence-based Practice
- NASN Position Statements
- Nurse Practice Acts
- Scope and Standards of Practice



QUALITY IMPROVEMENT

- Continuous Quality Improvement
- Documentation/Data Collection
- Evaluation
- Meaningful Health/Academic Outcomes
- Performance Appraisal
- Research
- Uniform Data Set



CARE COORDINATION

- Case Management
- Chronic Disease Management
- Collaborative Communication
- Direct Care
- Education
- Interdisciplinary Teams
- Motivational Interviewing/Counseling
- Nursing Delegation
- Student Care Plans
- Student-centered Care
- Student Self-empowerment
- Transition Planning



LEADERSHIP

- Advocacy
- Change Agents
- Education Reform
- Funding and Reimbursement
- Health Care Reform
- Lifelong Learner
- Models of Practice
- Technology
- Policy Development and Implementation
- Professionalism
- Systems-level Leadership



COMMUNITY/PUBLIC HEALTH

- Access to Care
- Cultural Competency
- Disease Prevention
- Environmental Health
- Health Education
- Health Equity
- Healthy People 2020
- Health Promotion
- Outreach
- Population-based Care
- Risk Reduction
- Screenings/Referral/Follow-up
- Social Determinants of Health
- Surveillance

ASCD and Centers for Disease Control and Prevention. *Whole School Whole Community Whole Child: A Collaborative Approach to Learning and Health*. <http://www.ascd.org/ASCD/pdf/siteASCD/publications/wholechild/wsc-a-collaborative-approach.pdf>. Published 2014. Accessed 2019.



PROCESS & METHODS

From January 2019 to July 2019, we conducted an intensive review of local and external district school health systems, structures and operations. We reviewed documents, analyzed policies and procedures, interviewed key informants and conducted an expansive literature review. The literature review included position statements from professional organizations as well as a review of academic publications using search terms related to school health and nursing practice. An advisory committee of primary care physical, behavioral, and early childhood experts informed our interview guides, document review protocols and policy analyses.

The internal district assessment consisted of a series of semi-structured interviews with various stakeholders (listed on next page). External interviews with national school health leaders identified best practices and innovative examples among districts of comparable size and student demographic. During our key informant interviews, we used standardized qualitative interview guides developed by our interview team and PolicyLab pediatric health care content experts, which addressed questions related to funding, data collection, behavioral health services, care coordination, policies and procedures, professional development, evaluation and family engagement. We recorded, transcribed and reviewed interviews for key themes. We then used these themes and best practice standards to identify priority recommendations within each section of this report.

INTERVIEWS

SDP Office of Student Health Service Administrators

- Irene Kratz, Nursing Director
- Natalie Mathurin, Medical Director
- Michelle Ovington, Financial Services Assistant Director
- Lauren Reagan, Nursing Coordinator
- Shannon Smith, Nursing Coordinator

SDP School Nurses

- Badia Brown, School Nurse
- Kathleen Celio, School Nurse
- Margaret Devine, School Nurse
- Melissa Platt, School Nurse
- Barbara Tiller, School Nurse

Physical Therapist

- Carolyn Szumal, Physical Therapist

SDP Office of Prevention and Intervention

- Lori Paster, Deputy Chief, Prevention & Intervention

SDP Guidance Counselors

- Cynthia Moore, Guidance Counselor
- Iris Parkinson-Culbreth, Guidance Counselor

National School Health Leaders:

Washington, District of Columbia

- Kristen Rowe, Manager of Health Services, District of Columbia Public Schools
- Danielle Dooley, Medical Director for Community Affairs and Population Health, Children's National Health System
- Desiree De La Torre, Director of Community Affairs and Population Health, Children's National Health System

Austin, Texas

- Tracy Spinner, Director of Health Services, Austin Independent School District

OFFICE OF STUDENT HEALTH SERVICES

The primary focus of this assessment was on the Office of Student Health Services, which manages oversight of the following functions:

- School nurses
- Centers for Disease Control and Prevention (CDC) Promoting Adolescent Student Health (PASH) grant
- Central Level Wellness Council
- Student Health Advisory Council



FINDINGS & RECOMMENDATIONS

The body of this report is organized using the following principles of the NASN Framework for 21st Century School Nursing Practice:



STANDARDS OF PRACTICE



QUALITY IMPROVEMENT



CARE COORDINATION



LEADERSHIP



COMMUNITY/PUBLIC HEALTH



Denotes framework principle example from another school district



FRAMEWORK PRINCIPLE: STANDARDS OF PRACTICE

Standards of practice impact every aspect of school health services as nurses and nursing leadership must remain up to date on both clinical practice and policies. In this report, we highlight best practices for school nurses with consideration of the numerous professional organizations that issue position statements and policies aimed at guiding school health services. For instance, in the Quality Improvement section, we highlight important recommendations in the use of electronic health records (EHRs), which aligns with the NASN position statement on EHRs, and in the Community/Public Health Section, we discuss the importance of enforcing policies for immunization compliance following the Pennsylvania Department of Health school immunization policy and CDC recommendations.⁵⁻⁷ Best practices are reflected in each section with additional resources for standards of practice available through organizations such as NASN, the American Nurses Association, the Nurse Practice Act, the CDC, the National Institutes of Health, the Food and Drug Administration, the AAP and professional journals.

