Major shift in HIV prevention priorities needed

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According to a new policy analysis led by researchers at the Harvard School of Public Health (HSPH) and the University of California, Berkeley, the most common HIV prevention strategies—condom promotion, HIV testing, treatment of other sexually transmitted infections (STIs), vaccine and microbicide research, and abstinence—are having a limited impact on the predominantly heterosexual epidemics found in Africa. Furthermore, some of the assumptions underlying such strategies—such as poverty or war being major causes of AIDS in Africa—are unsupported by rigorous scientific evidence.

The researchers argue that two interventions currently getting less attention and resources—male circumcision and reducing multiple sexual partnerships—would have a greater impact on the AIDS pandemic and should become the cornerstone of HIV prevention efforts in the high-HIV-prevalence parts of Africa. The paper appears in the May 9, 2008 issue of the journal *Science*.

“Despite relatively large investments in AIDS prevention efforts for some years now, including sizeable spending in some of the most heavily affected countries (such as South Africa and Botswana), it’s clear that we need to do a better job of reducing the rate of new HIV infections. We need a fairly dramatic shift in priorities, not just a minor tweaking,” said Daniel Halperin, lecturer on international health in the HSPH Department of Population and International Health and one of the paper’s lead authors.

The AIDS pandemic continues to devastate some populations worldwide. In most countries, HIV transmission remains concentrated among sex workers, men who have sex with men and/or injecting drug users and their sexual partners. In some parts of Africa, HIV has jumped outside these high-risk groups, creating “generalized” epidemics spread mainly among people who are having multiple and typically “concurrent” (overlapping, longer-term) sexual relationships. In nine countries in southern Africa, more than 12% of adults are infected with HIV.

Halperin, co-lead author Malcolm Potts, Bixby Professor of Population and Family Planning at UC Berkeley School of Public Health, and their eight colleagues say that the current widely used prevention strategies, while having value in some instances, are not as effective at preventing HIV transmission as male circumcision and reducing multiple sexual partners and thus should not continue to receive the bulk of donor investments for prevention, especially in Africa.

For example, condom use is widely promoted as an HIV prevention measure and is effective in countries such as Thailand, where the epidemic is spread primarily through sex work. However, studies have found no evidence that condom use has played a primary role in HIV decline in generalized, primarily heterosexual epidemics, such as those in southern Africa, the authors note. This is mainly because most HIV transmission there occurs in more regular sexual relationships, in which achieving consistent condom use has proved extremely difficult.

The evidence is similarly lacking for other popular prevention approaches as well, according to the authors. Studies have shown no consistent reduction in risk for those testing HIV-negative and testing programs have produced no evidence of HIV reduction in populations. The treatment of other STIs has had discouraging results; vaccine development trials and microbicide testing have been disappointing; and abstinence is not likely to have a major impact since most HIV

infections occur among people in their 20s or older, when most are already sexually active.

In contrast, many studies in the last two decades have shown that male circumcision significantly reduces the risk of heterosexual HIV infection. In west Africa, where male circumcision is widespread, the prevalence of HIV remains relatively low. When initial findings from three recent randomized controlled trials of male circumcision in Africa showed at least a 60% reduction in HIV risk, the trials were stopped early because it was not ethical to withhold the clearly proven benefits of this simple surgical procedure. “It is tragic that we did not act on male circumcision in 2000, when the evidence was already very compelling. Large numbers of people will die as a result of this error,” said Potts.

Similarly, partner reduction appears to have played a primary role in reducing HIV rates in Uganda, Kenya, Zimbabwe, Cote d’Ivoire, and in urban Malawi and Ethiopia. Uganda’s “Zero Grazing” campaign, initiated in 1987, indicated that reducing partners can be achieved on a large scale as later surveys revealed that the number of people reporting multiple and casual partners declined by over half.

The political fight in the United States between supporters of condoms and supporters of abstinence has obscured the importance of what is arguably the most powerful of what are known as the three “ABC” strategies (Abstinence, Be Faithful, Condoms), which is the “B,” or partner reduction and fidelity aspect, according to the paper’s authors.

The authors argue that HIV prevention priorities need to shift significantly to reflect the best available scientific evidence. They note that only 1% of total prevention funding requested by the United Nations AIDS Program is earmarked for male circumcision, and that reducing multiple sexual partnerships would probably garner only a small fraction of “community mobilization and mass media,” “workplace” or other HIV

prevention investments.

“The vast majority of donor investments in HIV prevention in the generalized epidemics of Africa continue to go to approaches for which the evidence of actual impact is increasingly unclear,” said Halperin. “Many of these approaches, such as HIV testing and treating other STIs, do have important public health benefits, and should be continued, but not because we believe they will definitely have a major impact on reducing HIV infections. Meanwhile, there is still some foot dragging on more fully implementing those approaches for which the evidence is much stronger, namely to scale up safe, voluntary male circumcision services, and to more assertively promote partner reduction.”

Source: Harvard School of Public Health