

Strategies for Improving Rural Health Equity: Leveraging Strengths and Assets

March 25, 2019

Alana Knudson, PhD

The Walsh Center 
for Rural Health Analysis

NORC AT THE UNIVERSITY OF CHICAGO

About the Walsh Center for Rural Health Analysis

- Established in 1996 in honor of William B. Walsh, M.D., founder of Project HOPE.
- Brought to NORC in 2003, with the mission of conducting research and analysis to improve rural health and well being in America.
- Studies on behalf of the Federal Office of Rural Health Policy, the Robert Wood Johnson Foundation, the CDC, USDA, the Appalachian Regional Commission, and many others.



A Shift of Focus



Exploring Strategies to Improve Health and Equity in Rural Communities (RWJF)

Project Purpose:

- Conduct formative research to identify strengths and assets, as well as opportunities, that will accelerate and improve health and well-being in rural communities.
- Identify factors (and partners) that can influence health and equity within rural communities.
- Identify opportunities for action and a set of recommendations for diverse rural stakeholders and funders to support rural communities.
- Create a new, more positive narrative to describe rural community health and well-being.

Methodology

Data Collection	Scope
Literature Synthesis	<ul style="list-style-type: none"> • Boolean search strategy, over 320 articles
National Discussion Forum	<ul style="list-style-type: none"> • n=27
Key Informant Interviews	<ul style="list-style-type: none"> • n=24
Regional Community Forums	<ul style="list-style-type: none"> • U.S. Mexico Border: n=34 • Delta: n=48 • Northeast: n=58 • Upper Midwest: n=43
Vetting Sessions	<ul style="list-style-type: none"> • All State Offices of Rural Health and partners • Appalachia regional vetting session: n=80+
Formal Non-Health Sector Engagement	<ul style="list-style-type: none"> • NACO Rural Action Caucus convening: n=40+ • NADO Focus group: n=6
National Conferences	<ul style="list-style-type: none"> • Feedback sessions at 9 conferences
Number of Sectors Represented	36
Total Participants & Reviewers	n=400+*
*does not include all participants at national conference feedback sessions	

Rural communities' "greatest assets are their people."

Frequently cited individual assets include:

- Civic and community engagement
- Entrepreneurship
- Resilience and adaptive capacities, including a strong "connectivity across sectors and actors"
- Specific population groups, including older adults, veterans, and youth

Organizational/Associational Assets

- Educational institutions
- Faith-based organizations
- Small businesses
- Farmers markets and other local food systems
- Community-based organizations/non-profit organizations
- Financial institutions
- Local media
- Social networks

Community Assets

- Natural resources
- Food system
- Land-grant institutions and cooperative extension
- Broadband infrastructure
- Larger employers
- System-owned hospitals
- Retail department stores

Cultural Assets

- Core values, including:
 - Close-knit sense of community
 - Support systems and neighborly social ties
 - Religious affiliation and faith
 - Pride in self, family, and place
 - Self-reliance and independence
 - Strong work ethic
- Social cohesion
 - “Culture of collaboration”
 - Collective efficacy
 - “Community spirit”
- Shared history
- Innovation and creativity

“Culture and history is the connective tissue in rural communities that is more important than anything else and that will ultimately drive the change to improve health status.”

-- Interview participant

Change Agents Across Sectors





Contextual Factors: *Political environment, policies, history*

Sample Project Recommendations

Foster Cross-Sector Collaboration

Cross-sector collaboration is often an existing asset in rural communities, which can be supported and expanded.

Adapt Funding Strategies to Support Rural Communities

Adapt funding strategies and grant structures to address rural barriers to participation in grant programs.

Build Relationships and Trust

Cultural assets highlight the importance of rural residents feeling ownership over solutions to rural challenges, and building long-term, meaningful relationships with communities.

Sample Project Recommendations

Engage with Regional/Local Intermediaries

Regional and local organizations have a better understanding of local culture, past experience, and assets.

Consider Rural Communities as Program Sites

Rural communities are well suited to pilot efforts to improve health and equity – programs can be tested on a smaller scale with fewer confounding factors.

Develop Rural-Specific Communications and Messaging

It is critical to consider the specific audience, choose an appropriate messenger, and tie messages to important cultural assets.



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Recommendations for Philanthropies and Government Agencies to Improve Health and Equity in Rural Communities

Rural communities have remarkable strengths, assets, and change agents across sectors that are often overlooked when developing strategies to improve rural health and equity in the U.S. Rural health inequities are well-documented,^{1,2,3,4} and it is important to address the root causes of these inequities. Alleviating poverty and ensuring gainful employment are primary priorities and challenges in rural areas because they are critical for strong, thriving, and healthy communities. Further, rural communities experience challenges ensuring access to high-quality health care, infrastructure and built environment

The final practice philanthropy describe history and final Rural Health Department health-ar



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Supporting Change Agents across Sectors to Improve Health and Equity in Rural Communities

Background

Rural communities have remarkable strengths, assets, and change agents across sectors that are often overlooked when developing strategies to improve rural health and equity in the U.S. Rural health inequities are well-documented,^{1,2,3,4} and it is important to address the root causes of these inequities. Alleviating poverty and ensuring gainful employment are primary priorities and challenges in rural areas because they are critical for strong, thriving, and healthy communities. Further, rural communities experience challenges ensuring access to high-quality health care, infrastructure and built environment that supports healthy living, clean environments, and social conditions that promote overall well-being. Despite these challenges, it is also essential

related to leveraging local culture and history as assets and recommendations. The briefs and final Center for Rural Health About/Department rural-health-analy

Change Agents across Sectors

Findings from of existing networks, organizations grow or change location



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Leveraging Culture and History to Improve Health and Equity in Rural Communities

Background

Rural communities have remarkable strengths, assets, and rich cultures and histories that are often overlooked when developing strategies to improve rural health and equity in the U.S. Rural health inequities are well-documented,^{1,2,3,4} and it is important to address the root causes of these inequities. Alleviating poverty and ensuring gainful employment are primary priorities and challenges in rural areas because they are critical for strong, thriving, and healthy communities. Further, rural communities experience challenges ensuring access to high-quality health care, infrastructure and built environment that supports healthy living, clean environments, and social conditions that promote overall well-being. Despite these challenges, it is also essential

Findings: Cultural and Historical Assets

A central cross-cutting theme was the importance of culture and history in improving rural health and equity. Culture can be defined as learned systems of human behavior and thought, including knowledge, beliefs, morals, and customs.⁷ Literature identifies culture as important in fostering better health outcomes.⁸ Culture itself is seen as a strength, described by a project participant as the "connective tissue in rural communities that is more important than anything else and that will ultimately drive the change to improve health status."⁹



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Rural Health
INFORMATION



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- Rural Data Visualizations ▾
- Case Studies & Conversations ▾
- Tools for Success ▾

Your First Stop for Rural Health Information

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- [Economic Impact Analysis Tool](#)
- [Community Health Gateway](#)
- [Sustainability Planning Tools](#)
- [Testing New Approaches](#)
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Funding Opportunities



Find Rural Data



The [Rural Data Explorer](#) and [Chart Gallery](#) provide access to a wide range of data on rural health issues.

Learn how to locate and use data in the [Finding Statistics and Data Related to Rural Health](#) topic guide.

Am I Rural?



Enhance Patient Recovery

Post-acute care (PAC) services available locally can make fully recovering from a serious illness or injury faster and easier, setting the patient and provider up for the best possible outcome. This article looks at how a tertiary facility's communication with skilled nursing facilities, a Critical Access Hospital's swing bed program, and a home health agency are improving patient transitions from acute care to PAC.



Social Determinants of Health: Transforming the Buzz Phrase to a Rural Action Item

Two healthcare organizations demonstrate how the social determinants of health and social risk assessment can be used as a framework for transforming a rural "health delivery system to a true health system."



Am I Rural? tool, Evidence-Based Toolkits (put together by NORC Walsh), and several other tools for rural programs.

Click on the Evidence Based toolkits

Rural Evidence-Based Toolkits

1. Identify evidence-based and promising community health programs in rural communities



2. Study experiences of these programs including facilitators of their success



3. Disseminate lessons learned through Evidence-Based Toolkits



Rural Health Information Hub: <https://www.ruralhealthinfo.org/>

A key focus of our work has been on establishing a rural evidence base which includes developing evidence-based toolkits based on the experiences of grantees and other rural communities.

Evidence-based toolkits are an important step in disseminating successful programs.

Our toolkits have three aims.

1. Identify evidence-based and promising programs
2. Study the experiences of these programs to figure out what's working in rural communities and why.
3. Disseminate best practices from their experiences through evidence-based toolkits, so future grantees and other rural communities can learn from these experiences and replicate them.

