

Swaziland HIV Incidence Measurement Survey (SHIMS)

Background

- The Swaziland HIV Incidence Measurement Survey (SHIMS) a **nationally representative survey** aimed at assessing the impact of *Soka Uncobe* (an accelerated voluntary medical male circumcision program), in the context of other national HIV prevention programs.
- **The survey was funded by PEPFAR** through the Centers for Disease Control (CDC). SHIMS was lead by the Ministry of Health with technical and implementation support from Columbia University-ICAP.
- **Swaziland is the only country in the world to have conducted an incidence survey**, providing the best available data on the HIV epidemic in Swaziland. The SHIMS provides a national HIV prevalence estimate, a prevalence measure of male circumcision, and a directly observed HIV incidence rate.

STUDY PARTICPATION

- Of the 13,352 households that were contacted for participation in the study. 12,603 households were interviewed (94.4% response rate).
- A total of 13,508 eligible women and 10,976 eligible men were identified among participating households.
- 7,129 men (65%) and 11,040 women (81.7%) aged 18-49 years old agreed to participate in a nationally representative, cross-sectional pre-cohort survey, which enabled the Ministry of Health to determine the rate of new infections (incidence).

KEY FINDINGS

HIV prevalence

- Overall, prevalence of HIV among men and women ages 18-49 was 31%.
- Prevalence was higher among women (38%) compared with men (23%)
- Prevalence peaked at 47% among men 35-39 years.
- **Prevalence peaked at 54% among women 30-34 years.**
- Reanalysis of the 2007 Swaziland Demographic Health Survey (DHS) identified prevalence in men and women aged 18-49 at 31%, so there was little change in prevalence within this age group from 2007 to 2012.

Knowledge of HIV status among HIV seropositive individuals

- 68% of women were previously aware of their serostatus at the time of testing
- 50% of men were previously aware of their serostatus at the time of testing
- Overall, 63% of HIV+ individuals were aware of their serostatus

Self-reported ART-use among HIV-seropositive individuals

- 58% of men compared with 46% of women who were already aware of their status reported taking ARVs.
- HIV positive men who were aware of their status were more frequently on ART than women.

HIV Uninfected Population

- Mean age of HIV-uninfected adults in 2011 was 28 years
- 78% of uninfected men and 48% of uninfected women were not married or living with a partner

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HIV Incidence

HIV incidence: The proportion of people who have become infected with HIV during a specific period of time.

- 24 out of 1000 HIV negative adults of 18-49 years old become HIV positive every year with an incidence rate of 2.4% per year
- The risk of women acquiring HIV infection is nearly twice as high as that for men. The incidence rate among men is 1.7% and is almost twice as high among women at 3.1%.
- Men of 30-34 years old are more at risk of HIV acquisition and incidence peaks at 3.1% among them.
- Women 20-24 years and women 35-39 years old are more at risk of HIV acquisition with the incidence peak of 4.2%
- The risk of becoming HIV positive is higher among women who are not married and not living with a partner (4.1%) and among those with 2 or more partners (9.6%)
- The risk of becoming HIV positive among men is higher in those reporting inconsistent condom use (2.7%) and those with 2 or more partners (3.2%)
- In both men and women, being unaware of a partner's HIV status is a significant risk factor. Risk of HIV acquisition is nearly four and three times greater among men and women respectively.
- Having more than 2 sexual partners in the past year is a high risk factor. Women who reported having two or more partners in the past year had a much greater chance of becoming infected with incidence of 9.6% compared with men at 3.2%
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Male Circumcision Prevalence & Condom Use

- 16% of men are circumcised
- 69% circumcised after sexual debut
- Consistent condom use among circumcised males (36%) is higher than among uncircumcised males (31%)
- More circumcised males report prior HIV testing than uncircumcised males (78% vs. 52%)

Program implications

- Comparison of SHIMS data with reanalysis of the 2007 Swaziland DHS suggests that HIV prevalence has remained stable over the past five years. The expansion of HIV prevention, care and treatment services since 2006 is likely a significant factor. PEPFAR began programming in 2007 with \$9 million. In FY2013, PEPFAR's investment in the HIV response has increased to \$43.8 million.
- Women experience the greater burden of the disease with 15% higher prevalence and nearly double the rate of new infections. This result highlights the need for increased attention to women and girls in the HIV response.
- While nearly two-thirds of HIV positive individuals are aware of their status, sustained efforts are needed to further increase testing coverage and frequency of testing in the general population. Since expansion of HIV counseling and testing will identify individuals at an earlier stage in the disease, it is essential for HTC scale-up to occur with stronger linkage to and retention in HIV care and ART services.
- While more women (68%) are aware of their status than men (50%), women represent a smaller proportion of ART patients (46%), since they tend to test early, while their CD4 counts are still high, making them ineligible for ART enrollment. Men represent a larger proportion of ART patients (58%) because they tend to test later, when their CD4 counts are low enough to qualify for ART enrollment. Our programs need to focus on getting more men tested and into care earlier to reduce their viral loads, thus reduce transmission.