

Rural Reach: Accelerating HPV Vaccination Coverage: Empowering Rural Communities for HPV Prevention

February 29, 2024

MARCH 4 IS
INTERNATIONAL HPV
AWARENESS DAY

Why focus on rural HPV vaccination?



Higher HPV cancers among rural populations



Lower HPV vaccination among rural populations



Rural doesn't mean "one size fits all"

Rural HPV Vaccination Priorities



Start at Age 9

Promote starting HPV vaccination at age 9 in rural communities.



Existing Resources

Compile and share existing resources for addressing HPV vaccination with rural communities.



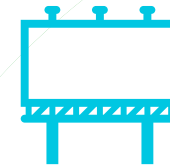
Training Providers

Develop or adapt health care provider and health care professional HPV vaccination training resources for those serving rural communities.



Advocacy and Policy

Explore policy influences on HPV vaccination in rural areas.



Communication

Develop, test, and disseminate easy-to-use messages for rural audiences.

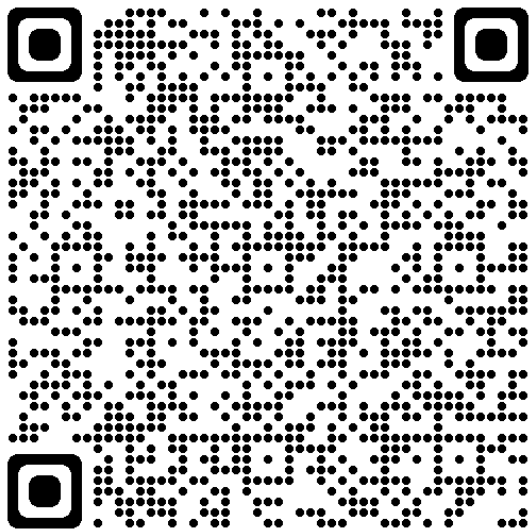


Data

Review and update existing resources and data on HPV vaccination and HPV cancers in rural communities.

Rural HPV Vaccination Webpage

Use the QR code to access the following resources:



- Priority action steps to improve rural HPV vaccination coverage
- Rural quarterly updates meetings (register and view past recordings)
- Wide Open Spaces articles
- Rural HPV vaccination fact sheet
- And more!

MARCH 4 IS
INTERNATIONAL HPV
AWARENESS DAY



Moderator

Sara Lolley, MPH, Immunization Initiatives Program
Manager, American Academy of Pediatrics.

PATH →
to prevention

 St. Jude Children's
Research Hospital | HPV Cancer
Prevention
Program

Welcome

MARCH 4 IS
INTERNATIONAL HPV
AWARENESS DAY



Electra Paskett, PhD
Director, Division of Cancer
Prevention and Control.
Department of Internal Medicine.
The Ohio State University
College of Medicine



William Calo, PhD, JD
Associate Professor, Department of Public
Health Sciences, Penn State College of
Medicine
Co-Leader, Cancer Control Program,
Penn State Cancer Institute



Prajakta Adsul, PhD
Assistant Professor, Department of
Internal Medicine,
Comprehensive Cancer Center,
University of New Mexico

PATH →
to prevention



**HPV Cancer
Prevention
Program**

MARCH 4 IS
INTERNATIONAL HPV
AWARENESS DAY



Improving Uptake of the HPV Vaccine in Appalachia: I Vaccinate

Electra Paskett, PhD

Director, Division of Cancer Prevention and Control, Department of Internal Medicine, The Ohio State University College of Medicine

PATH →
to prevention



HPV Cancer
Prevention
Program



***Improving Uptake of the HPV Vaccine in
Appalachia:
I Vaccinate***

ELECTRA D. PASKETT, PHD

THE OHIO STATE UNIVERSITY

FEBRUARY 29TH, 2024



Disclosures

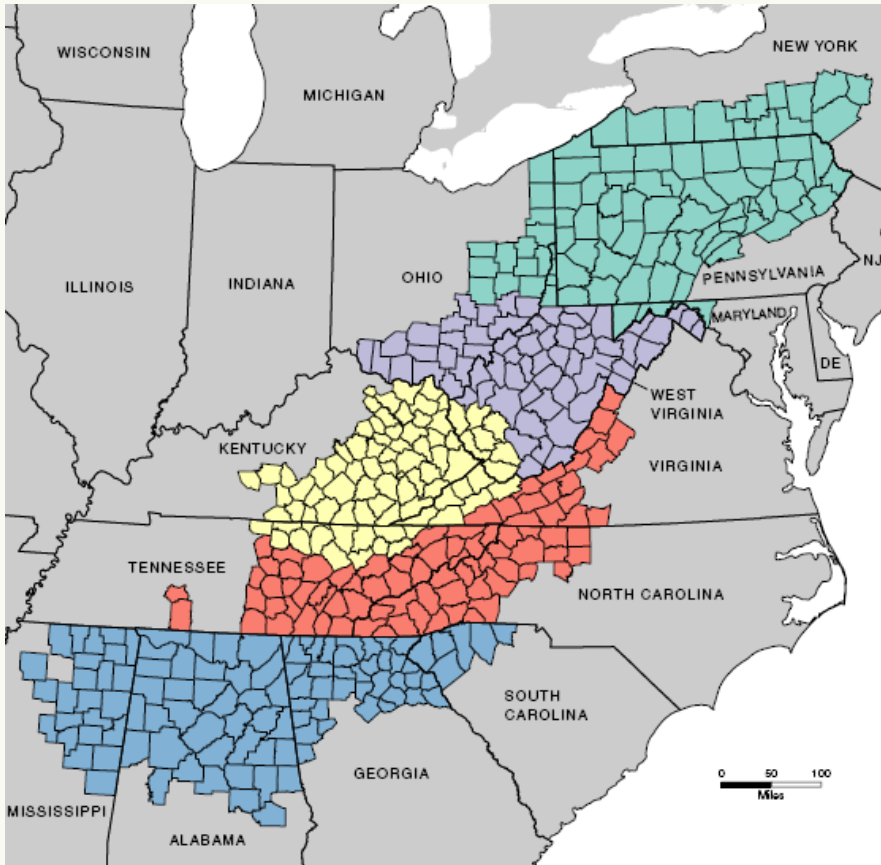
- **Grant funding to the Institution:**
 - Pfizer
 - Merck Foundation
 - Breast Cancer Research Foundation
 - FoxConn Technology Group
 - Genentech
 - Guardant Health
 - AstraZeneca
- **Advisory Board Member:** GSK, Merck
- **The research I will discuss was/is funded by:**
 - The NIH, National Cancer Institute



Learning Objective

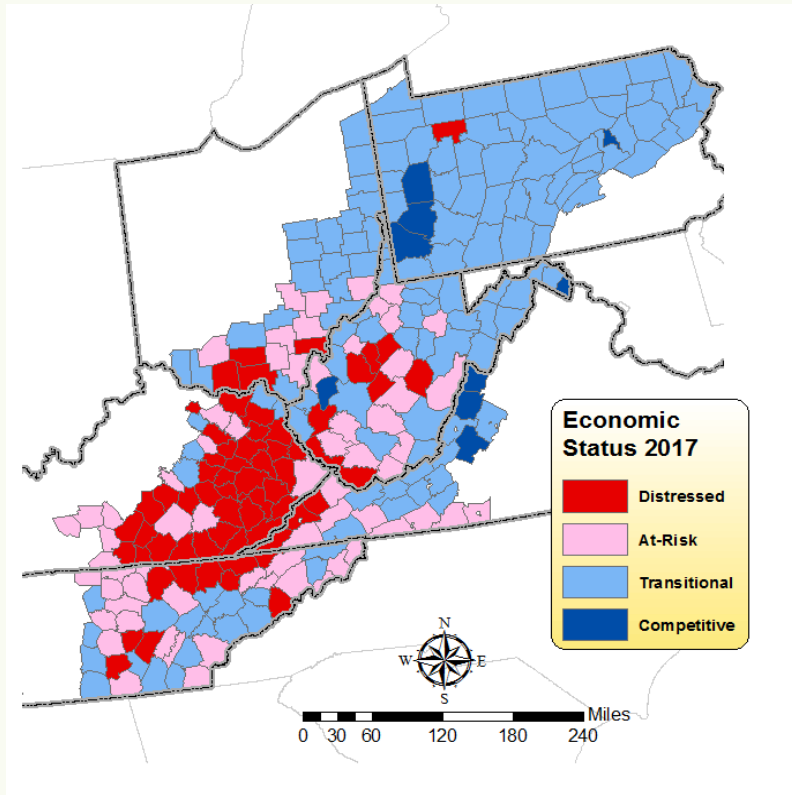
Discuss how implementation science methods and an integrated approach can reduce HPV associated cancer risk among patients from rural communities

