The Link Between School Attendance and Good Health

Mandy A. Allison, MD, MSPH, FAAP, a Elliott Attisha, DO, FAAP, b COUNCIL ON SCHOOL HEALTH

More than 6.5 million children in the United States, approximately 13% of all students, miss 15 or more days of school each year. The rates of chronic absenteeism vary between states, communities, and schools, with significant disparities based on income, race, and ethnicity. Chronic school absenteeism, starting as early as preschool and kindergarten, puts students at risk for poor school performance and school dropout, which in turn, put them at risk for unhealthy behaviors as adolescents and young adults as well as poor long-term health outcomes. Pediatricians and their colleagues caring for children in the medical setting have opportunities at the individual patient and/or family, practice, and population levels to promote school attendance and reduce chronic absenteeism and resulting health disparities. Although this policy statement is primarily focused on absenteeism related to students’ physical and mental health, pediatricians may play a role in addressing absenteeism attributable to a wide range of factors through individual interactions with patients and their parents and through community-, state-, and federal-level advocacy.

STATEMENT OF THE PROBLEM

What Is Chronic Absenteeism?

Chronic absenteeism broadly refers to missing too much school for any reason, including excused and unexcused absences as well as suspensions. The US Department of Education’s Office of Civil Rights has used a definition of missing 15 or more days over the course of a school year. Most researchers and a growing number of states have defined chronic absenteeism as missing 10% (or around 18 days) of the entire school year. Some organizations suggest using 10%, because it promotes earlier identification of poor attendance throughout the school year. For example, identifying students who have missed just 2 days in the first month of school predicts chronic absence throughout the year.

Chronic absence is different than truancy. The definition of truancy also varies but usually refers to when a student willfully misses school, and the
absence is “unexcused.” Although students who are truant may be chronically absent, focusing solely on truancy may miss those students who miss excessive amounts of school for “excused” reasons. Regardless of whether absences are unexcused or excused, chronic absenteeism typically results in poor academic outcomes and is linked to poor health outcomes.

Factors such as poverty, unstable housing conditions, poor parental health, and racial or ethnic minority status are associated with poor child health outcomes and are known in the medical and public health communities as social determinants of health.6–8 Students living in poverty are more likely than students from higher-income families to be chronically absent from school.7,8 Factors associated with chronic absenteeism include poorer overall health,9,10 unstable housing conditions,11 transportation difficulties, and exposure to violence.12 Students who change schools within the school year are also more likely to experience absenteeism.13 In addition, youth may be called on to care for sick family members or stay home with younger siblings when a parent or primary caregiver is sick or cannot take time off work, and this is more likely to occur among low-income families.14 Finally, authors of some studies have found that students from racial and ethnic minority groups and those who are English language learners are more likely to be chronically absent than students who are not in these groups.1

Children with a history of maltreatment or exposure to major trauma, such as witnessing domestic violence or experiencing a natural disaster, are more likely than those without these exposures to experience absenteeism, truancy, school suspension, and school dropout.15–17 These children are also more likely to experience other risk factors for chronic absenteeism, including poor mental and behavioral health, poverty, homelessness, and frequent school changes.15,16,18 Children who are living in foster care are more likely to transfer schools within a year compared with the general school population; however, this effect is mitigated among children with more stable (3 months or longer) foster care placements.16 Although reliable data are lacking regarding the effect of immigrant or refugee status on school attendance, immigrant and refugee children are likely to have 1 or more risk factors for poor school outcomes, including poverty, racial or ethnic minority status, and exposure to major trauma.17,19

Why Does Chronic Absenteeism Matter?

Chronic absenteeism can occur as early as preschool and kindergarten and has been shown to be related to future chronic absenteeism, grade retention, and poor academic achievement, particularly for social skills and reading.3,8,20,21 Among elementary school students, absenteeism is highest in kindergarten and first grade, then decreases until middle school. At least 10% of kindergarten and first-grade students miss a month or more of the school year.21 Absenteeism tends to increase again in middle school and high school, with an estimated 19% of all high school students being chronically absent.1 A national map of chronic absenteeism based on the US Department of Education’s 2013–2014 Civil Rights Data Collection reveals wide geographic variation in chronic absenteeism and describes variations on the basis of race and ethnicity, with African American, Hispanic, American Indian, and Pacific Islander students experiencing higher rates of chronic absenteeism than their white and Asian American peers.22 Students with poor attendance score lower than their peers who attend school regularly on national skills assessments, regardless of race or ethnicity.3 Chronic absenteeism can be a better predictor of school failure than test scores. In 1 study, students with high test scores who missed at least 2 weeks of school during the semester were more likely to have failing grades than students with low test scores who regularly attended school.23 Chronic absenteeism as early as sixth grade is predictive of dropping out of school.3

