



## Let's eliminate cervical cancer: A call for inclusive vaccine coverage against Human Papillomavirus in South Africa.

### Key Messages

- Cervical Cancer (CC) is the second most common cancer amongst South African women<sup>1, 2, 3</sup>.
- It is the leading cause of cancer-related mortality in South Africa (SA)<sup>1, 2, 3</sup>.
- More than 90% mortality rates being in low- and middle-income countries (LMICs)<sup>10</sup>.
- CC incidence is mostly (70%) caused by the Human Papillomavirus (HPV) infection<sup>2, 3</sup>.
- CC is preventable through vaccination against HPV<sup>3</sup>.

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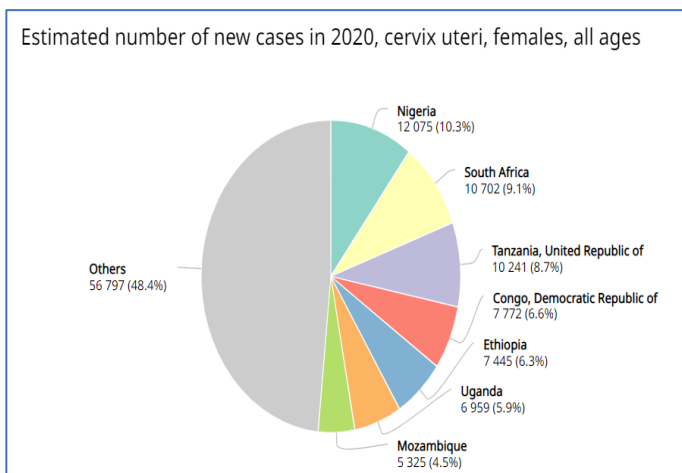
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## Problem Statement

CC is the fourth most common cancer in women worldwide. Approximately 90% of new CC incidence and mortality in 2020 occurred in LMICs<sup>1,2,3</sup>. CC has a high incidence rate in SA, making it a cause for concern. CC is one of the cancers that are mostly preventable through vaccination.

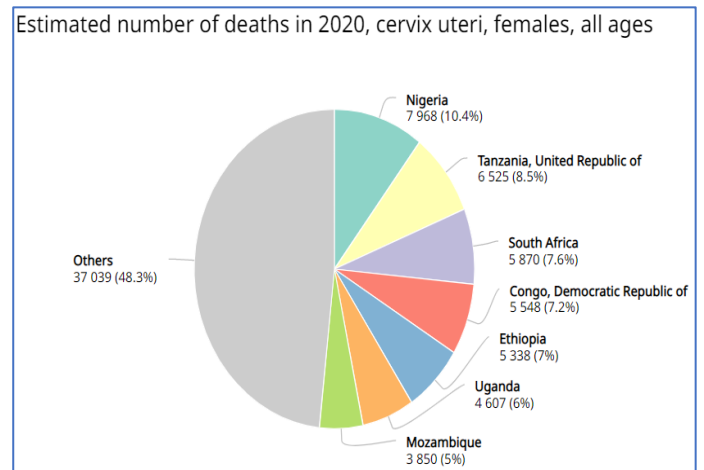


The International Agency for Research on Cancer (IARC, 2020) also reports that CC is the second most common cancer in women and the leading cause of cancer-related mortality among women over the age of 40 in SA<sup>1</sup>. HPV infection, primarily acquired through sexual contact, is the primary factor contributing to the majority of CC cases<sup>1,6,8</sup>.

According to WHO, when 80% of people are vaccinated against HPV, around 30-45% of CC incidence can be avoided<sup>1,3</sup>.

As a result, the WHO has launched a global strategy to eliminate CC by 2030. This includes a goal of 90% of girls to be fully vaccinated with the

HPV vaccine by the age of 15, and 70% of women screened using a high-performance test by the age of 35 and again by the age of 45<sup>1</sup>.



The South African government has adopted an elimination strategy where the HPV vaccination is rolled out in public schools, targeting girls at 9 years old, mostly in grade 5<sup>9</sup>. The policy option addresses how the HPV vaccination can be made inclusive to achieve the desired outcome.

## Policy Options

To reduce the incidence and deaths due to CC, it is essential to increase HPV vaccine coverage by vaccinating all eligible girls by the age of 15 as per the WHO guidelines. Policy options to achieve this include Inclusive school-based vaccination and Enhanced Facility Based Vaccination programs.

