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Voluntary medical male circumcision uptake through soccer in Zimbabwe

October 2016

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HIV and AIDS



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Impact Evaluation

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Voluntary medical male circumcision uptake through soccer in Zimbabwe

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Summary

Make The Cut Plus (MTC+) is a short, sport-based intervention, delivered by Grassroot Soccer, that aims to increase demand for male circumcision among adolescent male students (aged 15 to 19 years) in secondary schools in Bulawayo, Zimbabwe. MTC+ consists of a 60-minute soccer-themed educational session led by a trained 'coach', who was circumcised; information, education, and communication material on male circumcision; referrals and phone-based follow-up to interested participants conducted by the coaches; and soccer-based incentives to participants who completed VMMC.

This study's objective was to determine if the MTC+ intervention could substantially and significantly increase demand for VMMC in secondary schools and whether the intervention is an effective, innovative and scalable solution to increasing uptake of VMMC. The study was constructed as a cluster-randomised trial to assess the effectiveness of MTC+. Twenty-six schools in Bulawayo were randomised to receive MTC+ at the start of a four-month trial (intervention) or at the end (control). VMMC uptake over four months was measured via cross-linkage of the trial participant database (n=1,226 male participants aged 14 to 20 years; median age 16.2) and clinic registers of Bulawayo's two free VMMC clinics (n=5,713) from 7 March to 6 July 2014, using eight identifying variables. The trial had more than 80 per cent power to detect an absolute difference of 5 percentage points in VMMC uptake.

A process evaluation was conducted to explore perceptions of VMMC, perceptions and acceptability of the MTC+ intervention, influential factors in deciding whether to undergo VMMC and the role of small incentives in creating demand for VMMC. The process evaluation included 20 in-depth interviews with participants, 10 in-depth interviews with coaches and observation of programme implementation.

This study provides strong evidence of the effectiveness (and cost effectiveness) of MTC+ in Bulawayo secondary schools. Amongst all participants, there is strong evidence that the MTC+ intervention increased VMMC uptake by approximately 2.5-fold (odds ratio [OR]= 2.53, 95 per cent confidence interval [CI]=1.21–5.30). Restricting the analysis to participants who did not report being circumcised at baseline, the findings suggest that MTC+ increased VMMC uptake by approximately 7.6 percentage points (12.2 per cent vs. 4.6 per cent, OR=2.65, 95 per cent CI=1.19–5.86). These findings are consistent across three levels of sensitivity analysis. The number needed to treat to yield one additional VMMC patient was 13.2 participants not already circumcised at the time of intervention. This translates to about US\$49 per new VMMC. Preliminary qualitative findings suggest that MTC+ coaches generally enjoyed and accepted the intervention. Logistical reinforcement from coaches, in the form of follow-up calls and accompaniment to the clinic were important in participants' decisions to undergo VMMC.

Given the urgent need to increase uptake of VMMC in Zimbabwe and other countries with generalised HIV epidemics and low male circumcision prevalence, it is crucial to take effective interventions to scale in order to prevent new, unnecessary infections. The trial was carried out in a single city, so the results should be treated with cautious

optimism when considering the potential impact at scale. Nevertheless, if its effectiveness remains consistent at scale, MTC+ could generate substantial new VMMC demand among adolescent males if scaled up in schools, and should be included in a package of effective demand-creation tools.

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Abbreviations and acronyms

CI	Confidence interval
IEC	Information, education, and communication
MC	Male circumcision
MCUTS	Male Circumcision Uptake Through Soccer
MTC	Make The Cut
MTC+	Make The Cut Plus
NUST	National University of Science and Technology
OR	Odds ratio
PSI	Population Services International
STI	Sexually transmitted infection
UNAIDS	Joint United Nations Programme on HIV/AIDS
USAID	United States Agency for International Development
VMMC	Voluntary medical male circumcision
WHO	World Health Organization

1. Introduction

Three randomised controlled trials have shown that voluntary medical male circumcision (VMMC) reduces female-to-male transmission of HIV by 50–60 per cent (Auvert *et al.* 2005). Mathematical modellers from the Centers for Disease Control and Prevention, the United States Agency for International Development, the World Health Organization (WHO) and the Joint United Nations Programme on HIV/AIDS (UNAIDS) estimate that between 2011 and 2025, more than 3.3 million new HIV infections (570,000 in Zimbabwe alone, representing 42 per cent of projected new infections) could be averted through increased scale-up and uptake of VMMC (Njeuhmeli *et al.* 2011). Though resources and efforts have been invested in scale-up, progress in the 14 priority countries has been limited (Wouabe 2013).

In Zimbabwe, the VMMC strategy was initiated in 2009 by the Ministry of Health and Child Welfare, which outlined aims to reach 80 per cent of 13 to 29 year-old males in Zimbabwe (approximately 1.3 million people) between 2011 and 2015. The ministry coordinates VMMC services with technical and financial support from Population Services International (PSI) Zimbabwe through USAID funding. VMMC services are offered free of charge to clients through fixed, mobile and outreach sites. The programme also offers transport vouchers or free transport via commuter buses to clients. Since 2011, ‘school holiday’ campaigns involving increased demand creation and supply-side efforts have been used to increase uptake of services for school-aged children or men in workplaces. From 2009 to 2012, Zimbabwe had completed 82,391 circumcisions, and 99.95 per cent of clients were tested for HIV before VMMC. From 2009 to 2011, annual rates of VMMC increased from about 500 to 12,000 among males 15 to 19 years. More circumcisions have been done during campaign periods (61 per cent of total) than during routine services (39 per cent) among males 15 to 19 years old (Kanagat *et al.* 2013).

Despite progress in supply scale-up, Zimbabwe is falling well short of its target of 80 per cent VMMC coverage by 2015 (WHO 2011), underlining the urgent need to identify and scale up effective interventions that increase demand for VMMC. The primary demand creation challenges include a strong need to dispel misconceptions about VMMC; limited resources for demand creation outside of campaigns; transport challenges, although transport is intended to be provided for all clients and a need to open communication channels beyond the traditional mass media, whose viewership has declined (Kanagat *et al.* 2013).

UNAIDS and WHO have stressed the urgency of increasing uptake among adolescent males, identifying schools and sports as two possible vehicles for intervention (WHO 2011). Secondary school participation remains fairly high among males across Zimbabwe, with 47.7 per cent of males attending (UNICEF 2013). Given the conditions in Zimbabwe, an innovative demand creation intervention that complements existing school holiday campaigns could play a vital role in increasing VMMC uptake among adolescent male students.

1.1 Sport for development

Interest is growing internationally, particularly in sub-Saharan Africa, for the use of sport in interventions to prevent HIV (Football for an HIV-Free Generation 2010). A recent systematic review by our group found that although there is strong evidence to suggest that sport-based HIV prevention interventions can increase HIV-related knowledge and communications, few studies have looked at effects on increased uptake of HIV-related services and none have looked at effects on uptake of VMMC (Kaufmann, Spencer & Ross 2013). Furthermore, none of the 21 evaluations of sport-based HIV prevention interventions identified in the review used a randomised design or assessed outcomes that were not self-reported.

Existing evidence has shown that demand creation interventions are urgently needed (Wouabe 2013; Chinkhumba, Godlonton & Thornton 2014) and can effectively increase VMMC uptake (Thirumurthy, Masters & Rao 2014; Mahler *et al.* 2011; DeCelles & Ndlovu 2013). This study contributes to literature on the effectiveness of sport-based HIV prevention at schools as a scalable, innovative approach for VMMC demand creation in Zimbabwe.

1.2 Grassroot Soccer Zimbabwe

Grassroot Soccer (GRS) is an international NGO that uses the power of soccer to educate, inspire and mobilise communities to stop the spread of HIV. Founded by former professional soccer players, GRS has run adolescent HIV prevention programs in Bulawayo, Zimbabwe since 2002 and is uniquely positioned to harness the opportunity of Africa's most popular game, to increase demand for VMMC.

A recent cluster-randomised trial – Male Circumcision Uptake Through Soccer (MCUTS) – measured the effectiveness of Make The Cut (MTC), a single, 60-minute intervention aiming to use soccer to increase VMMC uptake among Zimbabwean men aged 18 to 50 years who were members of soccer teams in Bulawayo. Enrolling 47 soccer teams and 736 men, the MCUTS trial found that the MTC intervention increased VMMC uptake approximately tenfold (4.8 per cent uptake among uncircumcised intervention participants, compared with 0.5 per cent among control participants).

Due to delays in ethical clearance that resulted in a shortened recruitment window, the trial was only able to recruit 73 per cent of the intended number of teams (64), making the study underpowered. Nevertheless, the trial did find weak statistical evidence of an effect on VMMC uptake (odds ratio [OR]=9.81, 95 per cent confidence interval [CI]=0.93,103.2, p=0.06). Quantitative and qualitative findings from MCUTS suggest that MTC's acceptability was higher among younger men participating in the trial. The objective of the present study was to assess the effectiveness of a modified intervention, Make The Cut Plus (MTC+), among male students attending secondary schools in Bulawayo.

1.3 Impact evaluation design

The objectives of the evaluation are to answer the following research questions:

- To what extent is the MTC+ intervention effective in increasing demand for VMMC among adolescent males attending secondary school (mainly aged 15–19 years) in Bulawayo?
- How and why is (or is not) the MTC+ intervention effective in increasing demand for VMMC?
- Approximately how much does it cost, using the MTC+ intervention, to generate demand from one new VMMC patient?

The study adequately answers the proposed research questions. Preliminary costing analysis has been completed, and GRS is working with health economists on a rigorous analysis of the cost-effectiveness of MTC+, including cost per HIV infection averted and implementation costs at scale.

A cluster-randomised trial was carried out to assess the effectiveness of MTC+, comparing VMMC uptake at the two Bulawayo VMMC clinics over the four-month study period (beginning of March to beginning of July 2014).

Baseline and four-month follow-up surveys were self-administered (in school classrooms) using mobile phones provided by the trial. The questionnaires were programmed using Open Data Kit, an open-access software tool. Focus group discussions and in-depth interviews with coaches and participants addressed how and why the intervention was or was not effective in increasing demand for VMMC. The interventions were carefully costed, and a cost-effectiveness analysis was carried out to determine the cost-per-new-VMMC-patient generated.

This report describes the MTC+ intervention, presents quantitative and qualitative findings and discusses potential policy implications.

2. Intervention, theory of change and research hypotheses

2.1 Description of the intervention

MTC+ consisted of a 60-minute in-person session delivered in schools by a trained 'coach' – a circumcised man aged 18 to 30 years recruited and trained by GRS to deliver the intervention (table 1). MTC+ was delivered in the first intervention school on 4 March 2014 and in the last intervention school on 10 June 2014.

Table 1: Summary of Make the Cut interventions and results from randomised controlled trial evaluation (MCUTS and MCUTS II)

	MCUTS	MCUTS II
<i>Target population:</i>	Men ages 18–30	Boys ages 14–19
<i>Cluster unit:</i>	Professional and social soccer teams	Secondary schools
<i>Intervention:</i>	MTC: <ul style="list-style-type: none"> • 60-minute session • Poster • SMS messages • Referral cards 	MTC+: <ul style="list-style-type: none"> • 60-minute session • Follow-up calls • Clinic accompaniment • Soccer-based incentives
<i>VMMC uptake results</i>	4.2% in intervention group vs. 0.5% in control group (OR=9.81, 95% CI=0.93–103.2, p=0.06)*	12.2% in intervention group vs. 4.6% in control group (OR=2.65, 95% CI=1.19–5.86, p=0.01)

Note: * Source: DeCelles and Ndlovu (2013).

The in-person MTC+ session consisted of an interactive game, a personal story shared by the coach and a group discussion. The game, called ‘Cut & Cover’, is structured as an interactive soccer penalty ‘shootout’ in which the goalkeeper metaphorically tries to protect himself from getting infected with HIV (letting the ball through the goal). In the first round, the goalkeeper represents an uncircumcised man who does not use condoms and frequently fails to stop the ball. In the next round, after participants identify that VMMC can help reduce the goalkeeper’s risk of infection, the goal’s width is reduced, representing the partial protection offered by VMMC (the ‘cut’). In the final round, four defenders help the goalkeeper block the goal, representing the additional protection of consistently and correctly using condoms (the ‘cover’). Key messages communicated during the activity focus on the scientific evidence of reducing risk of HIV infection and the numerous other health benefits of VMMC, including improved hygiene and protection from sexually transmitted infections (STIs).

Through the ‘Coach’s Story’ second component of MTC+, coaches shared personal stories of their decisions to become circumcised. By openly discussing their experiences, MTC+ coaches built personal connections with participants and addressed barriers to seeking VMMC, such as fear of pain during and after the surgery. In the week following the intervention, coaches followed up with phone calls to participants who had expressed interest in receiving VMMC. Coaches scheduled a time to meet with groups of participants at a school and transport was provided for the group to go to the clinic together.

MTC+ was also delivered in control schools at the end of the trial, with participants receiving the intervention immediately upon completion of the follow-up questionnaire.

2.1.1 Incentives structure

The intervention design initially included soccer-based incentives to be distributed to participants upon completion of VMMC. The intention was to offer incentives to all

participants, but in April 2014 the organisation (PSI) running the local VMMC clinics requested that this component be removed. Recent empirical evidence indicates that positive incentives can bring about changes in health behaviours, and incentive-based interventions have gained considerable support as a result. Findings from psychology and economics have shown that in high- and low-income countries, incentive-based approaches have the potential to increase use of preventive technologies such as vaccinations and reduce the use of addictive substances (Schultz 2004; Rivera *et al.* 2004; Lussier *et al.* 2006; Higgins & Silverman 1999). In developing countries, a growing body of research shows that conditional cash transfers offered on a frequent basis can influence households' decisions to send children to school regularly and bring them for health check-ups (Rivera *et al.* 2004; Lussier *et al.* 2006). However, although conditional cash transfers for education tend to involve relatively large sums of cash, other interventions have found much smaller financial incentives to undertake desirable health behaviours to be effective (Banerjee *et al.* 2010; Thornton *et al.* 2014). Compared with the long-term benefits that stem from adopting healthy behaviours or ceasing unhealthy ones, the size of incentives that may be necessary to achieve behaviour change may be relatively small (Banerjee *et al.* 2010; Thornton *et al.* 2014).

Focus group discussions with MTC coaches and participants consistently identified t-shirts, tickets to popular soccer matches, and opportunities to meet famous local players as motivational incentives. GRS explored implementing a small incentive (US\$3–5 or the equivalent in airtime) to all MTC+ coaches if the group achieved an uptake target of 10 per cent. The group incentive was not implemented, however, because formative research showed that this incentive would be too logistically difficult and that there was a slight risk of coercion.