The literature reveals that poor school performance is associated with poor adult health outcomes. Compared with adults with higher educational attainment, those with low educational attainment are more likely to be unemployed or work at a part-time or lower-paying job.24 Those with lower educational attainment are less likely to report having a fulfilling job, feeling that they have control over their lives, and feeling that they have high levels of social support.24,25 This lack of control and social support is thought to be associated with poor health attributable to difficulty adhering to healthy behaviors, psychological processes such as depression, and biological processes such as increased inflammation and reduced immune system function.26 Adults with lower educational attainment are also more likely to smoke and less likely to exercise, which are directly linked to poor health outcomes.24,25 Not earning a high school diploma is associated with increased mortality risk or lower life expectancy.27 Conversely, obtaining advanced degrees and additional years of education are associated with a reduced mortality risk.27 Over the past 20 years, disparities in mortality rates based on educational attainment are worsening for preventable causes of death.28 Chronic absenteeism is associated with engaging in health risk
behaviors, including smoking cigarettes or marijuana, alcohol and other drug use, and risky sexual behavior; such as having 4 or more sexual partners. For every year a student delays alcohol or drug use, his or her odds of regular school attendance in subsequent quarters increase. Students’ experiences of teenage pregnancy, violence, unintentional injury, and suicide attempts are associated with chronic absenteeism. Roughly 30% to 40% of female teenage dropouts are mothers, with teenage pregnancy being the number 1 cause of high school dropout for adolescent female students. Poor school attendance is also associated with juvenile delinquency: in 1 study of youth in Mississippi from 2003 to 2013, authors found that those with chronic absenteeism had 3.5-times higher odds of being arrested or referred to the juvenile justice system.

**Causes of School Absenteeism**

Students may be frequently absent from school for a wide variety of reasons. In the publication, “The Importance of Being in School: A Report on Absenteeism in the Nation’s Public Schools,” Balfanz and Byrnes describe 3 broad categories of causes: “(1) students who cannot attend school due to illness, family responsibilities, housing instability, the need to work or involvement with the juvenile justice system; (2) students who will not attend school to avoid bullying, unsafe conditions, harassment and embarrassment; and (3) students who do not attend school because they, or their parents, do not see the value in attending school, they have something else they would rather do, or nothing stops them from skipping school.” An additional category (ie, “myths”) is also thought to cause problem absenteeism. Myths include when students and their families do not realize that missing just 2 days a month can be a problem, think that it is a problem only if absences are unexcused, or do not think absences are a problem for younger children in preschool through grade school. Finally, school suspension and expulsion, as early as preschool, have increasingly been identified as causes of chronic absenteeism that disproportionately affect African American students and students with emotional and behavioral disorders and attention-deficit/hyperactivity disorder.

Most studies of health-related causes of school absence have been conducted by authors focusing on a specific health condition and determining whether that condition is associated with missing school. Common health conditions that have been associated with school absenteeism include influenza infection, group A streptococcal pharyngitis, gastroenteritis, fractures, poorly controlled asthma, type 1 diabetes mellitus, chronic fatigue, chronic pain (including headaches and abdominal pain), seizures, poor oral health, dental pain, and obesity. Experienced clinicians know that mental health conditions may present with physical health complaints, including some of those listed above that have been associated with frequent absences. Few studies have been conducted to identify groups of children with higher absenteeism and lower absenteeism and determine which health conditions are most prevalent among those with higher absenteeism. Therefore, it is a challenge to clearly define which health conditions cause more absenteeism than others. In addition, although more data are needed, the data that exist and the authors’ clinical knowledge suggest that the most common health-related causes of school absenteeism likely vary among communities.

Although occasional absences attributable to health conditions can be expected, absences can quickly add up and lead to chronic absenteeism if a child experiences multiple health conditions, unrecognized or undertreated conditions, or lack of access to care. Absenteeism attributable to physical health conditions can be compounded by the presence of mental or behavioral health conditions and socioeconomic factors.

