

The copyright of this thesis rests with the University of Cape Town. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

***The human rights implications of adopting male
circumcision as a prevention strategy for HIV/
AIDS in South Africa***

by

**Deborah Louise Kroon
KRNDEB001**

SUBMITTED TO THE UNIVERSITY OF CAPE TOWN
In partial fulfilment of the requirements for the degree
MASTERS IN PUBLIC HEALTH

June 2009

Faculty of Health Sciences

Abstract

This study considers the human rights implications of adopting male circumcision as an HIV prevention strategy in South Africa. Consistent findings from three randomised controlled trials in sub-Saharan Africa reflect a protective effect of male circumcision on HIV infection. Given the attention bestowed on the topic by popular media and the international HIV / AIDS community alike, it is justifiable for countries with high HIV prevalence to consider adopting a policy for male circumcision in HIV prevention. However, male circumcision involves many human rights challenges and therefore it is justifiable to consider the human rights issues at stake during policy development.

The study methodology included three sub-studies consisting, firstly, of a cross-sectional descriptive study of healthcare workers in the Cape Town Metro region. Participants completed a written questionnaire about their knowledge of and attitudes towards adopting male circumcision as an HIV prevention strategy in South Africa. Analysis of results reflected responses to each statements, and were further disaggregated by factors such as professional position, gender and male circumcision practices in the participant's own culture. A second cross-sectional qualitative descriptive sub-study comprised of semi-structured interviews with key informant stakeholders with the aim of providing insight into the capacity of the public sector to respond to possible rollout of male circumcision services in South Africa. The findings from the interviews were intended to complement data from the healthcare worker survey. The primary data from these two sub-studies were used in a third sub-study, together with secondary data from the literature, to inform an accepted human rights impact assessment. This final sub-study applies a systematic approach to consider the public health purpose, likely effectiveness and appropriate targeting of the policy, together with the potential human rights burdens of all affected parties. Thereafter, the public health goals and human rights burdens may be balanced by considering alternative policies that may be less restrictive, whether there is sound epidemiological and empirical evidence to support the proposed policy, and whether fair administrative procedures have been applied.

The main findings reflect that healthcare workers have good knowledge of conventional HIV prevention strategies that are centred in behaviour change, but that there are low levels of awareness of the potential role of male circumcision in HIV prevention. Cultural practices and gender may impact on beliefs and attitudes

towards male circumcision which may, in turn, influence practice. Few healthcare workers are trained to perform male circumcisions, even amongst doctors, and there is a relatively low willingness to perform the surgical procedure, regardless of the age at which the circumcision takes place. The vast majority of participants are willing to refer patients to appropriate services indicating that negative attitudes of healthcare workers should not be a major barrier to access. There appears to be a high awareness of human rights issues amongst healthcare workers with the vast majority of participants indicating that male circumcision could only be done on a voluntary basis, thus respecting the rights to informed consent and personal choice.

Findings from the key informant interviews indicate consensus that male circumcision should be explored as a potential HIV prevention strategy. However, a number of caveats were noted, in particular emphasizing further research into the impact on women, the potential for risk compensation and the need for accurate messaging and communication on the topic. Insights into capacity indicated it would be possible to offer male circumcision services in an outpatient, primary health care setting and that nurses could feasibly perform the procedure and be trained with relative ease. However, an over-burdened and short-staffed public sector remains a concern and dedicated resources are essential to ensure that resources are not withdrawn from other existing and important health services.

The human rights impact assessment of a potential policy to introduce male circumcision as an HIV prevention strategy in South Africa identified that there are many complex and nuanced issues at stake. The human rights of men, women, children, parents and healthcare workers require further and careful consideration to ensure the balancing of the public health benefits and burdens on all parties involved. Conclusions are drawn that the introduction of male circumcision as an HIV prevention strategy in South Africa amongst consenting adults and adolescents is probably premature and that mass neonatal male circumcision as an HIV prevention strategy is unjustified.

Recommendations for further research are made; particularly into the true impact on women, the efficacy of the randomised controlled trials versus the effectiveness in a real-world setting and operational research into capacity issues and challenges. Key considerations for implementation, in the event that such a policy is introduced, are put forward.

Contents

LIST OF TABLES	V
LIST OF FIGURES	V
LIST OF APPENDICES	VI
ACKNOWLEDGEMENTS	VII
ABBREVIATIONS	VIII
1 INTRODUCTION	1
1.1 The Problem	1
1.2 Literature Review	5
1.2.1 Findings of the Randomised controlled trials	5
1.2.2 Response from the International and Local Communities	6
1.2.3 Prevalence and determinants of Male Circumcision.....	7
1.2.4 Health Benefits of Male Circumcision.....	7
1.2.5 Risk Compensation	8
1.2.6 Acceptability of Male Circumcision	10
1.2.7 Ethnicity and Male Circumcision	11
1.2.8 Complications Associated with Male Circumcision	12
1.2.9 Gender and Male Circumcision	12
1.2.10 Health Systems and the Inclusion of Male Circumcision Programmes	
14	
1.2.11 Conflicting Evidence and Opinion in the Literature	15
1.2.12 Neonatal Male Circumcision	17
1.2.13 Male Circumcision and Human Rights	19
1.2.14 Human Rights Framework for Policy Analysis	20
1.3 Justification	21
1.4 Rationale.....	21
1.5 Primary Study Objectives.....	22
1.6 Study Format	22
2 SUB- STUDY A – HEALTHCARE WORKERS’ ATTITUDES TOWARDS ADOPTING MALE CIRCUMCISION AS AN HIV PREVENTION STRATEGY IN SOUTH AFRICA.....	23
2.1 Methods	23
2.1.1 Study design	23
2.1.2 Population and Sampling	23
2.1.3 Measurement	25
2.1.4 Pilot study	26
2.1.5 Procedures	27
2.1.6 Analysis.....	28
2.1.7 Ethics and communication	29
2.2 Results	30
2.2.1 Sample realisation	30
2.2.2 Responses to knowledge, attitudes and behaviour questions.....	32
2.2.3 Summary of findings.....	45
3 STUDY B – ATTITUDES AND OPINIONS REGARDING THE CAPACITY OF THE	

PUBLIC SECTOR TO IMPLEMENT MALE CIRCUMCISION	47
3.1 Methods	47
3.1.1 Study Design	47
3.1.2 Population and Sampling	47
3.1.3 Procedures	48
3.1.4 Analysis.....	49
3.1.5 Ethics and Communication	50
3.2 Results	50
3.2.1 Study Participants	50
3.2.2 Interview findings	51
3.2.3 Summary of findings.....	62
4 DISCUSSION	64
4.1 Introduction	64
4.2 Discussion	64
4.2.1 Knowledge and beliefs about HIV prevention.....	64
4.2.2 Knowledge and beliefs about male circumcision and HIV prevention..	66
4.2.3 Attitudes towards, and beliefs about male circumcision.....	69
4.2.4 Training and willingness to perform or refer for male circumcisions ...	73
4.2.5 Opinions regarding human rights and male circumcision.....	75
4.2.6 Capacity.....	77
4.3 Limitations of the study.....	78
4.4 Conclusion.....	79
5 SUB STUDY C – POLICY ANALYSIS	82
5.1 Introduction	82
5.2 Policy Analysis	82
5.2.1 Step 1: Clarify the public health purpose.....	82
5.2.2 Step 2 (i): Evaluate the likely effectiveness of the policy.....	83
5.2.3 Step 2 (ii): Is there an alternative / better approach?	90
5.2.4 Step 3: Is the public health policy well targeted?	92
5.2.5 Step 4: Examine the policy for human rights benefits and burdens.....	94
5.2.6 Step 5: The least restrictive policy to achieve the objective?	105
5.2.7 Step 6: Base on significant risk standard	106
5.2.8 Step 7: Fair administrative procedures.....	107
5.2.9 Conclusion	108
6 CONCLUSIONS AND RECOMMENDATIONS	109
6.1 Male circumcision amongst consenting adults and adolescents.....	109
6.2 Neonatal Male Circumcision.....	110
6.3 Considerations for implementation	110
6.4 Recommendations for research	111
6.5 Final comments	112
7 REFERENCES	113
8 APPENDIX	123

LIST OF TABLES

Table 2.1: Facilities selected into the sample	24
Table 2.2: Knowledge and beliefs about prevention strategies for HIV/AIDS	33
Table 2.3: Knowledge and beliefs about male circumcision and HIV prevention.....	34
Table 2.4: Participant responses to statements about the role of male circumcision in HIV prevention, disaggregated by professional position	35
Table 2.5: Participant responses to statements about the role of male circumcision in HIV prevention, disaggregated by professional position (combining nurses and doctors)	35
Table 2.6: Participant responses to statements about the role of male circumcision in HIV prevention, disaggregated by male circumcision practices in own culture	36
Table 2.7: Attitudes and beliefs towards male circumcision	37
Table 2.8: Participant responses to statements about attitudes and beliefs towards male circumcision, disaggregated by male circumcision practices in own culture	38
Table 2.9: Personal beliefs and opinions about male circumcision	39
Table 2.10: Participant responses amongst those who practice male circumcision to statements around beliefs about male circumcision, disaggregated by age of circumcision	41
Table 2.11: Training and willingness of healthcare workers to perform or refer for male circumcisions.....	42
Table 2.12: Participant responses on training and willingness to perform or refer for male circumcision, disaggregated by professional position	43
Table 2.13: Participant responses to training and willingness to perform or refer for male circumcision, disaggregated by gender	43
Table 2.14: Opinions regarding human rights and male circumcision	44
Table 5.1: Human Rights at stake and relevant Human Rights Instruments	95

LIST OF FIGURES

Figure 1.1: Proposed Framework, IFRCRC, FXB, 1999.....	4
Figure 2.1: Gender and professional position of participants	31
Figure 2.2: Circumcision practices of participants	31

LIST OF APPENDICES

Appendix 1: Healthcare Workers Questionnaire	123
Appendix 2: Key Informants Interview Guide	128
Appendix 3: Informed Consent Information Sheet for Healthcare Workers and Facility Managers with a clinical background.....	132
Appendix 4: Information sheet for informed consent for key informant stakeholders	135
Appendix 5: Participant information sheet.....	138
Appendix 6: Participant responses to statements about HIV prevention, disaggregated by professional position.....	139
Appendix 7: Participant responses to statements about HIV prevention, disaggregated by gender	139
Appendix 8: Participant responses to statements about HIV prevention, disaggregated by male circumcision practice in own culture	140
Appendix 9: Participant responses to statements about the role of male circumcision in HIV prevention, disaggregated by gender	140
Appendix 10: Participant responses to statements about attitudes and beliefs towards male circumcision, disaggregated by gender	141
Appendix 11: Participant responses to statements around beliefs about male circumcision, disaggregated by gender	141
Appendix 12: Participant responses to statements around beliefs about male circumcision, disaggregated by male circumcision practices in own culture.....	142
Appendix 13: Participant responses to statements about training and willingness to perform or refer for male circumcision, disaggregated by male circumcision practices in own culture	142
Appendix 14: Participant responses to statements about potential human rights beliefs and male circumcision, disaggregated by gender	143
Appendix 15: Participant responses to statements about potential human rights beliefs about male circumcision, disaggregated by professional position	143
Appendix 16: Participant responses to statements about human rights beliefs and male circumcision, disaggregated by male circumcision practices in own culture	144
Appendix 17: Ethics Approval Letter	145
Appendix 18: Amendments to Ethics Approval Letter.....	146

ACKNOWLEDGEMENTS

My grateful thanks go to all who have assisted me in completing this dissertation. In particular, I would like to thank Professor Leslie London, my supervisor, who has given his time and invaluable input throughout the process. I would also like to thank Rauf Sayed and Anna Grimsrud for their assistance with the statistics.

To the managers in the health departments at the City of Cape Town and the Provincial Government of the Western Cape, I thank you for enabling me access to your health facilities and for your input and suggestions on the scope of the study and the healthcare worker questionnaire.

To staff at the University of Cape Town, the Department of Health and various non-governmental organisations who willingly agreed to participate in this study in the key informant interviews, I thank you for your time and the information shared.

Thank you to the healthcare workers and health facility managers who willingly gave their time and energy to answer the healthcare worker questionnaire.

Finally, to my friends, family and partner who have supported and encouraged me throughout the process, I am extremely grateful and thank you all.

ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
AVAC	AIDS Vaccine Coalition
CCT	City of Cape Town
CTOPA	Choice of Termination of Pregnancy Act
DOH	Department of Health
HAART	Highly Active Antiretroviral Therapy
HIV	Human Immunodeficiency Virus
HCW	Healthcare Worker
MC	Male Circumcision
MSM	Men who have Sex with Men
NSP	National Strategic Plan
PGWC	Provincial Government of the Western Cape
PMTCT	Prevention of Mother to Child Transmission
RCT	Randomised controlled trials
REC	Research Ethics Committee
STI	Sexually Transmitted Infections
TAC	Treatment Action Campaign
TOP	Termination of Pregnancy
UCT	University of Cape Town
UNAIDS	United Nations HIV and AIDS Programme
WHO	World Health Organisation

1 INTRODUCTION

1.1 The Problem

With the results from three independent randomised controlled trials in sub-Saharan Africa reflecting a significant protective association between male circumcision and HIV infection, discussion around the scaling up of male circumcision services as an HIV prevention strategy has commenced; both in the global arena and in South Africa. The outcome of these trials has received considerable media coverage with consequent attention being given to the topic and drawing many into the debate - from the person on the street to researchers, academics, policy makers, gender activists and civil society advocates who promote the right to health for all.

Data from the UNAIDS 2007 AIDS Epidemic Update indicate that there are an estimated 33.2 million (30.6 – 36.1 million) people living with HIV / AIDS worldwide. The report states that over 6 800 people become infected with HIV daily and that over 5 700 people die from AIDS daily – mostly due to poor access to HIV prevention and treatment services (UNAIDS, 2007).

The majority of cases of HIV / AIDS are found in sub-Saharan Africa where AIDS is the leading cause of death. Epidemiological data from UNAIDS (2007) estimates that of all the cases of HIV / AIDS worldwide, 68% of adults and nearly 90% of children are found in sub-Saharan Africa, and that 76% of all AIDS deaths occur in this region, reflecting inadequate access to both antiretroviral treatment and effective prevention programmes, and the urgent need to address this.

In South Africa, the HIV prevalence is estimated at 10.8% in persons above the age of 2 years; the prevalence is higher in females (13.3%) compared to males (8.5%) and annual incidence is estimated at 2.7% (Shisana et al., 2005). The South African government has laid out its' response to the HIV / AIDS crisis in the country in their 2007 National Strategic Plan (NSP) which, amongst other targets, aims to reduce the number of new infections of HIV to half by 2011 (NSP, p 53). Achieving this ambitious goal represents a major challenge given the still high rates of HIV infection. The NSP also identifies male circumcision as a potential HIV prevention strategy that needs to be addressed and recommends that the National Department of Health consider both the effectiveness of such a strategy and appropriate policy development (NSP, p 71).

Given the alarming statistics on HIV / AIDS, it is clear that HIV prevention must be a priority on the public health agenda, particularly in areas of high prevalence such as South Africa. Until now, HIV prevention strategies that have centred on behavioural change such as promoting abstinence, being faithful to one partner and using condoms have not yielded the full desired effect; this is reflected in the ongoing high rate of infection. Therefore other innovative and technological strategies have been sought. Such strategies include research into vaccines for HIV / AIDS, vaginal microbicides, the role of pre-exposure prophylaxis with antiretroviral therapy and the role of male circumcision in HIV prevention. Given the impact of the HIV / AIDS pandemic on the lives of so many and the global economic consequences, finding an effective solution to the problem is an extremely compelling and necessary public health objective.

Consequently, the results from the circumcision trials have been greeted with cautious optimism and, within this context, the demand for adult male circumcision in sub-Saharan Africa, where HIV is highly prevalent, is likely to increase.

In a joint report by the World Health Organisation (WHO) and the United Nations programme for HIV and AIDS (UNAIDS) on the global trends, determinants, safety and acceptability of male circumcision, evidence indicates that increased demand for circumcision in southern Africa is already taking place and it is thought that this demand will further increase; the results of the trials have been widely publicised and many men in traditionally non-circumcising communities are requesting circumcision (WHO / UNAIDS, 2007). In a World Bank report, Wilson and De Beyer (2006) cite indication of increasing demand for male circumcision in traditionally non-circumcising countries such as Zambia and Swaziland; the reported demand at a Zambian hospital has increased from an average of 1 circumcision to 15 per month, while demand at a clinic in Swaziland has increased from less than 1 circumcision to an average of 40 per month.

Notably, there has also been some opposition to the calls for roll out mass circumcision programmes. In particular, concerns about "risk compensation" have been raised. Risk compensation refers to men who, after being circumcised, believe that they are safe from HIV and then engage in risky sexual behaviours, counteracting the potential protective effect of male circumcision. This highlights the argument that male circumcision should only be considered as one part of a

comprehensive HIV prevention strategy; the challenge remains in how this is implemented in practice.

Furthermore, gender experts and activists have warned against a prevention strategy that targets men only, and urge careful consideration of the gender aspects of the HIV / AIDS pandemic and what implementation of such a policy would mean for women (Sawires et al., 2007). There has also been criticism of the proposed policy from a human rights point of view, where issues such as informed consent and the right to bodily integrity have been raised (Myers and Myers, 2007; Sidler et al., 2008; Green et al., 2008).

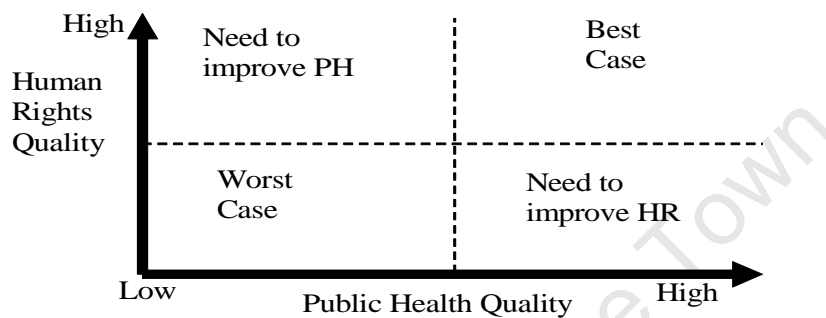
Male circumcision is a practice that is immersed in religious and cultural values, and closely linked to ethnic identity. Therefore debate and disagreement about the topic are not unexpected and opposing views and opinions give rise to major challenges for policy formulation and decision-making (Csete, 2007). The debate also points to the importance of considering all the consequences of introducing new technologies and policies aimed at HIV prevention because such interventions may have unintended outcomes and, while these outcomes may be for public health benefit, they may also impact on human rights and dignity (Gostin and Mann, 1999.)

This is particularly important when considering HIV / AIDS interventions because HIV targets the most vulnerable groups in society, both in terms of prevention and access to treatment. This vulnerability is borne out in the disproportionate global burden of HIV infections and AIDS-related deaths in sub-Saharan Africa, where poverty, gender inequality and economic underdevelopment are common (UNAIDS, 2007). In addition, the stigma associated with HIV / AIDS leads to discrimination which can further negatively impact vulnerable groups. Therefore, any new programme or policy introduced to address HIV / AIDS must recognise this vulnerability and assess any potential positive or negative impacts that the proposed policy may have. At the very least, the new programme or policy must not worsen the burden on vulnerable groups and, preferably, should reduce it.

That the implications of a proposed policy on a specific group in society must be considered introduces the concept of a human rights-based approach to policy development and analysis, and highlights the importance of this process. A model proposed by IFRCRC, FXB (1999) to evaluate public health effectiveness versus human rights restrictions is depicted in Figure 1.1 below. The vertical axis depicts

the human rights quality of the proposed policy while the horizontal axis depicts the public health quality. The best scenario is that the proposed policy be located in the top right quadrant, which has both high public health value and high human rights quality.

Figure 1.1: Proposed Framework, IFRCRC, FXB, 1999.



Public health policies may have the potential to limit human rights. If, for example, the proposed policy of scaling up male circumcision appears to have high public health value (preventing transmission of HIV), but has poor human rights value, then it would be located in the lower quadrant on the right in the model, suggesting the need to increase the human rights quality. This simple model provides a visual representation of why all public health policies need to be examined for human rights impacts.

Human rights are enshrined in the South African Constitution and many other regional and international conventions. These legal frameworks have resulted from acknowledgement of how historical atrocities preyed upon vulnerable groups in society, such as the holocaust during the Second World War and the apartheid regime in South Africa. Furthermore, that societies and humanity must ensure that such horrific human rights violations are never repeated.

The human rights implications of potential public health policy to expand male circumcision services in the public sector in South Africa as an HIV prevention strategy have not been fully considered. Analysing such proposed policy within a human rights framework is a compelling and necessary step in policy formulation

and requires careful consideration of the human rights benefits and burdens of all parties involved. This is important from both an ethical and a legal context and has implications for uptake and implementation of the proposed policy.

1.2 Literature Review

Numerous observational studies have reflected a protective association between male circumcision and transmission of HIV and other sexually transmitted infections (STIs) (Westercamp and Bailey, 2007). A systematic review and meta-analysis of observational studies conducted by Weiss et al. (2000) concluded that male circumcision is associated with a significant reduction in HIV infection amongst men in sub-Saharan Africa (crude RR = 0.52, CI 0.40 – 0.68). However, researchers realised that other variables may confound these results; such variables include sexual norms and practices that may be associated with the same religious differences that influence circumcision practices (Csete, 2007). Therefore, the need for a randomised control trial that could control for potential confounding factors was borne.

To this end, three independent randomised controlled trials (RCTs) looking at the impact of male circumcision on HIV transmission were conducted in sub-Saharan Africa. Randomised controlled trials offer an experimental design where trial participants are randomly allocated to an intervention group or a control group. RCTs are considered to be the apex in the hierarchy of study designs because the randomisation process yields two comparable groups; the comparison of which accounts for potential confounding factors, and the outcome of the trial can be said to be due to the intervention. In this case, the RCTs recruited large numbers of HIV negative, uncircumcised young men, from similar communities. The men were then randomly allocated into two groups. The intervention being studied was male circumcision and the outcome assessed was HIV incidence. Men in the intervention group were circumcised, while men in the control group were not. The participants were then followed up over time and HIV incidence measured (Auvert et al., 2005; Bailey et al., 2007; Gray et al., 2007).

1.2.1 Findings of the Randomised controlled trials

Auvert et al. (2005) reported data from their trial carried out in Orange Farm, South Africa noting an HIV incidence rate ratio of 0.40 (0.24-0.68, 95% CI; $p < 0.001$)

between the circumcised intervention group and the uncircumcised control group, indicating that male circumcision reduces the risk of sexual transmission of HIV from women to men by 60% (32-76, 95% CI). This finding has been substantiated by other RCTs. In a Kenyan trial, the relative risk of HIV infection in the circumcised group was 0.47 (0.28-0.78, 95% CI) translating to a risk reduction of HIV acquisition in the circumcised group of 53% (22-77, 95% CI) (Bailey et al., 2007). In addition, findings from a RCT conducted in Uganda by Gray et al. (2007) report an estimated efficacy of circumcision to prevent HIV infection as 51% (16-72, 95% CI, $p=0.006$). Notably these results indicate HIV transmission within a heterosexual population and the quoted protection rates refer to female-to-male transmission only. All three studies conclude that male circumcision in adult men is effective in reducing the risk of HIV infection in men in Africa and recommend that voluntary, safe and affordable male circumcision be integrated with other HIV prevention strategies (Auvert et al., 2005; Bailey et al., 2007; Gray et al., 2007).

1.2.2 Response from the International and Local Communities

The results of these trials have led to organisations such as the World Health Organisation (WHO) and the United Nations HIV and AIDS programme (UNAIDS) calling for a mass scaling up of male circumcision services as a part of current HIV prevention strategies. A WHO / UNAIDS progress report (2007a) cites “In response to the findings of the trials WHO, UNAIDS, and their partners held an international consultation in early March 2007 with the goal of defining specific policy and programmatic recommendations for expanding and / or promoting male circumcision for HIV intervention.” The report further emphasised that countries with high HIV prevalence due to heterosexual transmission and low rates of male circumcision “should urgently consider expanding access to safe male circumcision services” and that WHO and UNAIDS will actively support countries who do so (WHO / UNAIDS, 2007a).

In South Africa, a recent article in the magazine of the advocacy group, the Treatment Action Campaign (TAC), recommended that baby boys in South Africa should be medically circumcised to reduce their risk of HIV infection (Fowler, 2007/2008). *Siyayinqoba Beat It!*¹, a national broadcast television show that focuses

¹ *Siyayinqoba Beat It!* Television show is produced by the Community Health Media Trust and broadcast on SABC1. Episode 11 on Circumcision and HIV was screened on 11 September 2008.

on HIV and related issues featured an episode on male circumcision, which promoted male circumcision, together with ongoing condom use, as a means to reduce HIV risk. Further, Bill and Melinda Gates, as major funders of HIV prevention interventions, have publicly endorsed male circumcision as an HIV prevention strategy (Aggleton, 2007). Such populism thrusts the topic into the public spotlight and may therefore influence policy formulation as decision makers become forced to respond.

1.2.3 Prevalence and determinants of Male Circumcision

Male circumcision is the surgical removal of all, or part of the foreskin of the penis (WHO / USAID, 2007b). The World Health Organisation estimates that 30% of all men are circumcised, amounting to approximately 665 million men worldwide. Male circumcision is common in many African countries, particularly in North and West Africa where the practice is almost universal. Male circumcision in Southern Africa is less common and the estimated prevalence in South Africa is 35% (WHO / USAID, 2007c).

The main determinants of male circumcision are religion and culture – nearly all Jewish and Muslim men are circumcised and a significant number of men may become circumcised for cultural reasons, particularly in sub-Saharan Africa where tradition and cultural identity play as central a role as religion during male circumcision practices (WHO/ UNAIDS, 2007c). Notably, male circumcision often forms part of religious and cultural practices at birth, or at transition from boyhood to manhood and may be performed in different ways, yielding differing results - from a small cut to complete removal of the foreskin (WHO / UNAIDS, 2007).

1.2.4 Health Benefits of Male Circumcision

A review by Moses et al. (1998) considered the knowledge base of health benefits and risks associated with male circumcision. The authors concluded that there are several health benefits associated with male circumcision including improved penile hygiene, a reduced risk of urinary tract infections in infants, a lower prevalence of some STIs, including HIV, and particularly ulcerative diseases such as chancroid and syphilis, and that male circumcision may lower the risk of penile cancer in men, and cervical cancer in women (Moses et al., 1998). The authors cited the complication rate associated with male circumcision to be 0.2% to 0.6% in one

review and 0.2 to 2% in another review, and noted that the majority of these complications are minor, with the most common being local infection and bleeding. Circumcision of adolescent boys and adult men carries a higher risk of adverse surgical outcomes compared with circumcision of baby boys (Moses et al., 1998). The review yielded little scientific evidence of adverse effects of male circumcision on sexual, psychological and emotional health and concluded that any decision to recommend male circumcision to a given society should be based on assessment of risk for, and prevalence of, diseases associated with the presence of the foreskin versus the potential complications of the procedure. Furthermore, the authors noted that despite the fact that the decision to circumcise may be more dependent on socio-cultural norms and values than medical knowledge, people's preferences may be influenced by information provided by healthcare professionals (Moses et al., 1998).

The biological explanation for why male circumcision is protective in STI and HIV transmission is not fully understood, but is thought to be related to the poor keratinisation of the inner mucosal surface of the foreskin which is therefore susceptible to minor trauma and abrasions which may facilitate the entry of pathogens; once a man is circumcised the whole penile shaft is covered with a thickly keratinised layer helping to prevent this. In addition, there are Langerhans cells in the foreskin and these cells have been shown to be susceptible to the HIV-1 pathogen. Finally, after sexual intercourse, the preputial cavity may provide an environment that enables increased viral survival and thus increases transmission in uncircumcised men (McCoombe and Short, 2006).

Concerns regarding the increased uptake of circumcision services pertain to safety and acceptability of the procedure, plus risk compensation, and in their document on policy and programme implications for male circumcision, WHO / UNAIDS (2007f) emphasize that male circumcision should only be proposed as part of existing HIV prevention strategies.

1.2.5 Risk Compensation

Risk compensation refers to men who, after becoming circumcised, may believe they are safe from being infected with HIV and ignore other public health messages regarding safe sex and the correct and consistent use of condoms. Significant risk compensation could reduce the protective effect of male circumcision on HIV

transmission and result in a paradoxical increase in HIV transmission, rather than the expected decrease (Csete, 2007). This is a common concern with technological solutions to HIV prevention such as AIDS vaccines, vaginal microbicides and male circumcision and while these new technologies may hold promise for HIV prevention, the complex nature of the HIV / AIDS pandemic highlights the unlikelihood of one single approach being successful (Cassell et al., 2006). Furthermore, the potential for risk compensation reflects the need for renewed efforts to prioritize and co-ordinate approaches to change sexual behaviour by maximising the benefits of new and existing risk reduction strategies and minimising the possibility of risk compensation; this may be achieved through sustaining high levels of personal risk perception amongst the communities in which new preventative technologies are implemented (Cassell et al., 2006).

Westercamp and Bailey (2007) reviewed 13 studies relating to the acceptability of male circumcision as an HIV prevention strategy which have been conducted in 9 different countries within sub-Saharan Africa and note that risk compensation has been reported in some of the acceptability studies. Again, this highlights the need to distinguish between absolute and relative protection and that the public health message needs to be communicated that male circumcision is not a single answer to the HIV/ AIDS epidemic, but rather that it is only one part of HIV prevention strategies (Sawires et al., 2007).

In contradiction to the findings from the acceptability studies mentioned above, results from a study by Mattson et al. (2008) in Kenya indicated that, within the context of a RCT, male circumcision is not associated with risk compensation. This study recruited participants of the Kenyan RCT into a separate study which compared risky sexual behaviour and the presence of STI's in circumcised men from the intervention group with uncircumcised men from the control group. The results yielded no statistically significant difference between the two groups. Mattson et al. (2008) note that five studies consistently reflect risk compensation as essentially absent after circumcision (Mattson et al., 2008; Auvert et al., 2005; Bailey et al., 2007; Gray et al., 2007; Agot et al., 2007).

However, commentary on behavioural disinhibition in the 2009 Cochrane review specifically noted increased sexual activity and / or more risky sexual behaviour in the circumcised (intervention) groups compared to the uncircumcised (control) groups in all three RCTs (Siegfried et al., 2009). The authors concluded that despite

the increase in risky behaviour, male circumcision remained protective for men within the 2-year period of the RCTs but that there is no evidence to show that this protective effect will persist over the long term.

1.2.6 Acceptability of Male Circumcision

In their review of acceptability studies about male circumcision as an HIV prevention strategy in nine different sub-Saharan African countries, Westercamp and Bailey (2007) note the findings from the studies to be consistent and to reflect a positive response. The median proportion of uncircumcised men who were willing to become circumcised was 65% (29-87%) while amongst women, 69% (47-79%) preferred their partners to be circumcised and 71% (50-90%) of men and 81% (70-90%) of women were willing to have their male babies circumcised (Westercamp and Bailey, 2007). Furthermore, the authors noted that levels of acceptability of male circumcision as an HIV prevention strategy is higher than may have been anticipated, particularly because all thirteen communities studied were all traditionally non-circumcising (Westercamp and Bailey, 2007). This reflects that cultural norms may shift and change over time and this is important because if non-circumcising communities display positive attitudes towards circumcision as an HIV strategy, then implementation of such a policy is more likely to be taken up. It is interesting to note how culture can shifted in a short space of time; historical sources note that during the Zulu wars, King Shaka ordered his people to abandon male circumcision as a cultural practice, most likely because the initiation schools were difficult to run during times of continuous warfare. Quite literally, a cultural practice that had taken place for generations was abandoned overnight (Marck, 1997).

Despite the observation by Westercamp and Bailey (2007) that high levels of acceptability for male circumcision were found amongst non-circumcising communities, communities that practice male circumcision for cultural or religious reasons must not be forgotten; there is frequently high social significance attached to the rituals associated with male circumcision and therefore medical male circumcision in a health facility may not be viewed amongst these communities as acceptable and may be resisted.

The main barriers to circumcision are cost, fear of pain and safety concerns while cultural norms, ethnic identity and religion are key factors in acceptability of male circumcision (Westercamp and Bailey, 2007).

1.2.7 Ethnicity and Male Circumcision

It has been established that male circumcision may be of high cultural importance in some communities. In addition, circumcision status may be significant in ethnic identity and consequently ethnic conflict. This has been reflected in the 2007/2008 post-election violence in Kenya where men from traditionally non-circumcising tribes have been subjected to 'forced circumcision' by others whose ethnic origins promote male circumcision. These forced circumcisions have been acts of violence, immersed in ethnic difference and conflict, and have resulted in genital mutilation and even death (AFP, 2008). A joint report by WHO and UNAIDS on the global trends, determinants, safety and acceptability of male circumcision cites that Xhosa men in South Africa who have not been circumcised (as per tradition) can sometimes be subjected to extreme forms of punishment such as bullying and beatings (WHO / UNAIDS, 2007). These examples constitute a horrific violation of human rights and highlights how circumcision status and the ethnic identity associated with it may have relevance within ethnic conflict situations.

