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## MCC News

An e-newsletter about male circumcision for HIV prevention in Kenya

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Research assistant Perez Siambe listens to a study participant during an interview in the third round of surveys conducted for the Circumcision Impact Study.

Photo by Silas Achar

## Surveys reveal positive impact of Kenyan programme

The percentage of men in Kisumu Municipality who are circumcised nearly doubled over the first four years of Kenya's voluntary medical male circumcision (VMMC) programme, rising from 32 percent in 2008 to 60 percent in 2013, a new study shows.

This rise in the prevalence of male circumcision occurred largely among the majority Luo population, which does not have a tradition of male circumcision, and it was not associated with any reported increases in risky sexual behavior.

But the interim findings of the Circumcision Impact Study also reveal that the percentage of uncircumcised men becoming medically circumcised has slowed since 2010, despite evidence of continuing demand for the procedure.

“Overall, these results indicate that the VMMC programme is having a positive impact,” says Dr. Athanasius Ochieng’, VMMC programme manager for the National AIDS/STI Control Programme (NAS COP). “But they also show that we need to redouble our efforts to communicate the benefits of male circumcision and provide VMMC services to those who want to be circumcised.”

### **Uptake slows**

The Circumcision Impact Study consisted of three household surveys conducted roughly every two years by researchers from the University of Illinois at Chicago (UIC) and the Nyanza Reproductive Health Society, with support from the Male Circumcision Consortium. The total number of study participants was 1,762 in the first round, 2,912 in the second round and 2,840 in the third round.

Designed to be representative of the adult population of Kisumu Municipality, each survey included in-depth interviews with all willing men and women ages 15 to 49 in randomly selected households, as well as visual confirmation of men’s circumcision status.

The results show that the percentage of uncircumcised men choosing medical circumcision reached 40 percent by 2013. But when the data were examined by year, they revealed a gradual decline in this uptake of VMMC from a peak in 2010, and then a dramatic reduction in 2012.

The authors of the study caution that continued decreases could jeopardize the programme’s goal of dramatically reducing new HIV infections by circumcising at least 80 percent of the male population in the Nyanza region, where Kisumu is located.

The decline in uptake of services coincides with evidence of reduced exposure to information about VMMC. In the third round of the survey, both men and women were significantly less likely to report receiving such information from circumcised men, sex partners, mass media, community meetings, mobile campaigns and other sources.

“These findings suggest decreased mobilisation efforts and may offer some

explanation for the lower VMMC uptake seen in 2012 and 2013,” says Matthew Westercamp of UIC, principal investigator for the study.

### **Many considering circumcision**

In August 2013, the communications subcommittee of the national VMMC task force began a review of its VMMC communication strategy and materials to enhance efforts to inform men and women about male circumcision for HIV prevention. Additional results from the Circumcision Impact Study suggest that intensified communication about VMMC would find receptive audiences.

The surveys show that preference for male circumcision has continued to increase among men and their female partners. The most dramatic increase was seen among women; nine out of ten Luo women in Kisumu now prefer a circumcised partner.

The 2013 survey also found significant gains in the percentage of uncircumcised men considering circumcision. Two out of five uncircumcised men said that they definitely plan to get circumcised in the future; less than one in five would definitely not seek VMMC services.

Access does not appear to be a major barrier to uptake. In the 2012-13 survey, 97 percent of men and 90 percent of women said that medical male circumcision is available to most men who want it, up from 72 percent and 68 percent, respectively, in 2008.

Among the uncircumcised men who would prefer circumcision, the most common reasons cited for not yet being circumcised were fear of pain and that “the procedures takes too long.”

“The primary barriers to male circumcision uptake have remained consistent across surveys, which suggests that they have not been amply addressed,” says Dr. Westercamp. “Messages that assure men about pain control and clarify the time required for the procedure and convalescence will likely have the greatest impact.”

### **No risk compensation**

The researchers also collected information on knowledge of male circumcision for HIV prevention, sexual risk behavior and HIV prevalence to better understand the impact of the VMMC programme. (The data on HIV prevalence will be available in 2014.)

