

2015 'Must Read' Papers for School Health Professionals

Compiled by Elliott Attisha, DO, FAAP

The American Academy of Pediatrics Council on School Health (COSH) membership and the Journal of School Health editorial board were asked to nominate the most important papers for school health professionals published in 2015. Thirty-five papers were nominated. COSH executive committee members and the Journal on School Health Senior Editor voted and the following ten papers were selected.

The top ten papers for 2015 comprise several topics, some of which include: e-cigarettes, principals' knowledge on concussion and return to school, interventions to address abusive adolescent relationships, supporting children with disabilities in school, parent and student perspectives on SBHCs as a medical home, integrating mental health into schools, health educators vs school nurses on teaching STI prevention, and effect of state competitive food policies on school food environment.

A few key messages from last year's top papers:

- Public health measures to counter trends associated with increased risk of smoking, including e-cigarettes, must be elevated.
- Pediatricians can play an active role in transition planning for college bound adolescents with mental health disorders.
- Resources and management strategies for students returning to school after concussion can vary. Understanding these differences can help health professionals better manage their school-aged patients with concussion.
- School-based Health Centers (SBHCs) are perceived as fulfilling criteria of Patient Centered Medical Home. For certain students, specifically those in large urban settings, SBHCs may be more accessible than traditional models of primary care.
- A continually growing body of research demonstrates the association between student health and academic achievement.

Intentions to smoke cigarettes among never-smoking US middle and high school electronic cigarette users: National Youth Tobacco Survey, 2011-2013.

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Nicotine Tob Res. 2015 Feb;17(2):228-35. doi: 10.1093/ntr/ntu166. Epub 2014 Aug 20.

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INTRODUCTION:

Electronic cigarette (e-cigarette) use is increasing rapidly, and the impact on youth is unknown. We assessed associations between e-cigarette use and smoking intentions among US youth who had never smoked conventional cigarettes.

METHODS:

We analyzed data from the nationally representative 2011, 2012, and 2013 National Youth Tobacco Surveys of students in grades 6-12. Youth reporting they would definitely not smoke in the next year or if offered a cigarette by a friend were defined as not having an intention to smoke; all others were classified as having positive intention to smoke conventional cigarettes. Demographics, pro-tobacco advertisement exposure, ever use of e-cigarettes, and ever use of other combustibles (cigars, hookah, bidis, kreteks, and pipes) and noncombustibles (chewing tobacco, snuff, dip, snus, and dissolvables) were included in multivariate analyses that assessed associations with smoking intentions among never-cigarette-smoking youth.

RESULTS:

Between 2011 and 2013, the number of never-smoking youth who used e-cigarettes increased 3-fold, from 79,000 to more than 263,000. Intention to smoke conventional cigarettes was 43.9% among ever e-cigarette users and 21.5% among never users. Ever e-cigarette users had higher adjusted odds for having smoking intentions than never users (adjusted odds ratio = 1.70, 95% confidence interval = 1.24-2.32). Those who ever used other combustibles, ever used noncombustibles, or reported pro-tobacco advertisement exposure also had increased odds for smoking intentions.

CONCLUSION:

In 2013, more than a quarter million never-smoking youth used e-cigarettes. E-cigarette use is associated with increased intentions to smoke cigarettes, and enhanced prevention efforts for youth are important for all forms of tobacco, including e-cigarettes.

Published by Oxford University Press on behalf of the Society for Research on Nicotine and Tobacco 2014. This work is written by (a) US Government employee(s) and is in the public domain in the US.

COMMENTARY:

This article documents the results of a validated national survey of students in Grades 6-12 about the correlation between intention to smoke cigarettes and use of e-cigarettes. Results demonstrate a tripling in the number of children who used e-cigarettes between 2011-2013 and a corresponding doubling of the self-reported likelihood of smoking tobacco cigarettes among those who ever used e-cigarettes. More than a quarter of a million youth used e-cigarettes in 2013 alone. This finding presents an enormous public health risk with respect to the currently under-regulated advertising and promotion of e-cigarettes to

minors. Given that at least 80% of adult smokers first used cigarettes before the age of 18 years, public health measures to counter trends associated with increased risk of smoking must be elevated.

