Acceptability of the Human Papillomavirus Vaccine among Latina Mothers

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Abstract. Study Objective: To describe Latina mothers’ acceptance of the human papillomavirus (HPV) vaccine for their daughters and explore their knowledge base regarding HPV-related issues.

Design: Individual interviews were conducted with a convenience sample of 40 Latina mothers of daughters 7–14 years old, from an urban, pediatric primary care clinic. Preliminary questions were asked regarding HPV knowledge and then information was verbally provided before exploring vaccine acceptance.

Results: Thirty-one of the Latina mothers had not heard of HPV and 34 were not aware of the connection between HPV and cervical cancer. Thirty-two mothers reported that they would allow their daughters to receive the HPV vaccine. Two overarching themes were identified as reasons for accepting the vaccine. The main theme for vaccine acceptance provided by 26 mothers was “to prevent disease.” The other theme was “to protect” their child. Four mothers were undecided and 4 reported they would not vaccinate their daughter. The two themes identified from this group of mothers include not having sufficient information regarding the vaccine, and that their daughters are too young.

Conclusion: Acceptance of the HPV vaccine was high in this sample of Latina mothers. The prevention of disease and the protection of their child were the motivating factors for vaccinating their daughters. Reasons for not accepting include lack of information and young age of daughter. The provision of information will be key to ensuring Latina mothers understand the rationale for vaccinating at a young age.

Key Words. Vaccination—Sexually transmitted infections—Human papillomavirus—Parent—Sexuality—Adolescent—Latina—Attitude

Introduction

Human papillomavirus (HPV) is the most common sexually transmitted infection in the United States1 and is the major cause of cervical cancer.2 Cervical cancer occurs most often in Latinas, with an incidence rate more than twice that among non-Hispanic white women.3 This higher incidence among Latinas likely results from documented lower rates of screening for cervical cancer and under-utilization of preventive health care services.4 Therefore, Latinas are at greater risk for later-stage diagnosis of cervical cancer, which results in higher mortality rates.4

In June of 2006, the United States Food and Drug Administration approved a vaccine for immunization against HPV serotypes 6, 11, 16, and 18.5,6 Mathematical models predict that implementation of the HPV vaccine in the United States will decrease the incidence of cervical cancer by nearly 50% over the next several decades.7 HPV vaccination could have enormous public health benefits for all women, but particularly for Latinas, by decreasing the morbidity and mortality associated with cervical cancer.

The simple availability of safe and effective sexually transmitted infection (STI) vaccines, including the HPV vaccine, will not ensure their acceptance. For example, parents from different ethnic minority groups may have distinctive understandings about the causes and prevention of STI infections and/or hold cultural beliefs about sexuality and health which may influence their acceptance of STI/HPV immunization for their children. Specifically, the knowledge...
base of Latinas about cervical cancer, Pap testing, HPV and their associations have been found to be low,8–10 even among a sample of well-educated young women.11 One set of researchers attributed this lack of HPV and cervical cancer awareness to cultural norms that often discourage discussions among Latinas of sexual health issues.11 Also, data from focus groups demonstrated that many Latino participants hold attitudes of fear, anxiety, and stigma toward these issues.8–11

Little prior research on HPV vaccine acceptability has focused on Latinos, who comprise the largest ethnic minority group in the United States.12 Only two quantitative published studies have included analyses of Latina mothers’ attitudes towards HPV vaccination of their children.13,14 In the study by Slomovitz et al13 the rates of acceptability (67% overall) did not differ on the basis of ethnicity (Latina, non-Hispanic white, African-American). The Constantine and Jerman14 study did find that Hispanic parents are more likely than non-Hispanics to be accepting of the HPV vaccine. In a study from Mexico, 83.6% of the 880 women interviewed said they would allow their adolescent daughter to participate in a HPV vaccine trial.15

Given the documented risk posed by HPV to Latinas, and the limited amount of published research, additional in-depth research with this population is needed. In this study, we used in-depth interviews to examine Latina mothers’ knowledge and beliefs regarding HPV, Pap screening, and cervical cancer as well as their attitudes toward HPV vaccination of their pre-adolescent and adolescent daughters.

Methods

Study Population and Procedure

A native Spanish-speaking research assistant recruited Latina mothers from an urban, pediatric primary care clinic from November 2004 to March 2005. The research assistant surveyed parents in the waiting area to determine which parents self-identified as Latina. Individual in-depth, semi-structured interviews were conducted with 40 Latina mothers (ages 24–40 years) of daughters 7–14 years old. Of the eligible potential participants approached (i.e., Latina mother who had a daughter aged 7–14 years), 59% agreed to participate. Of the 41% who declined participation, 64% gave time constraints as the reason for refusal. Written informed consent was obtained from all participants in their primary language. This study was approved by the university’s institutional review board.

