



Ministry of Health

Kenya VMMC Programme End Term Report 2007-2013



MoH – NASCOP Kenya

End–Term Review of Kenya’s Voluntary Medical Male Circumcision Program (2008–2013)

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Acronyms

AE	Adverse events
APHIAplus	AIDS, Population and Health Integrated Assistance
BMGF	Bill & Melinda Gates Foundation
CDC	Centers for Disease Control and Prevention (United States)
DAIDS	Division of AIDS (US National Institutes of Health)
EH	EngenderHealth
EIMC	Early infant male circumcision
GIS	Geographic information system
GoK	Government of Kenya
IRDO	Impact Research and Development Organization
KAIS	Kenya AIDS Indicator Survey
KNASP	Kenya National AIDS Strategic Plan
LCE	Luo Council of Elders
MC	Male circumcision
MCC	Male Circumcision Consortium
M&E	Monitoring and evaluation
MoH	Ministry of Health
NASCOP	National AIDS and STI Control Programme
NGO	Nongovernmental organization
NIH	National Institutes of Health (United States)
NRHS	Nyanza Reproductive Health Society
PASCO	Provincial AIDS/STI control officer
PEPFAR	President's Emergency Plan for AIDS Relief
PI	Principal investigator
PITC	Provider-initiated testing and counselling
QA/QI	Quality assurance/quality improvement
RCT	Randomized controlled trial
RRI	Rapid results initiative
STI	Sexually transmitted infection
UIC	University of Illinois at Chicago
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNIM	Universities of Nairobi, Illinois and Manitoba
USAID	United States Agency for International Development
UW	University of Washington
VMMC	Voluntary medical male circumcision
WHO	World Health Organization

Executive Summary

Voluntary medical male circumcision (VMMC) was endorsed by the World Health Organization (WHO) and the Joint United Nations Programme on HIV/AIDS (UNAIDS) in 2007 after the results from three randomized control trials demonstrated its efficacy in reducing men's risk of HIV acquisition through vaginal sex. VMMC was subsequently adopted by the Kenyan Ministry of Health (MoH) in 2008 as an additional HIV prevention intervention. Kenya's VMMC strategy for 2008–2013, was designed to meet the national target of circumcising approximately 860,000 boys and men ages 15 to 49 years by the end of 2013.

The first phase of the strategy involved rolling out the programme in regions with low prevalence of male circumcision (MC) and high HIV of prevalence. Logically, the programme began in the Nyanza region, which is predominantly inhabited by the non-circumcising Luo community and has the highest HIV prevalence in Kenya. The programme was then expanded to Nairobi, and parts of Rift Valley, Coast and Western region to enhance access in populations with a high proportion of uncircumcised men.

Since 2008 when VMMC for HIV prevention was rolled out in Kenya, the program has contributed significant public health benefits towards lowering the burden of new HIV infection. The Kenya AIDS Indicator Survey 2012 (KAIS 2012) report indicates that the HIV prevalence among uncircumcised men aged 15-64 years was at least five times greater than circumcised men. Moreover, about half of the men who were recently circumcised reported consistently using condoms in their last sex, suggesting that risk-compensating is minimal and that men who have been recently circumcised are heeding the prevention messages included in the VMMC package of circumcision services. Conversely, uncircumcised men were still having risky sexual behaviors, with only about a fifth using condom with their most recent partner of whom half did not know their sexual partner's HIV status. The majority of the men who were not circumcised were also HIV-negative which therefore means that accessing VMMC is critical for the prevention of HIV and to increase condom use.

Furthermore, mathematical modelling using the Decision Makers Program Planning Tool (DMPPT) shows that by targeting 80% VMMC coverage in Nyanza province between 2011-2015, about 6% of all new infections will have been reduced by 2011 and 16% by 2025. The model further shows that for every 36 circumcisions of men aged 15-49 in Nyanza, one HIV infection will have been averted by 2015. This means that for Nyanza where 474,983 circumcisions took place by December 2013, over 13,000 new HIV infections will have been averted by 2015.

This End-Term Report (ETR) documents the progress made in the implementation of the VMMC Strategy 2008–2013. Specifically, the report details the progress, approaches and lessons learnt from this first phase of the programme. Furthermore, the ETR makes recommendations that will inform prioritization of activities for the next phase of implementation.

The ETR is based on data review, content analysis of relevant VMMC reports and key-informant interviews. The content assessment exercise utilized qualitative data collection methods. It also involved a desk

review of documented guidelines, publications, reports, newsletters and media reports. Key informant interviews were conducted with various VMMC stakeholders including representatives from the MoH and implementing partners.

Overall, Kenya is considered a leader among countries in sub-Saharan Africa that adopted VMMC as an HIV prevention strategy. By the end of 2013, 792,931 male circumcisions had been performed. This total represents 92.2 percent of the programme's numerical goal for male circumcisions performed and 71 percent of its coverage goal for the primary target group of men ages 15-49 years. The Nyanza region registered an increase in MC prevalence from 45 percent in 2007 to 66 percent in 2012 (Kenya AIDS Indicator Survey 2012).

Innovative approaches in communication, service delivery, monitoring and evaluation, and human resource mobilization contributed to improvements in VMMC coverage and quality during the period under review. However, there is a need to further adjust and fast track the process of VMMC roll out, expanding geographical coverage and sustaining the momentum. For the next phase, realistic targets need to be set based on current population estimates and with a focus on individuals at the highest risk of HIV infection.

In this ETR we have noted several challenges that will require innovative solutions. The uptake of VMMC by men ages 25 years and older has been relatively low. The programme needs to develop communication and service delivery approaches to increase uptake in this age group. Successful efforts such as the quarterly rapid results initiatives (RRIs), which boosted the number of men circumcised, need to continue, and media campaigns should be strengthened to improve uptake of VMMC. To buttress uptake among groups that have demonstrated low demand, the potential for incentives — monetized or otherwise — should be evaluated. There is also a need to review the role of women in the VMMC process, to strengthen their support for spouses/partners abstaining from sex until complete healing and the practice of safe sex, especially in the post-circumcision healing period.

It is worth noting that opportunities to improve the scope of the VMMC programme abound. For example, it would be appropriate to define the next steps regarding early infant male circumcision (EIMC) given the favorable safety and uptake data from a pilot study conducted in Kisumu County. A phased introduction of EIMC, with initial service provision in the non-circumcising communities and operational research on acceptability in the traditionally circumcising communities, should be considered.

In the first phase of VMMC roll out, Kenya piloted the use of adult male circumcision devices (ShangRing and PrePex) with acceptable feasibility and safety results. In the next phase, the use of devices that have been prequalified by WHO should be considered. The integration of these devices into the method mix for VMMC may be enhanced with appropriate task shifting. In addition, deliberate efforts should be made to ensure that MC services in traditionally circumcising communities embrace safer surgical practices as well as HIV prevention messaging and counseling and testing.

The MoH needs to expand options for financing VMMC over the long term. As part of this effort, advocacy for increased allocation of domestic resources, including the potential for an AIDS trust fund, should be accelerated. Equally important is encouraging communities to begin to take ownership of VMMC and make financial contributions to the scale up of VMMC.



CHAPTER 1

Introduction

In March 2007, WHO/UNAIDS endorsed medical male circumcision as an additional HIV prevention intervention following review of three landmark studies conducted in South Africa, Kenya and Uganda confirming that male circumcision reduces a man's risk of acquiring HIV infection through vaginal intercourse by up to 60 percent. In Kenya, the government and its development partners, together with key stakeholders, moved quickly to translate these research findings into practice. This took careful consideration of the political, cultural and logistical challenges of scaling up VMMC services. By the end of December 2010 more than 230,000 men and boys in Nyanza Region alone had been circumcised through a government-led programme designed to increase access to safe and voluntary MC services offered by well-trained health care providers.

This report describes the progress and the experiences from the first five years of VMMC roll out. It documents the achievements, challenges and lessons of this initiative from its inception in October 2008 to the end of 2013. It also outlines recommendations for the next phase of the VMMC strategy. The report is divided into the following sections.

- i) Section 1 outlines Kenya's strategy on VMMC for HIV prevention and provides the background on how the government and its partners planned to implement the strategy.
- ii) Section 2 describes the materials and methods for the end-term review process.
- iii) Section 3 provides detailed findings, achievements, lessons learnt and recommendations from each of the following thematic areas that were covered during the implementation of the strategy:
 - Management and coordination
 - Service delivery
 - Communication and advocacy
 - Leadership and partnerships
 - Human resources
 - Financing
 - Commodities
 - Monitoring and evaluation, including operations research
 - Quality assurance
- iv) Section 4 presents the summary of conclusions and recommendations for strengthening the programme based on research findings and lessons learnt.

1.1 Situation Analysis of the Kenya National Strategy for Vmmc 2008–2013

1.1.1 VMMC Program Context

Kenya is one of the few countries that quickly developed a policy and other programmatic documents to translate research evidence on medical male circumcision into practice. The Kenya VMMC programme was launched in November 2008 following the publication of the National Guidance for Voluntary Male Circumcision in Kenya policy document, and later by the Kenya National Strategy for Voluntary Medical Male Circumcision. These documents guided the implementation of the WHO/UNAIDS recommendations on male circumcision.

The Kenya national strategy outlined three overlapping implementation phases:

The first phase (2008–2013) targeted boys and men ages 15–49 from traditionally non-circumcising communities with the aim of increasing national MC prevalence from 84 percent to 94 percent. This translated to a target of 860,000 men circumcised, based on a projected demand of 80 percent and the Kenya AIDS Indicator Survey (KAIS) 2007 estimates, which showed that there were 1.2 million uncircumcised men ages 15–49. The second phase was to target the traditionally male circumcising communities to enhance the safety of traditional circumcision procedures by incorporating the minimum package of HIV prevention services, and the third phase was to offer universal male circumcision to infants. The phases were to be implemented in an overlapping fashion.