It should be noted that the medical act of circumcision amongst cultures who practice traditional circumcision may have unseen consequences and different implications in different social contexts. For example amongst the Xhosa tribe, men who have not undergone the traditional initiation ritual associated with male circumcision as a passage to manhood are shunned by both men and women and are not considered to be a "real man" (Meissner and Buso, 2007). Reasons for attending traditional male circumcision cited by a group of Xhosa pre-initiates included fear of being ridiculed by peers or being called "small boys" if they remained uncircumcised, and belief they would have improved social status and respect from both men and women in their communities. Another reason was fear of being haunted by bad luck if they did not attend a traditional initiation school (Peltzer et al., 2008). Medical male circumcision is not considered to be culturally adequate amongst Xhosa-speaking people; Funani (1990) explains that alternatives to traditional male circumcision, which is practiced as a cultural institution, are negligible to non-existent. Furthermore that initiation is seen as the "formal incorporation of males into Xhosa religious and tribal life" and that medical circumcisions performed by health professionals are deemed meaningless. Such deeply rooted social reasons for traditional male circumcision suggest the need to adequately consider whether the means by which men become circumcised (i.e. medically) may have social impacts or unforeseen consequences.

1.2.8 Complications Associated with Male Circumcision

The differences between traditional/ cultural circumcision and circumcision as a medical procedure must be considered together with the safety of male circumcision. As discussed previously, post-operative complications take place in 0.2 – 2 percent of cases of medical circumcision; but notably this is when “health professionals have been trained and equipped to perform safe male circumcisions” and assumes adequate sterile facilities (UNAIDS, 2005). Csete (2007) points out that many male circumcisions occur in conditions that are less ideal than those described; this includes circumcisions conducted by “traditional surgeons” as part of an initiation rite of passage into manhood.

Traditional circumcisions do not take place in medical facilities and are commonly seen as a rite of passage into manhood; young adolescent men are frequently separated from society and attend initiation schools where they undergo “transformation” before reintegration into society in a new role. The transformation stage includes initiates shaving their heads, covering their bodies in ash or clay, the circumcision procedure itself carried out by a traditional surgeon and seclusion from society after the event during which initiates are tutored and given instruction by traditional “guardians” which includes general knowledge and special ritual observances (Marck, 1997).

Adverse outcomes of traditional circumcisions are not uncommon and include sepsis, haemorrhage, dehydration and death; traditional circumcisions may even lead to HIV transmission, particularly if the same instrument is used to perform multiple circumcisions (Lagarde et al., 2003). Csete (2007) cites article 12 of the *International Covenant of Economic, Social and Cultural Rights* which promotes the human right to the highest attainable standard of health and highlights that planning for any scaling up of circumcision services needs to ensure that sanitary conditions and technical competence are a priority.

1.2.9 Gender and Male Circumcision

Despite the potential adverse outcomes of traditional male circumcision, Rachel Jewkes, a gender expert, cautions against viewing circumcision for HIV prevention as a medical intervention only. In an article in the Mail and Guardian newspaper, Jewkes (2007) puts forward her opinion that male circumcision should rather been

seen as a social intervention that should be regarded as a “transformative process” that provides an opportunity to engage men in discussion regarding safer sexual behaviour and gender equity. Peltzer et al. (2007) note that male circumcision in Africa is a holistic concept that brings together multiple and interconnected dimensions such as religion, spirituality and culture, plus social, biomedical and aesthetic aspects. Therefore, for any health policy to be successful, promotion must go beyond the narrow domain of biomedical paradigms (Peltzer et al., 2007) and should be consistent with socio-cultural norms.

Male circumcision as an HIV prevention strategy predominantly offers greater direct benefit to men compared to women; the results from the three RCTs translate to a 50-60% reduction in risk of HIV acquisition in men only and therefore the impact of such an intervention on women must be considered. While mathematical modelling suggests that women may benefit indirectly from a reduction in HIV prevalence among their male sexual partners (Williams et al., 2006), this effect is secondary and refers to the potential long term benefit of the intervention. Male circumcision is associated with lower rates of genital ulcer disease and STIs in men (Moses et al., 1998) and this too could translate to a secondary benefit to women because STIs are known co-factors for HIV transmission.

There is concern that male circumcision in HIV positive men does not protect their female partners from HIV infection. A Ugandan trial that was stopped early by the Data Monitoring Board noted that couples who resumed sexual intercourse before the circumcision wound had healed completely had an increased risk of HIV transmission to women, compared to couples who delayed sex until the wound was completely healed. Additionally, the rate of HIV transmission to women in couples who resumed sex before wound healing was higher than transmission rates from uncircumcised HIV positive men to their female partners (Wawer et al., 2008). Although these differences were not statistically significant, they are of concern; in an undated paper considering the implications of male circumcision for HIV prevention on woman, the AIDS Vaccine Advocacy Coalition (AVAC) note that the results of this study raise critical issues such as the willingness of men seeking circumcision to be tested for HIV before surgery.

In their document entitled “New Data on male Circumcision and HIV Prevention: Policy and Programme Implications”, WHO / UNAIDS (2007f) provide some guidance on this issue. The report states that HIV testing or knowledge of HIV status

should not be a prerequisite for male circumcisions due to concern that restricting male circumcision at medical points of service could further stigmatize HIV positive men and potentially drive them to seeking surgery from poorly qualified and poorly equipped providers. The guidelines state that while male circumcision is not recommended for HIV positive men, it should not be withheld unless there are medical contraindications (WHO / UNAIDS, 2007f).

It is clear that gender issues must be considered, not only from the perspective of quantifying how much women would stand to benefit from such proposed policy (Sawires et al., 2007), but also to consider how male circumcision may impact gender relations, especially in relation to condom usage. In a study conducted in Kwa-Zulu Natal, Varga (1998) reports that dynamics in sexual relationships are primarily guided by the male's preferences and that young women seem to have little power to insist on their preferences in sexual situations. Thus circumcision as an HIV prevention strategy in communities where gender inequality is prevalent may further impact women adversely because men may refuse to use condoms if they believe circumcision protects them from HIV infection.

Importantly, women in sub-Saharan Africa are more vulnerable to HIV infection than men; 58% of HIV-positive adults in the region are female which makes African women the group that is most severely affected by HIV and AIDS in the world (Dunkle et al., 2004). Dunkle and Jewkes (2007) propose that within the context of the gender inequalities that drive the HIV pandemic in sub-Saharan Africa, advocacy of traditional prevention messages such as abstinence, fidelity and using condoms is futile and 'morally bankrupt' for women, as little of this lies within the woman's control. Therefore Dunkle and Jewkes (2007) advocate, over and above the development of gender-sensitive technology based prevention strategies such as vaginal microbicides, that effective HIV prevention needs gender-transformative strategies where men are encouraged to challenge the underlying social constructs of masculinity and gender norms.

1.2.10 Health Systems and the Inclusion of Male Circumcision Programmes

In their position paper (undated) on the implications of male circumcision as an HIV prevention strategy on women, the AIDS Vaccine Advocacy Coalition (AVAC) note that well-designed male circumcision programmes could use the intervention as a means to provide other services such as couples counselling, domestic violence

interventions and condom promotion. This paper notes that, historically, it has been a challenge to bring men into contact with health services and to reach them with information about HIV, STIs and sexual reproductive health. Therefore, a potential positive spin-off of scaling up male circumcision services may be the opportunity to engage men about such issues and there is consensus in the literature that this opportunity should not be wasted (Csete, 2007; Wamai et al., 2008).

Concerns have also been raised about whether already over-burdened and under-resourced health systems have the capacity to deliver a scaled-up circumcision service and particularly, at what cost to other public health programmes and resources. Furthermore, can these health systems respond to the complications that may arise from circumcision (Sawires et al., 2007)?

1.2.11 *Conflicting Evidence and Opinion in the Literature*

Not all the literature supports the scaling up of circumcision services as an HIV prevention strategy. Myers and Myers (2007) challenge the “unbalanced circumcision advocacy” suggesting only modest evidence of the preventive effect of circumcision in HIV transmission and a recent study by Connolly et al. (2008) refute the findings from the three RCTs, citing findings from their analysis of a sub-sample of data obtained from the 2002 national population-based survey on HIV / AIDS in South Africa.

The cross sectional study conducted by Connolly et al. (2008) employed statistical methods to ascertain factors associated with male circumcision and HIV status, and then applied a logistic regression model. The results indicated that HIV and circumcision were not associated and the authors noted concern about the implications of their findings on the potential scaling up of male circumcision programmes, both as a public health policy and an HIV prevention strategy. The findings did however reflect that HIV was significantly lower in men who were circumcised before the age of 12, compared to men circumcised after the age of 12 and reported that 2 out of 5 men were circumcised after sexual debut (Connolly et al., 2008). The authors therefore suggest that any potential benefit of male circumcision may have been reduced by sexual activity before the procedure; particularly if the sexual contact was with young females – a group in which HIV is highly prevalent in South Africa. This may be an important finding with regards to the

recommended age of circumcision, should any policy on scaling up male circumcision services in South Africa be considered.

Recent commentary by Green et al. (2008) refutes a claim made by Klausner et al. (2008) that male circumcision is “at least as good as the HIV vaccine we have been waiting for, praying for and hoping to see in our lifetimes”. Green et al. (2008) contend that campaigns promoting safe-sex behaviour have been shown to achieve a high rate of HIV prevention without the surgical risks and complications of male circumcision, and argue that such strategies are more cost-effective. The authors note concern about insufficient data from the RCTs for a real-world setting, citing factors such as early termination of the trials, participants being lost to follow up, the high number of reported non-sexual HIV infections, conflicting results from observational studies, lack of HIV risk calculation per sexual exposure and other factors and conditions in the RCTs that do not represent the real world. This includes repeated reinforcement of condom use and safe sex practices, participants receiving two years of free medical care and being paid to take part in the trial. Furthermore, that the trials were conducted in sanitary and well-resources settings, which is atypical in many African settings and that participants solicited to take part in the trials all wanted to be circumcised and may therefore not be representative of the general population (Green et al., 2008).

Green et al. (2008) raise concerns that scaling up male circumcision services could lead to increased HIV transmission in the female partners of newly circumcised HIV-positive men, as reported by Wawer et al. (2008) in the halted Ugandan study. In addition, the authors contend that the costs and harms of male circumcision outweigh the potential benefits and call for improved cost-benefit analyses that take into account the true costs of complications that may result from the surgical procedure; the authors note a Nigerian study by Okeke et al. (2006) which cite neonatal circumcision complication rates as 20.2%. This figure is considerably higher than the complications of 0.2-2% cited previously in this review of the literature.

Green et al. (2008) argue that ethical medical practice and the availability of other, more effective prevention strategies need to be considered. They note that comparing male circumcision to a vaccine may be a misleading and potentially damaging analogy. The authors therefore conclude that much more evidence about the real-world efficacy of male circumcision as an HIV prevention strategy must be

gathered before any policy for scaling up circumcision services is considered (Green et al., 2008)

The above-mentioned commentary received an immediate rebuttal for every point raised, in a collaborative letter to the publishing editor. The authors of this rebuttal included many researchers and academics already mentioned in this review of the literature, together with doctors working in the field of HIV, activists and commentators (Wamai et al., 2008).

In an editorial in 2008, Myers and Myers contend that “rolling out male circumcision as a mass HIV / AIDS intervention seems neither justified nor practical”. In particular the authors note the conflicting literature on the subject, and reflect that the discordant findings are difficult to interpret. They suggest that despite being theoretically strong in study design, the findings from the RCTs may not be generalisable beyond their settings and that study flaws may reduce the quality.

Notably, a 2003 Cochrane Review concluded that there is insufficient evidence to support male circumcision as a tool for HIV prevention (Siegfried et al., 2003). However, a review of this paper six years later by the same authors concluded that by 2009 there is indeed strong evidence to show that medical male circumcision reduces the risk of HIV infection in heterosexual men by between 38 and 66 per cent, over 2 years. Furthermore, that the incidence of adverse effects is very low and that medical male circumcision is therefore a safe procedure and that the inclusion of male circumcision into current HIV prevention strategies is justified (Siegfried, et al., 2009).

1.2.12 Neonatal Male Circumcision

In a 2007 paper, Myers and Myers considered the historical and contemporary justification for male circumcision and note that many developed countries no longer endorse routine circumcision of infants; the National Health Service in the United Kingdom stopped provision of circumcision services in 1949 due to “a lack of evidence of benefit” and the most recent policy statement for the American Academy of Paediatrics does not recommend routine circumcision (Myers and Myers, 2007). Furthermore, the authors suggest the increasing perception among parents in developed countries that “genital surgery on non-consenting subjects was

not only unnecessary, but also inhumane and out of step with an evolved human rights culture” (Myers and Myers, 2007).

Sidler et al. (2008) contend that neonatal circumcision does not reduce HIV / AIDS infection rates and that using “neonatal non-therapeutic circumcision to combat the HIV crisis in Africa is neither medically nor ethically justifiable on the basis of current medical evidence or universally recognised ethical and human rights principals.” They argue that parents should not be misled into believing that the results from the RCTs, which were conducted on adult African males, can be extrapolated to health policy for newborns; suggesting that it is unprecedented and unethical to offer prophylactic surgery in neonates to reduce the risk of a disease acquired in adulthood, particularly given that there are “safer, less invasive, less expensive and proven prevention methods available” (Sidler et al., 2008). The authors put forward the argument that newborn babies are not sexually active and thus are not at risk of STIs. In addition, a vaccine or other treatment options may be available by the time they are sexually active. Therefore, newborns may prefer to retain their foreskin and, as adults, elect vaccination and safe sex practices to prevent HIV infection (Sidler et al., 2008).

Myers and Myers (2008) take the above arguments into account and conclude that parents should err on the side of caution, deferring the decision to circumcise until the child can make an autonomous decision. They argue that without compelling indications, circumcision could be seen as a procedure that violates the child’s rights to bodily integrity. Furthermore, the authors contend that the ethical principal of “first do no harm” cannot be upheld due to the risk of complication involved with the procedure and that at a societal level, scaling up male circumcision as an HIV prevention strategy may be unjust because it could compete for resources with other cheaper and more effective options, and it may disadvantage women (Myers and Myers, 2008).

Many cultures that practice male circumcision have, for generations, circumcised baby boys at birth or older boys during adolescence without giving thought to informed consent (Csete, 2007). Despite the theoretical high acceptability of male circumcision in traditionally non-circumcising communities described above, informed consent becomes a critical component in the planning of any scaling up of circumcision services and Csete (2007) notes that it may be challenging to establish ethical standards for obtaining informed consent from a boy who has not reached

the age of legal majority. The *Convention on the Rights of the Child* affirms the right of people under the age of 18 to take part in any decision-making that affects them, and that their opinions are “given due weight in accordance with the age and maturity of the child” and their “evolving capacities”. To this end, Csete (2007) recommends that WHO review existing guidance by government regulators and medical associations in this matter, with specific attention given to the role and rights of parents or guardians and even community or cultural leaders where parental guidance is not available. Furthermore, as knowledge spreads about the role and benefits of male circumcision in HIV prevention, men and boys may experience various kinds of social pressure to have the procedure; in this context it is vital to ensure strong adherence to informed consent processes and that stringent attention is given to surgical safety (Csete, 2007).

Notably, the Children’s Act of 2005 in South African law contains a clause that states that no male may be circumcised under the age of 16, except when “performed for religious purposes in accordance with the practices of the religion concerned” or “for medical reasons on the recommendation of a medical practitioner”. Sidler et al. (2008) point out that the discussion of forced, infant circumcision in South Africa, is therefore moot. However, the point remains moot only until such time that medical practitioners start interpreting medical reasons to justify neonatal male circumcision as an HIV prevention strategy.

1.2.13 Male Circumcision and Human Rights

Concerns about ethical issues relating to bodily integrity in non-consenting infants are shared by those who strongly oppose male circumcision, citing it as “an assault causing grievous bodily harm (genital mutilation)” (Boyle et al., 2000). In their Position Paper, the International Coalition for Genital Integrity opposes routine neonatal circumcision (ICGI, 2007).

WHO / UNAIDS (2007f) recommend that a human rights based approach that upholds legal and ethical principals must guide service delivery for any development or expansion of male circumcision services and note that the steps must be taken to ensure the procedure is carried out safely, that there is informed consent and that there is no coercion or discrimination. Furthermore, communities where male circumcision services are introduced or expanded have the “right to clear and comprehensive information about what is known and what is not known about male

circumcision and HIV prevention” and that men wishing to become circumcised have the right to information about the risks and benefits involved (WHO / UNAIDS, 2007f).

Gostin and Hankins (2008) comment on the sociological barriers to introducing male circumcision as an HIV prevention strategy and conclude that male circumcision services will have to be acceptable, available and safe and that policy on rollout of male circumcision must be sensitive to cultural and religious values, must be respectful of patients’ rights to informed consent and confidentiality, and must defend the human rights of women and girls.

1.2.14 Human Rights Framework for Policy Analysis

The issues discussed around human rights and ethics introduces the concept of adopting a human rights framework in the development of health policy, and highlights the importance of analysing any potential health policy from this perspective.

Gostin and Mann (1999) note that within the development of public health policies, there is seldom thorough consideration of the goals of the policy, whether the means adopted will actually achieve these goals and whether the intended health benefits will offset financial and human rights burdens. They observe that public health policies are frequently developed without careful reflection on human rights impacts, or the norms of international human rights law, and propose that implementation of policies without due consideration of human rights may harm the people affected and result in the policy being ineffective or detrimental. Thus Gostin and Mann (1999) note the need for an analytic tool that experts working in the fields of public health and human rights can apply to systematically evaluate the impact of public health policies on human rights and enable collaboration between the two fields.

Gostin and Mann (1999) propose one such analytic framework which systematically considers the public health purpose, the likely effectiveness and the appropriate targeting of the policy. Thereafter it considers the potential human rights burdens of all affected parties. The public health goals and human rights burdens may then be balanced by considering alternative policies that may be less restrictive, whether there is sound epidemiological and empirical evidence to support the proposed policy, and whether fair administrative procedures have been applied.

1.3 Justification

In the development of any health policy, it is critical to examine the human rights burden of the policy, for all parties concerned. This is important from both an ethical and a legal context. Awareness regarding a human rights discourse in policy development has been fostered in many international, regional and national human rights instruments and the law. Furthermore, public health policies where due consideration is not given to human rights are likely to undermine the effectiveness of the proposed public health policy because those whose rights are infringed are likely to reject such policies. Thus, it is justifiable to consider the human rights implications of this proposed policy by applying an accepted tool as a human rights impact assessment, and to use data obtained from potential parties affected by the proposed policy to strengthen and contribute to the analysis.

1.4 Rationale

The literature reviewed has suggested that in sub-Saharan Africa, where HIV infection is highly prevalent, male circumcision may provide up to 60% protection from HIV infection in heterosexual males, compared to uncircumcised men within a similar population. This has resulted in organisations such as the World Health Organisation, the United Nations programme for HIV and AIDS (UNAIDS) and the Treatment Action Campaign (TAC) calling for the rollout of male circumcision services in the public sector, as a part of HIV prevention strategies in sub-Saharan Africa. Other sources in the literature oppose this (Green et al., 2008; Sidler et al., 2008; Myers and Myers 2007; Myers and Myers, 2008).

The human rights implications of such a policy have not been fully considered. Hence this study aims to analyse the policy within a human rights framework by applying an accepted human rights impact assessment to the proposed policy. This analysis will firstly be informed by secondary data from acceptability studies conducted throughout sub-Saharan Africa, and secondly by primary data from a survey of healthcare workers in the public sector regarding attitudes and acceptability of male circumcision as an HIV prevention strategy, and interviews with key informant stakeholders regarding their opinions on the feasibility of scaling up male circumcision services in South Africa as an HIV prevention strategy and the capacity of the public sector to deliver such a service.

1.5 Primary Study Objectives

- To describe the knowledge, attitudes and beliefs towards, and the acceptability of, male circumcision as an HIV prevention strategy amongst healthcare workers.
- To determine the willingness of healthcare workers to perform circumcisions as an HIV prevention strategy.
- To determine the capacity of the public sector to respond to implementation of a possible policy to adopt male circumcision as an HIV prevention strategy in South Africa.
- To assess the human rights impact of a proposed health policy of male circumcision as a prevention strategy for HIV transmission in South Africa, drawing on primary and secondary data to inform the policy analysis.

1.6 Study Format

The following chapter presents the methodology and findings of sub-study A - a survey amongst healthcare workers. Thereafter, Chapter 3 presents the methodology and findings of sub-study B which are interviews conducted with key informant stakeholders. Chapter 4 synthesizes and discusses the findings from both sub-studies and leads into Chapter 5 - a policy analysis using an accepted Human Rights Impact Assessment tool. Findings from sub-study A and B, together with secondary data from the literature, will be used to inform the policy analysis. From this, conclusions about the proposed policy of scaling up male circumcision as an HIV prevention strategy in South Africa are drawn and recommendations made in Chapter 6.

2 SUB- STUDY A – HEALTHCARE WORKERS’ ATTITUDES TOWARDS ADOPTING MALE CIRCUMCISION AS AN HIV PREVENTION STRATEGY IN SOUTH AFRICA

2.1 Methods

2.1.1 Study design

This is a cross-sectional descriptive study. Healthcare workers and health facility managers working in the Cape Town Metro health district were asked to complete a questionnaire about their knowledge of and attitudes towards adopting male circumcision as an HIV prevention strategy in South Africa.

2.1.2 Population and Sampling

2.1.2.1 Method of sampling

The study population for sub-study A consisted of healthcare workers and health facility managers with a clinical background, working in the public sector in the Cape Town Metro region where health facilities are run either by the Provincial Government of the Western Cape (PGWC) or the City of Cape Town (CCT). There are an estimated 573 doctors and 1692 nurses currently working in the Metro region (P. Petersen, pers. comm. 2008, PGWC Department of Health; C. Negus, pers. comm. 2008, CCT).

The Cape Town Metro region was chosen for the study location due to budgetary and logistical considerations. Limiting the study to a single city / area may reduce its generalisability, particularly because circumcision practices may vary between different ethnic groups and cultures in South Africa. However, this research can still be useful by serving as a starting point for further research of a similar nature in other places in South Africa.

Sampling of healthcare workers and health facility managers made use of health sub-districts as pre-existing clusters. There are 8 sub-districts in the Metro region. Each sub-district was allocated a number and a random selection of three of these sub-districts was made.

Within each sub-district, different facilities such as district hospitals, community health centres and primary health care clinics were listed. The numbers of facilities per sub-district varies from 13 to 29, with a total of 166 facilities. These facilities formed clusters for sample selection. Each facility was allocated a number and a random selection of 13 of these clusters was made.

The three sub-districts randomly selected into the study were Khayelitsha, Southern and Western sub-districts. Due to greater heterogeneity of PGWC facilities, 40% of the PGWC facilities were sampled and 25% of the CCT facilities, resulting in 8 PGWC facilities and 5 CCT facilities being selected to participate in the study (Table 2.1). One PGWC health facility selected was dropped from the sample on request from PGWC because of concerns that large amounts of research were already being carried out in this facility and that more research will burden the staff. False Bay Hospital was randomly selected as a replacement. This meant that there were 3 facilities from Khayelitsha, 4 from the Southern sub-district and 6 from the Western sub-district in the final sample.

Table 2.1: Facilities selected into the sample

	Khayelitsha Sub-District		Southern Sub-District		Western Sub-District	
	<i>N</i>	<i>Selected facilities</i>	<i>N</i>	<i>Selected facilities</i>	<i>N</i>	<i>Selected facilities</i>
PGWC Facilities	3	Nolungile Clinic n=1	6	Grassy Park CHC Lady Michaelis CHC False Bay Hospital n=3	11	Greenpoint CHC Woodstock CHC Robbie Nurock CHC Kensington CHC n=4
CCT Facilities	10	Town Two Clinic Zakhele Clinic n=2	22	Grassy Park Civic Clinic n=1	15	Du Noon Clinic Langa Clinic n=2

** N refers to the total number of facilities per sub-district, run either by PGWC or CCT*

The facility manager of each health facility selected into the sample was approached by the researcher and invited to participate in the study. The researcher explained that as many nurses, doctors and facility managers with a clinical background who were willing to participate would be recruited into the study.

2.1.2.2 Sample Size

The sample size for the sub-study A was calculated using Epilnfo software. The assumptions made for the sample size calculation for a binary outcome are summarized below:

Population (N) of HCWs in Metro Region	2265
A priori estimate of HCW willing to refer for MC	50 %
Precision estimate	15%
Confidence Interval	95%

Sample Size (n) = 42

The following factors were taken into account in determining the final sample size:

- A non-response of 25%
- A potential Design Effect of 25%

Sample size (n) = $42 \times 1.25 \times 1.25 = 66$.

2.1.3 Measurement

Measurement of healthcare workers' and health facility managers' attitudes towards male circumcision as an HIV prevention strategy was achieved through a self-administered questionnaire. These questionnaires were in English as all healthcare workers and health facility managers are required to be proficient in English. No one requested a questionnaire in another language. Questionnaires were distributed by the researcher who provided an explanation of the study, answered any questions from the healthcare workers and went through the Informed Consent Information Sheet (see Appendix 3) with the participants as a group. The healthcare workers were then asked to complete the questionnaires individually, after which the researcher immediately collected and stored all questionnaires safely.

The reasons for using a written questionnaire were two-fold. Firstly, it assisted with issues relating to anonymity which is important when assessing individual's attitudes; particularly relating to sensitive issues such as HIV/ AIDS and circumcision and specifically because the former is associated with social stigma.

Secondly, it reduced the time taken to collect the data as the questionnaire could be distributed to many participants at a time.

Healthcare Workers Questionnaire (Appendix 1) collected data relating to:

- Socio-demographic variables of the health care worker
- The position of the healthcare worker i.e. nurse / doctor / facility manager
- The sub-district and type of facility where the participant works
- Whether the healthcare worker has worked in specific areas such as maternity, STI clinics, ARV clinics and family planning clinics
- The male circumcision practices within the culture of the healthcare worker
- The healthcare worker's knowledge of HIV prevention strategies in general and of the potential role of male circumcision in HIV prevention
- The attitudes and beliefs of the healthcare worker towards male circumcision in general and towards adopting male circumcision as an HIV prevention strategy in South Africa
- Whether the healthcare worker is currently trained to perform male circumcisions and, if not, their willingness to be trained to do so
- The willingness of the healthcare worker to perform male circumcisions in male babies and / or older boys and adult men
- The willingness of the healthcare worker to refer male patients for circumcisions if they are unable or unwilling to provide the procedure themselves
- The beliefs and attitudes of the healthcare worker regarding human rights and the implementation of male circumcision as an HIV prevention strategy in South Africa.

2.1.4 Pilot study

The questionnaire was piloted with two programme managers, one each from PGWC and CCT, during a meeting at a health facility to determine if all questions were easily understood and appropriate. Suggestions for modifications to some questions were adopted and the initial questionnaire was changed prior to data collection. An opportunity was also taken to discuss the best method for data collection with the sub-district and facility managers.

2.1.5 Procedures

Once Ethics approval from the UCT Research Ethics Committee (REC Reference number 184/ 2008) and permission from the PGWC Department of Health and the CCT was granted, the researcher made email and telephonic contact with all the facility managers of the facilities selected into the sample to discuss the study and set up an appropriate date and time for data collection. Data collection took place over a period of three weeks.

On the day of data collection, healthcare workers who were willing to participate in the study gathered together in an appropriate space in the health facility and refreshments were provided to thank them for participating. The researcher explained the purpose of the study and answered any questions raised. The researcher went through the Informed Consent Information Sheet for Healthcare Workers (see Appendix 3) and ensured that all participants willingly consented to complete the questionnaire. The healthcare workers were then requested to complete the questionnaire individually.

The researcher collected and checked the questionnaires and, where the participant had failed to complete responses to all questions the researcher asked them to re-check their questionnaire and encouraged them to answer as many questions as possible. The completed questionnaires were collected immediately and safely stored by the researcher. At the end of every day of data collection, the researcher entered the data into the database. A coding sheet was used to ensure accurate data input. Missing data was coded as a blank.

Participants were offered the opportunity to receive feedback, and those who requested this were asked to provide their contact details on a separate form (see Appendix 5). 15 participants requested a copy of the studies that have shown the effectiveness of male circumcision in HIV reduction; this was emailed or posted to them by the researcher soon after the date of data collection. In particular facility managers and nursing managers indicated they would like copies of the studies for distribution.

2.1.6 Analysis

Data were entered in an Excel spreadsheet, according to a pre-defined coding system for each question. The statistical package Stata 10 was used to first analyse participants' responses to each question, noting percentage agreement and disagreement to each statement plus the nuances of whether strong agreement or disagreement was indicated. The percentage of unsure and non-responses for each question were noted.

Thereafter, the data was further analysed according to participants who offered a clear opinion for each statement (i.e. those that agreed / strongly agreed or disagreed / strongly disagreed). These responses were analysed according to variables such as gender, professional position and whether participants belong to a culture that normally practices male circumcision or not. Note that unsure responses and non-responses were omitted from this part of the analysis because an unsure answer is intuitively very different to that indicating a clear opinion and therefore cannot be grouped together. Similarly, non responses were not included in the analysis. Given the small sample size, the Fischer's Exact statistical test was used to determine significant association.

Data analysis collated participants' responses to report the following:

- Knowledge of the role of male circumcision as an HIV prevention strategy
- Attitudes of the healthcare workers towards and their acceptability of male circumcision as an HIV prevention strategy
- Proportion of healthcare workers currently trained to carry out circumcisions
- Proportions of healthcare workers willing to be trained to carry out circumcisions
- Proportions of healthcare workers willing to refer patients to appropriate circumcision services if unable or unwilling to perform circumcisions themselves
- Attitudes of healthcare workers towards male circumcision as an HIV prevention strategy and how they believe this impacts human rights

2.1.7 Ethics and communication

2.1.7.1 Ethics Considerations

The study was conducted according to the Department of Health Ethics in Research Principles, the 1996 Declaration of Helsinki and local rules and ethical regulations of South Africa. Submission of the final protocol and any protocol amendments to the UCT Research Ethics Committee (REC) were carried out in accordance with the UCT Research Ethics committee requirements (REC Reference number: 184/2008). Each participant was read an information sheet for informed consent (see Appendix 3) which gives detailed information about the study and indication that all information would remain confidential and that the identity of all participants would remain anonymous.

2.1.7.2 Informed consent

All participants had a detailed information sheet for informed consent read to them by the researcher (see Appendix 3). Participants' agreement to complete the questionnaire indicated their informed consent and willingness to freely participate in the study.

2.1.7.3 Stakeholders

Stakeholders of the project include the Department of Health and the City of Cape Town. Furthermore, the healthcare workers and health facility managers themselves together with people attending health facilities in the Cape Town Metro region are important stakeholders, as are researchers in tertiary education centres who are working in the HIV/ AIDS domain. Every effort will be made to disseminate findings of the research to all stakeholders. A policy brief may be developed from the findings of the study and disseminated to all stakeholders.

2.1.7.4 Reporting and implementation

The study has resulted in the writing up of a thesis, plus one or more potential papers for publication in a peer reviewed journal. The researcher undertakes to show all reports and publications to the relevant stakeholders prior to submission, providing opportunity for any comments, inputs or corrections. In particular, the

researcher undertakes to provide a presentation of the findings to district or provincial health department meetings if required and a full report will be distributed to all district managers, to the Provincial Government of the Western Cape Health Department and to the City of Cape Town Health Department. Finally, a report will be sent to the participating facilities, and in particular to the participants who requested feedback at the time of data collection.

2.2 Results

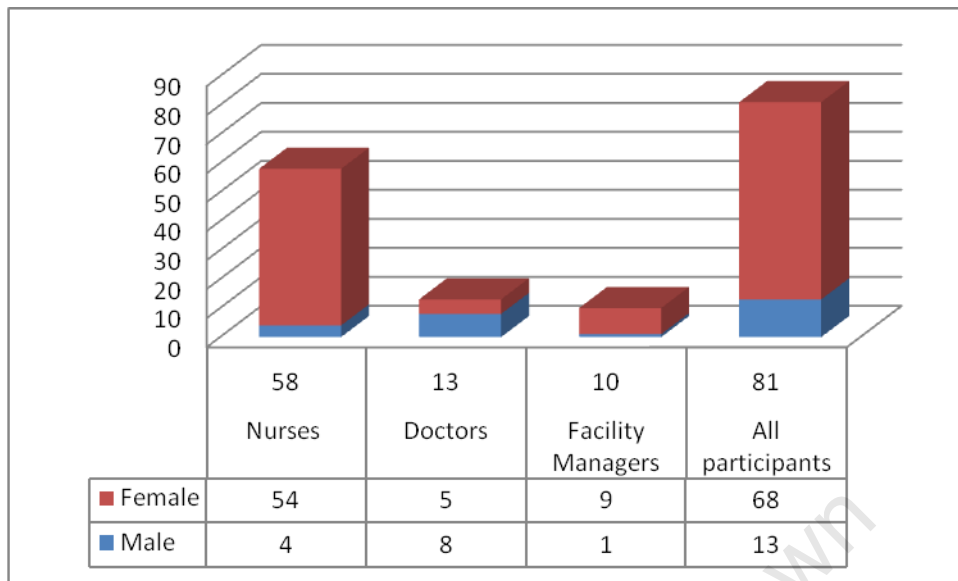
2.2.1 Sample realisation

On the whole, there was a favourable response to participate in the study with the exception of one facility where staff initially agreed to complete the questionnaire but failed to do so despite multiple efforts from the researcher to follow up with them. At another facility, only the facility manager agreed to complete the questionnaire, and the nurses working in that facility refused. Finally, the facility manager at second facility indicated unhappiness about the research, citing concern about the cultural appropriateness of the topic but allowed the researcher access.

