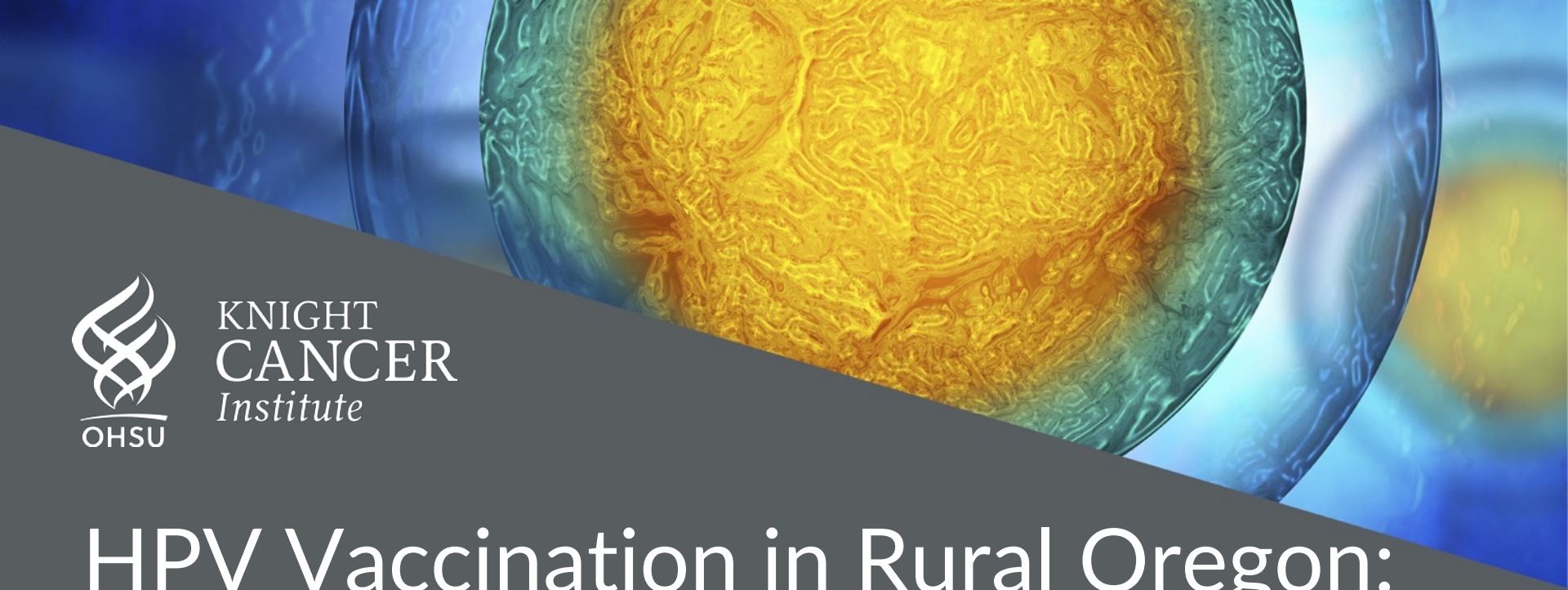

KNIGHT CANCER Institute

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HPV Vaccination in Rural Oregon: A Multi-Level Analysis

DATE: June 11, 2019 PRESENTED BY: Paige E. Farris, MSW, Research Associate

Today's Objectives:

- Describe a recent study conducted throughout the state in rural counties
- Share preliminary data about barriers
- Suggest facilitators to HPV vaccination
- Link our findings to the evidence-based approaches described in the ACS Oregon HPV Week toolkit

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Eliminate HPV Cancer

Eliminate HPV Cancer

HPV experts from around the world see a clear path forward to eliminating cancers caused by HPV.

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NCI-Designated Cancer Centers Endorse Goal of Eliminating HPV-Related Cancers

Cancers caused by the human papillomavirus (HPV) are a significant public health problem. The National Cancer Institute (NCI)-designated cancer centers fully endorse the goal of eliminating cancers caused by HPV through gender-neutral HPV vaccination and evidence-based cancer screening. These practices offer a rare opportunity to prevent 12,000 cervical cancers and nearly 40,000 other HPV-related cancers (oropharyngeal, anal, penile, vulvar, and vaginal cancers) among men and women annually in the United States.

An effective and safe vaccine is available that prevents the large majority of cancer-causing HPV infections. In addition, healthcare providers can use proven methods to screen for and treat cervical pre-cancers.

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American Cancer Society

Mission: HPV CANCER FREE

ACS Elimination Statement on HPV

The American Cancer Society affirms our commitment to work towards a rec
burden of HPV disease, and where certain conditions are met, the eliminatic
through HPV vaccination and screening. To this end, the ACS has launched
Free,[1] the goal of which is to increase HPV vaccination rates for pre-teen bo
2026, 20 years after approval of the first HPV vaccine. We believe that throu
organizational commitment and strategic investment, the American Canc
save untold lives and create an HPV cancer-free world.

The Case for Elimination

Human papillomavirus (HPV) infection is a known causal agent of six di
Each year in the United States, 31,500 people are diagnosed with a can
HPV and hundreds of thousands of women are diagnosed and treated
cancers costing billions of health care dollars.[2] Virtually all cases of ce
cancers are caused by HPV infection.

The HPV vaccine prevents infection with nine HPV types, including h
about 90% of HPV cancers.[3] The HPV vaccine is so effective at preve
administered before exposure that the Advisory Committee on Imn
the number of recommended doses from three to two, consistent with glob
including from the World Health Organization.[4] Current research shows the HPV vaccine provides
lasting protection and early studies are showing reduction of HPV cancer rates to zero in certain
populations after vaccination.[5,6] Research is beginning to demonstrate that it may be possible to
eliminate certain HPV types and the diseases they cause, including cancer.[7]

Papillomavirus Research 5 (2018) 87–88

Contents lists available at ScienceDirect

Papillomavirus Research

journal homepage: www.elsevier.com/locate/pvr

IPVS statement moving towards elimination of cervical cancer as a public health problem

IPVS is releasing a ***Call to Action*** to health authorities to adhere to international standards developed by WHO to develop national, regional and local plans to ulitmatley achieve the goal of cervical cancer elimination as a public health problem. A markedly reduced incidence of cervical cancer is possible in the near term, with elimination thereafter, if high rates of HPV vaccination and cervical screening are achieved.

The facts:

Every 2 min a woman dies of cervical cancer

- Cervical cancer is a cancer caused by human papillomavirus (HPV) infection, which can be effectively prevented as a public health problem by vaccination and screening.
- Highly safe and effective vaccines that can prevent the majority of HPV infections that cause cervical and other HPV-associated cancers are available.
- Tests to screen for, and methods to treat, cervical pre-cancerous lesions are available and are proven to reduce cervical cancer incidence.
- Combining HPV vaccination at high coverage for adolescents and high coverage of cervical screening, with appropriate treatment of all women, can eliminate cervical cancer as a public health problem.
- Recent modelling suggests that, with the tools available, elimination of cervical cancer in local populations is achievable within our lifetime. To achieve this, these effective and cost-effective prevention methods will need to be expanded, to include those not currently vaccinated or screened.
- Broad dissemination of HPV vaccines has been achieved in some low and high resource countries, but needs to be scaled up globally, to reach the majority of age eligible individuals.

Today we are poised to markedly reduce the incidence of cervical cancer, with the vision of eventually eliminating it as a public health problem, using the combination of sustained high coverage HPV vaccination and sustained high coverage screening with treatment.

Please help spread the message that we can markedly reduce cervical cancer. We have the science and the tools. We now urgently need the policy, the resources, political will and the public's determination to move forward to implement these actions.

Knight Cancer Institute's HPV Vaccination Environmental Scan

AIM:

Conduct a multi-level environmental scan using the social ecologic framework to assess barriers and facilitators to full HPV vaccination among adolescents in three rural Oregon regions

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Framework:
The Social-Ecologic Model

Public policy; scanning for information on previous or existing Oregon-specific and county-specific resources

Community tours (observational scans) to count providers, pharmacies, HPV Vax resources in public spaces.

Community forums (2/county) and regional social media scan

Organizational key informant interviews

Focus groups (at least 2-4 per dyad/triad) with providers, parents, other entities like faith-based organizations, etc.

