

HPV vaccine is cancer prevention so why aren't more teens getting vaccinated?

Kristin Zorn, MD

Department of Ob/Gyn and Division of Genetics
University of Arkansas for Medical Sciences

Disclosure

- ➔ *I was on Merck's Gardasil speakers' bureau from 2006-2009.*
- ➔ *I've been a member of the CDC HPV Speakers' Bureau.*

HPV vaccination: a revolution in healthcare

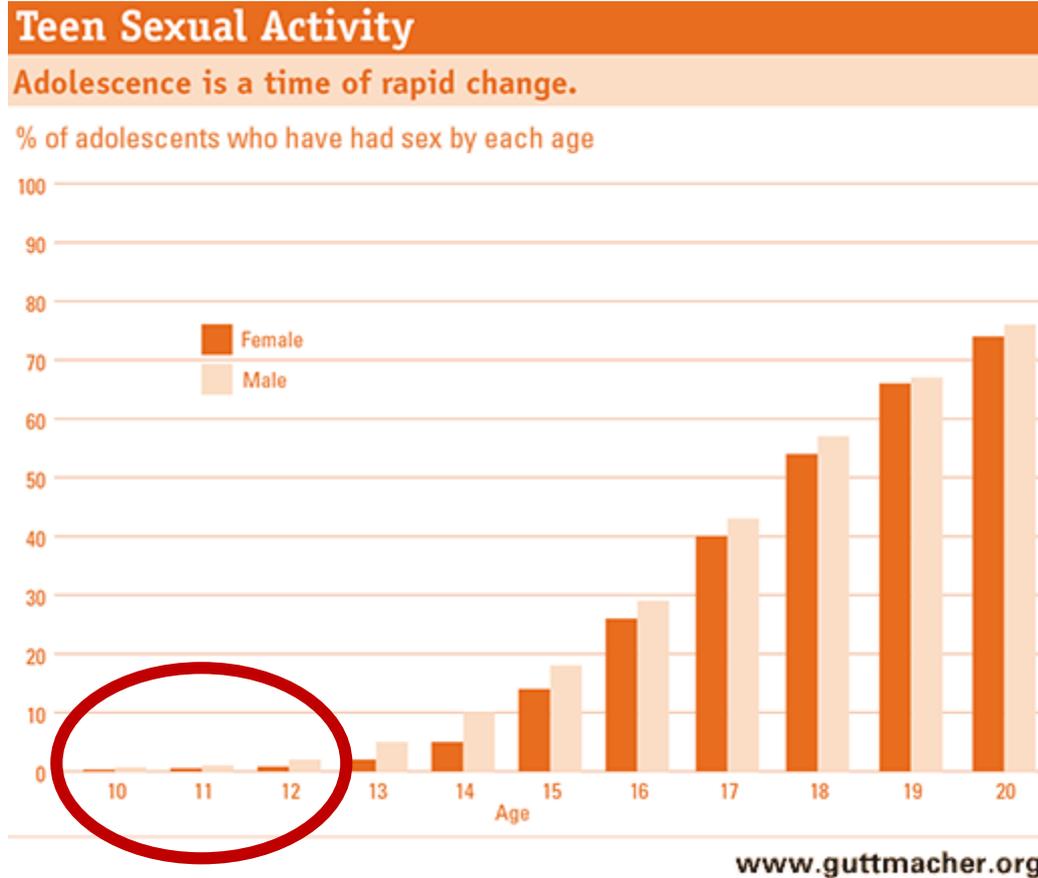
“How often do we have the opportunity to nearly wipe out a type of cancer with something as simple and safe as a vaccine? We have that rare opportunity with HPV-related cancers in the next generation of adults. Let’s not miss out.”