Appalachian Region



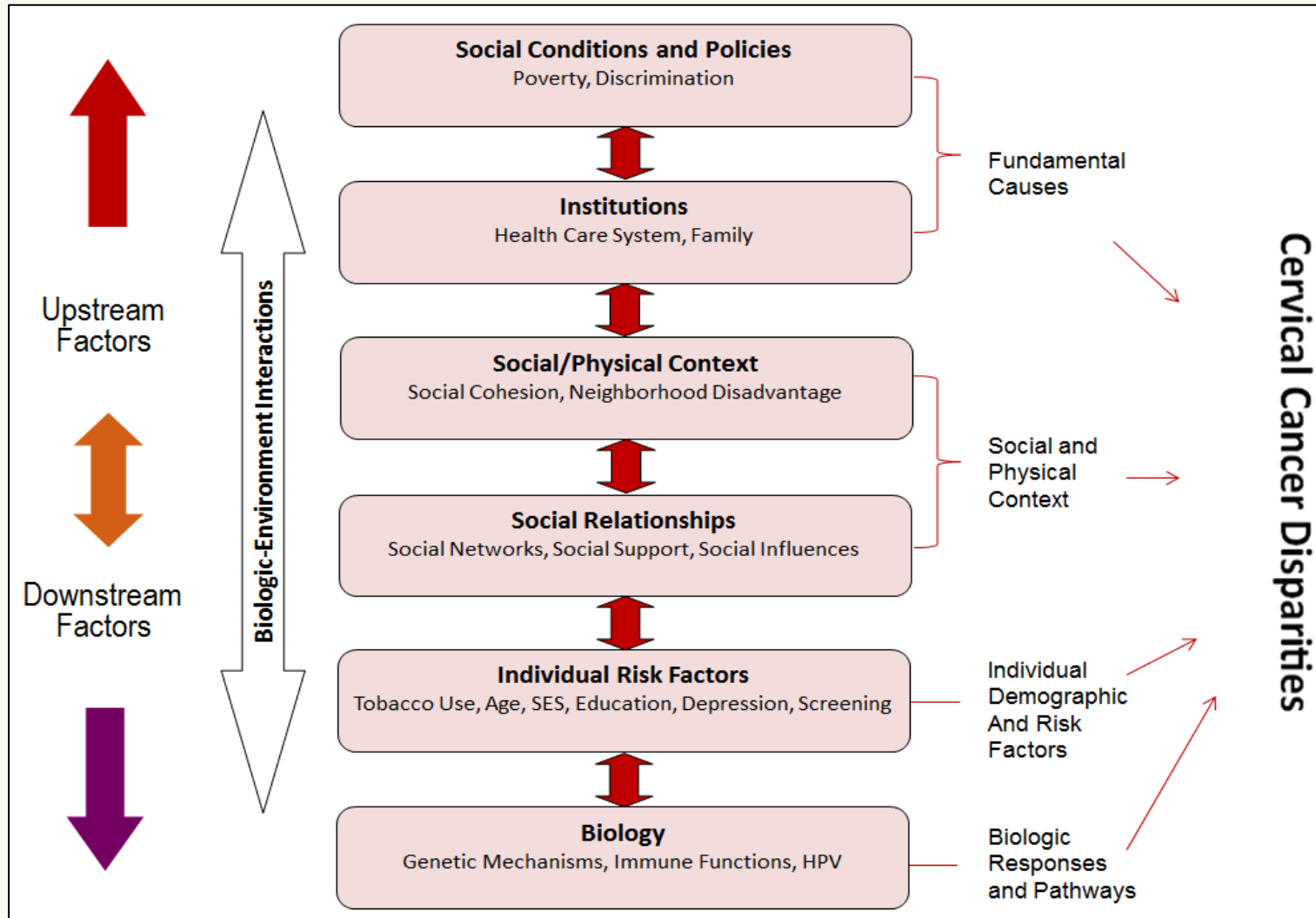
- Appalachia consists of 423 counties in 13 states
- 5 regions: Northern, North Central, Central, South Central and Southern
- 26.3 million residents (about 8% of total U.S. population)
- Median age = 41.3 years old
- Population is 20.2% minority
- Median household income of \$56,780 (US=\$69k)

Prior Work by Team in Appalachia



- High incidence and mortality rates for cervical cancer
- High prevalence of risk factors for cervical cancer:
 - smoking, lack of cervical screening, high rates of high-risk HPV infection, and low HPV vaccination rates
- Genetic alterations contribute to elevated risk of cervical cancer in non-smokers
- Social networks of smokers reinforce smoking
- Poor follow-up after abnormal Pap tests
- Stress increases risk of persistent HPV infection

Multi-Level Model for Cervical Cancer Disparities in Appalachia



Program Description

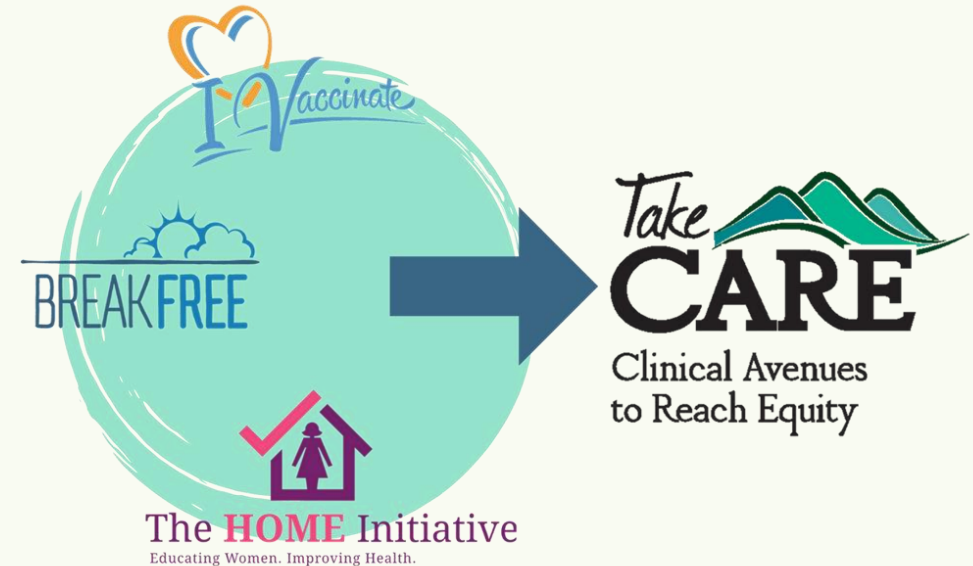
Take CARE is a clinic-based, integrated cervical cancer prevention program to address cervical cancer burden in Appalachian Kentucky, Ohio, Virginia, and West Virginia through three complementary initiatives.

- Designed to target individual, social and community, health system and broader contextual-level barriers related to the burden of cervical cancer.
- 4 States, 10 Health Systems, 39 Health Centers
 - >370 providers and staff trained.



Take CARE – 3 Initiatives, 1 Program

1. I Vaccinate – HPV vaccination and education
2. Break Free – Smoking cessation through NRT and counseling
3. The Home Initiative – HPV and cervical cancer screening



Aims

- Test the effectiveness of an integrated cervical cancer prevention program designed to address three causes of cervical cancer
- Evaluate the impact of the cervical cancer prevention program at the clinics, including:
 - Implementation
 - Acceptability
 - Short term impact
 - Long term impact
 - Bundling of 3 Initiatives
 - Sustainability

Formative Phase

- Community Profiles
- Health Center Scans
- Key Informant Interviews
- Focus Groups
 - Providers
 - Parents of 9-26-year-olds
- Identified health center champions

Completed from
January – December 2020.

