



THE CRITICAL CONNECTION BETWEEN STUDENT HEALTH AND ACADEMIC ACHIEVEMENT: HOW SCHOOLS AND POLICYMAKERS CAN ACHIEVE A POSITIVE IMPACT



the James Irvine foundation

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EXECUTIVE SUMMARY

The health of California's students has a direct impact on school dropout rates, attendance, academic performance, school revenues and the ability to reach the achievement goals set by the state. By carefully considering where and how to provide services, schools and policymakers can take immediate and low cost steps to improve the health of students and increase student academic achievement and graduation rates. In the long term, student health must be a key component in the ongoing discussion about school reform.

Student health is a strong predictor of academic performance. Healthy, happy, active and well-nourished youth are more likely to attend school, be engaged and ready to learn. Yet an overwhelming number of students come to school with a myriad of health problems that compromise their ability to learn.

It is time for state and local policymakers to take seriously the critical importance of ensuring that all students are healthy, engaged and ready to learn. By doing so, policymakers will increase the chances of successful academic outcomes for all California students.

This is an opportune moment to address the health needs of students. With budget shortfalls in education, it makes sense for educators to collaborate with others in the health and social services fields to ensure that students can fully engage with their school work. Encouraging greater collaboration among education, health and social policy groups will provide more effective and efficient services to our students. The reasons to focus on student health are compelling:

- While education reform efforts in California have led to increased student achievement-- particularly at the elementary level--the absolute academic performance and graduation rates of California students remain unacceptably low. Statewide, nearly 19% of 9th graders will not complete high school. The dropout rates are much more pronounced for Latinos (24 percent) and African Americans (33 percent) than Asians (8 percent) and Whites (12 percent).
- The link between learning and health is clear. In the last 15 years, studies consistently document the powerful connection between health and academic failure, with poor health affecting students' attendance, grades and ability to learn in school.
- Poor health, chronic medical conditions and stress-induced inability to concentrate translate into lost dollars due to absences and lack of achievement for our youth. Because California schools are reimbursed based on the Average Daily Attendance of students, absences mean significant lost revenues for school districts.



THE COST OF POOR HEALTH TO STUDENTS AND SCHOOLS

A number of health conditions make a direct impact on students' ability to learn.

For example:

- Chronic diseases such as asthma, diabetes, obesity and tooth decay affect about 20 to 30% of children and adolescents in California, which leads to more absenteeism and lower school performance.
 - > Asthma is the leading cause of school absences due to a chronic disease and accounts for 3 times more lost school days than any other cause. The disease is also associated with low academic achievement. Almost 18 percent of California adolescents have asthma, which was responsible for an estimated 1.9 million missed days of school in California in 2005.
 - > Tooth decay is the single most common chronic disease of childhood, affecting nearly 6 in 10 children in the United States. In California, the need for oral health is the most prevalent unmet health care need among children and adolescents.
 - > Children with poor oral health and poor general health are 2.3 times more likely to report poorer school performance than those with good oral health.

- More than 30 percent of middle and high school students in California have felt so sad or hopeless for two weeks or more in the past 12 months that it interfered with their regular activities. Students who experience high levels of stress or depression tend to do poorly in school. Among California secondary students, as the percentage who reported that they felt sad or hopeless increased, subsequent gains in reading, language, and mathematics test scores declined.

- As students progress through middle and high school, they report a decreasing sense of connectedness between themselves and their families, schools and communities. Forty-one percent of 7th grade students report that they feel a high level of connectedness to their schools, decreasing to 33 percent in the 9th grade and 11th grade. A national study found that of all the protective factors examined, school connectedness was the strongest protector against substance use, school absenteeism and early sexual initiation.



Schools are crucial players in helping to ensure the health of their students. They can take steps -- many of which have no or little cost -- to help their students be healthy.



THE DIFFERENCE THAT SCHOOLS CAN MAKE

Schools are crucial players in helping to ensure the health of their students. They can take steps--many of which have no or little cost--to help their students be healthy. These “education supports” are resources, services, strategies and practices within and outside of school that ensure that all students are physically, socially, emotionally and intellectually ready to succeed in school.



Creating policies that ensure that children are healthy and able to attend school will benefit not only students but also cash-strapped school districts through increased student attendance and revenues.



WHAT POLICYMAKERS CAN DO

There is much that state and local policymakers can do to help schools ensure that students are healthy and ready to learn. Creating policies that ensure that children are healthy and able to attend school will benefit not only students but also cash-strapped school districts through increased student attendance and revenues. Among the steps that policymakers can take are to:

- Encourage collaboration between educators, health organizations, and other community-based organizations and the private business sector in providing resources to support a continuum of student-physical, social and emotional needs.
- Support improved data collection and utilization (including investing in the California Healthy Kids and California School Climate surveys as well improving how schools and districts monitor if large numbers of students are chronically absent) to inform the development and implement programs that lead to increased student achievement.
- Review health, environmental and educational state-level policies to coordinate funding for issues that affect the education and success of our children.



NEXT STEPS

To further explore the connections between student health, education supports, and student performance, a consortium of foundations have funded the California Education Supports Project. The project will commission a series of issue-specific papers to explore in greater detail the complex connections between health and education. This project is funded by the James Irvine Foundation, The California Endowment and the William and Flora Hewlett Foundation.

