



A patient receives medication after circumcision © Edward Echwalu/IRIN

TECHNICAL BRIEF

Voluntary Male Medical Circumcision (VMMC) for HIV Prevention

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Introduction

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 randomized 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.

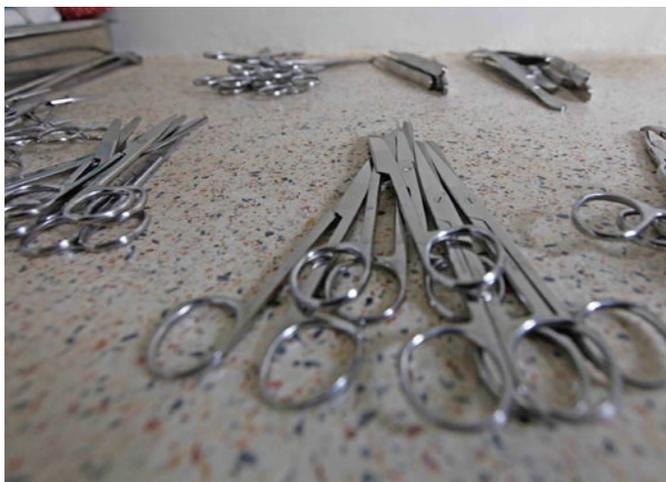
WHO/UNAIDS specified that countries with a high HIV prevalence, low rates of male circumcision, and heterosexual epidemics should consider scaling up male circumcision as part of a comprehensive HIV prevention package. Thirteen Eastern and Southern African nations were identified as priority countries 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 550,000 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 VMMCs performed in any one country. However, nearly all the countries have seen the pace of scale up quicken in 2010.¹ 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.²

1 WHO and UNAIDS, "Joint Strategic Action Framework to Accelerate the Scale-Up of Voluntary Male Medical Circumcision for HIV Prevention in Eastern and Southern Africa 2012-2016", (UNAIDS, 2011), 8.

2 WHO and UNAIDS, "Male circumcision: global trends and determinants", 1



Equipment used for circumcision in Uganda © Edward Echwalu/IRIN

Rationale for Voluntary Male Medical Circumcision (VMMC)

WHO and UNAIDS state that male circumcision should be recognized as an efficacious intervention for the prevention of heterosexually acquired HIV infections in men. MC has been shown to provide men with lifelong partial protection against HIV infection, as well as genital ulcers, syphilis, and penile cancer³ since the cutting of the foreskin reduces the receptive sites for HIV acquisition. It is clear that MC could have an immediate impact on HIV transmission, but the full impact on prevalence and deaths will only be apparent about ten to fifteen years later. Research has also shown that circumcision also reduces the risk of human papillomavirus (HPV), herpes simplex virus (HSV), and cancer⁴. Women indirectly benefit through the reduction in prevalence of HIV in their male partners. As more men become circumcised, women will be less likely to encounter men who are HIV-positive. MC has been shown to reduce urinary tract infections in infants and children, ulcerative STIs, HPV (which causes cervical cancer in women), and bacterial vaginosis and trichomonas in the female partners of circumcised men. It remains unclear whether VMMC could have a positive impact on HIV transmission via anal sex among gay men and other men who have sex with men⁷. Finally, although HIV-positive men may be able to be circumcised if their CD4 count is 350 or higher, MC does not lower their CD4 count or protect their partners from being infected.

Mathematical models demonstrated in 2009 that VMMC is cost-effective, with 5 to 15 circumcisions averting one HIV infection in high HIV prevalence settings. The cost per circumcision used is between US\$47 and US\$80. Epidemiological and economic modeling commissioned by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and UNAIDS in 2011 determined that scale up of VMMC in appropriate settings constitutes a high-impact intervention with excellent value for money.

3 Catherine Hankins et al., "Voluntary Medical Male Circumcision: An Introduction to the Cost, Impact, and Challenges of Accelerated Scaling Up," *PLoS Medicine* 8, No. 11 (2011), e1001127.
4 Ingrid T. Katz and Alexi A. Wright, "Circumcision—A Surgical Strategy for HIV Prevention in Africa," *The New England Journal of Medicine* 359 (2008), 2413.

