

Taking Action, Saving Our Women: Reducing Cervical Cancer Incidence in Rwanda by Increased Screening and Treating

Fatuma Gahongayire^{1,*}, Jean Paul Hakizimana², Clarisse Mukashyaka³, Jean de Dieu Ntivuguruzwa⁴, Daniel Sabushimike⁴, Kutha Banda⁵, Francois Uwinkindi⁴, Christian Nsanzabaganwa⁴, Clarisse Musanabaganwa⁴, Leon Mutesa¹

¹University of Rwanda, Kigali, Rwanda

²Shyira District Hospital, Rwanda

³JHPIEGO, Kigali, Rwanda

⁴Rwanda Biomedical Center, Kigali, Rwanda

⁵Center for Disease Control and Prevention Foundation (CDCF), Atlanta, Georgia, USA

*Corresponding author:

Fatuma Gahongayire
University of Rwanda, Kigali, Rwanda
Email: fatoumagahongayire@yahoo.fr

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KEY MESSAGES

Rwanda has a high cervical cancer incidence rate of 28.2/100,000 women

Screening rate is low, with only 18% coverage against the target of 70%

Increasing the number of women screened for cervical cancer will have about 160,164 women with precancerous lesions treated and reduce the incidence of cancer cases.

PROBLEM STATEMENT

Globally, more than 604,127 new cervical cancer cases and 341,831 deaths have been reported by Globocan in 2020 [1], and 70-90% occurred in Low-Middle Income Countries (LMICs) with observed low screening rates, especially in sub-Saharan countries [2,3]. Rwanda has a high cervical incidence rate of 28.2/100,000 women (1229 new cases per year) and a mortality rate of 20.1/100,000 (829 deaths per year) observed in 2020 (Figure 1) [4,5]. However, cervical cancer can largely be prevented through the vaccination of young girls against HPV and screen-and-treat programs for pre-cancerous lesions.

Rwanda is the first country in Africa to vaccinate about 93 % of its target population (girls aged below 15) against HPV [6].

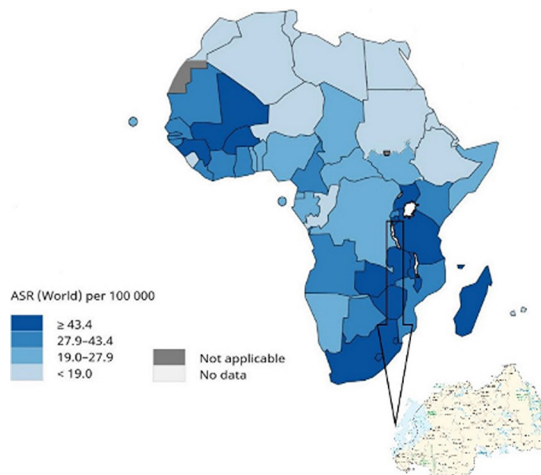


Figure 1: Rwanda among countries with high cervical cancer incidence rate

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However, the screening rate is low with only 18% coverage against the target of 70% recommended by the World Health Organization (WHO) [5,7].

ROOT CAUSES OF LOW SCREENING RATES

Lack or poor knowledge about cervical cancer, the importance of its screening and poor knowledge of the availability of screening services among women [5,7,8].

Fear of pain related to the procedure, concern about lack of privacy, social stigmatization or embarrassment to go for screening, and long waiting reported by some women [5,7,8].

Insurance companies (CBHI) do not cover screening services [9], resulting in a shortage of supplies or materials, especially at Health Centers [5,11].

Healthcare providers are not as motivated as those on a Performance-based Finance (PBF) incentivizing platform for the services [10].

Lack of training on Visual Inspection with Acetic acid (VIA) among healthcare providers since Nkurunziza et al. [11] found that only 17.6% of healthcare providers from 10 health centers enrolled in their study were trained.

POLICY OPTIONS

To reduce the high incidence of cervical cancer, it is crucial to increase the screening rate and the rate of treating precancerous lesions. This ensures a reduction in the incidence of invasive cervical cancer [12]. To address this, two policy options have been proposed and compared with the status quo below.

Policy option 1: Status quo

What: Providing cervical cancer screening to clients at the facility whenever they come, as well as through targeted campaigns and when possible

Challenge: With this current option, only about 18% of the eligible women have been reached with this approach [5,7,8]. This is because, as much as it is provided free of charge, most facilities may not have the supplies required to conduct the service. Further, studies have shown that there is a lack of awareness of this service and its benefits [11].

