

# HUMAN PAPILLOMA VIRUS VACCINE IS CANCER PREVENTION

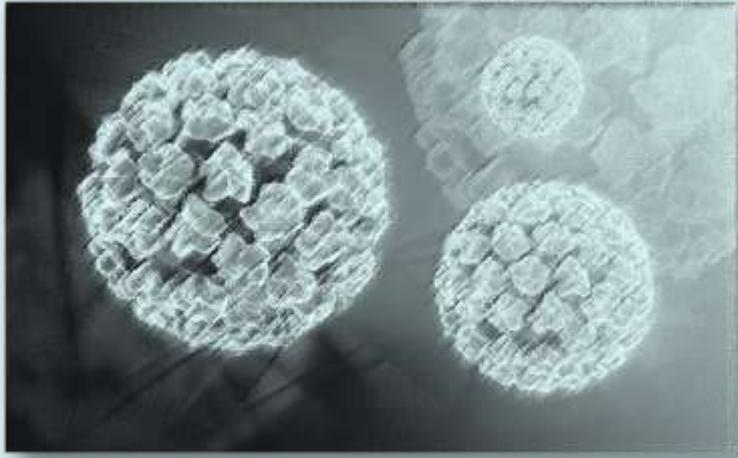
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DOH Broward has obtained a grant from the National Association of County and City Health Officials (NACCHO) to work with community partners to increase Human Papillomavirus vaccination rates in Broward County.

# Objectives

- Describe the cancer risks that have been linked to HPV infection.
- Define the benefits of HPV vaccination for cancer prevention and the rationale for vaccination.
- Provide information on current CDC vaccination recommendations.
- Provide tips on overcoming barriers to vaccination.



Human Papillomavirus (HPV)

# BACKGROUND

# Human Papillomavirus (HPV)

## ➤ What is **HPV**?

- The most common **sexually transmitted infection** (STI) in the U.S.
- Transmitted person to person by close contact
- Most people infected with HPV are **asymptomatic** or may not develop symptoms until years after infection (This Makes the virus easier to spread)

# HPV Prevalence & Incidence

- Most sexually-active females and males will be infected with at least one type of HPV at some point in their lives
  - Estimated **79 million Americans** currently infected
  - **14 million** new infections/year in the U.S.
  - HPV infection is most common in people in their teens and early 20s

