EARLY INFANT MALE CIRCUMCISION IN IRINGA, TANZANIA

REPORTS FROM AN EIMC PILOT PROJECT AND AN OPERATIONAL RESEARCH ACCEPTABILITY STUDY

July 2016

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CONTENTS

ABBREVIATIONS

AE	adverse event
ANC	antenatal care
CHMT	Council Health Management Team
DACC	district AIDS control coordinator
DBS	dried blood spot
DMO	district medical officer
EIMC	early infant male circumcision
FGD	focus group discussion
IEC	information, education, and communication
IPC	infection prevention and control
IRB	Institutional Review Board
JHSPH	Johns Hopkins University Bloomberg School of Public Health
KII	key informant interview
L&D	labor and delivery
M&E	monitoring and evaluation
MCHIP	Maternal and Child Health Integrated Program
MOHSW	Ministry of Health and Social Welfare
NACP	National AIDS Control Program
NBS	National Bureau of Statistics
NIMR	National Institute of Medical Research
OCGS	Office of Chief Government Statistician
OPD	outpatient department
PEPFAR	United States President's Emergency Plan for AIDS Relief
PI	principal investigator
PMTCT	prevention of mother-to-child transmission of HIV
QA	quality assurance
RA	research assistant
RCH	reproductive and child health
SSA	sub-Saharan Africa
TCCP	Tanzania Capacity and Communication Program
TOT	trainer of trainers (or training of trainers)
UNAIDS	Joint United Nations Programme on HIV/AIDS
USAID	United States Agency for International Development
UTI	urinary tract infection
VMMC	voluntary medical male circumcision
WHO	World Health Organization
ZAC	Zanzibar AIDS Commission

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The initiation of the early infant male circumcision pilot in Iringa Region is led by a joint effort between the Reproductive Child Health Team and the National AIDS Control Program under the Ministry of Health of Tanzania. The EIMC pilot is made possible through funding from the United States President's Emergency Plan for AIDS Relief (PEPFAR) and the United States Agency for International Development (USAID) through the Maternal and Child Health Integrated Program (MCHIP), Accelovate, and AIDSFree, implemented by Jhpiego. We would like to thank these agencies and partners for their support of the operational research study and the pilot.

We would also like to thank Iringa regional leadership—including the regional administrative secretary, regional medical officer, regional AIDS control coordinator, regional reproductive and child health coordinator and district medical officers (DMOs), district AIDS control coordinators (DACCs), and district reproductive health coordinators—as well as the Council Health Management Teams (CHMTs) from pilot implementing councils in Iringa Region (specifically, the Iringa Municipal Council, Iringa District Council, Kilolo District Council, and Mufindi District Council).

Similarly, we would like to extend our gratitude to the reproductive child health providers that perform EIMC in all eight health facilities in Iringa Region, whose knowledge, accountability, and commitment are greatly appreciated.

EXECUTIVE SUMMARY

Background

Since July 2009, the Tanzania Ministry of Health and Social Welfare (MOHSW) and regional health authorities in Iringa, supported by Jhpiego through MCHIP, Accelovate, and now AIDSFree, have been providing services for voluntary medical male circumcision (VMMC) for males over age 10.

In April 2013, the MOHSW and regional health authorities in Iringa, supported by Jhpiego through MCHIP, determined to deepen their work in male circumcision. The project had two components: 1) a pilot project of EIMC service delivery integration and 2) an operational research study of EIMC feasibility and acceptability.

Pilot Project on Service Delivery Integration

The service delivery integration pilot aimed to assess the feasibility of incorporating an EIMC intervention into services for reproductive and child health (RCH) provided at eight selected health facilities.

As of December 2014, 2,084 infants had been provided with EIMC at the eight pilot sites. Most infants were circumcised during the first three weeks of life (49 percent, n=1,036), 26 percent during the first seven days of life, and 23 percent at between eight and 21 days of age. The majority of EIMC clients (93 percent) returned for their 48-hour follow-up visit, and 71 percent returned for their seven-day follow-up. Most infants' mothers heard about the availability of EIMC services at a visit for antenatal care (ANC) and/or an RCH visit.

Overall, during the entire period of the pilot, there were eight intraoperative adverse events (AEs), two mild and six moderate. Of the moderate intraoperative events, four were categorized as bleeding and two as excessive skin removal. There was one postoperative adverse event: infection. AE rates intraoperatively and postoperatively were 0.38 and 0.05 respectively. All AEs were resolved satisfactorily.

Operational Research Study of EIMC Feasibility and Acceptability

This study, "Piloting Early Infant Male Circumcision (EIMC) in Iringa, Tanzania: Views on Acceptability and Service Delivery Integration," qualitatively evaluated the potential client base for EIMC services as well as non-users, and documented EIMC providers' views and experiences, with a primary focus on the integration with RCH services.

Objectives

The operational research study had the following specific objectives:

- To describe users of the EIMC service in the pilot drawn from the EIMC pilot program database.
- To describe views of mothers and fathers of infants circumcised through the EIMC pilot, including satisfaction and decision-making.

- To explore the views and perceptions of mothers and fathers who had received counseling or orientation regarding EIMC and did not choose to have their male infant circumcised.
- To explore views of facility in-charges and health care providers on the rollout of integrated EIMC within reproductive child health services.
- To review the demographic characteristics of all parents and infants in the EIMC area.

Methods

The study used mixed methods, largely qualitative, with secondary data review from routine EIMC service delivery records. Twenty-four group discussions were held with parents attending RCH services at four EIMC pilot sites and key informants for health care providers. In-depth interviews were administered to health care providers, health facility in-charges, and RCH in-charges by trained RAs. Data from routine EIMC service delivery records were also analyzed.

Results

Qualitatively, parental reasons for not accepting EIMC included inadequate knowledge of EIMC, myths and misconceptions about it (e.g., concerns about lack of penile growth post circumcision or that EIMC would cause urinary tract infections), concerns about the age of the infant at the time of EIMC, and lack of decision-making power among mothers. Reasons for accepting EIMC included information and education received, availability of free and high-quality service, and support and encouragement by family members. Health care providers perceived EIMC as a good practice and agreed that it should be integrated within RCH to reduce delay in service provision. However, they were concerned about increased workload and availability of space for EIMC provision within RCH.

Overall Conclusions

Based on the overall results of both activities, we can conclude that EIMC uptake is increasing at all project sites, is feasible, and is gaining acceptability over time. Parents had heard about EIMC services during ANC and/or RCH visits, and the majority of infants were circumcised in the facility where they were born. Generally, parents needed in-depth information at different points in time to make informed decisions around EIMC, and fathers were influential in making decisions to circumcise their sons. Most health care providers viewed EIMC as a valuable practice and agreed that integration with RCH services was beneficial. The EIMC project in Iringa Region was successful in providing a rich learning experience and generating needed data, which has contributed to the incorporation of EIMC into national VMMC guidelines as well as the VMMC Country Operational Plan 2014–2017.

Final Recommendation

With an eye toward maintaining a high prevalence of circumcised men, it is recommended that EIMC be initiated when the adult and adolescent VMMC program of a country or a region is well established (UNICEF 2011). This ensures that the catch-up is well underway and reduces the need for adult circumcision in the future.

BACKGROUND: MALE CIRCUMCISION IN TANZANIA

Three randomized controlled trials showed unequivocally that VMMC offers a 60 percent protective effect in reducing the risk of female-to-male HIV transmission through heterosexual sex (Auvert et al. 2005; Gray et al. 2007; Bailey et al. 2007). In March 2007, the World Health Organization (WHO) and the Joint United Nations Programme on HIV/AIDS (UNAIDS) issued guidance urging countries with high HIV prevalence and low male circumcision rates to incorporate VMMC into their comprehensive HIV prevention programs (WHO 2007). Adult male circumcision for HIV prevention, which is being scaled up in 14 countries in sub-Saharan Africa (SSA), is viewed as a "catch-up" strategy for reaching men and boys who were not reached for circumcision at a young age. Iringa, with an HIV prevalence of 9.1 percent, is Tanzania's second most HIV-affected region (Tanzania Commission for AIDS et al. 2013). Tanzania has a male circumcision prevalence of 70 percent, ranging from more than 90 percent in the eastern regions to 29 percent in the western regions (National Bureau of Statistics and ICF Macro 2010; Wambura et al. 2009). Historically in Tanzania, circumcision has been widespread, either in adolescents as a rite of passage or in infants, where it is generally associated with the Muslim religion. The Tanzanian MOHSW, with support from PEPFAR and USAID, has scaled up VMMC services across Tanzania in general and in Iringa Region in particular since 2009. As of December 2014, more than 970,000 VMMCs (DHIS2, December 2014) have been conducted in Tanzania, including 272,740 in Iringa, on adolescents (boys aged 10 and up) and adults. In Iringa, adult male circumcision prevalence increased from 29 percent to more than 60 percent between 2007–2008 and 2011–2012 (Tanzania Commission for AIDS et al. 2013).

Although VMMC has been coined the catch-up strategy, each year about 556,745 boys turn 10 and "age in" (National Bureau of Statistics, Census Database, 2012), becoming eligible for VMMC; the intensive and costly VMMC national program must be maintained unless an alternate strategy is undertaken. However, the more infants who are circumcised, the fewer adolescents and adults will need circumcision in the future. Consequently, EIMC is seen as a potential long-term, sustainable strategy.

Compared to VMMC, EIMC is likely more cost-efficient, requires less time, and has a shorter healing period. Fewer barriers may exist for infants than for boys and men; for example, the required post-circumcision sexual abstinence period has been shown to be a barrier for both adolescents and men seeking VMMC services (Plotkin et al. 2011).

In October 2012, a consultative meeting was held with the MOHSW, including both the National AIDS Control Program (NACP) and the Reproductive and Child Health Service, as well as the Tanzania Nursing and Midwifery Council and representatives from Muhimbili National Referral Hospital and regional health authorities in Iringa. The EIMC concept was examined in light of the region's well-established VMMC program. Given the maturity of that program and the region's continued success in this implementation area, coupled with its

high HIV prevalence, the region was well suited to serve as a pilot location for integrated EIMC services. Thus, the MOHSW and regional health authorities in Iringa, supported by Jhpiego through MCHIP, decided in late 2012 to pilot EIMC services in Iringa Region to assess the feasibility of the intervention, guide national scale-up, and evaluate the sustainability of services.

The process for designing and implementing this pilot EIMC program was developed during the consultative meeting.

At the same time, it was decided to conduct a concurrent EIMC operational research study on the acceptability of EIMC. Led by the MOHSW and Jhpiego, the operational research study was entitled "Piloting Early Infant Male Circumcision (EIMC) in Iringa, Tanzania: Views on Acceptability and Service Delivery Integration." The principal investigators (PIs) were Dr. Georgina Msemo, MOHSW, and Dr. Amuri Mbaraka, Jhpiego.

The following pages present two reports: one of a pilot of EIMC services and the other of findings from an operational research study conducted alongside the pilot.

REPORT ON A PILOT PROJECT OF EIMC SERVICES

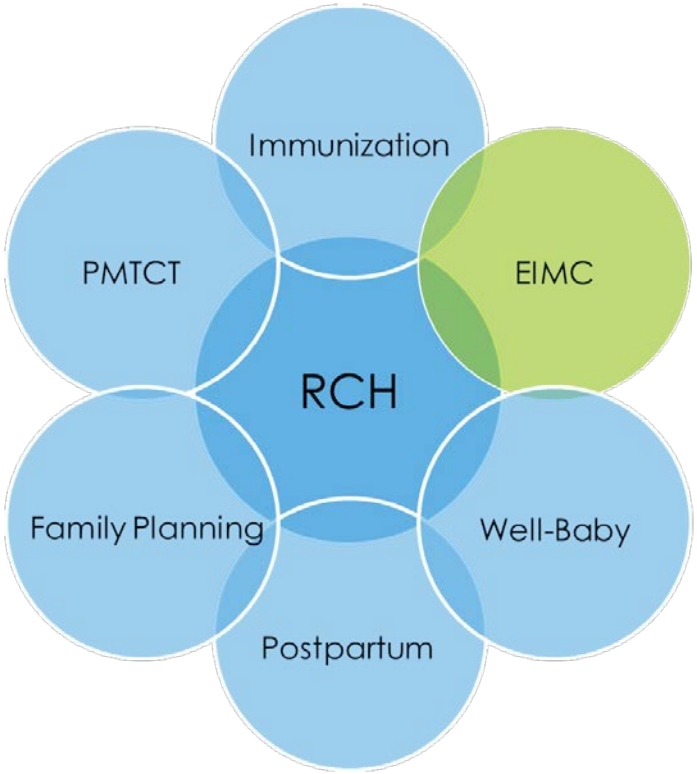
THE SERVICE DELIVERY MODEL

During the consultative meetings in October 2012, it was decided to integrate EIMC services seamlessly into existing RCH services (Figure 1).

Parents of infant males are introduced to the concept of EIMC during ANC, maternity, and/or postpartum care as well as during well-baby visits. WHO recommends that EIMC be performed between 24 hours and 60 days after delivery (World Health Organization and Jhpiego 2010). Male infants are referred to the EIMC service in the outpatient RCH department, where trained health care providers perform the procedure during regular well-baby visits. Since the service is complimentary, parents and clients can be referred to it from a myriad of health encounters; the parents of infants coming in for EIMC service can also be referred out for additional services, especially infants who are HIV exposed or born to HIV-positive parents not yet in care and treatment. There is also the potential to use EIMC services to strengthen aspects of RCH care. For example, desire for EIMC can encourage facilities to have mothers remain at the health facility at least 24 hours post-birth so their infant sons can be circumcised when they are 24 hours old—but this also benefits the mother's health and is a WHO recommendation.

The project also has offered in-service training to RCH providers to refresh their skills. During these trainings, providers are updated on measures designed for infection prevention and control (IPC), on emergency management of sick infants, and on linkages to care and treatment for parents and HIV-exposed infants.

Figure 1. Integrated Model of Service Delivery



EIMC is offered as one of many services within the RCH department.

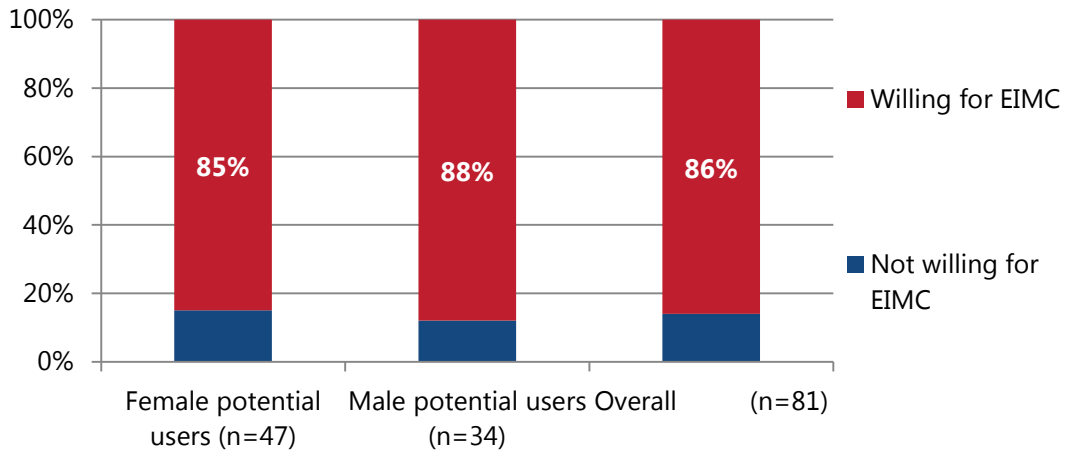
IMPLEMENTING THE PILOT

Site Selection, Site Strengthening, and EIMC Acceptability

Figure 2. Timeline of EIMC Pilot Key Activities

Following the consultation meeting and the decision to site the pilot in Iringa Region, but prior to the start of pilot services, various Iringa health facilities were assessed as potential pilot sites, and a series of site-strengthening activities occurred in preparation for the launch of services (Figure 2). In November 2012, an assessment team comprising staff members from MCHIP, the Iringa Regional Health Authority, and facility in-charges assessed seven health facilities (hospital and health center sites) to determine appropriate health facilities to launch EIMC services. Site assessments included a review of service statistics (male births), human resources, space allocation, sterilization/instrument processing facilities, and staff willingness to initiate EIMC services. Finally, data on acceptability of EIMC from potential clients and service providers were collected using structured interviews.

Figure 3. Proportion of Parents Who Were Willing to Circumcise Their Infants Based on Structured Interviews during Site Assessments



The following were some of the key findings from the client interviews (Figure 3).

A majority of facility attendees (86 percent) reported that they would be willing to have their infant sons circumcised if the services were available.