Commentary by Peter Gorski, MD, FAAP; pgorski412@gmail.com

High school principals' resources, knowledge, and practices regarding the returning student with concussion.

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OBJECTIVE:

To determine high school principals' self-reported resources, knowledge, and practices regarding the management of students returning to school following concussion.

STUDY DESIGN:

A cross-sectional survey of public high school principals in the state of Ohio assessed respondent and school demographics, respondent concussion training, school resources, and monitoring and accommodation practices for students with concussion.

RESULTS:

Of the 695 eligible high school principals, 465 (66.9%) completed the survey. Over one-third of principals (37.2%) had some form of concussion training in the past year. Those with training were more likely to promote training of other school faculty (57.4% vs 30.6%, $P < .001$). Principals were asked to identify school personnel who are designated as case managers for students with concussion. Schools without a designated case manager were less likely to have an athletic trainer ($P < .001$) and had fewer students (median 424.5 vs 599) than schools with a case manager. Principals could list at least 1 faculty designee who communicates with health professionals more often for student-athletes than for nonathletes ($P < .001$). Most principals were willing to provide students with short-term academic accommodations, but 30.1% required a health professional's note prior to making any academic changes. Only 32% of principals reported providing families with a written academic plan following concussion.

CONCLUSIONS:

Schools differ in their resources and management strategies for students returning to school after concussion. Understanding these differences can help health professionals to overcome potential barriers in managing their school-aged patients with concussion.

COMMENTARY:

This article provides pediatric providers with an instrument they can use to assess school policies and school principals' knowledge of what is in place to help students who return to school after experiencing a concussion. Analysis of principal knowledge should provide the provider with information that could be used in development of special programs to educate principals about monitoring and accommodating the academic needs of students who return to school following experiencing a concussion, providing in-school services for these returning students, and informing the development of school policy related to students who have experienced a concussion and have now returned to school. These policies should not only address "return-to-play" for student athletes, but also for non-athletes who have experienced a concussion so all students can get the most from the educational experiences in school (return-to-learn) and maximize their learning following the traumatic event of experiencing a concussion.

Commentary by Larry Olsen, Dr.P.H.; lkoump53@msn.com

A school health center intervention for abusive adolescent relationships: a cluster RCT.

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Pediatrics. 2015 Jan;135(1):76-85. doi: 10.1542/peds.2014-2471. Epub 2014 Dec 22.

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BACKGROUND AND OBJECTIVES:

Few evidence-based interventions address adolescent relationship abuse (ARA) in clinical settings. This cluster randomized controlled trial tested the effectiveness of a brief relationship abuse education and counseling intervention in school health centers (SHCs).

METHODS:

In 2012-2013, 11 SHCs (10 clusters) were randomized to intervention (SHC providers received training to implement) or standard-of-care control condition. Among 1062 eligible students ages 14 to 19 years at 8 SHCs who continued participation after randomization, 1011 completed computer-assisted surveys before a clinic visit; 939 completed surveys 3 months later (93% retention).

RESULTS:

Intervention versus control adjusted mean differences (95% confidence interval) on changes in primary outcomes were not statistically significant: recognition of abuse = 0.10 (-0.02 to 0.22); intentions to intervene = 0.03 (-0.09 to 0.15); and knowledge of resources = 0.18 (-0.06 to 0.42). Intervention participants had improved recognition of sexual coercion compared with controls (adjusted mean difference = 0.10 [0.01 to 0.18]). In exploratory analyses adjusting for intensity of intervention uptake, intervention effects were significant for increased knowledge of relationship abuse resources and self-efficacy to use harm reduction behaviors. Among participants reporting relationship abuse at baseline, intervention participants were less likely to report such abuse at follow-up (mean risk difference = -0.17 [-0.21 to -0.12]). Adolescents in intervention clinics who reported ever being in an unhealthy relationship were more likely to report disclosing this during the SHC visit (adjusted odds ratio = 2.77 [1.29 to 5.95]).

CONCLUSIONS:

This is the first evidence of the potential benefit of a SHC intervention to address abusive relationships among adolescents.

