

Why Kids Need the HPV Vaccine

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Disclosure:

No speaker, planner nor independent reviewer has any relevant financial relationships to disclose.

Objectives:

- Better understanding of the following:
 - Human papilloma virus (HPV)
 - History
 - Prevalence
 - Transmission
 - Prevention
 - Treatment

HPV vaccine

- Who
- Where
- When
- Why
- Efficacy

What is Human Papilloma Virus?

- Commonly referred to as HPV
- Group of extremely common viruses
- Exist world wide
- Most common sexually transmitted infection

Human Papilloma Virus (HPV)

- > 200 known types of HPV
 - Approximately 30 can affect the genitals
 - Some cause warts
 - At least 14 are cancer-causing (known as high risk)
 - Can lead to the following cancers:
 - cervical
 - penile
 - anal
 - vulvar
 - oropharyngeal



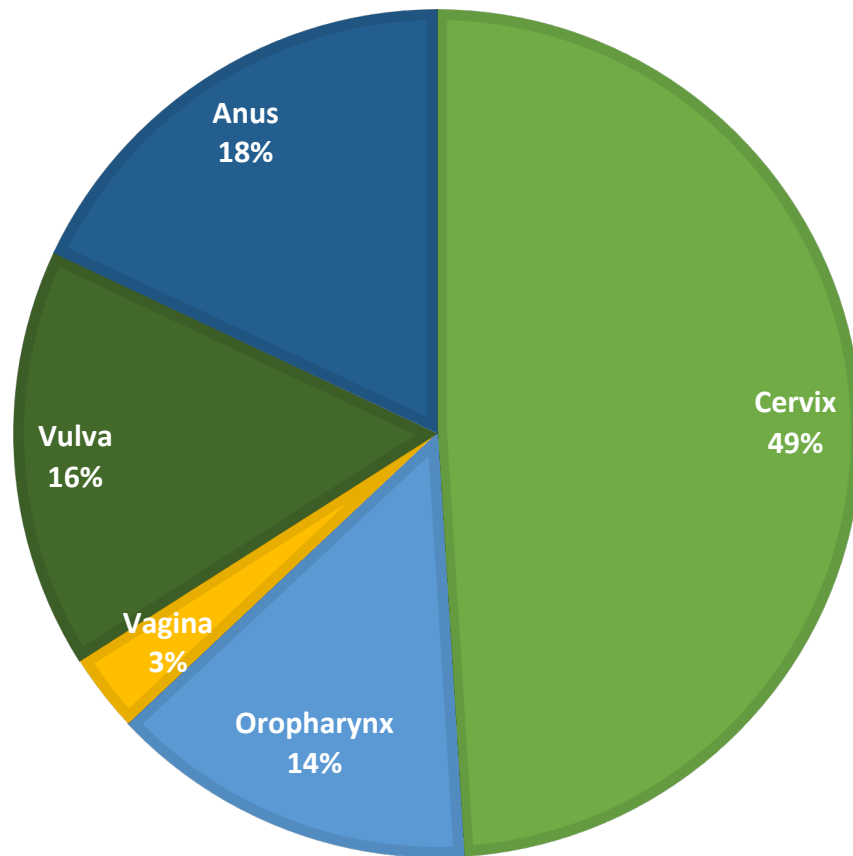
Number of new cancer cases each year

42,700 new cases of HPV-associated cancers occurred in the United States each year.