There was a strong expectation among both providers and facility attendees that the community will respond positively to EIMC. This view was more common among facility attendees than among providers.

Potential barriers also existed to community adoption of EIMC, including fear of pain, lack of familiarity with the service, association of circumcision with the Muslim religion, and

some myths, including beliefs that circumcision will result in a smaller penis in adulthood and that EIMC can cause urinary tract infections (UTIs).

Using site assessment findings, four sites were selected for the pilot: Iringa Regional Hospital, Ipogolo Health Centre, Ilula Hospital, and Tosamaganga Hospital. Site-strengthening activities began in preparation for launch of services. Specific EIMC commodities were purchased, space in the RCH services reorganized, and health care providers and management at the facilities given orientation.

Staff Orientation and Community Sensitization

Staff at the selected pilot sites and at surrounding sites (to encourage referrals) attended one-day EIMC site orientations before the pilot launch in April 2013. Two hundred health care providers from outpatient departments (OPDs), reception, RCH, and maternity and labor wards were oriented to EIMC service provision and how to appropriately educate and refer clients. The orientations aimed to create awareness among health facility staff so as to stimulate demand for services and promote client referrals to pilot sites.

Before the launch of the EIMC pilot, a one-day advocacy meeting was held with Iringa regional leaders (i.e., district medical officers, RCH coordinators, and regional medical officers) and with residents and religious leaders to advocate for the initiation of EIMC services in Iringa. Throughout the pilot, the team periodically held community meetings to maintain the dialogue between the communities and the pilot facilities.

Launching Services

In April 2013, after the first training of EIMC providers (described in "Trainings in EIMC Services," page 9), services were launched at the four pilot sites. Newly trained EIMC providers were supported to provide services to clients via mentorship and oversight post training. After two weeks of service post training, 21 of the initially trained 22 providers were judged competent. The lone provider not deemed competent was mentored to competency. In June 2013, the EIMC team conducted supportive supervision and visits for quality assurance (QA), which were considered "baseline" for the pilot (see "Mentorship, Quality Assurance, and Supportive Supervision Activities," below).

Expanding the Pilot

The first four pilot sites (Iringa Regional Referral Hospital, Tosamaganga Hospital, Ilula Hospital, and Ipogolo Health Center) were deemed successful with regard to quality of services, the use of the integrated service delivery model and to increase service uptake (determined via analysis of service statistics and quality assessment reports). Given this success, the MOHSW decided in December 2013 to expand pilot services to an additional four sites (for a total of eight sites). In February 2014, a second site assessment was conducted, using the same protocols as the first assessment. Four additional EIMC sites were selected: Mafinga Hospital, Frelimo Hospital, Kidabaga Health Centre, and Igumbilo Dispensary. The team trained new EIMC providers for the new sites, sourced appropriate commodities, and provided mentorship, supportive supervision, QA, and oversight to the new sites. All eight sites remain open and are continuing to offer EIMC services.

Trainings in EIMC Services

Provider Trainings in EIMC

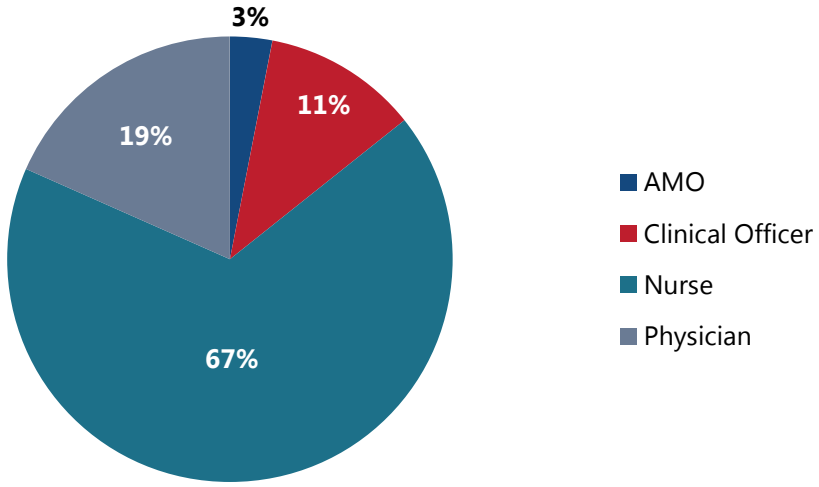
Providing standardized, competency-based EIMC training and follow-up mentorship and support to existing RCH health care providers has been the key to the program's success. Since program inception, there have been three 5-day EIMC provider trainings (Table 1). In addition, the team conducted one on-the-job EIMC provider training. All EIMC provider trainings used Tanzanian adaptation of the *WHO/Jhpiego Early Infant Male Circumcision under Local Anaesthesia* training package (World Health Organization and Jhpiego 2010). Its blended learning approach comprises both didactic and clinical elements, including components on EIMC counseling skills.

Table 1. EIMC-Related Trainings

Type of Training	Date	Number of Providers
EIMC skills training	April 2013 August 2013	22 18
EIMC training of trainers (TOT)	March 2014	12
EIMC skills training	March 2014	19
EIMC emergency refresher training	July 2014	22
IPC and autoclave training	August 2014	15
EIMC on-the-job skills training	August 2014	5

Pilot EIMC providers included medical doctors, clinical officers, assistant medical officers, and nurses (Figure 4). As of the April 2013 launch of EIMC services, training had been provided to a total of 22 Tanzanian EIMC providers (plus three participants from Jhpiego Lesotho). After the training, a Jhpiego expert trainer mentored all new providers for two weeks. During the mentorship period, newly trained EIMC providers were assessed for competency; any provider who had not met competency standards by the end of the mentorship period was mentored or trained further, or as necessary. Ongoing follow-up supportive supervision and QA visits were conducted in all pilot sites for all EIMC providers at least quarterly. Supportive supervision and QA activities were based on a tool called *Performance Standards for EIMC in Tanzania*, adapted from standards used by Jhpiego Swaziland.

Figure 4. EIMC Providers by Cadre



In August 2013, 18 participants (12 health care providers from Tanzania and six others from around the region) were trained on EIMC service provision to supplement the first batch of EIMC providers. The aim was to add providers to support the pilot sites and to give Jhpiego staff from Kenya, Rwanda, and Ethiopia the opportunity to initiate the EIMC services in their countries. All participants were coached in the WHO/Jhpiego EIMC training curriculum—with theoretical training, practice on anatomic models, and mentoring at the pilot sites.

In March 2014, 12 new trainers of trainers were trained using the *Jhpiego Clinical Training Skills Course*, with five days of theory and five days of co-training with a Jhpiego expert trainer). The TOTs then facilitated two additional EIMC provider trainings, resulting in the training of 19 new EIMC providers. Mentorship and supervision components were implemented immediately post training.

To support a specific site that needed additional human resources to keep up with demand for EIMC services, the EIMC team conducted an EIMC on-the-job training for four health care providers from Mafinga Hospital in August 2014. Among the eight pilot sites, the program trained 57 providers (four of whom subsequently moved to other facilities) plus 12 TOTs (three at each of the original four pilot sites). As of December 2014, there were 47 practicing providers. (Of these, six have been transferred to facilities not providing EIMC, one was promoted to District AIDS Control Commissioner, and three left to further their studies.)

Supportive Trainings for Service Providers

During QA and supportive supervision visits, it became apparent that there were gaps in EIMC providers' knowledge of both IPC practices and emergency response. To fill gaps and upgrade provider knowledge and skills, the MOHSW, with support from Jhpiego, provided relevant trainings.

Although the AE rate for EIMC is generally very low, it is vital that providers know what to do in case of an emergency. The team developed a *Refresher Training in Infant Emergency Management,* which included

Emergency Management Refresher Training

assessment of the healthy and sick newborns, neonatal resuscitation, neonatal-period complications, and AEs and patient transfers. The training updated 22 health care providers trained in EIMC in these emergency skills, including a practicum held at Iringa Regional Hospital. The remaining health care providers were "refreshed" with these skills in January 2015.

A common gap found in all facilities during supportive supervision and QA activities was the failure of both facilities and providers to meet IPC standards. In addition, some EIMC pilot sites were issued small autoclaves in order to process reusable EIMC instruments, but their knowledge of autoclave maintenance was either outdated or nonexistent. To school staff in IPC practices and autoclave use, a specific training was held in August 2014. At all eight sites, the EIMC team, in collaboration with the IPC project funded by the U.S. Centers for Disease Control and Prevention and trainers from the MOHSW, conducted on-site training on the appropriate use of IPC protocols and autoclave use and maintenance for all eight EIMC pilot sites.

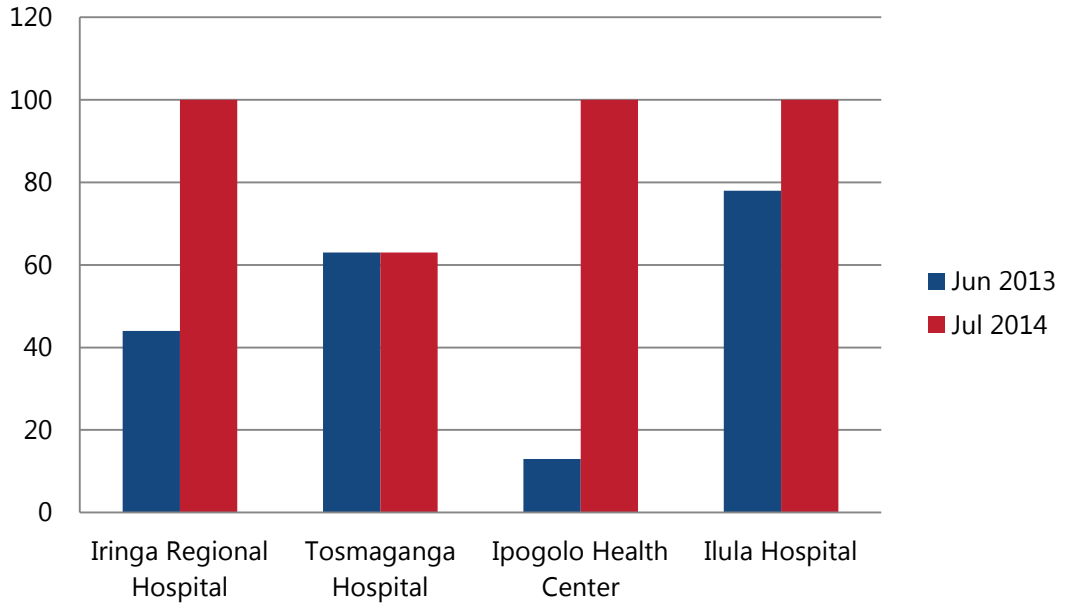
Mentorship, Quality Assurance, and Supportive Supervision Activities

The pilot EIMC program utilized ongoing mentorship, QA, and supportive supervision activities to ensure a high-quality program implementation. The pilot used various adapted tools originally designed by WHO to undertake these activities.

On-Site Mentorship: Mentoring of the newly trained EIMC providers was undertaken for two weeks post training for all EIMC providers and then as needed, depending on the competency assessment results. Mentoring was conducted by Jhpiego technical advisors and MOHSW staff and later in the pilot, by the specifically trained TOTS.

Quality Assurance: The pilot utilized the *Performance Standards for Early Infant Male Circumcision (EIMC) in Tanzania* tool, which was adapted to the Tanzanian context from WHO's normative guidance. The tool's 10 EIMC standards fall into four sections, concerning: 1) facility space, registration for EIMC, and linkages; 2) information and education on EIMC for parents/guardians and preparations for surgery; 3) EIMC surgical procedure; and 4) continuity of care in EIMC services. From April 2013 through December 2014, four QA visits were conducted. All pilot sites showed marked improvement in meeting EIMC standards; three of the first four pilot sites achieved 100 percent of the standards as of the last QA visit (Figure 5). Overarching gaps found in QA visits were generally related to IPC practices and missing documentation.

Figure 5. Percentage of Quality Assurance Standards Met in the Four Original Pilot Sites, at Baseline and in July 2014



Supportive Supervision: Supportive supervision was used to provide ongoing oversight and mentorship to the sites to ensure that documentation, logistics, and site management were well implemented. The pilot utilized the adapted Swaziland Supportive Supervision tool. External teams visited sites quarterly to conduct supportive supervision exercises. After each observation, the team met with facility staff to review findings and develop an action plan that highlighted gaps, how they would be handled, and persons responsible. Jhpiego technical advisors and regional MOHSW focal persons periodically followed up with each health facility to check on the status of action plan implementation and to provide any needed additional support.

Demand Creation and Community Engagement

EIMC is a new concept for Iringa Region and its communities. Creating demand for this new service was a key to ensuring that the community was aware of the services offered and understood the benefits of EIMC. The team took various approaches to build demand.

For example, the Tanzania Capacity and Communication Program (TCCP) developed behavior change communication materials to support the EIMC pilot (Figure 6). Materials included resources for the health facility, an EIMC counseling flip chart, EIMC community brochures, an EIMC poster, and promotional materials such as T-shirts and *khangas* (local cloths usually printed with messages and worn by women). To encourage follow-up visits, TCCP also developed a parent appointment card printed with postoperative instructions; there were also radio ads and radio spots that discussed EIMC risks and benefits and let parents know where to find the services.

Figure 6. Various Items Used to Create Demand

From top right: EIMC promotional poster, counseling flip chart, khanga, t-shirt.

Initially, EIMC demand creation relied for referrals solely on health care providers; but given their competing priorities and how new the service was, the team began to use VMMC peer promoters explain the benefits of EIMC and to refer potential clients for services. These peer promoters worked in the community and with facility providers in RCH waiting areas to educate people about EIMC services. The approach was successful, and at the end of the 2014 semiannual performance report period, regional authorities asked that the program support peer promoters so they could dedicate themselves full-time to EIMC during the pilot phase, in order to maximize opportunities to educate expectant couples and new parents on the benefits of EIMC. Two EIMC peer promoters were trained and deployed to each of the eight pilot sites. Peer promoters worked both within health facilities and in the community.

Peer promoters sensitize the community about the benefits of EIMC.

All peer promoters were trained in EIMC demand creation, and the team implemented a referral tracking system in May 2014. The system allows tracking of EIMC peer promoter referrals and shows which peer promoter-driven activities are successful in generating referrals.

To further capitalize on Iringa-based resources, the team supported a community EIMC training for mothers2mothers mentors, village leaders, community-based care workers, and home-based care workers. The purpose of this training was to ensure that these key

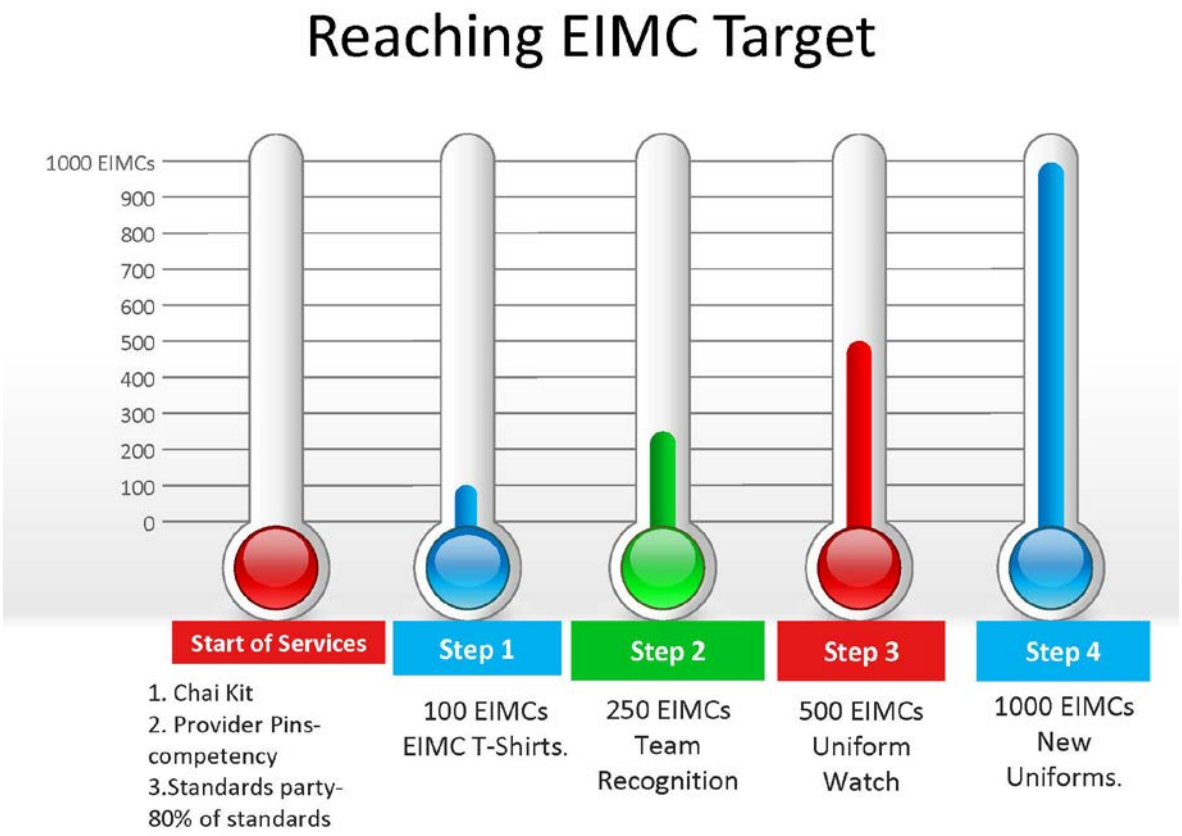
community spokespeople were sensitized to the benefits of EIMC and could transfer their knowledge to community members in their daily work, with the goal of further sensitizing the community to EIMC.

