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# Increasing the Delivery of Preventive Health Services in Public Education

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## Abstract

The delivery of prevention services to children and adolescents through traditional healthcare settings is challenging for a variety of reasons. Parent- and community-focused services are typically not reimbursable in traditional medical settings, and personal healthcare services are often designed for acute and chronic medical treatment rather than prevention. To provide preventive services in a setting that reaches the widest population, those interested in public health and prevention often turn to school settings. This paper proposes that an equitable, efficient manner in which to promote health across the life course is to integrate efforts from public health, primary care, and public education through the delivery of preventive healthcare services, in particular, in the education system. Such an integration of systems will require a concerted effort on the part of various stakeholders, as well as a shared vision to promote child health via community and institutional stakeholder partnerships. This paper includes (1) examination of some key system features necessary for delivery of preventive services that improve child outcomes; (2) a review of the features of some common models of school health services for their relevance to prevention services; and (3) policy and implementation strategy recommendations to further the delivery of preventive services in schools. These recommendations include the development of common metrics for health outcomes reporting, facilitated data sharing of these

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metrics, shared organization incentives for integration, and improved reimbursement and funding opportunities.

## Introduction

Improving the health of communities starts with a commitment to address the primary physical, cognitive, behavioral, and affective health service needs of all children and their families. Public health has such a commitment, 1,2 but as currently organized in the U.S., the local, state, and federal organizations that are mandated to provide public health services are not sufficiently funded or integrated with other systems to effectively reach the entire child population, particularly with regard to cognitive, affective, and behavioral health services. Cognitive health is neurologic functioning, including reasoning, memory, and language; affective and behavioral health refer to mental status and emotional behaviors such as psychological well-being, depression, and antisocial behavior. Primary care, the primary provider of preventive services, is a natural partner for public health in this mission and one of the foundations for a healthy population, a major perspective that was recognized and addressed by the National Academy of Medicine. Despite primary care's expanded capacity through the Affordable Care Act (ACA) in delivering preventive services to many who previously were uninsured, including primary mental health care, there are still major gaps in delivering services to support the health and well-being of children in this country.

A third leg of the stool, in addition to primary care and public health, is needed to fill some of these gaps: public education. Although called for, few practical steps have been outlined. Public education is the uniquely community-based, near-universal system that is of fundamental importance to children's health. The integration of preventive services delivered through the three perspectives of public health, primary care, and public education provide capacities for improving aspects of child health that are rarely reached at the population level, particularly cognitive, affective, and behavioral health. One of the most notable promises of delivering preventive services to students and their families through schools is the inclusivity of the potentially served population, as almost all children attend school in the elementary and middle school years, regardless of SES, immigration status, or presence of other factors that typically inhibit access to health care.<sup>6</sup>

The delivery of prevention services to children and adolescents through traditional healthcare settings, from mental health screening to more lengthy evidence-based programs such as those reviewed in the National Registry of Evidence-Based Programs and Practices (NREPP),<sup>7</sup> is challenging for a variety of reasons. Parent- and community-focused services are not always reimbursable or easy to deliver in primary care, and individual-focused healthcare services are designed for acute and chronic medical treatment rather than prevention for the most part. As a result, those interested in population health and prevention have turned to school settings to serve broader populations of children and adolescents.<sup>8</sup> The Centers for Disease Control and Prevention (CDC), Substance Abuse and Mental Health Services Administration,<sup>6</sup> and American Academy of Pediatrics have issued frameworks and guidelines, and implemented initiatives for expanding health services that include partnerships with schools.<sup>7,9–11</sup> Schools, too, have long recognized the critical role of health

in education, from the effects of early childhood medical and developmental delays on school readiness, to medical and emotional disorder effects on adolescent truancy and dropout. 12–16 However, many schools continue to deliver primarily treatment-oriented services, or have limited health services available overall, often because of financial barriers. 17

## This paper:

- **1.** examines some key features of systems necessary for delivery of preventive services;
- **2.** reviews the features of some common models of school health services for their relevance to prevention services;
- 3. considers financing and payment concerns; and
- **4.** makes policy and implementation strategy recommendations to further the delivery of preventive services in school health settings.

