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Original Article

Structural Intervention With School Nurses Increases Receipt of Sexual Health Care Among Male High School Students

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ABSTRACT

Purpose: Adolescent males are less likely to receive health care and have lower levels of sexual and reproductive health (SRH) knowledge than adolescent females. The purpose of this study was to determine if a school-based structural intervention focused on school nurses increases receipt of condoms and SRH information among male students.

Methods: Interventions to improve student access to sexual and reproductive health care were implemented in six urban high schools with a matched set of comparison schools. Interventions included working with school nurses to improve access to sexual and reproductive health care, including the provision of condoms and information about pregnancy and sexually transmitted disease prevention and services. Intervention effects were assessed through five cross-sectional yearly surveys, and analyses include data from 13,740 male students.

Results: Nurses in intervention schools changed their interactions with male students who visited them for services, such that, among those who reported they went to the school nurse for any reason in the previous year, those in intervention schools reported significant increases in receipt of sexual health services over the course of the study compared with students in comparison schools. Further, these results translated into population-level effects. Among all male students surveyed, those in intervention schools were more likely than those in comparison schools to report increases in receipt of sexual health services from school nurses.

Conclusions: With a minimal investment of resources, school nurses can become important sources of SRH information and condoms for male high school students.

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IMPLICATIONS AND CONTRIBUTION

Adolescent males often do not receive sexual and reproductive health information and care. With a minimal investment of resources, school nurses may become important sources of sexual and reproductive health information and condoms for male high school students, and may serve as a connection to the larger health-care system.

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Providing high-quality sexual and reproductive health care (SRHC) is an important part of preventing and reducing unintended pregnancy, sexually transmitted disease (STD), and HIV/ AIDS among young people. The American Medical Association recommends that adolescents aged 11–21 years have annual preventive health service visits and receive guidance and counseling on topics ranging from responsible sexual behavior to methods of birth control and STD prevention [1]. The *Guidance for Providing Quality Family Planning* Services by the Office of Population

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Affairs and Centers for Disease Control and Prevention (CDC) recommends all reproductive-aged individuals, including young men, receive family-planning services [2]. Although utilization of health care does not differ by gender among younger adolescents (11–15 years old), older male adolescents utilize less health care (including family physicians and emergency departments) than older female adolescents [3]. Compared with females, adolescent males are less likely to access SRHC services and are less likely to discuss sexual health topics with a health-care provider or a parent [4]. With an increased understanding of this gap [3,5–8], there is a clear need for the development of new strategies to address it.

Although males, compared with females, have generally not been a focus of intervention efforts like sexually transmitted infection screening and unintended pregnancy prevention efforts, there has been some success in addressing the SRHC needs of male adolescents. For example, in an intervention targeting firsttime clinic patients receiving routine physical exams, participants showed increased sexual and reproductive health (SRH) knowledge and frequency of safer sexual behaviors [5].

Although often overlooked as a source of SRH information and services, school nurses play a vital role in the health of our nation's children. School nurses provide episodic care and manage chronic conditions, as well as promote health behaviors and connect children with external health-care providers [9]. School nurses are well positioned to also provide SRH information and condoms, and make referrals for health services. A 2006 study found that nearly half of US high schools employed at least one full-time nurse and another 25% employed a part-time nurse [10], indicating that many high schools could make use of this resource to raise not only male adolescents' awareness of their need for services but also their awareness of services already being provided at school.

Project Connect was an adolescent pregnancy and STD prevention program implemented in a public school district in Los Angeles County, California. It consisted of activities targeting parents, health-care providers, schools, and communities in order to improve SRHC among youth. Among other activities, successful efforts to improve receipt of reproductive health care included the implementation of systems-level interventions to connect students to community-based sources of care [11] and improve existing condom availability programs [12]. Previous analyses have determined that the interventions were effective in increasing the utilization of reproductive health care among sexually experienced female adolescents (i.e., receipt of birth control in the past year, STD testing or treatment in the past year, and ever receiving an HIV test) [11] and receipt of condoms among all students in the intervention schools, relative to comparison [12]. The original intention was not to focus on school nurses, but as the interventions were designed and implemented, school nurses played a prominent role. The school-based intervention activities that relied heavily on nurse involvement were efforts to improve the implementation of the school district's condom availability policy and the development and implementation of a health-care provider referral guide, intended to connect sexually active students to community health-care providers who were identified as providing high-quality SRHC to adolescents. School nurses were the primary condom distributers in schools and were most heavily engaged in providing referrals to students by making use of the Project Connect referral guide. The project brought together school and district nursing staff and community-based health-care providers to discuss referral barriers, and this

increased nurses' comfort in making referrals. By engaging all intervention school nurses early in the process (e.g., through preintervention assessments in which education and training needs were identified), by raising their awareness of the SRH needs of the students at their schools as well as of district policies related to SRH, and by treating nurses as public health advocates for the SRH needs of students, they became champions for Project Connect, with school administrators and the district. The purpose of this analysis is to examine whether factors related to school nurse utilization, addressed directly by components of engagement and education of school nurses in a broader systemic, structural intervention, had a populationlevel impact on the male students in the intervention schools, particularly those who were sexually experienced. The research questions are as follows:

- (1) Did visits to the school nurse, for any reason, increase among male high school students in intervention schools, relative to comparison schools?
- (2) Among males who went to the school nurse for any reason, did those in intervention schools report receiving more condoms or SRH information than males in comparison schools who reported going to the school nurse for any reason?
- (3) Did male high school students in intervention schools report more visits to the school nurse for condoms or SRH information over the course of the study, relative to males in comparison high schools?
- (4) Did sexually experienced males in intervention high schools report more visits to the school nurse for condoms or SRH information over the course of the study, relative to sexually experienced males in comparison high schools?

Methods

Participants and procedure

Twelve high schools in attendance areas¹ with rates of chlamydia and births among 15- to 19-year-olds exceeding Healthy People 2010 [13] goals participated in Project Connect. Schools were selected and matched based on size and demographics, availability of a school-based health center, and geography. Schools from each pair were purposively assigned to either the intervention or the comparison group so that no comparison school shared a geographic border with an intervention school.

Project Connect was implemented over 5 years with recruitment and data collection occurring during the spring semester annually from 2005 through 2009 (TI–T5). At each time point, the students of randomly selected 9th- to 12th-grade required classes (e.g., health, history) were eligible for the study and were invited to participate in the survey. The surveys were selfadministered, taken in English or Spanish, and completed in 30 minutes during one class period.²Students could have participated in multiple years (15.4% of the sample provided more than one survey).

¹ The geographic boundaries that define which high school a student attends, according to his/her home address.

² Although surveys were available in only English or Spanish, there were no reported incidents of a student being unable to participate because of a language barrier.

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