Motivating Providers

Since the inception of the VMMC program, providers trained in VMMC had been paid overtime hours for performing VMMC at static sites. However, because EIMC services were intended to be integrated into health facilities and thus sustainable, EIMC providers deliver services during normal working hours (i.e., with no overtime) and do not receive extra-duty allowances. To accommodate the additional tasks without extending their work schedules, EIMC providers limited the number of infants they would circumcise per day to between three and five. The Iringa Regional Authority, in collaboration with Jhpiego, met to ensure that provider workloads remained balanced while meeting the new demand for infant circumcisions. The team worked with facilities to develop duty rosters for each pilot site to ensure that services were provided by EIMC providers from more than one department, including both maternity and RCH.

The team decided to introduce the EIMC motivation ladder to EIMC providers to improve their morale. Regional authorities and providers themselves suggested nonmonetary ways to motivate and reward facilities to achieve targets. The MOHSW, with Jhpiego support, hosted recognition parties for EIMC teams that reached targets, and the teams received letters, certificates, and congratulations from district health management teams. Teams also receive nonmonetary recognition for specific targets (Figure 7).

Figure 7. Motivational Targets for EIMC Providers



Commodities and Logistics

Prior to establishment of services, MCHIP supported procurement of equipment and supplies needed for EIMC startup and implementation. Minimal items (e.g., Mogen clamps and restraint boards) were sourced internationally, while most consumable and other supplies were outsourced locally. Commodities and supplies were distributed to all pilot sites, and one focal person was selected from each facility to control and manage the EIMC consumable supplies.

MCHIP is continuing to support the EIMC pilot sites to procure and distribute commodities to sites, and a special form has been developed to track and request commodities and supplies for each EIMC facility (Annex B).

The Mogen clamp was chosen because it is simple to operate, is reusable, and does not require the infant to return for device removal (as required when using the Plastibell technique). Requiring the infant to return for device removal (with potential dire consequences if the device is not removed when required) was considered a potential risk in rural areas, where such requirements may be burdensome to parents.

Monitoring and Evaluation

In April 2012, before the pilot's launch, in consultation with NACP, MOHSW, and regional and district authorities, tools for monitoring and evaluation (M&E) were developed. These included client intake cards, referral cards, and registers.

The EIMC M&E tools and data collection, currently being supported by Jhpiego, will eventually be transitioned to the NACP and/or to RCH departments. EIMC service statistics data are reported to both NACP and RCH. A clear data flow system for the pilot has not been established, as both departments have been collecting data.

Site Management and Support

MCHIP worked closely with each facility to ensure proper site management and supported the facilities' dedicated focal people to take the lead on duty rosters, commodities, and M&E activities. Action plans were developed after each QA visit, and technical advisors worked closely with each facility to resolve gaps. While the pilot sites were new, monthly supportive supervision and quarterly QA visits were conducted with national and local representatives. During the EIMC pilot, Jhpiego MCHIP/Accelovate has been dedicated to ensuring a constant supply of EIMC commodities by institutionalizing the requisition and supply system between the sites and the technical advisors at the Jhpiego Iringa Regional Office.

Preparing for the Operational Research EIMC Acceptability Study

Complementary to the EIMC pilot, data collection for an operational research EIMC Acceptability Study was in progress as of May 2014. The EIMC study's aim was to gather information on the users of EIMC services, their experience with EIMC services, and their decision-making surrounding EIMC. Additionally, the study assessed the views of health care providers in facilities where EIMC was being integrated into service delivery. *Report on an Operational Qualitative Research Study on EIMC Feasibility and Acceptability in Iringa, Tanzania* (beginning on page 15) discusses this qualitative research in detail.

COSTING EIMC

Currently there is no comprehensive estimate of the unit cost of EIMC and this has not been completed in Tanzania. There are no robust data in the literature; data are mainly desk analyses rather than primary costing studies. The costs of this Iringa pilot will be inflated, due to the additional costs related to program startup (e.g., provider training, commodities and furniture, mentorship, development of M&E tools, related research, and demand creation material and activities).

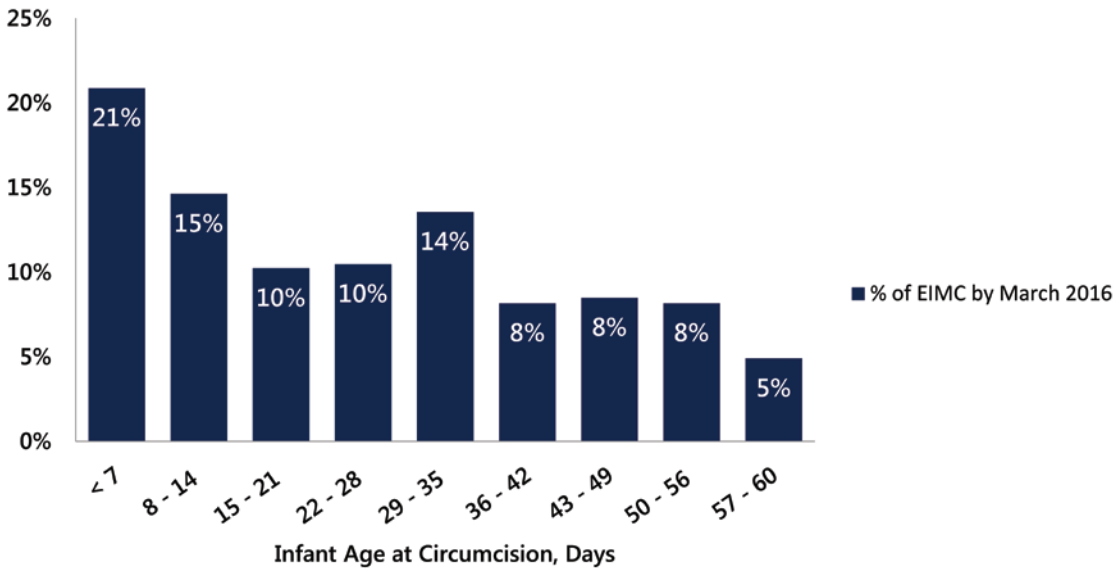
Costing EIMC is an area needing attention.

Results of the Pilot EIMC Implementation

Service Statistics

As of December 2014**,** 2,084 infants were provided with EIMC at the eight pilot sites (Table 2). Overall, most infants were circumcised during the first three weeks of life (49 percent, n=1,036); 26 percent of infants during the first seven days; and 23 percent at between eight and 21 days (Figure 8). On the day of circumcision, 78 percent were brought by mothers or female guardians alone (between 54 and 94 percent), and 22 percent were brought by both parents; none was brought by a father or male guardian alone. Parents of infants were assessed for HIV status. The uptake of HIV testing and counseling among parents was low, with only 3 percent of parents tested for HIV. One hundred twenty-eight infants (6.1 percent) were considered HIV exposed during the pilot.

Figure 8. Infant Age at Day of Circumcision



During the pilot, parents of EIMC clients were advised to return at 48 hours and seven days for follow-up to review wound care and to assess healing. Most EIMC clients (93 percent) returned for their 48-hour follow-up visit, and 71 percent returned for the seven-day follow-up visit. There were eight intraoperative AEs) and one postoperative AE over the period of the pilot, giving an AE rate of 0.38 and 0.05 respectively. AEs included: excessive bleeding (n=6) and excessive skin removal (n=2). The remaining AE was an infection, reported on a Day 2 follow-up visit. All AEs were treated and the complications completely resolved (Table 3).

Table 2. Service Statistics on EIMCs Performed April 2013–December 2014

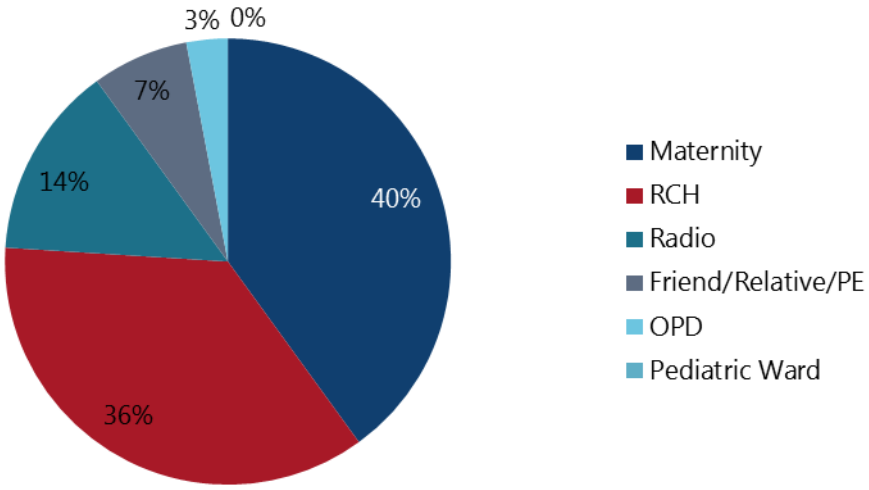
Indicator	Statistics	
	#	%
EIMC done cumulatively	**2,084**	
EIMC done by age		
<=7 days	546	26.2
8–21 days	490	23.5
22–36 days	459	22.0
37–51 days	368	17.7
52–60 days	204	9.8
61+ days	17	0.8
Total	2,084	100.0
Place of delivery of infant's mother		
This facility	1,398	67.1
Another facility	555	26.6
Home	131	6.3
Total	2,084	100.0

Most mothers of infants heard about EIMC service availability either in the labor and delivery (L&D) ward or in RCH (Figure 9 on the following page). Table 3 provides an overview of infant service statistic data on EIMCs performed between April 2013 and December 2014.

Table 3. Adverse Events Occurring During the Pilot

Indicator	Facility			Total
	Iringa Regional Hospital	Ilula Hospital	Ipogolo Health Centre	
Number of AEs during procedure	5	2	1	8
Mild bleeding AE	2	1	1	4
Moderate bleeding AE	2	0	0	2
Mild to excessive skin removal	1	1	0	2
Number of AEs occurring post procedure	0	0	0	0
Moderate infection AE	1	0	0	1

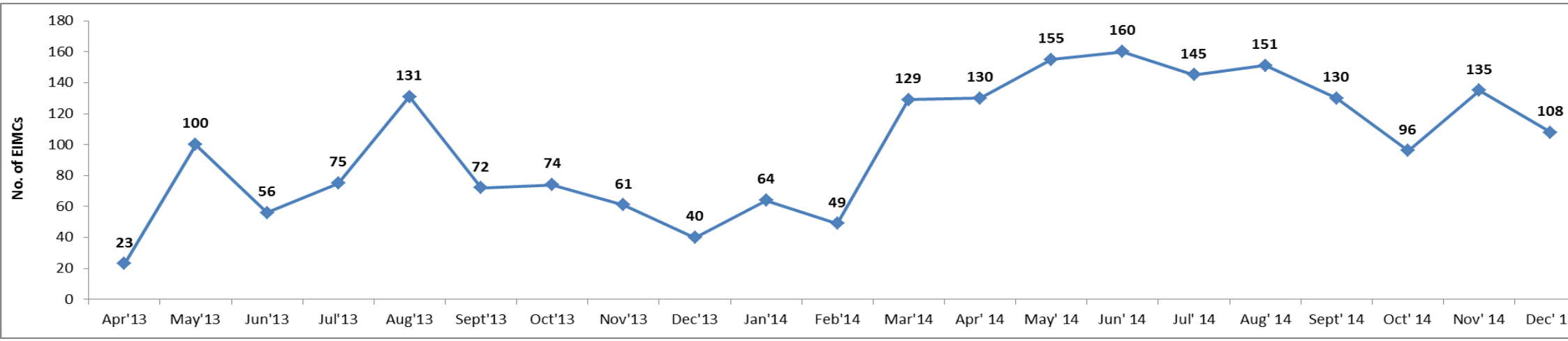
Figure 9. Sources of Mothers' Information on EIMC Service Availability



Monthly, Quarterly, and Yearly EIMC Results

The number of EIMCs differed from month to month. During the initial pilot, with four health facilities providing services, the average number of monthly EIMCs was 60 (range 23–131). From March 2014, when eight facilities were offering services, the average monthly total was 133. Spikes in the number of monthly EIMCs correlated with training activities (in August 2013 and March 2014), as there was a focus on recruiting clients so that providers could undertake the practical component of the training.

Figure 10. Number of EIMCs Performed, April 2013–December 2014



Facilities' monthly performance varied. Table 4, Table 5, and Table 6 show monthly and quarterly performance of individual sites since the pilot inception. Iringa Regional Hospital conducted the most EIMCs in the period (528 EIMCs), with Ipogolo Health Centre a close second, with 503 EIMCs conducted during the period. In a comparison of the number of EIMCs conducted in a facility to the number of male infants born there, Ipogolo Health Centre had the highest coverage, with 25.4 percent of male infants born in the health facility circumcised. Iringa Regional Hospital circumcised 7.9 percent of male infants born there (Table A-2 in Annex A).

Table 4. Number of EIMCs Performed, by Facility, April/June 2013–October/December 2014

	Apr/Jun 2013	Jul/Sept 2013	Oct/Dec 2013	Jan/Mar 2014	Apr/Jun 2014	Jul/Sept 2014	Oct/Dec 2014
Ilula Hospital	21	61	23	29	72	46	45
Ipogolo HC	49	82	48	85	97	68	74
Iringa Referral Hospital	75	82	45	69	92	108	57
Tosamaganga Hospital	34	53	59	59	62	33	26
Kidabaga Health Centre					20	1	6
Igumbilo Dispensary					45	52	28
Mafinga Hospital					22	45	32
Frelimo Hospital					35	73	71
Total	179	278	175	242	445	426	339

Table 5. Indicators for EIMCs Performed, by Facility

Indicator	Facility Performance								
	Iringa Referral Hospital	Ipogolo Health Centre	Tosamaganga Hospital	Ilula Hospital	Frelimo Hospital	Igumbilo Dispensary	Mafinga Hospital	Kidabaga Health Centre	Program Total
# of EIMCs done	528	503	326	297	179	125	99	27	20,84
% of EIMCs conducted at the site	85.2	42.9	91.1	84.8	30.2	16.0	85.9	88.9	67.1
% of EIMCs done delivered at another facility	8.5	46.7	7.1	11.4	63.1	71.2	13.1	11.1	26.6
% EIMCs done delivered at home	6.3	10.3	1.8	3.7	6.7	12.8	1.0	0	6.3
% EIMCs returning for Day 2 follow-up	98.3	98.6	64.4	99.0	96.6	100.0	91.9	100.0	92.9
% EIMCs returning for Day 7 follow-up	87.7	84.3	10.4	73.7	83.2	91.2	59.6	59.3	70.9
# of exposed infants	27	17	21	30	13	8	11	1	128
% of exposed infants	5.1	3.4	6.4	10.1	7.3	6.4	11.1	3.7	6.1
# of intra AEs	5	1	0	2	0	0	0	0	8
# of post AEs	1	0	0	0	0	0	0	0	1

A comparison of the number of EIMCs provided by each facility to the number of male infant births demonstrated great variance (from 10.9 percent to 26.1 percent; Figure 11). A comparison of EIMCs at all eight facilities for 2014 showed that 16 percent of all recorded male infants in the region were circumcised (Table A-1, Annex A).