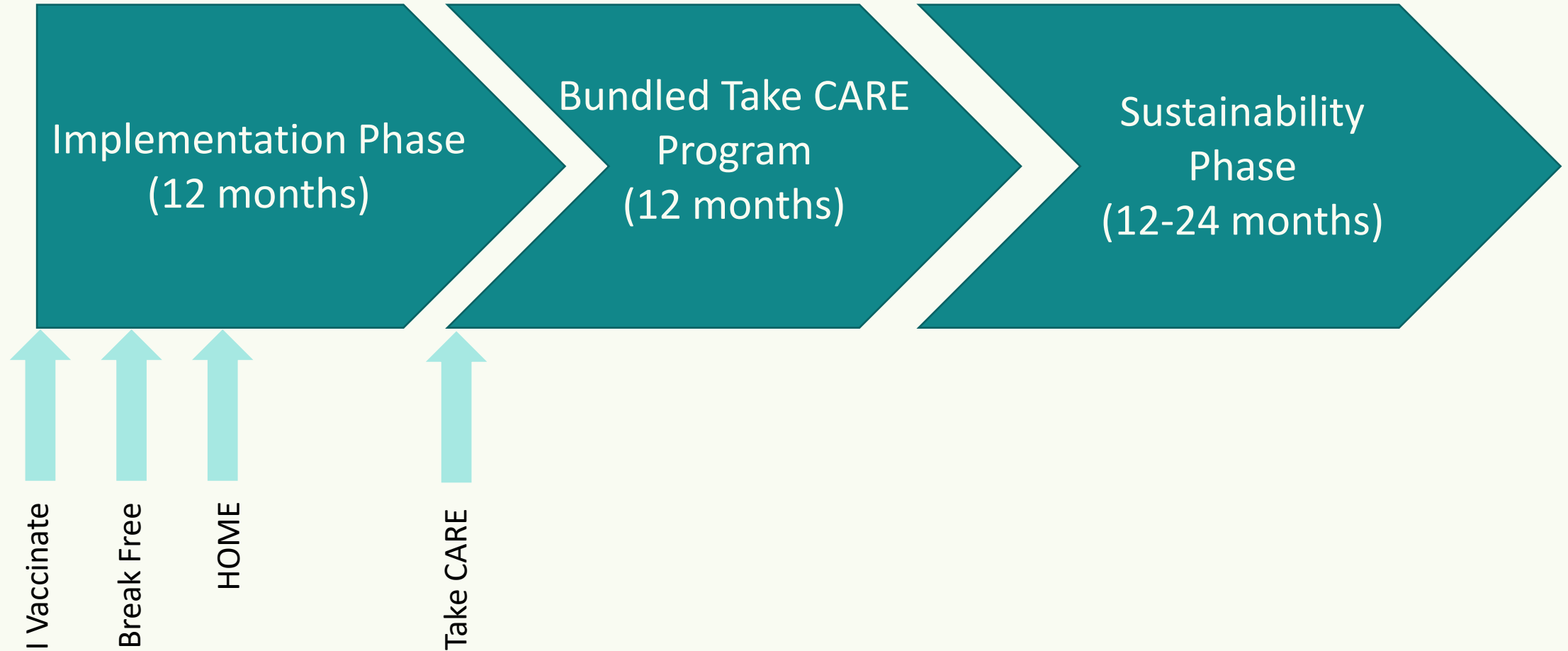
Focus Group and Key Informant Interview Results

- Focus groups were conducted in all 4 states
 - Discussed cervical cancer knowledge, attitudes, screening barriers
 - Participants provided feedback on HPV self-test instructions and FAQ document
- Second round of focus groups completed with the same participants for additional feedback on study materials

Themes from Formative Work about HPV Vaccination

- From providers:
 - Concerns about side effects, promotion of sexual activity, parental consent
 - Great deal of misinformation about vaccine and side effects
 - Work, time, insurance are concerns for those 18+
 - Difference in approach for differing age cohorts
 - Providers need conversation starters
- From community members:
 - Parents seen as a barrier due to misinformation
 - Lack of provider recommendation still a barrier in some areas
 - Young adults not concerned about prevention and cost/lack of insurance are barriers
 - Campaigns should focus on benefits and minimize sex and morality aspects

Trial Phase





Initiative to Increase HPV Vaccination Uptake

- Reframe the conversation: HPV vaccine is cancer prevention
- Strengthen vaccination commitment by healthcare providers
- Reduce concerns about safety
- Maximize access to vaccination services
- Ensure adherence to follow-up doses
- Utilize the EHR to track patients' HPV vaccine progress

I Vaccinate: Target Populations

- Promote bundled vaccines at 11–12-year-old well-child visit with 6-month booster
 - Can be administered in patients as young as age 9.
- Facilitate “late” vaccination for 13–45-year-olds.
 - Engage in shared decision-making with patients aged 27-45.

Shared Decision Making

For adults 27-45 years old, a shared decision-making approach is recommended:

S eek your patient's participation	Communicate that a choice exists, ask patient to share in decision
H elp your patient explore and compare treatment options	Discuss the benefits and harms of vaccinating or not vaccinating
A ssess your patient's values and preferences	Take into account what matters most to patients
R each a decision with your patient	Decide together on the best option. Arrange for the action and follow-up
E valuate your patient's decision	Plan to monitor decision or revisit the decision

<https://www.ahrq.gov/health-literacy/curriculum-tools/shareddecisionmaking/index.html>

Research Coordinator and Champion Activities

Vaccination Strategies Checklist

Reviewed and updated annually to inform action plan

Action Plans

Strategies selected, timeline to implement and status

I Vaccinate Toolkits

Digital and physical copies of all resources and order forms

Social Media Resources

Suggested schedules, wording and imagery

Roles of the Community Health Center Staff

I Vaccinate Role	Health Center Position	Role Description
Initiator	Front desk	Provides immunization/education handout to eligible patients
Supporter	Check-in nurse	Gives VIS handout
Reinforcer	Provider	Supports immunizations due today
Closer	Check-out/front desk	Schedules follow-up appointments
Follow-up	EHR & reminders	Re-contacts for missed follow-up appointments
Reviewer	Champion	Reviews data and continues to educate team

Health Center-Level Interventions

- Custom posters and buttons
- Follow-up reminder system within the EHR



Provider-Level Interventions

- Educational presentation
- Fact sheets
- “Reframe the Conversation” tip sheet
- In-visit reminders from the EHR
- Feedback on HPV vaccination rates
- Booster session at 6 months



Reframing the Conversation

- A healthcare professional's recommendation is the single most important factor in a patient's decision to receive the HPV vaccine.
 - **The HPV Vaccine is cancer prevention!**
 - Recommend the HPV vaccine the same way you recommend others.
 - Listen to and answer parents'/patients' concerns and questions.
 - Make firm recommendations.
 - Share your own success stories and experiences.
 - Use the tip sheet.

**REFRAME THE
CONVERSATION**

Provider Education Session Pre/Post Tests

	Pre-Test			Post-Test		
State	N	Mean Score	Std Dev	N	Mean Score	Std Dev
Kentucky	194	8.4	1.3	158	9.1	1.0
Ohio	50	8.2	1.7	47	8.8	2.1
Virginia	66	7.5	2.1	35	7.7	2.9
West Virginia	53	8.3	1.4	54	9.1	0.9

Patient and Parent-Level Interventions

- Information about the HPV vaccine, in-person and via mail, email, patient portal, and social media
 - Posters in the facility
 - Brochures and fact sheets
 - Reminder magnets
 - Social media messaging
- Reminder contact for follow-up shot
 - Phone, text, email, mail



Social Media Messaging

Summer is flying by and it is time to begin planning to return to school. Remember vaccinations are a great tool to keep kids healthy, in school, and ready to learn. Talk to your healthcare provider today to determine what vaccines are right for your child.



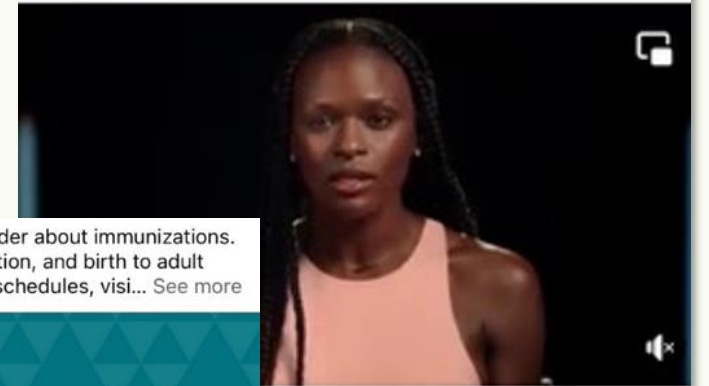
January is Cervical Health Awareness Month. Vaccination and regular screening can prevent cervical cancer. Talk to your health care p... See more



The HPV vaccine can prevent more than **9 out of 10** cases of cervical cancer.

