

# 2022 NPCR WASHINGTON SUCCESS STORY

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## HPV-Related Cancer Incidence-Rates and Trends in Washington State

### National Program of Cancer Registries SUCCESS STORY

#### SUMMARY

The Washington State Cancer Registry (WSCR) performed a data analysis using the Human Papillomavirus (HPV)-related cancer sites incidence data, to help support Washington's Comprehensive Cancer Control Program (CCCP) better understand cancer burden and inform interventions to target priority populations. WSCR worked directly with CCCP to integrate this information into program and is currently being utilized among partners in Washington.

#### CHALLENGE

In Washington State, overall HPV vaccination rates remain low. Timely HPV vaccination of preteens can prevent an estimated 90% of HPV cancers. However, despite widespread availability for more than 15 years, rates for HPV vaccination continue to lag compared to other common adolescent vaccines. HPV infection status results are not collected alongside the cancer cases that are collected by the Washington State Cancer Registry. Additionally, the Washington Immunization Information System does not collect the appropriate data for WSCR to successfully perform a linkage. Thus, HPV's general impact on the population is represented by its related cancer cases and their trends within the population. This analysis examined to address impacts of the 6 HPV associated cancer sites as the best way to understand impact of HPV infection.

#### SOLUTION

The Washington State HPV Task Force, co-led by Washington Comprehensive Cancer Control Program (WA CCCP) partnered with WSCR to utilize data to analyze the impacts of HPV related cancers in Washington. WSCR provided necessary incidence data for analysis of HPV related cancers and its analysis helped identify disparities by gender, race and ethnicity and geographic region. Highlighting HPV related cancers data using WSCR incidence data can reinforce the importance of the Cancer Registry system and its practical application among community organizations and partnerships like the WA HPV Task Force. This incidence data is also key to decision making within the HPV Task Force to highlight priority areas and provide support to partners working to increase vaccine rates across the state. This analysis was used to develop a presentation that can be used for several collaborative group settings including at the HPV Task Force quarterly meetings, Washington State Cancer Registry advisory meetings, and Centers for Disease Control and Prevention (CDC) partnership calls or trainings.

#### RESULTS

Washington State Cancer Registry (WSCR) incidence data identified 6 primary HPV related cancers (Squamous cell carcinoma of the oropharynx, Squamous cell carcinoma of the anus, Squamous cell carcinoma of the vulva, Squamous cell carcinoma of the vagina, Carcinoma of the cervix, and Squamous cell carcinoma of the penis) and calculated age adjusted incidence rates (per 100,000 population, age adjusted to the U.S. 2000 standard population) to examine disparities on Washington residents by gender, race and ethnicity and geographic region. In addition, the Joinpoint software was used to test for changes over time from diagnosis year 1992 to 2019. This software calculated the annual percent change (APC). This trend analysis was then drafted into a presentation to inform Washington clinics and providers helping future generations prevent cancer causing HPV. WSCR data analysis produced a variety of HPV related cancer trends and disparities by gender, race and ethnicity and county of residence at the time of diagnosis which was worthy of highlighting.

In general, there was a significant increase in all HPV-related cancers from 2001 to 2014 (APC: 1.5). There were also significant increases in male oropharyngeal cancer (APC: 2.7) from 1992 to 2019 and Female and Male combined Anal/Rectal Cancer (APC: 3.2) from 1992 to 2012. In line with trends seen around the United States, Washington saw a significant decrease in cervical cancer (APC: -2.9) from 1992 to 2002. During 2015-2019 combined, Hispanic men in Washington had a significantly higher incidence rate of Penile cancer (age adjusted incidence rate: 1.5 per 100,000) compared to white non-Hispanic men (age adjusted incidence rate: 0.6 per 100,000). In 2015-2019 combined, Clallam (age adjusted incidence rate: 16.4 per 100,000), Jefferson (age adjusted incidence rate: 19.8 per 100,000), Kitsap (age adjusted incidence rate: 14.3 per 100,000), Pacific (age adjusted incidence rate: 20.3), Pierce (age adjusted incidence rate: 13.7 per 100,000), and Snohomish (age adjusted incidence rate: 13.2 per 100,000) counties had significantly higher incidence rates of all HPV related cancers combined than the state as a whole (age adjusted incidence rate: 11.8 per 100,000).

During the same period only four counties had significantly higher incidence rates of male and female combined oropharynx cancer compared to the state as a whole (age adjusted incidence rate: 4.9 per 100,000) including Clallam County (age adjusted incidence rate: 7.3 per 100,000), Jefferson County (age adjusted incidence rate: 8.7 per 100,000), Kitsap County (age adjusted incidence rate: 6.8 per 100,000), and Snohomish County (age adjusted incidence rate: 6.3 per 100,000). There were also three counties that had significantly higher incidence rates of male and female combined anal/rectal cancer than the state (age adjusted incidence rate: 1.9 per 100,000) including Grays Harbor County (age adjusted incidence rate: 3.5 per 100,000), Jefferson County (age adjusted incidence rate: 5.2 per 100,000), and Mason County (age adjusted incidence rate: 3.5 per 100,000). For cervical cancer only Pacific County (age adjusted incidence rate: 17.3 per 100,000) had significantly higher incidence rate compared to the state (age adjusted incidence rate: 6.5 per 100,000). The Pierce County (age adjusted incidence rate: 2.9 per 100,000) had significantly higher incidence rate of vulvar cancer compared to the state (age adjusted incidence rate: 2.0 per 100,000).

#### SUSTAINING SUCCESS

The Washington State HPV Task Force has been a critical partner in utilizing the HPV-related cancers data provided by WSCR. The Task Force has more than 250 individuals from across the state that include health care facilities and cancer centers, non-profits, universities, tribal organizations, and local health jurisdictions. The Task Force was able to use this data to better understand disparities in cancer burden and prioritize work in these counties facing disparities. The Task Force WSCR will continue to closely collaborate with WA CCCP to provide analysis and better understanding of how HPV is impacting residents in WA state.

WSCR will continue to share data presentations on HPV associated cancers at future HPV Task Force meetings and HPV Task Force events. WSCR will also monitor trends of HPV associated cancers to see how HPV vaccination has made impact over time. WSCR will collaborate closely with WA CCCP and provide incidence data to WA CCCP for the progress report. The HPV Task Force will continue to collaborate closely with WA CCCP and the HPV Task Force to further promote resources and materials to increase the awareness of HPV associated cancers. WSCR will also work to find ways to link with WA State immunization data to see whether the cancer patients have been vaccinated.

#### STORY QUOTE

"Cervical Cancer Rates in Washington have significantly decreased over time. However other HPV related cancers are on the rise. Increasing HPV vaccine rates state-wide is necessary in preventing these cancers and protecting Washington Residents." – Patti Migliore Santiago

#### REGISTRY CONTACT INFORMATION

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[Washington State Cancer Registry Website](#)



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