Policy option 2: Including cervical cancer

screening and treatment on Community-Based Health Insurance (CBI) and Performance-Based Financing (PBF) for volunteers

What: To get all Community Health Workers (CHWs) across the country incentivized to raise awareness on cervical cancer screening programs and community-based health insurance (CBHI) cover the services

Why: Raising awareness by CHWs on cervical cancer screening programs has been implemented in 7 sub-districts and increased uptake of services from 2 % to 34%, according to Rwanda Integrated Health Management Information System (HMIS) data.

Studies conducted in Rwanda and other low- and middle-income countries (LMICs) showed that CBHI schemes had a significant positive impact on healthcare utilization, particularly for outpatient services [9,13]. Additionally, these schemes provided improved financial risk protection and households with insurance had a greater likelihood of utilizing healthcare services (Adjusted Odds Ratio [AOR] = 1.60, 95% Confidence Interval [CI]: 1.04–2.47), accessing outpatient health services (AOR = 1.58, 95% CI: 1.22–2.05), and receiving delivery services at a health facility (AOR = 2.21, 95% CI: 1.61–3.02) [9]. This indicates the significant impact of CBHI in allowing healthcare access. In this line, CBHI led to 61% of eligible women being screened for cervical cancer [9], indicating its importance in improving cervical cancer screening.

How: Community health workers will mobilize eligible women door to door in their communities, they will also use community events or activities such as Umuganda, Umugoroba w'ababyeyi. To motivate CHWs, \$2 will be given per person mobilized in the PBF incentivization approach.

Feasibility: High. Easy to implement as the CHW approach of awareness has been used for a long, fast enough to maximize effects. Raising awareness on cervical cancer screening can be implemented like other different programs, preventing home delivery and family planning successfully implemented by motivated CHWs. Ensuring that cervical cancer screening programs are covered by CBHI would increase the rate of screening by ensuring the availability of screening materials at health facilities.

Policy option 3: Facility Performance-Based

Table 1: Summary cost-effectiveness analysis of the policy options

Policy Option	Cost	Outcomes	ICER	Feasibility
Status quo	\$9893452	52139		High
Insurance	\$28596769	160684	\$172.31	High
PBF	\$16697466	63010	\$625.86	Medium

Discounted summary for 5 years; PBF: Performance based financing; ICER: Incremental Cost-Effectiveness Ratio

Financing (PBF) indicators

What: To have a cervical cancer screening program incorporated in the facility-based PBF indicators in all public health care settings at all levels across the country (health centers, district hospitals, provincial hospitals, and referral hospitals)

Why: Data from HMIS shows that in 6 sub-districts where PBF has been used to incentivize healthcare providers, cervical cancer screening was raised from 5% to 37%. Analysis of performance-based financing in Rwanda suggests that 27.5% of eligible women can be screened for cervical cancer if the program is incorporated in the PBF indicators [10].

How: Motivated healthcare providers will provide good service in screening eligible women and treating those found with precancerous lesions. Healthcare providers will be remunerated with \$3.06 per person screened through the PBF incentivization approach.

Feasibility: Medium. It is easy to implement as it has already been tried in a few healthcare settings. Ensuring cervical cancer screening programs are incorporated into the PBF system would motivate healthcare providers to sensitize women attending health facilities for screening as it has been proven successful with other programs such as TB, HIV, and Eyecare.

The insurance policy option shows value for money with the cost of \$172.31 for every additional case of a woman with precancerous lesions treated compared to the status quo. This option is cost-effective as the cost is below the country's GDP per capita of about \$822 and henceforth an indication of the government's willingness to pay (Table 1).

RECOMMENDATIONS AND NEXT STEPS

We recommend introducing cervical cancer screening on the health insurance scheme. This option, combined with awareness raising in the community, will encourage women to screen for cervical cancer and, in turn, ensure that about 160,184 women with pre-cancerous lesions are treated and reduce the incidence of cancer cases (Table 1). To implement this option, the Ministry of Health, with support from partners would need to: (i) Add cervical cancer to CBHI as a matter of policy; (ii) Provide training to volunteers on how to raise awareness in the community; (iii) Train healthcare workers on cervical cancer screening and treating of precancerous lesions; and (iv) Early detection saves lives, and increasing the number of women screened and treated will save many women and society from the loss of women due to cervical cancer.

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