Children with disabilities are more likely to be chronically absent than children without disabilities. Similarly, children and youth with special health care needs tend to have more school absences than children without. School performance, including absenteeism, of children and youth with special health care needs has been shown to be affected by risk and protective factors at the child, family, and system levels (eg, socioeconomic factors, the presence or absence of care coordination, and school climate and accommodations). Children with moderate-to-severe autism spectrum disorder may be at particular risk for disruptive behaviors that affect their own and other students’ learning. Students with autism spectrum disorder who display disruptive behaviors at school may be more likely to be excluded or absent from school.

School absenteeism has been associated with mental health conditions and substance use disorders. Longitudinal cohort studies have revealed that conduct disorder and depressive symptoms can lead to frequent absenteeism and, conversely, that frequent absenteeism can lead to conduct disturbances and depressive symptoms. Youth who are truant, defined as willfully refusing to attend school, are more likely than youth who attend school regularly to be diagnosed with oppositional defiant disorder, conduct disorder, depression, and tobacco, alcohol, and marijuana abuse.
Studies have been used to examine school absenteeism by using a socioecologic model considering individual-, family-, and school-level factors. Authors of these studies have found that individual factors (such as hyperactivity, conduct problems, and poor perceived health), family factors (such as low maternal education and high levels of unemployment), and school factors (such as not feeling safe or not feeling treated with respect at school) all contributed to students’ poor attendance. Issues that are likely to be brought up during a visit to a health care provider include bullying, gender identity and sexuality, and adverse childhood experiences (ACEs). In-person and electronic bullying have been shown to be associated with school absenteeism. Lesbian, gay, bisexual, transgender, queer, and questioning youth have been shown to be at risk for poor school connectedness, and poor school connectedness is a risk for poor attendance. Finally, students with higher numbers of ACEs are more likely to have chronic absenteeism than students with fewer ACEs.

**EVIDENCE FOR PHYSICAL AND MENTAL HEALTH INTERVENTIONS TO IMPROVE SCHOOL ATTENDANCE**

Many organizations are making multidisciplinary efforts to promote school attendance at community, state, and national levels. Although the body of evidence about effective interventions to improve school attendance is growing, high-quality evaluation has been limited by the lack of routine measurement of chronic absenteeism and differences in how schools and local educational agencies measure and define absenteeism and attendance. Several national organizations and collaborations are working to promote school attendance by bringing together stakeholders from diverse sectors, including education, law enforcement, juvenile justice, public health, and health care. Summaries of additional evidence and information about strategies to promote school attendance and address chronic absenteeism are available from these organizations and are listed in the Additional Resources section below.

**Infection Prevention**

Interventions used to improve hand hygiene practices in schools include increased frequency of hand-washing and use of hand sanitizers. It is suggested in a 2016 review of 18 randomized controlled trials that hand hygiene interventions can be used to promote good hand hygiene practices among children and school staff and can be used to reduce the incidence of respiratory tract illness symptoms, symptoms attributable to influenza, and school absenteeism. Evidence was mixed for hand hygiene interventions to reduce absenteeism attributable to gastrointestinal tract illness. The effects of school-based infection prevention measures have been best studied for influenza. In addition to studies of hand hygiene interventions, school-located influenza vaccination programs have been shown to reduce school absenteeism during influenza season. Finally, school immunization requirements have been shown to increase immunization coverage in the community, and high levels of coverage are necessary for the prevention of outbreaks of vaccine-preventable diseases that could lead to school absenteeism.

**School Nurses**

School nurses play a significant role in student success and attendance. The American Academy of Pediatrics (AAP) and the National Association of School Nurses recommend a minimum of 1 full-time professional school nurse in every school, recognizing that the ideal nurse-to-student ratio varies depending on the needs of the student population. Healthy People 2020 includes goals to have a school nurse-to-student ratio of 1:750 in elementary and secondary schools. School nurses have the expertise to identify and intervene on health issues that may affect the learning environment and are critical team members for ensuring that students’ individualized education programs, 504 plans, or health care plans are appropriately designed and implemented. Given the complexity of studying nursing services in the school setting and the paucity of research funding and researchers studying school nursing services, data regarding the effect of school nurses on school attendance are limited. One study revealed that 95% of students seen by a school nurse for illness or injury are able to return to class compared with 82% of students seen by an unlicensed school employee. Studies have also revealed that the addition of full-time school nurses reduces illness-related absenteeism among children with asthma compared with children with asthma in schools with part-time school nurses. One literature review revealed that school nurses can improve attendance among students with chronic absenteeism and that lower nurse-to-student ratios were associated with improved school-level attendance rates. Many schools have nurse coverage only part-time, and some schools do not have nurse coverage at all; therefore, a health aide or other school personnel may provide some school health services. The services provided by health aides or other school personnel are essential when a nurse is not available, but these other providers typically do not have nursing training.