Eighty-eight potential candidates were approached during the recruitment phase for the study, and a total of seven either refused to participate or did not complete the questionnaire given to them. 81 out of 88 possible candidates agreed to participate in the study, translating to a 92% response rate. The required sample size of 66 was exceeded.

The mean age of the participants was 41.6 years (SD 10.86). Most of the participants were female (84%) and were nurses (72%). See Figure 2.1. Male gender was significantly associated with being a doctor when compared to nurses ($\chi^2 = 22.56$; $p < 0.001$) and facility managers ($\chi^2 = 6.30$; $p = 0.012$).

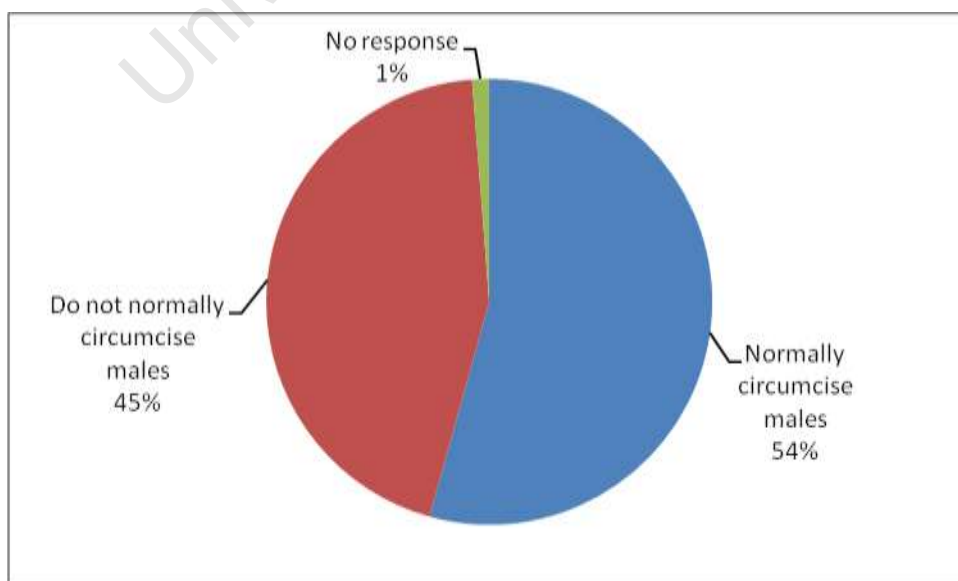
Figure 2.1: Gender and professional position of participants



Participants were asked to indicate if they had worked in specialised services in the last three months. STI clinics and Family Planning clinics (43% each) were the most common sites reported; less common were ARV clinics (28%) and maternity services (7%).

More than half (55%) of the participants reported that male circumcision was usually practiced in their own culture (Figure 2.2).

Figure 2.2: Circumcision practices of participants



Amongst participants from cultures that practice male circumcision, the majority of the participants reported that circumcision was performed in adolescence (36%) and adulthood (34%), while 27% reported that males in their culture are circumcised as newborn babies and only 2% reported male circumcision as taking place in childhood.

2.2.2 Responses to knowledge, attitudes and behaviour questions

The data is first presented below to reflect the participants' response to each question, noting agreement and disagreement, together with nuances of strong opinion and percentages of unsure and non-responses. Thereafter, the data is further presented according to participants who offered a clear opinion for each statement (i.e. excluding non-response and unsure responses) by variables such as gender, professional position and whether they belong to a culture that normally practices male circumcision or not. Note that the overall non-response and unsure percentages are reported separately.

2.2.2.1 Knowledge and beliefs regarding HIV prevention

Responses to statements about HIV prevention are detailed in Table 2.2 below. The majority of participants agreed with HIV prevention strategies such as Being Faithful (91%) and using Condoms (93%) for HIV prevention. The vast majority, 87% and 84% respectively, **strongly** agreed with statements about condom use and being faithful to one uninfected partner. Opinions were more divided about abstinence; about equal proportions agreed (48%) and disagreed (44%) that one should not have sex at all to prevent HIV.

Most participants (83%) disagreed that traditional medicine should be used for HIV prevention and of those who disagreed, 68% **strongly** disagreed with the statement.

The highest percentage of uncertainty was elicited by the statements about male circumcision and HIV prevention. 16% of respondents indicated they were unsure if being circumcised (as a man) prevents HIV infection and a further 7% did not answer the question. Furthermore, 10% of all participants noted they were unsure that only having sex with circumcised men (if you are a woman) prevents HIV infection and a further 5% did not answer the question.

Table 2.2: Knowledge and beliefs about prevention strategies for HIV/AIDS

<i>To prevent infection with HIV/AIDS, one should:</i>	n	Strongly agree	Agree	Disagree	Strongly Disagree	Unsure	No response
Use a condom every time you have sex	81	87.7%	4.9%	1.2%	3.7%	1.2%	1.2%
Use traditional medicine	81	2.5%	1.2%	14.8%	67.9%	3.7%	9.9%
Be faithful to one uninfected partner	81	83.9%	7.4%	0	4.9%	0	3.7%
Be circumcised (if you are a man)	81	28.4%	27.2%	8.6%	12.4%	16.1%	7.4%
Only have sex with circumcised men (if you are a woman)	81	12.4%	7.4%	27.2%	38.3%	9.9%	4.9%
Not have sex at all	81	34.6%	13.6%	22.2%	22.2%	3.7%	3.7%

Analyses according to participants' professional position (Appendix 6), gender (Appendix 7) and male circumcision practices within the participant's culture (Appendix 8) did not reveal any statistically significant differences. However, 28% of female participants agreed that one should only have sex with circumcised men (if you are a woman) while no male participants agreed with this statement (Fisher's exact p value = 0.056). Amongst respondents' whose culture practices male circumcision, 29% agreed with this statement compared to 15% amongst respondents' whose culture **does not** practice male circumcision (Fischer's exact value = 0.246).

2.2.2.2 Knowledge and beliefs about male circumcision and HIV prevention

Participant responses to statements about the role of male circumcision in HIV prevention are presented in Table 2.3 below. The majority of participants (80%) indicated agreement that abstinence, being faithful and using condoms are more effective than male circumcision in HIV prevention with 58% **strongly** agreeing. Most participants (80%) believed that male circumcision is not as effective as correct and consistent condom use in HIV prevention and 61% agreed that male circumcision is only one part of potential prevention strategies to reduce the

transmission of HIV / AIDS. Nearly all participants (92%) disagreed that circumcised men do not need to be counselled about correct and consistent condom use to reduce the transmission of HIV / AIDS.

A statement that male circumcision effectively reduces the transmission of HIV / AIDS yielded the highest level of uncertainty (16%) with a further 4% not answering the question. Clear responses to this statement represent a fair spread of opinion with 44% agreeing and 35% disagreeing. This contrasts responses to other statements which were more polarized.

Table 2.3: Knowledge and beliefs about male circumcision and HIV prevention

	n	Strongly agree	Agree	Disagree	Strongly Disagree	Unsure	No response
Male circumcision effectively reduces transmission of HIV/AIDS	81	11.1%	33.3%	21.0%	14.8%	16.1%	3.7%
Prevention strategies such as Abstinence, Being Faithful and using Condoms (ABC) are more effective than male circumcision in reducing transmission of HIV/ AIDS	81	58%	22.2%	6.2%	6.2%	4.9%	2.5%
Circumcised men do not need to be counselled about correct and consistent condom use to reduce transmission of HIV/AIDS	81	4.9%	0%	27.2%	64.4%	0%	2.5%
Male circumcision is only one part of potential prevention strategies to reduce transmission of HIV/ AIDS	81	30.9%	29.6%	21.0%	7.4%	7.4%	3.7%
Circumcision is not as effective as correct and consistent condom use in HIV prevention	81	42%	38.2%	6.2%	2.5%	8.6%	2.5%

Facility managers were more likely to report that male circumcision is effective in reducing transmission of HIV / AIDS (86%) compared to nurses (51%) and doctors (56%), and to hold the view that male circumcision is only one part of potential HIV prevention strategies needed (100%), compared to 61% of nurses and 75% of doctors (Table 2.4). A statistically significant difference was found when comparing facility managers to doctors and nurses combined for the latter statement (Fischers exact p value = 0.05). See Table 2.5.

Table 2.4: Participant responses to statements about the role of male circumcision in HIV prevention, disaggregated by professional position

	NURSES			DOCTORS			FACILITY MANAGERS		
	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree
Male circumcision effectively reduces transmission of HIV/AIDS	49	51% CI (36.3-65.6)	24%	9	55.6% CI (21.2-86.3)	20%	7	85.7% CI(42.1-99.6)	33.3%
Prevention strategies such as Abstinence, Being Faithful and using Condoms (ABC) are more effective than male circumcision in reducing transmission of HIV/AIDS	53	84.9% CI (72.4-93.3)	82.2%	12	100% CI (73.5-100)	41.7%	10	80% CI (44.4-97.5)	62.5%
Circumcised men do not need to be counselled about correct and consistent condom use to reduce transmission of HIV/AIDS	56	5.4% CI (1.1-14.9)	100%	13	7.7% CI (1.9-36)	100%	10	0% CI (0-30.8)	0%
Male circumcision is only one part of potential prevention strategies to reduce transmission of HIV/AIDS	51	60.8% CI (46.1-74.1)	38.7%	12	75% CI (42.8-94.5)	66.6%	9	100% CI (66.4-100)	77.7%
Circumcision is not as effective as correct and consistent condom use in HIV prevention	50	85% CI (73.3-94.2)	55.8%	13	100% CI (75.3-100)	46.2%	9	100% CI (66.4-100)	44.4%

Table 2.5: Participant responses to statements about the role of male circumcision in HIV prevention, disaggregated by professional position (combining nurses and doctors)

	DOCTORS AND NURSES		FACILITY MANAGERS		Fischers Exact
	n	% of overall agreement	n	% of overall agreement	
Male circumcision effectively reduces transmission of HIV/AIDS	58	51.7% CI (38.2 - 65)	7	85.7% CI(42.1-99.6)	0.120
Prevention strategies such as Abstinence, Being Faithful and using Condoms (ABC) are more effective than male circumcision in reducing transmission of HIV/AIDS	65	87.7% CI (77.2-94.5)	10	80% CI (44.4-97.5)	0.614
Circumcised men do not need to be counselled about correct and consistent condom use to reduce transmission of HIV/AIDS	69	5.8% CI (1.6-14.2)	10	0% (0-30.8)	(1 sided) 0.575
Male circumcision is only one part of potential prevention strategies to reduce transmission of HIV/AIDS	63	63.5% CI (50.4-75.3)	9	100% CI (66.4-100)	0.050
Circumcision is not as effective as correct and consistent condom use in HIV prevention	63	88.% CI (78.4-95.4)	9	100% CI (66.4-100)	0.585

Analysis according to gender (Appendix 9) did not yield any statistically significant findings. However, it is noted that male participants (80%) appeared more likely to agree that male circumcision effectively reduces the transmission of HIV / AIDS compared to females (51%) but this finding was not statistically significant (Fischer's exact p value = 0.165).

Participants from cultures that **do not** practice male circumcision (97%) were more likely to agree that prevention strategies such as abstinence, being faithful and using condoms are more effective than male circumcision in reducing transmission of HIV / AIDS, compared to 78% of participants from circumcising cultures (Fischer's exact p value = 0.036). No other significant differences were noted in the data analysis disaggregated by belonging to a culture that practices male circumcision. See Table 2.6.

Table 2.6: Participant responses to statements about the role of male circumcision in HIV prevention, disaggregated by male circumcision practices in own culture

	Culture practices MC			Culture does not practice MC			Fischers Exact
	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree	
Male circumcision effectively reduces transmission of HIV/AIDS	35	57.1% CI (39.4-73.7)	25%	29	55.2% CI (35.7-73.6)	25%	(1 sided) 0.537
Prevention strategies such as Abstinence, Being Faithful and using Condoms (ABC) are more effective than male circumcision in reducing transmission of HIV/ AIDS	41	78.1% CI (62.4-89.3)	71.2%	33	96.8% CI (84.2-99.9)	71.2%	0.036
Circumcised men do not need to be counselled about correct and consistent condom use to reduce transmission of HIV/AIDS	43	4.7% CI (5.7-15.8)	100%	35	5.7% CI (7-19.2)	100%	(1sided) 0.611
Male circumcision is only one part of potential prevention strategies to reduce transmission of HIV/AIDS	36	66.7% CI (49-81.4)	50%	35	71.4% CI (53.7-85.4)	52%	0.798
Circumcision is not as effective as correct and consistent condom use in HIV prevention	36	86.1% CI (70.5-95.3)	38.7%	35	94.3% CI (80.8-99.3)	63.6%	0.429

2.2.2.3 Attitudes and beliefs about male circumcision

Most participants (59%) agreed that circumcised men are more hygienic than uncircumcised men. Statements that women prefer their male partners to be

circumcised and that male circumcision is a useful prevention strategy for HIV / AIDS yielded diverse opinions and a high level of uncertainty; 21% of participants noted they were unsure about both statements.

The majority of participants (62%) did not agree that male circumcision prevents the transmission of HIV / AIDS while a further 15% reported that they were unsure. The vast majority of participants (90%) disagreed that circumcised men do not need to wear condoms with 79% of all participants **strongly** disagreeing with the statement. Most respondents (69%) did not agree that circumcised men are more at risk of contracting HIV than uncircumcised men, while a high number (19%) reported they were unsure and a further 3% did not answer the question (Table 2.7).

Table 2.7: Attitudes and beliefs towards male circumcision

	n	Strongly agree	Agree	Disagree	Strongly Disagree	Unsure	No response
Circumcised men are more hygienic than uncircumcised men	81	40.7%	18.5%	19.8%	8.6%	8.6%	3.7%
Women prefer their partners to be circumcised	81	18.5%	25.9%	18.5%	9.9%	21%	6.1%
Circumcised men are more at risk of contracting HIV than uncircumcised men	81	7.4%	2.5%	29.6%	39.5%	18.5%	2.5%
Circumcised men do not need to wear condoms	81	7.4%	0	11.1%	79%	0	2.5%
Male circumcision prevents transmission of HIV/ AIDS	81	6.1%	14.8%	27.2%	34.6%	14.8%	2.5%
Male circumcision is a useful prevention strategy for HIV/ AIDS	81	14.8%	27.2%	18.5%	16.1%	21%	2.5%

Female participants appeared more likely to agree that women prefer their male partners to be circumcised; 65% (CI 50.6 - 77.3) of female participants agreed with the statement compared to 20% (CI 5.1 – 71.6) of men. The result is not statistically significant (Fischer's exact p value = 0.07) and the wide confidence interval is noted. (See Appendix 10).

Respondents from cultures that practice male circumcision (74%) were significantly more likely to agree that women prefer their male partners to be circumcised, compared to 42% of those whose culture **does not** (Fischer's exact p value = 0.028). See Table 2.8.

Table 2.8: Participant responses to statements about attitudes and beliefs towards male circumcision, disaggregated by male circumcision practices in own culture

	CULTURE PRACTICES MC			CULTURE DOES NOT PRACTICE MC			Fischers Exact
	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree	
Circumcised men are more hygienic than uncircumcised men	37	70.3% CI (53-84.1)	57.7%	33	66.7% CI (48.2-82)	81.8%	0.8
Women prefer their partners to be circumcised	34	73.5% CI (55.6-87.1)	44%	24	41.7% CI (22.1-63.4)	30%	0.028
Circumcised men are more at risk of contracting HIV than uncircumcised men	35	8.6% CI (1.8-23.1)	66.6%	28	17.9% CI (6.1-36.9)	80%	0.449
Circumcised men do not need to wear condoms	43	7% CI (1.5-19.1)	100%	35	5.7% CI (0.7-19.2)	100%	(1 sided) 0.598
Male circumcision prevents transmission of HIV/ AIDS	33	24.2% CI (11.1-42.3)	37.5%	33	24.2% CI (11.1-42.3)	12.5%	(1 sided) 0.613
Male circumcision is a useful prevention strategy for HIV/ AIDS	32	53.1% CI (34.7-70.9)	35.3%	29	55.2% CI (35.7-73.6)	31.3%	(1 sided) 0.539

2.2.2.4 Personal beliefs and opinions about male circumcision

Table 2.9 presents participant responses to statements about male circumcision, including neonatal circumcision, medical versus traditional circumcisions, safety beliefs and the potential for risk disinhibition. Just over half of the respondents (57%) disagreed that there are higher complication rates in male circumcisions carried out in babies compared to adult men. This statement elicited a very high level of uncertainty with 28% reporting they were unsure and a further 3% not answering the question.

Most respondents (86%) agreed that male circumcisions carried out in a medical setting were safer than those carried out in a traditional settings and the majority of participants (70%) disagreed that male circumcisions carried out in a traditional setting are safe. There was some level of uncertainty about the latter statement with 15% reporting they were unsure and a further 3% not answering the question.

There were divided responses to statements about it being wrong for parents to decide on their male child's behalf about circumcising them as a baby, and that male

circumcision as an HIV prevention strategy would decrease condom use; 46% of participants agreed and 42% disagreed with the first statement while 37% agreed and 36% disagreed with the second one.

There was a high level of uncertainty about male circumcision in babies being a form of physical mutilation and that male circumcision as an HIV prevention strategy will decrease condom use with 21% of respondents noting they were unsure and a further 6% not answering the question, for both statements.

Just under half of the participants (49%) disagreed that it is wrong for medical professionals to encourage neonatal male circumcision; however there was a high level of uncertainty about this with 20% indicating they were not sure and a further 3% not answering the question.

Table 2.9: Personal beliefs and opinions about male circumcision

	n	Strongly agree	Agree	Disagree	Strongly Disagree	Unsure	No response
There are more complications with male circumcisions carried out in babies (neonates) compared to adult men	81	7.4%	4.9%	25.9%	30.9%	28.4%	2.5%
Male circumcisions done in a traditional setting are safe	81	3.7%	8.6%	34.6%	35.8%	14.8%	2.5%
Male circumcisions done in a medical setting are safer than male circumcisions done in a traditional setting	81	54.3%	32.1%	3.7%	1.2%	6.1%	2.5%
It is wrong for parents to decide, on behalf of their male children, about circumcising them as a baby	81	24.7%	21%	28.4%	13.6%	11.1%	1.2%
It is wrong for medical professionals (doctors or nurses) to promote male circumcision in babies	81	11.1%	17.3%	23.5%	25.9%	19.8%	2.5%
Male circumcision in babies is a form of physical mutilation	81	9.9%	7.4%	25.9%	29.6%	21%	6.2%
Male circumcision (as an HIV prevention strategy) will decrease condom use	81	17.3%	19.8%	14.8%	21%	21%	6.2%

Analysis according to gender (Appendix 11) and to circumcision practices in the respondents' own culture (Appendix 12) suggested that more female respondents (54%) appear to agree that male circumcision as an HIV prevention strategy will decrease condom use compared to males (33%), but this difference was not statistically significant (Fischer's exact p value = 0.299). Respondents from cultures that **do not** practice male circumcision (65%) appeared more likely to agree with this

statement compared to respondents from cultures that do (38%), but again this finding was not statistically significant (Fischer's exact p value = 0.064).

Trends reflect that participants from cultures that **do not** practice male circumcision are more likely to agree that male circumcisions carried out in a medical setting are safer than those carried out in a traditional setting, while participants from cultures that do practice male circumcision are more likely to agree that male circumcisions done in a traditional setting are safe and that higher complication rates occur with male circumcisions carried out in babies compared to adult men.

Further analysis amongst participants from cultures that practice male circumcision, according to the stage of development at which male circumcision normally takes place is detailed in Table 2.10. Significantly more (71%) of participants from cultures that normally circumcise males at **adolescence or in adulthood** agreed that it is wrong for parents to decide on behalf of their male children about circumcising them as a baby, compared to 17% of participants from cultures that normally circumcise soon after **birth or in childhood** (Fischer's exact p value = 0.002). A higher number (39%) of participants from cultures that normally practice male circumcision in **adolescence and adulthood** appeared to agree that neonatal male circumcision is a form of physical mutilation compared to 7% of those whose culture practices circumcision in **babies and childhood**, but this finding was not statistically significant (Fischer's exact p value = 0.053).

Participants from cultures that normally circumcise males at **adolescence or in adulthood** appeared more likely (26%) to agree that male circumcisions conducted in traditional settings were safe compared no (0%) participants from cultures that practice circumcision **in babies and childhood**, but the finding was not statistically significant (Fischers exact p value = 0.068). All participants (100%) from the latter group agreed that male circumcisions conducted in medical settings are safer than those conducted in traditional settings, compared to 85% in the former group, but again these findings were not statistically significant (Fischers exact p value = 0.053).

Table 2.10: Participant responses amongst those who practice male circumcision to statements around beliefs about male circumcision, disaggregated by age of circumcision

	NEWBORN BABY & CHILDHOOD			ADOLESCENCE & ADULTHOOD			Fischers Exact
	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree	
There are more complications with male circumcisions carried out in babies (neonates) compared to adult men	13	15.4% CI (1.9-45.4)	50%	15	26.6% CI (7.8-55.1)	25%	0.655
Male circumcisions done in a traditional setting are safe	13	0% CI (0-24.7)	0%	23	26.1% CI (10.2-48.4)	33.3%	0.068
Male circumcisions done in a medical setting are safer than male circumcisions done in a traditional setting	14	100% CI (76.8-100)	64.3%	26	84.6% CI (65.1-95.6)	63.6%	0.278
It is wrong for parents to decide, on behalf of their male children, about circumcising them as a baby	12	16.7% CI (2.1-48.4)	50%	28	71.4% CI (51.3-86.8)	60%	0.002
It is wrong for medical professionals (doctors or nurses) to promote male circumcision in babies	12	25% CI (5.5-57.2)	66.6%	24	45.8% CI (25.6-67.2)	36.3%	0.292
Male circumcision in babies is a form of physical mutilation	14	7.1% CI (0.2-33.9)	100.0%	18	38.9% CI (17.3-64.3)	42.9%	0.053
Male circumcision (as an HIV prevention strategy) will decrease condom use	12	33.3% CI (9.9-65.1)	0%	22	40.9% CI (20.7-63.6)	66.6%	0.727

2.2.2.5 Training and willingness to perform or refer for male circumcisions

A significant majority of participants (85%) reported that they are not currently trained to perform male circumcisions. In response to a question about willingness to perform circumcisions in male babies if they received the appropriate training, 33% of all respondents indicated that they would be willing and 48% reported that they would not be. In response to a similar question, except that the procedure would be done on older boys and adult men, 41% indicated that they would be willing and 46% that they would not be willing. A high proportion (90%) of participants indicated that they would willingly refer male patients and parents to the appropriate services if they were unable or unwilling to perform the procedure themselves (Table 2.11).

Table 2.11: Training and willingness of healthcare workers to perform or refer for male circumcisions

	n	YES	NO	Unsure	No Response
Are you currently trained to perform Male circumcisions?	81	8.6%	85.2%	0	6.2%
If you received the appropriate training, would you be willing to circumcise male babies?	81	33.3%	48.2%	11.1%	7.4%
If you received the appropriate training, would you be willing to circumcise older boys and adult men who request the procedure?	81	40.7%	45.7%	7.4%	6.2%
If you are unable to or not prepared to personally perform male circumcisions, would you willingly refer the patient/ parents of the male baby to the appropriate service?	81	90.1%	3.7%	0	6.3%

Analysis according to professional position (Table 2.12) revealed that the vast majority of nurses (98%) and facility managers (100%) are not currently trained to perform male circumcisions, while 46% of doctors are. The majority of doctors (69%) and just under one third of nurses (29%) and facility managers (30%) indicated they would be willing to perform male circumcisions in babies if they received the appropriate training. The same percentage of doctors (69%) and higher proportions of nurses (38%) and facility managers (40%) indicated they would be willing to perform male circumcisions in older boys and adult men if they received the appropriate training. Nearly all participants, regardless of professional position, reported they would willingly refer male patients and parents to the appropriate service if they were unable or unwilling to perform the procedure themselves.

Analysis according to gender (Table 2.13) indicates that a high proportion of male respondents (46%) are trained to perform male circumcisions compared to a small proportion of females (2%). This difference is statistically significant (Fischer's exact p value <0.001). A higher proportion of males (80% and 85% respectively) indicated willingness to perform male circumcisions in babies or older boys and adult men if they received the appropriate training compared to fewer females (27% and 35% respectively). These are statistically significant findings (Fischer's exact p values ≤ 0.001).

Table 2.12: Participant responses on training and willingness to perform or refer for male circumcision, disaggregated by professional position

	NURSES				DOCTORS				FACILITY MANAGERS			
	n	YES	NO	UNSURE	n	YES	NO	UNSURE	n	YES	NO	UNSURE
Are you currently trained to perform male circumcisions?	53	1.9%	98.1%	0%	13	46.2%	53.8%	0%	10	0%	100%	0%
If you received the appropriate training, would you be willing to circumcise male babies?	52	28.9%	57.7%	13.4%	13	69.2%	23.1%	7.7%	10	30%	60%	10%
If you received the appropriate training, would you be willing to circumcise older boys and adult men who request the procedure?	53	37.7%	54.7%	7.6%	13	69.2%	23.1%	7.7%	10	40%	50%	10%
If you are unable to or not prepared to personally perform male circumcisions, would you willingly refer the patient/parents of the male baby to the appropriate service?	54	98.2%	1.8%	0%	12	100%	0%	0%	10	80%	20%	0%

Table 2.13: Participant responses to training and willingness to perform or refer for male circumcision, disaggregated by gender

	MALE				FEMALE				Fischers Exact
	n	YES	NO	UNSURE	n	YES	NO	UNSURE	
Are you currently trained to perform male circumcisions?	13	46.2%	53.8%	0%	63	1.6%	98.4%	0%	0.000
If you received the appropriate training, would you be willing to circumcise male babies?	13	76.9%	7.7%	15.4%	62	27.4%	61.3%	11.3%	0.000
If you received the appropriate training, would you be willing to circumcise older boys and adult men who request the procedure?	13	84.6%	7.7%	7.7%	63	34.9%	57.1%	8%	0.001
If you are unable to or not prepared to personally perform male circumcisions, would you willingly refer the patient/parents of the male baby to the appropriate service?	12	100%	0%	0%	64	95.3%	4.7%	0%	(1sided 0.593)

Analysis according to whether the respondents' culture practices male circumcision (Appendix 13) showed no significant differences.

2.2.2.6 Opinions regarding human rights and male circumcision

Most participants (89%) agreed that a patient has the right to refuse to be circumcised, and 53.1% **strongly** agreed with the statement. The majority (81%) agreed that healthcare workers who disagree with male circumcision for personal reasons should be allowed to refuse to do the procedure. Most respondents (78%) agreed that the national Department of Health should run awareness campaigns about the role of male circumcision in HIV prevention. A statement that healthcare workers should promote male circumcision elicited a spread of responses with a high proportion (17%) reporting they were unsure while 49% agreed and 27% disagreed. Just under half (46%) of the participants disagreed with a statement that expecting healthcare workers to perform male circumcisions impacts on their (the healthcare workers) human rights (Table 2.14).

Table 2.14: Opinions regarding human rights and male circumcision

	n	Strongly Agree	Agree	Disagree	Strongly Disagree	Unsure	No response
Expecting healthcare workers to perform male circumcisions impacts on their (the healthcare workers) human rights	81	19.8%	12.4%	29.6%	16.1%	14.8%	6.2%
Healthcare workers who disagree with circumcision for personal reasons should be allowed to refuse to do the procedure	81	44.4%	37%	6.2%	6.2%	1.2%	4.9%
A patient has the right to refuse to be circumcised	81	53.1%	35.8%	0	2.5%	2.5%	6.2%
The national Department of Health should run awareness campaigns about the role of male circumcision in HIV prevention	81	48.2%	29.6%	3.7%	4.9%	7.4%	6.2%
Healthcare workers should promote male circumcision as an HIV prevention strategy	81	22.2%	27.2%	14.8%	12.4%	17.3%	6.2%

Analyses according to gender (Appendix 14), professional position (Appendix 15), and male circumcision practices of the participant's own culture (Appendix 16) yielded no significant differences. More males (80%) appeared to agree that healthcare workers should promote male circumcision as an HIV prevention strategy compared to females (61.5%), but the difference was not statistically significant

(Fischer's exact p value = 0.472). More of the respondents from cultures that **do not** practice male circumcision (72%) appeared to agree with this compared to 59% of respondents from cultures that **do**. Again this was not statistically significant (Fischer's exact p value = 0.419).

2.2.3 Summary of findings

In summary, the findings from this sub-study suggest a high awareness amongst participants about conventional HIV prevention strategies centred in behaviour change, such as the use of condoms. Statements about male circumcision as an HIV prevention strategy raised high levels of uncertainty and elicited low levels of belief that male circumcision would effectively reduce HIV transmission. High numbers of participants agreed that conventional prevention strategies are more effective than male circumcision in HIV prevention, that male circumcision should only ever form part of existing HIV prevention strategies and that circumcised men should still use condoms.

Participants had varying beliefs about and attitudes towards male circumcision. These beliefs and attitudes were mostly influenced by factors such as culture and gender. There was a divided response about whether male circumcision as an HIV prevention strategy will reduce condom use or not. High numbers of participants believed that medical circumcisions are safer than circumcisions carried out in a traditional setting but were unsure about the complication rates associated with the procedure in adulthood versus infancy.

High numbers of participants agreed that men had the right to refuse to become circumcised, that the rights of healthcare workers must be taken into account and that there should be awareness programmes about the potential role of male circumcision in HIV prevention.

The findings show that not all doctors, and very few nurses, are trained to perform male circumcisions. Furthermore, that there is a relatively low willingness to perform the surgical procedure; more so amongst nurses and facility managers than amongst doctors. The vast majority of participants are willing to refer patients to appropriate services if they are unwilling or unable to perform circumcisions themselves.

These findings and their implications are discussed further, taking account of the existing literature in Chapter 4, and relating them to the findings of the stakeholder sub-study (Chapter 3).

University of Cape Town

3 STUDY B – ATTITUDES AND OPINIONS REGARDING THE CAPACITY OF THE PUBLIC SECTOR TO IMPLEMENT MALE CIRCUMCISION

3.1 Methods

3.1.1 Study Design

This is a cross-sectional qualitative descriptive study that comprises of semi-structured interviews with key informant stakeholders. These interviews aim to provide insight into the capacity of the public sector to respond to possible rollout of male circumcision as a prevention strategy for HIV transmission in South Africa, as well as to provide expert opinion on whether this is a worthwhile option and whether the proposed policy has any human rights implications. The findings from the interviews are intended to complement data from sub-study A.

3.1.2 Population and Sampling

The population for sub-study B are key informant stakeholders who have expertise on the subject of male circumcision and the surgical requirements of implementing male circumcision as an HIV prevention strategy within the public health sector in South Africa, such as doctors currently involved in the delivery of surgical services at a community health centre level, programme managers for HIV/ AIDS, gender experts and academics.

3.1.2.1 Method of sampling

Sampling was purposive; key informant stakeholders that can provide insight on the subject of male circumcision were identified by the researcher at the time of data collection. Selection of stakeholders was guided by information supplied by academics and health programme managers, who are experts in the field.

3.1.2.2 Sample Size

Five key informant stakeholders were identified on the basis of their areas of expertise, which included: HIV programming, gender, surgical requirements, communication, and traditional male circumcision.

3.1.2.3 Measurement

The key informants were interviewed by the researcher, using an interview guide (see Appendix 2) that allowed the interviewee to elaborate on areas of particular interest. The interview guide explored opinions regarding the capacity of the public sector to deliver a scaled up circumcision service as an HIV prevention strategy in South Africa, the feasibility of this and the challenges and constraints that would be faced. Each interview was recorded and the interviewer also kept written notes.

Interviews with key informant stakeholders (See Appendix 2)

Interviews were conducted to ascertain structured responses around:

- How the interviewee's professional position links to male circumcision
- If the interviewee is involved in providing circumcision services and, if so, the type of setting this takes place in and the age group accessing the services
- If demand for male circumcision has increased over the past 12 months and, if so, the age group this is taking place in
- The type of facilities required to perform safe medical circumcisions
- What staff are currently trained to perform male circumcisions and if other cadres of healthcare workers could be trained to perform male circumcisions

The interviews also explored the interviewees' opinions about:

- Introducing male circumcision as an HIV prevention strategy in South Africa with particular focus on feasibility, safety, equipment and facilities, capacity of the public sector to implement, training, challenges and constraints
- If proposed policy is worth implementing and why
- If the proposed policy has any human rights implications, and if so what groups are affected

3.1.3 Procedures

Once Ethics approval from the UCT Research Ethics Committee (REC reference number 184/2008) and permission from the PGWC Department of Health and the CCT was granted, the researcher made email or telephonic contact with all the interviewees to discuss the study and to set up an appropriate date and time for an interview. All the interviews were conducted over a period of one month, from mid October to mid November 2008.

