Forum on Rural Population Health

May 19-21, 2025
Seaside, Oregon
ohsu.edu/orhforum

OREGON OFFICE of RURAL HEALTH

Rural Clinician Perspectives on Barriers to the Human Papilloma Virus (HPV) Vaccine in Oregon: A Survey Study

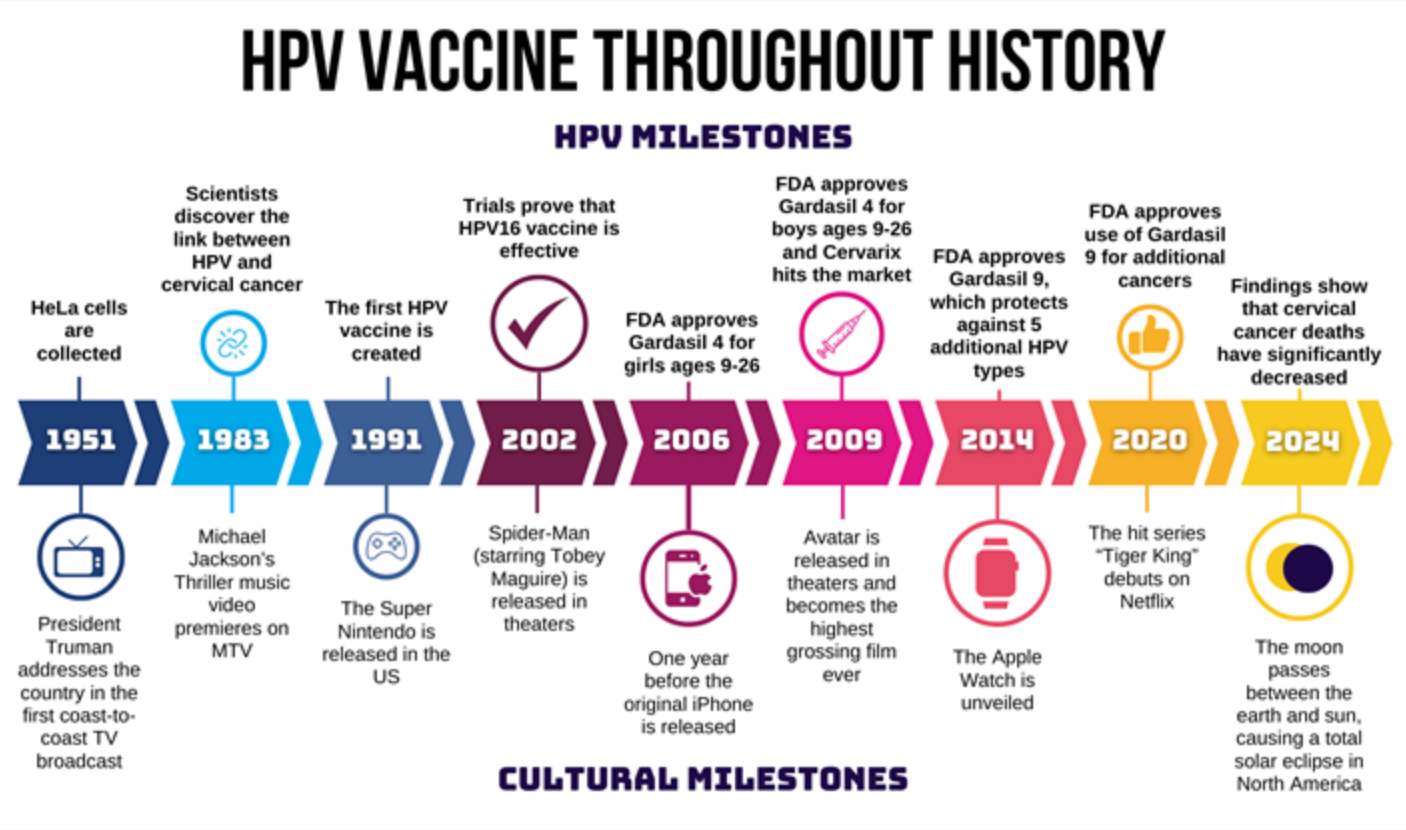
McGwire Smith, OMSII
Daisy Ward, OMSII
Western University of Health Sciences College of Osteopathic Medicine of the Pacific Northwest

Learning Objectives

By the end of this presentation, participants will be able to:

