

HUMAN PAPILLOMAVIRUS; GENITAL

Background

This case definition was developed in 2013 by the Armed Forces Health Surveillance Center (AFHSC) for the purpose of epidemiological surveillance of a sexually transmitted disease important to military associated populations.

Clinical Description

Human papillomavirus (HPV) is one of the most common sexually transmitted viral diseases in the United States.¹ Human papillomaviruses are DNA viruses that infect basal epithelial (skin or mucosal) cells. There are over 200 virus genotypes. The viruses are grouped as “high-risk” genotypes which are the cause of most cervical cancer and “low-risk” genotypes which cause benign or low-grade cervical tissue changes and genital warts (condyloma acuminata). Most HPV infections are asymptomatic and are cleared by the immune system within 2 years. Vaccines are available that provide protection against the HPV genotypes that most commonly cause cervical cancer, genital warts and other HPV associated cancers of the anus, vagina, and vulva. The Centers for Disease Control and Prevention currently recommends vaccination against HPV for girls and boys age 11-12, or older if not previously vaccinated.²

Case Definition and Incidence Rules

For surveillance purposes, a case of HPV infection is defined as:

- *One outpatient medical encounter* with any of the defining diagnoses of HPV infection (see ICD9 and ICD10 code lists below) in the *primary or secondary* diagnostic position.

Incidence rules:

For individuals who meet the case definition:

- The incidence date is considered the date of the first outpatient medical encounter with a defining diagnosis of HPV infection.
- An individual is considered an incident case only *once per lifetime*.

Exclusions:

- Individuals with a diagnosis of HPV infection prior to the surveillance period.

¹ <http://www.cdc.gov/hpv>; accessed June 8, 2015.

² <http://www.who.int/bulletin/volumes/85/9/06-038414>; accessed June 8, 2015



Codes

The following ICD-9 and ICD10 codes are included in the case definition:

Condition	ICD-10-CM Codes	ICD-9-CM Codes
Human papillomavirus	A63.0 (anogenital warts, venereal)	078.11 (condyloma acuminatum) –
	Translated code too broad for inclusion.	796.79 (other abnormal Papanicolaou smear of anus and anal HPV; anal low risk human papillomavirus; DNA test positive)
	R85.81 (anal high risk human papillomavirus DNA test positive)	796.75 (anal high risk human papillomavirus; DNA test positive)
	R85.82 (anal low risk human papillomavirus DNA test positive)	796.79 (above)
	Translated code too broad for inclusion.	795.19 (other abnormal Papanicolaou smear of vagina and vaginal HPV; vaginal low risk human papillomavirus DNA test positive)
	R87.81 (high risk human papillomavirus DNA test positive from female genital organs)	--
	- R87.810 (cervical high risk human papillomavirus DNA test positive)	795.05 (cervical high risk human papillomavirus ; DNA test positive)
	- R87.811 (vaginal high risk human papillomavirus DNA test positive)	795.15 (vaginal high risk human papillomavirus ; DNA test positive)
	R87.82 (low risk human papillomavirus DNA test positive from female genital organs)	--
	- R87.820 (cervical low risk human papillomavirus DNA test positive)	795.09 (other abnormal Papanicolaou smear of cervix and cervical human papillomavirus; cervical low risk human papillomavirus; DNA test positive)
	- R87.821 (vaginal low risk human papillomavirus DNA test positive)	795.19 (above)
	B97.7 (papillomavirus as the cause of diseases classified elsewhere)	079.4 (human papillomavirus in conditions classified elsewhere and of unspecified site)

Development and Revisions

- In June of 2014 the case definition was updated to include ICD10 codes.
- This case definition was developed based on reviews of the ICD9 codes, the scientific literature, and previous AFHSC analyses. The definition was developed by the AFHSC Medical



Surveillance Monthly Report (MSMR) staff for a February 2013 article on sexually transmitted infections.³

Case Definition and Incidence Rule Rationale

- In 2013 the case definitions for sexually transmitted infections (STIs) were updated to be more specific for each of the individual STIs. For HPV infection, the case finding criteria were updated to include outpatient medical encounters only and ICD9 codes in the primary and secondary diagnostic positions only. Reports using this case definition were featured in a March 2013 Webinar on “STDs in Military Populations.”⁴
- In September 2009, a case definition for sexually transmitted infections (STIs) was developed by AFHSC and a Department of Defense (DoD) HIV/STI Prevention working group. The definition was used for a descriptive epidemiology report on the most frequent sexually transmitted infections among active component members of the U.S. Armed Forces.⁵ The case defining criteria in this definition included hospitalizations, used ICD9 codes in *any* diagnostic position, and were the same for all STIs in the report.

Code Set Determination and Rationale

- ICD9 code 079.4 (human papilloma virus) includes common warts as well as genital warts. This code is designed to be used as an additional code to identify the viral agent in diseases classified elsewhere. The code alone, as used in this case definition, may or may not be case defining. A DMED query shows approximately 12,000 encounters coded with this diagnosis over the last 10 years, as such AFHSC has chosen to retain the code in the code set. Investigators may want to consider case finding criteria that require this code be used in combination with one of the other codes on this list.

Reports

None

Review

Jun 2015	Case definition reviewed and updated by the AFHSC Surveillance Methods and Standards (SMS) working group.
Jun 2014	Case definition reviewed and updated by the AFHSC Surveillance Methods and Standards (SMS) working group.
July 2013	Case definition reviewed and adopted by the AFHSC Surveillance Methods and Standards (SMS) working group.
Feb 2013	Case definition reviewed and adopted by the AFHSC MSMR staff.

³ Armed Forces Health Surveillance Center. Sexually Transmitted Infections, Active Component, U.S. Armed Forces, 2000-2012. *Medical Surveillance Monthly Report (MSMR)*. 2013 February; 20(2): 5-11.

⁴ Focus on the Treatment of STDs in Military Populations – 2010 STD Treatment Guidelines Webinar. See <http://www.cdc.gov/std/training/webinars.htm>.

⁵ Armed Forces Health Surveillance Center. Sexually Transmitted Infections, U.S. Armed Forces, 2004-2009. *Medical Surveillance Monthly Report (MSMR)*; 2010 August; Vol 17(8): 2-10.



Comments

Armed Forces Reportable Events: Human papilloma virus (HPV) infection is not a reportable medical event in the Armed Forces Reportable Medical Events System. Available on the AFHSC website at: <http://www.afhsc.mil/reports>.

Vaccine exclusion: Investigators may want to explore the relationship between the use of codes for HPV immunizations and encounters with codes for HPV infection. For consideration, exclusion criteria may read as follows:

- Cases with one medical encounter with evidence of HPV immunization *within 7 days* before or after the case defining encounter; as indicated by the following vaccine administered (CVX) codes: 118 (HPV bivalent), 62 (HPV quadrivalent), 137 (HPV unspecified formulation), 165 (HPV9).
- Cases with one Current Procedure Code (CPT) or one ICD9/ICD10 procedure code indicating HPV vaccination during the same medical encounter; as indicated by the following codes.
 - ICD9 codes: No specific codes: V04.89 (need for prophylactic vaccination and inoculation against other viral diseases) and V05.8 (need for prophylactic vaccination and inoculation against other specified diseases) are used.
 - CPT codes: 90649 (HPV quadrivalent), 90650 (HPV bivalent), 90651 (HPV nonavalent)

