
SCHOOL-BASED HEALTHCARE CAN ADDRESS CHILDREN'S UNMET HEALTH NEEDS: MODELS, EVIDENCE, AND POLICIES

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INTRODUCTION

Addressing the unmet physical and mental health needs of school-aged children in the U.S. has moved to the forefront of the emerging policy conversation about effective, school-based strategies to support students. Although some new and unique challenges regarding the physical and mental health of school-aged children can be directly attributed to the COVID-19 pandemic, policymakers and educators have long grappled with finding, funding, and implementing effective strategies to support the physical and mental health of school-aged children as means to promote their learning, growth, and development.

Providing care for students' mental and physical health in a school-based setting offers the potential to meet students where they are and provide them with access to services that support their learning, growth, and development. These services (henceforth, "school-based healthcare") can include primary care, mental health care, and urgent care, all of which can help students and their families manage and address both chronic health conditions and acute health needs. School-based healthcare reaches students where they are so that students can remain in school or return to school (when well) more quickly. School-based healthcare also offers the potential to ameliorate gaps in healthcare access that exist both within and across communities and to reach populations and places that are historically underserved.

Even prior to the onset of the COVID-19 pandemic, supporting students' physical and mental health was an active area for state legislation. In 2018, more than 40 bills covering diverse areas such as health services, mental and behavioral health, nutrition, school-based services and health professionals, and



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suicide prevention were introduced across U.S. states and the District of Columbia (D.C.).¹

Some specific areas of school-aged children's health and health-related programming addressed by these bills included vision screening, in-school diabetes management, standards for school-based health centers, and the administration of asthma medications in school.²

This brief describes the state of school-aged children's health and healthcare access in the U.S. and then summarizes research on the link between children's health and educational performance and on the effects of school-based healthcare. The brief concludes by presenting examples and models of school-based healthcare along with summaries of the existing evidence on their effectiveness and by discussing funding considerations.

BACKGROUND: HEALTH STATUS AND HEALTHCARE ACCESS AMONG SCHOOL-AGE CHILDREN IN THE UNITED STATES

In the United States, the number of children living with a diagnosed chronic physical or mental health condition has increased dramatically over the past thirty years.³ Although some of this increase has been driven by improved detection and diagnosis of health conditions during childhood, there have been large increases in the number of children diagnosed with asthma, Attention Deficit Disorder/Attention Deficit Hyperactivity Disorder (ADD/ADHD), obesity, and diabetes, among others. Recent estimates from the 2019 National Survey of Children's Health indicate that 46.7 percent of children have a health condition that "consistently [or] often greatly affect[s] their daily activities" and that 19.0 percent of children have a special healthcare need.⁴ Data from the same survey indicate that 22.1 percent of children have a mental, emotional, developmental, or behavioral problem.⁵



During the past decade, both health insurance coverage and healthcare access among children have improved substantially, largely as a result of improved public health insurance coverage. These gains have been especially pronounced for Hispanic, Black, poor, and near-poor children.⁶ Despite progress on these dimensions following the passage and implementation of the Affordable Care Act (ACA), data from more recent years indicate that some of the initial progress is now beginning to fade.^{7,8} Recent estimates indicate that 93.3 percent of children have health insurance coverage but that only 87.3 percent received medical care (including a check-up or well-child visit) in the past year.⁹

THE LINK BETWEEN CHILDREN'S HEALTH AND EDUCATIONAL PERFORMANCE

Unaddressed health challenges among school-aged children can have far-reaching and long-lasting impacts on children's educational, social, and economic outcomes. In the short-run, unaddressed health issues can prevent school-aged children from attending school regularly or preclude them from fully participating in the learning



and social environment even when physically present at school. Both missed school (i.e., absences) and an inability to fully participate in classroom, social, and academic activities in school have the potential to disrupt students' learning, reduce children's school engagement, and result in lower levels of academic achievement. Chronic childhood health conditions associated with school absences include type 1 diabetes, asthma, chronic fatigue, and chronic pain.¹⁰ Untreated mental health conditions in children are also associated with high rates of school absences.¹¹