**School-Based Health Centers**

School-based health centers (SBHCs) have been shown to improve education outcomes, including grade point average and high school graduation, and have been recommended by the Community Preventive Services Task Force to
improve both education and health outcomes in low-income communities. SBHCs provide health services to students who otherwise may have been sent home or missed school because of illnesses and injuries or attending medical appointments for management of chronic health problems. School-based health services can include preventive services, dental services, and mental or behavioral health services. Research has shown SBHCs can reduce absenteeism. Authors of a study of SBHC users in Seattle found that those who used the clinic for medical purposes had a significant increase in attendance over nonusers. African American male SBHC users were 3 times more likely to stay in school than their peers who did not use the SBHC. Authors of 2 studies in New York found that students enrolled in SBHCs had more time in class, better attendance, and fewer hospitalizations attributable to asthma. Authors of another study found a 50% decrease in absenteeism and 25% decrease in tardiness for high school students who received school-based mental health services. Overall, SBHCs have been shown to improve school attendance for students who use SBHCs for physical and mental health care, with greater improvement for those using SBHCs for physical health.

**Mental Health Care**

Authors of a recent review of children's mental health services provided in schools or in other community-based or clinic settings found that educational outcomes, including school attendance, are infrequently measured. The authors of this review did suggest that mental health treatment was associated with improved overall educational outcomes for children. Investigators found that providing cognitive behavioral therapy for students identified with "school refusing" can improve attendance as well as anxiety and depressive symptoms. "Trauma-informed schools" are schools in which the adults in the school community are prepared to recognize and respond to those who have been affected by trauma. These schools are focused on the life experiences of a student and how the experiences may affect the student’s behavior and performance at school. In addition, these schools provide individual mental health interventions for students and/or link students and families to services in the community. Although research in this area is new and ongoing, a trauma-informed approach at schools appears to reduce school suspensions and expulsions and improve attendance and school performance. Overall, more evidence is needed, specifically regarding the effectiveness of school-based mental health services and trauma-informed approaches for improving school attendance.

**School Policies and Programs**

Policies that promote a positive school climate can promote attendance. As defined by the National School Climate Center, "School climate refers to the quality and character of school life. School climate is based on patterns of students’, parents’ and school personnel’s experience of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures." The concepts of school climate and school connectedness are closely related, and research reveals that students who feel a connection with their school are more likely to attend and less likely to engage in risky behaviors. The Centers for Disease Control and Prevention (CDC) has identified specific strategies to improve school connectedness. The CDC also provides technical guidance regarding prevention of youth violence, including bullying, for schools and communities. This guidance suggests strategies including universal school-based programs for strengthening youth skills, connecting youth to caring adults and activities through mentoring and after-school programs, and creating protective community environments including a positive school climate. It is suggested in evidence that these strategies can be used to reduce youth violence and, in turn, improve school connectedness, attendance, and academic success. Although many of these strategies are directed toward education professionals in the schools, they include engaging with community partners such as health care professionals. Some researchers suggest rewarding students for good attendance with parties, gift certificates, or other types of special recognition results in higher attendance rates.

**Parent Interventions**

Schools that communicate effectively with all parents, regardless of language or culture, provide parents with a specific school contact person who can address their questions and concerns, and provide workshops about school attendance for parents. Strong parental monitoring and parental involvement (eg, when a parent knows whether his or her child is attending school) are related to lower levels of delinquency, which is associated to better school attendance. In 1 study conducted in 2014–2015 among students in kindergarten through 11th grade in Philadelphia, authors indicated that simply informing parents of their children's absences from school can help reduce subsequent absenteeism; this may be partly because parents have misbeliefs about how much their child has been absent. Schools that build strong partnerships with families and the community have shown improved student attendance.
nurses and other members of the school health team, school counselors can play a key role in developing these partnerships.128,129