↓ **IN THIS TOOLKIT**
Modules

- 1: [Creating a Program](#)
- 2: [Developing a Program](#)
- 3: [Implementing a Program](#)
- 4: [Evaluating a Program](#)
- 5: [Planning for Sustainability](#)
- 6: [Disseminating Best Practices](#)
- [About This Toolkit](#)


[Rural Health](#) > [Tools for Success](#) > [Evidence-based Toolkits](#)
> [Rural Community Health Toolkit](#)

Rural Community Health Toolkit



Welcome to the Rural Community Health Toolkit. This toolkit provides rural communities with the information, resources, and materials they need to develop a community health program in a rural community.

Each of the toolkit's six modules contains information that communities can apply to develop a rural health program, regardless of the specific health topic the program addresses. The toolkit also links to [issue-specific toolkits](#) for more in-depth information.

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IN THIS TOOLKIT Modules

- 1: Creating a Program
- 2: Developing a Program**
 - Evidence Base
 - Community Needs
 - Program Models
 - Adapting Interventions
- 3: Implementing a Program
- 4: Evaluating a Program
- 5: Planning for Sustainability
- 6: Disseminating Best Practices
- About This Toolkit

Rural Health > Tools for Success > Evidence-based Toolkits > Rural Community Health Toolkit

Module 2: Developing a Rural Community Health Program

It is important to review the evidence base when developing a rural community health program. It may be possible to implement or adapt an existing evidence-based or promising program model that has been shown to be effective in other rural communities. Because no two rural communities are the same, it is important to identify how an existing model will address the needs of your community and how it may be adapted based on local contextual factors and resources.



This module focuses on reviewing the evidence base for the program, matching a program to the community's needs, identifying existing evidence-based and promising models, and thinking about considerations for adapting programs.

In this model:

- Review the Evidence Base for the Program
- Match the Program to the Community's Needs
- Identify Evidence-based and Promising Program Models
- Considerations when Adapting a Program

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*Assessing Disparities
in Pneumococcal
Vaccine Service
Delivery in the Rural
Fee-for-Service
Medicare Population*



National Vaccine Advisory
Committee
March 25, 2019

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College of Pharmacy



**Rural & Underserved
Health Research Center**

Pneumococcal Disease

Significant public health concern in US, especially among elderly



Mortality from invasive pneumococcal disease ranges from 20% at 65 years of age to 40% at 85 years of age

Pneumococcal Vaccination

- 2-dose vaccination series recommended for persons age ≥ 65
 - 1 dose PCV13 at age 65 and 1 dose PPSV23 at least 1 year later
- Vaccination rates remain low
 - 50% for either vaccine individually
 - <20% for 2-dose series



Disparities in Pneumococcal Vaccination

Racial and geographic disparities noted in previous research

Cause of disparities

- Socioeconomic barriers?
- Reduced access to clinic-based health care providers?

Pharmacies as Alternate Sites



Use of alternate sites for vaccine delivery has been recommended to improve vaccine coverage



All 50 states and D.C. authorize pharmacists to provide pneumococcal vaccines



93% of Americans live within 5 miles of a community pharmacy



May play a significant role in vaccine access, especially in rural communities

Study Objectives

To evaluate trends in pneumococcal vaccination service delivery for the years 2012 -2015

To determine the relative contribution of community pharmacies as an alternate site vaccine service provider

Methods

Data Source: Medicare Physician and Other Supplier Public Use File, years 2012 to 2015

**Pneumococcal
vaccination
services** were
identified by:

HCPCS G0009 “any pneumococcal vaccine administered”

CPT 90670 “PCV13 administered”

CPT 90732 “PPSV23 administered”

Providers were classified as: primary care provider, pharmacy provider, or other

with 1-3 designated as urban, and 4-9 as rural ; variables from the medicare geographic variation county public use file included average age; average Hierarchical Condition Category (HCC) score, a composite risk score reflective of chronic disease burden; and percent male, white non-Hispanic, eligible for Medicaid, and using inpatient or outpatient services ;

Descriptive statistics on vaccine services by rural-urban designation, provider type, vaccine type, and year were calculated. A logistic regression model of the estimated rate of pneumococcal vaccination in 2015 was created using the parameters from the Medicare Geographic Variation table, rural-urban designation, the percent of vaccines provided by pharmacists, and the interaction of rural-urban designation with percent of vaccines provided by pharmacists

Methods

Urban status was identified by provider NPI registration address linked to Rural-Urban Continuum Codes

County level demographics were incorporated from the Medicare Geographic Variation State/County Public Use File

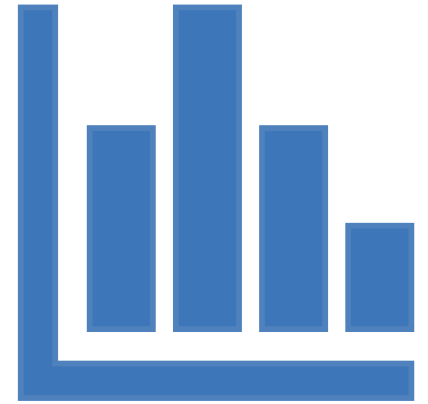
Descriptive statistics were performed for vaccine services by rural-urban designation, provider, vaccine type, and year

Logistic regression was performed predicting likelihood of pneumococcal vaccination in 2015

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Findings



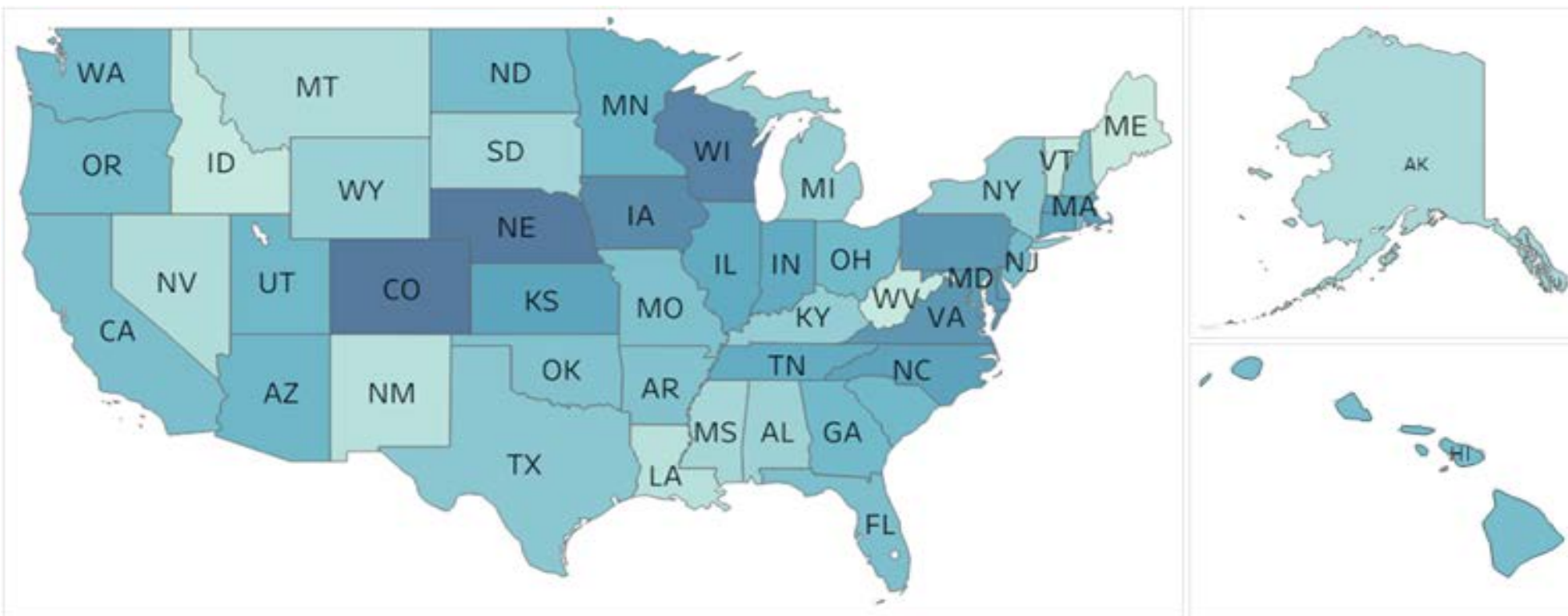
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Total Number of PPSV23 and PCV13 Vaccination Services, in Thousands, 2012-2015

Year	PPSV23	PCV13
2012	1,067 (97.7%)	25 (2.3%)
2013	1,077 (92.3%)	90 (7.7%)
2014	1,025 (66.9%)	507 (33.1%)
2015	445 (8.4%)	4,852 (91.6%)

This table depicts the number of pneumococcal vaccination services for the two types of vaccines, over the 4 years in the study period. 5.35 million beneficiaries (16% of eligible) received pneumo vaccine in 2015 and almost 4-fold increase in number of pneumococcal vaccines provided to FFS beneficiaries between 2012 and 2015 and as you can see is driven by the uptake of PCV13.