Barbara Goff, MD

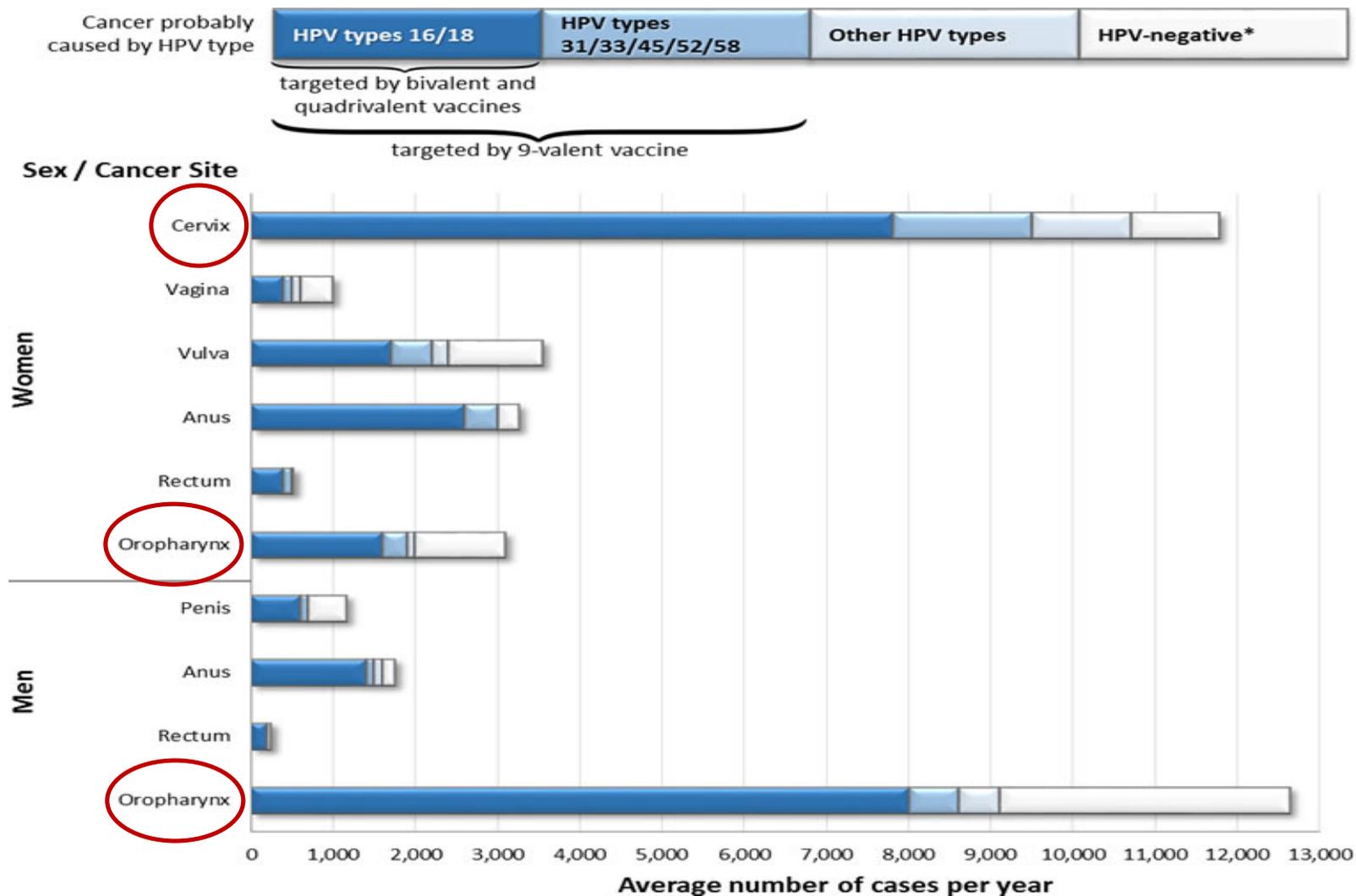
HPV infection is incredibly common

- ▶ **Most men and women will be infected with at least 1 type of HPV at some point in their lives**
 - ▶ ~79 million Americans currently infected
 - ▶ 14 million new infections each year in the US
 - ▶ Most common in the teens and early 20s
- ▶ **Most people never know that they have been infected**

