“Saved Sex or Safer Sex?” Risk Reduction Or Risk Avoidance?

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Abstract

The HIV pandemic continues to march forward with devastating consequences in Sub Saharan Africa, the continent most affected by AIDS. In the HIV prevention armamentarium is the common A, B, C paradigm. Often, the C (condom use) is highly weighted at the expense of the B (Be faithful) and A (Abstinence). This short review report tries to counterbalance this skewed approach by highlighting the A and B aspects and avers that this might be of huge benefit in HIV prevention activities.

Keywords: HIV, AIDS, Sub-Saharan African

INTRODUCTION

Sub-Saharan African has 10% of the world’s population, yet account for more than 50% of the world Human Immune Deficiency Virus (HIV) infected people. Of the 20 million plus people who have died from Acquired Immune Deficiency Syndrome (AIDS) globally, 14 million have been from Africa. Of the 14 million AIDS Orphans in the world, 12 million are in Africa. Most of these are largely from sub-Saharan Africa. This has led to significant socioeconomic interruption on the African Continent. Lately the epidemic has substantially reduced in Eastern Africa while remaining static or increasing slightly in Southern Africa.

Sub-Saharan Africa HIV transmission is primarily heterosexual (rather than homosexual and injection drug users as in North America) making the question of condom effectiveness a crucial one in HIV prevention programs (Bretzman MC, Stanford JB, 1994)). With 40 million people currently infected with HIV, 20 million have died and 3 million annual deaths from HIV, the time for action has never been more imperative.

Two main prevention strategies are in Vogue: Risk reduction (minimizing infection chances) and Risk Avoidance (preventing chances of infection). Whereas the former is the major strategy in most global programs, the authors raise issues with its effectiveness. Using the East African experience the authors develop a case for taking a keen look at the latter as the more effective strategy.

Risk Avoidance or Risk Reduction

Risk avoidance intervention based on the “ABC’ model has shown the A (Abstinence) and B (Be faithful) being superior to C (Condoms) in the Ugandan experience (Green et al). Led by the 1st couple, President Yoweri and Janet Museveni, this intervention focused on encouraging youth and adults to refrain from non-marital sex (Museveni YK and Kanyongonya E, 2012). The medium of implementation was via school education; Faith based organization and community networks promoting abstinence and faithfulness. When encouraged repeatedly by their leaders to avoid risk through behaviour change, people listened and acted. As a result Abstinence increased from 30% to 60%. This pattern in Uganda has been replicated in Kenya and other East African countries in a provocative paper by Green titled “Rethinking AIDS prevention”.

In contrast, risk reduction strategies originally developed in North America for HIV epidemics concentrated in homosexual males and injecting drug users focusing primarily on condom promotion and distribution and/or needle exchange. Unfortunately both homosexuality and injecting drug use is a very minor
component of HIV spread in Africa. Consequently this strategy has had minimal appreciable impact on reducing HIV prevalence in Africa where most HIV transmission occurs through heterosexual sex and where condom availability is limited (Hill K, 2002). Partner reduction, rather than condom use, has had the most significant impact on reducing HIV prevalence in Africa. To date there are no clear examples of a country that has turned back a generalized epidemic primarily through condom promotion.

There are two basic approaches to disease prevention - Risk avoidance and Risk reduction. Risk avoidance intervention corresponds to the A and B in the ABC model. Risk reduction corresponds to the C. Although most HIV prevention methods developed from the West for HIV epidemics stress risk reduction (condoms) to the dwarfing of risk avoidance (abstinence and faithfulness); higher rates of condom availability in Africa have not led to lowered HIV prevalence rates (Green EC and Conde A, 2000). One reason for this is the fact that condom promotion efforts may “backfire” and result in disinhibition of behaviour. People feel safer using condoms and therefore engage in riskier behaviors (such as multiple sex partners) than they would were they using no “protection” (i.e. condoms). Green EC (2003) has analyzed this aspect as it relates to Africa HIV prevention programs. During the 13th International AIDS Conference, Stoneburner R (2000) analyzed how sexual partner reduction and monogamous marital relationships have a far greater impact than increased condom usage. In our view, this emphasis has greater traction to offer a lasting impact in HIV prevention endeavours.