The implementation framework of the national strategy was organized in nine critical areas, as follows:

- Management and coordination
- Service delivery
- Communication and advocacy
- Leadership and partnerships
- Human resources
- Financing
- Commodities
- Monitoring and evaluation, including operations research
- Quality assurance

Progress on achievement of targets

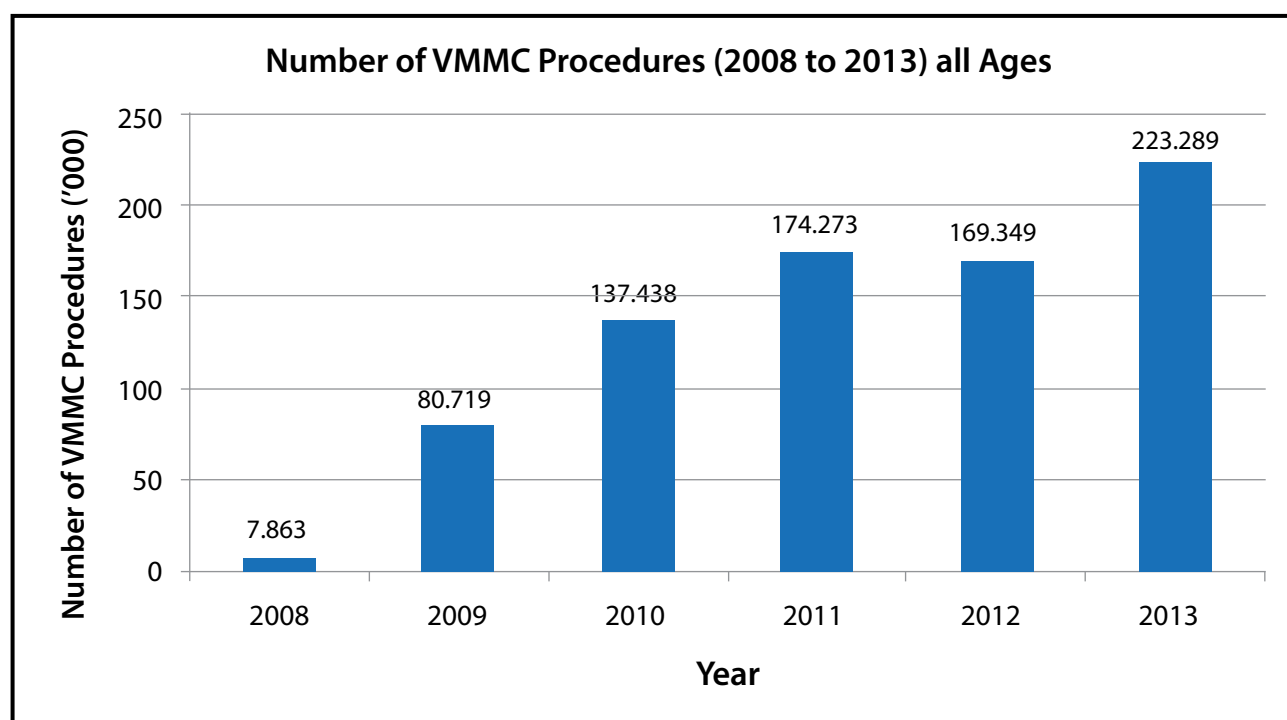
Coverage: The primary goal of the national programme was to expand coverage from 84 percent to 94 percent of men circumcised during the course of the VMMC strategy. Based on the 2012 Kenya AIDS Indicator Survey, national MC coverage increased to 91 percent. The Nyanza region registered the largest increase in MC prevalence, from 45 percent in 2007 to 66 percent in 2012. The VMMC programme therefore achieved two-thirds of its goal, although this coverage belied regional differences. The main reason for this sub-optimal coverage is the low rate of scale up in regions other than Nyanza, a consideration that should form part of the focus of the next phase of the VMMC strategy.

Number of men circumcised: The secondary target of the programme was to meet 80 percent of the estimated demand among men ages 15-49. This translated to performing 860,000 circumcisions over the five year period. By December 2011, the Kenya National VMMC Programme had performed approximately

300,000 male circumcisions, according to programme reports, and was viewed as the most successful programme among VMMC priority countries. By the end of 2013, the cumulative number of MCs was 792,931, of which 609,314 were in men ages 15-49, representing achievement of 71 percent the national target and additionally covering 183,617 boys aged 10 – 14 years. Overall, targets were achieved in Nyanza, but other regions did not reach their goals.

In order to sustain momentum and set realistic targets for the next phase, there is need to fully understand the factors that influenced the uptake of MC and other lessons necessary to achieve the full package of VMMC services for the first phase of VMMC programme implementation.

Figures 1, 2 and 3: Numbers of VMMC procedures by year, region and age (2008-2013)



Limitations and Interpretations of the above data:

- i. The National Strategy for VMMC 2009 set targets according to Kenya Government financial years from 2009/10 to 2012/13 (July 2009 – June 2013), whereas this report used data from October 2008-December 2013
- ii. It is possible that in some areas such as Siaya and Nairobi, due to the high quality of VMMC services and being free, neighbouring men/adolescents from traditionally circumcising communities received services and were counted, thus overestimating achievements as they were not part of the initial programmatic target
- iii. The VMMC targeting did not take into account the population growth and changing structure over the strategy period, and this lead to underestimating the true target
- iv. It was challenging to verify the age of boys under 15 years, and therefore to avoid incorrect self reporting of their ages, boys 10 – 14 years were included into the target group. These boys were extremely motivated and unwilling to postpone the time for VMMC and had parental consent.

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- v. It is for the above reasons that although over 92% of the initial 860,000 target was met with the aim of achieving 94% national coverage, KAIS 2012 showed a coverage of only 91% which was lower than expected.

The main funding sources for the Kenya VMMC program were the Presidents Emergency Fund for AIDS Relief (PEPFAR), Bill and Melinda Gates Foundation (BMGF) through FHI 360, Global Fund (GF) and World Bank (WB). PEPFAR for instance contributed \$62M mainly for program implementation including direct service provision and renovation of minor theatres, supplies and equipment, and technical support. BMGF supported program coordination and technical support, while both GF and WB was for program implementation. NASCOP and the Ministry of Health were the overall coordinators for the program, provided technical support, political support, staff for circumcision and the excellent political environment necessary for VMMC implementation.

1.1.2 Purpose of the ETR Report

This End-Term Review (ETR) report seeks to inform the second Kenya National Strategy for Voluntary Medical Male Circumcision, which will guide the country's ongoing roll out of VMMC from 2014 to 2019. The preparation of VMMC ETR was led by NASCOP with input from the National AIDS Control Council (NACC), CDC, USAID, MCC, WHO and PEPFAR implementing partners.

CHAPTER 2

Methods

We used the following approaches to gather information during this program review:

- a. Reviewed the Kenya National Strategy for Voluntary Medical Male Circumcision and other relevant VMMC programme documents, publications and plans. The purpose was to understand the contextual environment, the planned activities and their rationale. The documents reviewed include:
 1. Kenya National Strategy for Voluntary Male Medical Circumcision
 2. VMMC national communication guidelines
 3. National Guidance on Voluntary Medical Male Circumcision
 4. VMMC monitoring and evaluation guidelines and tools
 5. National task force meeting reports and minutes
- b. Reviewed research publications, assessment reports, programme reports, meeting/conference materials, newsletters, and document repositories at the local and global levels to identify what has been implemented and emerging issues. Most of the publications had research findings from studies that were conducted in the Nyanza region. Other documents that provided useful information included the quarterly provincial newsletters on the VMMC programme (Nyanza region) and UNAIDS reports.
- c. Conducted interviews with various stakeholders involved in the VMMC process. Key informants from the MOH, USG agencies, personnel from FHI 360, the Nyanza Reproductive Health Society (NRHS), and IRDO (See annexes II and III for interview questions and a list of people interviewed, respectively).

Two consultative meetings of a technical committee of the national VMMC task force were also convened to review and revise the document with up-to-date information.

CHAPTER 3

Findings on Implementation of Components of the VMMC Strategy

3.1 Management and Coordination

The Kenya national strategy for VMMC provided the framework for operationalizing the National Guidance for VMMC in Kenya, which was a critical component of the Kenya National HIV/ AIDS strategic Plan (KNASP) III (2009-2013). It provided the anchorage within which the goal of VMMC was to be achieved with various stakeholders playing different but complementary roles.

Coordination efforts were led by the MoH through NASCOP, which created a multi-sectoral task force in 2007 to provide oversight and policy direction on VMMC in Kenya. Through this task force, the National Guidance for Voluntary Medical Male Circumcision in Kenya was developed and adopted in 2008. Subsequently, the task force mandate changed to that of providing oversight for the rollout of VMMC services. Secretariat support for the national and Nyanza provincial/regional VMMC task force operations throughout Phase I was provided by FHI 360 through the BMGF-funded Male Circumcision Consortium. MCC started supporting coordination before the official program launch. Besides supporting coordination at national level, MCC also funded operational research to guide VMMC program roll out (see annex III). Support for national coordination was extended to provincial and district levels through formation of the provincial task force in Nyanza region in July 2008 and Nairobi region in 2010; and district steering committees in districts implementing VMMC since May 2009 to coordinate district-level activities. By the end of 2013, the Nyanza provincial task force and district steering committees had been transitioned into Inter – County task force, county task forces and sub county steering committees respectively, as per the new constitutional dispensation.

MCC's mandate was extended from five to seven years, expiring in August 2014. The rapidly changing VMMC landscape in Kenya, including devolution and phased introduction of MC devices and EIMC, will require sustained investment in coordination and operational research through continuation of functions performed by MCC during Phase I. Functions previously performed by MCC may be transitioned wholly or partially to the central or devolved governments or both. Alternatively, an MCC-like group could continue to support VMMC to give time for the new devolved structures to establish and assume greater responsibility for coordination progressively. National coordination under the devolved structures of government also comes with unique challenges that may benefit from support from a MCC-like organization. Greater involvement of VMMC stakeholders (PEPFAR and WHO) in the conceptualization of a new MCC-like coordinating body will be critical in ensuring that there is no duplication of effort.

Achievements

A major feature of Kenya's VMMC program success was the leadership by the MoH through NASCOP. A policy, strategy and operational plan, as well as a number of guideline documents and tools, were

published to guide the rollout of the program. As a result, rollout of VMMC in Kenya was undertaken. Day-to-day management of VMMC service delivery was the responsibility of district health management teams (DHMTs) with support from PEPFAR implementing partners in the respective districts and the provincial health management teams (PHMTs). As a result, a sense of program ownership by the district health authorities grew progressively. For example, in Teso District, MoH initiated VMMC services and incorporated its components into overall MoH plans through seed funds from World Bank. The provision of services in the district has been maintained through support from PEPFAR. Kenya adopted a new constitution in 2010 which has changed the governance and service delivery structures with creation of 47 counties. Implementation of necessary structural changes for health management at national and county level is in progress in accordance with the new constitution

Challenges

- There was a delay in cascading the establishment of coordination structures such as the task forces from national to the district level.
- District level ownership of VMMC implementation grew slowly in some districts with failure to incorporate activities into the annual work plans (AWPs).
- VMMC was seen as a region specific programme primarily for Nyanza despite the current scope covering other regions including Nairobi, Western and North Rift Valley.
- Coordination of implementing partners at national, provincial and district levels was often challenging given that the partners work on the basis of a contractual agreement with their funders and not necessarily with the MoH. Specifically, the MoH did not particularly control allocation of MC targets and regions and did not have timely access to data from the implementing partners.