Figure 11. Percentage of Infants Circumcised at Facilities Compared to Infant Male Facility Births

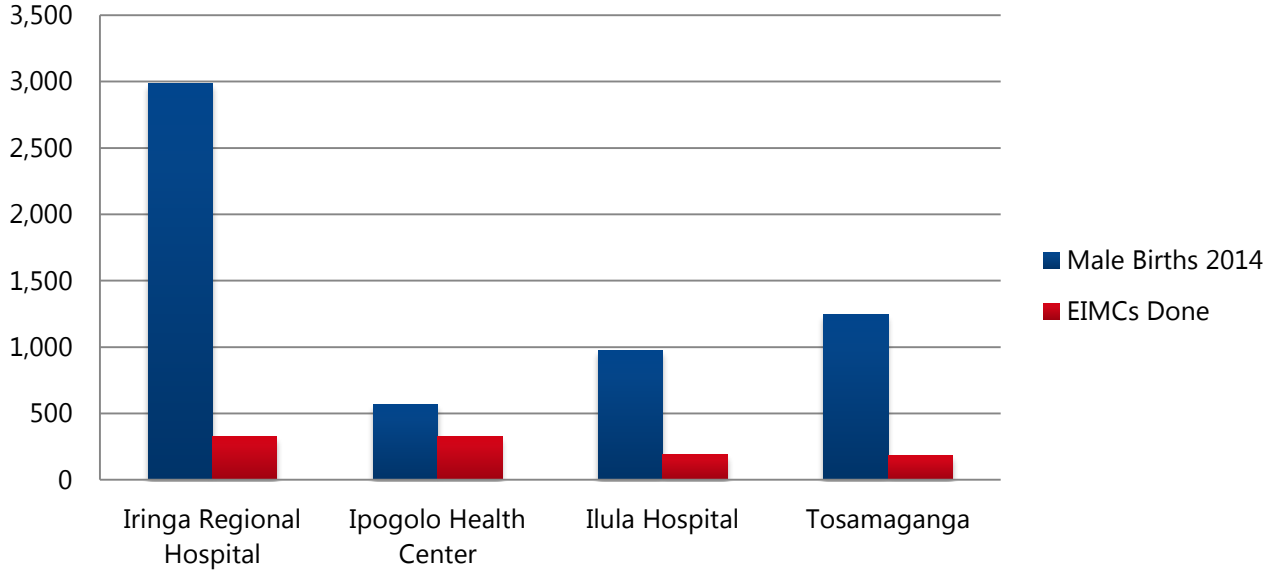


Figure 12. EIMC Quarterly Performance, April/June 2013 through October/December 2014

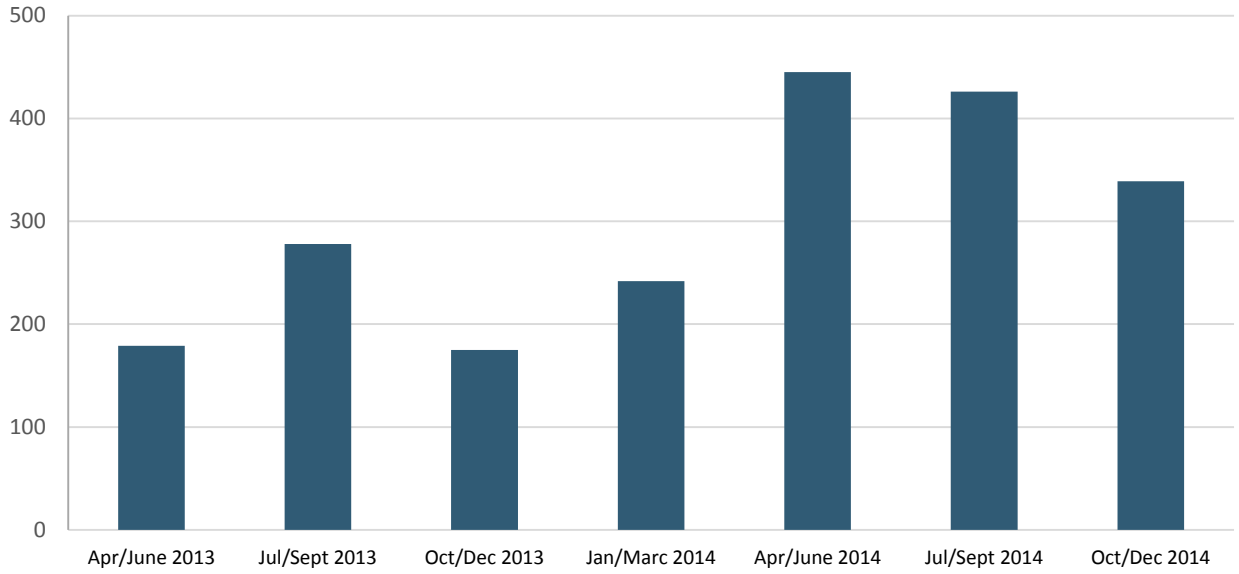


Table 6. Average Number of EIMCs per Month by Providers' Work Section Classification

Classification of work sections	Average number of EIMCs per month								
	Iringa Referral Hospital	Ipogolo Health Centre	Tosamaganga Hospital	Ilula Hospital	Frelimo Hospital	Igumbilo Dispensary	Mafinga Hospital	Kidabaga Health Centre	Overall Total
RCH	4	4	3	4	6	6	3		4
RCH and OPD		5			4	4			4
Maternity	5	6		3	8		3		5
Maternity and RCH		9						3	6
OPD		4						1	3
OPD, maternity, and RCH				4	2			1	2
Surgical ward	2		3		5				4
Neonatal/pediatric ward	6		6						6
Total	4	5	4	3	5	5	3	1	4

An analysis of EIMCs performed by place of work shows that on average, EIMC providers in maternity and RCH performed the most EIMCs per month.

EIMC Services Strengthening RCH Service Delivery

One of the many advantages of integrating EIMC services into existing outpatient department RCH services has been the mutual benefits for both overarching RCH services and HIV prevention practices—for example:

- RCH providers were "refreshed" on basic assessment and emergency skills, including infant warning signs, during EIMC training.
- Fathers were encouraged to be involved in their children's health (20 percent of infants were accompanied by their father).
- Postpartum care visits may be increased; EIMC follow-up rates were greater than 90 percent.
- The RCH department received additional resources (e.g., equipment, training, supportive supervision, mentorship).
- The number of infants born at home and coming to a health facility for services increased.

Challenges for EIMC Service Delivery Pilot

One challenge over the life of the project was been the issue of the provider payment for circumcision services. Providers working in the VMMC program since its inception had received stipends for performing VMMC services at MOHSW direction. However, for EIMC to be sustainable over the long term, it is important that services be integrated, with no additional stipend offered to providers. EIMC providers expressed concern about not receiving such a stipend, and it was challenging to integrate EIMC service provision into their already-busy schedules; some clients experienced long waits, and others were turned away, as providers seemed unwilling to commit to EIMC service delivery due to the discrepancy in provision of stipends between VMMC and EIMC. MCHIP, Accelovate, and now AIDSFree have worked closely with regional and national authorities and with providers to develop a "motivational ladder" (Figure 7), which aims to develop a team approach to program implementation. Teams work together toward targets, including a specific number of EIMCs. When a team reaches the target, they receive specific nonmonetary incentives. Similar motivation schemes have been implemented in other health facilities in Tanzania, including for RCH services.

Provider workload also affected the EIMC pilot, as providers limited the number of infants they would circumcise per day (to between three and five infants) in order to fit their work schedules. To overcome the resulting limitation on potential EIMC numbers, duty rosters for other departments (i.e., maternity, RCH) provided for EIMC service delivery there.

Overall, providers in RCH performed significantly more EIMCs than their maternity or L&D counterparts. In part this resulted from the EIMC location (in the RCH outpatient area), which made it less accessible to other departments' providers.

Overcoming community myths about EIMC services was also a challenge, and some infants missed the opportunity to have EIMC as a result. For example, some fathers held the belief that infants are too young for circumcision or that it may retard or accelerate the growth of the infant's penis. Through the life of the EIMC pilot, the community was assured of the benefits of EIMC and educated on the facts during demand creation activities (e.g., advocacy meetings and group education sessions in health facilities, as well as through distribution of brochures and other information and communication materials specifically developed to relay the facts).

Lessons Learned

Post-training mentorship and supportive supervision and mentorship were enhanced for the EIMC providers who did not become competent during training; more than 95 percent of EIMC providers have achieved competency.

Improved demand creation for sensitizing clients to EIMC benefits and risks during trainings increased the number of EIMC procedures conducted. Demand creation activities enhanced the number of parents seeking EIMC at pilot sites. Demand creation is important, given the fact that infant circumcision is totally new in Iringa. Generally, community demand seems to be slowly rising, an effect of facility referrals and radio commercials.

Providers and facilities needed to be supported to develop duty rosters and think through the best way to integrate services into RCH. When services were first introduced, there were times that clients were turned away or had to wait a long time for services.

Additional trainings were required to ensure that services delivered were of high quality. These specific trainings covered emergency skills, IPC, and autoclave use and maintenance.

A motivational ladder of nonmonetary incentives was introduced to encourage providers to conduct EIMC services. This mechanism was a response to provider feedback around the discrepancies around extra-duty allowances given to VMMC providers.

The EIMC pilot in Iringa Region was successful in providing a learning rich experience and generating needed data which has contributed to the incorporation of EIMC into both the national VMMC guidelines and the VMMC Country Operational Plan 2014–2017.

REPORT ON AN OPERATIONAL QUALITATIVE RESEARCH STUDY ON EIMC FEASIBILITY AND ACCEPTABILITY IN IRINGA, TANZANIA

INTRODUCTION TO THE EIMC QUALITATIVE RESEARCH STUDY

The exploration of male circumcision options in Iringa Region had two concurrent streams of activities: the service delivery pilot described above, involving delivery of EIMC services integrated with RCH services, and an operational qualitative research study that aimed to gather data on parent views of EIMC service acceptability (the views both of parents who elected to have their male infant circumcised and of those who did not so elect) and on the views of health care providers actually implementing EIMC services. The following pages report on this operational qualitative research study, *Piloting Early Infant Male Circumcision in Iringa, Tanzania: Views on Acceptability and Service Delivery Integration*.

Research Objectives

Qualitative study objectives were:

1. To describe pilot EIMC service users, drawn from the EIMC pilot program database.
2. To describe views of parents of infants circumcised through the EIMC pilot, including their satisfaction and factors in their decision-making process.
3. To explore the views and perceptions of mothers and fathers who received counseling or orientation regarding EIMC and did not choose to have their male infant circumcised.
4. To explore views of facility in-charges and health care providers on the rollout of integrated EIMC within RCH services.
5. To review the demographic characteristics of all parents and infants in the EIMC service delivery area.

Ethical Clearance and Consent

The research was conducted with the ethical oversight of the Institutional Review Boards (IRBs) of the Johns Hopkins University Bloomberg School of Public Health (JHSPH; reference number IRB00005145) and the Tanzania National Institute of Medical Research (NIMR; reference number NIMR/HQ/R.8a/Vol. IX/1684), and with the support of the Iringa Regional Medical Authorities.

Researchers trained on research ethics obtained verbal informed consent from participants in focus group discussions (FGD). The researchers read a consent script to participants in Kiswahili—the national language and the language most commonly spoken in the country—calling for questions from the group and asking each individual whether he or she agreed to participate. The facilitator's signature indicated that all participants consented. A trained RA obtained written informed consent from health care providers. Before initiating each interview, the RA read the informed consent statement, solicited questions, and then asked providers to sign the consent statement.

Methods

General Study Design and Sampling

The qualitative study was conducted with clients from four health facilities in Iringa Region: Ipogolo Health Centre, Iringa Regional Hospital, Tosamaganga Hospital, and Ilula Hospital.

The study used FGDs for EIMC acceptors and non-acceptors, stratified by where they received counseling on EIMC; in-depth interviews for health care providers, including facility and RCH in-charges at the EIMC pilot health facilities; and a review of the non-identified dataset, which included all EIMC clients. The study was conducted from May to August 2014.

Twenty-four FGDs were held with parents attending RCH services at four EIMC pilot sites, for a total of 154 participants (26 percent male and 74 percent female). Parent FGDs were stratified by those who decided to circumcise their infant son after being provided with EIMC education (n=8 FGDs); those who declined to circumcise their infant son (n=8 FGDs); mothers who received EIMC education during ANC services (n=4 FGDs); and mothers who received EIMC education during their postnatal or well-child services (n=4 FGDs).

Table 7. Overview of FGD Participants

Population	Gender	Ipogolo	IRH	Tosamaganga	Ilula	Total
EIMC acceptors (91)	Male	7	7	4	10	28
	Female	10	10	7	10	37
	Female at ANC	7	5	5	9	26
EIMC non-acceptors (74)	Male	4	6	7	7	24
	Female	5	8	6	10	29
	Female at ANC	4	4	4	9	21
Total		**37**	**40**	**33**	**55**	165

Participation of the health care providers in the study was based on a convenience sampling among all providers who had been trained on EIMC and were providing EIMC services. All who were present on the day of interview and met the inclusion criteria were included in the study. All health facility in-charges (or those acting for them) were interviewed.

The interviews were conducted on health facility premises, during working hours when the provider was not too busy but mostly after hours. Interviews lasted approximately 30 minutes and comprised open- and closed-ended questions.

Study Definitions	
Non-Acceptor	Mother, father, or guardian who has been counseled and educated about EIMC (upon attendance at ANC, L&D, or well-child services) and who does not have son circumcised during the first 60 days after birth.
Acceptor	Mother, father, or guardian who has been counseled and educated about EIMC either during pregnancy or post-delivery and who has the infant circumcised within 60 days of birth.

Data from routine EIMC service delivery records were also analyzed. Data were entered into a database and stripped of identifiers. These data were routinely examined as part of the pilot monitoring. Some of the variables routinely examined included: service uptake by facility; who refers infants for EIMC; places where the infants' mothers delivered; rate of returning for follow-up care; AEs; infants' HIV status; and providers' performance.

Study Population

Participants in the EIMC qualitative study comprised three populations:

EIMC Acceptors

"EIMC acceptors" were defined as parents or guardians who decided to circumcise their male infant at the EIMC pilot health facilities. These included both mothers/female guardians and fathers/male guardians (their FGDs were held separately). Mothers were further divided into two groups: those who received EIMC information and counseling during pregnancy in ANC and those who received EIMC information and counseling after the baby was born. A separate FGD was held for each group.

EIMC Non-Acceptors

"EIMC non-acceptors" were defined as parents, both mothers and fathers or guardians, who had received counseling or orientation on EIMC and who chose not to have their male infant circumcised within 60 days of birth.

Fathers were interviewed in their own FGD. Mothers were further divided into two groups: those who received EIMC information and counseling during pregnancy in ANC and those who received EIMC information and counseling after the baby was born. A separate FGD was held for each group of mothers.

All study participants were at least 18 years old, lived within an EIMC pilot health facility catchment area, and consented to be part of the research. EIMC acceptors and non-acceptors were either parents or guardians of a male infant. Health care providers interviewed were either facility in-charges or providers trained in the EIMC procedure.

EIMC Providers and Facility In-Charges

Key informant interviews (KIIs) were held with facility in-charges, RCH in-charges, and providers who offer EIMC service. A total of 31 KIIs were conducted—seven among the facility in-charges and/or RCH in-charges of the pilot sites and 24 with EIMC providers. FGDs and KIIs were conducted in Kiswahili. All discussions were audio recorded, transcribed in the same language, and later translated into English.

Training and Deployment of Research Assistants

Eight RAs were recruited for the study; one person ended up not participating. The remaining seven were trained on study-specific procedures on May 8–9, 2014, in Dar es Salaam, in a training that covered good clinical practice, including the obtaining of informed consent and basic human research ethics. During training, RAs learned about the study and practiced with the tools and study procedures. After the training, RAs were deployed to Iringa and introduced to their specific facilities during the week of May 12, 2014. Actual study and participant recruitment started on May 19, 2014.

Data Analysis

Audio-recorded data were transcribed in Kiswahili and then translated verbatim into English. Codes were grouped into categories, and emerging themes were then identified iteratively following the general principles of grounded theory. Analysis was based on theme saturation—a situation where qualitative data collection reaches a point where no new issues emerge. For the quantitative analysis, Stata 13 (stata.com) was used to produce descriptive statistics (frequencies).

PILOT RESULTS

A total of 2,084 infants were circumcised in the pilot from April 2013 to December 2014 (Table 8).

Table 8. Overview of EIMCs Performed in Pilot

Indicator	Facility performance								
	Iringa Referral Hospital	Ipogolo Health Centre	Tosamaganga Hospital	Ilula Hospital	Frelimo Hospital	Igumbilo Dispensary	Mafinga Hospital	Kidabaga Health Centre	Program Total
# of EIMCs performed	528	503	326	297	179	125	99	27	**2,084**
Median age at circumcision (in days)	32	27	4	14	28	30	14	3	**22**
% of EIMCs performed; delivered at the site	85	43	91	85	30	16	86	89	**67**
% of EIMCs performed; delivered at another facility	9	47	7	11	63	71	13	11	**27**
% of EIMCs performed; delivered at home	6	10	2	4	7	13	1	0	**6**
# of exposed infants circumcised	27	17	21	30	13	8	11	1	**128**
% of exposed infants circumcised	5	3	6	10	7	6	11	3	**6**
% of EIMC returning for Day 2 follow-up care	98	99	64	99	97	100	92	100	**93**
% of EIMC returning for Day 7 follow-up care	88	84	10	74	83	91	69	59	**71**
# of intraoperative AEs	5	1	0	2	0	0	0	0	**8**
# of postoperative AEs	1	0	0	0	0	0	0	0	**1**

The largest portion of the EIMC clients were seven days old. Most parents (67 percent) received EIMC services at the health facility where their child was delivered.