Learn more at hhs.gov/immunization

The most important things you can do to help prevent cervical cancer are to get vaccinated against HPV, have regular screening tests, and go back to the doctor if your screening test results are not normal. Learn More at: https://www.cdc.gov/cancer/cervical/basic_info/prevention.htm #ohhchpv



According to the CDC, HPV causes thousands of preventable cancers in the United States every year. The good news? The HPV vaccine can pre... See more



Be sure to talk to your provider about immunizations. For comprehensive information, and birth to adult recommended vaccination schedules, visi... See more

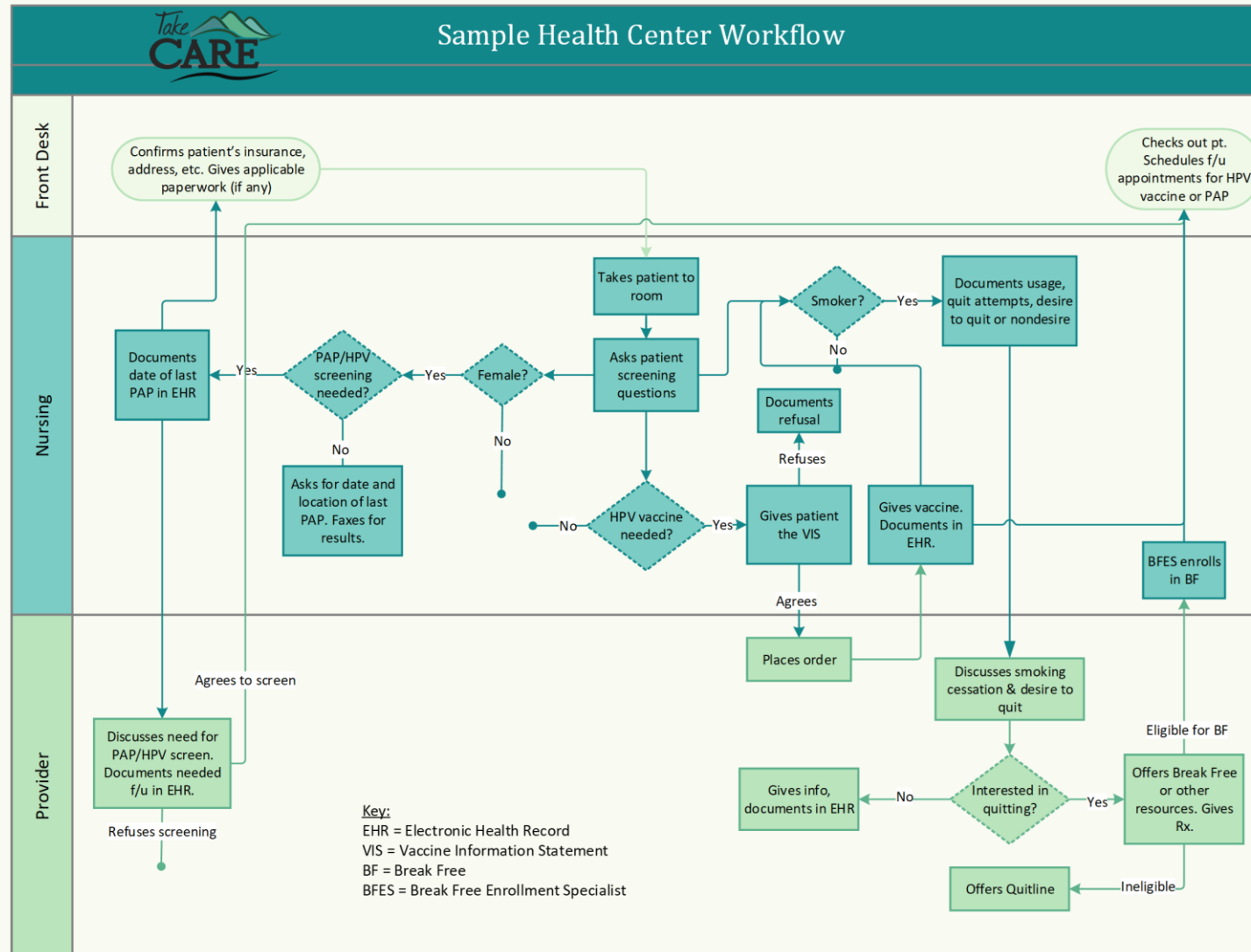


Protect Your Preteen/Teen with Vaccines

Protect them from serious diseases including HPV cancers, meningitis, tetanus, whooping cough, flu, and COVID-19.



Health Center Workflows



Example Outcomes: *I Vaccinate*

Implementation Outcomes	Service Outcomes	Client Outcomes
Acceptability: Provider-reported through regular meetings and annual process evaluation assessments	Equity: Vaccination rates and race, gender, age from EHR	Satisfaction: Provider-reported through regular meetings, annual and exit assessments
Fidelity: Provider education session attendance	Efficiency: Time to implement program components	Knowledge: Provider information session pre- and post-tests
Sustainability: Vaccination rates from electronic health records	Effectiveness: Vaccination initiation and completion rates: 11-12y, 13-26y, 27-45y	

Lessons Learned

- Approach every patient, every time.
 - Provider prompts and vaccine reminder systems in health management software.
- Promotion
 - Digital displays, info sheets and brochures in waiting room, roadside signs all encourage patients to discuss HPV vaccination in visit.
 - Magnets are a great reminder tool to assist in series completion.
- Get outside!
 - Parking lot vaccination days, health fairs and other community events have been effective in delivering knowledge and vaccines broadly.

Remaining Activities

- Recently requested and received a no-cost extension through March 2025 due to COVID delays during startup.
- NCE allows for sustainability phase in Delayed health systems and final data collection across all sites.
- Health centers will update workflows, complete a final HPV Vaccination Strategies Checklist, and continue in or begin an abbreviated Sustainability Phase, depending on randomization arm.

Take CARE Team

UK

Adebola Adegboyega
Jessica Burris
Juan Canedo
Mark Cromo
Mark Dignan
Mindy Rogers
Lovoria B. Williams

OSU

Ryan Baltic
Sarah Cooper
Amy Ferketich
Darla Fickle
Deborah Flinner
Kelsey Jordan
Mira Katz
Michelle Naughton
Jill Oliveri
Electra Paskett
Joanne Patterson
Mike Pennell
Paul Reiter
Abby Shoben
Merry Smith
Julie Stephens
Jean Walunis
Sarah Wilkins
Wendy Xu

UVA

Roger Anderson
Thomas Guterbock
Lindsay Hauser
Teresa Kern
Robert Klesges
Melissa Little
Emma Mitchell
Asal Pilehvari

WVU

Amie Ashcraft
Adam Baus
Dannell Boatman
Trea Haggarty
Zack Jarrett
Stephenie Kennedy-Rea
Cecil Pollard

Questions?



HPV vaccine communication interventions for rural communities

William A. Calo, PhD, JD

Associate Professor of Public Health Sciences, Co-leader, Cancer Control Program, Interim Associate Director, Community Outreach & Engagement, Penn State Cancer Institute

HPV vaccine communication interventions for rural communities

William A. Calo, PhD, JD

Associate Professor of Public Health Sciences

Co-leader, Cancer Control Program

Interim Associate Director, Community Outreach & Engagement

Penn State Cancer Institute



PennState
College of Medicine

**inspired
together**

Rural Think Tank – Priority Action Steps

- Promote starting HPV vaccination at age 9 in rural communities.
- Compile and share existing resources for addressing HPV vaccination with rural communities.
- Develop or adapt health care provider and health care professional HPV vaccination training resources for those serving rural communities.
- Explore policy influences on HPV vaccination in rural areas.
- Develop, test, and disseminate easy-to-use messages for rural audiences.
- Review and update existing resources and data on HPV vaccination and HPV cancers in rural communities.



The Announcement Approach for Increasing HPV Vaccination

Take these steps to more effectively recommend HPV vaccination. They will save you time and improve patient satisfaction.

1

If a parent is hesitant

ANNOUNCE

Start with a presumptive announcement that assumes parents are ready to vaccinate. This is an effective way to recommend adolescent vaccines, including HPV vaccine.¹

KEY ELEMENTS OF AN ANNOUNCEMENT:

Note child's age to cue that this is part of routine care

Say you will vaccinate today

Announce children this age get a vaccine that prevents six HPV cancers.

ANNOUNCEMENT EXAMPLE

"Marcus is now 9, so today he'll get a vaccine that prevents six HPV cancers."

2

CONNECT & COUNSEL

Connect with parents by asking for their main concern about HPV vaccine. Counsel parents by using a research-tested message to address their concern.² Then clearly recommend getting HPV vaccine today.

If a parent declines

3

TRY AGAIN

Say you'll bring up HPV vaccine at the next visit. Then make a note in the child's chart. Almost 70% of parents who initially decline later agree to HPV vaccine or plan to soon.