INTRODUCTION

Student health is a strong predictor of academic performance. ¹ Healthy, happy, active and well-nourished youth are more likely to attend school, be engaged and be ready to learn. Yet many students come to school with one or more health problems that compromise their ability to learn. Fortunately, policymakers and schools can participate in effective interventions to help promote student health. By doing so, policymakers will improve academic outcomes for California students.

While education reform efforts in California have led to increased student achievement—particularly at the elementary level—the absolute academic performance and graduation rates of California students remain unacceptably low. Statewide, nearly 19 percent of 9th graders do not complete high school. The dropout rates are much more pronounced for Latinos (24 percent) and African Americans (33 percent) than Asians (8 percent) and Whites (12 percent). ²

In the past, closing this achievement gap has been an elusive goal. One possible strategy to counter the multiple effects of poverty and race on academic achievement is to address the need for improved student health, safety, and caring and supportive relationships.

This is a particularly timely moment to address the health needs of students. With budget shortfalls in education, it makes sense for educators to collaborate with others in the health and social services fields to ensure that students can fully engage in their school work. Student success is a collective responsibility; encouraging greater collaboration among education, health and social policy groups will provide more effective and efficient services to our students.

Such collaborative efforts might also make California more attractive for new federal funding like the Obama administration’s stimulus package and its specific programs, such as Race to the Top. U.S. Education Secretary Arne Duncan has urged California lawmakers to make education reforms or risk falling behind the rest of the nation and losing out on a portion of the \$4.3 billion in federal stimulus money. ³

This framing paper is intended as a starting point to describe some of the ways that students’ health makes an impact on their educational achievement. It also describes steps that policymakers can take to better address student health in schools. Most of all, this paper is intended to spur discussion, additional research and more work on how to meet the physical, mental and social needs of our students in ways that will help them achieve better academic outcomes.

Over the next year, policymakers will receive issue briefs that will address specific health issues important to student health and achievement such as chronic illnesses, nutrition and physical activity, mental health, student engagement and school environment.





WHY STUDENT HEALTH MATTERS

The link between learning and health is clear. Over the last 15 years, several studies have consistently documented the powerful connection between health and academic achievement, with poor health often negatively affecting students' attendance, grades and ability to learn in school. ⁴

Studies confirm what we already know intuitively. If a child misses school due to asthma, cannot focus due to a toothache, has not physically developed properly due to inadequate nutrition or is preoccupied with fears of violence or faces excess stress, even the best teacher armed with the most interesting curriculum may not be able to teach him. By contrast, a healthy child is more likely to arrive at school each day eager and able to learn.

One study found that 15 percent of middle and high school students reported recurrent health problems that were associated with school failure, largely due to their greater likelihood of experiencing absenteeism, having trouble with homework and feeling under emotional distress. ⁵

In addition, poor health, chronic medical conditions and stress-induced inability to concentrate translate into lost dollars due to absences. ⁶ California schools are reimbursed based on the average daily attendance of students so student absences are converted directly into significant lost revenues for school districts. ⁷

Based on studies that estimate the rate of illness-caused absences and the economic impact of these absences in Southern California, it is possible to estimate the economic impact of student absences due to illness in the entire state of California. At a rate of 1.34 illness-related absences per 100 student days, there would be more than 15 million illness-related absences every year statewide, costing school districts a total of \$670 million in lost revenue over the course of the school year. ⁸



HEALTH CONDITIONS IMPACT SCHOOL SUCCESS

A number of health conditions have a direct impact on a student's ability to learn.

Chronic diseases such as asthma, diabetes, obesity and tooth decay affect 20 to 30 percent of children and adolescents. As these students require more frequent and complex medical services, they experience a higher incidence of school absences, which often results in decreased educational outcomes.

- Among chronic diseases, asthma is the leading cause of school absences and accounts for three times more lost school days than any other cause. ⁹ Almost 18 percent of California adolescents have asthma, which was responsible for an estimated 1.9 million missed days of school in California in 2005. ¹⁰ The disease is also associated with low academic achievement.



If a child misses school due to asthma, cannot focus due to a toothache, has not physically developed properly due to inadequate nutrition or is preoccupied with fears of violence or faces excess stress, even the best teacher armed with the most interesting curriculum may not be able to teach him.

