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to prevention

# St. Jude Rural HPV Vaccination Introductory Meeting

January 23, 2023

1-2:30 pm Central Time



**HPV Cancer  
Prevention  
Program**



Special thanks to Heather's dad Gene Brandt and her friend Gina Puck for providing some of the photos used in today's presentation.

# AGENDA



Welcome and Introductions



The State of HPV Cancer Prevention in Rural America



Questions and Answers with Presenters



Final Thoughts and Next Steps

Sign up today to be added to the rural HPV vaccination listserv and receive information following today's introductory meeting. Direct URL will be in the chat.





# Welcome & Introductions

**Use the chat to share the following:**

1. Your name
2. Your affiliation
3. In one word, how do you feel about the future of HPV cancer prevention in rural America?

To participate:

Go to [www.menti.com](http://www.menti.com) and  
use the code 5580 1784

Go to  
<https://www.menti.com/al3qv8je1bqk>

Scan the QR code with  
your phone camera



**mentimeter:  
we want to hear  
from you**

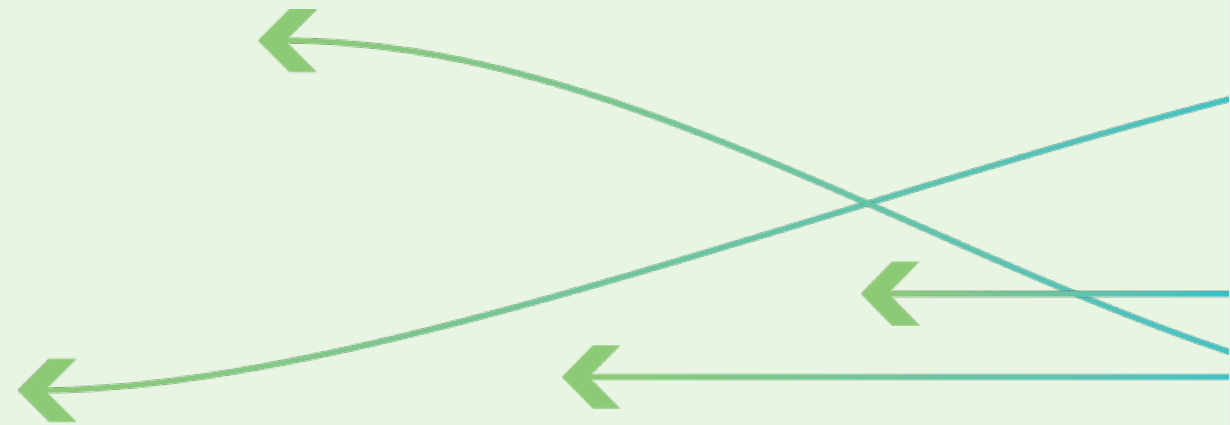
Go to [www.menti.com/al3qv8je1bqk](https://www.menti.com/al3qv8je1bqk)

# What do you expect to learn from today's meeting?

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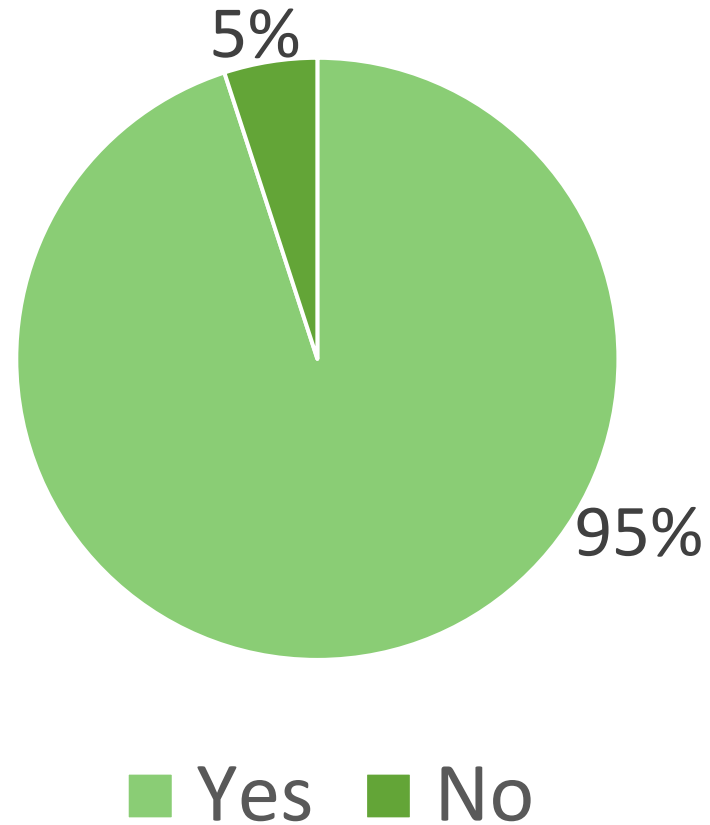
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# Purpose

# Have you or your current organization ever focused efforts on improving health outcomes with rural communities?



Almost everyone who completed the pre-meeting survey has focused efforts on improving health outcomes with rural communities.

# What do you view as the main strengths of rural communities in the United States? In other words, what exists on which to build efforts to improve health outcomes?

- Collaboration
- Resilience
- Tight-knit
- Trust

“Rural communities tend to have a stronger sense of community than urban and suburban communities. Harnessing the power of the community can have impact in improving health outcomes. Identifying who the leaders of a community are, what organizations/businesses/communities are active there, where do people get their health info/services already, where do folks gather, etc. The answers to these questions can help public health programs meet the community where they are, build relationships with people and orgs the community trusts, and go from there.”



# What do you view as the main strengths of rural communities in the United States? In other words, what exists on which to build efforts to improve health outcomes?

- Collaboration

Specifically, to improve HPV vaccination coverage with rural communities

- Resilience

- Tight-knit

- Trust

- Community

“Community leaders (especially within the tribal communities) who can support the message of the need for and importance of the vaccine.”

# What do you view as the primary challenges that exist in rural areas of the United States that could be important to improve health?

- Access to care
- Lack of specialists
- Transportation

“I think some of the main health-related challenges that rural communities face are accessibility issues, a lack of healthcare providers, and larger percentages of un- and underinsured citizens.”

# What do you view as the primary challenges that exist in rural areas of the United States that could be important to improve health?

- Access to care
- Lack of specialists
- Transportation
- Mistrust
- Healthcare providers
- Not a priority

Specifically, to improve HPV vaccination coverage with rural communities

“Competing priorities- COVID, RSV, the financial situation of health care providers in rural areas - There is no one around in the clinic to do the work! - concerned about increasing hesitancy related to COVID-19 vaccine - health care providers concerned about conflict/alienating parents in small community.”

# What is the most pressing issue that is preventing improvements in rural health outcomes? In other words, what is stopping us from improving rural health?

- Access to care
- Funding
- Lack of education
- Lack of resources

“Lack of consistent, sustained intervention. We are trying several different things which have varying levels of success but cannot seem to disseminate on a broader level. Improvements in rural health outcomes are dependent on the efforts of investigators focused specifically on those, and those efforts are dependent on funding. Thus far, the resources have not been available to dedicate the time and energy needed to focus on solving these issues because of the traditional grant/academia mill.”

# Partners for Improving HPV Vaccination Coverage

- Rural health offices
- Community-based organizations
- Non-profit organizations
- Community colleges
- Faith-based organizations
- Health departments
- Health systems
- Junior League
- Insurers / payors
- Pharmacies
- Schools
- Parent-teacher organizations
- Rotary
- American Cancer Society
- Boards of education
- United Way
- State cancer coalitions
- YMCA
- 4H
- Future Farmers of America
- Rural businesses
- Healthcare providers
- Extension programs
- Libraries
- Agriculture
- Migrant worker programs

# If you had a magic wand, what one thing (\*only one\*) would you want to see happen to increase HPV vaccination coverage with rural communities in the United States?

## Address HPV vaccination hesitancy

- “Intervention research to identify best approaches to overcome vaccine hesitancy.”
- “Identifying those who are “sitting on the fence” vs those who are against vaccines in general.”
- “Remove all vaccine misinformation from social media.”

## Increase funding for HPV vaccination efforts

- “More funding to increase the number of providers that are trained and serve as advocates for HPV vaccination.”
- “Appropriating funds to support health equity.”
- “Increased scope of practice for all providers (physician, nurses, pharmacists, dentists, etc.) to be reimbursed by all insurance (at no cost to patient).”

## Mandate HPV vaccination

- “Make it a mandated vaccination for school entry.”
- “Mandates! Our region is not ready to pursue this but mandates seem to be the most effective in increasing vaccine rates (to my knowledge).”
- “National school mandates.”

**Pre-meeting survey revealed a high level of interest in improving HPV vaccination with rural communities now and into the future.**

A rural landscape with cows in a field under a blue sky. The scene is captured in a wide-angle shot, showing a grassy field with several cows resting. In the background, there are trees and a clear blue sky. The overall tone is bright and natural.



# The State of HPV Cancer Prevention in Rural America



# Ignite-style Talks on Rural HPV Cancer Prevention



**Marvella E. Ford, PhD**  
Medical University of South Carolina  
and Hollings Cancer Center



**Whitney Zahnd, PhD**  
University of Iowa and  
Holden Comprehensive Cancer Center



**Cassandra (Sandy) Pingali, MPH, MS**  
Centers for Disease Control and  
Prevention



**Caryn E. Peterson, MS, PhD**  
University of Illinois Chicago



**Scherezade (Scher) K. Mama, DrPH**  
The University of Texas MD Anderson  
Cancer Center



**Deanna Kepka, PhD, MPH**  
University of Utah and  
Huntsman Cancer Institute

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## Creative Ways to Improve Rural HPV Vaccination:

### The MUSC Hollings Cancer Center HPV Vaccination Van Program

Marvella E. Ford, Ph.D.

Professor, Department of Public Health Sciences

Associate Director, Population Sciences and  
Cancer Disparities, Hollings Cancer Center,  
Medical University of South Carolina

SmartState Endowed Chair, South Carolina State  
University



**HPV Cancer  
Prevention  
Program**





## **MUSC Hollings Cancer Center HPV Vaccination Van Program**

Marvella E. Ford, Ph.D.

Professor, Department of Public Health Sciences

Associate Director, Population Sciences and Cancer Disparities, Hollings  
Cancer Center, Medical University of South Carolina

SmartState Endowed Chair, South Carolina State University



Hollings Cancer Center

An NCI-Designated Cancer Center

# MUSC Hollings HPV Vaccination Van (“HPV Vax Van”) Program Team

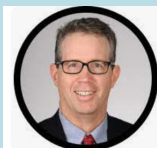
## Leadership



**Raymond N. DuBois, M.D., Ph.D.**  
Director, Hollings Cancer Center



**Marvella E. Ford, Ph.D.**  
**COE Director** and Associate Director of  
Population Sciences



**James R. Roberts, M.D.**  
Professor, Department of Pediatrics and  
Medical Director, Hollings Cancer Center  
HPV Vax Van Program

## Staff



**Melanie Slan, MLIS**  
NCI National Outreach Network  
Community Health Educator



**Joan McLauren**  
HPV Educator



**Mina Platt, LPN**  
Vaccine Administrator

## Support



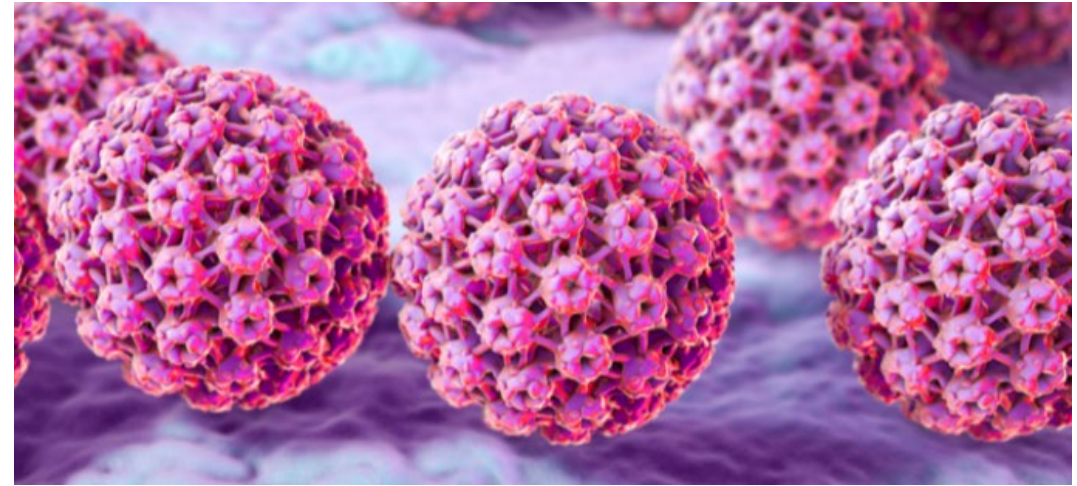
**Willette Burnham-Williams, Ph.D.**  
MUSC Chief Equity Officer  
*Advisor*