- **Describe** the current trends and disparities in HPV vaccination rates nationally and in rural Oregon communities.
- **Identify** both social and structural barriers to HPV vaccine uptake as perceived by rural clinicians.
- **Evaluate** communication strategies and clinical approaches that may influence HPV vaccine acceptance and completion.
- **Participate** in a survey study which will provide insight into barriers and successful strategies to encouraging HPV vaccination completion in rural Oregon

Background of HPV Vaccine

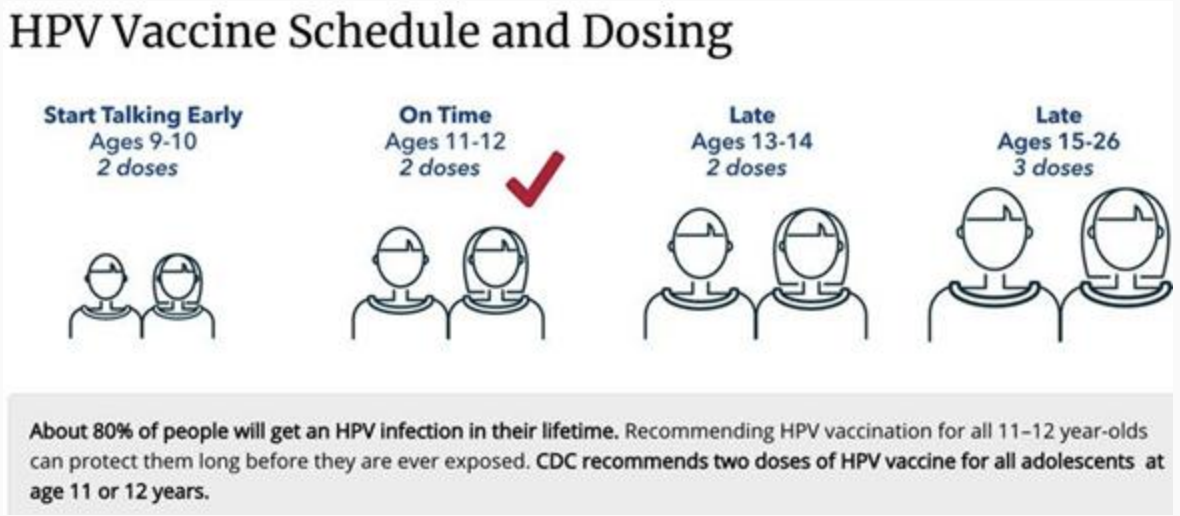


Background of HPV Vaccine

- First approved for clinical use in 2006
- Recommended in the U.S. at age 11-12 years since 2006 for females and since 2011 for males
- 18 months after licensure (2006-2008), 98% of pediatricians and 88% of family physicians surveyed, reported administering HPV vaccines.
- In 2018, 99% of pediatricians and 90% of family physicians surveyed, reported strongly recommending HPV vaccination for female patients over 15 years old

Vaccine Schedule Basics

- First dose recommended at 11-12 years old with a second dose 6-12 months later
- Series can be completed with two doses if started before age 15 but requires three doses if started after age 15.
- HPV vaccination can be started at age 9 and is recommended through age 26 for those who weren't vaccinated earlier



Infection trends since vaccine introduction

- 2006-2010: 56% decrease in HPV vaccine-type genital infection in female patients 14-19 years old
- 2006-2012: vaccine-type HPV decreased by 31% among all men and by 36% among unvaccinated men, indicating herd protection effects
- 2003-2018: 88% decrease in HPV infection in patients aged 14-19
- 2003-2018: 81% decrease in HPV infection in