COMMENTARY:

Pediatricians share concern over adolescent relationship abuse. Researchers at the Children's Hospital of Pittsburgh/University of Pittsburgh Medical Center developed a provider-delivered intervention, the School Health Center Healthy Adolescent Relationships Program (SHARP). The study evaluated the effectiveness of the intervention, which is educational and counseling in nature. A large sample of over 1000 14-19 year olds enrolled in 11 School Health Centers was studied for recognition of abusive behaviors, intentions to intervene, and knowledge of resources to ARA. Training on SHARP was conducted (3 hours). Providers integrated discussion of healthy and unhealthy relationships into visits and provided an educational brochure. Control patients received "usual care." Exit surveys were conducted. While the findings were not statistically significant, exposure to the intervention did show improvement

in recognition of sexual coercion and, for teens who experienced ARA, improved recognition of it. This article suggests that brief interventions can be designed to begin to tackle a widely recognized pitfall of adolescence.

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Transition Planning for the College Bound Adolescent with a Mental Health Disorder.

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ABSTRACT:

Health promotion, disease prevention and anticipatory guidance are the hallmarks of nursing practice, particularly in pediatrics. While there is a wealth of information on anticipatory guidance for the pediatric patient at different ages and developmental stages, there is a paucity of information on anticipatory guidance for the adolescent and emerging adult in transitioning to manage their own health care. While an established need for anticipatory guidance and a transition plan from pediatric to adult health care is apparent for youth routinely followed for significant medical, intellectual, or developmental conditions, a group particularly vulnerable to destabilization of their health as they transition to self-directed adult health care management is composed of youth with mental health disorders. The risk for destabilization increases as they move away from social supports to the university setting. This article reviews available literature on anticipatory guidance for the college bound adolescent with a mental health disorder and makes recommendations for transition planning including examining the college and community services that would support mental health as well as personal choices regarding lifestyle habits while attending the university.

Recommendations are made for nurses to be the leaders in filling this anticipatory guidance gap in preparing youth with mental health disorders for a successful transition to and through college life.

COMMENTARY:

High school graduation and the transition to college are significant milestones in the life of young adults. The transition to college often means transitioning to an adult medical practice setting, which for those with chronic health conditions can often be a greater challenge. Even more challenging is concurrent transitioning to health care settings remote from their home because of their choice of location for college. The transition to college for adolescents with mental health conditions comes with the high risk for destabilization of their condition and the

need to address the unique needs of these young adults when transitioning to college. This literature review addresses the role of nurses in adolescent transition planning. However, the emphasis on anticipatory guidance makes the suggested approach well suited for pediatricians. The authors propose a “road map” for transition planning based on best practice, research on adolescent transition and current data related to the unique vulnerabilities of those with mental health conditions. The road map components present an opportunity for pediatricians to play an active role in transition planning and anticipatory guidance for college bound adolescents with mental health disorders. Pediatricians should begin early, well before college planning, to encourage their adolescent patients with mental health disorders to be able to describe their condition, to understand the various health care options in college settings or college communities, to navigate the mental health system, and to advocate for themselves for academic accommodations when eligible. Pediatricians should also understand and communicate how the behavioral risk factors of the college setting uniquely affects adolescents with mental health disorders and address ways to cope with greater exposure to alcohol and drugs, sleep disruption, and stress. Guidance should also include developing strategies to minimize medication non-compliance and to establish a local support network. Pediatricians should educate families about the components of a transition plan and support adolescents and their families as they work through each component as part of the college selection process and the college experience. This may be done directly or through office based care coordinators or nurses. School nurses and guidance counselors are well equipped to participate in transition planning; therefore, pediatricians should collaborate with schools while assisting with implementing the transition road map. School nurses can help adolescents understand the interrelatedness of their mental health disorder and their college academic outcomes as well as the process for obtaining academic accommodations in the college setting.

**Commentary by Cheryl Duncan De Pinto, MD, MPH, FAAP, FASHA;
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Supporting children with disabilities at school: implications for the advocate role in professional practice and education.

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PURPOSE:

School settings are a common practice context for rehabilitation professionals; health advocacy is a common and challenging practice role for professionals in this context. This study explored how pediatric practitioners advocate for children with disabilities at school. Specifically, we examined everyday advocacy in the context of school-based support for children with disabilities.