# **Characteristics of Preventive Services**

Although calls for mental health promotion and related prevention services are more than 150 years old, the increase of prevention science research to address these issues has occurred in the last 25 years. <sup>18–20</sup> Currently, a variety of evidence-based programs and policies to improve mental health outcomes among children and adolescents are available, but are, for the most part, not widely adopted, effectively implemented, or sustained. <sup>21,22</sup> Further, once implemented, referrals to community-based services and clinics, follow-up by school counselors, and mental health and addiction specialists must be facilitated to ensure comprehensive care.

Although macro prevention strategies that aim to address social determinants of health, such as increasing the availability of quality housing, <sup>23</sup> poverty reduction strategies, <sup>24–28</sup> and increased education and employment opportunities for parents and guardians<sup>29–31</sup> are among the most efficient ways to boost quality of life and promote mental health among the most underserved children, 32 the argument below focuses on specific cognitive, affective, and behavioral interventions that increase resilience and reduce stressors in community and especially school settings. The targets of such interventions include academic outcomes, social skills, and overall well-being along with the prevention of specific problems such as behavior disorders, bullying, <sup>33</sup> anxiety, and depression. <sup>20,34–36</sup> Meta-analysis of schoolbased interventions suggests that they can be delivered effectively in schools using a variety of intervention deliverers (teachers, trained professionals, and others) and with a range of time requirements, suggesting that there is no need to have a "one-size-fits-all" approach to intervention.<sup>20</sup> Though school-based prevention interventions are comprehensively reviewed elsewhere, <sup>18</sup> several features of the preventive interventions are consistent across many of the interventions, and thus are important features to be included in school health policy plans and worth mentioning here. These features include: attention to modifying the environment or classroom ecology, training and assessing the behavior of adults interacting with children rather than individual child-focused services, incorporation of reinforcement tools into the

school, universal programs backed up by more-selective interventions as needed, and use of workers from the community and programs that reflect community values. The crucial next steps of devising policies that incorporate these prevention interventions in the education system and providing resources for adequately implementing and sustaining these programs is lacking, however. A list of evidence-based programs that could be implemented in schools is in Table 1.

Moving research to practice requires relationships and strategic planning. Adoption of effective programs by schools requires that the programs contribute to and do not detract from education's fundamental mission of learning. Relatedly, schools use federal education language to classify and communicate about children with special needs, whereas medical and public health settings use another language. Such barriers first require the creation of shared values and vocabulary across sectors that can only be achieved through relationships and ongoing interaction. Secondly, they require common goals to measure such value that have shared benefits to all parties, from primary care clinicians to school services and public health officials. For example, reductions in teen pregnancy can result in improved reimbursement for healthcare organizations under some Medicaid incentives (M Applegate, personal communication, 2015); improved graduation rates for girls in high school; and reduced infant mortality. 37–39

The implementation of cognitive, affective, and behavioral health services in schools is quite limited. With respect to conditions for which evidence-based prevention programs are available such as alcohol or other drug use prevention, and suicide prevention, only 27%–44.9% of schools provide such services, and not all services are evidence based, 17 such as those in NREPP, 7 versus home grown programs without proven effectiveness. There are a growing number of examples of evidence-based interventions that have been implemented with fidelity, such as the Good Behavior Game (GBG) across Baltimore City School system 40,41 or prevention decision support systems that guide schools and communities to use evidence-based programs that match their needs. 42

Many factors affect implementation quality and sustainability,<sup>43</sup> including the ability to monitor and provide feedback to improve delivery,<sup>44–45</sup> organizational structure,<sup>46</sup> legal, and staffing policies. As much has been written about the previous steps,<sup>46–48</sup> this paper discusses the barriers and recently evolved opportunities for financial sustainability for prevention.