HPV Cancer Associations

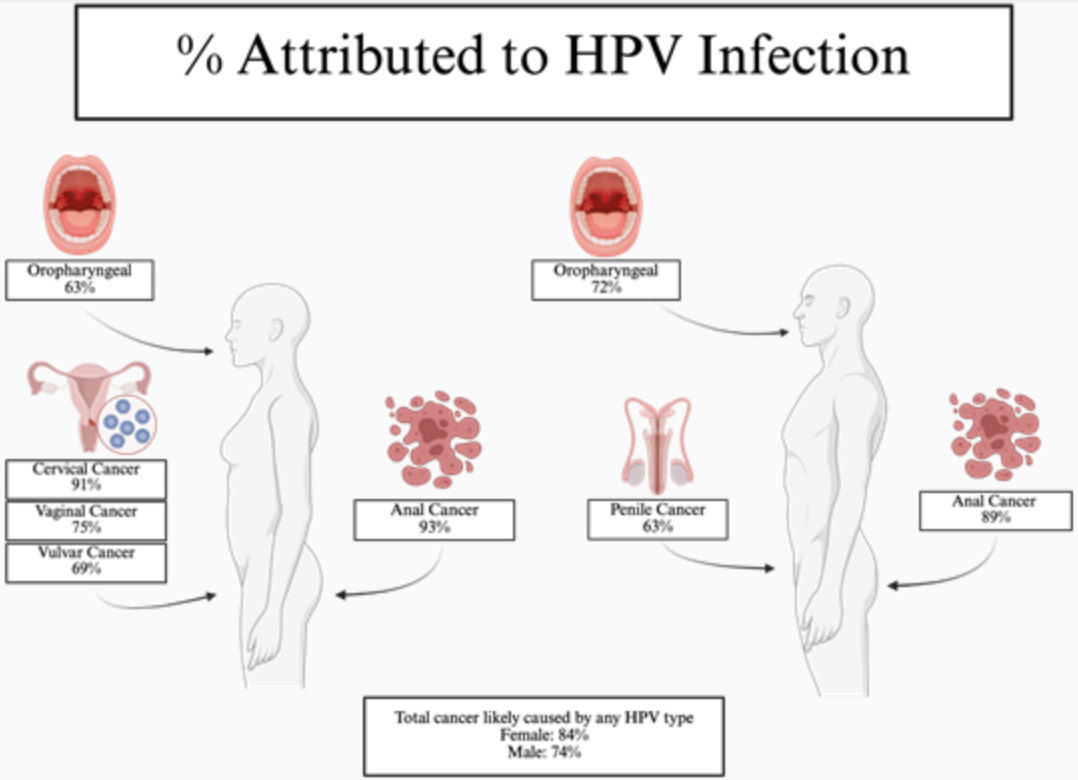
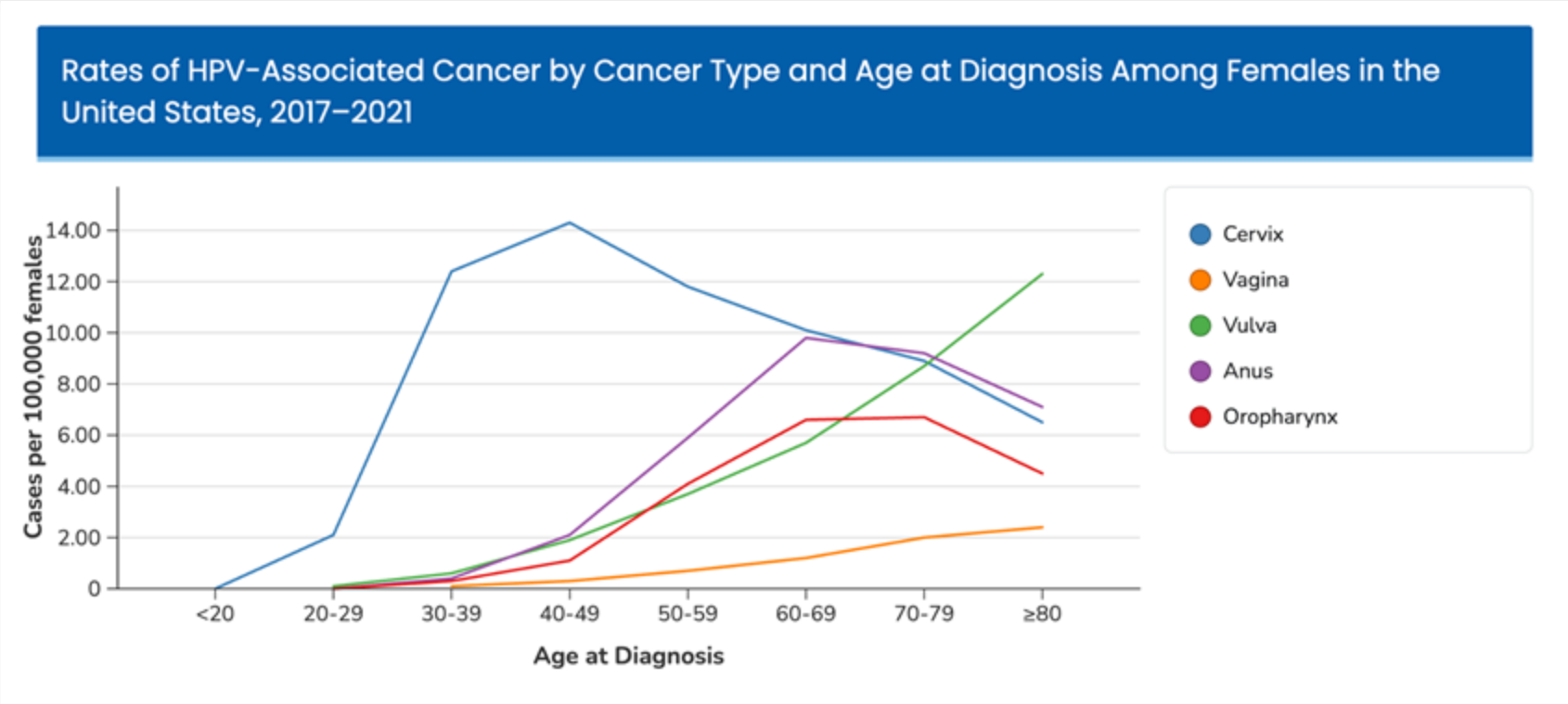