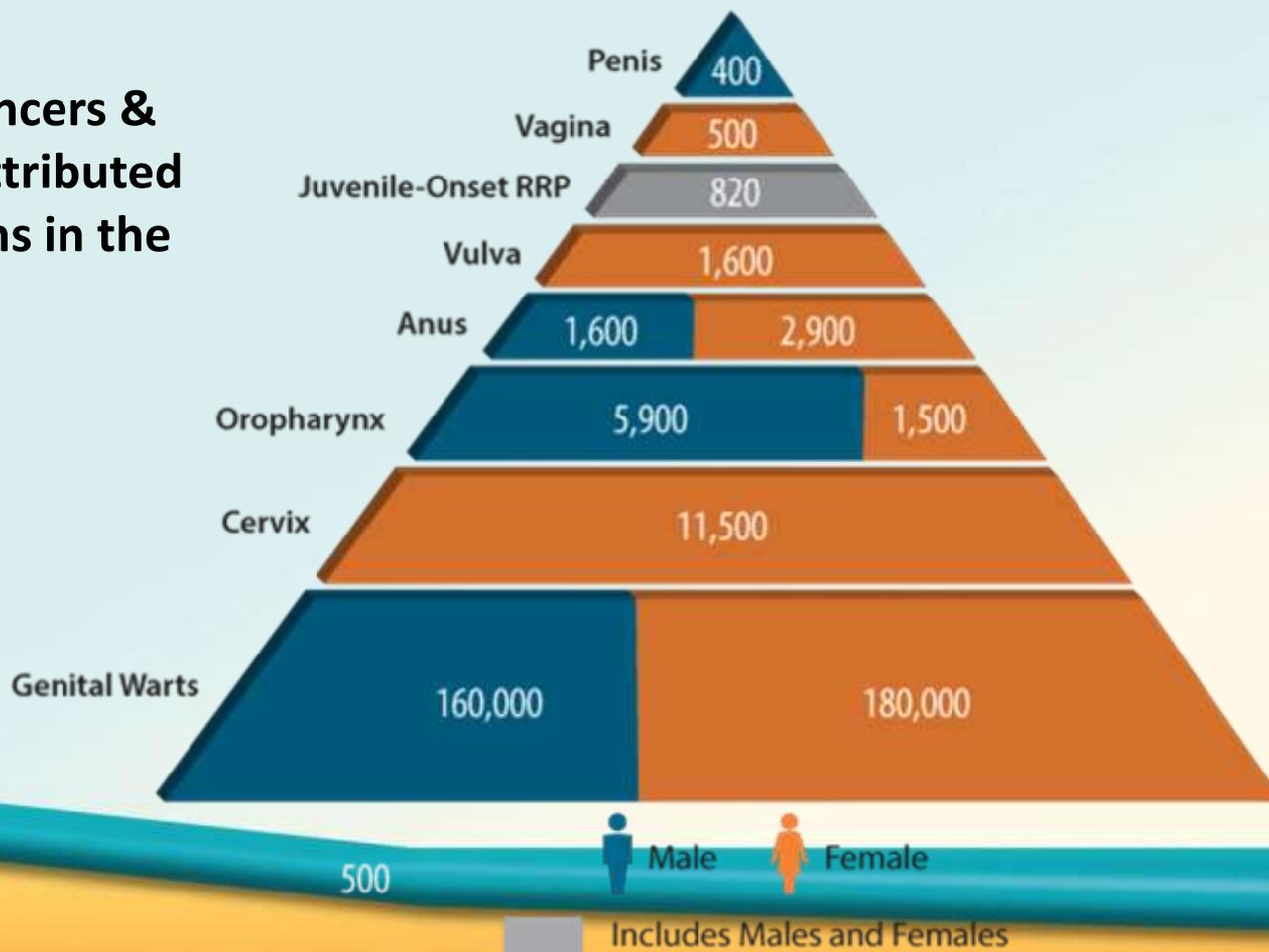


# HPV-Related Health Problems

- 40 different types
- Most go away on their own and do not cause health problems
- Cases that do not go away can cause serious health problems such as **genital warts** or **cancer**:
  - \* Cervical
  - \* Oropharyngeal
  - \* Anal
  - \* Vulvar
  - \* Vaginal
  - \* Penile

# Burden of HPV – Cancer & Genital Warts

Numbers of Cancers & Genital Warts Attributed to HPV Infections in the U.S.

