

POLICY BRIEF

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KNOWLEDGE, BELIEFS, AND PRACTICES REGARDING HUMAN PAPILLOMAVIRUS (HPV) VACCINATION AMONG WOMEN AND HEALTH CARE PROVIDERS IN CUERNAVACA AND OXNARD

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Background.

Cervical cancer is a significant public health problem in both Mexico and the U.S. In 2014, there will be an estimated 12,360 new cases and 4,020 cervical cancer related deaths in the U.S.¹ Latina women in the U.S. have the highest overall cervical cancer rates of any racial or ethnic group.^{2,3} In Mexico, cervical cancer is the second leading cause of cancer death for women, with 4,031 deaths in 2008,⁴ despite the presence of a national cervical cancer screening program in Mexico since 1974.^{5,6} Human Papillomavirus (HPV) is a necessary cause of cervical cancer, and the availability of an HPV vaccine has brought about significant changes to cervical cancer prevention efforts. Therefore, primary prevention of cervical cancer via population-wide adoption of the HPV vaccine among Mexican and Mexican-American adolescent girls is particularly urgent. Vaccination rates in Mexico (67%) and among Latinas in the US (63%) remain sub-optimal.^{7,8} Scant research to date has focused on understanding the factors related to HPV vaccine underutilization in these groups.

Study Objective.

This bi-national study aimed to compare and contrast the knowledge, beliefs, and practices regarding HPV vaccination among mothers of vaccine eligible girls and a sample of health care providers in Cuernavaca, Morelos and Oxnard, California. The specific aims of this research project were:

1. To identify the knowledge, beliefs, and practices regarding HPV vaccination in a sample of 200 women in Cuernavaca, and 200 Mexican women living in Oxnard.
2. To determine the attitudes and practices that clinicians and program administrators have about the HPV vaccine at two clinics in Cuernavaca and two clinics in Oxnard.

We hypothesized that HPV vaccination rates would be higher in Mexico than in the U.S. based on evidence that the three-dose coverage estimate among girls aged 13 to 17 years is lower in the U.S. than in Mexico.^{7,8}

Study sites.

- *Mexican Institute of Social Security (IMSS)* is the main social security institution of Mexico, providing health insurance coverage to current or formally employed workers and their dependents (approximately 40% of the Mexican population).
- *Clinicas del Camino Real Inc.* provides a fully integrated system of healthcare services to members of the community who are underserved (due to limited income, resources, cultural and language barriers) at 13 locations in California.

Methods.

Data were collected via in-person interviews with similar samples of Mexican mothers of girls aged 9-18 years at two IMSS clinics in Cuernavaca, Mexico from July to October 2012 (n=200) and at two clinics in Oxnard, U.S. from August to November 2013 (n=200). Eligibility criteria for both samples included: age 18-65 years, born in Mexico, native Spanish speaker, and the medical decision-maker for at least one vaccine age/eligible girl. Interviews were approximately 20-40 minutes and assessed: demographics, HPV awareness, knowledge, beliefs, and barriers related to HPV vaccine receipt in age-eligible girls.

Convenience sampling techniques were used to recruit a subset of 35 mothers, who were asked if they would like to participate in a longer, more in-depth interview, so they could elaborate on their responses. Interviews addressed women's experiences and beliefs about vaccinating children in general and against HPV specifically, women's own HPV-related disease experiences, and their experiences with local health care systems. Interviewers followed best practices for eliciting reliable, in-depth information, and consent was obtained in person prior to the interviews. Interview transcripts were analyzed using a grounded theory approach.

Data were also collected from a sample of 32 health care providers, and program administrators at the two study sites in Oxnard (n=13) and two clinics in Cuernavaca, (n=19), between November 2013 and January 2014. Providers' attitudes and communication practices regarding the HPV vaccine were assessed during in-person interviews that were conducted in English or Spanish.

Study Findings.

