Male circumcision (MC) involves the removal of all or part of the foreskin of the penis. MC is one of the oldest and most common surgical procedures in the world. It is undertaken for religious, cultural, social, or medical reasons. Data from a range of observational epidemiological studies since the mid 1980s indicate that circumcised men have a lower prevalence of HIV infection than uncircumcised men.

In March 2007 the World Health Organization (WHO) and the Joint United Nations Programme on HIV/AIDS (UNAIDS) convened an expert meeting to review the evidence for male circumcision for HIV prevention, including data from three randomised controlled trials conducted in Kenya, South Africa, and Uganda. The clinical trials showed that circumcision reduced the rates of heterosexual men acquiring HIV through vaginal sex. In all three trials, significant reductions in HIV risk were seen in clinical settings where men received treatment for sexually transmitted infections (STIs), free condoms, comprehensive HIV prevention messages, and circumcision performed in sterile conditions by trained personnel.

Based on the strength of the evidence, WHO/UNAIDS recommended that MC should be considered an important new intervention for HIV prevention.

**Introduction**

**Table 1: Overview of Voluntary Medical Male Circumcision Program Characteristics in SADC Countries**

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**Pre-Counseling**

- Procedure clearly provided
- Effective methods used
- Focus on adults (18-49yrs)
- Included neonates & prepubescent MMC
- Hygienic methods
- MOVE method
- Sufficient infrastructure & staff
- VMMC occurring in hospitals
- Minimum cost to patients
- Post-counseling provided
- Counseling by clinicians & trained counselors
- Information pamphlets
- Social network services for information and reminders

**Post-Counseling**

- Minimum cost to patients
- Post-counseling provided
- Counseling by clinicians & trained counselors
- Information pamphlets
- Social network services for information and reminders

**Table 1: Overview of Voluntary Medical Male Circumcision Program Characteristics in SADC Countries**

- Acceptance levels determined
- High VMMC acceptance
- Social mobilization
- Advertising at a community site
- Media advertising
- Approaching schools
- SMS service information & reminders
- Promoting VMMC as a health / cultural issue
- Procedure clearly provided
- Pre-counseling provided
- Pre-counseling by clinicians and trained counselors
- Risk compensation information included
- Patients reasons for VMMC obtained
- Minimum procedure time
- Effective methods used
- Focus on adults (18-49yrs)
- Included neonates & prepubescent MMC
- Hygienic methods
- MOVE method
- Sufficient infrastructure & staff
- VMMC occurring in hospitals
- Minimum cost to patients
- Post-counseling provided
- Counseling by clinicians & trained counselors
- Information pamphlets
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**WHO/UNAIDS** specified that countries with a high HIV prevalence, low rates of male circumcision, and heterosexual epidemics should consider scaling up male circumcision as part of a comprehensive HIV prevention package. Thirteen Eastern and Southern African nations were identified as priority countries for scale up of MC: Botswana, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, South Africa, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe. Ten of these countries are SADC member states.

Scale-up of voluntary medical male circumcision (VMMC) since 2007 has been modest in most countries, with reportedly over 50,000 males circumcised for HIV prevention by the end of 2010 in the priority countries. This represents 2.7% of the estimated 20 million male circumcisions needed. The greatest success in scaling up adult VMMC has occurred in Nyanza Province, Kenya, where more than 230,000 men have been circumcised in recent years, representing 27% of the number of procedures needed nationally, and 62% of the number needed in the province. Zambia and South Africa had circumcised over 80,000 and 130,000 men, respectively, by the end of 2010.

Progress in implementing VMMC has been more limited in the other priority countries, with fewer than 25,000 VMCCs performed in any one country. However, nearly all the countries have seen the pace of scale up quicken in 2010. As of 2010, Swaziland had reached 13.3% of the estimated number of MCs needed; Botswana and Zambia had reached 3.2% and 4.2%, respectively; and South Africa and Tanzania had reached 3.4% and 1.4% of their targets, respectively.

performing 20.3 million circumcisions by 2015, and would aver 3.4 million, or 22%, of new HIV infections through 2025. An additional 8.4 million circumcisions would be needed between 2016 and 2025 to maintain the 80% coverage level. While the model shows that this scale-up would cost a total of US$1.5 billion by 2015, it could result in net savings (due to prevention, treatment and care costs) of US$16.6 billion. Other models have suggested that VMMC scale-up would reduce HIV incidence in Eastern and Southern Africa by roughly 30–50% over 10 years. Achieving the 80% prevalence target is consistent with universal access targets and national targets adopted in most of the priority countries.  

