Provider and Parent Perspectives on Enhanced Communication Tools for Human Papillomavirus Vaccine–Hesitant Parents

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Abstract

Objective: Human papillomavirus (HPV) vaccine initiation and completion rates remain far below the Healthy People 2020 goal, suggesting that additional tools and training may be needed to help medical staff provide a quality recommendation. As part of a larger pragmatic trial, we conducted a qualitative study to understand how a multifaceted communication intervention used by medical staff with HPV vaccine–hesitant parents can improve HPV vaccination rates in the primary care setting.

Methods: At 8 primary care intervention clinics in the Denver metro area, medical staff and parents of adolescent boys and girls ages 11 to 17 years eligible to start the HPV vaccine series at a recent well care visit were recruited for study participation. Focus groups with medical staff and in-depth interviews with hesitant parents were conducted during the post-intervention period. All data were recorded, transcribed, and analyzed using established qualitative methods.

Results: Twenty parents and 46 medical staff participated. All parents and medical staff felt that the overall intervention was beneficial and should continue to be used and preferred the HPV vaccine fact sheet component. Medical staff reported that communication trainings (intervention component) that taught a presumptive approach and motivational interviewing were the most beneficial for introducing the HPV vaccine and for countering HPV vaccine hesitancy, respectively. Least favorable components were the decision aid, disease images, and parent website.

Conclusions: Select components of a multifaceted communication intervention were seen as beneficial to HPV vaccine-hesitant parents and medical staff. Future studies should look at how to implement these intervention components in a greater number of primary care settings.

Keywords: communication tools; human papillomavirus vaccination; qualitative research

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What's New

This is the first study to collect information from both human papillomavirus vaccine–hesitant parents and medical staff impacted by an intervention successful in improving human papillomavirus vaccination rates. Select components of a multifaceted communication intervention were easy to implement and beneficial.

Currently, 79 million Americans are infected with human papillomavirus (HPV) and >14 million new cases occur annually.[1] Since the HPV vaccine was introduced in 2006, there has been a 56% reduction in vaccine-type HPV infections among teen girls in the United States.[2] Yet, HPV vaccine series initiation and completion rates remain low. As of 2016, only 65% of girls and 56% of boys ages 13 to 17 years initiated the series, with completion rates being significantly lower,[3] despite a universal vaccine recommendation from the Advisory Committee on Immunization Practices and a change in recommendation in 2016 to 2 doses for those <15 years who are initiating the HPV vaccine series.[4]

Research demonstrates the influence of a provider's recommendation for increasing HPV vaccination rates. A recent study found that adolescents who received an HPV recommendation from their provider compared to no recommendation were 5 times more likely to receive the vaccine.[5] However, studies show that providers often do not make consistent recommendations at the recommended age or equally for both genders.[6–8] Driving this can be provider knowledge gaps, misconceptions about reasons for parental HPV vaccine hesitancy, and worry about handling uncomfortable discussions.[7,9,10] Parental knowledge

gaps include how HPV is contracted, diseases the vaccine protects against, the number of doses required in the series, and the need to vaccinate at younger ages—all further hindering vaccination rates.[7,11–13] Tools for parents and providers to overcome these barriers are needed.

Several recent studies have examined educational tools and communication strategies to facilitate provider vaccine communication.[10,14–16] Studies have consistently shown that the educational tool most commonly used during clinical encounters is the Centers for Disease Control and Prevention Vaccine Information Statement; however, research suggests it lacks sufficient information for many parents.[14,15,17,18] Other communication strategies such as brief messaging and providing gender-specific benefits have mixed results.[19,20] Moreover, it remains unclear when to introduce such tools during a visit (before, during, or at the end) for the greatest influence on vaccine decision-making. Recent work has suggested that an effective communication strategy is using a presumptive approach to begin the HPV vaccine conversation ("Let's get her vaccinated"), rather than a participatory one ("What do you want to do about vaccines?").[10] However, no published studies have demonstrated interventions that are effective in overcoming parental HPV vaccine hesitancy. Further challenges exist to identify materials and strategies that do not add significant time to the already time-constrained clinical visit.[7,14,21]

From 2015 to 2016, we conducted a large pragmatic cluster-randomized trial that developed and assessed the impact of a 5-component HPV vaccine communication intervention on adolescent HPV vaccination rates (Supplementary Appendix). The trial included 12 pediatric and 4 family medicine clinics (8 intervention, 8 control) in Denver, Colorado. Each intervention study site was expected to implement at least one of the tools with all eligible adolescents seen during the study period, and several practices implemented multiple tools. Results of the trial demonstrated significant increases in both HPV vaccine initiation (adjusted odds ratio [aOR], 1.46; 95% CI, 1.31−1.62) and completion (aOR, 1.56; 95% CI, 1.27−1.92) among clinics receiving the intervention, compared to controls.[22] To inform our understanding of perceptions and utility of these tools, we conducted a qualitative study among medical staff and HPV vaccine−hesitant parents (hereafter referred to as "parents") from the intervention practices.

METHODS

INTERVENTION DESCRIPTION

The intervention components, described in detail elsewhere,[22] included 1) a fact sheet library that practices used to create practice-specific fact sheets about HPV infection and vaccination, 2) a parent website called "iVac" that created individually customized information about HPV vaccination, 3) a series of disease images depicting diseases associated with HPV infection, 4) a parent decision aid for HPV vaccination, and 5) communication training that taught providers to use a presumptive approach for introducing the vaccine and motivational interviewing when encountering vaccine hesitancy (Supplementary Appendix). The fact sheet and disease images tools were customized based on site staff feedback. Research staff conducted process mapping (an activity to help determine patient and staff workflows) to understand practice flow and optimal placement of physical intervention components.[23]

STUDY DESIGN AND POPULATION

At the post-intervention period, in-depth interviews with parents and focus groups with medical staff involved in the implementation of the intervention were conducted by experienced qualitative researchers. Each parent participant had an adolescent boy or girl 11 to 17 years old who was eligible to start the HPV vaccine series, and each parent expressed HPV vaccine hesitancy at a recent well check visit (within the last 6 months and regardless of reported exposure to any intervention components), was present in the examination room during the HPV immunization discussion, was English-speaking, and reported consent to childhood vaccines for their adolescent. Recruitment was conducted by study interviewers, and vaccine hesitancy was confirmed following study consent by probing the parents with regard to their views about HPV vaccine at the time of the visit. Medical staff participants were medical assistants, nurses, physician assistants, providers (ie, MDs/DOs), front office staff involved in distributing tools to parents of adolescents eligible to start the HPV vaccine series, and study champions (staff members identified by each site to help facilitate study activities). All study activities were approved by the Colorado Multiple Institution Review Board.

RECRUITMENT

Parent recruitment first was conducted by study site medical staff and was later augmented by research staff outreach to parents who had agreed to be contacted by phone for additional studies. Attempts were made to balance representation across all clinics, with a goal of 2 parents per site. All medical staff involved in the intervention and part of the adolescent care clinical team were invited to participate, with a goal of 6 participants per site. Recruitment and interviews or focus groups occurred from December 2015 to August 2016. Parent interviews occurred on average 115 days after their adolescent well check visit (minimum, 12; maximum, 259), with 70% occurring within 6 months. To reduce recall bias, interviewers asked participants to recall personal events around the time of the well care visit to help participants recall visit details.

DATA COLLECTION

All parent participants received copies of their adolescent's clinic-specific intervention components, and each was reviewed in detail during the interview. Parent interviews explored opinions about the HPV vaccine, views on how the provider initiated and carried out