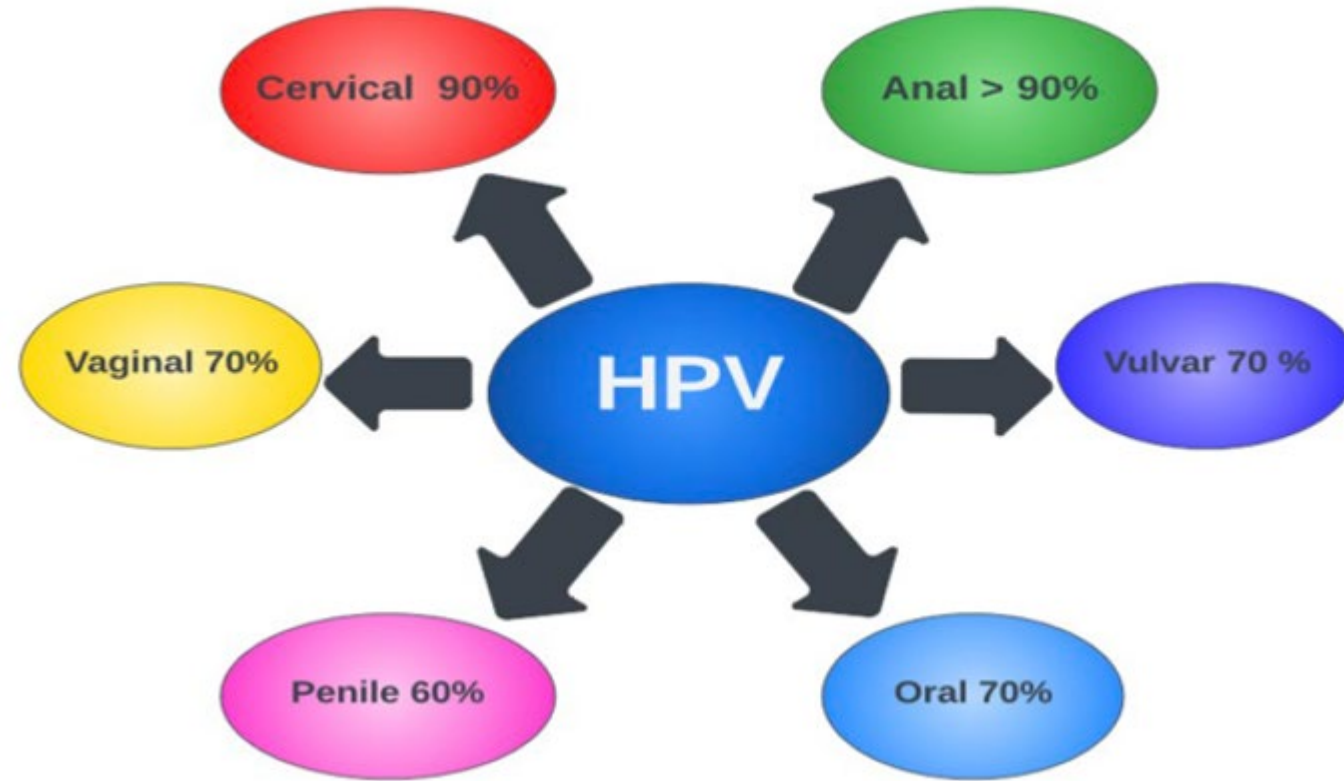
**Leslie Cantu**  
Hollings Manager, Strategic  
Communications  
*COE liaison*

# HPV Infections in the US and South Carolina

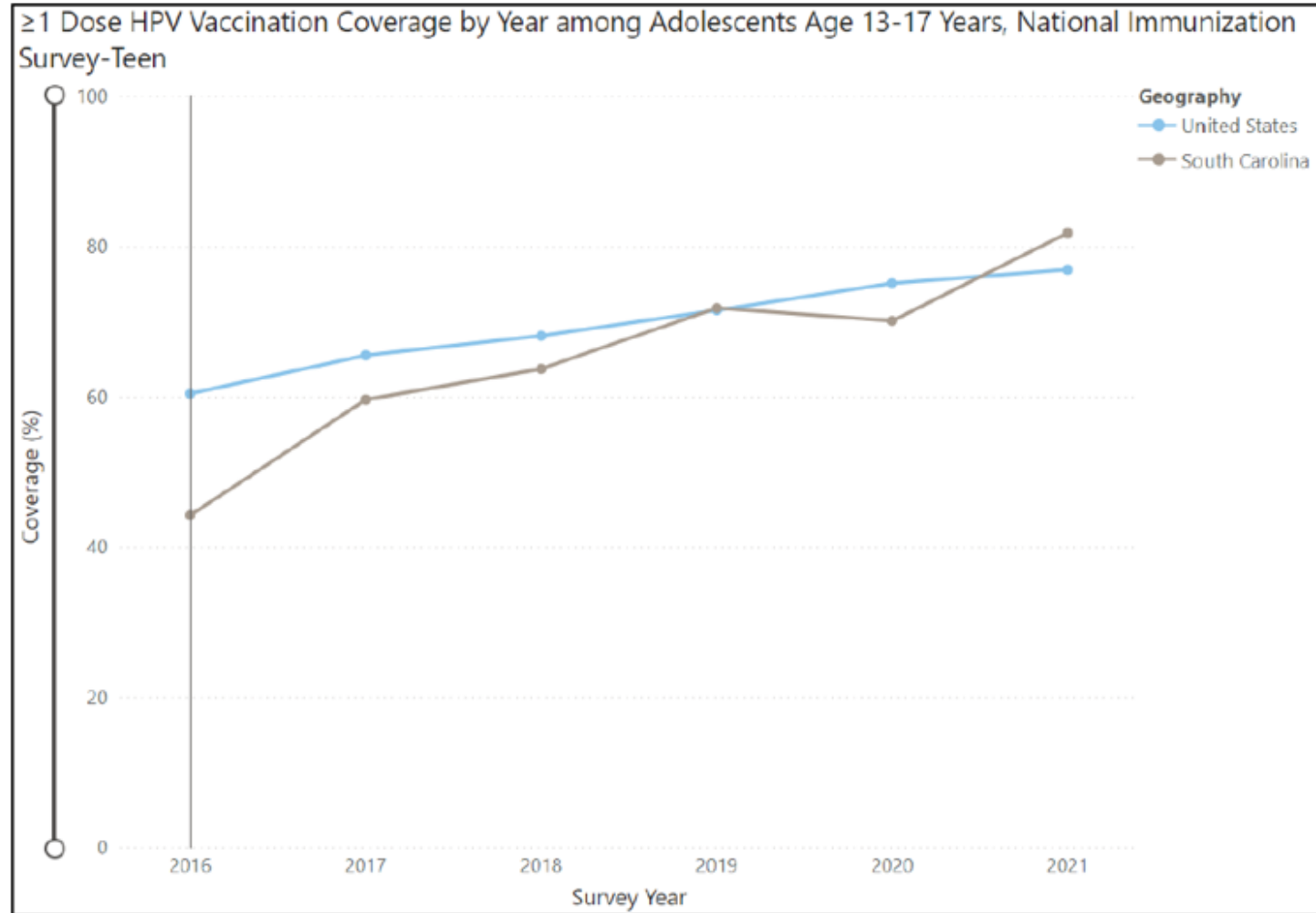
- HPV infection is linked to six different types of cancer
- Every year, HPV is estimated to cause ~35,900 of the 45,300 new cases of HPV-associated cancer found in women and men
- **In South Carolina, more than 580 new cases of HPV-related cancers are diagnosed each year**



# HPV Infection as a Causative Agent of Multiple Types of Cancers



# HPV Vaccination Rates in the United States and in South Carolina



# The MUSC Hollings Cancer Center HPV Vax Van Program: Rationale

- While SC is making progress in increasing our HPV vaccination rates, there is still room for improvement.
- HPV vaccination rates in SC vary dramatically by demographic subgroup.
  - Black and Latinx women have higher rates of HPV-associated cervical cancer than women of other races and non-Hispanic women.
- The lowest HPV vaccination rates are among:
  - Boys
  - People living in poverty
  - People in rural areas
  - Whites vs. Blacks and Latinx communities.





# The MUSC Hollings Cancer Center HPV Vax Van Program: Mission

To improve access to HPV vaccinations to prevent six cancer types and to deliver cancer control services throughout the state, with a concentrated focus among medically underserved areas in the HCC catchment area by:

- › Delivering cancer control services (CCS) to residents in rural areas and those with health care professional shortages.
- › Providing evidence-based education about guidelines for early detection and cancer control behaviors.



# MUSC HCC Mobile Vax Van Program

HPV Education and  
Vaccination  
(Ages 9-45)



## Community partners:

- South Carolina Dept. of Health and Environmental Control
- School districts
- Health fairs
- Faith-based settings
- Facilitate Town Hall meetings
- Work with Catchment Area Committee to target areas of greatest need



# MUSC HCC Mobile Vax Van Program – Healthy Me/Healthy SC Partnership



Mina Platt, HCC COE LPN, administers the HPV vaccine at a drive-through health fair in Blackville, SC



# The MUSC Hollings Cancer Center HPV Vax Van Program – HPV Vaccination Town Hall Meetings with School Districts



## VIRTUAL TOWN HALL FEBRUARY 21 2022

6:00pm-7:00pm

Don't miss this opportunity.

- ✓ Join us to learn more about the importance of the HPV vaccine and how it can prevent cancer later in life.
- ✓ You will be able to ask questions from medical experts about HPV infection and its impact.
- ✓ Panel of Medical Experts from Medical University of South Carolina-Hollings Cancer Center, University of South Carolina & Local Providers.
- ✓ Personal Testimonies from a special student and parent.



Event will be **live** on all [middle schools Facebook pages](#) or on FIT2getherCCSD's YouTube.

**TUNE IN...JOIN IN**

Join us to hear about:  
**HPV Vaccine and  
Cancer Prevention  
for Your Child**

Info MUSC Vaccine  
Mobile Van

Cherokee County  
Vaccination Rates

Get the Facts on  
the HPV Vaccine  
for Adolescents

Personal Journey  
with HPV Infection

CHEROKEE CO.  
SCHOOL DISTRICT  
141 Twin Lake Road  
Gaffney, SC 29341

For More Information:  
864-206-2249



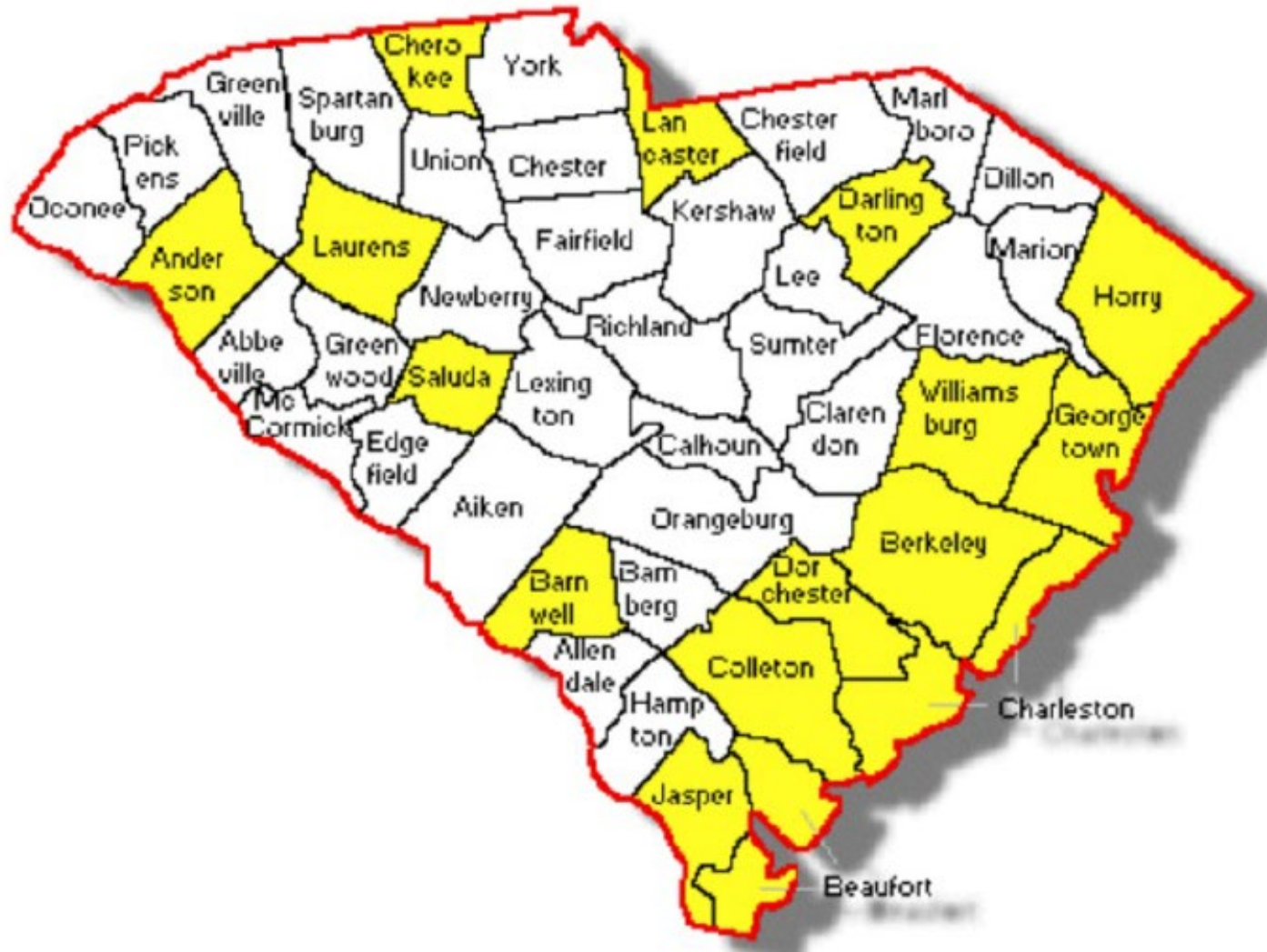
# HPV Vaccination Town Hall Meeting – Cherokee County School District

## HPV Vaccination Town Hall Social Media Analytic Data

- Gaffney Middle FB- 238 views
- Ewing Middle FB - 96 views
- Blacksburg Middle FB - 151 views and 3 shares
- FIT2gether FB - 36 views
- FIT2gether YouTube - 23 views
- Totals - 544 views as of 2-23-2022



## South Carolina Counties Served by the HPV Vaccination Van Program (N=16/46 to Date)



# Sociodemographic Characteristics of the HPV Vaccination Van Program Participants, Overall and by Receipt of Routine Childhood Vaccinations (N=521)

	Participants receiving routine childhood vaccinations (n=299), n (%)	Participants receiving routine childhood vaccinations including the HPV vaccine (n=222), n (%)	Total (n=521) n (%)	p-value
<b>Gender</b>				
Female	170 (56.9)	126 (56.8)	296 (56.8)	0.982
Male	129 (43.1)	96 (43.2)	225 (43.2)	
<b>Age group (years)</b>				
4-18	258 (86.3)	212 (95.5)	470 (90.2)	<0.001
19-24	0 (0)	1 (0.5)	1 (0.2)	
25-34	4 (1.3)	1 (0.5)	5 (1.0)	
35-44	4 (1.3)	7 (3.2)	11 (2.1)	
45-64	18 (6.0)	1 (0.5)	19 (3.6)	
64-81	15 (5.0)	0 (0)	15 (2.9)	
<b>Race/Ethnicity<sup>a</sup></b>				
American Indian	1 (0.3)	0 (0)	1 (0.2)	0.028
Asian	5 (1.7)	3 (1.4)	8 (1.6)	
Black	128 (44.0)	62 (29.4)	190 (37.8)	
Hispanic	40 (13.7)	35 (16.6)	75 (14.9)	
Multiracial	11 (3.8)	7 (3.3)	18 (3.6)	
White	104 (35.7)	99 (46.9)	203 (40.4)	
Other race/ethnicity	1 (0.3)	1 (0.5)	2 (0.4)	
Other (Arab)	0 (0)	2 (0.9)	2 (0.4)	
Other (Middle Eastern)	0 (0)	1 (0.5)	1 (0.2)	
Not listed	1 (0.3)	1 (0.5)	2 (0.2)	
<b>Insurance status</b>				
Private	58 (19.4)	47 (21.2)	105 (20.2)	0.053
Medicaid & Private	1 (0.3)	0 (0)	1 (0.2)	
Medicaid	145 (48.5)	114 (51.4)	259 (49.7)	
Medicare	10 (3.3)	0 (0)	10 (1.9)	
None	85 (28.4)	61 (27.5)	146 (28.0)	

<sup>a</sup> Information on race/ethnicity is missing for 19 participants (8 who received routine childhood vaccinations, and 11 who received childhood vaccinations including the HPV vaccine).