- Half of all children with asthma under 12 years of age miss at least on one day of school per year and the average number of days missed among this group is 5.2 days, according to a study by the UCLA Center for Health Research. ¹¹ The study also demonstrated that 7 percent of children in California with current asthma miss 11 or more days of school per year.
 - School buildings and educational environments sometimes contain triggers—such as mold, chemicals and germs—for asthma and other conditions. Twenty percent of U.S. public schools have such indoor air quality problems, according to the General Accounting Office. ¹² On a related note, elevated levels of carbon dioxide because of poor ventilation in schools decrease students' attention spans and levels of alertness and academic achievement. ¹³
 - Tooth decay is the single most common chronic disease of childhood, affecting nearly 6 in 10 children in the United States, five times as many children as asthma. ¹⁴ In California, the need for oral health care is the most prevalent unmet health care need among children and adolescents. Twenty-eight percent of elementary school children have untreated tooth decay. ¹⁵
 - Children with severe decay are often in pain, can't concentrate, miss school days and get poor grades. Poor children and children of color are much more likely to have tooth decay and suffer the consequences of leaving the disease untreated. Latino children have the highest risk for dental health problems in California. Seventy-two percent of Latino children surveyed had experienced decay, 30 percent needed treatment, and 26 percent had rampant decay (cavities on seven or more teeth)—nearly twice the rate of non-Hispanic white children surveyed. ¹⁶ Children with poor oral health and poor general health are 2.3 times more likely to report poorer school performance than those with good oral health, even after adjusting for socioeconomic factors. ¹⁷
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Children with poor oral health and poor general health are 2.3 times more likely to report poorer school performance than those with good oral health, even after adjusting for socioeconomic factors.
- Almost two million children in California come from homes that experience food insecurity (fear of having adequate food), according to the California Department of Education. ¹⁸ Consequences of food insecurity include risk of poor nutrition, physical and emotional illness requiring greater use of medical care, increased complications from chronic diseases such as diabetes, and poor school performance among children and adolescents in these households, according to the UCLA Center for Health Policy Research. ¹⁹ Ironically, food insecurity may result in weight gain because low-income families may stretch their food dollars by buying lower-cost food, with higher levels of calories per dollar, to ward off hunger.
 - More than 1 in 3 California students is obese or overweight.²⁰ Latino children are most likely to be obese, and low-income communities and schools have the highest obesity rates. Overweight 4th to 6th graders were absent significantly more days than their non-overweight peers (12.2 vs. 10.1 days). ²¹

- In addition, the emotional and mental health impact of being overweight may have an impact on students and their school performance. In a study of 7th, 9th and 11th graders, obese girls were 1.5 times more likely to report being held back a grade and 2.1 times more likely to consider themselves a poor student than average weight girls (after adjusting for race, grade level and parental socioeconomic status).²²



Mental health and a sense of connectedness also affects a student's ability to succeed in school. Students who experience high levels of stress or depression tend to do poorly in school.

- A contributing factor to obesity is reflected in the fact that just 29 percent of California teens are getting the one or more hours of physical activity each day recommended by the California Daily Food Guide.²³

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Two examples:

- More than 30 percent of middle and high school students in California have felt sad or hopeless for two weeks or more in the past 12 months such that it interfered with their regular activities.²⁴ Among California secondary students, as the percentage who reported that they felt sad or hopeless increased, reading, language, and mathematics test scores declined.²⁵
- As students progress through school, they feel decreasing sense of connectedness. Forty-one percent of 7th grade students report that they feel a high level of connectedness to their schools, decreasing to one-third of students in the 9th grade and 11th grade.²⁶



THE CONNECTION BETWEEN STUDENT HEALTH AND THE COMMUNITY

The community environment in which children live and learn has a dramatic impact on students' academic success. School districts that serve largely low-income, ethnically diverse populations experience a disproportionate number of factors external to the classroom that negatively impact academic performance.

- The lack of access to grocery stores in certain communities limits the nutritious foods available to students and families.
- Poor air quality in a community increases the rates and severity of asthma. Pollution from nearby highways, factories and other sources can decrease student alertness.

- Violence within the communities where students live and attend school hurts their ability to concentrate on their studies and build friendships. They may even be traumatized by their experiences or afraid to go to school.
- Students who don't feel safe may also be reluctant to go to neighborhood parks where they can get exercise.

Nationally, homicide was the second leading cause of death for youth ages 10-24 in 2004. For non-fatal violent crimes—which are much more common than homicides—victimization rates peak at ages 12-24, and young offenders are much more likely to target young people. ²⁷

All of these causes contribute to the achievement gap between districts. Many of the schools experiencing the greatest academic challenges are located in high poverty communities where environmental risk factors, stressors and other external barriers to learning are the greatest. Schools made smaller increases in test scores if they had high incidences of property theft and vandalism, high percentages of students who felt unsafe, and high levels of weapon possession.



THE DIFFERENCE THAT SCHOOLS CAN MAKE

Schools are the logical place to provide a variety of “education supports” (such as breakfast programs and mental health services) that help ensure the health of their students. Schools can influence students’ health and academic achievement simply because schools are where young people spend a large part of their day for nine months of the year.

Schools also have a long history of helping to ensure their students’ health. For example, schools require students to have received certain immunizations and require that students meet ongoing requirements for physical exams before playing team sports.

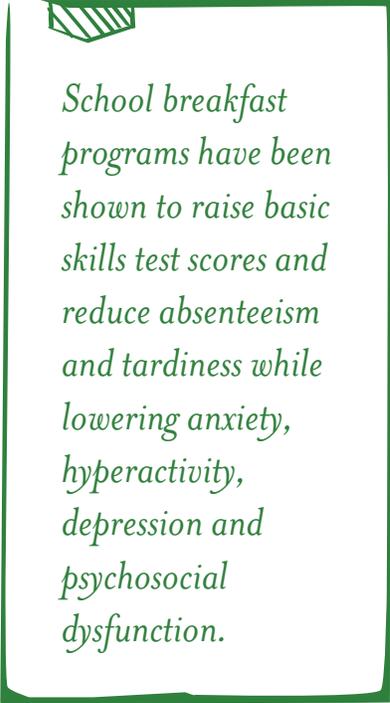
The evidence for the effectiveness of education supports is compelling:

- Receiving school-based mental health services has been shown to reduce course failures and dropout rates. For example, a study of school-based mental health centers in the Dallas Public Schools found that students served in these centers showed a 32 percent decrease in absences, a 31 percent decrease in failures and a 95 percent decrease in disciplinary referrals. ²⁸
- Students who receive proper asthma care from a school nurse improve their grades and perform better in physical education classes, according to research from the National Heart, Lung and Blood Institute. ²⁹



