

The case for boosting infant male circumcision in the face of rising heterosexual transmission of HIV

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Circumcision now to prevent heterosexual HIV transmission in 2030 makes sense

Australia is rightly proud of its response to HIV. Thanks to superb formulation of public policy in the early days of the epidemic, it is not only a low-prevalence country but an international leader in many aspects of its clinical and public health responses. To maintain this fine record, Australia should change policy so that infant male circumcision rates are boosted in the face of rising heterosexual transmission of HIV.

Regular surveillance indicates that HIV in Australia is slowly following the trend in Western Europe and North America toward an increased proportion of transmission occurring through heterosexual contact.¹ Although the epidemic in Australia is likely to remain concentrated for some time among men who have sex with men, the proportion of new diagnoses attributable to heterosexual contact has risen from the negligible levels of the epidemic's early days.¹

The World Health Organization, the Joint United Nations Programme on HIV/AIDS and the Global Fund to Fight AIDS, Tuberculosis and Malaria have endorsed male circumcision to control HIV attributed to heterosexual contact in hyperendemic areas, stating: "The efficacy of male circumcision in reducing female to male transmission of HIV has been proven beyond reasonable doubt. This is an important landmark in the history of HIV prevention."²

This raises the question of whether low-prevalence countries such as Australia — with an increasing proportion of HIV cases attributed to heterosexual contact — should consider increasing the rate of infant male circumcision to reduce future HIV infections. The protection conferred to heterosexual males by circumcision is similar in hyperendemic and low-prevalence settings.³⁻⁵ In 2008, the Centers for Disease Control and Prevention (CDC) concluded that male circumcision "may also have a role in the prevention of HIV transmission in the United States."³ The CDC is now formulating a new policy.⁴

Being a low-prevalence country does not preclude a population-wide approach to HIV prevention. For example, we test pregnant women to prevent cases of vertical HIV transmission. Infant male circumcision would be a comparable, albeit more interventionist, population-wide strategy.

A wealth of research has shown that the foreskin is the entry point that allows HIV to infect men during intercourse with an infected female partner.^{5,6} Soon after the HIV pandemic was first recognised, much lower HIV prevalence was found in areas of sub-Saharan Africa where more than 80% of males had been circumcised than in areas where the circumcision rate was less than 20%.^{5,6} These findings were then replicated in Asia.⁷ In Australia, infant male circumcision was once routine, but plummeted in the 1970s.

Circumcision of males is now referred to by many as a "surgical vaccine" against a wide variety of infections and adverse medical conditions over the lifetime.^{5,6,8,9} The public health benefits

include protection not just from sexually transmitted HIV, but also from some common sexually transmitted infections and other conditions.⁴⁻⁶ Although it can be performed at any age, the ideal time is infancy, when adverse effects are uncommon.⁴⁻⁶ Considerable evidence, including data from randomised controlled trials, shows that male circumcision has no adverse effects on sexual function, sensitivity or satisfaction.^{4-6,8}

At present, the major obstacle to increasing the rates of infant male circumcision in Australia is an influential Royal Australasian College of Physicians policy, which has been criticised on scientific grounds.¹⁰ A draft of a new policy has also been criticised in a detailed petition by 38 academic and clinical experts (including Fellows of the College). Another barrier is the Medicare rebate, which has been reduced steadily in real terms over many years. No state or territory Department of Health except Queensland Health allows elective infant male circumcision to be performed in public hospitals.

Despite official discouragement, Medicare statistics show a rise in the rate of infant male circumcision in Australia from 13% in 1998 to 19% in 2009. Boosting the rate in Australia, as a long-term strategy to reduce HIV transmission (in combination with other interventions), is sound public health policy. Male circumcision is one of the most powerful interventions that is currently available in the fight against HIV.^{8,9} The prospect of the availability of a vaccine over the next 20 years is unlikely. Thus, circumcision now to prevent heterosexual HIV transmission in 2030 makes sense.

In addition to preventing HIV transmission, other benefits, high cost-effectiveness¹¹ and risk-benefit balance^{5,10,11} justify acceptance of male circumcision as a sensible public health measure.^{3,5,6} It should be viewed as part of a safer sex package. Condom use remains essential, with promotion of condom use plus circumcision of males being analogous to seatbelts plus airbags for reducing the road toll.

Australia would also be acting compassionately if it promoted infant male circumcision in the Asia-Pacific region, especially in Papua New Guinea where a generalised HIV epidemic has become well established. A commitment to increasing infant male circumcision should complement earlier commitments to other strategies for prevention of sexually transmitted infections, including condom use.

Twenty-nine years after the existence of this epidemic was first announced, it is clear that a new chapter has opened with the recognition that male circumcision substantially reduces female-to-male HIV transmission. Australia would be wise to take advantage of this knowledge.

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