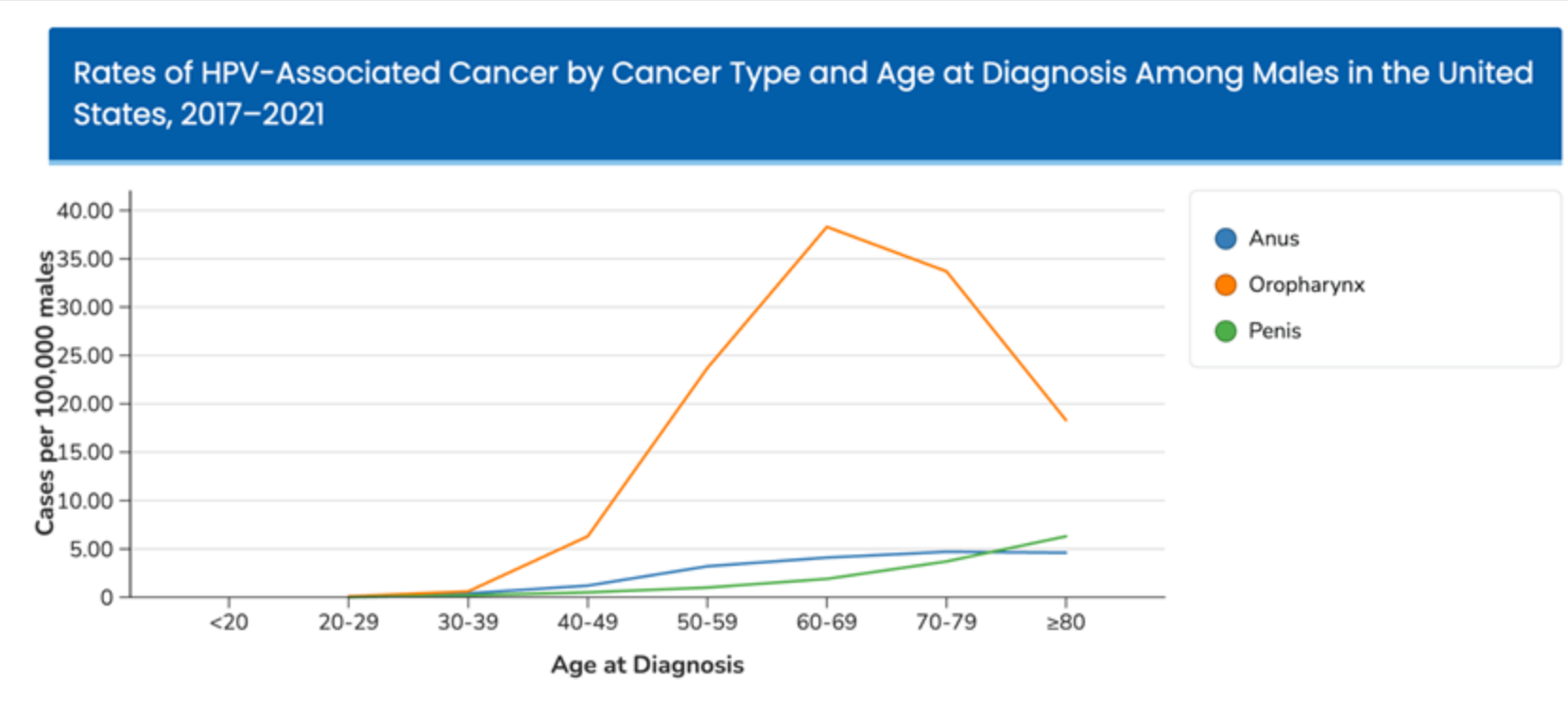
Figure 1 depicts HPV related cancers and their percentages based on CDC data (created with BioRender.com)