On the day of the interview, the researcher met with the interviewee and explained the purpose of the study and answered any questions raised. The researcher went through the Informed Consent Information Sheet for Key Informant Stakeholders (see Appendix 4) and ensured that all interviewees willingly consented to participate in the study and to have the interview recorded. The researcher then proceeded with the interview, documenting responses and recording the interview with a digital recorder. Following the interview, the researcher wrote up the content of each interview, using the digital recording to ensure accuracy.

3.1.4 Analysis

The interviews were analysed and collated to reflect responses about:

- Any increased demand for male circumcision over the past 12 months
- The type of healthcare worker that may currently perform male circumcisions
- Whether other cadres of healthcare workers could be trained to perform male circumcisions

Analysis also explored opinions such as the:

- Interviewees' opinions about introducing male circumcision as an HIV prevention strategy in South Africa with particular focus on feasibility, safety, equipment and facilities, capacity of the public sector to implement, training, challenges and constraints
- Interviewees' opinions about whether adopting male circumcision as an HIV prevention strategy will be worthwhile in South Africa
- Interviewees' opinion about whether the proposed policy has any human rights implications

The participants' responses were analysed to identify common themes and insights indicating where there were common responses and where participants raised specific issues. Actual quotes, which remain anonymous, have been used to illustrate insights. The findings were then used, together with data from sub-study A, for the policy analysis in sub-study C.

3.1.5 Ethics and Communication

Ethical considerations and precautions were broadly the same as for the healthcare worker sub-study with regards to ethical approval, informed consent, stakeholders, reporting and implementation. These are outlined in detail in section 2.1.7. See Appendix 4 for the informed consent form for all key informant stakeholders.

3.2 Results

3.2.1 Study Participants

Five people were purposively selected as key informants on the subject of male circumcision. Each person was chosen specifically for their different knowledge, perspective and opinion on the subject matter. Only four out of the five informants identified were interviewed. This is because after the first four interviews, the data generated did not yield additional insights or information, over and above what was already obtained.

Background information of the five key informant stakeholders:

- A senior official from the Provincial Government of the Western Cape Health Department, who has a particular interest in improving the safety of traditional circumcisions carried out in the province.
- A senior academic in Family Medicine, who is currently running a training programme for medical students and intern doctors in minor surgical procedures at a community health centre level, which includes performing male circumcisions.
- A senior researcher in the field of Women's Health, who has interest in the subject matter from a gender perspective, particularly the impact of the proposed policy on women.
- A senior official from a US-funded health and education programme in South Africa, that runs communication campaigns for health education around HIV / AIDS in South Africa. The interviewee previously worked with UNAIDS at the time that the results from the RCTs were released and therefore formed part of the team that developed communication strategies on how the results of these studies were to be disseminated.

- A gender activist, with a focus on male gender issues. Despite several attempts to contact this person, it was not possible to interview them. However, other interviewees had given insight into potential issues around gender from a male perspective and therefore the researcher decided that interviewing this person was not essential because this area had not been neglected.

3.2.2 Interview findings

All interviewees willingly consented to participate and to have the interviews recorded. Their responses are presented below, first reporting common themes that all interviewees agreed upon. Thereafter, specific issues that came out of the interviews are grouped together.

3.2.2.1 Commonly agreed responses

All interviewees reported knowledge of the three randomised control trial that took place in South Africa, Uganda and Kenya which indicated that male circumcision could significantly reduce heterosexual transmission of HIV, from women to men. All responded that they were unaware of any increased demand for male circumcision in South Africa, in light of the findings of these trials. They also noted the critical importance of accurate communication about the role of male circumcision in HIV prevention and shared the view that it should only ever form part of a comprehensive package for HIV prevention and that accepted and proven methods of HIV prevention should not be omitted in any health programming.

On the whole, all interviewees agreed that due to the very high rates of HIV prevalence and infection, pursuing male circumcision as a possible HIV prevention strategy in South Africa would be worthwhile. However, they included certain caveats relating to further research, particularly on the impact on women, accurate messaging and communication strategies, engaging with traditional leaders on the subject of traditional circumcision, and ensuring that male circumcision only forms one part of a comprehensive HIV prevention approach. These specific issues will be discussed in full below.

All interviewees noted that the policy could only ever take place on a voluntary basis and that a policy of compulsory male circumcision would never be acceptable. They

noted that human rights issues such as informed consent, freedom of choice and the right to bodily integrity would be important issues to pay attention to.

3.2.2.2 Policy Context

One interviewee noted that male circumcision as an HIV prevention strategy is mentioned in the government's National Strategic Plan for HIV / AIDS (NSP, p 71) but highlighted that the subject is still being researched and discussed and that there is no formal policy on male circumcision as yet. The respondent also said that male circumcision as a possible HIV prevention strategy has not been elevated to the status that other HIV prevention programmes have, such as the Prevention of Mother to Child Transmission (PMTCT) and the Voluntary Counselling and Testing (VCT) programmes.

Two respondents noted that policy challenges and constraints include acceptability at a community level and also buy-in from healthcare workers. This is consistent with findings from sub-study A and will be taken into account in the policy analysis in sub-study C. One interviewee believed that proceeding with this proposed policy should not happen until all issues have been addressed; particularly that the impact on women has to be fully taken into account. An opinion was expressed that not proceeding with the policy until all issues have been resolved could present a major challenge because some civil society groups are lobbying intensively for its adoption, in a very a single-minded manner. Furthermore, one interviewee believed that the recommendation by WHO to promote male circumcision for HIV prevention may be premature and recommended a more cautious approach. None of the other interviewees expressed this opinion.

3.2.2.3 Risk Compensation

A number of the interviewees discussed the risk of behavioural disinhibition if the correct message around the role of male circumcision and HIV prevention is not communicated properly and referred to potential increases in risky behaviour such as men having multiple partners because they believe they are safe from HIV infection if circumcised. One interviewee noted in particular the issue of couples resuming sexual activity before the wound has properly healed, which may actually increase risk of HIV infection for them and for their partners.

One interviewee noted that it was critical to develop accurate messages around male circumcision because there was concern about the messages that the media were taking from the RCTs and also the messages that men may take regarding male circumcision and its' potential to reduce their risk for HIV. The interviewee highlighted the need to speak to men who are circumcised and who may therefore believe that their HIV risk is reduced, which may result in them believing they do not need to use condoms. One respondent noted the following:

"I have concerns about behaviour disinhibition but at the same time, if men were provided with the necessary counselling and information so they can make a decision that best suits them, then the fact is that male circumcision does reduce the risk by 60%. Some people use the analogy of a vaccine which would have a similar sort of efficacy. We need to make sure the messages we are communicating are correct, consistent and informed by science, and that would enable men and women to make the most informed decision that they can".

Another interviewee drew an analogy to the potential use of vaginal microbicides in HIV prevention where the protective effect would also only have been partial. Evidence in the literature supports this assertion (Orner et al., 2006).

3.2.2.4 Communication Strategies

One respondent highlighted the need to consider the language used in disseminating messages around male circumcision as demonstrated by the following quote:

"Firstly let's correct the language – it is not HIV prevention, but HIV risk reduction. Male circumcision reduces the risk of HIV by 60% and that is only if it is done correctly. We need to speak clearly to people that male circumcision is a risk reduction strategy - it does not prevent HIV- and that it is not the only effective way of preventing HIV – condom use and partner reduction are more effective."

The respondent continued to speak about communication in terms of addressing primary and secondary audiences, the primary audience being those in which you are trying to bring about change and includes men who are circumcised or not circumcised, homosexual men and HIV positive men, plus parents and women.

The respondent stated the strategic communication targeted at men needs to ensure accurate messaging to counteract issues such as risk compensation as discussed above. Traditional and cultural values attached to circumcision need to be addressed amongst men from non-circumcising communities and the potential health benefits of circumcision discussed. Homosexual men need to know that currently there is no evidence to indicate benefits of male circumcision amongst this group, while HIV positive men need to understand that if they choose to become circumcised, the procedure will not reverse their HIV status and may have detrimental effects on their health.

Parents need to understand the evidence around male circumcision, noting not just the HIV benefits but other sexual and reproductive health benefits. Accurate information will assist parents in making an informed choice for their child. Amongst women there is a need to talk about issues around cultural acceptance of men who choose to become circumcised in non-circumcising communities, and women must critically understand the partial risk reduction of male circumcision because women are partners of men and that they still need to use condoms. The respondent concluded that *“The challenge is to ensure that counselling is done correctly.”*

Secondary audiences include traditional and cultural leaders from circumcising and non-circumcising communities, who have the potential to influence the choices people make and therefore need to have accurate information. It also includes healthcare workers who need to know and provide correct information around male circumcision and policy and decision makers who need to have the correct message and accurate information communicated to them to allow for informed decision-making.

3.2.2.5 Resources

In terms of service delivery and the capacity of the public health system to rollout male circumcision services, several interviewees noted the need for specific resources to be allocated by national treasury with one interviewee noting that costs will be a challenge. They reported that there is already a cutback on essential drugs and that the system is currently battling to cope with the day-to-day demand and that there would have to be provision made in the budget for any rollout of male circumcision services.

One interviewee expressed their belief that the health system would not be overwhelmed because men would present on a voluntary basis, will not be coerced to have the procedure and that people have different opinions about when to be circumcised. These variations will prevent any chance of the system from becoming “clogged”. Another interviewee contradicted the above statement, indicating that the public sector currently does not have the capacity to rollout circumcision services and that the system is already overburdened, with high patient loads and human resources shortages. The following quote sums up the respondent’s opinion:

“Already they can barely manage with emergency patients that walk in off the street. Also, the numbers of patients at a community health centre are limited each day and the staff cannot cope with the demand already on the service. These constraints on the public service are important and they are not surmountable at this stage and this will be important to consider.”

Another interviewee noted that feasibility needs to be considered from a health systems perspective, raising issues such as cost, whether there are sufficient healthcare workers who would be willing to be trained to perform male circumcisions and what cadre of healthcare worker this would be. It is the opinion of this respondent that if male circumcision is to be done on a large scale by doctors then it will not be tenable in the South African context. This raises questions about whether nurses could be trained to perform the procedure, if they are motivated to do so, and if the services can cope with another add-on. On the topic of the capacity of the public sector to scale up male circumcision services, the respondent noted that

“While the system is already stressed, preventing HIV has to be an absolute priority. Therefore, if the questions on safety, training, cost and the impact on women are answered then it would be worthwhile to see if capacity can be built at a primary care level.”

One respondent expressed their opinion that despite health services already being overburdened, the benefits of introducing male circumcision as a possible HIV prevention strategy would make it a worthwhile option. They cited a cost benefit analysis presented at a WHO (2007) meeting in Nairobi that shows investing in male circumcision now will have a significant long-term benefit - in terms of reducing new HIV infections and the related costs. Furthermore they expressed their belief that

“of all the countries in sub-Saharan Africa who could provide the service, it would be South Africa as we have the infrastructure and resources to do so on a large scale.”

3.2.2.6 Location of services

On the question of where male circumcision should be located in the health service, one respondent noted that the procedure can be carried out safely in an outpatient setting where basic precautions are taken. This respondent noted that while this setting can never be completely sterile, basic precautions such as hand washing, wearing sterile gloves and a face mask, using disposable sterile packs and a sterile blade for each procedure and keeping one room aside for surgical procedures reduces the risk of infection. The respondent currently runs a training programme for final year medical students and intern doctors in a Community Healthcare Centre and notes that it is a feasible option to locate male circumcision services in an outpatient setting.

When asked about challenges and constraints, one interviewee noted that you would need trained staff to assist with conducting the procedure to increase turnover and improve service efficiency. This would ideally be a trained nursing sister, although a staff nurse could also be trained to assist. The respondent noted that space in the primary health care setting would be a challenge as the facilities were all designed a long time ago and do not have adequate space.

3.2.2.7 Safety

Several interviewees expressed their opinion that safety of the procedure in medical facilities would not be a problem, noting that doctors are well trained to provide male circumcisions and that the necessary equipment could be made available. Furthermore, a respondent who conducts male circumcisions on an outpatient basis reports that the procedure can be done safely, if reasonable precautions are taken.

3.2.2.8 Cadre of healthcare worker that could perform male circumcisions

One interviewee noted that not all qualified doctors are trained to perform circumcisions as they may not have been exposed to this procedure in their training and that they may not have shown interest in surgical techniques once qualified. This

is consistent with the findings from sub-study A where only 46% of doctors reported being trained to so. The interviewee believed it would be feasible and relatively easy to train those who are interested.

When asked about identifying other potential cadres of healthcare workers who could perform the procedure, the interviewees had different opinions. One interviewee expressed an opinion that Clinical Nurse Practitioners could be trained, particularly since they have knowledge of anatomy which is important in achieving the correct technique. One interviewee noted further that it would not be feasible from a health systems perspective to expect doctors to perform the procedure if male circumcision services are expanded. On the other hand, a different respondent argued that only doctors should be able to provide the service.

Another respondent raised a potential policy issue, noting that if nurses were identified to fulfil this role they would not be permitted to do so by regulatory bodies such as the Health Professions Council of South Africa and the national Nursing Council, which state that surgical procedures do not fall within the scope of work for nurses. However, given the human resource constraints on an over-burdened public sector dealing with the HIV / AIDS pandemic, there are calls for “task-shifting” within the health sector where tasks ordinarily carried out by doctors become the domain of nurse. This is consistent with recommendations made by WHO / UNAIDS / PEPFAR (2008). If task-shifting were to occur to enable nurses to perform male circumcisions, then policy issues regarding the scope of work for nurses would need to be considered.

3.2.2.9 Traditional Circumcision

Several of the respondents spoke about traditional circumcision. Two respondents noted that the debate around voluntary medical male circumcision cannot be separated from traditional male circumcision in South Africa. One interviewee noted that male circumcision in some cultures is seen mainly as a cultural tradition, and not as a health issue. Other respondents spoke about potential acceptability issues of medical circumcision within cultures that practice traditional male circumcisions. In particular, one respondent queried whether it would be acceptable to change the means by which men from traditionally circumcising communities become circumcised and if this might raise social dilemmas and consequences. Therefore, the need to engage with cultural and traditional leaders in both circumcising and

non-circumcising communities was noted. One respondent noted that, in circumcising communities, there is a need to talk about the age at which male circumcision happens and potentially encourage that it is done earlier; before males are sexually active and at risk of HIV. Several respondents expressed the opinion that there is a need to work with communities that practice traditional male circumcision about how to make it a safer procedure. One interviewee argued that this is particularly important from a communications point of view, as the deaths that can result from traditional male circumcision are often blown out of proportion by the media. Safety concerns about traditional circumcision were apparent in the findings from sub-study A.

One respondent believed that the capacity issues discussed with regards to scaling up male circumcision services in public sector facilities are also critical issues in improving the safety of traditional male circumcisions and therefore resources are required from treasury to improve the safety of traditional male circumcision, regardless of whether the proposed policy of medical circumcision is introduced or not.

3.2.2.10 Engaging with Traditional Circumcision Schools

The above information leads into opinions from three interviewees about the critical need to engage with those running traditional circumcision schools; from a training, communications and potential regulatory point of view. Two interviewees reported a particular interest in improving the safety of traditional male circumcisions carried out in the Western Cape, noting that the risks associated with traditional circumcision include sepsis, HIV infection, septicaemia and even death. Therefore, they pointed to the critical need to train traditional surgeons who run traditional circumcision schools about the use of sterile instruments, aseptic techniques and after-care to prevent unnecessary infection and the potential transmission of HIV where one surgical instrument is used for all initiates. Both interviewees reported being involved in such training initiatives which also provide circumcision kits to those operating traditional initiation schools. The kits consist of a sterile blade and dressing, and basic medication for each initiate.

The issue of regulating traditional male circumcision practices was raised by two interviewees. One respondent noted the provincial laws in the Eastern Cape and Limpopo which require that initiation schools are accredited (Application of Health

Standards in Traditional Circumcision Act of 2001 and Northern Province Circumcision Schools Act of 1996 respectively). For example, in Limpopo traditional surgeons must be registered and meet certain criteria such as holding a certificate which reflects their accredited competency and that initiates have access to a pre-medical examination to exclude risk factors for the procedure. Traditional nurses are also well trained in caring for initiates after the procedure and environmental practitioners from the Department of Health visit sites regularly to report on health conditions and to deliver circumcision kits. There are legal penalties if initiation schools do not comply with this legislation.

Another respondent expressed his opinion that traditional circumcisers have a role to play in a potential scaling up of male circumcision in South Africa and advocates an accreditation system all of traditional circumcision sites, where traditional surgeons and traditional nurses receive adequate training and equipment. In terms of safety, the interviewee commented that he had no concerns about the procedure in a medical setting but that traditional circumcisions should not be sidelined.

3.2.2.11 Gender

One interviewee noted that there have not been adequate studies into the impact of male circumcision on women and that it is important that such research should be conducted before adopting the proposed policy. In particular, the respondent highlighted safety for women, noting that

“...male circumcision has been shown to be effective for women to men [transmission], but there have not been studies yet that look at the other way around. So is it safe for women, does it in any way heighten a woman’s risk? I know it does heighten their risk if the wound is not healed, but I don’t think there have been any other studies – or have been enough studies that show that it [male circumcision] does not harm women? That would be an issue.”

The interviewee also highlighted other issues of safety such as risk disinhibition and whether men, if they become circumcised, will be less likely to use condoms and if this will negatively impact on women’s ability to negotiate condom use, which is already difficult in some patriarchal cultures. Furthermore, the interviewee believed that difficulty with negotiating condom use may accentuate gender-based violence against women. All this would have a negative impact on women’s risk for HIV and

their health and wellbeing in general. Therefore, the interviewee reiterated that any policy decision should be avoided until such time that all the issues have been addressed and

“that women need to absolutely be taken into account and not just in a token way, but that organisations working in women’s health feel that the questions they have asking have been adequately answered.”

One respondent noted that while correct and consistent condom use is the best way to prevent HIV transmission, gender norms in some cultures may negatively influence a women’s capacity to negotiate condom use. Furthermore, research and the ongoing high rate of new infections indicate that people are not using condoms consistently and that it is therefore useful to consider other technological options that may reduce risk, such as the research into microbicides and the role of male circumcision. The interviewee noted protective strategies for HIV that are not as effective as condoms should still be considered, in terms of a hierarchy of use.

3.2.2.12 Culture

One interviewee highlighted issues relating to feasibility in terms of whether people find male circumcision culturally acceptable and whether they will be willing to take up the proposed policy, particularly in communities where men are not circumcised for religious or cultural reasons. The interviewee noted the importance of acceptability amongst men and women in cultures who do practice traditional circumcision, and in particular, the acceptability of changing the means in which men are circumcised; the RCTs relate only to circumcisions done in a medical setting and not traditional settings.

Finally, the interviewee noted that the topic of traditional circumcision is a sensitive issue and cultural taboos dictate that women should not know about it. This will have implications for scaling up circumcision services as the majority of healthcare workers are women.

3.2.2.13 Comprehensive Health Programming

One respondent noted that male circumcision, which is only partially effective in HIV reduction, cannot be spoken about in the context of a vertical programme and

should rather be viewed in a broader context that provides an opportunity to engage with men, something that the South African health system has historically been very poor at. This notion is supported in the literature (Csete, 2007; Wamai et al., 2008; AVAC, undated). The interviewee sums up the opportunity in the following quote:

“We have to talk about male circumcision in the context of a broader programme, because in many ways it provides us with a way to engage with men about their sexual and reproductive health. In particular, we can talk to men about knowing their status, reducing their number of partners, looking at the behaviours that place them at risk for HIV infection, but also getting men to test. We know that in South Africa, while 50% of women have tested, only 20% of men have been tested. Therefore it is a critical entry point to engage men on a one-to-one and an interpersonal level about HIV risk. So in many ways, male circumcision is a broader package in which we need to foreground with men that it is a part of a package that only partially reduces HIV risk and that you still have a 40% chance of being infected with HIV”

3.2.2.14 Human Rights

All interviewees were questioned about whether the proposed policy has any human rights implications. All noted that the policy could only ever take place on a voluntary basis and that a policy of compulsory male circumcision would never be acceptable. Human rights issues such as informed consent, freedom of choice and the right to bodily integrity would be important issues to pay attention to.

All respondents noted that male circumcision in infants is a controversial issue and that there has been debate on ethical and moral issues relating to conducting the procedure on a baby who cannot give informed consent and is not free to make their own choice. Several respondents noted pressure groups that oppose neonatal male circumcision. One respondent provided a counter argument about the rights of the parent to make decisions about the best interests of their child and argued that it needs to be acknowledged that parents do have the right to make these decisions. Another respondent noted that people who circumcise for religious beliefs will continue to do so regardless of any policy - specifically Jewish and Muslim communities who practice neonatal circumcision and also those who practice traditional circumcision as a rite of passage to manhood. One interviewee discussed traditional circumcision, which is frequently seen as a human rights violation in a

western context, and explained their hope that the debate about western versus traditional circumcision would look rather at the two systems as complimentary and work towards making all male circumcisions safe, so as to minimize harm to men.

One respondent noted women's rights which need to be taken into account as a human rights issue. They explained

“male circumcision protects men but if it makes men much less likely to use condoms, or leads to increased gender-based violence when women suggest condoms, or places women at risk - then we have to ask ourselves if male circumcision is justifiable? I would say not. Not if it is infringing someone else's rights and actually placing them at risk or potentially placing them at risk – so I think one would have to work through all those things.”

Uncircumcised gay men or men who have sex with men were identified as another potentially vulnerable group, where rights issues may be at stake because there have not been any studies about the role of male circumcision in HIV prevention conducted in this group.

3.2.3 Summary of findings

The key informant stakeholders share a cautiously optimistic view about the role that male circumcision may have to play in HIV prevention in South Africa and support exploration into potential policy development in this regard - as part of a comprehensive prevention package. This is however noted in the context of certain caveats, which include the need for accurate communication to highlight the *partial* protective effect, the need for more research into the true impact of the proposed policy on women and to understand what impact risk reduction behaviour may have on effectiveness. The respondents displayed variation in opinion regarding the policy context, with one respondent noting that areas of concern need to be adequately addressed before proceeding with policy development, while others did not highlight such concerns.

Conflicting opinion about capacity, resources and the location of male circumcision services reflect that comprehensive operational research is required, where issues such as dedicated resource allocation, training, and human resource task-shifting are addressed.

Recommendations from WHO / UNAIDS focus solely on the provision of voluntary medical male circumcision services, but findings from these interviews highlight the need to include traditional male circumcision in the discussion around policy development and the general need to address safety issues in this regard, so as to reduce harm to men.

The findings from both this chapter, and the preceding one, will be integrated and discussed together in chapter 4.

University of Cape Town

4 DISCUSSION

4.1 Introduction

Discussion of the findings from the two sub-studies is structured around the primary objectives of this study. Firstly, it describes and discusses healthcare workers' knowledge, attitudes and beliefs towards, and the acceptability of, adopting male circumcision as an HIV prevention strategy in South Africa. Secondly, it describes and discusses the willingness of the healthcare workers to perform the procedure and thereafter considers the capacity of the public sector to implement the proposed policy and the human rights implications involved.

4.2 Discussion

4.2.1 *Knowledge and beliefs about HIV prevention*

Healthcare workers in sub-study A displayed good knowledge of conventional HIV prevention strategies which focus on behaviour change programmes such as Abstinence, Being Faithful and using Condoms (ABC). The vast majority of participants (over 90%) agreed with accepted, conventional HIV prevention strategies such as Being Faithful and using Condoms for HIV prevention, and nearly all of these participants **strongly** agreed with these approaches (88% and 84% respectively). The divided response about the role of abstinence in HIV prevention strategy, with similar proportions agreeing (48%) and disagreeing (44%) is noted. One potential explanation for this may be that healthcare workers may not believe that abstinence as an HIV prevention strategy is working; however there is no definitive evidence in the literature to support this finding.

In spite of a strong belief in condoms and being faithful as effective HIV prevention strategies, healthcare workers are faced with ongoing high rates of HIV infection in South Africa (Shisana et al., 2005). This may have implications for how they respond to new HIV prevention strategies, particularly those that are technological such as vaccines, vaginal microbicides and male circumcision. Such strategies may be welcomed, more because of high ongoing rates of HIV incidence in spite of the efforts of behavioural change programmes, than because of evidence of effectiveness. Notably, one interviewee in sub-study B noted that research and the ongoing high rate of new infections indicates that people are not using condoms

consistently and therefore that other technological options that reduce HIV risk should be considered.

The majority (83%) of participants from sub-study A disagreed with using traditional medicine for HIV prevention. This is not an unexpected finding amongst healthcare workers who work largely within a biomedical framework and similar attitudes have been noted elsewhere in the literature. Mall (2005) reported that healthcare professionals working in antiretroviral rollout sites in South Africa are concerned about the potential negative impact of using traditional medicine on the effectiveness of biomedical treatment regimes.

Attitudes of healthcare workers towards traditional male circumcision should be taken into account because healthcare workers may begin to view male circumcision as a bio-medical intervention and this could have negative implications in communities that practice male circumcision for religious or cultural reasons. Similar concerns were raised in sub-study B where potential and unforeseen social consequences may result from the means by which men become circumcised; if men from communities that practice traditional circumcision as a rite of passage to manhood are not considered to be “real men” because they were circumcised medically then “medicalising” male circumcision could result in a potential backlash and social problems. In such communities, the bio-medical approach driving the proposed policy (of scaling up male circumcision as an HIV prevention strategy) must take cultural beliefs into account and allow for consultation with traditional leaders, traditional healers and traditional circumcisers. This is to ensure cultural sensitivity and acknowledgement of heritage practices, and will assist in gaining buy-in from traditionally circumcising communities. Such consultation will also provide an opportunity to ensure that community leaders and traditional healers understand and can help to disseminate accurate information about the partial protection offered by male circumcision - that behaviour change, ongoing condom use and partner reduction are still necessary to combat HIV infection. This contention is supported by findings from sub-study B which indicate the need to address safety issues and the need for accurate communication with traditional leaders, traditional circumcisers and men and women from traditionally circumcising communities.

Healthcare workers’ knowledge about HIV prevention strategies did not vary significantly according to professional position, gender or circumcision practice in

their own culture. However, it is interesting to note some variations; females and participants from cultures that **do** practice male circumcision appeared more likely to agree that one should only have sex with circumcised men (if you are a woman) compared to males and participants from communities that **do not** practice male circumcision (Fisher's exact p values = 0.056 and 0.246 respectively). These findings are not statistically significant; this could be explained by the small sample size. Nevertheless it appears that female healthcare workers and healthcare workers from circumcising cultures may be more likely to believe there is less risk of heterosexual HIV transmission to women if the man is circumcised. This highlights the need for research into how best to formulate messaging about the role of male circumcision in HIV prevention for different target audiences. Such a response is corroborated by findings from sub-study B, in which one interviewee spoke extensively about communication strategies required for different audiences - not only if the proposed policy is to be adopted, but also in response to the media attention that the RCTs have received. Effective communication strategies, accurate messaging and the inclusion of technological solutions as only one part of a comprehensive HIV prevention package are critical issues addressed in the literature (Cassell et al., 2006).

4.2.2 Knowledge and beliefs about male circumcision and HIV prevention

Findings from sub-study A reflect a high rate of uncertainty about male circumcision effectively reducing HIV transmission amongst healthcare workers. In addition, there was a divided response in agreement and disagreement with the statement. This is consistent with the high percentage of healthcare workers who reported they were unsure if being circumcised (as a man) prevents HIV infection (16%) and that only having sex with circumcised men (if you are a woman) prevents HIV infection (10%). Such uncertainty was not apparent for statements about conventional HIV prevention strategies. Furthermore, less than half (42%) of all participants in sub-study A believe that male circumcision would be a useful prevention strategy for HIV / AIDS while 21% were unsure. A fair number (35%) of the healthcare workers surveyed do not believe that male circumcision prevents the transmission of HIV / AIDS and a further 16% were unsure.

The above findings provide evidence that healthcare workers, in general, have a low awareness of the findings from the RCTs recently conducted in South Africa, Uganda and Kenya. It is therefore clear that awareness programmes about the RCT

findings need to be disseminated to all healthcare workers, before any policy of scaling up male circumcision for HIV prevention in South Africa can be adopted. In fact, participants from sub-study A, particularly facility managers, requested copies of the RCTs from the researcher to read and initiate discussion amongst staff. It is also critical to ensure that the correct and complete message is communicated so that healthcare workers are equipped with the appropriate knowledge and tools to disseminate accurate information to the general public. This is particularly important because this group of people work at the forefront of a health service that is already over-burdened with treating and managing people who are HIV positive, while also trying to implement prevention strategies.

Addressing the low belief in male circumcision as an HIV prevention strategy amongst healthcare workers is important in terms of getting buy-in from healthcare workers because beliefs can influence the practices of the healthcare worker which, in turn, could have implications for policy implementation. Such concerns about the impact of healthcare workers' beliefs and attitudes on their behaviour have been noted in the literature, in the context of advice given to HIV positive patients about their reproductive choices (London et al., 2008).

It is encouraging to note that over 90% of participants from sub-study A disagree that circumcised men do not need to be counselled about correct and consistent condom use to reduce HIV risk. This is a critical message that must accompany any strategy involving male circumcision in HIV prevention. In addition, the majority of participants agree that male circumcision is only one part of potential prevention strategies to reduce HIV transmission, that male circumcision is not as effective as correct and consistent condom use and that behaviour change methods such as abstinence, being faithful and using condoms are more effective than male circumcision in reducing HIV. Such findings are consistent with policy recommendations by WHO / UNAIDS (2007f) for comprehensive HIV prevention strategies and respond positively to concerns raised in the literature that male circumcision should not be viewed as a "magic bullet" to combat HIV infection (Sawires et al., 2007; Green et al., 2008).

These findings on the knowledge, attitudes and beliefs of healthcare workers towards the role of male circumcision in HIV prevention provide a starting point to build on so that all healthcare workers can be empowered with accurate information

to assist them in helping their patients – men and their female (or male) partners, plus parents – to make an informed decision.

Analysis according to professional position reflects that facility managers (86%) were more likely to agree that male circumcision effectively reduces the transmission of HIV / AIDS, compared to nurses (51%) and doctors (56%). Analysis which grouped responses from nurses and doctors together and compared them to those of facility managers revealed no statistical significance in this finding (Fischer's exact p value = 0.120). The lack of statistical significance may be due to a small sample size, particularly because the numbers of facility managers in the sample is small (n=10). All facility managers (100%) compared to 61% of nurses and 75% of doctors agreed that male circumcision is only one part of potential prevention strategies to reduce the transmission of HIV / AIDS. Analysis that grouped responses from nurses and doctors together compared to those of facility managers revealed this difference to be statistically significant (Fischer's exact p value = 0.05). This finding is not necessarily surprising as facility managers are more likely to have been exposed to information about the potential role of male circumcision in HIV prevention than nurses and doctors at, for example, health department meetings and planning sessions. Facility managers will have had more opportunity to engage with the information and how it could be integrated into existing programmes. Their awareness and knowledge needs to be built upon, so that it can filter down to healthcare workers who actively engage with patients.

Analysis according to gender did not yield any statistically significant differences. However, there was a notable difference in opinion about male circumcision effectively reducing the transmission of HIV / AIDS, with 80% of all male respondents agreeing with the statement compared to 51% of all female respondents. This finding is not statistically significant (Fischer's exact p value = 0.165); this could be explained by a small sample size and a high rate of unsure responses (16%) that do not form part of the analysis. Furthermore, potential confounding by professional position may play a role as male gender was significantly associated with being a doctor when compared to nurses ($\chi^2 = 22.56$; $p < 0.001$) and facility managers ($\chi^2 = 6.30$; $p = 0.012$). Nevertheless, it is interesting that considerably more men appear to believe that male circumcision effectively reduces HIV transmission. If this is a true finding, then it is important as it may mirror what men in the general public believe, pointing to the need for clear communication that circumcised men still need to use condoms to reduce their risk for HIV.

Analysis according to circumcision practices within the respondents own culture revealed that the vast majority (97%) of respondents from cultures that **do not** practice male circumcision agree that prevention strategies such as abstinence, being faithful and using condoms are more effective than male circumcision in reducing transmission of HIV / AIDS, compared to 78% of respondents from cultures that do; Fischer's exact p value = 0.036. This finding is statistically significant and indicates that any potential policy of male circumcision as an HIV prevention strategy will have to take into account the differences between circumcising and non-circumcising communities and the circumcision practices of healthcare workers themselves.

The findings from sub-study B reflect that all key informant stakeholders had a clear understanding of the potential role of male circumcision in HIV prevention and were also aware of the limits of what could be expected; they were aware of the results from the RCTs conducted, and up to date on recommendations by the international community and evidence in the literature. This is not surprising, given that they were selected for participation based on their expertise on the subject matter. Furthermore, the findings reflect an opinion that, due to the very high rates of HIV prevalence and infection, pursuing male circumcision as a possible HIV prevention strategy in South Africa would be worthwhile.

4.2.3 Attitudes towards, and beliefs about male circumcision

There is a high degree of uncertainty (up to 21%) amongst healthcare workers about statements that elicit their attitudes and beliefs towards male circumcision. The exception to this is a statement that circumcised men do not need to wear condoms in which no one being reported being unsure and 90% of participants disagreed with the statement. This finding indicates a high awareness about the need for correct and consistent condom use and behaviour change to reduce HIV risk. It is important that healthcare workers maintain this attitude even if more technological solutions to HIV are found; and particularly if male circumcision is adopted as an HIV reduction strategy because the epidemiological evidence from the RCTs report that it is only partially effective (Auvert et al., 2005; Bailey et al., 2007; Gray et al., 2007). The RCTs all included counselling about safer sex practices for all trial participants; safer sex counselling should form part of all male circumcision programmes for HIV prevention.