Figure 13. Infant Age at Circumcision (April 2013–December 2014)

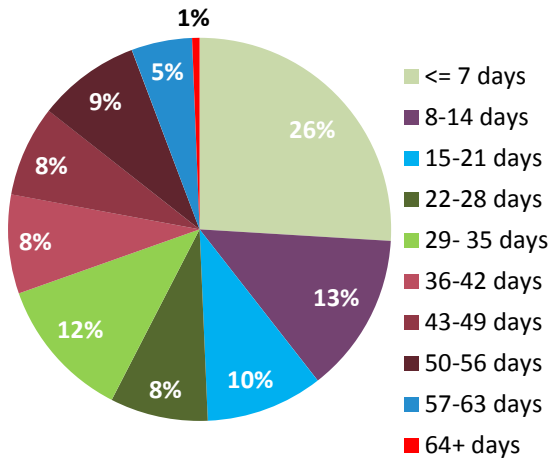
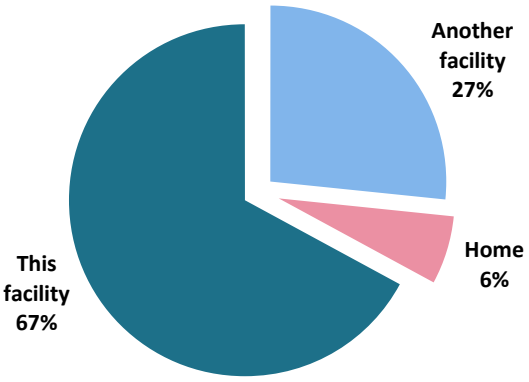


Figure 14. Percentage of EIMC Clients by Place of Delivery (April 2013–December 2014)



More than half the parents of circumcised infants were of tribes from Iringa (58 percent) and most other parents were from Njombe (17 percent). Both Iringa and Njombe are southern regions of Tanzania where infant circumcision is not common. Most of the parents of circumcised infants were Christians, with both male and female parents or guardians hearing about EIMC services primarily within the health care facilities and through radio advertising.

Table 9. Background Characteristics of Parents/Guardians Who Brought Their Infants to EIMC Services

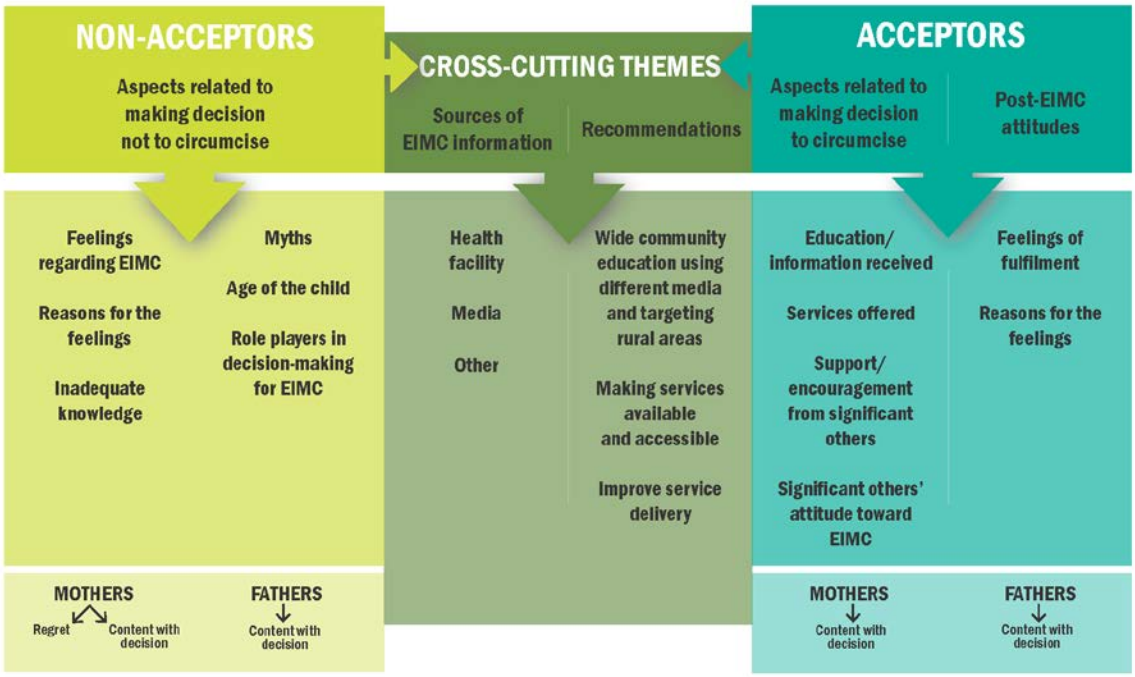
Characteristics of EIMC clients and parents	Number	Percentage
Region of EIMC parents' or guardian's tribe*		
Iringa	1,213	58
Njombe	362	17
Other southern regions	107	5
Other regions in the country	251	12
Unknown	151	7
Total	2,084	100
Residence of infant's mother		
Same district as circumcision facility	1878	90
Different district from circumcision facility	206	10
Total	2,084	100
Parents' or guardian's religion		
Christian	1,652	86
Muslim	270	14
Other	4	0.1
Not recorded	158	8
Total	2,084	100
Where did infant's father hear about EIMC services?		
Maternity, L&D	107	28
RCH	93	25
Radio advertising	102	27
OPD	6	2
Friend or relative	58	15
Peer educators	12	3
Total reporting	378	100
Where did infant's mother hear about EIMC services?		
Maternity, L&D	830	40
RCH	746	36
Radio advertising	288	14
Friend or relative	100	5
Peer educators	62	3
OPD	54	3
Total reporting	2,080	100

* Where the father's tribe was missing, the mothers' tribe was used.

STUDY RESULTS

FGD results are presented below in two sections—one describing the acceptors and the other the non-acceptors. Certain themes emerged (Figure 15).

Figure 15. Categories Emerging from Acceptors and Non-Acceptors



FGD Results: Non-Acceptors

Among the non-acceptors, some participants felt unhappy that their sons had not undergone EIMC, while others were comfortable with their sons not being circumcised. Reasons for the feelings varied.

Participants Who Felt Unhappy That Their Sons Had Not Undergone EIMC

Non-acceptor FGDs revealed that quite a few of non-acceptor women had actually wanted their infant son to be circumcised but were not permitted by the baby's father to allow the procedure. All these women had received counseling on EIMC during their RCH services and wanted to circumcise their sons but their husbands had refused. Their comments centered around the lost opportunity to circumcise while the child was still young and while the procedure had no cost implications, carried a low risk of injury, and meant that their child would have a positive self-image while growing up and from an early age would be clean and less prone to UTIs and other conditions. Their feelings were evident in comments such as:

> *Actually I do feel terrible because I wanted the kid circumcised while he was still young so that we can clear this once and for all and avoid all disturbances, because if he grows big, there will be disturbances.*

> *I feel badly. . . . I wanted to circumcise him soon after birth but his father refused until he grows up, because he said he is still young.*

Other female non-acceptors indicated that they would have liked to have their infant circumcised, because they felt circumcision within 60 days was a good idea, given the tradition of keeping the mother and baby indoors for the first 40 days; if an infant is circumcised early, both the umbilical stump and the penis will have healed before the child is allowed outside.

They are saying why not I took the son for circumcision when I was at Mfyele. Mfyele is the period soon after delivery, when we normally stay for about one month without going out, you understand now! So they suggest the son to be taken for infant circumcision so that after a month when the mom can start going out, even the son is clean, the umbilical cord and even the circumcised wound.

Participants Who Felt Satisfied That Their Sons Were Not Circumcised

Other participants felt satisfied or not worried with their decision not to circumcise their sons early. Their reasons fell into two main categories, reasons relating to the child and those relating to the parent.

Category 1: Factors Related to the Decision Not to Circumcise

- **Feelings regarding EIMC**
- **Reasons for feelings**
- **Inadequate knowledge**
- **Myths**
- **Age of the child**
- **Role players in decision-making for EIMC.**

Within factors related to a decision not to circumcise, child-related reasons focused mainly on the age of the child. The idea was that the child was still too young and as a result, his organs were too small; because the penis, too, was still very small, the provider doing the circumcising might make a mistake and cut it. Hygiene issues were also a concern; participants felt that, due to the age of the child, he would not be able to control urination and as a result would infect the wound. At the same time, again due to the child's young age, it would be hard for parents to change the child or clean his wound after he soiled himself. Other reasons included the fact that they believed the child would "be stubborn," meaning he would cry uncontrollably and would not stop even when consoled, due to pain. It could be deduced from this notion that participants did not possess adequate knowledge about what EIMC entailed and as a result had little confidence, neither in EIMC providers nor in their own role as parents after the EIMC procedure. The quotes below reflect how some of the participants related such feelings.

I don't have a piece of worry in me, as I've told you I am waiting for him to be a little grown up till three months, then I will bring him here for circumcision.

First, nursing the wound is tiresome. If he urinates, it becomes a problem, even to change him. On top of all, you even worry about his navel and the same time you take care of the circumcision wound.

Fathers' key reasons not to circumcise their sons seemed to result from inadequate education on EIMC as well as on the procedure itself and how pain would be controlled. As a result, some fathers, especially those who themselves had undergone traditional circumcision, felt they would be torturing their sons by exposing them to such a painful procedure while so young. Other fathers were working far from their homes and wanted the procedure to be done when they were at home so they could support their families. The excerpts below support these notions.

It is true that I opposed this issue of circumcision. First of all I should let you know that I for one was circumcised traditionally. . . . So based on my case, I thought that my kid is too young to be circumcised. The reason for me to have such kind of argument is due to the fact that I myself was circumcised when I was about 15 years old. . . . Yes, I can remember that there was a kid of about five years old when we were circumcised in a group who was also circumcised with us as well. . . . For my observation he was going through some suffering and I reached a conclusion that my parents had done the right thing when they decided that I should be circumcised with old age of about 15 years.

My wife visited the health center a couple of days ago . . . and we were informed about procedures, but you know the nature of my bread-winning activities involves some movements and travelling . . . so I advised my wife that it would be a wise idea if I finish up with my job first and then this process of circumcision for our child can take place later, so that I should have a chance to be around and therefore be able to help her with some activities at home.

Category 2: Factors Related to the Decision to Circumcise

- **Education/information received.**
- **Services offered.**
- **Support/encouragement from significant others**
- **Significant others' attitude toward EIMC.**

The women who felt satisfied that their sons were not yet circumcised were mainly those who had not yet received any EIMC education, so they believed that they would not be able to take good care of the wound and were therefore even content with their husbands' decisions to delay circumcision until the boys were older. Those who had received EIMC education also made peace with their husbands' decisions not to circumcise the infants, as arguing the matter further seemed to cause friction in the house. This is how one woman put it:

It's true that husbands are the ones causing inconveniences. If it wasn't for our husbands, most of the children could've undergone circumcision. . . . when talking about circumcising our child it results to conflict between us.

Another theme related to the decision not to circumcise was participants' inadequate knowledge. This third theme, equally common among men and women, focused on the provider's skill in performing the EIMC procedure and concern that the provider would cut their son's small penis or cut veins to the penis, and/or that as the provider performed the circumcision, the muscles would become stiff, causing difficulties in healing of the wound.

The theme of myths and misconceptions also affected the decision not to circumcise. Myths are wrong, unproven, false, or imaginary beliefs, ideas, or conclusions based on faulty thinking or wrong facts that are used to justify a social establishment. Misconceptions are usually based on inadequate information regarding a phenomenon under discussion. Participants' false beliefs around EIMC focused on the procedure's long-term effects on the child—for example, the thought that it would cause impotence or early ejaculation and or that it would cause the size of the penis to be reduced. All this would bring family problems. Other participants, probably Christians, thought EIMC was promoted and undertaken as part of an indirect approach to converting them to Islam. The quotes below highlight such thinking.

He can be circumcised free of charge and later be affected. Maybe it will cause impotence, or they say it will result into early tiredness of penis. . . . Another thing I wanted to say is that, it seems that, eehh, when an infant is still an infant and get circumcised. . . . They say the size of his penis will be reduced. . . . that also can be found.

Because some people think if a person is circumcised he changes his religion, that circumcision is Muslims' affair. They are the ones who circumcise.

The preferred age for circumcising a child was brought up by non-acceptors as a theme in the decision not to circumcise. Having declined the circumcision of their children during infancy, it was logical to establish what those parents believed would be the appropriate period for circumcision. Participants' responses were classified into two categories: unspecific and specific preferred age.

Among those participants who did not specify an age, some participants indicated that, when they came to an agreement as parents, they would go ahead and circumcise their son(s). Others indicated that

when their children reached certain milestones (e.g., when their child could sit or feed himself), they would circumcise him. Most of these parents were women who seemed to have received education and wanted to circumcise their sons but were unable to allow the procedure because they could not reach consensus with their husbands.

Some participants, after not accepting EIMC, brought up a preference on the specific age of circumcision. Different participants identified different appropriate ages. Generally, all indicated the best time for circumcision being from three months onwards, with the majority indicating six months to 10 years, when a child would be able to control his sphincters and wound hygiene would not be a problem. For most participants, this preference stems from prior experience, as most boys were circumcised when they were a year or so old. EIMC is a change that people still need to get used to.

> *I was circumcised traditionally in the bush without anesthesia, without anything, you see? Now, majority of people know that there has been a slight change that nowadays one is circumcised by using scissors unlike in old days where a knife or something else was used. . . . It is an advice, like this is not proper and if you recall the way you were circumcised and your child should go the same process, you think let him grow a bit.*

> *Until they are grown, because for now they are really young for this, and we've never heard anything like this before, we've heard it this very year, we only used to witness circumcision for adults only.*

Non-acceptors also discussed role players in decision-making for EIMC. Although other people seem to have had some role in facilitating parental decision-making not to circumcise their sons, the key decision maker seems to be the father of the baby, as the statement below indicates.

> *It's true that dads are the problem, if the man says the child won't be circumcised till he turns two. It will be like that despite what. And I have no powers to force it other way round.*

FGD Results: Acceptors

For this group of participants, two categories emerged from analysis of FGD responses—namely, factors related to the decision to circumcise the child and factors relating to post-EIMC attitudes. In the former group, there were four themes.

Education/Information Received

Most parents in the FGDs had received EIMC information before circumcising their sons. However, they still had doubts about what they had been told. Following circumcision, they completely believed the information they had been given and felt ready to convince other parents to circumcise their sons during infancy. Some even confirmed having heard and believed some of the myths regarding EIMC before the procedure—myths they discarded after having had their sons circumcised. Those who had other sons who were circumcised at an older age were able to compare the two experiences and mentioned that EIMC wounds heal more quickly and that the pain is not as bad as for older children. Excerpts below confirm this notion.

> *I also feel good. The main reason is that of quick wound healing, because my other child who was circumcised when he was a bit older, the wound was delayed in healing as compared to this one. For this one, I was surprised that he was healed after just three days.*

I feel good. This is my firstborn but you can hear people in streets saying that if you circumcise when he is still young, his private parts can be small too. I am grateful because I didn't want to listen what would I get, I have seen prosperity right now and my child is doing very well.

My fear was due to the fact that I was thinking that this is my firstborn I should not do this to him then in future he gets problems. He didn't disturb me at night and they were saying that if you do early circumcision, the child's private parts can be small. I was afraid of that. But all those didn't happen and when I did it, he didn't disturb and we slept well.

Services Offered

That EIMC services are free seems to play a significant role in motivating parents to take their children for circumcision. FGD participants commented on this, together with the positive reports from parents who have already had their sons circumcised on the good care provided to the infants, as another factor contributing to their decision to bring their infant for circumcision.

Support and Encouragement from Significant Others and Significant Others' Attitude toward EIMC

When both parents were convinced of the value of EIMC, they tended to send their son for surgery within the stipulated period. Other people who played a significant role in supporting and encouraging the parents in this decision included the in-laws, other close relatives, and friends and neighbors.

First of all, I talked to my husband; secondly, I talked with parents of both sides who are parents and in-laws. . . . They all agreed and then I made a decision to circumcise him. . . . Because this child has a grandfather and a grandmother so everything should be shared to these elders. That is why I decided to take the first advice from them, when they accepted, I circumcised him.

