



Prevention Brief

VA National Center for Health Promotion and Disease Prevention
Office of Patient Care Services, Veterans Health Administration

<http://www.prevention.va.gov>

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Prevention of Human Papillomavirus Infection



Bottom Line

- Counsel patients to reduce risky sexual behaviors.
- Offer HPV vaccination to women ≤ 26 yrs who have not previously received it regardless of current status with respect to HPV infection, cervical dysplasia, or genital warts.
- HPV-vaccinated women should continue to receive periodic cervical cancer screening with the PAP smear test.

Genital human papillomavirus (HPV) infection is the most common sexually transmitted disease, and estimates suggest that 80% of women will become infected with HPV by age 50. Most adults who are infected with HPV do not have any signs or symptoms; thus transmission to sexual partners easily occurs. Because HPV infection is so common, routine HPV surveillance and partner notification are not effective prevention strategies.

Symptomatic HPV infection typically manifests as pink, fleshy warts of the cervix, vagina, vulva, or anus. About 90% of women who are infected with HPV eventually clear the infection on their own; the rest often develop persistent HPV infection which can lead to recurrent warts, genital dysplasia and cancers (most common is cervical). While cancer may be the most life-threatening consequence of HPV infection, genital warts have significant morbidity with a large impact on

quality of life. Genital warts often result in psychological, social, and/or sexual distress or dysfunction, in addition to physical pain, irritation, or interference with bowel and bladder functioning.

In this Prevention Brief, the prevention of HPV infection is discussed including counseling to reduce risky sexual behaviors and the use of the quadrivalent HPV vaccine (Gardasil®).

Factors associated with HPV infection in women

- Age < 25 yrs
- Early age (≤ 16 yrs) at first sexual intercourse
- Sex with a new partner
- Increasing number of sex partners
- Male partner has (or has had) multiple sex partners.

HPV is transmitted via direct mucosal contact most often during vaginal or anal intercourse. Transmission in the absence of penetration is possible but is less common. The sidebar lists the major factors associated with HPV infection in women. While the HPV vaccine is one strategy to prevent infection, it only protects against four of the more than 40 HPV types that infect mucosal surfaces, and its long-term efficacy (> 5 yrs) remains unknown.

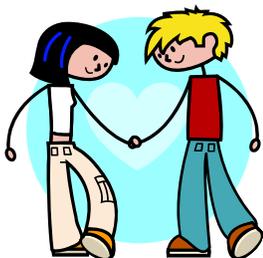
Non-vaccine strategies for preventing HPV transmission include reducing the duration of infectiousness, decreasing the efficiency of transmission, and reducing the number of sexual partners. Very little evidence exists to suggest that treating HPV-associated genital warts, cervical dysplasia, or sub-clinical

HPV infection reduces the duration of infectiousness. Thus, treatment decisions should be made on an individual clinical basis rather than from a public health perspective. Consistent condom use appears to mitigate the consequences of HPV infection (dysplasia, warts), but the evidence is less clear that their use prevents HPV transmission. Condoms may not be as effective for preventing HPV transmission compared to other sexually transmitted infections because condoms do not cover all skin/mucosal surfaces such as the scrotum, vulva, or peri-anal areas.

The surest way to prevent HPV infection is to abstain from any intimate genital contact (penetrating or other). For those who choose to be sexually active, long-term

mutual monogamy with a single, uninfected partner is the next most effective approach. Other approaches include reducing the number of sex partners and choosing partners who are less likely to be HPV-infected (e.g., partners with no or few prior sex partners).

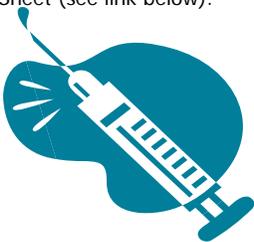
Talking with patients about their sexual behaviors can be difficult. Healthcare providers can assess current sexual behaviors and potential for change. Counseling that includes skill-building centered on refusal, negotiation, and proper condom use appear to be the most effective counseling techniques for reducing risky sexual behaviors. Whatever approach is chosen, ensure that dialog with patients is respectful and culturally appropriate.



HPV Vaccine

HPV Vaccine Fast Facts

- In the VHA, about **32,000** women aged 18-26 would potentially be eligible for HPV vaccination. This number will likely decrease over time as the DOD provides catch-up vaccination to women upon entry to active-duty service.
- HPV Vaccine is on the VHA national formulary (**VA Class IM100**).
- The CPT code for HPV vaccine is **90649**. The ICD-9 code that can be used for patients receiving HPV vaccination is **V04.89** (need for prophylactic vaccination and inoculation against certain viral diseases—other).
- Don't forget to offer patients the HPV Vaccine Information Sheet (see link below).