All participants were required to provide informed consent at the clinic, and the process evaluation assessed motives for undergoing VMMC, documenting any cases of suspected coercion. The proposed incentives approach is consistent with The United States President's Emergency Plan for AIDS Relief policy and the monetary value of incentives was equal to those of similar VMMC trials (Wouabe 2013).¹

2.1.2 Coach selection

MTC+ coaches participated in at least 56 hours of training, led by local GRS staff, before implementing MTC+. Training focused on building HIV prevention knowledge, facilitation techniques and skills in working with youth. It also included a GRS-led curriculum and storytelling workshop and a PSI-led VMMC information session. MTC+ coaches learned their role in the whole intervention, including curriculum delivery, follow-up phone calls, transport arrangements and incentive distribution. All coaches had at least one year of experience implementing GRS's other sport-based HIV prevention curriculum in Bulawayo schools. Some MTC+ coaches had also been MTC coaches and had been involved in the MTC+ intervention redesign process through

¹ Dr Harsha Thirumurthy, assistant professor of health economics at the University of North Carolina at Chapel Hill, advised on the incentive structure and evaluation plan. Dr Thirumurthy is a leading health economist with experience leading incentive trials.

their participation in interviews or focus groups. The majority of MTC+ coaches were circumcised before the MCUTS and MCUTS II trials; two coaches chose to get circumcised when they learned the eligibility requirements for MTC+ coaches.

2.2 Theory of change and key assumptions

Grounded in Bandura's Social Cognitive Theory, our theory of change posits that young men in Zimbabwe need additional knowledge and motivation to undergo VMMC. Building on promising uptake findings from the MCUTS trial and qualitative findings suggesting higher acceptability of MTC among younger men, the MTC+ intervention was delivered by trained, circumcised MTC+ 'coaches' – a mix of professional soccer players and community role models – male students aged 15 to 19 years in public secondary schools in Bulawayo.

Below we present barriers and enablers to VMMC uptake among 15- to 19-year-old Zimbabwean males, our assumptions in developing the MTC+ model, and the hypothesised pathway for the changes that MTC+ was designed to effect.

2.2.1 Barriers to VMMC uptake

From our quantitative and qualitative research within MCUTS and more recent qualitative research with 15- to 19-year-old male Zimbabwean students, cultural barriers such as religion and tradition do not appear to hinder VMMC uptake in Zimbabwe. Additionally, private costs are not a barrier: VMMC is a free service and PSI provides free transport.² GRS has identified three individual-level barriers to VMMC uptake among this group.

Barrier 1: myths and lack of knowledge

Although 90 per cent of MCUTS baseline survey participants correctly answered that VMMC can decrease HIV risk, only 54 per cent of participants could correctly identify at least one local VMMC clinic, demonstrating a lack of knowledge about local services. Findings from the focus group discussion with 15- to 19-year-old Zimbabwean males have further demonstrated gaps in knowledge and the presence of myths surrounding VMMC:

You can just be unlucky and bleed to death during the operation. (16-year-old Zimbabwean male)

Some say that ... the foreskin is used for rituals. (15-year-old Zimbabwean male)

To address myths and lack of knowledge, GRS modified 'Cut & Cover', the 60-minute VMMC education activity used under the MCUTS trial, to address specific myths and knowledge gaps of Zimbabwean males. MCUTS qualitative research suggests greater acceptability of Cut & Cover among younger participants (18 to 20 years). Younger participants expressed a greater sense of comfort with the game-based approach than older participants, some of whom thought the game was too juvenile. Moreover, during

² Other studies have identified cultural beliefs and private costs as barriers to seeking VMMC.

a pilot of Cut & Cover delivered by GRS to South African youth aged 15 to 19 years, participants demonstrated a 31.5 percentage points increase in VMMC knowledge, from 41.8 per cent to 73.3 per cent ($p < 0.001$) (Kaufmann *et al.* 2012).

Barrier 2: fear of pain and/or HIV test

Fear of pain and fear of mandatory HIV testing³ were the most commonly cited barriers among MTC coaches and MCUTS participants. MTC coaches highlighted a common concern raised by participants during the intervention that the procedure would be painful. Described by one MTC coach as ‘the first hindering factor’, some coaches noted the HIV test requirement as a greater deterrent than VMMC itself: ‘[Participants were] afraid, not of being circumcised, but of being tested’.

To address this barrier, MTC+ coaches shared their personal experiences with circumcision during the ‘Coach’s Story’, including how much pain they had experienced and how they had felt before and during HIV testing. Coaches also discussed how they overcame fears of pain or HIV testing. The following statement demonstrates how coaches referenced their personal experience during the intervention:

By the time we started, I think I’d been circumcised for less than 2 weeks. So ... we also tell them that, as you can see, we’re standing here but, can you guess when he was circumcised? ‘Yaa, last year, last year’, saying it was a long time ago. But I’d be like, ‘No, he got circumcised last week. It is his first week’. (MTC coach)

MTC+ coaches also addressed fears of HIV testing and pain during follow-up phone calls with participants.

Barrier 3: healing time

The opportunity cost of missed employment is not likely to be a barrier to VMMC uptake among the great majority of 15- to 19-year-old students, since very few are employed, but time away from school or soccer has been identified as a barrier to VMMC for MTC+ participants. Formative research highlights this point:

I realised that the 6-week healing period is a punish[ment] ... so I told myself that I will first write my O-levels, then when I am waiting for my results that’s when I can go. (16 year-old Zimbabwean male)

MTC coaches made special efforts to educate participants on the importance of post-operative healing time and share their own experiences with healing from VMMC. MTC+ coaches adopted a similar strategy to address participants’ potential concerns about healing time.

³ Zimbabwe’s Department of Health mandates that free VMMC at public clinics is available only to males who test negative for HIV.

2.2.2 Enablers of VMMC uptake

GRS identified five individual and community-level enablers of VMMC uptake.

Enabler 1: HIV and STI risk reduction

Reduced risk of HIV infection has been identified in the literature as an enabler of VMMC uptake as well as among men in MCUTS (Wouabe 2013). Formative research shows that 15- to 19-year-old Zimbabwean males are motivated by HIV risk reduction:

If you forget to wear a condom there are less chances of you getting HIV compared to someone who is not circumcised. (15-year-old Zimbabwean male)

The MTC+ Cut & Cover activity clearly demonstrated the reduction of risk with VMMC, but also stressed that the risk of unprotected sex with an HIV-positive partner is not reduced to zero, and therefore promoted condom use.

Enabler 2: improved sexual performance and/or hygiene

MTC coaches and participants highlighted improved sexual performance as a motivator for VMMC, citing 'lasting longer' and 'satisfying one's partner'. Hygiene has been identified as an important enabler for 15- to 19-year-olds and there is some indication that improved sexual performance is also important to this age group, as shown through formative research:

... your penis will always be clean and it reduces your chances of getting [STIs] and some say that you last longer during sex. (15-year-old Zimbabwean male)

During the Coach's Story component of MTC+, coaches shared personal experiences with improved hygiene or sexual performance to influence participants.

Enabler 3: social pressure

MTC coaches, some of whom are professional soccer players, are important role models in the community, as exemplified in this quote from a MTC coach:

I'm a celebrity, like Khupa⁴ and others. So, most of the children, they look up to us ... like being circumcised and doing the right choices in life, so I always have an influence because the children will always be listening to me and do like me. (MTC coach)

During the Coach's Story, MTC+ coaches used positive social pressure to motivate participants to undergo VMMC. Their follow-up calls to participants who signed up for VMMC allowed them to continue using their influence after the MTC+ session and reduce loss to follow-up for those who had expressed interest in the procedure.

GRS and PSI had been encouraged by findings from their 2012 collaboration on a youth tournament VMMC, which showed 365 boys ages 13 to 17 signed up for VMMC,

⁴ A reference to Mkhupali Masuku, a famous former professional football player and coach who has been circumcised.

yet only 172 boys (47 per cent of those that signed up) underwent the procedure (PSI Zimbabwe 2013). Studies of other behavioural interventions have shown that brief HIV prevention counselling delivered by mobile phone can sustain intervention effects and significantly reduce high-risk sexual behaviours (DiClemente *et al.* 2010). Qualitative findings from MCUTS showed little effect of follow-up SMS messages on uptake of VMMC. However, some MTC coaches independently obtained participants' mobile phone numbers and made follow-up calls to interested men to apply positive social pressure and induce self-efficacy to undergo VMMC, as highlighted in this quote:

And also we had to actually make a follow for them to have courage as well ... We actually took their phone numbers. So to remind them where the picking points are and also to actually give them courage, to tell them that we all went through that. (MTC coach)

MTC+ coaches recorded participants' mobile phone numbers and interacted with participants via phone calls, SMS, and WhatsApp, a free, Web-based phone messaging service.

Enabler 4: peer support

There is some indication that peer pressure may be a more important enabler to 15- to 19-year-olds than to older men. During MCUTS, older participants expressed fear of going for VMMC as a group, since the status of a man who tests HIV positive would be exposed when he does not proceed directly into VMMC.

Formative research suggests less of a fear of testing HIV positive in front of one's friends among youth in the 15 to 19 age group; the research also suggests that young men of this age group often go to the clinic with one or more peers for support, as highlighted by the following quote:

I went with my older brother and we were told that we will be next to each other during the operations which gave me strength and courage. (17-year-old Zimbabwean male)

MTC+ encouraged participants to support one another and undergo VMMC together.

Enabler 5: incentives

Incentives serve as a further enabler of VMMC uptake, providing additional motivation to seek VMMC after the intervention. During MCUTS qualitative research, participants and coaches identified t-shirts and tickets to popular soccer matches. Table 2 identifies barriers and enablers to VMMC uptake among Zimbabwean men aged 15 to 19, with corresponding examples of interventions and MTC+ components.

Table 2: Barriers and facilitators to seeking VMMC

Intervention components to reduce barriers to seeking VMMC		
<i>Barrier</i>	<i>Intervention examples</i>	<i>MTC+ component</i>
Myths, lack of knowledge	Information on VMMC	Soccer-based VMMC activity
Fear of pain or HIV test	Information on VMMC	Coach's Story, Q&A, phone-based follow up
Healing time	Information on VMMC	Soccer-based VMMC activity, Coach's story
Lack of transportation	Reduce costs and inconvenience	Free transportation provided by PSI
Intervention components to enable seeking VMMC		
<i>Facilitator</i>	<i>Intervention examples</i>	<i>MTC+ component</i>
HIV and STI risk reduction	Information on VMMC	Soccer-based VMMC activity
Improved hygiene or sexual performance	Information, advocacy provided by social groups	Coach's Story
Social pressure	Information and advocacy provided by social groups	Trained, circumcised adult role models facilitate sessions; follow-up calls with coaches
Peer support	Information and advocacy provided by social groups	Coach's Story, stories from circumcised participants

2.2.2 Assumptions

GRS built its pathway of change on the following assumptions:

- The supply of VMMC services remains consistent
- PSI transport remains free and effective
- HIV testing is less of a perceived barrier for boys than it is for older males
- Schools remain open and permit coaches to implement MTC+
- Boys are already considering VMMC
- Boys obtain parental consent to participate in the trial
- Boys obtain parental consent to get circumcised
- Boys will be reachable by phone for follow-up calls

2.2.3 Pathway of change

Appendix A (figure 3) represents the proposed pathway of change through which GRS anticipated the MTC+ intervention would increase uptake of VMMC and decrease HIV incidence amongst grade 7 students (15–19 years old) in Bulawayo, Zimbabwe.

The design of MTC+ is guided by social learning theory, which suggests that learning occurs within a social context through observation and modelling of one another's attitudes and behaviours (Bandura 1977). Group participation in the interactive,

activities-based intervention stimulated an environment of peer support, social pressure and shared learning, enabling adoption of new knowledge related to the benefits of VMMC and of local VMMC service providers.

Expanding on the notion of observation and modelling, MTC+ draws further on Bandura's social cognitive theory, which asserts that individuals learn best from people with whom they can identify – role models – who are instrumental in generating self-efficacy in others. In the context of the MTC+ intervention, social cognitive theory was used to predict behaviour change, positing that MTC+ coaches, selected for their position as role models in the participants' communities, would foster participants' self-efficacy for seeking VMMC. By sharing their personal experiences of getting circumcised, MTC+ coaches addressed identified barriers to VMMC uptake within the target population, including fear of pain, fear of HIV testing and concerns about healing time.

Through the Coach's Story, coaches also addressed enablers of VMMC uptake, including improved hygiene and sexual performance. Influenced by their role models, participants were expected to internalise these messages, modelling the attitudes their role models displayed towards VMMC. Soccer-themed IEC material, follow-up phone calls and accompaniment to the VMMC clinic by MTC+ coaches reinforced learning and induced self-efficacy, simultaneously reducing loss to follow-up, which has been identified as a limiting factor in increasing circumcision uptake amongst youth in Zimbabwe. Soccer-based incentives were meant to serve as an additional enabler, improving motivation to seek VMMC. Messaging in the Cut & Cover activity was designed to ensure that participants who completed VMMC would adhere to post-operative healing guidance and not engage in risk-compensation behaviours.

While underscored by social cognitive theory as a model to predict behaviour change, the development of the MTC+ intervention was also informed by the Transtheoretical or 'Stages of Change' model. Described by Prochaska, DiClemente, and Norcross (1992), the model identifies six stages – pre-contemplation, contemplation, preparation, action, maintenance and termination – which reflect the nature of health decision-making as a process. In particular, acknowledgement that the decision-making process is not always linear or incremental aligns with the nature of the decision to be circumcised.

The MTC+ intervention includes multiple behaviour change communication approaches with different time scales (the interpersonal soccer-themed session, IEC material, phone-based follow-up, accompaniment and incentives) tailored to reach participants at different stages of readiness for change, with an emphasis on shifting those in the pre-contemplation and contemplation stages to preparation and action.

2.3 Outcomes

The primary outcome was VMMC uptake over four months (determined via cross-linkage between clinic registers from the two Bulawayo male circumcision clinics and consent forms) amongst participants who reported that they were uncircumcised at baseline. As was successfully used in the MCUTS trial, individual linkage was based

on a combination of factors – school, name and surname, age, address and phone number. Links between patients and participants were classified as definite, probable, possible or unlikely. The primary analysis looked at the number and percentage of definite or probable links, with a follow-on sensitivity analysis including possible links. Secondary outcomes include male circumcision-related knowledge and perceptions, self-reported VMMC prevalence at endline and reported sexual risk behaviour.