# **Overview of Preventive Services in Schools**

CDC suggests that school health should involve coordinated services across eight "interrelated components" that include health education, physical education, health services, mental health and social services, nutrition services, healthy and safe school environments, faculty and staff health promotion, and family and community involvement.<sup>17</sup> According to CDC, the health services component includes not only daily healthcare management but also the spectrum of health services required by students who have no regular medical care access, including prevention services. Although school nurses are a key provider of health services, community and family partnerships are needed to facilitate a transition between

school- and community-delivered services, particularly after positive screenings in school settings that require community referrals.<sup>47</sup>

The 2014 CDC report of its School Health Policies and Practices Study aligns with the recommendations in this paper by suggesting the ideal nature of schools for implementing comprehensive health services from universal prevention, to screening, to treatment, to linkage to more-extensive community-based services. <sup>49</sup> This vision can be supported through federal initiatives such as *Healthy People 2020*, <sup>50</sup> which aims to reduce the ratio of students to each school nurse, and the ACA, which aims to cover and provide services to a broader population. <sup>51</sup> As of 2013, a limited proportion of schools (28.1%) serve as Medicaid providers and receive Medicaid funding. <sup>17</sup>

A Safe and Healthy School Environment, as described by CDC, focuses primarily on student behavior such as "safe sun practices" and the use of "protective equipment," with the leadership upon either a single school health counselor or team at the district or state level. This conceptualization should be expanded by including the fostering of an environment that is also mentally and emotionally safe for students, such as one that is free from harmful interpersonal relationships and interactions such as microaggressions, <sup>52–54</sup> racism, <sup>55–58</sup> and bullying. <sup>59–62</sup> Further, schools and their communities should revisit the appropriateness of police officers in schools, whose presence at times provides a sense of security, and at other times promotes the school-to-prison pipeline and instills more of a sense of fear and hopelessness in students <sup>63–65</sup> as opposed to empowerment. Federal entities such as the U.S. Departments of Education, Justice, and DHHS have also released policy statements on improving school discipline policies. <sup>66</sup>

Schools are positioned to provide connection to services in the community, as well as school-based services to follow up with students receiving positive screens regarding behavioral or affective problems. As of 2014, despite the presence of mental health clinicians, only 59.4% of schools keep records of students' emotional or mental history, compared with 88.7% completeness of physical health history and 96.5% for vision or hearing history. The lack of record keeping in schools could serve as a barrier for information sharing when transitioning from school- to community-based care and to receiving reimbursement for prevention services delivered; thus, data system support and integration should be a focus of efforts to integrate schools and health promotion.

# **Financing**

Preventive interventions present new financing challenges to those aiming to integrate evidence-based interventions into school settings. Preventive services are often characterized by the lack of a clear "patient," no specific diagnosis, and delivery by people who are not licensed in health care such as teachers. Therefore, they require alternatives from the traditional healthcare funding streams.

Time spent training teachers how to employ universal preventive intervention models, as well as the time teachers spend delivering the intervention, is not reimbursable under the common fee-for-service medical model.<sup>67</sup> Traditional insurance-based reimbursement

requires a named patient, a specific diagnosis or disorder requiring treatment, a billing code to be charged to a particular patient's insurance, and licensure of the site for provision of care. Classroom- and community-based prevention interventions that train teachers to better manage or teach children in their care meet none of these criteria.

Specific financing for behavioral health treatment services in public schools for children and adolescents is largely governed by Medicaid regulations when those services are provided by community mental health agencies, private providers, or MCOs. Additional specialty services are often provided through Individualized Education Plans that operate through Department of Education regulations and often include additional Medicaid resources as a payer.<sup>68</sup> Individualized Education Plan regulations address traditional behavioral health services aimed at individual children with specific educational challenges that do not necessarily reflect diagnoses. The relatively recent addition of school-based health clinics (SBHCs)<sup>47</sup> through \$50 million in competitively awarded funding by Congress through the ACA (Section 4101[a]) and state governments is largely consistent with this traditional treatment model focused on particular youth with behavioral disorders and specific treatment therapies provided by specialists. However, most SBHCs depend on funding from state (76%) or local governments (37%) for their operations.<sup>69</sup> Half receive some support from private foundations. <sup>69</sup> The vast majority of SBHCs are not eligible for funding provided by Section 10503 of the ACA. 70 SBHCs did not receive funding under the federal stimulus. 70 None of these new financing mechanisms address core prevention services aimed at lessening the incidence of behavioral health problems in children.