By 2013, 90 percent of men and women believed that circumcised men were less likely to become infected with HIV compared to uncircumcised men.

Studies have shown conclusively that male circumcision reduces men’s risk of HIV infection through vaginal sex by about 60 percent. However, it is feared that knowledge of this protective effect could give men and their partners a false sense of security, resulting in increases in risky sexual behavior — a potential effect known as “risk compensation.”

The survey results suggest that this is not the case in Kisumu. In the second and third rounds, no significant increases were seen in the percentage of participants reporting that they were less worried about HIV infection, more likely to have more than one sex partner, more likely to have sex without a condom, or more willing to take a chance of becoming infected with HIV.

Most notably, the study found no evidence of increases in behaviors that put people at risk of HIV infection. No decrease in condom use was reported from 2008 to 2013, and there was no significant difference in the number of lifetime sex partners reported by circumcised and uncircumcised men.

A **report** describing the interim results of the Circumcision Impact Study is available on the Clearinghouse on Male Circumcision for HIV Prevention.

### **Study examines viral shedding after male circumcision**

Medical circumcision of an HIV-positive man who is not receiving antiretroviral treatment (ART) results in a temporary surge in the amount of the virus shed from the penis, a study conducted in Kisumu, Kenya, has found.

The results of the **study** — published online 16 August in the *Journal of Acquired Immune Deficiency Syndromes* — underscore the importance of abstaining from sex during the six weeks after male circumcision, because increased viral shedding during that time could heighten the risk of HIV transmission from HIV-positive men to their partners.

Nevertheless, the investigators say, these results are reassuring because they show that the spike in viral shedding is short-lived, dropping to pre-circumcision levels within six weeks.

“This temporary increase in penile viral shedding should pose no additional risk of HIV transmission, as long as men abstain from sex for six weeks post-circumcision and use condoms consistently,” says Dr. Elijah Odoyo-June of the Nyanza Reproductive Health Society (NRHS), first author on the publication and coordinator of the study.

### **HIV-positive men and circumcision**

The Kisumu study was the first to assess the effects of circumcision on penile shedding of HIV. Conducted by the University of Illinois at Chicago (UIC) and NRHS, with support from the Male Circumcision Consortium, it also examined whether medical male circumcision of HIV-positive, “ART-naïve” men leads to increased viral load in blood plasma.

Voluntary medical male circumcision (VMMC) is offered, along with other services, for HIV prevention. But men who are already infected with HIV do get circumcised, to take advantage of its other benefits or because they do not know their HIV status.

“The HIV testing rate among men seeking male circumcision in Kenya is more than 90 percent,” says Robert C. Bailey, principal investigator of the study and professor of epidemiology at UIC. “However, not all programs are as successful in encouraging clients to get tested and learn their results.”

HIV-positive men have the right to become circumcised if they wish, he adds. But widespread circumcision of men infected with virus could limit the public health benefits of the intervention if it puts their partners at greater risk of HIV.

### **Assessing viral load and viral shedding**

The study was conducted at the UNIM Research and Training Centre in Kisumu as part of a larger study on wound healing after male circumcision that involved 215 HIV-negative men and 108 HIV-positive men ages 18 to 35. The men’s circumcision wounds were examined to assess healing at weekly intervals for seven weeks and again at 12 weeks.

On the day of circumcision and at each visit, the researchers washed the penises of HIV-positive participants and collected the fluid to assess shedding of the virus. They also collected blood samples to measure the amount of virus in plasma.

There was no increase in viral load after six weeks among the first 19 men, so no further tests were run on blood plasma. Viral shedding was assessed in those men and an additional 10 men for seven weeks and at 12 weeks.

### **Results and implications**

The World Health Organization recommends that men abstain from sex for six weeks after being circumcised to allow time for the wound to heal. The MCC-supported study of wound healing, also conducted by UIC and NRHS, confirmed that most circumcision wounds heal within six weeks.

Now the new findings on viral shedding reinforce the need for six weeks of sexual

abstinence post-circumcision.

Three of the men who had no detectable viral shedding before the procedure also had no measurable virus at any time post-circumcision. Among the other 26 men, penile viral shedding rose significantly post-circumcision.

