

SCALING UP VOLUNTARY MEDICAL MALE CIRCUMCISION FOR IMPACT

OVERVIEW

Three randomized controlled trials have demonstrated that voluntary medical male circumcision (VMMC) reduces the risk of HIV transmission from women to men by up to 60 percent.^{i,ii,iii} VMMC was recommended for scale-up as an HIV prevention intervention in 14 priority countries in sub-Saharan Africa with high HIV and low male circumcision prevalence by World Health Organization (WHO) and UNAIDS in 2007. VMMC is embedded within a comprehensive HIV prevention package which includes: HIV testing and counseling; screening and treatment for sexually transmitted infections; risk reduction education; condoms, and; linkage to HIV care and treatment services for HIV-positive clients.

VMMC is a critical component of the UNAIDS Fast-Track Strategy to End the AIDS Epidemic by 2030. Reaching and maintaining 80 percent coverage of VMMC in priority countries significantly contributes to the Fast-Track goals of reducing new HIV infections to fewer than 500,000 by 2020. Mathematical modeling suggests that achieving 20.3 million circumcisions in the priority countries will avert approximately 3.4 million HIV infections through 2025 and result in \$16.5 billion in net savings of HIV care and treatment costs.^{iv}

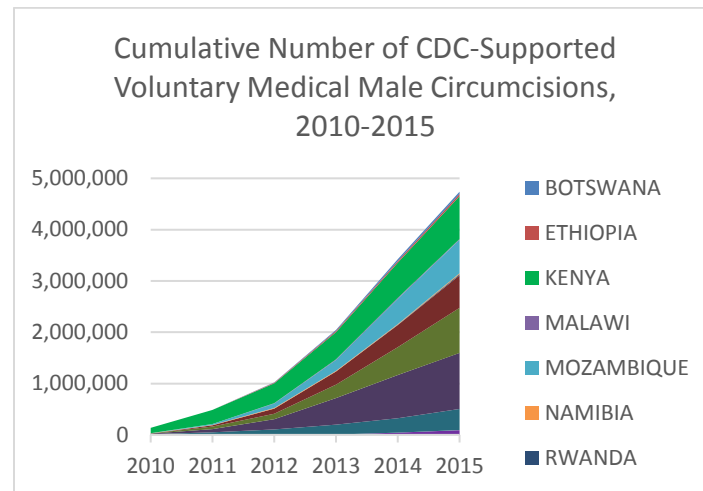
The U.S. Centers for Disease Control and Prevention (CDC) supports VMMC as a core component of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) high-impact interventions to reduce HIV infections. CDC monitors and provides technical guidance to the 14 priority countries implementing VMMC.

CDC'S ROLE

CDC implements research to enhance service delivery, evaluates strategies to generate demand for VMMC, assesses the feasibility and acceptability of device-based VMMC, and studies delivery models that are most sustainable for services. CDC develops training materials and tools to ensure that VMMC services meet the accepted global standards for safety and quality. CDC works with Ministries of Health to assess quality of services, improve mobilization strategies, and use program data to make evidence-based decisions about VMMC service delivery.

ACCOMPLISHMENTS / RESULTS

- CDC has conducted over 4.5 million VMMCs supported by PEPFAR to date (see graph). VMMC uptake has increased by nearly 400 percent since 2010^v. Mathematical modeling suggests that all VMMCs done to date will avert an estimated 240,000 HIV infections through 2025^{vi}.
- CDC has worked in close collaboration with implementing partners, Ministries of Health, and other stakeholders to ensure and maintain quality services through PEPFAR's External Quality Assurance assessments of VMMC. CDC also conducts routine monitoring and oversight activities to maintain high quality services, manage adverse events, and ensure voluntarism and referrals to HIV treatment of the VMMC program.
- CDC has supported the evaluation of device-based VMMCs in several priority countries, helping to improve uptake of VMMC in partner countries.
- CDC has conducted and supported several studies testing interventions to increase demand creation for VMMC services among men.
- CDC has worked closely with implementing partners, Ministries of Health, and other stakeholders to disseminate and provide technical guidance for VMMC.



FUTURE EFFORTS

- CDC will continue to partner with UNAIDS, country governments, and other stakeholders to scale up VMMC in priority countries with the aim of achieving an AIDS-Free Generation.
- CDC supports PEPFAR's "age-pivot," as it seeks to better target sexually active men aged 15 to 29 years, where the impact of VMMC services on the HIV epidemic will be more immediately felt.
- CDC continues to support countries and implementing partners as they test interventions to drive demand, introduce new circumcision devices, and create sustainable models for VMMC.
- CDC continues to provide quality assurance and improvement to ensure the safe delivery of VMMC services.
- CDC will continue to work with countries as they reach saturation in prioritized geographic areas (i.e., 80 percent or more of men 15 to 29 years of age are circumcised), and sustain the prevention benefit of circumcision to adolescent boys 10 to 14 years of age.

BENEFITS OF WORK

- Building local capacity in the priority countries strengthens national governments' response to HIV and provides a platform to improve health across a variety of infectious diseases.
- Generating knowledge regarding effective strategies to reach men with health services, particularly critical as men often do not access health and preventive services.
- Strengthening and upskilling clinical expertise, particularly surgical, across a broad range of service providers.
- Global HIV prevention helps to reduce the burden of disease worldwide, and reducing HIV around the globe improves people's lives and helps protect America.

ⁱ Auvert B, Taljaard D, Lagarde E, Sobngwi-Tambekou J, Sitta R, Puren A. Randomized, controlled intervention trial of male circumcision for reduction of HIV infection risk : the ANRS 1265 Trial. *PLoS Med.* 2005;2(11):e298.

ⁱⁱ Gray RH, Kigozi G, Serwadda D, et al. Male circumcision for HIV prevention in men in Rakai, Uganda: a randomised trial. *Lancet.* 2007;369(9562):657-666.

ⁱⁱⁱ Bailey RC, Moses S, Parker CB, et al. Male circumcision for HIV prevention in young men in Kisumu, Kenya: a randomised controlled trial. *Lancet.* 2007;369(9562):643-656.

^{iv} Njeuhmeli E, Forsythe S, Reed J, et. al. Voluntary medical male circumcision: modeling the impact and cost of expanding male circumcision for HIV prevention in eastern and southern Africa. *PLoS Med.* 2011;8:e1001132.

^v *Ibid.*

^{vi} Assessing Progress, Impact, and Next Steps in Rolling Out Voluntary Medical Male Circumcision for HIV Prevention in 14 Priority Countries in Eastern and Southern Africa through 2014. Kripke K, Njeuhmeli E, Samuelson J, Schnure M, Dalal S, Farley T, Hankins C, Thomas AG, Reed J, Stegman P, Bock N. *PLoS One.* 2016 Jul 21;11(7):e0158767. doi: 10.1371/journal.pone.0158767. eCollection 2016.