Quality Improvement Recommendation Overview

- Quality Improvement (QI) Initiatives
- Standardized Data Collection
- Electronic Health Record (EHR)
- Data Sharing
- Staffing Models
- Data & Evaluation for Performance Appraisals



FRAMEWORK PRINCIPLE: QUALITY IMPROVEMENT

Quality improvement (QI) is an ongoing and systematic process that leads to measurable improvements and outcomes. The NASN *Framework* aptly describes QI as “the nursing process in action; assessment, identification of the issue, developing a plan, implementing the plan, and evaluating if the goals/outcomes are achieved.”⁸ Creating infrastructure for data-informed decision-making can help SDP better understand the need, efficiency and impact of health services in real time to allow for necessary adjustments. This section reviews how standardized data collection, data sharing and data aggregation all contribute to a thoughtful QI program. Additionally, we discuss the use of data to support staffing models and performance appraisals.

Data is the cornerstone of QI, and school nurse documentation of daily activities is a crucial form of data collection. School nurse documentation demonstrates the variety of roles and activities of school nurses, shows the impact of nursing care on students’ health and identifies trends over time.⁹ However, standardization is critical for school nurse documentation to be actionable. When districts are thoughtful about the data they choose to track and take steps to collect and format this data in a consistent way, they are well prepared to aggregate data across schools, identify trends and intervene appropriately.¹⁰ Standardized data means that every nurse across the district measures and captures the same data in the same way.

At the individual-school level, uniform data collection could, for example, track out-of-class time and student nurse office visits. This could enable SDP to monitor the use of school nurses and make quality improvements as needed in teacher education for those who too frequently (or infrequently) send students to the nurse or to intervene when students use the nurse’s office for more than a standard number of visits a year.¹¹ Data on student visits is particularly important considering overutilization of the nurse’s office could indicate underlying medical issues. For example, “frequent flyers” who regularly come to the nurse for unexplained headaches or stomach aches could indicate a referral to behavioral health is necessary since somatizing children are significantly more likely than their peers to have higher levels of depression and anxiety.¹²

Not only does the literature emphasize the importance of data collection; this was also an emerging theme during interviews. For example, interviewees indicated a need for data collection fields within the current EHR to be more user-friendly and for information to be more easily accessible. Additionally, interviewees noted that the SDP EHR is not designed to provide aggregated data reports, instead requiring long processes for requesting reports from the Office of Information Systems and the Office of Research and Evaluation. Due to this limitation, nurses and nurse leadership depend primarily on individual student reports accessible via student health files, which does not require the tracking of health information in a standardized way (e.g., referrals/concerns, behavioral health, most frequent interactions). Finally, interviewees noted that they spend a substantial amount of time locating data from multiple sources or systems and then manually inputting data, which creates inefficiencies and hinders standardization.

To maximize the effectiveness of data collection, NASN developed a minimum set of standardized data points that school nurses can use to track outcomes and inform best practices.¹³ Areas of data collection recommended by NASN include: school staffing levels, students with chronic conditions and health office visits.¹⁴ However, for districts to use this data effectively to improve student outcomes, they must store information in a way that is organized, easily viewable and protective of student privacy. EHRs are an essential data collection and storage tool, with the capacity to manage data, provide outcome analysis and share data across settings to optimize the coordination of care.¹⁵



RECOMMENDATION: QUALITY IMPROVEMENT (QI) INITIATIVES

We recommend allocating resources to support an increased focus on health service QI initiatives. QI resources are foundational for data-informed decision-making for health initiative investments and in building the necessary infrastructure for standardizing and using data to improve the allocation of nursing resources and efficiency of service delivery.



RECOMMENDATION: STANDARDIZED DATA COLLECTION

We recommend prioritizing several key data points for standardized tracking that the district can use to inform QI initiatives.

NASN states that EHRs are a critical tool for not only effectively and efficiently caring for individual students, but also for monitoring student population health as a whole.¹⁶ When properly utilized in the school setting, districts can leverage EHRs to better understand the health needs of students, initiate quality improvement initiatives, and improve community and family health outreach. A well-developed EHR can help schools track their progress on improving health indicators such as vaccination rates, and can offer quick data aggregation to improve clinical decision-making. Yet, many educational or student data management systems are not sufficient for health data collection as these systems do not provide opportunity for documentation using medical terminology and are often not interoperable with community-based health records.¹⁷



Due to this limitation in student management systems, the Austin Independent School District (AISD) developed their own EHR to track attendance across schools as well as the most common illnesses and injuries. They use this data to conduct trend analyses of incidents. AISD is able to monitor immunization compliance and rates and to better understand where children with complex health needs are clustered across the district. AISD school nurses document their interactions directly in the EHR, allowing them to quickly identify and act on changes in student health trends. For example, at times when there has been an influx of influenza, school nurses can identify the trend within 24 hours and take actionable precautions, such as requesting that housekeeping conduct a deep cleaning of surfaces.

AISD has also used their EHR data on a community level by monitoring kids who initiate contact with the nursing office due to breathing difficulties. AISD shares permissions with the local hospitals' EHR and can track diagnoses, action plan status, if patients are adhering to the plan and how many times per day a student accesses their rescue inhaler. Nurse leadership compares these numbers against community data to determine what is usual and customary in terms of population health for that community.

A significant benefit of an optimized EHR is the ability to seamlessly view and share data with external providers and agencies to identify trends and improve students' access to health services.

The AAP has emphasized the importance of collaboration between school nurses, school physicians, school staff, families, and external pediatric providers to improve the health of children both in school and in the community.¹⁸ Data sharing is a critical tool for facilitating this collaboration and, ultimately, building integrated health systems. On the school level, data sharing with principals or the board gives administrators a clear picture of students' health needs and can inform decisions around staffing and financing school health programs.¹⁹ More broadly, sharing data with external health partners creates a more robust and triangulated view of community trends and can help leaders identify areas in need of targeted health promotion activities.²⁰ In Philadelphia, nurses and nurse leadership identified an opportunity for more readily available data in order to track trends and build models for sharing with internal and external partners.