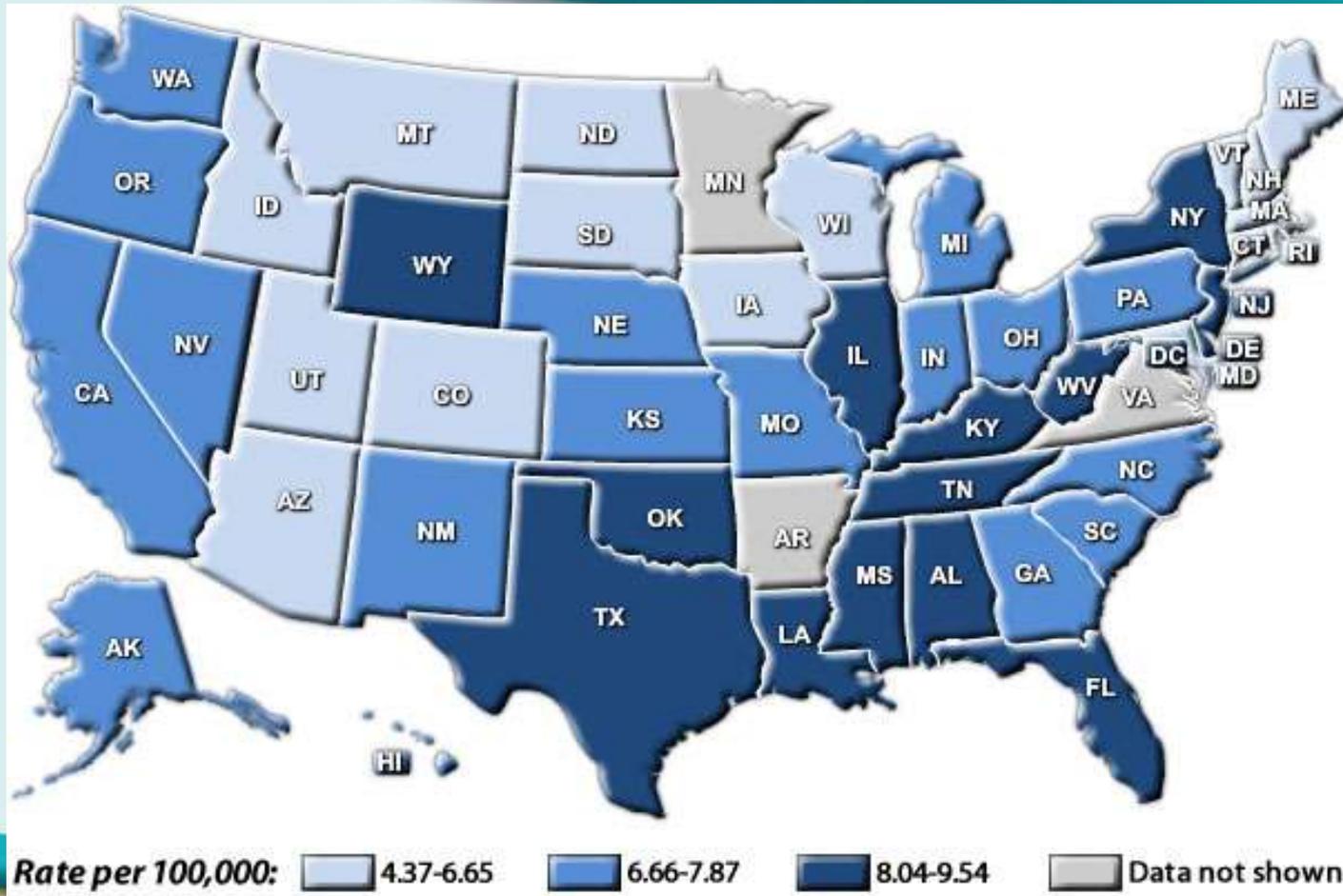


**Every year in the United States 27,000 people are diagnosed with a cancer caused by HPV**

**That's 1 case  
every 20 minutes**

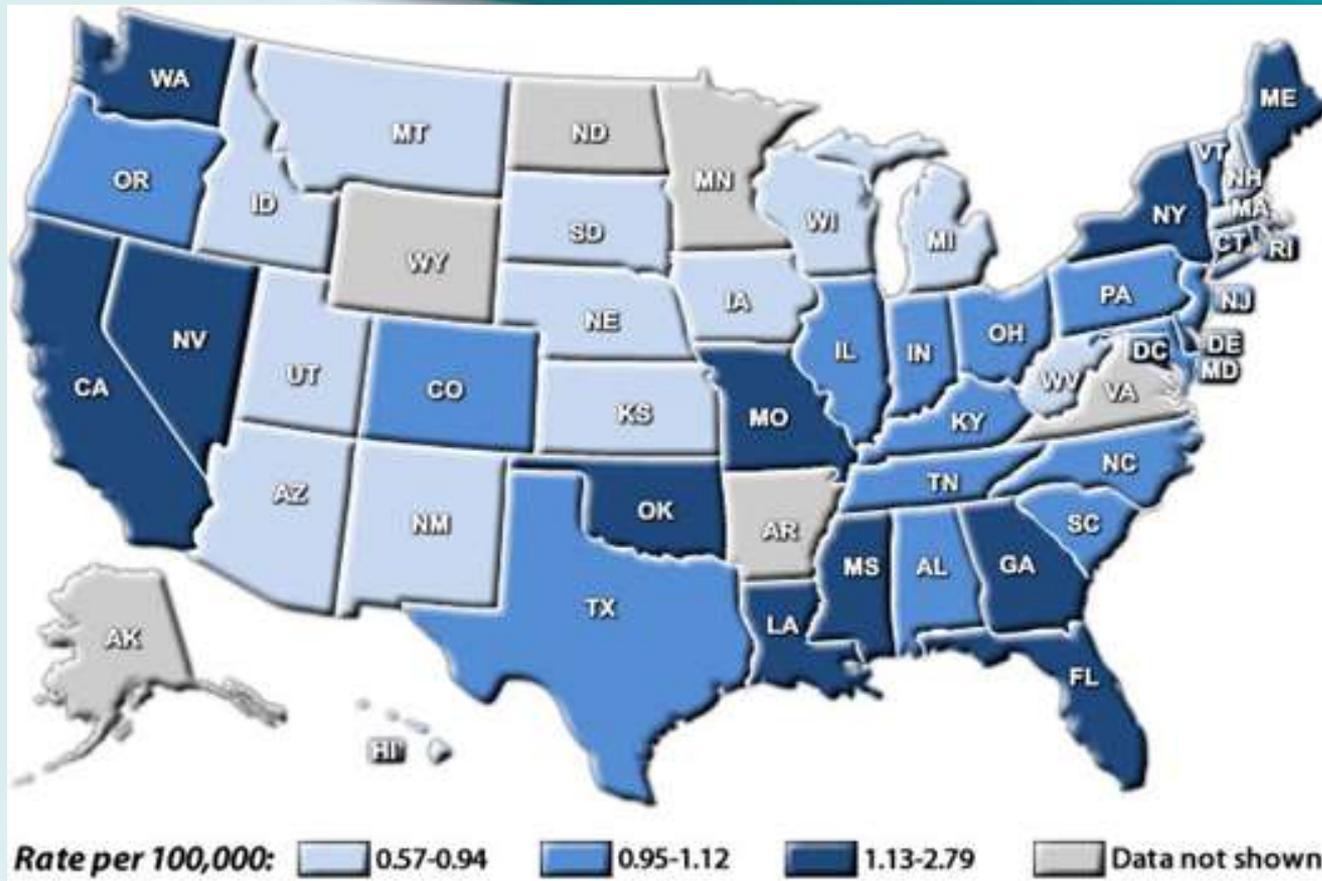


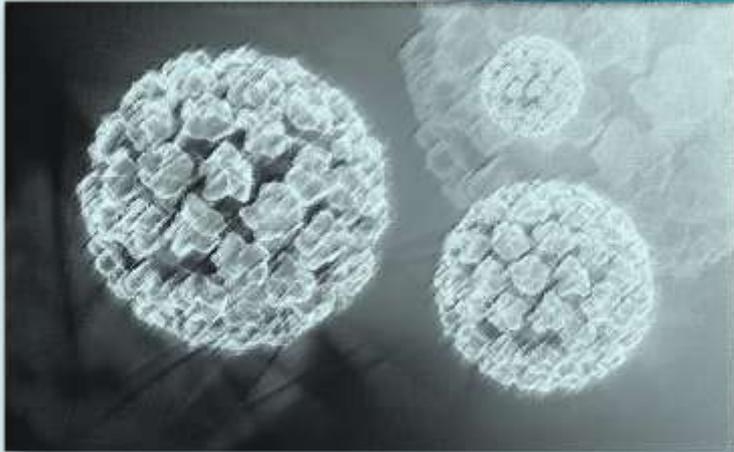
# HPV-Associated Cervical Cancer Rates by State, 2006-2010





# HPV-Associated Oropharyngeal Cancer Rates by State, 2006-2010





Human Papillomavirus (HPV)

# PREVENTION

# Prevention Strategies



## ***Vaccination***

- Safe and effective vaccines are available and recommended for certain age groups



## ***Screening***

- Routine screening recommended for women ages 21-65 to detect cervical cancer



## ***Safer Sex***

- If you are sexually active:
  - condoms
  - mutually monogamous relationship

# Vaccination

## 3 Dose Series



Inactivated viral / IM injection



Prevents infection from HPV types that cause the majority of HPV-related ***cancers***



Prevents infection from HPV types that cause the majority of ***genital warts*** cases