# First-Year Program Summary

- Partnerships with state school districts have been invaluable.
- Most of the participants are insured by Medicaid.
- The HPV recipients are representative of South Carolina's sociodemographic characteristics.
- The COVID-19 pandemic limited the number of vaccination events at the schools.
- Moving forward, the Program staff will build on and expand the relationships with the state school districts to increase the number of HPV vaccines delivered each year.



# Questions



**Hollings Cancer Center Visit from First Lady Dr. Jill Biden – October 25, 2021**



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# HPV Cancers in Rural Communities

Whitney Zahnd, PhD

Assistant Professor, Department of Health  
Management and Policy

University of Iowa



**HPV Cancer  
Prevention  
Program**



College of Public Health

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# HPV Cancers in Rural Communities

**Whitney E. Zahnd, PhD**

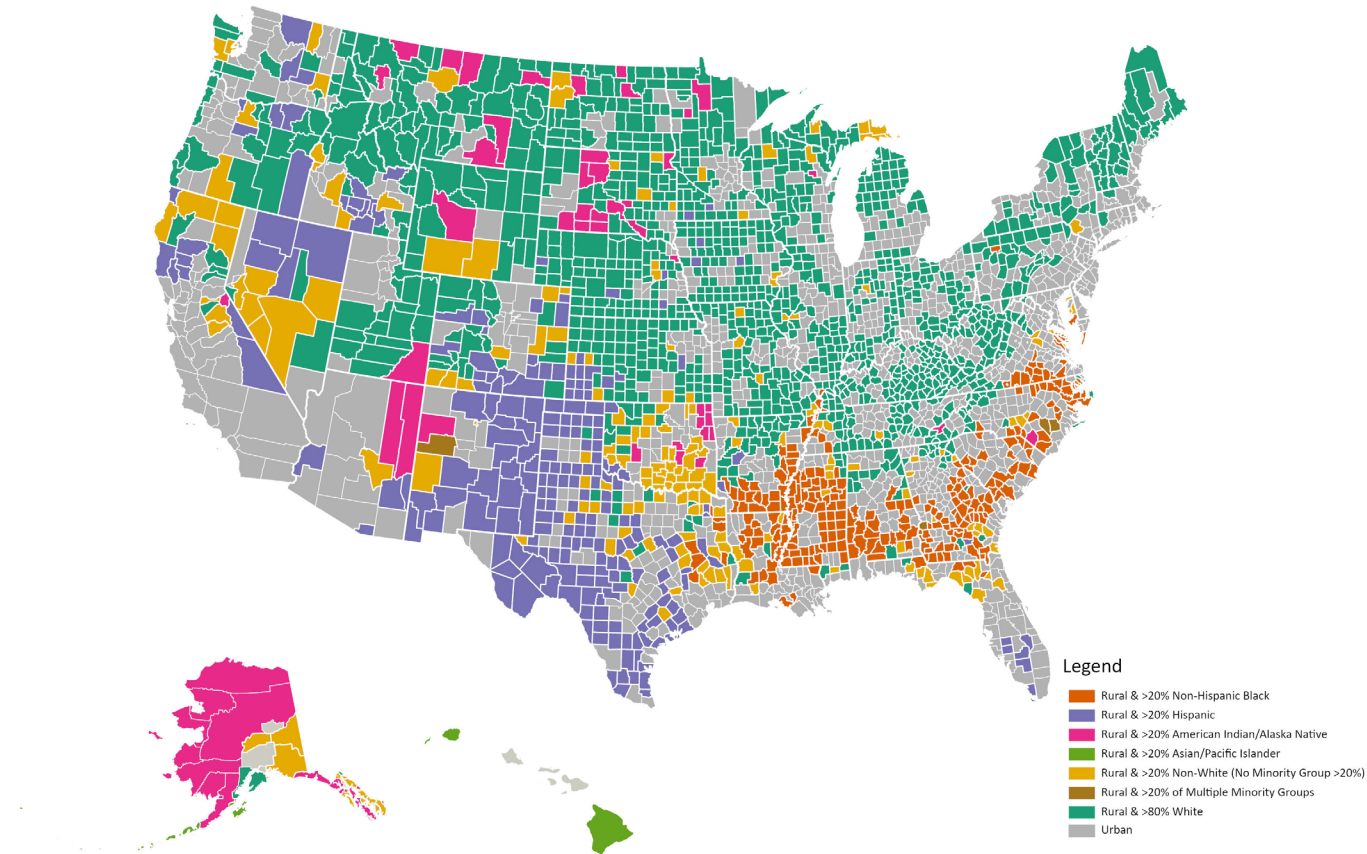
**Assistant Professor**

**Department of Health Management and Policy**

**Advancing Cancer and Rural Equity (ACRE) Lab**

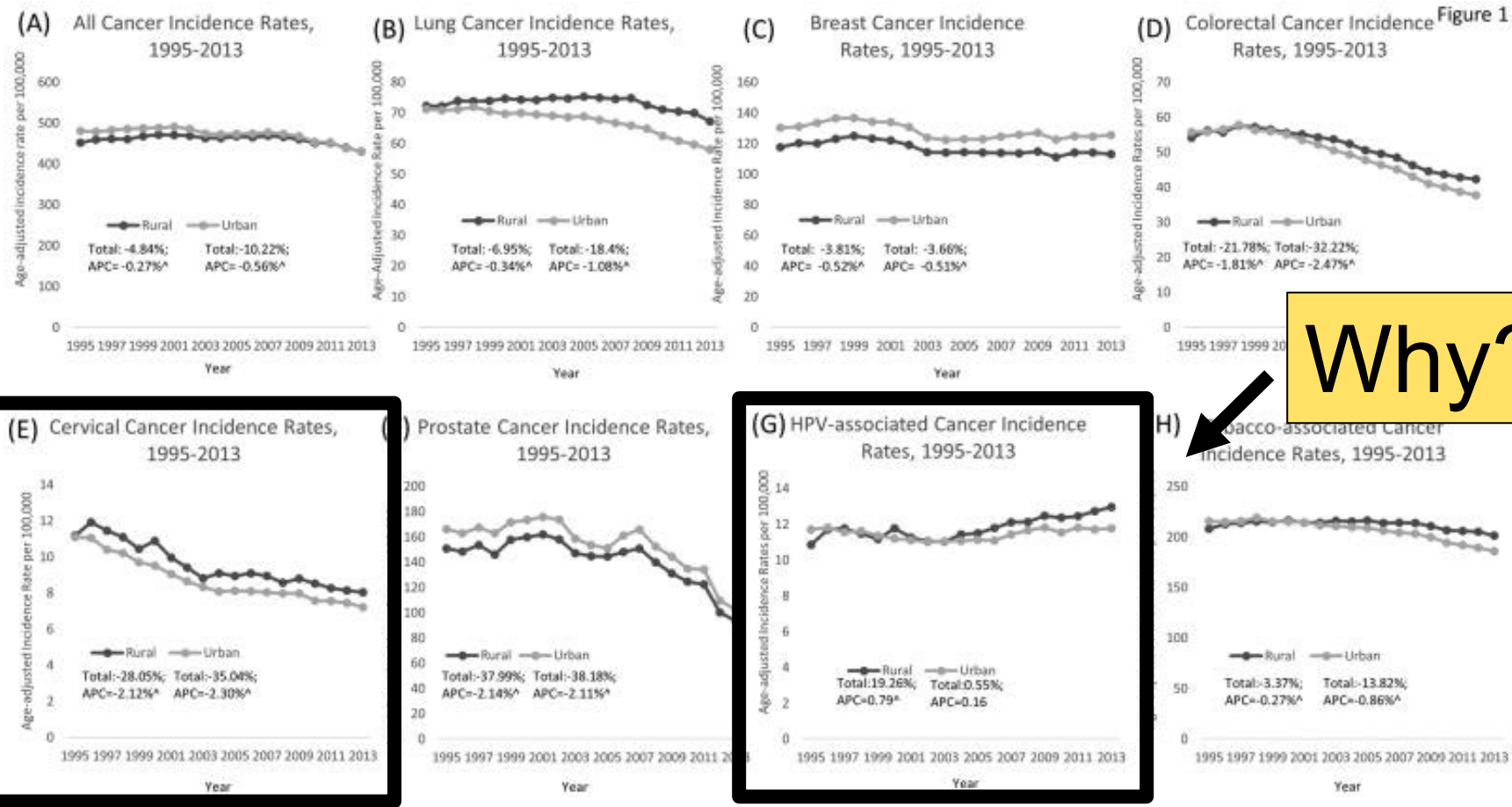
St. Jude Rural HPV Vaccination Introductory Meeting

# Who and where is rural?



Source: Zahnd et al, 2021. *IJERPH*.

# HPV-Associated Cancer Trends



Why?

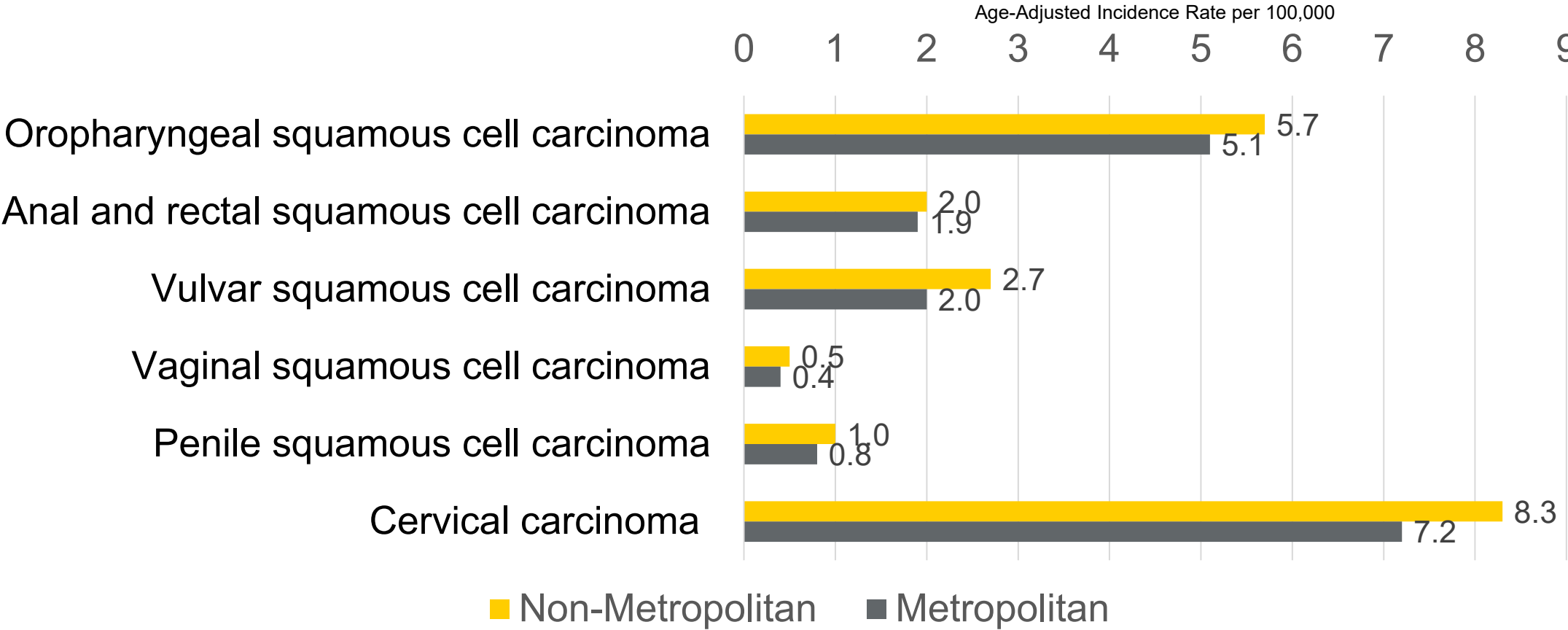
# HPV-Associated Cancer Inequities

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→ HPV-Associated Cancer Incidence Trends by Sex between 1995 and 2013

- Rural Men (90.9% increase)
- Urban Men (46.2% increase)
- Rural Women (3.5% decrease)
- Urban Women (16.8% decrease)