Rate of Pneumococcal Vaccine Service Delivery per Eligible Population, 2015



Estimated Vaccination Rate

7.7%



25.7%



Rates of vaccine service delivery varies significantly across the country. Form a low of 7.7% in Maine to a high of 25.7% in CO.

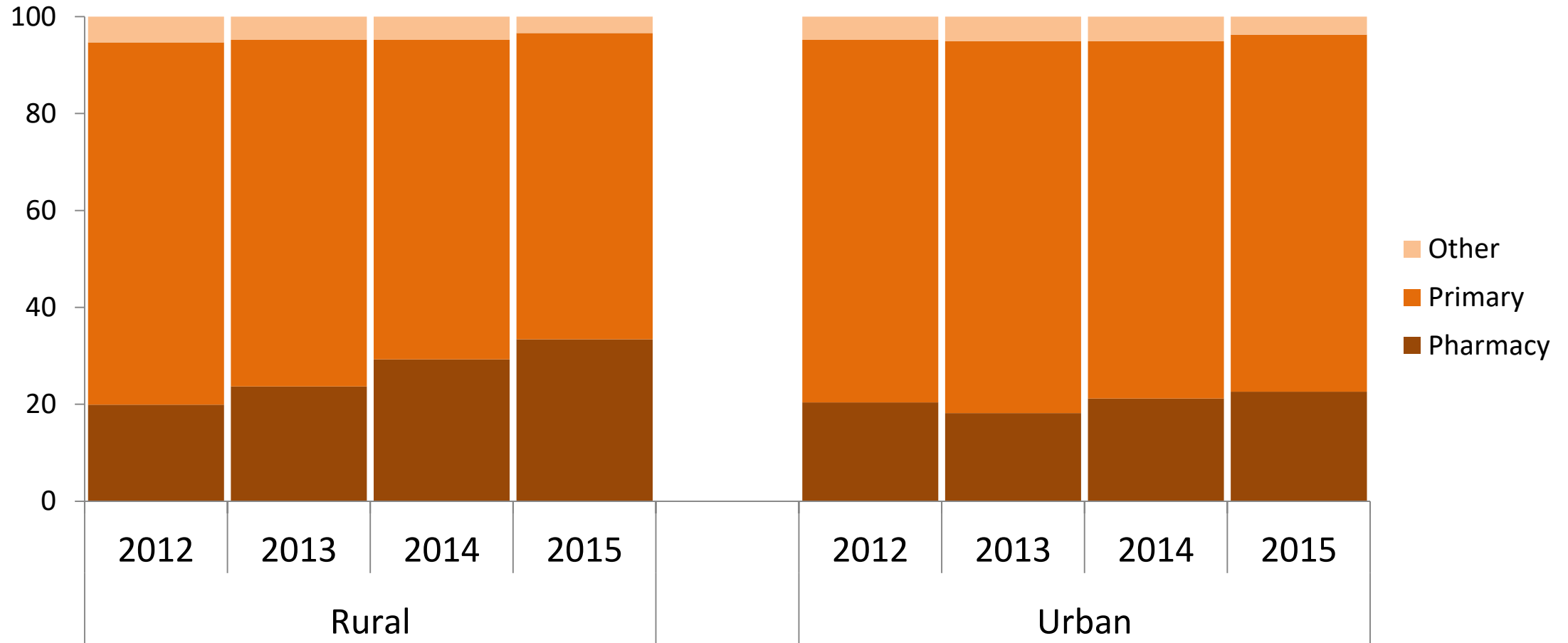
Significant rural urban disparities noted. - 10.7% rate in rural vs 17.4% in urban communities.

Number of Pneumococcal Vaccination Services by Provider Type and Rural-Urban Designation, in Thousands, 2015

Provider Type	Rural Vaccination Services		Urban Vaccination Services		Combined Vaccination Services	
	Number	Percentage	Number	Percentage	Number	Percentage
Pharmacy	247	(33.5%)	1,049	(22.7%)	1,296	(24.2%)
Primary Care	465	(63.1%)	3,398	(73.6%)	3,863	(72.2%)
Other	25	(3.4%)	168	(3.6%)	193	(3.6%)
Total	737		4,615		5,353	(100%)

In 2015, primary care providers delivered the majority (72.2%) of pneumococcal vaccination services to FFS Medicare beneficiaries while pharmacy providers accounted for one-fourth. In rural communities, pharmacy providers delivered one-third of pneumococcal vaccine services, suggesting the important role of rural pharmacies in vaccine access.

Percent of Pneumococcal Vaccination Services Delivered by Provider Type and Rural-Urban Designation, 2012 to 2015



When look at the trends over time separated by rural/urban can see the increasingly important role that pharmacy providers are playing in vaccine delivery

Summary of Model Results

Variables positively associated with vaccination

- Increasing age of beneficiaries
- Greater proportion of female beneficiaries
- Greater proportion of white non-Hispanic beneficiaries

Variables negatively associated with vaccination

- Rurality
- Lower overall health status
- Greater use of outpatient services vs inpatient services

Significant interaction

- Between rurality and percent of vaccines provided by pharmacists

The interaction between rurality and percent of vaccines provided by pharmacists was significant and when interpreted with the finding from Figure 1 that pharmacists provide a greater proportion of vaccines in rural versus urban areas, suggests that community pharmacies play an important role in access to pneumococcal vaccinations in rural areas

Summary of Key Findings

Between 2014 and 2015, pneumococcal vaccine services delivered to FFS Medicare beneficiaries increased by 380%

Continued disparities in delivery of pneumococcal vaccine services to FFS Medicare beneficiaries in rural and urban communities are noted, with a 63% higher vaccination rate observed in urban areas

Summary of Key Findings

Primary care providers delivered the majority of pneumococcal vaccine services

Pharmacy providers, overall, deliver one-fourth of pneumococcal vaccine services

Pharmacy providers in rural communities play an increasing role in pneumococcal vaccine service delivery



Conclusion and Recommendations

Disparities in pneumococcal vaccination rates between rural and urban areas are noted

Community pharmacies serve as important access points for pneumococcal vaccine services in rural communities

Continued support of rural service providers is needed to ensure older adults have access to recommended vaccines

Research Team

Joseph Vanghelof, PharmD, MS

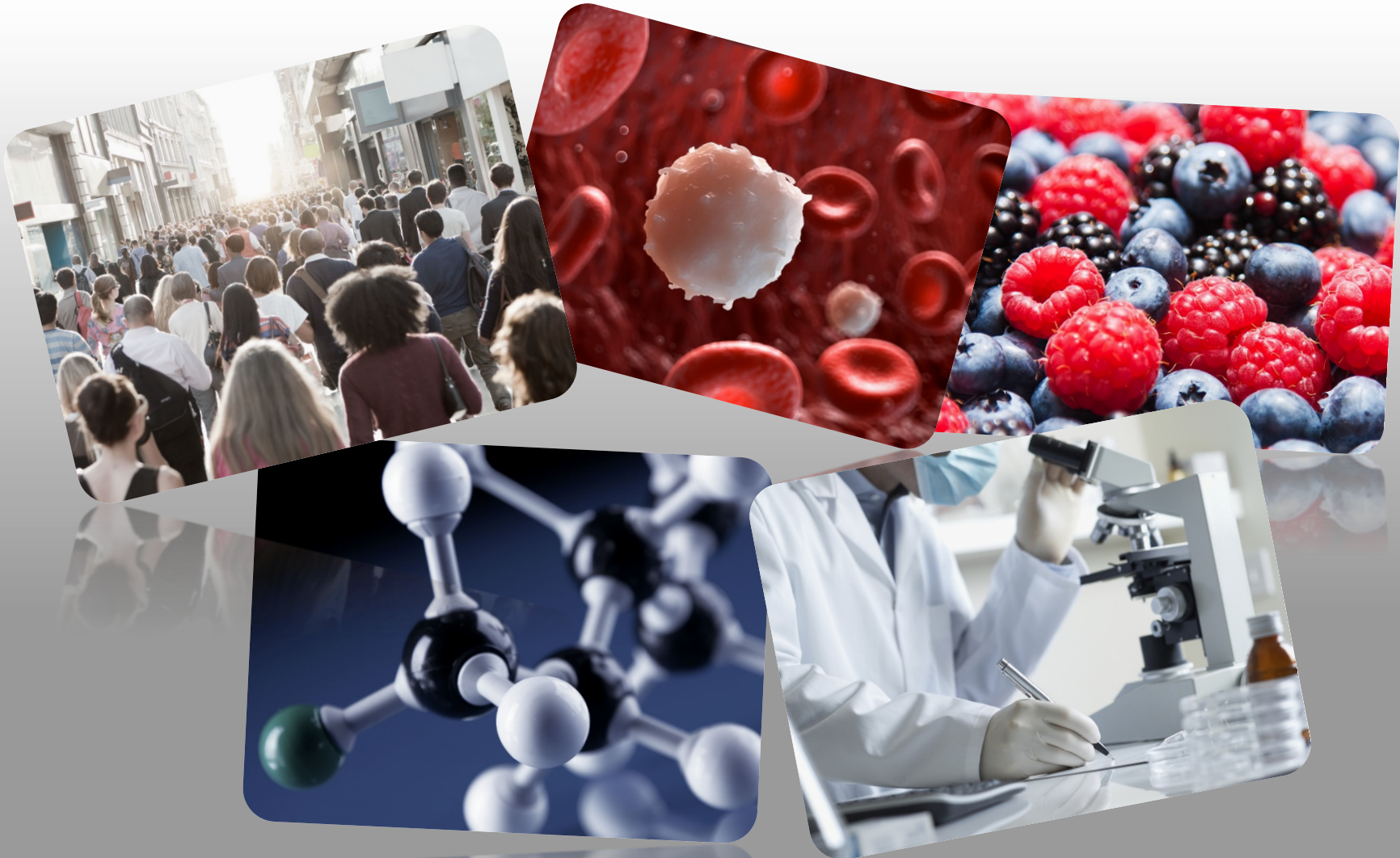
Aric Schadler, MS

Acknowledgement

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The information, conclusions and opinions expressed in this document are those of the authors and no endorsement by FORHP, HRSA, HHS, or the University of Kentucky is intended or should be inferred.





