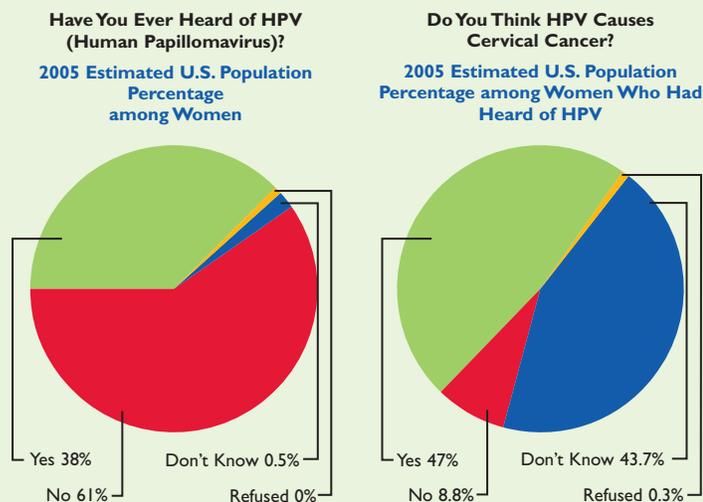


## In 2005, 61 Percent of American Women Had Never Heard of HPV

Since the 2006 FDA approval of Gardasil™, a vaccine to prevent cervical cancer, news stories and advertisements have penetrated print, broadcast, and online communication channels with information about human papillomavirus, more commonly known as HPV. Communication researchers do not yet know how this influx of information has shaped knowledge, attitudes, or opinions about HPV and cervical cancer prevention. However, in 2005, 61 percent of American women aged 18 and older had never heard of HPV, even though it is the leading cause of cervical cancer. Of those who had heard of HPV, 44 percent did not know that it causes cervical cancer. (These percentages are unadjusted for other factors that may predict awareness and knowledge.)

Cervical cancer screening using the Pap test is widely accepted and integrated into the U.S. health care system. Newer HPV-based technologies such as the HPV test and vaccine give women and health care providers options for complementing the Pap test to prevent and control cervical cancer more effectively. Current guidelines recommend using the HPV test in women 30 and older for primary screening, and in women of all ages to follow up an abnormal Pap test. In addition, the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices recently recommended routine HPV vaccination for girls aged 11 and 12. The vaccine protects against two types of HPV that cause 70 percent of all cervical cancers. Not all cervical cancers can be prevented with the vaccine; therefore, it is essential that even vaccinated women continue to receive Pap and HPV tests at the recommended intervals.



### Quick Facts:

- Persistent HPV infection causes most cervical cancers. It also plays a role in cancers of the anus, vulva, vagina, and oropharynx.
- HPV is a very common infection. About 20 million people are currently infected and at least 50 percent of sexually active men and women get an infection at some point in their lives.
- There are 100 types of HPV. Most infections go away on their own; some persistent high-risk infections can lead to cervical cancer.
- The Pap test is used to detect abnormal cells in the cervix. Women should begin having Pap tests within three years of first having sexual intercourse, and no later than age 21. Healthy women should repeat the test at least every three years.
- For women age 30 and older, the HPV test can be used for general screening. For women of all ages, it is approved as a way to follow-up an abnormal Pap test. The HPV test can detect 13 of the high-risk types of HPV associated with cervical cancer, even before there are visible changes to cervical cells.
- In June 2006, the FDA approved Gardasil™, the first vaccine to prevent two types of HPV infection that cause 70% of all cervical cancers. The vaccine is approved for girls and young women aged 9 to 26; routine vaccination is recommended for girls aged 11 and 12.
- Although males can also contract HPV, there is no approved test to detect HPV infection in males, and no approved vaccine to prevent HPV infection in males.

### How Can This Inform Your Work?

HINTS 2005 does not tell us where women get information about HPV and cervical cancer, nor does it capture the likely increase in awareness of HPV since the 2006 introduction of Gardasil™ and its associated campaigns. Nonetheless, HINTS tells us that in 2005, American women were largely unaware of the virus that causes the majority of cervical cancers. There are several tasks that health educators and health communication practitioners can take on to increase the likelihood that women have accurate awareness of HPV and its relationship to cervical cancer.

- Efforts are needed to increase recognition of the name of the virus, human papillomavirus, and its acronym, HPV, especially among older women, less educated women, and those not being screened regularly for cervical cancer.
- Efforts are needed to increase the depth of accurate knowledge about HPV and its link to cervical cancer. This information should be shared with women before they are at risk for contracting and suffering adverse consequences from an HPV infection.
- Women who are vaccinated against HPV must understand that regular Pap or HPV tests are still needed to screen for the types of cervical cancer not covered by the vaccine.

