

2023 Emerging Leaders

Best Practices, Challenges, and Solutions to HPV Vaccination in Rural Areas: A Qualitative Study from Three States

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Project Goal: Understanding the challenges and solutions to HPV vaccination in rural areas by:

- Documenting policy, activities, or programs that have been implemented to increase rural HPV vaccination rates.
- Identifying barriers to and facilitators of HPV vaccination in rural areas.
- Reporting on promising best practices and future opportunities for increasing rural HPV vaccination.

Project Description:

- Case study using three states
- Virginia, Illinois, and South Carolina
- Examining state cancer control plans, HPV cancer action plans, and other existing literature
- Collecting semi-structured qualitative interviews with key informants

State Profiles

Background

Key HPV Policies*



Illinois

State population: 12.58 million
 % living in rural areas: 11.5%
 HPV vaccine initiation rate: 80.7%
 HPV vaccine up-to-date rate: 65.7%

- Pharmacists are allowed to administer HPV vaccination.
- Minors 12+ years old do not need parental consent to receive the HPV vaccine.
- According to Public Act 102-1018 (July 2024), HPV vaccine services pilot program is available to those eligible in the Breast and Cervical Cancer Program.



South Carolina

State population: 5.28 million
 % living in rural areas: 34.3%
 HPV vaccine initiation rate: 69.9%
 HPV vaccine up-to-date rate: 54.4%

- Pharmacists are allowed to administer the HPV vaccine if 18+; if under 18, under Rx/Protocol.
- Age limitations for HPV vaccine: 18+
- SC adolescents can receive the vaccine through: the Vaccine for Children (VFC) Program and SC State Vaccine Program.



Virginia

State population: 8.68 million
 % living in rural areas: 24.6%
 HPV vaccine initiation rate: 77.5%
 HPV vaccine up-to-date rate: 62.7%

- Pharmacists allowed to administer the HPV vaccine if 18+.
- HPV vaccine is code-required for all students in public and private schools.
- Parent/guardian may elect for the child to not receive the vaccine after reviewing the Board of Health-approved materials.
- State law requires the distribution of HPV vaccine materials to parents.
- Dentists are not allowed to administer HPV vaccine.

Methods

- An interview guide was developed with questions focusing on rural HPV vaccination-related barriers, facilitators, existing policies and programs, and future opportunities.
- For each state, 2–3 key informant interviews were conducted with participants from state level organizations and agencies who could share information on rural HPV vaccination programs, activities and policies.
- Data collection: September 2023 to February 2024
- Interviews were conducted via Zoom and Microsoft Teams, audio-recorded, transcribed, and validated.
- Each interview lasted between 45–60 minutes.
- Data was qualitatively analyzed. Common and unique themes were identified.

Barriers

Barriers*	IL	SC	VA
Lack of publicly accessible, large-scale data specific to HPV vaccination in rural areas (e.g.) state registry	✓	✓	✓
Lack of pediatricians in rural areas	✓	✓	✓
Long distance to health clinics; transportation barriers	✓	✓	✓
Insurance and financial barriers	✓	✓	✓
Lack of awareness of the HPV vaccine	✓	✓	✓
Concerns about vaccine side effects	✓	✓	✓

*Table displays the barriers in all three states.

- Virginia, Illinois, and South Carolina lack large-scale data targeting HPV vaccination in rural areas. Without a state registry, data is not readily available to track the progress of policies, activities, and projects.
- There is a lack of accessibility within rural communities due to the absence of pediatricians. Without pediatricians, rural communities have a shortage of HPV vaccination champions leading to inadequate awareness, spread of misinformation, vaccine hesitancy, and unanswered concerns about side effects of the vaccine among community members.
- Transportation barriers exist in all three states due to the long distances of health clinics. States have created programs to bring immunizations for residences to reduce this burden.

“Our rural areas typically will lack providers or people who can even administer. There may not be a pediatrician who can advocate for HPV vaccination. There might be a health department, but the health department might not have an immunization nurse that’s able to administer.”