Disparities in
HPV Vaccination
Uptake in
Appalachia:
*Unique Problems
Require Unique
Solutions*

Electra D. Paskett, Ph.D.

March 25, 2019

A CANCER FREE WORLD STARTS HERE



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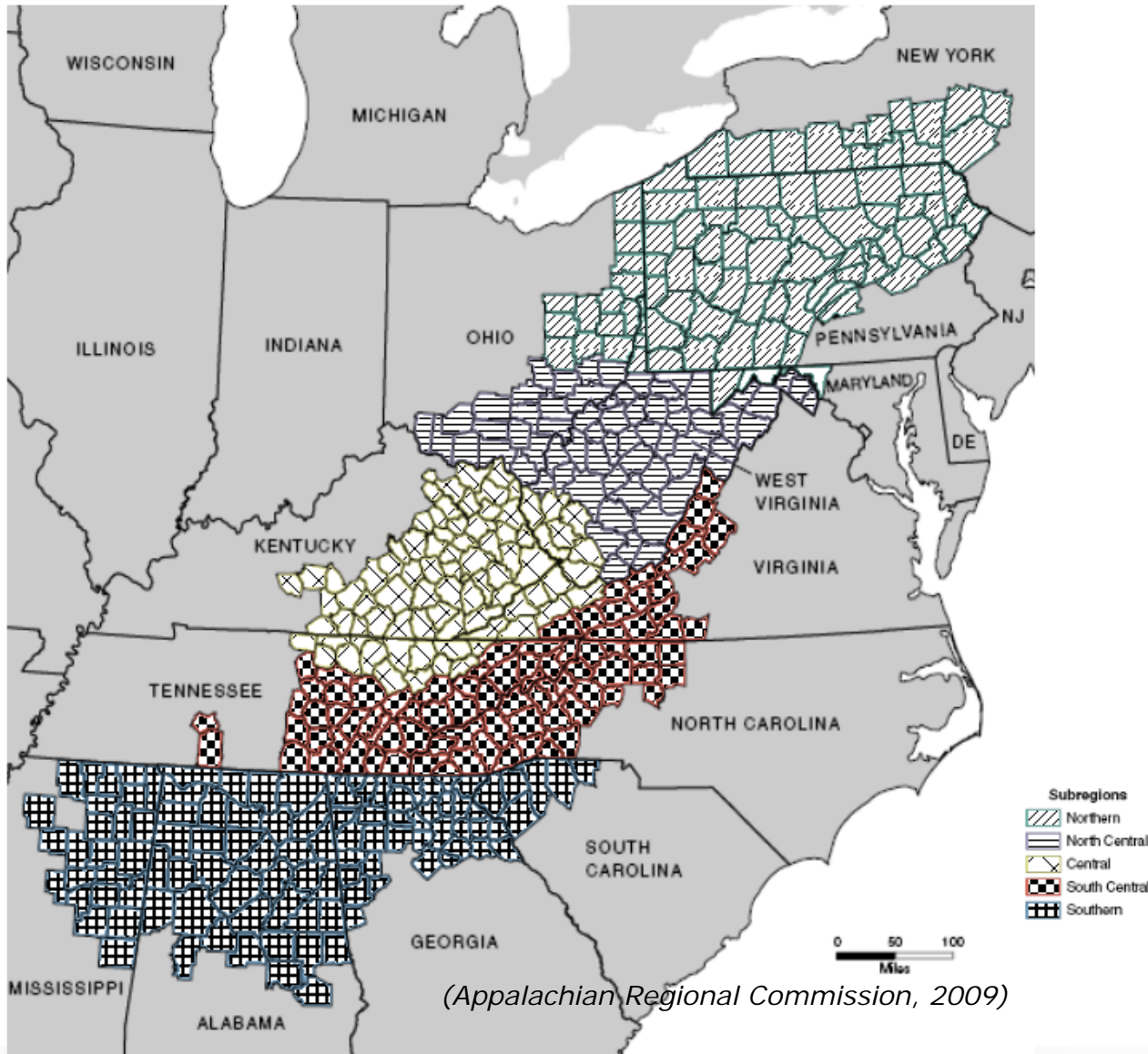
Overview

- Overview of Appalachia
- Burden of HPV disease in Appalachia
- Uptake of HPV vaccine in Appalachia
- Reasons for low uptake
- Strategies for addressing low uptake: our efforts and future strategies



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Appalachia



- Appalachia consists of 420 counties in 13 states
- 5 regions: Northern, North Central, Central, South Central and Southern
- Appalachian Regional Commission defined in 1965 in response to region's deficits
- 24.8 million residents (about 8% of total U.S. population)

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Characteristics Of Appalachia

- Both urban and rural areas
- Less racial diversity
 - 12% minorities in Appalachia, 31% in U.S.
- Higher rates of poverty
 - Poverty rate: 16.6% in Appalachia, 12.3% in U.S.
 - 78 Appalachian counties are considered “distressed”
- Lower education
 - High school diploma: 77% in Appalachia, 81% in U.S.
 - Bachelor’s degree: 18% in Appalachia, 25% in U.S.



(**All figures from Census 2000 data**)

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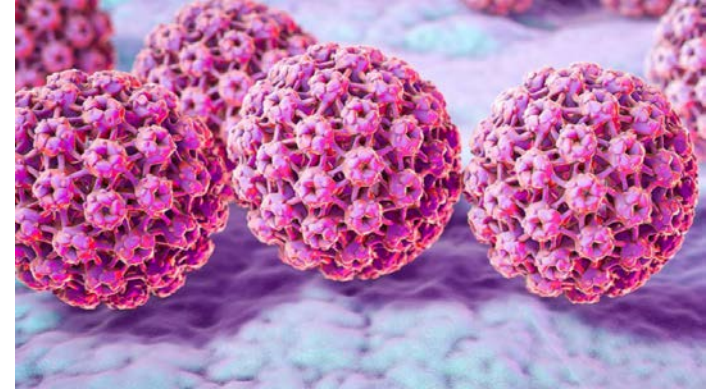
Health In Appalachia

- Appalachia is a traditionally underserved area in terms of the health care system
- Excess mortality exists in Appalachia with cancer and heart disease being leading causes of death
- Cancer is the leading cause of death
- Factors contributing to health disparities in region:
 - Lower SES
 - Lack of medical care facilities and health care providers
 - Poor health behaviors
 - Poor communication with health care providers



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HPV Disease and Vaccination Uptake