The SADC HIV and AIDS Framework 2010-2015, prepared in October 2009, states that male circumcision is a priority intervention for the region. It cautions that male circumcision does not provide complete protection from HIV for men. MC reduces the risk of HIV acquisition through heterosexual sex by approximately 60%. Risk-reduction counseling must be reinforced as part of programs. The low rates of male circumcision in the SADC region require massive efforts to educate and provide VMMC services. VMMC will be strengthened when integrated with other evidence-based prevention methods, such as promotion of delayed sexual debut, abstinence, reduction of sexual partners, use of barrier methods such as condoms, voluntary counseling and testing (VCT), sexual and reproductive health counseling, and prevention of STIs.

Global Policy Guidance

In 2007, WHO and UNAIDS recommended that MC be recognized as an additional, important strategy for the prevention of heterosexual acquired HIV infection in men, particularly in countries with hyper epidemics or generalized HIV epidemics and low MC prevalence.


The pace of scaling up VMMC differ among SADC countries with a number of countries implementing effective practices to support VMMC roll-out. Effective practices that have been implemented by most countries include advertising via the media to access men, providing clear information on the procedure during pre-counseling, using the MOVE method and conducting VMMC at a minimal cost to patients. The inclusion and detail of procedures on VMMC roll-out in country level NSPs are evidenced in 70% of the countries, with only five countries not including VMMC in their NSPs. However, certain good practices, such as the inclusion of monitoring and evaluation of VMMC in NSPs, determining VMMC acceptance levels prior to program roll out, approaching schools for accessing boys for VMMC, and addressing risk compensation during pre- and post-counseling occur in very few or no countries.

A key priority for SADC countries is to educate and share with its citizens the knowledge regarding the protective effect of VMMC for prevention of HIV, other sexually transmitted diseases and penile cancer. We must also be transparent and provide clear and consistent messages about the potential risks and limitations (partial efficacy) of VMMC for HIV prevention and the exception of the danger of unskilled practitioners trying to profit from the growing demand for male circumcision. It should be noted that while VMMC is seen as an efficacious intervention for the prevention of new HIV infections, men who have acquired HIV infections, men, there also needs to be a concerted effort to engage women in communities where VMMC scale-up is being undertaken.
women to be involved in sexual decision making, including contraceptive use, and encourage communication between partners.

**Structural level:** At a structural level, the range of cultural and health systems-related factors that contribute to VMMC adoption and demand are explored. For example, neonatal circumcision rates remain low and there are inadequate numbers of health care staff in the region to implement this type of intervention. Most countries concentrate their VMMC efforts on adults aged 18-49 years. Further government support and investments for VMMC programs may be needed for both infants and men.31

In most circumstances, a minimum amount of time (15-30 minutes) is taken to perform the procedure. In terms of the methods used, most of the countries’ programs used the more effective types of circumcision, i.e., the Guide Forceps was the simplest, preferred, and most effective method to use. However, if the patient was at risk for excessive bleeding, then the Sleeve Resection method was used. Most programs attempted to use hygiene methods to promote safety; however, more resources may be required to ensure that VMMC is consistently conducted using safe and hygienic procedures.

Infrastructure and staffing affects the quality and uptake of VMMC services. Most men prefer to be circumcised in a hospital setting. Good staffing may be required for the scale up of VMMC. This needs to be a prerequisite for VMMC. However, most programs in SADC countries lack adequate staffing. Health facilities report that they would be able to increase the number of VMMCs performed if they had additional staff, equipment, and instruments, such as surgical tables, protective gear, operating instruments, disposable equipment, sterilizers, reliable electrical power, adequate water supply, medicines, and policies, all of which are not available in the procedures which performed these on how to perform the surgery. Advocacy at all levels, from global to local, will be required to improve and sustain delivery of this effective and cost-saving prevention intervention. While funds have been made available to the United States, the Bill and Melinda Gates Foundation, diversified funding sources are required, including national contributions. Moreover, VMMC should be included in proposals to the Global Fund.

Accurate estimates and projections of human resource needs, and policies and strategies for task shifting and task sharing should aim to maximize the use and time of trained health care personnel in resource-poor settings. Involvement of traditional practitioners is crucial to engage and participation where male circumcision and initiation practices are performed. In contexts where both types of practices are occurring, concerted efforts should be made to scale up integrated medical communication alongside traditional initiation practices into manhood.