Lessons learnt

- Effective coordination enabled the programme to apply uniform standards of quality across implementing partners and regions and to quickly deal with initial cultural and political sensitivities.
- Engagement of the respective DHMTs in coordination resulted in ownership of the VMMC programme at local levels thereby improving prospects for sustainability.

Recommendations

- Change the VMMC task force to a technical working group in order to reflect the long-term nature of the VMMC programme.
- Institute periodic consultations on VMMC implementation with a wide range of stakeholders including professional associations, church leadership, Ministry of Education and Labor officials, and the private sector, amongst others.
- Transform the existing provincial coordination structures for VMMC to align them to the new constitution and specifically to the respective county and sub-county administrative mechanisms.
- Scale up VMMC to traditionally circumcising communities focusing on prevention messaging and surgical safety for MC in cultural or non-medical contexts.
- Facilitate all counties to integrate VMMC into health sector component of their integrated development plans and AWPs.
- Provide strategic leadership during the life of the second VMMC strategic plan and identify focal persons responsible for coordination at national and county levels.

3.2 Service Delivery

According to the Kenya National Strategy for Voluntary Medical Male Circumcision (2008-2013), VMMC was to be delivered through various agencies, including the MoH working closely with implementing partners. During the period under review, MC was to be offered as an integral part of a minimum package of HIV prevention services which included:

- Counseling on risk reduction and safe sex
- HIV testing and counseling
- Active exclusion of symptomatic STIs and syndromic treatment
- Promotion and provision of condoms
- Male circumcision procedure performed as described in the Clinical Manual for Male Circumcision under Local Anesthesia
- Linkage and referrals to care and treatment services for persons with HIV

Achievements

In order to promote service uptake, the service providers came up with innovative approaches that might have contributed to the successes observed. Due to inadequate infrastructure and to improve access to VMMC, the following models of service delivery were adopted:

- **Static services** were offered at public and private health facilities with the capacity and space to offer MC services on demand. Most did so with support from teams deployed by the VMMC partners.
- **Outreach services** were provided by partner teams on specific days at health facilities that did not have the capacity to offer the services on their own.
- **Mobile services** utilized teams to bring VMMC services to remote communities depending on need and included setting up surgical theatres in dispensaries, school classrooms, chiefs' offices and even large banquet tents.
- **Moon light services** were offered at night to reach clients who could not attend during the day.

VMMC service delivery teams

The VMMC service delivery teams consisted of:

- Surgeon (Any of these cadres - medical officer, clinical officer, nurse)
- Assistant surgeon (Any of these cadres - medical officer, clinical officer, nurse)
- Behavioral counselor (Any of these cadres - nurse, lay counselor)
- Infection prevention officer

In light of data showing that nurses could perform circumcisions safely and due to shortages of medical and clinical officers, nurses were trained to perform MCs in a task shifting strategy. This innovation contributed to the success of the programme without compromising on quality of services. Staff from the VMMC programme were versatile and could be available to provide primary health care services such as immunizations, whenever MC client volumes were low.

As shown in Table 1 below, various activities (including training) were undertaken to support the improvement in service delivery.

Table 1: Activities initiated to improve VMMC service delivery (by December 2013)

Activity	Indicator	Institutions involved	Comments/ recommendations
Training of providers to offer safe MC services	3,159 surgeons, surgical assistants, counselors and infection prevention officers trained of which more than 1,725 providers were from Nyanza region	NASCOP, implementing partners (NRHS, IRDO, FACES, EDARP, CMMB, APHIA II, APHIA+, ICAP, WRP)	Continued training of more health care providers to offer safe VMMC beyond the currently covered regions and Integration of VMMC training in pre-service curricula
Innovation	<p>Innovative models of service delivery adopted:</p> <ul style="list-style-type: none"> • Static • Outreach • Mobile • Moon light <p>Model of optimizing volume and efficiency (MOVE) Task shifting especially to nurses Rapid Results Initiatives (RRIs)</p>	<p>NASCOP, MoH, Implementing partners (NRHS, IRDO, FACES, EDARP, CMMB, ICAP, WRP, APHIA II, APHIA+), donors</p> <p>For RRIs: IRDO, APHIA II, CMMB, and NRHS in 2009 and 2010 and all implementing partners in subsequent years</p>	<p>Innovative mechanisms for VMMC delivery and improvement in VMMC uptake should be continued</p> <p>Use of incentives should be explored for men above 25 years</p> <p>The role of non-surgical devices should be defined urgently</p> <p>Further task shifting with the use of devices may be an option</p> <p>Institutionalize RRIs with planned accelerated periods for program implementations, i.e. accelerated scale earmarked for all school holiday periods and interministerial communication from Ministry of Health to Ministry of Education done</p>
Infrastructure support to health facilities	575 health facilities accessible for VMMC in Nyanza, Western, Rift Valley & Nairobi regions and other regions	Implementing partners (NRHS, IRDO, FACES, EDARP, CMMB, APHIA II, APHIA+, ICAP, WRP), NASCOP, MoH	<p>The number can be increased further to the dispensaries and nongovernmental health facilities including private and mission health facilities</p> <p>Newly established facilities should be also be capacitated to provide VMMC</p> <p>Develop regional centers of excellence</p>

Lessons

- Task shifting helped the programme address the challenge of staff shortages and increase the number of men circumcised. However, human resource capacity remains limited, and more staff need to be trained, with particular emphasis on more efficient techniques.
- Access to VMMC services was improved by increasing the service delivery modalities, such as through outreach and moonlight services. To improve access even more, services should be expanded to additional facilities (e.g., dispensaries.)
- Innovative approaches and techniques should be standardized and incorporated into the programme. For example, a pilot study of PrePex in routine services conducted by MCC and NASCOP in 2013 showed favorable safety and acceptability data and found that clients reported experiencing less pain compared to those who received the standard MC surgical procedure. This device, which is easy to use and does not require injectable anaesthesia, could be considered for VMMC roll out during Phase II. With the use of PrePex, further task shifting to lower cadres of health worker, such as community workers, may be possible and should be considered.
- VMMC is still not considered an integral part of primary health care provision. Some MoH providers consider VMMC a separate initiative, unlike other HIV prevention services such as HIV testing and counselling that have been well integrated. Incorporating VMMC as a routine medical service available in health facilities and not as a special procedure will be vital.
- Best practices for service delivery models must be documented by implementing partners for possible adoption and scale-up. Although a number of approaches implemented in Phase I could be termed, the documentation needed to guide scale-up is lacking.

Recommendations

- Accelerated campaigns for VMMC including RRI should continue during Phase II and their contribution to target achievement monitored with the objective of making timely adjustments to avoid inefficiencies.
- Integrate VMMC as a routine medical intervention which is an integral part of health care provision.
- Engage traditionally circumcising communities to improve safety and integrate the other package of services beyond safe surgery in MC done in their local context.
- Continue to use mixed service delivery models (fixed, outreach and mobile) including additional innovations such as moonlight VMMC where appropriate.
- Recognize the potential introduction of devices for VMMC, and how these will alter procedures (i.e., faster procedures, reduced client pain, change in human resources needs, waste management requirements, potential greater client demand etc.). This should be expedited to avoid unnecessary lag between devices approval by normative agencies to actual availability to MC clients.
- During the next window of national clinical guidelines manual review, update the male circumcision component to include the full package of services as recommended by WHO
- Build capacity of private health care service outlets to provide VMMC to cater for males willing to pay for the procedure, and establish indicators that are easily reported for these private providers.
- Advocate for inclusion of VMMC to be covered in all health insurance schemes

- County government should make budgetary provisions for male circumcision activities both in all counties in Kenya either for scale or improve safety

3.3 Communication and Advocacy

A national communication strategy to guide the communication and advocacy for the VMMC programme was developed in 2009. The five-year strategy defined the framework and guiding principles aimed at raising awareness and creating and maintaining demand for VMMC within a comprehensive HIV risk-reduction framework. The specific objectives were to:

- Increase the level of awareness of medical MC as a safe and voluntary HIV prevention strategy
- Promote VMMC as part of a comprehensive HIV prevention strategy
- Create and maintain demand for a comprehensive package of HIV-prevention services including VMMC
- Improve the attitudes and communication skills of health workers and others in the health sector to enhance delivery of high-quality VMMC services.
- Improve advocacy among community and opinion leaders, amongst other community gate keepers.

Medical male circumcision for HIV prevention was identified as the key campaign message and different regions adapted the national strategy to their local context. Nyanza developed a regional communication strategy that took into account the local cultural and social factors affecting uptake of VMMC.

Achievements

The strategies and activities most commonly used to convey VMMC messages are shown in Table 2.