Coordinated School Health

The CDC’s Whole School, Whole Community, Whole Child model provides a framework for health and educational professionals to promote students’ health and academic achievement.130,131 The components of this model are health education; physical education and physical activity; nutrition environment and services; health services; counseling, psychological, and social services; social and emotional climate; physical environment; employee wellness; family engagement; and community involvement. Although not all of these components have been studied in relation to school attendance, authors of a recent comprehensive summary of the literature indicate that each component plays a role in improving children’s academic performance.132 Aspects of nutrition services (breakfast at school); health services (nursing services); counseling, psychological, and social services (school-based mental health care); social and emotional school climate (school connectedness); physical environment (full-spectrum lighting, reduction of physical threats, indoor air quality); family engagement; and community involvement have all been associated with improved school attendance.132

RECOMMENDATIONS

Pediatricians could address school attendance in their office-based practices and communities and/or states or nationally as advocates using a tiered approach. The office-based approaches could include members of the health care team, such as front office staff, medical assistants, nurses, or care coordinators, to reduce the burden on the pediatrician.

Tier 1

These office-based and advocacy approaches promote school attendance for all youth.

Office-Based

- Routinely ask at preventive care visits and sick visits about the number of absences a student has experienced. Consider adding questions about the number of missed school days in the previous month and the name of the school each patient is currently attending in templates in the paper or electronic medical record;
- Encourage parents to bring copies of their child’s report card or share data available from their child’s online school information system during preventive visits. These data sources usually include information about school absences and tardiness;
- Praise patients and caregivers when patients are regularly attending school, meaning they miss no more than a day per month on average;
- Talk about the effects of school absences on school performance and future wellness. Talk about how absences can add up. Stress the value of developing strong attendance habits as early as preschool;
- Support parents in addressing barriers to attendance;
- Ask families of children with chronic health issues, such as asthma, allergies, and seizures, if they have an action plan at school. Help complete school action plans so that families feel secure sending their children to school. When needed, work with the school nurse to adjust the action plan when there is a change in a patient’s condition. Some states and national organizations or foundations have developed standardized forms for asthma,133 allergy,134 and seizure action plans135;
- Encourage families to share their concerns about their children’s health with their school nurse;
- Assist families in documenting and interpreting their children’s medical needs or disability for an individualized education program or 504 plan to help them establish services to optimize learning opportunities99,136;
- Promote school attendance by using handouts, posters, or videos in your waiting area (see links to resources below), working with community partners (eg, during September Attendance Awareness Month campaigns: http://awareness.attendanceworks.org/), and communicating via your practice Web site or social media;
- Educate yourself and your office staff about the appropriate and inappropriate reasons to exclude a child from school. Additional information about appropriate school inclusion and exclusion criteria can be found in the following publications from the AAP: "Managing Infectious Disease in Child Care and Schools: A Quick Reference Guide"137 and the chapter on school health in the Red Book: 2015 Report of the Committee on Infectious Diseases;138;
- Provide firm guidance on when a child should stay home if sick and how to avoid absences from minor illness or anxiety (links to resource below);
- Learn about resources in the community and connect families with resources that can improve the well-being of the entire family (eg, family counseling, food pantries, housing assistance) as described in more detail in the “Poverty and Child Health in the United States” policy statement139; and
- Routinely ask about whether your patients have experienced out-of-school suspension or expulsion and assist patients and families affected by suspension and expulsion (more
opportunities may include the following:

- Work with AAP chapter leaders to advocate at the school, school district, state school board, and state legislative levels for policies and interventions known to promote school attendance. These interventions can include policies and approaches that promote a positive school climate and avoid suspension and expulsion.42,121 Advocate for funding to ensure adequate numbers of school support personnel, including school nurses and school counselors, and for school-based medical, oral, and behavioral health services96,140;
- Encourage and collaborate with community leaders (faith leaders, public officials, businesses) to develop and deliver consistent and coordinated community-specific and culturally salient messages that inform the public about the importance of regular school attendance at all ages, starting in early childhood;
- Educate and collaborate with school professionals about appropriate and inappropriate reasons for exclusion (eg, some schools continue to exclude children with head lice from school despite a strong, evidence-based recommendation to avoid exclusion from school for head lice).141 AAP chapter leaders and the Council on School Health can provide assistance in these efforts;
- Support school districts’ efforts to improve children’s and families’ access to health insurance and medical services;
- Serve as a school physician or on a school board, school or school district health services advisory committee, or wellness committee to develop policies and practices that promote school attendance142;
- Work with your state school board, department of education, or school districts (local educational agencies) to encourage schools to consistently collect and share data with public health and health care providers on chronic absence by grade, school, and neighborhood, because chronic absence is often an indicator that children and families are struggling with health-related issues. Develop and promote strategies that encourage data sharing and are compliant with existing privacy laws;
- Work with schools to identify physical and mental health conditions that are significantly contributing to school absenteeism among their students and help identify interventions to address these conditions; and
- Encourage public health departments to compare chronic absence data and available health metrics to identify where collaborative action would be helpful.

