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SCHOOL-BASED HEALTH CENTERS: A MEANS TO MEET THE WHOLE SCHOOL, WHOLE COMMUNITY, WHOLE CHILD MODEL

A CSCH Report

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EXECUTIVE SUMMARY

This report aims to outline adolescent health care needs in schools and provide recommendations for meeting these needs utilizing the Whole School, Whole Community, Whole Child (WSCC) approach. The established associations between academic outcomes, health status, and individual wellbeing for adolescents support the need for a whole-child approach to health care that is built on trusting relationships and a supportive network. Schools provide an accessible platform to assure that essential physical and mental health care needs are met. The WSCC works to address education and learning outcomes by establishing a network of collaboration between the student, school staff, advocates, policy makers, and the community.

Providing Health Care in Schools

There are three major opportunities to assure that student health needs are met:

- **School-based health centers (SBHCs)** establish a collaborative space to meet primary, dental and mental health needs of adolescents. SBHCs may employ a team of professionals from nursing, medicine, dentistry, psychology, and social work to offer high-quality health care services. The centers also work with educators and the community to identify barriers and facilitators to promoting a healthy school environment.

- The **school nurse model** prioritizes the delivery of safe and effective health care to students. School nurses manage chronic health conditions, refer students with acute care needs, and act as advocates within the community.

- The **school health coordinator** provides systemic support for the school community by identifying health-related needs and developing programs to address them. The school health coordinator is a non-clinical leadership position aimed at health promotion and enhancing the school environment.

Recommendation for School-Based Health Centers

To succinctly implement the WSCC model, we recommend application of SBHCs to develop a thriving school community. The services provided by SBHCs directly address each element of the WSCC model by providing a space for students to access a range of health care services and building sustainable relationships with the community. SBHCs aim to increased access to health care, reduce adolescent health disparities, and contribute to enriching the school environment.

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The Whole School, Whole Community, Whole Child Approach

The Whole School, Whole Community, Whole Child (WSCC) model strives to improve child and adolescent education and learning outcomes by focusing on essential health needs. The WSCC model provides a framework for collaboration between school administrators and employees, community members, and policy makers to address the learning and health needs of students[1] This model is based on a collaboration between ASCD's Whole Child approach and the Centers for Disease Control and Prevention's (CDC) coordinated school health approach.[2]

As displayed in Figure 1,[3] the WSCC model includes four major elements. The student is at the center of the model as an active contributor to both their health and education. Immediately surrounding the student is the internal ring of coordination between policy, process, and practice. This ring serves as a bi-directional facilitator between the student and the components of the external ring. The external ring contains the ten factors that contribute to a healthy school environment including students, faculty and staff. Lastly, the community provides the outside element to represent the environmental context of the school as well as to emphasize the role of families and local organizations as active participants in the student's health and education.

Figure 1. WSCC Model

A Focus on Adolescents

It is estimated that one-sixth of the world's population (1.2 billion people) are adolescents between the ages of 10 and 19.[4] This developing group has a unique set of health care needs as they experience changes in both physical and mental health throughout their pre-teen and teenage years. During this time, adolescents begin to form healthy habits as well as engage in risky behaviors, both of which impact health outcomes and wellbeing in adulthood. The top health concerns that contribute to rates of premature death and disability for this population include:

1. unintentional injuries and violence;
2. mental health disorders including depression and suicidal behaviors; and
3. risk-taking activities, such as substance use and unprotected sexual activity.[5]

Focusing on preventative and supportive care utilizing a collaborative approach directly with adolescents and their communities can encourage positive youth development and health care engagement.

The World Health Organization (WHO) states that adolescent care should be accessible, acceptable, equitable, appropriate, and effective in order to create a foundation for sustained health outcomes.[6] National standards are needed to ensure that adolescent health care programs have these characteristics. In order to implement quality-driven standards, the engagement of key stakeholders (i.e. adolescents, community members, teachers, government officials, etc.) must take place to develop the structure and goals of this initiative.[7] Implementing a school-based approach grounded in the WSCC model will support all key members as active participants in promoting wellbeing and helping youth to invest in their physical and mental health.