Measures

The interview format used by Mays et al16 in their HPV knowledge and beliefs study served as a template for this interview. The questions were translated into Spanish, and then back-translated and modified to ensure a culturally-sensitive interview. The interview schedule was pre-tested with five parents to ensure comprehension and validity. The participants provided basic demographic information which included one question regarding religion: “How important is religion in your life?” The interviewer then elicited the participants’ knowledge regarding the following topics: genital warts, HPV, Papanicolau testing, and cervical cancer. The interview included open-ended questions such as: 1. “What do you know about genital warts?” Follow-up questions probed the depth of knowledge on the topic. Depending on the extent and accuracy of knowledge in each domain, information was verbally provided by the interviewer (as per the script), followed by inquiry about reactions to the information. Participants were asked about their understanding and beliefs regarding diagnosis of HPV infection, treatment of HPV infection, relationship of Pap testing to HPV infection and cervical cancer, prevention of HPV infection, and potential sequelae of HPV infection. Following these knowledge questions, participants were asked specifically about a hypothetical vaccine to prevent HPV infection. The question read as follows: “…Now that you know that HPV causes genital warts and can cause cervical cancer, I would like your opinion about a possible HPV vaccine that is in development… The vaccine is currently being tested and it is a safe vaccine. Would you allow your daughter to receive the HPV vaccine?” Additional issues discussed include perceived need for such a vaccine in light of the information they received from the interviewer regarding HPV infection and their thoughts regarding the diseases targeted by the vaccine (e.g., cervical cancer only or cervical cancer and genital warts).

Data Analysis

The interviews were audio-taped, transcribed, then entered into “ATLAS.ti,” a qualitative software program. The principal investigator and two co-investigators reviewed the transcripts. Common themes, issues, and language usage was noted, and then placed into broader categories based on similarity of content. The categories of content and language were evaluated to assess if generalizations could be made. The investigators discussed the independent reviews of issues and themes, and by consensus a summary of the relevant concepts was produced.17

Results

Descriptive Statistics

The 40 Latina mothers who participated in this study ranged in age from 24 to 40 years (mean 32.4 years)
and their daughters were 7–14 years of age (mean 10.7 years). All but two of the Latina mothers were foreign-born, with most (n = 31) from Mexico. Three mothers were from Guatemala and four from Honduras. Their length of residence in the United States ranged from 1 to 25 years. Thirty-eight (95%) of the mothers reported that religion was important in their life, with twenty of those mothers actually stating “very important.” Thirty-eight (95%) of the mothers completed the interview in Spanish. Sixty percent reported less than a high school education. See Table 1 for more detailed demographic information.

Knowledge of HPV and Genital Warts
Most of the Latina mothers (n = 31, 78%) had not heard of HPV. The 9 mothers who had heard of HPV were questioned further regarding their knowledge base. Nearly all (n = 8) knew that HPV was transmitted sexually. Concerning prevention, one mother identified abstinence only, whereas six believed that condoms provided a lot or complete protection against HPV. Two mothers stated that condoms provided minimal protection against infection, and two knew that cancer was a possible outcome of HPV infection.

A variety of sources for information on HPV were identified, including doctors (n = 4) and media (n = 5). Only 15 (38%) of the 40 Latina mothers had heard of genital warts and of those, 12 knew it was a STI. Interestingly, several mothers alluded to cultural disparities in health services, for example:

“I do not know much about this disease, because sometimes we as Hispanics... sometimes the resources do not come easy so we can learn and know more about the diseases.”

One mother added:

“In the Hispanic community there is a lack of information about this topic.”

Knowledge of Pap Testing and Cervical Cancer
All 40 mothers reported having a Pap test and all reported a frequency of tests every 6 months or annually. Their self report was not confirmed by chart review. Three themes emerged in respondents’ descriptions of the function of Pap smears: (a) Twenty-nine mothers mentioned the detection of infection/disease and/or cancer (7 mothers); (b) the prevention of infection or cancer (7 mothers); and (c) the maintenance of general well-being or health (e.g., “If it is normal then you are okay”). None of the mothers knew precisely that the purpose of Pap testing is to detect changes in the cervix suggestive of cancerous conditions and the majority was unable to explain the meaning of an abnormal Pap result. Most participants (n = 34, 85%) were not aware of the connection between Pap test results and HPV. Only three mothers clearly stated that HPV can be detected through the Pap test.