Attitudes towards male circumcision indicate high acceptability of the procedure, with the majority of respondents (59%) agreeing that circumcised men are more hygienic than uncircumcised men and just under half (44%) of the respondents indicating that women prefer their male partners to be circumcised. These findings are consistent with findings from 13 acceptability studies conducted in 9 sub-Saharan African countries; a review by Westercamp and Bailey (2007) report high levels of acceptability of male circumcision.

Nevertheless, it remains important to determine the acceptability of male circumcision in the South African population, particularly in non-circumcising communities. This is borne out in the analysis from sub-study A, where 74% of respondents from cultures that **do** practice male circumcision agreed that women prefer their male partners to be circumcised, compared to 42% of respondent from cultures that **do not** practice male circumcision (Fischer's exact value = 0.028). This finding is statistically significant in a small sample population of healthcare workers, where 21% reported they were unsure. Findings from sub-study B are consistent with this and note that acceptability must be adequately determined amongst non-circumcising communities and also within circumcising communities where the method proposed i.e. medical circumcision in a medical setting, may conflict with traditional practices.

More females (65%) than males (20%) agreed that women preferred their male partners to be circumcised. The lack of statistical significance (Fisher's exact p value = 0.07), may be explained by the small sample size and a high degree of uncertainty (21%). It nevertheless highlights the need to establish women's opinions on male circumcision, which may often be ignored, prior to scaling up any circumcision services. This finding is consistent with findings from the key informant interviews which speak about the need for adequate research into both the impact of the proposed policy on women in general, and also about the acceptability of the procedure amongst women.

Healthcare workers' responses to statements about male circumcision, including opinions on neonatal circumcision, medical versus traditional circumcisions, safety, and the potential for risk compensation, indicate a high degree of uncertainty and suggest under-developed or under-explored opinions on this topic.

To draw on experiences from the implementation of the Choice on Termination of Pregnancy Act (CTOPA) in South Africa, where healthcare workers' personal beliefs about termination of pregnancy (TOP) became a major barrier to implementation (Harrison et al., 2000), it may be useful to consider values clarification workshops amongst healthcare workers about the topic of male circumcision, before implementation of any policy. Such workshops were only conducted after implementation of the CTOPA, but still yielded some benefit (Dickson-Tetteh and Rees, 1999).

Most healthcare workers believe that circumcisions carried out in a medical setting are safer than those carried out in a traditional setting, irrespective of whether they are from a circumcising culture or not. However, healthcare workers from cultures that practice male circumcision at **adolescence or in adulthood** appeared more likely to agree that circumcisions conducted in traditional settings are safe, compared to participants from cultures who practice **neonatal or childhood** circumcision although this difference (25 vs. 0%) was not statistically significant (Fischer's exact p value = 0.068).

These findings indicate both a public and a healthcare worker concern about the health risks of traditional male circumcision. The literature provides evidence that adverse outcomes of traditional male circumcisions are not uncommon (Lagarde et al., 2003; Csete, 2007). Key informant stakeholders spoke about efforts already taking place to improve the safety of traditional circumcisions, particularly regulation of the practice in the Eastern Cape and Limpopo (Application of Health Standards in Traditional Circumcision Act of 2001 and Northern Province Circumcision Schools Act of 1996 respectively). If these initiatives prove successful, then traditional circumcisers may have a role to play in the scaling up of male circumcision services, were a policy to be introduced in South Africa. Traditional circumcision therefore needs to be part of the discussion in the South African context, despite guidelines from the international community that promote the intervention taking place in a medical setting only (WHO / UNAIDS 2007f).

Despite the wide variation in the reported safety of medical circumcision, from 0.2 to 2% (Moses et al., 1998; UNAIDS, 2005) up to 20% (Okeke et al. 2006), several key informant stakeholders reported that they did not have concerns about the safety of the procedure in medical settings in South Africa.

The majority (56%) of all participants disagreed that male circumcision in babies is a form of physical mutilation while 21% reported they were unsure. Notably, 17% of participants **did** agree with the statement, pointing to the fact that these issues need consideration, and providing insight into the human rights considerations raised by those who oppose male circumcision in babies on the grounds of lack of informed consent, freedom of choice and the right to bodily integrity. These concerns have been raised in the literature (Myers and Myers, 2007; Myers and Myers, 2008; ICGI, 2007 and Sidler et al., 2008).

Despite neonatal circumcisions having lower complication rates (Moses et al., 1998), being potentially more cost effective than adult circumcisions, and dealing with the issue of males being circumcised before they are sexually active and at risk of HIV - Connolly et al., (2008) suggest that the protective benefits of male circumcision may be lost if circumcision takes place after males become sexually active - these findings, from a small survey, reveal that the beliefs and opinions about human rights issues cannot be ignored during policy development. This is substantiated by the divided response amongst healthcare workers about it being wrong for parents to decide on behalf of their male children about circumcising them as a baby and whether it is right or wrong for medical professionals to encourage neonatal male circumcision.

Further analysis about beliefs and attitudes towards male circumcision amongst participants in sub-study A from circumcising cultures was conducted according to the stage of development at which male circumcision normally takes place. Participants from cultures that practice male circumcision in adolescence and adulthood appeared more likely to believe that it is wrong for parents to decide on behalf of their male children about circumcising them as a baby, that neonatal male circumcision is a form of physical mutilation and that it is wrong for medical professionals to promote male circumcision in babies. Only the first finding is statistically significant (Fischer's exact p value = 0.002). These findings are not unexpected and could relate to peoples' belief systems which are often firmly entrenched in their cultural and religious practices. Furthermore, the findings imply that the recommended age of circumcision must be carefully considered during development of any potential policy and highlights the fact that male circumcision in infants is not the same as male circumcision in adolescents.

Risk compensation has been debated in the literature with many arguing that male circumcision as an HIV prevention strategy could lead men believing they are not at risk, and therefore engage in risky sexual behaviour such as not using condoms. This consequently increases their risk of HIV acquisition (Cassell et al., 2006; Csete, 2007; Green et al., 2008; Sidler et al., 2008 & Myers and Myers, 2008). Findings from sub-study B highlight concerns around the potential for risk compensation and the vital need for accurate messaging to reduce adverse outcomes. Furthermore, that there is accurate monitoring during implementation to ensure that, for example, condom usage does not decline.

The findings in sub-study A reflect a high degree of uncertainty (21%) about whether male circumcision, as an HIV prevention strategy, will decrease condom use and about even proportions agreed (37%) and disagreed (36%) with the statement. Analyses of this statement according to gender and cultural circumcision practice suggest that females and participants from cultures that **do not** practice male circumcision are more likely to agree with it, compared to men and participants from circumcising cultures. Neither result is statistically significant; Fischer's exact p values = 0.299 and 0.064 respectively. Nevertheless the findings do suggest the critical need to investigate to what extent risk compensation may take place and what impact adopting male circumcision as an HIV prevention strategy will have on women, particularly on women's ability to negotiate condom use and safer sex. Gender experts have noted that negotiating condom use is already difficult for women in some patriarchal societies and that this contributes to a woman's risk for HIV (Varga, 1998; Dunkle and Jewkes, 2007). There is concern that male circumcision as an HIV prevention strategy may further compound this issue. Therefore, further and adequate research into the impact of the proposed policy on women is essential (Sawires et al., 2007; AVAC, undated). This opinion was also expressed by one of the key informant stakeholders who spoke extensively about the need to fully consider and research the potential impact of the proposed policy on women.

4.2.4 Training and willingness to perform or refer for male circumcisions

The vast majority (85%) of healthcare workers participating in sub-study A indicated that they are **not** currently trained to perform male circumcisions; only 9% indicated that they are. This can be explained by the small number of doctors (n=13) in the sample. Nevertheless, it raises concerns for implementation because the findings

also indicate that not all doctors are trained to perform circumcisions; in fact only six (46%) of the doctors in the sample are trained to do so. Furthermore, given the strain on human resources in the public health sector, implementation of the suggested policy may require task-shifting to a different cadre of healthcare worker, such as a qualified nursing sister. Therefore training of both nurses and doctors would be necessary before such a policy could even be considered. The concept of task-shifting in response to the HIV pandemic is evidenced in the literature; it is noted in South Africa's NSP (p 116) and in a WHO / UNAIDS /PEPFAR (2008) document on the recommendations and guidelines on the topic, task-shifting was also raised by some of the key informant stakeholders interviewed.

Findings from sub-study A reflect that high proportions of healthcare workers **would not** be willing to perform male circumcisions, regardless of whether the procedure took place in babies (48%), or in older children and adults (41%). Analysis of the data according to professional position revealed that 58% of nurses, 60% of facility managers and 23% of doctors **would not** be willing to perform male circumcisions in babies, while the same percentage of doctors, 55% of nurses and 50% of facility managers indicated they **would not** be willing to perform male circumcisions in older boys and adult men. These findings have implications for implementation and careful consideration should be given to this issue during any policy development. Consultation amongst healthcare workers will be essential to establish capacity and to promote buy-in.

Encouragingly, 90% of all participants indicated that they would willingly refer male patients and parents to the appropriate services if they were unable or unwilling to perform the procedure themselves. This finding indicates that barriers to implementation such as healthcare workers impeding access to services are not an issue. This is an important finding given the negative attitudes that healthcare workers had towards the CTOP Act in South Africa which proved to be a major barrier in policy implementation (Harrison et al., 2000).

Analysis according to gender indicated that 46% of male respondents were trained to perform male circumcisions compared to only 1.6% of female respondents (Fischer's exact p value <0.001). Differences according to gender were also found regarding willingness to perform male circumcisions in babies or older boys and adult men, with 77% and 85% of males willing to perform male circumcisions compared to 27% and 35% of females respectively (Fischer's exact p values ≤

0.001). However, this was largely related to confounding by professional status with male gender being significantly associated with being a doctor when compared to nurses ($\chi^2 = 22.56$; $p < 0.001$) and facility managers ($\chi^2 = 6.30$; $p = 0.012$). Nevertheless, the findings may be important for implementation, given the considerably higher numbers of female healthcare workers.

The above finding may also be indicative of taboos amongst cultures that practice traditional male circumcision as a rite of passage into manhood, where women play no part in the ritual (Deacon, 2008). An anecdotal example of this was played out in the reticence by some nurses and a facility manager to participate in sub-study A. Nurses (all female) at one facility refused to participate because they did not want to have anything to do with a study about male circumcision; they felt this would be culturally inappropriate. A facility manager at another facility challenged the researcher, citing in particular that it was inappropriate for a female, who is not from a traditionally circumcising culture, to conduct research on male circumcision amongst a largely female healthcare worker population. The nurses and facility manager in question were Xhosa; this culture traditionally practices male circumcision as a rite of passage to manhood and it is considered taboo for a woman to talk about male circumcision. This again suggests how cultural practices and belief systems may play an important role in acceptability and behaviour amongst healthcare workers.

4.2.5 Opinions regarding human rights and male circumcision

The vast majority (89%) of all healthcare workers participating in sub-study A agreed that a patient has the right to refuse to be circumcised, with 53% **strongly** agreeing with the statement. In fact, only 2 people disagreed with the statement. This finding may indicate a growing awareness of ethical and human rights discourses in healthcare, where issues such as informed consent and freedom of choice are being highlighted more frequently. The literature in fact suggests considerable variation in what healthcare workers understand human rights to be (London et al., 2008).

Findings from the key informant interviews in sub-study B reflect a high awareness and understanding of human rights. Issues such as informed consent, freedom of choice and the right to bodily integrity were all highlighted as critical aspects to pay attention to. Consideration of human rights issues is critical in the development of all health policy; and the findings from sub-study A certainly reflect some level of

engagement in this regard; the vast majority (87%) of healthcare workers believe that any policy on male circumcision as an HIV prevention strategy would have to be on an entirely voluntary basis. Indirectly this points to the fact that a mandatory policy would be highly unacceptable and infringe on the human rights of the individual.

The majority of participants (81%) in sub-study A believed that healthcare workers who disagree with male circumcision for personal reasons should be allowed to refuse to do the procedure, indicating another area where awareness of human rights may be increasing. This may be partly due to the experience gained during the implementation of the CTOPA in South Africa, where healthcare workers who did not agree with TOP for personal reasons were permitted to refuse to be part of the procedure (Dickson-Tetteh and Rees, 1999; Harrison et al., 2000). Policy and decision makers must take the rights of healthcare workers into account when planning implementation so as not to encounter the challenges faced during the implementation of the CTOPA, where healthcare workers who opposed TOP as conscientious objectors did in fact undermine access to TOP (Dickson-Tetteh and Rees, 1999).

There was a spread of opinion about whether expecting healthcare workers to perform male circumcisions impacts on their (the healthcare workers) human rights; a fair number (46%) of participants disagreed with the statement, while 32% agreed and 15% were unsure. This variation in opinion is more consistent with the literature cited above about the variation in understanding about what human rights are amongst healthcare workers (London et al., 2008).

The majority (78%) of participants agreed that the national Department of Health should run awareness campaigns about the role of male circumcision in HIV prevention. This highlights the right to benefit from scientific development and therefore suggests that the research findings about the potential role of male circumcision in HIV prevention should be made accessible to all healthcare workers and the general public to enable them to make an informed decision. Once people have the information, they may wish to access male circumcision services and this in turn has implications for implementation, the right to healthcare for all and the right to access safe health care. Notably, while 49% of participants agreed that healthcare workers should promote male circumcision as an HIV prevention strategy, 27% disagreed and 17% were unsure; this again speaks to the need to

clarify values and attitudes of healthcare workers and disseminate accurate scientific knowledge on the subject.

Analyses according to professional position, gender, and circumcision practices within the participant's own culture yielded no significant differences. However, it is noted that males and participants from cultures that **do not** practice male circumcision appeared more likely to agree that healthcare workers should promote male circumcision as an HIV prevention strategy, pointing to a potential higher degree of acceptance of the proposed policy amongst these groups. This in turn may have implications for implementation given the considerably higher number of female healthcare workers and according to whether health facilities are based in traditionally circumcising or non-circumcising communities.

4.2.6 Capacity

Results from sub-study A indicate low numbers of healthcare workers are currently trained to perform male circumcisions, even amongst doctors (46%). This has been discussed in section 4.2.4 above. Other issues relating to capacity form part of the findings from the interviews in sub-study B. Notably, themes such as resources, location of services within the public health system, which cadre of healthcare worker should provide male circumcisions and safety were raised in response to questions about the capacity of the South African public health system to scale up male circumcision services as an HIV prevention strategy.

Several interviewees noted the need for dedicated resources from government if male circumcision services are to be scaled up. This is a critical factor as resources should not be taken from other important health initiatives, particularly programmes that have proven to be effective in reducing HIV infection. Furthermore, health programmes not focusing on HIV / AIDS should not be put at a disadvantage for funding.

Findings from sub-study B reflect opinions that the public sector currently does not have the capacity to scale up male circumcision services, that the system is already overburdened and has high patient loads and human resources shortages. Feasibility issues such as cost, whether there are sufficient healthcare workers who would be willing to be trained to perform male circumcisions and what cadre of healthcare worker this would be were noted. In particular an opinion was expressed that if male circumcision is to be done on a large scale by doctors then it will not be tenable in the

South African context. This raises questions about whether nurses could be trained to perform the procedure and if they are motivated to do so. The findings from sub-study A indicate a relatively low willingness to perform the procedure, even if trained and therefore is an area of concern with regards to implementation.

Furthermore, issues of gender and culture must be taken into account when considering how the policy may be implemented; the majority of healthcare workers are female. This raises the question of how the healthcare system could, for example, expect Xhosa women (for whom it is taboo to even talk about male circumcision) to perform circumcisions on young men? Or how non-Xhosa African women could circumcise Xhosa or Zulu men? These will be major challenges to address and overcome for successful implementation.

Conflicting opinion about capacity is noted; one respondent in sub-study B argued that despite health services already being overburdened, the benefits of introducing male circumcision as a possible HIV prevention strategy would make it a worthwhile option. This informant argued that a costing exercise presented at a WHO meeting held in Nairobi in 2007 about Operations Research shows that investing in male circumcision now will have a significant long-term benefit - in terms of reducing new HIV infections and the related costs. The costing exercises were conducted in Swaziland, Lesotho and Zambia and assume that male circumcision provides a 60% protective effect from HIV. Notably this is the outer extent of effectiveness shown in the RCT which reported the highest protective effect (Auvert et al., 2005). Commentary in the literature calls for more accurate cost benefit analyses to be conducted where the true cost of complications associated with male circumcision is taken into account (Green et al., 2008).

4.3 Limitations of the study

Sub-Study A was a cross-sectional descriptive study conducted amongst healthcare workers in the Western Cape. The sample size was small, and therefore the findings may not be generalisable to the general population. Furthermore, the small sample size may have been the reason that some of the associations were not significant because there was not sufficient power to show an association. The study took place in the Cape Town metro region, whose population is unique and not representative of the different race or ethnic groups within South Africa. The results are therefore in the context of the Cape Town metro cultural, religious and racial

practices. Participants had to willingly agree to take part in the study, which focused on a potentially sensitive topic. This may introduce selection bias; particularly in the cases where healthcare workers who felt the topic to be culturally sensitive refused to participate. This may have impacted the findings; the acceptability of male circumcision as an HIV prevention strategy amongst healthcare workers and the willingness to perform male circumcisions or to refer to appropriate services may in fact be lower than what the study results have indicated because the opinions and attitudes of those that oppose the proposed policy have not been included.

Sub-Study B was a qualitative study of key informants and was not meant to be representative. The sampling technique for the interviews with key informant stakeholders was purposive which may introduce selection bias as other potential stakeholders may have been excluded from the sample. Nonetheless, the empirical information gained from both the sub-studies serves as a starting point for further research into the topic and provides insight that may be used to inform the policy analysis which follows in chapter 5.

Finally, research into male circumcision and its' relationship to HIV prevention is a rapidly evolving field; new literature and articles were published continuously throughout the time this study took place. It is therefore possible that not all new data has been included in this study.

4.4 Conclusion

The dominant findings from sub-study A reflect that healthcare workers have good knowledge of conventional HIV prevention strategies that are centred in behaviour change, but that there are low levels of awareness of the potential role of male circumcision in HIV prevention. Furthermore, factors such as the participants' own cultural practices and gender may impact on their beliefs and attitudes towards male circumcision which, in turn, can influence their practice in terms of what they do or what they tell their patients. Therefore in the absence of very clear guidelines, healthcare workers' own beliefs will greatly influence what patients are told and what management they will receive.

The findings reflect that not all doctors are trained to perform male circumcisions and that very few nurses are. Furthermore, there is a relatively low willingness to perform the surgical procedure, more so amongst nurses and facility managers than

amongst doctors, regardless of the age at which the circumcision takes place. These findings have critical implications for implementation. The vast majority of participants are willing to refer patients to appropriate services if they are unwilling or unable to perform circumcisions themselves, indicating that negative attitudes of healthcare workers should not be a major barrier to access. Nonetheless values clarification during awareness campaigns would still be beneficial to obtain buy-in from healthcare workers. There appears to be a high awareness of human rights issues amongst healthcare workers; the vast majority of participants indirectly note that any proposed policy would need to be done on a voluntary basis, and thus respect the rights to informed consent and personal choice.

The dominant findings from sub-study B reflect that key informant stakeholders, who are experts from various relevant fields, do believe that male circumcision should be explored as a potential HIV prevention strategy. They do however note a number of caveats, in particular emphasizing further research into the impact on women, the need for accurate messaging and communication on the topic, and that it should only ever form part of a comprehensive prevention package where proven and accepted methods remain in place. In particular, the fact that it provides an opportunity to engage with men about sexual and reproductive health issues was noted as a major positive factor.

Issues around traditional male circumcision were raised, in particular that it will not be possible to only talk about medical male circumcision, but that traditional circumcision must form part of the discussion in the South African context. Coupled to this is addressing safety issues and collaboration with traditional leaders and research to determine whether promotion of medical male circumcision will be acceptable in communities that practice traditional male circumcision, or whether the policy may be resisted due to high social significance being placed on traditional rituals.

Insights into the capacity of the public health sector to deliver revealed some encouraging findings; it would be possible to offer male circumcision services in an outpatient, primary health care setting and nurses could feasibly perform the procedure and be trained with relative ease. However, an over-burdened and short-staffed public sector remains a concern. The need for dedicated resources from national government was noted as essential, thus ensuring that resources are not withdrawn from other existing and important health services.

Concerns around risk compensation were highlighted, together with any potential negative impacts on women. The key informant stakeholders all displayed a high awareness of human rights issues, in particular the freedom of choice and the right to informed consent and bodily integrity

The following chapter continues to work through the study objectives, by applying a human rights impact assessment that will carefully consider all the human rights implications at stake, and draw on primary data from the two sub-studies discussed above, and secondary findings from the literature.

University of Cape Town

5 SUB STUDY C – POLICY ANALYSIS

5.1 Introduction

One of the key objectives of this dissertation is to consider the human rights implications of adopting male circumcision as an HIV prevention strategy in South Africa. In the context of developing public health policies, Gostin and Mann (1999) point to the need for an analytic tool that experts working in the fields of public health and human rights can apply to systematically evaluate the impact of public health policies on human rights, and to enable collaboration between the two fields. Such a framework will be applied to the proposed policy of scaling up male circumcision services as an HIV prevention strategy in South Africa. The policy analysis applies a step by step process to thoroughly examine the proposed public health policy and draws on primary data from sub-studies A and B, and secondary data from the literature.

5.2 Policy Analysis

5.2.1 Step 1: Clarify the public health purpose

The aim of the proposed public health policy of scaling up male circumcision services in South Africa is **to reduce the transmission of HIV in the population.**

The UNAIDS 2007 AIDS Epidemic Update provides evidence of an estimated 33.2 million (30.6 – 36.1 million) people living with HIV / AIDS worldwide. Furthermore, over 6 800 people become infected with HIV and over 5 700 people die from AIDS daily. The majority of cases of HIV / AIDS are found in sub-Saharan Africa where AIDS is the leading cause of death (UNAIDS, 2007). In South Africa, in persons above the age of 2 years, HIV prevalence is estimated at 10.8% and the annual HIV incidence is estimated at 2.7% (Shisana et al., 2005).

The South African government ambitiously aims to reduce the number of new infections of HIV to half by 2011 (NSP, p 53). Given the alarming statistics on HIV / AIDS, it is clear that HIV prevention must be a priority on the public health agenda. Until now, HIV prevention strategies appear to have had limited success in South Africa; this is borne out in the ongoing high incidence.

Therefore, and given the results of the three RCTs conducted in sub-Saharan Africa which show a protective association between male circumcision and HIV infection, exploration into the potential role that male circumcision may play in HIV prevention is indeed a compelling and necessary public health objective.

5.2.2 Step 2 (i): Evaluate the likely effectiveness of the policy

Three independent RCTs conducted in sub-Saharan Africa point to an estimated 60% protective effect of male circumcision on HIV infection (Auvert et al., 2005; Bailey et al., 2007; Gray et al., 2007). Numerous observational studies reflect a similar protective association (Westercamp and Bailey, 2007) and results from a systematic review and meta-analysis of observational studies conclude that male circumcision is associated with a significant reduction in HIV infection amongst men in sub-Saharan Africa; crude RR = 0.52, CI 0.04 – 0.68 (Weiss et al. 2000). The latest Cochrane review on the topic by Siegfried et al. (2009) reports the literature provides compelling evidence to show that medical male circumcision reduces the risk of HIV infection in heterosexual men by between 38 and 66 per cent, over a 2 year follow up period, that the incidence of adverse effects is very low and that the inclusion of male circumcision into current HIV prevention strategies is justified.

However, not all the evidence supports the above findings and the conflicting opinions of academics and experts in the field do flag warning signals, making it difficult to predict the actual effectiveness of the proposed policy in practice, compared to experimental conditions which test efficacy.

Concerns raised about the true effectiveness of the proposed policy include:

1. Concerns about insufficient data from the RCTs for a real-world setting, as noted by Green et al. (2008) who allude to the fact that effectiveness in a trial setting does not necessarily translate to effectiveness in a programme. This is supported by Myers and Myers' (2008) contention that the discordant findings in the literature are difficult to interpret and that, despite RCTs being theoretically strong in study design, their findings may not be generalisable beyond their settings. Lack of generalisability is an accepted limitation of RCTs and highlights the need for a trial of effectiveness, rather than studies that are solely about efficacy.

2. While there is evidence to show the benefits of male circumcision for men, there is no evidence to show that it benefits women. Furthermore, some evidence suggests that male circumcision may even place women at an **increased risk** of HIV infection (Wawer et al., 2008). Given the disproportionate burden of HIV / AIDS that women in sub-Saharan Africa bear, (Dunkle and Jewkes, 2007) this is a concern.
3. Concerns about risk compensation which could reduce the protective effect of male circumcision on HIV transmission and result in a paradoxical increase in HIV transmission, rather than the expected decrease (Csete, 2007). Evidence suggests that circumcised men in South Africa are more likely to believe that they can safely have sex with many women and a significant association was found between circumcision status and a higher reported number of lifetime partners (Lagarde et al., 2003) while circumcised men in Uganda were more likely to engage in high HIV risk behaviours compared to their uncircumcised counterparts (Westercamp and Bailey, 2007). In contrast, five studies (including the 3 African RCTs) consistently report risk compensation as essentially absent after circumcision (Auvert et al., 2005; Bailey et al., 2007; Gray et al., 2007; Agot et al., 2007; Mattson et al., 2008). However, commentary on behavioural disinhibition in the 2009 Cochrane review notes that in the South African RCT, men from the circumcised group displayed more risky sexual behaviour compared to their uncircumcised counterparts, that circumcised men in the Kenyan and Ugandan RCTs were consistently more sexually active than men in the uncircumcised group, and that circumcised men from the Kenyan RCT consistently engaged in unprotected sex (Siegfried et al., 2009). The authors noted that despite the increase in risky behaviour, male circumcision remained protective for men within the 2-year period of the RCTs. However, this evidence cannot be used to argue for a protective effect persisting beyond 2 years.
4. Male circumcision is a surgical procedure associated with potential complications and adverse outcomes; the complication rates of male circumcision are contested in the literature; from 0.2 to 2% (Moses et al., 1998; UNAIDS, 2005) to 20% (Okeke et al. 2006).

Such concerns appear reasonable in light of the pressure to rollout mass male circumcision programmes. Furthermore, evidence from a recent cross-sectional study reflects that HIV and circumcision are not associated (Connolly et al. 2008). Notably the authors did report a protective association in a sub-group of men, who were circumcised before they became sexually active. This suggests that initiation of sexual activity before male circumcision for cultural reasons may have negated any protective effect and raises the question of what the best age for male circumcision is, with respect to effectiveness for HIV prevention. In addition, evidence cited by Green et al. (2008) from ecological studies conducted in the United States of America (USA) reflect no statistical differences in HIV prevalence among circumcised and uncircumcised males - in both heterosexual and homosexual men; and no benefit of male circumcision on HIV infection in high risk groups.

The lack of research into the impact of male circumcision on women is a justifiable concern, particularly because women bear a disproportionate burden of HIV / AIDS in sub-Saharan Africa. Mathematical modelling about indirect benefits to women is insufficient to base decision-making on and the trial indicating a detrimental impact on women cannot be taken lightly. Notably, if all couples complied with behavioural measures (i.e. no sexual intercourse until circumcision wound has completely healed), then the increased risk for women may be avoided. However, like condom usage, behavioural interventions are difficult to predict and control. The whole attraction of male circumcision as an HIV prevention strategy is that it would supposedly remove the element of behavioural compliance. However, the results from the Ugandan study (Wawer et al., 2008) and the behavioural disinhibition noted in all three RCTs (Siegfried et al., 2009) make it clear that you can hardly ever get an HIV intervention that is devoid of the need for behavioural compliance. Moreover, behavioural disinhibition was noted in all three RCTs despite extensive safe sex counselling as part of the protocol.

Such extensive counselling would be difficult to replicate in a real-world setting and poorly implemented male circumcision programmes, where inadequate counselling is given, may in fact undermine messages about HIV risk reduction if men believe they can safely have more sexual partners without putting themselves at risk of HIV. An anecdotal example is taken from a quote by a Rwandan man, who accessed recently scaled up male circumcision services in that country. He is quoted as saying that "*For me, I believe that when you make circumcision, it's like an invisible condom*" (PlusNews, 2009). If such an opinion is widespread, then it calls into

question the likely effectiveness of the proposed policy in the long term. Findings from sub-study A reflect a high degree of uncertainty and divided opinion about whether male circumcision will decrease condom use, suggesting the need for research into the true impact that adopting male circumcision as an HIV prevention strategy could have on men and women, particularly on women's ability to negotiate condom use and safer sex.

Findings from sub-study B, which are echoed in the literature, highlight concern around a potential increase in gender-based violence if risk compensation makes condom negotiation even more difficult for women. In communities where gender inequalities exist, male circumcision could potentially lead to reduced condom use and more difficulty in negotiating condom use for women therefore hindering HIV prevention, rather than assisting it.

Findings from sub-study A suggest that, in general, healthcare workers in South Africa have a low awareness about the potential role of male circumcision in HIV prevention and a relatively low belief in male circumcision as an HIV prevention strategy. Addressing this is important in terms of gaining buy-in from healthcare workers because their beliefs and behaviour may impact implementation and hence the overall effectiveness of the proposed policy.

Proponents for and against adopting male circumcision as an HIV prevention strategy have noted that public health effectiveness is contingent on accurate messaging to communicate the concept of risk reduction compared to risk elimination. However, the challenge remains in exactly how this is done and the resources and training required. The majority of participants from the healthcare worker survey believed that circumcised men must still be counselled about correct and consistent condom use and that male circumcision is only one part of potential prevention strategies to reduce HIV risk. Therefore, healthcare workers in South Africa could play a significant role in disseminating accurate information about the partial protective effect of male circumcision. Findings from the interviews with key informants indicate a high awareness that male circumcision could only ever form part of a comprehensive HIV prevention package and note the limitations of what such a strategy could be expected to achieve.

Male circumcision does not reverse HIV status; this message must be accurately communicated to men and the general public. WHO / UNAIDS guidelines for male

circumcision do not recommend that HIV positive men should be circumcised, but note that refusal, unless medically contraindicated, would be discriminatory (WHO / UNAIDS, 2007f). Requiring all men who request male circumcisions to test for HIV may present multiple challenges which must be taken into account; firstly because of stigma-related issues and the potential for discrimination, and secondly because this will exponentially increase the uptake of VCT services, therefore requiring improved access to services, and additional capacity and resources. Furthermore, the necessary counselling about delaying sexual intercourse until complete wound healing and the need for ongoing condom use must be considered; failure to address these issues effectively will negatively impact the likely effectiveness of the proposed policy.

Male circumcision is a practice steeped in culture and religious belief. In non-circumcising communities, the proposed policy may not reach high numbers of men as they, or their female partners, may not find it culturally acceptable. The literature does report relatively high levels of acceptability (Westercamp and Bailey, 2007), however this is still important to consider because to improve the likely effectiveness of the policy there needs to be adequate coverage.

In communities that practice male circumcision for cultural reasons, the issues are different; high social significance is attached to the traditional rituals and promotion of medical male circumcision may be a disincentive. Essentially, the safety concerns around traditional male circumcision are a problem entirely unrelated to HIV prevention, unless the policy were to explicitly promote it (WHO / UNAIDS guidelines **do not** promote traditional male circumcision) or if the policy leads indirectly to an increased uptake of non-medical male circumcision.

In addition, effectiveness of the proposed policy is contingent on targeting appropriate communities with accurate information about the partial protective benefit of male circumcision. Failure to do so may result in risk compensation amongst men who are already circumcised which could, in turn, reduce the likely effectiveness of the proposed policy.

The costs of male circumcision services and capacity issues must be taken into account, including the costs and logistics of scaling up VCT and counselling services. Findings from sub-study B reflect that the procedure could take place on an outpatient basis, in a primary health setting and therefore the costs should not be

prohibitive. However, the capacity of an already over-burdened public service was also noted as a concern, and should not be ignored. The necessity for designated funding was raised to ensure that resources are not taken away from other critical health services.

Findings from sub-study A indicate that not all doctors are trained to perform male circumcisions; only 46% of doctors were trained to do so. Therefore, task-shifting to enable nurses to perform the procedure needs consideration. In addition, willingness to perform the procedure amongst nurses must be taken into account; the findings from sub-study A reflect that this is low. Furthermore, the considerably higher proportion of female healthcare workers in the work force must not be forgotten and capacity issues for implementation must consider whether training of female nurses will be worthwhile if the cultural issues around social taboos are not addressed.

Nearly all participants were willing to refer potential patients and parents to male circumcision services if unable or unwilling to perform the procedure themselves. These findings inform the likely effectiveness for implementation in two ways; firstly they point to the fact that negative attitudes of healthcare workers towards the policy should not be a major barrier to effective implementation, and secondly highlight the fact that training, task-shifting, human resource shortages and addressing cultural taboos are important factors to consider. Failure to address these issues adequately may have a negative impact on implementation and hence reduce the likely effectiveness of the proposed policy.