Washington D.C.'s public school system is an example of how school districts can partner with state agencies to improve coordination and service delivery. D.C. Public Schools (DCPS) developed a data sharing agreement with the Department of Health and D.C.'s Medicaid agency. By cross-referencing school enrollment data with Medicaid enrollment status, dates of last well-child, dental visits, and immunization data the three agencies have been able to identify schools with the highest Medicaid enrollments and service utilization gaps.²¹ These schools receive targeted outreach in the form of education events and resources for principals and school nurses to use to promote health and wellness.²² The Department of Health Care Finance has also used the data to provide "school health snapshots" to managed care organizations, highlighting service usage among their DCPS-enrolled beneficiaries.²³

One challenge of data sharing is assuring that all participating data systems are compliant with privacy requirements. The Health Insurance Portability and Accountability Act (HIPAA) and the Federal Education Rights and Privacy Act (FERPA) govern the release of identifiable health information and educational records, including those collected by a school nurse. To comply with these laws, EHR administrators must get parental or guardian permission to share student health records and develop agreements with external providers to ensure that student data remains confidential.²⁴ Oftentimes, this requires the assistance of a legal or compliance team to review workflows ensuring EHR administrators are meeting privacy standards.²⁵

On an individual level, SDP school nurses consistently expressed a desire to more easily share information with students' medical providers as pulling information from student registration files can produce incomplete documentation. Additionally, parents may not understand the depth of their child's medical condition, making it difficult to provide care to students without all the necessary health information. During our interviews, nurses repeatedly identified HIPAA and FERPA as barriers to coordination of care.

One potential solution is in simplifying and/or condensing legal consents so that EHR administrators can design one blanket consent form for a myriad of medical and treatment needs. Additionally, districts could create an online portal where parents can electronically provide consent, simplifying the process. SDP could partner with local health systems to use the site as a clearinghouse for electronic HIPAA and FERPA signatures. This could provide easy access to needed signatures for SDP, health systems and parents alike. Ultimately, interoperable EHRs or alternative contractual agreements to allow for easy exchange of information are ideal.



RECOMMENDATION: ELECTRONIC HEALTH RECORD (EHR)

We recommend a careful assessment of the capabilities of the current EHR and, dependent on the outcome of that review, consideration of a contract with a technical assistance provider for system improvements. Dashboarding capabilities are an important component to include in system improvements, as the ability to quickly view aggregate data is a crucial function for health services. This may be accomplished through the EHR or may require additional applications.



RECOMMENDATION: DATA SHARING

We recommend a review of legal and technical considerations to enable participation in interagency data sharing or integration relationships to improve coordination and service delivery across child-serving systems. As a first step, simplifying legal consents and the creation of an online portal for HIPAA and FERPA consents would serve as a building block to facilitate future data sharing arrangements.

Districts can also leverage school health data to support appropriate staffing models.

There are numerous studies showing consistent nurse staffing levels are linked to improved access to care for students.²⁶ Research also demonstrates that schools with lower nurse-to-student ratios are associated with better student attendance and academic success.²⁷

Our interviews with SDP nurses indicated that staffing levels can be problematic as schools have a wide range of student population numbers and needs. Another challenge to SDP's current staffing structure is nurse absenteeism, which can substantially lower nurse staffing levels across the district (during one day of interviews, 22 nurses called out sick with only 4 available substitutes for the day). Interviewees also highlighted a need for coverage during school-sponsored field trips.

The district currently uses a cohort model to respond to limited numbers of nurses and to address unlicensed professionals administering medications. The cohort model works by placing responsibility on school nurses to coordinate and cover for one another during times when a colleague is out of the building. For instance, if a nurse calls out sick, nurses in the same cohort coordinate to cover schools at certain times/hours based on need (e.g. insulin administration, asthma treatments, etc.). Additionally, some nurses rotate through multiple schools throughout the week.

Since 2011, SDP has made great strides in school nurse staffing. Most district public schools are following the AAP recommendation of one nurse for every building, and ratios for non-public schools are close to the previously set standard of one nurse for every 750 students. However, it is worth noting that as of 2015, NASN has moved away from nursing ratios and toward a recommendation suggesting that districts determine school nurse workloads annually taking into consideration student and community health data.²⁸⁻²⁹

As children with complex health and social needs are increasingly educated in the mainstream classroom, school nurses play a major role in the case management, care coordination and day-to-day health interventions required for these children to succeed in school.³⁰ Nurses in Philadelphia indicated that stabilizing health care needs for students with high social acuity can be particularly complicated and time-consuming. For instance, SDP nurses face significant barriers reconnecting students in out-of-home placement to services when the foster family may not have the child's insurance information or when a prescription runs out. By using data to

A significant benefit of an optimized EHR is the ability to seamlessly view and share data with external providers and agencies to identify trends and improve students' access to health services.

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analyze school enrollment, illness and injury contacts, number of students under ongoing case management, and health care access in the surrounding community, schools can build models that accurately predict their nursing needs and allow for effective distribution of resources.



AISD has been a national leader in utilizing acuity analysis to effectively distribute nursing resources among the district's schools.³¹ In its analysis, AISD weighs a combination of medical factors, such as number of students with complex medical conditions, alongside community factors, such as economic disadvantage among students.³² Additionally, the Wake County Public School System (WCPSS) in North Carolina uses acuity analysis to establish a tiered model through which the administration evaluates schools in the district and staffs them at three levels depending upon student acuity/condition and social determinants (e.g., chronic illness, medication, poverty, language barriers, access to care). Similar to these other districts, using community and student data to perform annual analyses could assist SDP administrators in meeting both student and staffing needs by allotting nurses based on acuity instead of enrollment.