METHOD:

Our theoretical framework and methodological approach were informed by institutional ethnography, which maps and makes visible hidden social coordinators of work processes with a view to improving processes and outcomes. We included families, educators, and health/rehabilitation practitioners from Ontario. Of the 37 consented informants, 27 were interviewed and 15 observed. Documents and texts were collected from the micro-level (e.g. clinician reports) and the macro-level (e.g. policies).

RESULTS:

Pediatric practitioners' advocacy work included two main work processes: spotlighting invisible disabilities and orienteering the special education terrain. Practitioners advocated indirectly, by proxy, with common proxies being documents and parents. Unintended consequences of advocacy by proxy included conflict and inefficiency, which were often unknown to the practitioner.

CONCLUSIONS:

The findings of this study provide practice-based knowledge about advocacy for children with disabilities, which may be used to inform further development of competency frameworks and continuing education for pediatric practitioners. The findings also show how everyday practices are influenced by policies and social discourses and how rehabilitation professionals may enact change. Implications for Rehabilitation professionals frequently perform advocacy work. They may find it beneficial to perform advocacy work that is informed by overarching professional and ethical guidelines, and a nuanced understanding of local processes and structures. Competency frameworks and education for pediatric rehabilitation professionals may be improved by: encouraging professionals to consider how their practices, including their written documents, may affect parental burden, (mis)interpretation by document recipients, and potential unintended consequences. Policies and texts, e.g. privacy legislation and the

Diagnostic and Statistical Manual (DSM), influence rehabilitation professionals' actions and interactions when supporting children with disabilities at school. An awareness of the influence of policies and texts may enable practitioners to work more effectively within current systems when supporting individuals with disabilities.

COMMENTARY:

In evaluating the interface between health and education services for children with special education needs in Ontario Canada, this article highlights the challenges that exists for health care providers in supporting families that receive services in the education system. First, providers are trying to advocate for their patients. However, providers often are doing it by educating patients and families to advocate for themselves. Some of this is due to misunderstanding of privacy rules. The other challenge highlighted by this article is a lack of understanding of providers of responsibility of schools and the scope of schools. Providers need training to help them be better advocates including an understanding of privacy, DSM diagnostic criteria and the scope of school responsibilities.

Commentary by Nathaniel Beers, MD, FAAP nathanielbeers@gmail.com

School-Based Health Centers as Medical Homes: Parents' and Adolescents' Perspectives.

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Acad Pediatr. 2015 Aug 29. pii: S1876-2859(15)00205-3. doi: 10.1016/j.acap.2015.06.004. [Epub ahead of print]

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OBJECTIVE:

Preventive health services are underutilized by US adolescents, especially those from low-income populations. School-based health centers (SBHCs) have been endorsed as primary medical homes for adolescents. This study was undertaken to determine how adolescent SBHC users and their parents perceive SBHCs, particularly whether SBHCs fulfill each of the elements of a medical home as defined by the American Academy of Pediatrics.

METHODS:

Middle and high school adolescents who had been enrolled in a SBHC in a major metropolitan school district for a minimum of 1 year were interviewed about their perceptions of and experiences with SBHCs. English- and Spanish-speaking parents of SBHC-enrolled adolescents also participated in focus groups on this topic.

RESULTS:

Four focus groups with parents (n = 30) and 62 interviews with adolescents were completed. Both adolescents and parents indicated satisfaction with the quality and utilization of SBHC services, reporting that SBHCs were highly accessible and family centered. Many students preferred to access care at their SBHC instead of their primary care practice because of the convenience, perceived trustworthiness, compassion, and high quality of care at the SBHC. A few parents reported unmet medical needs from their adolescent's SBHC, and some differences emerged between English- and Spanish-speaking parents.

CONCLUSIONS:

Adolescents' and parents' perceptions of care received at these SBHCs are consistent with features of the medical home model. These findings suggest that SBHCs can provide coordinated, compassionate care to students in a large, urban school system and may be perceived as more accessible than traditional primary care settings.