School breakfast programs have been shown to raise basic skills test scores and reduce absenteeism and tardiness while lowering anxiety, hyperactivity, depression and psychosocial dysfunction. A study of school breakfast programs in public schools in Philadelphia, PA., and Baltimore, MD., found that:

- > Children who regularly ate school breakfast had a mean math grade of 2.8 compared with a mean math grade of 1.9 for children who ate school breakfast rarely.
- > Children who regularly ate school breakfast had significantly fewer absences (1.5 days) during the last academic term compared with children who ate school breakfast rarely (2.8 days).³⁰
- Schools that improve their students' sense of connectedness and decrease the incidences of bullying show reductions in student alcohol and substance abuse. Studies have shown that school connectedness is consistently and strongly related to both low health-risk behavior and high attendance and academic achievement.³¹



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Specifically, a long-term national study of more than 36,000 adolescents examined the effects of various protective factors—such as school connectedness, parent-family connectedness, parental expectations for academic achievement, and youth involvement in religious activities—on the health and well-being of young people. Among the findings:

- Of all the protective factors examined, school connectedness was found to be the strongest protector against substance use, school absenteeism, early sexual initiation, violence and risk of unintentional injury (such as drinking and driving or not wearing seat belts).
- School connectedness was second in importance, after family connectedness, in protecting adolescents from emotional distress, eating disorders, and suicidal ideation and attempts.³²

In addition, an analysis of 165 studies of school-based prevention activities that included individual counseling or behavior modification as well as efforts to change the way schools are managed found that school-based prevention practices appear effective for reducing alcohol and drug use, dropout and nonattendance and other conduct problems.³³

Providing education supports to students can also bring more money to schools in the following ways:

- Improving health conditions will reduce school absences and increase students' average daily attendance, which is used by the state to compute school district funding.
- Establishing school health services can be reimbursed through Medi-Cal and other public funding streams.



POLICY LEADERS UNDERSTANDING OF THE LINK BETWEEN HEALTH AND ACADEMIC OUTCOMES

Traditionally, policymakers and community members have addressed education reform in isolation. However, national and local educators and policymakers are making clear that they understand the connection between healthy students and high academic achievement.

The Council of Chief State School Officers observed that an overwhelming number of students of all ages come to school depressed, abused, hungry, overweight, tired, stressed or under the influence of psychoactive substances, compromising their ability to learn and be successful.

And in a recent survey of California school board members and superintendents in more than 600 districts, some 60 percent of respondents strongly agreed that the provision of health services reduces student absenteeism, improves academic performance and facilitates student learning.³⁴

In addition to discussing long term policy changes to increase student health and achievement that may require structural or high costs, policymakers and educators can begin to take immediate and low-cost steps to improve the health of students and meet their goals of increasing academic achievement and high school graduation rates.



SOLUTIONS TO IMPROVING ACADEMIC ACHIEVEMENT

Schools and communities across California are taking steps to improve the health of their students. In some cases, they focus on the physical and mental health needs of students. In others, they take a broader perspective in addressing the environment that students live in, especially the school environment, to help improve students' feelings of connectedness and engagement with their school and community.

Many of these interventions have little or no cost for schools.



Solution 1: Strengthen Education Supports that Improve Health and Academic Achievement

There are several steps that can help ensure student health. Some steps can be taken by state policymakers while others can be taken by individual schools and local school districts. Certain steps will require a combination of both state and local action.

Frequently, state solutions involve creating the infrastructure and processes that enable local school districts to tailor solutions to their specific needs. Four of these activities are:



- (1) Collecting and analyzing health and education data to use when making policy and budget decisions.
- (2) Creating funding streams and organizational structures that both ensure a focus on the health and education progress of children and are flexible enough to allow local school districts to tailor programs to their community's needs.
- (3) Providing technical assistance so that local school district personnel can engage in an ongoing dialogue about best practices and how to most effectively disseminate successful strategies.
- (4) Encouraging districts to identify schools with problematic attendance patterns (e.g. large numbers of students who are chronically absent due to excused as well as unexcused absences) in order to target the utilization of community resources that can reduce barriers to attendance (including school-based health services).



Healthy Start Improves Student Learning

In the 1990s, promising results emerged from California's Healthy Start Program, which provided seed-money to improve student learning by helping children and their families gain access to a comprehensive array of learning supports (physical, emotional, and intellectual) through community-school partnerships, primarily through family resource centers at or near schools (Villarreal 2004).

Program evaluations reported positive results at the individual and school levels in a range of health and academic outcomes (Wagner & Golan 1996; Malloy & Harlick 1999; Villarreal 2004). An evaluation conducted during the first three years of Healthy Start reported: significant improvements in student GPA; a reduction in unmet basic needs such as housing, food, clothing and transportation; a reduction in teen risk behaviors; and an improvement in emotional well-being (Wagner & Golan 1996).

A second statewide evaluation, which used data from 1994-96, showed substantial decreases in family violence, a 40% increase in parental involvement in the schools, and a 12 percent reduction in mobility and transiency rates. It also showed improvement in student GPA, attendance, and test score performance (reading by 25 percent, math by 50 percent), particularly among the lowest-performing students and schools (Villarreal 2004).