Table 2: VMMC communication achievements and tools used to deliver VMMC messages

Strategy	Activity
Advocacy and Stakeholder participation	<ul style="list-style-type: none"> • Community engagement initiated in April 2007 • Involvement of the Luo Council of Elders • Engagement of various stakeholders and community gatekeepers: political leaders from Luo Nyanza, including the prime minister and local members of Parliament endorsed the programme • Others involved include religious organizations and community-based organizations
Communication guidelines	<ul style="list-style-type: none"> • Communication guide/strategy; Nyanza communication guide - 2011 • Developed the logo and branding for VMMC in 2009/2010 • IEC materials developed and in use by March 2010

<p>Communication/ demand creation approaches</p>	<p><u>Mass Media</u></p> <ul style="list-style-type: none"> • Radio spots and talk shows (e.g., Ramogi radio, a local Dholuo radio station, created programs for the Luo population) • Road shows • Media briefings on RRI and other programme highlights, to disseminate results and successes in VMMC • Use of assorted information, education and communication materials, including brochures, fliers, posters, banners and T-shirts with VMMC messages • Health talks to organized groups • In Nyanza, a periodic newsletter provided updates on the progress of the programme <p><u>Out of Home Media</u></p> <ul style="list-style-type: none"> • Construction of boda boda sheds in Kisumu West district with VMMC signage • VMMC signage for all facilities offering VMMC <p><u>Interpersonal Communication</u></p> <ul style="list-style-type: none"> • Training and working with the communities' own resource persons (community mobilisers) • Use of one-on-one mobilisation through peer-to-peer mobilisation approaches • Female champions who motivated their female counterparts to mobilise their partners to go for VMMC • Workplace strategies through identified workplace motivators • Development of an issues management guide and, in Nyanza, crisis communication procedures
<p>Media engagement</p>	<ul style="list-style-type: none"> • Training of over 80 journalists and radio presenters on reporting VMMC in the context of HIV • Regularly briefing and updating the media on the progress of the VMMC programme • Training of more than 20 spokespersons/VMMC programme managers on communicating with the media

Lessons

- **Engagement of multiple stakeholders is critical for the success of a programme.** The VMMC task forces engaged various key stakeholders including policy makers, politicians and journalists. Others were community gatekeepers such as the Luo Council of Elders. The success of the Nyanza programme may be partially attributed to comprehensive stakeholder involvement. However, it should be noted that the initial introduction of the programme in Turkana in 2011 encountered resistance from the community due to lack of adequate stakeholder involvement.
- **Engaging journalists from onset of programmes and constant follow ups is critical in creating a supportive environment.** Media is an accessible and trusted channel of communication for most Kenyans. Proactive engagement of journalists ensured accurate coverage in the media. PEPFAR conducted a case study to document the successful media engagement experience in Kenya.
- **Partnership amongst government and partners is essential to ensure coordinated approaches.** The task forces created a forum for partners to coordinate their efforts; for instance, the development

of IEC was done centrally and adapted at regional levels.

- **Demand creation and communication is a critical component of the programme.** The number of clients rose significantly during Rapid Results Initiatives (RRI) due to intensified communication campaigns.

Recommendations

- **Tracking implementation of the communication strategy:** There is need to spell out clear targets and tracking mechanisms in the communication strategy. Communication guidelines and communication tool kits require continuous attention, especially as new developments such as new devices and EIMC are integrated into the programme.
- **Media and stakeholder engagement and capacity building:** Continued engagement and capacity building with the media, stakeholders and community and political leaders is important, especially at the county levels. In the new strategy, advocacy messages should be tailored to the different county stakeholders.
- **Media monitoring and crisis communications:** Continuous monitoring of the information environment and issues/crisis communication management is essential. Ongoing monitoring of the media coverage should continue given the sensitive nature of foreskin removal. Inaccuracies can be corrected to promote accurate and well-balanced reporting. Additionally, the national programme should strengthen mechanisms for quick responses to inaccurate information or crises.
- **Targeted messaging:** The revised VMMC strategy needs to reemphasize the importance of localized, region specific and culturally sensitive messaging for demand creation to engage all segments of the population, including women.
- **Women:** The revised VMMC strategy needs to provide specific guidance about best practices for engaging women and should prioritize strategies to better harness women's contribution to demand creation. The revised strategy should recommend more research to explore messaging for demand creation with women at its focus.
- **Managing communication for Serious Adverse events:** Serious adverse events need to be managed well, including using appropriate standard procedures in communication to mitigate potential back lash by the community. The revised VMMC strategy should include a section on communication management for serious VMMC adverse events
- **Traditionally circumcising communities:** Demand creation for VMMC in traditionally-circumcising communities will need to be different than demand creation in non-circumcising communities. This is because the eligible population could be smaller and more geographically dispersed. The new strategy should promote innovative demand creation strategies to engage these communities and increase uptake (i.e., engaging traditional circumcisers, highlighting safety aspects while maintaining cultural traditions, etc.).

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- **Grassroots-level:** National awareness of VMMC is varied in different regions in Kenya and uptake of service is challenging. The revised VMMC strategy should focus on linking awareness to service uptake and encourage grassroots-level campaigns that target different populations using innovative interpersonal communication strategies.
 - **Financing of demand creation activities:** The activities identified by most partners were not actualized due to limitation of funds. During the intensive RRI campaigns, funds are available and these activities contribute to increased numbers. However, there is need to keep the communication campaigns to some degree through the year.
 - **Evidence based planning:** There is need to understand the determinants of the behaviour particular among men ages 25+ in order to properly target and serve them. They have not been as quick to adopt the practice as younger men have; behavioral research needs to be funded and conducted to inform the development of strategies.
 - **Standardization of IEC materials and tools:** There is need for a structured clearinghouse probably at the level of the MoH's division of health promotion to review and approve IEC materials and tools for VMMC.
 - **Structured documentation of best practices and lessons learnt:** The programme implementers need to document the various innovative approaches that can be scaled up to improve efficiency of the VMMC programme.

3.4 Leadership and Partnerships

The Ministry of Health, through NASCOP, provided the necessary leadership for VMMC implementation during Phase I. The leadership at the national level was cascaded and replicated at the then provincial and district levels. This attribute coupled with focal persons at the national and provincial level is cited as a major contributory factor for VMMC success.

The VMMC programme also benefited from effective partnerships. A number of partners including donors, CDC, USAID and PEPFAR implementing partners, MCC, World Bank and UN agencies (WHO, UNICEF, UNAIDS) partnered with the government to support VMMC program oversight and implementation. The clear division of labour contributed synergistically towards the goals of the programme.

Achievements

Government leadership was clearly visible through the executive arm of government, with the Head of State, Prime Minister and Minister of Health all supporting program roll out. Leaders made a number of important pronouncement urging adoption of VMMC for HIV prevention. NACC and NASCOP led the national VMMC programme coordination. At regional and district levels, the provincial and district management teams provided leadership in the implementation of VMMC services with support of implementing partners. Community leadership was also prominent through active involvement of councils of elders from the Teso and Luo communities as well as religious establishments. They helped in advocating for VMMC as a HIV prevention strategy.

Kenya's VMMC programme has enjoyed a rich partnership encompassing government, academia, development partners, civil society and the private sector. Through this partnership, the programme was developed in record time of less than a year between 2007 and 2008. Implementation was progressively expanded to cover all identified non-circumcising communities by 2011 through allocating specific implementing partners to various regions with specific targets. Kenya also collaborated with other countries in the region to learn from them and to share country level innovations/successes through regional and global coordination setups such as WHO mechanisms.

Lessons

The following lessons were learned in leadership and partnership:

- Strong government leadership influenced acceptance of VMMC as a HIV prevention strategy despite earlier sensitivities by traditionally non-circumcising communities
- Collaboration between implementing partners assisted in progressive scale-up of VMMC to all targeted regions
- Cultural sensitivities on male circumcision still persist to the extent that some traditionally non-circumcising communities often do not readily accept encouragement to embrace VMMC
- Implementing partners work on the basis of contractual agreements with their funders and not necessarily MoH, and as such, accountability to the MoH was not always clear

Recommendations

- The new devolved structure of governance which includes 47 semi-autonomous counties provides a good opportunity for entrenching VMMC as an integral component of devolved health services once the county authorities buy in. County authorities will play a particularly important role in extending the VMMC programme to circumcising communities on the premise that medical male circumcision will optimize HIV prevention benefits over traditional male circumcision which does not include the full package of VMMC services. Strong leadership for this additional strategy will be required.
- There is also need to transition from the strategy that primarily depends on USG implementing partners to scale up VMMC to that which utilizes government resources and to integrate VMMC within overall health activities, hence ensuring sustainability of the VMMC programme.
- Strengthen VMMC leadership in counties and sub counties, including facilitating full integration of VMMC into county health plans
- Guide partners to work through county plans and align their performance based on county plans for performance assessment
- Engage community leaders in circumcising communities to champion implementation of VMMC

3.5 Human Resources

At the start of scale up, there were few trained MC providers available nationally. It was therefore necessary to establish a cadre of personnel with competencies in surgical removal of the foreskin. Additional competencies required included HIV testing and counselling, infection prevention and treatment of sexually transmitted infections. Given the urgency of implementation, in-service training was prioritized over pre-service training. Several strategic decisions were made that influenced scale up. First, Kenya trained nurses as MC surgeons and enabled task shifting to occur. Secondly, VMMC service delivery was considered a team effort that included a surgeon, assistant surgeon, a behavioural counselor and an

infection control officer, all comprising a unit. Third, a centre of excellence was established to facilitate training and mentorship.

Lessons

- Despite the trainings and human resource mobilization already undertaken, the number of service providers is still insufficient to meet the projected demand for services and to cover for attrition.
- The forceps guided method, as recommended in the WHO Clinical Manual for Male Circumcision under Local Anesthesia, was the primary method used in training

Recommendations

- Initiate pre-service training in VMMC through partnerships with middle level medical colleges and medical schools
- Further task shifting to reduce the reliance of nurses and clinical officers, especially as non-surgical devices become available
- Training should be expanded to encompass other surgical procedures such dorsal slit, sleeve resection, EIMC procedures and using adult devices so as to achieve high quality service delivery, decrease adverse events and improve efficiency

3.6 Financing

Implementation of the VMMC programme has heavily relied on donor support. USG was the main funder of VMMC implementation through its implementing partners at national, provincial and district levels. This financing climate is reflective of the broader development assistance for health in Kenya. Through this arrangement, USG provided both technical and financial support for VMMC rollout. Bill & Melinda Gates Foundation, through MCC, mainly supported coordination, media and communications, operations research, and surveillance. The UN provided technical support and World Bank provided time-limited support for program start up in some regions.

GoK has been the main provider of physical infrastructure and staff salaries of MoH employees engaged in VMMC implementation. PEPFAR's funding is assigned to both NASCOP for coordination and management and to VMMC implementing partner organizations to conduct VMMC service delivery. The fact that development partners account for most of the funds should be a major concern as it raises concerns over sustainability.

Achievement

The main achievement is that necessary funding to achieve targets as per the VMMC strategy was made available. Where targets were not reached, implementation delays or lower than expected demand of services by potential VMMC clients were more to blame than lack of funding. Furthermore, programme funding was flexible and could be availed depending on needs. Funding made available was fully aligned to the VMMC strategy. The available funding supported VMMC policies, guidelines and service delivery; programme management and coordination; service provider capacity building; procurement/supply of commodities and equipment; and community mobilization and demand creation. However no deliberate effort was made to engage the communities to contribute towards financing through their own resources or through fee-for-service approaches. Still, advocacy in ensuring MC was part of the benefits package for the National Hospital Insurance Fund (NHIF) was limited.