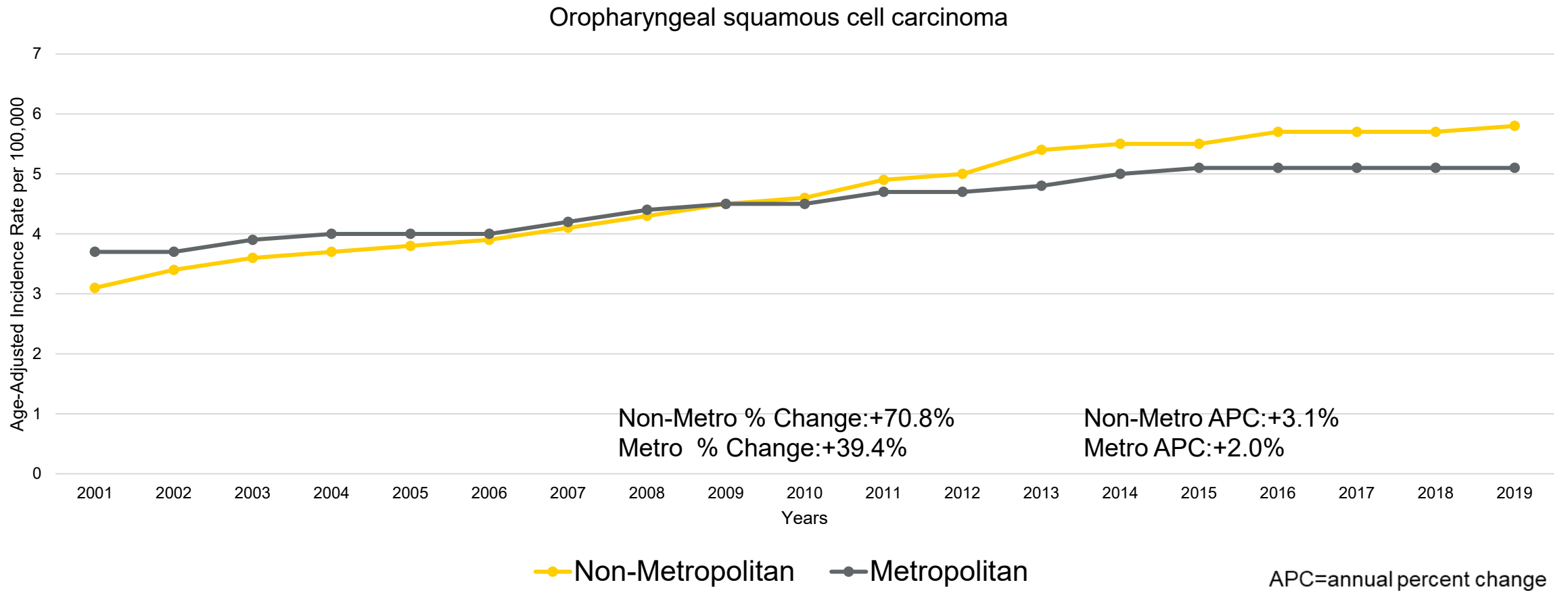
# HPV-Associated Cancers, 2015-2019



Preliminary Analysis of U.S. Cancer Statistics Public Use Database Data

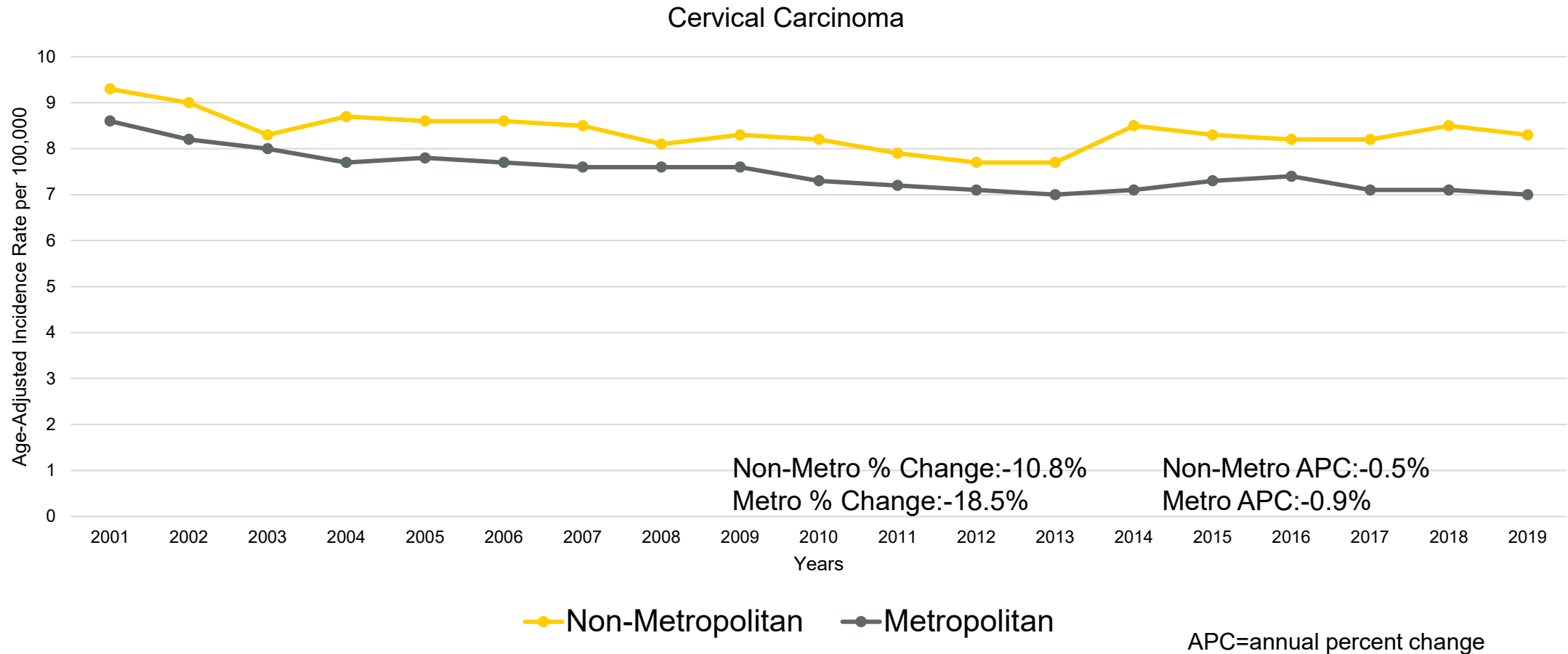


# Trends in HPV-Associated Oropharyngeal Cancer Rates, 2000-2019





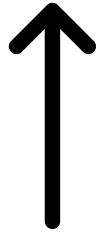
# Trends in HPV-Associated Cervical Cancer Rates, 2000-2019



Preliminary Analysis of U.S. Cancer Statistics Public Use Database Data

# Key Takeaways

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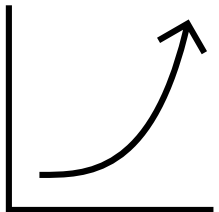
HPV-associated cancers are elevated in non-metropolitan areas

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Improvements are slower for cervical cancer incidence in non-metropolitan areas

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Accelerations in oropharyngeal cancer incidence are faster in non-metropolitan areas

# Important Questions and Action Steps

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How can we improve inequities in rural HPV-associated cancer rates—particularly among men?

How can we target our interventions and policies—at all levels—to address the nuances in these rate trajectories?

What can we learn from the challenges and successes of COVID-19 vaccination?

**IOWA**

College of Public Health

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**Thank you!**

[whitney-zahnd@uiowa.edu](mailto:whitney-zahnd@uiowa.edu)



[@whitneyzahnd](https://twitter.com/whitneyzahnd)

[@\\_ACRELab](https://twitter.com/_ACRELab)

# Rural HPV Vaccination Coverage

Cassandra (Sandy) Pingali, MPH, MS

Epidemiologist

National Center for Immunizations and Respiratory  
Diseases (NCIRD)

Centers for Disease Control and Prevention (CDC)



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## Rural HPV Vaccination Coverage, National Immunization Survey-Teen, 2021

**Cassandra Pingali, MPH, MS**  
Epidemiologist  
SEB, NCIRD, CDC  
[ncu9@cdc.gov](mailto:ncu9@cdc.gov)



St. Jude Rural HPV Vaccination Introductory Meeting  
January 23, 2022

# What is the National Immunization Survey-Teen (NIS-Teen)?



## Purpose

- Estimate vaccination coverage among teens in the United States

## Strengths

- Coverage estimates are comparable across states and time
- Used to identify pockets of need and vaccine inequity

# How does NIS-Teen gather data?

## First Phase

RDD telephone survey of parents with teens 13-17 years

- Socio-demographics
- Health insurance status
- Consent for provider survey

## Second Phase

Mailed survey of identified vaccination provider(s)

- Types of vaccinations
- Number of doses
- Dates of administration
- Administrative data about the health care facility





# Which vaccines should adolescents receive?



## 11-12 years

- HPV vaccine
- MenACWY vaccine
- Tdap vaccine
- Influenza vaccine



## 13-18 years

- MenACWY booster at age 16 years
- MenB vaccine may be given at 16-18 years

## HPV Vaccine Schedule and Dosing

**Start Talking Early**  
Ages 9-10  
2 doses



**On Time**  
Ages 11-12  
2 doses



**Late**  
Ages 13-14  
2 doses



**Late**  
Ages 15-26  
3 doses



About 80% of people will get an HPV infection in their lifetime. Recommending HPV vaccination for all 11-12 year-olds can protect them long before they are ever exposed. CDC recommends two doses of HPV vaccine for all adolescents at age 11 or 12 years.

### HPV Vaccination Coverage Measures in NIS-Teen

- **HPV initiation**- those with  $\geq 1$  doses
- **HPV UTD**- those with  $\geq 3$  doses, and those with 2 doses when the first HPV vaccine dose was initiated at age  $< 15$  years and there was  $\geq 5$  months minus 4 days between the first and second dose

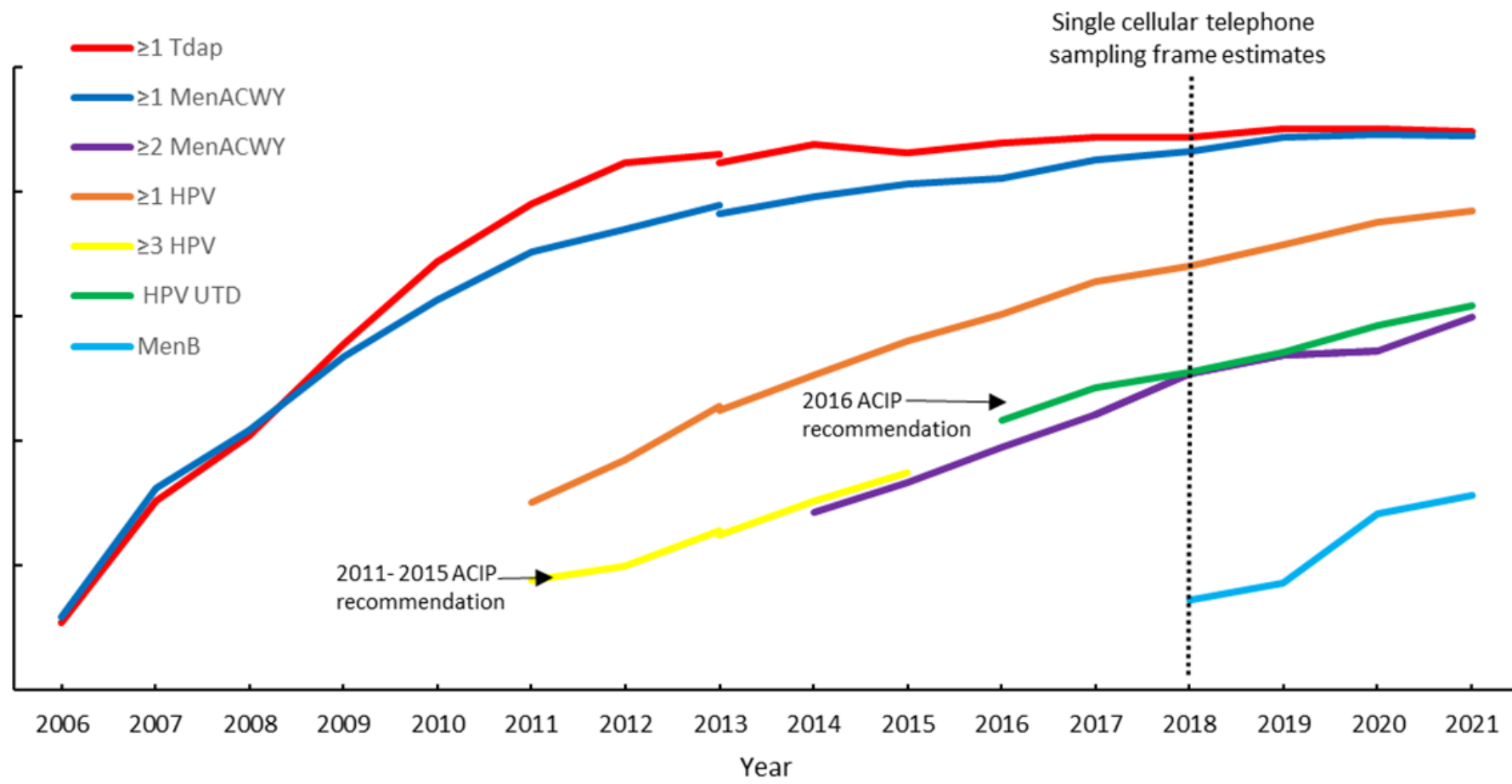
## Two Dose Schedule

- Initiate before 15<sup>th</sup> birthday
- Interval of 6-12 months between doses

## Three Dose Schedule

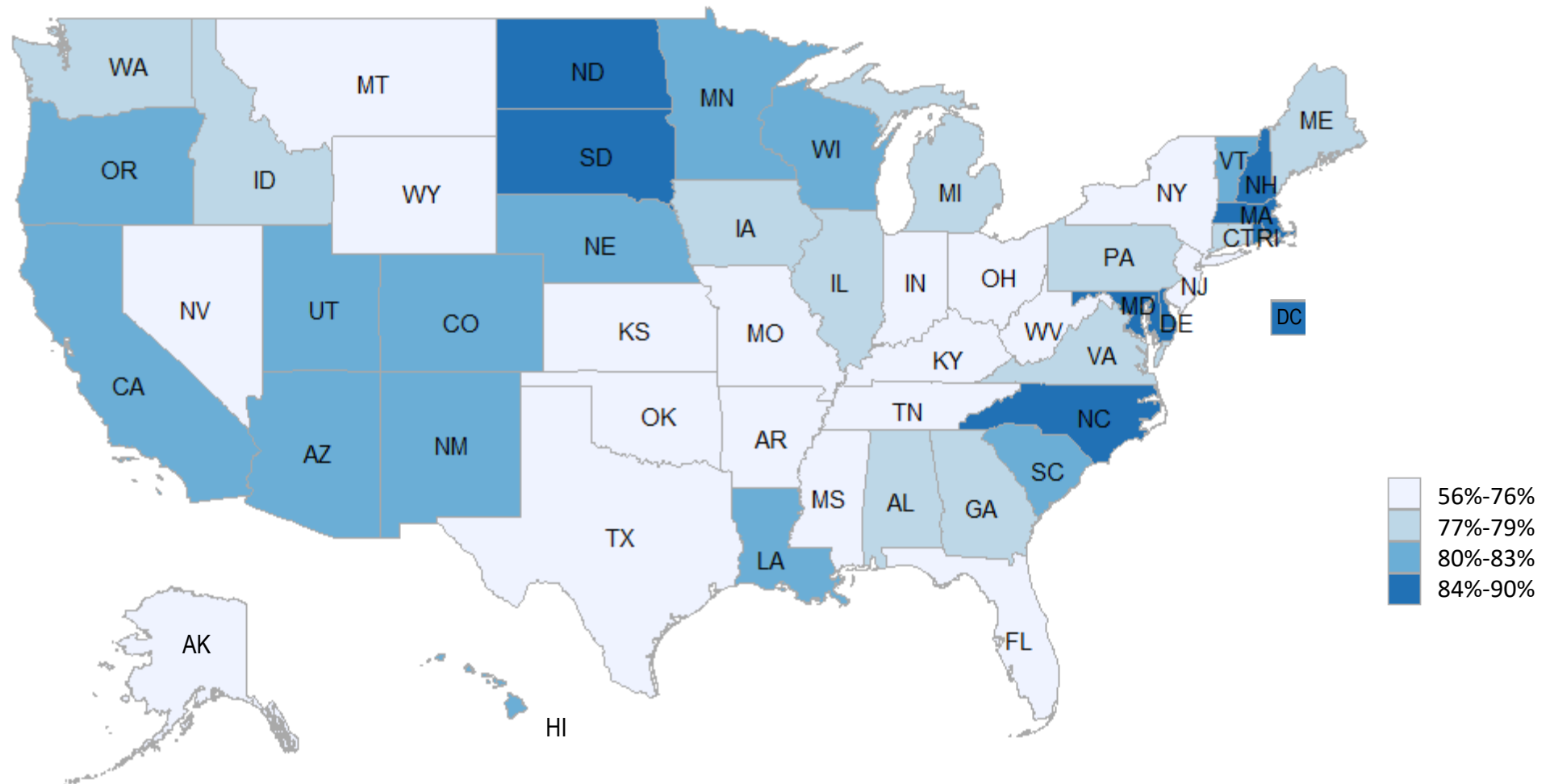
- Initiate on or after 15<sup>th</sup> birthday
- Those who received 2<sup>nd</sup> dose before 6-month interval