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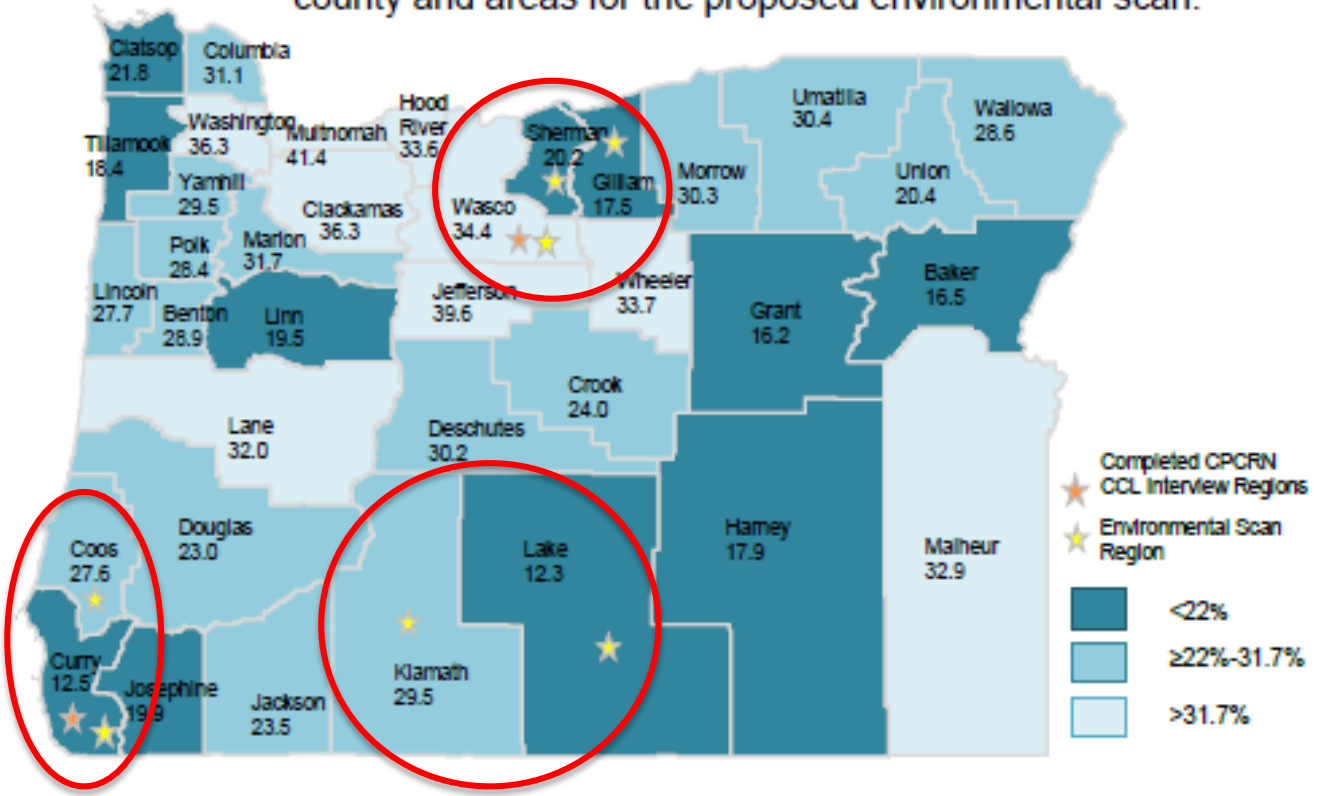
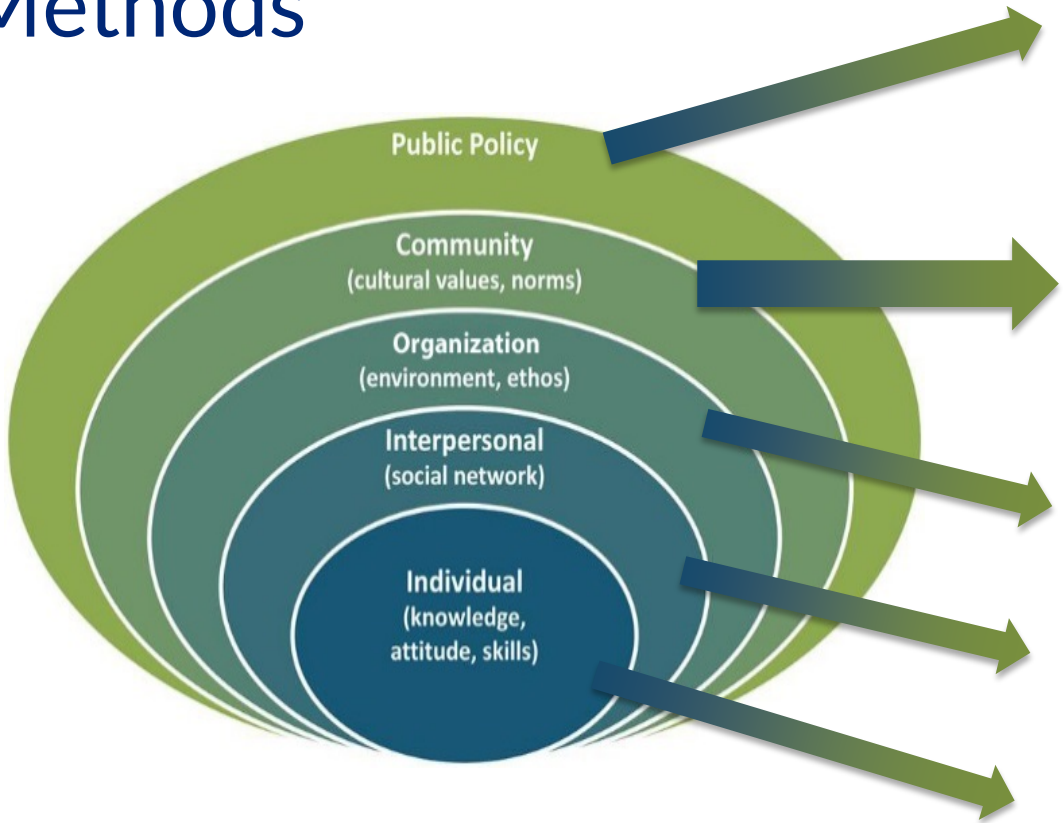
Regions for Investigation

Two dyads and one triad (n=7) of geographically similar counties with divergent HPV immunization coverage

Figure 1. Map of HPV vaccine series completion rates by county and areas for the proposed environmental scan.



Methods



Public Policy Scan
Federal to state to county level
Online searching, phone calls

Observational Scans
6 counties
Walk in, ask clinical & community settings about HPV vaccination, observe/tally presence of materials

Regional social media scan
7 counties
Online using Google Alerts, Mention.com, Tweetdeck, Sprinklr

Key informant interviews
6 counties
Recorded de-identified phone calls

Provider Focus Groups
6 counties
In person de-identified phone calls

Parent Focus Groups
5 counties
In person, demographic survey

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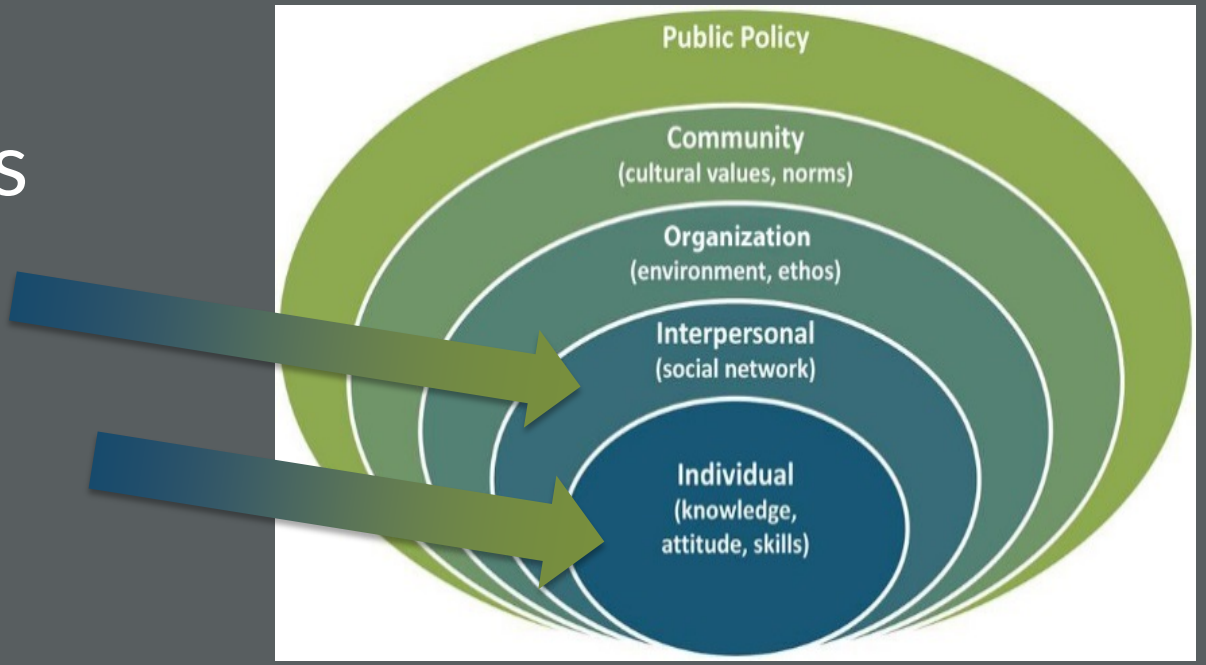
Preliminary Results:

Parent Focus Groups



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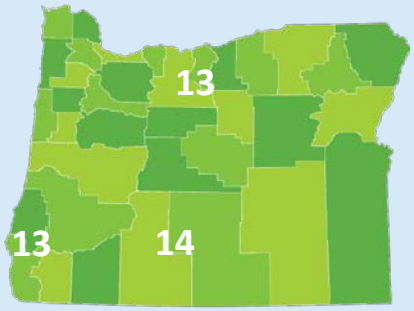
Parent Demographics



Equal size focus groups
in each region
(total participants = 40)