The only licensed HPV vaccine for use in the US is Gardasil®, a quadrivalent product that protects against HPV types 6, 11, 16, and 18. These four types are responsible for 70% of cervical cancers and 90% of genital warts. The vaccine is administered as a series of three intra-muscular injections (0.5 ml) over the course of six months (0, +2 months, +6 months). The vaccine has almost 100% efficacy in preventing HPV-associated dysplasia and warts among women naïve to the included HPV types and has the most potential to prevent HPV-associated disease when administered to females prior to sexual debut.

The Advisory Committee on Immunization Practices (ACIP) recommends the vaccine for 11-12 year old females. They also recommend catch-up vaccination for females aged 13-26 who have

not received or completed the three dose series. Vaccinated women who are already infected with one or more HPV types will only receive protection against the HPV types that have not yet been acquired. Pre-vaccine testing for HPV types is not recommended and the vaccine is not effective for treating existing infection or symptoms. The HPV vaccine is not licensed or recommended for women aged > 26 or for men based on limited efficacy data at this time.

Current studies indicate that the vaccine is effective for at least 5 years with no evidence of waning immunity during that period. The vaccine has no serious side effects; injection site soreness was the most common side effect reported in pre-licensing trials. Fainting or loss of consciousness has been reported during post-marketing

surveillance, but the numbers of patients experiencing these adverse events have not been unusually high. Nonetheless, CDC recommends patients wait 15 minutes after administration before leaving the clinic. The vaccine should not be given to patients with an immediate hypersensitivity to yeast or other vaccine components. The vaccine is safe for lactating women but is not recommended during pregnancy due to limited safety data. Like most other vaccines, HPV vaccine can be administered to patients with minor acute illnesses.

Lastly, cervical cancer screening recommendations and management of cervical dysplasia does not change for women who are vaccinated. Periodic PAP smear screening and prompt evaluation of abnormal PAP smear results remains the same.

Additional Resources

Reporting Adverse Vaccine Events

- Work with VHA pharmacists to report all clinically significant adverse events, even if causal relationship to the vaccine is not certain.
- Web-based reporting available: <https://secure.vaers.org/VaersDataEntryintro.htm>. Reports can also be made by telephone (800-822-7967).
- Enter allergies/adverse reactions into CPRS. A link to "How to Enter an Allergies and Adverse Reactions for CPRS v.26" is available here: <http://vawww.pbm.va.gov/pbm/vamedsafe.htm>.

Patient Tools

- *Vaccine Information Sheet (VIS)* <http://www.cdc.gov/vaccines/pubs/vis/downloads/vis-hpv.pdf>. This website also has an audio version and versions available in other languages.
- *CDC Genital HPV Fact Sheet* <http://www.cdc.gov/std/HPV/hpv.pdf>
- *CDC Patient HPV Brochure* http://www.cdc.gov/std/hpv/common-infection/CDC_HP_V_Bro_Eng_FINAL_snglpgg.pdf (Also available in Spanish)
- *ASHA HPV Myths & Misconceptions* http://www.ashastd.org/hpv/hpv_learn_myths.cfm

Clinician Tools

- *CDC HPV Info for Clinicians* http://www.cdc.gov/std/HPV/common-infection/CDC_HP_V_ClinicianBro_HR.pdf
- *CDC HPV Posters* <http://www.cdc.gov/std/hpv/common-downloads.htm>
- *CME Opportunities*
ASCCP- Lower Genital Tract Disease Modules (with focus on HPV) <http://cme.asccp.org/cme/CMECourseList.cfm>
- *CDC Self-Study STD Modules* <http://www2a.cdc.gov/stdtraining/self-study/default.asp>
- *ACIP Recommendation CME* <http://www2a.cdc.gov/ce/CourseDetails.asp?ActivityId=56-02&ProgramName=MMWR>
- *IAC Suggested Standing Orders* <http://www.immunize.org/catg.d/p3091.pdf>

Additional Reading

- *CDC Q & A Safety and Efficacy of HPV Vaccine* <http://www.cdc.gov/vaccines/vpd-vac/hpv/downloads/vac-faqs-vacsafe-efficacy.pdf>
- *HPV Vaccine. Recommendations of the Advisory Committee on Immunization Practices* <http://www.cdc.gov/mmwr/PDF/rr/rr5602.pdf>
- *FDA Licensing Information* <http://www.fda.gov/cber/products/hpvmr060806ga.htm>