Making the Cut: Should Neonatal Male Circumcision be a Recommended HIV-Prevention Tool in the United States?

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For some, it's a revered and ancient expression of religious faith and tradition. Others believe it's not only medically unnecessary, but also a violation of human rights. In the U.S., debate over neonatal (newborn) male circumcision is more likely to happen among bloggers or at the doctor's office than among the body politic. That changed in December 2014 when the U.S. Centers for Disease Control and Prevention (CDC) published their first-ever recommendations on male circumcision and the prevention of HIV and other sexually-transmitted infections.

While the recommendations stop short of telling all parents to circumcise their newborn sons, the report states: "It is essential to maximize the impact of all available prevention options," and that "male circumcision is one strategy that may help reduce the continued spread of HIV in the U.S." And according to Dr. Jonathan Mermin, Director of the CDC's National Center for HIV/AIDS, Viral Hepatitis, STD and TB prevention, "The scientific evidence is clear that the benefits [of circumcision] outweigh the risks."

Recent studies from Sub-Saharan Africa do support circumcision as an effective HIV-prevention tool among heterosexual men, and the CDC cites them to support its recommendation that all uncircumcised males and parents and guardians of newborn males in the U.S. should be counseled by doctors on the benefits and risks of circumcision, including reduced risk of HIV infection.

The fight against HIV must include all available, scientifically-supported prevention options, such as condoms and pre- and post-exposure prophylaxis (PrEP and PEP), as well as Treatment as Prevention, which ensures that those who are HIV-positive reach viral suppression. But does the scientific evidence support routine male circumcision as an HIV-prevention tools in the U.S? What about the research on medical risks and complications associated with circumcision, as well as ethical concerns? It's critical to assess these issues when considering the breadth and potential affects of the CDC's recommendations.

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History and Background

Circumcision rates in the U.S. have always fluctuated, but it wasn't until the mid-twentieth century that neonatal male circumcision became common. In the 1940s, approximately 70 percent of male infants in the U.S. were circumcised at birth. That proportion reached 90 percent—the highest historical rate—in the 1970s, and it has since dropped to around 60 percent today. Unlike most countries with high neonatal male circumcision rates, procedures in the U.S. are usually performed for non-religious purposes. Circumcision in the U.S. is culturally accepted and considered the norm, though rates differ by region. The lowest rates in the U.S. are in the West and the highest are in the Midwest and North East. Prevalence is also higher among white males than among Hispanic or black males.

Outside of religious tradition, the biological justification often cited is that a circumcised penis is easier to clean and reduces the risk of collecting bacteria and viruses under the skin. In fact, the foreskin contains a large number of Langerhans cells, which some research indicates are susceptible to and targeted by HIV. However, research also indicates that Langerhans cells have a protective effect against HIV by secreting Langerin, a natural barrier.

International public health and professional medical associations largely disagree with the CDC's new recommendations. The Canadian Pediatric Society believes that "circumcision of newborns should not be routinely performed," and the British Medical Association reports that "the medical harms or benefits [of circumcision] have not been unequivocally proven." Similarly, the Royal Australian College of Physicians released a statement in 2010 that concluded, "After reviewing the currently available evidence, the RACP believes that the frequency of diseases modifiable by circumcision, the level of protection offered by circumcision and the complication rates of circumcision do not warrant routine infant circumcision in Australia and New Zealand." Additionally, the Pediatric Society of New Zealand, Royal Dutch Medical Society, and Central Union for Child Welfare in Finland have issued policy statements opposing routine neonatal male circumcision.

Risks

Circumcision is a generally safe procedure, but it still carries risks that range from extensive scarring to more severe complications that can lead to difficulty urinating, sexual dysfunction, and, in rare cases, even death. These risks are often associated with specific circumcision practices. For example, since 2000, 13 infants in the U.S. have been infected with herpes by rabbis who used their mouth to help stop the bleeding during a bris (Jewish circumcision ceremony). Two of the 13 infants suffered brain damage and an additional two died as a result of the infection. In total, there are an estimated 117 annual, neonatal, circumcision-related deaths in the U.S.

Peer-reviewed studies have also linked sexual dysfunction to circumcision. Removing the foreskin also removes thousands of Meissner's Corpuscles, nerve receptors that are touch-sensitive cells also found on the lips and fingertips. The effects of exposing the head of the penis and removing these nerves leads to keratinzation and the reduction of sensitivity. In fact, a study of 138 men circumcised as adults assessed sexual pleasure and circumcision. After they were circumcised they reported a 48 percent decrease in masturbatory pleasure and 20 percent reported that their sex life worsened.

Additionally, a Danish study of 5,222 men found that those who were circumcised were more likely to report difficulty achieving orgasm, as well as pain during intercourse. In the same study, the sexual partners of men who were circumcised reported less fulfillment in their sexual needs than the partners of uncircumcised men. Another study found circumcised men were 4.53 times more likely to report erectile dysfunction and more likely to report using erectile enhancement drugs than those who are uncircumcised.

In addition to these physical risks, a growing body of peer-reviewed research indicates that circumcision may be associated with psychological and neurological health issues. One study found that the stress and pain caused by circumcision can double a boy's risk for developing autism spectrum disorder (ASD). Another study found that the pain and trauma associated with circumcision may also lead to post-traumatic stress disorder (PTSD) and feelings of victimization and sexual assault. Of the 1,577 boys included in that study, 68 percent were circumcised under medical procedures and the remainder were circumcised during a religious ceremony or ritual circumcision. Almost 70 percent of those who experienced ritual circumcision and over 50 percent of those who experienced medical circumcision fulfilled the DSM-IV criteria for a diagnosis of PTSD. Additional psychological health issues associated with circumcision include depression, anxiety, and interpersonal difficulties.