COMMENTARY:

School-based health centers (SBHCs) were developed in the late 60's and early 70's to increase access to healthcare for poor children. Services have been described as comprehensive, compassionate and culturally relevant all of which capture the basic tenets of the patient centered medical home (PCMH). This study examines the SBHC user and parents of SBHC users' perceptions of how this model of healthcare fulfills the elements of the PCMH. Parents (n=30) and SBHC users (n=62) participated in focus groups and were interviewed respectively. Focus groups contained both Spanish speaking (2) and English speaking (2) parents. SBHC users from 3 middle schools and 3 high schools were interviewed. Topics of discussion included whether SBHCs were accessible, comprehensive, family centered, compassionate, coordinated, and culturally effective. Both parents and SBHC users perceived that the SBHCs services were consistent with the features of the PCMH, especially in the areas

of accessibility, family centeredness, compassion, and quality of services. It is the conclusion of this study that SBHCs are perceived as fulfilling the criteria of a PCMH and for students in a large urban setting may be more accessible than traditional models of primary care.

Commentary by Veda Johnson, MD, FAAP; vjohn01@emory.edu

Strategies for integrating mental health into schools via a multitiered system of support.

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Child Adolesc Psychiatr Clin N Am. 2015 Apr;24(2):211-31. doi:

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ABSTRACT:

To fully realize the potential of mental health supports in academic settings, it is essential to consider how to effectively integrate the mental health and education systems and their respective resources, staffing, and structures. Historically, school mental health services have not effectively spanned a full continuum of care from mental health promotion to treatment, and several implementation and service challenges have evolved. After an overview of these challenges, best practices and strategies for school and community partners are reviewed to systematically integrate mental health interventions within a school's multitiered system of student support.

COMMENTARY:

Pediatricians are well aware of the significant mental health needs of school aged children but may find it challenging to work with schools to implement services. This article details a comprehensive framework for integrating multiple levels of integrated mental health supports with schools. By using this framework pediatricians can better work with schools and community partners to implement a comprehensive integrated mental health system.

Commentary by Tom Young, MD, FAAP; tyoung@uky.edu

Critical connections: health and academics.

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J Sch Health. 2015 Nov;85(11):740-58. doi: 10.1111/josh.12309.

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BACKGROUND:

While it is a national priority to support the health and education of students, these sectors must better align, integrate, and collaborate to achieve this priority. This article summarizes the literature on the connection between health and academic achievement using the Whole School, Whole Community, and Whole Child (WSCC) framework as a way to address health-related barriers to learning.

METHODS:

A literature review was conducted on the association between student health and academic achievement.

RESULTS:

Most of the evidence examined the association between student health behaviors and academic achievement, with physical activity having the most published studies and consistent findings. The evidence supports the need for school health services by demonstrating the association between chronic conditions and decreased achievement. Safe and positive school environments were associated with improved health behaviors and achievement. Engaging families and community members in schools also had a positive effect on students' health and achievement.

CONCLUSIONS:

Schools can improve the health and learning of students by supporting opportunities to learn about and practice healthy behaviors, providing school health services, creating safe and positive school environments, and engaging families and community. This evidence supports WSCC as a potential framework for achieving national educational and health goals.

COMMENTARY:

Pediatricians can become familiar with the Whole School Whole Child Whole Community model as an essential frame for making the connection between health and learning. There is a growing body of research connecting the overall health of students with their ability to learn and achieve educational goals. This paper describes the literature review which makes this case.

Pediatricians can provide professional support for implementation of the WSCC framework and advocate for the use of national guidelines and strategies.

Commentary by Breena Holmes, MD, FAAP; breena.holmes@state.vt.us

Socioeconomic Differences in the Association Between Competitive Food Laws and the School Food Environment.

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J Sch Health. 2015 Sep;85(9):578-86. doi: 10.1111/josh.12288.

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BACKGROUND:

Schools of low socioeconomic status (SES) tend to sell fewer healthy competitive foods/beverages. This study examined whether state competitive food laws may reduce such disparities.

METHODS:

School administrators for fifth- and eighth grade reported foods and beverages sold in school. Index measures of the food/beverage environments were constructed from these data. Schools were classified into SES tertiles based on median household income of students' postal zip code. Regression models were used to estimate SES differences in (1) Healthy School Food Environment Index (HSFEI) score, Healthy School Beverage Environment Index (HSBEI) score, and specific food/beverage sales, and (2) associations between state competitive food/beverage laws and HSFEI score, HSBEI score, and specific food/beverage sales.

