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Parent Attitudes About Adolescent School-Located Vaccination and Billing

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A B S T R A C T

Purpose: School-located vaccination programs may need to bill health insurance to be sustainable. This mixed methods study assessed parent attitudes about school-located vaccination and billing.
Methods: Seven public schools in Denver, Colorado, participated in a school-located adolescent vaccination program that billed students' insurance. From April through June 2010, a survey was administered to parents of 1,000 randomly selected sixth to eighth grade students in these schools. In March and April 2011, focus groups were conducted with a sample of parents of adolescents attending these schools to further explore and help explain patterns emergent in the survey data.
Results: Survey response rate was 66%. Among survey respondents, 56% strongly supported and 29% somewhat supported school-located vaccination. Forty-two percent reported concern about receiving a bill if their child participated in a school-located vaccination program that billed insurance, and 23% did not want to provide insurance information to the school. Four focus groups were conducted with English-speaking (n = 17) and Spanish-speaking (n = 14) parents. Focus group participants indicated strong support for school-located vaccination, emphasizing the convenience of the program for both parents and adolescents. These parents also appreciated the affordability of the program and reported feeling comfortable with in-school vaccination delivery. Very few participants indicated concerns about providing health insurance information to the school, but some expressed concern about potential record scatter.
Conclusions: Although some parents expressed concerns about billing health insurance for school-located vaccination, most parents indicated strong support for school-located vaccination.

IMPLICATIONS AND CONTRIBUTION

Although some parents of adolescents had concerns about the potential for billing problems and other issues, most indicated strong support for school-located adolescent vaccination because of its convenience and affordability and parents' and adolescents' trust in the school.

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In the past decade, significant opportunities for disease prevention in adolescents have been created through the licensure of new vaccines and the expanded use of existing vaccines [1]. However, a number of barriers to immunization delivery exist for adolescents, and national immunization rates in this age group have lagged well behind national goals [2–4]. In 2012, an estimated 84.6% of adolescents had received one or more doses of

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tetanus–reduced diphtheria–acellular pertussis vaccine, 74.0% had received one or more doses of quadrivalent meningococcal conjugate vaccine, and 33.4% of female adolescents had received three or more doses of human papillomavirus (HPV) vaccine [5]. The rates for meningococcal conjugate vaccine and HPV are well below the Healthy People 2020 national target of 80% coverage [6].

Although school-located vaccination (SLV) has been proposed as a means of improving immunization delivery to adolescents, much is still unknown about the acceptability and feasibility of such an approach. Because of the costs associated with purchase and administration of vaccines, billing students' health insurance will likely be necessary for sustainable SLV programs [7]. Although surveys have shown that parents are generally supportive of SLV [8–10], little is known about whether parents would support having their health insurance billed for vaccines delivered at school. It is also not known whether other parental attitudes, such as discomfort providing students' health insurance information to SLV program staff, could create barriers to participation in SLV programs.

The objective of the current investigation was to assess parental attitudes about SLV and about billing for vaccines received at school. We also sought to understand the potential barriers to parental consent for their children to participate in SLV programs.

Methods

Study setting and population

This study followed the Explanatory Sequential Design, a model of sequential mixed methods research in which quantitative data are collected first, followed by the collection of qualitative data to help explain the quantitative data [11,12]. A survey and focus groups were conducted as a part of an SLV program. From January 2010 through May 2011, voluntary in-school vaccination clinics were held for sixth to eighth grade students in seven middle or prekindergarten through eighth grade schools in Denver, Colorado. The program offered all vaccines recommended for middle school–aged students by the Advisory Committee on Immunization Practices and was developed jointly by a community vaccinator (Denver Public Health and Denver Community Health Services) and Denver Public Schools. Fifteen percent of students (466 of 3,144) participated in the SLV clinics (i.e., received one or more vaccines). Parents provided participating students' health insurance information to the program staff who then billed insurance for vaccines delivered [13]. Community vaccinator staff and Denver Public Schools staff worked together to obtain consent and students' insurance information from parents. The consent form stated that parents would not be personally billed for vaccines their child received through the program, but that their child's health insurance would be billed. Community vaccinator personnel conducted the clinics and billed for vaccines given.

In April through June 2010, a paper-based survey was administered to parents of sixth to eighth grade adolescents attending these schools and, in March and April 2011, focus groups were conducted with a sample of English- and Spanish-speaking parents of students at these schools. Focus groups were held significantly later than the survey because we wanted to discuss the SLV program with parents after it had been implemented for at least 1 year, to increase the likelihood of their familiarity with the program and their ability to engage in a focused discussion of its perceived positives or negatives. Focus group recruitment began in January 2011, a year after the commencement of the SLV program. The study was approved by the Colorado Multiple Institutional Review Board.

Survey design and administration

The survey instrument was designed based on existing literature [14,15] and was pilot tested among a random sample of parents (n = 14) from participating schools and a convenience sample of parents (n = 8) attending a hospital-based pediatric clinic. A random sample of 1,000 parents of adolescent students enrolled in the sixth to eighth grades at participating schools was selected for survey administration, regardless of whether their adolescent participated in the clinics. Surveys were administered in English and Spanish, and were delivered to parents via students and via standard mail, with up to four survey attempts per parent. To compensate respondents for their time, $5 in cash was included with the first survey.

Focus group design and facilitation

To further investigate patterns that emerged from the survey data, we conducted focus groups in which we probed attitudes toward SLV and billing among parents of adolescents who participated in the program as well as parents of adolescents who did not participate in the program. Parents who attended parent–teacher conferences were invited to provide their contact information, so they could be contacted to participate in a focus group regarding the immunization program offered at their school. Announcements were also sent home to parents and were placed in the school newsletter.

Following a pilot test of the focus group guide with parents from schools without SLV clinics, two focus groups were conducted in English and two were conducted in Spanish. Each focus group lasted for approximately 90 minutes. Participants were asked to bring their child's immunization record to the focus group to confirm immunization status; school immunization records were also printed from the school district's information system for the relevant child of each focus group participant. Before the discussion, each participant completed a demographic questionnaire; after the discussion, participants were compensated $40 for their time. Focus groups were audiotaped and transcribed verbatim; the Spanish-language transcripts were translated verbatim to English before analysis.

Analytic methods

Survey data were analyzed as follows. Descriptive statistics were used to characterize parent attitudes. For multivariate analyses, the primary outcome variable was strong support for SLV, defined as strongly agreeing with the statement "If there were a nurse at my child's school that could give vaccines, I would be OK with my child getting vaccines at school" versus disagreeing with this statement. Multivariate analyses were conducted to assess the association between prespecified independent variables and the primary outcome variable. Because of the potential impact of insurance status on support for SLV, this variable was retained in the final multivariate model regardless of statistical significance. Using standard methods, odds ratios were converted to risk ratios [16]. All analyses were performed using SAS software (version 9.2; SAS Institute, Cary, NC).

The analysis of focus group data was conducted according to established qualitative analytic procedures [17–19]. Analysis commenced as an iterative process soon after the data collection began, with members of the research team meeting regularly to review the data and identify emergent themes. The qualitative