Exposure to HPV happens early in life

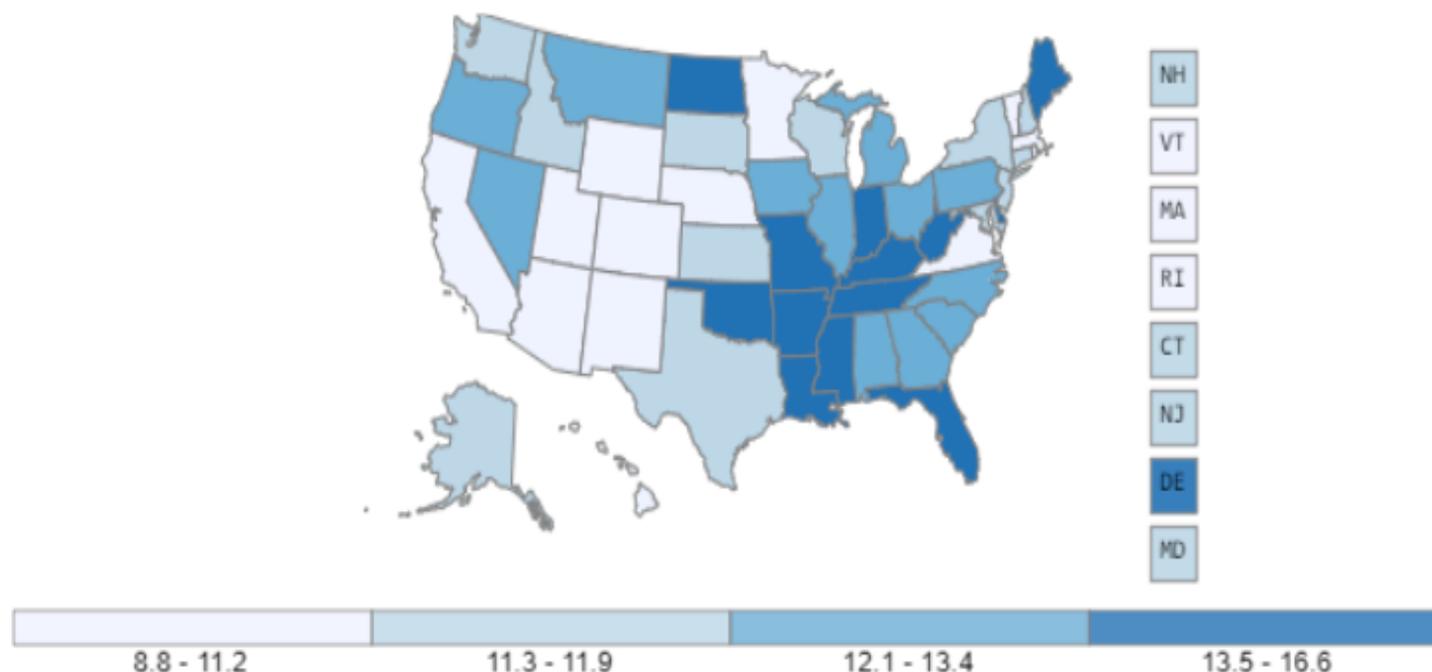


HPV causes ~31,000 new cancer cases each year



All HPV-associated Cancers, Male and Female, United States, 2016

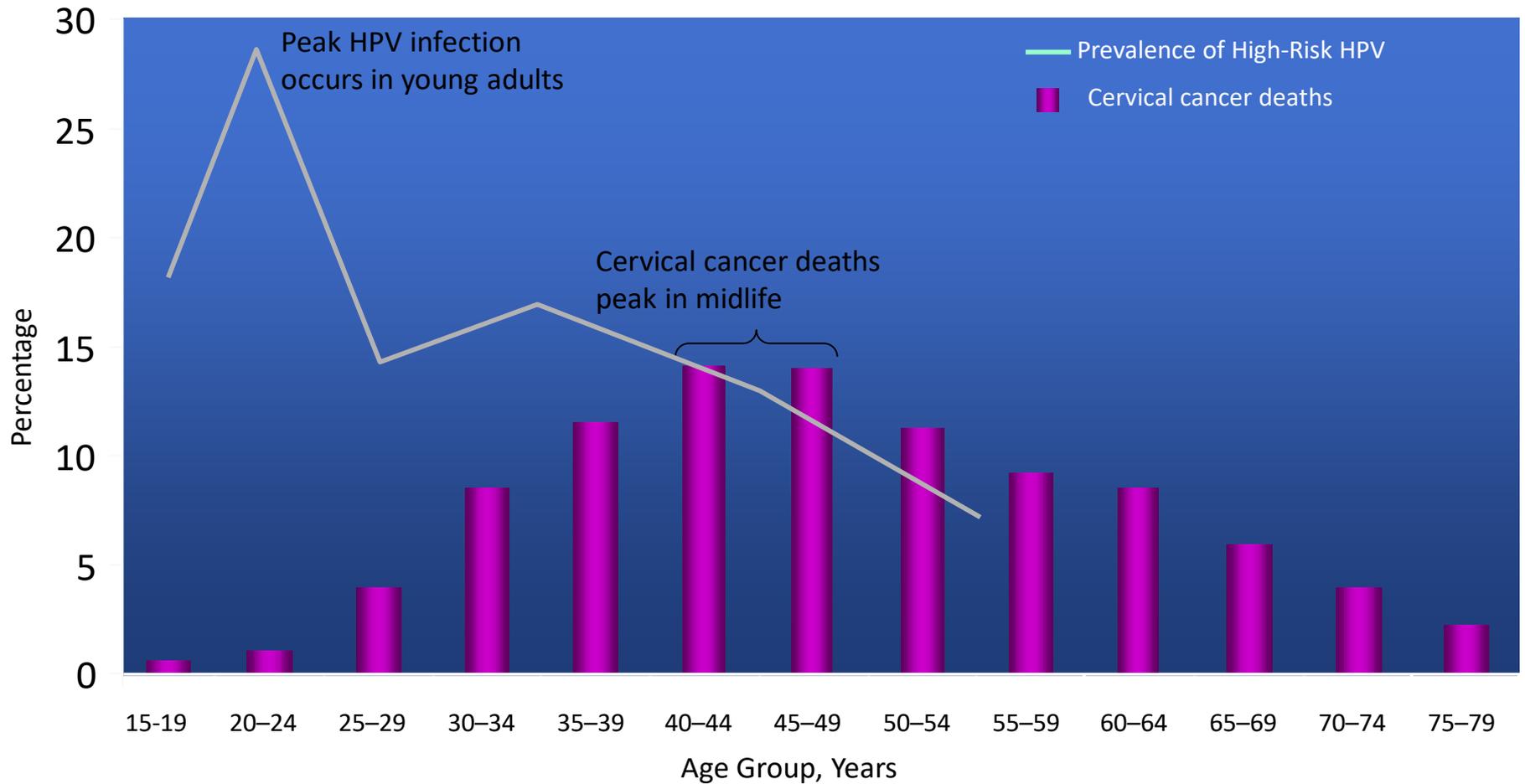
Rate of New HPV-associated Cancers by State



Rate per 100,000 people

Data source – U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on November 2018 submission data (1999-2016); U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; <https://www.cdc.gov/cancer/dataviz>, June 2019.

HPV infection causes cancer deaths decades later



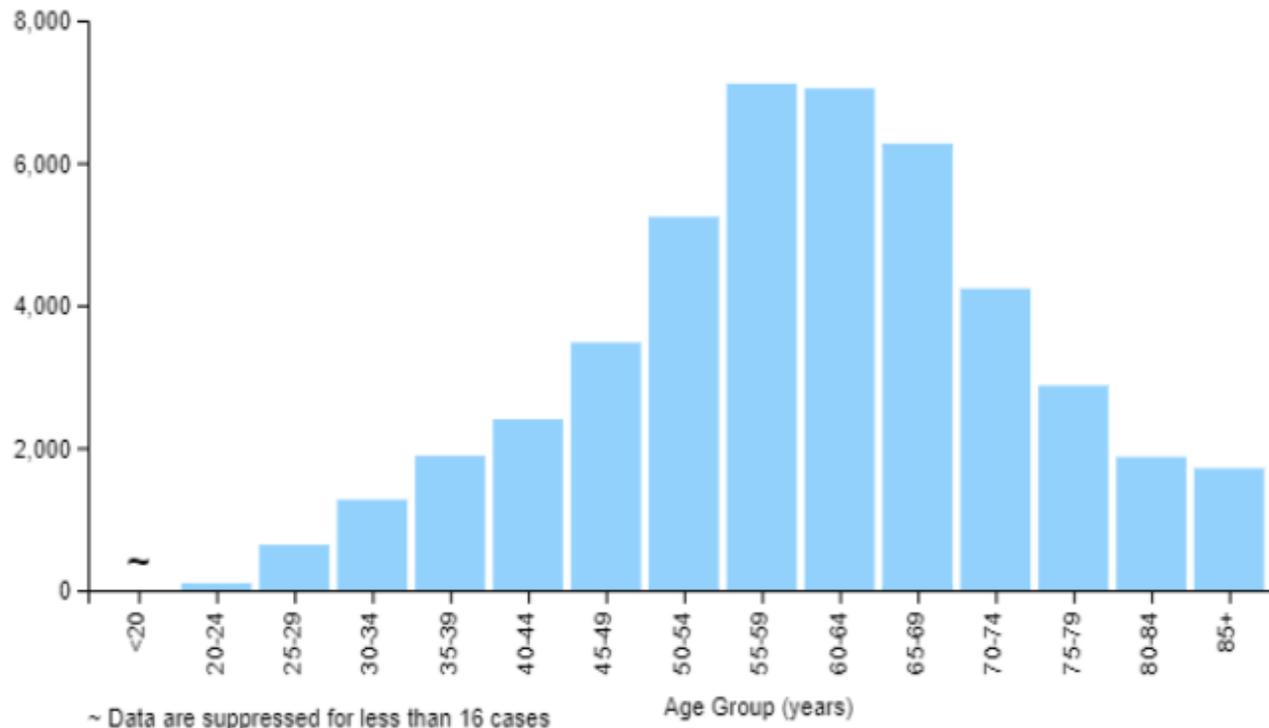
Adapted from Dunne EF et al. *JAMA*. 2007