Alternative sources of program funds such as grants or short-term contracts<sup>71</sup> are either too inconsistent and patchwork in their implementation for large-scale sustainability or are openly incompatible to nontraditional healthcare delivery formats. For example, the implementation of the Pax GBG and other versions of the GBG across diverse school systems in Ohio<sup>72</sup> can be considered one of the best examples of success in implementation of an evidence-based preventive intervention in school settings with extensive documentation of improved school outcomes in randomized trials across many locations. <sup>41,73–75</sup> Diverse communities relying on GBG are implementing through grants from sources such as the Ohio Osteopathic Heritage Foundation, a county levy to support GBG, federal Substance Abuse and Mental Health Services Administration funding to school districts, and healthcare funding in the central Ohio area to support behavioral prevention services. Some of these are subject to the whim of change in leadership, policy, or administration, and all of these funding sources are time limited. <sup>76</sup>

The Center for Medicare and Medicaid Services would be an ideal candidate for leading efforts to transform financing for preventive services in schools through its role as the single largest insurer of child health in the U.S. The States face challenges from their respective Medicaid payment systems with the delivery of services in school settings, as not all children who potentially benefit from universally implemented school-based services are Medicaid eligible. However, many states and systems have found ways to deliver such broad-reaching services and maintain Medicaid reimbursement, as improving the overall school environment can be an economical way to reach Medicaid eligible youth. Indeed, some schools have nurses that can directly bill services to Medicaid and are available on

school grounds who are hired through the school system, local health departments, or even through affiliated physician practices or federally qualified health centers. These efforts have also been supplemented by recent Centers for Medicare and Medicaid Services changes. Unfortunately, despite reform and the Mental Health Parity and Addiction Equity Act, amany insurance plans continue to exclude or limit mental health and learning disability benefits.

Further, the ACA supports flexibility in Medicaid reimbursement models through waivers, targeted case management, and strategies for pooling, blending, or braiding funds from various child-serving systems in order to improve child health and development outcomes. 83-85 Modified funding efforts allow for reducing service duplication as well as including the family in child services and healthcare decision making. Pooling funding refers to various sectors such as education and health combining monies to make services available. Blended streams allow the greatest flexibility because monies are in a single pool for purchasing across sectors, but require an immense amount of trust among partners and careful attention to regulatory and legislative restrictions on input monies. Braided streams do not fully integrate dollars, but rather coordinate them to purchase the same services, requiring more accounting and administrative sophistication because of the careful need for monitoring. Schools should explicitly support knowledge transfer between administrators who have successfully braided funds so as to improve the likelihood of continued and expanded utilization of braided funding efforts. Crucially, such funding also allows for reducing the burden on any one system, a particularly important consideration for prevention efforts that often requires intense financial investment from one agency or system even though the short- and long-term benefits can be seen within a variety of systems such as juvenile justice, education, and child welfare. Steverman and Shern<sup>86</sup> offer a more detailed discussion of alternative funding mechanisms and financial structure changes under the ACA.