First of all, I talked with my husband, because the child belongs to all, and with my mother, because she was taking a good care of me so it is good to inform her. It would not [be] good just to see the baby is crying without knowing why.

For most of the parents who took their sons for EIMC, the attitude of significant others toward EIMC was positive. However, even in situations where their attitude was not, parents disregarded those opinions if both parents were in agreement to circumcise their child.

Within the category post-EIMC attitudes of parents related to the decision to circumcise, there were two themes—feelings of fulfillment and reasons for the feelings—which participants' statements describe.

Post-EIMC Attitudes of Parents
- **Feeling of fulfillment**
- **Reasons for feelings.**

Feelings of Fulfillment

Without exception, all participants in acceptors' FGDs, both males and females, indicated that they were happy with the decision to circumcise their sons. They felt they had made the right decision for their sons, and at the right time.

Elaborating on these feelings of fulfillment, the parents expressed satisfaction with the fact that the infants recovered quickly and without any major disturbances to the parents and with the good reception they were given at the EIMC facility as well as with the friendly, dedicated staff who assisted. It was further noted that prior training and education received also played a role, because parents were able to confirm that what they had been taught was true.

Common Categories among Acceptor and Non-Acceptor Focus Group Participants

Two categories were common to both non-acceptor and acceptor groups: sources of EIMC information and recommendations. The following results describe the findings from both acceptor and non-acceptor FGDs.

Sources of EIMC Information:
- **Health facility**
- **Media**
- **Others.**

Sources of EIMC information for both acceptors and non-acceptors were similar. These sources fell into three categories: health facility, media, and other.

Participants listed **health facility staff,** by their provision of health education, as the main source of information. Most beneficiaries of this education were women attending maternal and child health services; in most cases husbands heard about EIMC from their wives. Other sources included posters on health facility walls and leaflets and pamphlets given to clients.

Participants also indicated that they learned about EIMC from posters and **the media,** in the form of radio and TV advertising. Finally, **other sources of information** included wives, who told their husbands, friends, and neighbors. Most men received information on EIMC from these other sources:

> *Aahh, I personally, just after receiving this information that there was infant circumcision and God blessed me with baby boys, it did not give me any difficulties in communication with my partner, because she was also informed about these issues. So it did not bring any trouble [and] we made joint decision.*

> *Yes, I am participant number ten, this issue is not new to me, but for infants, it was a bit new, because some people have not experienced it, education has not been passed through so that each one understands about circumcision for infants. After hearing about it, we sat down with the child's mother, we said if it has been said, then take the child for circumcision. . . . She brought him and [he] was circumcised like other children. Therefore, on my side, I am thankful and was very happy, and I am still happy with my wife. She is also happy.*

Both groups discussed their **recommendations for improving EIMC services**. One of the questions participants were asked was "How do you think EIMC services could be improved?" When their responses were categorized, three themes emerged.

Recommendations to Improve EIMC Services
- **Wide community education**
- **Making services available and accessible**
- **Improved service delivery.**

Both EIMC acceptors and non-acceptors emphasized the **need for wide community education using multiple media** as a key to the improvement of services.

The **need to focus on rural and remote areas** was particularly considered, as respondents felt that these areas do not usually have access to health education.

To reach the community during the pilot implementation in Iringa, health education was given using different methods (e.g., staff providing health education and giving out leaflets on EIMC, peer educators working in the community). Such information sharing affected the number of infants who came in for EIMC services, according to a 2013 Jhpiego Tanzania EIMC assessment internal report. Providing EIMC information has also been found to correct some of the myths and misconceptions around EIMC, with the result that more parents send their children for circumcision, as noted by this participant:

Another thing is that, it builds a scope of education from where people have received the circumcision service to a wider scope toward the villages that are not reachable. So I think there is a need to increase education and to encourage the community that has not recognized the importance of circumcising children for the urban to the rural areas. Because there was a time when it was a problem in the rural areas. When you tell someone about infant circumcision, they do not understand. But if we start there by bringing education using the systems that we put in place, I believe we can remove the community from a place where I say it is full of diseases and problems. I think now we have to talk about diseases, circumcision is a small part, but let us look at the benefits of this circumcision that we remove them from this problem. Those who have not been circumcised could get diseases such as UTIs. And not only in the clinic. This information should reach even in the streets through maybe leaflets or in all NGOs. It should be known that a child is going to be circumcised in this way or that and not, as I said, that I was circumcised a long time ago. Eehee in order for a society, I mean, the surrounding society to get this information in different places and also to advertise in village offices, wards, and any place where there are gatherings.

Participants also recommended that following demand creation, it is important, especially in remote areas, that **services be made available and accessible** to the community. This is how one participant alluded to the issue.

Village people are very backward—they lack knowledge and they become circumcised when they are grown-ups. I would like this service to reach rural areas, too.

I am thankful, personally. I am very happy with this infant circumcision because for my five children I did pay for them to be circumcised. For each I was using 15,000. . . . And for the older ones, when they were being circumcised, they brought a lot of trouble by crying. Because they already know the pain, that now there is pain, they did disturb a lot, but for this who has been circumcised now, he sincerely he has healed well and he has not disturbed with anything until now. . . . I am therefore thankful for this service.

The last theme was the need to improve service delivery for EIMC. Following are some interventions that participants highlighted to improve service delivery:

- Using expert patients—that is, using parents who have circumcised their children to educate others.
- Providing a larger and cleaner space for EIMC.
- Providing free circumcision to other children older than 2 months to curb HIV infection, because this program did not exist when they were born.
- Continuing to provide good customer care.
- Providing services daily and for 24 hours a day.
- Improving staffing for EIMC (i.e., increasing the number of doctors and nurses).

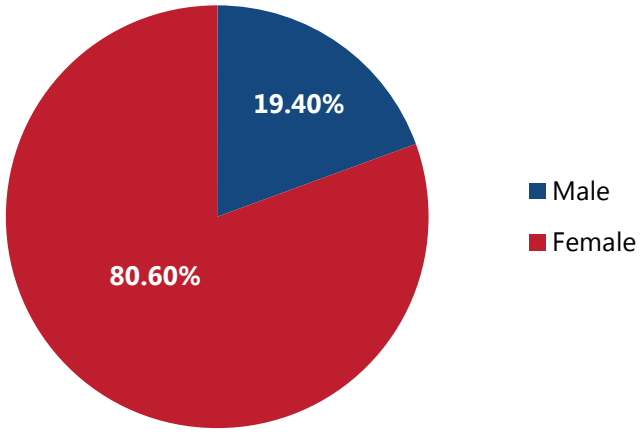
On the need to improve service delivery, some participants expressed the following belief:

I advise my fellow parents to not hesitate to do that thing because the things people say in the communities might discourage them to do anything. Some people might just be saying if you circumcise a child while young, the penis will not erect, or the vessels will not be visible when he grows up. . . . Someone like that, if you look at him as a parent he has not done it, so he can not care about the child. So let us advise parents not to have fears.

Health Care Provider Interview Results

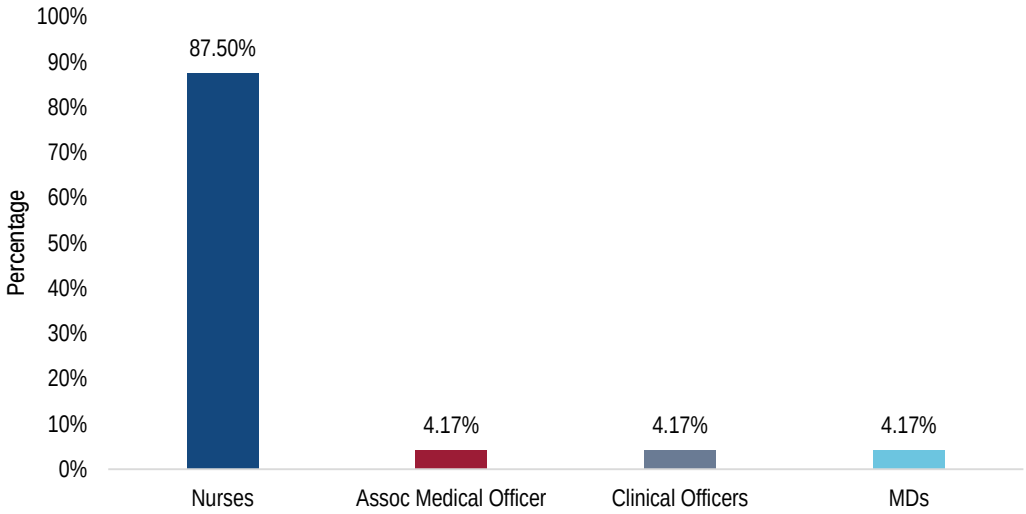
A total of 31 health care providers participated in the interviews; 24 of them (77.4 percent) had been trained on EIMC and were providing EIMC services at their facilities. Of the remaining seven providers, two were health facility in-charges, three were RCH in-charges, and two were facility matrons. Nurses and other females accounted for the majority of the providers—87.5 percent and 80.4 percent respectively (Figure 16, Figure 17).

Figure 16. Gender of the Health Care Providers



Three main themes emerged from the health care providers with respect to EIMC service provision: responsibilities and service provision; EIMC service and uptake of ANC and postnatal care; and perceived challenges in service provision.

Figure 17. Health Care Providers by Cadre



Responsibilities and Service Provision

Health providers perceived EIMC as a good practice and appreciated that its integration within RCH reduced delay. However, providers felt that their work responsibilities had changed since the introduction of EIMC services—that is, their workload had increased and the work plan or schedule had

changed. In all health facilities, EIMC services were provided on weekdays. The first three days of the week were for circumcising, with the remaining two for follow-ups and emergency cases. On the day of service provision, three or four providers were usually on duty and all service delivery data were recorded on specific EIMC tools. Providers are responsible for making sure that all data were recorded and complete.

> *What I like about this program is that the service is available here at RCH. This reduces delay because there is no need to send the client to theater for circumcision.*

EIMC and Uptake of Antenatal and Postnatal Care

It was postulated that integration of EIMC and RCH services would increase uptake of antenatal and postnatal care. Health care providers felt that EIMC awareness had increased but had difficulty knowing whether EIMC uptake had increased or not; mothers still needed time to go home to consult their husbands and other relatives before they made decisions. A few male parents accompanied their wives on the day of circumcision.

> *It's difficult to tell but I have seen few men escorting their wives to bring their infant for circumcision.*

Challenges

Health care providers highlighted a number of challenges with regard to EIMC service provision and its integration within the RCH services. The most noted challenge was around space. Although needs varied from facility to facility, there was generally not enough of it. Health care providers mentioned that client waiting areas were inadequate, the space for EIMC procedures was small, and, in particular, there was no scrubbing area. Also, in some facilities, one room was used for multiple purposes, such as both EIMC counseling and Option B+ service, causing crowding and congestion.

> *The area where infant circumcision is provided is small and not enough, and especially on days where other services like immunization are provided, it become overcrowded. Therefore, another building or room is needed specific for that task.*

> *The room that is used for infant circumcision is used for other services as well like Option B+, DBS [dried blood spot], and other office work. Therefore, sometimes the room is overcrowded.*

Ordering materials and ensuring a regular supply were another challenge, as was lack of education on EIMC evidenced by other staff in the facilities.

Lastly, health care providers felt that their workloads had increased and that their work plans had changed and that they should receive incentives beyond their pay in compensation for the additional service they were providing.

Study Limitations

The study focused on Iringa Region from May to August 2014. Convenience sampling was used, so the sample is not representative of the entire Tanzanian population. The study results, therefore, cannot be generalized to all regions of Tanzania or to other countries. There is also a possibility of self-selection bias, as participants selected themselves for the study.

The number of female respondents in FGDs was large compared to males, because it is mainly women who come for RCH services. This equates to overrepresentation of female views compared to male views. There was also no link between the time frame for receiving education and the decision to circumcise the baby, and this may have had implications for participants' general perceptions of EIMC.

Finally, because FGDs were not broken down into age strata, each group comprised women of a full range of ages, from 18 to 49. Because younger people are sometimes reluctant to speak up in the presence of their elders, older participants' views may have been overrepresented.

DISCUSSION

In this study, the majority of participants viewed EIMC as a valuable practice. That was also true among participants who would not accept EIMC during the stipulated period; these participants indicated that their sons would be circumcised at a later stage in life, suggesting that the timing might have been the issue, rather than the practice itself. Revealing that circumcision—although not EIMC specifically—is generally accepted among the community in Iringa Region, this fact represents a shift of cultural practices in this traditionally non-circumcising region. Education and efforts to encourage adolescents and men in the region to become circumcised for HIV prevention have been far-reaching and are possibly affecting parents' views on infant circumcision. To ensure the success of the EIMC program, the following factors, which surfaced during this study, require particular consideration.

- **Need for Information:** To make an informed decision to circumcise their children, parents need information. Providing it will help them separate facts from myths and thus ensure that the decision they make will not be one they later regret. Information, education, and communication (IEC) combining strategies, approaches, and methods should be used to deliver the facts to individuals, families, groups, organizations, and communities to support informed decisions and change behaviors and/or social conditions.

- **Varied Information Channels:** It was found in this study that people received EIMC information from different sources. That is because, as individuals, people do have preferences as to how they receive information; some may prefer interpersonal delivery and others mass media. Thus it is necessary for different channels to be used to disseminate EIMC information. At the same time, key messages should stay the same. Study results further emphasized the need for the IEC to target rural areas, which in most cases are not reached with health information messages and which, as a result, experience multiple health challenges. The study highlighted women as more informed and ready to circumcise their sons than men and men as those who made the final decision to circumcise or not to circumcise. It is therefore recommended that education target fathers, particularly those who were circumcised by traditional methods, so as to allay their anxieties about EIMC provider expertise.

- **Timing of Parent Education on EIMC:** The timing of parent education on EIMC is important, as parents need to discuss and come to an agreement before sending their child for the procedure. In this study, most parents received EIMC information during pregnancy, were followed up, and seem to have had a chance to communicate between themselves and with friends and family and possibly also to ask questions and absorb the information so as to make an informed decision on EIMC. By contrast, others who seem to have received the information but may not have had so much opportunity to discuss it thoroughly felt bad that their sons were not circumcised on time and even blamed one another.

- **The Power of Myths and Misconceptions:** The study shows that myths and misconceptions regarding EIMC remain pervasive in this community. Historically, EIMC has been common among Muslims and among other communities is generally viewed as a rite of passage to manhood. More than 90 percent of Iringa communities are Christian (Plotkin et al. 2011); accepting EIMC represents a huge change in their thinking, and change takes time. Therefore, time and effort are required to strengthen the community knowledge base, particularly surrounding such myths as the one that

EIMC is a ploy to convert Christians to Islam. The need to offer health education on the benefits of EIMC and to debunk myths and correct misconceptions, especially in rural communities, cannot be overemphasized.

- **Influencers in the Decision-Making Process:** The decision-making process for both mothers and fathers was an important finding of study. Several factors were shown to influence the decision to circumcise or not to circumcise infants. Among acceptors, the training, education, or information they had received regarding EIMC was a key factor; the service offered and the encouragement and attitudes of significant others also played a role. Findings from non-acceptors revealed their decisions to have been influenced by inadequate knowledge, myths surrounding EIMC, concerns about the age of the child and about the appropriate age for EIMC, and the opinions of in-laws, parents' siblings, friends, neighbors, and other significant others.

  The study also found that the father was a key decision maker in the choice to circumcise the son, even if the mother was supportive of the procedure. This finding is supported by findings from other studies: One in Zimbabwe described that fathers made the ultimate decision about circumcision and that mothers- and grandmothers-in-law were likely to influence decision-making (Mavhu et al. 2012). A study in two communities in South Africa also highlighted that the baby's father is the most important and final decision maker (Spyrelis et al. 2013). Finally, a study in Kenya and China also identified the father as the final decision maker in EIMC (Young et al. 2012; Pan et al. 2012).

- **Feelings Regarding EIMC:** Participants described their feelings regarding EIMC during the FGDs. Participants who did not accept circumcision for their sons had mixed feelings; some felt bad that their sons had missed the opportunity to be circumcised. Other participants felt good that they had not circumcised their sons for various reasons, including beliefs that their child was too young, that his reproductive organs were not yet grown, that wound care would be difficult, and that the child would disturb the household while healing. Other parents expressed concern rooted in their belief that the procedure would be painful for the infant. A study in China had similar findings; many parents were most concerned about pain (Mavhu et al. 2012). Although EIMC seems to have added to the responsibilities and workload of health care providers, they also perceived the practice as important. The need to improve EIMC staffing was voiced by all participants.

  Participants' prior experience seemed to affect parents' decision-making. Participants who did not accept circumcision often had mixed feelings that it was a missed opportunity because EIMC has no cost implications and because of perceptions that uncircumcised men are not clean and that no woman wants an uncircumcised man.