Impact and costing estimates suggest that scaling up VMMC to reach 80% coverage among males 15 to 49 years old in the 13 priority countries plus Ethiopia by 2015 would entail performing 20.3 million circumcisions by 2015, and would avert 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 averted treatment and care costs) of US\$16.5 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.⁵

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 STIs⁷.

Global Policy Guidance

In 2007, WHO and UNAIDS recommended that MC be recognized as an additional, important strategy for the prevention of heterosexually acquired HIV infection in men, particularly in countries with hyper epidemics or generalized HIV epidemics and low MC prevalence⁸.

The WHO and UNAIDS *Joint Strategic Action Framework to Accelerate the Scale-Up of Voluntary Medical Male Circumcision for HIV Prevention in Eastern and Southern Africa, 2012–2016*⁹, published in 2011, presents a joint five-year framework for use by Ministries of Health and diverse country, regional, and global stakeholders to accelerate the scale up of VMMC in selected priority countries of Eastern and Southern Africa.

It guides key stakeholders to collaborate and coordinate efforts for promoting country ownership, expanding coverage of VMMC, and contribute to "getting to zero" new infections. The Joint Strategic Action Framework is consistent with, and aims to advance UNAIDS's 2011–2015 Strategy, WHO's Global Health Sector Strategy on HIV/AIDS 2011–2015, and PEPFAR's five-year strategy.

of prevalence, safety and acceptability," (Geneva: WHO Press, 2007), 8.
5 WHO and UNAIDS, "Joint Strategic Action Framework to Accelerate the Scale-Up of Voluntary Medical Male Circumcision for HIV Prevention in Eastern and Southern Africa 2012–2016," (UNAIDS, 2011), 7.
6 Ingrid T. Katz and Alexi A. Wright, "Circumcision—A Surgical Strategy for HIV Prevention in Africa," *The New England Journal of Medicine* 359 (2008), 2413.
7 Olalekan A. Uthman et al., "Economic Evaluations of Adult Male Circumcision for Prevention of Heterosexual Acquisition of HIV in Men in Sub-Saharan Africa: A Systematic Review," *PLoS ONE* 5, No. 3 (2010), e9628.
8 WHO/UNAIDS Technical Consultation on Male Circumcision and HIV Prevention: Research Implications for Policy and Programming (2007: Montreux, Switzerland) http://whqlibdoc.who.int/publications/2007/9789241595988_eng.pdf
9 http://www.who.int/hiv/pub/malecircumcision/op_guidance/en/index.html

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 “sustainability” phase (i.e., efforts to implement the routine provision of MC for infants and/or 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 for neonates, adolescents, and adults, and acts in synergy with other HIV prevention and reproductive health strategies to move towards zero new infections in countries with generalized epidemics where the prevalence of MC is low. Specifically, the Framework seeks to achieve the following goals: By 2016 countries with generalized 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.¹⁰

Regional Experience and Promising Practices

WHO and UNAIDS developed *Operational guidance for scaling up male circumcision services for HIV prevention*¹¹ in 2008 to support countries in the development of national programs. The ten essential components 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; commodity security; social change communication; and monitoring and evaluation.¹²

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 longer-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 did mention 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. All countries have coordination structures, but the effectiveness of their functioning differs.

The WHO and UNAIDS document, “*Progress in scale-up of male circumcision for HIV prevention in Eastern and Southern Africa: focus on service delivery*,”¹³ includes brief profiles of progress in the delivery of VMMC services for HIV prevention in priority countries, including descriptions of: service delivery strategies, service delivery statistics as of 2010, demand creation, achievements, and key challenges. The report also provides information on innovations that have been used to accelerate service delivery and on the means of sustaining it.