## Recommendations

The first, most fundamental recommendation to facilitate the integration of primary care prevention services in schools is to create a shared vision between various stakeholders, including educators, families, communities, legislators, and academic and healthcare institutions, such that individuals agree upon the importance of population health across the life course and that improved child and adolescent health leads to better school outcomes. This shared and mutually beneficial vision<sup>87</sup> can be accomplished through engaging legislators, education professionals, students and their parents, and the community at large in a partnership-building process.<sup>87</sup> Several key principles of partnership development can be utilized,<sup>87</sup> and understanding mutual self-interest will be particularly important when aligning federal and state initiatives, as these have different foci, at times, and require partnerships with more horizontal leadership and power sharing, as opposed to the typical hierarchical power dynamic typically observed among federal, state, and local legislators. Regardless of the diversity of perspectives and potentially competing interests, partnerships can be a powerful strategy to help each child develop to their full potential.

Once a shared vision has been established and continues to grow, the following stepwise improvements can be implemented.

#### **Common Metrics**

In order to be effective, comparable across stakeholders, and widely disseminated, common metrics should be agreed upon by State Education, Medicaid, and Health officials.

Following the principles of the National Academy of Sciences Vital Signs report, <sup>88</sup> common measures should include few items but ones of high salience such as teen pregnancy rate, kindergarten readiness, and high school graduation rate. Less than half of schools, 39.6%, review student illness reports to proactively develop prophylactic plans against further serious illness. <sup>17</sup> Metrics should also include social determinants that are known to contribute to health disparities, <sup>1</sup> which could be informed through partnerships with families and communities, <sup>47</sup> as well as through publicly available community-wide data such as the County Health Rankings <sup>89</sup> and Youth Risk Behavior Surveillance System. <sup>90</sup> Currently, only 41.8% of schools report having a written School Improvement Plan that "includes health-related objectives on family and community involvement." <sup>17</sup> The RE-AIM framework <sup>91</sup> can help construct such strategies, as it focuses on five dimensions that affect population level impact and provides straightforward language for achieving common metrics that can be agreed upon by diverse service sectors. <sup>92–94</sup>

# **Facilitated Data Sharing**

Traditionally, each sector develops unique metrics, but as the National Academy of Medicine has noted, commonalities in metrics are increasingly understood as important for population health. 95 State assistance in training and educating schools and healthcare systems about appropriate interpretation of Health Insurance Portability and Accountability Act and Family Educational Rights and Privacy Act (the privacy policies for health care and schools, respectively) and idealized business contracts for vendors will assist the thousands of schools and hundreds of provider groups who cannot afford the time or money for individual legal consultation on sharing of data. The American Academy of Pediatrics has taken an important step toward facilitating the integration of school and primary care records through a forthcoming review of methods through which health-care and school privacy concerns may be aligned. 96 Meetings on the federal level have also been actively working to break down barriers that limit the sharing of information between these two complementary but separate systems through initiatives such as Early Childhood Integrated Data Systems that integrate information from agencies serving children. 66 Currently, 14.0% of healthcare providers refuse information sharing with schools because of failure to obtain Health Insurance Portability and Accountability Act authorization from parents.<sup>17</sup>

## **Shared Incentives for Achieving Metrics**

In some cases, incentives may be in place to achieve these metrics for schools where reimbursement is tied to "students in seats" and graduation rates, but Medicaid programs will increasingly need to lead the way for healthcare providers to feel accountable for such metrics. Accountable care community programs, whose mandate is to coordinate mental, physical, and dental services with a single source of funds with shared incentives across insurers and providers, may be one solution.<sup>97</sup>

# Improved Reimbursement and Funding Opportunities

One avenue through which legislators could support school health services is to increase the length of Medicaid contracts and accountability measurement so that the benefits of prevention services can be accrued. Currently, annual contracts for Medicaid and other health insurers rarely allow sufficient time for prevention services to achieve any return on investment that is measurable. Increasing the duration of contracts and allowing longer-term return will encourage greater investment in prevention over time. Relatedly, developing intermediate and short-term measures that are proxies for longer-term improvements and paying provider groups on achievement of these shorter-term measures in a pay for performance approach may be an alternative. Additionally, funding for school health services should be allocated through braided funding mechanisms that draw from both education and health funds. 99

Crawford and Houston<sup>100</sup> group the options for funding based on the relative size of the planned services. They note the common use of philanthropy, grants, and federal seed monies as common for pilot work to experiment with specific applications of cross-sector services for children not usually included in Medicaid reimbursement. Pilots can develop not only estimates of the effectiveness and feasibility of various interventions, but also the likely return on investment for public funds.