Vaccination rates in the Mexican and U.S. samples were substantially below the national rates reported in both countries, which may be due the lower income and education levels in our samples compared to national norms.^{7,8} Although U.S. mothers were significantly less knowledgeable and had more concerns regarding the vaccine than their Mexican counterparts, vaccine uptake rates were higher among girls in the U.S. sample (49% vs. 40%). Part of the explanation may lie in the fact that a higher proportion of U.S. mothers, compared to Mexican mothers, had discussed the vaccine with a provider and had been offered the vaccine by a provider. In multivariate analyses, having discussed the vaccine with the daughter's provider was the strongest predictor of vaccine receipt in both samples.

We were surprised to find lower HPV vaccination rates in Mexico, especially at two clinics that offer medical services to those who have IMSS health insurance. Only 5.5% of the women interviewed in Mexico did not have health insurance, as compared to 71.5% of those interviewed in the U.S. This finding suggest that although most of the mothers at the Oxnard clinics did not have

health insurance, they were able to vaccinate their daughters against HPV through programs such as the Vaccines for Children Program and Medical, which allow eligible girls who are 18 years or younger to be vaccinated for free. These results indicate that factors other than knowledge and beliefs, (such as system, clinic or provider factors), may be the main drivers of vaccine receipt in our samples. Debriefing interviews with staff at the U.S. clinics revealed that they had specifically instituted policies and procedures to address the HPV vaccine gap among their patients.

The most common reasons for vaccinating in both countries were: (1) prevention of disease, (2) being a good person and parent, and (3) following healthcare provider recommendations, regardless of own HPV vaccine knowledge. The main reasons for not vaccinating their daughters against HPV in both countries were (1) concern about vaccine side-effects, (2) needing more information to make a decision, and (3) vaccine not offered to daughter. The qualitative interview data reveals that identification of these concerns might relate to incomplete communication about vaccine purpose, side effects and eligibility by health providers.

Mothers in both countries found vaccination for daughters desirable. The vast majority of women got their daughters vaccinated against HPV either immediately when their health care provider offered it, or after a brief period of consideration. Women's reasons for wanting to vaccinate daughters were consistent across countries. They saw HPV and other vaccines as important for disease prevention. Further, they saw getting daughters vaccinated as ways to be good parents and citizens. The main factor that precipitated girls' vaccinations was healthcare workers offering the vaccine. Mothers overwhelmingly trusted and followed health professionals' recommendations, even if they did not fully understand HPV or the vaccine. No mothers in Mexico, and only three in the US, feared that HPV vaccination might encourage sexual development or experimentation. The latter group still wanted to vaccinate, but when girls were slightly older.

The enthusiasm expressed by most mothers about the HPV vaccine and their desire to follow healthcare professionals' vaccination recommendations suggests that structural rather than social barriers account for suboptimal vaccination rates for Mexican and Mexican-American girls. Although U.S. acculturation increased some mothers' belief that vaccination might promote promiscuity, all interview participants desired eventual vaccination. Our findings also indicate that U.S. providers were substantially more likely to report discussing the HPV vaccine with their patients compared to Mexican providers. Despite this, patient refusal of the vaccine was higher in the US compared to Mexico. This raises interesting questions regarding the value of provider-patient discussion of the vaccine compared to offering the vaccine as just another routine childhood immunization.

Conclusions.

This bi-national study brought together established investigators with experience conducting Latino health research at IMSS, UCLA, and the University of Iowa. Both Mexican and Mexican-American women bear a high cervical cancer burden. However, research on mothers' decision-making about vaccinating daughters against HPV focuses largely on U.S. Latinas. The goal of this study was to understand the factors that influence the conversation between Mexican and American healthcare providers and their patients about the HPV vaccine. Given the mobility of people and ideas, understanding the factors shaping Mexican-born mothers' experiences regarding daughters' HPV vaccination on both sides of the border is necessary to increase vaccine coverage through socially acceptable programs.

Our findings provide important information about the differences and similarities between HPV vaccination programs and policies in both countries and the structural rather than cultural barriers that may be affecting vaccination rates. These results also help us to better understand the process of clinician offering and patient uptake of the HPV vaccine among Mexican women in the U.S. and Mexico. Information from this study will provide valuable guidance for interventions to increase HPV vaccination uptake among Mexican women in both countries. Our findings may also be useful to healthcare providers who can tailor their promotion activities and hopefully increase the HPV vaccination rates at their clinics.

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