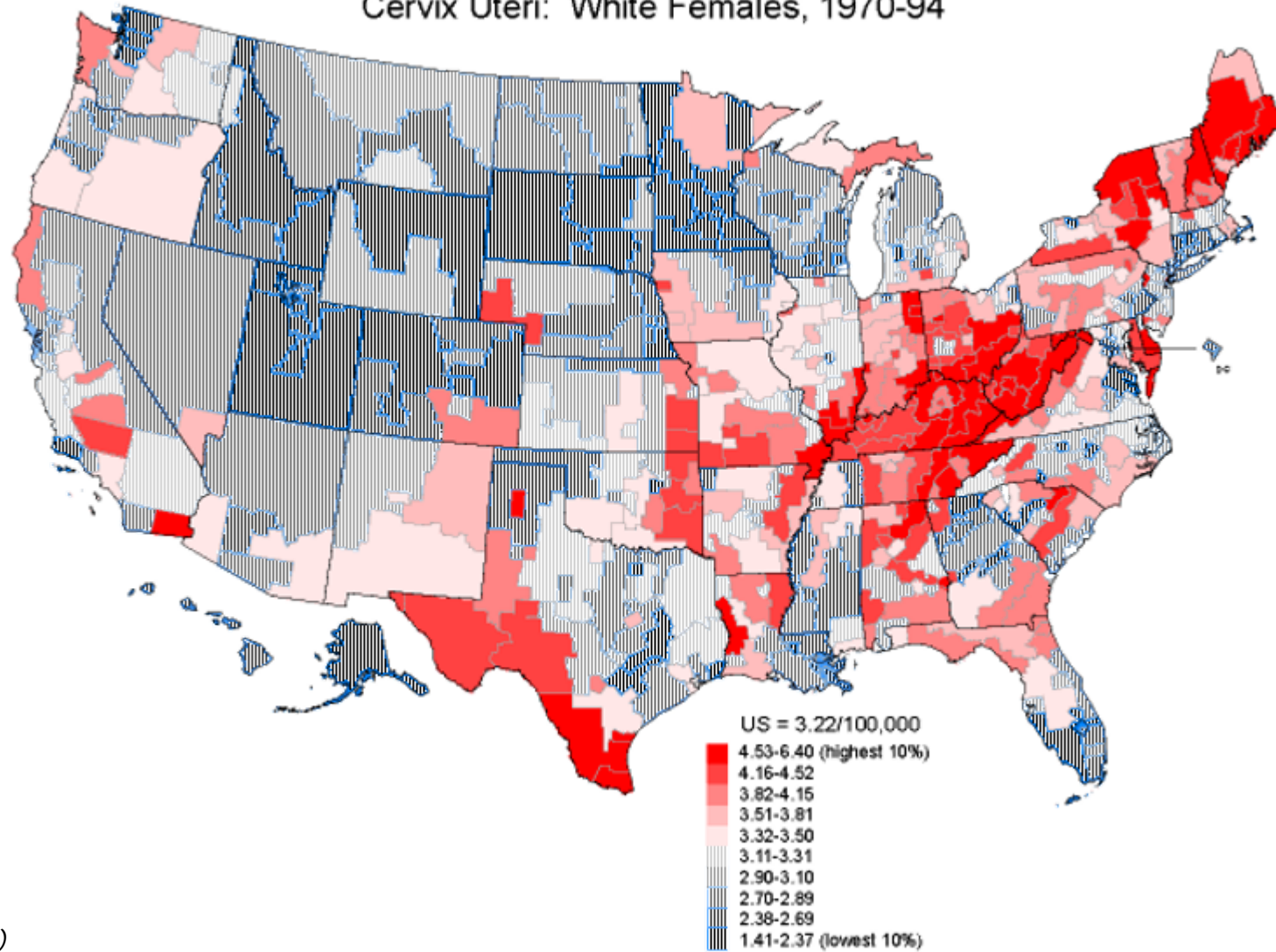


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Cancer Mortality Rates by State Economic Area (Age-adjusted 1970 US Population)
Cervix Uteri: White Females, 1970-94

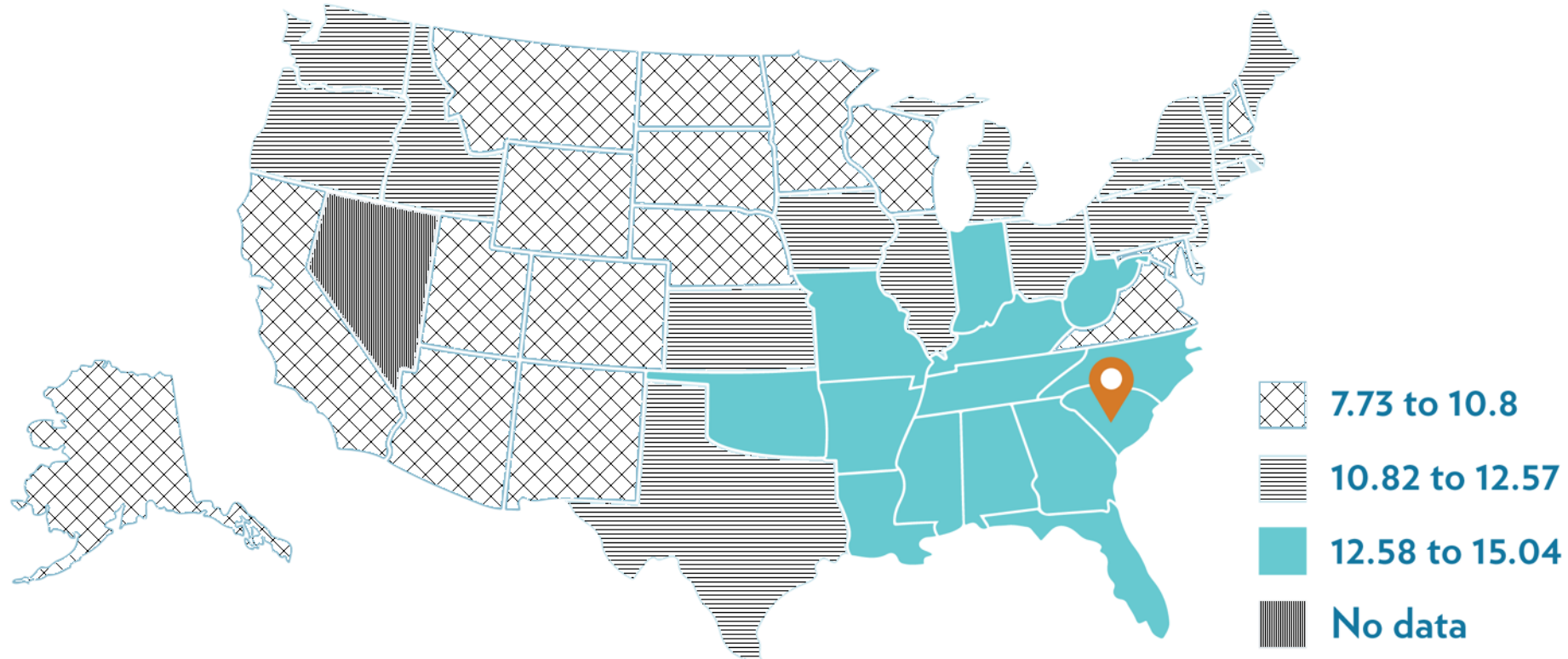


(National Cancer Institute, 2001)

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HPV-Associated Cancers by State