73% women, relatively
equal across regions

Average age:
41

Max age:
63

Min age:
17

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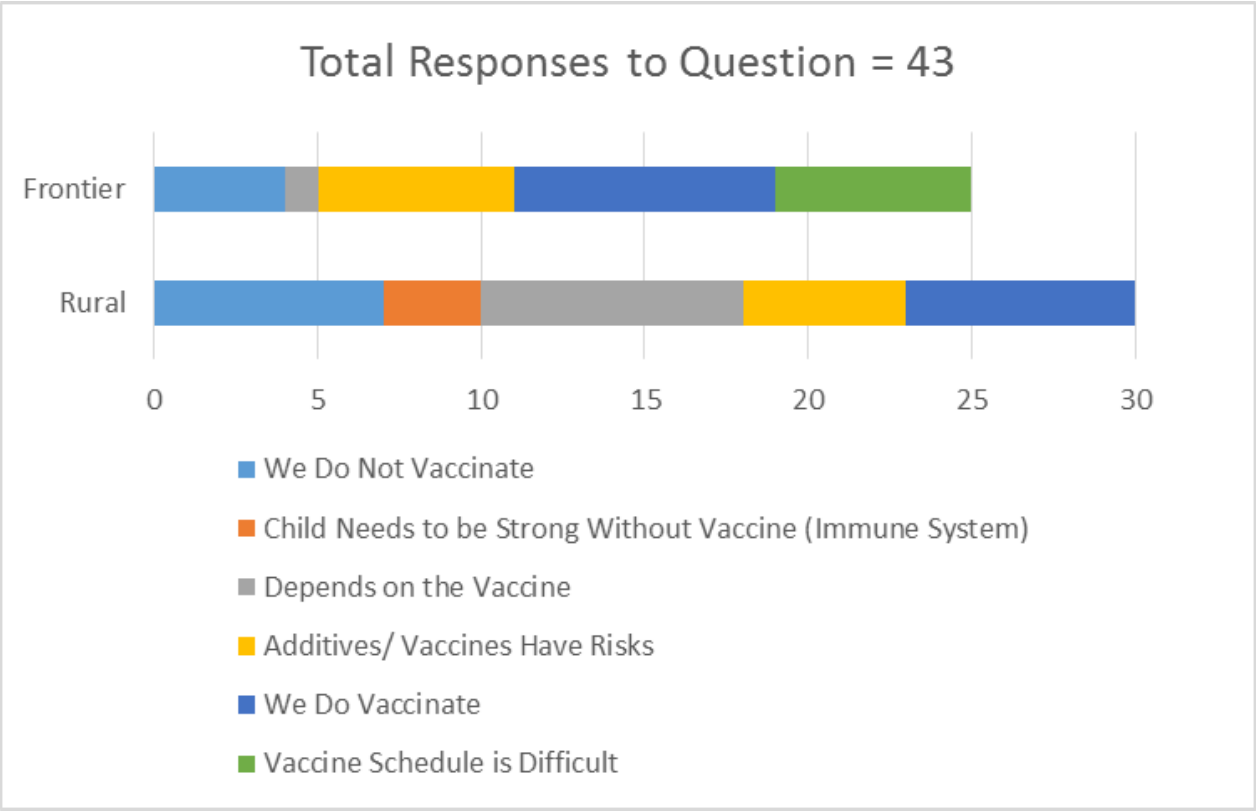
The Range of Feelings about Vaccination are Relatively Broad



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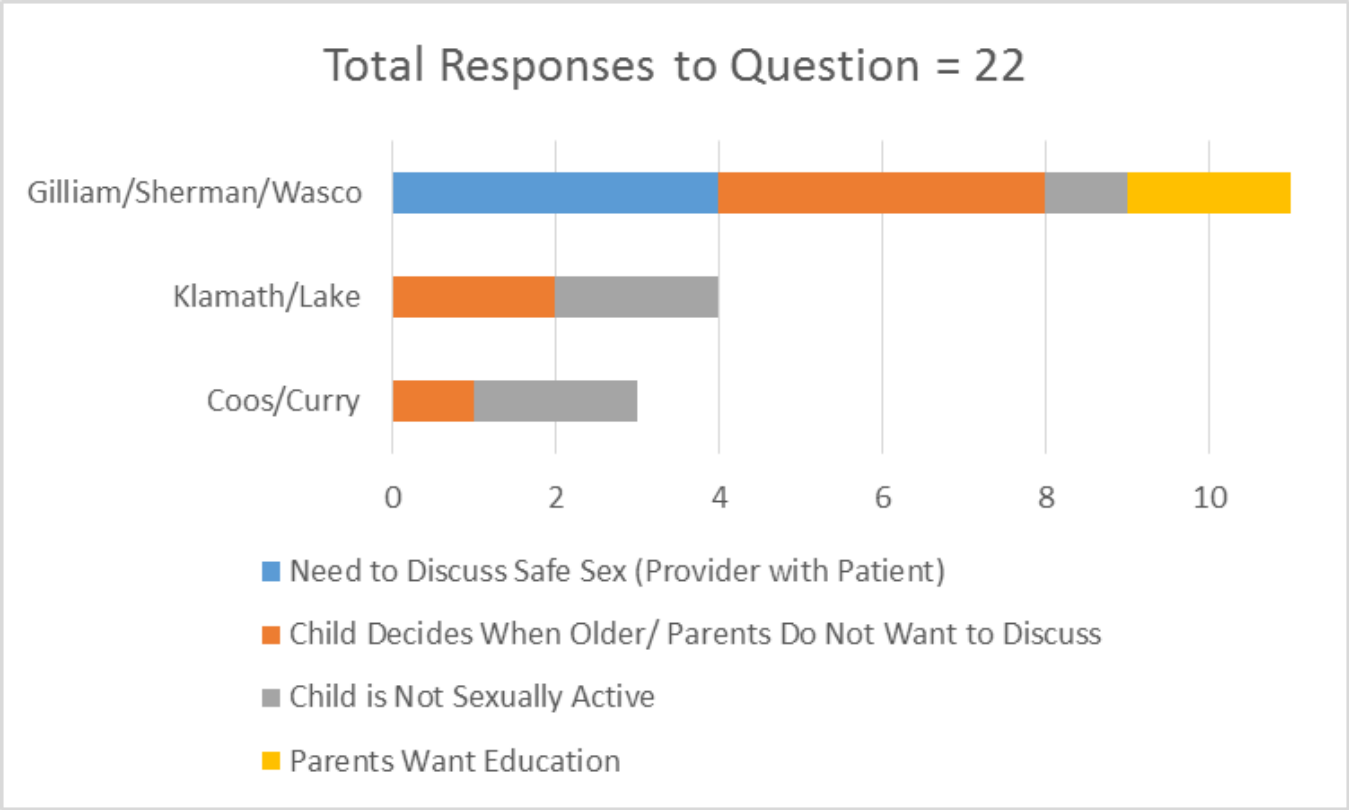
Parents' Responses to Doctor Recommending Vaccine:



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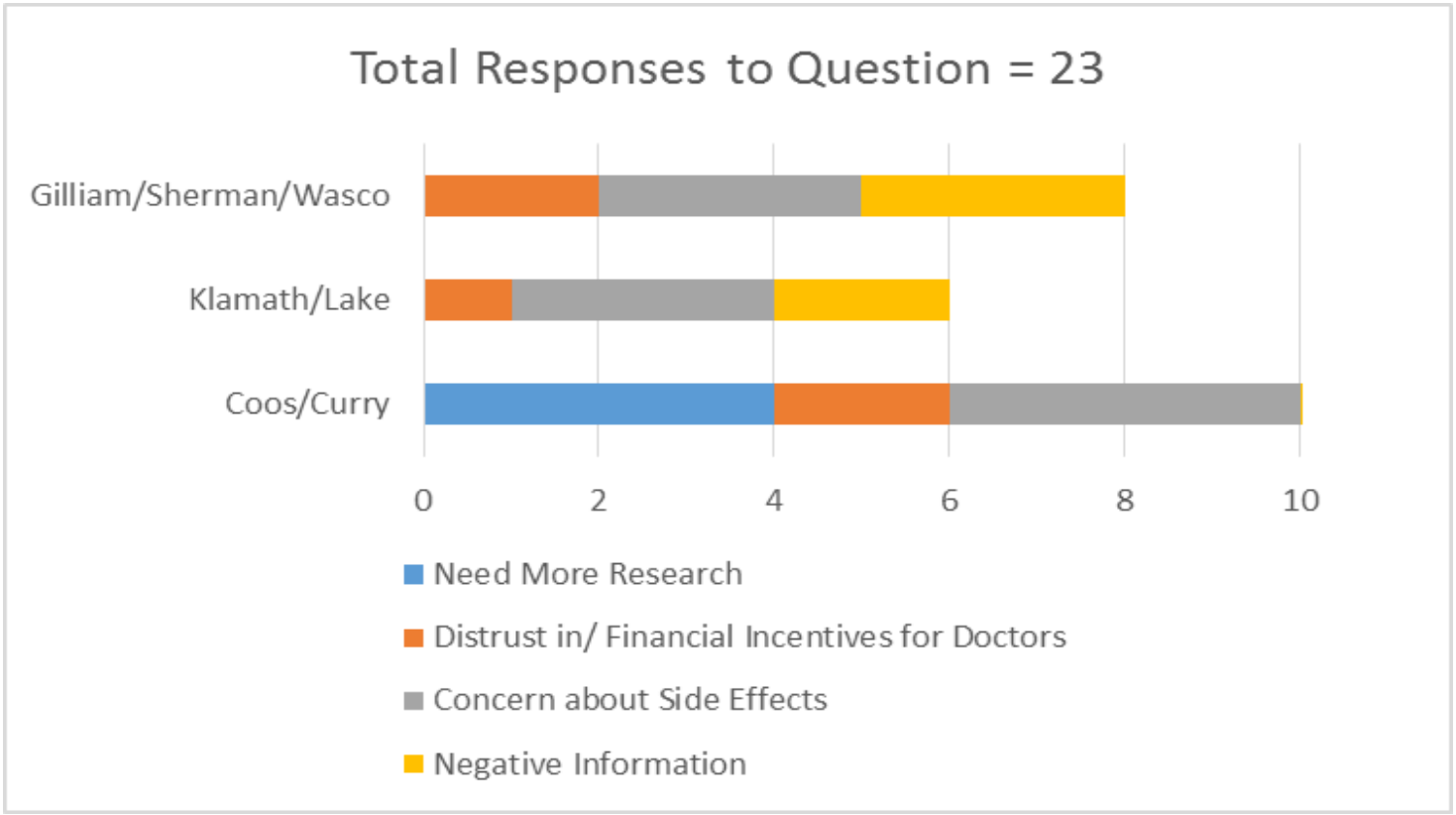
Reasons Parents Do **Not** Want to Vaccinate Child:



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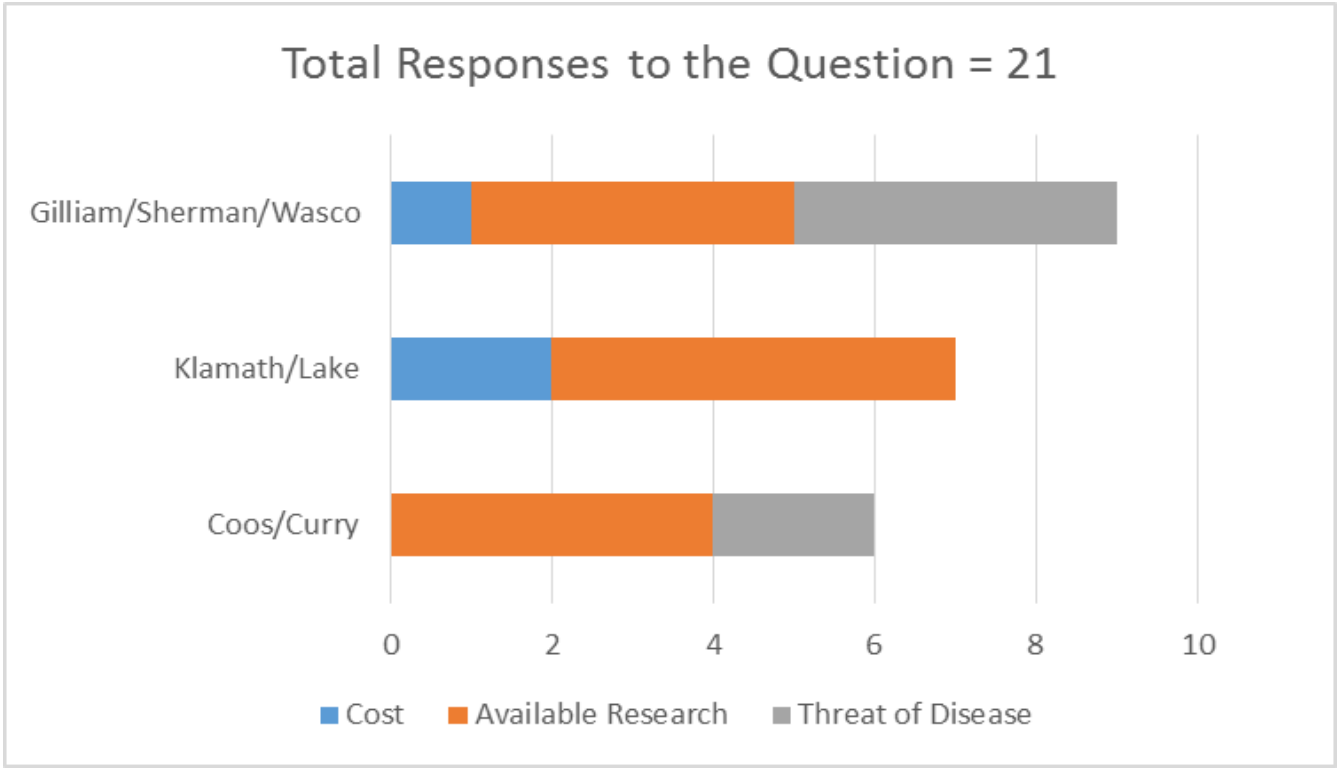
Parents Tell Us What the Community Wants to Know Before Allowing HPV vaccination



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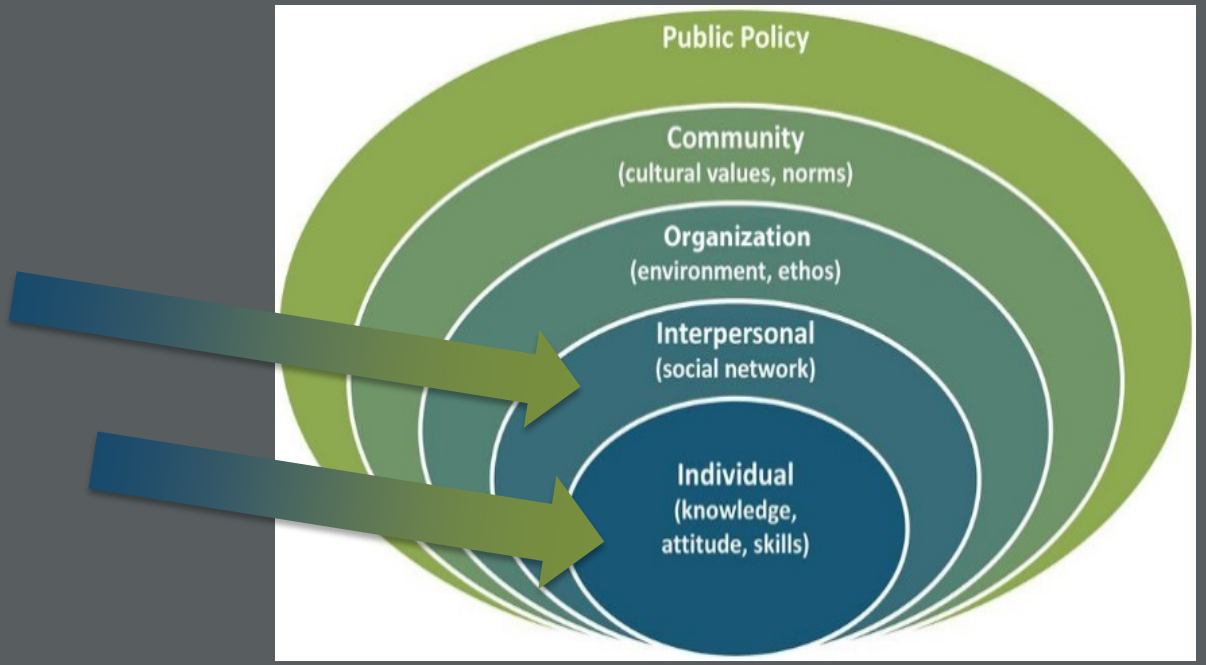
Preliminary Results: Provider Focus Groups



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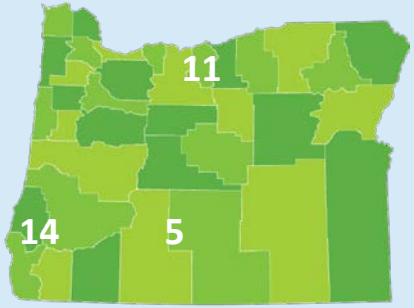
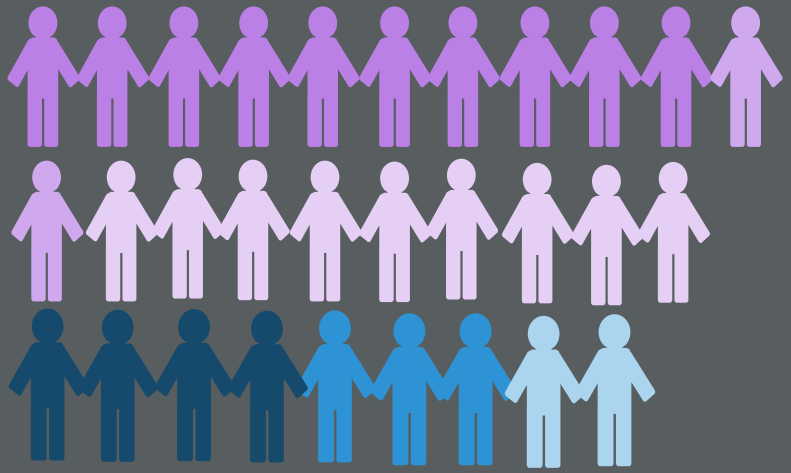
Provider Demographics