- **No Cost for Services:** The fact that services were free seemed to have been a positive for some participants, while others felt concern about free services. Some participants' inadequate knowledge of EIMC outcomes had influenced their decision not to circumcise their sons, as they were worried that accepting free services might put them at risk for later problems. A similar observation was made in a study in Zimbabwe, pointing out that caution should be exercised when accepting free donor-driven services (Mavhu et al. 2012).

- **The Risk of Inadequate Parental Knowledge:** Participants' inadequate knowledge about EIMC outcomes may have influenced the decision of non-acceptors. Participants had concerns that circumcision at a very young age might have negative such long-term results for the child as a

reduction in penis size, severance of the penis or the veins to the penis, or even infertility. In a study in Zimbabwe, participants reported the belief that the fragility of the infant penis in the immediate postpartum period would result in an unacceptable risk of surgical error (Mavhu et al. 2012).

Based on these concerns, participants suggested that EIMC be performed at least three months after birth. A similar finding was also reported in Zimbabwe, where participants generally felt that circumcision should be done three to six months after birth (Mavhu et al. 2012). In a quantitative study conducted in two South African communities, 67 percent of both fathers and mothers reported that they preferred that circumcision be done within EIMC range (Spyrelis et al. 2013). Participants felt that EIMC might lead to the penis being cut, especially because the child is very young. Culture and tradition are the main reasons that people in the South Africa study rejected EIMC (Spyrelis et al. 2013) and the same was true in this study. However, here, men seemed to acquire most of their information from other sources, including their wives, friends, and relatives, perhaps because it is women who generally seek and receive RCH services. It may be useful to consider these issues when selecting media to be used for disseminating information to men. Ensuring that appropriate and detailed information is provided to women is also important, because they were shown to have been the ones informing their husbands. In addition, to educate fathers, expert clients (i.e., fathers who have previously had their children circumcised) may also be helpful.

It is important that health education sessions clearly stipulate that the procedure is performed by skilled, well-trained personnel. How pain is relieved during and after the procedure, the key advantages of conducting it at that particular age, and managing the wound so as to prevent infection should also be thoroughly explained.

- **The Positive Experience of EIMC:** Most studies have cited negative attitudes of health care providers as hindering access to health services (Furstenberg et al. 1998). It is worth noting that FGD participants highlighted that the positive attitude of and good reception provided by health care providers facilitated their decision to accept EIMC services.

CONCLUSION

Use of the integrated model of service delivery (EIMC in RCH) is appropriate, safe, and feasible and prevents delay in infants seeking EIMC services. There is a potential to further strengthen the linkages of postpartum and postnatal services to EIMC that will be mutually beneficial for both RCH and HIV prevention services.

Generally, acceptance of and satisfaction with EIMC were relatively high among parents who had been sensitized to the service. Given that it is new, time will be needed for it to be taken up by the majority. Among pilot sites, EIMC uptake was between 10 and 25 percent of all male births. Parents who did not accept EIMC services were often swayed by myths and misconceptions; in some instances, the father—the decision maker for the family—had not received information on EIMC. The nature of the decision-making process for both mothers and fathers was an important finding in this study.

Several factors were shown to influence the decision to circumcise or not to circumcise infants. Myths and misconceptions about EIMC, many arising from inadequate information, are prevalent in this community. It is worth noting that participants in the FGDs highlighted that a good reception and positive attitude of the health care providers assisted in families' decision to accept EIMC services.

RECOMMENDATIONS AND WAY FORWARD

Recommendations

- Given the opportunities currently available, embarking into an active surveillance phase of the pilot in one or two regions is recommended as a way to explore a sustainability strategy for long-term circumcision coverage. Such surveillance can inform accurate EIMC costing as well as an appropriate national-scale VMMC sustainability plan.
- Focus on and nurture the communication and intersection of RCH and NACP to support EIMC services integrated in RCH services.
- Implement a costing study to inform national scale-up.
- Integrate EIMC commodities into existing supply chain systems for sustainability.
- A national policy and guidelines have already been developed and signed. Print these and roll them out. Also develop quality tools and an EIMC curriculum.
- Outline EIMC M&E data flow to be inclusive of both RCH and NACP data systems (DHIS2).
- Develop an appropriate multipronged communication plan and advocacy strategy. These are needed, given that EIMC will be a new practice in many cultures.
- Target fathers with specific EIMC information, because they are pivotal in the decision process.
- Prioritize health facilities with high birth rates, facility space, and sterilization facilities.
- To efficiently train RCH providers, develop an on-the-job training package and couple it with postnatal refresher training.
- Explore the best model for linking infants to other RCH services as part of EIMC, and vice versa.
- Develop community advocacy strategies to ensure that rural populations are sensitized to services.
- Explore methods of EIMC that do not require autoclave facilities (i.e., with disposable devices).
- At the conclusion of the active and passive surveillance phases of the pilot, the Ministry of Health should review findings and determine whether expansion of EIMC services to lower-level health facilities, with a goal of reaching more people with services, is appropriate.
- Increase communities' demand by using satisfied parents as "ambassadors" for EIMC.

The Way Forward

- Progress to the active surveillance phase of the pilot by increasing the number of EIMC sites in Iringa Region; review potential expansion of EIMC services to additional regions that are approaching their VMMC national targets and are in the midst of transitioning to a VMMC sustainability phase.
- Capitalize on the intersection of EIMC and RCH to benefit both HIV prevention and the health of the mother and child.
- Integrate EIMC services with RCH services as a routine.
- Train additional RCH staff to perform EIMC as part of their routine work.
- Conduct more education and information on EIMC, targeting fathers and the significant others who play a major role in decision-making, so as to clear misconceptions and myths in the communities.

REFERENCES

Auvert, Bertrand, Dirk Taliaard, Emmanuel Lagarde, Joëlle Sobngwi-Tambekou, Rémi Sitta, and Adrian Puren. 2005. "Randomized Control Intervention Trial of Male Circumcision for Reduction of HIV Infection Risk: The ANRS 1265 Trial." *PLoS Medicine* 2 (11): e298. doi:10.1371/journal.pmed.0020298.

Bailey Robert C., Stephen Moses, Corette B. Parker, Kawango Agot, Ian Maclean, John N. Krieger, Carolyn F.M. Williams, Richard T. Campbell, and Jeckoniah O. Ndinya-Achola. 2007. "Male Circumcision for HIV Prevention in Young Men in Kisumu, Kenya: A Randomised Controlled Trial." *The Lancet* 369: 643–656. doi:10.1016/S0140-6736(07)60312-2.

Furstenberg, Charlotte T., and Tim A. Ahles, Marie B. Whedon, Kyle L. Pierce, Marion Dolan, Linda Roberts, and Peter M. Silberfarb. 1998. "Knowledge and Attitudes of Health-Care Providers toward Cancer Pain Management: A Comparison of Physicians, Nurses, and Pharmacists in the State of New Hampshire." *Journal of Pain and Symptom Management* 15(6): 335–349. doi:10.1016/S0885-3924(98)00023-2.

Gray, Ronald H., Godfrey Kigozi, David Serwadda, Frederick Makumbi, Stephen Watya, Fred Nalugoda, Noah Kiwanuka, Lawrence H. Moulton, Mohammed A. Chaudhary, Michael Z. Chen, Nelson K. Sewankambo, Fred Wabwire-Mangen, Melanie Bacon, Carolyn F.M. Williams, Pius Opendi, Steven J. Reynolds, Oliver Laeyendecker, Thomas C. Quinn, and Maria J. Wawer. 2007. "Male Circumcision for HIV Prevention in Men in Rakai Uganda: A Randomised Trial." *The Lancet* 369 (9562): 657–666. doi:10.1016/S0140-6736(07)60313-4.

National Bureau of Statistics (NBS) and ICF Macro. 2011. *Tanzania Demographic and Health Survey (DHS) 2010*. Dar es Salaam, Tanzania: NBS and ICF Macro. http://dhsprogram.com/publications/publication-fr243-dhs-final-reports.cfm.

Pan, Lianjun, and Aixia Zhang, Rong Shen, and Zhong Wang. 2012. "Acceptability of Early Infant Male Circumcision among Chinese Parents: Strategy Implications of HIV Prevention for China." *BMC Public Health* 12(1): 738. doi:10.1186/1471-2458-12-738.

Plotkin, Marya, Jan Küver, Kelly Curran, Hawa Mziray, Judith Prince, and Hally Mahler. 2011. *Embe Halijamenywa: The Unpeeled Mango. A Qualitative Assessment of Views and Preferences Concerning Voluntary Medical Male Circumcision in Iringa Region, Tanzania*. Baltimore, MD: Jhpiego. http://www.mchip.net/sites/default/files/The%20Unpeeled%20Mango%20-%20Final%20Report%202011.pdf.

Spyrelis, Alexandra, Sasha Frade, Dino Rech, and Dirk Taljaard. 2013. *Acceptability of Early Infant Male Circumcision in Two South African Communities. Technical Report*. Johannesburg: Centre for HIV AIDS Prevention Studies. http://www.chaps.org.za/infant-male.pdf.

Tanzania Commission for AIDS (TACAIDS), Zanzibar AIDS Commission (ZAC), National Bureau of Statistics (NBS), Office of Chief Government Statistician (OCGS), and ICF International. 2013. *Tanzania HIV/AIDS and Malaria Indicator Survey (THMIS) 2011–12*. Dar es Salaam, Tanzania: TACAIDS, ZAC, NBS, OCGS, and ICF International. http://dhsprogram.com/pubs/pdf/AIS11/AIS11.pdf.

UNICEF. 2011. "Eastern and Southern Africa: Medical Male Circumcision." http://www.unicef.org/esaro/5482_7884.html.

Wambura, Mwita, Joseph Mwanga, Jackline Mosha, Gerry Mshana, Frank Mosha, and John Changalucha. 2009. *Situation Analysis for Male Circumcision in Tanzania. Final Report*. Dar es Salaam, Tanzania: Institute for Medical Research and Ministry of Health and Social Welfare. http://www.nacp.go.tz/site/download/Situation_Analysis_for_male_circumcision_September_09.pdf.

Webster Mavhu, Karin Hatzold, Susan M. Laver, Judith Sherman, Brenda R. Tengende, Colin Mangenah, Lisa F. Langhaug, Graham Hart, and Frances M. Cowan. 2012. "Acceptability of Early Infant Male Circumcision as an HIV Prevention Intervention in Zimbabwe: A Qualitative Perspective." *PLoS ONE* 7(2): e32475. doi:10.1371/journal.pone.0032475.

World Health Organization. 2007. "WHO and UNAIDS Announce Recommendations from Expert Consultation on Male Circumcision for HIV Prevention." Press release. March 28. http://www.who.int/hiv/mediacentre/news68/en/.

World Health Organization and Jhpiego. 2010. *Manual for Early Infant Male Circumcision under Local Anaesthesia*. Geneva: WHO. http://www.who.int/hiv/pub/malecircumcision/manual_infant/en/.

Young, Marisa R., Elijah Odoyo-June, Sherry K. Nordstrom, Tracy E. Irwin, Dedan O. Ongong'a, Betha Ochomo, Kawango Agot, and Robert C. Bailey. 2012. "Factors Associated with Uptake of Infant Male Circumcision for HIV Prevention in Western Kenya." *Pediatrics* 130(1): e175–e182. doi: 10.1542/peds.2011-2290.

ANNEX A. NUMBERS OF EIMCs AND MALE BIRTHS IN THE PILOT SITES

Table A-1. Number of EIMCs vs. Number of Male Births in the Four Districts for the Eight Pilot Facilities in Iringa Region

Indicator	Iringa Municipal Council	Iringa District Council	Mufindi District Council	Kilolo District Council	Overall Total
Number of all births	13,494	4,406	4,796	3,665	26,361
Number of male births	6,839	2,203	2,442	1,779	13,263
Number of EIMCs done (%)	1,335 (20%)	326 (15%)	99 (4%)	324 (18%)	2,084 (16%)

Table A-10. Number of EIMC vs. Number of Male Births in the Eight Pilot Sites in Iringa Region

Facility Name	Periods	All births (male births)	EIMCs performed N (%)	EIMCs delivered at this facility N (%)
Iringa Regional Hospital	Jan 2013	387 (193)	N/A	N/A
	Feb 2013	387 (193)	N/A	N/A
	Mar 2013	398 (199)	N/A	N/A
	Apr 2013	360 (180)	22 (12.2)	20 (11.1)
	May 2013	466 (233)	37 (15.9)	35 (15.0)
	Jun 2013	424 (212)	16 (7.5)	15 (7.1)
	Jul 2013	482 (241)	20 (8.3)	19 (7.9)
	Aug 2013	474 (237)	50 (21.1)	35 (14.8)
	Sep'2013	496 (248)	12 (4.8)	10 (4.0)
	Oct 2013	492 (246)	23 (9.3)	19 (7.7)
	Nov 2013	510 (225)	11 (4.3)	10 (3.9)
	Dec 2013	498 (249)	11 (4.4)	10 (4.0)
	Total 2013	5,374 (2,686)	202 (9.6)	173 (8.2)
	Jan 2014	572 (286)	14 (4.9)	10 (3.5)
	Feb 2014	398 (199)	6 (3.0)	6 (3.0)
	Mar 2014	620 (310)	49 (15.8)	37 (11.9)
	Apr 2014	430 (215)	22 (10.2)	15 (7.0)
	May 2014	498 (249)	43 (17.3)	39 (15.7)
	Jun 2014	588 (294)	27 (9.2)	23 (7.8)
	Jul 2014	558 (279)	35 (12.5)	33 (11.8)
	Aug 2014	574 (287)	39 (13.6)	35 (12.2)
	Sep 2014	514 (257)	34 (13.2)	28 (10.9)
	Oct 2014	474 (237)	10 (4.2)	7 (3.0)
	Nov 2014	420 (210)	29 (13.8)	27 (12.9)

Facility Name	Periods	All births (male births)	EIMCs performed N (%)	EIMCs delivered at this facility N (%)
	Dec 2014	322 (161)	18 (11.2)	17 (10.6)
	Total 2014	5,968 (2,984)	326 (10.9)	277 (9.3)
Grand Total		**11,342 (5,760)**	**528 (9.3)**	**450 (7.9)**
Ipogolo Health Centre	Jan 2013	N/A	N/A	N/A
	Feb 2013	N/A	N/A	N/A
	Mar 2013	N/A	N/A	N/A
	Apr 2013	N/A	N/A	N/A
	May 2013	68 (34)	28 (82.4)	26 (76.5)
	Jun 2013	56 (28)	21 (75.0)	8 (28.6)
	Jul 2013	66 (33)	22 (66.7)	3 (9.1)
	Aug 2013	74 (37)	40 (108.1)	8 (21.6)
	Sep 2013	90 (45)	20 (44.4)	8 (17.8)
	Oct 2013	58 (29)	16 (55.2)	4 (13.8)
	Nov 2013	68 (34)	18 (52.9)	5 (14.7)
	Dec 2013	80 (40)	14 (35.0)	5 (12.5)
	Total 2013	560 (280)	179 (64)	67 (23.9)
	Jan 2014	86 (43)	22 (51.2)	11 (26.0)
	Feb 2014	86 (43)	20 (46.5)	3 (7.0)
	Mar 2014	82 (41)	43 (104.9)	22 (53.7)
	Apr 2014	110 (55)	40 (72.7)	25 (45.5)
	May 2014	110 (55)	29 (52.7)	18 (32.7)
	Jun 2014	194 (97)	28 (28.9)	17 (17.5)
	Jul 2014	82 (41)	24 (58.5)	13 (31.7)
	Aug 2014	74 (37)	26 (70.3)	14 (37.8)
	Sep 2014	72 (36)	18 (50.0)	8 (22.2)

Facility Name	Periods	All births (male births)	EIMCs performed N (%)	EIMCs delivered at this facility N (%)
	Oct 2014	100 (50)	26 (52.0)	6 (12.0)
	Nov 2014	58 (29)	28 (96.6)	8 (27.6)
	Dec 2014	88 (44)	20 (45.5)	4 (9.1)
	Total 2014	1,142 (571)	324 (56.7)	149 (26.1)
Grand Total		**1,702 (851)**	**503 (59.1)**	**216 (25.4)**
Ilula Hospital	Jan 2013	N/A	N/A	N/A
	Feb 2013	N/A	N/A	N/A
	Mar 2013	N/A	N/A	N/A
	Apr 2013	161 (82)	0	0
	May 2013	157 (72)	15 (20.8)	13 (18.1)
	Jun 2013	165 (78)	6 (7.7)	6 (7.7)
	Jul 2013	162 (82)	22 (26.8)	15 (18.3)
	Aug 2013	166 (87)	19 (21.8)	13 (14.9)
	Sep 2013	152 (76)	20 (26.3)	19 (25.0)
	Oct 2013	135 (69)	14 (20.2)	13 (18.8)
	Nov 2013	166 (80)	7 (8.7)	7 (8.8)
	Dec 2013	156 (72)	2 (2.8)	1 (1.4)
	Total 2013	**1,420 (698)**	105 (15.0)	87 (14.1)
	Jan 2014	163 (67)	7 (10.4)	6 (9.0)
	Feb 2014	172 (73)	8 (10.9)	8 (11.0)
	Mar 2014	174 (90)	14 (15.5)	10 (11.1)
	Apr 2014	178 (71)	16 (22.5)	13 (18.3)
	May 2014	175 (91)	20 (21.9)	17 (18.7)
	Jun 2014	181 (103)	36 (34.9)	28 (27.2)
	Jul 2014	170 (89)	18 (20.2)	17 (19.1)