The Need for Health Care in Schools

Research has demonstrated strong links between health status and academic outcomes in children and adolescents.[8] For example, initiatives directed at increasing physical fitness in school have shown a positive impact on academic performance and cognitive function.[9] Additionally, school-based programs focused on promoting healthy eating habits, including providing regular meals such as breakfast, can improve attention, concentration and memory in the classroom.[10]

Although these health-promoting programs encourage favorable outcomes that can lead to healthy habits, adolescents remain at high risk for developing poor health habits during school years. Prior evidence has demonstrated an association between risky health behaviors and academic achievement. For example, based on the National Youth Risk Behavior Survey, data from 2015 showed that students receiving course grades of C and below were more likely to report engaging in vaping, smoking marijuana, drinking alcohol, and fighting with peers.[11] Although this data indicates a relationship between health behavior and academic achievement, the direction of this association remains undetermined. Thus, at this time we are not able to confidently state if poor academic performance leads to risky health behaviors or if risky health behaviors lead to poor academic performance.

Primary, dental, and mental health care needs for adolescents

Beyond developing health promoting behaviors, meeting the healthcare needs of adolescents is another area of concern. Both primary care and behavioral health care play a role in physical and mental wellbeing that can have a life-long impact.[12] Only an estimated 12% of children and adolescents report managing an active chronic disease, therefore meeting the primary care needs of adolescents is not always prioritized as teens are often considered to be healthy.[13] Well-care visits with primary care providers (PCP) provide an opportunity to identify and manage acute and ongoing needs as well as provide referrals to specialists for additional follow-up, although attendance for completing annual care visits with a primary provider has been cited as low as 43% for adolescents.[14] In one study on using health care services, youth cited several barriers to attending these health maintenance visits including the lack of accessibility, concerns with confidentiality, and disinterest in speaking with PCPs about mental health needs.[15] This loss in the continuity of care with a PCP can lead to increased emergency department use for non-urgent visits and raise care costs.[16]

There are also significant challenges to maintaining dental and periodontal health for this population. Adolescents are at a higher risk for periodontal disease, dental caries, and traumatic injury to the oral cavity due to a variety of factors including changing dietary habits, risky behaviors, and dental phobia.[17] Further, previous data have found poverty to be associated with an increased prevalence of dental caries putting disadvantaged populations at higher risk for poor oral health and higher care needs.[18] Strategies which account for the unique oral hygiene care needs for teens and provide opportunities to access consistent dental care in a trusting environment are needed.[19]

Mental health and well-being has received significant attention in recent years and continues to be a topic of conversation in teen health. Lifetime prevalence of a mental health disorder in adolescence has been cited as high as 49.5%, with 27.9% displaying signs of severe impairment.[20] Particular health concerns include anxiety, depression, substance abuse, eating disorders, self-harm, and suicidal ideation. Although there are resources available to support teens in their mental health needs, many adolescents forego accessing care or do not have the social support to identify the resources they require.[21] Barriers that may contribute to low mental health access include ethnicity, geographic location, household income, sexual or gender identity, and social history.[22]

> Particular health concerns include anxiety, depression, substance abuse, eating disorders, self-harm, and suicidal ideation.

Youth violence is another key factor that affects health outcomes of adolescents across geographic areas. Violence may be physical or psychological, and present in a variety of forms including bullying, personal threats, gang-related violence, and homicide. The roles that one may have in a violent act include as the offender, as the victim, or as a bystander.[23] It is estimated that each day 14 people under the age of 24 die from an act of homicide.[24] Violence can also have significant indirect consequences, such as influencing mental health well-being and acts of self-harm or suicide.

Violence is closely associated with the social determinants of health, both as a contributor to health outcomes as well as product of the social environment. Risk factors for youth violence include previous exposures of community-based trauma, chronic stress, peer influence, poor family functioning, and impulsive behavior.[25] Programs targeting the development of community

safety to enhance supportive factors can lead to violence prevention and peer engagement. Examples of such strategies include promoting family relationships, developing youth mentoring programs, and investing in community partnerships to identify and reduce risks.

As discussed, access to reliable health care can be particularly challenging for at risk youth who are associated with marginalized populations, such as adolescents living in rural areas or those with a refugee background, and contribute to increased health care inequities.[26] Vision needs, teen pregnancy, and behavioral health have been found to specifically affect academic achievement in minority youth living in urban areas.[27] Further, one study that analyzed a national sample of over 48,000 adolescents discovered that youth who identified as American Indian/Alaskan Native, African American, or Latino were more likely to be overweight/obese and have asthma, as well as not have consistent health insurance coverage.[28]

> Vision needs, teen pregnancy, and behavioral health have been found to specifically affect academic achievement in minority youth living in urban areas.