Personalized networks of information on HIV/AIDS worked best in Uganda compared to conventional communication through channels of pamphlets and brochures. Such a strong risk avoidance using personal networks is responsible for HIV prevalence drop from 30% to the current seen 5-6% in the East African countries studied (namely Uganda, Kenya and Malawi) (Green and Conde, 2000). We opine that risk avoidance, rather than risk reduction is the key to successful HIV prevention in Sub-Saharan Africa. The available data is evidence of this fact.

This evidence for risk avoidance is so compelling. Can the same strategy work in the developed countries such as the USA? In a 2008 CDC released study from USA, 4 out of 4 teenage girls between the ages of 14 – 19 years has a sexually transmitted infection (STI), based on a sample of 838 girls tested for STIs. Since STI co infection with HIV is clearly established, this is a worrying trend. STIs are a major risk factor for HIV transmission. The risk avoidance for HIV and STIs are identical. We opine that the same strategy we have seen working in developing countries, such as in sub Saharan Africa, is likely to reverse this worrying trend in developed countries, such as the USA, and indeed the world at large.

A further reason for emphasizing the Risk Avoidance strategy is the finding that majority of HIV transmissions occur very soon after exposure, and definitely before the appearance of antibodies that can be detected using standard HIV screening tests. This means that most HIV new infections occur where an infected HIV negative testing person (in the incubation period) passes the HIV virus to an unsuspecting “victim”. Both the “transmitter” and “victim” are unaware at the time of transmission exposure; and hence during the actual infection.

In this so called “incubation period” currently referred to as the Primary HIV infection phase, nearly 70 – 80% of all new HIV cases occur. Focus on this phase is the key to taming the HIV epidemic. Which of the A, B, C aspects work? Will emphasis on the C be the solution? Are condoms the panacea for this phase?

The Condom Controversy

Condoms are considered to be the only products that offer protection against both pregnancy and sexually transmitted infection (Curtis et al). As such, they are used as the primary method to implement most HIV prevention strategies. In a British Medical Journal editorial, data from the UK showed that 50% of girls under 16 chose male condoms as their main contraceptive method. Condom use rose from 6% in 1975 to 35% in 2001, while use of the contraceptive pill declined from 70% to 42% in the same period.

Obviously choosing condoms does not translate to necessarily using them. In one large survey, only 40% of unmarried 18 – 59 year olds used them at last intercourse. In casual intercourse the figure was 62% (Anderson JE, Wilson R, Doll L, Jones S, Baker P, 1999). In the same study looking at 8500 American College Students, only 43% always used condoms and 24% never did. Men with most partners (who ought to have used condoms most) reported lower condom use, and men who only had homosexual sex used them less than those who only had heterosexual sex. In the light of HIV pandemic and the impact on the African Continent, condoms effectiveness is increasingly being questioned. Are they the panacea? Or is their use equated with playing Russian roulette? (Eiseberg, M 2001).

Leading experts are asking why condom promotion has not yielded the desired impact in most developing countries such as in Africa. Furthermore, a critical question asked in the Lancet (Richens et al) is whether we have the right balance between message about risk reduction (condom promotion) and Risk avoidance (Faithfulness and partner reduction). Are we skewed and unbalanced with our A, B, C strategy? Have we emphasized the C at the expense of A and B? Have we, as health professionals become co-conspirators in propagating the erroneous belief that using condoms
make sexual activity safe? Have we given people a false sense of security? We think so. Husker H concurs with us.