HPV Cancer Associations Female



CDC, 2024

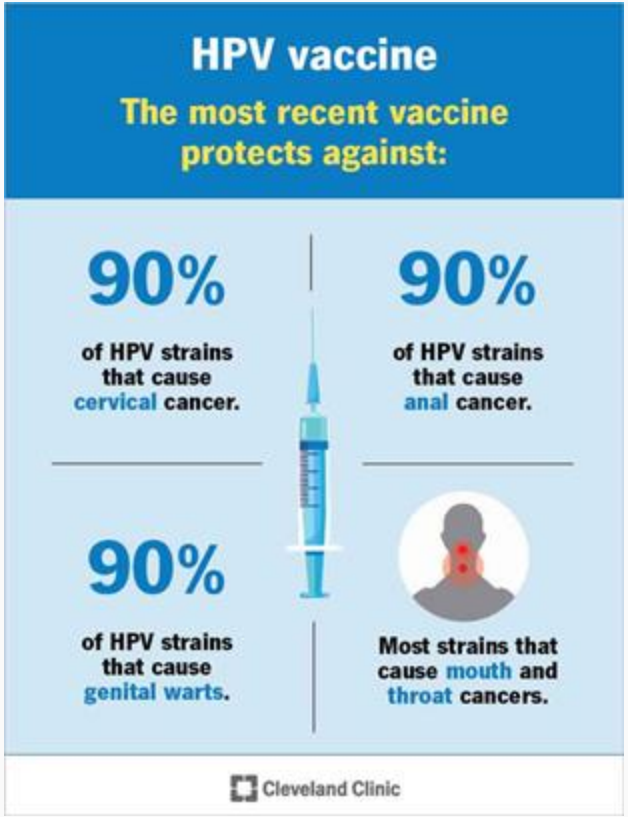
HPV Cancer Associations - Male



CDC, 2024

Cancer Associations

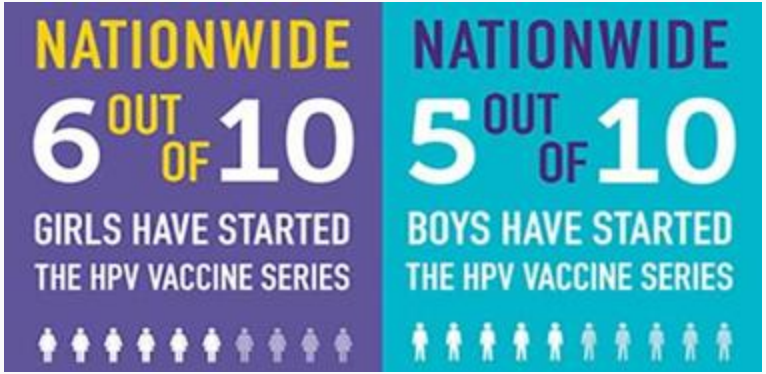
- Gardasil 9 vaccine - Protects against HPV types 6, 11, 16, 18, 31, 33, 45, 52, and 58.
  - This covers the most common cervical, vaginal, vulvar, anal, oropharyngeal, and penile cancer causing strains
- Each year in the United States, about 47,984 new cases of cancer are found in parts of the body where HPV is often found
- HPV causes about 37,800 of these cancers