1. Brewer, et al., 2017, *Pediatrics*. 2. Shah, et al., 2019, *Pediatrics*. 3. Kornides, et al., 2018, *Academic Pediatrics*.
hpvIQ.org



IMPACT Center at UNC-Chapel Hill (Brewer)

Wraps interventions around Announcement Approach Training (AAT)

- Standing orders (P1)
- Vaccine incentives (P2)
- Vaccine champions (P3)

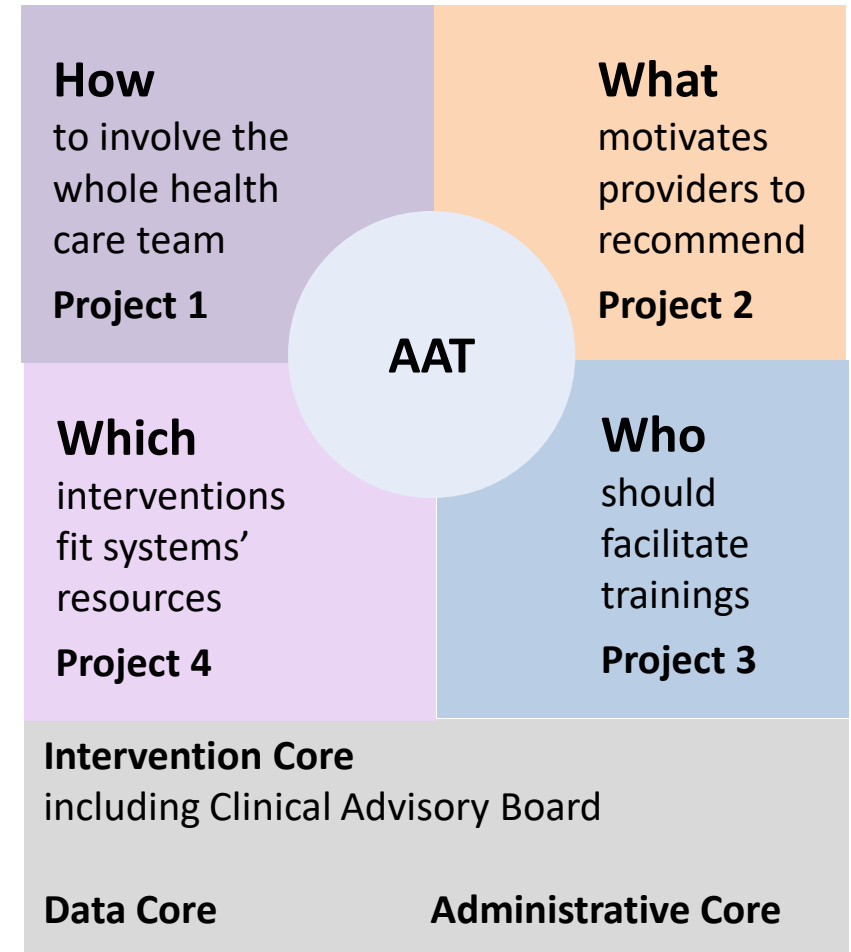
Implementation focus

- Cost-effectiveness analysis of interventions (P4)
- Integrated intervention package

Rural and DEI focus

NCI P01CA250989 to Noel Brewer

<https://www.med.unc.edu/hpvcommunication>



PennState
College of Medicine

**inspired
together**

Domain	P1: Standing orders	P2: Financial incentives	P3: Vaccine champions
Implementation strategy	Facilitation	Alter incentive/payment structures Audit and provide feedback	Champions
Actor	<ul style="list-style-type: none"> Meeting facilitator System QI specialists Clinic representatives 	<ul style="list-style-type: none"> Meeting facilitator Clinic representatives 	<ul style="list-style-type: none"> Vaccine champion System QI specialists
Action	Prepare an action plan for consistent use of standing orders using template Improve clinic process maps	Incentivize clinics for their HPV vaccine rates, conduct audit using EHR Provide report to clinics	Deliver the AAT to clinics Coordinate AAT with other QI Plan for sustainability
Temporality	Working meeting 1 starts the intervention Working meeting 2 one month later Action plan between meetings Clinic staff orientation a month after AAT Learning collaboratives 2, 4, 6 mos later	Kick-off meeting starts the intervention Audit and feedback monthly for 12 months after kick-off meeting Incentive program over 12 months	Facilitator orientation prior to AAT AAT in spring/early summer of intervention years Other enhancements and sustainability plans after AAT
Dose	Two working meetings (90 mins each) Action plan (60 mins/clinic) Orientation (10-20 mins/clinic) Learning collab's (10-20 mins/meeting)	Kick-off meeting (60 mins) Twelve feedback reports over 12 months Incentive paid as vaccination targets met	Facilitator orientation (150 mins) AAT (60 mins) Up to 6 tech assistance calls over 6 months Enhancements at champions' discretion
Action target	Improve clinic flow for HPV vaccination Consistent use of standing orders Improve HPV vaccine recs Increase HPV vaccine initiation	Improve reliance on HPV vaccination data Improve HPV vaccine recs Increase HPV vaccine initiation	Leverage local relationships and knowledge Improve HPV vaccine recs Increase HPV vaccine initiation
Implementation outcome	Acceptability, appropriateness, adoption, cost, feasibility, fidelity, penetration, and sustainability		

NCI P01CA250989 to Noel Brewer



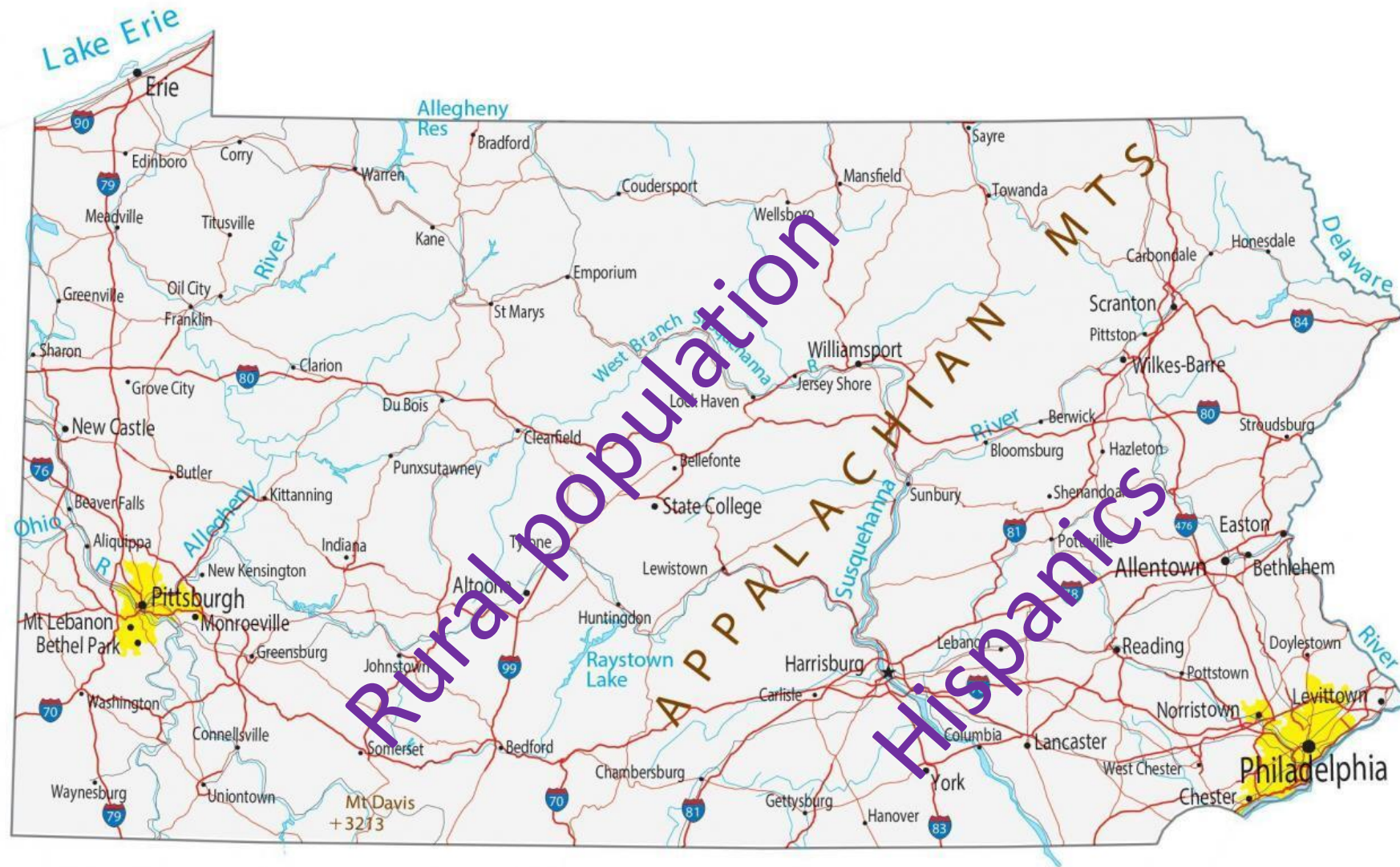
PennState
College of Medicine

**inspired
together**

Rural Think Tank – Priority Action Steps

- Promote starting HPV vaccination at age 9 in rural communities.
- Compile and share existing resources for addressing HPV vaccination with rural communities.
- **Develop or adapt health care provider and health care professional HPV vaccination training resources for those serving rural communities.**
- Explore policy influences on HPV vaccination in rural areas.
- Develop, test, and disseminate easy-to-use messages for rural audiences.
- Review and update existing resources and data on HPV vaccination and HPV cancers in rural communities.





PennState
College of Medicine

**inspired
together**

HPV Vaccine Communication ECHO Study

- Evidence-based interventions for HPV vaccine communication are underused:



Announcement Approach Training (AAT)



Systems communication

- Never tested to support HPV vaccination efforts, the ECHO Model is a promising implementation strategy that allows “hub” specialists to connect with “spokes” to discuss best practices in care.
- This cluster RCT tests the effectiveness and implementation of two ECHO-delivered HPV vaccination communication interventions in primary care clinics.
- Priority to rural clinics or clinics serving large numbers of rural patients.