Most of the mothers knew nothing about cervical cancer (n = 27, 68%). Of the mothers who had some familiarity with the disease process, several focused on the infectious nature of the disease, such as:

“It is when you are contagious with HPV and do not get treatment on time.”

Three of the Latina mothers accurately described cervical cancer. When asked about their degree of worry about developing cervical cancer the majority of women reported they were worried. The most common reason for being worried was the possibility of having cancer and not knowing. Twelve (30%) of the 40 Latina mothers knew someone who had cervical cancer, and the most common outcomes for those individuals were hysterectomy and death.

HPV Vaccine Acceptability
After the completion of the knowledge base sections, the research assistant verbally provided HPV information to all of the mothers and then asked about HPV vaccine acceptability. Thirty-two (80%) of the Latina mothers reported that they would allow their daughters to receive the HPV vaccine. Two overarching themes were identified as reasons for acceptance. The main theme provided by 25 mothers was “to prevent disease,” the second was “to protect” their child. One mother commented:

“...It is just like any other vaccine you give your kid. I mean, why do you give your kid a polio shot? To prevent it.”

The participants talked about their desire to provide “security” for their daughters and the concept

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of their daughters belonging to the “risky youth of this generation.” For example, one mother stated:

“Because the youth today do not take care of themselves...you know young people are wild, they do not think about getting a disease like that one; even when we tell them and give advice. Sometimes there are youth that do not mind their parents, so it (giving the vaccine) is to prevent disease.”

Of the 40 mothers, four were undecided about HPV vaccination and only four reported they would not vaccinate their daughters. With respect to their baseline HPV knowledge, there was no difference in the knowledge base between the vaccine acceptors and the non-acceptors. Two themes were identified from the group of eight mothers who were non-acceptors of the HPV vaccine: (1) not having sufficient information regarding the vaccine, and (2) their daughter’s young age. For example, with respect to needing more information, one mother stated: “I do not know anything. I am undecided because I would like to be more informed about vaccines, to get more information. It is the first time I have heard of this.”

Another mother commented: “I would vaccinate her but not until it is tested on other persons and proven that the vaccine has functioned correctly and that there are not any types of risks.”

The mothers who participated in this study had daughters in the 7–14 year age range, and five of the eight mothers who were undecided or opposed to vaccination had younger-aged daughters (7–9 years). For example, one mother clearly stated: “She is still a girl; she is only ten years old... when she becomes an adult she can decide.”

The mother of an 8-year-old daughter was undecided about the HPV vaccine, but thought that perhaps when her daughter was 18 years old she could make her own decision. She added:

“They will come to an age in which they will be curious about sex, but for that I will give them information before they get to that age. As adolescents, one could explain how babies are made and that men are big liars. The same things he tells her, he is telling other girls...”

Of note, there was a subgroup of mothers (n = 7) who discussed issues regarding partner infidelity and the potential associated risks. However, three of those mothers were HPV vaccine non-acceptors.

A majority (n = 33, 83%) of the mothers stated that added protection against genital warts would make them more likely to accept HPV vaccination for their daughter. Although most (n = 28) understood that the vaccine ideally should be administered before the onset of sexual activity, a subgroup of mothers said that it should be given after sexual debut (n = 4) or that the timing is irrelevant (n = 7).

Three themes emerged in descriptions of the advantages of HPV vaccination to children in the community: (a) protection of children; (b) reduction of infection and disease; and (c) eradication of an STI. Twenty-eight (70%) of the mothers identified no disadvantages to their children receiving the HPV vaccine, although two mothers did express concern about the implicit encouragement of sexual activity:

“We are giving them permission to have sex,” and “They will not have to worry about that (HPV) and they are going to have more sexual relations without protection, since they are already vaccinated.”

Most mothers viewed their children as susceptible to HPV in their teenage years. Eighteen (45%) of the mothers stated that their child had at least a 50% chance of getting infected with HPV as a teen. One of the mothers believed her 7-year-old daughter “does not run a risk” of HPV infection as a teen. She stated she believed this “because of the education we hope to give her and the religion we follow; is that she avoids having sex before getting married.” In general, mothers of older daughters perceived them to be at greater risk of infection than did mothers of younger daughters. When asked their degree of worry about their child getting HPV, 22 (55%) of the Latina mothers were extremely worried. Only one mother stated she was not worried.