Another source of information on VMMC strategies, approaches, and programs is the WHO/UNAIDS meeting held in Tanzania in June 2010: “*Scaling-up male circumcision programs in the Eastern and Southern Africa Region, Country update meeting to share lessons, explore opportunities and overcome challenges to scale-up,*” 8-10 June 2010¹⁴. The meeting’s objectives were: to share country experiences and lessons learned in the scale-up of male circumcision programs; to examine the facilitating and constraining factors to implementation and to propose strategies to accelerate country scale-up; to provide opportunities for capacity building on the various tools and guidelines available to support implementation; to identify inter-country, regional, and global support actions required to strengthen scale up of male circumcision services; and to explore opportunities for South-to-South collaboration. Ten of the thirteen priority countries participated (Botswana, Kenya, Malawi, Namibia, Rwanda, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe). The meeting highlighted the good progress that has been made 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 Westercamp and Bailey survey.¹⁵ These researchers reviewed studies on the acceptability of MC in Sub-Saharan Africa to identify factors that influence uptake of circumcision in traditionally non-circumcising 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 promptly and safely according to international 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.¹⁶ In the ANRS 12126 “Bophelo Pele” project implemented in 2008 in the township of Orange Farm, South Africa, 14,011 men were circumcised, with a rate of approximately 740 circumcisions per month.¹⁷

14 http://www.who.int/hiv/pub/malecircumcision/meetingreport_mc_jun10/en/index.html

15 N. Westercamp and RC Bailey, “Acceptability of male circumcision for prevention of HIV/AIDS in sub-Saharan Africa: a review,” *AIDS Behavior* 11, No. 3 [2007], 341-55, (<http://www.ncbi.nlm.nih.gov/pubmed/17053855>)

16 WHO and UNAIDS, “Operational guidance for scaling up male circumcision services for HIV prevention,” (Library Cataloguing-in-Publication Data: WHO, 2008), 59.

17 Pascale Lissouba et al., “A model for the roll-out of comprehensive adult male circumcision services in African low-income settings of high HIV incidence: The ANRS 12126 Bophelo Pele Project,” *PLoS Medicine*, 7, No.7, (2010) e13.

10 WHO and UNAIDS, “Joint Strategic Action Framework to Accelerate the Scale-Up of Voluntary Male Medical Circumcision for HIV Prevention in Eastern and Southern Africa 2012-2016,” (UNAIDS, 2011), 10-11.

11 http://www.who.int/hiv/pub/malecircumcision/op_guidance/en/index.html

12 WHO and UNAIDS, “Progress in scale-up of male circumcision for HIV prevention in Eastern and Southern Africa: focus on service delivery,” (Geneva: WHO Press, 2011), 5.

13 http://www.who.int/hiv/pub/malecircumcision/mc_country_progress2011/en/index.html

Demand Creation for VMMC Scale Up

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.¹⁸ Media advertising on the radio and in newspapers in Kenya increased VMMC uptake by 7%.¹⁹ Community mobilization and outreach programs, as well as communication approaches that target both men and women within the context of broader HIV prevention strategies and sexual health programs are essential components of effective VMMC programs.²⁰

A study of factors affecting knowledge and awareness of VMMC for HIV prevention recommended that less educated people, women, and youth — as opposed to adults — should increasingly be targeted by information campaigns about the positive health effects of VMMC. This is because they are less likely to be aware of VMMC as a protective factor for HIV than those who are educated. However, in almost all countries, the focus was on adult men aged 18–49 years. Socioeconomic status or employment status, traditional MC rates, and even circumcision status were not a determinant of awareness of VMMC's HIV prevention properties. In addition, a number of sexually active men indicated that they would be willing to be circumcised if education resources detailing the benefits of the procedure were available. Programs were also effective in areas where VMMC was not traditionally performed due to cultural reasons. This was accomplished by reinforcing the health benefits in spite of the cultural taboos around VMMC.

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 VMMC, schools were targeted. In most programs, cultural factors were also taken into account, which affect 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.

Considerations for Program Implementation

Pre-procedure: Pamphlets and other information on VMMC are not being handed out in most SADC countries. Pre-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-procedure 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 WHO²¹ 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 appropriate, 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 VMMCs per day under local anesthesia. Equipment included sterilized circumcision disposable kits and electrocautery. The procedures were performed daily by three teams of one medical circumciser and five nurses.²² 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 being used by ten of the SADC countries.

