Evaluating the Profile of VMMC Clients in Order to Increase Yield in HIV Testing for Voluntary Male Circumcision (VMMC) Programs

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Background

In Tanzania, fewer men than women test for HIV (62% of women and 47% of men have ever tested for HIV).1

VMMC programs target HIV-negative males to maximize the HIV prevention benefit of VMMC, but all males can be circumcised regardless of HIV status.

VMMC provides an opportunity to test adolescent boys and men who are less likely to access conventional HIV testing services.

Little is known about the HIV prevalence among males in different age groups who receive VMMC services even though the World Health Organization’s minimum service package for VMMC includes HIV testing.

We examined demographic factors of clients attending VMMC services in three regions in Tanzania served by the AIDSFree Project.


Background

World Health Organization’s VMMC Minimum Package of Services

AIDSFree Project’s VMMC Program in Tanzania

AIDSFree Project collaborates with the MOHCDGEC in three VMMC priority regions.

VMMC services are offered to males who are at least 10 years old.

Tanzania MOHCDGEC prioritizes services for males aged 10–29 years old.

National HIV prevalence is 5.1%, but the rate is generally higher in VMMC-priority regions.

HIV Testing Services as Part of VMMC

Clients receive counseling on benefits and risks of VMMC.

Clients receive information and education on HIV transmission and risks.

The counselor conducts an HIV risk assessment for each client and gives him targeted behavioral counseling.

 Clients then receive an offer to test for HIV, but they can decline the offer.

 Clients get a result of the test and counseling and referrals provided.

 Study Methods

We conducted a retrospective analysis of VMMC client-level data gathered between September 2009 and June 2016 at the AIDSFree-supported VMMC sites in Tanzania.

These were routine program data (captured during routine services) entered into the program database during the relevant time period.

Study Methods, continued

We explored age group, marital status, and sexual activity for associations with HIV positivity.

We performed a descriptive analysis, calculated an odds ratio, and calculated an adjusted odds ratio for each of the three parameters.

We calculated the adjusted odds ratios, 95% confidence intervals, and associated p-values to establish the statistical significance of the findings where applicable.

Definitions of Terms for Marital Status and Sexual Activity Parameters Used in This Analysis

Not applicable (marital status): a VMMC client who is not married and below the legal age of marriage in Tanzania (below 18 years)

Single: a VMMC client who is above the legal age of marriage in Tanzania (18 years) but is not married

Cohabiting: a VMMC client who reports being in long-term relationship but is not legally married to the partner

Married: a VMMC client who reports being in a permanent legal relationship with a partner

Sexual activity: a VMMC client who reports ever having any sexual activity, protected or otherwise

Results

In total, 553,514 males were circumcised between September 2009 and June 2016.

Of these, 425,270 (77%) were aged 10–19 years.

552,740 (95.2%) of the circumcised males received HIV testing.

In total, 4,972 (0.99%) of those tested were found to be HIV positive.

3,407 of those who tested HIV positive (68.2%) were newly diagnosed cases.

Conclusions

Our findings showed that all clients who received VMMC services were below 30 years of age.

HIV was lowest among clients under 25, single, and not sexually active.

In an era of more targeted HIV testing service programming, it may be possible to reduce routine HIV testing in clients who are under 20 (who are also single and not sexually active) since they are most likely to be HIV negative.

In addition to VMMC services, young male clients should be provided with adolescent-friendly counseling services to help them remain HIV negative.

Clients who test HIV positive, regardless of age, should be actively linked to HIV care, treatment, and support services.

Summary of Key Findings

Clients aged 10–14 and 15–19 years had significantly lower HIV positivity than clients in older age groups.

Even after adjusting for age and relative to the baseline groups (10–14 years of age, not sexually active, and single or not married), HIV positivity was significantly higher among those who were sexually active, cohabiting, and married.

Clients who test HIV positive, regardless of age should be actively linked to HIV care, treatment, and support services.

HIV Positivity Rates by Age Group

Marital Status

Prevalence of VMMC-priority regions.

Non-VMMC Regions

Partners’ VMMC Regions

HIV Positivity by Self-reported Sexual Activity

Condom promotion and risk reduction counseling services to help them remain HIV negative.

VMMC services were below 20 years of age.

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Odds Ratios for HIV Positivity Controlled for Age

Note: odds ratio (OR); confidence interval (CI); adjusted odds ratio (aOR)

Using an adjusted odds ratio of the 95% significance level, clients aged 20–24, 25–29, 30–49, and 50+ years had significantly higher HIV positivity rates than clients aged 10–14 years.

Note: odds ratio (OR); confidence interval (CI); adjusted odds ratio (aOR)

Using an adjusted odds ratio of the 50% confidence interval, clients who were married or cohabiting had a significantly higher HIV positivity rate than those who were single. Those who were sexually active had a significantly higher HIV positivity rate than those who were not sexually active.

Note: odds ratio (OR); confidence interval (CI); adjusted odds ratio (aOR)

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