3. Larger context and sample context

3.1 Rationale for site selection

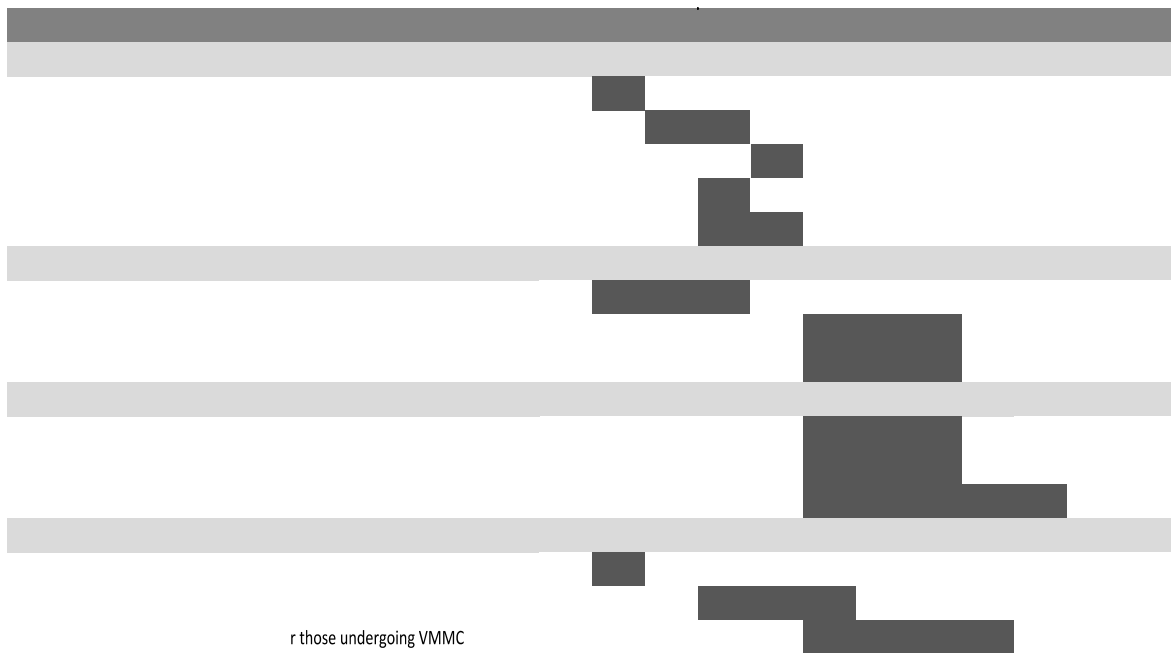
With a population of 653,337, Bulawayo is the second largest city in Zimbabwe. National HIV prevalence is 18 per cent, and the HIV prevalence in Bulawayo is 19 per cent (Zimbabwe National Statistics Agency 2011). Free VMMC services in Bulawayo are available only at two clinics run by PSI Zimbabwe: Bulawayo Eye Clinic, operating since 2009, and Lobengula Clinic, operating since 2012. The clinics completed 26,383 VMMC procedures in 2013 (PSI Zimbabwe 2013). Due to the need for rigorous measurement of VMMC uptake, it was crucial to have access to registration data for both Bulawayo-based clinics.

GRS has delivered school-based HIV educational programmes in Bulawayo since 2002 and has a strong partnership with the Zimbabwe Ministry of Education. With MCUTS II, GRS seeks to assess the effectiveness of this brief and low-cost intervention in schools. If found effective in increasing demand for VMMC services, GRS will seek to scale MTC+ across Zimbabwe and in other VMMC priority countries.

4. Timelines

4.1 Implementation of intervention

Table 3: MCUTS II implementation plan (October 2013 – September 2014)



4.2 Implementation of evaluation

Table 4: MCUTS II impact evaluation plan (October 2013 – September 2014)

ce Oral or poster presentation

5. Process evaluation

5.1 Analysis of inputs and outputs

MTC+ was implemented in 13 schools with 557 participants. Coaches began their work in February 2014, one month later than anticipated due to a delay in ethical approval from the London School of Hygiene & Tropical Medicine. As a result, implementation ran from February to March, rather than January to February, as originally scheduled. Upon completion of baseline surveys in the original 22 schools, we saw lower than anticipated cluster sizes and therefore enrolled an additional four schools in the trial in May and June. GRS implemented MTC+ with participants from the control schools in July and August 2014.

5.1.1 Referral cards and interventions

VMMC referral cards were distributed to 249 intervention participants from the 5 schools where incentives were offered. Those attending the programme development workshop identified GRS t-shirts and tickets to local professional soccer matches (each valued at approximately US\$5) as appropriate for VMMC with little risk of coercion. The structure for promoting and distributing the incentives closely followed USAID guidelines on incentives.

Boys with a stamped referral card could choose an incentive; 17 selected t-shirts and 10 selected tickets as incentives. Those who selected tickets had to wait about two weeks to receive them, as the Zimbabwe Premier Soccer League had not yet issued tickets for the 2014 season.

At PSI's request, incentives were removed in March 2014.

5.1.2 Follow-up, transport and accompaniment to the VMMC provider

Coaches collected phone numbers from participants who expressed interest in VMMC and initiated follow-up with phone calls. Beyond the initial call, coaches mostly communicated with participants via SMS or WhatsApp. For participants without phones, coaches communicated with them through their teachers.

PSI arranged transport to VMMC clinics for groups of more than five; GRS provided transport for smaller groups. Often, GRS coaches paid taxi fare for the boys.

MTC+ coaches accompanied participants to the VMMC clinic – individually or with groups of up to five boys – and stayed with them throughout the day. In total, coaches accompanied 56 participants to undergo VMMC between February and June 2014. Coaches and participants viewed accompaniment as an integral and unique component of MTC+, as evidenced in this quote by a MTC+ participant:

[The coach accompaniment] gave us a sense of security, a sense of safety. Because, if I was to go alone, maybe I would have turned around and came back home. But, with the coach, he'll be just telling you everything 'cause he's gone through it. He has the experience and he knows more than you who haven't done. (MTC+ participant)

5.2 Monitoring

GRS staff members passively observed all 13 MTC+ sessions and collected field notes. Observation suggests the sessions were well received by participants and school personnel and that coaches closely followed the steps of the curriculum.

5.3 Challenges

Participant recruitment into the trial proved more challenging than expected. Sample size assumptions were on a predicted cluster size of 80 participants enrolled at each school. However, once recruitment began, research teams observed that students and teachers were busy preparing for exams or extracurricular activities. As a result, actual cluster size averaged 47 participants per school. In response, we adjusted the study design and enrolled four more schools.

PSI felt the incentives were unsustainable, potentially coercive and potentially detrimental to other PSI VMMC outreach campaigns that did not offer incentives. At PSI's request, we halted incentive promotion and distribution after being implemented in five intervention schools. Participants at the remaining eight intervention schools were not offered incentives, although they did receive follow-up phone calls, free transport and coach accompaniment to the clinic. This shift suggests a need for researchers and implementers to more thoroughly engage stakeholders at all levels earlier in the development stage, especially on potentially controversial activities such as incentives.

The removal of incentives from the intervention also meant that referral cards could no longer be given to participants or used to track male circumcision uptake.

5.4 Participation

Table 5 shows lower than expected initial participation rates. School officials and coaches reported difficulty in organising students due to conflicting extracurricular activities and exam schedules; coaches often visited the same school multiple times. An MTC+ participant made reference to this challenge during an in-depth interview:

[MTC+] came at the middle of the term. You should have come at the end of the term when we were done with the exams and in that way most people would go to get circumcised because there is more time, and even during the holidays it would be a nice time to recover because we won't have to think about coming to school soon after being circumcised. (MTC+ participant)

Table 5: Impact evaluation outputs

Output	Anticipated	Completed
Number of schools enrolled	22	26
Number of participants enrolled	1,280	1,226
Average participants per school	80	47

5.5 Beneficiaries

The beneficiary group largely matched the intended target population, with all participants enrolled in secondary schools in Bulawayo (median age: 16.2). We anticipated 20 to 30 per cent VMMC prevalence at baseline; however, about 48 per cent of participants reported being circumcised at baseline.

5.6 Implemented intervention vs. planned intervention

In the five schools that were offered incentives, participants who produced a stamped referral card were offered the option of a t-shirt or a ticket to a Zimbabwe Professional Soccer League match. A delay meant the season did not start until the first week of April, leaving a one-month gap between the circumcision procedure and the incentive.

Additionally, since class schedules varied by form level and school, the 60-minute MTC+ session was delivered over two or more days to different groups of participants. This led to more MTC+ coach visibility and a longer GRS presence at the school than expected.

5.7 Weaknesses in implementation

The delay in distribution of tickets as incentives contradicted our theory of change, which stressed immediate receipt of incentives as integral for generating positive peer communication of MTC+:

It took about 3 weeks [to get our incentive]; they gave it to us when we were on holiday. (MTC+ participant)

Implementation plans also changed based on class schedules and recruitment challenges. This led to multiple visits to each school to implement MTC+ and smaller groups of participants during each session.

6. Methodology: evaluation design and implementation

6.1 Evaluation and identification strategy

6.1.1 Study design

The study employed a cluster-randomised design, using schools as clusters. Twenty-six secondary schools (n=1,226) were randomised to receive early delivery of MTC+ (intervention group: March–June 2014) or delayed delivery (control group: October–December 2014). Thus, 565 participants received the intervention in the first phase.

6.1.2 Randomisation

Schools were used as the cluster unit of randomisation. Prior to randomisation, schools were broken into three strata based on student enrolment data provided by the Ministry of Education: private schools and large public schools (≥ 300 students enrolled) and small public schools (< 300 students). This method was used to ensure that the two study groups would be comparable in socioeconomic status and size.

Stratified randomisation was then carried out at a public event in Bulawayo, with representatives from participating schools, GRS, the National University of Science and Technology (NUST), and PSI in attendance. To assign each school to the intervention and control groups, each school name was written on a piece of paper, which was then folded and placed in a covered bucket. The names were then blindly drawn, one by one, from the bucket, alternating so that the first name drawn was assigned to the intervention group, the second to the control group, the third to the intervention group and so on. This process was repeated three times, once for each stratum. Attendees at the event each took a turn drawing from the bucket so all could see the process' transparency.

6.1.3 Consent and assent

Written assent was obtained from all participants. The survey team visited each school one week prior to administering the baseline survey in order to distribute parent/guardian letters. Those under the age of 18 were required to obtain a signature on the form to participate in the study, and those older than 18 were able to give consent for themselves. Participants under 18 were also required to bring signed VMMC parental consent forms to the clinic.

6.2 Determination of sample size and power

Using the Hayes and Bennett method (1999) for assessing the power of a cluster-randomised trial, we determined that 22 clusters and approximately 1,760 participants would serve as a sufficient sample size for the trial. This assumed an average of 80 male participants per school, 20 per cent baseline circumcision prevalence, 2 per cent VMMC uptake in the control group over four months, and a k of 0.3.

We determined that a study of this size, involving 11 intervention and 11 comparison schools, would have a greater than 80 per cent power to detect a threefold increase in VMMC uptake (6 per cent vs. 2 per cent, or an absolute difference of 4 percentage points in uptake) as being very unlikely to have occurred by chance ($p < 0.05$). Three weeks into the trial, two things became apparent: first, that baseline reported circumcision prevalence would likely be higher than the estimated 20 per cent, and that the average number of participants enrolling per school, even with several repeat visits, was closer to 50. To ensure the trial would have sufficient power, we enrolled 4 additional schools, bringing the total to 26. A group of study staff from GRS and NUST used the same method to randomise the additional schools.

The most recent enrolment database (Ministry of Education 2013) indicated that there were 30 public secondary schools in Bulawayo with a sufficient number of students to participate in the study (4 other schools had fewer than 20 students in Form 4, and 4 others do not have any students in Form 4). The 30 schools have an average of 137 males enrolled in Form 4 (a range of 58 to 233). To reach an average of 80 study participants per school, the study would need to achieve approximately 59 per cent enrolment among all Form 4 males in participating schools. Our experience with trials in South Africa and Tanzania suggests that this is feasible – and perhaps conservative – even if written parental consent is required.

6.3 Strategies to avoid bias

We expected a low risk of selection bias, as loss-to-follow-up should be minimal given the relatively short follow-up period and the fact that follow-up surveys would be carried out during the same academic semester (thus the vast majority of participants would be in the same classes). There was a slight risk of selection bias since the Medical Research Council of Zimbabwe insisted on written parental consent – i.e. more cooperative students would be more likely to participate – but this would not be differential between study groups and will be minimised by intensive efforts to obtain informed parental consent for as many interested students as possible.

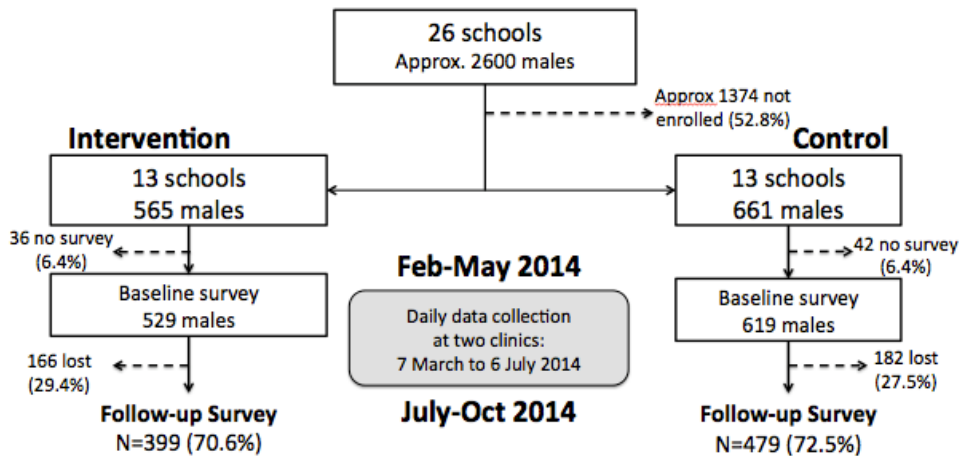
While it is not possible to blind survey administrators to each school's allocation (as they need to cooperate with coaches to coordinate times for baseline surveys and intervention delivery in Intervention schools), data collectors at the clinic as well as data entry clerks and those analysing data were blind to participants' study groups.

A cluster-randomised design was chosen over an individually randomised design to minimise risk of control group contamination. While it is not possible to entirely prevent mixing of intervention and control students, the risk is very small and the chance of its resulting in any meaningful diffusion or spillover of the intervention was expected to be negligible. However, the chance of such spillover in intervention schools (e.g. to younger students not directly receiving the intervention) was possible; this was investigated through the process evaluation. Focus group discussions and in-depth interviews in the process evaluation enabled us to determine whether there was any evidence that the intervention may have spilled over to the control group.

6.4 Sampling design

Figure 1 shows the flow of schools and participants in the trial. Twenty-six schools were enrolled, with an average of approximately 100 male students in each in forms 3, 4 and 5. Of these approximately 2,600 male students, 1,226 enrolled in the trial. All enrolled participants in the intervention group received the MTC+ intervention. Upon completion of clinic data collection, MTC+ was offered at all control schools.

Figure 1: Distribution of participants



Note: Figure created by Grassroot Soccer.

6.5 Primary data collection

While GRS was the primary grant-holding institution, distribution of responsibilities for the evaluation ensured that its independence was not compromised. The London School of Hygiene & Tropical Medicine led the study design and data analysis, which was carried out blind of study groups. NUST led all data collection and data entry for baseline Open Data Kit surveys, consent and assent forms, clinic registers and follow-up Open Data Kit surveys.

