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Comparative Effectiveness Research:

In reply

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Despite recent evidence establishing the substantial medical benefits and safety of MC,^{1,2} intense debate over the procedure continues, as demonstrated by comments regarding our recent analysis and the revised American Academy of Pediatrics policy on MC.² It would be inappropriate to allow emotions to cloud logical judgment about the health and economic benefits of a medical procedure.

The ethical concerns Booker raises compare MC, a safe and beneficial medical procedure, with female genital mutilation, a distinct cultural practice and human rights violation. While it is clear that bioethical concerns may arise when one individual makes a decision about a medical procedure for another, MC has a far different benefit/risk balance than female genital mutilation. We fully agree with the cited multiagency statement on female genital mutilation, but this has no bearing on MC. We also support the World Health Organization/UNAIDS and American Academy of Pediatrics policies that parents should be provided with unbiased information on the risks and benefits of MC to make informed decisions in the best interests of their sons. This method of consent is used for other pediatric medical procedures, including immunization.

Hay and Booker suggest that the model incorporated unreasonable assumptions and did not account for important factors that would affect our outcomes. However, numerous observational studies have demonstrated that MC has similar efficacy in the United States as in Africa,^{1,2} and our results withstood parameter variation during sensitivity analysis. Our model did not incorporate the effects of the human papillomavirus vaccine. However, the vaccine's uptake among female adolescents is just 32%,³ and incorporating this factor would not substantially affect our findings. In addition, our cost parameter for HIV treatment is

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likely an underestimate. Despite availability of generic HAART, the cost of HIV treatment is expected to increase, because HIV-infected individuals are living longer and receiving newer patent-protected medications with improved safety and efficacy profiles.⁴ Our study was not designed to address the societal value of MC compared with other sexually transmitted infection control methods.

Although Truvada may be an important component of a comprehensive HIV strategy, Hay's claims are unrealistic. Unlike MC, Truvada must be used daily, presenting a significant barrier to success when compliance rates are just 50%.⁵ Furthermore, because HIV has a high mutation rate, Truvada may not be effective for all patients over the long term. Even if Truvada becomes available cheaply as a generic drug (it currently costs \$13 900 annually), patients may need other prophylactic medications. In addition, Hay underestimates the cost of pre-exposure prophylaxis; in addition to the medication itself, regular physician visits and HIV testing are required.

As a one-time procedure, MC is associated with long-term medical benefits, including a 60% reduced risk of heterosexually acquired HIV and reductions in other sexually transmitted infections and infant urinary tract infections.^{1,2} There are more than 19 million sexually transmitted infections in the United States annually, and MC is a valuable tool for reducing these infections, in conjunction with other methods. Our model focused only on the impact of reduced MC on a birth cohort of men and women and incorporated conservative input parameters and assumptions, resulting in an underestimate of the true health and financial implications. Parents, physicians, and the policy community should logically and objectively assess the health and financial evidence regarding MC.

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