Halfon et al. (2001) concluded: "Healthy Start has been recognized for playing a crucial role in improving student academic achievement and family functioning, as well as integrating effective services that foster school success, and connecting community agencies with the children and families they serve." In 2003-2004, the legislature reduced funding and the last grants were funded in 2006.

Solutions can also involve actions that schools and districts take that are supported by state policies or funding. Those actions can include ensuring access to health care.

- **Ensuring access to health care.** Schools can play an important role in ensuring that students have access to health care coverage they may be eligible to receive but they might not be aware of. More than 700,000 of California’s children and teenagers—roughly nine percent—lack health care insurance.³⁵

Healthy students with access to quality preventive health care outperform their peers who have poor health and health care access. Enrollment in public coverage also has been associated with improved school performance. Researchers have found that enrollment leads to increased school attendance as well as a greater ability to pay attention in class and to participate in school and normal childhood activities.³⁶

Accordingly, there have been several efforts in partnership with schools to identify youth who are eligible but not enrolled in Healthy Families (the State Children’s Health Insurance Program in California) as well as Medi-Cal (the state’s Medicaid program) and other programs.³⁷

In one such effort, the California Teachers Association worked with the California Association of Health Plans in a program called Teachers for Healthy Kids that helped to enroll children in low- or no-cost health, dental and vision insurance programs. The effort, funded by The California Endowment, led to more than 150,000 students being enrolled in health care coverage through outreach programs in the schools.

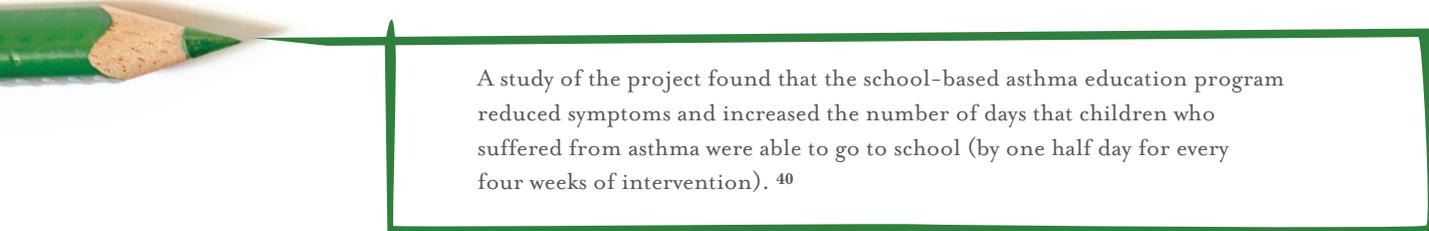
Helping students and their parents sign up for health insurance may be among the most effective interventions schools can provide. A study of children enrolled in Healthy Families for two years found that those with the poorest health status experienced dramatic improvements after the first year, especially in physical and social health outcomes, and these improvements were sustained over time.³⁸

- **Preventing chronic diseases including asthma, obesity, diabetes, and stress.** While there are many chronic illnesses over which schools have no control, schools can intervene to help prevent a number of chronic conditions. For example, reducing student exposure to pollution in and around the school can reduce asthma.

In Oakland, as in many other school districts, asthma affects many students, teachers and school staff. Oakland school officials engaged in a plan to reduce asthma “triggers” by removing furry pets and food from classrooms, reducing diesel exposures from idling school buses and inspecting for water leaks that could cause mold. As a result, school attendance problems due to asthma attacks for students and teachers were greatly reduced.



- **Screening for chronic diseases.** In another project in Oakland, the non-profit organization Oakland Kicks Asthma identified middle school students with active asthma and offered them a four-week curriculum of asthma self-management classes. ³⁸ Students were also referred to asthma services in the community.



A study of the project found that the school-based asthma education program reduced symptoms and increased the number of days that children who suffered from asthma were able to go to school (by one half day for every four weeks of intervention). ⁴⁰

- **Promoting or mandating physical activity.** While some schools are not able to financially provide a physical education curriculum, some are encouraging after-school sports or community-led sports or hiking programs. Additionally, some schools are including aerobic exercise in their curriculum. Studies show that including aerobic exercise in a school's curriculum has the following effects:

- > Improved self-esteem.
- > Decreased depressive symptoms.
- > Reductions in anxiety. ⁴¹

- **Promoting healthy settings for learning.** Multiple California schools have realized the importance of ventilation in the classroom to reduce carbon dioxide levels. Simply opening windows for fresh air, removing obstructions such as boxes from blocked vents and turning on ventilation systems that were not previously in use have reduced carbon dioxide levels and improved attendance, alertness and academic productivity among both students and teachers. ⁴²

One study of ozone-related school absences for children ages 5 to 18 residing in Southern California showed the dramatic difference that improvements in air quality can make to student health and attendance. The study estimated that improvement in air quality from the period of 1990-1992 to 1997-1999 and the resulting decrease in school absences had an economic value of \$245 million annually. ⁴³

- **Establishing school-based health centers.** These centers, of which there are more than 150 in California, contribute to academic achievement by taking physical and behavioral health problems out of the classroom and placing them into the hands of qualified medical professionals and by linking students to health services and resources in the community. Through collaboration with governmental and non-governmental providers, primary care, mental health, health education and dental care services can be provided at little or no cost to the schools or the students or families.