–Quote from SC Key Informant #1

Current Programs, Activities, and Policy

Current programs, activities, and policy*	IL	SC	VA
Social media and outreach campaigns targeting rural areas/Sign on letters for providers	✓		✓
Organizations/health systems working in partnerships with one another	✓	✓	✓
Ongoing state-level HPV/Immunization Advisory Committee/immunization Plan development	✓	✓	✓
Webinar and education/training for clinicians and providers in rural areas	✓	✓	✓
Educating traditional/non-traditional providers to engage in HPV vaccine promotion/vaccination	✓	✓	✓
Creating standardized educational materials/advocacy newsletters	✓		✓
Quality improvement projects in clinical setting and FQHCs		✓	✓

*Table displays the programs, activities, and policy implemented in at least two out of the three states.

"We had one webinar with the division of oral health, and then that was so popular that we set up a series of 3 webinars that were focused on understanding the challenges in the state. And then we talked about some of the implementing successful vaccine campaigns specifically targeting certain populations. So, we talked about rural populations, LGBTQ individuals, trying to drill down to the concept that it's not a one size fits all approach to getting folks vaccinated and that everybody's going to have different challenges. And then our next wave... we're setting up an HPV Task force..."

- **Quote from Illinois Key Informant #2**

Organizations Increasing HPV Vaccination in Rural Areas*

Illinois

- Illinois Chapter of the American Academy of Pediatrics
- Illinois Public Health Association
- Illinois Department of Public Health
- Illinois HPV Workgroup
- Illinois Rural Health Association
- Illinois Primary Healthcare Association
- Siteman Cancer Center (Washington University in St. Louis)
- Southern Illinois University

South Carolina

- South Carolina Department of Health and Environmental Control
- South Carolina Adolescent Immunization Taskforce
- South Carolina Cancer Alliance
- American Academy of Pediatrics South Carolina Chapter
- Medical University of South Carolina
- University of South Carolina
- Presbyterian College
- American Cancer Society

Virginia

- Cancer Coalition of Virginia
- Virginia HPV Immunization Taskforce
- Immunize VA
- Virginia State Department of Health
- American Academy of Pediatrics Virginia Chapter
- Virginia Commonwealth University
- University of Virginia
- School Nurse Association
- Dentist and Dental Hygienist Association of Virginia
- Health systems and insurance groups
- Virginia Rural Health Association

*Selected Organizations (not comprehensive) involved in efforts to increase HPV Vaccination in rural areas

Future Opportunities

There was a strong overlap in identified opportunities to improve HPV vaccination among three states, including engagement with dental providers and pharmacists. Some unique opportunities to improve HPV vaccination, especially in rural areas, include involving community leaders, faith-based organizations, and the use of mobile immunization vans.

Opportunities*	IL	SC	VA
Engage with dental health and oral health providers	✓	✓	✓
Promote HPV vaccination in locations beyond primary care/pediatricians (e.g., pharmacies)	✓	✓	✓
Peer-to-peer education	✓	✓	✓
Better ways to capture immunization data in rural areas	✓	✓	✓
Engage with trusted leaders and groups or non-traditional partners (e.g., libraries, local YMCAs, religious organizations)	✓		✓
Engagement with pharmacists and school nurses		✓	✓
Mobile vans for HPV vaccination	✓		✓

*Table displays the future opportunities in at least two out of the three states.

- There was a wide engagement from various groups, coalitions, and organizations for improving HPV vaccination. Each state has some similar and unique barriers and facilitators influencing HPV vaccination in rural areas.
- Although each state had either a cancer or HPV action plan, addressing rural HPV vaccination was not listed as a direct goal in any of them.
- Rural HPV vaccination data is difficult to find, highlighting the need to capture this information better to set goals and measure progress.
- Knowing that rural areas face more challenges to HPV vaccination, more intentional work, and resources are needed to develop robust programs and focused research for increasing HPV vaccination in rural areas.

"[...] think about the role the schools in rural communities, the community centers, just sort of the places that people congregate and what keeps them tied to those rural communities. Those are our main assets there. It's that sense of, I wanna look out for my friends and my neighbors. [...] They want to eat food that came from their land or from their neighbors. So if we can loop in this vaccination is just sort of one piece of that. I really do think we'll get a lot of buy in, because it just sort of shows that you're trying to, promote long-term health and wellness... if we can get that message across and find some advocates from within the rural communities. I think that's going to go a long way towards like building that trust within the community about vaccines."

- **Quote from Illinois Key Informant #2**

Implications

Our work highlights the common features from three states that can impact HPV vaccination and can be a valuable guide for groups developing HPV vaccination programs and identifying best practices to address low vaccination rates in rural areas.