Ethics

Apart from the physical and mental risks and complications that can be caused by circumcision, there are ethical issues associated with the CDC's recommendation specific to neonatal male circumcision because a child is unable to consent. Medical ethicists have framed neonatal circumcision as a human rights and social justice issue that violates the right to bodily integrity. They argue that it's a form of medical violence because it electively removes healthy tissue and can lead to severe, negative health outcomes.

Nonetheless, parental rights and religious freedom for parents are also important to consider. While parents are free to express their religion, does that right extend to circumcision? Do parental rights trump the human rights of the child? According to the Committee on Bioethics of the American Academy of Pediatrics, "Constitutional guarantees of freedom of religion do not permit children to be harmed through religious practices, nor do they allow religion to be a valid legal defense when an individual harms or neglects a child." The 1944 U.S. Supreme Court case, Prince v. Massachusetts, also offers precedent regarding parental rights applicable to this debate. The Court ruled that parental authority is not absolute and can be restricted if it's in the best interest of the child's welfare: "The right to practice religion freely, does not include liberty to expose…a child…to ill health or death."

Ethicists also cite the specific articles included in the United Nations Convention on the Rights of the Child and the Universal Declaration of Human Rights when opposing routine neonatal male circumcision, including the right to liberty, security of person, and freedom from torture or cruel, inhuman, or degrading treatment. Accordingly, in 2013, Norway, Sweden, Finland, Greenland, Iceland, and Denmark released a joint statement declaring that "circumcision, performed without a medical indication, on a person who is incapable of giving consent, violates fundamental

medical-ethical principles, not least because the procedure is irreversible, painful and may cause serious complications. There are no health-related reasons for circumcising young boys in the Nordic countries." These nations are currently working towards banning all non-medically necessary circumcisions for infants.

Ethical challenges to circumcision are also supported by one of the most common justifications—parents simply want their sons' penises to look like their fathers'. However, cosmetic justification for circumcision loses standing when that logic is applied to other situations. For example, if a father has a different eye color or hair color than his son, would he make his son use colored contacts or dye his hair to match? If a father were missing a toe or had an amputation, would he want his son to undergo surgery to remove a toe or leg to look like him?

Even more challenging is the gap in belief and ethical condemnation between male and female circumcision, often referred to as "female genital mutilation" (FGM). Like male circumcision, FGM has historic, religious, and cultural roots, and it's also justified as a rite of passage and/or necessary for hygiene and social acceptance. Both have also been used as a method for controlling and preventing sexual expression, including masturbation. While FGM is condemned in the U.S., male circumcision is not similarly challenged.

HIV Prevention

The use by the CDC of studies from Africa as justification for recommending circumcision as an HIV-prevention tool in the U.S. is comparing apples to oranges. While studies in Sub-Saharan Africa associate circumcision with a 50 to 60 percent reduction in risk for HIV, they don't take into account the differences in the epidemic in the U.S.

In 2012, there were approximately 469,000 new HIV infections in South Africa, compared to approximately 50,000 in the U.S. In South Africa, HIV transmission is primarily spread through heterosexual sexual intercourse, and men who have sex with men (MSM) comprise only 9.2 percent of new infections. By contrast, in the U.S., MSM comprise 63 percent of new infections; only 10 percent of new infections occur through heterosexual sex.

Most importantly, the studies from Africa have only associated circumcision with a reduction in HIV risk among heterosexual men. There is little to no research on the effectiveness of circumcision for MSM or for men who are HIV positive. In the U.K., the epidemic is also concentrated among MSM. Yet, after the release of the African studies the British HIV Association concluded that the benefits of circumcision as a public health intervention are minimal and should not take away resources from interventions that have proven effective.

It's important to note that circumcision alone does not equate to lower rates of HIV, just as lower circumcision rates do not equate to higher rates of HIV. Europe has low circumcision rates in general and, collectively, some of the lowest rates of HIV in the world. Finland, in particular, has a less than 1 percent circumcision rate and approximately 0.1 percent of its adult population is infected with HIV. Comparatively, the U.S. has a 60 percent circumcision rate and approximately 0.5 percent of its adult population is HIV-infected.

It’s also important to note that all of the existing peer-reviewed studies on circumcision as an HIV-prevention tool focus on adult males, so it’s unclear whether neonatal circumcision guarantees the same protective effect. It’s also impossible to determine at birth which infant males will engage in more risky sexual behaviors as adults or what their sexual orientation is. Thus, it’s erroneous to believe that all male circumcised children will receive—or will even require—the same purported preventative benefits as adults.

Conclusion

In its recommendations, the CDC admits that “[M]ost new HIV infections in the United States are attributed to male-male sex, a population for whom male circumcision has not been proven to reduce the risk of HIV acquisition.” There are better-proven, less expensive, and less invasive interventions that are more effective at preventing new HIV infections in men — gay or straight — including female and male condoms, Treatment as Prevention, and PrEP and PEP. In fact, studies of PrEP show at least a 90 percent reduction in HIV risk when taken as prescribed, compared to the 50 to 60 percent reduction found by the studies in Africa of men who were circumcised as adults. Compared to circumcision, PrEP is also non-invasive, not permanent, and applicable to heterosexual, gay and bisexual men, and men and women of transgender experience.

The CDC also does not address the growing body of peer-reviewed research on the psychological and neurological health issues, ethical concerns, associated sexual dysfunctions or recommendations of medical professional organizations in Europe regarding neonatal male circumcision. The CDC should revise its recommendations to more directly address these concerns so that physicians and families can be better informed when they decide for future generations of infant boys whether circumcision is a benefit. In the interim, HIV advocates, healthcare specialists, and policy makers may have more of an impact on our collective goal to end this epidemic by focusing on more proven HIV-prevention tools.

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