30 focus group participants total



70% (21) women, 30% (9) men

Average age: 47

Max age: 74

Min age: 27

<u>Race/Ethnicity</u>
93% Non-Hispanic, White
7% Hispanic

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Provider Specialties

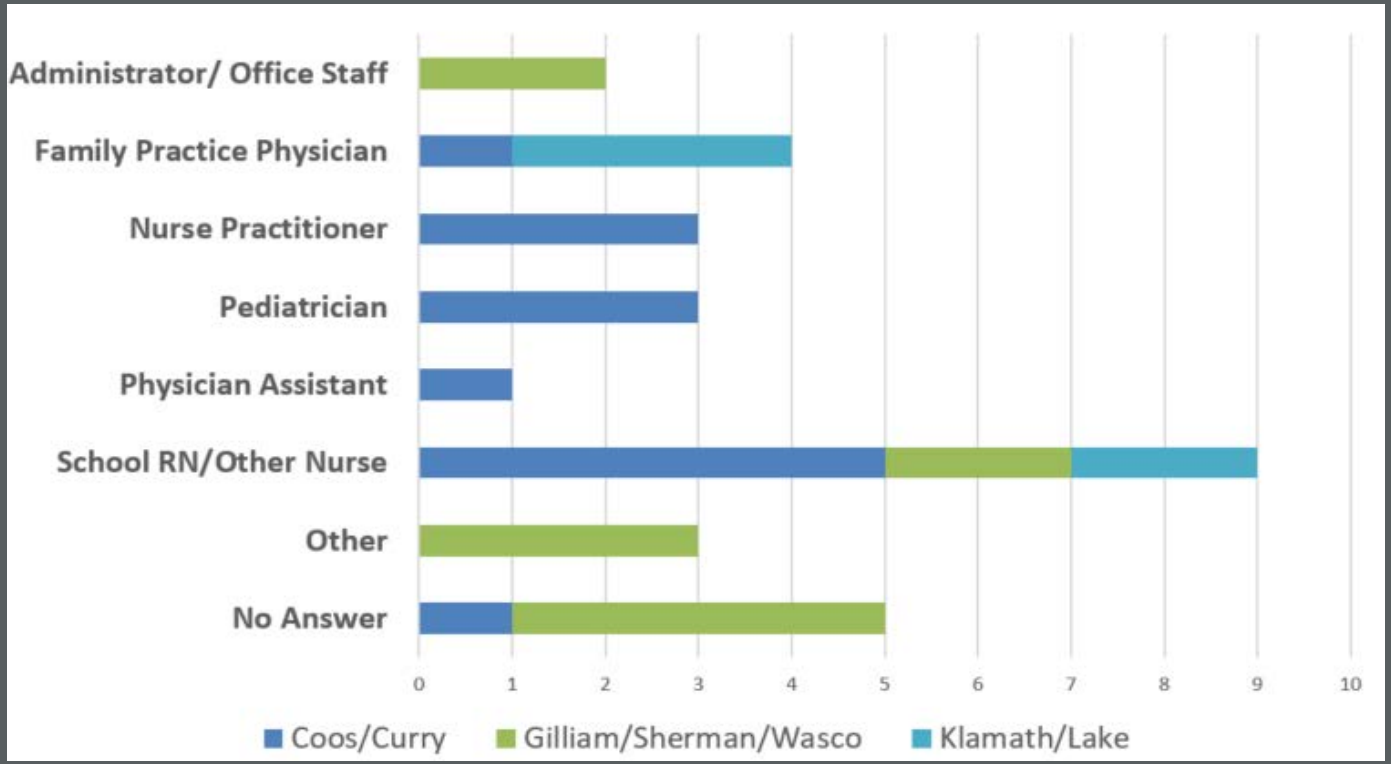

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Table 5. Descriptive statistics of PROVIDER focus group participants by county, continued.

COUNTIES (number of attendees)		COOS/CURRY (N=14)	KLAMATH/LAKE (N=5)	GILLIAM/ SHERMAN/WASCO (N=11)	Total (N=30)
TYPE OF PRACTICE	Private (solo or group)	50%	-	9%	26%
	Ambulatory Care/ Primary	14%	-	18%	13%
	Institutional setting/ Clinic	-	20%	-	3%
	Health Department*	-	-	27%	10%
	Federally Qualified Health Center (FQHC)	-	-	-	-
	> 1 Type of Facility	-	60%	-	10%
	Other/ Not Applicable/ No Ans.	36%	20%	45%	37%
VFC PROVIDER		57%	80%	18%	47%
Average # of patients seen/ day**		24 (n=10)	20 (n=5)	60 (n=2)	27 (n=17)
Average # of adolescents seen per week**		39 (n=9)	8 (n=5)	33 (n=3)	29 (n=16)

* Includes County and State Government Agencies
**If range provided, range median used to calculate average

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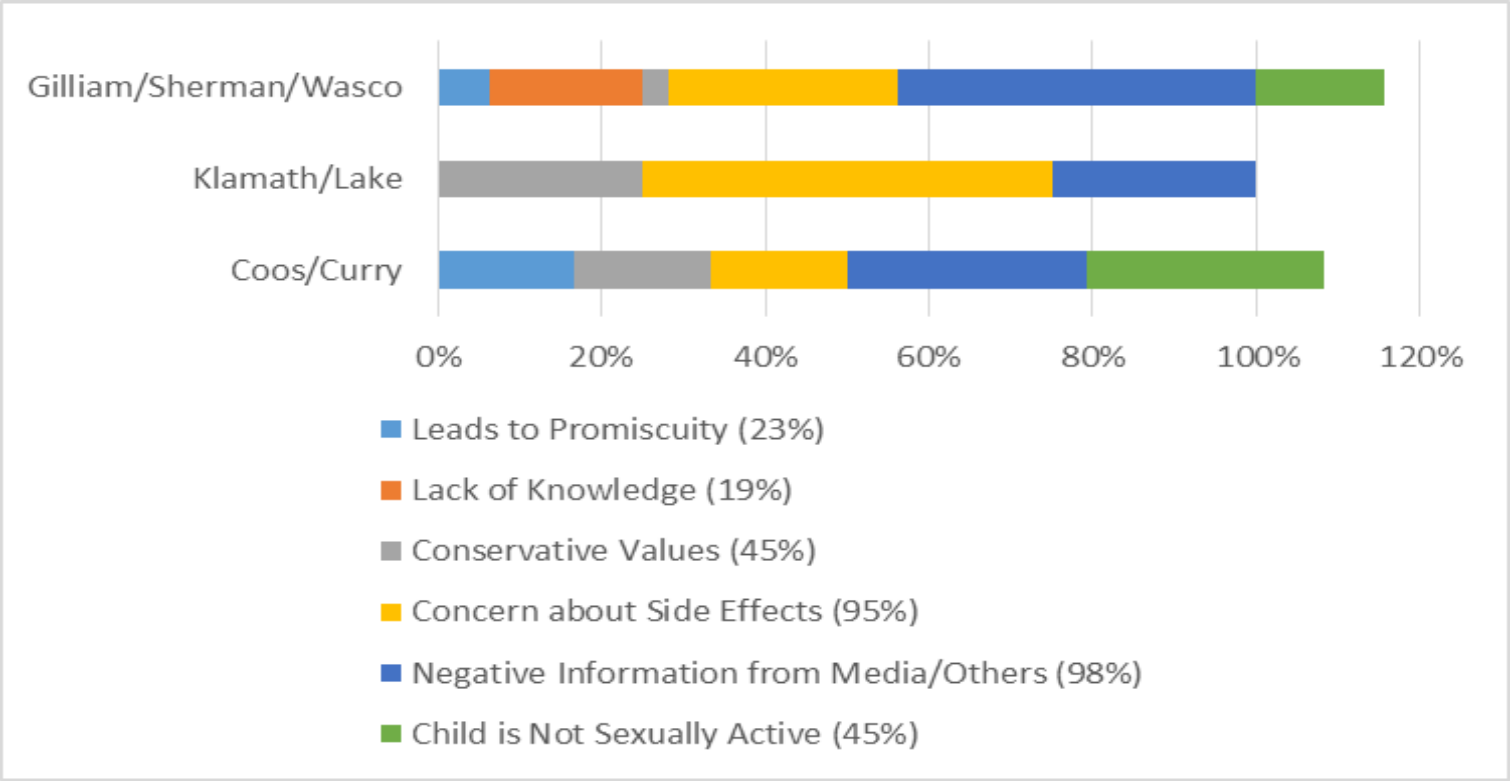
Providers are Telling Us the Reasons They Hear about Why Parents Are Not Vaccinating



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Providers Use the Following Strategies/Words in Response to HPV vaccine Refusal

- Reviewing Vaccine Information
- Cancer Prevention
- Give the Vaccine When the Child is Younger

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"I like to educate on the HPV virus, like contracting it and the cancers associated with it and that kind of thing, to let them know what the risks are of not being protected and vaccinated."

- School Nurse, South Coast

"…this is a vaccine that, to be thought of (as) preventing cancer, not just preventing all STDs, it protects against a few that are most associated with developing cervical or penile cancer.