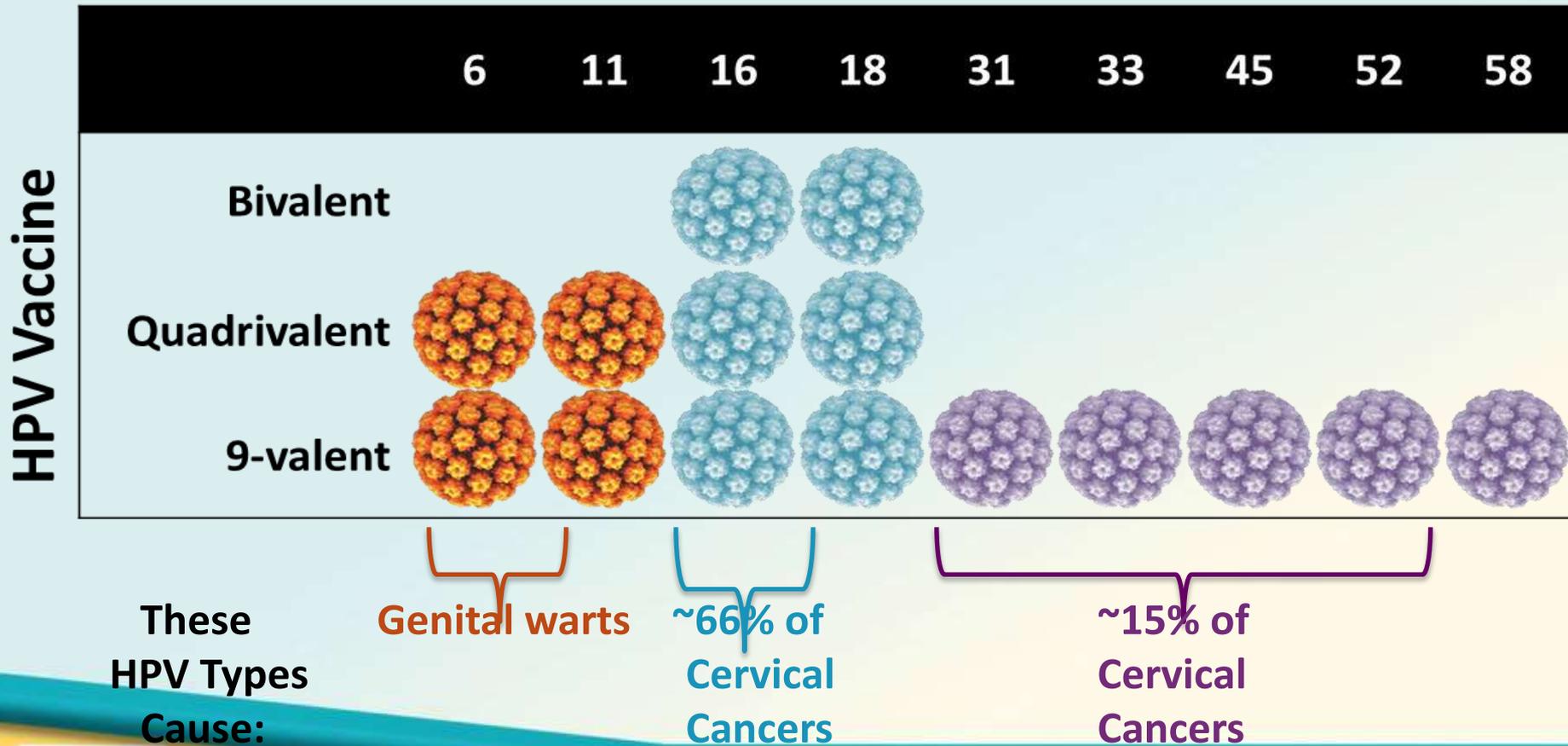
# Vaccination

| Trade Name        | Abbrev | HPV Types Protected Against               | Which Cause                                      | Licensed For                   | Dose Schedule                    |
|-------------------|--------|---|--|--------------------------------|----------------------------------|
| <b>Gardasil</b> ® | HPV 4  | 6, 11, 16, & 18                           | Most HPV-related cancers and genital warts       | Males & Females:<br>9-26 years | 3 dose series:<br>0, 2, 6 months |
|                   | HPV 9  | 6, 11, 16, 18,<br>31, 33, 45, 52,<br>& 58 |  |                                |                                  |
| <b>Cervarix</b> ® | HPV 2  | 16 & 18                                   | Most HPV-related cervical, anal, & throat cancer | Females:<br>10-25 years        | 3 dose series:<br>0, 1, 6 months |



# HPV Vaccine Comparison

## HPV Types Included in Vaccine



# Rationale

- HPV vaccine is most effective when administered before exposure to the virus
- Age recommendations based on:
  - Research on safety and efficacy
  - Average age of sexual debut in the U.S.
  - Cost-effectiveness evaluations



# Safety & Efficacy



## HOW A VACCINE'S SAFETY CONTINUES TO BE MONITORED

FDA and CDC closely monitor vaccine safety after the public begins using the vaccine.

The purpose of monitoring is to watch for adverse events (possible side effects).



Monitoring a vaccine after it is licensed helps ensure that possible risks associated with the vaccine are identified.

### VACCINE ADVERSE EVENT REPORTING SYSTEM

VAERS collects and analyzes reports of adverse events that happen after vaccination. Anyone can submit a report, including parents, patients and healthcare professionals.

### VACCINE SAFETY DATALINK

Network of healthcare organizations across the U.S.



Healthcare information available for a population of over **9 million** people.