GRS are co-authors on papers resulting from the study. The London School of Hygiene & Tropical Medicine led the write-up and dissemination of results, with support from NUST.

6.6 Qualitative methods

Qualitative methods were employed during the MCUTS and MCUTS II trials (table 6). Forty-seven in-depth interviews and two focus group discussions were conducted. In-depth interviews elicited individual experiences, opinions, and feelings (Tashakkori & Teddlie 2003). In-depth interviews and focus group discussions specifically covered perceptions and acceptability of the intervention, perceptions of VMMC, influential factors in deciding whether to go for VMMC and suggestions for programme improvement. Programme observation enabled further consideration of emerging themes and the intervention's reception within the target population.

Table 6: Qualitative data collected through formative research of MTC and process evaluation of MCUTS II

	In-depth interviews hosted	Focus group discussions hosted
<i>Formative research of MTC</i>		
Circumcised participants	3	
Uncircumcised participants	6	
Coaches	10	2
<i>Process evaluation of MCUTS II</i>		
Circumcised participants	10	
Uncircumcised participants	10	
Coaches	8	
Total	47	2

6.6.1 Data collection

During formative evaluation of MTC, in-depth interviews were conducted with participants (n=9) and coaches (n=10). MTC intervention-group participants who underwent VMMC within 45 days post-intervention (determined via clinic registers) were purposively selected for in-depth interviews. Where possible, these participants were matched with a same-age participant from the same soccer team who did not undergo VMMC to enable comparison. All active MTC coaches were selected for in-depth interviews. Two focus group discussions were conducted with MTC coaches. Research assistants observed the coaches' training workshop and MTC interventions (n=30). Observation was also conducted at the Bulawayo Eye Clinic to explore participants' use of the free transportation and referral cards.

The process evaluation of MCUTS II employed the same methods. For in-depth interviews with participants, MTC+ intervention-group participants who underwent VMMC within 45 days post-intervention were purposively selected and matched with same-age participants from the same school who did not undergo VMMC.

In-depth interviews and focus group discussions were conducted in English and Ndebele, depending on the participants' language proficiency. Research assistants fluent in both languages hosted the interviews and discussions. All in-depth interviews and focus group discussions were audio-recorded and transcribed verbatim. Those conducted in Ndebele were translated into English by fluent local speakers before transcription.

6.6.2 Data analysis

A four-person team coded the MTC transcripts and a five-person team coded the MCUTS II transcripts, using NVivo 10 software. A preliminary coding scheme for MTC formative research was developed based on the topics in the interview and focus group guides, including experience in MTC, perceived impact of MTC, motivation and barriers for VMMC, support, intervention components, materials, training and suggestions for programme improvement, including use of incentives. We employed an applied thematic analysis approach to code and analyse the data, focused on

thematic coding and identification of emergent themes (Guest, MacQueen & Namey 2012). The team coded the first interview together and then revised the coding scheme to improve inter-coder agreement. Each team member subsequently coded a unique sample of transcripts. The team convened to code the final transcript together to again assess inter-coder agreement.

The coding scheme was revised iteratively based on emerging themes. Prior to the application of the scheme to MCUTS II data, codes were added to capture additional MTC+ components, including coach follow-up calls, accompaniment to the VMMC clinic and incentive provision. Structured observation forms were reviewed to assess their consistency with results obtained from focus group discussion and in-depth interview data.

7. Impact analysis and results of the key evaluation questions

7.1 Primary empirical specifications

Daily registers from Bulawayo's two VMMC clinics – Bulawayo Eye Clinic and Lobengula Clinic – were photographed and data in the images were transcribed into an electronic database. Clinic receptionists had made hand-written entries in the registers at the time of each client's visit.

Table 7 shows the variables and weights used for probabilistic matching to determine VMMC uptake. Three-point thresholds were used to classify links as definite matches (18.00 or more points), probable matches (14.00–17.99 points), possible matches (12.00–13.99 points) and non-matches (11.99 or fewer points). To reduce potential bias from false positives (e.g. a participant's brother getting VMMC, having the same last name, street address, house number, next of kin and phone) and false negatives (e.g. discrepancies in spelling between participants' handwriting and entries in the clinic register), all possible and probable matches were manually blindly reviewed by two investigators to provide a definitive and consistent determination of match or non-match.

The main outcome of VMMC uptake therefore included definite matches as well as favourably reviewed probable and possible matches. VMMC uptake was assessed among all trial participants and among participants who did not report already being circumcised at baseline.

Table 7: Variables and weights used for probabilistic matching

Variable	Points for exact match	Points for partial match	Points for disagreement
Last Name	6	4	-2
First Name	5	3.5	-2
Date of birth**	10	4	0
Street Address/ Area	5	3	-2
House Number	2	1	-1
Age^	2	0	-2
Name of next of kin	8	3	-0.5
Phone	6	1.5	0

Note: * Phonetic matching used for strings. ** Only available for 915 of the patients.

^ Only year of difference considered a match; 2–3 years diff = 0 pts; 4+ years diff = –2 pts.

Table 8 shows the baseline characteristics of all trial participants. There was good balance between groups. The majority of participants (88.1 per cent intervention, 90.5 per cent control) attended public schools. At baseline, about half of participants (49.3 per cent intervention, 46.9 per cent control) self-reported that they were already circumcised, and about one-third (34.1 per cent intervention, 33.9 per cent control) reported their fathers' being circumcised.

The median age of participants in both groups was 16.2 years and the median asset index score in both groups was 3 of 5 (IQR 2–4 in both groups). A larger proportion of intervention participants (15.9 per cent) than control participants (9.4 per cent) reported their fathers' having less than O-level education. Equivalent values were more similar for mothers having less than O-level education (19.5 per cent vs. 16.6 per cent). No other important imbalances were observed between study groups.

Table 8: Sample characteristics

	Intervention (n=565)		Control (n=661)	
	n	%	n	%
Participation				
School Type	69	12.2	63	9.5
Private	228	40.4	292	44.2
Public Small	268	47.4	306	46.3
Public Large	528	93.6	615	93.6
Completed baseline questionnaire				
Grade in school				
Form 3	293	55.9	299	48.5
Form 4	228	43.5	294	47.6
Form 5 (Lower 6)	3	0.6	25	4.1
Circumcision				
Self-reported circumcised	261	49.3	290	46.9
Father is/was circumcised	176	34.1	207	33.9
How many of your friends are circumcised?				
None	23	4.4	40	6.5
A few	245	46.4	306	49.4
Most	187	34.4	203	32.8
All	53	10	44	7.1
Demographics				
Language spoken at home				
Ndebele	388	73.4	448	72.4
Shona	99	18.7	131	21.2
English	35	6.6	33	5.3
Other	7	1.3	7	1.1
What best describes where you live?				
Low-density housing	235	44.4	272	43.9
High-density housing	214	40.5	288	46.5
Who do you live with?				
Neither mother nor father	180	34	205	33.1
Father, not mother	39	7.4	46	7.4
Mother, not father	132	25	157	25.4
Both parents	178	33.7	211	34.1
Mother less than O-level education	103	19.5	103	16.6
Father less than O-level education	84	15.9	58	9.4
Numeric characteristics				
	Median	IQR	Median	IQR
Baseline age (years)	16.2	15.5–17.0	16.2	15.6–17.0
People in household	5	4.0–6.0	5	4.0–6.0
Asset Score (out of 5)*	3	2.0–4.0	3	2.0–4.0

Note: Percentages include in the denominator those who declined to answer. * Ownership of five assets: mobile phone, car, TV, computer and piped water.

7.2 Baseline knowledge and perceptions related to male circumcision

Table 9 presents the baseline levels of knowledge and perceptions related to circumcision among participants not reporting being already circumcised (n=596).

High baseline knowledge of VMMC was observed in both study arms (a score of 6.04 out of 8 in the intervention arm, and a score of 6.09 out of 8 in the control arm). However, low baseline knowledge was observed related to statements involving the risks and benefits to female partners of circumcised males: 35 per cent of intervention participants and 32 per cent of control participants incorrectly responded that VMMC reduces the risk of HIV infection for female partners and 58 per cent of intervention participants and 62 per cent of participants were unaware that VMMC can reduce the risk of cervical cancer for female partners.

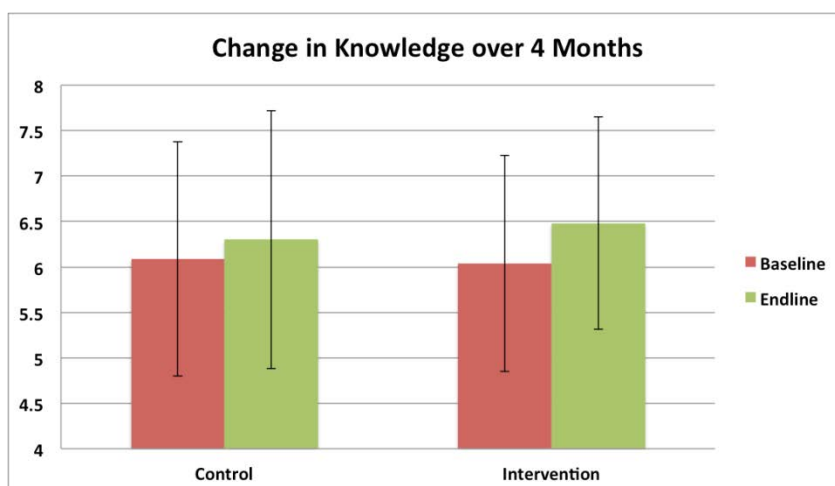
Table 9: VMMC knowledge at baseline

Knowledge	Intervention (n=268)		Control (n=328)	
	n or mean	% or SD	n or mean	% or SD
Using condoms during sex reduces your risk of getting HIV (true)	249	92.9	309	93.9
Male circumcision reduces a man's risk of getting HIV (true)	244	91	301	91.5
Correct estimated per cent of male circumcision (MC) risk reduction (between 50 and 70%)	208	77.6	254	77.2
How long should someone wait to have sex after getting circumcised? (6 weeks)	205	76.5	262	79.6
Circumcised men don't need to use condoms (false)	236	88.1	292	88.8
Male circumcision reduces the risk of HIV infection for female partners (false)	94	35.1	106	32.2
Male circumcision reduces the risk of cervical cancer for female partners (true)	155	58.3	201	61.5
Can name at least one local site offering VMMC (multi-select)	227	84.7	278	84.5
Overall knowledge score (out of 8)	6.04	1.42	6.09	1.29
Perceptions (4-item Likert from 0–3; higher is favourable)	mean	SD	mean	SD
Getting circumcised is dangerous	1.98	0.83	1.97	0.68
It is a good idea to get circumcised	2.41	0.63	2.29	0.62
I am planning to get circumcised	2.04	0.85	1.89	0.89
The circumcision procedure is very painful (disagree is favourable)	1.39	0.87	1.36	0.85
The circumcision healing process is very painful (disagree is favourable)	1.41	0.83	1.5	0.81
I would get circumcised, even if none of my friends did	2.09	0.79	2	0.78
I am comfortable talking about with my friends	2.27	0.69	2.2	0.75

	Intervention (n=268)		Control (n=328)	
Real men do NOT get circumcised (disagree is favourable)	2.47	0.65	2.43	0.66
Circumcision reduces a man's sexual pleasure (disagree is favourable)	2.16	0.86	2.15	0.8
I have decided to get circumcised*	1.87	0.93	1.83	0.83
Overall perceptions (out of 27)	20.3	4.5	19.9	4

Figure 2 presents changes in VMMC knowledge between control and intervention group participants during MCUTS II. Using random-effects linear regression adjusting for clustering, there was strong evidence that the intervention group had higher knowledge scores than the control group at endline (coef.=0.21, 95 per cent CI=0.03–0.39, p=0.021)

Figure 2: Change in VMMC knowledge



Note: Source: Grassroot Soccer.

7.3 Effect of MTC+ on VMMC uptake

Table 10 presents the main findings for the MTC+ intervention's effect on VMMC uptake. In all, 41 intervention participants (7.3 per cent) and 19 control participants (2.9 per cent) took up VMMC over four months (OR=2.53, 95 per cent CI=1.21–5.30, p=0.014). When restricted to participants not reporting being already circumcised at baseline (n=304 in the intervention group, n=371 in the control group), there remains strong evidence of an effect, with 37 of the intervention group (12.2 per cent) and 17 of the control group (4.6 per cent) taking up VMMC during the trial (OR=2.65, 95 per cent CI=1.19–5.86, p=0.017). Based on these effects, the number needed to treat for MTC+ to yield one additional VMMC patient was 13.2 participants not already circumcised at the time of intervention.

The results remained consistent across all three levels of sensitivity analysis, as shown in table 10:

- In the most sensitive scenario (considering all possible, probable and definite matches as links, restricted to those not reporting being already circumcised at baseline), 38 intervention participants (12.5 per cent) and 18 control participants (4.9 per cent) took up VMMC (OR=2.61, 95 per cent CI=1.19–5.72, p=0.016).
- In the medium-sensitivity scenario (considering probable and definite matches as links without manual review, restricted to those not reporting being already circumcised), 31 intervention participants (10.2 per cent) and 12 control participants (3.2 per cent) took up VMMC (OR=3.32, 95 per cent CI=1.52–7.21, p=0.002).
- In the highest-specificity scenario (considering only definite matches as links, restricted to those not reporting being already circumcised at baseline), a roughly threefold effect was observed, with 27 intervention participants (8.9 per cent) and 11 control participants (3.0 per cent) taking up VMMC (OR=3.06, 95 per cent CI=1.15–8.14, p=0.025).

The results of all these analyses also remained consistent when considering all participants rather than restricting to those not reporting being already circumcised at baseline.

Table 10: Effect of MCT+ on VMMC uptake

Outcome	Intervention (n=565)		Control (n=661)		Diff.	Comparing groups*		
	n	%	n	%		OR	95% CI	p-value
Participants not reporting being already circumcised	304	53.8	371	56.1		1.02	0.72-1.45	0.9
Primary: VMMC Uptake (among all participants)**	41	7.3	19	2.9	4.4	2.53	1.21-5.30	0.014
Restricted to non-MC-at-baseline denominator	37	12.2	17	4.6	7.6	2.65	1.19-5.86	0.017
Sens Level 1: Definite, Probable or Possible Links	45	8	21	3.2	4.8	2.56	1.24-5.26	0.011
Restricted to non-MC-at-baseline denominator	38	12.5	18	4.9	7.6	2.61	1.19-5.72	0.016
Sens Level 2: Definite or Probable Links	37	6.6	18	2.7	3.9	2.47	1.18-5.15	0.016

	Intervention (n=565)		Control (n=661)		Diff.	Comparing groups*		
Restricted to non-MC-at-baseline denominator	33	10.9	16	4.3	6.6	2.59	1.23-5.45	0.012
Sens Level 3: Definite links	30	5.3	12	1.8	3.5	3.05	1.13-8.14	0.028
Restricted to non-MC-at-baseline denominator	27	8.9	11	3	5.9	3.06	1.15-8.14	0.025
Reported MC at follow-up (among all participants)	255/ 399	63.9	259/ 479	54.1	9.8	1.38	0.94-2.03	0.098
Reported MC at follow-up but did not at baseline	75/ 212	35.4	60/ 272	22.1	13.3	1.86	1.10-3.16	0.022

Note: * Via random-effects logistic regression, adjusting for clustering. ** Based on systematic, probabilistic matching as well as double-manual review of probable and possible matches.