Adapted with permission from Insinga RP. *Womens Health Issues*. 2006



Rate of New HPV-associated Cancers by Age Group (years)

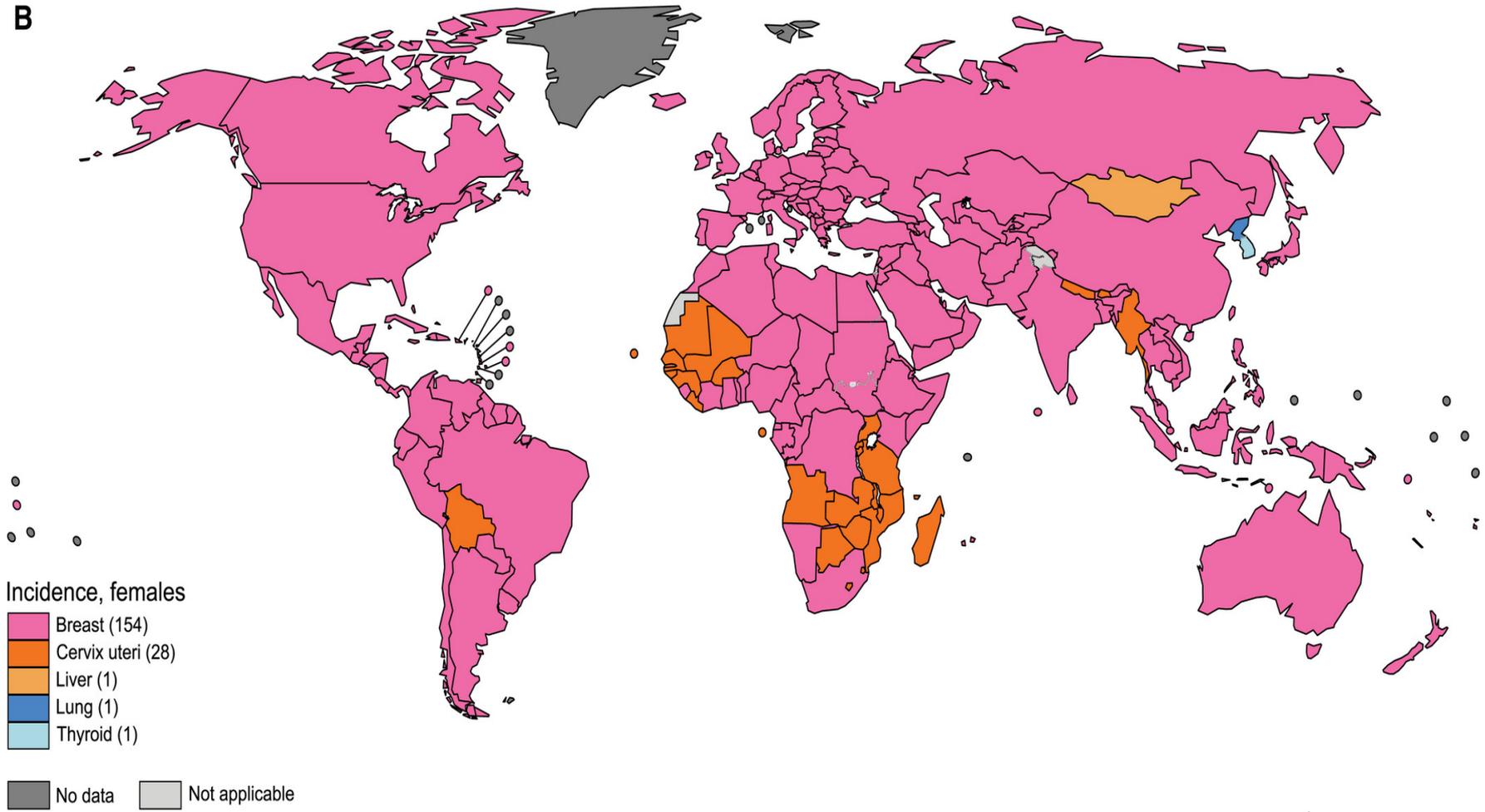
All HPV-associated Cancers, Male and Female, United States, 2016



Data source – U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on November 2018 submission data (1999-2016); U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; <https://www.cdc.gov/cancer/dataviz>, June 2019.