**Tier 2**

In addition to the approaches described in tier 1, pediatricians can use the following office-based interventions for patients who are missing 2 or 3 days of school per month (~10% of total school time):

- Prevent, identify, and treat physical and mental health conditions that are contributing to school absences. Collaboration with school and mental health professionals is essential in the treatment of youth with psychosomatic symptoms that result in poor school attendance;
- When possible, identify psychosocial risk factors and health factors among a patient’s caregivers that may be contributing to the patient’s school absenteeism and refer the caregiver to appropriate resources in the community;
- Avoid writing excuses for school absences when the absence was not appropriate and avoid backdating to justify absences;
- Strongly encourage patients who are well enough to attend school to return to school immediately after their medical appointments, so they do not miss the entire day;
- Avoid contributing to school absences. In concordance with the medical home concepts of providing accessible, continuous, and family-centered care, consider offering extended office hours and encourage families to make preventive care appointments and follow-up appointments for times outside of regular school hours143;
- Communicate and collaborate with school professionals and community partners to manage the health conditions of your patients with chronic absenteeism. The school nurse is usually the best first contact.96 The AAP publication *Managing Chronic Health Needs in Child Care and Schools*136 is a reference that may be particularly useful in the child care or preschool settings, where a school nurse or child care health consultant may not be readily available; and
- Encourage parents of students with excessive absences to seek a formal school team meeting (often termed a school study team) to discuss how the school and family can cooperate to address the issue. Specifically, parents can request that their student be considered for participation in their school’s behavioral intervention system.144

**Tier 3**

In addition to the approaches described in tiers 1 and 2, pediatricians can use the following
Office-based interventions for patients who have severe chronic absenteeism and are missing 4 or more days of school per month (~15% of total school time):

- Encourage the school or school district to provide services such as intensive case management and mentorship, communicate and collaborate with professionals providing support services in school, and serve as your patient’s advocate and medical expert; and

- Children are eligible for home or hospital educational services from the public schools if they have a legitimate medical reason for absences. The use of these services should be clearly justified on the basis of the patient’s medical presentation. The goal should be for these services to be time limited. Communicate and collaborate with school professionals to decide whether out-of-school instruction is appropriate, develop a time line for out-of-school instruction, develop a reentry plan, and identify whether an alternative to out-of-school instruction is appropriate.

ADDITIONAL RESOURCES

Organizations Addressing School Attendance

- America’s Promise Alliance, Grad Nation (http://www.americaspromise.org/program/gradnation);
- Attendance Works (http://www.attendanceworks.org/);
- Everyone Graduates Center (http://www.every1graduates.org/);
- Healthy Schools Campaign (https://healthyschoolscampaign.org/);
- National Center for Education Statistics, Every School Day Counts (https://nces.ed.gov/); and
- National Center for School Engagement (http://schoolengagement.org/).

Links to Resources to Share With Patients and Parents

- Handouts to give to parents (http://www.attendanceworks.org/resources/handouts-for-families/);
- Video to show in waiting room (http://www.attendanceworks.org/tools/for-parents/bringing-attendance-home-video/); and

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ABBREVIATIONS

AAP: American Academy of Pediatrics
ACE: adverse childhood experience
CDC: Centers for Disease Control and Prevention
SBHC: school-based health center

REFERENCES


6. Schickedanz A, Dreyer BP, Halfon N. Childhood poverty: understanding and


73. Shore SM, Sachs ML, Lidicker JR, Brett SN, Wright AR, Libonati JR. Decreased scholastic achievement in overweight middle school students. Obesity (Silver Spring). 2008;16(7):1535–1538


90. Seelman KL, Forge N, Walls NE, Bridges N. School engagement among LGBTQ high school students: the roles of safe adults and gay-straight alliance characteristics. Child Youth Serv Rev. 2015;57:19–29


95. Committee on Practice and Ambulatory Medicine; Committee on Infectious Diseases; Committee on State Government Affairs; Council on School Health; Section on Administration and Practice Management. Medical versus nonmedical immunization exemptions for child care and school attendance. Pediatrics. 2016;138(3):e20162145


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