In the self-administered follow-up survey, 255 intervention participants (63.9 per cent) and 259 control participants (54.1 per cent) reported being circumcised. Restricting to those not reporting being already circumcised at baseline, there was strong evidence that a higher proportion of intervention participants (n=75, or 35.4 per cent) than control participants (n=60, or 22.1 per cent) reportedly took up VMMC during the trial period (OR=1.86, 95 per cent CI=1.10–3.16, p=0.022).

7.4 Sub-group analyses

Table 11 presents a sub-group analysis by age group for the effect of MTC+ on VMMC uptake. Overall, when comparing the oldest age group (18–20 years) against the other two, there was weak evidence of effect modification by age (p=0.10), suggesting that the intervention may be more effective with participants younger than 18. The effect appeared to be slightly greater among 16- to 17-year-olds (13.4 per cent vs. 3.7 per cent, OR=4.00, 95 per cent CI=1.56–10.3) than among 14- to 15-year-olds (10.3 per cent vs. 3.5 per cent, OR=3.02, 95 per cent CI=0.92–9.95).

Table 11: VMMC uptake by study group and by age group

Outcome	Intervention (n=565)		Control (n=661)		Diff.	Comparing groups*		
	n	%	n	%		OR	95% CI	p-value
14-15 years	14/229	6.1	5/246	2	3	3.01	0.94-9.60	0.062
Restricted to non-MC-at-baseline denominator	13/126	10.3	5/144	3.5	6.8	3.02	0.92-9.95	0.07
16-17 years	23/283	8.1	9/341	2.6	3.3	3.26	1.48-7.17	0.003
Restricted to non-MC-at-baseline denominator	20/149	13.4	7/189	3.7	9.7	4	1.56-10.3	0.004
18+ years	4/40	10	5/53.0	9.4	1.1	1.07	0.27-4.26	0.93
Restricted to non-MC-at-baseline denominator	4/26	15.4	5/25.0	20	-4.6	0.73	0.17-3.09	0.66

Note: * Via random effects logistic regression, adjusting for clustering. ** Based on systematic, probabilistic matching as well as double-manual review of probable and possible matches.

Table 12 presents an additional sub-group analysis of VMMC uptake among intervention participants who were or were not offered the incentives as part of the intervention. There was no statistical evidence of a difference in uptake between participants who were offered the incentives and those who were not (p=0.32 for all participants and p=0.23 for restricted analysis). Uptake was slightly higher, however, among participants who were offered the incentives than among those who were not (15.4 per cent vs. 9.5 per cent, OR=1.88, 95 per cent CI=0.68–5.23).

Table 12: VMMC uptake by whether schools were offered soccer-based incentives

Analysis	Intervention (n=250)		No incentives (n=315)		Diff.	Comparing groups*		
	n	%	n	%		OR	95% CI	p-value
All participants	22/ 250	8.8	19/ 315	6	2.8	1.58	0.64- 3.92	0.32
Restricted to non- MC-at-baseline denominator	21/ 136	15.4	16/ 168	9.5	5.9	1.88	0.68- 5.23	0.23

Note: * Via random-effects logistic regression, adjusting ** Based on systematic, probabilistic matching as well as double-manual review of probable and possible.

7.5 Cost-effectiveness

Table 13 shows initial calculations of the cost effectiveness of the MTC+ intervention. The total cost includes the training workshop for coaches; transportation for coaches to attend MTC+ implementation and accompany boys to clinic; materials, including a t-shirt, printed curriculum, soccer balls, cones, and laminated cards; and a coach stipend of US\$3.5 per half-day of work. These overhead costs totalled 15 per cent.

To implement MTC+ with 565 intervention participants (regardless of VMMC status) cost US\$1.99 per participant. Forty-one participants went for VMMC, representing a cost of US\$27.36 per client in the intervention group. Taking into account the observed absolute effect of the intervention – the difference in VMMC uptake between groups – the approximate cost per additional VMMC client was US\$45.31 among all participants, or US\$48.61 among participants not reporting being circumcised at baseline. This was determined as follows:

1. Assume the groups had an equal number of participants (n=565)
2. The intervention group with this number had 41 VMMCs, whereas the control group would have had 16.24 (19/661×565).
3. The difference (41–16.24) is 24.76 new VMMC clients.
4. Dividing the full intervention cost by this number, we get US\$45.31 per new VMMC client.

GRS and the London School of Hygiene & Tropical Medicine are collaborating with health economists to design a more rigorous cost-effectiveness evaluation to project the costs of MTC+ at scale. Approximately 65 per cent of implementation costs covered training and materials, the costs of which should decrease at scale. We also, we seek to calculate the approximate cost per HIV infection averted due to the impact of MTC+.

Table 13: MCUTS II cost-effectiveness

Metric	Cost
A. Total cost of intervention	US\$1,121.83
B. Cost per participant	US\$1.99
C. Cost per VMMC in intervention arm (A/41)	US\$27.36
D. Approximate number of new VMMCs generated, all participants (41–19/661×565)	24.76
E. Cost per new VMMC generated, all participants (A/D)	US\$45.31
F. Approximate number of new VMMCs generated, restricted to non-male circumcision at baseline (37–17/371×304)	23.07
G. Cost per new VMMC generated, restricted to non-male circumcision at baseline (A/F)	US\$48.63

7.6 Qualitative findings

Qualitative findings demonstrate high programme acceptability, highlighting the coach-participant relationship as a key factor associated with uptake. Specifically, participants valued the coaches' openness to discuss their personal experiences with VMMC and the accompaniment to the VMMC clinic.

7.6.1 Coach follow-up

For some participants, coaches' follow-up phone calls increased motivation to go for VMMC:

*I was 99.9 per cent, but after [the follow-up] call, I was 100 per cent.
(Circumcised MTC+ participant)*

Coaches believed that phone calls were important in showing their commitment to participants:

If you call the kids, they'll see you are also interested to see them go through with circumcision ... if they see you are serious, they will also be serious about it. (MTC+ coach)

Some coaches faced challenges reaching participants by phone, e.g. incorrect phone numbers, leading them to communicate with participants through WhatsApp or with in-person visits to participants' schools.

7.6.2 Coach accompaniment

Participants shared that they highly valued the coach accompaniment to the VMMC clinic and paid transport, and appreciated the opportunity during clinic trips to hear more about the VMMC procedure and talk informally, 'like friends, freely' (circumcised MTC+ participant):

[The coach] gave us a sense of security, a sense of safety, because if I was to go alone, maybe I would have turned around and came back home. But, with the coach, he's gone through it, he has the experience, and he knows more than you who haven't done. (Circumcised MTC+ participant)

7.6.3 Incentives

Circumcised participants were offered the choice of a t-shirt or a ticket to a local professional soccer match as further motivation to undergo VMMC. However, at PSI's request, incentive promotion and distribution were halted after implementation in five intervention schools; the remaining eight schools did not receive an offer of incentives. Though not statistically significant, uptake was slightly higher among participants who were offered incentives (see table 12).

Qualitative findings demonstrated mixed reactions to the incentives. Some participants felt that incentives increased their motivation to go for VMMC:

I think [the incentives] just added some spice to something that was already nice ... I know that I would have gone through the procedure even though there were no tickets. (Circumcised MTC+ participant)

Others felt that the Coach's Story was a more important motivating factor.

Overall acceptability was high for both types of incentive (t-shirt and tickets). Some preferred the tickets, due to their strong interest in soccer. Other preferred the t-shirt, which coaches believed stemmed from a desire to wear the same shirt as their coaches.

8. Discussion and actionable findings for policy, implementation and research

The trial revealed strong evidence that the MTC+ intervention increased VMMC uptake among adolescent males in Bulawayo schools over four months roughly 2.5-fold, by about 7.6 percentage points. The observed effect is consistent whether considering all participants or restricting the analysis to participants who did not report being circumcised at baseline. The observed effect is also consistent across three levels of sensitivity analysis, with the strictest level suggesting that the relative effect may actually be closer to threefold. Although one should treat sensitive self-reported data from adolescents with caution (Plummer, Ross & Wight 2004), it was encouraging that strong evidence of an effect was also observed when assessing self-reported VMMC uptake at follow-up. The absolute and relative effects observed were similar to those observed for the middle-tier intervention group (US\$8.75) in a 2013 trial assessing the effect of conditional economic compensation for VMMC uptake in Kenya (Thirumurthy, Masters & Rao 2014).

There was weak statistical evidence of effect modification by age, with MTC+ being slightly more effective for participants younger than 18. The removal of incentives in the middle of the trial allowed for a natural, albeit unplanned, experiment to understand the role of non-monetary soccer-themed incentives in increasing uptake. While these

analyses showed no statistical evidence of differences in uptake between participants who were offered the incentives and those who were not, the trial would have been powered only to detect about a threefold difference between these sub-groups, with 95 per cent significance and 80 per cent power. Further research would be needed to more definitively understand the effect of these non-monetary incentives.

We note that nearly half of the participants at baseline reported already being circumcised. This higher than expected prevalence suggests that other adolescent-targeted VMMC demand creation interventions in Bulawayo have already had some effect. It also suggests that participants getting circumcised in the trial were relatively late adopters of VMMC. If introduced in a setting where most early adopters had not yet gone for VMMC, it is possible that MTC+ would have greater effectiveness and cost-effectiveness.

Participants valued the educational session and coach accompaniment to the clinic. The Coach's Story seemed particularly instrumental in generating discussion about VMMC and helping participants consider its pros and cons, due to the honest and intimate nature of the activity. The high baseline prevalence of VMMC and high VMMC acceptability of participants (see table 9) suggest that adolescent Zimbabwean male students generally view VMMC favourably and are considering undergoing the procedure; the MTC+ intervention appears to provide additional motivation – a 'nudge' towards action. VMMC demand creation interventions should engage circumcised men as local role models and create a space where they can build relationships with participants, share personal experiences related to VMMC and accompany young men to the clinic.

Incentives were also viewed favourably, but due to their removal mid-trial, we were not able to assess whether they were instrumental to VMMC uptake. Some research has shown that the provision of food vouchers can increase VMMC uptake, but further research is needed to determine the effectiveness of soccer-based incentives with boys.

Interestingly, 6 of the 60 participants (10 per cent) who took up VMMC during the study reported at baseline that they were already circumcised, further underscoring the importance of relying on clinic registers or clinical observation rather than self-reported circumcision status when assessing the effectiveness of VMMC demand creation interventions.

The trial had minor limitations. First, the estimated absolute increase in VMMC uptake may be slightly over- or underestimated, depending on the validity of participants' self-reported circumcision status at baseline, since the analysis excluded participants who reported already being circumcised from the analysis. However, the relative estimates of effect for the unrestricted and restricted analyses are very consistent, suggesting that any bias introduced from the restriction was non-differential. Second, it must be acknowledged that the linkage based on identifiers process is imperfect. Unfortunately, as has been the case with many similar studies, it was not logistically possible to use biometrics for participant linkage. A robust approach using probabilistic linkage was the next best alternative. Finally, poor students' handwriting on consent forms and/or

by receptions on clinic registers may have resulted in imperfect capture of identifying information. This may have yielded false negatives (participants who did not even show up as possible links) in the linkage process. The use of phonetic matching and fuzzy logic in the linkage process (granting partial points for phonetic matches) reduced the risk of false negatives resulting from poor or inconsistent handwriting. The blind, manual post-linkage review further reduced the risk of false negatives and false positives, ensuring, for example, that a participant whose brother (same surname, address, next of kin) got circumcised would not show up as a link, and that a participant whose address was abbreviated on the clinic register but written in full on the consent form – e.g. ‘S Pumula’ and ‘South Pumula’ – would still show up as a link.

Given the urgent need to increase uptake of VMMC in Zimbabwe and other countries with generalised HIV epidemics and low male circumcision prevalence, taking effective interventions to scale is crucial to prevent unnecessary new infections. This study provides strong evidence of the effectiveness of MTC+ in Bulawayo schools. The trial was carried out in only one city, so the results should be treated with cautious optimism when considering the potential impact of MTC+ at scale across Zimbabwe and/or in other countries in need of effective demand-creation endeavours. Nevertheless, if its effectiveness remains consistent at scale, MTC+ could generate substantial new VMMC demand among adolescent males if scaled up in schools. Unless the intervention continued to lead to further uptake of VMMC after the observation period, however, this brief, low-cost intervention on its own would not be sufficient to achieve the VMMC coverage target of 80 per cent. Thus, there remains a need for additional effective interventions – especially those targeting adult males – potentially including mass media interventions, additional interpersonal communication interventions and interventions using monetary or non-monetary incentives.

Further research should focus on the impact of MTC+ in different settings, such as rural schools and with slightly different age groups. Additionally, MTC+ was directly implemented by experienced HIV education facilitators under close supervision by GRS. Further research should investigate VMMC uptake among participants that receive MTC+ via implementing partners.

GRS and the London School of Hygiene & Tropical Medicine will disseminate findings at a dissemination event in Bulawayo with researchers, policymakers, implementing partners, and VMMC service providers in early 2015 to plan MTC+ scale up and additional research.