# HPV vaccination coverage is still lower than coverage for other routine adolescent vaccines

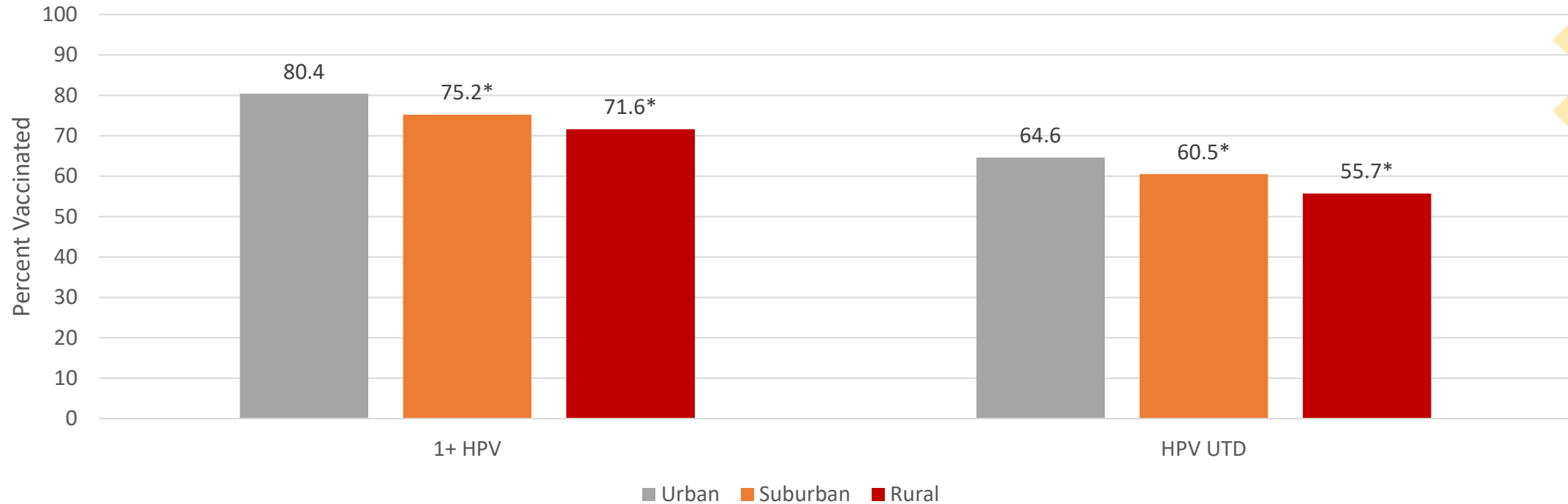


# HPV vaccination coverage varies widely by state

Estimated vaccination coverage with  $\geq 1$  dose of HPV among adolescents aged 13–17 years, NIS-Teen, 2021

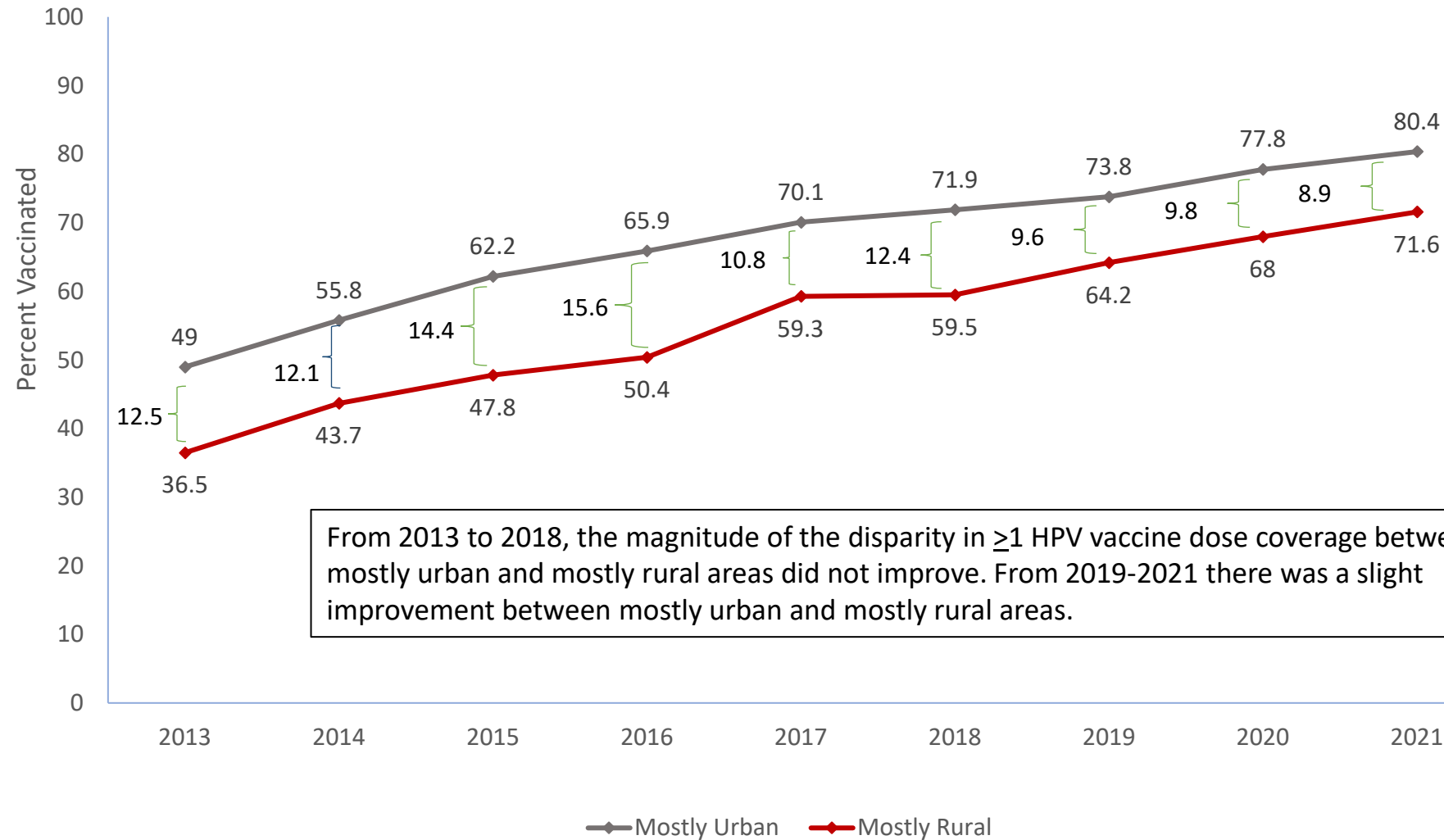


## In 2021, HPV vaccination coverage was lower in rural and suburban areas than urban areas

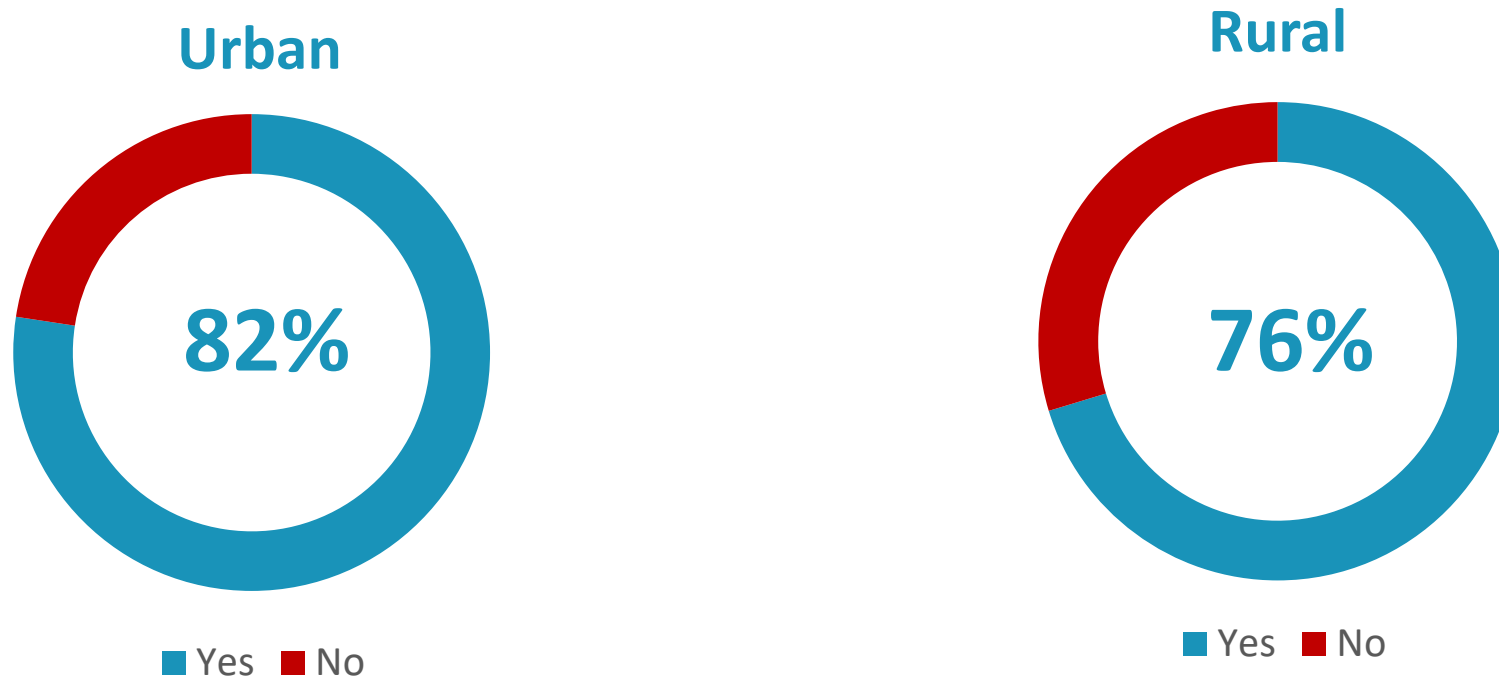


\*Statistically significant difference compared with adolescents living in urban areas (p<0.05).

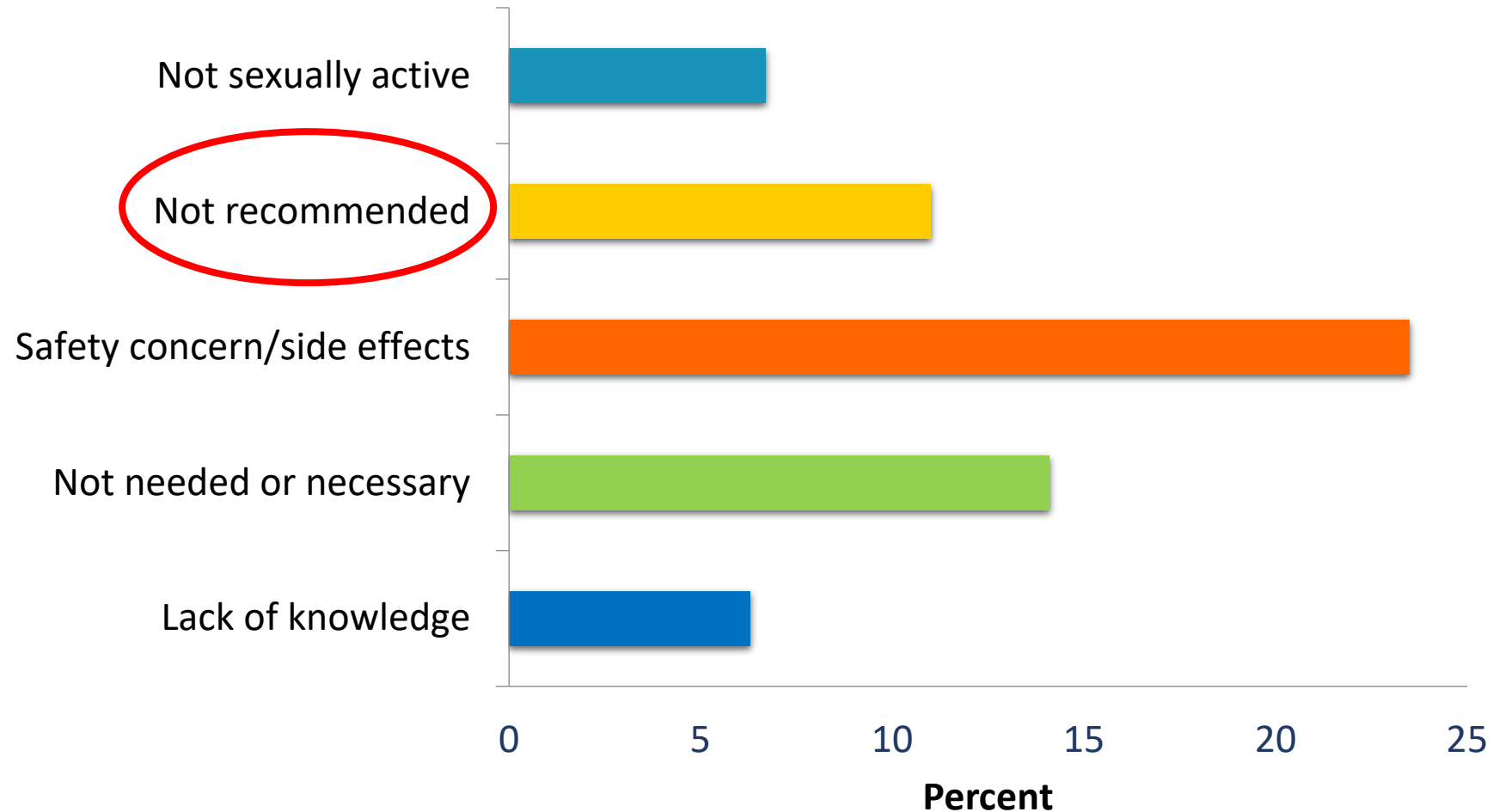
# ≥1 HPV vaccination coverage in rural areas has been consistently lower from 2013-2021



