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FEDERAL HEALTH CARE DATA TRENDS 2023



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HPV and Related Cancers

The incidence of certain HPV-related cancers, such as oropharyngeal and anal cancers, has risen dramatically over the past 20 years. Oropharyngeal cancer is now the most common HPV-related cancer in the US.¹

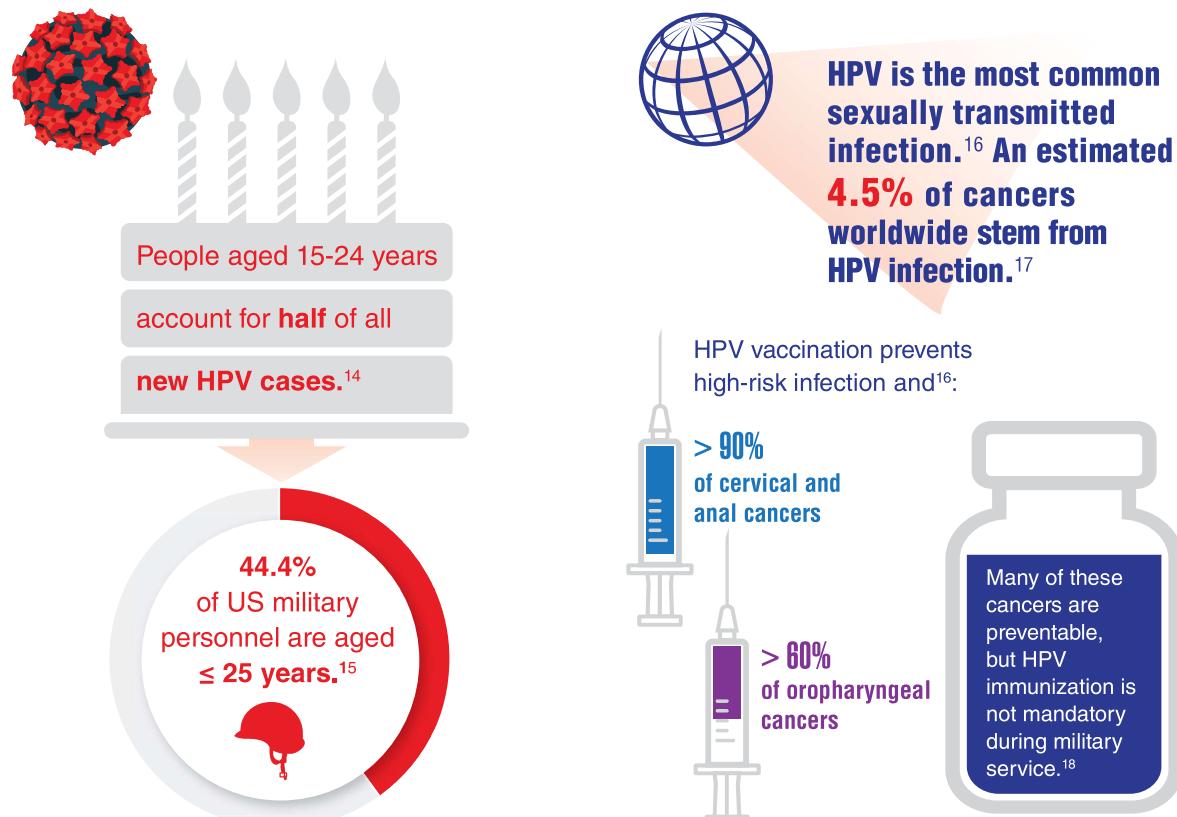
Active-duty military service members and veterans are twice as likely as the general population to develop oncogenic HPV infections, resulting in a higher risk of HPV-associated cancers and cancer-related mortality.²⁻⁴ Yet, HPV vaccination rates among eligible veterans and active-duty military are only half that of their civilian peers.⁵

Unfortunately, no vaccination requirements or campaigns actively target this population.⁵ An updated US military policy could include the most recent Advisory Committee on Immunization Practices guidelines on the HPV vaccine and provide guidance on ways to make vaccines more widely available to service members.⁶

Because of the lack of routine screening procedures and the long latency period between the incident oncogenic HPV infection and the subsequent development of cancer, oropharyngeal cancers are often diagnosed at an advanced stage, which results in increased cancer associated mortality.⁷ HPV-related cancers may also cause significant clinical and economic burdens for the VHA system.⁴ Effective vaccination strategies could save the VHA millions of dollars in costs associated with treating these largely preventable cancers.⁴

