Horizons

Male Circumcision and HIV Prevention

According to a recent meta-analysis of studies on male circumcision—the removal of all or part of the foreskin of the penis—in sub-Saharan Africa, this procedure may reduce HIV infection risk by approximately 50 percent.[1] Acceptability, feasibility, safety, and cost-effectiveness of male circumcision as a public health intervention need to be explored and better understood if appropriate decisions with regard t the allocation of scarce HIV intervention resources are to be made. To this end, on February 7-8, 2000, Horizons convened a meeting of leading international researchers to explore programmatic and research implications of the strong association between male circumcision and lower prevalence of HIV infection.[2]

Male Circumcision: What We Know So Far

In sub-Saharan Africa, where most studies have been done, male circumcision is statistically associated with a reduced rate of HIV infection. Male circumcision may thus be seen as a potential new intervention for reducing HIV incidence, and there is anecdotal evidence of an increased demand for male circumcision in some communities as a result of increased concern about HIV/AIDS.

But little is known about the acceptability, feasibility, safety, and cost-effectiveness of male circumcision in different parts of sub-Saharan Africa, especially among currently non-circumcising populations, among whom the introduction of male circumcision has the greatest potential impact. Research also suggests that the protective effect against HIV infection is most pronounced if the procedure is done before the onset of sexual activity. In many parts of sub-Saharan Africa, circumcision is typically done as part of initiation to manhood rites, at ages ranging from 10 to 20 years or even older.

Next Steps for Research

Randomized controlled trials should be conducted to prospectively evaluate the effect of circumcision on HIV transmission. While such studies are expensive and difficult to implement, often involving sensitive ethical issues, they are the only way to adequately address key questions about circumcision. Such studies should include penile hygiene as an independent variable. Little is known about the role of the foreskin in relation to HIV transmission, which needs further study.

Acceptability studies should be done in currently non-circumcising populations. Social and behavioral consequences of introducing male circumcision as an HIV intervention should also be studied. Anecdotal evidence suggests that male circumcision is perceived in some areas as protective against HIV infection, and has even been referred to as the "invisible condom." Perceptions of protection may lead to increased risk behaviors, including reduced condom use. Thus any male circumcision intervention should include HIV prevention education, counseling and behavioral change interventions, and sustained promotion of condom use.

Researchers should also explore the safety of the procedure in different settings, operational aspects of male circumcision interventions (training, personnel, equip-

ment, cost), issues of informed consent (including parental versus client consent), and public understanding of risks and benefits. Finally, a country-level rapid assessment tool should be developed to prepare for male circumcision programs.

Future Research Directions for Horizons

The Horizons Program is well placed to address a number of research questions related to male circumcision in its ongoing research portfolio, and to undertake operations research specific to this issue. Participants proposed the following activities for Horizons:

- Integrate assessments of attitudes and beliefs about male circumcision in ongoing studies in circumcising and non-circumcising populations, including the role of circumcision in the gender and sexual socialization of boys.
- Explore the understanding of the benefits of male circumcision among parents, adolescents, and young adults.
- Conduct observational studies of traditional male circumcision practices, including assessments of parent and client understanding of the benefits of male circumcision.
- Include questions on circumcision status in ongoing studies.
- Model the costs and impact of male circumcision in different settings.
- Design longer-term studies on the costs and safety of male circumcision.
- Develop and field-test a rapid assessment tool to assess the feasibility and cost of introducing male circumcision.

As a result of carrying out these research activities, Horizons would contribute to answering the following research questions:

- Whether introducing male circumcision as an HIV intervention in currently non-circumcising populations is feasible, acceptable, and cost-effective.
- What the gender and ethical implications of promoting male circumcision are and how they can be addressed programmatically.
- How best to collaborate with non-clinical (religious and traditional) and clinical providers of circumcision services to implement safe and effective male circumcision interventions (in terms of training, supervision, and support).
- How best to obtain informed consent at different ages.
- How male circumcision should be promoted to enhance acceptability while at the same time avoiding a reduction in preventive behavior, such as condom use.
- More about the minimum resource package needed to perform male circumcision safely, such as properly equipped facilities and adequately trained staff.
- Using mathematical modeling, what the short- and long-term impact of male circumcision on HIV transmission under different conditions is, at different ages, in different populations, as well as the cost of such interventions.
- What specific criteria program managers should use to prioritize male circumcision among proven HIV prevention strategies.

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[1] Hayes, R.J., H. Weiss, and M. Quigley. 1999. *Meta-analysis of the Relationships between Male Circumcision and HIV Infection.* Presented at the 13th meeting of the ISSTDR, July 11-14, 1999. Denver, CO, USA.

[2] Van Dam, J and M.C. Anastasi. 2000. *Male Circumcision and HIV Prevention: Directions for Future Research.* Washington, DC: Horizons Program.

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