PennState
College of Medicine

inspired
together


3-arm RCT with primary care clinics in Pennsylvania

HPV ECHO



- 8 one-hour sessions
- Flash talks following the AAT
- 1-2 case presentations or role play scenarios per session
- Online resource library, infographic cards
- No cost CME, MOC Part 4, nursing continuing education

HPV ECHO+




- Same HPV ECHO curriculum

PLUS

- Electronic or mailed recall notices to vaccine-declining parents
- Research-tested messages
- Visual aids to facilitate comprehension

Control



- No intervention
- At the end of the study, clinics gain access to online resource library

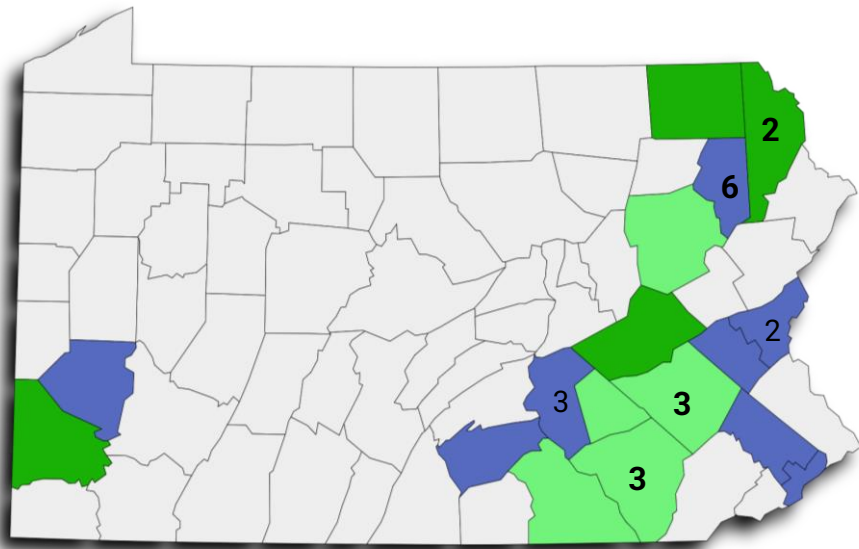
ClinicalTrials.gov Identifier: NCT04587167
NCI R37CA253279 (Calo)



PennState
College of Medicine

**inspired
together**

HPV Vaccine Communication ECHO



- Rural
- Urban location serving rural communities
- Urban



30 primary care clinics



135 providers trained



17 counties



~40,000 adolescent patients

ClinicalTrials.gov Identifier: NCT04587167
NCI R37CA253279 (Calo)



PennState
College of Medicine

**inspired
together**

Rural Think Tank – Priority Action Steps

- Promote starting HPV vaccination at age 9 in rural communities.
- Compile and share existing resources for addressing HPV vaccination with rural communities.
- Develop or adapt health care provider and health care professional HPV vaccination training resources for those serving rural communities.
- Explore policy influences on HPV vaccination in rural areas.
- **Develop, test, and disseminate easy-to-use messages for rural audiences.**
- Review and update existing resources and data on HPV vaccination and HPV cancers in rural communities.



Stories to Prevent (StoP) HPV Cancers

- **Trusted messengers** are people seen as credible sources of information by specific populations
- **Narrative communication** is the use of stories to educate the public, instead of using traditional didactic communication
- We assessed the feasibility of using video narratives from cancer survivors to increase parents' intentions to get HPV vaccination
- We recruited 37 parents who watched our 4-minute video intervention

American Cancer Society Institutional Research Grant #124171-IRG-13-043-01



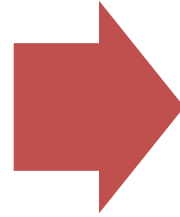
PennState
College of Medicine

**inspired
together**



Phase 1: Video library

Using Narrative Persuasion Framework and professional recording, we developed a 4-min video intervention of a local cancer survivor narrating his story with an HPV-related cancer and promoting HPV vaccination as cancer prevention.



STUDYfinder
SEARCH FOR STUDIES AT STUDYFINDER.PSU

Are you a parent of an adolescent male
VOLUNTEERS ARE NEEDED FOR A RESEARCH

ABOUT THIS STUDY
This research study is seeking parents to complete two online surveys describing their thoughts about adolescent vaccinations. Parents will also be asked to watch a brief video.

WHO CAN VOLUNTEER?

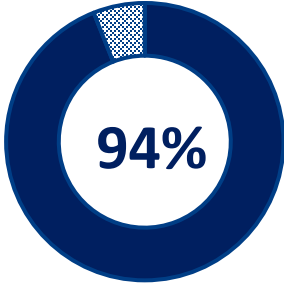
- Parents and guardians of an adolescent male
- Individuals who read and understand English
- Individuals with an email address

Phase 2: Pilot

Parents of males (9-17 yo) were recruited from primary care clinics in Central Pennsylvania.

Participants completed a survey both prior to, and following, the video intervention which preceded their child's wellness visit.

Pilot study findings



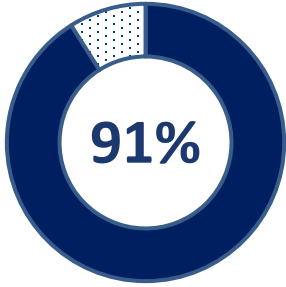
Believe to be true



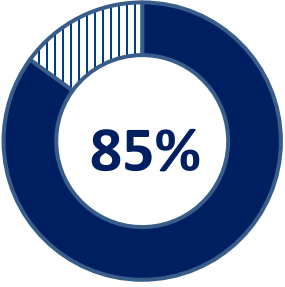
Easy to follow



Helpful to understand risks

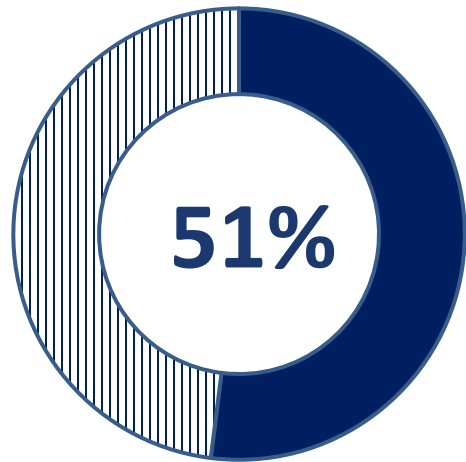


Consistent information



Relevant to parents





Parents said their decision to get the HPV vaccine was influenced by our video intervention



PennState
College of Medicine

**inspired
together**

Stories to Prevent Cancer | Craig's Story



Stories to Prevent Cancer | George's St...



Access our video library
<https://ctsi.psu.edu/isc/resources/>

Stories to Prevent Cancer | Patrice's Sto...



Stories to Prevent Cancer | Mike's Story



Questions?

wcalo@pennstatehealth.psu.edu



PennState

MARCH 4 IS
INTERNATIONAL HPV
AWARENESS DAY



Rural Reach: Accelerating HPV Vaccination Coverage Through Provider Communications and Implementation Science

Prajakta Adsul, MBBS, MPH, PhD. Assistant Professor, Department of Internal
Medicine, Comprehensive Cancer Center, University of New Mexico

PATH →
to prevention



HPV Cancer
Prevention
Program



Rural Reach: Accelerating HPV Vaccination Coverage Through Provider Communications and Implementation Science



