Making the Impossible Possible: Progress in Scale-up of Voluntary Medical Male Circumcision for HIV Prevention Supported by the United States President's Emergency Plan for AIDS Relief through 2017

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Background

- Male circumcision reduces men's risk of acquiring HIV through heterosexual sex by about 60%[1,2,3].
- Voluntary medical male circumcision (VMMC), which offers men with lifelong partial protection from HIV and other sexually transmitted infections (STIs), has become a cornerstone of the global HIV prevention portfolio through support by national and global programs, such as PEPFAR[4,5].
- VMMC was introduced in 14 southern and eastern African countries, which scaled-up services progressively between 2007 and 2011.
- The PEPFAR-supported VMMC program has experienced rapid growth and is contributing to epidemic control in these countries.

Methods

- All PEPFAR-supported programs report key metrics, including total VMMCs performed and the following disaggregations: client age range, technique, HIV test results, and post-operative follow-up.
- Data reported by PEPFAR-supported VMMC programs are drawn initially from site-level client registers and records, and reported by the implementing partners at the site level to PEPFAR in each host country.
- Data are then cleaned in-country; and reported to PEPFAR's central coordinating body, the Office of the Global AIDS Coordinator on a quarterly basis.
- Data are grouped by U.S. Government fiscal year, which runs October 1st through September 30th, rather than by calendar year.
- Descriptive analyses were performed by country and for the overall program.

Results

- From 2007 through 2017, 15.2 million VMMCs were performed with PEPFAR support (Figure 1).
- From 2010–2014, annual performance approximately doubled each year. After temporarily slowing of performance during 2015–2016, 2017 represented the highest single year of VMMCs performed since program inception, contributing nearly one-fourth (22%) of all PEPFAR-supported circumcisions performed to date (Figure 2).
- In 2017, 48% of VMMC clients were between the ages of 15-29 years, a priority age group for immediate impact on HIV incidence (Figure 3).
- Over twenty-four thousand clients tested positive for HIV at VMMC sites (Figure 4).
- Device-based techniques constituted a minority of circumcisions, except in Rwanda where they were the majority (Data not shown).
- Post-operative follow-up rates were over 80% overall, ranging from between 60% in South Africa to 100% in Rwanda (Figure 5).

Figures and Tables

Figure 1 - Cumulative Number of PEPFAR-Supported VMMCs by Country, 2007-2017

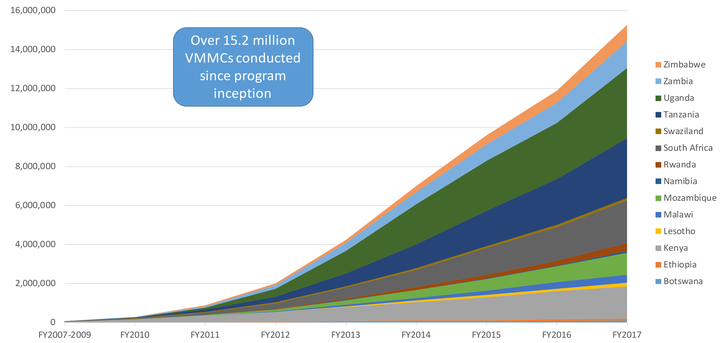


Figure 2 - Annual Number of PEPFAR-Supported VMMCs by Country, 2007-2017

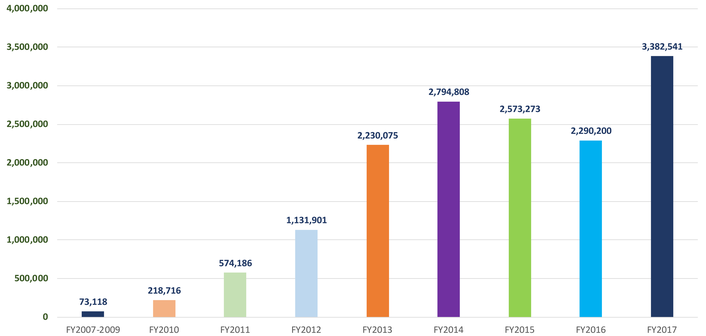


Figure 3—Number and Proportion of Circumcisions by Priority Age Bands, by Country, 2017

