

Getting To Zero: Male Circumcision for HIV Prevention in The BahamasC George¹, D Brennen², R Roberts³, A Rabie⁴, S Read^{2,5}**INTRODUCTION**

The American Academy of Pediatrics has recently released a policy statement in support of male circumcision (MC) for newborns in the United States of America [USA] (1). In order to gather information on MC in The Bahamas, our research team from The Bahamas and Canada will soon be launching a two-year study which will measure the prevalence of MC in adults. It will assess healthcare providers' attitudes toward circumcision, and societal knowledge and attitudes about this practice. We believe that this may set the stage for further work on the reduction of the burden of HIV in The Bahamas and other countries in the region.

The Bahamas has seen important gains in the management of its HIV epidemic but the prevalence still remains high and is estimated to be 3% (2). Since 1994, AIDS has remained the leading cause of death in the 15–49-year age group in The Bahamas. The epidemic has been characterized as a heterosexual epidemic with a reported female to male ratio of 0.83:1 (2).

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While the HIV prevalence varies by age group, it is clear that any reduction in the epidemic must not focus only on females but also on males. In addition to other intervention strategies such as increased condom use, increased medication adherence for HIV positive individuals and reduction in the number of sexual partners, adult MC may be an appropriate intervention in the medium term for reducing the transmission of HIV. In the long term, a country-wide MC policy could prove beneficial in “getting to zero new HIV infections”, the theme of UNAIDS’ HIV campaign, due to its relatively low cost and the existing health service structure within The Bahamas (3).

Epidemiological Evidence on MC and HIV Transmission

Medical male circumcision is the surgical removal of the foreskin (prepuce) to expose the glans penis. Depending on the country or region, MC may be a part of religious/cultural practices and rituals or a commonly practiced medical procedure. According to an early Cochrane review, over 30 observational studies suggested a protective effect of MC on HIV acquisition in heterosexual men but there was insufficient evidence to recommend the procedure as a medical intervention (4). In 2002, three randomized controlled trials (RCTs) were conducted in Africa to assess the efficacy of MC in the prevention of HIV acquisition in men (5–7). Their results have overwhelmingly shown that MC reduces men’s risk of HIV. To evaluate these RCTs, another Cochrane review compared these MC interventions to no circumcision in HIV-negative heterosexual men, with HIV infection as the primary outcome (8). The review showed that there is strong evidence that medical MC reduces the acquisition of HIV in heterosexual men by between 38% and 66% over 24 months (8). Further, a recent study has demonstrated that five years after the original Ugandan trial, MC showed an adjusted effectiveness of 67% (95% CI 38, 83%) in preventing HIV acquisition (9).

Epidemiological studies using mathematical modelling have predicted that MC could prevent 2.0 million new HIV infections and 0.3 million deaths over a ten-year period in sub-Saharan Africa (10); HIV prevalence could be halved over this time period (11), and the reduction in HIV incidence in populations at higher risk of HIV exposure could reduce the basic virus reproductive rate to less than one, thus potentially halting the sustainable transmission of HIV in such populations under some scenarios (12). Another recent modelling study showed that if the rate of MC in 13 Sub-Saharan African countries reached 80%, 3.36 million new HIV infections could be averted by 2025 (13). While these models have been based on countries with relatively high HIV prevalence, other mathematical modelling showed that medical MC can be beneficial to populations with lower HIV prevalence in the prevention of HIV transmission between women and men (14–16).

Acceptance of MC among Health Practitioners

While UNAIDS/WHO and various other health organizations recommend MC as one of the strategies for reducing HIV, its implementation does not come without controversy (17–19). There are various myths in communities on the intent of MC practice including that it could become a status symbol thereby encouraging stigma; that MC could be a behavioural dis-inhibitor thereby encouraging reckless sex or that it could be perceived as a threat to masculinity (18, 20–24). There is a paucity of evidence on the attitudes and practices of healthcare practitioners, including paediatricians, obstetricians/gynaecologists, family practice physicians, nursing officers and front line nurses in rural areas *etc*, regarding adult male circumcision (although there are websites devoted to anti-circumcision practice). Few studies on medical decision-makers' acceptance of MC are presented in the literature. A study in the USA found that 49% of physicians recommended MC and 54% performed it on children [35% of paediatricians, 60% of family practitioners and 70% of obstetricians] (25). One small study in