RECOMMENDATION: STAFFING MODELS

We recommend the use of community and student health data to build models that accurately predict the district's nursing needs and allow for effective distribution of resources. Additionally, to respond to nurse absenteeism, we recommend that the district use its own data to determine an appropriate number of substitute nurses for full-time employment.

Evaluation is the final step in the QI process. Nurse and nurse leadership should utilize data on an ongoing basis to assess the impact of their nursing interventions on student outcomes and determine whether processes are appropriate and effective.

Districts should also use data for performance appraisals, incorporating both nurses' assessment of their own work and evaluations by a supervisor.

When evaluating nurses' performance, supervisors should take into account the nurses' use of data-informed decision making. For example, a nurse may track office visits and recognize a cohort of students who are accessing the nurse's office far more frequently than others. Using this data a school nurse can make determinations about intervention (e.g., referrals to guidance or behavioral health assessment, or discussion with a teacher). To use data in this way, it is imperative that the nursing director and coordinators are involved in the supervision of school nurses. This requires supervisory certifications for health services leadership so that the nursing director and coordinators can directly oversee clinical supervision of school nurses. Currently, school principals are fulfilling this function.

The American Nursing Association and NASN recommend that all school nurses receive clinical supervision from a registered nurse with knowledge of school nursing practice.³³ Pennsylvania does not prohibit non-nursing staff from supervising school nurses; the state only requires supervisors to have



an administrative credential.³⁴ While school administrators can continue to supervise non-nursing tasks such as communication skills, team collaboration or enforcement of school and district policies, non-clinical staff are not sufficiently qualified to evaluate clinical nursing competency; districts should shift this specific responsibility to nurse leadership.³⁵⁻³⁶ Students benefit when nurse supervisors can effectively evaluate school nurses' responses to health care needs and assure attention to best practices and evidence-based protocols. Interdisciplinary evaluation and supervisory processes, inclusive of nurse leadership and administrative staff, can also help non-clinical leadership better understand the expansive responsibilities of school nurses.³⁷⁻³⁸



**RECOMMENDATION: DATA & EVALUATION FOR
PERFORMANCE APPRAISALS**

We recommend that SDP fund supervisory certifications for health services leadership so the nursing director and coordinators can directly oversee clinical supervision of school nurses. This would allow supervisors to take into account the nurses' use of data-informed decision-making as part of performance appraisals.

Care Coordination Recommendation Overview

- Nurse Delegation
- Collaborative Care



FRAMEWORK PRINCIPLE: CARE COORDINATION

The broad principle of care coordination incorporates many of the daily tasks school nurses perform and includes practice components such as student-centered care, direct care, chronic disease management, collaborative communication and nursing delegation.³⁹ During our interviews with staff, it was clear that SDP nurses regularly engage in many of these tasks. For example, throughout SDP, nurses are providing direct care in the form of routine treatments, screenings, medication administration, and responses to acute and urgent health care needs. School nurses also spoke about chronic disease management, highlighting asthma, seizure disorders and Type 1 diabetes as critical health concerns for Philadelphia's student population.

Nurses are well-positioned to identify children who are not achieving their optimal level of health or academic success due to acute or chronic medical conditions, and can develop and implement care plans that give these students the best health, academic and quality-of-life outcomes. Implementing structures to facilitate care coordination, such as interdisciplinary care teams and nursing delegation protocols, can help to manage communication between health professionals and families and improve the efficiency of care. This section discusses coordination and communication among partners in school health and the role and scope of nursing responsibilities.

When districts are intentional in defining the role of nurses within the larger care team, it can result in improved health outcomes for students. For example, for a student with asthma, a school nurse may develop the child's emergency action plan, teach school personnel how to respond to emergencies, work with families to reduce asthmatic triggers and teach students skills to self-manage their condition.⁴⁰ However, as evidenced by this example, school nurses are tasked with a broad range of responsibilities beyond direct care, including surveillance, chronic disease management, emergency preparedness, health education, and data and records management.⁴¹ Additionally, as chronic conditions such as diabetes and asthma become more common and children with complex health and social needs are increasingly educated in the mainstream classroom, school nurses are increasingly charged with managing conditions that were previously handled in acute care, such as tube feedings, insulin administration and emergency injections.⁴²

The many demands placed on a nurse require that school districts maintain appropriate staffing levels to ensure there is adequate personnel to complete required tasks. In the QI section, we suggested the use of acuity analyses to help SDP move away from ratios and toward the use of data to better determine needs. We also advocated that SDP hire full-time nurse substitutes as our interviewees noted that nursing absenteeism and lack of coverage during school-sponsored field trips lowered nurse staffing levels across the district. A third staffing option is the use of delegation of non-medical tasks to qualified health assistants.

Delegation of some nursing tasks to a qualified health assistant can help school nurses address specific complex student health care needs while balancing other responsibilities.⁴³ Health assistants are unlicensed professionals with prior health care experience (such as EMT training), who perform basic tasks under the direct supervision

of the school nurse.⁴⁴ While health assistants cannot legally perform medical tasks, their assistance with charting, record keeping and health office management is critical for managing a school nurse's workload. Health assistants can also make connections with primary care and other external stakeholders, which nurses in Philadelphia reported as a particular challenge when coordinating care for medically complex children. Nurses can conduct this delegation in-person or virtually using telehealth.



AIISD implemented a free, HIPPA-compliant video software called VSEE that allows clinical assistants staffed across the district to connect with school nurses to diagnose and assess students over video conference. For example, if a child comes to an assistant with a rash on their arm, the clinical assistant can video conference with a nurse for assessment and diagnosis.

