



ISSUES IN PUBLIC HEALTH

Key facts on male circumcision

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In 2007, the World Health Organization (WHO) and UNAIDS convened an international consultation of experts who represent a wide range of stakeholders, including government representatives, researchers, civil society representatives, gender experts, human rights and women's health advocates, young people, funding agencies and implementing partners, to investigate the potential role of male circumcision in the prevention of HIV transmission. As a result, male circumcision is now recognised and recommended by WHO/UNAIDS as an additional and important strategy for the prevention of heterosexually acquired HIV infection in men in countries with a high prevalence of heterosexually transmitted HIV infection and low levels of male circumcision.¹

Following the results of rigorous scientific research and the WHO/UNAIDS recommendations, sub-Saharan countries including Kenya, Swaziland, Botswana and Uganda are implementing national male circumcision programmes to help prevent the spread of HIV.

Diverse advocacy groups such as Southern African HIV Clinicians Society and the Treatment Action Campaign (TAC) recognise voluntary medical male circumcision as an efficacious measure that can potentially reduce the national HIV epidemic in South Africa.

Multiple factors are associated with HIV infection, and biomedical studies may yield discordant results as a function of the scientific methodology used, such as study design, male

circumcision status ascertainment and reporting of sexual behaviour. A major limitation of the review published in a recent *SAMJ* paper² is that male circumcision was self-reported and not observed clinically. Furthermore, evidence from one study cannot and should not be generalised, especially in a domain as complex as the dynamics of sexually transmitted infections.

Acceptability of male circumcision among uncircumcised men in southern Africa is high, at about 60 - 70%.³ In a recent study conducted in Orange Farm, South Africa, 59% of the surveyed men to whom male circumcision was acceptable underwent the intervention.⁴

Earlier studies show that in areas where male circumcision was practised, HIV prevalence was lower than where it was not practised.^{5,6} An analysis of the ecological and individual risk factors for HIV infection in four urban populations in sub-Saharan Africa shows that this geographical correlation was not affected by variations in sexual behaviour: although high-risk sexual behaviour is more common in Cameroon, a country with high levels of male circumcision, HIV prevalence remains relatively low.⁷

A methodologically sound, systematic review of 27 observational studies on male circumcision and HIV revealed a reduced risk of HIV among circumcised men, namely about half that of uncircumcised men. It concluded that male circumcision was associated with significantly lower levels of HIV infection among men in sub-Saharan Africa, particularly among those at high risk of HIV.⁸

In biomedical research, randomised controlled trials are considered the gold standard for judging the benefits of an intervention, since the observed effect can be attributed more readily to the actual intervention than in the case of observational studies. Three recent randomised controlled trials, each conducted over a period of about 24 months,⁹⁻¹¹ demonstrated a reduced HIV acquisition risk of about 60% among circumcised men.

Analyses from the extended follow-up of participants in a male circumcision randomised controlled trial conducted in Kisumu, Kenya, indicate that the protective effect of male circumcision was sustained, and possibly strengthened, for at least 42 months.¹²

In addition, mathematical and medical economics modelling studies have shown that the roll-out of male circumcision has a reasonable cost, is cost effective and can prevent millions of HIV infections in southern Africa.¹³⁻¹⁵

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In a recent survey conducted in Orange Farm it was found that 45% of men who declared themselves to be 'circumcised' still had an intact foreskin and were not clinically circumcised. HIV prevalence among these men was similar to that of uncircumcised men, but it was significantly lower among medically circumcised participants.⁴ This shows substantial bias with self-reported circumcision status in this population, and proves that the effectiveness of male circumcision stems from the removal of the foreskin, rather than cultural initiation practices.

In all male circumcision randomised controlled trials, sexual behaviour was naturally taken into account as a factor associated with HIV acquisition. Evidence has shown that in the context of a randomised controlled trial, circumcision does not result in increased HIV risk behaviour, also called risk compensation. However, its continued monitoring, together with evaluation and intensification of HIV prevention messaging on an individual and population level, is necessary to support the efficacy of male circumcision.¹⁶

Male circumcision is a cultural practice that can be changed: male circumcision was practised among the Zulus in the past and has become common in Korea. Furthermore, discussions with traditional circumcisers have indicated that collaboration is possible – medical male circumcision could therefore be combined with traditional initiation in order to minimise adverse events and morbidity associated with the intervention.

A randomised controlled trial in Orange Farm has shown that male circumcision markedly reduced human papillomavirus (HPV) acquisition by men, thus also reducing their female partners' exposure to HPV. HPV is the main cause of cervical cancer among women. This means that male circumcision is also indirectly beneficial to women in reducing their exposure to sexually transmitted diseases other than HIV.¹⁷

Like all medical interventions, male circumcision is associated with benefits as well as with risks. Adverse effects that are associated with medical male circumcision and require treatment include pain, bleeding and infections. However, no deaths or mutilations were recorded during the 24 months of the three randomised controlled trials, despite the fact that about 10 000 male circumcisions were performed.⁹⁻¹¹

Resuming sexual activity after male circumcision but before wound healing may increase the risk of HIV acquisition for both the men and their partners. Fortunately this risk applies only for a limited period of time (about 3 weeks), and imprudent behaviour may still be prevented by counselling. The risk also does not outweigh the far greater benefits of male circumcision.⁹⁻¹¹

Male circumcision trials offer a unique context in which young men may be offered voluntary counselling and testing (VCT), as well as counselling on HIV prevention methods such as condom use.

Ethically, because male circumcision is effective and its cost reasonable, it has to be offered and made available to the general population in heterosexual HIV epidemic settings.

The following signatories support the statements above, in which their comments have been included:

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