Worldwide cancer incidence in women

B



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data source: Globocan 2018
Map production: IARC
World Health Organization



© WHO 2018. All rights reserved

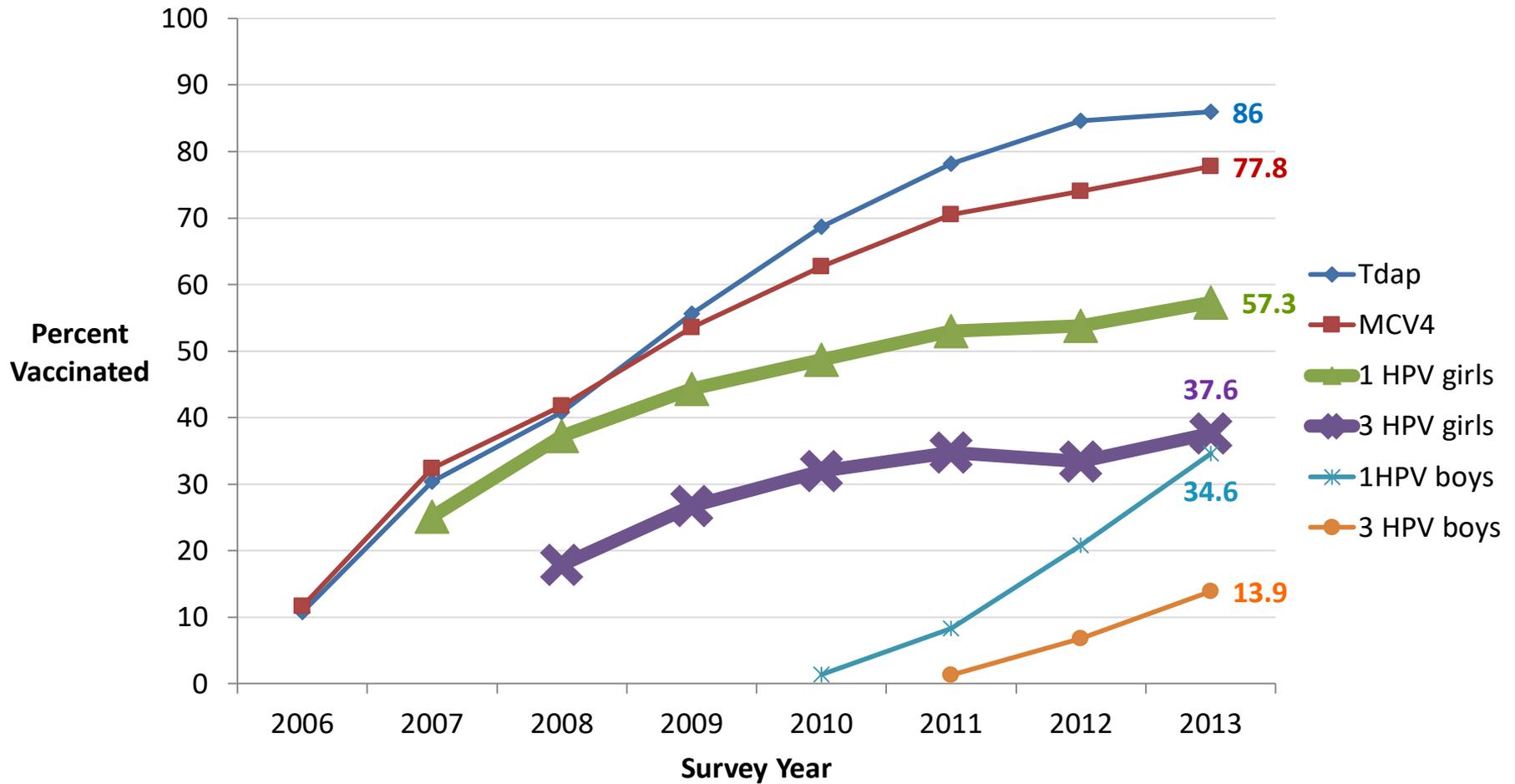
HPV vaccination in Australia

**By 2020, cervical cancer will be rare
(<6 cases/100,000 women)**

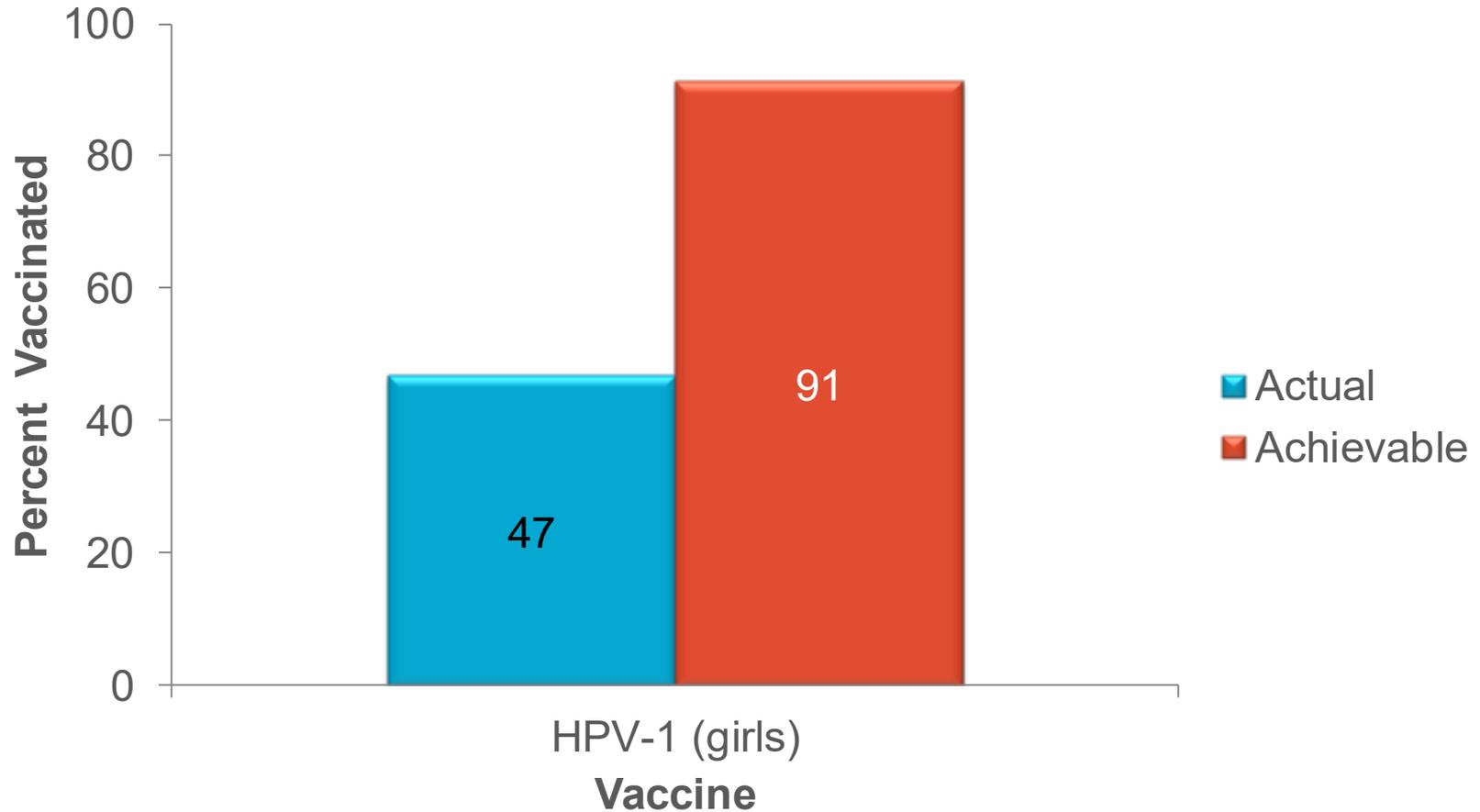
**By 2028, it will be effectively eliminated
(<4 cases/100,000 women)**