Lessons

- Availability of required funds and its full alignment to the VMMC strategy enabled VMMC implementation to be rapid.
- Despite initial implementation delays, overall implementation rate since 2009 has been in line or faster than was anticipated in the strategy. Absorptive capacity on funds made available has been relatively good.
- Over-reliance on external funding presents a sustainability challenge for the long term continuation of VMMC implementation in traditionally non-circumcising communities.
- Advocacy for government funding has been low; as a result, government did not feel obliged to commit some of its resources towards VMMC except for the implicit funding provided towards health infrastructure and human resources.
- It may be necessary to develop strategies for cost recovery for VMMC services to be implemented in circumcising communities. More importantly, engagement of communities to identify potential community resources that can be available for MC is critical.

Recommendations

- Sustainable financing is crucial to ensure the provision of safe medical MC services. In the context of diminishing funding for HIV prevention activities, the programme is required to explore innovative funding mechanisms to scale up and sustain VMMC and other prevention programs within government budgets. The programme needs to explore alternative financing strategies including private-public partnerships or an HIV trust fund to finance local HIV programs. Such strategic initiatives need to be premised on sound financial principles and have leadership support.
- A parallel system of VMMC commodity procurement initiated by partners for initial rapid roll out should be phased out during Phase II to ensure optimal integration with the national supplies management system.
- Government and development partners support need to be improved with special emphasis on promoting consistent implementation of the VMMC strategy and wider health strengthening support for better- equipped facilities.
- Financial performance framework would yield strategic information, and inform resource mobilization, allocation and utilization. It will therefore be critical to ensure that spending is aligned to priority areas as stipulated by VMMC strategy.
- There is need to consider integration of cost information with service delivery data. This will enable the tracking of efficiencies gained as the programme evolves.
- Community resource mapping should be explored to identify the potential contribution of beneficiaries in MC. This is in line with the financing of MC in traditionally circumcising communities in which families and communities take responsibility.
- The impending universal health coverage should be leveraged to include MC as part of its benefits package given the public health benefits of MC.

3.7 Monitoring and Evaluation and Operations Research

3.7.1 M&E progress

One of the strategic objectives of the Kenya National VMMC Strategy (2008-2013) was to ensure effective monitoring and evaluation (M&E) of VMMC services. The document recommended two components of M&E

to be developed. One was to track service statistics specifically number and ages of the men circumcised and number and types of adverse events and was to be incorporated into the national Health Management Information System (HMIS). The other component was to be more of a programme-specific instrument that would be used to monitor the aspects of the roll out process that are critical for effective implementation of the VMMC programme specifically number of providers trained using the national training tools; number of facilities with capacity to provide the services, etc. During this phase, the emphasis was on development of the M&E framework, indicators and tools. Tools were developed to track the indicators and were further refined and integrated into the national HMIS. Several data quality audits were conducted to verify the quality of data being reported and suggest recommendations for improvement.

While the first component (HMIS) of the M&E objective was achieved very well, the programmatic component has been weak. There is therefore a need to agree on a set of programmatically relevant indicators that need to be tracked on a regular basis. Further, a separate M&E system should be established to help the programme achieve efficiency by matching demand and supply. The M&E team should also consider the revision of M&E tools to track the circumcisions by devices and EIMC.

It is recommended that the next strategy put more emphasis on increasing levels of reporting, quality of data reported and use of data for programme improvement. Specifically, the program may consider the adoption of electronic registers to enhance completeness and accuracy. NASCOP has developed computer storage capacity over the last few years and should be able to archive large datasets. This could be coupled with the use of smart phones so that transmission of data from these registers is instantaneous.

In the next phase of the programme, specific emphasis on tracking the quality of the programme should be made. An active AE surveillance system should be implemented when devices roll out.

Most importantly, the M&E effort needs to go beyond output level to outcome and impact. It is possible that during the implementation period, significant reductions in HIV incidence may have occurred. This needs to be documented. The demonstration of impact through a combination of strategies including mathematical and statistical modelling is feasible and should be integrated as part of M&E and research.

Table 3: Selected key milestones for M&E

	Activities and meetings	Partners	Results
M&E Data collection tools and guidelines	1 st meeting March 2008 to begin developing M&E guidelines and tools. Followed by monthly Nyanza provincial M&E sub-committee meeting and quarterly national M&E meetings.	NASCOP, NRHS, IRDO, FACES, CMMB, MCC (FHI 360 and EngenderHealth)	<ul style="list-style-type: none"> • Adapted UNIM forms for data collection • First draft of tools and guidelines developed by end 2009 • Pilot-test for tools in January to April 2010 • DQA conducted in May 2010 to assess understanding and usage of the tools • Feedback meeting held in August 2010 to consolidate views for improvement • Final version of tools produced in May 2011 • Refresher training on the tools in June 2011 • Roll out of the new tools from July 2011 • VMMC Indicators included in the MOH731 in September 2011

Integration and ownership

In the catch-up phase, VMMC started as a parallel program. Efforts were made to integrate the services in the routine MoH service provision, but that has not been successful on all components of VMMC. For M&E, the indicators have been integrated into the MoH 731. However, for full ownership, the Minor Theater Register needs to receive MoH coding.

As the service delivery team begins to target faith-based and private health facilities and traditionally-circumcising communities, innovative M&E strategies need to be developed to track and report the MC procedures done in those settings through the HMIS. This way, the national M&E system will be able to provide a true picture of the uptake of VMMC nationally. There may be scope in to intergrate this into the electronic system as outlined above.

3.7.2 Research to Practice

Research on male circumcision for HIV prevention in the Kenyan programme was designed to address the real challenges of providing access to safe, high quality VMMC services in low-resource settings. At least 23 studies on MC had been completed by August 2013. They included studies of the long-term impact of MC on a cohort of the original Kisumu trial participants, assessments of new adult MC devices, a study on how to communicate the concept of partial protection against HIV, studies on safety and acceptability of EIMC, as well as operations research to identify ways to improve the quality, effectiveness and reach of service delivery. A study on delivery models for EIMC and another on demand creation for older men are on-going [Annex III].

As early as 2009, research and M&E findings were being used to improve the VMMC programme. For example, the results from Male Circumcision Monitoring and Evaluation Study alerted providers on low rates of counseling and testing for VMMC clients and informed the emphasis on provider Initiated Testing and Counseling (PITC) as opposed to voluntary counseling and testing (VCT). This improved uptake of HIV testing and counseling among VMMC clients from an average of 25 percent to more than 80 percent. A study comparing procedures done by clinical officers and nurses showed that AE rates between the two cadres of providers were closely comparable. These results supported the policy decision to allow nurses perform MC procedures. Results from studies on PrePex and EIMC are currently being used to plan for the scale-up of these two program components.

Recommendations

While studies conducted so far have informed the implementation in various ways, wider dissemination of results is needed. In addition, implementation plans and roadmaps should be developed that are informed by these studies. Future policies and guidelines on VMMC service provision should be grounded in these findings. Additional research areas include:

- Adult MC devices: other promising MC devices should be studied in-country. Also, the safety and scalability of PrePex should be studied among adolescent pastoralist communities and HIV-positive men.
- EIMC: so far the studies conducted on safety and acceptability of EIMC have focused only in the Nyanza region, which harbors sedentary and traditionally non-circumcising communities. Similar studies should be conducted in selected traditionally-circumcising as well as pastoralist

communities.

- Additional examination of the role incentives play in the decision making process of men eligible for circumcision.
- Qualitative research on barriers and facilitators of medical MC in traditionally circumcising communities.

A complete list of the studies done, as well as results and recommendations is found in Annex II.

3.8 Quality Assurance

The VMMC strategy 2008-2013 spelled out a need for a quality assurance system whose goal was to ensure that safety for clients is guaranteed through provision of high quality services; provision of minimum package of services in addition to the surgical procedure; a sufficient volume of procedures to achieve impact on reducing HIV incidence; and services that are delivered efficiently. It was expected that the program health facility managers would undertake continuous MC QA assessments using the WHO and the CDC/PEPFAR toolkits to determine the status of:

- SOPs, guidelines and policies
- Facility supplies and equipment
- Clinical record keeping and M&E
- Minimum package of VMMC services
- Staffing and training
- Surgery, including pre-op, immediate post-op and follow up care
- Productivity and efficiency

As a first step, the programme piloted the WHO VMMC QA tool in 2010 for adaptation to the Kenyan setting. The adapted toolkit was used for a rapid and comprehensive assessment of the VMMC programme. Quality assurance officers from the government and partners were trained and have implemented internal QA as well as participated in external QA. As envisioned in the VMMC strategy, the task force has implemented quality assurance assessments at least once annually and provided timely feedback for improvement. These efforts have been augmented by external QA led by the OGAC Inter-agency technical team, which have been done twice in the course of the programme. As a result, there has been remarkable improvement in the quality of services over the years. However, the national MoH supervision guidelines lack indicators for VMMC QA. They need to be identified and included in the MoH supervision checklist.

Pilot studies on MC devices – specifically Shang Ring, PrePex and AlisKlamp - have been conducted with favorable safety and acceptability results. PrePex device has been pre-qualified by WHO and is being considered for phased introduction into the national VMMC programme. Additionally, EIMC has been found to be cost effective and easily performed and studies have proved that it is safe and relatively acceptable in Nyanza and therefore being considered for inclusion into the national VMMC programme. Thus, additional quality assurance standards should be introduced to assure safety of the device-based circumcision as well as EIMC.

CHAPTER 4

Summary of Conclusions and Recommendations

4.1 Conclusions

From 2007 to 2012 MC coverage has increased from 84 percent to 91 percent nationally and from 48 percent to 65 percent in Nyanza. By December 2013, a total of 792,931 males, of which 609,314 were ages 15-49 years, representing target achievement of 71 percent, had been circumcised. The majority of the VMMC clients (78 percent) were from Nyanza.

Other achievements included:

- Establishment of the Kenya National Task Force on Male Circumcision in October 2007.
- Development and publication of relevant policy, strategy and operational guidelines as well as data tools
- Establishment of functional regional task forces that coordinate programme implementation in Nyanza, Nairobi and Turkana. In Nyanza, the process has been concluded to transform the provincial task force and the district steering committees into inter-county and county task forces, and sub county steering committees.
- Experience from Nyanza was used as the model for expansion of VMMC services to other parts of Kenya.
- By the end of 2013 VMMC could be accessed in more than 575 fixed and outreach health facilities in Nyanza, Nairobi, Rift Valley, Western and Coast regions.
- 3,159 surgeons, surgical assistants, counselors and infection prevention officers had been trained by the end of 2013 to offer safe medical MC services, of which 1,725 of these were from Nyanza.
- A total of 81 corrective surgeries were performed for congenital abnormalities identified through the VMMC programme.
- M&E tools and guidelines were developed and integrated into the national health information system (the DHIS) and providers trained how to use them.
- Numerous operational research studies conducted during Phase I have informed program implementation.