A reliable and efficient supply system chain management is needed for the procurement and distribution of VMMC equipment and consumables. Male circumcision should be offered with full adherence to medical ethics and human rights principles, including informed consent, confidentiality, and absence of coercion. Global, regional, and national level

The Framework outlines strategic pillars and activities for both accelerating the “catch-up” phase (i.e., efforts to provide safe VMMC services, performed by trained health care personnel under hygienic conditions, to uncircumcised adult men), and initiating the “sustaining” phase (i.e., efforts to implement the prevention of HIV transmission provision in schools and relatively adolescents). The term “scale up” is intended to encompass both the catch-up and sustainability phases. The Framework is guided by the vision that: VMMC is established as an HIV prevention social norm in the countries; communities and systems have the ability to act in synergy with other HIV prevention and reproductive health strategies to move towards zero new infections in countries with generalised epidemics where the prevalence of MC is low. Specifically, the Framework seeks to achieve the following goals: By 2016, country policies with generalised HIV epidemics and low prevalence of MC have: a) VMMC prevalence of at least 80% among 15- to 49-year-old males; and b) Established a sustainable national program that provides VMMC services to all infants up to two months old and at least 80% of male adolescents.

**Regional Experience and Promising Practices**

**WHO and UNAIDS developed Operational guidance for scaling up male circumcision services for HIV prevention2** in 2008 to support countries in the development of national programs. The ten elements for programs defined in the guidance document are: leadership and partnerships; situation analysis; advocacy; enabling policy and regulatory environment; strategy and operational plan for national implementation; quality assurance and improvement; human resource development; security; social change communication; and monitoring and evaluation.3

By the end of 2010, among the 13 priority countries, at least one component of a situation analysis had been conducted and most of these countries had developed national policies and strategies. Many countries have a five-year strategy, as well as a long-term strategy that focuses on the provision of early infant and adolescent services. Regarding the inclusion of VMMC in SADC countries’ National Strategic Plans for HIV and AIDS, only four countries have comprehensive policy responses, six have some policy responses and the rest do not mention VMMC in their policies.

Of the ten countries that mentioned VMMC in their policies, all portrayed it as a necessary action for HIV prevention and supported the promotion of safe VMMC. Nearly half of these countries provided procedures and regulations for the roll out of VMMC. Leadership and advocacy vary greatly among the countries and over time since policies and strategies have been adapted to African low-income settings. It can be implemented in male circumcision programs since 2007. The meeting report includes country updates from priority countries providing details on service delivery models and key issues, including scale up, demand creation and communications strategies, research highlights, costing analyses, and addressing long-term sustainability. A number of success stories and case studies on VMMC as a promising practice in Sub-Saharan Africa region are included in the Westecamp and Bailey survey.4 These researchers reviewed studies on the acceptability of MC in Sub-Saharan African communities and factors that influence the uptake of circumcision in traditionally non-cirumcising populations. Factors that influence a man’s decision to use this HIV prevention service are important to know in order to learn how best to implement VMMC.

Quality and feasible VMMC roll out can be achieved and adapted to African low-income settings. It can be implemented provided and safely according to the guidelines. The programs can act as models for the scale up of comprehensive VMMC services, which could be tailored to rural and urban communities of high HIV prevalence and low VMMC rates in SADC countries. Kenya has been highly successful in scaling up its VMMC programs, as indicated by an 85% VMMC prevalence rate with a 7% HIV prevalence out of the male portion of the total population of 37.5 million. 5 In the ANRS 12126 “Bophelo Pele” project implemented in 2008 in the townships of Orange Farm, South Africa, 14,011 men were circumcised, with a rate of approximately 740 circumcisions per month.6


Prepared by Poloko Kebaabetswe et al., “Male circumcision: an acceptable strategy for HIV prevention across populations at risk,” Journal of Sexually Transmitted Infections 7(6)

31 Poloko Kebaabetswe et al., “Male circumcision: an acceptable strategy for HIV prevention across populations at risk,” Journal of Sexually Transmitted Infections 7(6), No. 5 (2003), e199.
It is important to promote awareness of VMMC as a protective factor for HIV in order to encourage men to be circumcised and increase VMMC rates. Media advertising on the radio and in newspapers in Kenya increased VMMC uptake by 7%.2

In most programs, cultural norms and practices in the design of VMMC programs. Programs concentrated on neonatal VMMC, hospitals publicized circumcision at birth or during visits for vaccinations, whereas for adolescent age, adolescence, and adulthood. Where SADC countries’ circumcision occurs.