Virtual delegation can be particularly useful in districts where nurses rotate between schools because a clinical assistant can be positioned at a school and maintain access to the school nurse, no matter where the nurse is located. Virtual delegation can also be utilized directly by nurses to video conference with doctors, which can reduce unnecessary dismissals home or permit a parent to have medication prescribed without an additional medical appointment.⁴⁵

While nursing assistants can be beneficial in helping nurses with non-nursing functions, it is unsafe and unwise to use health assistants in place of nursing expertise. This is unlikely to be an issue as Pennsylvania code is fairly stringent regarding what a school nurse is permitted to delegate to unlicensed personnel; however, the Good Samaritan act does allow nurses to train unlicensed nursing assistants to administer emergency medications, such as epinephrine auto-injectors and rescue asthma inhalers.⁴⁶ Nurse delegation is a worthy consideration as many of the recommendations made throughout this report will require substantial effort on behalf of the school nurse who is already concerned about how difficult it can be to accomplish all that is asked.



RECOMMENDATION: NURSE DELEGATION

We recommend that SDP delegate non-medical tasks to qualified nursing assistants to support school nurses in prioritizing responsibilities of addressing complex health care needs while balancing other responsibilities such as screening, medication administration, and response to acute and urgent health care needs.

Another important factor to consider when it comes to care coordination is interdisciplinary care teams within each school. This allows for professionals from across disciplines—including behavioral health providers, counselors, climate managers, special education liaisons and others—to holistically address students' health, academic and social needs.

SDP's monthly tier meetings help facilitate this process by bringing a diverse set of district employees together to discuss school-wide and classroom initiatives aimed at identifying and implementing targeted interventions. The inclusion of nurses in these meetings in a standardized way across the district would bring important medical context to academic or behavioral problems. For example, nurses can identify if a child struggling in the classroom has a new or recent diagnosis and lacks access to medication or if a child frequently visits the nurse's office and could benefit from targeted interventions; this could ensure that all related staff are updated and receive the same information. During these meetings, school nurses can also provide critical perspectives on health promotion, disease prevention and care coordination. Finally, SDP could consider how it can alter or combine the current tier meetings to create school wellness committees, which are used in districts across the country.

Nurses are well-positioned to identify children who are not achieving their optimal level of health or academic success due to acute or chronic medical conditions, and can develop and implement care plans that give these students the best health, academic and quality-of-life outcomes.

Interdisciplinary care teams allow for professionals from across disciplines to holistically address students' health, academic and social needs.

Another way that districts can ensure a collaborative approach to health services is by providing information to staff that clearly describes the health services and supports, including physical and behavioral health, available for students throughout the district. Beyond their programs and role, SDP staff were often unsure of other health services being delivered within their schools and the district at-large, and nurses endorsed having limited involvement/collaboration with behavioral health services in particular. One thing that may contribute to this is that SDP health-related offices are currently separated into different departments, which can create barriers to information sharing. For example, health and physical education, food services and health programming, such as Eat Right Philly, all relate to health, but are not unified under a common department or office. This separation makes regular and collaborative communication a top priority—an issue that SDP nurses raised throughout our interviews. There are several possible solutions:

- Realignment of health service-related departments within SDP



- A resource guide, which can serve as a tool for staff tasked with coordinating care, and is also informative for anyone seeking to understand the work originating from this office. **The Los Angeles Unified School District (LAUSD) offers a useful example in their Health and Human Services Resource Guide, which outlines available services, resources and partnerships under the Health and Human Services umbrella and includes program descriptions, types of service and contact information for each department (e.g., Department of Diversity and Equity, pupil services, school mental health and restorative justice.)⁴⁷**



- A principal's guide, which is a potentially more granular way to educate staff and principals. **DCPS created a principal's guide to school health, which includes descriptions of key concepts regarding laws and regulations and dictates many of the procedures that staff must follow as a result.**

All of these serve as useful examples for how principals, colleagues and other departments can better understand health services work and more clearly delineate points of connection, communication and collaboration.



RECOMMENDATION: COLLABORATIVE CARE

We recommend that SDP ensure a collaborative approach to health services by:

- ***Assessing the current organization of health service-related departments and programming and aligning where appropriate using the Whole School, Whole Community, Whole Child (WSCC) as a guide***
- ***Creating a resource guide that spans physical and behavioral health services and provides information to staff that clearly describes the available health services and supports***
- ***Emphasizing nurse participation on interdisciplinary care teams and considering the creation of school wellness committees using the current tier structure***



FRAMEWORK PRINCIPLE: LEADERSHIP

Leadership is an essential mindset for school nurses. According to NASN, as the only medically trained professional in the school setting, school nurses are well-positioned to take a leadership role, specifically, in the development and implementation of health policies, programs, and procedures.⁴⁸ This ensures the centrality of health services in the educational setting, and is a best practice in terms of defining the structure of health service programming and providing guidance for staff in delivering optimal care. This section will address both policies/procedures and professional development, two activities that are closely related and represent key components in nursing leadership.

Clear and effective policies and procedures are integral to school health services. Policies not only inform and support school personnel, but reassure key stakeholders that schools are addressing health and safety issues.⁴⁹ Throughout interviews, school nurses were inconsistent with their understanding of health services policies. Nurses often referenced state mandated requirements when asked about district-wide policies and procedures, and some interviewees indicated that current policies and procedures are significantly outdated with reference to a policy manual last updated in the 1990s. Policies can play a major role in changing school culture; therefore, it is essential that school nurses have a readily available policy manual including a description of the policy, procedural steps to implement the policy, a method of tracking the implementation of the policy and an effective way to enforce the policy.