Over the medium-run, unaddressed physical and mental health challenges among school-aged children can lead to chronic absenteeism, interfere with on-time grade progress, and decrease children's educational attainment.^{12,13} Research evidence documents the association between absences and poor academic achievement^{14,15} and several studies provide evidence suggesting that this relationship is indeed causal.^{16,17} These effects have the potential to accumulate, ultimately leading from high rates of absences to low levels of academic achievement and to the possibility of high school dropout. Over the longer-run, poor health during childhood and children's performance in school can have far-reaching consequences and affect eventual educational attainment and lifetime earnings.¹⁸

THE EFFECTS OF SCHOOL-BASED HEALTHCARE ON HEALTHCARE UTILIZATION, CHILDREN'S HEALTH, AND ACADEMIC PERFORMANCE

School-based healthcare offers one potential way to reach school-age children with unaddressed physical and mental healthcare needs and may thus serve to break the link between unmet health needs and poor educational outcomes. Access to school-based health-

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care for students is associated with increased utilization of mental health services and social work services.^{19,20} In some studies, access to school-based healthcare is also associated with less missed routine medical care, lower rates of hospital admissions, and lower rates of emergency department visits.^{21,22} In low-income populations, school-based healthcare is associated with increased use of preventive care, increased vaccination, and fewer emergency department visits.²³ Aside from these direct effects, some existing evidence suggests that school-based healthcare can generate improvements in health domains, including physical activity and nutrition.²⁴

More research is needed to fully understand the effects of school-based healthcare access on students' educational outcomes because existing research evidence on the effects of school-based healthcare on student outcomes is mixed.^{25,26} Although several studies report improved academic performance among sub-populations of children with chronic health conditions, such as those with asthma, others do not find any evidence of positive effects on educational outcomes.²⁷ One recent study of school-based telemedicine finds evidence to suggest that access to school-based healthcare in this form reduces the likelihood that a student is chronically absent.²⁸

MODELS FOR DELIVERY OF HEALTHCARE IN SCHOOLS

Healthcare provided in a school-based setting has become increasingly common in the United States over the past two decades. The best available data indicate that the share of K-12 public school students who have access to healthcare in a school-based setting has doubled since the early 2000s and now reaches close to 13 percent of K-12 public school students.^{29,30,31} A nationwide study of school-based healthcare found that services are most commonly offered in schools that serve large proportions of students from low-income families.^{32,33}



Some common models for the delivery of school-based healthcare include School-Based Health Centers (SBHCs), telemedicine, and specialized instructional support personnel (SISP). The table below presents a brief description of each model, several examples of implementation, and a short summary of some of the existing research evidence on the model's effectiveness at improving children's health and educational outcomes (See Table 1).