Appendix A: Sample design

Figure 3: MTC pathway of change model

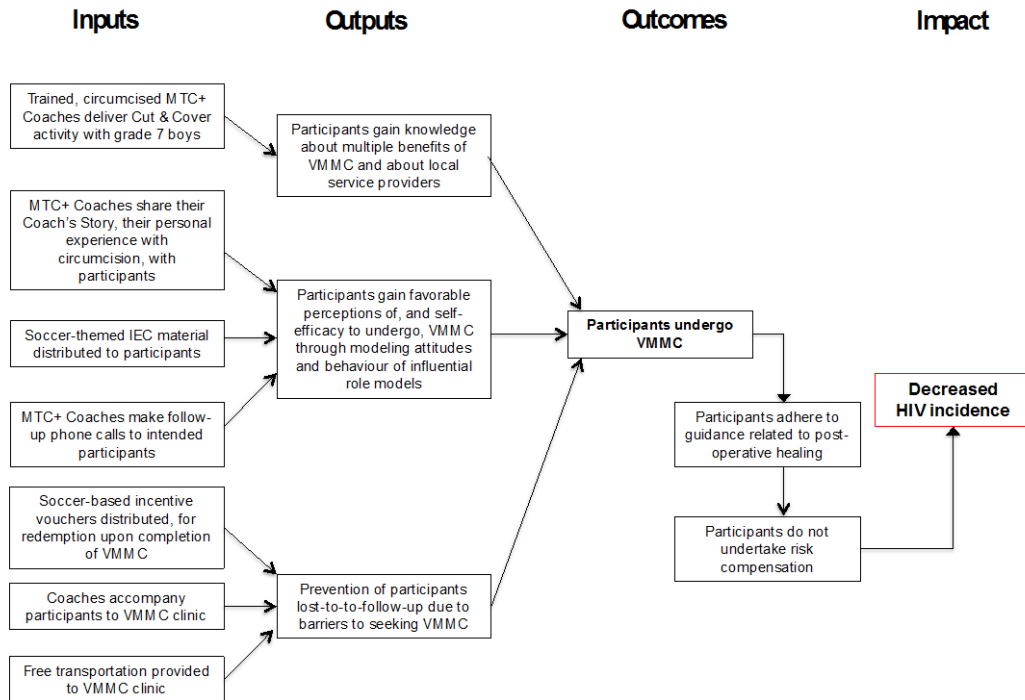
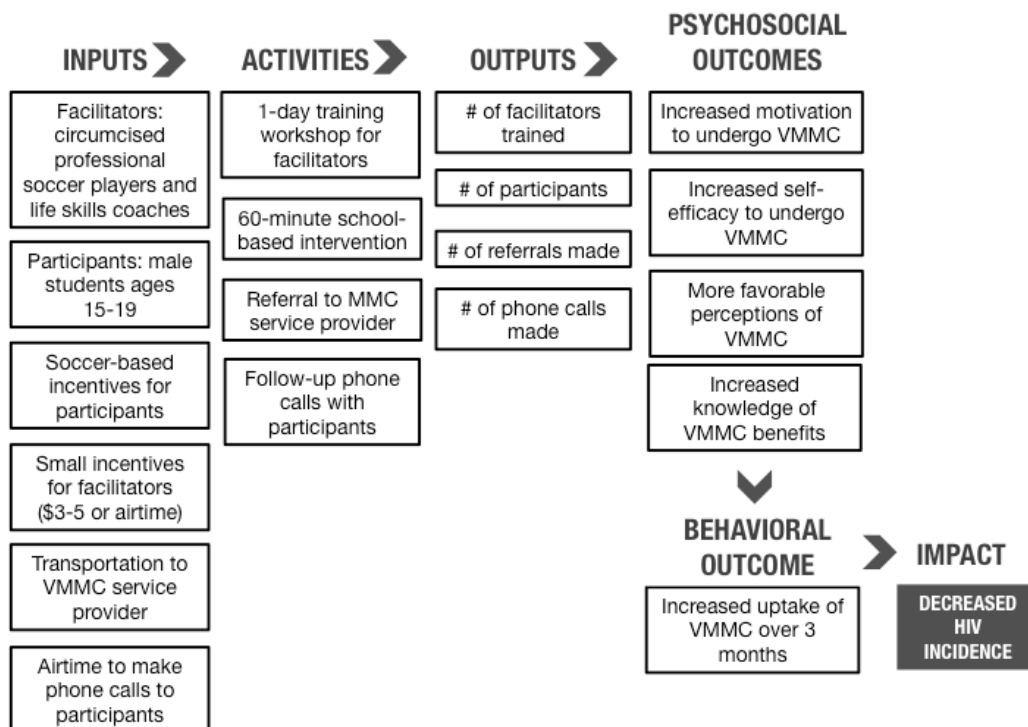


Figure 4: MTC+ logic model



Appendix B: Qualitative tools

Qualitative tool 1: in-depth interview guide for participants

MCUTS II cover sheet: in-depth interview guide for PARTICIPANTS

Instructions to the interviewer: Complete the following information prior to the interview. Read the introduction to the interviewee. After collecting initials, detach the cover sheet. Start the recorder and state aloud the participant's study ID number, date, and time of the interview.

Interview Information		
Date: ____ / ____ / ____ (dd) (mm) (yyyy)	Time:	<i>To be completed after the interview:</i> Duration of in-depth interview: _____ minutes
Venue:	Interviewer:	Co-interviewer/Observer:
Participant Information		
Study ID number:	Offered incentive? Circle one: Yes No	
Subject school name:	Has the subject been circumcised? Circle one: Yes No	

Introduction

'We greatly appreciate your agreeing to participate in this interview. I am going to ask you some questions. There are no right or wrong answers and you may answer in any way. Your answers are completely confidential. Your name will not be written on this form and will never be used in connection with any of the information that you tell me. You do not have to answer any questions that you do not want to answer and you may end the interview at any time if you want to. However, your answers to these questions will help us better understand your experience or reaction to being a PARTICIPANT in a team that has been involved in the Make The Cut+ programme and/or the MCUTS II Trial. The interview will last 30 minutes or less. It will be recorded and transcribed for the sake of accuracy and for review by the team that will be working on this research project, and potentially by others, but only for research purposes.

'Thank you for your cooperation.

'First, let me introduce myself. I am ..., and I will be asking you some questions today.
<Other researchers or observers now introduce themselves and state their roles.>

Remember there are no ‘right’ or ‘wrong’ answers – please be honest and critical, as it will help us learn. We are here to learn from you.

‘Remember that you gave consent to participate in the MCUTS trial. To ensure that no one has pressured you to participate in this interview, please initial (don’t sign) below.’

Initials of participant: _____ Date: _____

Initials of interviewer: _____ Date: _____

Turn on the voice recorder. Record the participants’ study ID number and the date, time, and location of the interview and begin the interview.

In-depth interview questions for PARTICIPANTS

‘I am going to ask you some general questions about GRS and Make The Cut’.

Topic	Main questions	Follow-up questions	Probes
1. Warm-up	<p>What is your favourite soccer team?</p> <p>Who is your favourite player? Why?</p> <p>Which team is winning the World Cup?</p>	In Zim? In England?	
2. Awareness of GRS	<p>From your understanding, what is GRS?</p> <p>Have you ever participated in a GRS activity?</p>	Where did you hear about GRS?	<p>Can you tell me what GRS does? Who do they work with?</p>
3. Awareness of Make The Cut	<p>From your understanding, what is Make The Cut?</p> <p>What did you do in Make The Cut?</p>	How would you describe Make The Cut to a friend?	<p>Make The Cut is a soccer-based circumcision education session. Do you remember participating in this?</p>
4. Reaction to Make The Cut	What has your experience been, being involved with Make The Cut?	What types of activities did you do in Make The Cut?	

Topic	Main questions	Follow-up questions	Probes
5. Cut & Cover activity		Did you enjoy participating in Make The Cut?	
		What did you learn in Make The Cut?	
6. Coach's Story activity	What do you remember about the activity 'Cut & Cover'?	What did you like or dislike about this activity?	Do you remember the activity where you took penalty shots?
	What did you learn in this activity?		What did shrinking the goal represent? What did the wall of players represent?
7. Views on Incentive (if applicable)	What do you remember about the 'Coach's Story' – the story your coach told you about his experience being circumcised?	What did your coach say about his experience being circumcised?	Did your coach talk about why he decided to get circumcised?
	What did you learn in this activity?	Which part of his story was most meaningful to you?	Did he talk about pain? Healing time? What benefits of VMMC did he talk about?
8. Views on Support calls	Were you offered any additional motivation to go for VMMC? What were you offered?	Did the incentive put too much pressure on you to go for VMMC? Did you feel tricked or coerced into going for VMMC?	What did you like about the incentive? What didn't you like about the incentive?
	How did you feel about the incentives? Did the incentives lead you to consider going for circumcision? Why or why not?	Are there other incentives that could be more meaningful to you?	
8. Views on Support calls	Some participants received a call from a coach after participating in Make The Cut. Did	Did you like getting a call from your coach? Why or why not?	

Topic	Main questions	Follow-up questions	Probes
	<p>you receive a call like this?</p> <p>What did you talk about?</p> <p>Did the call lead you to consider going for circumcision? Why or why not?</p>	<p>How many times did you talk on the phone? For how long?</p>	
9. Views on coach accompaniment	<p>Did a GRS coach offer to go with you to the VMMC clinic? Which coach?</p> <p>Did you like having a GRS coach offer to go with you? Why or why not?</p> <p>Did this lead you to consider going for circumcision? Why or why not?</p>	<p>What sort of things did you and your coach talk about?</p>	
10. View of Make The Cut coaches	<p>Who were your Make The Cut coaches?</p> <p>What did you think of your coaches?</p> <p>Did your coach lead you to consider going for circumcision? Why or why not?</p>	<p>What did you like about your Make The Cut coach?</p> <p>What did you dislike about your Make The Cut coach?</p>	<p>Could you relate to your coach? Why or why not?</p>
11. Impact of Make The Cut	<p>Has Make The Cut had any impact on your life? Are there any examples you would like to share?</p>		
12. Motivation (if not circumcised)	<p>Can I ask you why you haven't been circumcised?</p>	<p>Did Make The Cut influence you in other ways?</p>	<p>Timing?</p> <p>Fear of HIV testing?</p>

Topic	Main questions	Follow-up questions	Probes
13. Views on other VMMC educational programmes	Are you considering VMMC?	Did you talk to anyone about what you learned in Make The Cut?	Pain? Partner reaction?
	What is preventing you from getting circumcised?	Do you know other boys who went to get circumcised after Make The Cut? Did they talk about their experience at the clinic? What did they say?	
14. Closing remarks	Had you ever participated in other VMMC education programmes besides Make The Cut? How many? What were they called?	What did these other programmes teach you? What did you like or dislike about these programmes?	Has anyone else come to your school to talk about VMMC?
	How is Make The Cut different?	How are the instructors different? How are the sessions different? How is the support different?	

'Thank you for your time during this interview; all your responses will help us in improving the MCUTS trial as well as the Make The Cut programme.'

Qualitative tool 2: in-depth interview guide for coaches

MCUTS II cover sheet: in-depth interview guide for COACHES

Instructions to the interviewer: Complete the following information prior to the interview. Read the introduction to the interviewee. After collecting initials, detach the cover sheet. Start the recorder and state aloud coach's name, date, and time of the interview.

Interview Information		
Date: ____ / ____ / ____ (dd) (mm) (yyyy)	Start Time: End Time:	<i>To be completed after the interview:</i> Duration of in-depth interview: _____ minutes
Venue:	Interviewer:	Co-interviewer/Observer:
Interviewee Information		
Coach Name:		

Introduction

'We greatly appreciate your agreeing to participate in this interview. I am going to ask you some questions and there are no right or wrong answers and you may answer in any way. Your answers are completely confidential. Your name will not be written on this form, and will never be used in connection with any of the information you tell me. You do not have to answer any questions that you do not want to answer, and you may end the interview at any time if you want to. However, your answers to these questions will help us better understand your experience or reaction to being a COACH in the Make The Cut+ programme. The interview will take about 60 minutes or less. It will be recorded and transcribed for the sake of accuracy and for review by the team that will be working on this research project, and potentially by others, but only for research purposes.

'Thank you for your cooperation.

'First, let me introduce myself. I am ..., and I will be asking you some questions today. <Other researchers or observers now introduce themselves and state their roles.> Remember there are no 'right' or 'wrong' answers-- please be honest and critical, as it will help us learn. We are here to learn from you.

'Remember that you gave consent to participate in the MCUTS II trial. To ensure that no one has pressured you to participate in this interview, please initial (don't sign) below'.

Initials of interviewee: _____ Date: _____

Initials of interviewer: _____ Date: _____

Turn on the voice recorder. Record the coach's name and the date, time, and location of the interview and begin the interview.

In-depth interview questions for COACHES

'I am going to ask you some general questions about Grassroot Soccer and Make The Cut+.'

Topic	Main questions	Follow-up questions	Probes
1. Role as GRS coach	How long have you been a GRS coach? Why did you decide to become a GRS coach?	Why is being a GRS coach important to you?	
2. Reaction to Make the Cut+	What has been your experience with Make The Cut+? What do you like about Make the Cut+? What do you dislike?	What was the reaction of participants to the programme?	
2A. If originally a Make the Cut coach (prior to MTC+)	If originally a Make the Cut coach, how is Make the Cut+ different from Make the Cut?	Do you view Make the Cut+ as more or less effective when compared to the original Make the Cut programme? Please explain.	
3. Views on implementation in schools, including materials	MTC+ was delivered in secondary schools. What was the reaction of the schools and teachers to the	How did you handle a situation in which a participant was already circumcised and unable to receive incentives?	

Topic	Main questions	Follow-up questions	Probes
4. Views on logistics	Make the Cut+ programme?	Do you have any recommendations on how best to engage already circumcised participants going forward?	
	Did you face any challenges in <i>recruiting</i> schools?		
	Did you face any challenges in <i>delivering</i> the programme in schools?	Did you feel supported by GRS staff during MTC+ implementation? Please explain.	
5. Impact of MTC+ on participants	Transport and follow-up phone calls were integrated into the MTC+ programme.		
	What are your views on the transport provided to participants?		
	What are your views on the follow-up phone calls to participants?		
5. Impact of MTC+ on participants	Some guys from MTC+ got circumcised and some did not.	Are there any stories about the impact of the programme on participants that you wish to share?	Were the incentives the most important part of the programme? Or transport? Or follow-up phone calls?
	Why do you think that some guys went for VMMC after participating in MTC+? Why did some guys decide not to go?	Did participants share information about MTC+ with people outside the programme (e.g. parents, friends, etc.)? What did they share?	What did participants say about MTC+?
	What is the most important thing that affected the guys'		

Topic	Main questions	Follow-up questions	Probes
	<p>decision to go for VMMC?</p> <p>Did the participants face any challenges in going for VMMC? <i>[e.g. for facilitator: not enough supply of services at the clinic]</i></p>	<p>What is the greatest benefit of MTC+ to the community?</p>	
6. Impact of MTC+ on self	<p>Let's discuss the impact of the programme on you.</p> <p>Were you circumcised prior to making the decision to become a MTC+ coach?</p> <p>What influenced your decision to get circumcised?</p> <p>Has being a MTC+ coach influenced you in other ways?</p>	<p>When getting circumcised, what were you afraid of?</p> <p>How did you overcome your fear?</p> <p>Did you face any other challenges in getting circumcised?</p> <p>Who supported your decision to get circumcised?</p>	<p>Through MTC+, did you gain skills in facilitation?</p> <p>Through MTC+, did you learn additional information about the health benefits of VMMC?</p>
7. Reaction to Make The Cut+ training workshop (training of coaches, or TOC)	<p>Now I want to ask you some questions on your training as a MTC+ coach.</p> <p>Can you describe the TOC?</p> <p>What did you like about the TOC?</p> <p>What did you dislike?</p>	<p>Did you feel prepared to deliver MTC+ after the TOC? Why or why not?</p> <p>How would you improve the TOC?</p> <p>How did you feel about the facilitators?</p>	<p>Does the TOC need to be longer or shorter?</p> <p>Did the PSI session on MMC help you?</p>
7A. If originally a Make the Cut coach (prior to MTC+)	<p>How did the TOC for MTC+ compare with the TOC for MTC?</p> <p>Did you feel more or less prepared to</p>		

Topic	Main questions	Follow-up questions	Probes
8. Incentives	<p>deliver the programme? Please explain.</p> <p>What are your views on the incorporation of incentives into the MTC+ programme?</p> <p>Which incentives do you feel were most effective? Which were least effective? Why?</p>	<p>Did it matter that the t-shirts were <i>GRS t-shirts</i> compared with other t-shirts? Please explain.</p> <p>Did it matter that the tickets were for Highlanders games compared with other football games?</p> <p>What are your views on the MTC+ cards used for incentives? Do you feel they were effective? Why or why not?</p> <p>Would you use incentives again in future delivery of the programme?</p>	<p>Highlanders tickets?</p> <p>GRS t-shirts?</p>
9. Closing remarks	<p>Is there anything you would change about MTC+ to improve the programme?</p> <p>Are there any other experiences that you would like to share?</p>		

'Thank you for your time during this interview; all your responses will help us in improving the MCUTS II trial as well as Make The Cut Plus programme'.

