## ABSTRACT

**Background:** Sexually transmitted infections and bacterial vaginosis have been associated with HIV acquisition through genital inflammation in women, especially in asymptomatic cases. Diagnosis of asymptomatic women through genital inflammation screening reduces the cases of untreated women. The objectives of this study were to estimate the total and unit costs of screening using a cytokine biomarker rapid test device and, to determine the budget impact of providing the screening service in primary health facilities in South Africa.

**Methods:** Costs of screening were estimated for women of reproductive age (15 to 49 years) attending two family planning clinics. The micro-costing approach was used to calculate the unit cost per patient screened from a provider’s perspective. The average utilization rate for patients was calculated, and combined with the average unit costs to obtain provider costs. The unit cost estimates were used to analyze the budget impact of scaling-up and providing this service in primary health facilities countrywide. Univariate sensitivity analyses tested the robustness of the study findings.

**Results:** Over one year, the cost per woman screened for genital inflammation was $24.26 at the Desmond Tutu HIV Foundation youth clinic, and $14.32 at University of Cape Town student clinic. With personnel costs as the cost driver, recurrent costs accounted for the greater proportion of the total costs for both health facilities. The scaled up costs ranged from $107,183,655 to $183,062,066 in South Africa. The screening intervention accounted for a significant amount of the available funds. The cost estimates were sensitive to the changes in personnel costs, utilization rate and population coverage rates.

**Conclusion:** The cost estimates of screening are high, and demonstrate that its implementation may not be affordable. However, this screening tool will increase the cases detected, contributing towards better STIs management and control, and reduce the risk of HIV acquisition among women. The potential of reducing a double burden of curable STIs and HIV/AIDS in South Africa could be achieved through the genital inflammation screening program.

**Keywords:**

Rapid point of care testing; genital inflammation screening; cost analysis; budget impact analysis