For adults and adolescents, three surgical methods are recommended by WHO²³: the Guided Forceps, the Dorsal Slit, and Sleeve Resection method. For pediatric and neonatal circumcision, methods such as the Dorsal Slit, the Plastibell, the Mogen clamp, and the Gomco clamp were being used. The Tara Klamp had been used, but was found to be problematic.²⁴ The most successful and preferred method among men was the Guided Forceps. However, in the case of a high risk for bleeding, the Sleeve Resection method is used.²⁵

Countries or regions with sufficient training of medical doctors and nursing staff were successful in achieving a high number of VMMCs, such as Kenya, where training for 180 personnel, including 40 medical doctors, was provided. This training was scheduled to take one to two weeks. Training in effective programs included learning

18 Maximo O. Brito et al., "Acceptability of male circumcision for the prevention of HIV and AIDS in the Dominican Republic," *PLoS One* 4, No. 11 (2009), e6.

19 Tristan McConnell, "Kenyan circumcision drive starts to overcome cultural barriers," *Financial Times*, November 30, 2009.

20 Pascale Lissouba et al., "A model for the roll-out of comprehensive adult male circumcision services in African low-income settings of high HIV incidence: The ANRS 12126 Bophelo Pele Project," *PLoS Medicine*, 7, No.7, (2010) e13.

21 WHO, "Considerations for implementing models for optimizing the volume and efficiency of male circumcision services," (WHO Library Cataloguing-in-Publication Data: WHO, 2010), 53.

22 Pascale Lissouba et al., "A model for the roll-out of comprehensive adult male circumcision services in African low-income settings of high HIV incidence: The ANRS 12126 Bophelo Pele Project," *PLoS Medicine*, 7, No.7, (2010) e13.

23 WHO, (2008). Consultation on male circumcision and HIV prevention in the African region, 2–4 April, Brazzaville: Congo

24 WHO and UNAIDS, "Operational guidance for scaling up male circumcision services for HIV prevention," (Library Cataloguing-in-Publication Data: WHO, 2008), 59.

25 Plus News, "Africa male circumcision slowly taking off," (IRIN Humanitarian News and Analysis, 2009),

the new and improved VMMC techniques: the Guided Forceps, Sleeve Resection, Gomco, Plastibell, and the Mogen Clamp.²⁶ Two new non-surgical devices are being piloted, known as the Shang Ring and the PrePrex. Data on the use of these procedures will be available later this year.

Post-procedure: “Risk compensation” or “disinhibition” is a concern. Hardly any countries in the SADC region address this aspect in their post-operative counseling. Education and short- and long-term follow up is also limited in SADC countries. There is a lack of reinforcing the messages of ‘no sexual activity’ during the six-week period of healing, consistent condom use, reducing the number of sexual partners and multiple concurrent partners, and safe post-operation behavior. In addition, there are an inadequate number of counselors, nurses and medical doctors providing information on the above-mentioned aspects. Table 1 below presents an overview of VMMC programs in SADC countries and whether they are implementing effective practices in VMMC roll-out:

Challenges and Recommendations

While VMMC has shown to be effective in reducing the risk of HIV acquisition among males, the procedure does not completely reduce the risk of acquiring HIV. Evidence from Botswana, Lesotho, and Swaziland suggest that the effectiveness of VMMC in decreasing the potential risk of HIV transmission (see textbox below) depends on whether or not circumcised men choose to continue practicing safe sex, that is, reducing the number of sexual partners, and consistently and correctly 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 Acceptability of VMMC

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 behaviors). Other barriers and risks are: a lack of regular or no access to health care; expected time away from 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, it must be used 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.



Circumcision in progress © Edward Echwalu/IRIN

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 focused on increasing the correct and 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’s 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 performed circumcision counseling most of the time. Further clarity to participants on the VMMC procedure could be provided while the patient is at the VMMC site.