Qualitative tool 3: intervention observation form

Make The Cut+ observation form: intervention

Date	
Name of school and location	
Observer	
Names of MTC coaches	
Number of participants	
Intervention start time	
Intervention end time	

<p>1. Outline of lesson (Please tick whether it was covered)</p>	<p>Part 1. Opening</p> <ul style="list-style-type: none"> <input type="checkbox"/> Energiser <input type="checkbox"/> Introduction of Coach <input type="checkbox"/> Introduction of Make The Cut <input type="checkbox"/> Introduction of incentives <p>Part 2. Make The Cut activities</p> <ul style="list-style-type: none"> <input type="checkbox"/> Cut & Cover <input type="checkbox"/> Coach's Story <input type="checkbox"/> Q&A <p>Part 3. Logistics</p> <ul style="list-style-type: none"> <input type="checkbox"/> Incentives explained <input type="checkbox"/> Transportation organised <input type="checkbox"/> Phone number registration form filled out <input type="checkbox"/> Follow-up calls explained <p>Part 4. Materials</p> <ul style="list-style-type: none"> <input type="checkbox"/> Referral card and parental consent form explained and distributed
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	<p>Part 6. Coach's Corner</p> <ul style="list-style-type: none"> ○ Coaches made themselves available to answer one-on-one questions after the practice
<p>2. What are the reasons for any activities not completed or covered?</p>	
<p>3. Which responses or comments from participants stood out to you? What questions did participants ask?</p>	
<p>4. Were the incentives clearly explained? How did participants respond?</p>	

<p>5. Did the coaches set up transportation to the clinic? Was it clear how transportation would take place? How many boys were interested in going to the clinic?</p>	
<p>6. Was anyone from the school present, such as principals, teachers, or sportsmasters? How were they involved in the intervention?</p>	
<p>7. Talk to the coaches. Write down how they felt about the practice. Ask them what went well and what didn't.</p>	
<p>8. Additional comments or thoughts after the observation.</p>	

Qualitative tool 4: parental consent form

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IRB No. _____

INFORMED CONSENT FORM:

FOR PARENT/GUARDIAN OF STUDENT



MCUTS+ Trial

Principal Investigator: David Ross, PhD (LSHTM)

Co-investigators: Zak Kaufman, MSc (LSHTM), Jeff DeCelles, EdM (Grassroot Soccer), Kenneth Bhauti, MBA (Grassroot Soccer), Cynthia Chaibva, PhD (NUST)

Phone number +263 778 529 046

What you should know about this research study:

- We give you this consent so that you may read about the purpose, risks, and benefits of this research study.
- Preventative care is based upon the best known interventions and is provided with the main goal of helping the individual participant. The main goal of research studies is to gain knowledge that may help people in future.
- We cannot promise that this research will benefit your child.
- You have the right to refuse to allow your child to take part, or agree for your child to take part now and change your mind later.
- Whatever you decide, it will not affect your child's regular care.
- Please review this consent form carefully. Ask any questions before you make a decision.
- Your choice to allow your child to participate is voluntary.

PURPOSE

You are being asked to allow your child to participate in a research study of a Voluntary Medical Male Circumcision (VMMC) education session. The purpose of the study is to evaluate the impact of a VMMC education session on VMMC knowledge, sexual behaviour, and male circumcision uptake. Your child was selected as a possible participant in this study because he is a male learner attending a school that is enrolled in the study. There will be approximately 1,800 males ages 14–19 years and above from 22 government schools in Bulawayo participating in this research study.

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IRB No. _____

PROCEDURES AND DURATION

If you decide to allow your child to participate, your child will be asked to complete a questionnaire that will ask the young man information about some personal issues such as his family, VMMC knowledge, and sexual behaviour. Participants will enter their answers to the questionnaire using a mobile phone to give them more privacy during the self-interview. Trained study members will be present to assist participants in completing the questionnaire and answer any questions they may have.

Participants will be asked to complete the questionnaire before the intervention and again three to six months after the intervention. Participants may also be asked to participate in interviews and focus group discussions to share their impressions of the intervention. Participants will be asked to provide their mobile phone numbers. Some participants will receive calls from Grassroot Soccer coaches.

The young man's school may be selected to receive a special 90-minute sport-based HIV prevention programme and he may have the opportunity to participate. Incentives for VMMC, such as t-shirts or tickets to soccer matches may be offered to his school.

RISKS AND DISCOMFORTS

It is possible the young man may find some of the questions distressing. He does not have to answer any questions he does not wish to answer. If the questions raise concerns of a personal nature, we can refer him to professional organisations that will try to assist him. Whether or not he takes up this referral will be his choice.

BENEFITS AND/OR COMPENSATION

There are no direct monetary benefits to participating in the study. However, the young man's school may be selected to receive a special 90-minute sport-based HIV prevention programme and he may have the opportunity to participate. Incentives for VMMC, such as t-shirts or tickets to soccer matches may be offered to his school. Additionally, he will receive refreshments each time he completes a questionnaire as part of this study. We cannot and do not guarantee or promise that your child will receive any benefits from this study.

CONFIDENTIALITY

If you indicate your willingness for your child to participate in this study by signing this document, we plan to disclose the information we will collect via questionnaires to the researchers for data analysis and report writing, and MRCZ for inspection purposes. He will be identified by a code number known only to the study staff. This number – not his name – will be used on all information about him. His name will never be used in any publication or presentation about the research study. His personal information will not be released without his written permission. Any information that is obtained in connection with this study that can be identified with your child will remain confidential and will be disclosed only with your, and when appropriate, your child's permission. Your child will be asked to fill out his name, address, date of birth, phone number, and name of next of kin on his consent form, which will only be used for confirming VMMC uptake with the clinic. Under some circumstances, the MRCZ and the local Institutional Review Board may need to review patient records for compliance audits.

VOLUNTARY PARTICIPATION

Participation in this study is voluntary. If you decide not to allow your child to participate in this study, your decision will not affect your child's ability to attend his school or receive any other services he normally receives. If you decide to allow your child to participate, you and your child are free to withdraw your consent and discontinue participation at any time without penalty.

OFFER TO ANSWER QUESTIONS

Before you sign this form, please ask any questions on any aspect of this study that is unclear to you. You may take as much time as necessary to think it over.

AUTHORISATION

YOU ARE MAKING A DECISION WHETHER OR NOT TO ALLOW YOUR CHILD TO PARTICIPATE IN THIS STUDY. YOUR SIGNATURE INDICATES THAT YOU HAVE READ AND UNDERSTOOD THE INFORMATION PROVIDED ABOVE, HAVE HAD ALL YOUR QUESTIONS ANSWERED, AND HAVE DECIDED TO ALLOW YOUR CHILD TO PARTICIPATE.

The date you sign this document to enrol your child in this study, that is, today's date, **MUST** fall between the dates indicated on the approval stamp affixed to each page. These dates indicate that this form is valid when you enrol your child in the study but do not reflect how long your child may participate in the study. Each page of this Informed Consent Form is stamped to indicate the form's validity as approved by the MRCZ.

Name of Parent (please print)

Date

Signature of Parent or legally authorised representative

Phone Number

Relationship to the Participant

Signature of Witness
Obtaining Consent

STAFF ONLY: Signature of Staff

(Optional)

YOU WILL BE GIVEN A COPY OF THIS CONSENT FORM TO KEEP.

If you have any questions concerning this study or consent form beyond those answered by the investigator, including questions about the research, your rights as a research Participant or research-related injuries; or if you feel that you have been treated unfairly and would like to talk to someone other than a member of the research

team, please feel free to contact the Medical Research Council of Zimbabwe on telephone 791792 or 791193.

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IRB No. _____

For children 13 years old to 17 years old

My participation in this research study is voluntary. I have read and understood the above information, asked any questions which I may have and have agreed to participate. I will be given a copy of this form to keep.

Name of Participant

Signature of Participant

Physical Address

Phone Number

Alternate Phone Number

Date of Birth

Name of Next of Kin

Qualitative tool 5: adult consent form

Page 1 [of 4]

MRCZ No. _____

INFORMED CONSENT FORM: FOR STUDENTS



MCUTS+ Trial

Principal Investigator Dr David Ross, PhD (LSHTM)

Co-investigators: Zak Kaufman, MSc (LSHTM), Jeff DeCelles, EdM (Grassroot Soccer), Kenneth Bhauti MBA (Grassroot Soccer), Cynthia Chaibva, PhD (NUST)

Phone number +263 778 529 046

What you should know about this research study:

- We give you this consent so that you may read about the purpose, risks, and benefits of this research study.
- Preventative care is based upon the best known interventions and is provided with the main goal of helping the individual participant. The main goal of research studies is to gain knowledge that may help people in future.
- We cannot promise that this research will benefit you.
- You have the right to refuse to take part, or agree to take part now and change your mind later.
- Whatever you decide, it will not affect your regular care.
- Please review this consent form carefully. Ask any questions before you make a decision.
- Your participation is voluntary.

PURPOSE

You are being asked to participate in a research study of a Voluntary Medical Male Circumcision (VMMC) education session. The purpose of the study is to evaluate the impact of a VMMC education session on VMMC knowledge, sexual behaviour, and male circumcision uptake. You were selected as a possible participant in this study because you attend a school that is enrolled in the study. There will be approximately 1,800 males ages 14-19 years and above from 22 government schools in Bulawayo participating in this research study.

PROCEDURES AND DURATION

If you decide to participate, you will be asked to complete a questionnaire that will ask you information about some personal issues such as your family, VMMC knowledge, and sexual behaviour. You will enter your answers to the questionnaire using a mobile phone to give you more privacy during the self-interview. Trained study members will be present to assist you in completing the questionnaire and answer any questions. You will be asked to complete the questionnaire before the intervention and again three to six months after the intervention. You may also be asked to participate in interviews and focus group discussions to share your impressions of the intervention.

You will be asked to provide your mobile phone numbers. Some participants will receive calls from Grassroot Soccer coaches.

Your school may be selected to receive a special 90-minute sport-based HIV prevention programme and you may have the opportunity to participate. Incentives for VMMC, such as t-shirts or tickets to soccer matches, may be offered to your school.

RISKS AND DISCOMFORTS

It is possible that you may find some of the questionnaire questions distressing. You do not have to answer any question you do not wish to answer. If the question raises concerns of a personal nature, we can refer you to professional organisations that will try to assist you. Whether or not you take up this referral will be your choice.

BENEFITS AND/OR COMPENSATION

There are no direct monetary benefits to participating in the study. However, your school may be selected to receive a special 90-minute sport-based HIV prevention programme and you may have the opportunity to participate. Incentives for VMMC, such as t-shirts or tickets to soccer matches, may be offered to your school. Additionally, you will receive refreshments each time you complete a questionnaire as part of this study. We cannot and do not guarantee or promise that you will receive any benefits from this study.

CONFIDENTIALITY

If you indicate your willingness to participate in this study by signing this document, we plan to disclose the information collected from via questionnaires to the researchers for data analysis and report writing and MRCZ for inspection purposes. You will be identified by a code number known only to the study staff. This number – not your name – will be used on all information about you. Your name will never be used in any publication or presentation about the research study. Your personal information will not be released without your written permission. Any information that is obtained in connection with this study that can be identified with you will remain confidential and will be disclosed only with your permission. You will be asked on this form to fill out your name, address, date of birth, phone number, and name of next of kin, which will only be used for confirming VMMC uptake with the clinic. Under some circumstances,

the MRCZ and the local Institutional Review Board may need to review patient records for compliance audits.

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IRB No. _____

VOLUNTARY PARTICIPATION

Participation in this study is voluntary. If you decide not to participate in this study, your decision will not affect your ability to attend your school or receive any other services you normally receive. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without penalty.

OFFER TO ANSWER QUESTIONS

Before you sign this form, please ask any questions on any aspect of this study that is unclear to you. You may take as much time as necessary to think it over.

AUTHORISATION

YOU ARE MAKING A DECISION WHETHER OR NOT TO PARTICIPATE IN THIS STUDY. YOUR SIGNATURE INDICATES THAT YOU HAVE READ AND UNDERSTOOD THE INFORMATION PROVIDED ABOVE, HAVE HAD ALL YOUR QUESTIONS ANSWERED, AND HAVE DECIDED TO PARTICIPATE.

Name of Research Participant (please print)

Date

Signature of Participant or legally authorised representative

Physical Address

Phone Number

Date of Birth

Signature of Witness
Obtaining Consent (*Optional*)

Alternate Phone Number

Name of Next of Kin

STAFF ONLY: Signature of Staff

YOU WILL BE GIVEN A COPY OF THIS CONSENT FORM TO KEEP.

If you have any questions concerning this study or consent form beyond those answered by the investigator, including questions about the research, your rights as a research participant or research-related injuries; or if you feel that you have been treated unfairly and would like to talk to someone other than a member of the research team, please feel free to contact the Medical Research Council of Zimbabwe on telephone 791792 or 791193 and cell phone lines (insert physical location).