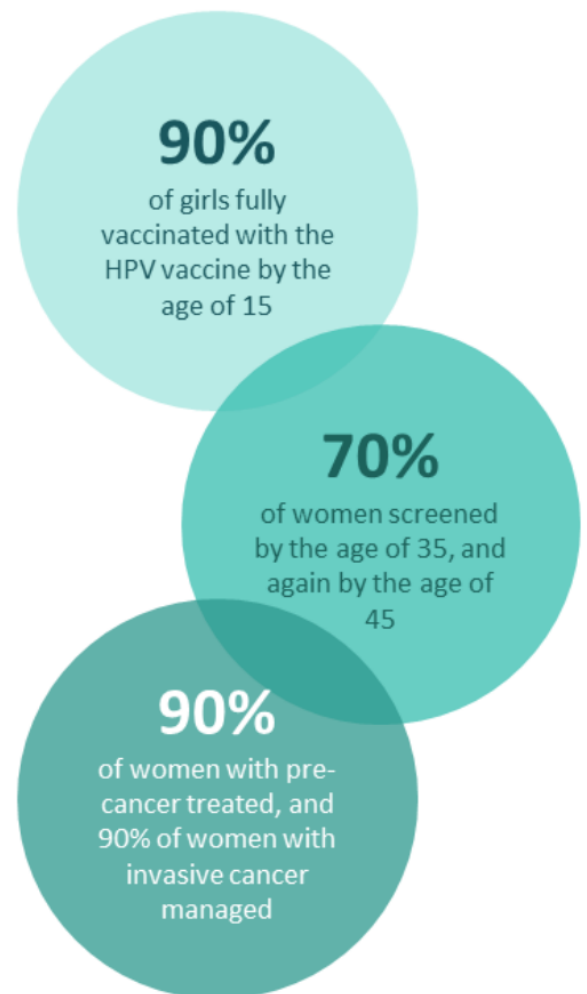
## 1. Inclusive School Based Vaccination

Inclusion of all eligible girls who attend private school education in the vaccination against HPV rollout program will increase the coverage. The existing vaccination rollout program is targeting only girls in grade 5 aged 9 years old who are attending public school education and excludes girls at private schools<sup>9</sup>. Southern Africa is a region that experiences some of the highest cases of CC due to lower screening levels and high HIV infection. Therefore, it is discriminatory to exclude vaccinations of private school girls, particularly when considering that there are many adolescents who are born with HIV in SA. It is a violation of human rights to exclude others based on the type of school they attend. This policy option has a medium feasibility because it would require additional vaccines with the same number of staff running the current program.

## 2. Enhanced Facility Based Vaccination

Making HPV vaccines available at healthcare facilities and being administered to all eligible girls at the healthcare facilities will be able to increase vaccine coverage and be inclusive. The current vaccination program includes only public school girls and it is administered at the schools. There are more than 6000 girls in SA who are not in official schools

(Private or public), We have those who are at homeschooling and some at special schools, therefore, it is a violation of their human rights not to be afforded the opportunity to be vaccinated against HPV. This policy option is highly feasible as it will use the existing resources at the vaccination sites in the healthcare facilities and will only require additional vaccines.



## Health and economic impact<sup>9, 2,</sup>

	Status Quo	Inclusive School Based Vaccination	Enhanced Facility Based Vaccination
Number of eligible girls	457 810	537 569	544265
Estimated number of girls vaccinated 1st dose	319565	450463	480899
Estimated number of Girls with HPV Infection	118585	80946	62715
Estimated number of cervical cancer	72696	44887	34530
Annual cost of the program (ZAR)	123870596	175248021	193049227
ICER (ZAR per infection averted)		1365	1238
ICER (ZAR per cancer averted)		1812	1847

The data provided is based on the 2022 financial year data. Assumptions: The same number of girls will be enrolled in the vaccination program annually. 18% of girls in private schools will get vaccines against HPV at private healthcare facilities annually. The incremental cost-effectiveness ratio (ICER) was calculated as the difference of policy option cost divided by the difference of case averted by each policy option versus the status quo (no intervention).

## Recommendations

Providing vaccines to all school girls is not cost effective, however the impact is high. It may also pose an operational and logistical challenge. In addition, it has higher implementation costs as all of the current resources would need to be distributed to all the schools. In contrast, making HPV vaccines available in healthcare facilities for

access to all eligible girls in SA has lower costs implications and is more feasible than taking vaccines to schools. A 98% coverage is expected when vaccines are easily accessible at healthcare facilities at no cost to the girls. The South African National Department of Health (NDoH) needs to collaborate with the private sector role players such as medical schemes and pharmaceutical manufacturing companies to ensure that HPV vaccines are always available at healthcare facilities at no cost. These stake holders should also make provision for additional vaccines where necessary.



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