Social level: The social acceptability of VMMC remains a concern. As seen in Table 1 above, most countries do not gauge the acceptance levels for VMMC as part of demand creation. Only half of the counties indicated that acceptance levels for VMMC were high.

²⁶ David Patrick et al., “Integrating male circumcision (MC) into HIV prevention efforts: Our learning in Ethiopia, Kenya and Rwanda” (Centre for Disease Control and Canadian Institutes of Health Research, 2009).

Health concerns were listed as the major reason participants' favored circumcision of a male child or themselves.²⁷ Further, in many countries circumcision was viewed as a form of initiation into manhood. This presents a unique opportunity to promote VMMC as a health or cultural issue in the context of the scale up of VMMC.

Moreover, more diverse methods for demand creation of VMMC should be used. This includes community mobilization and outreach, advertising at community sites, approaching schools and providing SMS or other forms of service reminders to men and women. These methods have been used by effective VMMC programs. In addition to promoting VMMC at these sites, men's reasons for considering VMMC should be understood and clarified in pretest counseling.

Another challenge is to appropriately contextualize VMMC in the broader context of gender relations. VMMC is not directly beneficial to women and may not be seen as a priority for them. However, there are indirect benefits, such as reduced risk of exposure to HIV and other STIs. The saturation of VMMC for men would result in more women being less likely to come into contact with men who are HIV positive. There needs to be an increased emphasis on women and VMMC in country policy documents on HIV prevention.

Furthermore, its inclusion is crucial to curb sexual disinhibition. Sexual disinhibition occurs by men assuming they are more protected from HIV resulting in the adoption of unsafe sexual practices. This in turn places women at a greater risk for HIV. At a broader level, it may also have implications for sexual decision making, gender-based violence, and stigma for women as a result of the misperception of men that circumcision implies a permanently negative HIV status, or that they cannot transmit the virus. An emerging challenge for VMMC programs is to integrate VMMC into sexual and reproductive health services and offer gender transformative interventions to both men and women. These comprehensive services should also empower 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 issues are particularly relevant. 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 initiative for VMMC programs may be needed for both infants and men.²⁸

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 Guided 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 hygienic 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, availability of the procedure room, and more staff trained 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, initially by the United States and 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 ensure engagement 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 circumcision alongside traditional initiation practices into manhood.

A reliable and efficient system supply 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 communication strategies need to ensure that clear and consistent messages are disseminated, and sociocultural implications are taken into consideration in VMMC planning and programming. SADC countries should develop appropriate policy and legal frameworks, including clinical protocols, guidelines, and monitoring and evaluation mechanisms to ensure VMMC services are accessible, safe, and without discrimination.

There is also a need to identify resource requirements for VMMC, and identify simpler and safer methods to perform these practices, including the use of suture-less, blood-free procedures and devices. PrePex, a bloodless circumcision device for adults, will be tested in at least nine African countries in the next year, with funding from PEPFAR and the Gates Foundation. The device has been approved by the U.S. Food and Drug Administration, and WHO approval is expected soon.²⁹ The Shang Ring is another non-surgical VMMC device. Data on its use will be available at the end of 2012.³⁰

In the context of diminishing funding for HIV prevention activities in Africa, countries are being increasingly required to explore innovative funding mechanisms to scale up and sustain prevention programs, including VMMC. Sustainable financing is crucial to ensure the provision of safe male circumcision services. A limited number of countries are currently reviewing their financing strategies. For example in Uganda, 68% of HIV funding comes from donors, 20% from HIV-positive people and their families, while only 11% comes from the government, and 1% from the private sector. The Government of Uganda is planning to establish a US\$1 billion dollar HIV trust fund to finance local HIV programs. According to a working paper released in September 2012, "Justification for Increased and Sustainable Financing for HIV in Uganda", the fund will generate cash through levies on bank transactions and interest, air tickets, beer, soft drinks and cigarettes, as well taxes on goods and services traded within Uganda. Kenya's National AIDS Control

27 WHO and UNAIDS, "Operational guidance for scaling up male circumcision services for HIV prevention," (Library Cataloguing-in-Publication Data: WHO, 2008), 59.