Prajakta Adsul, MBBS, MPH, PhD

Assistant Professor, School of Medicine

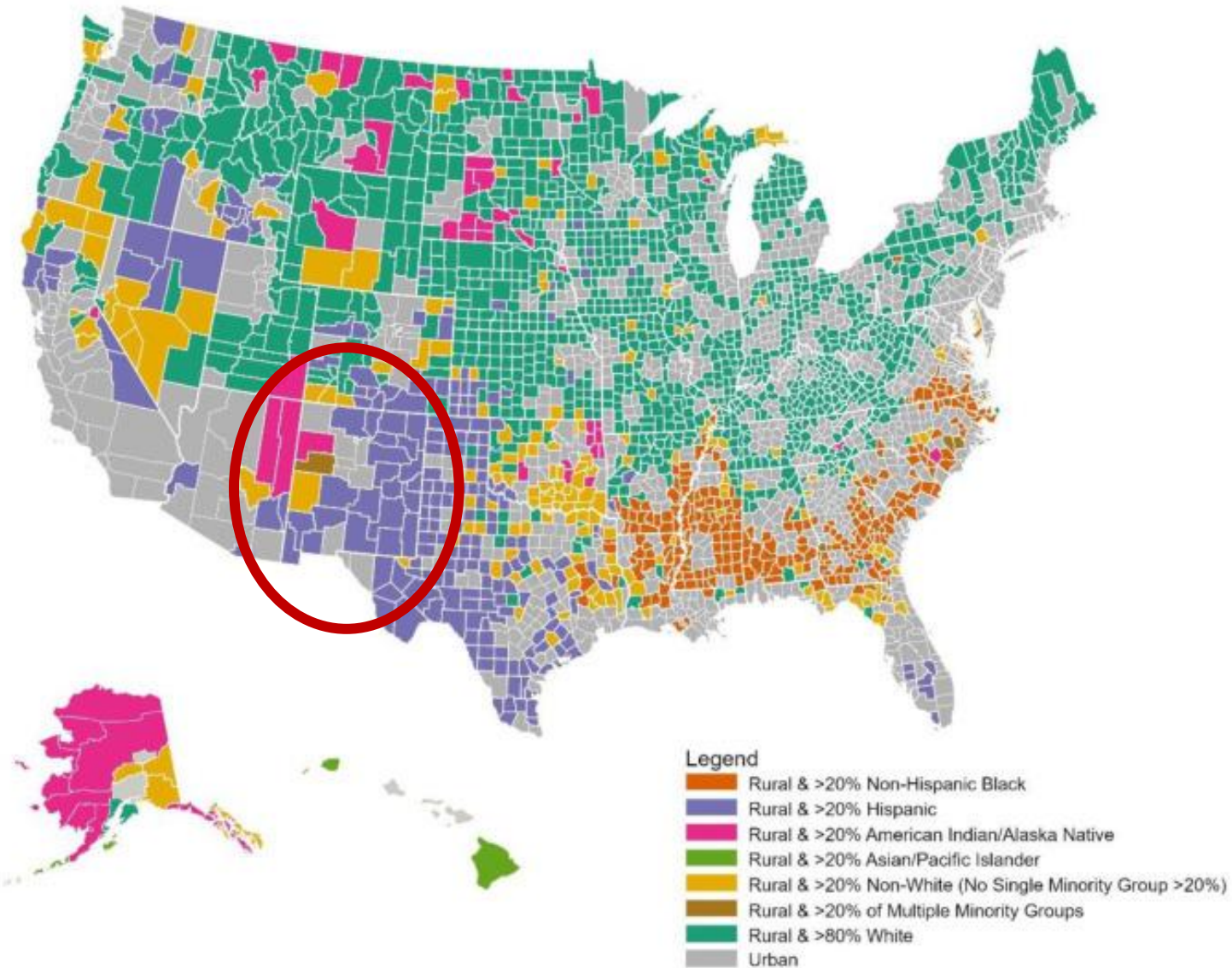
Member, Cancer Control and Population Sciences Research Program

Director, Center for Advancing Dissemination and Implementation Science



Racial/ethnic composition across rural counties, 2018

Figure from [Zahnd, et al., 2019](#)



Rural and urban counties are defined by the non-metro and metro designations from the United States Department of Agriculture. Racial/ethnic composition by county is based on the 2018 Census Bureau Population Estimates Program.

Rural America



- Rural populations are about 20% population, approximately 59 million, one in every 25 individuals ([Zahnd et. al., 2019](#); [Bennett, et. al., 2019](#))
- Historical segregation and discrimination ([Dennis, et. al., 2021](#)); and migration and trauma ([Yellow Horse Brave Heart, et. al., 2011](#))
- Inequities in social and structural determinants of health; including safe, healthy, and affordable, food, water, housing and transportation ([Rural Health Hub, 2023](#))
- “Too simplistic” rural/urban political divide with not enough attention paid to underlying political determinants of health ([Dawes, 2020](#))
- Lack of focus on the assets in rural America; population growth fueled by immigration ([Lichter, 2012](#)) and community social capital ([Arriola, et. al., 2023](#))

Situating health and healthcare in rural America

- Lack of recognition around regional differences for health and healthcare in rural areas (i.e., Southwest, Appalachian, Deep South)
- Non-existent evidence-base on strategies and interventions to improve access to high quality health care
 - Recruiting and retaining health care professionals, and
 - Market-driven approaches to healthcare facility closures
- Unequal improvements in environment and infrastructure for health (i.e., clean water, access to nutritious and affordable food, communications and broadband)
- Social isolation and lack of access to information and education







HPV vaccination in rural America

- Continued poor outcomes for cancer prevention and control in rural residents ([Zahnd, et. al., 2019](#))
- Lack of interventions specific to improving HPV vaccinations in rural settings ([Brandt, et. al., 2021](#))
- Key factors that influence vaccination mapped on the socioecological levels ([Peterson, et. al., 2020](#)) call for an improved focus on organizations and community
- Implementation challenges in rural primary care settings ([Askelson, et. al., 2019](#))

Cancer Causes & Control (2020) 31:801–814
<https://doi.org/10.1007/s10552-020-01323-y>

ORIGINAL PAPER

Barriers and facilitators to HPV vaccine uptake among US rural populations: a scoping review

Caryn E. Peterson^{1,2}  · Abigail Silva^{3,4}  · Hunter K. Holt⁵ · Alexandrina Balanean³ · Abigail H. Goben⁶  · Jon Andrew Dykens^{2,5} 

Received: 21 November 2019 / Accepted: 5 June 2020 / Published online: 14 June 2020
© Springer Nature Switzerland AG 2020








Preventive Medicine
Volume 145, April 2021, 106407



Review Article

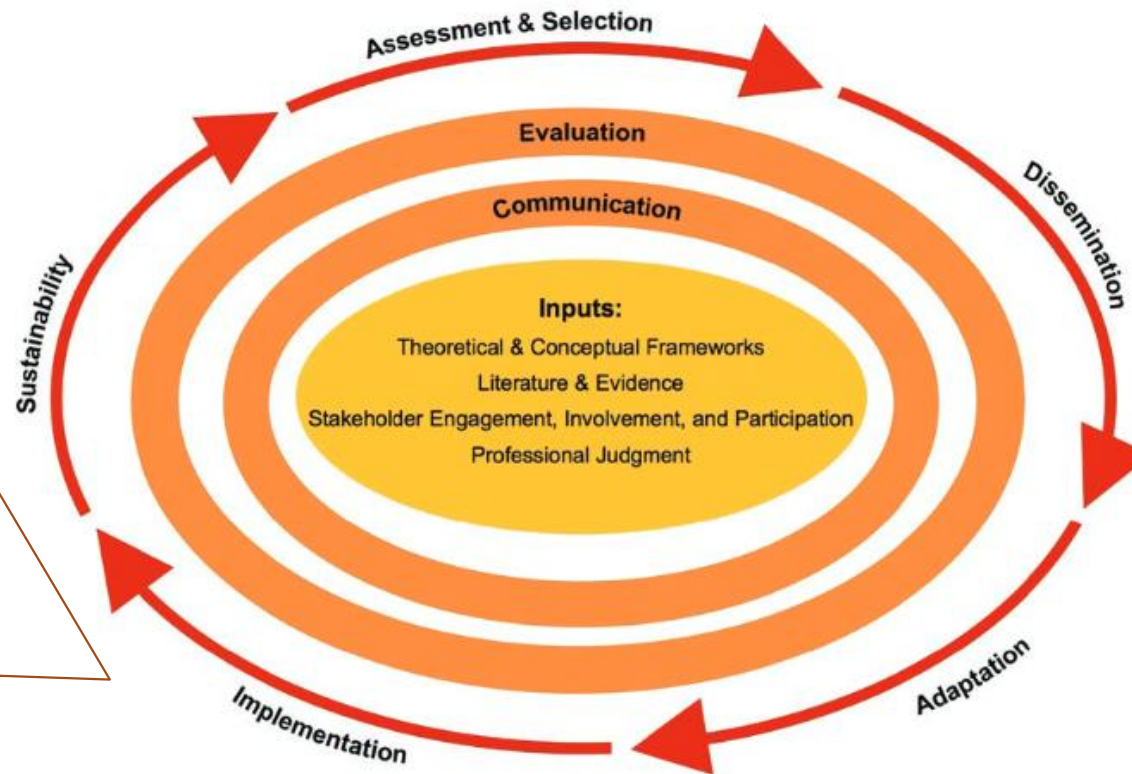
A narrative review of HPV vaccination interventions in rural U.S. communities

Heather M. Brandt^a  , Robin C. Vanderpool^b , Meagan Pilar^c ,
Maria Zubizarreta^d , Lindsay R. Stradtman^e

Dissemination and Implementation Science

(NIH PAR -22-105; Koh, S., et al. 2020)

“... use of strategies to adopt and integrate evidence-based health interventions into clinical and community settings to improve individual outcomes and benefit population health ”



“...targeted distribution of information and intervention materials to a specific public health or clinical practice audience”