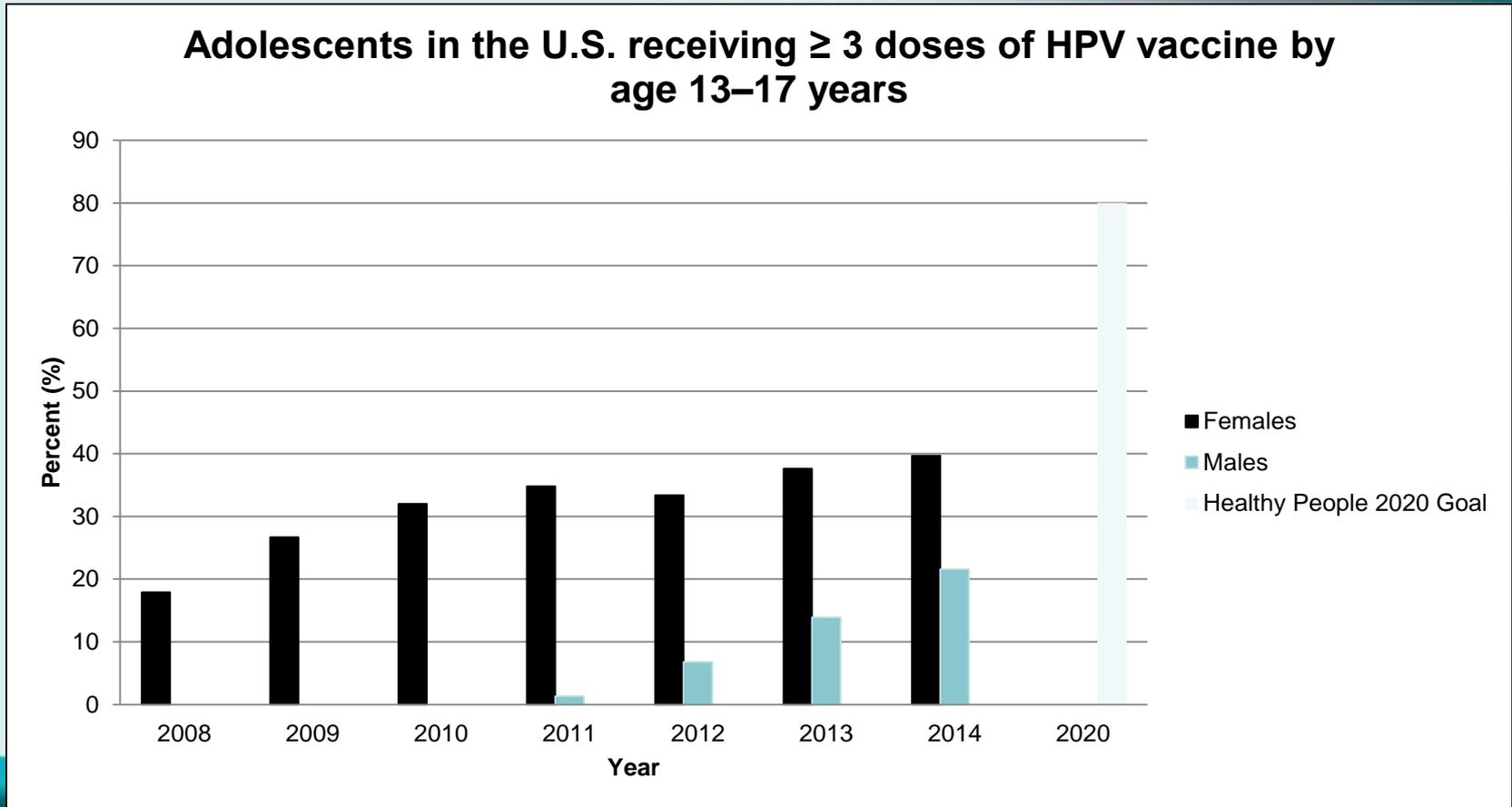
Scientists use VSD to conduct studies to evaluate the safety of vaccines and determine if possible side effects are actually associated with vaccination.

Vaccine recommendations may change if safety monitoring shows that the vaccine risks outweigh the benefits (like if scientists detect a new serious side effect).