28 Poloko Kebaabetswe et al., "Male circumcision: an acceptable strategy for HIV prevention in Botswana," *Journal of Sexually Transmitted Infections* 79, No. 3 (2003), e219.

29 Donald G. McNeil, Jr., "Africa: Nonsurgical Circumcision Device Will Be Tested to Help Curb AIDS," *The New York Times*, August 13, 2012. http://www.nytimes.com/2012/08/14/health/nonsurgical-circumcision-device-will-be-tested-to-help-curb-aids.html?_r=1

30 AVAC: Global Advocacy for HIV Prevention, "Voluntary medical male circumcision for HIV prevention (VMMC)," (AVAC, 2012), 1.



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Council has proposed similar measures, including a mobile phone tax and an air ticket tax. Zimbabwe's AIDS levy, a 3 percent tax on income raised over US\$20 million in 2010. While these initiatives are promising, they need to be premised on sound financial principals and a leadership that is disciplined and has good moral standing.

Regional Level

Five of the SADC countries National Strategic Plans (NSP) do not include VMMC. These include Angola, DRC, Madagascar (currently suspended from SADC), Mauritius and Seychelles. The other ten country plans that do include VMMC have limited information on the following: specific plans to commission research on VMMC; details on strategies for accessing men or on the procedure itself; targets for VMMC scale up, including estimated resource needs and detailed plans for monitoring and evaluation. In addition, NSPs in these countries do not provide information on post-procedure activities or include information on neonatal circumcision.

The pace of scaling up VMMC in the SADC region has to be accelerated to achieve the 80% coverage goal by 2015. Factors that have contributed to effective scale up to date include:

- Visible and strong national political leadership, commitment and advocacy, sustained over time and with diverse stakeholders.
- Effective coordination and collaboration among delivery partners, including government, donors, and civil society and nongovernmental partners. Practices in several countries have demonstrated that partners can align their interests and complementary skills with the national program to achieve program activities and objectives.
- Concerted effort to engage communities where scale up is underway. Sufficient and timely allocation of funds and commodities. The implementation of mixed service delivery approaches and efficiency measures have extended coverage and generated momentum.
- The provision of efficient pre- and post-counseling to patients has increased knowledge on correct procedures and post-procedures for VMMC.
- VMMC occurring at a minimum cost to patients has been effective in maximizing roll out.

Conclusion

The pace of scaling up VMMC differ among SADC counties 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, including the danger of unskilled practitioners trying to profit from the growing demand for male circumcision³¹. It should be noted that while VMMC is seen as an efficacious intervention for the prevention of heterosexually acquired HIV infections in men, there also needs to be a concerted effort to engage women in communities where VMMC scale-up is being undertaken.

31 Klausner et al (2008), Is circumcision as good as an HIV vaccine we've been waiting for. Future HIV Therapy 2(1), 1-7



Preparing a patient for circumcision in Uganda © Edward Echwalu/IRIN

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

Country	Demand Creation	Pre-Procedure	Procedure	Post Procedure
Angola	Acceptance levels determined	Procedure clearly provided	Minimum procedure time	Post-counseling provided
Botswana	High VMMC acceptance	Pre-counseling provided	Effective methods used	Counseling by clinicians & trained counselors
Democratic Republic of Congo	Social mobilization	Pre-counseling by clinicians and trained counselors	Focus on adults (18-49yrs)	Information pamphlets
Lesotho	Advertising at a community site	Risk compensation information included	Included neonates & prepubescent MMC	Social network services for information and reminders
Madagascar	Media advertising	Patients reasons for VMMC obtained	Hygienic methods	
Malawi	Approaching schools		MOVE method	
Mauritius	SMS service information & reminders		Sufficient infrastructure & staff	
Mozambique	Promoting VMMC as a health / cultural issue		VMMC occurring in hospitals	
Namibia			Minimum cost to patients	
Seychelles				
South Africa				
Swaziland				
United Republic of Tanzania				
Zambia				
Zimbabwe				

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