Table 1. School-Based Healthcare: Models, Examples, and Evidence

Model	Example	Research Evidence on Effectiveness
<p>School-Based Health Centers</p> <p>School-Based Health Centers (SBHCs) provide students with access to healthcare during the regular school day at a clinic located within the school. SBHCs are often staffed by physicians or advanced practice providers (e.g., nurse practitioner or physician assistant) and can provide a range of healthcare services to students (and sometimes family members or community members), including primary care and acute/urgent care.</p>	<p>The Maryland Assembly on School Based Healthcare (MASBHC) provides support and technical assistance to the state’s 80 school-based health centers.</p> <p>The School-Based Health Alliance of Arkansas provides support and opportunities for grant funding to the state’s 56 school-based health centers. These SBHCs provide services for vision, mental health, dental, and telemedicine.</p> <p>Wellness Centers and School-Based Health Clinics in Los Angeles Unified School District (LAUSD) provide healthcare services to students in the district who are uninsured, Medi-Cal recipients, or Alaskan or Native American.</p>	<p>SBHCs are associated with increased utilization of healthcare and decreased emergency room visits.^{36,37,38}</p> <p>SBHCs are associated with increased uptake of preventive care, increased rates of vaccination in low-income populations.³⁹</p> <p>Existing evidence on the association between SBHCs and school absences is mixed; some studies find that SBHC access decreases absences while other studies find no association.⁴⁰</p> <p>SBHC access reduces teen pregnancy but has no effect on high school drop-out rates.⁴¹</p>
<p>Telemedicine</p> <p>Telemedicine provides students with access to a healthcare provider via private and secure videoconference appointment. Some telemedicine appointments may be facilitated by a presenter who manages cameras and other diagnostic equipment (e.g., stethoscope).</p>	<p>Children’s Medical Center offers school-based and home-based (virtual school) telemedicine visits for children in Dallas, Texas.</p> <p>The Health-e-Schools Program, run by the Center for Rural Health Innovation in Spruce Pine, North Carolina, provides telehealth medical services to students in seven rural western counties.</p>	<p>Access to a school-based telemedicine clinic reduces the likelihood that a student is chronically absent by 20 percent, reduces the number of days absent by 7 percent, and increases the likelihood of end-of-grade test-taking (2 percent).⁴²</p> <p>Telemedicine in schools can help school nurses manage increased caseloads driven by increasing number of children with chronic conditions who require management coordinated with specialist(s).⁴³</p> <p>Telemedicine can be embedded within school-based health centers (SBHCs) to provide students with access to more specialized services and care.⁴⁴</p>

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<p>Specialized Instructional Support Personnel (SISP)</p> <p>School nurses, guidance counselors, social workers, speech language pathologists, and psychologists can help students and their families access healthcare services in the community and make referrals when necessary. Some SISP provide services directly to students and their families.</p>	<p>The School Nurse Grant Program in Colorado created a process for local education agencies (LEAs) to apply to the state for funds to hire school nurses. 11 LEAs were funded in the first year of the program.</p> <p>Starting in 2020, the state of Oregon requires local education agencies (LEAs) to provide comprehensive school counseling following a statewide framework and directed by a licensed professional.</p>	<p>Additional funding for guidance counselors in elementary schools leads to fewer student suspensions and reductions in violent incidents (e.g., involving weapons).⁴⁵</p> <p>State-level policies mandating minimum counselor-to-student ratios and increasing state subsidies for guidance counselors leads to improved teacher perceptions of school climate and student behavior.⁴⁶</p> <p>Decreased student-to counselor ratios lead to decreases in the number of students involved in disciplinary infractions in school and help break the cycle of repeated disciplinary infractions.⁴⁷</p> <p>Additional guidance counselors improve boys’ academic achievement and reduce student misbehavior.</p>
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Aside from the models covered in the table, some states and school districts also deliver school-based healthcare through community partnerships, mobile clinics, or other collaborations with local healthcare providers.

FUNDING CONSIDERATIONS

Funding for school-based healthcare varies based on the model for delivery, the population served, payer types, and the type of service provided. Most School-Based Health Centers (SBHCs) are supported by federal funds as federally qualified health centers.³⁴ The establishment of a SBHC requires substantial investment, as physical space, equipment, and technology are needed to open a full-service, brick-and-mortar health clinic capable of providing services for students, staff, and families. Telemedicine, in contrast, can be cheaper, particularly if local education agencies (LEAs) or schools can leverage existing resources, such as high-speed internet connectivity, physical space (e.g., school nurses office), and existing school personnel and staff (e.g., a school nurse). Although some investments in technology and medical equipment (e.g., high-definition cameras for diagnostic exams) are required, these are typically less expensive than the equipment required to open a full-service clinic. Reimbursement for telemedicine services provided in schools has changed dramatically since the onset of the COVID-19 pandemic. As of 2021, 49 states have policies that allow Medicaid to provide reimbursement for school-based telemedicine services.³⁵ Finally, funding for specialized instructional support personnel (SISP) typically comes from states as part of the education budget.



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