New Cancer Cases

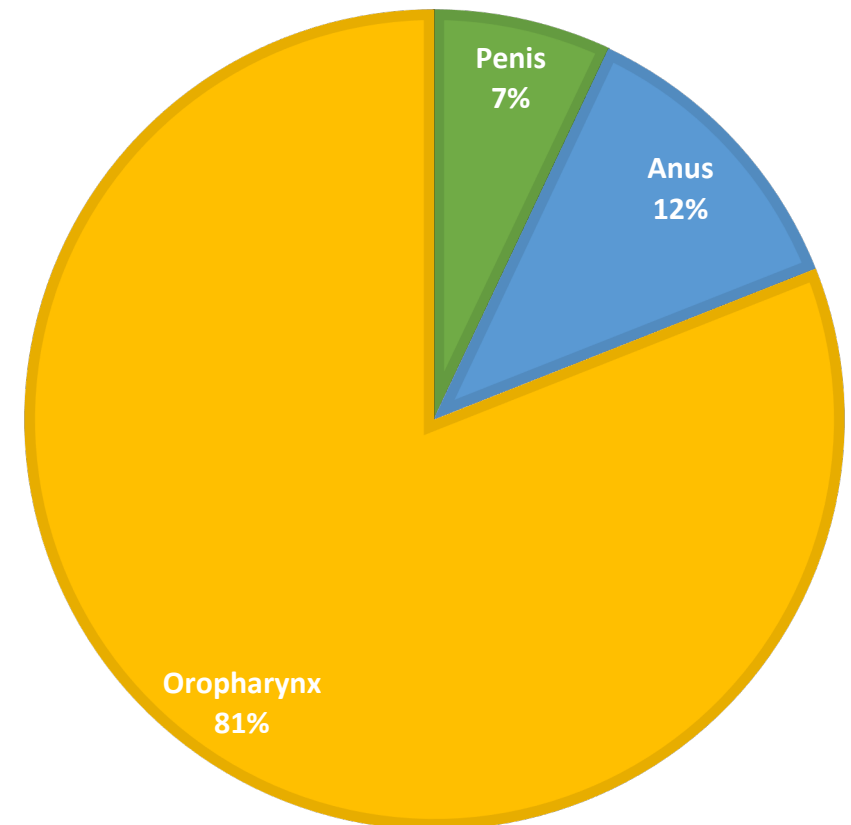
FEMALES (25,400)

■ Cervix ■ Oropharynx ■ Vagina ■ Vulva ■ Anus



MALES (19,900)

■ Penis ■ Anus ■ Oropharynx



- Most HPV infections will resolve spontaneously
 - Usually within 12 months
 - Latency?
- Some may progress and may lead to cancer

- Peak prevalence is age 15-25 years old
- Usually within 10 years of sexual debut
- 80 % of people will have HPV by age 50

- Skin to skin contact

VACCINE:

- Who gets it?
- When do they get it?
- Where do they get it?

- Routine screenings
 - Pap/HPV screening
- Appropriate follow ups for abnormal findings
 - Repeat pap/HPV
 - Colposcopy
 - Cryotherapy
 - LEEP
 - More extensive excisional surgery
- Treatment of warts
 - Freezing
 - Acid application
 - Laser
 - Topical medications

