



Voluntary Medical Male Circumcision for HIV Prevention (VMMC)

An Introductory Factsheet

April 2020

This fact sheet provides basic information on VMMC, an HIV prevention strategy for HIV-negative men. For more basic fact sheets in this series on HIV prevention strategies visit www.avac.org/intro.

What is medical male circumcision?

Medical male circumcision is the removal of all or part of the foreskin of the penis (the fold of skin that covers the head of penis when it is not erect). Circumcision is usually done by a trained health professional and is a quick, simple surgery. It can also be done non-surgically by using a special plastic device (either PrePex or ShangRing) placed on the penis by a health care provider. The device is worn for seven days while the foreskin gradually disconnects itself from the penis. Then the provider removes the device and, with it, the foreskin. Both types of circumcision cause little to no pain. Local anesthetic is used for both.

Resources and links

AVAC (www.avac.org)

Clearinghouse on Male
Circumcision
(www.malecircumcision.org)

Why does male circumcision work as an HIV prevention method?

It is not yet known exactly how medical male circumcision reduces men's risk of getting HIV during vaginal sex, but there are a few possible explanations. The foreskin of the penis has many cells that are vulnerable to HIV. Removing the foreskin removes these "target cells" and makes the penile skin more durable, which may also reduce risk. Medical male circumcision also reduces rates of genital ulcer disease caused by sexual transmission, which can increase HIV risk.

Why is VMMC a key part of combination prevention?

VMMC lowers a man's risk of getting HIV from a female partner by 60 percent. When enough men have been circumcised, the women in their community are also less likely to get HIV. That's because there are fewer men living with HIV in the community. Once a man is circumcised, the procedure cannot be reversed. His partial protection from acquiring HIV continues throughout his life.

Models developed by epidemiologists (scientists who study how and why diseases spread) predict that scaling up VMMC can help lower new HIV infection rates significantly. A country has reached "high coverage" of VMMC when 80 percent of all men and boys are circumcised. By the end of 2017, over 18.6 million men and boys in 14 eastern and southern African countries have had VMMC. The World Health Organization (WHO) predicts that those procedures had already prevented an estimated 230,000 new HIV infections by 2017 and are projected to prevent more than 1 million HIV infections by 2030.

A study done in Rakai, Uganda showed that VMMC can reduce the transmission of other sexually transmitted infections (STIs), such as herpes simplex virus type 2 (HSV-2), and the human papillomavirus (HPV) among adolescents and adult males. VMMC can also reduce the transmission of syphilis amongst men and women.

A 2017 literature review by Grund JM, Bryant TS, Jackson I, et al. included evidence that suggested VMMC led to increased protection for women against cervical cancer, cervical dysplasia, HPV type 2, chlamydia and syphilis.

VMMC is a core element of HIV prevention, along with immediate access to antiretroviral treatment (ART) for people living with HIV. Other elements include HIV testing, access to PrEP for HIV-negative people, male and female condoms, microbicides and vaccines (when they become available) and harm reduction programs.

What has VMMC research proven and what research is still going on?

In the 2000s, data from three large trials in Kenya, South Africa and Uganda showed that VMMC provided by well-trained health professionals was both safe and effective in preventing HIV transmission. WHO and UNAIDS then issued recommendations to add VMMC to the HIV prevention toolbox in countries and regions where HIV is often transmitted heterosexually and where circumcision was not common. Data since 2010 show that as rates of HIV among men decline, the rate of new HIV infections among women also declines. Data also show that VMMC does not significantly change sexual practices, such as lower condom use, among men.

VMMC is a proven prevention strategy but ongoing research is exploring additional questions:

- How can countries achieve maximum impact with their VMMC program? Operational research is teaching us the best ways to make VMMC programs efficient, cost-effective, and well supported by the communities where they are most needed.
- How does the age at which VMMC is offered affect HIV rates in a country? Mathematical modeling shows that age and location affect the program's success. Models suggest the fastest way to use VMMC to reduce new HIV infections would be generated by circumcising males ages 20–34 in Malawi, South Africa, Tanzania, and Uganda and males ages 20–29 in Swaziland. But new mathematical modeling shows that starting it even earlier can reduce the number of HIV infections even more. According to these models, the greatest drops in HIV rates, over a 15-year period, could be achieved by increasing VMMC among “males ages 10–19 in Uganda, 15–24 in Malawi and South Africa, 10–24 in Tanzania, and 15–29 in Swaziland.” Introducing VMMC to younger boys appears to be a strong strategy for HIV reduction.

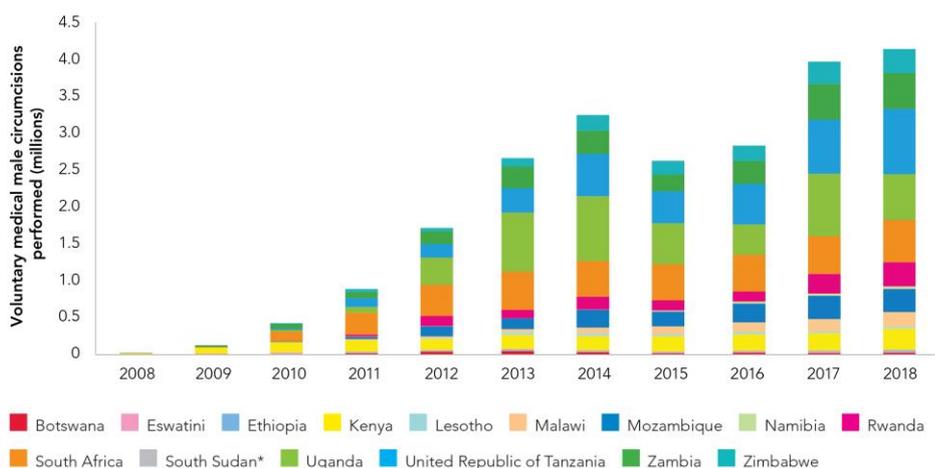
Engaging women and men who have sex with men

Women play important roles in campaigns to create demand, and scale up VMMC. They provide positive messages about the benefits of VMMC and influence decisions by their partners and sons. Women are well positioned to highlight VMMC as a way to reduce risk for their daughters as well because they are safer if their future partners undergo VMMC early in life. What we know about VMMC for gay men and other men who have sex with men (MSM) is less clear. Protection might depend on whether the individual is insertive or receptive during anal sex. Recent findings suggest circumcision might help reduce transmission in MSM who report that they are only the insertive partner during sex.

Annual totals: 2008-2018

Voluntary male medical circumcisions rising

Annual number of voluntary medical male circumcisions, 15 priority countries, 2008–2018



*South Sudan has only recently initiated a pilot voluntary medical male circumcision programme, and data were reported for the first time in 2018. This is the reason for low numbers.

Source: 2019 Global AIDS Monitoring.

About AVAC | AVAC is a non-profit organization that uses education, policy analysis, advocacy and a network of global collaborations to accelerate the ethical development and global delivery of new HIV prevention options as part of a comprehensive response to the pandemic.