Key tenets of D&I science

- Take what we know in research and actively assist in spreading evidence based information for adoption into practice
- Know that how an intervention is implemented in practice can have an important influence on whether the intervention achieved population health outcomes
- Contextual factors can influence how an intervention gets implemented
- Co-designing strategies with dissemination and implementation partners can help promote effective implementation



Strategies to disseminate evidence-based information



Rural communities

- Reducing the controversy around HPV vaccination using evidence-based messaging around cancer prevention and vaccine safety ([Vanderpool, et al., 2018](#))
- Consider local health communication campaigns in communities, especially in school settings ([Vanderpool, et al., 2015](#); [Ramos, et al., 2023](#))
- Leverage local immunization registries for campaigns and generating awareness ([Rane, et al., 2021](#))



Strategies to disseminate evidence-based information and interventions



- **Rural health care settings and providers**
 - Improving provider's knowledge and awareness through didactic, case-based learning, and learning collaboratives ([Oliver, et al., 2020](#))
 - Project ECHO (Extending Community Health Outcomes) known to work in a rural contexts ([Arora, et al, 2011](#))
 - Receiving a provider recommendation is strongly associated with HPV vaccination initiation! ([Dorell, et al., 2011](#))
 - Improving skills for collaborative decision making with parents ([Gilkey, et al., 2016](#))
 - Committing to adaptations for incorporating the local context of providers ([Zhang and Tang, 2022](#))

Strategies to implement interventions in rural healthcare settings



- Acknowledge the unique context for implementation in rural healthcare setting and how decisions for intervention uptake or quality improvement are made ([Askelson, et. al., 2019](#))
- Consider shifting settings to rural community pharmacies ([Daniel, et al, 2021](#)) and school based health centers ([Rane, et al., 2021](#))
- Leverage strategies that have worked in rural settings ([Gunn, et al., 2020](#))
 - Standardized workflows
 - Vaccine support champions
 - Provide immunizations regardless of visit type
 - Use of clear persuasive language



Let's connect!

Email: padsul@salud.unm.edu

Twitter/X: @PrajaktaAdsul

LinkedIn: Prajakta Adsul

Moderated Discussion

MARCH 4 IS
INTERNATIONAL HPV
AWARENESS DAY



Sara Lolley, MPH



Electra Paskett, PhD



William Calo, PhD, JD



Prajakta Adsul, PhD

PATH →
to prevention



**HPV Cancer
Prevention
Program**

Please use Q&A function to pose questions to presenters

PATH →
to prevention

Closing Remarks

MARCH 4 IS
INTERNATIONAL HPV
AWARENESS DAY



HPV Cancer
Prevention
Program

International HPV Awareness Day 2024 Virtual Seminar Series

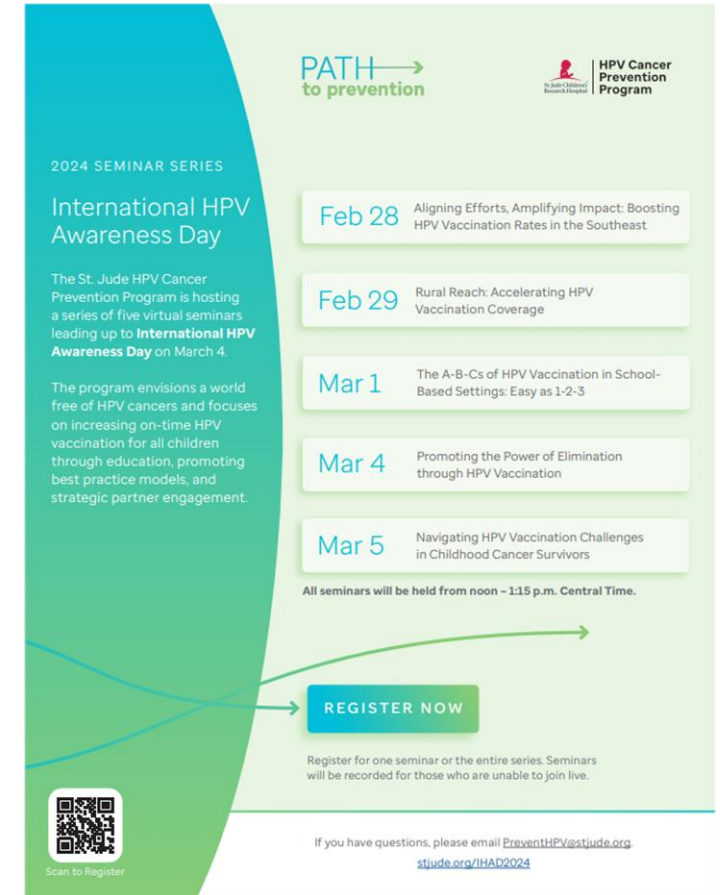
- **Feb 28:** Aligning Efforts, Amplifying Impact: Boosting HPV Vaccination Rates in the Southeast
- **Feb 29:** Rural Reach: Accelerating HPV Vaccination Coverage
- **Mar 1:** The A-B-Cs of HPV Vaccination in School-Based Settings: Easy as 1-2-3
- **Mar 4:** Promoting the Power of Elimination through HPV Vaccination
- **Mar 5:** Navigating HPV Vaccination Challenges in Childhood Cancer Survivors



stjude.org/IHAD2024

PATH →
to prevention

MARCH 4 IS
INTERNATIONAL HPV
AWARENESS DAY



2024 SEMINAR SERIES

International HPV Awareness Day

The St. Jude HPV Cancer Prevention Program is hosting a series of five virtual seminars leading up to **International HPV Awareness Day** on March 4.

The program envisions a world free of HPV cancers and focuses on increasing on-time HPV vaccination for all children through education, promoting best practice models, and strategic partner engagement.

Feb 28 Aligning Efforts, Amplifying Impact: Boosting HPV Vaccination Rates in the Southeast

Feb 29 Rural Reach: Accelerating HPV Vaccination Coverage

Mar 1 The A-B-Cs of HPV Vaccination in School-Based Settings: Easy as 1-2-3

Mar 4 Promoting the Power of Elimination through HPV Vaccination

Mar 5 Navigating HPV Vaccination Challenges in Childhood Cancer Survivors

All seminars will be held from noon – 1:15 p.m. Central Time.

REGISTER NOW

Register for one seminar or the entire series. Seminars will be recorded for those who are unable to join live.

If you have questions, please email PreventHPV@stjude.org or stjude.org/IHAD2024

PATH → to prevention

HPV Cancer Prevention Program

St. Jude Children's Research Hospital

Scan to Register

HPV Cancer
Prevention
Program

St. Jude Children's
Research Hospital

Evaluation

We hope you enjoyed this webinar, and we would like to ask for your feedback.

Please take a few minutes now to complete a brief evaluation.

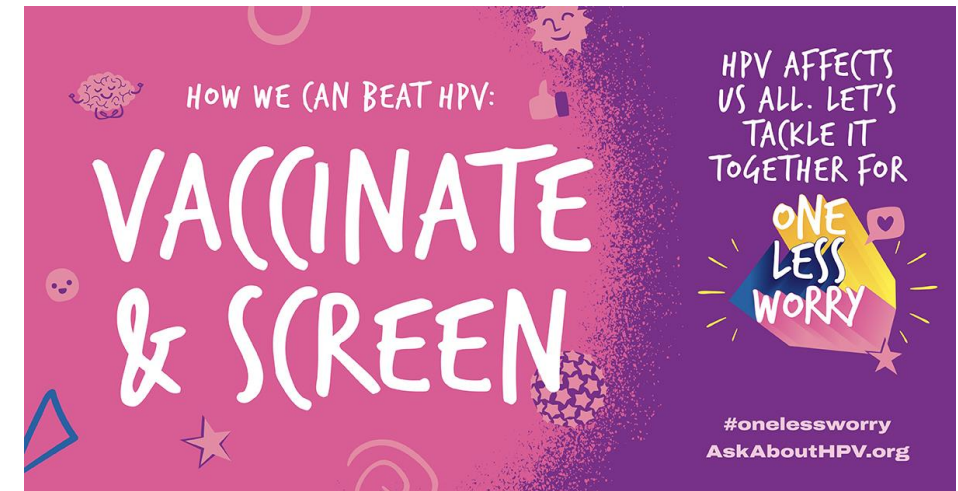


Use the QR code to or the link in the chat to complete the evaluation

International Papillomavirus Society (IPVS): International HPV Awareness Day Campaign 2024

MARCH 4 IS
INTERNATIONAL HPV
AWARENESS DAY

- HPV Cancer Stories
- Social media graphics #onelessworry
- HPV Facts
- Information about HPV vaccination & cervical cancer screening



Use the QR code to access the campaign or visit askaboutHPV.org.

THANK YOU

PATH →
to prevention



HPV Cancer
Prevention
Program

MARCH 4 IS
INTERNATIONAL HPV
AWARENESS DAY