And then I throw in the, if you do it before you turn 15, it's only **two** pokes instead of three. I recommend it today, what are your thoughts." - Pediatrician, South Coast

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Providers are using open-ended, non-judgmental questions; ‘tell me more about that/your choice’

Discussing source of information parents might be looking at; is it reputable?

Consider online sources; are they scientific or anecdotal?

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For Parents and Patients who Agree to the HPV Vaccine, Providers Tell Us:

- Teens are more interested than their parents (7)
- Believe in the vaccine/ vaccination (6)
- They have trust in their doctors

"I think the marketing that they're doing concerning HPV on TV is really… helping kids associate that their voice, or, you know, requesting the vaccine."

"…I find that my teenage patients are more interested and want it than their parents …well, to a degree, I see a lot of that where the kid is like, yeah, I want that, so sign me up for that, I don't want genital warts. Where the parents might be hesitant sometime - that they let their kid make that choice…"

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Providers Told Us What Messages Should be Included in HPV Vaccination Educational Material

- #1: Focus on Cancer Prevention (15)
- Mode or Method of Effectiveness (e.g. why this age?) (7)
- Personalize the Message
- Present the Newest Research

"So the kids think they're invincible but when you bring in how it's gonna affect their physical appearance, warts on your face, or your genitals, you know, my son is 16 years old, so …when I talked to him about this vaccine it was like, 'oh, yeah, sign me up for that one. I don't want warts', you know, …anything that affects their…physical appearance affects teenagers."

"I think maybe having new research to talk to them about because it has been so long since it's been out, that people still think it's the new vaccine."

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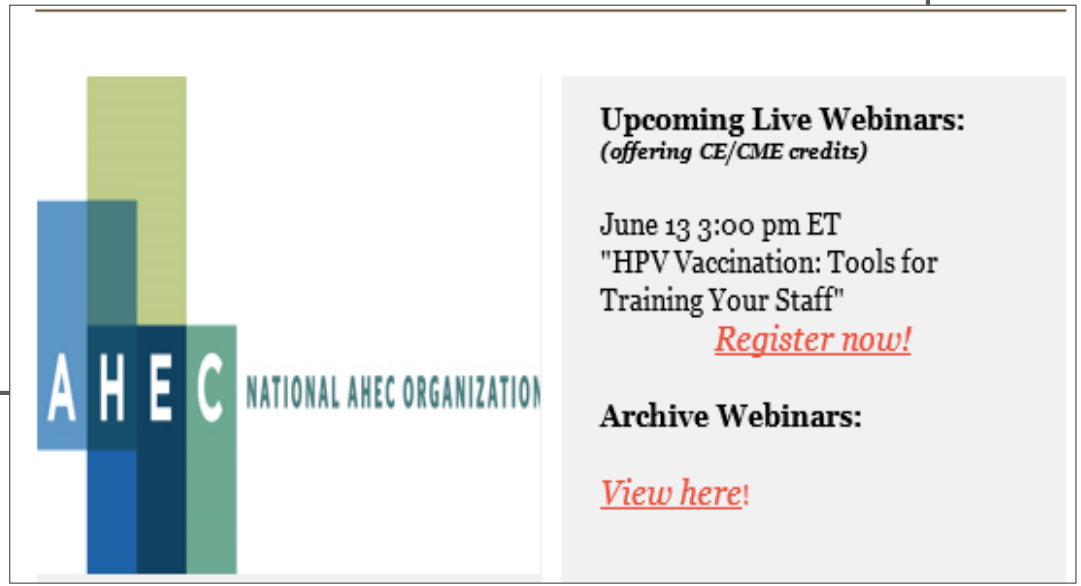
Education About HPV Vaccination is of Interest to Providers

- Include full clinic/ entire team – front to back of clinic
- Financial incentives
- Education support



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“So, as we continue to broaden that we're care teams, not individual employees doing a certain task, that we're all part of the team, I think those barriers'll break down a little bit easier where everybody's on the same page and we provide different levels of education. So the front desk can offer some basic knowledge, the medical assistants can offer what their scope is, and knowledge, and then providers can do their part.”

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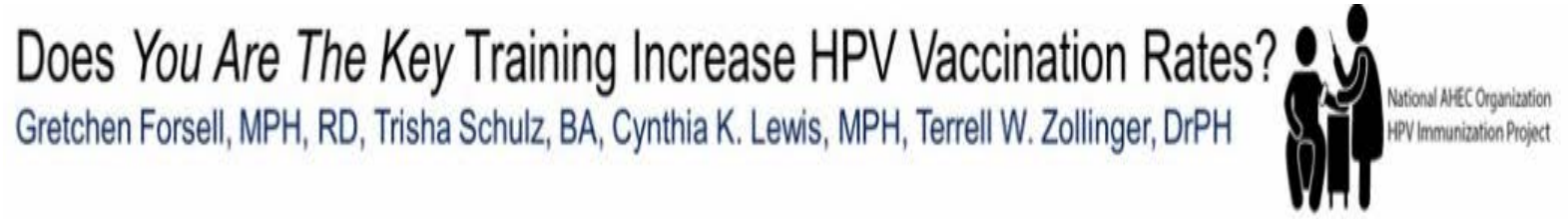
Professional CME via Oregon Pacific Area Health Education Center

You Are The Key to HPV Cancer Prevention presentations

- Audiences: PCPs, Dentists, Pharmacists, clinic settings



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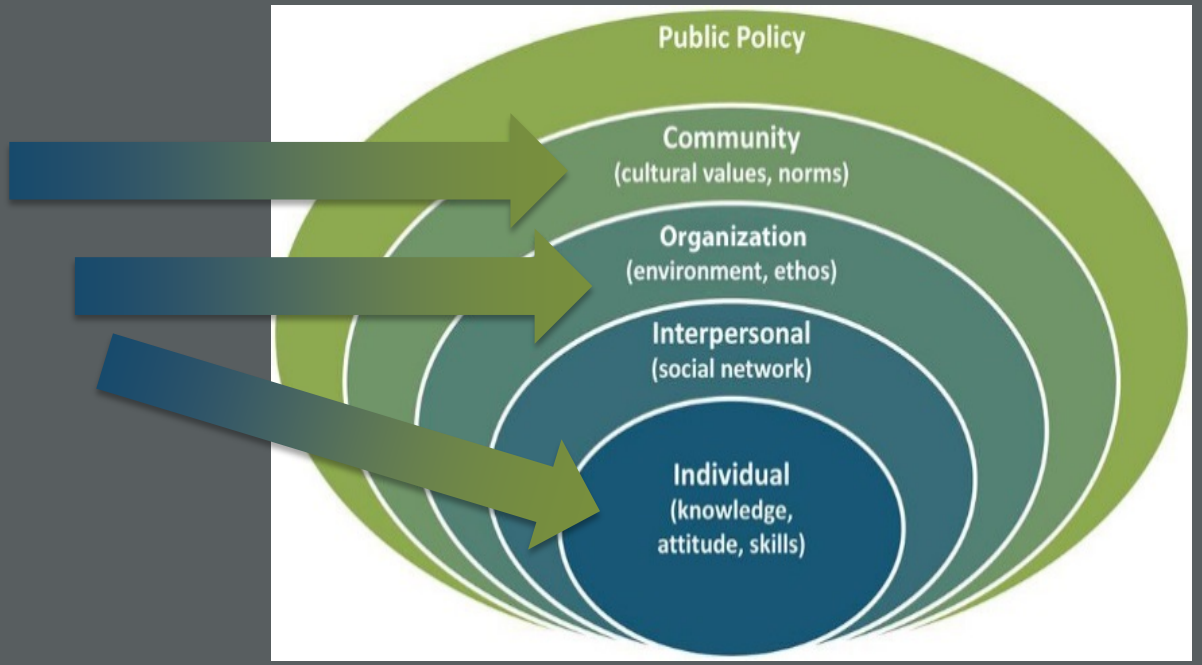
Preliminary Results:

Key Informant Interviews



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Key Informant Interview Participants

Non-clinical Sectors:

- Public Health, Education, Government (n=26)
- 65% had limited experience with/ exposure to the HPV vaccine

Clinical Sector:

- Healthcare Settings (n=8)
- 88% had high experience with/ exposure to the HPV vaccine

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Interviewees Feel Like They Don't Know a lot About the Vaccine

- People are not at all familiar or have limited familiarity with their own county's current HPV vaccination rates.
  - 73% non-clinical interviewees unfamiliar
  - 62% clinical interviewees unfamiliar

- **Lack of Education was listed as a barrier to HPV vaccination in counties for both girls and boys.**

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“I think for parents in the community at large, it's just really educating them on the risks that will happen if they don't have it. I think there, everybody kind of lives in that idea that it's not going to happen to my child, my child's not going to do these things. I think it's really important to educate on why they should have it done and what it can prevent and how it can save their life potentially down the line.”

- Public Health Employee, Columbia Gorge

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“We have a couple of TV screens out in our waiting room, and it shows pictures of our staff, and that's lovely, but I think they could also be used for a lot of educational opportunities.”