- **Establishing student assistance centers.** Several states have had success with student assistance programs, which are school-based programs that identify and link students to behavioral health education, programs and services. Studies show that these programs have helped address barriers to learning due to social, behavioral, emotional and mental health issues. In California, 325 school districts and other local education agencies have reported some form of student assistance program. However, while this is a promising practice, little evidence of these program results has been documented as of yet.



Solution 2: Improve Health and Academic Achievement through a Healthy Social Environment

A healthy social environment is one that has support networks and opportunities that buffer the impact of environmental risk and allow for healthy youth development. These opportunities and supports are also known as protective factors. These protective factors account for an individual's ability to "bounce back" in the face of poor health, stress, trauma, violence and alcohol and drug abuse. Researchers have identified three interrelated protective factors: high expectations; meaningful opportunities for participation and contribution; and caring adult relationships.

The California schools in which students report high levels of these protective factors have higher scores on California's statewide standardized test.⁴⁴ Moreover, schools made greater progress in improving test scores when they had higher percentages of students who reported caring relationships and high expectations at school.⁴⁵ Schools can take steps to help create a healthy environment for students by:

- **Holding students to high academic expectations.** Research shows that messages from adults in school who express high expectations also convey to their students their belief that students can and will succeed. Only 37 to 48 percent of students in California secondary schools have strong perceptions that teachers and administrators have high expectations of them.⁴⁶
- **Involving students in meaningful participation.** Students need opportunities to make their own decisions. Studies show that when students from high-risk environments are given the opportunity to participate in student-driven learning, they are more likely to successfully avoid poverty, teen pregnancy, drug abuse and dropping out of school. Only 13 to 17 percent of California secondary school students report a high level of participation in their school.⁴⁷
- **Encouraging caring adults in schools and the community to establish and nurture positive relationships with students.** Caring relationships between students and their teachers or other adults in the school and in the community are the most powerful of all education supports. Studies have shown that school connectedness is consistently and strongly related to fewer high-risk health behaviors and higher attendance and academic achievement.⁴⁸



Students in Alameda County were encouraged to decide on the services they wanted to include in their school-based health center. Students assessed options, polled other students, and presented the findings to the school board.

Their findings led the students to recommend dispensing condoms at the center and to create a program where student peers could serve as youth advocates and health educators for other students. Following the passage of their recommended proposal, students assisted in implementing the new services.

(Source: Soleimanpour S, Brindis C, Geierstanger S, Kandawalla S, Kurlaender T. "Incorporating Youth-Led Community Participatory Research into School Health Center Programs and Policies," Public Health Reports, 123(Nov-Dec):709-716, 2008.

WHAT POLICYMAKERS CAN DO

There is much that state and local policymakers can do to help schools ensure that students are healthy and ready to learn. A great support to student learning that education systems can provide is to create policies that are grounded in an understanding of how students are motivated to learn and that promote safe, protective and supportive environments.

Creating policies that ensure that children are healthy and able to attend school will benefit not only students but also cash-strapped school districts through increased student attendance and revenues.

The more that service systems and agencies within health care, social services, schools, business, criminal justice and other fields work together to create policies and programs to support students, the more barriers to learning will be reduced and academic outcomes will be improved.

Examples of steps that policymakers can take include:



SHORTER-TERM INVESTMENTS

- Encourage collaboration between educators, health organizations, and other community-based organizations and the private sector to provide resources to support a continuum of student-physical, social and emotional needs
- Fund data collection and utilization (including the California Healthy Kids Survey, the California School Climate Survey and active monitoring of chronic absence) to develop and implement programs that lead to increased student achievement.
- Increase student access to health care through on-site health coverage enrollment.
- Provide recreation and physical activity opportunities either within schools or through after-school programs.
- Support policies and programs that document and remove asthma risk factors from schools, including furry animals, food in classrooms, and/or barriers in front of air vents, clutter in classes that make it difficult to clean, like sofas and rugs; address water leaks; and possible mold.
- Encourage joint use agreements with the community for school grounds and facilities to provide health-related programs and services to all community members on evenings and weekends.
- Support policies and programs that encourage family and community involvement in school and educational activities. For example, the California Home Visit Project supports annual teacher home visits to student homes to discuss student achievement.



LONGER-TERM POLICIES AND INVESTMENTS

- Review state-level health, environmental and educational policies in order to coordinate funding for issues that affect children.
- Develop school-community partnerships that encourage service providers to use schools as sites for coordinated services to build supportive, healthy and safe environments that meet the students' needs, such as health, mental health and oral health services.
- Collaborate with teacher groups to develop state policies that create training programs and an environment that supports teachers in their relationships with students.
- Support community and state-level reductions of toxins that affect youth and communities including particulate matter (including diesel exhaust), pesticides and other harmful substances.
- Ensure successful youth transitions from home to elementary school, from middle to high school, and from high school to college by assessing individual and family needs, matching community resources to needs and tracking progress over time. For example, youth development plans could be used in a preventive manner to define goals and progress.



NEXT STEPS

To further explore the connections between student health, education supports and student performance, a consortium of foundations have funded the California Educational Supports Project. The project will commission a series issue-specific research papers to explore in greater depth the complex connections between health and education. In this project researchers and practitioners will:

- Review, synthesize and analyze current California-specific data and the state of knowledge related to education supports, health and education.
- Make evidence-driven policy and practice recommendations aimed at fostering the school culture and environment and the supports and services needed to ensure that all youth are engaged and learn every day.