Addressing adolescent health needs in schools

Addressing the links between health and education during teenage years holds further implications for long-term health engagement and outcomes, as lower levels of education are associated with higher rates of chronic disease, risky health behaviors in adulthood, and community violence rates.[29] In order to decrease chronic disease rates and related disability, public focus should prioritize interventions aimed at children and adolescents to combat health disparities across the lifespan. By implemented a model such as the WSCC, support for prevention and health promotion targeting this age-group can be addressed at the personal, school, and community levels.

One way to implement a community-centered approach is by providing comprehensive health services in schools, which presents a unique opportunity to meet the physical and psychological health care needs of adolescents at a convenient location. With an estimated 15.1 million adolescents enrolled in United States school systems, educational centers can be a central location to provide medical, dental, and behavioral health services.[30] Specific services may include annual exams, dental care, sexual health counseling, prenatal care, psychological counseling, emergency care, and social support. Primary, secondary and tertiary prevention can be addressed in the schools as well as primary care. In addition to providing individual services, health care workers may also team-up with teachers and school administrators to ensure that the school is providing an environment that supports physical, psychological, and academic growth through didactic and extracurricular activities. With the WSCC as the nexus, the health of all in the school and in the community in which the school is a stakeholder can be addressed.

As health for teens goes beyond completing annual physical exams, providing a comfortable space for students to build trust with their providers is essential. Forming a relationship in a safe environment can allow for adolescents to learn how to communicate their physical and psychological care needs, thereby developing lifelong skills in self-care independence and personal responsibility.[31] Feeling a sense of connection to school health care providers and staff through the formation of trusting relationships can also improve attendance rates and education outcomes for at-risk youth.[32]

Challenges to Providing Health Care in Schools

Establishing health services within school systems takes careful consideration as there are several challenges to overcome. The foremost challenge is **acquiring the necessary stakeholders** to support the integration of health care services and, immediately thereafter, securing the funding. The engagement of stakeholders at the school and community levels is necessary to assure that the essential components of the WSCC model are maintained. The ongoing support of school administrators and educators, business leaders, local policy makers, family members, and the students will allow for program sustainability. Collaborating with a health care business partner as a primary stakeholder is also integral as they can provide access to health care staff as well as directly communicate with health insurance agencies for reimbursement.[33]

Identifying sources of funding can present additional challenges. Applying for federal and state grants can support the health center initiation. Funding contributions may also be found from non-profit organizations, private funders and health care partners. Funding considerations include the start-up costs, staffing, equipment, and space. Funding considerations should also include infrastructure costs if structural changes to the school are required for health services accommodation. An estimated $1.4 million is needed for the first three years of school-based health program operation.[34]

Major logistical challenges include **finding the space within the school system** to support a health care clinic and identifying the populations to be served. Clinic size will depend on the number, frequency, and demand for the services provided. Understanding who has access to the services will impact these decisions. For example, are the health services only provided for students of the school, or are siblings and family members included? Are individuals with no association to the school permitted to access services?

Lastly, **confidentiality should be carefully considered** as education and health care merge together. Allowing minors to access and direct their health care holds legal implications and may be a challenge to eliciting parental support for integrating additional health care services in schools. Precautions should be taken to assure that patient privacy is maintained and does not interfere with academic requirements.

To overcome each of these challenges, strategic planning is required to navigate this complex endeavor. From the first discussion with stakeholders to the first patient seen, a rigorous plan should be followed to communicate progress and meet implementation goals.

A Recommendation for School-Based Health Centers

Developing a thriving school community that supports academic achievement and healthy growth throughout the adolescent years can be attained with a school-based health center (SBHC). A SBHC is based on a health care delivery model that emphasizes reducing health disparities by increasing access to health care providers. SBHCs are a collaborative space to provide high-quality preventive services as well as acute treatment of illness and a broad range of counseling services.

SBHCs work within the WSCC model by facilitating the dynamic link between the student and the community. As many physical and mental health concerns may first be recognized during school hours, these centers can lessen barriers to accessing health care services and reduce health care costs for low-income families.[35] Further, the presence of SBHCs has been related to better health outcomes as well as improved academic performance.[36] By ensuring that youth health needs are met through safe, supportive and accessible services, SBHCs emphasize the importance of primary health care, dental care and mental health services within the school community and create an environment for students to succeed.

> These centers can lessen barriers to accessing health care services and reduce health care costs for low-income families.