The following factors contributed to the success of the VMMC programme in the country, especially in Nyanza, where the program was first launched.

- **Leadership** - the strong guidance from the Ministry of Health coupled with a cascaded engagement of regional MoH officials was pivotal in the success of VMMC in Kenya
- **Coordination** – the task forces brought all partners together regularly to plan and ensure a coordinated approach. Specifically, FHI 360/MCC supported the national and Nyanza task forces. In addition, jhpiego supported the adaptation of the Clinical Manual for Male Circumcision under Local Anesthesia to suit Kenya's context.
- **Innovative models** - the mixed service delivery models that combine static, outreach and mobile approaches made it possible to sufficiently address demand in diverse settings.

- **Partnerships** - The GoK's implementing partners worked closely with the DHMTs to identify and train VMMC providers.
- **Good communication strategies** - the use of multiple channels of communication and involvement of opinion leaders, political leaders and diverse stakeholders from the community level ensured near universal coverage with messages on VMMC; engagement of professional media groups, and in particular Internews, also ensured accurate and balanced reporting of VMMC and helped give correct information to the public through good journalism and dispelled myths and misconceptions.
- **Provision of funds for implementation** – PEPFAR through its implementing agencies CDC, USAID and DOD provided over \$62M and Global fund were key in the provision of funding required for programme implementation.
- **Technical support:** BMGF and PEPFAR provided funding for technical support. Other contributors included the UN system (WHO, UNAIDS, UNICEF), PEPFAR implementing partners and Ministry of Health
- **Ownership** - The key drivers that led to early adoption and sustained scale-up are country ownership, explicit political leadership, engagement of stakeholders, and community mobilization.

4.2 Key Recommendations

The roll out of VMMC services should continue in the next phase to ensure optimal HIV prevention benefits. VMMC targets for the next phase need to be set based on current and projected population figures. Specifically the following factors should be taken into account in the next VMMC strategy:

1. Progress in coverage

- a. In order to expand MC coverage beyond the current 91 percent nationally, a strategic focus on other regions other than Nyanza should be considered. It would necessarily mean increasing scale up especially in Nairobi and Rift Valley regions.
- b. The overall programme targets for the next five years should be reviewed based on the projected population growth, current programme coverage, expected impact and the feasibility of scale up.

2. Target population

- a. The current strategy planned to provide VMMC to males ages 15-49 years. Given demographic and epidemiologic shifts that may have occurred over the last five years, this age group target should be reviewed. The national programme may conduct mathematical modelling to provide indications on the ages that are the highest risk of HIV infection.
- b. Furthermore, the introduction of EIMC would introduce an additional age band for consideration.

3. Leadership

- a. Strong government leadership should continue at the national level.
- b. Additionally, county governments especially in priority counties as defined in the Kenya Prevention Revolution Roadmap should provide exemplary strategic support to the programme.

4. Coordination

- a. VMMC should be firmly anchored as a national programme with coordination structures

replicated across the country (not only in non-circumcising communities) and VMMC targets included in the (Annual Work plans) AWP across all counties.

- b. VMMC task forces should be expanded to include new stakeholders as the strategy moves to the next phase. With the introduction of the county governments, the provincial task forces will need to be devolved to the county levels, as is already happening in Nyanza, for effective leadership and coordination of service delivery. This will however require additional funding from both the national and county governments and supporting donors.

5. Human resources

- a. Continue to build capacity for VMMC service delivery at peripheral health facilities including dispensaries and other community-funded facilities for wider coverage.
- b. Plan for capacity building for adult MC devices and EIMC, including considering the role of community health workers or cadres of comparable skills to support roll out of non-surgical devices.
- c. Support pre-service training in middle and tertiary medical training institutions.

6. Communication

- a. Evidence based planning - There is need to understand the determinants of the behaviour particularly among men ages 25 and above in order to properly target and serve them. Behavioral research needs to be funded and conducted to inform the development of appropriate demand creation strategies for these 'older' men.
- b. Reviewing and tracking the implementation of the communication strategy – There is need to spell out clear targets and tracking mechanism in the communication strategy; also to review the VMMC communication guidelines to cover new priorities in Phase II (e.g., EIMC, devices, new focus on traditionally circumcising communities, etc.)
- c. Targeted messaging to different population segments in the revised VMMC strategy needs to re-emphasize the importance of localized, region specific and culturally sensitive messaging for demand creation to engage all segments of the population, including women.
- d. Communication to women: The role of women in the current strategy is undefined. The revised VMMC strategy needs to provide specific guidance about best practices for engaging women in the VMMC program. While the current VMMC strategy addresses potential concerns, VMMC's protective effect and potential risk compensation and women, the revised strategy should prioritize strategies to better harness women's contribution to VMMC demand creation. The revised strategy should recommend more research to explore messaging for demand creation with women at its focus. In addition, the role of women as mothers will need to be accounted for with EIMC.
- e. Traditionally circumcising communities: Demand creation for VMMC in traditionally-circumcising communities will need to be different than demand creation in non-circumcising communities because the eligible population may be different. The revised VMMC strategy should promote innovative demand creation strategies to engage these communities and increase uptake of VMMC (i.e., engaging traditional circumcisers, highlighting safety aspects while maintaining cultural traditions, emphasizing benefits from VMMC besides HIV prevention, etc.)
- f. Adequate financing of demand creation activities – the activities identified by most partners were not actualized due to limitation of funds. During the intensive RRI campaigns, funds

are available and these activities contributed to increased numbers. However, there is need for demand creation activities to be sustained throughout the year.

- g. Structured documentation of best practices and lessons learnt – programme implementers need to document the various innovative approaches that can be scaled up to improve efficiency of the VMMC programme.

7. Service delivery

- a. Accelerated pre-planned campaigns periods for VMMC that may include RRIs, to mop up access to services for uncircumcised males who could not be easily reached during routine programming should continue during Phase II and their contribution to target achievement monitored with the objective of making timely adjustments to avoid inefficiencies.
- b. Integrate VMMC as a routine medical intervention which is an integral part of health care provision.
- c. Engage traditionally circumcising communities to improve safety and integrate other HIV prevention interventions (package of services) into MC done in their local context.
- d. Continue to use mixed service delivery models (fixed, outreach and mobile) including additional innovations such as moonlight VMMC where appropriate.
- e. Recognize the potential introduction of devices for VMMC, and how these will alter procedures (i.e., faster procedures, reduced client pain, change in human resources needs, waste management requirements, potential greater client demand etc.). This should be expedited to avoid unnecessary lag between devices approval by normative agencies to actual availability to MC clients.
- f. Build capacity of private health care service outlets to provide VMMC to cater for males willing to pay for the procedure, and establish indicators that are easily reported for these private providers.

8. Monitoring and evaluation and operational research

- a. As the programme expands, there is need to use data to specifically identify geospatial distribution of services and MC coverage at the lowest administrative unit possible. This would enable appropriate allocation of implementation resources to regions of greatest need. Overlaying geographical information with service delivery statistics is strongly encouraged in the next phase of the VMMC strategy.
- b. Implement an M&E system to help match demand and supply on real-time basis thus improve efficiency of programme implementation.
- c. Adapt the current client forms into electronic format to enable the utilization of smart-phone based data capture and other similar technological solutions. This coupled with real time transmission of data to NASCOP and county servers should be prioritized.
- d. Revise M&E tools to include monitoring indicators for EIMC and device-assisted MC.
- e. Leverage on the existing data sources including programme data and surveys to measure the impact of VMMC in Nyanza in terms of number of infections averted.

9. Financing

- a. Lobby for financial support from the national government as well as county government financing mechanisms to support the program, while considering MC as part of routine health care services in all public and faith-based health facilities.
- b. Consider integration of MC in the planned universal health coverage.
- c. Map and document available community resources that can be mobilized for VMMC.

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Annexes

Annex I: Key informant interview questions

1. Should the mid-term review of the national VMMC strategy change the way that it addresses women's role/involvement in VMMC (as sexual partners for un-circumcised males, as mothers of sons/neonates)? If so, how?
2. The current strategy discusses advocacy and communications, but do you think that the review should address demand creation for VMMC specifically? If yes, how?
3. Should the strategy discuss expanding services further to other districts including Rift Valley, Nairobi, Western, etc.? If so, how/why?
4. As the VMMC program moves into the "medium-term phase", do you think the strategy should discuss expanding services into traditionally circumcising communities? If so, how?
5. As the VMMC program gradually progresses to the "long-term phase," neo-natal VMMC will be emphasized. Do you think that the strategy should specifically discuss moving into neo-natal services? If so, how/why?
6. The current strategy mentions the focus of the VMMC program should be on outreach and mobile services, and we now know that moonlight services and RRIs are also successful models to increase VMMC uptake. Should the strategy provide an update on service delivery models and/or activities? If so, what should it include?
7. Do you think the strategy should alter its focus on males ages 15-49 years? If so, why?
8. How should the strategy address the likely approval and possible introduction of devices?
9. Are there any other topics that you would like to discuss that I have not asked?