Over the next several months, the project will work with the state legislature and administration to discuss and disseminate information in the form of papers and legislative hearings. For more information on how to provide input to the project, contact Dr. Gregory Austin, WestEd Health and Human Development, gaustin@wested.org, (562) 799-5155

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ENDNOTES



- I Dunkle & Nash 1991; Symons, Cinelli, Janes & Groff 1997; Marx, Wooley & Northrup 1998; Mitchell 2000; Allensworth, Lawson, Nicholson & Wyche 1997; Hanson et al. 2004; California Department of Education 2005; National Governors Association Center for Best Practices 2000.
- 2 California Department of Education, Educational Demographics Office. Available online at: <http://dq.cde.ca.gov/dataquest/DropoutReporting/GradeEth.aspx?cDistrictName=State&cCountyCode=00&cDistrictCode=0000000&cSchoolCode=0000000&Level=State&TheReport=GradeEth&ProgramName=All&cYear=2007-08&cAggSum=StTotGrade&cGender=B>
- 3 "US education chief urges Calif. to enact reforms", *Associated Press*, September 3, 2009. Available online at: http://www.mercurynews.com/news/ci_13263776?nclick_check=1
- 4 Belfield CR, Leving HM. The Economic Losses from High School Dropouts in California, August 2007; Babey et al 2007; Hinkle 1992; Kolby et al., 1993; Murphy et al., 1998; Alatorre & De Los Reyes, 1999; Fosterlin & Binser, 2002; Jennings et al., 2000; Wilson et al., 2001.
- 5 Needham, Crosnoe, & Muller 2003
- 6 Milet M, Tran S, Eatherton M, Flattery J, Kreutzer R. *The Burden of Asthma in California: A Surveillance Report*. Richmond, CA: California Department of Health Services, Environmental Health Investigations Branch, April 2007.
- 7 Hall JV, Brajer V, Lurmann FW. 2003. *Economic valuation of ozone-related school absences in the South Coast Air Basin of California*. Contemporary Economic Policy, (21)4:407-417. Available online at http://econpapers.repec.org/article/oupcoecpo/v_3A21_3Ay_3A2003_3Ai_3A4_3Ap_3A407-417.htm
- 8 Hall 2003.
- 9 Magzamen S, Patel B, Davis A, Edlestein J and Tager IB. "Kickin' Asthma: School-Based Asthma Education in an Urban Community," *Journal of School Health*. 78 (12): 655-665, December 2008.
- 10 Meng YY, Babey SH, Hastert TA, Lombardi C. and Brown, RE. *Uncontrolled Asthma Means Missed Work and School, Emergency Department Visits for Many Californians*. UCLA Policy Brief, July 2008. Available online at: http://www.healthpolicy.ucla.edu/pubs/files/Uncontrolled_Asthma_PB_0708.pdf
- 11 Milet M, Tran S, Eatherton M, Flattery J, Kreutzer R. *The Burden of Asthma in California: A Surveillance Report*. Richmond, CA: California Department of Health Services, Environmental Health Investigations Branch, April 2007.
- 12 *School facilities: American Schools Report Differing Conditions*, General Accounting Office, June 1996. Available online at: <http://www.gao.gov/archive/1996/he96103.pdf>

- 13 Shaughnessy RJ, Haverinen-Shaughness U, Nevalainen A, Moschandreas D. "A Preliminary Study of the Association Between Ventilation Rates in Classrooms and Student Performance." *Indoor Air*, 16(6): 465-468.
- 14 U.S. Department of Health and Human Services. (2000). Oral health in America: A Report of the Surgeon General, Rockville, MD: US Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health.
- 15 Dental Health Foundation, Mommy It Hurts to Chew, The California Smile Survey: An Oral Health Assessment of California's Kindergarten and 3rd Grade Children, February 2006.
- 16 Ibid.
- 17 Blumenshire SL "Children's School Performance: Impact of General and Oral Health," *Journal of Public Health Dentistry*, 2008 Spring 68(2): 82-87.
- 18 *Healthy Children Ready to Learn*, California Department of Education. Available online at: <http://www.cde.ca.gov/eo/in/se/yr05healthychildrenwp.asp>
- 19 Harrison GG, Sharp M, Manalo-LeClair G, Ramirez A, McGarvey N. "Food Security Among California's Low-Income Adults Improves, But Most Severely Affected Do Not Share in Improvement," UCLA Center for Health Policy Research, June 2007, available online at http://www.healthpolicy.ucla.edu/pubs/files/foodinsecurity_06082007.pdf.
- 20 Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*. Data Resource Center for Child and Adolescent Health web site.
- 21 Geier AB, et al. "The Relationships Between Relative Weight and School Attendance Among Elementary Schoolchildren," *Obesity*, 15(8), August 2007.
- 22 Falkner NH, et al. "Social, Educational and Psychological Correlates of Weight Status in Adolescents," *Obesity Research*, 9: 32-42, 2001
- 23 "Nutrition and Physical Activity," California Adolescent Health Collaborative. Available online at: http://www.californiateenhealth.org/nutrition_physical_overview.asp
- 24 California Healthy Kids Survey, 2005-2007. Available online at: http://www.wested.org/cs/chks/print/docs/chks_samplereports.html
- 25 Hanson, Austin & Lee Bayha (2004)
- 26 California Healthy Kids Survey, 2005-2007, Available online at: http://www.wested.org/cs/chks/print/docs/chks_samplereports.html