RESULTS:

Strong competitive food laws were positively associated with HSFEI in eighth grade, regardless of SES. Strong competitive beverage laws were positively associated with HSBEI particularly in low-SES schools in eighth grade. These associations were attributable to schools selling fewer unhealthy items, not providing healthy alternatives. High-SES schools sold more healthy items than low-SES schools regardless of state laws.

CONCLUSIONS:

Strong competitive food laws may reduce access to unhealthy foods/beverages in middle schools, but additional initiatives are needed to provide students with healthy options, particularly in low-SES areas.

COMMENTARY:

Addressing childhood obesity is a national health priority, and there has been growing awareness of the roles that schools can play in students' nutrition. The study by Taber et al (2015) describes the effects that state competitive food policies (policies that regulate nutritional content of foods and beverages sold in schools) have on nutrition and the impact these policies may have on decreasing the disparities found in U.S. schools regarding nutrition provided to students in 5th and 8th grade. The main findings of this data analysis of a nationally representative survey of school administrators across 40 states (ECLS-K) concludes that these state competitive food policies have resulted in decreases in the unhealthy food choices in schools across SES, such as lower high-sugar, high-fat foods and beverages. However, there was a lack of healthy food alternatives in low SES schools, resulting in increased disparities between high and low income schools. Pediatricians need to be aware that other school policies will be needed to promote healthy alternatives in schools, especially low-income schools.

Commentary by Sheryl Kataoka, MD, MSHS; SKataoka@mednet.ucla.edu

Effectiveness of health education teachers and school nurses teaching sexually transmitted infections/human immunodeficiency virus prevention knowledge and skills in high school.

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J Sch Health. 2015 Mar;85(3):189-96. doi: 10.1111/josh.12234.

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BACKGROUND:

We examined the differential impact of a well-established human immunodeficiency virus (HIV)/sexually transmitted infections (STIs) curriculum, Be Proud! Be Responsible!, when taught by school nurses and health education classroom teachers within a high school curricula.

METHODS:

Group-randomized intervention study of 1357 ninth and tenth grade students in 10 schools. Twenty-seven facilitators (6 nurses, 21 teachers) provided programming; nurse-led classrooms were randomly assigned.

RESULTS:

Students taught by teachers were more likely to report their instructor to be prepared, comfortable with the material, and challenged them to think about their health than students taught by a school nurse. Both groups reported significant

improvements in HIV/STI/condom knowledge immediately following the intervention, compared to controls. Yet, those taught by school nurses reported significant and sustained changes (up to 12 months after intervention) in attitudes, beliefs, and efficacy, whereas those taught by health education teachers reported far fewer changes, with sustained improvement in condom knowledge only.

CONCLUSIONS:

Both classroom teachers and school nurses are effective in conveying reproductive health information to high school students; however, teaching the technical (eg, condom use) and interpersonal (eg, negotiation) skills needed to reduce high-risk sexual behavior may require a unique set of skills and experiences that health education teachers may not typically have.

COMMENTARY:

States across the US vary in their requirements to teach sex education and to provide HIV education. Currently, 21 states and the District of Columbia mandate both sex education and HIV education. * Other states do not mandate such education or direct their schools to cover only HIV or only sex education. School-based instruction on reproductive health and the prevention of disease (eg, STIs, HIV) is typically delivered by health education and science teachers. This study examined the relative effectiveness of teachers and school nurses as they delivered a curriculum that incorporated group discussions, role-playing, role model videos and interactive exercises. In this randomized study, the students who received their course content from teachers rated their instructor more prepared and effective at challenging them to think about their health over those students taught by school nurses. Alternatively, those taught by school nurses reported significant and sustained changes (up to 12 months after intervention) in the technical (eg, condom use) and interpersonal (eg, negotiation) skills needed to reduce high-risk sexual behaviors. The results of this study suggest that while classroom health education teachers may be skilled at imparting knowledge, they may be less effective with instruction involving skills aimed at reducing risky sexual behaviors. An investment in school nurses as health educators may improve the capacity of schools to transmit the skills and knowledge students need to succeed in mastering sexual health and STD literacy.

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