**Public and Patient Engagements to Improve Uptake of Cervical Cancer Screening and HPV Vaccination in Developing Countries – The Case of Uganda.**

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**Background:**

Cervical cancer is the leading cause of cancer-related deaths among Ugandan women, with 6,938 new cases and 4,782 deaths in 2022. Despite the availability of primary prevention through HPV vaccination for girls aged 9–14 and secondary prevention via cervical cancer screening for women aged 25–49, uptake of these services remains critically low in Uganda. In 2020, only 30% of eligible girls received the HPV vaccine, and by 2019, only 10% of eligible women had ever undergone screening. This study sought to understand the factors influencing the low uptake of these services to be used for public and patient engagements to improve the uptake of the cervical cancer screening and HPV vaccination services in developing countries.

**Methods**

We conducted cross-sectional surveys and mixed-methods qualitative studies in three regions of Uganda. Surveys were conducted among girls aged 9–14 and women aged 25–49, including 197 women living with HIV in north-eastern, central, and north-western Uganda between 2022 and 2023. Additionally, qualitative interviews with 20 women and eight health workers provided further insights into the barriers and facilitators of service uptake. For both HPV vaccination and cervical cancer screening, uptake was assessed based on reports of ever use of the service.

**Results**

Findings reveal that HPV vaccination uptake ranged from 19.6% in north-eastern Uganda to 23.8% in central Uganda. Factors positively associated with HPV vaccination uptake included health worker recommendations (adjusted odds ratio [aOR] 9.09), cervical cancer education in schools (aOR 12.56), and participation in community health outreach events (aOR 4.41). Conversely, exposure to negative rumors, such as claims that the HPV vaccine causes infertility, was associated with lower vaccine uptake (aOR 0.501).

For cervical cancer screening, uptake among women aged 25–49 ranged from 12.3% in north-western Uganda to 44.8% in north-eastern Uganda, with women living with HIV showing even greater variation. Factors associated with higher screening uptake included primary or tertiary education, marital status, perceived severity of cervical cancer, and knowledge about the disease. Conversely, barriers to screening included non-use of modern contraceptive methods, limited knowledge about cervical cancer, lack of health worker recommendations, and male partner disapprovals.

Qualitative interviews revealed numerous barriers to screening uptake, such as misinformation about cervical cancer, fears surrounding screening procedures, and perceived pain and discomfort. Women expressed concerns about privacy, particularly regarding exposure to male health providers. Other significant barriers included lack of accessible and private screening facilities, limited healthcare provider training, and the high cost of the diagnostic tests. Key informants highlighted supply-side issues like equipment shortages, inadequate training, and limited community awareness as critical obstacles to the provision of cervical cancer screening services.

**Conclusions**

Uganda’s HPV vaccination and cervical cancer screening rates fall significantly short of WHO targets. Misconceptions, limited knowledge about cervical cancer, and pervasive rumours hinder uptake, while healthcare system weaknesses exacerbate the problem. Recommendations include intensified public outreach efforts to dispel myths and raise awareness and targeted investments in healthcare infrastructure. Strengthening training, mentorship, and resources for healthcare providers, especially those working with women living with HIV, is essential. Enhancing affordability and access to diagnostic tests and improving patient’s privacy and confidentiality could further encourage women to engage in cervical cancer screening.

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**References to publications**

Nakayita, R.M., Benyumiza, D., Nekesa, C. *et al.* Factors associated with uptake of human papilloma virus vaccine among school girls aged 9–14 years in Lira City northern Uganda: a cross-sectional study. *BMC Women's Health* **23**, 362 (2023). <https://doi.org/10.1186/s12905-023-02511-z>