Let’s look at contraceptive failure with condom usage. Contraceptive failure rates (CFR) are based on resulting pregnancies while method is being used. For condoms CFR equals method failure (e.g. latex weakness and burst) plus user failure (e.g. incorrect use). Therefore making CRR=MF+UF. Condom method failure is 3% but user failure rate is 14%. This means 1 in 7 condom users become pregnant each year while using condoms. Clearly this CFR is largely due to User Failure rate. Even in a study of 4600 cumulative condom uses in monogamous couples (Haighere CS, 1999), condom breakage (method failure) was only 0.4% while the CFR was 1%. However 1/3 of heterosexual students said that they delayed putting on condoms until after initial penetration (User Failure).

Approximately 80% of emergency pill requests arise from contraceptive failure, mostly condoms (Pearson et al). Consequently reliance primarily on condoms will not necessarily reduce teenage pregnancy rates if a false sense of security in their effectiveness results in more acts of intercourse taking place (Williams ES, 1995). Using the CFR model above, an estimated 53% chance of becoming pregnant over 5 years of girls using only condoms for contraception (Stammers T, 2002) is a startling figure. The HIV virus is much smaller than a sperm. Contraceptive failure leading to pregnancy means sperm penetration into a woman’s body. The same applies to any existing HIV in the man. It will definitely mean HIV transmission. More so, due to the smaller size of HIV compared to the sperm. This portends alarm for HIV control.

**Condoms and STI Transmission Risk**

Reliance on condoms leads to increased frequency of sex with either the same or a number of partners (Richens J, Imrie J, Copaset A, 2000). Given their 14% CFR and failure to effect sexual behaviour change, condom promotion results in increased STI transmission (including HIV) and unplanned pregnancies. Condom users’ false sense of “safety” leads to increase intercourse rates. This in turn leads to more numbers of individuals with CFR. This concomitantly increases the HIV transmission in a population (Stammers T, 2002) with devastating sequelae.

But there are other more compelling reasons than just CFR to consider when it comes to HIV control. One unprotected act of penile-anal sex is 30 times riskier, that is 1 in 33 (Silvermann BG, Gross TP, 1997)). Condoms give substantial protection against vaginal HIV transmission. Theoretical concerns about “pores”, “channels” or “holes” in the latex condom being larger than HIV virus particles are genuine. An HIV virus is 50 times smaller than spermatozoa. However the practical transmission risk of this fact is difficult to ascertain. This is because most HIV in semen is not “free floating” but rather found within lymphocytes that are unlikely to pass through an intact condom (Lytle CD, Rouston LB, Seaborn GB, Dixon LG, Cyr WH, 1997).

In an earlier multinational study of 378 sero negative partners in discordant heterosexual relationships (where the partners were HIV-infected), no sero conversions occurred when condoms were used consistently. The 121 couples that used condoms inconsistently had a sero conversion rate of 4.8 per 100-person years (De Vincenzi I, 1994). Thus condoms offer substantial (but not 100%) protection against pregnancy and STIs including HIV, when used consistently and correctly; but inconsistent and incorrect use carries considerable risks of HIV transmission (Stammers T). A USA Department of Health and Human services report concludes that consistent condom use is 85% effective in reducing the risk of HIV transmission. But there is more bad news.

Human Papilloma Virus (HPV) is associated with cervical cancers, anal cancers, genital warts and dysplasia. Both skin-to-skin contact as well as transfer of genital fluids transmits HPV. The US National Institutes of Health report found no evidence that condom use reduces the transmission of HPV. Yet co infection of HIV and STI is a major factor in HIV transmission. This means that HIV risk while using condoms exists.

The USA’s Department of Health and Human Services further shows no conclusive evidence that condoms offer substantial protection from the common STI, Genital Herpes Infection (Herpes Simplex Virus). This STI results in multiple, painful blisters that shed virus particles. Again the co morbidity of HSV and HIV raises the scepter of increased HIV transmission despite condom use.