# Parents in urban areas were more likely than in rural areas to receive an HPV vaccination recommendation from their adolescent's provider

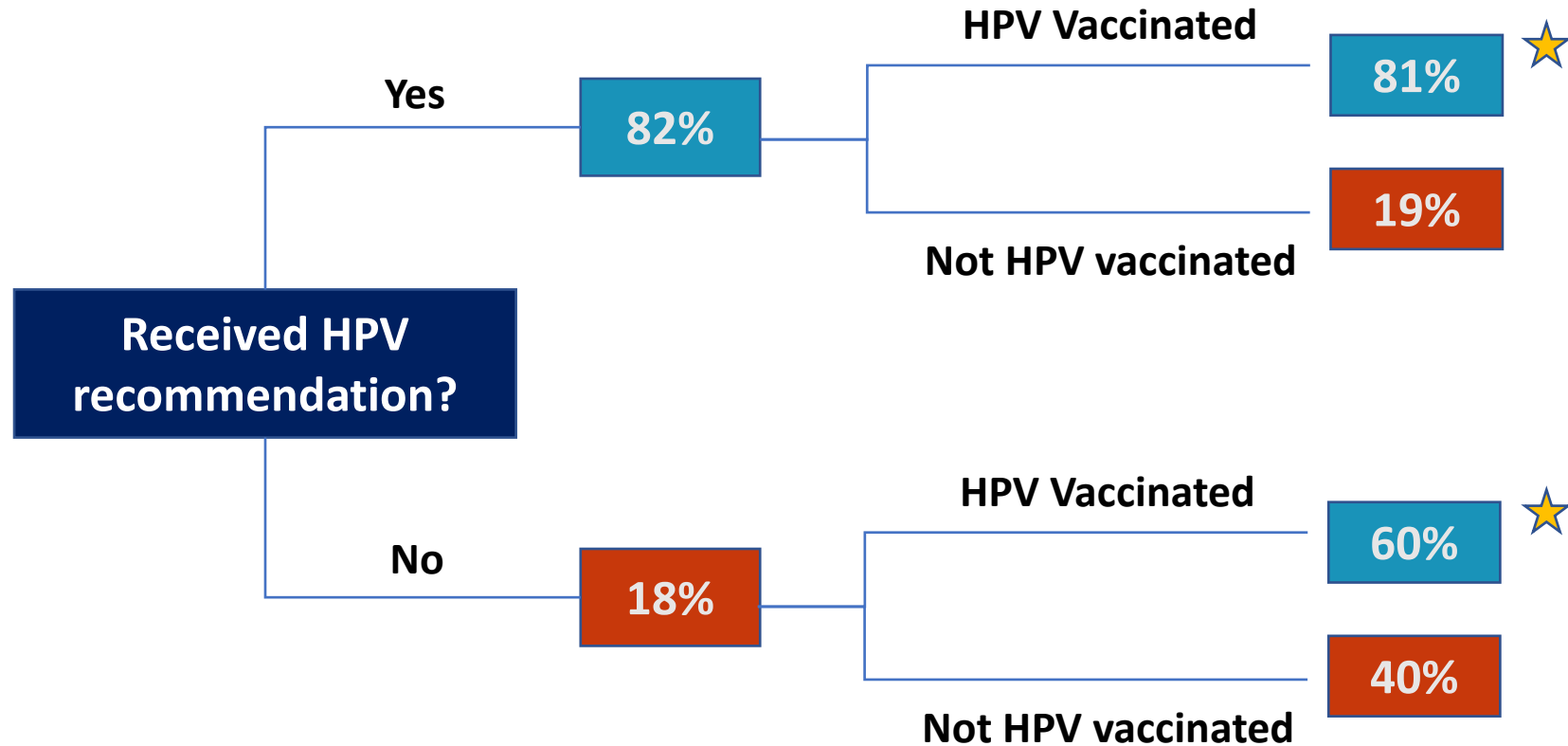


# Not receiving a provider recommendation is a top reason parents choose to not vaccinate for HPV





# HPV vaccination coverage is higher among those who received a recommendation





## How to close the gap?

**In rural areas, teens are less likely to be vaccinated for HPV and less likely to have received a provider recommendation for HPV vaccination**

- **Make an effective HPV vaccination recommendation**
- **Increase vaccine confidence by addressing parents' questions and concerns**
- **Develop communication strategies tailored to your community**

Thank you!  
ncu9@cdc.gov

For more information, contact CDC  
1-800-CDC-INFO (232-4636)  
TTY: 1-888-232-6348 [www.cdc.gov](http://www.cdc.gov)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



# Barriers and Facilitators to HPV Vaccination in Rural Communities

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Caryn E. Peterson, MS, PhD  
Research Assistant Professor, Epidemiology  
Co-director, UIC's Cancer Education and  
Career Development Programs  
Faculty Affiliate, UIC Center for Global Health



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# Barriers and Facilitators to HPV Vaccination in Rural Communities

Caryn E. Peterson, MS, PhD, Research Assistant Professor of Epidemiology

**EPIDEMIOLOGY  
AND BIostatISTICS  
SCHOOL OF  
PUBLIC HEALTH**



**Center for  
Global Health**

# The problem...

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Relatively low HPV vaccine initiation/completion among rural children & adolescents

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High rates of HPV-related cancers among rural adults

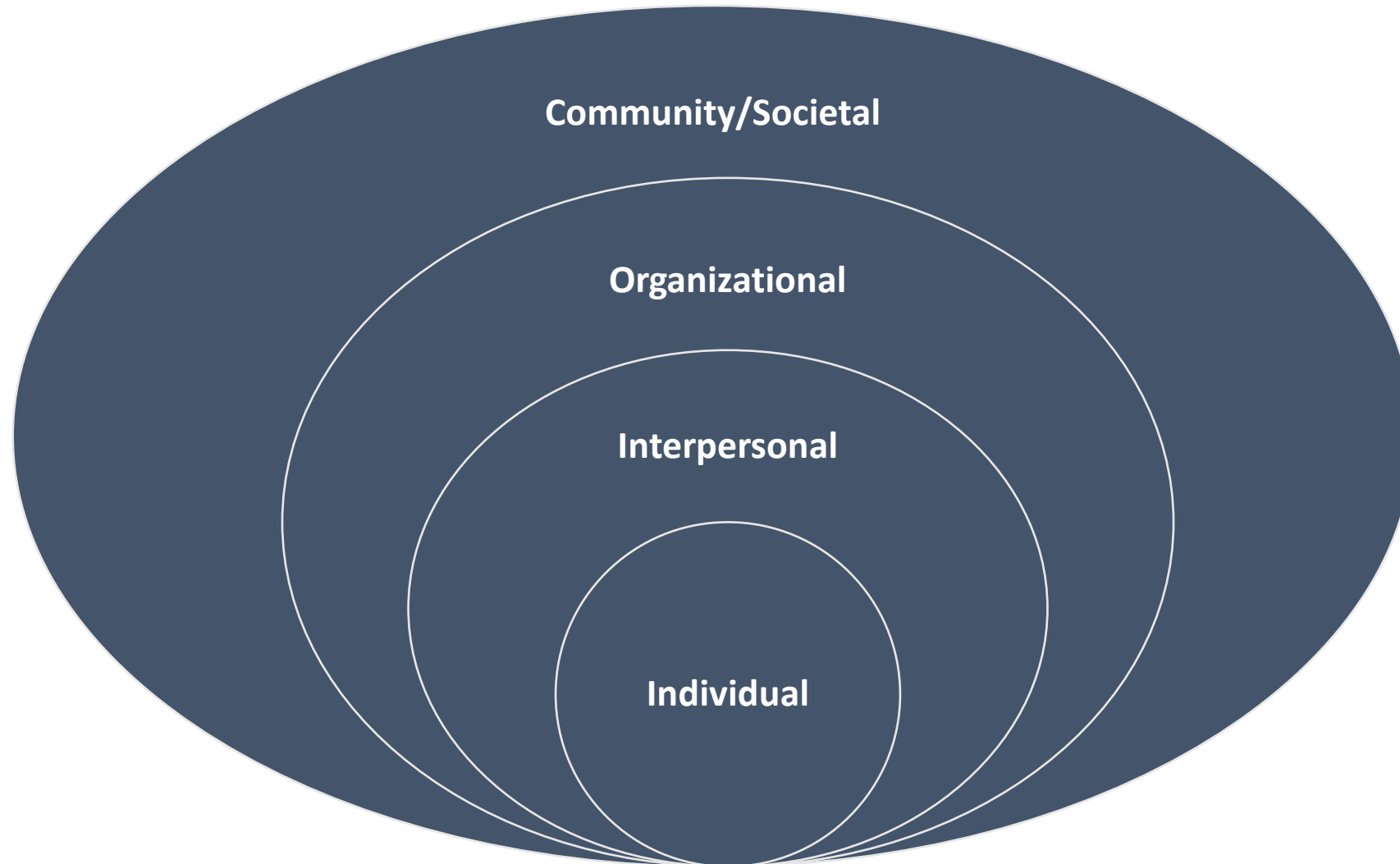
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“Awareness” of HPV promotes HPV vaccination

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Awareness declining and low among rural adults

# Multilevel Barriers & Facilitators



# Individual-level

## Key Barriers >>

- Older age of caregiver
- Caregivers' negative perceptions of vaccine
- Low awareness of risk

## Facilitators >>

- Older-age of vaccine recipient
- Acceptance/belief in other vaccines
- Caregivers' awareness of risk
- Knowledge of vaccine recommendations



# Interpersonal-level

Facilitators >>

- Strong patient-provider relationships
- Provider recommendation
- Parental & peer influence

# Organizational-level

Facilitators >>

- School-based programs to raise awareness & offer vaccine
  - Provider training
- School-generated reminders

# Community/Societal-level

Facilitators >>

-Social marketing campaigns to raise awareness

# Next steps...

## Interventions & policies that focus on facilitators while addressing barriers

### Identify “actionable” barriers & facilitators

Barriers

- Older age of caregiver
- Caregivers’ negative perceptions of HPV vaccine
- Low awareness of HPV risk

Facilitators

- Older-age of vaccine recipient
- Acceptance of & belief in other vaccines/childhood immunizations
- Caregivers’ awareness of HPV infection & HPV-related cancers
- Knowledge of vaccine recommendations
- Strong patient-provider relationships
- Provider recommendation
- Positive parental & peer influences
- School-based programs to raise awareness & offer HPV vaccination
- Provider training (current guidelines)
- School-generated reminders
- Social marketing campaigns to increase awareness of HPV risk & benefits of HPV vaccine



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# Engaging in Partnerships with Rural Communities

PATH →  
to prevention

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The University of Texas MD Anderson Cancer  
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**HPV Cancer  
Prevention  
Program**



# Engaging in Partnerships with Rural Communities

Scherezade K. Mama, DrPH

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*St. Jude Rural HPV Vaccination Introductory Meeting*

*January 23, 2023*

## Characteristics of rural communities

### Broader than a single definition

Best understood through the character and sense of community of the people who live there

### Face unique challenges related to health and health care access

- Accessibility to high-speed internet
- Driving distance
- Accessibility to community meeting spaces
- Accessibility to resources (e.g., health care, mental health services, dental, etc.)
- Educational attainment, poverty, and unemployment

## WHO LIVES IN RURAL COMMUNITIES?



FEMA guide to supporting engagement and resiliency in rural communities:  
[https://www.fema.gov/sites/default/files/documents/fema\\_rural-guide\\_jan-2021.pdf](https://www.fema.gov/sites/default/files/documents/fema_rural-guide_jan-2021.pdf)





## **Rural community partners are essential members of the team**

**There is no one-size-fits-all approach when working in rural communities**

**Community partnerships are key to success**

- Understand the rural community and its unique context
- Identify community leaders, elders, and knowledge holders
- Facilitate communication between providers, academic partners, other organizations and the community



# **Trust**



## Practical suggestion #1

Suggestion	Examples
<b>Build trust through listening and being credible and honest</b>	<ul style="list-style-type: none"><li>• Go on a listening tour – talk to as many people as you can, and when you’ve talked to one, ask them to connect you with another</li><li>• Meet people face-to-face at a coffee shop, library, or other community location</li><li>• Ask about community challenges and needs</li><li>• Seek out the bright spots – shine light on what makes the community resilient</li><li>• Be humble and consistent</li></ul>



## Practical suggestion #2

Suggestion	Examples
<b>Create time and space to develop an authentic relationship</b>	<p>Trust takes time – do not rush the process and plan ahead</p> <p>Show up several times and in multiple ways – small acts can have a big impact</p> <p>Say what you mean and mean what you say</p> <p>Address misperceptions upfront</p> <p>Be honest about what you can and cannot do or offer and the time commitment involved</p>



## Practical suggestion #3

Suggestion	Examples
<b>Bring in the language(s) of the community to build trust and open lines of communication for engagement</b>	<p>Show your deeper understanding of the community by using their language or idioms (e.g., “the knowledge of dirt,”) </p> <p>Discuss specific concerns of this community, not broadly</p> <p>Do not compare communities or cities – no two communities are the same</p> <p>Use simple and positive language</p>



## Practical suggestion #4

Suggestion	Examples
<b>Participate in community events – these are an opportunity to connect and engage</b>	<p>Show up early and often – Show your face/the face of your organization repeatedly</p> <p>Attend health fairs at churches, libraries or community centers – host a table or walk around and talk to other organizations</p> <p>Speak at local organizations, schools, churches, etc.</p> <p>Get involved with foundation-related events (e.g., Relay for Life)</p> <p>Don't show up empty handed – provide handouts, health assessments, small giveaways</p>



## Before engaging with the community, ask yourself the following

What are you asking of the community, and **what are you providing** to the community?

What **challenges** are preventing the community from doing what they want to address a given problem?

**Who are the experts** within the community, and can you partner with them?

What questions would the community have about you, your research team, or your organization?

How does your **identity and personal experience influence your work** in the community?