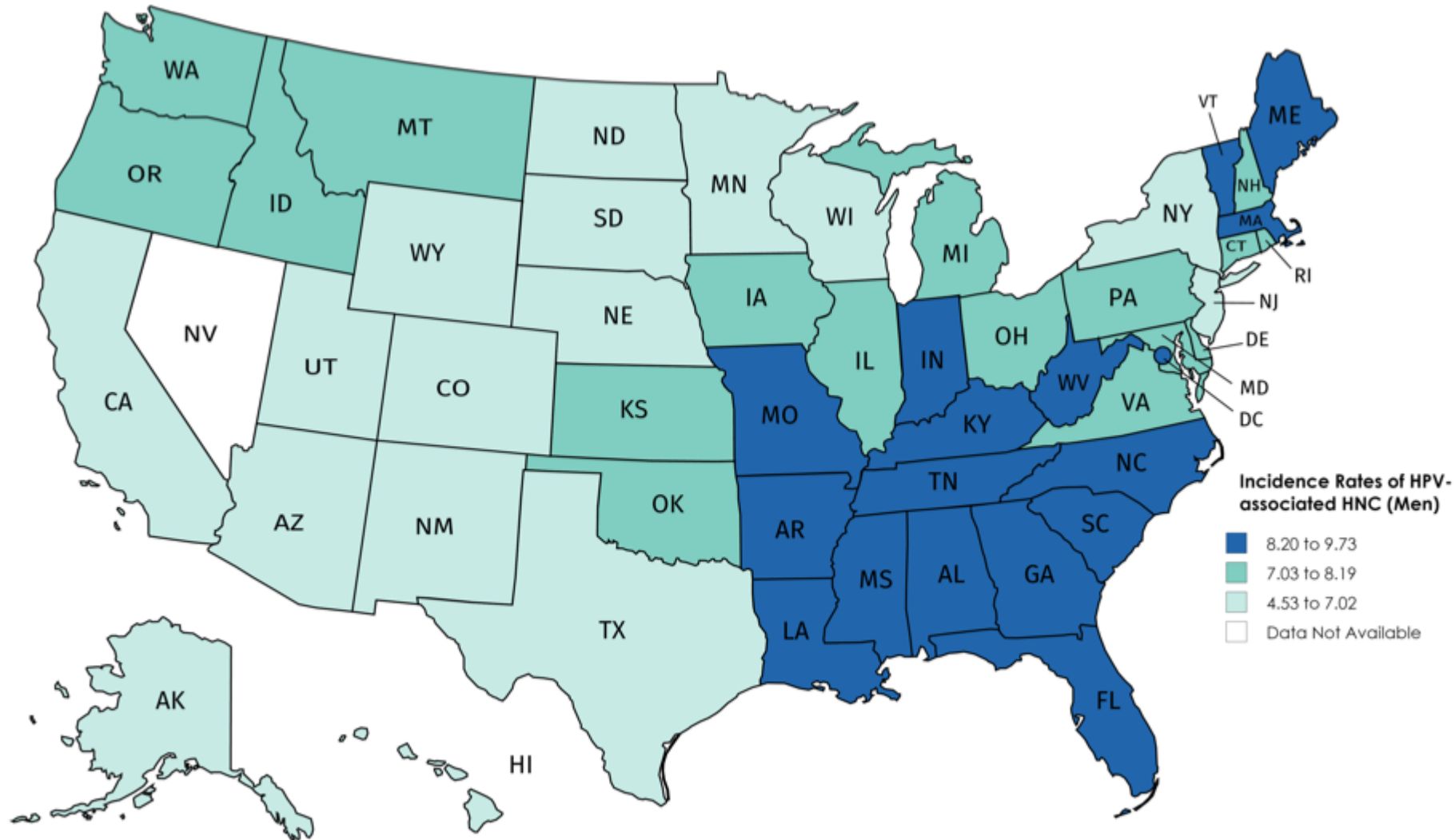
HPV-associated cancer rates by state



Centers for Disease Control & Prevention, 2009-2013

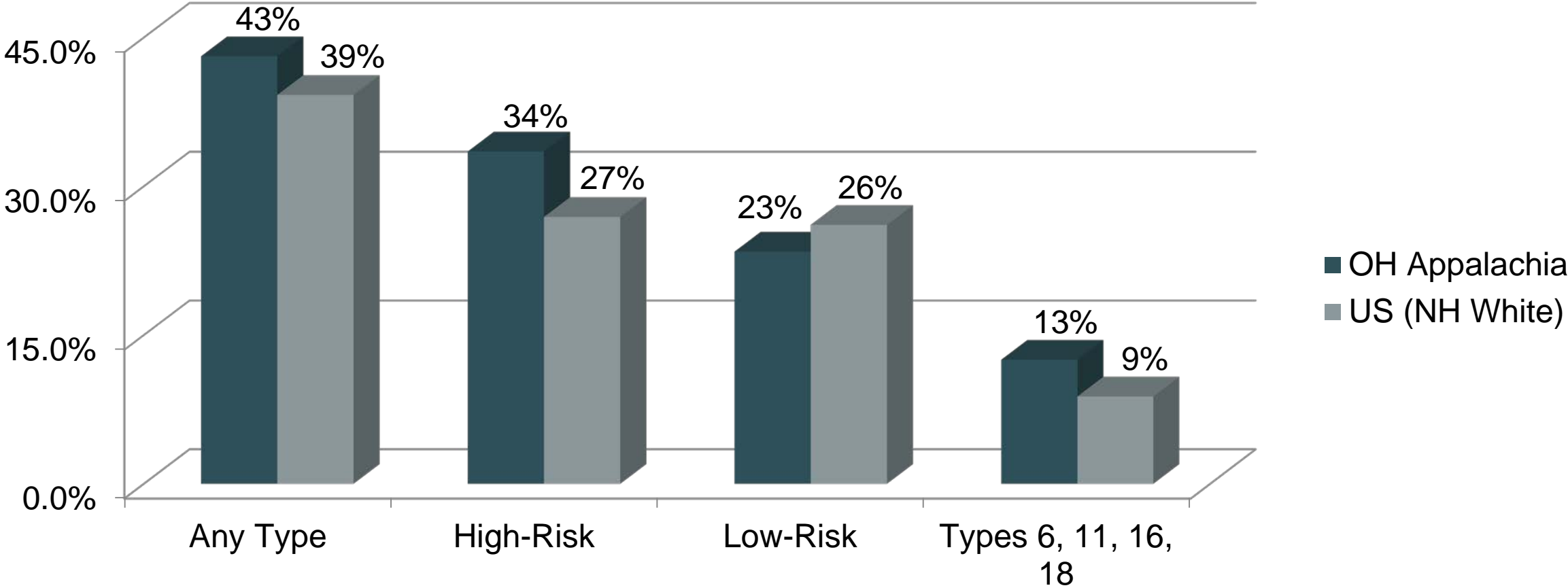
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HPV-Associated HNC (Men)



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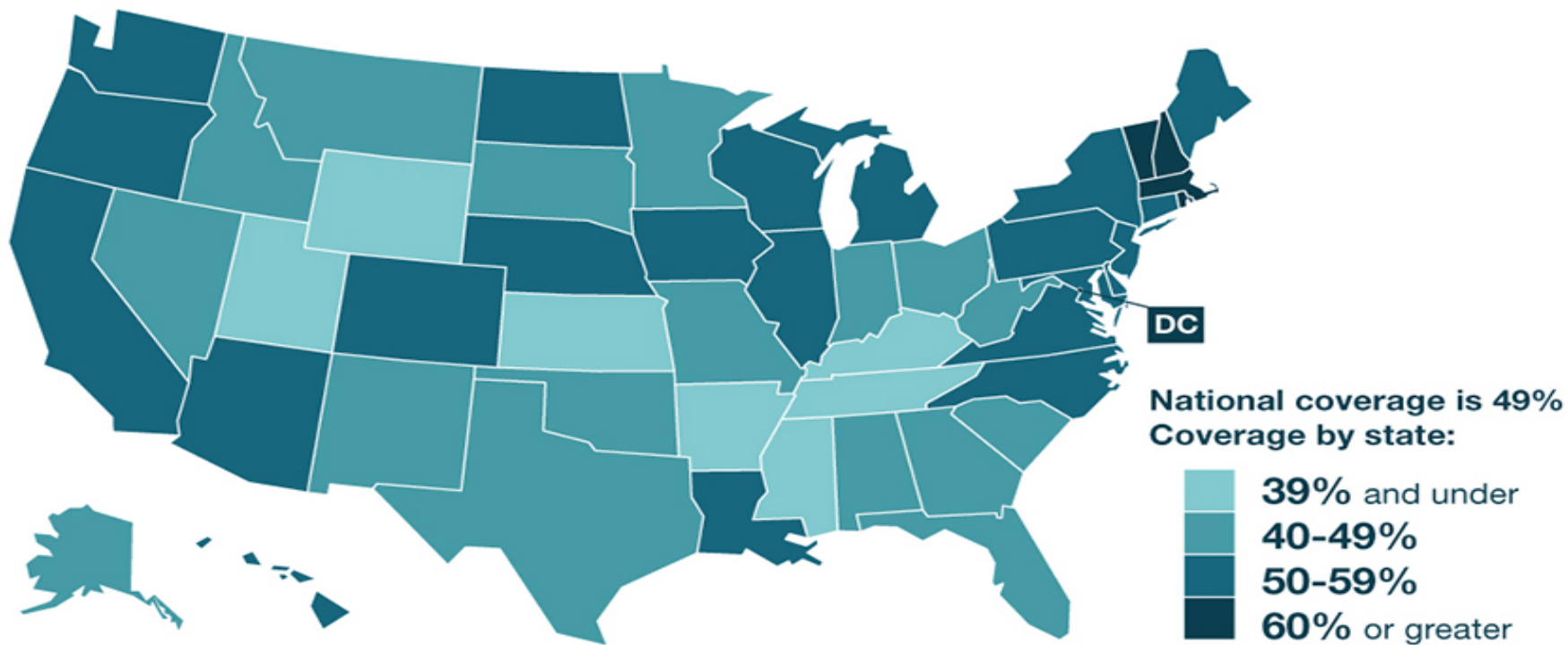
HPV Prevalence By Type in Ohio Appalachia



(Ruffin et al., unpublished data)

HPV Vaccine Uptake in the US

Percentage of adolescents who are up to date on HPV vaccination



Source: MMWR August 24, 2018

www.cdc.gov/hpv



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

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Reasons for Low Uptake



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In Appalachia,

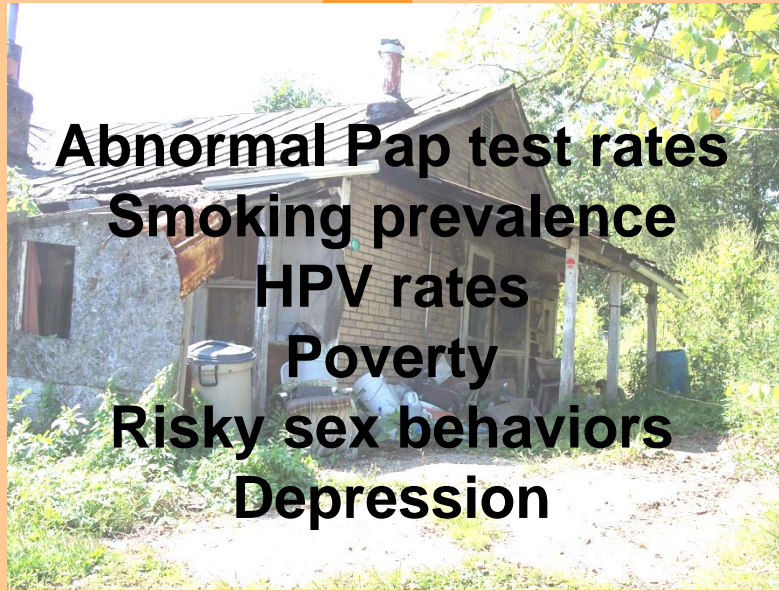
“We don’t talk
about cancer.”