Penile warts



Vulvar warts

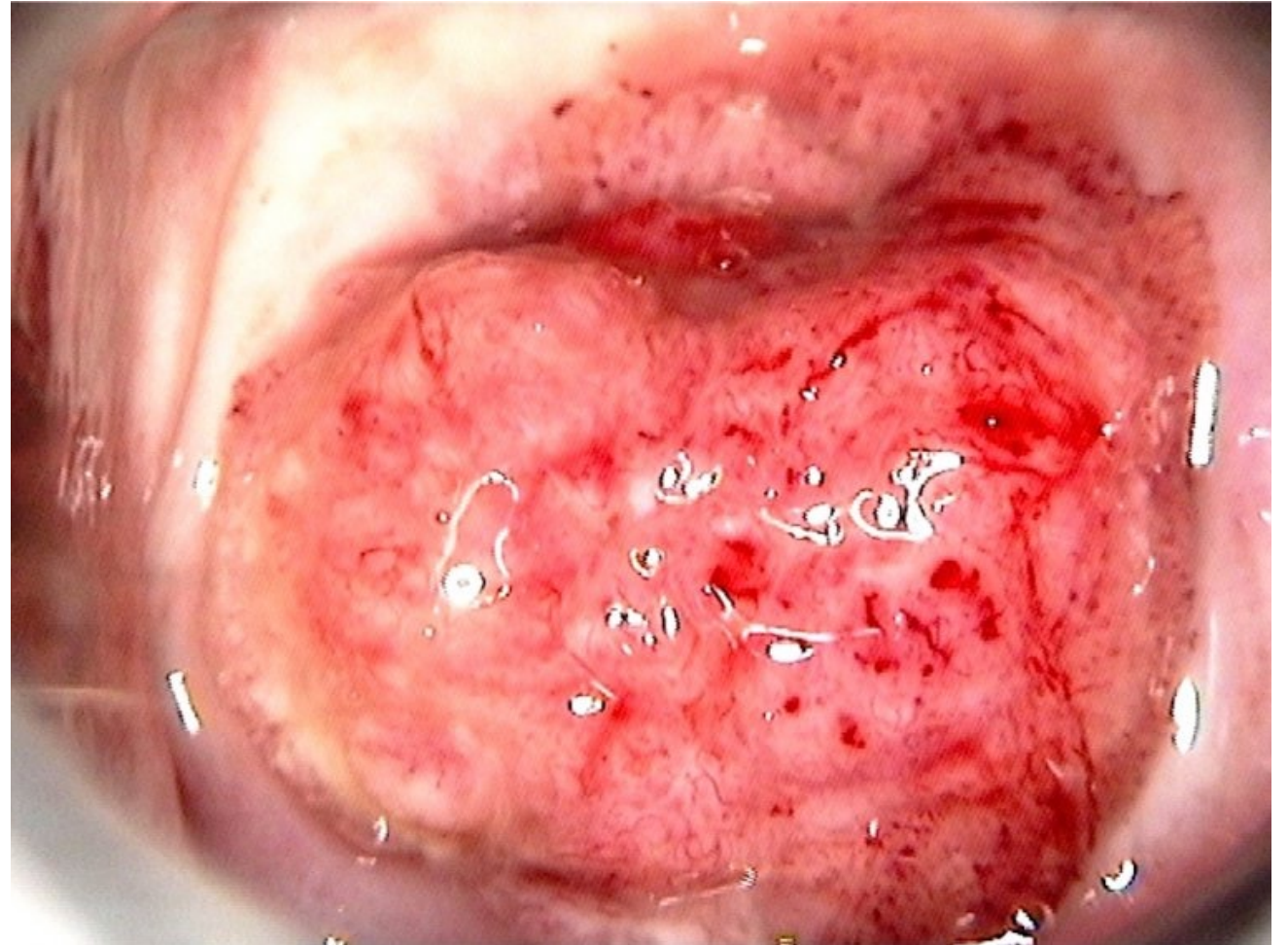


Perianal warts



- 4th most common cancer in females
- Breast, lung, and colorectal are more common
- The virtually all cases of cervical cancer are from HPV
 - 50% are from type 16
 - 20% are from type 18

Cervical cancer



- 90% are caused by HPV type 16 and 18.
- Females have higher incidence than males.

Oropharyngeal cancer

- Non HPV causes
 - Tobacco and alcohol
- Majority of these cancers are now HPV related

Oropharyngeal cancer



- 2006 Gardasil 4
 - 6,11,16, and 18
- 2009 Cervarix
 - 16 and 18
- 2014 Gardasil 9
 - 6, 11 16, 18, 31, 33, 45, 52 and 58

- Gardasil 9
 - 6, 11 16, 18, 31, 33, 45, 52 and 58
- Available in US
- Is it safe?
 - US vaccine Safety System
- Males and Females 9-45 years old

Who?

- Available to males and females ages 9-45
- Ideal age: male and female at ages 11-12
- Off label use

Where?

- Pediatric offices
- Public health office/county health department
- Family medicine office/primary care office
- Women's health providers
- BCH of course

When to get it?

- Ideal to administer vaccine before onset of sexual activity
- Usually given between 11-13 years old
- <15yo needs 2 doses
 - initial dose
 - 2nd dose: between 6-12 months
- >15yo needs 3 doses
 - initial
 - 2nd dose: 2 months
 - 3rd dose: 6 months

Why?

- Protection against virus
 - How? Antibody response to HPV types 1 month after series completed in 98% of people vaccinated
 - HPV vaccines are highly immunogenic.
- Effective
 - Almost 100% effective in reducing HPV strands in vaccine
 - 86% effective to reduce cancer
 - 71% effective to reduce incidence of genital warts

References:

- The World Health Organization
[https://www.who.int/news-room/fact-sheets/detail/human-papillomavirus-\(hpv\)-and-cervical-cancer](https://www.who.int/news-room/fact-sheets/detail/human-papillomavirus-(hpv)-and-cervical-cancer)
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