Viral shedding peaked after one week, and then declined to undetectable levels within six weeks in all but one man. His viral shedding became undetectable at week seven.

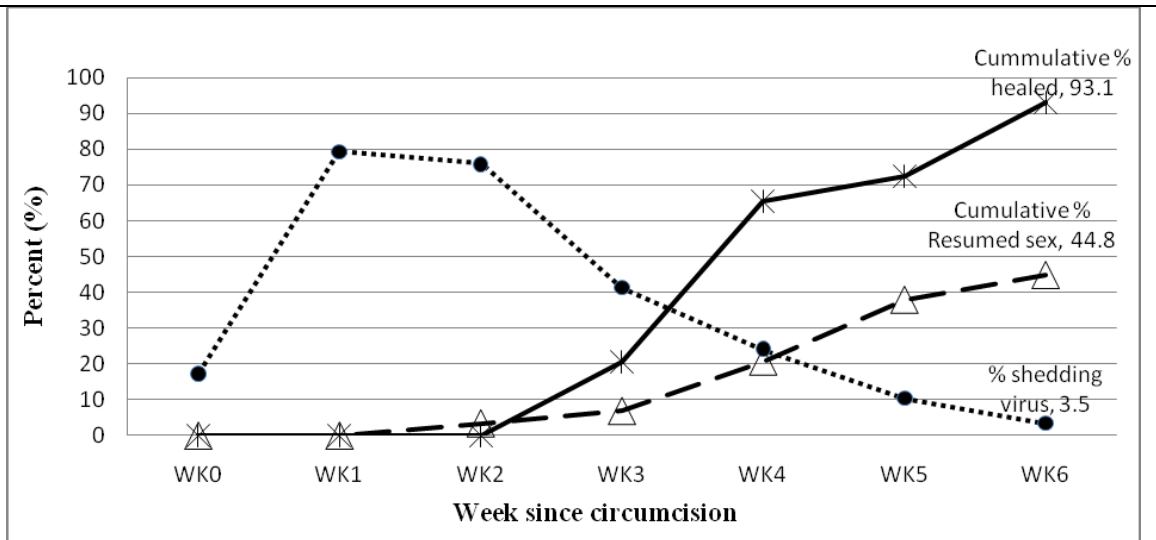
By week six, 45 percent of men had resumed sex and 93 percent were certified as fully healed. Only one man still had penile viral shedding from an unhealed wound when he first resumed sex, and he reported using a condom.

Given that more than 96 percent of the men had no viral shedding after full wound healing, the investigators say, it is reasonable to conclude that the increase in viral shedding is due primarily to the openings in the skin created by a circumcision wound.

“Moreover, there was no difference in viral shedding between men who resumed sex early and men who did not,” says Dr. Odoyo-June. “This suggests that sexual intercourse did not cause breaking or tearing at the site of the wound.”

The investigators said the temporary nature of the surge in viral shedding suggests that the risk of HIV transmission to the partners of HIV-positive men after male circumcision is less than was previously thought.

“Nevertheless, almost one-quarter of ART-naive HIV-positive men in the study continued shedding virus above baseline up to four weeks post-surgery,” Dr. Odoyo-June cautions. “That’s why it is so important that we develop effective counseling and other communication strategies, encouraging both men and their female partners to avoid sex before 42 days after circumcision and use condoms when they resume having sex.”



**Figure 3:** Proportion of HIV-positive men shedding detectable virus from penis, assessed as healed and reporting resumption of sex by weekly intervals (n=29)

### Male circumcision offers lasting protection

A **study** in Kisumu has shown that the effectiveness of voluntary medical male circumcision for HIV prevention is sustained for at least six years.

The study, published online in the journal *AIDS*, followed 1,545 men who had participated in the randomised controlled trial (RCT) of male circumcision for HIV prevention in Kisumu.

After 72 months of follow-up, circumcised men were about 58 percent less likely to become infected with HIV compared to uncircumcised men. This reduction in risk is similar to the findings of the Kenyan RCT and the male circumcision trials conducted in South Africa and Uganda.