What is important to the people who live in this community? **What would they want to make sure is there for their children, their grandchildren, and their grandchildren's children?**

THE UNIVERSITY OF TEXAS  
MD Anderson  
~~Cancer~~ Center

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Making Cancer History<sup>®</sup>

PATH →  
to prevention

# Intervening to Improve HPV Vaccination with Rural Communities

Deanna Kepka, PhD, MPH  
Associate Professor  
College of Nursing and Huntsman Cancer Institute  
University of Utah



**HPV Cancer  
Prevention  
Program**





# Intervening to Improve HPV Vaccination with Rural Communities

Deanna Kepka, PhD, MPH  
Huntsman Cancer Institute  
University of Utah



## THE TEAM



**Deanna Kepka, PhD, MPH**

HPV Vaccination Investigator  
Huntsman Cancer Institute



**Kaila Christini, MsPH, MS**

Program Manager  
Huntsman Cancer Institute



**R. Neal Davis, MD**

Pediatrics  
Intermountain Healthcare

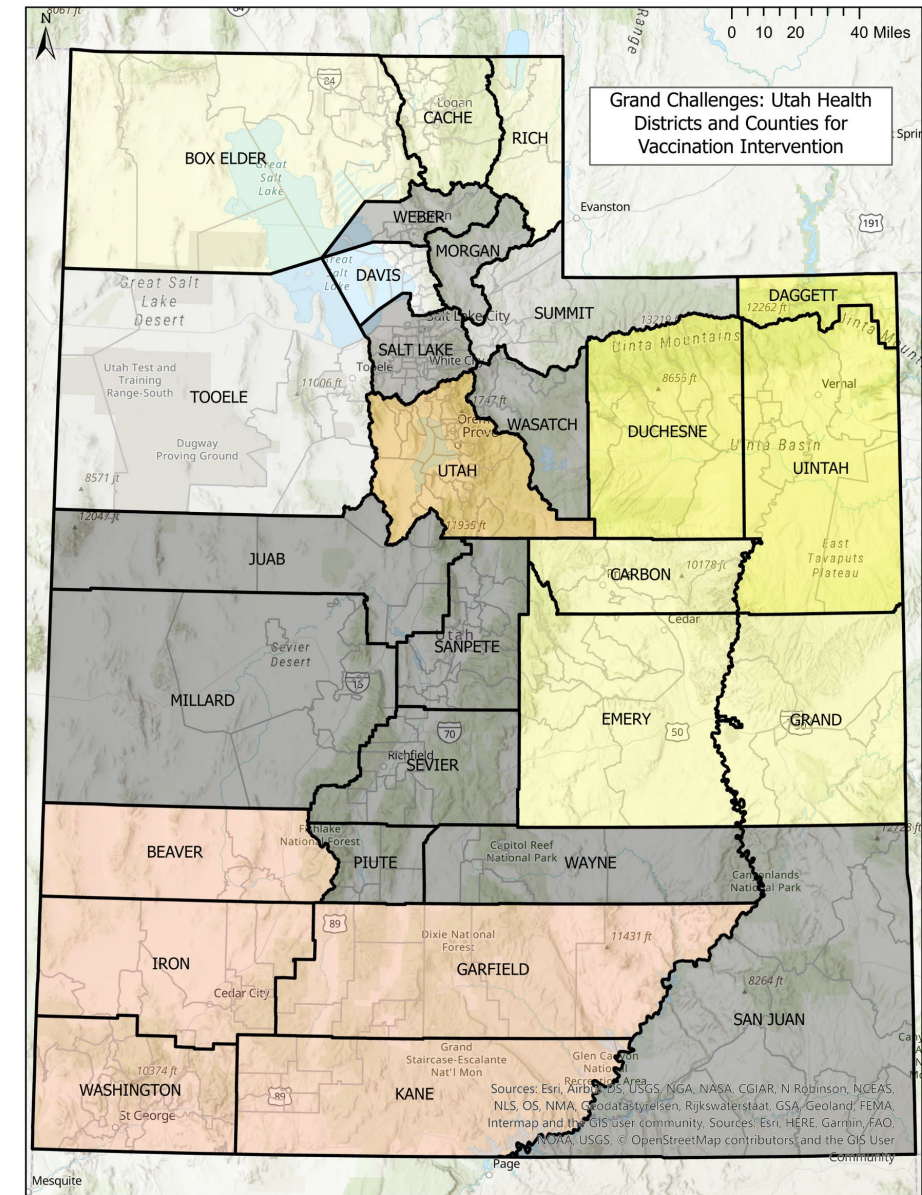


**Viliija N. Avizonis, MD**

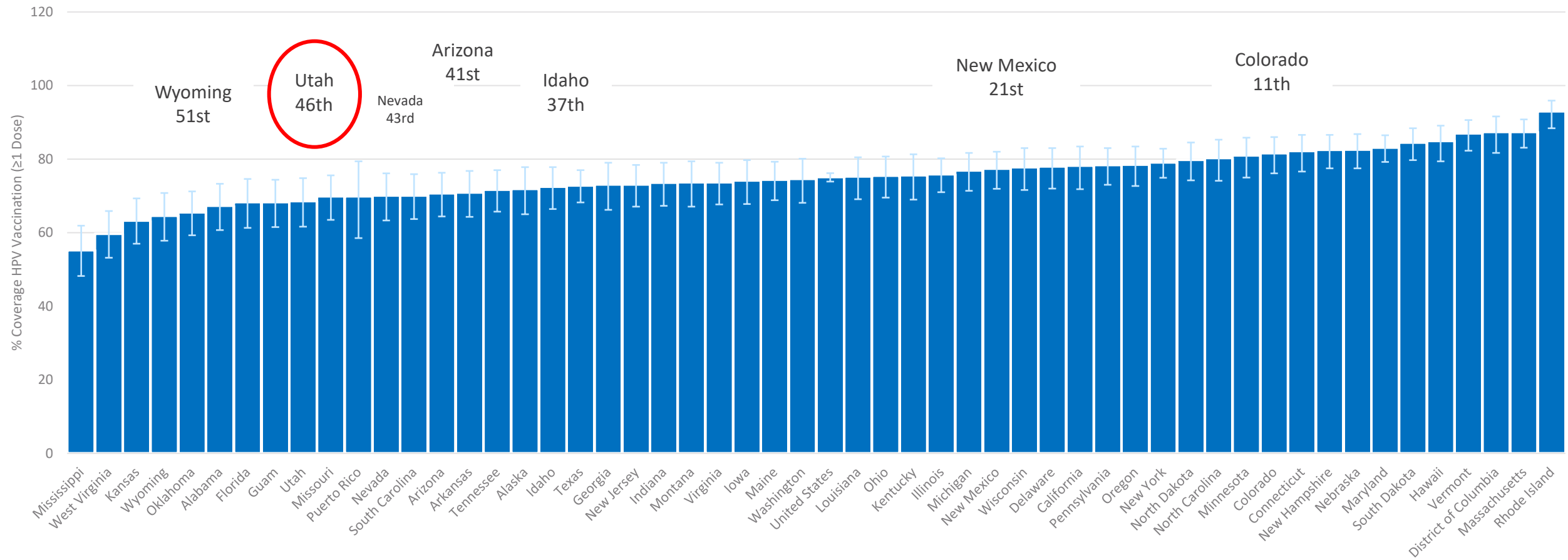
Radiation Oncology  
Intermountain Healthcare

# UTAH GRAND CHALLENGES - HUNTSMAN CANCER INSTITUTE

- **Goal - Accelerate HPV vaccination rates in rural populations**
- *Priority Regions: Utah County, Bear River, Southeast, Southwest, Tri-County*
- Tailored clinic-focused HPV vaccination intervention in primary care systems and clinics
- July 2021-June 2023
- **2-4 hours of training, ongoing mentorship, and tailored follow-up**
- Real-time HPV vaccination tracking within IHC system
- **Clinics receive** incentives for participants (gift cards, swag, incentives for children, etc.)

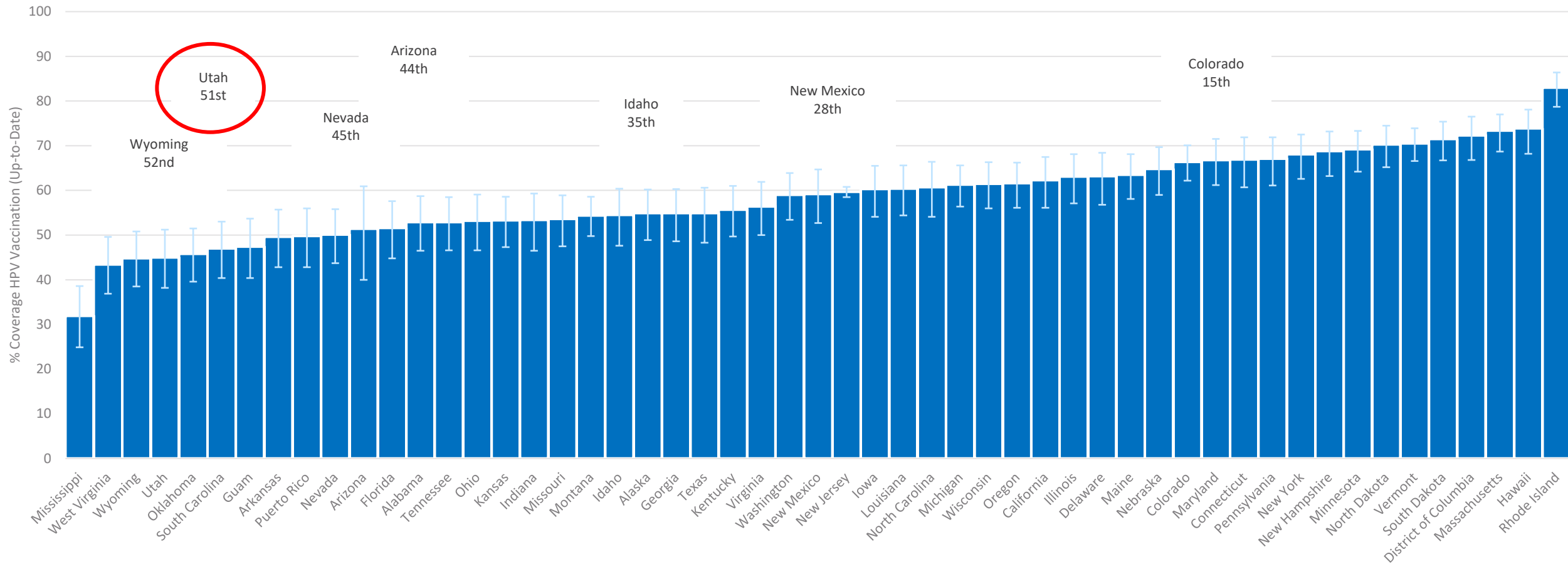


## HPV Vaccination Coverage $\geq 1$ Dose (%) for Males and Females, U.S. 2020



HPV vaccination coverage among teens in the U.S. by state, 2020. Vaccination percentages shown for males and females with 95% confidence intervals represent estimates of coverage for at least one dose HPV vaccination from the CDC's NIS-Teen vaccination survey conducted annually by random digit dialing among parents and caregivers of children age 13-17 years in 50 states, the District of Columbia, selected local areas, and U.S. territories.

# HPV Vaccination Coverage Up-to-Date (%) for Males and Females, U.S. 2020



HPV vaccination coverage among teens in the U.S. by state, 2020. Vaccination percentages shown for males and females with 95% confidence intervals represent estimates of coverage for up-to-date HPV vaccination from the CDC's NIS-Teen vaccination survey conducted annually by random digit dialing among parents and caregivers of children ages 13-17 years in 50 states, the District of Columbia, selected local areas, and U.S. territories.

# 2021 NIS-Teen Data: Hot off the PRESS

## ≥1 HPV Vaccination

		US	Utah	National Rank
2017	Male	62.6%	54.7%	43
	Female	68.6%	63.1%	37
	Both	65.5%	58.8%	41
2018	Male	66.3%	57.2%	42
	Female	69.9%	76.7%	12
	Both	68.1%	66.7%	30
2019	Male	69.8%	63.0%	41
	Female	73.2%	75.0%	18
	Both	71.5%	68.8%	33
2020	Male	73.1%	65.6%	45
	Female	77.1%	71.7%	39
	Both	75.1%	68.6%	43
2021	Male	75.4%	79.1%	22
	Female	78.5%	82.8%	15
	Both	76.9%	80.9%	19

## HPV Vaccination Up-To-Date

		US	Utah	Rank
2017	Male	44.3%	32.9%	44
	Female	53.1%	42.1%	37
	Both	48.6%	37.4%	46
2018	Male	48.7%	38.1%	44
	Female	53.7%	48.6%	39
	Both	51.1%	43.2%	41
2019	Male	51.8%	41.1%	45
	Female	56.8%	48.0%	45
	Both	54.2%	44.6%	45
2020	Male	56.0%	40.5%	47
	Female	61.4%	49.8%	44
	Both	58.6%	45.0%	47
2021	Male	59.8%	60.2%	27
	Female	63.8%	62.5%	36
	Both	61.7%	61.4%	33

## Here's a vaccine Utahns have heartily embraced

The Eagle Forum and some lawmakers initially scorned the HPV vaccine, but new data shows 81% of teens are getting the cancer-preventing shots



(Huntsman Cancer Institute) Deanna Kopka holds her son Jonah's hand while he gets the HPV vaccine.

By Sofia Jeremias | Nov. 4, 2022, 6:00 a.m.

*This story is part of The Salt Lake Tribune's ongoing commitment to identify solutions to Utah's biggest challenges through the work of the Innovation Lab.*

[[Subscribe to our newsletter here](#)]

When a child steps into Dr. Neal Davis' office, the patient's first question usually is:

"Do I have a shot today?"