Facility Name	Periods	All births (male births)	EIMCs performed N (%)	EIMCs delivered at this facility N (%)
	Aug 2014	182 (90)	14 (15.5)	11 (12.2)
	Sep 2014	168 (84)	14 (16.7)	12 (14.3)
	Oct 2014	174 (84)	10 (11.9)	10 (11.9)
	Nov 2014	159 (71)	20 (28.2)	19 (26.8)
	Dec 2014	145 (63)	15 (23.8)	14 (22.2)
	Total 2014	**2,041 (976)**	192 (19.7)	165 (16.9)
Grand Total		**3,461 (1,674)**	**297 (17.7)**	**252 (15.1)**
Tosamaganga Hospital	Jan 2013	N/A	N/A	N/A
	Feb 2013	N/A	N/A	N/A
	Mar 2013	N/A	N/A	N/A
	Apr 2013	204 (102)	1 (0.9)	1 (1.0)
	May 2013	190 (95)	20 (21.1)	20 (21.1)
	Jun 2013	208 (104)	13 (12.5)	11 (10.6)
	Jul 2013	176 (88)	11 (12.5)	10 (11.4)
	Aug 2013	362 (181)	22 (12.2)	19 (10.5)
	Sep 2013	232 (116)	20 (17.2)	19 (16.4)
	Oct 2013	206 (103)	21 (20.4)	19 (18.4)
	Nov 2013	144 (72)	25 (34.7)	25 (34.7)
	Dec 2013	198 (99)	13 (13.1)	12 (12.1)
	Total 2013	1,920 (960)	146 (15.2)	136 (14.2)
	Jan 2014	192 (96)	21 (21.9)	21 (21.9)
	Feb 2014	146 (73)	15 (20.5)	15 (20.5)
	Mar 2014	198 (99)	23 (23.2)	21 (21.2)
	Apr 2014	228 (114)	14 (12.3)	13 (11.4)
	May 2014	178 (89)	23 (25.8)	21 (23.6)

Facility Name	Periods	All births (male births)	EIMCs performed N (%)	EIMCs delivered at this facility N (%)
	Jun 2014	212 (106)	25 (23.6)	21 (19.8)
	Jul 2014	176 (88)	7 (7.9)	6 (6.8)
	Aug 2014	262 (131)	17 (12.8)	11 (8.4)
	Sep 2014	222 (111)	9 (8.2)	9 (8.1)
	Oct 2014	250 (125)	3 (2.4)	2 (1.6)
	Nov 2014	208 (104)	15 (14.4)	13 (12.5)
	Dec 2014	214 (107)	8 (7.5)	8 (7.5)
	Total 2014	2,486 (1,243)	180 (14.5)	161 (12.9)
	Grand Total	**4,406 (2,203)**	326 (14.8)	**297 (13.5)**
Igumbilo Dispensary	Apr 2014	14 (9)	11 (122.2)	4 (44.4)
	May 2014	16 (6)	19 (316.7)	3 (50.0)
	Jun 2014	17 (8)	15 (187.5)	2 (25.0)
	Jul 2014	15 (4)	29 (725.0)	3 (75.0)
	Aug 2014	8 (3)	11 (366.7)	1 (33.3)
	Sep 2014	10 (6)	12 (200.0)	0
	Oct 2014	12 (3)	5 (166.7)	0
	Nov 2014	13 (7)	11 (157.1)	4 (57.1)
	Dec 2014	13 (8)	12 (150.0)	3 (37.5)
	Total 2014	**118 (54)**	**125 (231.5)**	**20 (37.0)**
Frelimo Hospital	Jan 2014	12 (5)	N/A	N/A
	Feb 2014	21 (9)	N/A	N/A
	Mar 2014	38 (18)	N/A	N/A
	Apr 2014	24 (12)	11 (91.7)	4 (33.3)
	May 2014	33 (17)	8 (47.1)	4 (23.5)
	Jun 2014	15 (7)	16 (228.6)	9 (128.6)

Facility Name	Periods	All births (male births)	EIMCs performed N (%)	EIMCs delivered at this facility N (%)
	Jul 2014	29 (23)	20 (87.0)	6 (26.1)
	Aug 2014	20 (8)	24 (300.0)	6 (75.0)
	Sep 2014	27 (12)	29 (241.7)	6 (50.0)
	Oct 2014	32 (20)	24 (120.0)	2 (10.0)
	Nov 2014	39 (25)	23 (92.0)	11 (44.0)
	Dec 2014	42 (18)	24 (133.3)	6 (33.3)
	Total 2014	**332 (174)**	**179 (103)**	**54 (31.0)**
Mafinga Hospital	Jan 2014	370 (137)	N/A	N/A
	Feb 2014	355 (162)	N/A	N/A
	Mar 2014	339 (174)	N/A	N/A
	Apr 2014	333 (202)	12 (5.9)	11 (5.4)
	May 2014	406 (220)	3 (1.4)	3 (1.4)
	Jun 2014	383 (184)	7 (3.8)	7 (3.8)
	Jul 2014	443 (229)	12 (5.2)	9 (3.9)
	Aug 2014	445 (215)	19 (8.8)	18 (8.4)
	Sep 2014	381 (213)	14 (6.6)	11 (5.2)
	Oct 2014	465 (252)	16 (6.3)	12 (4.8)
	Nov 2014	417 (224)	5 (2.2)	4 (1.8)
	Dec 2014	459 (230)	11 (4.8)	10 (4.3)
	Total 2014	**4,796 (2442)**	**99 (4.1)**	**85 (3.5)**
Kidabaga Health Centre	Jan 2014	11 (4)	N/A	N/A
	Feb 2014	12 (5)	N/A	N/A
	Mar 2014	17 (11)	N/A	N/A
	Apr 2014	21 (12)	4 (33.3)	4 (33.3)
	May 2014	25 (13)	10 (76.9)	9 (69.2)

Facility Name	Periods	All births (male births)	EIMCs performed N (%)	EIMCs delivered at this facility N (%)
	Jun 2014	29 (16)	6 (37.5)	5 (31.3)
	Jul 2014	22 (7)	0	0
	Aug 2014	17 (10)	1 (10.0)	1 (10.0)
	Sep 2014	14 (6)	0	0
	Oct 2014	21 (9)	2 (22.2)	1 (11.1)
	Nov 2014	4 (2)	4 (200.0)	4 (200.0)
	Dec 2014	11 (10)	0	0
	Total 2014	**204 (105)**	**27 (25.7)**	**24 (22.9)**

ANNEX B. MINIMUM NUMBERS AND QUANTITIES OF RECOMMENDED EIMC SUPPLIES

Minimum Stock for EIMC Supplies						
Note: The stock count should be checked *weekly* by the commodities focal person. Please fill out stock sheet and calculate stock order as shown in the example below (first row under Material Description).						
1	**2**	**3**	**4**	**5**	**6**	**7**
Material Description	**Unit of measure**	**Minimum quantity required**	**Actual stock**	**Column 3 minus Column 4**	**Restock Amount**	**Quantity to order (Column 6 minus Column 5)**
EXAMPLE: EMLA cream	**Tube**	**5**	**3**	**5-3=2**	**10**	**10-2=8**
Pharmaceuticals						
1% lidocaine *(without epinephrine)*, 1 ml per client	Vials	5			10	
EMLA cream	Tube	5			10	
Paracetamol syrups (125 mg/5 mls)	Bottles	24			72	
Amoxyciline syrups (125 mg/5 mls)	Bottles	5			24	
Pacifier—Dextrose 5% (bottle of 500 mls)	Bottle	5			20	
Topical epinephrine	Vials	5			5	
Consumables						
1-ml sterile syringes (with small 27-gauge)	Pcs	10			50	
Plaster, micropore-Tape-3M-wound-care-dressing	Rolls	2			10	
Alcohol wipes	Pcs	10			500	
Gel foam or equivalent	Pack	1			1 pack	
5-0 absorbable suture (chromic or catgut) on a needle	Pcs	5			5	
Blue/black color bin liners (large size)	Pcs	20			100	
Red color bin liners(large size)	Pcs	20			100	
Yellow color bin liners (large size)	Pcs	20			100	
Absorbent sterile gauze pads	Rolls	2			10	

Minimum Stock for EIMC Supplies						
Note: The stock count should be checked *weekly* by the commodities focal person. Please fill out stock sheet and calculate stock order as shown in the example below (first row under Material Description).						
1	**2**	**3**	**4**	**5**	**6**	**7**
Material Description	**Unit of measure**	**Minimum quantity required**	**Actual stock**	**Column 3 minus Column 4**	**Restock Amount**	**Quantity to order (Column 6 minus Column 5)**
White petroleum jelly such as Vaseline (15–30 mg—the smallest pack)	Pcs	20			100	
Plastic aprons (reusable; 10 pcs per site)	Pcs	5			5	
Surgical caps (a pack of 100 pcs)	Packs	1			2	
Face mask(a pack of 50 pcs)	Packs	1			2	
Precepts (a tin of 100 tablets)	Tins	½ tin			1	
Guidelines, BCC and M&E tools						
Client record cards	Pcs	20			250	
Appointment card	Pcs	20			250	
Client register	Pcs	1			1	
AE forms	Pcs	10			50	
EIMC WHO Manual	Pcs	1			1	
Quality assurance tool	Pcs	1			1	
Supportive supervision tool	Pcs	1			1	
Counseling flip chart	Pcs	2			2	
Referral books	Books	2			5	
Posters	Pcs	5			10	
Brochures	Pcs	100			500	
Emergency Kit						
Neonate resuscitator—mask and bag (250 cc, mask size 1)	Pcs	2			2	
Thermometer	Pcs	2			2	
Pulse oximeter/monitor	Pcs	2			2	
Small cannula (size 24 G)	Pcs	2			2	
Small cannula (size 26 G)	Pcs	2			2	
Small butterflies (size 19 G)	Pcs	2			2	
Rapid HB test kits	Pcs	1			1	
Normal saline	Bottle	1			1	

Minimum Stock for EIMC Supplies						
Note: The stock count should be checked *weekly* by the commodities focal person. Please fill out stock sheet and calculate stock order as shown in the example below (first row under Material Description).						
1	**2**	**3**	**4**	**5**	**6**	**7**
Material Description	**Unit of measure**	**Minimum quantity required**	**Actual stock**	**Column 3 minus Column 4**	**Restock Amount**	**Quantity to order (Column 6 minus Column 5)**
Giving set	Pcs	2			2	
Syringes (2 cc)	Pcs	10			10	
Syringes (5 cc)	Pcs	10			10	
Syringes (10 cc)	Pcs	10			10	
Pediatric BP machine	Pcs	1			1	
Infant airway	Pcs	2			2	
Tourniquet	Pcs	1			1	
10% dextrose	Vial	2			2	
Glucometer kit	Pcs	1			1	
Glucometer strips - pack of 100	Pack	1			1	
EIMC Sets	**10 sets per site**					
Surgical blade	Pack	½ pack			3	
Mogen clamp	Pcs	10			10	
Blade handle	Pcs	10			10	
Needle holder (15 cm)	Pcs	10			10	
Metzenbaum tissue scissor (14 cm)	Pcs	10			10	
Sponge-holding forceps (20 cm)	Pcs	10			10	
Mosquito artery forceps straight (12.5 cm)	Pcs	10			10	
Mosquito artery forceps curved (12.5 cm)	Pcs	20			20	
Adson forceps	Pcs	10			10	
Gallipot (100 mls)	Pcs	10			10	
Kidney dish (20 cm)	Pcs	10			10	
Solid drapes	Pcs	20			20	
O-drapes	Pcs	20			20	
Other items						
Colored-coded dust bins	Pcs	1 of each color				
Decontamination buckets	Pcs	3			3	
Scrub brushes	Pcs	2			6	

Minimum Stock for EIMC Supplies						
Note: The stock count should be checked *weekly* by the commodities focal person. Please fill out stock sheet and calculate stock order as shown in the example below (first row under Material Description).						
1	**2**	**3**	**4**	**5**	**6**	**7**
Material Description	**Unit of measure**	**Minimum quantity required**	**Actual stock**	**Column 3 minus Column 4**	**Restock Amount**	**Quantity to order (Column 6 minus Column 5)**
Liquid soap	Bottle	2			6	
Utility gloves	Pairs	2			12	
Sterile gloves	Pairs	50			150	
Examination gloves	Pairs	50			1,000	
Goggles	Pcs	6			12	
Nappies	Pack	1			3	
Wipes	Pcs	5			12	
Restraint boards	Pcs	2			2	
Blankets	Pcs	6			12	
Restraint straps	Pcs	8			16	
Stopwatches	Pcs	4			4	

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ANNEX C.
THEMES FOR NON-ACCEPTORS

Selective Coding	Axial Coding	Open/Descriptive Coding
1. Aspects related to making decision not to circumcise	**Feelings regarding EIMC**	**Feeling bad:** Terrible Not feel free
		Feeling good: Feels fine Feels at peace Does not feel bad Not worried
	Reasons for the feelings	**For those who felt bad that their children were not circumcised**
		Missed opportunity: Son missed opportunity to circumcise Older ones may hurt themselves and/or infect the wound Will be a shame to them because no woman wants uncircumcised man Uncircumcised men are not clean; it is easy to be infected with disease by uncircumcised men, disease like UTI and others are easily transported to a woman with uncircumcised man EIMC has no cost implications
		For those who felt good/not worried/ fine that their children are not circumcised
		Child-related reasons: Age of the child: must be at least 3 months Reproductive organs not yet grown Wound hygiene issues (infection from urine, etc.) Child still small, so it will be hard even to change him He will be very stubborn plus the wound, it will be worse
		Parent-related reasons: Fathers' decisions Tiresome nursing the would First born, would not know what to do when he is crying Feels like he will be torturing him Knows from experience (father) it is a painful Partner support when child is circumcised Discussing it causes friction between parents as they have different few
	Inadequate knowledge	Vessels become stiff so recovery becomes a problem Free services will later predispose to problems They will cut the penis Will cut the veins to the penis
	Myths	EIMC will cause impotence; early ejaculation; size of the penis will be reduced They will be converted to Muslims

Selective Coding	Axial Coding	Open/Descriptive Coding
	Age of the child	**Non-specific:** Depends on their agreement as parents Grown enough to a certain stage (not specific); able to sit and drink porridge
		Specific: At least 3 months (3, 5, 6 months, 5 years, 10 years)
	Role players in decision-making for EIMC	**Relatives:** Biological parents (mother and father together) In-laws, siblings
		Others: Friends Neighbors
2. Sources of EIMC information	**Health facility**	Health care personnel Hospital posters
	Media	Radio and TV Advertisements Flyers/Leaflets
	Other	My partner (wife/husband) Friends, neighbors

ANNEX D. THEMES FOR ACCEPTORS

Selective/pattern/ explanatory coding	Axial coding	Open/descriptive coding
1. Aspects related to making decision to circumcise the child	Training/education/ information received	**Changed parents' attitude toward EIMC:** Positive toward EIMC, "I feel very happy for the first time; I was afraid"; child's quick recovery Parents happy and proud of their decision
		Overcame myths and bad past experiences: Scared of circumcision because of older child's bad experienced
	Services offered	Free services Good reception Child given good care Seeing other children already circumcised
	Support/encouragement from significant others	**Relatives:** Child's mother and father together In-laws, siblings
		Others: Friends Neighbors
	Significant others' attitudes toward EIMC	Happy, supportive, gave permission and were ready to help Had no complaints Wife/mother informed them
2. Sources of EIMC information	Health facility	Health care personnel Hospital posters
	Media	Radio and TV Advertisements Flyers/Leaflets
	Other	My partner (wife/husband) Friends, neighbors
3. Post-EIMC attitudes	Feeling of fulfillment	100% feel happy and proud to have circumcised their children Feeling of having done good for their children Feel have made right decision
	Reasons for the feelings	Child's quick recovery Comparing with prior experience Free services Prior training/education received Good reception Friendly and dedicated staff

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