It is necessary to provide context and age appropriate information on VMMC to reduce concerns about the possible decrease in sexual pleasure in order to increase uptake. Effective VMMC communication programs developed targeted messages for different age groups; they were differentiated in the manner in which they gained access to the three distinct ages at which circumcision could possibly occur. These three ages are pediatric age, adolescence, and adulthood. Where SADC countries’ programs concentrated on neonatal VMMC, hospitals publicized the procedure mostly to women and mothers of male children at birth or during visits for vaccinations, whereas for adolescent and adult VMMC, schools were targeted. Most programs emphasized factors were also taken into account, which reflect the age at which circumcision occurs.

Most countries in the region considered the impact of cultural norms and practices in the design of VMMC programs. Programs commonly delivered resonant messages that took into account prior perceptions and used the most appropriate means of communicating the benefits of VMMC to different audiences.

**Circumcision in progress © Edward Echwalu/IRIN**

**Conclusions for Program Implementation**

**Pre-procedure:** Pamphlets and other information on VMMC are not being handed out to clients before the pre-procedural counseling is provided by medical staff prior to the VMMC procedure on a) the procedure itself, and b) the post-operative process. Pre-counseling ensures that patients make informed decisions about and are satisfied with their decision to have VMMC performed and with the procedure used at their chosen health facility. Effective programs also provide specific information to prospective VMMC patients regarding risk compensation and clarified the patients’ reasons for wanting to be circumcised. Addressing these issues is not the norm in most SADC countries. South Africa is one example where risk compensation and the patients’ reasons for wanting to be circumcised are addressed in the pre-progress counseling.

**Procedure:** Countries that need to scale up male circumcision for HIV prevention usually have overburdened health systems and a critical shortage of skilled health professionals. It is therefore necessary to find ways to rationalize and maximize the use and time of trained, competent health-care personnel. The MOVE model (Model for Optimizing the Volume and Efficiency) of male circumcision services that is recommended by the WHO advocates for a task-shifting and task-sharing approach. Task-shifting refers to the use of non-physician providers to complete all steps of male circumcision surgery. Task-sharing refers to the use of non-physician/lower cadres of health-care providers to complete specific steps of male circumcision surgery. This allows the operator (or surgeon) to focus on the most technically complex components of the surgery. In task-shifting and task-sharing models, surgical activities are reassigned, where is possible, from those providers qualified for such interventions, e.g., physicians, to other appropriately trained and competent health-care providers, e.g. clinical officers and nurses. For example, in the Orange Farm trial, which used the MOVE model, they were able to perform up to 150 adult VMMC per day under lateral positioning. The procedure also included sterilized circumcision disposable kits and electrocautery. The procedures were performed daily by three teams of one medical circumciser and five nurses.7 The shifting or sharing of surgical tasks among health-care cadres allows more highly trained health professionals additional time to dedicate themselves to the most complex clinical tasks, thus helping to address staffing shortages and reducing the cost of service provision. Components of the MOVE model are currently being piloted in 10 countries, and 20 interventions, e.g. physicians, to other appropriately trained and competent health-care providers, e.g. clinical officers and nurses. For example, in the Orange Farm trial, which used the MOVE model, they were able to perform up to 150 adult VMMC per day under lateral positioning. The procedure also included sterilized circumcision disposable kits and electrocautery. The procedures were performed daily by three teams of one medical circumciser and five nurses.7 The shifting or sharing of surgical tasks among health-care cadres allows more highly trained health professionals additional time to dedicate themselves to the most complex clinical tasks, thus helping to address staffing shortages and reducing the cost of service provision. Components of the MOVE model are currently being piloted in 10 countries, and 20 interventions.

While VMMC has shown to be effective in reducing the risk of HIV transmission among men, the procedure does not completely reduce the risk of acquiring HIV. Evidence from Botswana, Lesotho, and Swaziland suggest that while the effectiveness of VMMC in decreasing the potential risk of HIV transmission (see text box) below depends on whether or not circumcision was chosen to continue practicing safe sex, that is, reducing the number of sexual partners, and consistently using condoms after being circumcised. The data indicated that circumcised men did not engage in “riskier sexual behavior” in Botswana and Swaziland, while in Lesotho, some data showed that circumcised men may not use condoms, which increases their risk of infection and counteracts the effects of VMMC.