The Journey of Your Child's Vaccine

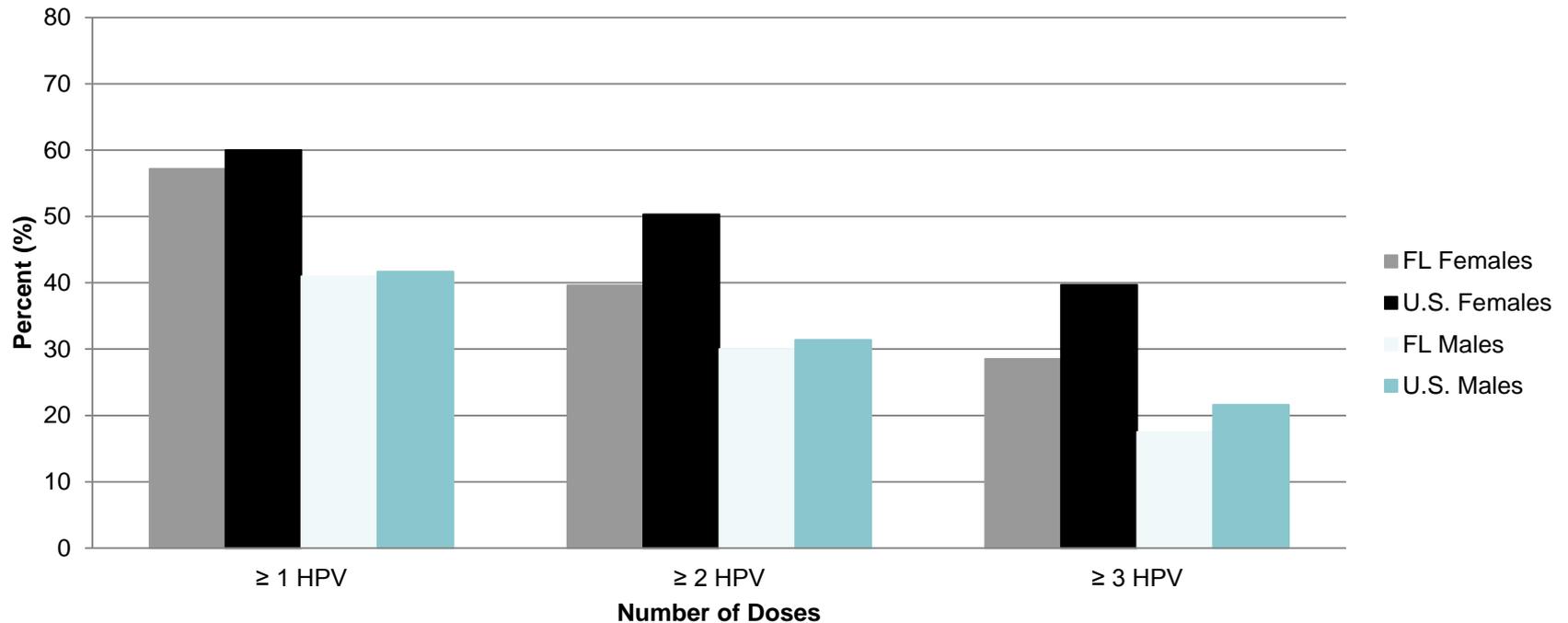
[cdc.gov/vaccines/parents/infographics/journey-of-child-vaccine.html](http://cdc.gov/vaccines/parents/infographics/journey-of-child-vaccine.html)