Davis, a Murray pediatrician and a father, likes to reply:

In the News,  
November 4, 2022  
FRONT PAGE OF  
SALT LAKE TRIBUNE

# Rural differences

## HPV vaccination coverage

Vaccination coverage is consistently lower for rural areas

Vaccination Coverage among Adolescents Age 13-17 Years, Survey Years 2015-2019, Utah, National Immunization Survey-Teen





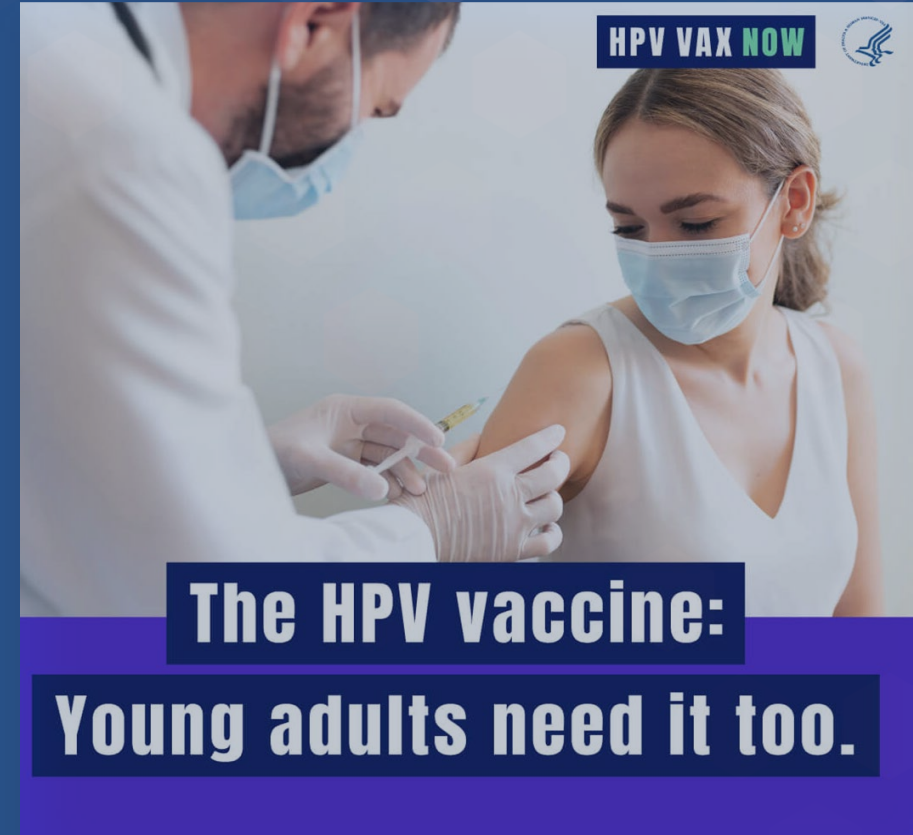
# Solutions Demonstrating Improvement

- **Start HPV Vaccine series at age 9**
- **Standing orders (Protocols)**
- **Provider reminder/recall (Advisories)**
- **Feedback to providers (Registries)**
- **Client reminder/recall (Work the list)**
- **Patient education**
- **Expand access (Immunization clinics, shot nurse/room, walk-in)**



# Implement Evidence-based strategies

- Increase access; Build clinic capacity
- Treat *EVERY* visit as a *VACCINATION* visit
- Prompts (for discussing the vaccine)
- Make an effective recommendation
- Track series completion and follow-up
- Measure and improve performance



# Messaging in Exam Rooms

- Immunization Schedule
- Non-Branded material for anyone to use



**Is your child up to date on immunizations?**

IMMUNIZATION SCHEDULE: BIRTH TO 21 YEARS

Age	Vaccine(s)
Birth	Hep B
2 Months	Hep B, DTaP, Polio, Hib, Prevnar, Rotavirus
4 Months	Hep B, DTaP, Polio, Hib, Prevnar, Rotavirus
6 Months	Hep B, DTaP, Polio, Hib, Prevnar, Rotavirus
12-15 Months	DTaP, Hib, MMR, Varicella, Hep A, Prevnar
18 Months	Hep A
4-6 Years	DTaP, Polio, MMR, Varicella
9-10 Years	HPV #1, (HPV # 2 is due anytime at least 6 months after HPV #1)
11-12 Years	Tdap, MenACWY, HPV #2 (if second dose has not already been given)
16 Years	MenACWY
19-20 Years	Tdap
Every year after 6 months of age: Influenza	
<a href="#">InsertYourURLHere.com</a> <span>CLICK TO INSERT LOGO</span>	

0421-SP9H-1026571

# HPV Vaccination Healthcare Team Training Program in the Era of COVID 19



# HPV Educational Training Modules

- Online independent study course for healthcare providers and their team members
  - Complete at any time throughout June 2022
- CME and partial CME credit offered
- Sections included:
  - The Journey of Two HPV-Cancer Survivors
  - Impact of the COVID-19 Pandemic on Vaccination
  - Education about Early Childhood HPV Vaccination
  - Strategies to Improve HPV Vaccination Rates within Clinical Practice
- Meet the presenters Q/A Sessions
- Follow-up course assessment focus groups



**Table 1a. Participants of an online HPV and HPV vaccination course characteristics, June 2022 (N=339)**

Characteristics	n	(%)
Registered	339	(100.0)
Completed Module 1 <sup>1</sup>	160	(47.2)
Completed Module 2 <sup>1</sup>	131	(38.6)
Completed Module 3 <sup>1</sup>	123	(36.3)
Completed Module 4 <sup>1</sup>	111	(32.7)
Completed Final Evaluation	101	(29.8)
Requested/Received CME Credit <sup>2</sup>	87	(25.7)
Employment Setting <sup>3</sup>		
Clinic, Primary Care, Hospital, Urgent Care	201	(40.0)
Health Department, Community Health, Public Health	104	(30.7)
<b>Rural Area</b>	<b>91</b>	<b>(26.8)</b>
Medically Underserved Community	71	(20.9)
School, K-12	15	(4.4)
Academic, University, Research, University Student	11	(3.2)
FQHC	4	(1.2)
Tribal Community	3	(0.9)
Insurance Industry	3	(0.9)

State	n	(%)
AZ	4	(1.3)
CA	3	(1.0)
CO	1	(0.3)
GA	2	(0.6)
IA	1	(0.3)
ID	5	(1.6)
IL	1	(0.3)
MI	2	(0.6)
NC	3	(1.0)
NH	1	(0.3)
NY	2	(0.6)
OH	5	(1.6)
OK	1	(0.3)
OR	9	(2.9)
Puerto Rico	1	(0.3)
TN	2	(0.6)
TX	1	(0.3)
UT	161	(51.3)
WA	108	(34.4)
WY	1	(0.3)

# Table. Participant evaluation of an online HPV and HPV vaccination course, June 2022 (N=339)

## Module 2<sup>4</sup>

	Mean <sup>1</sup>	(STD)	P-Value <sup>2</sup>
My ability to describe the impact COVID-19 has had on immunization rates, prior to the training	2.89	(1.11)	<.0001
Prior to the training			
After the training	4.38	(0.63)	
My ability to provide useful and compelling information about the HPV vaccine to parents to aid in making the decision to vaccinate			<.0001
Prior to the training	3.02	(1.12)	
After the training	4.41	(0.61)	
My knowledge of strategies to increase vaccination rates			<.0001
Prior to the training	3.02	(1.04)	
After the training	4.24	(0.67)	

# Mountain West HPV Vaccination Coalition

## Mission:

*“The Mountain West HPV Vaccination Coalition brings together immunization program representatives with cancer control, pediatric, and primary care specialists as well as parents and community members who share the common goal of improving human papillomavirus (HPV) vaccination rates in our region.”*





## Who we are:

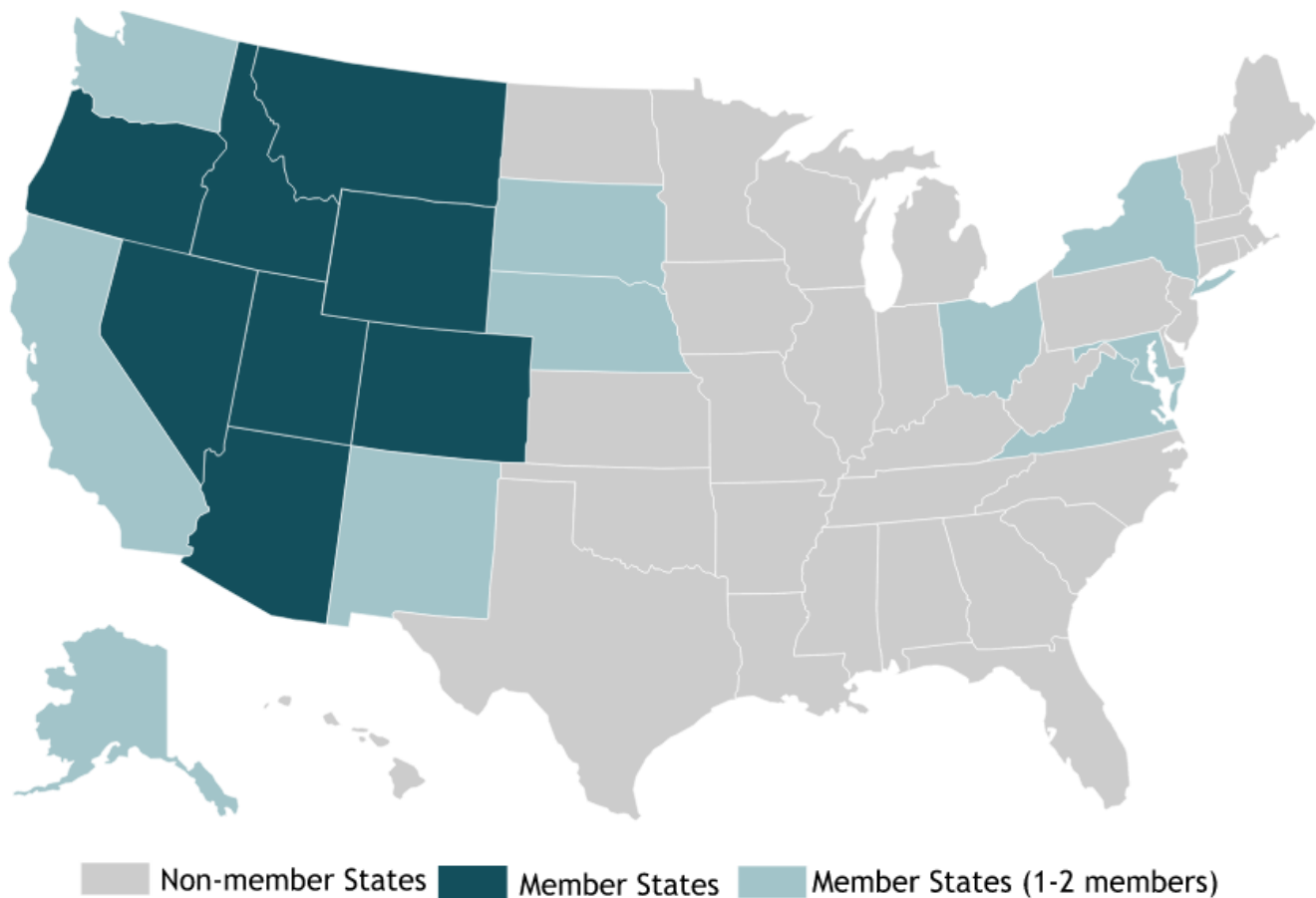
- 2014: Approximately 130 members (3 states)
- 2023: More than 410 members (18 states)



# Mountain West HPV Vaccination Coalition

## Reach

### Intermountain West HPV Vaccination Coalition Member States



MOUNTAIN WEST  
**HPV VACCINATION  
COALITION**



*Thank you*



MOUNTAIN WEST  
**HPV VACCINATION  
COALITION** 

UNIVERSITY OF UTAH  
**HUNTSMAN**  
CANCER INSTITUTE

Deanna Kepka, PhD, MPH  
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Office: 801.587.4565  
[deanna.kepka@hci.utah.edu](mailto:deanna.kepka@hci.utah.edu)



# Questions & Answers with Presenters

To participate:

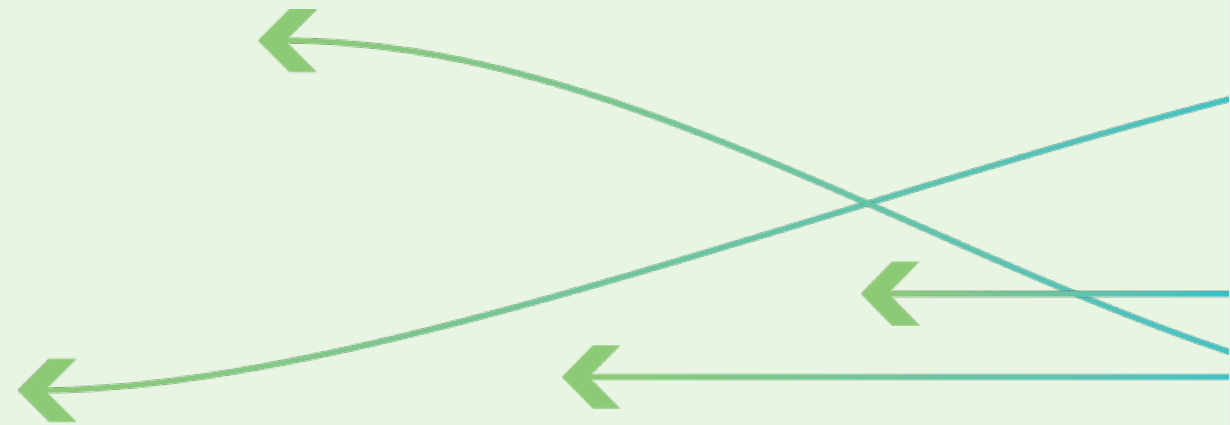
Go to [www.menti.com](http://www.menti.com) and  
use the code 5580 1784

Go to  
<https://www.menti.com/al3qv8je1bqk>

Scan the QR code with  
your phone camera



**mentimeter:  
we want to hear  
from you**



# Final Thoughts & Next Steps

2023 SEMINAR SERIES

## International HPV Awareness Day

Join the HPV Cancer Prevention Program as we celebrate the week leading up to the 6<sup>th</sup> annual **International HPV Awareness Day on March 4<sup>th</sup>**. Don't miss our week-long series of virtual seminars as we aim to help spread awareness about HPV and educate the public about HPV vaccination as a tool for cancer prevention.

Feb 27

Addressing HPV Vaccination Gaps in the **Southeastern U.S.**

Feb 28

Improving HPV Vaccination Rates among **Childhood Cancer Survivors**

Mar 1

Promoting PRIDE in HPV Vaccination Among **LGBTQIA+ Communities**

Mar 3

Wide Open Spaces: Improving HPV Cancer Prevention with **Rural Communities**

REGISTER NOW

Register for one seminar or the entire series at the link provided here. Each seminar will be held from 12 - 1:15 CST. For those of you who are unable to join, all seminars will be recorded and posted.

If you have questions, please email [PreventHPV@stjude.org](mailto:PreventHPV@stjude.org).

[stjude.org/IHAD2023](https://stjude.org/IHAD2023)

Learn more at [stjude.org/IHAD2023](https://stjude.org/IHAD2023).

Direct registration link will be provided in the chat.

# Thank you for joining us today!



## HPV Cancer Prevention Program

Sign up today to be added to the rural HPV vaccination listserv and receive information following today's introductory meeting. Direct URL will be in the chat. Questions? Email [PreventHPV@stjude.org](mailto:PreventHPV@stjude.org).





PATH →  
to prevention

# St. Jude Rural HPV Vaccination Introductory Meeting

January 23, 2023

1-2:30 pm Central Time



**HPV Cancer  
Prevention  
Program**



Special thanks to Heather's dad Gene Brandt and her friend Gina Puck for providing some of the photos used in today's presentation.