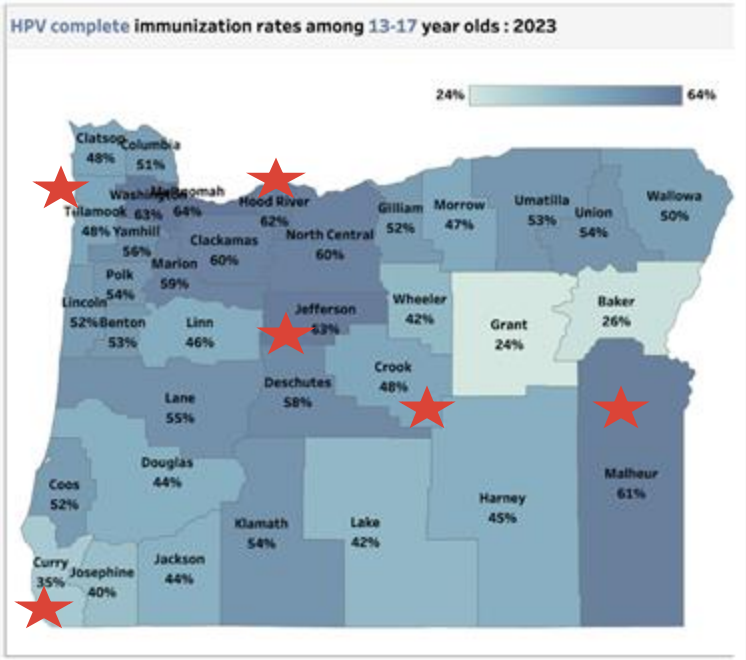
CDC, 2024

National Goals / Trends

- The Healthy People 2030 project is a list of objectives set by the U.S. Dept of Health and Human Services
- One objective is to achieve an HPV vaccination rate of 80% by 2030
- Most recent data shows an HPV vaccination rate of 57.3%



Oregon Trends



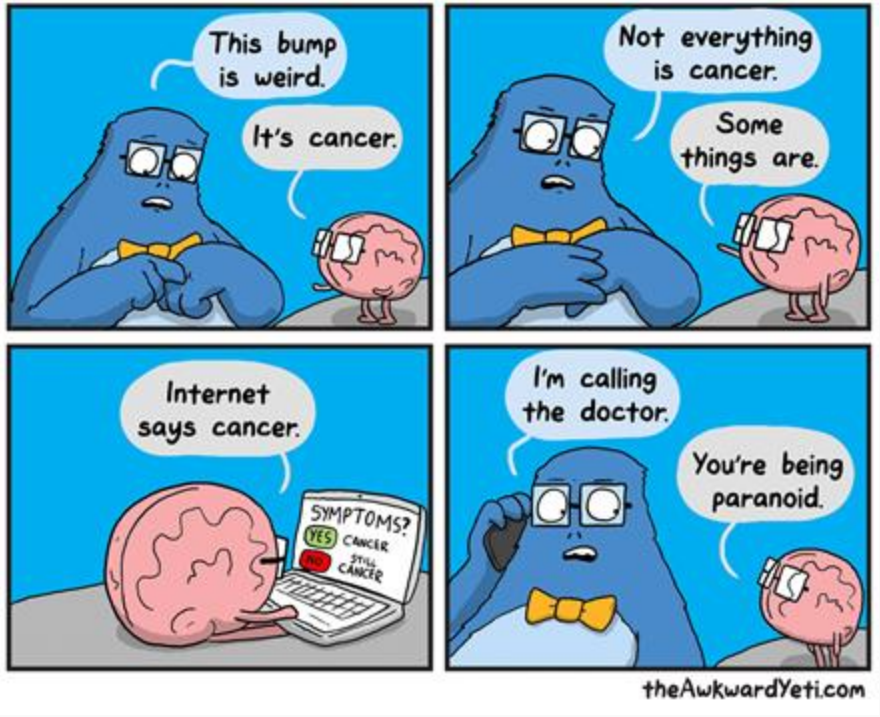
- Rural communities tend to have lower vaccination rates compared to urban communities
- In Oregon there is a wide variation in vaccination rates between certain rural counties
- Why?

County	Population	Rate of vaccine series completion for 13-17 year olds
Malheur	32,044	61%
Jefferson	25,454	63%
Hood River	23,745	62%
Tillamook	27,417	48%
Crook County	26,952	48%
Curry	23,296	35%

Table 1 includes population and vaccination rates for the counties to be surveyed

Social Barriers to HPV Vaccination

- Sexual stigma and fear of promiscuity
- Missed opportunities for vaccination since the COVID pandemic
- Variation in language and demographics
- Parental concerns about vaccine safety as a result of online misinformation
- Parents unaware the HPV vaccine is recommended for their children