Qualitative tool 6: survey questions administered via mobile phones using Open Data Kit

type	name	label:english	hint
today	today	Date of survey	
start	start_time	Start Time	
end	end_time	End Time	
deviceid	deviceid	Device ID	
integer	study_ID	Please enter the participant's 5-digit study ID	
integer	confirm_ID	Now re-enter the 5-digit study ID	
select_one school	school	What school does the participant attend?	
note	intro	Thanks for agreeing to take this survey. It should take about 15 minutes to complete.	If you ever need help, just raise your hand and we'll help you out. Please answer questions as honestly as possible!
select_one team	testquestion	What is your favourite soccer team?	Select one answer and swipe to the next screen
note	section_1	First, I'm going to ask some questions about yourself.	
select_one form	grade	What form are you in?	
select_one age	age	How old are you?	
begin_group	birthdate	What is your date of birth?	Please enter year, then month, then day
select_one year	birthday_year	Year:	
select_one month	birthday_month	Month:	
select_one day	birthday_day	Day:	
end_group	birthdate		
note	section_2	Now I'm going to ask you some questions about your household.	By household, I mean the place where you live and the people you live with most of the time.
select_one language	home_language	What language do you speak most at home?	
select_one density	density_area	Which best describes where you live?	
select_one household_type	household_type	What best describes your accommodation?	
integer	household_num	How many people live in your household?	Including yourself
select_one yes_no	live_with_mother	Do you live with your mother?	
select_one yes_no	live_with_father	Do you live with your father?	
select_one yes_no	mother_alive	Is your mother alive?	
select_one yes_no	father_alive	Is your father alive?	
select_one Education	educ_mom	What is the highest level of education your mother has completed?	
select_one Education	educ_dad	What is the highest level of education your father has completed?	
select_one yes_no	own_mob_phone	Do you have your own mobile phone?	
select_one yes_no	own_car	Does you have a car at your household?	
select_one yes_no	house_tv	Does you have a television in your household?	
		Does you have a computer or laptop in your	
select_one yes_no	house_piped	Do you have piped water in your household?	
note	section_3	Now I'm going to ask you some questions about circumcision.	
select_one know_mc	know_mc	What is male circumcision?	
note	mc_explanation	Actually, male circumcision is the complete removal of the foreskin from the penis.	Swipe to advance
note	mc_right	That's right - male circumcision is the complete removal of the foreskin from the penis.	Swipe to advance.
select_one yes_no	circumcised	Are you circumcised?	
select_one date_circumcised	when_mc	When were you circumcised?	
select_one where_mc	where_mc	Where were you circumcised?	
select_one yes_no	father_MC	Is or was your father circumcised?	
select_one howmany	friends_MC	Are your male friends circumcised?	
select_one t_f_true	k-condoms-reduce	Using condoms during sex reduces your risk of getting HIV	
select_one t_f_true	k-mc-reduces	Male circumcision reduces a man's risk of getting HIV	
select_one percent	k-percent	By approximately how much does male circumcision reduce HIV risk for a man?	
select_one wait_weeks	k-wait-to-have-sex	How long should someone wait to have sex after getting circumcised?	
select_one t_f_false	k-mc-dont-need-condoms	Circumcised men don't need to use condoms.	
select_one t_f_false	k-female-partner	Male circumcision reduces the risk of HIV infection for female partners.	
select_one t_f_true	k-cervical	Male circumcision reduces the risk of cervical cancer for female partners.	
select_one t_f_true	k-where-to-go	I know where I can go to get circumcised.	
select_multiple mc_locations	k-where-VMC	Where can you go to get circumcised?	You can select more than one answer
note	Section_4	Now, I'm going to ask some questions about what you think or believe.	Please answer whether you Strongly Disagree, Disagree, Agree, or Strongly Agree. There are no right answers!
select_one agree_disagree_d	P_danger	Getting circumcised is dangerous	
select_one agree_disagree_a	P_good_idea	It is a good idea to get circumcised	
select_one agree_disagree_a	P_women_prefer_mc	Women prefer a circumcised man	
select_one agree_disagree_a	SE_planning_mc	I am planning to get circumcised	
select_one agree_disagree_d	F_mc_proc_painful	The circumcision procedure is very painful	
select_one agree_disagree_d	F_mc_heal_painful	The circumcision healing process is very painful	
select_one agree_disagree_a	SE_get_mc_friends	I would get circumcised, even if none of my friends did	

select_one			
agree_disagree_a	C_comf_talk_circum	I am comfortable talking about circumcision with my friends	
select_one			
agree_disagree_d	P_real_men	Real men do NOT get circumcised	
select_one			
agree_disagree_d	P_reduce_sexual_pleasure	Circumcision reduces a man's sexual pleasure	
select_one			
agree_disagree_a	P_inc_sexual_pleasure	Circumcision increases a man's sexual pleasure	
select_one			
agree_disagree_d	C_uncomfort_talk_mc	I feel uncomfortable talking about circumcision	
select_one			
agree_disagree_d	P_mc_reduces_drive	Getting circumcised reduces a man's sex drive	
select_one			
agree_disagree_a	SE_get_mc	I have decided to get circumcised	
select_one yn_dw	C_talked_man_circum	I have talked about circumcision with someone who has been circumcised	
select_one yn_dw	C_question_mc	I have asked someone a question about circumcision in the past 2 months	
note	section_6	Now I'm going to ask some questions about your sexual history.	If you do not feel comfortable answering a question, just click "I don't want to answer".
			This means penetrative sex where the penis enters the vagina, anus or mouth
select_one yes_no	sex_ever	Have you ever had sex?	
select_one age_sex	age_first_sex	How old were you the first time you had sex?	
select_one yn_dw	condom_ever	Have you ever used a condom?	
select_one yn_dw	condom_first	Did you use a condom the first time you had sex?	
select_one yn_dw	condom_last	Did you use a condom the last time you had sex?	Be honest!
select_one partners	lifetime_partners	How many sexual partners have you had in your lifetime?	Even if you only had sex with a person one time, count this as a sexual partner.
select_one yn_dw	sex_last_3mo	Have you had sex in the last 3 months?	
select_one partners	partners_3mos	How many different people have you had sex with in the past 3 months?	
select_one			
currpartner	curr_partner	Do you currently have a sexual partner?	
select_one yn_dw	sex_post_MC	Have you had sex since getting circumcised?	
select_one			
sex_post_MC	when_sex_post_MC	When did you first have sex after getting circumcised?	
select_one	before_circumsize_d_condom	Before getting circumcised, how often did you use condoms during sex?	
always_never	use	After being circumcised, how often did you use condoms during sex?	
select_one	after_circumsize_d_condom	After being circumcised, how often did you use condoms during sex?	
always_never	se	Have you ever been told by a female partner that you made her pregnant?	
select_one yn_dw	impregnated	Have you ever had an STI?	(like herpes, syphilis or gonorrhoea)
select_one yn_dw	had_sti	Have you ever been tested for HIV?	
select_one yn_dw	hiv_tested	Have you been tested for HIV in the last year?	
select_one yn_dw	HIV_test_last_year	How would you assess your own personal risk of getting HIV?	
select_one risk	risk_assessment		

note	section_7	Now I am going to ask you some questions about	'Alcoholic drinks' include beer, wine, and other types of liquor. Remember, your answers are confidential.
select_one alcohol	alcohol_1	How often do you have a drink with alcohol?	
select_one alcohol2	alcohol_2	How many drinks with alcohol do you have on a typical day?	A drink means 1 can of beer, 1 small glass of wine, or 1 shot of spirits
select_one often3	alcohol_3	How often do you have six or more drinks on one occasion?	
select_one often3	alcohol_4	How often during the last year have you found that you were not able to stop drinking once you had started?	
select_one often3	alcohol_5	How often during the last year have you failed to do what was normally expected from you because of drinking?	
select_one often3	alcohol_6	How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	

Qualitative tool 7: sample referral card



Appendix C: Results

Table 14: MTC+ programme outputs

Output	Anticipated	Completed
Number of facilitators trained	25	25
Number of MTC+ participants	1,280	1,222
Number of referrals made*	-	56
Number of phone calls**	-	-

Note: * Number of referrals is measured as number of boys accompanied to VMMC clinic by GRS coaches. ** Coaches always initiated follow-up with a phone call, but they often contacted boys via SMS or WhatsApp after the initial call. During data analysis, we will formulate a way to account for communication between coaches and participants.

References

- Auvert, B, Taljaard, D, Lagarde, E, Sobngwi-Tambekou, J, Sitta, R and Puren, A, 2005. Randomized, controlled intervention trial of male circumcision for reduction of HIV infection risk: the ANRS 1265 trial, *PLOS Medicine* 2(11), p.298.
- Bandura, A, 1977. *Social Learning Theory*. New York: General Learning Press.
- Banerjee, AV, Duflo, E, Glennerster, R and Kothari, D, 2010. Improving immunisation coverage in rural India: clustered randomised controlled evaluation of immunisation campaigns with and without incentives. *British Medical Journal* 340.
- Chinkhumba, J, Godlonton, S and Thornton, R, 2014. *The demand for medical male circumcision*. McGill University. Available from: <https://www.mcgill.ca/sociology/files/sociology/rebecca_l_thornton_march_26_2014.pdf>
- DeCelles, J and Ndlovu, M, 2013. *Male circumcision uptake through soccer: preliminary results from a cluster-randomised trial*. Paper presented at the Eastern and Southern Africa regional meeting on demand creation for Voluntary Medical Male Circumcision, Lusaka, Zambia.
- DiClemente, R, Wingood, G, Rose, E, Sales, J, Latham, T, Hardin, J and Caliendo, A, 2010. *Brief cellphone-delivered counseling as a novel strategy to enhance the maintenance of HIV behavioral intervention efficacy: results from a supplemental treatment effectiveness trial*. Paper presented at the XVIII International AIDS Conference, Vienna, Austria.
- Football for an HIV Free Generation, 2010. *Using football for HIV/AIDS prevention in Africa*. Available from: <http://assets.sportanddev.org/downloads/f4_hiv_report.pdf>
- Guest G, MacQueen KM and Namey EE, 2012. Introduction to applied thematic analysis. In: *Applied Thematic Analysis*. Thousand Oaks, CA: SAGE Publications, pp.3–18.
- Higgins, ST and Silverman, K, 1999. *Motivating behavior change among illicit drug abusers: research on contingency management interventions*. Washington, DC: American Psychological Association.
- Kanagat, N, Rock, A, Mahler, H, Hatzold, KC, Magalona, S and Adamu, T, 2013. *Matching demand with supply: scaling up voluntary medical male circumcision in Tanzania and Zimbabwe*. Case study series. Arlington, VA: USAID's AIDS Support and Technical Assistance Resources, AIDSTAR-One, Task Order 1, and Maternal and Child Health Integrated Program (MCHIP).
- Kaufman, ZA, DeCelles, J, Nkosi, Z, Delany-Moretlwe, S and Ross, DA, 2012. *GOAL trial: pilot results of a sport-based HIV prevention intervention to inform a cluster-randomized trial in South African schools*. Paper presented at the XIX International AIDS Conference, Washington, DC.

- Kaufman, ZA, Spencer, TS and Ross, DA, 2013. Effectiveness of sport-based HIV prevention interventions: a systematic review of the evidence.' *AIDS and Behavior* 17(3), pp.987–1,001.
- Kaufman, ZA, Spencer, TS and Ross, DA, 2013. Effectiveness of sport-based HIV prevention interventions: a systematic review of the evidence. *AIDS and Behavior* 17(3), pp.987–1,001.
- Lussier, JP, Heil, SH, Mongeon, JA, Badger, GJ and Higgins, ST, 2006. A meta-analysis of voucher-based reinforcement therapy for substance use disorders. *Addiction* 101(2), pp.192–203.
- Mahler, HR, Baldwin, K, Curran, K, Plotkin, M, Adamu, T, Hellar, A, Koshuma, S, Nyabenda, S, Machaku, M, Lukobo-Durrell, M, Castor, D, Njeuhmeli, E and Fimbo, B, 2011. Voluntary medical male circumcision: matching demand and supply with quality and efficiency in a high-volume campaign in Iringa region, Tanzania. *PLOS Medicine* 8(11).
- Ministry of Education, 2013. *Bulawayo Secondary School Enrolment Database*. Bulawayo, Zimbabwe.
- National Statistics Agency, 2011. *HIV prevalence: data from the 2010-11 Zimbabwe demographic and health survey*. Zimbabwe National Statistics Agency. Available from: <http://dhsprogram.com/pubs/pdf/HF37/HF37.pdf>
- Njeuhmeli, E, Forsythe, S, Reed, J, Opuni, M, Bollinger, L, Heard, N, Delivette, C, Stover, J, Farley, T, Menon, V and Hankins, C, 2011. Voluntary medical male circumcision: modeling the impact and cost of expanding male circumcision for HIV prevention in eastern and southern Africa. *PLOS Medicine* 8(11).
- Plummer, ML, Ross, DA and Wight, D, 2004, 'A bit more truthful': the validity of adolescent sexual behaviour data collected in rural northern Tanzania using five methods. *Sexually Transmitted Infections* 80(2), pp.49–56.
- Population Services International Zimbabwe, 2013. *Program highlights*. Unpublished study.
- Prochaska, JO, DiClemente CC and Norcross, JC, 1992. In search of how people change: applications to addictive behaviors. *American Psychology* 47, pp.1,102–1,114.
- Rivera JA, Sotres-Alvarez, D, Habicht, JP, Shamah, T and Villalpando, S, 2004. Impact of the Mexican program for education, health, and nutrition (*Progres*a) on rates of growth and anemia in infants and young children: a randomized effectiveness study. *Journal of the American Medical Association* 291(21), pp.2,563–2,570.
- Schultz, TP, 2004. School subsidies for the poor: evaluating the Mexican *Progres*a poverty program. *Journal of Development Economics* 74(1), pp.199–250.
- Tashakkori A and Teddlie, C, 2003. *Handbook of Mixed Methods in Social & Behavioral Research*. Thousand Oaks, CA: SAGE Publications.

Thirumurthy, H, Masters, SH and Rao, S, 2014. Effect of providing conditional economic compensation on uptake of voluntary medical male circumcision in Kenya: a randomized clinical trial. *Journal of the American Medical Association* 312, pp.703–711.

Thornton, R, Chinkhumba, J, Godlonton, S and Pierotti, R, 2014. *Scaling up male circumcision service provision: results from a randomized evaluation in Malawi*. 3ie Impact Evaluation Report 13. New Delhi: International Initiative for Impact Evaluation (3ie)

United Nations Children's Fund (UNICEF), 2013. UNICEF indicators: Zimbabwe. December 31, 2013. Available from:
<http://www.unicef.org/infobycountry/zimbabwe_statistics.html#117>

Volpp, KG, Pauly, MV, Loewenstein, G and Bangsberg, DR, 2009. P4P4P: an agenda for research on pay-for-performance for patients. *Health Affairs* 28(1), pp.206–214.

World Health Organization 2011 (revised). *Progress in scale-up of male circumcision for HIV prevention in Eastern and Southern Africa: focus on service delivery*. Available from: <http://apps.who.int/iris/bitstream/10665/44741/1/9789241502511_eng.pdf>

Wouabe, E, 2013. *Scoping report on interventions for increasing the demand for voluntary medical male circumcision*. Washington, DC: International Initiative for Impact Evaluation (3ie).

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Make The Cut Plus (MTC+) consists of a 60-minute soccer-themed educational session led by a trained 'coach', who was circumcised. These coaches also conduct referrals and phone-based follow-up with interested participants. This study assessed whether MTC+ increased the demand for male circumcision among adolescent students in secondary schools in Bulawayo, Zimbabwe. Preliminary qualitative findings show strong evidence of the effectiveness of MTC+. Researchers found that logistical reinforcement offered by coaches, in the form of follow-up calls and the offer to accompany boys to the clinic were important factors in their decision to undergo VMMC. The results, however, need to be treated with cautious optimism when considering the potential impact at scale, as the trial was carried out in a single city. If its effectiveness remains consistent at scale and if scaled up in schools, MTC+ could generate substantial new VMMC demand among adolescent males.

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