The cost effectiveness of male circumcision for HIV prevention in South Africa has been considered in a Cost Benefit Analysis by Kahn et al. (2006) who concluded that the costs of scaling up male circumcision services are significantly less than the costs associated with treating the number of HIV infections that could have been averted by the proposed policy. The authors note that adult male circumcision is likely to be a cost effective prevention strategy in countries where HIV is highly prevalent in the general population, such as sub-Saharan Africa and contend that this will be the case even if there is low coverage of male circumcision (Kahn et al., 2006). Intervention costs included the costs to perform the procedure and treat adverse events, but not the costs for training, physical infrastructure, safe sex counselling and ongoing condom use. The analysis assumed 100% coverage of male circumcision which would never be the case in reality and assumed the rate of effectiveness of the policy as 60%; notably this is the upper end of one of the three

RCT study findings. Effectiveness was defined as the number of HIV infections averted and included secondary transmission to women; notably the latter is based on mathematical modelling and there is no evidence to show a direct benefit. The model did factor in increased risk due to risk compensation and a sensitivity analysis was applied, however it did not take into account the fact that in a trial setting, study subjects may be exposed to one programme but in real life people are exposed to many such programmes, in various combinations. Therefore it is difficult to assume that what works for a single vertical programme is the same in a real-world setting, where people are exposed to multiple different programmes. Thus the costs of scaling up male circumcision in South Africa cannot be viewed in isolation and need to be considered in the context of limited resources, an already over-burdened public sector, and the need to maintain the costs of other critical HIV prevention services such as condom distribution, the PMTCT programme, VCT, and school-based education programmes.

The Cost Benefit Analysis by Kahn et al. (2006) suggests that male circumcision, at a cost of US\$ 181 per HIV infection averted, is one of the more economically efficient prevention options for sub-Saharan Africa, citing costs per HIV infection averted with other programmes such as US\$ 68- US\$ 79 for peer education programmes for sex workers, US\$ 58 for mass media, US\$ 10 – US\$ 2,188 for condom distribution, US\$ 393 - US\$ 482 for voluntary counselling and testing (VCT), US\$ 20 – US\$ 2,198 for prevention of mother to child transmission (PMTCT) programmes and US\$ 7,288 – US\$ 13,326 for school-based education programmes. The very wide estimates for condom distribution and PMTCT programmes are noted. It is clear from all the literature and recommendations from UNAIDS and WHO that the scaling up of male circumcision is not going to be effective as a stand-alone strategy for HIV prevention, and rather that it needs to form part of a comprehensive prevention package. This notion is supported by the findings from both sub-study A and B.

Safety issues and adverse outcomes associated with male circumcision cannot be ignored. If services are not provided in a sterile setting, or if service providers are inadequately trained, the impact of adverse outcomes will negatively impact the likely effectiveness of the proposed policy.

On balance, there is evidence that male circumcision offers about a 60% protective effect for HIV acquisition amongst men; this is supported by the latest Cochrane

review on the topic (Siegfried, et al., 2009). However, there is some evidence that male circumcision could adversely impact on women's risk and that the 60% protective effect may be reduced or even nullified by risk compensation and by the increased risk of male to female transmission if intercourse is resumed before wound healing. Conflicting opinion and evidence in the literature, together with findings from sub-study A and B, suggest the need further research is into the true effectiveness of the proposed policy in the general population in a real-world setting, and to assess the true impact on women. Operational research is required to assess if the public health sector can cope with the add-on of another service and resource allocation must be considered to ensure that resources are not drawn away from other essential prevention programmes. Failure to address any of these caveats may compromise the likely effectiveness of the proposed policy.

5.2.3 Step 2 (ii): Is there an alternative / better approach?

Evidence from the literature on alternative prevention strategies suggests that campaigns that promote safer sex behaviours have been successful in achieving a high reduction in the number of HIV infections, without the surgical risks associated with male circumcision and at a much lower cost (Green et al. 2008). In particular, success stories of such approaches in largely non-circumcising countries have been reported in Uganda, Thailand and Brazil where the ABC approach (Abstinence, Be Faithful, Condomise) has been adopted; Shelton et al., (2004) report a decline in HIV prevalence in Uganda from 15% to 5% through the ABC approach. Such interventions are considerably less invasive than the proposed policy of male circumcision and may be more effective; condoms have been shown to be 80% effective if used consistently and correctly (Weller and Davis, 2003). Even if a man is circumcised, he still needs to be counselled about safe sex behaviours and have access to condoms. Therefore, the costs of behaviour change programmes and condom distribution remain a necessity, particularly in the context of limited resources and over-burdened health services.

Despite the compelling evidence for condom use in preventing HIV, concerns around gender equity have been noted. In particular, women in patriarchal societies have difficulty in negotiating condom use (Varga, et al., 1993). The point to note is that some of the suggested alternatives to male circumcision, such as behaviour change and condom use may in fact suffer from similar problems as the proposal of male circumcision, for example gender inequalities.

There is opinion that multiple concurrent partnerships may contribute to the high number of HIV infections in South Africa, together with factors such as high degrees of alcohol and substance use, and transactional and intergenerational sex (Parker et al., 2007). Campaigns for behavioural change that take these drivers into account and promote messages of partner reduction and risk awareness may be successful in reducing HIV infection in South Africa. Shelton et al. (2004) suggest that without multiple concurrent sexual partnerships, an HIV epidemic would not occur. The authors suggest that while the Abstinence and Condom components of the ABC approach adopted in Uganda had a role to play in reducing HIV prevalence in that country, partner reduction contributed a significant impact to the success of the campaign; there was a reported 35% to 15% drop in casual sexual partnerships amongst men and a 16% to 6% drop amongst women, while proportions of men reporting 3 or more non-regular partners dropped from 15% to 3%. Mathematical modelling suggests that partner reduction to such a degree would have had a significant impact on HIV incidence (Shelton et al., 2004).

When widely available, highly active retroviral therapy (HAART) has been shown to reduce heterosexual transmission of HIV by about 80%, irrespective of changes in other factors that impact transmission (Castilla et al., 2005). This is because HAART suppresses the viral load (Quinn et al., 2000) and therefore lowers infectivity. PMTCT programmes are a critical part of HIV prevention; treatment of the pregnant mother and the baby with ART has been shown to be highly effective and cost efficient (Coetzee et al., 2005). Bringing male circumcision into the prevention package should in no way undermine these critical programmes, nor draw valuable resources away from them.

It may be also be worth noting that the HIV pandemic in South Africa has lacked decisive leadership from government. Bateman (2007) reviews work by Nicoli Nattrass about the AIDS denialism which dominated the Mbeki era, coupled with reticence to implement PMTCT and ART programmes; opinion suggests this has had serious consequences on the state of the pandemic in South Africa. Prevention messaging, behavioural change, and PMTCT and ART programmes may not have been given a real chance and therefore may not have been as effective as they could have, had the messaging been strongly endorsed by the country's leaders. Strong and open leadership by the Ugandan government has been attributed as a key factor in the success of HIV prevention programmes in that country (Shelton et al., 2004). With elections in April 2009, the political landscape in South Africa is

about to change and may present an opportunity to gain governmental buy-in and endorsement of conventional behaviour change programmes and messaging. Opting for male circumcision as a high technology solution may undermine this.

The key issue to consider here is that there **are** alternative options for HIV prevention that may be more effective, more cost effective, less invasive and less restrictive on human rights than male circumcision and that the money spent on rolling out male circumcision services may be better spent on improving the delivery of these other interventions.

5.2.4 Step 3: Is the public health policy well targeted?

The proposed policy currently targets men only. Evidence from the RCTs clearly identifies that the protective effects of male circumcision on HIV transmission apply to a heterosexual population and refers to female-to-male transmission only. Current evidence suggests this policy does not target women or other high risk groups, such as men who have sex with men (MSM) and sex workers and therefore further research into the impact within these groups is required.

The proposed policy targets sub-Saharan Africa, but developed countries are not adopting male circumcision as part of their HIV prevention strategies; Australia and France have stated that male circumcision has no role to play in the HIV epidemic in their countries (Sidler et al., 2008). HIV prevalence may be low and the drivers of the epidemic may be different in developed versus developing countries; however one should perhaps question why male circumcision is being so strongly advocated as a solution for the sub-Saharan pandemic and not for developed countries? Are developed countries, which may have devoted large amounts of funding to fight HIV / AIDS in sub-Saharan Africa, disillusioned by the small amounts of progress made with regards to HIV prevention? Is male circumcision considered an easier option compared to overcoming the challenges relating to social dynamics and behaviour change in sub-Saharan Africa?

That the policy does not target at women at all is concerning, especially in the context of women's vulnerability to HIV infection; African women are the group that is most severely affected by HIV and AIDS in the world (Dunkle et al., 2004). Mathematical modeling predicts some indirect benefit to women over time, as the prevalence of HIV and other STIs reduces over time (Williams et al., 2006) but these

effects are secondary and refer to potential long term benefit. The concerning results of the impact on women in the Ugandan study by Wawer et al. (2008) have been discussed and indicate the need for HIV prevention strategies that include, rather than exclude, women.

There has been little research conducted on the impact of male circumcision on HIV transmission amongst men who have sex with men (MSM). An ecological study in the USA reflected no statistical differences in HIV prevalence among circumcised and uncircumcised males, in both heterosexual and homosexual men (Green et al., 2008). MSM are a high risk group for HIV and are also a vulnerable group due to potential discrimination based on their sexual orientation. Findings from sub-study B indicate that specific messaging is required for MSM; specifically that male circumcision has not been shown to be protective role for HIV risk reduction within this group and that that further research in this area is therefore necessary.

In the context of a human rights approach to policy analysis, the question needs to be asked whether the lack of targeting of high risk, vulnerable groups such as women living in patriarchal societies in sub-Saharan Africa and homosexual men is discriminatory. At the very least, it highlights the need for improved targeting and ensuring that male circumcision is only ever considered as one part of a comprehensive HIV prevention package, and further research into the true impact of the proposed policy on women.

Gender norms around masculinity mean that men may be less likely to seek healthcare (Csete, 2007; AVAC, undated). Men need to present to clinics to access male circumcision, therefore the proposed policy may not reach high risk heterosexual men who are resistant to seeking healthcare and this needs to be taken into account.

To summarize, the proposed policy targets men only, whose uptake of healthcare services is recognised as low; the discussion above makes it clear that a comprehensive approach to HIV prevention needs to go beyond this. Women must be included in HIV prevention policies, together with high risk and vulnerable groups. Furthermore, culture and gender norms must be taken into account to fine tune how different messages for different target audiences be developed - to ensure dissemination of accurate information.

5.2.5 Step 4: Examine the policy for human rights benefits and burdens

Since there is no actual policy to work from as the National Department of Health is still developing such a policy, this process will assist in determining what human rights are at stake and what is necessary to ensure that the proposed policy **respects** (i.e. does not violate), **protects** (i.e. protects violation from a third party), **promotes** (i.e. awareness and education, and information on how to access justice) and **fulfils** (i.e. action to provide) these rights. This section first examines the human rights benefits and burdens of all affected parties which may then be balanced by considering alternative policies that may be less restrictive, whether there is sound epidemiological and empirical evidence to support the proposed policy, and whether fair administrative procedures have been applied.

The human rights at stake are noted in Table 5.1 below, together with the instruments that affirm and uphold these rights.

Table 5.1: Human Rights at stake and relevant Human Rights Instruments

HUMAN RIGHT	INSTRUMENT
Right to Dignity and Autonomy	<ul style="list-style-type: none"> • The preamble to The Universal Declaration of Human Rights; • The preamble to the International Covenant on Civil and Political Rights; • The preamble to the International Covenant on Economic, Social and Cultural Rights; • The African Charter on Human and People's Rights, article 5; • The South African Bill of Rights, article 10, as an explicit right.
Right to Life	<ul style="list-style-type: none"> • Universal Declaration of Human Rights, article 3; • The International Covenant on Civil and Political Rights, article 6; • The African Charter on Human and People's Rights, article 4; • The South African Bill of Rights, article 11.
Right to Equality and Freedom from Discrimination	<ul style="list-style-type: none"> • Universal Declaration of Human Rights, article 2; • The International Covenant on Civil and Political Rights, article 26; • The African Charter on Human and People's Rights, article 2, 3 & 19; • The South African Bill of Rights, article 9.
Right to Freedom of Opinion, Belief and Religion	<ul style="list-style-type: none"> • The Universal Declaration of Human Rights, article 18; • The International Covenant on Civil and Political Rights, article 18; • The African Charter on Human and People's Rights, article 8; • The South African Bill of Rights, article 15.
Right to Health Care	<ul style="list-style-type: none"> • The Universal Declaration of Human Rights, article 25 • The International Covenant on the Economic, Social, and Cultural Rights, article 12 which states that everyone has the right to "<i>the highest attainable standard of physical and mental health</i>"; • The African Charter on Human and People's Rights, article 16 which states "<i>...that every individual shall the right to enjoy the best attainable state of physical and mental health</i>" and notes the obligation of party States to take the "<i>necessary measures to protect the health of their people</i>"; • The South African Bill of Rights, article 27 which states in section 1(a) that "<i>...everyone has the right to have access to health care services</i>"
Right to Access of Information	<ul style="list-style-type: none"> • The Universal Declaration of Human Rights, article 19; • The International Covenant on Civil and Political Rights, article 19; • The African Charter on Human and People's Rights, article 9 (1); • The South African Bill of Rights, article 32;
Right to Benefit from Scientific Progress and its Applications	<ul style="list-style-type: none"> • The International Covenant on the Economic, Social, and Cultural Rights, article 15.
Right to Just Administrative Action	<ul style="list-style-type: none"> • The South African Bill of Rights Article 33.
Rights of the Child	<ul style="list-style-type: none"> • The South African Bill of Rights Article 28, which in particular cites that "<i>Every child has the right.... to be protected from abuse or degradation</i>"

5.2.5.1 The Rights of Men

Right to Autonomy

Findings from both sub-study A and B and evidence in the literature, including recommendations by WHO / UNAIDS (2007f), indicate that the proposed policy could only ever be possible on a voluntary basis. Mandatory circumcision could never be enforced and accurate information is vital to ensure true informed consent. A policy that upholds confidentiality, enables access to accurate information, and allows all men and male adolescents free choice about becoming circumcised respects and promotes their right to autonomy. However, if the policy led to increased child and neonatal circumcision through, for example, parents electing to circumcise their male babies because of the policy and publicity, then this would infringe on a child's right to autonomy and freedom of choice. Policy development should therefore include a mechanism to monitor any increase in neonatal male circumcision. Methods to limit or prevent this problem would require additional financial and human resources.

Right to Dignity

Male circumcision in Africa is closely linked with tradition, ethnicity and culture and therefore human dignity is also at stake. If men are given the freedom of choice to decide whether they want to be circumcised or not, then their right to dignity will be upheld. A valid concern is whether rollout of voluntary medical male circumcision may undermine some cultural practices. This may impact negatively on the dignity of men from traditionally circumcising communities. Therefore, policy development needs to take traditional circumcision into account and consultation with communities that practice traditional circumcision is essential to ensure that the proposed policy of medical circumcision is structured in such a way as to minimize any negative impact and that there is a mechanism to monitor this during implementation.

Right to Freedom of opinion, belief and religion

Male circumcision is a practice steeped in culture and religion. Men have the right to freedom of opinion and belief about circumcision. Any policy for rollout of male circumcision as an HIV prevention strategy must respect this right and voluntary choice and informed consent are essential. Mandatory policies or coercion, in any form, to get men to become circumcised must be avoided at all costs. Failure to do so would impact negatively on men's freedom of opinion, belief and religion.

Notably, in some communities where traditional male circumcision is practiced, some men are forced to become circumcised against their will due to cultural practice. This provides insight into how forced or mandatory circumcision could have a negative impact on the rights of autonomy, dignity and freedom of opinion, belief and religion. An example of this is a landmark court case where a young Xhosa man is suing his father and traditional leaders after he was abducted and underwent forced circumcision (Sunday Times, 27 January 2008). The youth believes he has become involved in a collision between individual rights and tradition and his case seeks a court order forbidding circumcision without consent.

Right to Life

If the policy were to lead to men or children being circumcised, without giving their fully informed consent, then any deaths resulting from either medical or traditional male circumcisions would be arbitrary and contravene the right to life. Therefore policy development needs to carefully consider how the rollout of male circumcision will be implemented in practice and to ensure that the right to informed consent and freedom of choice are respected, and mechanisms put in place to prevent coercion to become circumcised. Furthermore, even if the complication rates from medical male circumcision are low, mass circumcision programmes will result in a small number of deaths that would otherwise not have occurred; this contravenes the right to life.

Developing a policy to introduce medical male circumcision as an HIV prevention strategy may provide an opportunity to engage with traditional circumcisers on the matter and work towards training, provision of sterile circumcision kits and accreditation requirements as has occurred in the Eastern Cape and Limpopo, these provinces have reportedly reduced the number of adverse outcomes associated with traditional male circumcision. This would promote the right to life through making traditional circumcisions less hazardous.

Right to Equality and Freedom from Discrimination

Introducing male circumcision as an HIV prevention strategy may result in potential negative impacts for men who choose not to become circumcised because they could potentially be discriminated against by healthcare workers and others in the community who believe all men should become circumcised in response to the HIV pandemic; this could potentially amplify culturally-based hostility and discrimination against non-circumcising men. Therefore the policy must clearly allow for protection

from discrimination for men who elect not to be circumcised; failure to do so would infringe on their right to freedom from discrimination.

The WHO / UNAIDS guidelines (2007f) suggest that men who are already HIV positive should not become circumcised and there is no research to show any benefit of circumcision and HIV transmission amongst men who have sex with men (MSM). HIV positive people and MSM are vulnerable groups who may be subject to discrimination. Therefore, HIV positive men or MSM presenting for male circumcision should not be turned away; this would be discriminatory and infringe on their rights to equality and freedom from discrimination. In addition, adequate counselling is required so that HIV positive men understand that becoming circumcised will not reverse HIV status and that MSM understand that present research does not indicate any protective benefit of male circumcision in HIV prevention. A policy addressing these issues will promote and protect the rights of all men.

Right to Health Care

The South African Bill of Rights cites the right to access healthcare services, including reproductive health care for both men and women. In addition, the South African NSP aims to halve the number of new HIV infections by 2011. This speaks to the obligation of the state to meet the challenge of the HIV pandemic. Therefore a policy that explores access to male circumcision in a safe and sterile setting promotes and fulfils the right to health care for men.

Notably, the proposed policy offers a key opportunity to better access men in a healthcare setting. Findings from sub-study B and opinion in the literature note that it is notoriously difficult to access men about health issues, particularly sexual health issues. Therefore this opportunity to access men on health topics such as HIV risk, VCT, safe sex behaviour, STIs, and even gender inequality, provides a unique chance to improve the overall health status of men and therefore promotes and fulfils the right to health care. However, if funds are taken from other health programmes to support male circumcision programmes, then this may lead to decreased access to health care.

Right to Access of Information

Men are entitled to know about the potential role that male circumcision may play in HIV prevention. They must however receive accurate information; namely that male

circumcision may be *partially protective* in HIV transmission and that, even if men do become circumcised, they still need to practice safe sex and use condoms correctly and consistently. If the correct and complete message is accurately disseminated to all men, the right to access of information will be upheld.

Right to Benefit from Scientific Progress and its Applications

The results from the RCTs reflect potential beneficial results for men in terms of reducing the transmission of HIV. Men have the right to benefit from these results and to have accurate information about the limitations of the intervention. Therefore exploration into a policy for potential rollout of male circumcision upholds this right.

5.2.5.2 The Rights of Women

Right to Equality and Freedom from Discrimination

Women are an already vulnerable group in society, particularly in Africa where gender inequality is pervasive and adversely impacts women, placing them at high risk for HIV infection. The fact that African women bear a disproportionate burden of the HIV pandemic reflects this vulnerability (Dunkle and Jewkes, 2007). The proposed policy targets men only and while there may be some secondary benefits for women, these are only in the long term and are not yet fully quantified by research. Therefore targeting men specifically in an HIV prevention strategy is discriminatory and infringes on women's rights to equality and freedom from discrimination. Implementation of the proposed policy requires increased resources which could potentially result in a reduction of resources to other important health and social development programmes that benefit women, due to limited resources. This opportunity cost may impact negatively on women's rights to equality. It is therefore imperative that costs of male circumcision programmes do not decrease the resources and attention dedicated to prevention, treatment and the empowerment of women (Gostin and Hankins, 2008). Policy development must seek to negate this.

Right to Life

If the concerns about risk compensation and the findings from the Ugandan study which show that male circumcision in fact increases a woman's risk for HIV infection (Wawer et al., 2008) are shown to be true, then women may be placed at an even higher risk of HIV. This will violate their right to life.

Right to Access of Information

Accurate communication about the partial protection of male circumcision in HIV transmission must be extended to women because, as one interviewee from sub-study B noted, “...*women are the partners of men*”. Women must therefore understand that even if their male partner is circumcised, it does not protect them (the woman) from HIV infection and that they still need to negotiate condom use. Should her partner become circumcised, women must receive counselling about delaying sexual intercourse until wound healing is complete and the ongoing use of condoms thereafter, to reduce the risk of HIV infection. If the proposed policy addresses how accurate information can be disseminated to women then their right of access to information will be promoted and fulfilled.

Right to Benefit from Scientific Progress and its Applications

Women may stand to gain health benefits in the long term if the results from the RCTs are shown to be effective in a real-world setting; men who become circumcised may be less likely to have STIs and HIV and hence less likely to transmit the infection to their female partners. Therefore, exploring how the results from the RCTs could be implemented promotes and fulfils women’s right to benefit from scientific progress. Conversely, concern about risk compensation and the lack of research into the true impact on women highlights the need for further research to fully understand the true impact on women before any guidelines for policy implementation are made. If the proposed policy takes this into account, then it will respect, promote and fulfil women’s rights to benefit from scientific progress. If it does not, it will infringe on these rights.

5.2.5.3 The Rights of Children

Children are a vulnerable group; Article 28 of the South African Bill of Rights makes explicit mention of the rights of the child, which are protected by the Constitution. These take lead from the United Nations Convention on the Rights of the Child which protects children from abuse, torture, exploitation and maltreatment, and promotes the rights of the child in terms of accessing social and economic rights. Overall, the best interests of the child should always prevail and where possible, if the child is old enough to have an opinion, then this should be respected by their parents and the law.

Right to Protection from Abuse

Part 1(d) of Article 28 in the South African Bill of Rights specifies that “*Every child has the right....to be protected from maltreatment, neglect, abuse or degradation*”. Male circumcision is an invasive and painful surgical procedure that may be accompanied with adverse outcomes. Therefore, the right to be protected from abuse must be considered during policy development.

Proponents for the rollout of neonatal circumcision argue for this because of lower complication rates, cheaper costs and ensuring that males are circumcised before they become sexually active. However, policy development must consider the invasiveness of the procedure and that a neonate is unable to make the choice for themselves and may, in adulthood, view this as abuse. This concern is shared by those who strongly oppose male circumcision, citing it as “an assault causing grievous bodily harm (genital mutilation)” (Boyle et al., 2000). Furthermore it has been suggested that it is unprecedented and unethical to offer prophylactic surgery in neonates to reduce the risk of a disease acquired in adulthood, particularly given that there are “safer, less invasive, less expensive and proven prevention methods available” (Sidler et al., 2008). The authors argue that newborn babies are not sexually active and thus are not at risk of STIs. In addition, a vaccine or other treatment options may be available by the time they are sexually active and that newborns may therefore prefer to retain their foreskin and, as adults, elect vaccination and safe sex practices to prevent HIV infection (Sidler et al., 2008). Such arguments must be carefully considered during policy development to uphold a male child’s right to protection from abuse.

Right to Autonomy and Dignity

Children have the right to autonomy and dignity. They should be able to make decisions, based on informed consent. Therefore, the age at which male circumcision is proposed to take place should be carefully considered. Gostin and Hankins (2008) suggest that national laws and policy should allow the opportunity for mature minors to make decisions for themselves, or at the very least empower boys to be part of the decision making process in an age-appropriate manner. For younger boys, the best interest of the child principle should be foremost during policy development; Gostin and Hankins (2008) suggest that parents and legal guardians should make the decision with the child’s best interest at heart. Neonatal male circumcision has the potential to violate a child’s right to autonomy, dignity and informed consent and those who oppose neonatal circumcision include the violation

of bodily integrity, dignity and protection from abuse to the list. A policy that allows for circumcision to take place in older boys, such as age 10 – 12 means that the boy will be able to give some input into the decision to become circumcised or not, and will also yield the benefit of most boys being circumcised before they are sexually active; such a policy respects and promotes children's rights to autonomy and dignity.

Right to Health Care

Children have the right to basic healthcare services, with the aim of attaining the highest possible health. A policy that considers access to male circumcision to reduce HIV transmission, in a safe and sterile setting, respects and promotes this right. While male circumcision services may not be considered "basic" health care, protection from HIV would be, particularly if it could be provided safely in a primary healthcare setting.

Right to Life

HIV is a leading cause of death in Africa. A policy that explores reducing HIV transmission in the general population, including youth, respects and promotes this right. Conversely, if the policy does not allow for adequate access to sterile facilities or adequate training of health professionals may violate the right to life. Therefore capacity issues, infrastructure and training must be addressed.

Right to Benefit from Scientific Progress and its Application

The RCTs have shown some evidence to suggest the protective benefits of male circumcision. Connolly et al. (2008) suggests that if males are circumcised after becoming sexually active, then the protective effect may be reduced; therefore the age that circumcision takes place is important. Boys should be able to benefit from this research and therefore a policy that examines how the research may be best applied respects and promotes this right.

Right to Freedom of opinion, belief and religion

The choice around if and when a male child is circumcised will primarily be driven by the culture of the child's parents and may impact on a male child's freedom of choice. In addition, if a child is born into a culture that practice traditional male circumcision as a rite of passage to manhood, a policy around voluntary medical male circumcision may undermine the right to freedom of cultural choice. Therefore,

policy development must pay attention to culture and respect and uphold the right to freedom of opinion, belief and religion.

Right to Access of Information

If a male child is circumcised as a baby, or as a young boy, they need accurate information about the partial protection that male circumcision may offer from HIV infection; however they must understand that they still need to practice safe sex behaviours and use condoms to reduce their risk of HIV acquisition. If the policy addresses how information will be accurately disseminated to both male and female children it respects and promotes their right to access of information.

5.2.5.4 The Rights of Parents

Right to Freedom of opinion, belief and religion

Parents have the right to freedom of opinion, belief and religion. This means that they have the right to decide, on behalf of their children, whether they want their male baby or older male child to become circumcised. A policy that did not allow parents to make this choice would violate this right. For example, people of the Jewish and Muslim faith practice neonatal circumcision. Their right to do so has not been challenged by the Children's Act of 2006 in South African law which states that no male may be circumcised under the age of 16 except "for religious purposes in accordance with the practices of the religion concerned". This provides an example of how legislation can uphold the right of parents to freedom of opinion, belief and religion and policy development needs to take this into account.

Right to Access of Information

Parents have the right to access accurate information about the findings from the RCTs and potential benefit male circumcision may offer in terms of reducing HIV risk. Policy development that considers how accurate information, which emphasizes the partial protection and the need for ongoing safe sexual behaviours and condom use, can be disseminated to parents will uphold this right.

Right to Benefit from Scientific Progress and its Applications

HIV / AIDS has impacted the lives of nearly all South Africans. Parents must be concerned about their children's risk of infection. Therefore a policy that explores how recent scientific findings can be used to potentially reduce HIV transmission respects and promotes the rights of parents to benefit from scientific progress.

5.2.5.5 The Rights of Healthcare Workers

Right to Freedom of opinion, belief and religion

Expecting healthcare workers who disagree with male circumcision to perform male circumcisions violates their right to freedom of opinion, belief and religion. Therefore, a policy that allows healthcare workers who disagree with male circumcision to be “conscientious objectors” and not be forced to perform the procedure will respect and promote this right. Allowance should also be made to ensure that healthcare workers are obliged to refer patients or parents of male children to the appropriate services if they are unable or unwilling to perform the procedure themselves. Failure to do so could negatively impact access to services, which in turn, may have implications for infringing the rights of those seeking male circumcisions.

Right to Access of Information

Healthcare workers interact daily with people accessing healthcare facilities and spend time educating and counselling people about health issues, including HIV. Healthcare workers therefore have the right to access of information about the findings from the RCTs, and to fully understand the findings of the trials plus the conflicting opinions and evidence from the literature. They need accurate information so that they can disseminate this to people seeking advice on male circumcision. A policy that explores how to increase awareness about the potential role of male circumcision in HIV prevention amongst healthcare workers, how education campaigns can be run to achieve this, and how healthcare workers can access and disseminate accurate information respects and promotes healthcare workers’ right to access of information.

Right to Benefit from Scientific Progress and its Applications

Healthcare workers are at the forefront of interacting with people in healthcare facilities. The impact of HIV / AIDS on the public sector health facilities in South Africa is dramatic and therefore any policy that explores how findings from recent research may be used to positively impact HIV prevention upholds the right of healthcare workers to benefit from scientific progress and its application. Previously in South Africa, healthcare workers were prevented by government policy from using antiretroviral drugs to treat HIV positive patients. This impacted on both the workload and morale of healthcare workers and reflects how access to the benefits of scientific progress, or lack thereof, impacts on the rights of healthcare workers.

5.2.6 Step 5: The least restrictive policy to achieve the objective?

Male circumcision is an invasive, surgical procedure that can have adverse outcomes and safety issues should not be ignored. Therefore, other HIV prevention strategies that are less invasive and less restrictive of human rights but still achieve the objective of the proposed policy must be considered. Such options include behavioural change programmes, correct and consistent condom use, PMTCT and ART treatment programmes and gender equality initiatives. Evidence to support the effectiveness of these options has already been addressed, but the human rights implications of such programmes require examination.

Behavioural change programmes and condom distribution uphold the right to autonomy and dignity, the right to life and access to health care, the right to freedom of opinion and access of information plus the right to benefit from scientific progress. However, potential human rights concerns include the underlying premise that all people have the ability to act freely and make informed choices. In reality, lack of education, socio-economic disparity and gender inequality may in fact negate this ability and therefore reduce the effectiveness of such strategies.

PMTCT and ART programmes strongly uphold people's right to life, dignity, access to healthcare, access to information and the right to benefit from scientific progress. PMTCT programmes in particular uphold the rights of the child. No human rights burdens are apparent, but consideration needs to be given to ensure equal access to all people, and to prevent discrimination against HIV positive people who are accessing the services. In South Africa, access to PMTCT is not universal and therefore coverage is incomplete; Skinner et al. (2005) report that socio-economic context can present a formidable barrier to provision of PMTCT services and that creative solutions are needed to improve access and coverage, particularly in under-served rural areas. This may include increasing human resources, providing mobile services and improved community education and stigma reduction through community development initiatives.

Women remain extremely vulnerable in many societies (Gostin and Hankins, 2008). Programmes that seek to empower women and address gender inequalities uphold women's rights, in particular the right to autonomy and dignity. Such programmes may empower women, both socially and financially, and may enable women to have more control over their sexual and reproductive health, therefore protecting them

from HIV infection. Such programmes have considerably less human rights restrictions for women compared to the proposed policy of male circumcision, and care must be taken to ensure that resources devoted to the empowerment of women are not deviated into the costs of providing male circumcision services.

5.2.7 Step 6: Base on significant risk standard

Public health policy needs to be based on robust evidence. The objective of the proposed policy is a compelling one and three RCTs and a recent Cochrane review do provide persuasive epidemiological evidence, given the scientific credibility bestowed on such study designs. However, other studies and opinion question the applicability of the findings to policy and programme development, citing that they do not prove effectiveness in a real-world setting. Therefore the exact benefit of the proposed policy is uncertain. The potential outcome of the proposed policy ranges from a suggested 60% benefit in ideal conditions to harmful - if issues like risk compensation and an increased risk of transmission to women are found to be true. This is a wide range.

The human rights impacts are generally negative, and while these may be controlled for, one needs to consider if the risk would be worthwhile. The first thing to control for would be to adequately address the true impact on women. If this is not achieved, adopting the proposed policy would not be worthwhile because of the potential detrimental impact on women. Secondly, consideration must be given to how to tackle the issue of risk compensation and to clearly define how accurate messaging and programme implementation will take place to avoid the pitfalls of this and reduce the risk of a prevention paradox occurring. Failure to do this will render an outcome opposite to what the proposed policy is aiming to achieve and therefore would not be worthwhile. Thirdly, capacity issues such as service provision in sterile conditions, adequate human resources, and adequate training and expertise of healthcare workers must be addressed, together with a dedicated resource allocation to ensure that valuable resources are not taken away from other essential health services and prevention programmes, especially in the context of an already overburdened health care system. Failure to do so could result in adverse outcomes ranging from surgical complications to damage of existing and essential health services and would not be worthwhile. Finally, clear mechanisms are needed to ensure that the rights of the child are not infringed upon and that neonatal male circumcision is not promoted by healthcare workers and policymakers and that

respect is given for patient and caregiver autonomy. Parents need to make an informed decision, and be aware that denying their children the freedom to make their own decisions about a disease that will only affect them in adulthood, and for which there may be a vaccine or other cure by the time they are sexually active, may infringe their child's right to autonomy, dignity and freedom of choice. Failure to do so would have serious negative human rights consequences for children and would therefore not be worthwhile.