School nurses and nurse leadership are vitally important to the development and implementation of health policies, programs and procedures, and should be included in the development of policies specific to their role.⁵⁰ Staying up to date on relevant research, position statements and professional education is one of the key roles for nurse leadership and ensures that policies are reflective of best practice.⁵¹ School nurses are also best-positioned to ensure that school health policies align with state and federal regulations. Finally, nurse leaders can utilize health services data to recognize trends or issues that provide opportunities for policy development. For instance, the rate of epinephrine administration for students who are undiagnosed with an allergy could prompt a policy recommendation that requires a stocked supply of epinephrine in each building.⁵²

Without including feedback from those trained and experienced in school nursing, administrators can enact policies that are overly cautious or in direct violation to nurse recommendations. For example, the Office of Safety has a policy that requires school personnel to call an ambulance for all students who are found to have smoked marijuana or have been sprayed with pepper spray, rather than having the nurse first evaluate the student to determine the appropriate need for care.

Leadership Recommendation Overview

- Policies & Procedures
- Professional Development

Professional isolation in the school setting can limit nurses' exposure to tools or changes in care practices, making education an important priority. Professional development can ensure that nurses are aware of new or updated policy and procedures and that they have the knowledge and skills to carry them out.

There are several online tools that SDP could find useful as it considers revisions to its policy manual:

- An online course designed by the AAP via the [TEAMs project](#). This resource offers a guide to school districts as they plan and implement health service improvements. The course highlights the development of health service policies and protocols and offers guidance on policy development.
- The CDC's [School Health Policies and Practices Study \(SHPPS\)](#). This national survey covers student health records, school entry requirements, required immunizations, procedures for student medications and more. It could be a useful starting place for developing a framework of needed policies and procedures.
- The Central Level Wellness Committee, newly led by the Office of Student Health Services. This body can serve as a useful resource in ensuring that policies are developed and revised in accordance with best practice and with input from a diverse audience.



RECOMMENDATION: POLICIES & PROCEDURES

We recommend that school nurses have a readily available policy manual including descriptions of the policies and procedural steps needed to implement. Additionally, we recommend engagement from all necessary stakeholders in policy creation. SDP should also utilize the Central Level Wellness Committee as a venue for collaborative communication regarding nursing practice and procedure.

Professional development is another important consideration as professional development and networking opportunities are infrequent. School nurses often work in isolation, sometimes as the sole health care provider in a building caring for students with a broad scope of health care needs.⁵³⁻⁵⁴ Professional isolation in the school setting can limit nurses' exposure to tools or changes in care practices, making education an important priority.⁵⁵⁻⁵⁶ Additionally, professional development can ensure that nurses are aware of new or updated policy and procedures and that they have the knowledge and skills to carry them out. During staff interviews, nurses highlighted the intention to hire a nurse educator to support professional development and provide personalized performance coaching and mentorship. To support this new role, SDP may consider providing professional development resources so the nurse educator can attract speakers who can grant continuing education units (CEUs) or is able to teach continuing education classes themselves, which could include access to e-learning software or videoconferencing capabilities.



Utilizing online learning modules can be an efficient way to get nurses the education they need, when they need it. AISD uses the Safe Schools Platform to automate staff training. This platform allows the district to purchase required trainings, such as basic illness and injury, suicide prevention, anaphylaxis and medication management, while also developing their own. With this platform, the district can be responsive to both regulations and the interest of their nurses. It also allows the district to provide trainings on an ongoing basis throughout the school year.



Another important factor to consider when developing training for nurses and other staff members is the need for cross training in behavioral health.

School nurses are often the first to interface with students experiencing behavioral and mental health challenges, including bullying, school phobia, anxiety, and stress-related physical symptoms such as stomach pain and headaches. It is recommended that school nurses and behavioral health professionals cross train to learn about each other's fields and better understand the overlap between physical and behavioral health and the impact of chronic medical conditions on psychosocial functioning. District-led training should offer mental health topics to school nurses, including effective responses to suicidal concerns, behavioral health crisis management, indicators of behavioral health problems, anxiety and depression. School nurse training should be trauma-informed and culturally responsive.⁵⁷⁻⁵⁸

The WSCC approach recommends that schools and communities have shared learning experiences to develop common terminology and approaches to best meet the needs of students.⁵⁹ Using an online platform is an effective way to ensure that diverse audiences have access to relevant training materials.



RECOMMENDATION: PROFESSIONAL DEVELOPMENT

We recommend the allocation of resources for professional development activities to include visiting speaker presentations with continuing education units (CEUs) and/or the procurement of software for e-learning or videoconferencing capabilities. Additionally, we recommend routine cross-training for school nurses and behavioral health professionals.

Community/Public Health Recommendation Overview

- Immunizations
- Health Education/
Parent Engagement
- Routine Screening/
Population-based Care



FRAMEWORK PRINCIPLE: COMMUNITY/PUBLIC HEALTH

School nurse practice is grounded in community and public health.

Throughout interviews we heard how public health concerns impact a school nurse's day-to-day work, and the health risks that students face due to environmental exposures both at home and at school. Some nurses spoke about breathing difficulties and the environmental concerns that contribute to the broader issue, including exposing children to mold, rodents or asbestos.



Interviewees also indicated a desire to track data to better target population-based care. AISD has been intentional about this work by creating geographic information system (GIS) maps that layer information collected by school nurses. Using this data they are able to determine by geographic location which schools have the highest rates of asthma. They identified the I-35 corridor as a problematic area, so the district installed improved HVAC filters in the schools with closest proximity. This is a useful example of how school health services can expand their focus beyond the individual student to populations with similar health concerns.

Ultimately, school nurses play a significant role in population health through efforts at disease prevention and health promotion, two core functions of public health.⁶⁰ In this section, we highlight several key disease prevention and health promotion activities.