# Vaccination Trends in the U.S.

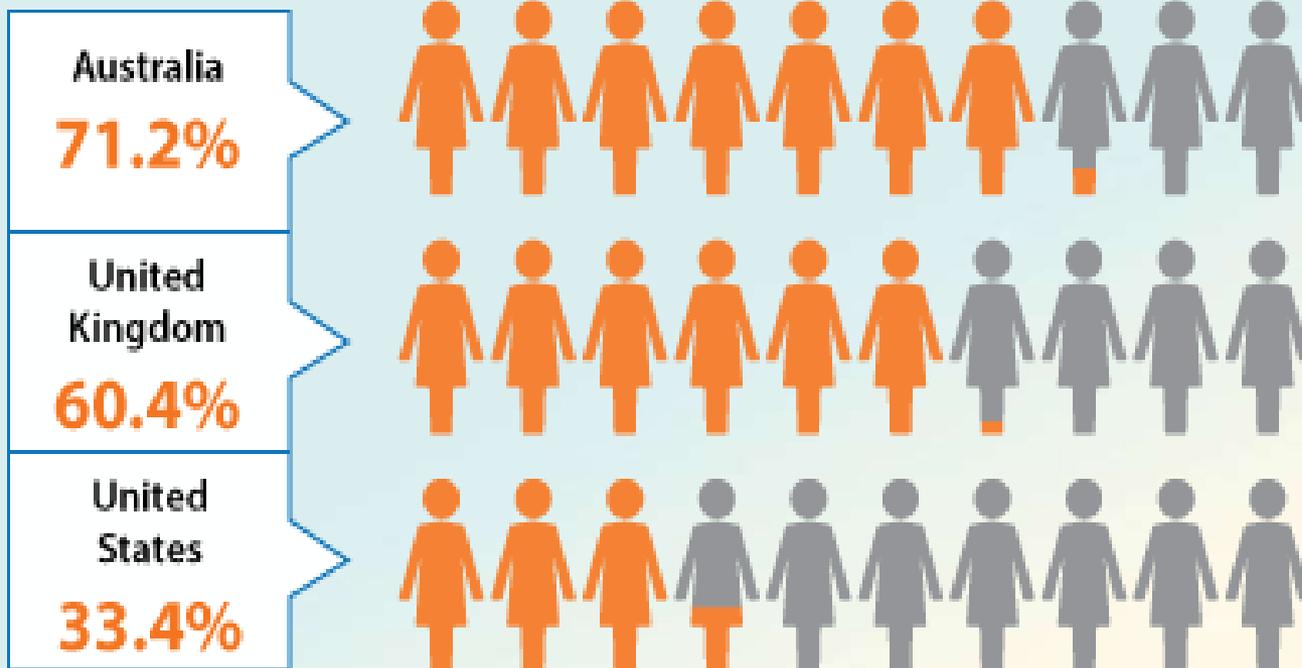


# Vaccination Trends in the U.S. & FL

## HPV Vaccination Among Adolescents Aged 13-17 Years in 2014



## HPV Vaccine Three-Dose Coverage

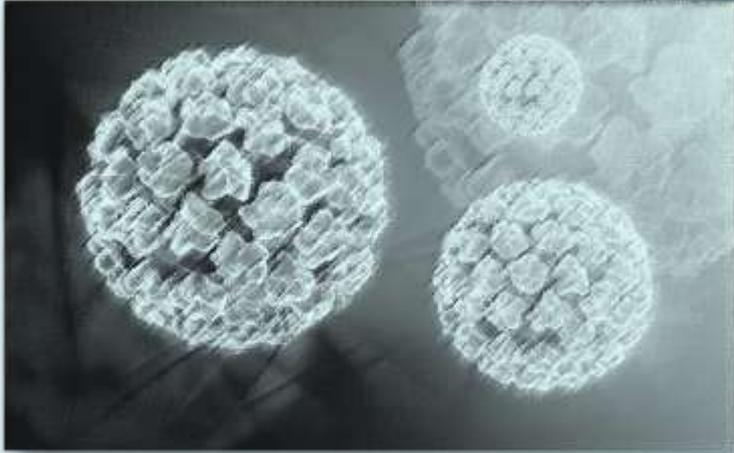


Among Girls in High-Income Countries

# Local Vaccination Trends

| DOH-BROWARD                                    | Age Group   |             |          | Totals |
|--|-------------|-------------|----------|--------|
|  | 10-15 years | 16-18 years | 19 years |        |
| Total patients who received 1 dose of HPV      | 455         | 374         | 1        | 830    |
| Total patients receiving $\geq 3$ dose         | 146         | 146         | 0        | 292    |
| Percentage of patients receiving $\geq 3$ dose | 32%         | 39%         | 0%       | 35%    |





## Human Papillomavirus (HPV)

# CHALLENGES & OPPORTUNITIES

# Provider Perspectives

## *Costs*

- Some insurance companies do not cover vaccine
- Inadequate reimbursement rates
- "Up-front" costs to purchase vaccine

## *Parents*

- Concerns about safety
- Moral and religious objections
- Concerns that vaccination encourages risky sexual behavior
- Concerns about efficacy



# Parents' Perspectives

Top 5 Reasons Parents of *Girls* Reported Not Vaccinating their Child Against HPV:

**1. Lack of knowledge**

**2. Not needed or necessary**

**3. Safety concern/side effects**

**4. Not recommended**

**5. Child not sexually active**

Top 5 Reasons Parents of *Boys* Reported Not Vaccinating their Child Against HPV:

**1. Not recommended**

**2. Not needed or necessary**

**3. Lack of knowledge**

**4. Child not sexually active**

**5. Safety concern/side effects**

# Preventing Cancer with HPV Vaccination is Important

- Let parents know that:
  - This vaccine is to protect your patients from cancer, not an attempt to promote sexual activity.
  - HPV vaccine needs to be given now, before age 13.
  - HPV vaccination is especially important for preventing cancers for which there isn't routine screening.

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# QUESTIONS??