REVIEW

Primary prevention of sexually transmitted disease: applying the ABC strategy

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Escalating rates of sexually transmitted disease (STD) in many areas of the world necessitate a re-evaluation of current public health STD preventive programmes. Pervasive long term sequelae for many STD afflicted people and the emerging threat, caused by the HIV/AIDS pandemic, to some national infrastructures, suggests that ongoing initiatives focusing primarily on risk reduction through barrier protection have not met their desired objective. Recent strategies to promote non-coital sexual involvement as a means of achieving STD reduction fail to address the transmission of infection that may occur through alternative non-intercourse sexual activities. The demonstrated success of the innovative, comprehensive ABC strategy shows that while risk reduction and treatment of existing infection remain important, the promotion of optimal health may be achieved more effectively through broad based comprehensive and adaptable programmes that include an emphasis on risk avoidance through delayed sexual debut and partner reduction.

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Despite international efforts to reduce the incidence of sexually transmitted disease (STD), rising infection rates[1–4] highlight the importance of exploring and evaluating the efficacy of STD prevention strategies. While the presentation of factual information about barrier protection and infection management has been the mainstay of prevention programmes worldwide, an overview of current STD risk reduction strategies and an exploration of programmes that focus on primary prevention suggests that the ABC approach to sexual behaviour change may be effectively used to develop balanced, population specific STD prevention programmes.[5 6] This approach, which advocates delayed sexual debut for adolescents (A, abstinence), partner reduction (B, be faithful), and factual information regarding condom use (C, condoms)[5 6] has been successfully pioneered in Uganda, a country previously experiencing significant STD rates.[7] Perhaps it is time to consider the potential application of this approach in the educational programmes of other nations.[6 8–11]

CURRENT RISK REDUCTION STRATEGIES

Rising STD rates have led to a situation where certain sexually transmitted infections are regarded as "an inevitable consequence of sexual activity"[12] and current STD prevention programmes principally focus on the reduction of risk as a means of stemming the tide of these diseases. The promotion of "safe" or "safer" sex practices and, more recently, of non-coital sexual activity has resulted in a focus on risk reduction even in population groups where an emphasis on risk elimination might be appropriate.

A focus on condom use, as a means of risk reduction, has been the basis of most behavioural STD interventions for many years. The practical effectiveness of this strategy is, however, hindered by three important factors. Firstly, condoms provide limited protection against "SS" (skin to skin or skin to sore) transmission of STDs such as HPV, HSV, syphilis, or chancroid as these barrier devices do not cover all exposed areas and thus direct skin contact with pathogens throughout the external genital area compromises the protection offered by the condom.[1] Secondly, rates of mechanical failure and user error with condoms, particularly in young people, are significant.[13 14] And finally, issues of compliance seriously impair the effectiveness of protection against discharge related infections such as HIV, chlamydia, and gonorrhea.[1] Research shows that exposure to condom education and increased awareness of risk does not result in safer sex choices when adolescents are sexually aroused, and only a minority of people engaging in risky sexual behaviour use condoms consistently.[15–19] This latter point has serious implications as "irregular use of condoms provides no protection against transmission of HIV and STD."[20]

Despite recent reports of decreased STD rates as a result of widespread condom use by commercial sex workers (CSW),[21 22] published results suggest that partner reduction played a pivotal part in STD decline. Mass advertising campaigns and widespread HIV education in Thailand as well as Ethiopia, Cambodia, and other countries resulted in pronounced reduction of casual sex and liaisons with CSW.[6 23–25] Infection patterns suggest the central role of partner reduction: after the "100% condom program" for Thailand's CSW, for example, there was a pronounced decrease not only in discharge related STDs, but also in "SS" diseases such as syphilis and chancroid,[21 22] infections that are commonly transmitted despite condom use. Furthermore, in an article comparing HIV seroprevalence among CSW who started the sex trade before and after the "100% condom program", it was found that HIV seroprevalence

Abbreviations: STD, sexually transmitted disease; CSW, commercial sex worker

was higher among CSW who started the sex trade after the implementation of the mandatory condom programme,[25] thus suggesting ongoing vulnerability for CSW and clients despite legislated condom use. In addition, it has been found that many Thai citizens, particularly adolescents, are still not consistently using condoms.[16 26 27] These findings imply that less commercial sex and partner reduction played an important part in the falling STD rates in these nations[6 23 25] and supports the hypothesis that a comprehensive educational strategy that incorporates risk avoidance through partner reduction is likely to have a greater impact than strategies with unilateral focus on risk reduction through condoms.