Throughout interviews, there was wide concern regarding immunizations and the lack of school entry requirements.⁶¹ Immunizations are a critical public health intervention as they help to protect the health of the entire community. High percentages of unvaccinated individuals can lead to local outbreaks and spread contagious illnesses to vulnerable populations, including those who cannot be immunized for age or medical reasons.⁶² School nurses play a significant role in surveillance and outreach efforts and can make a substantial impact on the rates of compliance within communities.

It is NASN's position that promotion of immunizations is central to the public health focus of school nurses and that school nurses are well-positioned to create awareness and influence action.⁶³ School nurses play an important role in risk reduction by providing strong recommendations and addressing misconceptions through outreach and education. Evidence-based immunization strategies include hosting vaccination clinics in schools, providing vaccine education, sending reminders about vaccine schedules, and using state information systems for accessing and sharing accurate information with families who may not have access to up-to-date records.⁶⁴

One study, in a Northern Indiana High School, found that using a three-step, nurse-initiated process to increase immunization compliance was highly successful. In the first step, nurses sent letters home to notify parents who were not in compliance with state law. They followed this up with a second letter providing information from the

health department about needed vaccinations, the importance of disease prevention and contact information for appointments. If needed, nurses sent a third letter home coupled with a phone call to parents. All communications included exclusion dates and an explanation of what exclusion means. Prior to this intervention, 34% of the student population would have been excluded from attendance in the event of an outbreak of a vaccine-preventable disease. After implementation, less than 1% of the school population would have missed class time.⁶⁵

A compelling local example is that of a SDP nurse coordinator and principal who worked together to inform parents, at one school, of the school entry requirement, setting a date for exclusion for children with no vaccine records. They identified 13 children at the onset of the effort; however, with regular outreach, support and follow-up only two children were left unvaccinated by the deadline. This shows not only how proactive outreach and education are crucial to engaging and connecting parents with care, but also how addressing noncompliance with school enforcement can increase immunization rates.⁶⁶



RECOMMENDATION: IMMUNIZATIONS

We recommend the creation of a district-wide, nurse-initiated vaccine compliance strategy to include education, reminders and exclusion when necessary.

School nurses play an important role in health promotion by addressing misconceptions through outreach and education. This is true for immunization compliance and is also applicable to other topics. As an example, nurses reported that not all parents of SDP children with health conditions have a clear understanding of the child's condition. School nurses are well-poised to provide community health education through offering parent night topics covering common medical conditions or, on a broader scale, topics such as environmental concerns and healthy environments. In addition to addressing an important health education function, these family education events could also increase family engagement with health services, an important component of WSCC.⁶⁷

Not only are school nurses poised to offer community education, but they can provide important health education to students. Some SDP nurses spoke of offering student health education while others felt unable to do so due to time constraints. A standardized process for health education or consistent messaging about nurses' involvement in such activities may be useful. Using a needs assessment to determine areas of focus for community or student education can be a useful first step in the development process.⁶⁸ The Student Health Advisory Council, which is newly led by the Office of Student Health Services, could serve as a useful resource in developing a needs assessment as well as reviewing and developing curriculum. This advisory council includes experts from the medical field who can provide a wide perspective about prevalence of needs, making the council well-positioned to identify areas of emphasis for health promotion activities.



RECOMMENDATION: HEALTH EDUCATION/PARENT ENGAGEMENT

We recommend the creation of a standardized process for nurse involvement in health education and family engagement. SDP should utilize the Student Health Advisory Council as a venue for expert consultation.

School nurses play a significant role in population health through efforts at disease prevention and health promotion, two core functions of public health.

Supporting nurses in completing screenings early in the school year could free up nurse time to focus more intentionally on individual student needs as well as larger health promotion and disease prevention activities.

Another important disease prevention and health promotion activity supported by school nurses is that of ensuring student health through routine screening. Routine screening allows school nurses to identify need and connect children and families with necessary care. Pennsylvania public school code requires certain health screenings for all children (dental, vision, hearing, height and weight, etc.).⁶⁹ A suggestion made repeatedly by the nurses we interviewed was that of a “mass screening day,” during which nurses could complete routine screenings all at once. Nurse’s spoke of being pulled in many direction throughout the day, and how urgent health care needs, medication changes, parent visits and injuries can take precedent over completing screenings. A mass screening day would allow nurses to identify children in need of services early in the school year, providing ample time to complete consents for those at risk for hearing or vision loss or for those who need access to glasses or dental exams.

This early identification could support nurses in focusing on coordination of care and in assisting children who are at-risk in accessing needed treatments. SDP currently has a robust array of community partnerships, such as the Eagles Eye mobile and St. Christopher’s dental van. These partnerships complement the work of the school nurse by providing an easily accessible referral site for students who are in need of oral, vision or hearing services. Collaboration and networking with community partners facilitates effective care and is a best practice central to WSCC.⁷⁰⁻⁷¹ However, to make the most of these partnerships, nurses must have screenings and consents complete prior to visits by these mobile providers so that partners can focus on providing needed treatment services.

Some districts tackle the task of mass screenings by using nurses from other schools who can be available for most or part of a day or through partnership with volunteer health providers. SDP could consider using nurses within cohorts, enlisting substitute nurses or engaging community partners to rotate throughout schools—some community partners have expressed interest in screening as it provides a useful opportunity to train residents within their program. It may also be useful to prioritize schools with highest enrollment or greatest acuity when considering how to best organize mass screening days. Supporting nurses in completing screenings early in the school year could free up nurse time to focus more intentionally on individual student needs as well as larger health promotion and disease prevention activities.



A targeted example of this is LAUSD’s application of a public health model to address oral health. The district implemented this program in response to routine screenings and significantly reduced the number of students across the district with active dental disease.⁷²

Another example gleaned throughout interviews was in relation to population-based care and a desire to expand the focus of nurses to include groups of students with similar health concerns. One example is in caring for students with asthma, which is a substantial health concern for Philadelphia communities. Tracking data on attendance could help nurses to identify children with asthma who are absent more than typically expected. They could use this information to follow-up on causality—weather changes, lack of maintenance inhalers or a need for a primary care physician. Nurses could use this information to connect families with needed services and target areas for health promotion and education for whole communities.