SBHCs are typically sponsored and closely affiliated with a community health care agency such as a hospital, a community health center and/or a state or local health department. The services offered range from preventive primary care and appropriate screenings, reproductive health including contraception, STD screening and relevant counseling, dental care, mental health services (which are increasingly needed with fewer access points other than SBHCs), and emergency services including referrals.

SBHCs may be staffed by a multi-disciplinary team including an advanced practitioner such as a Nurse Practitioner with an independent license, a registered nurse, a medical assistant, outreach workers, health educators, dentists and dental hygienists, social workers, clinical psychologists and a nutritionist. The number of each type of personnel and the breadth of the team is dependent on the fiscal support, the goal of the breadth of services provided, and the number of students within the school.

Moriarty Daley, Polifroni and Sadler (2019) discovered that adolescents and an expert panel of advanced practice nurses in SBHCs agreed on six essential elements of an effective SBHC. They assert that confidentiality and privacy, accessibility and flexibility, a welcoming environment, a team of clinicians and staff who were respectful and competent, services which are comprehensive and continuous, and collaborative relationships between the school and the SBHC are essential. The adolescents also believed that the SBHC was based on a comfortable environment and a feeling of being comfortable wherein trusted relationships were established. Figure 2 demonstrates these themes in a safety net approach. The SBHC is the safety net.
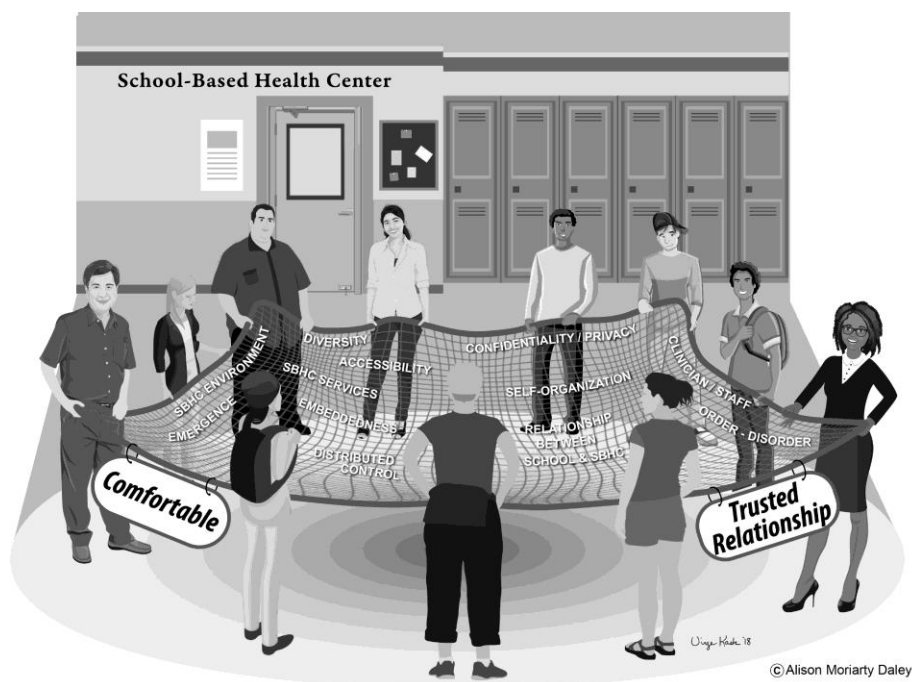
Figure 2. The safety net of school-based health centers. Reprinted with permission.
(Moriarty Daley, Polifroni and Sadler, 2019).

Essential Elements to Create a Thriving School Environment

As not all school communities have the resources to create and/or ensure the sustainability of a SBHC, schools can invest in a thriving school environment by developing a supportive network within the school. Educators, clinical staff, and health coordinators can work together with students to create a safety net that focuses on adolescent health, education, and social needs. Table 1 displays the various roles and services that may contribute to a thriving school environment.

Differences between school nurses and SBHCs

Traditionally, school nurses are the point-person for the medical needs of students across school systems. A position that was established in the early 1900s, the role of the school nurse is to facilitate the assessment, treatment, and management of acute and chronic illnesses of students.[37] It has been estimated that there are over 95,000 full-time school nurses practicing in the U.S.[38] The scope of practice for a school nurse includes addressing medical, psychological, emotional, and social needs. Additionally, school nurses participate in monitoring and addressing health disparities throughout their communities.[39] Overall, they are a key figure in supporting students in their academic achievements by promoting health and coordinating care between the school, family, and health care provider.