While factual information regarding barrier protection is an important component of STD reduction strategies, it has not met the desired objective of diminishing the global STD pandemic. As a result of concerns about escalating STDs in the adolescent population (the World Health Organisation estimates that two thirds of STDs worldwide occur in teenagers and young adults[28]) and the increasing recognition that, from an STD perspective, early sexual intercourse among youth may be a health hazard, some educational initiatives have sought to promote non-coital sexual activity as a means of STD risk reduction. This strategy, however, has limited potential for STD prevention: non-intercourse sexual involvement may entail serious risk of STD acquisition.[14] Oral sex, for example, may be a means of transmitting both ''SS'' and discharge related STDs, and genital frottage facilitates transmission of ''SS'' pathogens.[14 29 30] In addition, there is no evidence to support the hypothesis that young people participating in highly stimulating, non-coital sexual activity will not participate in at least intermittent intercourse.

With the limited success of programmes focusing primarily on risk reduction, attention to the ABC strategy for sexual behaviour change, particularly the often neglected A and B components, is warranted.[6 9]

PRIMARY PREVENTION: ADDRESSING UNDERLYING BEHAVIOURS

There has been general consensus in the public health community that HIV discordant couples and those engaging in higher risk sexual activities, including multiple sexual partners or ''serial monogamy'', should be encouraged to use condoms to reduce the transmission of discharge related STDs; however, focus on this risk reduction strategy has sometimes occurred without a complementary focus on other forms of behavioural interventions. The fact that early initiation of sexual intercourse in adolescents is associated with a higher number of lifetime sexual partners[31–34] and a consequent higher risk of contracting STDs, makes the promotion of delayed sexual debut in this population a first and critical step in partner reduction and the primary prevention of sexually transmitted infections.[9] From a STD perspective, sexual encounters include present partners as well as past partners and all of their partner's partners[35]; therefore, partner reduction must be a prerequisite focus in the primary prevention of STDs. The results of a prevention programme that focused on the both primary prevention and risk reduction through the use of an ABC approach to sexual behaviour change can be seen in the outcomes of a national programme started by government and health officials in Uganda.[58]

To tackle the growing HIV crisis, an aggressive media campaign was instituted in Uganda over the past decade with a strong emphasis on ''behaviour change'' in the general population as well as an emphasis on empowering women to make healthy sexual choices.[5] Reported changes occurring in association with this programme include the following: rates of 13 to 16 year olds involved in sexual activity in one district of Uganda declined from nearly 60% in 1994 to less than 5% by 2001[5]; fewer than 10% of unmarried Ugandan women in all age groups reported multiple partners, in noticeable contrast with 20%–65% of women in other African nations such as Kenya and Malawi[5]; and, reported rates of barrier protection use with non-regular partners increased. During about the same time period, national HIV prevalence declined from reported rates as high as 30% in 1992[7] to an estimated 5% in 2001.[5] The potential public health implications of replicating the Ugandan results in other nations are apparent.

It has been reported that ''behavior change, as distinct from condom adoption''[24] was the principal factor responsible for pronounced reduction in HIV rates in Uganda.[5 6 8 24] Although barrier protection with irregular partners increased in the past half decade, ever use of condoms in Uganda remained low: only 16% of women in 2000 reported that they had ever had sex with men who were using condoms,[5] and a study of the general population in one district found that only 4.4% reported consistent condom use.[20] In other African nations, such as Zimbabwe and Botswana, where STD prevention strategies have principally focused on the promotion and distribution of condoms and where, compared with Uganda, there are higher rates of condom sales and reported use, HIV prevalence is among the highest in the world.[5 36–38] There is an unprecedented 55.6% HIV prevalence among pregnant women aged 25–29 in urban Botswana and infection rates in Zimbabwe suggest that by 2020 there will be a 30% AIDS related workforce loss.[39] These figures contrast starkly with Ugandan figures and suggest that the ABC approach may provide an adaptable framework for balanced, population specific STD prevention programmes in other nations.[8]

CONCLUSION

The worldwide STD crisis, a public health challenge that disregards socioeconomic barriers and national boundaries, requires broad based interventions that allow for personal, cultural, and epidemiological differences. Given the apparent success of prevention strategies that address primary sexual behaviour, increased consideration and resources should be allocated to comprehensive ABC STD prevention initiatives that include the promotion of risk avoidance through delayed sexual debut and partner reduction, as well as the provision of factual information about risk reduction through barrier protection.

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