***In this HINTS Brief, we explore women's awareness of HPV and knowledge of the HPV-cervical cancer link in 2005, before the introduction of the HPV vaccine.***

## The HPV-Cervical Cancer Connection: Do Women Understand the Link?

A recently published HINTS study revealed that awareness of HPV among American women in 2005 was low, and that accurate knowledge of the HPV-cervical cancer link is generally limited to women who have tested positive for HPV or who have had an abnormal Pap test. Therefore, educating women about persistent HPV infection and its relationship to cervical cancer is crucial.

The study used 2005 HINTS data to assess awareness and accurate knowledge of HPV and cervical cancer among American women. Researchers also examined whether variables for sociodemographics, access to health care, cervical cancer screening history, cancer history, and health information trust and attention were associated with accurate knowledge. The study found that awareness of HPV was significantly lower among women who are older, less educated, and less

exposed to health information. Factors associated with having heard of HPV were being non-Hispanic White, getting regular Pap tests, and being aware of the change in cervical cancer screening guidelines.

Among those women who had heard of HPV, the multivariate analysis found that the only factors positively associated with knowing that HPV causes cervical cancer were having had an abnormal Pap or a positive HPV test result. It appears that education about the HPV-cervical cancer link is more likely to occur after a woman has experienced an adverse consequence from an HPV infection.

Investigators suggest that if HPV testing and vaccination represent the future of cervical cancer control, population-wide understanding of HPV and its relationship to cervical cancer is imperative.

## HPV Awareness and Knowledge: Differences by Education and Cervical Cancer Screening History

Despite some key differences by level of education and cervical cancer screening history, it is important to remember that the majority (61 percent) of all female respondents to HINTS in 2005 had never heard of HPV, and that among those who had heard of the virus, less than half knew that it causes cervical cancer. Below, we provide associations identified in a recent HINTS 2005 publication by education and screening history, adjusting for other factors that predict HPV awareness and knowledge.

### Education

In 2005, awareness of HPV was greater among respondents with some college (47%) or a college degree (61%) compared with respondents with a high school degree (27%) or less (16%).

Among those who had heard of HPV, accurate knowledge of the HPV-cervical cancer link was highest among college graduates (54%) compared with those with less education.

### Cervical Cancer Screening History

Awareness of HPV was greatest (100%) among women who said they had had a positive HPV test. HPV awareness also was higher among

women who received Pap tests on a regular schedule. Women who reported having regular cervical cancer screening were more likely to say they had heard of HPV (45%) compared with women who only recently had a Pap test (26%) or women who never or had not recently had a Pap test (24%).

Among women who had heard of HPV, the multivariate analysis found only two factors associated with knowing HPV causes cervical cancer: positive HPV test and abnormal Pap test. Among women who reported having had a positive HPV test, 72% were aware that an HPV infection could cause cervical cancer while only 46% of women who had not had a positive HPV test were aware of this connection. Similarly, while 68% of women who had a previous abnormal Pap result knew that an HPV infection could cause cervical cancer, only 47% of women who had not had an abnormal Pap result were aware. Getting regular Pap tests was not associated with knowing about the HPV-cervical cancer connection.

## About HINTS

The National Cancer Institute (NCI) fielded the first Health Information National Trends Survey (HINTS) in 2002 and 2003, surveying 6,369 Americans. The second survey was fielded in 2005, surveying 5,586 Americans. HINTS was created to monitor changes in the rapidly-evolving field of health communication. The survey data can be used to understand how adults 18 years and older use different communication channels to obtain health information for themselves and their loved ones, and to create more effective health communication strategies across populations.

The Briefs are intended to highlight top-level findings and are not meant to be comprehensive reports. Conclusions drawn from the Briefs are limited by their descriptive nature and are not intended to replace HINTS-related scientific publications from which inferences may be more confidently derived.

## For More Information on Cancer

- Call the NCI Cancer Information Service at 1-800-4-CANCER (1-800-422-6237)
- Visit <http://cancer.gov>
- Order NCI publications at <http://www.cancer.gov/publications>

## References Used in This HINTS Brief

- Tiro JA, Meissner HI, Kobrin S, Chollette V. What do women in the U.S. know about human papillomavirus (HPV) and cervical cancer? *Cancer Epidemiology, Biomarkers, and Prevention*, 16(2), 2007.
- Human Papillomaviruses and Cancer: Questions and Answers, NCI Fact Sheet (2006), <http://www.cancer.gov/cancertopics/factsheet/Risk/HPV>
- CDC Advisory Committee on Immunization Practices (2006), <http://www.cdc.gov>
- NCI's Cancer Trends Progress Report—2005 Update, <http://progressreport.cancer.gov>
- American Cancer Society. Cancer Prevention & Early Detection: Facts and Figures 2006, <http://www.cancer.org>

