National HPV Vaccination Roundtable

Rural Disparities in HPV Vaccination Coverage

What's Known

Human Papillomavirus (HPV) vaccination is routinely recommended for male and female adolescents and young adults in the United States to prevent HPV-related diseases, including cancer.[1] However, adolescents in rural communities are less likely to be vaccinated against HPV than adolescents in urban areas, which may exacerbate disparities in cancer outcomes experienced by rural residents.[2] Data from the Centers for Disease Control and Prevention (CDC) confirms that 2019 up-to-date HPV vaccination coverage among adolescents in rural areas was 10 percentage points lower in comparison to urban communities (47% vs. 57% respectively).[3] Additional data suggests rural young adults aged 18-26 years are less likely to initiate the HPV vaccine compared to their urban counterparts.[4] This low HPV vaccination coverage may be due to numerous barriers faced by rural residents at multiple levels – patient, provider, clinic, and community.[2] Barriers include, but are not limited to:

- Individual, interpersonal, organizational, and community-level barriers to accessing preventive healthcare services, including HPV vaccination, in rural communities.[5]
- Rural residents' lack of knowledge of HPV's link to cancer and limited awareness regarding the HPV vaccine.[6,7]
- Cultural views unsupportive of HPV vaccination.
- Limited collaborative communication between parents and healthcare providers about HPV vaccination in rural areas.[8]
- Systems-level challenges with vaccine distribution and access, vaccination tracking in electronic health records, missed opportunities for vaccination, provider shortages, and clinical constraints such as long appointment wait-times.
- Few widely available evidence-based HPV vaccination interventions focused on rural communities.[9]

What's New

Increased promotion of and access to HPV vaccination across rural America is helping to decrease barriers to HPV vaccination.

- Pharmacies are being explored as alternative settings for HPV vaccination due to their greater population reach, convenience, and existing infrastructure for vaccine delivery.[10] Recent studies found pharmacists have the potential to be effective collaborators for HPV vaccine administration and promotion in rural communities.[11,12] However, substantial barriers remain to the implementation of HPV vaccination programs in pharmacies, including the need to expand third party reimbursement and address variations in state laws regarding pharmacists' legal vaccination authority.[10,13]
- Rural healthcare providers, including federally qualified health centers, rural health clinics, local health departments, private practices, and pharmacies, more commonly participate in the CDC's Vaccine for Children's Program, which provides HPV vaccination at no cost to children under the age of 19 years who are uninsured, Medicaid-eligible, or of American Indian or Alaska Native descent.[2,14,15]
- Increases in school-located vaccination programs, including school-based health centers, in rural communities have helped to both minimize many logistical barriers to HPV vaccination and ensure that adolescents are up-to-date on vaccination. However, more work is needed to overcome attitudinal and logistical barriers to implementation of school-located HPV vaccination, including obtaining parental consent.[16,17]
- The CDC initiated rural-specific health communication to promote improvements in rural health, including HPV vaccination, among providers and patients.[18]
- Innovative community-clinical partnerships and local health communication campaigns are being used to promote HPV vaccination in rural communities.[2,19,20]
- The National Cancer Institute is prioritizing dissemination and implementation of evidence-based cancer prevention strategies such as HPV vaccination through the Cancer Moonshot℠ initiative and accelerating both rural cancer control research and HPV vaccination implementation research among cancer centers and the extramural research community.[21,22]

What's Next

Additional research, practice, and policy efforts are needed to close the gap between rural and urban adolescents and young adults related to HPV vaccination. Approaches include, but are not limited to:

- Adequately defining "rural", including refinement of measurement and descriptions of rural context (e.g., geographic location, rural-urban metric used, intersectionality with other key factors) to promote consistency in intervention reporting and replication.[9]
- Increased intervention research incorporating contextual factors to improve rural HPV vaccination outcomes and subsequent translation of research into practice.[9]
- Develop, implement, and evaluate communication strategies using social media and technology at the parent-, provider-, and practice-level to increase reach across rural communities.[24]
- Beyond pharmacies and schools, focus on leveraging additional community-based services such as mobile health clinics, home health, and dental care for increased access to HPV vaccination services in rural communities.
- Develop effective geospatial approaches[23] and policy-oriented strategies for HPV vaccination in rural areas aimed at addressing limited vaccination access and healthcare provider shortages.
- In addition to the emphasis on vaccinating adolescents, continue to focus on improving HPV vaccination coverage for the "catch-up pool" of males and females in rural communities, particularly given the impact of being un- or underinsured in this age group.[9,25]
- Promote HPV vaccination among 27-45-year-old rural individuals in accordance with CDC guidelines.[25]
- Increase HPV vaccine confidence among rural residents with an emphasis on health equity and reducing health disparities. Efforts may include targeted and tailored approaches across individual and structural levels from disseminating information about vaccine development, with consideration to health literacy and numeracy skills, to ensuring equitable access to HPV vaccination.[26]
- Identify and address the impact of the COVID-19 on delays in preventive care and increased vaccine hesitancy, including the direct effects on HPV vaccination in rural communities.[27, 28]

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The HPV Vaccination Roundtable convenes, communicates with, and catalyzes member organizations to increase HPV vaccination rates and prevent HPV cancers.

Learn more at hpvroundtable.org.