If all these caveats were met, the policy could be considered because it has balanced the human rights issues at stake. Notably, if all caveats were met, then the cost-effectiveness might decline – for example scaling up of primary care services to offer male circumcision services may make the intervention unaffordable, especially relative to other interventions of equal or even better effectiveness.

5.2.8 Step 7: Fair administrative procedures

A human rights approach to public health policy development requires that fair and just administrative procedures have been followed. If this is not the case, the policy may impact on the rights of one or more affected parties and may negatively impact the successful implementation of the policy. The proposed policy of male circumcision as an HIV prevention strategy in South Africa still needs to go through a public consultation process and thereafter through a transparent, legislative process. This has yet to happen and the national Department of Health is still in the development phase of drawing up a formal policy (NSP, p 71).

It is clear from the findings in sub-study A that healthcare workers in South Africa have a low awareness about the potential role of male circumcision in HIV prevention. Consultation with healthcare workers will be essential to increase their awareness and provide accurate information; it is also required to gain buy-in and co-operation from healthcare workers to assist with implementation of the policy at a later stage. The error made with regards to not including healthcare workers during the consultation phase of the CTOPA should not be repeated.

Consultation is required with other affected groups such as leaders from both circumcising and non-circumcising communities, plus traditional circumcisers from communities who practice traditional male circumcision. Consultation with women and gender experts is also required, and questions and concerns that they may

have about the true impact of the proposed policy on women must be comprehensively addressed.

The proposed policy could only ever be implemented on a voluntary basis; the findings from both sub-study A and B support this, as do the recommended policy guidelines provided by WHO / UNAIDS (2007f). Men and parents of male children should not be coerced in any way and issues such as the right to bodily integrity and freedom of choice must be respected. Provision must be made during policy development to allow for a review and oversight of any programme adopted; ensuring that HIV risk is not made worse for those entering the programme, and those choosing not to enter the programme. Provision must also be made to monitor the complication rates associated with medical male circumcisions.

Oversight of implementation also includes periodic review to be sure that the promotion of medical male circumcision does not result in risk compensation or an increased uptake of traditional male circumcisions which may take place under less than hygienic circumstances and be associated with serious adverse effects. Finally it will be necessary to monitor the impact of the policy on cultural practices

5.2.9 Conclusion

Application of a systematic approach to analyse the human rights impacts of a potential policy to introduce male circumcision as an HIV prevention strategy in South Africa has identified that there are many complex and nuanced issues at stake. Conclusions are presented in the following chapter, together with recommendations for further research and considerations for implementation.

6 CONCLUSIONS AND RECOMMENDATIONS

After reviewing the human rights issues involved in the proposed policy of adopting male circumcision as an HIV prevention strategy in South Africa, it is the conclusion of the author that the human rights of men, women, children, parents and healthcare workers need further and careful consideration to avoid over-hasty implementation. Such considerations must be taken into account and worked through to ensure the balancing of the public health benefits and burdens on all parties involved.

While it cannot be denied that the public health goal is extremely compelling, the human rights impact assessment reveals that the proposed policy has the potential to infringe on the rights of certain groups, such as women and children and highlights concerns about the likely effectiveness of the proposed policy in a real world setting, whether the policy has appropriate targeting, and whether there are not less restrictive alternatives that may be more effective.

Caution must be taken to ensure that the rights of men are promoted and fulfilled by the potential public health benefit that male circumcision may play in HIV prevention, but the realisation of these rights should not violate the rights of other parties. In particular, women are a vulnerable group and the true impact of the proposed intervention on this group is not fully understood. The potential negative impact that risk compensation may have in the long term needs careful consideration. Furthermore, the conflicting opinion in the literature about the true impact of the RCT findings in a real-world setting and the potential study constraints need to be reconciled. These issues need to be addressed through robust research, prior to any policy implementation.

6.1 Male circumcision amongst consenting adults and adolescents

The policy analysis in the preceding chapter reflects that, in spite of the robust epidemiological evidence supporting the efficacy of male circumcision in reducing the risk of HIV transmission amongst heterosexual men in a trial setting, there are many factors which may mitigate against the effectiveness of the proposed policy. Such mitigating factors would be costly to resolve, and may therefore reduce the cost-effectiveness cited in the literature. Furthermore, complete resolution of such mitigating factors may not be entirely achievable. In the likely event of not being able to overcome all the mitigating factors, the effectiveness of male circumcision in HIV

prevention will be reduced or obviated. It is therefore the conclusion of the author that the introduction of male circumcision as an HIV prevention strategy in South Africa amongst consenting adults and adolescents is premature. However, better information on the topic and research into the mitigating factors would be needed to decide on the best approach to adopting this strategy.

6.2 Neonatal Male Circumcision

The systematic approach of the human rights impact assessment has highlighted that the issues at stake with regards to neonatal circumcision are very different to those for circumcision amongst older youth and adults. Proponents for the rollout of widespread neonatal circumcision have not fully taken the rights of the child into account and the concerns around the right to freedom of choice, informed consent and bodily integrity must be addressed. Furthermore, monitoring and oversight mechanisms are necessary to ensure that the rights of male children are protected. It is therefore the conclusion of the author that a policy for mass neonatal male circumcision as an HIV prevention strategy is unjustified, given the intrusion on the rights of male children and the potential for intrusion on cultural rights. Furthermore, other alternatives such as a vaccine or other treatment options may be available by the time the infant becomes sexually active and individuals may rather choose to use to not be circumcised as infants and to opt for vaccination and safe sex practices to prevent HIV infection instead.

6.3 Considerations for implementation

Male circumcision as an HIV prevention strategy is being adopted in other sub-Saharan countries. If the South African government does introduce such a policy, consideration of how to mitigate any potential negative impact, particularly on vulnerable groups, must be taken into account. Key considerations for implementation must include mechanisms to oversee and monitor:

1. The rates of adverse events associated with male circumcisions
2. The impact of the proposed policy on the numbers of men accessing traditional male circumcisions, which may take place under less than ideal circumstances, and whether this has any negative health risk for men
3. The impact of the proposed policy on cultural practices
4. The impact of the proposed policy on rates of neonatal circumcision

5. The true impact on women
6. The true extent of risk compensation in a real-world setting.

Capacity issues must also be addressed, including:

1. The costs for infrastructure and the provision of sterile equipment
2. The costs and logistics of awareness campaigns to disseminate accurate information
3. How to overcome the human resources shortages in the health sector
4. Ensuring adequate training and expertise of healthcare workers to perform male circumcision
5. Making provision for dedicated resource allocation for the rollout of male circumcision services
6. Ensuring that valuable resources are not drawn away from other essential health services and prevention programmes, especially in the context of an already overburdened health care system.

6.4 Recommendations for research

A number of outstanding questions remain in order to inform the risk-benefit analysis. Key areas of research to adequately answer these questions include the following:

1. A focused look at the true impact of the proposed intervention on women
2. The true impact of risk compensation on effectiveness in a real-world setting and over the long term and how to mitigate any negative outcome
3. How to develop and disseminate accurate messaging to target different groups.
4. Operational capacity including workable solutions for human resource shortages and the challenges of having a predominantly female workforce, provision of training, provision of equipment and sterile facilities, scaling up primary care facilities to provide adequate counselling and access to services - all within the context of limited resources
5. Cost benefit analyses which take into account all the costs associated with rolling out male circumcision in South Africa, including the costs of physical infrastructure, training, counselling services, communication campaigns and

ongoing condom distribution. Furthermore, that the model should take into account the lower estimates of the protective effect found in the RCTs

6. What impact changing the means of male circumcision may have on communities that attribute high social and cultural value to traditional male circumcision rituals
7. How providers of traditional circumcision can be engaged with, together with community leaders in traditionally circumcising communities to improve the safety of non-medical male circumcisions
8. The potential impact of the proposed policy on neonatal circumcision rates and how to uphold the rights of children.

6.5 Final comments

Despite the cautionary approach advised in the development of a policy on male circumcision as an HIV prevention strategy in South Africa, it is also the opinion of the author that the findings from the RCTs and the very recent Cochrane review cannot be discounted. The conclusions drawn from this dissertation indicate that the introduction of male circumcision for HIV prevention amongst consenting adults and adolescents is currently premature and that mass neonatal male circumcision is unjustified. However, the author supports exploration and further research into the topic; male circumcision presents an exciting breakthrough in potential HIV prevention, where a technologically-based solution may offer hope in the face of the ongoing challenge to sustain behavioural change. It is however noted that for male circumcision to be effective, behaviour change still remains a necessity.

If male circumcision were to be included as part of a comprehensive HIV prevention package, it could yield beneficial results in a country ravaged by the impact of HIV / AIDS. However, before the South African government proceeds with finalising a policy, addressing the key issues highlighted for policy implementation and undertaking adequate research is critical. Finally, dedicated resources must be provided to ensure the continuation of other critical health, empowerment and HIV prevention and treatment programmes.

7 REFERENCES

AGENCE FRANCE-PRESSE. 2008. 'Forced Circumcision': the latest weapon in Kenya's ethnic strife.

<http://afp.google.com/article/ALeqM5gkiZSdchTFFEy7rFhYWAK4z6Zc8Q>, accessed 18 March 2008.

AGGLETON, P. 2007. "Just a Snip "?: A Social History of Male Circumcision. *Reproductive Health Matters*, 15(29): 15-21.

AGOT, K.E. KIARIE, J.N. NGUYEN, H.Q. ODHIAMBO, J.O. ONYANGO, T.M. & WEISS, N.S. 2007. Male Circumcision in Siaya and Bondo Districts, Kenya – Prospective Cohort Study to Assess Behavioural Disinhibition Following Circumcision. *Journal of Acquired Immune Deficiency Syndromes*, 44(1): 66-70.

AUVERT, B. TALJAARD, D. LAGARDE, E. SOBNGWI-TAMBEKOU, J. SITTA, R. & PUREN, A. 2005. Randomized, Controlled Intervention Trial of Male Circumcision for Reduction in HIV Infection Risk: The ANRS 1265 Trial. *PLoS Med*, 2: e298.

AIDS Vaccine Advocacy Coalition. Undated. *AVAC Draft Issue Backgrounder: Male Circumcision for HIV Prevention: Implications for Women*.

BAILEY, R.C. MOSES, S. PARKER, C.B. AGOT, K. MACLEAN, I. KRIEGER, J.N. WILLIAMS, C.F.M. CAMPBELL, R.T. & NDINYA-ACHOLA, J.O. 2007. Male circumcision for young men in Kisumu, Kenya: a randomised controlled trial. *Lancet*, 369: 643-656.

BATEMAN, C. 2007. Paying the Price for AIDS Denialism. *South African Medical Journal*, 97(10): 912-914.

BOYLE, G.J. SVOBODA, J.S. PRICE, C. P. & TURNER, J.N. 2000. Circumcision in Healthy Boys: Criminal Assault? *Journal of Law & Medicine*, 7: 301-310.

CASSELL, M.M. HALPERIN, D.T. SHELTON, J.D. & STANTON, D. 2006. Risk compensation: the Achilles' heel of innovations in HIV prevention? *British Medical Journal*, 332: 605-607.

CASTILLA, J. DEL ROMERO, J. HERNANDA, V. MARINCOVICH, B. GARCIA, S. & RODRIGUEZ, C. 2005. Effectiveness of Highly Active Antiretroviral Therapy in Reducing Heterosexual Transmission of HIV. *Journal of Acquired Immune Deficiency Syndromes*, 40(1): 96-101.

COETZEE, D. HILDERBRAND, K. BOULLE, A. DRAPER, B. ABDULLAH, F. & GOEMAERE, E. 2005. Effectiveness of the first district-wide programme of mother-to-child transmission of HIV in South Africa. *Bulletin of the World Health Organisation*, 83:489-494.

CONNOLLY, C. SIMBAYI, L.C. SHANMUGAM, R. & NQEKETO, A. 2008. Male circumcision and its relationship to HIV infection in South Africa: Results of a national survey in 2002. *South African Medical Journal*, 98(10): 789-794.

CSETE, J. 2007. Male circumcision and HIV prevention: a human rights and public health challenge. *HIV / AIDS Policy and Law Review*, 12 (1): 4-10.

DEACON, H. 2008. AIDS and Heritage Management in South Africa: The Case of Traditional Male Circumcision. *Centre for Social Science Research*. Working Paper No. 213. University of Cape Town.

DICKSON-TETTEH, K. & REES, H. 1999. Efforts to Reduce Abortion-Related Mortality in South Africa. *Safe Motherhood Initiatives: Critical Issues*: 190-197 (Reproductive Health Matters).

DUNKLE, K.L. & JEWKES, R. 2007. Editorial: Effective HIV prevention requires gender-transformative work with men. *Sexually Transmitted Infections*, 83:173-174.

DUNKLE, K.L. JEWKES, R.K. BROWN, H.C. GRAY, G.E. McINTYRE, J.A. & HARLOW, S.D. 2004. Gender-based violence, the relationship power, and risk of HIV infection in women attending antenatal clinics in South Africa. *Lancet*, 363: 1415-1421.

FOWLER, S. 2007/2008. Should we circumcise baby boys? *Equal Treatment*, Issue 23: 24.

FUNANI, L.S. 1990. Circumcision Among the Ama-Xhosa. A Medical Investigation. Braamfontein, Skotaville Publishers.

GRAY, R.H. KIGOZI, G. SERWADDA, D. MAKUMBI, F. WATYA, S. NALUGODA, F. KIWANUKA, N, MOULTON, L. CHAUDHARY, M.A. CHEN, M.Z. SEWANKAMBO, N.K. WABWIRE-MANGEN, F. BACON, M.C. WILLIAMS, C.F.M. OPENDI, P. REYNOLDS, S.J. LAEYEND:ECKER, O. QUINN, R.C. & WAWER, M.J. 2007. Male circumcision for HIV prevention in men in Rakai, Uganda: a randomised trial. *Lancet*, 369: 657-666.

GREEN, L.W. McALLISTER, R.G. PETERSON, K.W. & TRAVIS, J.W. 2008. Male circumcision is *not* the HIV 'vaccine' we have been waiting for! *Future HIV Therapy*, 2(3): 193-199.

GOSTIN, L. & MANN, J.M. 1999. Towards the Development of a Human Rights Impact Assessment for the Formulation and Evaluation of Public Health Policies, in Mann, J.M. et al. (eds.) *Health and Human Rights: A Reader*. New York: Routledge: 54-71.

GOSTIN, L.O. & HANKINS, C.A. 2008. Male Circumcision as an HIV Prevention Strategy in Sub-Saharan Africa: Sociological Barriers. *Journal of the American Medical Association*, 300 (21): 2539-2541.

HARRISON, A. MONTGOMERY, E. LURIE, M & WILKINSON, D. 2000. Barriers to implementing South Africa's Termination of Pregnancy Act in rural KwaZulu/ Natal. *Health Policy and Planning*, 15(4): 424-431.

HIV AND AIDS AND STI STRATEGIC PLAN FOR SOUTH AFRICA, 2007-2011.

<http://www.doh.gov.za/docs/misc/stratplan-f.html>, accessed 8 March 2008.

INTERNATIONAL FEDERATION OF RED CROSS AND RED CRESCENT SOCIETIES AND FRANCOIS-XAVIER BAGNOUD CENTER FOR HEALTH AND HUMAN RIGHTS. 1999. The Public Health – Human Rights Dialogue, in Mann, J.M. et al. (eds.) *Health and Human Rights: A Reader*. New York: Routledge: 46-53

INTERNATIONAL COALITION FOR GENITAL INTEGRITY. 2007. Position Paper on Neonatal Circumcision and Genital Integrity.

<http://icgi.org/Downloads/ICGIPositionPaper.pdf>, accessed 7 March 2008.

KAHN, J.G. MARSEILLE, E. & AUVERT, B. 2006. Cost-Effectiveness of Male Circumcision for HIV Prevention in a South African Setting. *PLoS Med*, 3(12): e517

KLAUSNER, J.D. WAMAI, R.G. BOWA, K. AGOT, K. KAGIMBA, J. HALPERIN, D.T. 2008. Is male circumcision as good as the vaccine we've been waiting for? *Future HIV Therapy*, 2(1): 1-8.

LAGARDE, E. TALJAARD, D. PUREN, A. RAIN-TALJAARD, R.C. & AUVERT, B. 2003. Acceptability of male circumcision as a tool for preventing HIV infection in a highly infected community in South Africa. *AIDS*, 17: 89-95.

LONDON, L. ORNER, P & MYER, L. 2008. 'Even if you're positive, you still have rights because you are a person': Human Rights and the Reproductive Choice of HIV-Positive Persons. *Developing World Bioethics*, 8(1): 11-22.

MAIL & GUARDIAN ONLINE 2007. Circumcision: a woman's view.

<http://www.mg.co.za/articledirect.aspx?articleid=311625&area=monitor>, accessed 8 March 2008.

MALL, S. 2005. Attitudes of Health Care Professionals in South Africa to the Use of Traditional Medicine by their Patients on Antiretroviral Treatment: A Research Note. *Social Dynamics*, 31(2): 118-125.

MARCK, J. 1997. Aspects of male circumcision in sub-equatorial African culture history. *Health Transition Review*, 7(suppl): 337-359.

MATTSON, C.L. CAMPBELL, R.T. BAILEY, R.C. AGOT, K. NDINA-ACHOLA, J.O. & MOSES, S. 2008. Risk Compensation Is Not Associated with Male Circumcision in Kisumu, Kenya: A Multi-Faceted Assessment of Men Enrolled in a Randomized Controlled Trial. *PLoS One*, 3 (6): e2443.

McCOOMBE, S.G. & SHORT, R.V. 2006. Potential HIV-1 target cells in the human penis. *AIDS*, 20: 1491-1495.

MEISSNER, O. & BUSO, D.L. 2007. Traditional male circumcision in the Eastern Cape – scourge or blessing? *South African Medical Journal*, 97(5): 371-373.

MOSES, S. BAILEY, R.C. & RONALD, A.R. 1998. Male circumcision: assessment of health benefits and risks. *Sexually Transmitted Infections*, 74: 368-373.

MYERS, A. & MYERS, J. 2007. Male circumcision – the new hope? *South African Medical Journal*, 97(5): 338-341.

MYERS, A. & MYERS, J. 2008. Rolling out male circumcision as a mass HIV/AIDS intervention seems neither justified nor practicable. *South African Medical Journal*, 98(105): 781-782.

ORNER, P. HARRIES, J. COOPER, D. MOODLEY, J. HOFFMAN, M. BECKER, J. McGRORY, E. DABASH, R. & BRACKEN, H. 2006. Challenges to microbicide introduction in South Africa. *Social Science and Medicine*, 63:968-978.

OKEKE, L.I. ASINOBI, A.A. & IKUEROWO, O.S. 2006. Epidemiology of complications of male circumcision in Ibadan, Nigeria. *BMC Urology*, 6:21

PARKER, W. MAKHUBELE, B. NTLABATI, P. & CONNOLLY, C. 2007. Concurrent Sexual Partnerships Amongst Young Adults in South Africa: Challenges for HIV prevention communication. Centre for AIDS Development Research and Evaluation.

PELTZER, K. NIANG, C.I. MUULA, A.S. BOWA, K. OKEKE, L. BOIRO, H. & CHIMBWETE, C. 2007. Editorial review: Male circumcision, gender and HIV prevention in sub-Saharan Africa: a (social science) research agenda. *Journal of Social Aspects of HIV/AIDS*, 4(3): 658-667.

PELTZER, K. NQEKEKO, A. PETROS, G. & KANTA, X. 2008. Attitudes of preinitiates towards traditional male circumcision in the context of HIV in the Eastern Cape, South Africa. *Social Behaviour and Personality*, 36(8): 1023-1034.

PLUSNEWS. 11 February 2009. "The invisible condom" and other male circumcision myths.

<http://www.plusnews.org/Report.aspx?ReportId=82873>, accessed 15 February 2009.

QUINN, T.C. WAWER, M.J. SEWANKAMBO, N. SERWADDA, D. LI, C. WABWIRE-MANGEN, F. MEEHAN, M.O. LUTALO, T & GRAY, R.H. 2000. Viral load and heterosexual transmission of human immunodeficiency virus type 1. Rakai Project Study Group. *The New England Journal of Medicine*, 342: 921-929.

RAIN-TALJAARD, R.C. LAGARDE, E. TALJAARD, D.J. CAMPBELL, C. MACPHAIL, C. WILLIAMS, B. & AUVERT, B. 2003. Potential for an intervention based on male circumcision in a South African town with high levels of HIV infection. *AIDS Care*, 15(3): 315-327.

SANAC Civil Society Sector's Position Paper on Male Circumcision as an HIV Prevention Strategy. 2008.

<http://www.alp.org.za/research/Final%20-%20Civil%20Society%20position%20paper%20on%20Male%20Circumcision%2022%20May%202008.pdf>, accessed 11 October 2008.

SAWIRES, S.R. DWARKIN, S.L. FIAMMA, A. PEACOCK, D. SZEKERES, G. & COATES, T.J. 2007. Male Circumcision and HIV/ AIDS: challenges and opportunities. *Lancet* 369:708-713.

SCOTT, B.E. WEISS, H.A. & VILJOEN, J.A. 2005. The acceptability of male circumcision as an HIV prevention strategy among a rural Zulu population, KwaZulu-Natal, South Africa. *AIDS Care*, 17(3): 304-313.

SHISANA, O. REHLE, T. SIMBAYI, L.C. PARKER, W. ZUMA, K. BHANA, A. CONNOLLY, C. JOOSTE, S. PILLAY, V. MBELLE, N. MANAGA, A. DANA, P. RAMLAGAN, S. ZUNGU-DIRWAYI, N. LOUW, J. VAN WYK, B. TAMASANE, T. PETROS, G. FREEMAN, M. KELLY, K. TSHOSE, P. LETLAPE, L. NAIDOO, E. HENDA, N. NQEKETO, A. PRINCE, B. & SHEAN, Y. 2005. South African National HIV Prevalence, HIV Incidence, Behaviour and Communications Survey. *Cape Town: HSRC Press*.

<http://www.hsrbpress.ac.za> accessed 22 September 2008.

SHELTON, J.D. HALPERIN, D.T. NANTULYA, V. POTTS, M. GAYLE, H.D. & HOLMES, K.K. 2004. Partner reduction is crucial for balanced "ABC" approach to HIV prevention. *British Medical Journal*, 328: 891-893.

SIDLER, D. SMITH, J. & RODE, H. 2008. Neonatal circumcision does not reduce HIV/AIDS infection rates. *South African Medical Journal*, 98(10): 762-766.

SIEGFRIED, N. MULLER, M. VOLMINK, J. et al. 2003. Male circumcision for prevention of heterosexual acquisition of HIV in men. *Cochrane Database of Systematic Reviews*, Issue 3.

SIEGFRIED, N. MULLER, M. DEEKS, J.J. & VOLMINK, J. 2009. Male circumcision for prevention of heterosexual acquisition of HIV in men. *Cochrane Database of Systematic Reviews*, Issue 2.

SKINNER, D. MFECANE, S. GUMEDE, T. HENDA, N. & DAVIDS, A. 2005. Barriers to accessing PMTCT services in rural South Africa. *African Journal of AIDS Research*, 4(2): 115-123.

SUNDAY TIMES. 27 January 2008. Teen sues father after forced circumcision.

UNAIDS. 2005. Male Circumcision Fact sheet.

http://data.unaids.org/Publications/Fact-Sheets04/fs_male_circumcision_26jul05_en.pdf, accessed 22 September 2008.

UNAIDS. 2007. AIDS Epidemic Update.

http://data.unaids.org/pub/EPISlides/2007/2007_epiupdate_en.pdf, accessed 22 September 2008

VARGA, C.A. 1998. Sexual decision making and negotiation in the midst of AIDS: youth in KwaZulu-Natal, South Africa. *Health Transition Review*, 7 (Suppl. 3), 45-67.

WAMAI, R.G. WEISS, H.A. HANKINS, C. AGOT, K. KARIM, Q.A. SHISANA, O. BAILEY, R.C. BETUKUMESU, B. BONGAARTS, J. BOWA, K. CASH, R. CATES, W. DIALLO, M.O. DLUDLU, S. GEFFEN, N. HEYWOOD, M. JACKSON, H. KAYEMBE, P.K. KAPIGA, S. KEBABETSWE, P. KINTAUDI, L. KLAUSNER, J.D. LECLERC-MADLALA, S. MABUZA, K. MAKHUBELE, M. B. MICHENI, K. MORRIS, B.J. DE MOYA, A. NCALA, J. NTAGANIRA, I. NYAMUCHERERA, O.F. OTOLORIN, E.O. PAPE, J.W. PHIRI, M. REES, H. RUIZ, M. SANCHEZ, J. SAWIRES, S. SELOILWE, E. S. SERWADDA, D. M. SETSWE, G. SEWANKAMBO, N. SIMELANE, D. VENTER, F. WILSON, D. WOELK, G. ZUNGU, N & HALPERIN,

D.T. 2008. Male circumcision is an efficacious, lasting and cost-effective strategy for combating HIV in high-prevalence AIDS epidemics. *Future HIV Therapy*, 2(5): 399-405.

WAWER, M. KIGOZI, G. SERWADDA, D. et al. 2008. Trial of circumcision in HIV+ men in Rakai, Uganda: effects in HIV+ men and women partners. Presented at: 15th Conference on Retroviruses and Opportunistic Infections, Boston, MA, USA.

WEISS, H.A. QUIGLEY, M.A. & HAYES, R.J. 2000. Male circumcision and risk of HIV infection in sub-Saharan Africa: a systematic review and meta-analysis. *AIDS*, 14: 2361-2370.

WESTERCAMP, N. & BAILEY, R.C. 2007. Acceptability of Male Circumcision for Prevention of HIV/ AIDS in Sub-Saharan Africa: A Review. *AIDS Behavior*, 11: 341-355.

WELLER, S. & DAVIES, K. 2003. Condom effectiveness in reducing heterosexual HIV transmission. *Cochrane Database Systematic Review*. Issue 4.

WILLIAMS, B.G. LLOYDS-SMITH, J.O. GOUWS, E. HANKINS, C. GETZ, W. M. HARGROVE, J. DE ZOYSA, I. DYE, C. & AUVERT, B. 2006. The Potential Impact of Male Circumcision on HIV in Sub-Saharan Africa. *PLoS Med*, 3: e262.

WILSON, D. & DE BEYER, J. 2006. Male Circumcision: Evidence and Implications. *HIV/ AIDS M&E - Getting Results*. World Bank Global HIV/ AIDS Program. <http://www.worldbank.org>, accessed 30 November 2007.

WHO. 2007. Male Circumcision and HIV Prevention: Operations Research Implications. http://www.who.int/hiv/pub/malecircumcision/mc_mr_21june07.pdf, accessed 21 January 2009.

WHO / UNAIDS. 2007. Male circumcision: Global trends and determinants of prevalence, safety and acceptability. http://whqlibdoc.who.int/publications/2007/9789241596169_eng.pdf, accessed 4 October 2008.

WHO / UNAIDS. 2007a. Towards Universal Access: Scaling up priority HIV/ AIDS interventions in the health sector. Progress Report.

<http://www.who.int/hiv> Accessed 30 November 2007.

WHO / UNAIDS. 2007b. Information Package on Male Circumcision and HIV Prevention Insert 1.

http://data.unaids.org/pub/InformationNote/2007/mc_briefing_pack1_en.pdf

WHO / UNAIDS. 2007c. Information Package on Male Circumcision and HIV Prevention Insert 2.

http://data.unaids.org/pub/InformationNote/2007/mc_briefing_pack2_en.pdf

WHO / UNAIDS. 2007d. Information Package on Male Circumcision and HIV Prevention Insert 3.

http://data.unaids.org/pub/InformationNote/2007/mc_briefing_pack3_en.pdf

WHO / UNAIDS. 2007e. Information Package on Male Circumcision and HIV Prevention Insert 4.

http://data.unaids.org/pub/InformationNote/2007/mc_briefing_pack4_en.pdf

WHO / UNAIDS. 2007f. New Data on Male Circumcision and HIV Prevention: Policy and Programme Implications.

http://data.unaids.org/pub/Report/2007/mc_recommendations_en.pdf, accessed 4 October 2008

WHO / UNAIDS / PEPFAR. (2008) Task Shifting: Global Recommendations and Guidelines.

http://www.who.int/healthsystems/task_shifting/en/index.html, accessed 15 February 2009.

South African National Acts

Application of Health Standards in Traditional Circumcision Act (6 of 2001). Province of the Eastern Cape, Republic of South Africa.

Children's Act (38 of 2005). Republic of South Africa.

Choice on Termination of Pregnancy Act (92 of 1996). Republic of South Africa.

Choice on Termination of Pregnancy Act Amendment Bill (38 of 2004). Republic of South Africa.

Constitution of the Republic of South Africa Act (108 of 1996). Republic of South Africa.

Northern Province Circumcision Schools Act (6 of 1996). Republic of South Africa.

Human Rights Instruments

African Charter on Human and People's Rights. 1981.

<http://www.africa-union.org>, accessed 5 October 2007.

International Covenant on Civil and Political Rights. 1966. Appendix C in Mann, J.M. et al. (eds.) *Health and Human Rights: A Reader*. New York: Routledge, 1999: 466-481.

International Covenant on Economic, Social, and Cultural Rights. 1966. Appendix B in Mann, J.M. et al. (eds.) *Health and Human Rights: A Reader*. New York: Routledge, 1999: 458-465.

Universal Declaration of Human Rights. 1948. Appendix A in Mann, J.M. et al. (eds.) *Health and Human Rights: A Reader*. New York: Routledge, 1999:453-457.

8 APPENDIX

Appendix 1: Healthcare Workers Questionnaire

I am conducting a study entitled:

“The human rights implications of adopting male circumcision as a prevention strategy for HIV/ AIDS in South Africa”.

This study will form part of my Masters degree in Public Health at the University of Cape Town.

Please read the attached Information Sheet for Informed Consent for Healthcare Workers carefully; this gives you detailed information about the study and the survey. By completing this questionnaire, you indicate your informed consent and that you have agreed to participate willingly in the study. **There is no need to sign your name on the form.**

The questionnaire should take approximately 15-20 minutes to complete.

Each questionnaire is confidential. Anonymity is ensured.

Thank you for agreeing to participate and for giving up your time to do so.

Debbie Kroon (Researcher)

Contact details:

Tel no: 082 532 7795

Email: debbie_kroon@hotmail.com

Healthcare Workers Questionnaire

Instructions:

- Please answer all questions
- Please circle your appropriate response for each question

Information Sheet for Informed Consent for Healthcare Workers read & agreement to participate willingly in study given?

YES NO

Today's Date:

(DD/MM/YYYY)

AGE: _____ years

SEX: Male Female

Please indicate your current professional position: (circle appropriate answer)

Doctor Nurse Facility Manager

If you are a facility manager, do you have a clinical background? YES NO

Please indicate the sub-district where you work: (circle appropriate response)

Khayelitsha Southern sub-district Western sub-district

Please indicate the type of facility you work in: (circle appropriate response)

District Hospital Community Health Centre Primary Health Clinic

Please indicate if you have worked in the following services in the last 3 months: (You can circle more than one response)

Maternity Unit STI Clinic ARV Clinic Family Planning

The scale used to answer all the questions is set out in the table below

1	=	Strongly Agree
2	=	Agree
3	=	Disagree
4	=	Strongly disagree

The final column allows you to indicate if you are unsure about the statement

THE FOLLOWING SECTION IS ABOUT YOUR KNOWLEDGE OF HIV & AIDS

1. Please read the following statements and indicate whether you agree or disagree with them, using the on page 2. (Please circle the appropriate response)

To prevent infection with HIV/ AIDS, one should:

a). Use a condom correctly every time you have sex	1	2	3	4	Unsure
b). Use traditional medicine	1	2	3	4	Unsure
c). Be faithful to one uninfected partner	1	2	3	4	Unsure
d). Be circumcised (if you are a man)	1	2	3	4	Unsure
e). Only have sex with circumcised men (if you are a woman)	1	2	3	4	Unsure
f). Not have sex at all	1	2	3	4	Unsure

THE FOLLOWING SECTION IS ABOUT MALE CIRCUMCISION PRACTICES WITHIN YOUR OWN CULTURE.

2a. Do you belong to a culture in which the men are usually circumcised?

YES

NO

2b. If yes to question 2a, at what stage of development does circumcision usually take place?

Newborn baby

Childhood

Adolescence

Adulthood

THE FOLLOWING SECTION IS ABOUT YOUR OWN BELIEFS & ATTITUDES TOWARDS CIRCUMCISION.