Discussion

Most of the Latina mothers in this study had not heard of HPV and therefore knew little about HPV transmission, the potential for disease progression to cervical cancer, or the purpose of Pap screening. The Pap test was often described as a general gynecologic/STI exam, and there was inadequate recognition of the specific purpose of this important screening test. These findings are consistent with prior research in primarily non-Latino samples. Given the limited knowledge regarding HPV, it is not surprising that these Latina mothers were unable to make the connection between HPV and genital warts, Pap tests, and cervical cancer.

Despite the limited knowledge regarding HPV, acceptability of the HPV vaccine was high among these Latina mothers, which is similar to studies with predominantly non-Latino parents. In this study, HPV information was verbally provided to the mothers prior to assessing the acceptability of the HPV vaccine. The Latina mothers were appreciative of the information and perhaps only needed a few key points to be able to make the decision. It is interesting to note that there was no difference in the HPV knowledge base between the vaccine acceptors and the non-acceptors. This finding is consistent with
the results of the Dempsey et al study in which it was shown that informing parents about HPV infection is not sufficient to influence their attitudes toward HPV vaccination. In our study, the primary factors associated with a favorable attitude towards vaccination for the Latina mothers were the desires to prevent disease and to protect their children from cervical cancer. The mothers reported a great deal of concern about cervical cancer and this level of concern may have also contributed to their interest in vaccinating their daughters.

The mothers who participated in this study had daughters in the 7–14 year age range, and the majority who were undecided or opposed to vaccination had younger-aged daughters (7–9 years). The reasons given by mothers for not accepting vaccination included needing more information and young age of daughter. For many of the mothers, this was the first time they were hearing about HPV and we speculate that some may need an opportunity to process the information and perhaps discuss the issue with their health care provider. Overall, the Latina mothers were very accepting of the HPV vaccine for their adolescent daughters. Vaccines are associated with “prevention” and may be viewed more favorably as opposed to other health care services geared towards sexual health. Based on our clinical experience (Bair, unpublished data); Latinos are very accepting of immunizations for their children. Also, research has shown that recent immigrant Latino children are more compliant with the routine childhood immunization schedule as compared to more acculturated Latinos.

Several aspects of Latino culture should be considered when developing an STI immunization program. For example, the religiosity of Latino culture (approximately 85% of Latinos in the U.S. identify themselves as practicing Catholics) may have an influence on attitudes toward pre-marital sex, contraception, and condom use. However, it is important to note that although the mothers in this study stated that religion was important in their lives, it is not how they exclusively make decisions. This finding is consistent with the Dinh et al study demonstrating the lack of link between sexual attitudes and decision-making. Also, in a survey of California residents, Constantine and Jerman identified parents who had moral concerns with HPV vaccination, rather than religion-specific concerns. In our study, the Latina mothers did discuss moral issues, such as partner infidelity and the potential associated risks. Interestingly, the subgroup that discussed infidelity had an almost equal number of HPV vaccine acceptors and non-acceptors. This area deserves further attention when looking to understand vaccine acceptance and non-acceptance.

This study has several limitations that may affect the interpretation of results. First, it is important to keep in mind that the study was conducted prior to the licensure of the HPV vaccine, and therefore prior to the massive advertising campaigns and all of the media attention. Second, we studied a small, non-random clinic-based sample of mothers from one Latino community; therefore the results cannot be generalized to all parents. Most of the mothers in our study were from Mexico and may not represent the maternal attitudes of other Latin American groups. This research highlights the need to continue to conduct studies on specific cultural groups of parents. Another limitation is that these mothers seem to have a more consistent history of Pap smears than many Latina women; therefore we know this group is already accessing health care.

An area of future research will be to inquire about issues unique to fathers in the Latino culture regarding this decision-making process. In the future, it is possible the HPV vaccine will be licensed in the United States for young men and it will be necessary to explore these issues with Latino males. Nonetheless, there has been limited information available regarding HPV-related issues in the U.S. Latino population and this research highlights the need to continue to conduct studies on specific cultural groups of parents.

Based on the mothers’ responses, health care providers will be among the most important sources of information regarding HPV-related issues. Providers should be aware that the attitudes and cultural beliefs of parents related to health care in general, and vaccination in particular, may influence the acceptability of HPV immunization. In conclusion, our results emphasize the need to provide comprehensive education about HPV and the HPV vaccine to Latina mothers, including ensuring that they understand the rationale for vaccinating at a young age. The findings from this study may help to inform public health programs that seek to develop culturally sensitive HPV awareness and immunization strategies.

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