Structural Barriers to HPV Vaccination

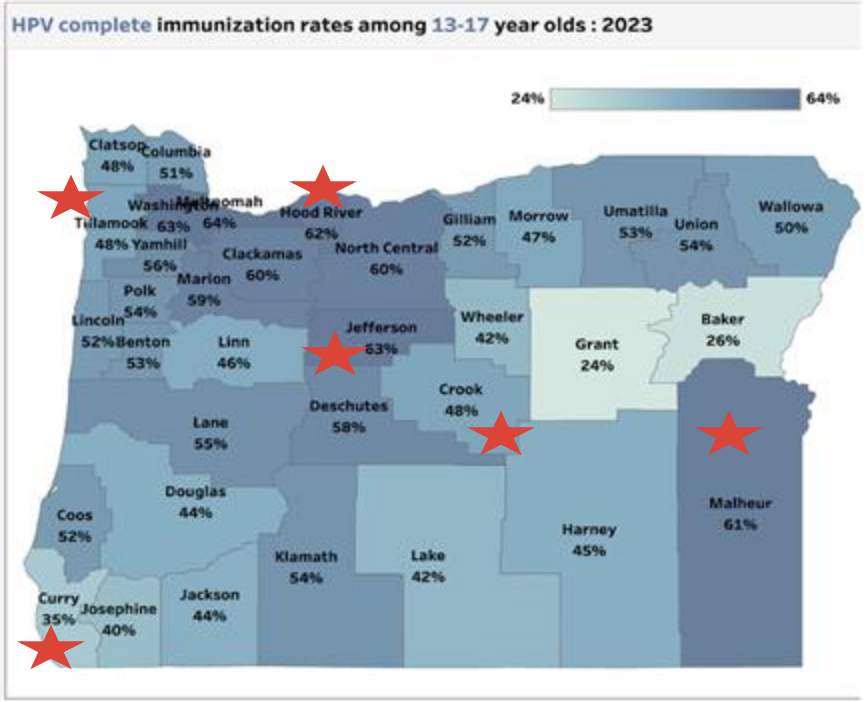
- Lost to follow up
- Staff shortages
- Staff not fully educated/utilized
- Not required for school
- Ineffective centralized immunization record systems
- Concern about starting the conversation too soon

Strategies to Increase HPV Vaccination

- Increase parental awareness of HPV vaccine recommendations
- Starting series at younger age is associated with higher rates of on time completion
- Reminders for scheduling vaccine appointments and scheduling during the visit and education
- Utilizing staff i.e. MAs, RNs, Care Coordinators, Community Health Workers
- Provide RN/MAs with training on how to approach the conversation
- “Presumptive approach”
- Bundling vaccines
- A provider’s strong recommendation is one of the most influential factors in parental decisions to get their children vaccinated against HPV

Survey Design

- An online, 11 question survey study was designed using Qualtrics
- Clinicians from six rural counties in Oregon will be surveyed:
  - Three counties with higher vaccination rates (>60% for 13-17 year olds)
  - Three with lower vaccination rates (<50% for 13-17 year olds).
- The survey will assess clinician perspectives on HPV vaccination, effective communication strategies, and common barriers encountered during patient discussions



Survey Questions

- Ideally, when do you first talk to your patients and/or their family members about the HPV vaccine?
  - Before age 9
  - Ages 9-14
  - Ages 15+
  - I normally do not bring up the topic of the HPV vaccine
- How often do you encounter HPV vaccine hesitancy in your practice?
  - Never
  - Rarely
  - Often
  - Always or almost always
- Once they start the HPV vaccination series, do your patients usually complete the entire series?
  - Yes
  - No

Survey Questions (continued)

➢ Which of these barriers do you face when talking to your patients and/or their family members about the HPV vaccine?