Conversely, a school based health center is a clinic that has been established on a school campus to provide health and social services. Although the role of the school nurse remains the same within a SBHC, additional services are provided that support the school-education collaboration. In addition to a nurse, a SBHC may be staffed with a primary care provider (i.e.

nurse practitioner), social worker, and/or psychologist. Through this multidisciplinary partnership, more emphasis is placed on the whole child case management of students to support their educational needs. There are over 2,000 SBHCs active in the US, either providing daily services to students or operating on a limited schedule.[40]

Laws mandating school nurses

The school nurse is a professional position that is bound by regulatory nurse practice laws as well as laws mandating the use of nurses in schools. The Nurse Practice Act is state-specific legislation which governs the rules and regulations of how a nurse may use their license to practice in that state. Therefore, the state sets the education standards, licensure requirements, and scope of practice for nurses.

Beyond the use of practice-specific state laws, there are also federal statutes which require the utilization of nursing services in schools to meet the medical support needs of students. The Americans with Disabilities Act (ADA), the Individuals with Disabilities Education Act (IDEA), and Section 504 of the Rehabilitation Act (Section 504) each outline specific requirements for ensuring that supportive services are in place to promote accessibility in schools and prohibit discrimination. Specifically in regards to the IDEA and Section 504, schools are required to provide a qualified health professional to identify and evaluate students for special needs services.[41] Moreover, school nurses have a responsibility to conduct health assessments, develop and manage plans of care, and request classroom accommodations for students.[42] These pieces of federal regulation safeguard all students' rights to attain a fair and equal education regardless of learning ability, health care needs, or requirements for classroom accommodation.

For specific services, Medicaid and the Children's Health Insurance Program (CHIP) mandate schools to provide necessary health services and support to assure that children with medical needs are able to remain in school. This pertains both to school nurses and SBHCs. Through Medicaid reimbursement, SBHCs are able to expand their services to meet the primary care needs of students on site for qualified children.

How school nurses can meet the needs of students

The role of the school nurse is to prioritize a practice of safe health care within in a school environment as well as be a public health leader in the community. School nurses can meet the needs of students by remaining in compliance with state and federal regulations, participating in inter- and intra-professional collaboration, and promoting accessible and developmentally appropriate health care services. They cultivate an environment of health by offering preventative health services, managing acute and chronic care needs, and establishing evidence-based health education programs. School nurses help to form the safety net for students in which they can quickly identify medical, emotional, and mental health challenges and create an individualized care plan to keep students actively engaged in their education.

The role of the school health coordinator

A school health coordinator is a leadership role in which the individual manages each major component of the WSCC model, the child, the school system, and the community.[43] The job of the school health coordinator is to ensure that health care practices remain within state and federal guidelines, to continually engage key stakeholders to support the connection between health and education, and to assess student health activities and needs.[44] As opposed to the clinical positions associated with a SBHC and school nurse, this is an oversight position that is focused on providing administrative and structural support. The school health coordinator is a unique position that has the ability to lead effective systemic change by identifying community-specific needs and developing programming directed at improving health outcomes. The implementation of school health coordinators has been linked to increased physical activity, improved nutrition, and decreased tobacco use in schools.[45]

Table 1. Services offered by health-related positions within school systems

	SBHC	School Nurse	SHC
Advanced practice provider*	x		
Emergency care	x	x	
Education	x	x	x
Comprehensive health care services (primary, dental, and mental health care)	x		
Referrals	x	x	
Advocacy	x	x	x
Stakeholder engagement	x		x
Community Development	x		x
Assessment of student health needs	x	x	x

Note. SBHC = School based health center; SHC = School Health Coordinator; *Diagnose, treat and prescribe.

Conclusion

WSCC embraces the philosophy of connectedness, engagement and team action. This can be achieved in regard to school health through a variety of models. SBHCs are the most comprehensive approach that manages individual students' health care needs while addressing community health needs at the systemic level. SBHCs can directly engage adolescents to take an active role in their health by providing an environment built on trusting relationships and a supportive network. These health centers can aim to reduce the challenges met with providing health care in schools by creating a sustainable structure to connect school administration with local health agencies through stakeholder participation and community development. With a focus on reducing the gap between education and student health outcomes, SBHCs contain all of the elements to seamlessly apply the WSCC approach.

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