

# Survey: Knowledge about HPV vaccine effectiveness lacking

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Knowledge about the efficacy of the human papillomavirus (HPV) vaccine in preventing cervical cancer was lacking in the majority of survey respondents for whom the information would be relevant, according to results presented here at the Sixth AACR Conference on the Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved, held Dec. 6-9.

"HPV infection can cause [cervical cancer](#) as well as other cancers such as anal and vulvar cancers. Recent data indicate the incidence of HPV-related cancers other than cervical cancer is increasing. This trend, coupled with continually low uptake of HPV vaccination and persistent disparities in cervical cancer, suggests we need to reinvigorate efforts to increase HPV vaccination levels," said Cassandra I. Alcaraz, Ph.D., M.P.H., director of [health disparities research](#) at the American Cancer Society.

"We were surprised to find such a high level of uncertainty about the [vaccine](#)'s effectiveness among individuals for whom the vaccine is relevant. This uncertainty may influence decision-making about getting vaccinated, and it hinders our ability to reduce cervical cancer incidence and mortality and reduce disparities in cervical cancer," she said. "Our findings suggest we should encourage [health care providers](#) to discuss the effectiveness of the HPV vaccine with patients who are age-eligible for vaccination and parents of vaccine-eligible adolescents."

Although the HPV vaccine has been available for seven years, uptake

remains low, Alcaraz said. For example, only 33 percent of adolescent girls have received the recommended three doses of HPV vaccine. In addition, non-Hispanic black women, Hispanic women, and women with low incomes are less likely than other women to have obtained the HPV vaccine despite having disproportionately higher rates of cervical cancer incidence and mortality.

"The HPV vaccine is a long way from reaching its potential," Alcaraz added. "Our research suggests efforts should go beyond merely increasing awareness of the availability of the vaccine and focus on making sure people know it is effective."

Alcaraz and colleagues wanted to examine if people's perceptions about the efficacy of the HPV vaccine were influencing these trends. Using data from the National Cancer Institute's Health Information National Trends Survey from 2012 to 2013, the researchers identified 1,417 people who were considered to be HPV vaccine-relevant: an individual or someone with an individual in their immediate family is 9 to 27 years old.

The researchers found that 70 percent of respondents for whom the vaccine was relevant did not know how successful the HPV vaccine was at preventing cervical cancer, with 78 percent of non-Hispanic blacks reporting uncertainty.

In addition, only 25 percent of respondents reported having talked with a health care provider about the HPV vaccine. Individuals with less than a high school education were even less likely to have talked with a provider about the vaccine. Respondents who had never talked to a [health care](#) provider about the HPV vaccine were nearly four times more likely than others to not know about its effectiveness; those who never sought any cancer information from the internet in the past 12 months were twice more likely than others to not know about the effectiveness

of the HPV vaccine.

**More information:** Abstract Number: PR02

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Title: Examining perceptions about the HPV vaccine by socio-demographic characteristics and factors associated with perceptions: Findings from the 2012 Health Information National Trends Survey (HINTS)

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**Background:** Although human papilloma virus (HPV) vaccination has been available for seven years, uptake remains low, and evidence suggests disparities exist in vaccination completion. Perceptions about the HPV vaccine may be contributing to these trends. The purpose of this study was to examine perceptions about the HPV vaccine by socio-demographic characteristics and the extent to which perceptions are associated with provider communication, health information seeking, and cancer beliefs.

**Methods:** The study used data from the National Cancer Institute's Health Information National Trends Survey (HINTS) that were collected in 2012-2013 (HINTS 4, Cycle 2). The sample was comprised of respondents for whom the HPV vaccine was relevant. Respondents were considered "HPV vaccine-relevant" if they or someone in their immediate family was ages 9-27 years old. Of the 3,551 adults in the HINTS survey population, 1,417 (52%) were HPV vaccine-relevant. Variables of interest were socio-demographic characteristics (age, gender, race/ethnicity, health insurance status, income, education),

perceptions about the HPV vaccine, and variables related to provider communication, health information seeking, and cancer beliefs.

Bivariate analyses were used to examine socio-demographic differences in perceptions about the vaccine. Binomial logistic regression was used to examine the influence of provider communication, health information seeking, and cancer beliefs on perceptions. Jackknife replicate weights were incorporated to assess standard errors and 95% confidence intervals.

Results: Among vaccine-relevant individuals, 25% (n = 348) reported talking with a healthcare provider about the HPV vaccine. Talking with a healthcare provider varied by education level (p=0.03); for example, 34% of college graduates reported talking with a provider compared to only 21% of individuals with less than a high school education. Non-Hispanic Black respondents reported the lowest levels of confidence in the HPV vaccine's effectiveness (18.6%). Overall, 70% (n = 980) of respondents reported not knowing how successful the HPV vaccine is at preventing cervical cancer, with non-Hispanic Black respondents reporting the highest levels of uncertainty (78%). However, the only socio-demographic characteristics statistically significantly associated with uncertainty were education (p=0.002) and gender (p=0.04).

Uncertainty about HPV vaccine effectiveness was significantly higher among individuals who had not talked with a provider about the vaccine, had not sought cancer information from any source, had not sought cancer information on the Internet in the past 12 months, agreed that there's not much one can do lower his/her chances of getting cancer, and agreed that there are so many recommendations about cancer prevention that it's hard to know which to follow. In a logistic regression model adjusting for socio-demographic characteristics, vaccine-relevant respondents who had never talked with a provider about the HPV vaccine were nearly four times more likely to not know about its effectiveness (aOR 3.89; 95% CI 2.31-6.55); those who had not sought cancer information on the Internet in the past 12 months were twice as likely to not know about the HPV vaccine's effectiveness (aOR 2.10;

95% CI 1.21-3.65).

Conclusions: Uncertainty about HPV vaccine effectiveness remains high and may be a factor contributing to low uptake and disparities in vaccination. Findings suggest HPV communication and messages need refinement to clearly highlight vaccine efficacy, and targeted strategies may be needed to reach non-Hispanic Blacks and individuals with lower levels of education.

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