- 27 National Adolescent Health Information Center. "2007 Fact Sheet on Violence: Adolescents and Young Adults," University of California, San Francisco. Available online at: nahic.ucsf.edu/downloads/Violence.pdf.
- 28 Jennings J, Pearson G and Harris M. "Implementing and Maintaining School-Based Mental Health Services in a Large, Urban School District." *Journal of School Health*, 70(5): 201-205, May 2000.
- 29 Education Development Center, urban Special Education Leadership Collaborative, ILIAD IDEA Partnership, 2003.
- 30 Murphy MJ, Pagano ME, Nachmani J, Sperling P, Kane S and Kleinman RE. "The Relationship of School Breakfast to Psychosocial and Academic Functioning." *Arch Pediatr Adolesc Med*. 152: 899-907, September 1998.
- 31 Resnick, et, al, 1997.
- 32 Center for Disease Control and Prevention, Division of Adolescent and School Health. *Strong Connections at School Can Lead to Healthier Choices*. Available at <http://www.cdc.gov/Features/ConnectToSchool>.
- 33 Wilson DB, Gottfredson DC and Najaka SS. "School-Based Prevention of Problem-Behaviors: A Meta-Analysis," *Journal of Quantitative Criminology*, 17(3): 247-272, 2001.
- 34 CSBA (2008). Providing school health services: A study of California district practices and needs. CSBA Research Brief, September 2008
- 35 *Percent of Children with Continuous Health Insurance, California 2007*, Annie E. Casey Foundation. Available online at: <http://datacenter.kidscount.org/data/bystate/stateprofile.aspx?state=CA&loc=6>
- 36 Ibid.
- 37 CA Adolescent Health Collaborative policy brief. Clayton S, Lee C, Buckelow S, Brindis C. (2002). *Improving Teen Health Care Access Through Teen-Oriented Outreach*. California Adolescent Health Collaborative. Available online at: http://www.californiateenhealth.org/download/teen_outreach.pdf
- 38 Lyons B, "The State Children's Health Insurance Program: Lessons and Outlook," The Henry J. Kaiser Family Foundation, April 2007. Kaiser.
- 39 This study was funded by the Centers for Disease Control and Prevention (CDC) Controlling Asthma in American Cities Project (Cooperative Agreement Number U59/CCU923264-01) and the Berkeley Center for Environmental Public Health Tracking funded by the CDC.

- 40 Magzamen S, Patel B, Davis A, Edlestein J and Tager IB. "Kickin' Asthma: School-Based Asthma Education in an Urban Community," *Journal of School Health*. 78 (12): 655-665, December 2008.
- 41 DeBate RD, Thompson SH. "Girls on the Run: improvements in self-esteem, body size satisfaction and eating attitudes/behaviors." *Eat. Weight.Disord.* 2005 Mar;10(1):25-32.
- Crews DJ, Lochbaum MR, Landers DM. "Aerobic physical activity effects on psychological well-being in low-income Hispanic children." *Percept.Mot.Skills* 2004 Feb;98(1):319-24.
- Strong WB, Malina RM, Blimkie CJ, Daniels SR, Dishman RK, Gutin B, Hergenroeder AC, Must A, Nixon PA, Pivarnik JM, et al. "Evidence based physical activity for school-age youth". *J.Pediatr.* 2005 Jun;146(6):732-7.
- 42 Rosenblum S and Spark B. "A Guide to Lowering Test Scores," *Association of California School Administrators*, September/October 2002.
- 43 Hall JV, Brajer V, Lurmann FW. "Economic Valuation of Ozone-Related School Absences in the South Coast Air Basin of California," *Contemporary Economic Policy*. (21)4: 407-417. 2003.
- 44 Hanson, T. L., Austin, G. A., & Lee-Bayha, J. (2003). *Student health risks, resilience, and academic performance: Year 1 report*. San Francisco: WestEd. Available online at: www.wested.org/hks
- 45 Hanson, Austin, Lee-Bayha 2003.
- 46 California Healthy Kids Survey, 2005-2007. Available online at :http://www.wested.org/cs/chks/print/docs/chks_samplerereports.html
- 47 Ibid.
- 48 Hanson, T.L, Austin, G.A. & Lee-Bayha, J. (2004). *Ensuring No Child Left Behind: How are student health & risk resilience related to the academic progress of schools?* San Francisco: WestEd. Available online at: www.wested.org/chks.
Benard, B. (2004). *Resilience*. San Francisco: WestEd.





ADDITIONAL WORKS CITED

Halfon, Neal, et al. (2001). *The Healthy Start Initiative in California: Final Report*. The UCLA Center for Healthier Children, Families and Communities

Malloy, J. and Harlick, D. (March 1999). "Healthy Start Works: A Statewide Profile of Healthy Start Sites," Sacramento, CA: California Department of Education.

Wagner, M. And Golan, S. (1996). *California's Healthy Start School-Linked Services Initiative: Summary of Findings*. Prepared for the Foundation Consortium for School-Linked Services, The Interagency Children and Youth Services Division, California Department of Education. Menlo Park, CA

Villareal, L. and Bookmyer, J (2004). *Community-school Partnerships: The living legacy of Health Start*. What Works Policy Brief, Spring 2004. Foundation Consortium for California's Children and Youth.