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Cervical Cancer

Appalachian Culture



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Data from Center for Population Health and Health Disparities

- Reasons for low uptake are many:
 - lack of physician recommendation
 - lack of awareness of need to be vaccinated
 - confusion about guidelines
 - cost
 - negative attitudes and beliefs about:
 - HPV vaccination
 - HPV-related cancer
 - vaccines in general (parent and provider)



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Efforts to Improve Uptake in Appalachia: The OSU Experience



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Primary Aims

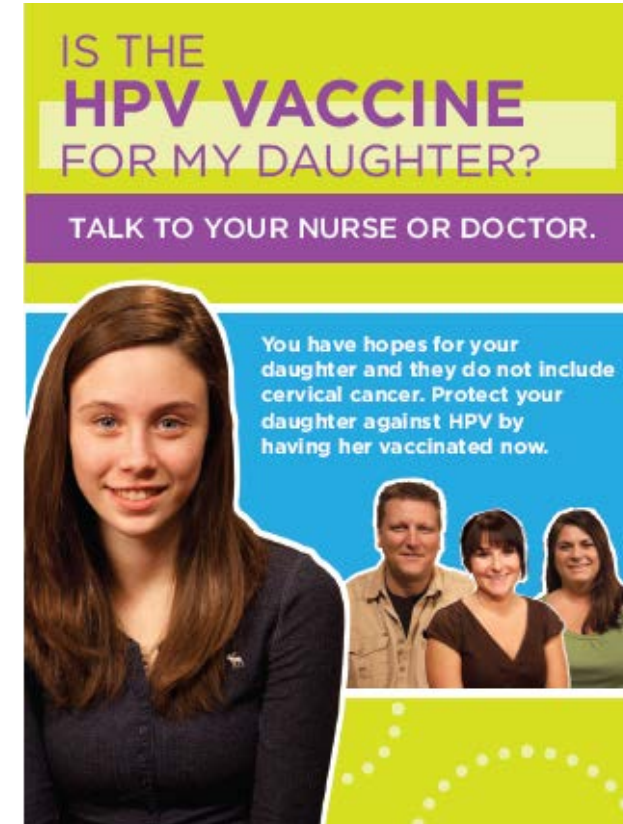
- To develop and **evaluate** a multi-level HPV **vaccine intervention** to increase HPV vaccination rates among young girls and adolescent females (9-17) living in Ohio Appalachia
- Levels:
 - **Parents** of female adolescents who live in Ohio Appalachia (Level 1)
 - **Health care providers** who practice at health departments and provider offices (Level 2)
 - **Health departments and provider offices** in Ohio Appalachia (Level 3)
- Intervention tested in 6 Ohio Appalachia counties (intervention) vs 6 usual care Ohio Appalachia counties (control)
 - **Control** counties receive education on the **flu and the flu vaccine**



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HPV Multi-Level Intervention

- Basic tenants:
 - Multi-level
 - Culturally relevant
 - Address salient issues
- Developed with input from the community:
 - Focus groups
 - Clinical review
 - Community Advisory Board



Note: Only approved for girls when study began

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Multi-Level Intervention Components

- System-level:
 - Waiting room and examination room posters and brochures
 - Tabletop tent cards for the waiting rooms
 - Quarterly newsletter
 - Vaccine tracking system
 - 'Invitation to be vaccinated' letter to parents from their provider
- Provider-level:
 - Fact sheet
 - Resource list
 - Article on Cervical Cancer in Ohio Appalachia
 - CME Session
- Patient-level:
 - Culturally tailored HPV and cervical cancer educational DVD
 - Culturally tailored educational brochures
 - Question & Answer (Q & A) fact sheet
 - Resource list
 - Magnetic appointment reminder card for the 2nd and 3rd shot

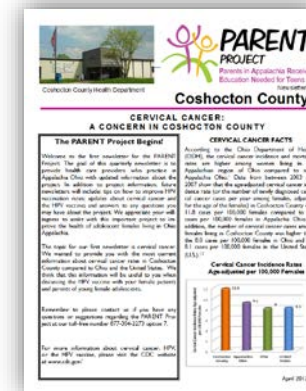
Top 3 Questions About HPV.

What is HPV? HPV is short for Human Papillomavirus. HPV is a common sexually transmitted virus (very small organism) that may infect women and men. Many people who have HPV do not know that they are infected with the virus. HPV may cause cancer (cervical, vaginal, vulvar, anal, head and neck) and genital warts in women.

Are there different types of HPV? There are many types of HPV. Two HPV types cause more than 70% of the cervical cancer cases and two different HPV types cause about 90% of genital warts.

How do you get genital HPV? HPV is passed from one person to another by skin-to-skin contact. It is spread mainly during vaginal, oral, or anal sex.

For additional information about HPV and the HPV vaccine, please ask your nurse or doctor.



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HPV Vaccine Uptake: Group Randomized Trial

First Shot within Three Months

Received Shot	Control Arm	HPV Arm	p-value
Yes	4 (3%)	10 (8%)	0.045
No	120 (97%)	120 (92%)	

First Shot within Six Months (Ever)

Received Shot	Control Arm	HPV Arm	p-value
Yes	8 (7%)	17 (13%)	0.003
No	116 (94%)	113 (87%)	



Paskett E, et al., CEBP 2016

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Why Didn't Parents Get Their Daughter Vaccinated?

- “Doctor didn’t tell me”
 - Too young
 - Didn’t start their period
 - Can wait
 - Not needed now
- Impact of Doctor Recommendation:
 - OR=3.43 (95% CI 1.19-9.87) discuss with doctor vs did not

4 TALK ABOUT WHAT CONCERNS YOU ABOUT THE HPV VACCINE FOR YOUR DAUGHTER.

It is common to be concerned about giving your daughter the HPV vaccine. Sometimes it helps to talk to your nurse or doctor about how you feel.

QUESTIONS TO THINK ABOUT:

- Should my young daughter get the HPV vaccine?
- Why should my daughter get the HPV vaccine since she is not sexually active?
- Does the HPV vaccine hurt?
- How much does the HPV vaccine cost?

Q&A'S ABOUT THE HPV VACCINE.

Is the same HPV vaccine given to both girls and boys?
Yes, girls and boys may receive the same vaccine. The HPV vaccine is given as 3 injections over 6 months to protect girls and boys from cancer and genital warts.

How long will the HPV vaccine last?
Currently, the vaccine protects against HPV for at least 5 years, but studies need to be done to see how long girls remain immune and whether booster shots are needed.

How safe is the HPV vaccine?
The Food and Drug Association (FDA) reports that the HPV vaccine is safe and effective. Common side effects include pain, swelling, itching, bruising, and redness at the injection site. Some girls have reported having a headache, fever, nausea, dizziness, vomiting, and fainting.

Sometimes people who faint can fall and hurt themselves. For this reason, your nurse or doctor may ask your daughter to wait for 15 minutes after she gets the HPV vaccine.

Why do I need to vaccinate my child now if she is not sexually active? It may be hard to think about your daughter coming into contact with HPV. After all, she isn't sexually active.

But, like other vaccines your child may have received, the HPV vaccine works to help prevent illness. That means the HPV vaccine works when given before there is any contact with the four HPV types that the vaccine protects against.

Could my daughter get HPV or any disease caused by HPV from the HPV vaccine? No. She cannot get HPV or any disease caused by HPV from the HPV vaccine. That's because there is no live virus in the vaccine.

Instead, the HPV vaccine contains a protein that helps the body's immune system produce antibodies or natural soldiers against HPV.

Can the HPV vaccine treat HPV infections? The HPV vaccine will not treat existing HPV infections. It is important to vaccinate girls before they are exposed to HPV.

Should everyone get the HPV vaccine? Anyone who is allergic to the ingredients in the HPV vaccine, including those severely allergic to yeast, should not receive the vaccine. The HPV vaccine is not for women who are pregnant.

The HPV vaccine may not fully protect everyone, nor will it protect against diseases caused by other HPV types or against diseases not caused by HPV.

Why is the HPV vaccine given in 3 shots? What if we are late for getting the second or third shot? The HPV vaccine is given in 3 shots over six months to allow time for the immune system to react. The immune system creates the antibodies to fight against the virus. These antibodies remain in the immune system's memory and will fight against HPV.

Make sure your daughter gets all 3 doses on time so that she gets the best protection. If you're a few days late getting your second or third dose of the HPV vaccine, don't worry. If you miss a dose, your nurse or doctor will decide when to give the missed dose.