Finally, Chlamydia is the world’s commonest STI. It is a bacteria transmitted via sexual intercourse. It has a prevalence of 10% in sexually active women; causing tubal damage and infertility. Countless women suffer from this STI and its consequences. Again, the US NIH finds no convincing evidence that condoms protect against Chlamydia.

**Safe Sex or Saved Sex**

Condoms do provide good protection against many STIs including gonorrhea and HIV. But other more common STIs show less clear protection. Furthermore condoms reduce sexual sensitivity and interfere with spontaneity of sex. That is probably one reason why consistent condom use rates are very low. The co morbidity of HIV and other STIs is also a critical risk factor. The vulnerability to STIs inspite of condom use poses questions of HIV transmission. Thus Risk reduction strategies need to be re-examined and
evaluated in comparison to the more effective Risk avoidance strategies. What then are the alternatives to so called “safer sex” (condom use)?

Many authorities, such as Stammers Trevor, are now suggesting “Saved Sex” as a better alternative. This Risk avoidance strategy has greater HIV risk reduction appeal for its potential for impact. It basically emphasizes the A and B of A,B,C catch phrase, rather than the conventional wisdom of emphasizing C.

The concept is that sex is saved for a time when the relationship between a couple is at such level of intimacy and commitment that they are able to make a reasoned decision that once having made love, they will go on making it together exclusively with each other for the rest of their lives. Such a message of faithfulness within a monogamous relationship is the primary focus of risk avoidance.

Promoting “Saved Sex” as a reliable and practical sexual health strategy is the panacea for the HIV pandemic control. We recognize not all are prepared to live fully by its principles; but presenting the ideal encourages people to live as close to it as possible. This is Stammers’ position. We fully concur. After all the “Safer Sex” message (risk reduction) has flooded the continent unabated, with minimal benefit. Why not try to counterbalance this with the “Saved Sex” message (risk avoidance) and see what happens? At best it will work. At worst it will be of not much use, but not hurt. We are convinced it will work. Uganda has shown the way. East Africa has followed the footsteps. As the failure of the “safer sex” programs becomes apparent globally, it is time for our HIV prevention programs to try the “Saved Sex” programs. Our Policy makers, Health Educators and community initiatives need to take the “Saved Sex” program as a serious alternative.

In one recent survey in Kenya, 15 – 20% teens of 15 -19 year age group had a sexual encounter before reaching the age of 20. This is a serious indictment of our youth. They desperately need the “Saved Sex” message today more than ever. This is the future hope for Africa.

Conclusion

The evidence for risk avoidance is so compelling that it has been designated as a key element in the $15 billion PEPFAR global initiative by the US Government. Approaches that focus on behaviour change, such as those that encourage abstinence and faithfulness, have a proven track record and are currently being expanded. We consider this to be such a step in the right direction. Adults need to focus on the A and B on the ABC model. This entails a monogamous committed relationship. Youth need to do the same even as adults provide the role models for this paradigm. An American survey conducted in USA discovered that teens today look for role models and heroes within their reach and who have regular interaction with and access to them (Parachin V, 2008). This study was representative of US population of teens aged 12 to 18 years. It showed inter alia the following who are our teen’s role models

67.7% Parents
40.6% Teachers/Coaches
40.4% Siblings
18.7% Religious Leaders
18.3% Athletes
16.5% Celebrities

This survey further confirms our averring of the role-modeling paradigm by adults in HIV control. “Saved Sex” rather than “Safer Sex” will have a greater impact to these teens. Should we be looking at more Risk avoidance strategies for them? We think so. Will it work? We are convinced it is the solution for the HIV pandemic. Is it practical? We have evidence of its working. Is it easy to promote? Yes. Will it gather traction globally? Unless we try, we shall never be able to answer this. After all, experiences in East Africa have showed it works. Maybe it’s our reluctance to try something different that deters our efforts. As one African sage put it, “He that has not travelled far, says his mother is the best cook!” Let’s try other cuisine choices. We just may be surprised!

References

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