-Nurse Practitioner, South Coast

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Identified Barriers:

Non-clinical respondents thought the following related to both boys and girls not getting the vaccine:

- Transportation: 9%
- Cost: 7%
- Access/availability: 4%

Clinical respondents reflected on provider barriers to recommending the HPV vaccine for ages 9-26 year olds:

- Infrastructure: 11%

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What Clinic Supports are Needed to Recommend the HPV vaccine to All Pre-Teens/ Teens?

Two evidence-based clinic interventions:

1. Steps for Increasing HPV Vaccination in Practice; An Action Guide to Implement Evidence-based Strategies for Clinicians (American Cancer Society-developed)

2. Proactive Office Encounter (POE) framework (adapted from Kaiser Permanente-developed work by the University of Kentucky's Appalachian Center for Cancer Education, Screening and Support)

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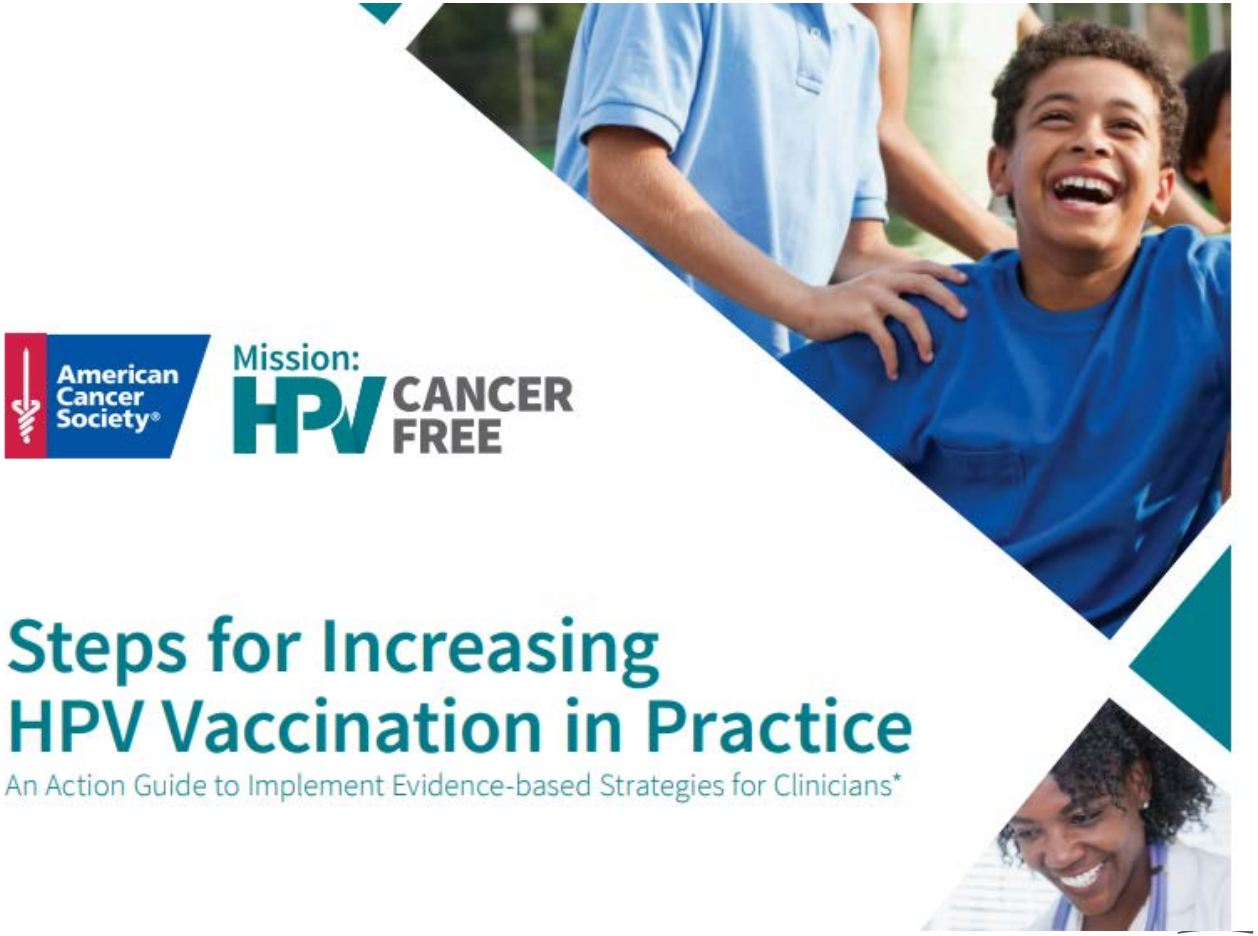
"…it would be nice if we were all on the same page because they could be doing other things that (would cut down on the providers spending) time cajoling, convincing, you know, suggesting they should get this vaccine. So we could be a united front."

Clinic Support/ Reduce Structural Barriers



Clinic Support/ Reduce Structural Barriers

RHIhub
Rural Health Information Hub

access
APPALACHIAN CENTER FOR CANCER EDUCATION, SCREENING & SUPPORT

Closing Preventive Care Gaps in Underserved Areas

Summary

- ***Need:*** *Address the need to increase cancer screening rates as well as other preventive care measures in Appalachian Kentucky, a region with high cancer incidence and mortality rates, and noted health disparities.*
- ***Intervention:*** *Federally Qualified Health Centers (FQHCs) and an academic center partnered to adapt and implement an office-based intervention, building on existing primary care resources to decrease gaps in preventive care measures, including cancer screenings.*
- ***Results:*** *After intervention implementation, White House Clinics saw a marked increase in various preventive care measures, including screenings for cancer, human immunodeficiency virus (HIV) and hepatitis C (HVC).*

Evidence-level

Promising *(About evidence-level criteria)*

Description

Cancer continues to be the second-leading cause of death in the United States. Early detection through evidence-based cancer screening remains an important mitigation step. In an effort to decrease the burden of cancer in Appalachian Kentucky, White House Clinics partnered with the University of Kentucky College of Public Health to create the Appalachian Center for Cancer Education, Screening, and Support (ACCESS). ACCESS serves as a collaborating center of the Centers for Disease Control and Prevention's (CDC) Cancer Prevention and Control Research Network (CPCRN).

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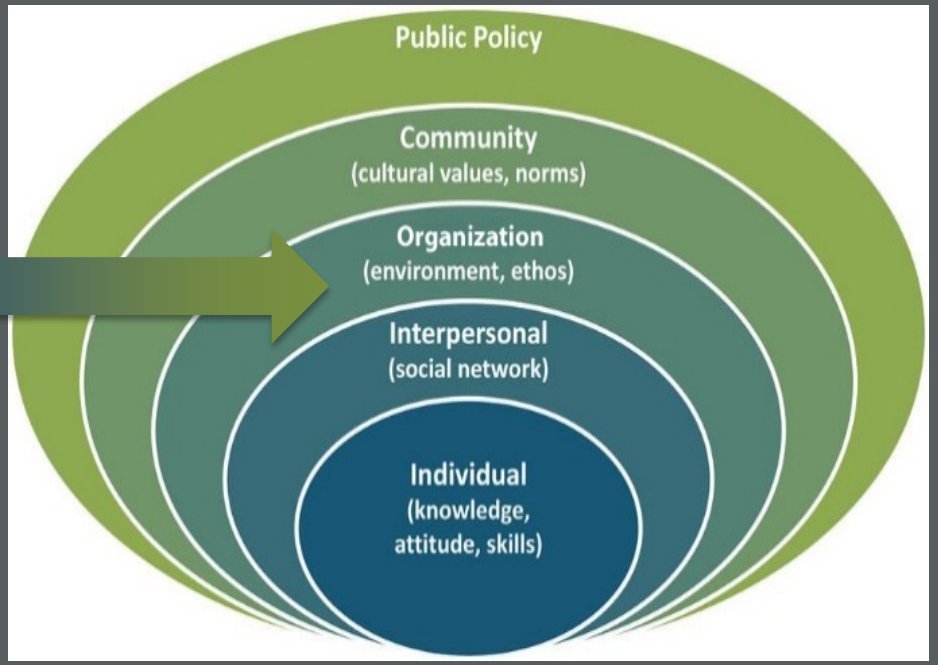
Preliminary Results:

Observational Scans



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147 Locations scanned

Coos, Curry, Klamath,Wasco, Sherman, Gilliam Counties:

HPV vaccination info present in only 11%

50% of HPV vaccination info found in **medical clinics**
37.5% of HPV vaccination info found in **pharmacies**

68% of HPV materials were **general** vaccine info
5% of HPV materials were **youth** targeted
26% of HPV materials were **adult/parent** targeted