Annex II: Stakeholders/key informants interviewed

1. Mores Loolpapit –Senior Manager, MCC, FHI 360
2. Vincent Odiara – NRHS
3. Silas Achar, STO, Communications – FHI 360
4. Nicholas Mbugua – PSI
5. Walter Obiero, Director - NRHS
6. George Otieno, M&E Manager – NRHS
7. Mathews Onyango – STO, Surveillance – FHI 360
8. Spala Ohaga, Programs Manager – IRDO
9. Benard Ayieko – IRDO
10. Charles Okal - Provincial AIDS/STI Control Program Coordinator - Nyanza
11. Dr. Anthanasius Ochieng - Programme Manager Nascop
12. Dr. Maina William - Head Nascop
13. Mr. Francis Ndwiga Benson - VMMC Nascop
14. Dr. Rex Mpajanze - WHO
15. Dr. Kioko Jackson - PMO - Nyanza, Public Health & Sanitation (Former)
16. Dr. Lusi Ojwang - Kisumu
17. Dr. June Odoyo - UNIM/NRHS
18. Dr. Kawango Agot - IRDO
19. Dr. Melsa Lutomia - Busia

Annex III: VMMC research and ongoing studies on VMMC as of December 2013

Study (Implementing Org)	Full name	Purpose	Objectives
Private sector assessment (FHI 360)	Private Sector Health Providers Assessment	Cross-sectional study to: assess providers' training needs to meet WHO minimum package; estimate the costs of bringing private health facilities up to meet the minimum standards for safe, quality MC; and measure the unit costs of providing the MC service package, including overhead, clinician time, supplies and equipment.	1) Description and clear understanding of costs associated with bringing facilities and employees to minimum standards for MC provision 2) Actual costs associated with providing MC services according to WHO minimum package 3) Recommendations for strategies to integrate private MC service provision with MOH services.
Communicating partial protection (FHI 360)	Communicating Partial Protection of Male Circumcision	1) To examine men's and women's understanding of "partial protection" 2) To develop, test and recommend messages to increase understanding of partial protection and promote use of other HIV protective methods after VMMC.	1) Insight into men's and women's understanding of partial protection of VMMC 2) Messages that effectively communicate partial protectiveness of VMMC and encourage use of other HIV protection methods after VMMC that can be incorporated into male circumcision communication strategies in Nyanza Region, Kenya.
Interventions to increase uptake (FHI 360)	Identifying Interventions to Increase Uptake of Voluntary Medical Male Circumcision among Men 18 – 35 Years Old	1. To identify the relative importance of barriers to seeking VMMC in men 18 - 35 2. To examine roles of important others, including: health care providers, female partners, community / religious leaders, and employers, in motivating men to seek VMMC 3. To design one or more interventions to increase rates of uptake of VMMC among 18-35 year old men using the identified barriers and motivators.	1. A detailed list of factors motivating and inhibiting the uptake of VMMC among men 18 – 35 years old 2. A prioritized list of feasible, acceptable interventions to increase the uptake of VMMC among men between the ages of 18 and 35.
Sources of variation in counseling (FHI 360)	Understanding sources of variation in HIV risk reduction in MC counseling	Cross-sectional integrated experimental design to describe several components associated with both provider and client characteristics and examines how they influence risk reduction messaging, particularly in settings where MC interventions are happening. The study tested direct and indirect relationship between the variables in the model to identify the effect of each variable on risk reduction communication efforts in our sample communities.	Primary Objective: Identify client factors influencing consistency of risk reduction messaging in Nyanza Region using vignettes. Secondary Objectives: 1) Describe relationship between provider demographics and attributes, including: attitudes toward MC and HIV drivers and knowledge of MC. 2) Inform an updated in-service training program to HIV risk reduction counselors in the context of MC services.

PrePex Pilot study (FHI 360)	Prospective Observational Study of Male Circumcision Using the PrePex Device in Routine Clinical Settings in Kenya	To evaluate the PrePex device for adult male circumcision in the Kenyan service delivery setting.	Primary Objective: To measure rates of moderate and severe AEs during routine service delivery for PrePex circumcision procedures. Secondary Objectives: 1) evaluate the acceptability of PrePex procedures; 2) determine time to complete healing after a PrePex procedure; 3) Determine the training need for proficiency; 4) Determine costs of PrePex training and service delivery; 5) Document proportion of men ineligible for circumcision with the device; 6) Document proportion of men who do not return for 7 day follow-up & level of effort needed for active follow-up; 7) Compare outcomes and acceptability in fixed vs mobile sites.
M&E study (UIC)	MCMES - A Monitoring and Evaluation Study to Assess Implementation of MC as an HIV Prevention Strategy in Kisumu and Nyando Districts in Kenya	Implement a monitoring and evaluation (M&E) system to passively and actively assess the incidence of adverse events and factors associated with the uptake and acceptability of MC.	Prospective study to: 1) Evaluate M&E system 2) Adverse event rates (by severity, type, clinician cadre, etc.) 3) Identify factors that facilitate and act as barriers to MC uptake 4) Evaluate time to onset of sexual activity 5) Assess satisfaction (appearance, sexual, health facility, etc.)
Sexual disinhibition (UIC)	SHABS - A Prospective Study of Behavioral Risk Compensation Related to MC as an HIV Prevention Method	Assess changes in risk behavior in circumcised men before and after circumcision and compare their behaviors to those of uncircumcised men longitudinally.	Observational prospective study to: 1) Compare circumcised and uncircumcised men over time in terms of: a) Changes in sexual risk behavior; b) Sexual function and satisfaction; c) Perception of HIV risk, and 2) Evaluate perceptions of circumcision in long-term female partners of circumcised participants.
Impact study (UIC)	CIRCIS - Impact of Male Circumcision on Sexual Risk Behaviors in Kisumu, Kenya	Assess current knowledge and beliefs about MC and HIV risk and how these are associated with sexual risk behaviors and HIV prevalence. Assess changes in knowledge and beliefs about MC and HIV risk from baseline, and assess changes in MC and HIV prevalence following promotion of MC in the general population.	A Series of three cross-sectional random-household studies conducted every two years to assess: 1) HIV and MC prevalence following introduction of MC services in general population over time, and 2) Changes in perceptions, knowledge and beliefs about MC and HIV over time

Wound healing (UIC)	Wound Healing and Resumption of Sexual Activity after Medical Male Circumcision in Kisumu, Kenya	Observational study to: 1) study resumption of sex after circumcision and validate the optimal duration of post circumcision abstinence based on visual evidence of wound healing and its main predictors, and 2) assess the effect of male circumcision on CD4, viral load and viral shedding in HIV-infected men.	<ol style="list-style-type: none"> 1. Time to complete wound healing after circumcision of HIV-negative and HIV-positive adults by the forceps guided method 2. Main predictors of wound healing and resumption of sex after circumcision 3. Optimal duration of post circumcision abstinence 4. Effect of MC on virologic parameters in people living with HIV
Infant circumcision (UIC)	Evaluation of safe voluntary infant medical MC in selected facilities in Nyanza Region, Kenya (The Mtoto Msafi Project)	Evaluate acceptability and feasibility of infant medical male circumcision in Nyanza Region, Kenya and estimate adverse event rates associated with the procedure.	Case control study to : 1) Compare beliefs and attitudes about circumcision between parents choosing IMC and those declining the procedure 2) Identify facilitators and barriers to uptake of IMC 3) Measure adverse event rates associated with IMC
Costing (EngenderHealth)	Assessing the Cost of Three Male Circumcision Service Modalities in Nyanza, Kenya	To compare the cost of various models for the delivery of MC services.	Determine current cost per MC by service delivery model (fixed health facilities, outreach health facilities, and mobile services); Analyze trends in unit cost during the scale up of services; Examine elements in each service delivery approach that decrease the unit cost while still maintaining quality (e.g. task shifting, task specialization, etc.); Estimate cost savings over time.
Non-physician clinicians (EngenderHealth)	Assessment of Non-Physician Clinicians Performing (NPC) Male Circumcision (MC) in Nyanza, Kenya	Evaluate acceptability and feasibility of infant medical male circumcision in Nyanza Region, Kenya and estimate adverse event rates associated with the procedure.	Case control study to evaluate: 1) MC surgical and post-operative procedures performed by non-physician clinicians 2) MC surgical outcomes at 7-days and 60-days post MC surgery 3) Patient satisfaction with MC services provided by non-physician clinicians at 7-days and 60-days post MC surgery
Training needs (EngenderHealth)	Responding to the Human Resource Capacity Development and Training Needs	To gather information about the human resource capacity and training needs of the public and private sector in Kenya, determine gaps in human resource and training capacities related to male circumcision; and identify human resource and training barriers/facilitating factors to introducing MC services.	<ol style="list-style-type: none"> 1) Identification of gaps in human capacity development 2) Identification of gaps and recommendations for training policies and guidelines 3) Recommendations related to MC service provision by nurses 4) Recommendations for resources and job aids needed to support health workers performing male circumcisions

Service delivery models (EngenderHealth)	Assessment of MC Services at Outreach Health Care Facilities in Nyanza, Kenya	To assess the safety, efficacy, and cost of providing MC by trained medical officers in outreach sites in a manner that will increase access for men who are seeking MC services.	<ol style="list-style-type: none"> 1) MC surgical and post-operative procedures at outreach sites 2) MC surgical outcomes at 7-days and 60-days post MC surgery 3) Patient satisfaction with MC services received at outreach sites at 7-days and 60-days post MC surgery
SYMMACS (NASCOP and FHI 360 under Tulane University)	Systematic Monitoring of the Male Circumcision Scale-up Study	Track progress and document pace and quality of MC scale-up in four countries including	<ol style="list-style-type: none"> 1) Track the implementation of VMMC services and the extent of adoption of 6 efficiency elements 2) Demonstrate that it is possible as part of this scale-up to improve efficiency with equivalent safety 3) Determine if the adoption of efficiency elements decreases operating time
Shang Ring Study-Pilot Study (EngenderHealth)	Shang Ring Pilot Study	Being the first use of the device outside China, the purpose of the study was to evaluate the efficacy, safety and acceptability of the device among Kenyan adult men.	
Shang Ring Study – Time to Removal Study (EngenderHealth and FHI 360)	The Shang Ring: Evaluation of Healing at Three Time Intervals and Potential for Spontaneous Detachment	Assess the time to complete healing with removal of the Shang Ring at different time points. Determine whether the device will spontaneously detach if removal is delayed for longer than the currently recommended 7 days. Compare the Shang Ring procedure with conventional surgery in terms of safety, cost, and pain, time to do the surgery, and time to wound healing	<ol style="list-style-type: none"> 1. To assess healing time—from the date of circumcision until complete healing—with removal of the Shang Ring at different time points; and, 2. To determine whether the device will spontaneously detach if removal is delayed for longer than the recommended time of seven days
Shang Ring Study – RCT (EngenderHealth and FHI 360)	Comparison of the Shang Ring with Conventional Surgical Methods: A Randomized Controlled Trial	Compare pain, safety, acceptability and ease of use of Shang Ring technique and the conventional techniques in Zambia and Kenya	<ol style="list-style-type: none"> 1. Compare the pain and acceptability of the Shang Ring procedure with the forceps guided surgical circumcision technique (Kenya) and the dorsal slit technique (Zambia); 2. Compare the safety and the course of wound healing, including the time to complete healing, between the Shang Ring adult male circumcision procedure and the standard surgical circumcision procedures (forceps guided in Kenya & dorsal slit in Zambia); and, 3. Compare the ease of the Shang Ring method versus standard circumcision surgical procedures 4. Compare the cost of the Shang Ring procedure to the cost of the forceps guided surgical circumcision technique (Kenya) and to the dorsal slit surgical circumcision technique (Zambia); and, 5. Assess adherence to post-surgical instructions for wound care and sexual abstinence.