There are numerous illustrations of public health approaches that can be undertaken by the Office of Health Services, and it is our hope that the recommendations made throughout this report will provide the foundation that is necessary for nurses and nurse leadership to become more involved in community and public health initiatives.



**RECOMMENDATION: ROUTINE SCREENING/
POPULATION-BASED CARE**

We recommend a review of the logistical and resource considerations required for the implementation of “mass screening days” as a population-based intervention strategy for systems-level efficiency. Within a system that supports mass screening interventions, nurses may allocate a higher percentage of their time toward individual student needs and larger community and public health initiatives. We also recommend that SDP support nurse leadership in using data to assess and identify core student and community populations who may benefit from targeted services and/or increased health promotion activities.

FUTURE DIRECTIONS

The health of students is critically important for their educational engagement and attainment and can help put them on a path to a successful future. The School District of Philadelphia has a strong foundation for school health services and a talented workforce of school health nurses and administrators. The opportunities outlined in this report to improve the delivery of health services will enhance alignment with best practice and advance the use of data, technology and capacity for quality improvement.

FUTURE DIRECTIONS FOR THIS WORK COULD INCLUDE FURTHER EXPLORATION OR CONSULTATION ON RECOMMENDATIONS MADE THROUGHOUT THIS REPORT, INCLUDING:



Using data to improve processes



Exploring how to legally permit a more effective exchange of information between school and external health professionals



Utilizing telehealth technology both to provide additional support to nurses and expand services

OTHER AREAS FOR FURTHER ASSESSMENT COULD INCLUDE:



A review of behavioral health services and how they intersect with SDP student health and wellness



School-based health centers and the utility and impact of their presence throughout Philadelphia



The effect of care coordination for children with medical complexity



How to best support parenting teens and youth in foster care



The accessibility of language access services

RECOMMENDATIONS RECAP

QUALITY IMPROVEMENT (QI) INITIATIVES

We recommend allocating resources to support an increased focus on health service QI initiatives. QI resources are foundational for data-informed decision-making for health initiative investments and in building the necessary infrastructure for standardizing and using data to improve the allocation of nursing resources and efficiency of service delivery.

STANDARDIZED DATA COLLECTION

We recommend prioritizing several key data points for standardized tracking that the district can use to inform QI initiatives.

ELECTRONIC HEALTH RECORD (EHR)

We recommend a careful assessment of the capabilities of the current EHR and, dependent on the outcome of that review, consideration of a contract with a technical assistance provider for system improvements. Dashboarding capabilities are an important component to include in system improvements, as the ability to quickly view aggregate data is a crucial function for health services. This may be accomplished through the EHR or may require additional applications.

DATA SHARING

We recommend a review of legal and technical considerations to enable participation in interagency data sharing or integration relationships to improve coordination and service delivery across child-serving systems. As a first step, simplifying legal consents and the creation of an online portal for HIPAA and FERPA consents would serve as a building block to facilitate future data sharing arrangements.

STAFFING MODELS

We recommend the use of community and student health data to build models that accurately predict the district's nursing needs and allow for effective distribution of resources. Additionally, to respond to nurse absenteeism, we recommend that the district use its own data to determine an appropriate number of substitute nurses for full-time employment.

DATA & EVALUATION FOR PERFORMANCE APPRAISALS

We recommend that SDP fund supervisory certifications for health services leadership so the nursing director and coordinators can directly oversee clinical supervision of school nurses. This would allow supervisors to take into account the nurses' use of data-informed decision-making as part of performance appraisals.

NURSE DELEGATION

We recommend that SDP delegate non-medical tasks to qualified nursing assistants to support school nurses in prioritizing responsibilities of addressing complex health care needs while balancing other responsibilities such as screening, medication administration, and response to acute and urgent health care needs.

COLLABORATIVE CARE

We recommend that SDP ensure a collaborative approach to health services by:

- Assessing the current organization of health service-related departments and programming and aligning where appropriate using the Whole School, Whole Community, Whole Child (WSCC) as a guide
- Creating a resource guide that spans physical and behavioral health services and provides information to staff that clearly describes the available health services and supports
- Emphasizing nurse participation on interdisciplinary care teams and considering the creation of school wellness committees using the current tier structure

POLICIES & PROCEDURES

We recommend that school nurses have a readily available policy manual including descriptions of the policies and procedural steps needed to implement. Additionally, we recommend engagement from all necessary stakeholders in policy creation. SDP should also utilize the Central Level Wellness Committee as a venue for collaborative communication regarding nursing practice and procedure.

PROFESSIONAL DEVELOPMENT

We recommend the allocation of resources for professional development activities to include visiting speaker presentations with continuing education units (CEUs) and/or the procurement of software for e-learning or videoconferencing capabilities. Additionally, we recommend routine cross-training for school nurses and behavioral health professionals.

IMMUNIZATIONS

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HEALTH EDUCATION/PARENT ENGAGEMENT

We recommend the creation of a standardized process for nurse involvement in health education and family engagement. SDP should utilize the Student Health Advisory Council as a venue for expert consultation.

ROUTINE SCREENING/POPULATION-BASED CARE

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RELATED POLICYLAB RESEARCH

Children's Hospital of Philadelphia, PolicyLab. Promoting Positive Educational Outcomes for Vulnerable Populations. Retrieved from <https://policylab.chop.edu/project/promoting-positive-educational-outcomes-vulnerable-populations>

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