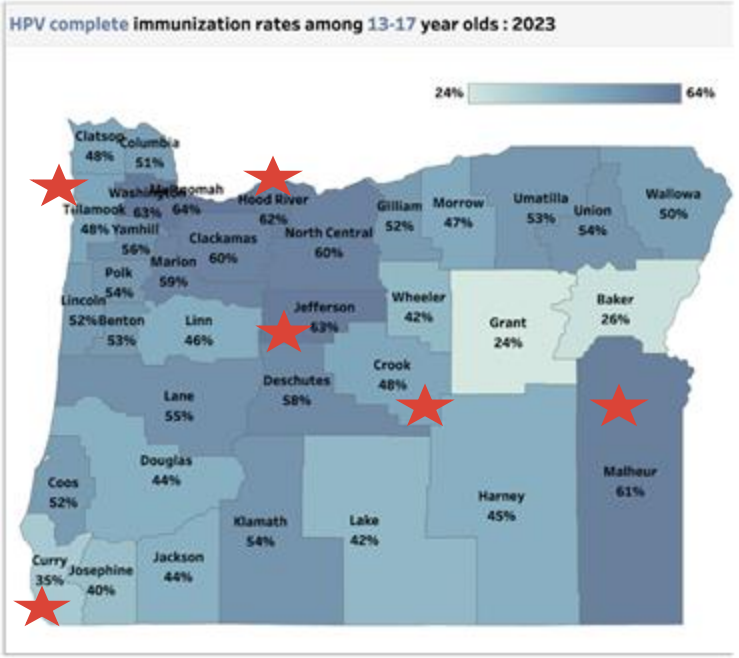
- Concerns about the safety of the HPV vaccination
  - Yes/No
- Concerns about the efficacy of the HPV vaccination
  - Yes/No
- Not enough time in the visit to talk about the HPV vaccine
  - Yes/No
- Vaccine not available in clinic
  - Yes/No
- Religious reasons
  - Yes/No
- Stigma around sex
  - Yes/No
- Misinformation about necessity of HPV vaccine
  - Yes/No
- General mistrust in vaccines
  - Yes/No
- Other: _____

Survey Questions (continued)

- How important is it to you that eligible patients complete the HPV vaccine series?
  - Not at all important
  - Slightly important
  - Very important
  - Extremely important
- What strategies do you employ while approaching the subject of HPV vaccination for the first time with patients and/or their family members?
- What are some reasons patients and/or their family members are motivated to get the HPV vaccine?

Goals and Timeline of study

- Compare successful strategies across rural counties with high versus low vaccination rates
- **Identify what rural clinicians see as the most common barriers for patients to receive the HPV vaccine and how that differs between high versus low vaccination rate counties.**
- Determine average age of patient during first conversation about HPV prevention and identify significant variation in age between higher vaccination rate and lower vaccination rate counties.
- Share findings with rural clinicians throughout the state to enhance their patient engagement practices.



Link for providers at conference to participate?

https://docs.google.com/forms/d/e/1FAIpQLSdoJb1Ev1jb8oVUuS6DAc_PQyMe2glmbBgddEkfTNNt6eqrTQ/viewform?usp=header

https://tinyurl.com/WUHPV

Summary

- The HPV vaccine was introduced in 2006; allowed significant reduction in HPV infections and related cancers.
- National HPV vaccine completion: 57.3%
- Rural Oregon counties vaccination disparity: some as low as 24% completion.
- Social Barriers: stigma, misinformation, safety concerns.
- Structural Barriers: staffing shortages, lack of follow-up, not required for school
- Successful strategies include early conversations (~age 9), vaccine bundling, staff involvement, strong provider recommendations.
- Study goal is to survey rural clinicians to compare barriers and strategies across counties with high vs. low vaccination rates.
- Share insights to improve vaccination practices statewide.

References

1. Eisenhauer, L., Hansen, B. R., & Pandian, V. (2020). Strategies to improve human papillomavirus vaccination rates among adolescents in family practice settings in the United States: A systematic review. *Journal of Clinical Nursing*, *30*(3-4), 341–356. https://doi.org/10.1111/jocn.15579
2. *Child Immunization Schedule Notes | CDC*. (2024, January 29). https://www.cdc.gov/vaccines/schedules/hcp/imz/child-schedule-notes.html
3. *Oregon Adolescent Immunizations | Tableau Public*. Retrieved November 12, 2024, from https://public.tableau.com/app/profile/oregon.immunization.program/viz/OregonAdolescentImmunizations/D-Landing
4. Vax 2 Stop Cancer. *HPV Vaccine Schedule and Dosing* (2024). *HPV Resources for Clinicians.*
5. *STD Facts—Human papillomavirus (HPV)*. (2022, December 20). https://www.cdc.gov/std/hpv/stdfact-hpv.htm
6. Centers for Disease Control and Prevention. *Cancers Associated with Human Papillomavirus*. Centers for Disease Control and Prevention, U.S. Department of Health and Human Services; 2024.https://www.cdc.gov/united-states-cancer-statistics/publications/hpv-associated-cancers.html

Questions?

Thank you to the 2025 Forum partners!

Oregon Office of Rural Health

Forum on Rural Population Health