3. Please read the following statements about male circumcision and circle whether you agree or disagree with each statement as per the scale on page 2:

a). Circumcised men are more hygienic than uncircumcised men	1	2	3	4	Unsure
b). Women prefer their partners to be circumcised	1	2	3	4	Unsure
c). Circumcised men are more at risk of contracting HIV than uncircumcised men	1	2	3	4	Unsure
d). Circumcised men do not need to wear condoms	1	2	3	4	Unsure
e). Male circumcision prevents transmission of HIV/ AIDS	1	2	3	4	Unsure
f). Male circumcision is a useful prevention strategy for HIV/ AIDS	1	2	3	4	Unsure

THE FOLLOWING SECTION IS ABOUT YOUR KNOWLEDGE OF MALE CIRCUMCISION AND HIV PREVENTION

4. Please read the following statements and indicate whether you agree or disagree with them, using the on page 2. (Please circle the appropriate response)

a).Male circumcision effectively reduces transmission of HIV/AIDS	1	2	3	4	Unsure
b).Prevention strategies such as Abstinence, Being Faithful and using Condoms (ABC) are more effective than male circumcision in reducing transmission of HIV/ AIDS	1	2	3	4	Unsure
c). Circumcised men do not need to be counselled about correct and consistent condom use to reduce transmission of HIV/AIDS	1	2	3	4	Unsure
d). Male circumcision is only one part of potential prevention strategies to reduce transmission of HIV/ AIDS	1	2	3	4	Unsure
e). Circumcision is not as effective as correct and consistent condom use in HIV prevention	1	2	3	4	Unsure

THE FOLLOWING SECTION IS ABOUT YOUR PERSONAL BELIEFS ABOUT MALE CIRCUMCISION.

5. Please read the following statements and indicate whether you agree or disagree with each statement as per the scale on page 2: (Please circle the appropriate response)

a). There are more complications with male circumcisions carried out in babies (neonates) compared to adult men	1	2	3	4	Unsure
b). Male circumcisions done in a traditional setting are safe	1	2	3	4	Unsure
c). Male circumcisions done in a medical setting are safer than male circumcisions done in a traditional setting	1	2	3	4	Unsure
d).It is wrong for parents to decide, on behalf of their male children, about circumcising them as a baby	1	2	3	4	Unsure
e). It is wrong for medical professionals (doctors or nurses) to promote male circumcision in babies	1	2	3	4	Unsure
f). Male circumcision in babies is a form of physical mutilation	1	2	3	4	Unsure
g). Male circumcision (as an HIV prevention strategy) will decrease condom use	1	2	3	4	Unsure

THE FOLLOWING SECTION IS ABOUT TRAINING & YOUR WILLINGNESS TO PERFORM OR REFER MALE PATIENTS FOR CIRCUMCISION

6. Please read the following questions and circle your appropriate response:

a). Are you currently trained to perform male circumcsions?	YES	NO	Unsure
b). If you received the appropriate training, would you be willing to circumcise male babies?	YES	NO	Unsure
c). If you received the appropriate training, would you be willing to circumcise older boys and adult men who request the procedure?	YES	NO	Unsure
d). If you are unable to or not prepared to personally perform male circumcsions, would you willingly refer the patient/ parents of the male baby to the appropriate service?	YES	NO	Unsure

THE FOLLOWING SECTION IS ABOUT YOUR OPINION REGARDING HUMAN RIGHTS AND MALE CIRCUMCISION

7. Please read the following statements and indicate whether you agree or disagree with each statement as per the scale on page 2: (Please circle the appropriate response)

a). Expecting healthcare workers to perform male circumcsions impacts on their (the healthcare workers) human rights	1	2	3	4	Unsure
b). Healthcare workers who disagree with circumcison for personal reasons should be allowed to refuse to do the procedure	1	2	3	4	Unsure
c). A patient has the right to refuse to be circumcised	1	2	3	4	Unsure
d). The national Department of Health should run awareness campaigns about the role of male circumcison in HIV prevention	1	2	3	4	Unsure
e). Healthcare workers should promote male circumcison as an HIV prevention strategy	1	2	3	4	Unsure
	1	2	3	4	Unsure

Thank you for giving up your time to participate in this questionnaire

Appendix 2: Key Informants Interview Guide

Interview with key informant stakeholders

I am conducting a study entitled:

“The human rights implications of adopting male circumcision as a prevention strategy for HIV/ AIDS in South Africa”.

This study will form part of my Masters degree in Public Health at the University of Cape Town.

Please read the attached Information Sheet for Informed Consent for Key Informant Stakeholders carefully; this gives detailed information about the study and the interviews. By agreeing to the interview, you indicate informed consent and that you have agreed to participate willingly in the study. **There is no need to sign your name on the form.**

The interview should take approximately 20-30 minutes of your time.

The information derived from each interview is confidential.

Thank you for agreeing to participate and for giving up your time to do so.

Debbie Kroon (Researcher)

Contact details:

Tel no: 082 532 7795

Email: debbie_kroon@hotmail.com

Interview with Key Informant Stakeholders

Instructions:

- Please answer all questions
- Please note the interview will be recorded to enable accurate analysis.

Information Sheet for Informed Consent for Key Informant Stakeholders read and agreement to participate willingly in study given?

YES NO

Today's Date:

_____ (DD/MM/YYYY)

1. What is your current professional position? _____

2. How does your professional position link in with male circumcision?

3. Please share your knowledge / understanding of the role of male circumcision in HIV prevention?

4. Are you involved in any services providing male circumcision?

YES

NO

If yes, in what sort of a setting do these circumcisions take place?

If yes, what age are the patients you provide male circumcision for?

Male babies (< 1 year) _____%

Male children (1-17years) _____%

Adult men (>18 years) _____%

5. Have you noticed any increase in demand for male circumcision in the past 12 months? YES NO

If yes, in what age group has this demand occurred?

Male babies (< 1 year) _____%

Male children (1-17years) _____%

Adult men (>18 years) _____%

If yes, what is your opinion on the reason for this increased demand? _____

6. What specific medical equipment / surgical facilities do you need to perform male circumcisions?

7. What type of healthcare worker is currently able to perform male circumcisions?

8. Can you identify any other cadre of healthcare worker who could be trained to perform male circumcisions? Would this differ for circumcisions in babies versus adults? Please elaborate.

9. I would like to explore your opinion about introducing male circumcision as an HIV prevention strategy in the public sector in South Africa?

Please answer under the following categories:

a) Feasibility _____

b) Safety _____

c) Capacity of the public sector to implement (equipment/training / cost)

d) Challenges / constraints _____

10) Please share your opinion about the potential for risk inhibition in behaviour if male circumcision is introduced as an HIV prevention strategy in South Africa?

11) Do you believe there are any human rights issues at stake if a policy that adopts male circumcision as and HIV prevention strategy in South Africa is implemented? Please elaborate which groups of people this may apply to and why.

12) Do you believe scaling up male circumcision as an HIV prevention strategy in South Africa is worthwhile?

YES

NO

Please elaborate further

Thank you for giving up your time to complete this interview

INFORMATION SHEET FOR INFORMED CONSENT FOR HEALTHCARE WORKERS AND HEALTH FACILITY MANAGERS WITH A CLINICAL BACKGROUND

Study Title: The human rights implications of adopting male circumcision as a prevention strategy for HIV/ AIDS in South Africa.

Date: _____

Researcher Name: D. L. Kroon, University of Cape Town

You are being asked to participate in a research study to assess attitudes of healthcare workers and health facility managers, with a clinical background, towards male circumcision as an HIV prevention strategy.

What does giving consent for this study mean?

Consent means agreeing to take part in this research study. You have the right to decide if you want to take part in the study or not. You have the right to refuse to participate in the study or to withdraw from the study. You should only participate if you feel you have fully understood what the study is about and agree that you would like to do this.

For that reason, please take time to read the following information carefully and ask us if there is anything that is not clear or if you would like more information.

What is male circumcision?

Male circumcision refers to the surgical removal of the foreskin of the penis. Male circumcision may take place at any age, including as a baby and as an adult. The male circumcision referred to in this survey is medical circumcision, taking place in a medical setting and does not refer to traditional circumcision.

Why is this study being carried out?

This study is being done because I would like to know your attitudes and knowledge regarding male circumcision as an HIV prevention strategy. Furthermore, I want to know if you would be willing to perform or refer male patients for circumcisions, or to be trained to do so if a new policy to introduce male circumcision as an HIV prevention strategy is implemented. This information will help me to inform analysis of a potential health policy from a human rights perspective.

How is the University of Cape Town involved?

This study will form part of my Masters degree in Public Health at the University of Cape Town. I receive supervision from staff employed by the university. The information and the materials that are given to you in relation to the study are confidential information. Confidentiality means that the information obtained will be kept private. Furthermore, your identity as a participant will remain anonymous.

What does this study involve?

The study schedule includes:

- Reading the information set out on this information sheet for informed consent
- Completing one questionnaire

In order to be included in the study, you need to:

- Have agreed to willingly participate in the study after reading this information sheet for informed consent
- Be a currently employed healthcare worker / health facility manager working in the public sector in the Cape Town Metro region.
- Be available to answer one questionnaire.

How many other subjects are there in the study?

47 healthcare workers/ health facility will be invited to participate in the study.

What are the foreseeable risks for taking part in the study?

There are no risks on the part of the participant.

Are there any benefits for taking part in the study?

There are no direct benefits to you from taking part in the study, but the information collected will be used to inform policy analysis of potential health policy to be implemented by the Department of Health. Recommendations will be made to policy makers.

If you would like to get feedback from this study, please give me your contact details on the 'Contact Details for Feedback" sheet which is separate to this form so that I can let you know when and where there will be a report back meeting. If you cannot attend a report back meeting, please ensure your address is on the 'Contact Details for Feedback' sheet so that I can post a report to you.

What payments will be made for the study?

You will receive no payment for participating in this study.

Who should you contact to answer any questions on the study?

If you have any questions about the study, or if you have any questions concerning your rights as a subject in a research study, you should contact:

Ms Debbie Kroon (Researcher)
University of Cape Town
Tel: 082 532 7795

Email: debbie_kroon@hotmail.com

OR,

An official body who independent of the study, and who can help you get answers your questions from the University of Cape Town Research Ethics Committee

Contact: Lameez Emjedi Tel no: 021 406 6492

Who will have access to personal information about you that is collected in this study?

Information about your participation in this study will remain confidential. The information collected may be reviewed by the Independent Research Ethics Committee of the University of Cape Town or other regulatory authorities responsible for auditing research studies. All of these bodies need to be sure that the study is being run correctly and that every subject's anonymity and confidentiality is protected. Staff who see this information will keep it confidential.

What will the University of Cape Town do with the information it gets?

University of Cape Town may use the information that the study staff gives it (i.e. the coded information):

- By storing and analysing it electronically to find out what this study tells us

- By sharing it with groups that check that research is done properly
- By publishing the results of the study (this will not include any information that directly identifies you)
- By using it to plan new studies or other types of research
- By making recommendations to the Department of Health.

Feedback and reporting:

- The survey will provide information to complete my Masters thesis
- An article may be submitted for publication in a peer reviewed journal
- A written report and presentation will be given to the Department of Health and other stakeholders, such as the City of Cape Town.

Please note: every participant's anonymity and confidentiality will be protected.

I would like you to understand the following:

- Your participation is completely voluntary.
- You have the right to end your participation from the study for any reason.
- The information collected up to the time you ended your participation in the study will be used by the University of Cape Town.

DO YOU HAVE ANY QUESTIONS?

Consent statement

By completing the attached questionnaire, you indicate your agreement to willingly participate in the study and confirm that:

- You have read the written information for the study titled "***The human rights implications of adopting male circumcision as a prevention strategy for HIV/ AIDS in South Africa***" in the Information Sheet for Informed Consent for Healthcare Workers and Health Facility Managers with a Clinical Background, and that the study procedures have been explained to you by study staff during the consent process for this study.
- You understand what the study is about
- You have had the opportunity to ask questions about this study and are satisfied with the answers and explanations that have been provided.
- You have been given time and opportunity to consider taking part in this study.

Thank you

INFORMATION SHEET FOR INFORMED CONSENT FOR KEY INFORMANT STAKEHOLDERS
--

Study Title: The human rights implications of adopting male circumcision as a prevention strategy for HIV/ AIDS in South Africa.

Date: _____

Researcher Name: D. L. Kroon, University of Cape Town

You are being asked to participate in a research study to assess attitudes of healthcare workers towards male circumcision as an HIV prevention strategy, plus the capacity of the public sector in South Africa to implement a scaled-up programme for male circumcision as an HIV prevention strategy.

What does giving consent for this study mean?

Consent means agreeing to take part in this research study. You have the right to decide if you want to take part in the study or not. You have the right to refuse to participate in the study or to withdraw from the study. You should only participate if you feel you have fully understood what the study is about and agree that you would like to do this. For that reason, please take time to read the following information carefully and ask me if there is anything that is not clear or if you would like more information.

What is male circumcision?

Male circumcision refers to the surgical removal of the foreskin of the penis. Male circumcision may take place at any age, including as a baby and as an adult. The male circumcision referred to in this survey is medical circumcision, taking place in a medical setting and does not refer to traditional circumcision.

Why is this study being carried out?

This study is being done because I would like to know your opinion of introducing male circumcision as an HIV prevention strategy in the public sector of South Africa. I would like to know your opinion about the capacity and feasibility of implementing such a policy. To this end, I would like to gather information on the type of surgical services delivered at district hospital level, the type of healthcare worker currently trained to perform male circumcisions, and if any other cadre of healthcare worker could be trained to do so. Furthermore, I would like your opinion on the equipment necessary for scaling up circumcision services in the public sector, plus the costs involved and potential challenges that will be faced in doing so. This information will help me to inform analysis of a potential health policy from a human rights perspective.

How is the University of Cape Town involved?

This study will form part of my Masters degree in Public Health at the University of Cape Town. I receive supervision from staff employed by the university. The information and the materials that are given to you in relation to the study are confidential information. Confidentiality means that the information you provide will be kept private.

What does this study involve?

- Reading the information set out on this information sheet for informed consent
- Participating in one interview with the researcher.

In order to be included in the study, you need to:

- Have agreed to willingly participate in the study after reading this information sheet for informed consent
- Be available to participate in one interview.

How many other subjects are there in the study?

A small selection of key informant stakeholders will be asked to participate in this aspect of the study. In addition, approximately 47 healthcare workers will be asked to complete a questionnaire.

What are the foreseeable risks for taking part in the study?

There are no risks on the part of the participant.

Are there any benefits for taking part in the study?

There are no direct benefits to you from taking part in the study, but the information collected will be used to inform policy analysis of potential health policy to be implemented by the Department of Health. Recommendations will be made to policy makers.

If you would like to get feedback from this study, please give me your contact details on the 'Contact Details for Feedback' sheet which is separate to this form so that I can let you know when and where there will be a report back meeting. If you cannot attend a report back meeting, please ensure your address is on the 'Contact Details for Feedback' sheet so that I can post a report to you.

What payments will be made for the study?

You will receive no payment for participating in this study.

Who should you contact to answer any questions on the study?

If you have any questions about the study, or if you have any questions concerning your rights as a subject in a research study, you should contact:

Ms Debbie Kroon (Researcher)

University of Cape Town

Tel: 082 532 7795

email: Debbie.kroon@gmail.com

OR,

An official body who independent of the study, and who can help you get answers your questions from the University of Cape Town Research Ethics Committee

Contact:

Lameez Emjedi

Tel no: 021 406 6492

Who will have access to personal information about you that is collected in this study?

Information about your participation in this study will remain confidential. The information collected may be reviewed by the independent Research Ethics Committee of the University of Cape Town or other regulatory authorities responsible for auditing research studies. All of these bodies need to be sure that the study is being run correctly and that every subject's anonymity and confidentiality is protected. Staff who see this information will keep it confidential.

What will the University of Cape Town do with the information it gets?

University of Cape Town may use the information that the study staff gives it (i.e. the coded information):

- By storing and analysing it electronically to find out what this study tells us
- By sharing it with groups that check that research is done properly
- By publishing the results of the study (this will not include any information that directly identifies you)
- By using it to plan new studies or other types of research
- By making recommendations to the Department of Health.

Feedback and reporting:

- The survey will provide information to complete my Masters thesis
- An article may be submitted for publication in a peer reviewed journal
- A written report and presentation will be given to the Department of Health and other stakeholders, such as the City of Cape Town.

Please note: your confidentiality will be protected.

I would like you to understand the following:

- Your participation is completely voluntary.
- You have the right to end your participation from the study for any reason.
- The information collected up to the time you ended your participation in the study will be used by the University of Cape Town.

DO YOU HAVE ANY QUESTIONS?

Consent statement

By completing the attached questionnaire, you indicate your agreement to willingly participate in the study and confirm that:

- You have read the written information for the study titled “***The human rights implications of adopting male circumcision as a prevention strategy for HIV/ AIDS in South Africa***” in the Information Sheet for Key Informant Stakeholders and that the study procedures have been explained to you by study staff during the consent process for this study.
- You understand what the study is about
- You have had the opportunity to ask questions about this study and are satisfied with the answers and explanations that have been provided.
- You have been given time and opportunity to consider taking part in this study.

Thank you

CONTACT DETAILS FOR FEEDBACK FORM

IMPORTANT NOTE:

- This form must be kept separate from the questionnaire you complete
- Your name must not appear anywhere on the questionnaire
- Please only complete this form if you would like feedback from the study

Name: _____

Contact email address:

Contact Postal Address:

Contact Telephone Number:

Thank you for participating in the study and for giving up your time to do so

Appendix 6: Participant responses to statements about HIV prevention, disaggregated by professional position

<i>To prevent infection with HIV/AIDS, one should:</i>	NURSES			DOCTORS			FACILITY MANAGERS		
	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree
Use a condom every time you have sex	57	94.7% CI (85.4-98.9)	94.4%	12	91.7% CI (61.5-99.8)	100%	10	100% CI (69.2-100)	90%
Use traditional medicine	50	4% CI (4.9-13.7)	100%	12	0 CI (0-26.5)	0%	8	12.5% CI (3.2-52.7)	0%
Be faithful to one uninfected partner	56	92.9% CI (82.7-98.1)	92%	13	100% CI (75.3-100)	84.6%	9	100% CI (66.4-100)	100%
Be circumcised (if you are man)	43	72.1% CI (56.3-84.7)	58.1%	11	72.7% CI (39-94)	37.5%	8	75% CI (34.9-96.8)	33.3%
Only have sex with circumcised men (if you are a women)	39	33.3% CI (19.1-50.2)	53.8%	12	8.3% CI (2.1-38.5)	100%	8	25% CI (3.2-65.1)	100%
Should not have sex at all	53	58.5% CI (44.1-71.9)	67.7%	13	38.5% CI (13.9-68.4)	80%	9	33.3% CI (7.5-70.1)	100%

Appendix 7: Participant responses to statements about HIV prevention, disaggregated by gender

<i>To prevent infection with HIV/AIDS, one should:</i>	MALES			FEMALES			Fischers Exact
	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree	
Use a condom every time you have sex	12	91.7% CI (61.5-99.8)	100%	67	95.5% CI (87.5-99.1)	93.8%	0.49
Use traditional medicine	12	0 CI (0-26.5)	0%	67	5.2% CI (1.1-14.4)	66.6%	(1 sided) 0.564
Be faithful to one uninfected partner	13	100% CI (75.3-100)	84.6%	65	93.9% CI (85-98.3)	93.4%	(1 sided) 0.475
Be circumcised (if you are man)	10	80% CI (44.4-97.5)	50%	52	71.2% CI (56.9-82.9)	51.4%	0.442
Only have sex with circumcised men (if you are a women)	11	0 CI (0-28.5)	0%	58	27.6% CI (16.7-40.9)	62.5%	0.056
Should not have sex at all	12	50% CI (21.1-78,9)	66.6%	63	52.4% CI (39.4-65.1)	72.7%	(1 sided) 0.564

Appendix 8: Participant responses to statements about HIV prevention, disaggregated by male circumcision practice in own culture

<i>To prevent infection with HIV/AIDS, one should:</i>	Culture practices MC			Culture does not practice MC			Fischers Exact
	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree	
Use a condom every time you have sex	43	93% CI (80.9-98.5)	92.50%	35	97.1% CI (85.1-99.9)	97.1%	0.623
Use traditional medicine	39	5.1% CI (0.6-17.3)	100%	30	3.3% CI (0.1-17.2)	0	(1 sided) 0.599
Be faithful to one uninfected partner	42	90.5% CI (77.4-97.3)	86.80%	35	100% CI (90-100)	97.1%	0.121
Be circumcised (if you are man)	32	68.8% CI (50-83.9)	68.20%	29	75.9% CI (56.5-89.7)	31.8%	0.58
Only have sex with circumcised men (if you are a women)	35	28.6% CI (14.6-46.3)	70%	33	15.2% CI (5.1-31.9)	40%	0.246
Should not have sex at all	39	51.3% CI (34.8-67.6)	60%	35	51.4% CI (34-68.6)	83.3%	(1 sided) 0.587

Appendix 9: Participant responses to statements about the role of male circumcision in HIV prevention, disaggregated by gender

	MALES			FEMALES			Fischers Exact
	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree	
Male circumcision effectively reduces transmission of HIV/AIDS	10	80% CI (44.4-97.5)	25%	55	50.9% CI (37.1-64.6)	25%	0.165
Prevention strategies such as Abstinence, Being Faithful and using Condoms (ABC) are more effective than male circumcision in reducing transmission of HIV/ AIDS	12	100% CI (73.5-100)	41.7%	63	84.1% CI(72.7-92.1)	79.2%	0.349
Circumcised men do not need to be counselled about correct and consistent condom use to reduce transmission of HIV/AIDS	13	7.75% CI (1.9-36)	100%	66	4.5% CI (0.9-12.7)	100%	0.52
Male circumcision is only one part of potential prevention strategies to reduce transmission of HIV/AIDS	13	76.9% CI (46.2-95)	60%	59	66.1% CI (52.6-77.9)	48.7%	0.529
Circumcision is not as effective as correct and consistent condom use in HIV prevention	13	100% CI (75.3-100)	30.1%	59	88.1% CI (77.1-95.1)	57.7%	0.337

Appendix 10: Participant responses to statements about attitudes and beliefs towards male circumcision, disaggregated by gender

	MALES			FEMALES			Fischers Exact
	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree	
Circumcised men are more hygienic than uncircumcised men	12	66.7% CI (34.9-90.1)	50%	59	67.8% CI (54.4-79.4)	72.5%	(1 sided) 0.593
Women prefer their partners to be circumcised	5	20% CI (5.1-71.6)	0%	54	64.8% CI (50.6-77.3)	42.9%	0.07
Circumcised men are more at risk of contracting HIV than uncircumcised men	11	9.1% CI (2.3-41.3)	0%	53	13.2% CI (5.5-25.3)	85.7%	(1 sided) 0.583
Circumcised men do not need to wear condoms	13	0 % CI (0-24.7)	0%	66	9.1% CI (3.4-18.7)	100%	0.582
Male circumcision prevents transmission of HIV/ AIDS	9	22.2% CI (2.8-60)	0%	58	25.7% CI (15.3-39)	33.3%	(1 sided) 0.590
Male circumcision is a useful prevention strategy for HIV/ AIDS	10	80% CI (44.4-97.5)	25%	52	50% CI (35.8-64.2)	38.5%	0.97

Appendix 11: Participant responses to statements around beliefs about male circumcision, disaggregated by gender

	MALES			FEMALES			Fischers Exact
	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree	
There are more complications with male circumcisions carried out in babies (neonates) compared to adult men	10	20% CI (2.5-55.6)	50%	46	17.4% CI (7.8-31.4)	62.5%	(1sided) 0.576
Male circumcisions done in a traditional setting are safe	10	20% CI (2.5-55.6)	0%	57	14% CI (6.3-27.8)	37.5%	0.637
Male circumcisions done in a medical setting are safer than male circumcisions done in a traditional setting	12	91.7% CI (61.5-99.8)	27.3%	62	95.2% CI (86.5-99)	69.5%	0.515
It is wrong for parents to decide, on behalf of their male children, about circumcising them as a baby	11	63.6% CI (30.8-89.1)	28.6%	60	50% CI (36.8-63.2)	60%	0.518
It is wrong for medical professionals (doctors or nurses) to promote male circumcision in babies	11	45.5% CI (16.7-76.6)	40%	52	34.6% CI (22-49.1)	38.9%	0.511
Male circumcision in babies is a form of physical mutilation	19	20% CI (2.5-55.6)	50.0%	49	24.5% CI (13.3-38.9)	58.3%	(1 sided) 0.560
Male circumcision (as an HIV prevention strategy) will decrease condom use	9	33.3% CI (7.5-70.1)	33.3%	50	54% CI (39.3-68.2)	48.1%	0.299

Appendix 12: Participant responses to statements around beliefs about male circumcision, disaggregated by male circumcision practices in own culture

	CULTURE PRACTICES MC			CULTURE DOES NOT PRACTICE MC			Fischers Exact
	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree	
There are more complications with male circumcisions carried out in babies (neonates) compared to adult men	26	23.1% CI (9-43.6)	33.3%	29	13.8% CI (3.9-31.7)	100%	0.49
Male circumcisions done in a traditional setting are safe	34	17.7% CI (6.4-32.8)	33.3%	32	9.4% CI (2-25)	33.3%	0.477
Male circumcisions done in a medical setting are safer than male circumcisions done in a traditional setting	38	89.5% CI (75.2-97.1)	64.7%	35	100% CI (90-100)	60%	0.116
It is wrong for parents to decide, on behalf of their male children, about circumcising them as a baby	38	55.3% CI (38.3-71.4)	57.1%	32	46.9% CI (29.1-65.3)	46.7%	0.632
It is wrong for medical professionals (doctors or nurses) to promote male circumcision in babies	34	35.3% CI (19.7-53.5)	41.7%	28	35.7% CI (18.6-55.9)	30%	(1 sided) 0.591
Male circumcision in babies is a form of physical mutilation	30	23.3% CI (9.9-42.3)	42.9%	28	25% CI (10.7-44.9)	71.4%	(1 sided) 0.562
Male circumcision (as an HIV prevention strategy) will decrease condom use	32	37.5% CI (21.1-56.3)	41.7%	26	65.4% CI (44.3-82.8)	47.1%	0.064

Appendix 13: Participant responses to statements about training and willingness to perform or refer for male circumcision, disaggregated by male circumcision practices in own culture

	CULTURE PRACTICES MC				CULTURE DOES NOT PRACTICE MC				Fischers Exact
	n	YES	NO	UNSURE	n	YES	NO	UNSURE	
Are you currently trained to perform male circumcisions?	42	11.9%	88.1%	0%	33	6.1%	93.9%	0%	0.456
If you received the appropriate training, would you be willing to circumcise male babies?	41	36.6%	48.8%	14.6%	33	33.3%	57.6%	9.1%	0.8
If you received the appropriate training, would you be willing to circumcise older boys and adult men who request the procedure?	42	45.2%	47.6%	7.2%	33	42.4%	48.5%	9.1%	(1sided 0.590)
If you are unable to or not prepared to personally perform male circumcisions, would you willingly refer the patient/parents of the male baby to the appropriate service?	42	95.2%	4.8%	0%	33	97%	3%	0%	(1sided 0.591)

Appendix 14: Participant responses to statements about potential human rights beliefs and male circumcision, disaggregated by gender

	MALES			FEMALES			Fischers Exact
	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree	
Expecting healthcare workers to perform male circumcisions impacts on their (the healthcare workers) human rights	12	41.7% CI (15.2-72.3)	20%	51	41.2 CI (27.6-55.8)	71.4%	(1 sided 0.611)
Healthcare workers who disagree with circumcision for personal reasons should be allowed to refuse to do the procedure	13	92.3% CI (64-99.8)	25%	63	85.7% CI (74.6-93.3)	61.1%	(1 sided 0.678)
A patient has the right to refuse to be circumcised	13	100% CI (75.3-100)	53.8%	61	96.7% CI (88.7-99.6)	61%	(1 sided 0.565)
The national Department of Health should run awareness campaigns about the role of male circumcision in HIV prevention	12	91.7% CI (61.5-99.8)	54.5%	58	89.7% CI (78.8-96.1)	63.5%	(1 sided 0.456)
Healthcare workers should promote male circumcision as an HIV prevention strategy	10	80% CI (44.4-97.4)	37.5%	52	61.5% CI (47.1-74.7)	46.9%	0.472

Appendix 15: Participant responses to statements about potential human rights beliefs about male circumcision, disaggregated by professional position

	NURSES			DOCTORS			FACILITY MANAGERS		
	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree
Expecting healthcare workers to perform male circumcisions impacts on their (the healthcare workers) human rights	40	42.5% CI (27-59.1)	58.8%	13	30.8% CI (9.1-61.4)	25.0%	10	50% CI (18.7-81.3)	100.0%
Healthcare workers who disagree with circumcision for personal reasons should be allowed to refuse to do the procedure	53	88.7% CI (77-95.7)	53.2%	13	84.6% CI (54.6-98.1)	54.5%	10	80% CI (44.4-97.4)	62.5%
A patient has the right to refuse to be circumcised	52	96.2% CI (86.8-99.5)	52.0%	13	100% CI (75.3-100)	84.6%	9	100% CI (66.4-100)	66.6%
The national Department of Health should run awareness campaigns about the role of male circumcision in HIV prevention	48	91.7% CI (80-97.7)	59.1%	12	83.3% CI (51.6-97.9)	80.0%	10	90% CI (55.5-99.7)	55.6%
Healthcare workers should promote male circumcision as an HIV prevention strategy	44	63.6% CI (47.8-77.6)	42.9%	9	66.7% CI (29.9-92.5)	66.7%	9	66.7% CI (29.9-92.5)	33.3%

Appendix 16: Participant responses to statements about human rights beliefs and male circumcision, disaggregated by male circumcision practices in own culture

	CULTURE PRACTICES MC			CULTURE DOES NOT PRACTICE MC			Fischers Exact
	n	% of overall agreement	Of those who agree, % who strongly agree	n	% of overall agreement	Of those who agree, % who strongly agree	
Expecting healthcare workers to perform male circumcisions impacts on their (the healthcare workers) human rights	36	47.2% CI (30.4-64.5)	58.8%	26	30.8% CI (14.3-51.8)	62.5%	0.294
Healthcare workers who disagree with circumcision for personal reasons should be allowed to refuse to do the procedure	42	85.7% CI (71.5-94.6)	55.6%	33	87.9% CI (71.8-96.6)	55.2%	(1 sided 0.531)
A patient has the right to refuse to be circumcised	40	95% CI (83.1-99.4)	78.6%	33	100% CI (89.4-100)	63.6%	0.498
The national Department of Health should run awareness campaigns about the role of male circumcision in HIV prevention	39	87.2% CI (72.6-95.7)	64.7%	30	93.3% CI (77.9-99.2)	57.1%	0.69
Healthcare workers should promote male circumcision as an HIV prevention strategy	32	59.4% CI (40.6-76.3)	52.6%	29	72.4% CI (52.8-87.3)	38.1%	0.419

University of Cape Town

Appendix 17: Ethics Approval Letter

UNIVERSITY OF CAPE TOWN



Health Sciences Faculty
Research Ethics Committee
Room E52-24 Groote Schuur Hospital Old Main Building
Observatory 7925
Telephone [021] 406 6333 • Facsimile [021] 406 6411
e-mail: nosi.tywabi@uct.ac.za

06 June 2008

REC REF: 184/2008

Ms DL Kroon
C/o Prof L London
Public Health & Family Health

Dear Ms Kroon

PROJECT TITLE: THE HUMAN RIGHTS IMPLICATIONS OF ADOPTING MALE CIRCUMCISION AS A PREVENTION STRATEGY FOR HIV/AIDS IN SOUTH AFRICA.

Thank you for submitting your study to the Research Ethics Committee for review.

MEETING DATE: 30 May 2008

DECISION:

- The study is **formally approved**. This is a well presented, well structured protocol. The informed consent form is clear and concise and well thought through.

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Please quote the REC. REF in all your correspondence.

Yours sincerely

PROFESSOR M BLOCKMAN
CHAIRPERSON, HSF HUMAN ETHICS

This serves to confirm that the University of Cape Town Research Ethics Committee complies to the Ethics Standards for Clinical Research with a new drug in patients, based on the Medical Research Council (MRC-SA), Food and Drug Administration (FDA-USA), International Convention on Harmonisation Good Clinical Practice (ICH GCP) and Declaration of Helsinki guidelines.

The Research Ethics Committee granting this approval is in compliance with the ICH Harmonised Tripartite Guidelines E6: Note for Guidance on Good Clinical Practice (CPMP/ICH/135/95) and FDA Code Federal Regulation Part 50, 56 and 312.

Federal Wide Assurance Number: FWA00001637 Institutional Review Board (IRB) number: IRB00001938

lemjedi

Appendix 18: Amendments to Ethics Approval Letter

UNIVERSITY OF CAPE TOWN



Health Sciences Faculty
Research Ethics Committee
Room E52-24 Groote Schuur Hospital Old Main Building
Observatory 7925
Telephone [021] 406 6338 • Facsimile [021] 406 6411
e-mail: lamees.emjedi@uct.ac.za

20 August 2008

REC REF: 184/2008

Ms DL Kroon
c/o Prof L London
Public Health & Family Health

Dear Ms Kroon

PROJECT TITLE: THE HUMAN RIGHTS IMPLICATIONS OF ADOPTING MALE CIRCUMCISION AS A PREVENTION STRATEGY FOR HIV/AIDS IN SOUTH AFRICA.

Thank you for your letter to the Research Ethics Committee dated 18 August 2008.

It is a pleasure to inform you that the Ethics Committee has **approved** the Amendment with reference to the above mentioned study:- including the following documents:

- Revised protocol dated 19.08.08
- Health Care Workers questionnaire and Consent (Appendix A)
- Key Informant questionnaire (Appendix B)

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Please quote the REC. REF in all your correspondence.

Yours sincerely

PROFESSOR M BLOCKMAN
CHAIRPERSON, HSF HUMAN ETHICS

lemjedi