The relative risk of cancers is also increased in veterans living HIV.⁸ Veteran women living with HIV in particular have an increased risk of HPV-associated genital tract cancers, in part because poorly controlled HIV is associated with more frequent and persistent HPV infections earlier in life.⁹⁻¹³

Overview



Most Common HPV-Related Cancers in the US

In the US, high-risk HPV causes 3% of all cancers in women and 2% of all cancers in men.¹⁹ These diagnoses present a significant economic burden to veterans and the VHA system.^{4,16,20}

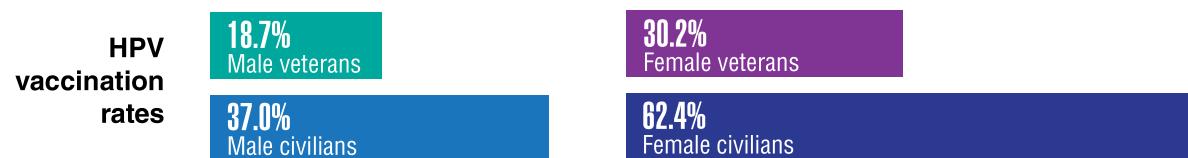
	Oropharyngeal	Penile	Anal	Cervical	Vulvovaginal
Estimated annual prevalence in veterans (per million)	682-779	67-68	52-53	125-426	51-123
Veterans with highest prevalence	Men; any patients aged 55-64 years	Men aged ≥ 65 years	Women; any patients aged 55-64 years	Women aged 55-64 years	Women aged ≥ 65 years
Inpatient hospitalizations	10.2× more	6.6× more	14.9× more	6.7× more	1.7× more
Length of inpatient stays	10.8× longer	6.9× longer	55.1× longer	6.8× longer	3.8× longer
Outpatient hospitalizations	2.7× more	1.8× more	2.5× more	1.4× more	1.9× more
Prescriptions filled	2.2× more	1.6× more	2.4× more	1.4× more	1.8× more
Total health care costs	8.3× higher	4.7× higher	11.8× higher	2.3× higher	3.2× higher
Main cost drivers	Inpatient; \$37,549 45% of total	Inpatient; \$20,386 48% of total	Inpatient; \$53,122	Outpatient; \$13,752 57% of total	Outpatient; \$15,504 45% of total

Compared with healthy controls

HPV Vaccination Disparities

Veterans have higher HPV incidence rates and lower vaccination rates compared with the national average.⁵

One recent study estimated that both male and female veterans aged 18 to 26 years are getting vaccinated for HPV at approximately **half the rate of civilians**.⁵



Active-duty service members aged ≤ 26 years who have initiated treatment²¹⁻²⁴:



Screening for HPV-Related Cancers

Current screening guidelines vary for different HPV-related cancers, and not all are recommended or routinely performed within the DoD and VHA.²⁵⁻²⁷

Cancer Type	Screening Recommendation
Cervical Cancer	Recommended by the USPSTF Required by the DoD for eligible active-duty service members every 3 years for those aged 21 to 29 years; those aged 30 to 65 years every 5 years with either HPV testing alone or with cervical cytology
Oropharyngeal Cancer	Not generally recommended for active-duty service members or routinely performed in the VHA
Anal Cancer	Not generally recommended for active-duty service members or routinely performed in the VHA



A DoD repository study found a higher rate of HPV-related cancers among **veterans** having ≥ 10 years of **military service**.²⁸⁻³⁰

Veterans With HIV Have Increased Risk of Oropharyngeal Cancer

A retrospective cohort study of > 45,000 veterans living with HIV found that...⁸

Compared with their HIV-negative peers, **veterans living with HIV/AIDS have 1.7X the risk of developing oropharyngeal cancer**

2.1X the risk of developing head and neck squamous cell carcinoma



HIV-positive veterans with oropharyngeal cancer were **more likely to also be HPV-positive vs HIV-negative peers**

81.1% vs 67.6%



5-year overall survival was significantly lower in HIV-positive veterans with oropharyngeal cancer vs those with head and neck squamous cell carcinoma

37.0% vs 49.1%



The prevalence of both HIV and HPV is rising. Continued research is required to better characterize the biologic and epidemiological interactions between these 2 conditions, and their shared role in head and neck cancer outcomes.⁸

Veteran women living with HIV are more likely to develop HPV-associated genital tract cancer than their HIV-negative peers, despite equal access to VA health care.⁹



2% of veteran women living with HIV have developed HPV-related cancers vs ≤ 1% of HIV-negative veteran women

241.3

41.7

Incidence per 100,000 person-years

The cervical cancer rate was **more than 6x higher in veteran women with HIV compared with veteran women who were HIV-negative.**

204.2

31.2

Incidence per 100,000 person-years

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