The ethics of claiming a 60% reduction in HIV acquisition from voluntary medical male circumcision

To the Editor: Is telling people that voluntary medical male circumcision (VMMC) reduces the risk of HIV acquisition (female to male) by 60% ethically defensible? It is commonly stated that VMMC reduces the risk of HIV acquisition by (about) 60%, and this statement is even repeated during the process of obtaining consent for the circumcision procedure, often without the clarification that this statement applies to female-to-male HIV transmission.\(^{1,2}\)

Say a person’s salary will be increased by 60% – the intuitive thing is to ask ‘60% of what?’ Knowing the baseline salary is vital for fuller understanding of the situation. Can one then give informed consent to undergo VMMC on the basis of just a percentage? (During the consenting process for VMMC other issues are discussed; however, the focus of this letter is on the 60% issue.)

Others state that VMMC can reduce by two-thirds (\(~66\%)\) the rate of male acquisition of HIV.\(^{3-7}\) Although this statement is technically true, it represents the upper margin of the 95% confidence interval relative risk reduction (40 - 67%) in favour of VMMC.\(^{3-7}\) A two-thirds reduction therefore paints a more optimistic picture of VMMC. Medical authors have been known to use spin – as the media do – in scientific writing to achieve personal agendas.\(^{8}\)

I am of the opinion that it is unethical to just say to people that male circumcision will reduce HIV acquisition by approximately 60%, especially when alternatives exist that may be clearer and more easily understood. In more practical terms, the approximately 60% reduction translates to: ‘On average’ 72 circumcisions will have to be conducted over a 2-year period to prevent a new [HIV] infection.\(^{9}\) Mathematical modelling suggests ‘one HIV infection being averted for every five to 15 male circumcisions performed …’ in low-prevalence settings: What can mathematical modelling contribute to informed decision making? PLoS Med 2009;6(3):e111-e12. [http://dx.doi.org/10.1002/j.1468-1293.2008.00596.x]

Risk compensation – where individuals engage in risky behaviour such as having multiple concurrent sexual partners because they think they are protected from acquiring HIV by VMMC – has been of concern in the HIV field.\(^{10}\) The Orange Farm trial did ‘find a slight increase in risky behaviour in the circumcised men’.\(^{11}\) In my opinion, the 60% (or higher) reduction story can create a false sense of security, because the fuller picture is not revealed. It is not inconceivable for someone to think that 60% is closer to 100% (full protection from HIV acquisition) than to 0% (no protection). Telling people about the number of men who have to be circumcised to prevent one HIV infection, rather than a percentage reduction, could make them more cautious (reduce risk compensation) about behaviours that could lead to HIV acquisition.

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References