For the next phase, which they label, "expansion," federal Medicaid waivers, state-managed trusts, or social equity/social impact financing are likely sources of funding. Waivers create a temporary agreement between the state Medicaid program and Centers for Medicare and Medicaid Services to test an alternative payment or delivery scheme not normally covered under the existing Medicaid program. The state trusts or pools are agreements by state agencies to blend funds in an attempt to obtain benefits for children. Social equity funds or social impact bonds <sup>101</sup> are not true bonds but rather innovative private fund investments targeted at government or public goals in a "pay-for-results" program. They are best employed around a specific goal such as reduction in prison recidivism or decreased teen pregnancy rate when there are clear public costs and specific interventions with documented effectiveness. Utah is currently studying their use in prevention of special education costs among high-risk preschool children. They have not yet been studied in behavioral health prevention for school-aged children, but offer the potential for significant private investment.

# **Conclusions**

Although national institutions can and do provide universal mandates for child health, such as through Medicaid and the Department of Education, state Medicaid and state education departments have highly heterogeneous policies within and among states, making the development of comprehensive, universal prevention and health promotion activities focused on cognitive, affective, and behavioral health difficult to implement. States and local education systems thus require tools to help maneuver the political power differentials that they encounter when trying to implement their health programs within their unique political context, while also adhering to federal mandates. These tools can include the proposed common metrics, regulatory documents such as data use agreements, packaged interventions

such as those in the National Registry of Evidence-based Practices and Programs,<sup>7</sup> and community-based partnerships that bolster the voice of local school systems.

In summary, a commitment to public health entails a concurrent commitment to population health across the life course, thus requiring a focus on preventive services. The realization of this commitment can be achieved through integrating public health, primary care, and public education systems so as to serve the broadest population possible, thus reducing health disparities and promoting children's cognitive, affective, behavioral, and physical health across the life course. Such integration will require partnership building not only among legislators and the practitioners within the three aforementioned sectors but also between families and communities. New opportunities from the ACA make this integration possible through the development of shared incentives for integration, improved reimbursement, and enhanced funding opportunities. Finally, several principles for integration should be minded, including thorough and integrated data keeping that is characterized by common metrics and measurement, as well as a commitment to environments that foster feelings of equity, safety, and health promotion.

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Table 1

Examples of Evidence-Informed and Evidence-Based Preventive Services for Cognitive, Affective, and Behavioral Health

Targeted condition	Level of prevention	Primary delivery site	Example intervention	Level of evidence
Bullying, academic success	Universal	Schools	Positive Action	Model program for reducing absenteeism, violence, and substance use improving academic test scores, selfesteem, internalizing symptoms (Blueprints) <sup>a</sup>
Externalizing behavior, substance use	Universal	Classroom	Good Behavior Game (GBG)	Promising for reducing suicidal ideation, alcohol, tobacco, and illicit drug use, internalizing symptoms, aggressive behavior (Blueprints)
Suicide	Universal	Schools	SOS Signs of Suicide	Promising for reducing suicidal thought and behavior, increasing knowledge, attitude of mental health (NREPP)
Depression screening	Universal, Indicated	Schools	Beck Depression Inventory (BDI)	BDI is one of two screening tools with the highest level of evidence for adolescents 12–18 years old (USPSTF)
Academic performance, externalizing behavior	Universal	Schools, Classroom	Promising Alternative Thinking Strategies	Model Program for conduct programs and externalizing, internalizing behaviors, improved academic test scores (Blueprints)

<sup>&</sup>lt;sup>a</sup>Blueprints for Healthy Youth Development.

NREPP, National Registry of Evidence-Based Programs and Practices; USPSTF, U.S. Preventive Services Task Force.