I have children 9 to 12 years old. Aren't they too young to be vaccinated with the HPV vaccine? Like other vaccines, the HPV vaccine works to help prevent illness. The HPV vaccine does not treat infections. The HPV vaccine works when given before there is a chance of coming into contact with the HPV types that the vaccine protects against.

Do girls and women who have been vaccinated still need Pap tests? Yes. The HPV vaccine does not prevent all types of HPV that can cause cervical cancer. Your daughter's nurse or doctor can tell you when your daughter's first Pap test should be completed.

How much does the HPV vaccine cost? There is no cost to you if your child is eligible for the Vaccines for Children Program. This is a federal program that provides vaccines to children and adolescents who are 18 years old and younger. A child is eligible if they are Medicaid eligible, uninsured, if their health insurance does not cover the costs of the shots, or if the child is American Indian or Alaska Native.

Does HPV affect women and men? Yes. HPV is very common virus. About 80% of all sexually active women and men will have HPV during their life.

For additional information about the HPV vaccine, please talk to your doctor or nurse.

IS THE HPV VACCINE FOR MY DAUGHTER?

TALK TO YOUR NURSE OR DOCTOR.

You have hopes for your daughter and they do not include cervical cancer. Protect your daughter against HPV by having her vaccinated now.

PARENT PROJECT
Parents Are Doing the Work to Make a Safer Future.

Funded by the National Cancer Institute.

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“I Vaccinate” Intervention Levels

- *Level 1:* Health clinic (Hopewell Health Center and Meigs County Health Department in Pomeroy, OH)
- *Level 2:* Providers at participating clinics (physicians, nurses, office staff)
- *Level 3:* Patients (girls and boys age 11 – 17 years and their legal guardians)



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“I Vaccinate” Activities

- Developed personalized HPV education materials (posters, brochures, table tents, billboards) featuring a local provider (clinic champion) and her family
 - Based on materials from previous study with input from clinic staff
- Delivered HPV education training to clinic staff, with a booster session offered 6 months post-baseline
 - Assessed provider HPV knowledge at pre- and post-education session
- Obtained HPV vaccination rates at baseline and 12 months post-baseline
 - Utilizing EHR at clinics



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Outcomes

- Distributed and/or displayed:
 - more than 700 brochures
 - 75 table tents
 - 30 posters
 - in clinic waiting areas, exam rooms, school districts and community areas
- Educated:
 - 23 providers
 - across two clinics
 - between October 2016 and September 2017



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Outcomes (cont.)

- HPV vaccination rates in one clinic increased in 13-year old females from 44% at baseline to 58% at 12 months
 - Among 18-year old females: HPV vaccination rates increased from 0% at baseline to 54% at 12 months
- Changes to EHR system in 2nd clinic prevented collection of follow-up data
 - Efforts to bridge that gap are ongoing
 - This clinic, however, engaged in community outreach strategies

1 TELL YOUR STORY.

Think about how to talk to your nurse or doctor about the HPV vaccine for your daughter.

- Cervical cancer and most cases of genital warts are caused by a common virus, the Human Papillomavirus (HPV)
- There are 4 times as many HPV cases among women living in Appalachia Ohio than in the United States
- The HPV vaccine is approved for girls ages 9 to 26 years

HPV CAUSES...

70% Of Cervical Cancer	90% Of Genital Warts
---------------------------	-------------------------

There are 4 times as many HPV cases among women living in Appalachia Ohio than in the United States

2 ASK QUESTIONS.

It is common to have questions about giving your daughter the HPV vaccine.

QUESTIONS TO THINK ABOUT:

- At what age should my daughter get the HPV vaccine?
- Why does my daughter need 3 HPV shots?
- Is the HPV vaccine safe?
- How long will the HPV vaccine last?

Sometimes when you are talking to a nurse or doctor it is hard to remember everything they say. Here are some tips to help you.

- Take notes when the nurse or doctor is telling you about the vaccine.
- Ask your nurse or doctor to repeat anything you do not understand.
- Read the CDC's HPV vaccine information statement given to you.

3 MAKE SURE YOU UNDERSTAND WHAT YOUR NURSE OR DOCTOR TELLS YOU.

TALKING TO YOUR DAUGHTER ABOUT THE HPV VACCINE.

Parents may worry about talking to their young daughters about the HPV vaccine because it means they have to be ready to have the "sex talk." But you do not have to talk about sex if you are not ready. You can tell your daughter that the HPV vaccine will keep her healthy and prevent cancer.

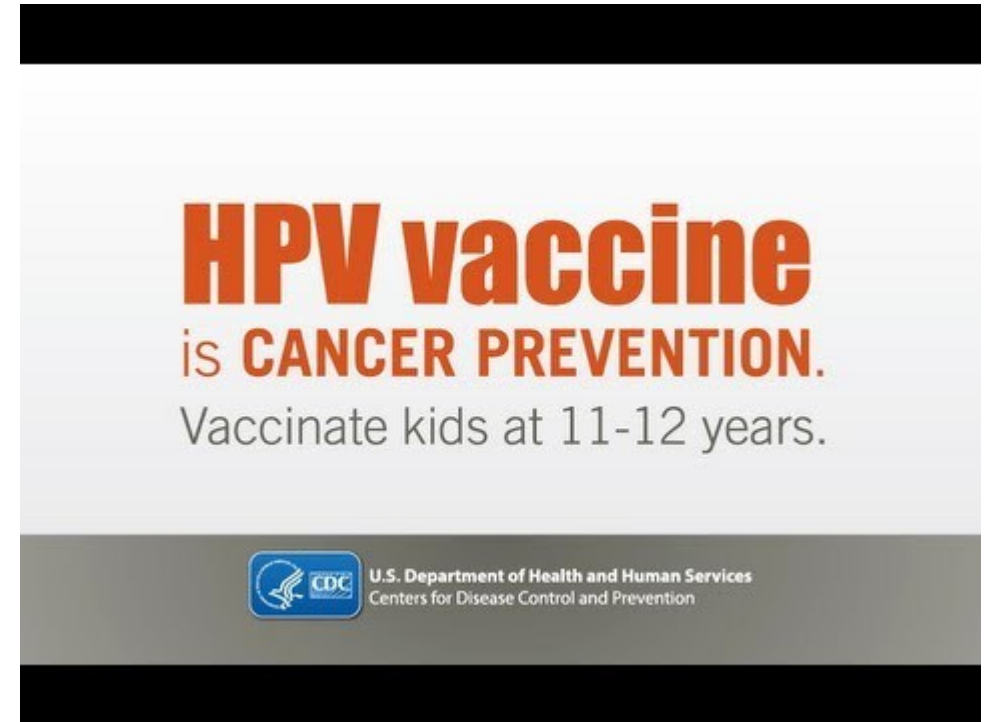
If you talk to your daughter about the HPV vaccine, it doesn't mean you are giving her permission to have sex. It is a chance for you to talk to her about safe sex, pregnancy, and sexually transmitted diseases (STDs). In fact, studies have shown that children who talk to their parents about sex are more likely to wait to have sex than children who haven't talked to a parent.

HERE ARE SOME HELPFUL TIPS.

- Start talking to your daughter when she is young. Talking about the HPV vaccine is a good time to tell her your values about sex and what information you want her to know. This is a good time to talk to older teens.
- Give her a book to provide more details about her changing body, but make sure you let her know that you are willing to talk to her about anything.
- Make her feel safe to come to you. Even if she makes a mistake!
- Your daughter learns a lot from watching you. Remember, you are her role model.

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Recommendations for Addressing Low Uptake



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The first section will focus on HPV infection and disease prevalence.

Strategies Tailored to the Region

- Use pharmacists
- Start at age 9
- Change community norms
- Work with schools and school-based clinics
- Teach providers and clinics to recommend vaccine
- Multi-level approach using implementation science and a family-based approach

Every year in the U.S., 27,000 people get cancer caused by HPV.



That's 1 person every 20 minutes of every day, all year long.

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Dissemination and Implementation: The Next Frontier

PO1: Improving Uptake of Cervical Cancer Prevention Services in Appalachia

Electra D. Paskett, Ohio State University

Roger Anderson, University of Virginia

Mark Dignan, University of Kentucky

Stephenie Kennedy, West Virginia University



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Overall Program Goals and Objectives

- Major questions to be addressed:
 - Will Appalachian clinics adopt an integrated prevention program focused on reducing cervical cancer risk in families?
 - Can Appalachian clinics sustain such a program?
 - What are the implementation and service outcomes of the program within each clinic, irrespective of the health outcomes from each project?
- Expected outcomes:
 - Immediate: Smoking prevalence reduction, **HPV vaccination rate increase**, and increased uptake of Pap testing – risk reduction
 - Long-term: Institutionalization of the prevention program and reduced HPV-related disease
- If successful, this program could:
 - Be implemented in other health care settings with underserved populations
 - Introduce other interventions bundled at the clinic level

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Questions?

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