New Zealand found that 20% of physicians offered MC (26). It is expected that the US Centers for Disease Control and Prevention will recommend MC for newborn males in the USA to reduce the spread of HIV, following the American Academy of Paediatrics policy statement. It is believed that the impact of MC on HIV incidence in the USA is not expected to be as large as it is in Southern African countries since a significant proportion of the US epidemic is in men who have sex with men and to date, there is no evidence that MC has a major impact of HIV transmission in this group. However, MC may have some benefits for certain heterosexual communities in the USA (16).

MC Practice and the General Population

Anecdotal evidence suggests that MC is not commonly practiced in The Bahamas. It is estimated that the prevalence of MC may be around 20%, based on data from private clinics (personal communication – Dr Percival McNeil, Bahamas). This may be similar to the rest of the Caribbean, where it is not supported by government programmes (27). Information from the WHO shows that the estimated prevalence of MC is less than 20% in the region (28). In the Caribbean, two small studies reported MC rates between 5–8% in Jamaica and the Dominican Republic (29, 30).

Studies of MC have shown differing levels of knowledge of circumcision, misconceptions about MC and HIV vulnerability for both males and females and even differing understanding of what is MC. For some, MC involves any intervention that reduces all or part of the prepuce (31, 32). In a Jamaican study among STI clinic attendees, while 60% of men and 67% of women reported that they had heard of circumcision, the research nurse assessed that 28% of men and 40% of women truly understood what was circumcision (30).

While attitudes toward MC differ among men, women and healthcare providers, there is general confusion about the practice and importance of MC in the region (29, 30, 33). There are no published studies of MC as part of cultural rituals among Caribbean people except anecdotal evidence suggesting that it may have been adopted among Caribbean people in the service of Jews. In addition, anecdotal evidence from Haiti suggests that some forms of partial circumcision may be practiced in Haiti but the extent of this practice among Haitian-Bahamians is unknown. While any exposure leading to keratinization of the glans may confer protection from HIV transmission, complete removal of the foreskin confers the most protection (34).

Significance of an MC Study in The Bahamas

The current research study addresses the HIV reduction strategy of UNAIDS/WHO (35, 36), and PANCAP (37), as well as that of other agencies such as PEPFAR (38) and the Bill and Melinda Gates Foundation (39). Further, this study supports the Caribbean Partnership Framework for HIV/AIDS, for which the Governments of The Bahamas, Jamaica and Trinidad and Tobago are signatories (40). Male circumcision is clearly marked as a strategic goal (goal 1.2 of the document). The study is important as it may provide information to support the reduction of new cases of HIV transmission in The Bahamas, as advocated by the government at the Caribbean HIV/AIDS Conference in November 2011. It was evident from the discussion following the MC plenary at the Caribbean HIV/AIDS Conference that countries in the region, including The Bahamas, did not have information on rates of MC or knowledge and attitudes about MC in their respective countries.

A human rights-based approach to the development or expansion of MC services requires measures that ensure that the procedure can be carried out safely, under conditions of informed consent, without coercion or discrimination and with the participation of communities (35). Therefore, the

primary goals of this research are to estimate the prevalence of MC among men in The Bahamas aged 15 – 49 years, to explore males’ knowledge, beliefs and attitudes about MC and willingness to be circumcised and to explore healthcare practitioners’ attitudes towards adult MC. There are also two secondary objectives for this research and these are (i) to assess women’s knowledge and beliefs about MC and their willingness to recommend MC to their male partner and to have their male infants circumcised and (ii) to examine men’s and women’s understanding of MC with regards to sexual health including HIV prevention.

CONCLUSION

By gathering information on attitudes and approaches toward male circumcision among men, women and healthcare practitioners, this study can provide information for policy development at the institutional level as well as for educational campaigns which could have a perceptible impact on the future attitudes and practices regarding male circumcision.

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