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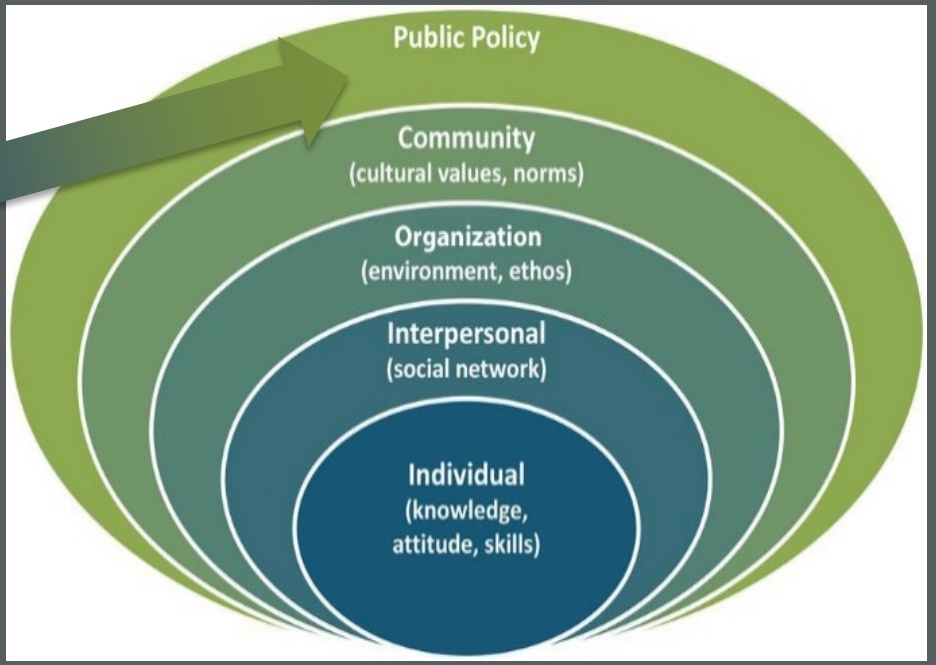
Preliminary Results:

Policy Scan



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Oregon HPV Vaccination Policy Scan

Barriers & Limitations to Full Policy Implementation in Seven Rural & Frontier Counties

Lea Brody-Heine[a], Paige E. Farris[b], Jennifer Griffith-Weprin[b], Jackilen Shannon[b]

[a] Summit High School, Bend, Oregon; [b] Oregon Health & Science University, Portland, Oregon

How are National HPV Vaccination Policies being Applied in Oregon?

HPV Vaccination is recommended for boys and girls, starting at age 11 years, per the CDC Advisory Committee on Immunization Practices.

National Agency or Organization

- **DHHS Affordable Care Act**: Requires private insurers to provide coverage of ACIP-approved vaccines at no cost to the patient.

Federal Policy at State Level

- **Oregon Health Authority[2] – Oregon Health Plan**: Oregon Health Plan (OHP) covers HPV vaccination for its members (Medicaid).
- **Oregon Health Authority – Oregon Immunization Program**: Assures all youth have access to the HPV vaccine anywhere they get healthcare.

National Agency or Organization

- **American Pharmacists Association**: As of 2012, 43 states allow pharmacies to administer HPV vaccination.

Federal Policy at State Level

- **Oregon Health Authority and the State's Board of Pharmacy**: State-level policy provides for standing pharmacy protocol and vaccination starting as early as 9 years of age.
- **Oregon Health Authority – State Legislation[3]**: Oregon's age of healthcare consent is 15 years old.

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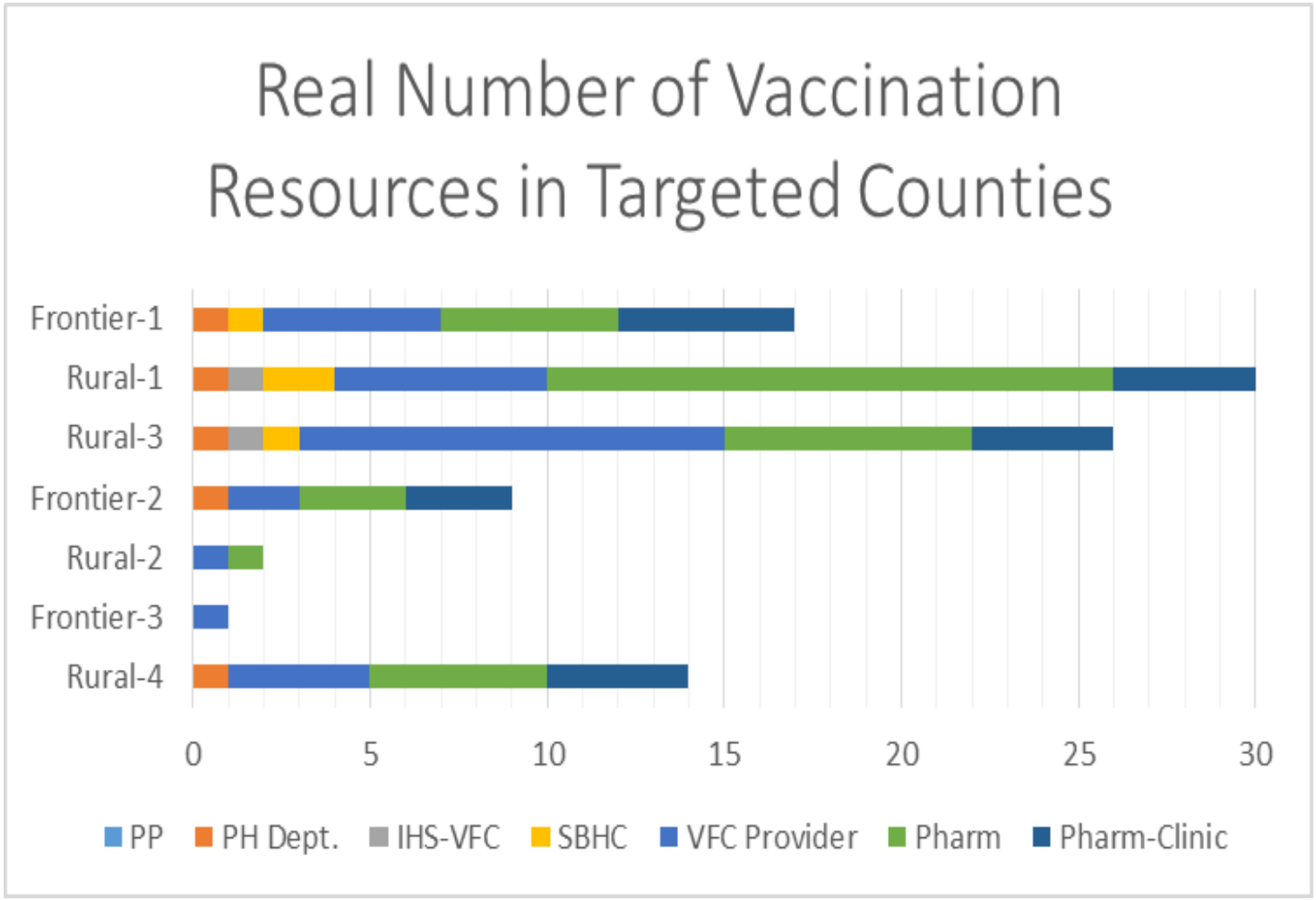

LEGEND:

ZERO PP = Planned Parenthood

PH Dept. = Public Health Dept.

IHS-VFC = Indian Health Service VFC

SBHC = School-based Health Center

VFC = Vaccines for Children Provider

Pharm = Pharmacies

Pharm-Clinic = Pharmacies connected to Clinics

Clinic Supports Needed to Recommend the HPV Vaccine to All Pre-Teens/Teens?

- Priming the conversation (11)
- Innovative educational materials (7)

"If (a message) is gonna be that long, I think what you just said is a perfect YouTube video."

"I think some material about evidence-based (information that supports) getting it, some good research, solid research, that says it's safe and effective."

"I think priming the conversation a year early helps. I mean, remember when we talked about this last year. and they go, oh, yeah. And it's completely different versus that shock of, oh my gosh my kid is growing up."

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What About Referring Pre-Teens/ Teens to Pharmacies to Complete the Dose Schedule?

"I would say any opportunity for them to get it, they wanna get it at the pharmacy, that's fine, as long as they get it."

"…a lot more convenient." "any access, more access…"

"I think that would probably increase the rate because it's just expanding the accessibility of it and not limiting them to getting in a car and driving down to (town) on a certain day…"

"…that would be a good solution, you know. Cause I try to catch them at the next visit but they don't come for the next visit."

"…it would be another access point. The clinic's not open but the pharmacist is open and the pharmacist can give the vaccination to the 9, the 10, 11 year olds."

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Parents Tell Us How to Reach Community Members

- Schools Send Out Information (16)
- Well-Informed Medical Professionals (11)
- Community Events
- Word of Mouth
- Social Media

"The best response you can get in this community is put it on 'What's Happening in XX County' and let everybody argue about it for 5 weeks."

"I don't know if it's a good idea but how about schools; (it) would be a good idea to post that information… too. Because, you know, half, (a) good 75% of the kids…are goin' to the school, I mean give the information there."

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Community-Clinical Champions

Acknowledgments

ANALYSIS SUPPORT:
Knight Network Coordinator = **Deb Howes**
ORPRN Manager = **Caitlin Dickinson**
Students (high school to doctoral representation) = **Lea Brody-Heine, Jennifer Griffith-Weprin, Katie Hernandez, Kylie Loutit, McKenzie Saelee**

REGIONAL DATA COLLECTION:
Knight Social Media = **Kate Rigall**
OHSU Community Research Liaisons = **Jennifer Volpi, Jill (Vandehey) Guerrero**
ORPRN Practice-Engagement Research Coordinators = **Steven Brantley, Angela Combe**
Parent Focus Group in Spanish = **The Next Door, Inc., Hood River**

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Thank You