Shang Ring Study - Demonstration (EngenderHealth and FHI 360)	A Prospective Observational Study of Male Circumcision Using the Shang Ring in Routine Clinical Settings in Kenya & Zambia	A prospective observational study to estimate rate of rare or unexpected AEs events during routine service delivery related to Shang Ring procedure.	Primary: To estimate rates of adverse events during routine service delivery, especially those that are rare or unexpected Other: 1. Evaluate the acceptability of Shang Ring circumcision procedures among clients and among health providers. 2. Explore understanding of post-VMMC abstinence period and related issue 3. Document training methods and the cost of training, 4. Gather data that might help evaluate whether HIV positive men are at higher risk for complications or delayed healing following Shang Ring circumcision procedures.
Alisklamp Study (Department of Surgery and Anaesthesiology, School of Medicine, Moi University)	The safety profile and acceptability of a disposable male circumcision device in Kenyan men undergoing voluntary medical male circumcision	To establish the safety and effectiveness as well as the acceptability of the Alisklamp® device for male circumcision among Kenyan men	
AE study	Evaluation of Moderate and Severe Adverse Events following Adult Male Circumcision in Nyanza Region, Kenya	To evaluate and characterize post-operative adverse events (AEs) following adolescent and adult male circumcision (MC) for HIV prevention services in Nyanza Region, Kenya.	1) To estimate the rate of moderate and severe AEs among male residents of Nyanza Region, Kenya who do not receive post-operative follow-up care as recommended after undergoing MC for HIV prevention services. 2) To determine whether the moderate and severe AE rate among those who do not receive routine post-operative follow-up care as recommended is significantly higher than the moderate and severe AE rate among those who do receive routine post-operative follow-up care as recommended
Turkana Demand Creation Study	Exploring Aspects of Demand creation And mobilization for male circumcision Among older men in Turkana, Kenya	Identify approaches to increase demand for VMMC services in Turkana County, with particular emphasis on reaching men 25-49 years of age	1) describe and establish the relative importance of social, economic, and cultural facilitators and Barriers that influence the demand for VMMC among older men. 2) synthesize results and previous literature in order to provide a framework for conceptualizing demand creation among older men that can be adapted and utilized in similar settings

Annex IV: Tables and figures showing achievements in VMMC 2008 - 2013

Table 4: Number of MC procedures by year 2008 - 2013

Year	VMMCs	Cumulative MCs
2008	7,863	7,863
2009	80,719	88,582
2010	137,438	226,020
2011	174,273	400,293
2012	169,349	569,642
2013	223,289	792,931

Table 5: Number of VMMC procedures (15-49 years) by region

Region	VMMCs
Nyanza	474,983
Rift Valley	38,814
Nairobi	52,880
Western	41,180
Others	1,457
Total	609,314

Figure 3: Proportion of males circumcised who were tested for HIV on-site

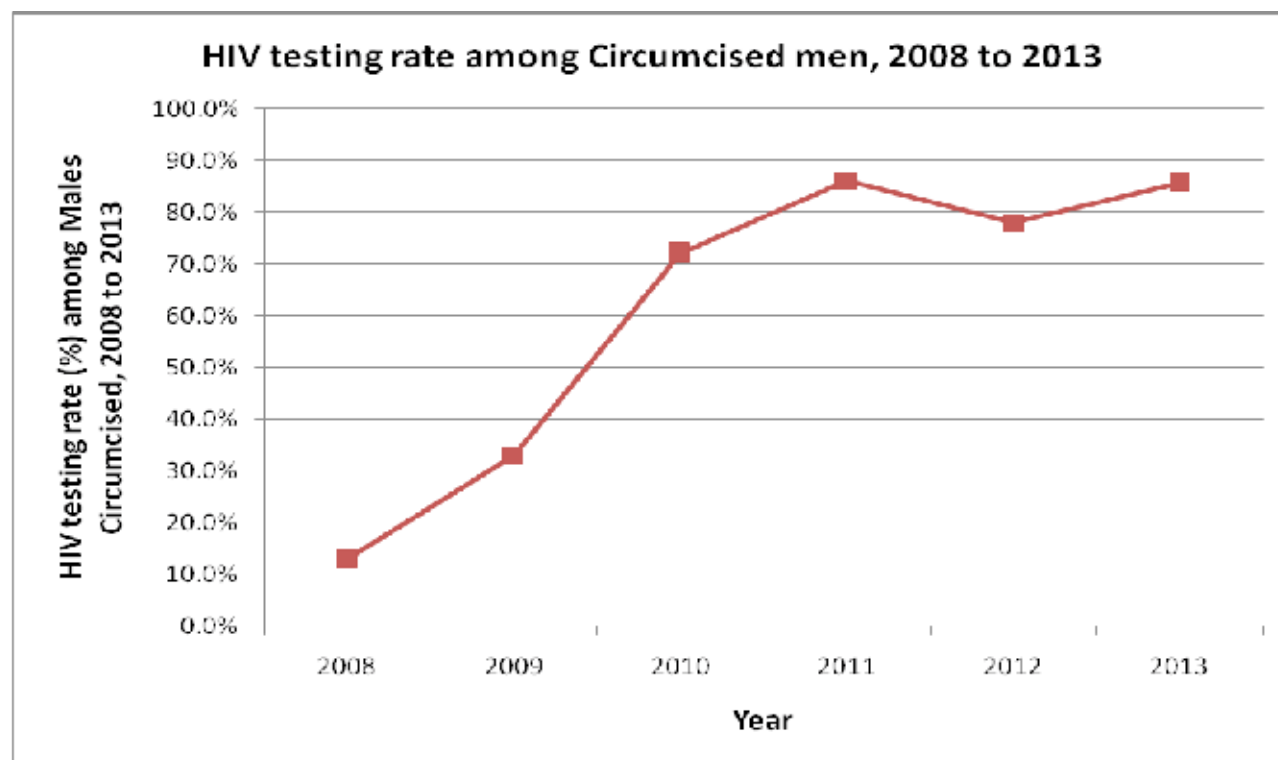


Table 6: Proportion of males circumcised who were tested for HIV on-site 2008-2013

Year	VMMCs by NRHS, IRDO, APHIA+	# HIV tested	Percent HIV tested
2008	11,650	1,498	12.9%
2009	97,492	32,039	32.9%
2010	95,910	69,071	72.0%
2011	144,815	124,555	86.0%
2012	127,399	99,313	78.0%
2013	178,816	153,052	85.6%

Table 7: Moderate adverse events reported by year, 2010 - 2013

Year	VMMCs	# AES reported	Percent AES reported
2010	112,857	1,354	1.2%
2011	184,540	1,249	0.7%
2012	158,278	667	0.4%
2013	214,851	351	0.2%

Figure 4: Number and percent of adverse events by severity

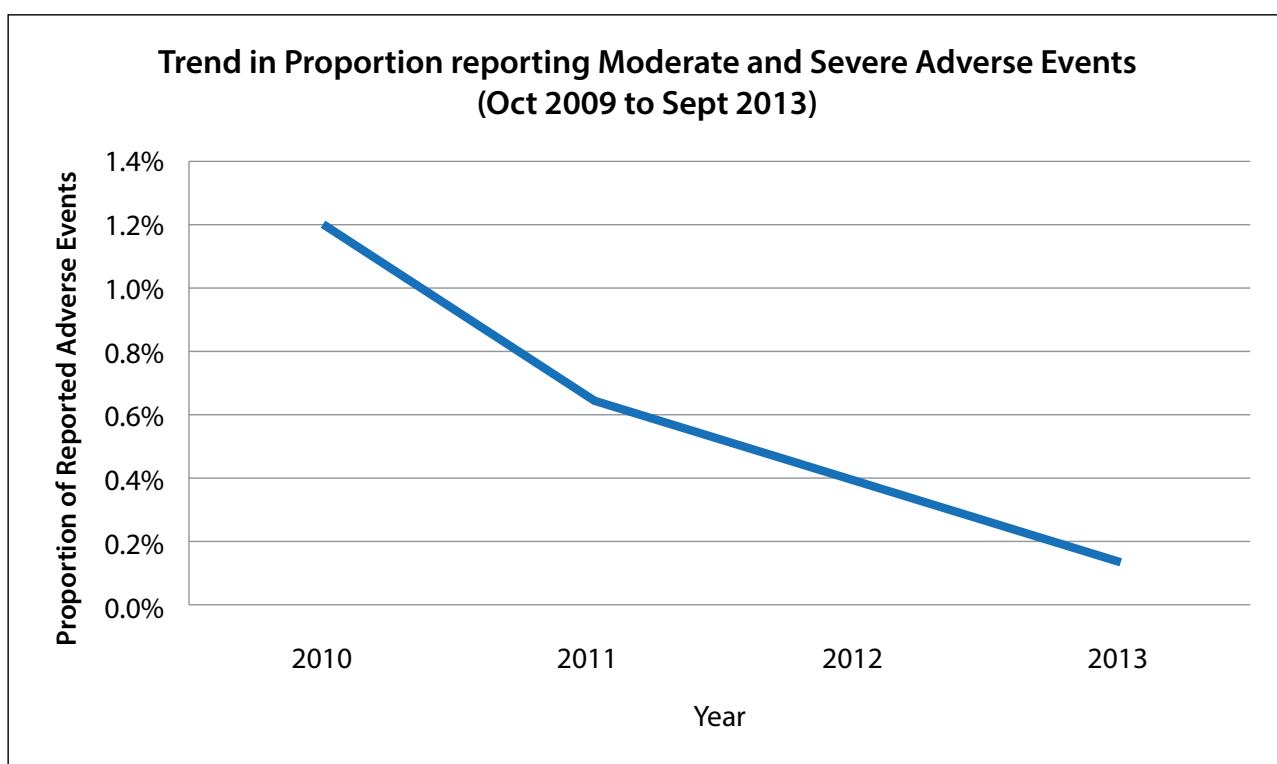


Table 8: Number of trained VMMC providers by cadre and region

Region	Medical Officer	Clinical Officer	Nurse	Counselor	Hygiene Officer	Grand Total
Nairobi	4	254	287	255	193	993
Nyanza	16	370	557	423	359	1725
Rift Valley	0	39	59	63	76	237
Western	7	44	76	24	13	164
Others	1	12	17	5	5	40
Grand Total	28	719	996	770	646	3159

Table 9: Number of active service delivery sites by region in 2013

Region	Number of sites
Nyanza	321
Rift Valley	120
Western	63
Nairobi	52
Others	19
Total	575





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