- introduced in 2007 as no-cost, optional vaccine series for girls at school
- expanded to boys in 2013
- 77% reduction in oncogenic HPV infection
- combined with screening program for older women
- screening changed from Pap every 2 years from 18-69 to primary HPV testing every 5 yrs from 25-69 with exit test 70-74
- widespread public support
- disparities persist for disadvantaged populations

Adolescent vaccination in US



Missed opportunities to vaccinate by age 13 in girls born in 2000



**For more information,
including free resources for yourself and your
patients/clients, visit
[cdc.gov/hpv](https://www.cdc.gov/hpv)**

**Dr. Casler on how her pediatrics practice handles
HPV vaccination as a team effort**

https://www.youtube.com/watch?v=IHwbz8_GSeU&list=PLvrp9iOILTQYvkkwdhf4P6HvG0YtVZ3xX

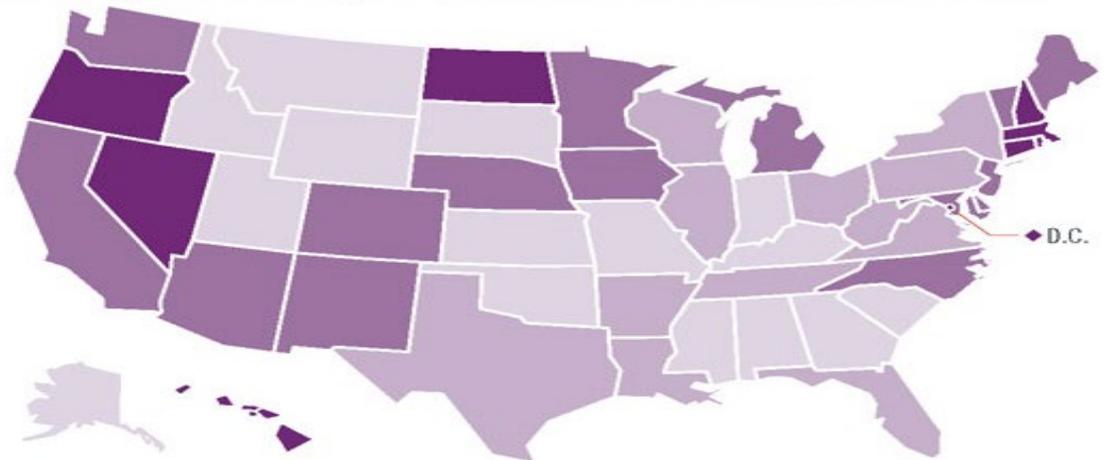
NATIONWIDE
6 OUT OF 10
 GIRLS HAVE STARTED
 THE HPV VACCINE SERIES

National coverage is 63%

Coverage by state:



Percentage of adolescent girls who have received one or more doses of HPV vaccine*



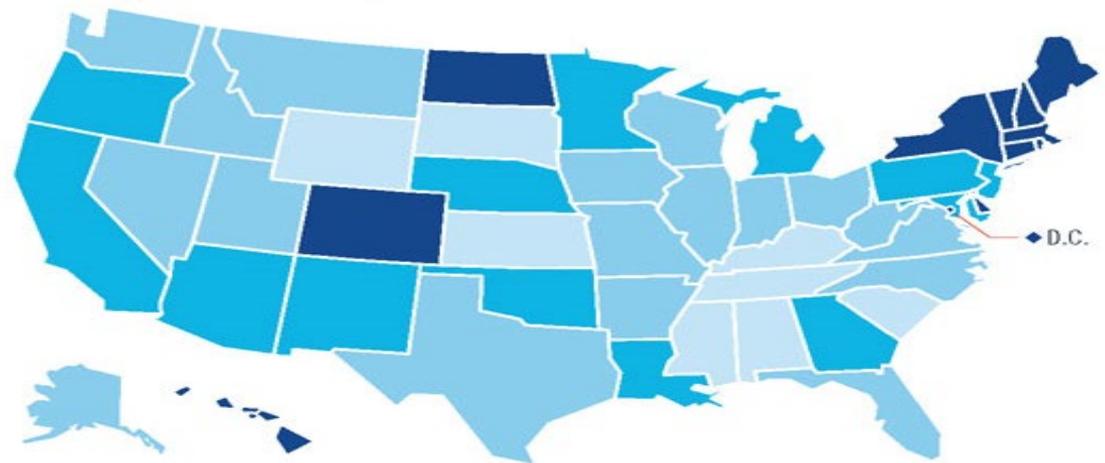
NATIONWIDE
5 OUT OF 10
 BOYS HAVE STARTED
 THE HPV VACCINE SERIES

National coverage is 50%

Coverage by state:



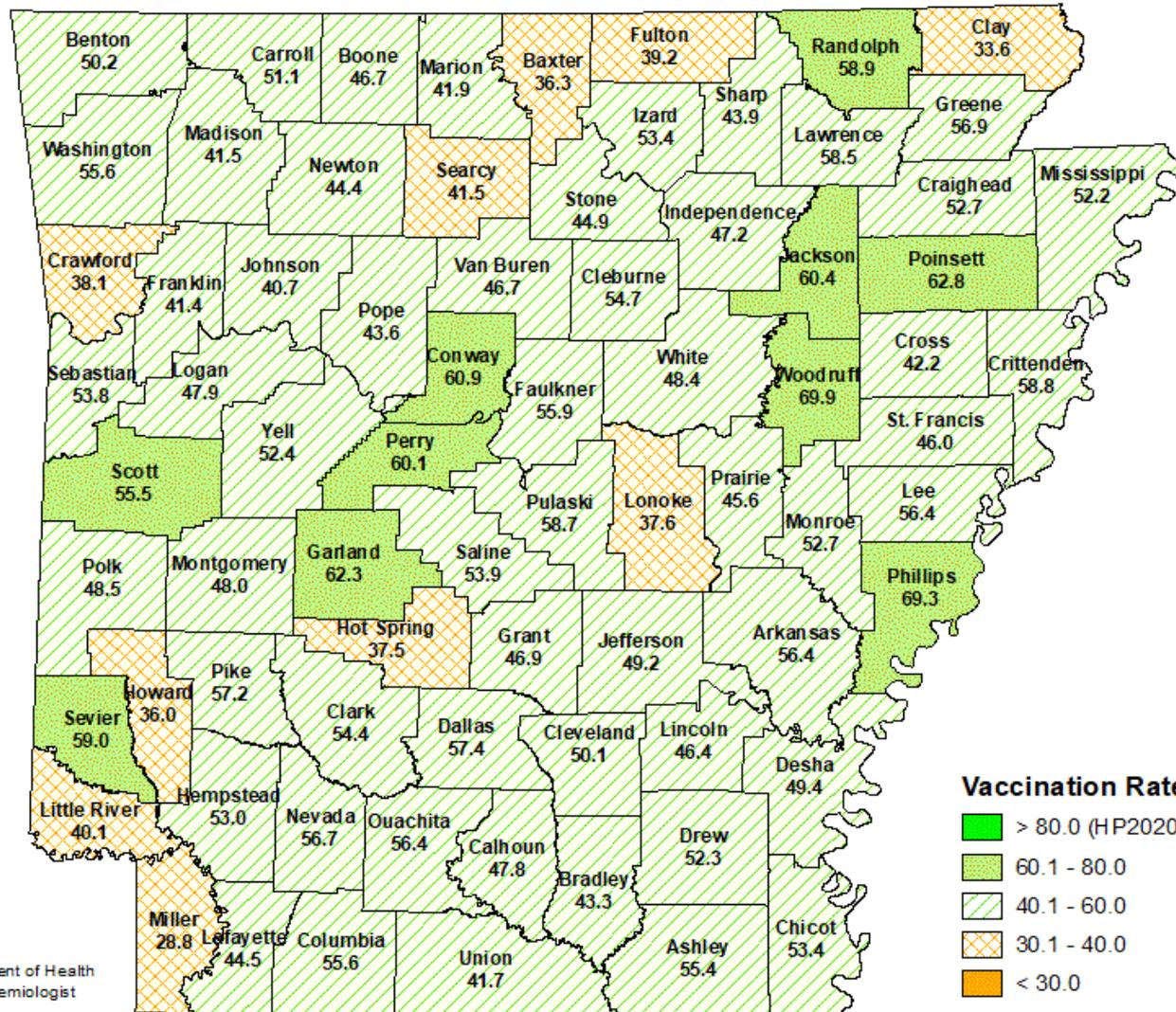
Percentage of adolescent boys who have received one or more doses of HPV vaccine*



IMPROVING HPV VACCINATION RATES WILL HELP SAVE LIVES.
 A high national Tdap vaccination rate of 86% shows that it is possible to achieve high HPV vaccination coverage.

*Estimated coverage with ≥ 1 dose of human papillomavirus (HPV) vaccine among adolescents aged 13-17 years, National Immunization Survey-Teen (NIS-Teen), United States, 2015
 Source: MMWR August 26, 2016

Vaccination Rate per County for 13-17 Years With 1 or More HPV Vaccine, Arkansas, 2020



Date: April 7, 2020
 Source: Arkansas Department of Health
 Author: Haytham Safi, Epidemiologist

HPV: Human papillomavirus

**For more information,
including free resources for yourself and your
patients/clients, visit
[cdc.gov/hpv](https://www.cdc.gov/hpv)**

**Dr. Savoy on how she handles concerns about
HPV vaccine safety**

<https://www.youtube.com/watch?v=zURREKHYeJs&list=PLvvp9iOILTQYPB9MjBHMIg7rxoPc8Xg-A&index=3>

HPV vaccine messages

- 1.** HPV vaccine is safe, effective, and lasting protection against most cancers caused by HPV infection
- 2.** HPV vaccination is best when given at 11 or 12 years of age
- 3.** Not giving HPV vaccination leaves another generation at risk for HPV cancers

[6 REASONS TO GET HPV VACCINE FOR YOUR CHILD]

1 HPV is a common virus that infects teens and adults.



80%

of people will get an HPV infection in their lifetime.