**Barriers to Acceptance of VMMC**

Westcamp and Bailey cited above identified a number of barriers that affect the acceptability of VMMC in the SADC region. These factors include: confusion of VMMC with female genital mutilation; the six-week healing period where intercourse is not allowed and leave from work has to be taken; fear of pain; cultural and religious beliefs; cost; the risk of medical complications and adverse effects; and the possibility of behavioral disinhibition (that VMMC would result in increased sexual risk behavior). Other barriers and risks are: a lack of regard for the effects of access to healthcare and employment in order to heal; a reduction in penile sensitivity and size; fear of a lessened capacity to engage in sexual intercourse or desire; and an increase in promiscuity. The results of studies in the region confirmed that, despite these barriers to VMMC, the procedure proved to be inexpensive, and the circumcision wounds healed rapidly if executed in a hygienic sterile hospital environment. Furthermore, if these concerns were addressed in advance, it was found that individuals often readily accepted VMMC.

Since VMMC does not protect entirely against HIV transmission, VMMC should be considered in conjunction with other preventive measures, including behavioral and biomedical interventions. Confusing “lowered risk” with “no risk” could cause detrimental effects and setbacks in progress made from increasing VMMC.

**Individual level:** At an individual level, HIV testing is recommended for all men seeking male circumcision, but it should not be mandatory. Patients also need to ensure that circumcision wounds are fully healed before engaging in sexual intercourse. VMMC should be provided in a safe, sterile, and confidential environment. VMMC should not be viewed as a vertical intervention, but should be integrated into primary health care services. Part of a comprehensive package includes: screening and treatment of STIs; HIV counseling and testing; risk-reduction counseling; and increasing the consistent use of both male and female condoms; decreasing the number of multiple and concurrent sexual partnerships; promoting other positive behavior changes relevant to HIV prevention; and ensuring active referrals of HIV-positive men to care and treatment programs. Behavior change programs should be underpinned by principles of sexual and reproductive health services.

**Protecting men from the risk of HIV acquisition is defined as protecting men from acquiring HIV. Reducing men’s risk of HIV transmission is defined as protecting men from becoming HIV infected partners from having the virus transmitted to them by these men.**

Most SADC countries have programs that include the lowering of patients’ anxiety about the circumcision and create an environment conducive to safe and comfortable VMMC. This is accomplished by having helpful doctors and nurses and by making the process clear to the participants. However, very limited information is being provided on risk compensation during pre-counseling or post-counseling. Facilities providing circumcision services conducted routine counseling services for circumcision. Before the procedure is performed, facilities offered counseling on the procedure and existing HIV and STI prevention approaches. After the procedure, most facilities also offered counseling on post-operative care, resumption of sexual activity, and on other male reproductive health topics. Clinicians and counselors

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3. Taran Westercamp and Bailey cited above identified a number of barriers that affect the acceptability of VMMC in the SADC region. These factors include: confusion of VMMC with female genital mutilation; the six-week healing period where intercourse is not allowed and leave from work has to be taken; fear of pain; cultural and religious beliefs; cost; the risk of medical complications and adverse effects; and the possibility of behavioral disinhibition (that VMMC would result in increased sexual risk behavior). Other barriers and risks are: a lack of regard for the effects of access to healthcare and employment in order to heal; a reduction in penile sensitivity and size; fear of a lessened capacity to engage in sexual intercourse or desire; and an increase in promiscuity. The results of studies in the region confirmed that, despite these barriers to VMMC, the procedure proved to be inexpensive, and the circumcision wounds healed rapidly if executed in a hygienic sterile hospital environment. Furthermore, if these concerns were addressed in advance, it was found that individuals often readily accepted VMMC.
7. David Patrick et al., “Integrating male circumcision (MC) into HIV prevention programs: a vertical intervention, but should be integrated into primary health care services. Part of a comprehensive package includes: screening and treatment of STIs; HIV counseling and testing; risk-reduction counseling; and increasing the consistent use of both male and female condoms; decreasing the number of multiple and concurrent sexual partnerships; promoting other positive behavior changes relevant to HIV prevention; and ensuring active referrals of HIV-positive men to care and treatment programs. Behavior change programs should be underpinned by principles of sexual and reproductive health services.
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