The study was conducted by researchers from the University of Illinois at Chicago (UIC), the University of Manitoba and Impact Research and Development Organization, with support from the Office of AIDS Research at the US National Institute of Allergy and Infectious Diseases and the Canadian Institutes of Health Research.

“These findings provide an estimate of the long-term efficacy of medical male circumcision against HIV infection,” the authors conclude. “Our results support programmatic scale-up recommendations that are based on assumptions of sustained efficacy.”

## **Rapid results initiative surpasses goal**

More than 51,000 men and boys were circumcised in the four counties of the Nyanza region in a Rapid Results Initiative (RRI) conducted from 15 July to 31 August.

The preliminary results compiled by the Inter-County Task Force on Male Circumcision (formerly the Nyanza Provincial Task Force on Male Circumcision) show that the government and its implementing partners exceeded their goal of reaching 30,000 clients over 45 days.

“This is a prolific piece of human effort,” said Dr. Ojwang’ Lusi, co-chair of the task force and Kisumu county director of health. “I want to thank everybody whose energy has contributed to this result.”

During the RRIs, which are held during school holidays, the government and its partners provide expanded access to voluntary medical male circumcision (VMMC) services and promote their use. This RRI was also conducted in other parts of Kenya, but the results from those campaigns are not yet available.

Of the 51,054 clients who received VMMC services during the RRI in Siaya, Kisumu, Homa Bay and Migori counties, 41 percent were younger than 15.

The VMMC programme focuses primarily on reaching those ages 15 to 49. Circumcising men in this age group will have the greatest impact on the HIV epidemic, because they are most likely to be sexually active. Nevertheless, Dr. Lusi said, providing VMMC services to so many boys younger than 15 is a serious investment in to the future.

The VMMC programme was launched in Kenya in November 2008 as part of HIV-prevention efforts. It aims to reach 860,000 boys and men ages 15 to 49 in by the end of 2013. So far, more than 691,000 men and boys of all ages have been circumcised.

## **Male circumcision in the news**

### **Text messages do not reduce early resumption of sexual activity in circumcised men**

*Aidsmap*, 5 September

### **Parents told to take boys for free cut**

*The Star*, 2 September

### **8,000 Busia men to get circumcised**

*The Star*, 6 August



## Resources

### **PEPFAR Guide to Monitoring and Reporting Voluntary Medical Male Circumcision Indicators**

This **guide** and its accompanying **appendices** serve as resources for partners implementing VMMC programmes supported by the US President's Emergency Plan for AIDS Relief (PEPFAR), but may also be useful to others seeking to improve the monitoring of VMMC services.

### **Association of the ANRS-12126 male circumcision project with HIV levels among men in a South African township: evaluation of effectiveness using cross-sectional surveys**

The results of a study published in *PLOS Medicine* suggest that the roll-out of voluntary medical male circumcision in Orange Farm, South Africa, is associated with a significant reduction in HIV levels in the community. Substantial uptake of VMMC in this community was not linked to changes in sexual behavior that might affect HIV infection rates.

### **Devices for Adult Male Circumcision for HIV Prevention: What's the Current Situation? What's Next?**

The third in a series of webinars about voluntary medical male circumcision hosted by the US President's Emergency Plan for AIDS Relief (PEPFAR) featured a discussion on the use of devices in VMMC programmes. Resources from the webinar, including slide presentations and recordings of the session, are available on the **Clearinghouse on Male Circumcision for HIV Prevention**.

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The **(MCC) Male Circumcision Consortium (MCC)** works with the Government of Kenya and other partners—including the US President's Emergency Plan for AIDS Relief (PEPFAR), which supports service delivery—to prevent HIV and save lives by expanding access to safe and voluntary male circumcision services. FHI 360 and the University of Illinois at Chicago, working with the Nyanza Reproductive Health Society, are partners in the Consortium, which is funded by a grant to FHI 360 from the Bill & Melinda Gates Foundation.

**Please send questions or comments to Silas Achar at: [mccinfo@fhi360.org](mailto:mccinfo@fhi360.org); also, please indicate whether you want to continue receiving this e-newsletter regularly.**