2 HPV vaccination works.

71%

Infections with HPV types that cause most HPV cancers and genital warts have **dropped 71 percent** among teen girls.

3 HPV vaccination prevents cancer.

31,200

cases of cancer could be prevented with HPV vaccination each year.



Same as the average attendance for a baseball game.

4 Preventing cancer is better than treating it.



HPV infections can cause **six types** of cancer, but doctors only routinely screen for cervical cancer. The other five types may not be detected **until** they cause health problems.

5 Your child can get protection from HPV cancers during the same visit they are protected against other serious diseases.



6 HPV vaccination provides safe, effective, and long-lasting protection

With over

100 MILLION

doses distributed in the U.S., data continues to show HPV vaccine is safe and effective.

[*Talk* to your child's doctor or nurse about HPV cancer prevention.]



HPV VACCINE
IS CANCER PREVENTION

www.cdc.gov/HPV

DISTRIBUTED BY:

Teen immunization schedule

	Flu Influenza	Tdap Tetanus, diphtheria, pertussis	HPV Human papillomavirus	Meningococcal		Pneumococcal	Hepatitis B	Hepatitis A	Polio	MMR Measles, mumps, rubella	Chickenpox Varicella
				MenACWY	MenB						
7-8 Years											
9-10 Years											
11-12 Years											
13-15 Years											
16-18 Years											
More Information:	Everyone 6 months and older should get a flu vaccine every year.	All 11- through 12-year-olds should get one shot of Tdap.	All 11- through 12- year olds should get a 2- shot series of HPV vaccine. A 3-shot series is needed for those with weakened immune systems and those who start the series at 15 years or older.	All 11- through 12- year olds should get one shot of meningococcal conjugate (MenACWY). A booster shot is recommended at age 16.	Teens 16-18 years old may be vaccinated with a serogroup B meningococcal (MenB) vaccine.						

**For more information,
including free resources for yourself and your
patients/clients, visit
[cdc.gov/hpv](https://www.cdc.gov/hpv)**

**Lacey Eden, NP, on how she addresses reluctance
to complete HPV vaccination**

<https://www.youtube.com/watch?v=vwD02naKq4k&list=PLvrp9iOILTQYGyYhIx-vJH3Qayu2tUgrn&index=6>

Prepare for questions

Why does my child need HPV vaccine?

HPV vaccine is important because it prevents infections that can cause cancer. That's why we need to start the shot series today.

Some HPV infections can cause cancer—like cancer of the cervix or in the back of the throat—but we can protect your child from these cancers in the future by getting the first HPV shot today.

What diseases are caused by HPV?

How do you know the vaccine works?

Studies continue to prove HPV vaccination works extremely well, decreasing the number of infections and HPV precancers in young people since it has been available.

HPV is a very common infection in women and men that can cause cancer. Starting the vaccine series today will help protect your child from the cancers and diseases caused by HPV.

Is my child really at risk for HPV?

Why do they need HPV vaccine at such a young age?

Vaccines protect your child before they are exposed to a disease. That's why we give the HPV vaccine earlier rather than later, to protect them long before they are ever exposed. Also, if your child gets the shot now, they will only need two doses. If you wait until your child is older, they may end up needing three shots.

Studies tell us that getting HPV vaccine doesn't make kids more likely to start having sex. I made sure my child (or grandchild, etc.) got HPV vaccine, and I recommend we give your child her first HPV shot today.

I'm worried my child will think that getting this vaccine makes it OK to have sex.

Why do boys need the HPV vaccine?

HPV vaccination can help prevent future infections that can lead to cancers of the penis, anus, and back of the throat in men.

Yes, HPV vaccination is very safe. Like any medication, vaccines can cause side effects, including pain, swelling, or redness where the shot was given. That's normal for HPV vaccine too and should go away in a day or two. Sometimes kids faint after they get shots and they could be injured if they fall from fainting. We'll have your child stay seated after the shot to help protect him/her.

I'm worried about the safety of HPV vaccine. Do you think it's safe?

Are all of these vaccines actually required?

I strongly recommend each of these vaccines and so do experts at the CDC and major medical organizations. School entry requirements are developed for public health and safety, but don't always reflect the most current medical recommendations for your child's health.

There is no evidence available to suggest that getting HPV vaccine will have an effect on future fertility. However, women who develop an HPV precancer or cancer could require treatment that would limit their ability to have children.

Can HPV vaccine cause infertility in my child?

For more information, visit
[cdc.gov/vaccines/conversations](https://www.cdc.gov/vaccines/conversations)

PN300195
CS209453B
Last updated JULY 2019

HPV vaccine communication tips

- Bundle your recommendations for adolescent vaccines (meningitis, HPV, and whooping cough)
- Ensure a consistent message (all staff trained)
- Use every opportunity to vaccinate (check status at each visit, have process to catch up)
- Provide personal examples (family members who were vaccinated, HPV-related cancer survivors)
- Effectively answer questions (be prepared, accurate, and empathetic)

**For more information,
including free resources for yourself and
your patients/clients, visit
[cdc.gov/hpv](https://www.cdc.gov/hpv)**

- **Patient and provider resources**
- **Spanish resources**
- **Continuing education credit**