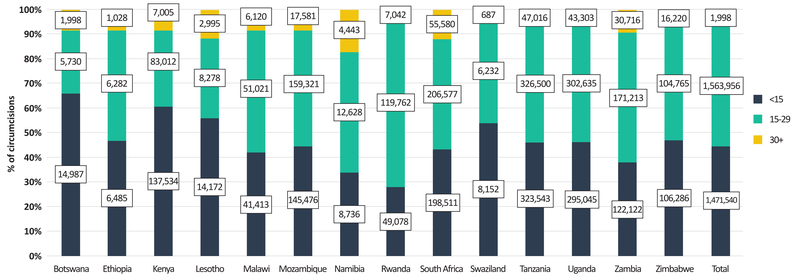


Table 1: Disaggregations and Categories for PEPFAR-supported VMMC program reporting on VMMCs performed, 2017

Disaggregation	Client Categories
Age	- < 61 days (early infant male circumcision) - 2 months-<10 years (not funded by PEPFAR due to safety concerns) - 10-14 years (this and younger categories are collapsed here as '<15') - 15-19 years - 20-24 years - 25-29 years - 30-49 years - 50+ years
Result of HIV test offer at VMMC site	- HIV+ - HIV - - Unknown: includes clients with undocumented or indeterminate status and those not tested at the VMMC site for any reason
Technique	- Surgical - Device-based
Follow-up visit attendance	- Returned for at least one post-operative follow-up visit within 14 days of surgery - Did not return within 14 days

Figure 4—Number and Proportion of Circumcisions by Testing Result by Country, 2017

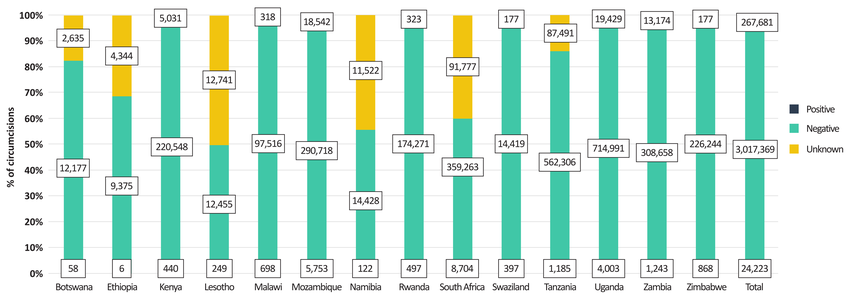
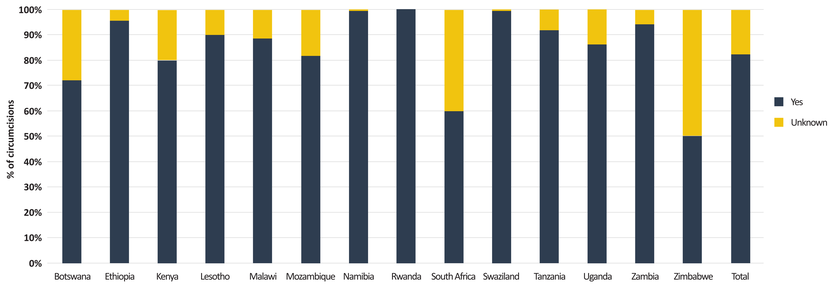


Figure 5—Proportion of Circumcisions by Follow-up Status by Country, 2017



Conclusions

- VMMC has undergone an historic scale-up within global health, enabled by dedicated resources, targets setting, leadership, rapid expansion of surgical skills and responsibilities to non-physicians, and public outreach campaigns.
- Models estimate that the VMMCs conducted through 2016 will avert at least 500,000 infections by the end of 2030[6]. VMMC has also helped prevent HIV and STIs among women[7].

Limitations

- These data reflect results supported by PEPFAR, rather than country totals.
- Data entry errors and variations in reporting practice are possible.
- The routine reporting system is aggregate only, and collected data does not support analyses of associations between client characteristics.

Recommendations and Context

- The PEPFAR program's achievements demonstrate the feasibility of rapid expansion of circumcision, but global strategy must continue evolving to maximize impact, achieve revised UNAIDS/WHO targets including circumcising 27 million men during 2016–2020, maintain safety, and meet broader UNAIDS and PEPFAR objectives[8].

References

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