

Preventing HIV infections among males who have sex with males in the Asia-Pacific region

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Information note

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Introduction

Preventing HIV infections among men and boys who practice male-to-male sex is a high priority in the Asia-Pacific Region, but, to date, there is not a single country that has adequately addressed the vulnerability of this population nor its capacity to spread HIV beyond the confines of male-to-male sexual networks. The foremost reason for considering all national programs inadequate in this regard is that coverage is extremely poor. UNAIDS reports that only about 8 percent of males who have sex with males had access to needed services in 2005 in the East Asia-Pacific region (UNAIDS 2006). Largely because there has been so little investment, there are few programs or projects that have accrued strong evidence of success, evidence that could be used as a guide to understanding what works to reduce risk and vulnerability in the specific settings found in the Asia-Pacific Region.

This paper will first examine HIV/STI interventions for males who have sex with males that can provide evidence of success with any of the following results:

- 1) HIV prevalence or incidence levels have dropped or remained low over time;
- 2) Consistent condom use rates and/or safer sex practices have risen significantly, and can be verified with measures other than self-reported data alone;
- 3) STI levels have dropped among sub-populations exposed to the interventions;

Gray (1997) lists the five strengths of evidence in research:

Type	Strength of evidence
I	Strong evidence from at least one systematic review of multiple well-designed, randomized controlled trials.
II	Strong evidence from at least one properly designed, randomized controlled trial of appropriate size.
III	Evidence from well-designed trials without randomization, single group pre-post, cohort, time series, or matched case-control studies.
IV	Evidence from well-designed non-experimental studies from more than one centre or research group.
V	Opinions of respected authorities based on clinical evidence, descriptive studies or reports of expert committees.

The evidence cited in this paper is derived from published papers and unpublished program data from the region. Several systematic reviews are summarized that include evidence with strength levels I-II. These are prevention studies conducted mostly in North America, Australia and Europe. For Asia and the Pacific, program data reported represent strength levels III and IV. No programs of strength level V are reviewed in our region. The primary outcome measures of interest are those that measure risk reduction and coverage. Issues such as cost, equity, or sustainability, are not addressed in this review.

Secondly, this paper will summarize available information on projects in selected Asian-Pacific countries with regard to their components and challenges.

Intervention effects outside the Asia-Pacific region

Despite the obvious socioeconomic and cultural differences, a brief examination of what has worked in the past in other parts of the world is illuminating. The most credible results come from intervention research where rigorous designs randomly select people for a treatment and a control arm to be followed for a set period of time, i.e. a cohort. Most such projects have been conducted in the USA or other English speaking countries. While these research projects are often more controlled than a real intervention would be, they can demonstrate the possibilities, much as psychology experiments show the relationships between stimulus and response. Applying their findings to real-life interventions is a challenge, but not impossible and represents the same kind of challenges in the USA as elsewhere.

Several meta-analyses have now been done on the results of prevention research for males who have sex with males outside of the Asia-Pacific Region. The first located 9 eligible studies in 2002, and was updated in 2003 using 12. These covered work done between 1988 through 1997 and found very similar levels of statistically significant effectiveness: 23% and 26%, respectively, reduction in the proportion of men practicing unprotected anal intercourse (Johnson et al., 2002; Johnson et al., 2003). The authors pointed out that there were slightly stronger effects for community-level interventions (as opposed to small group or individual ones), and effects were stronger where interpersonal skills were promoted and when the men were in their 20s rather than their 30s.

More recently two updates of these meta-analyses have been published. One included 33 research studies (Herbst et al, 2005) and the other used 54 studies that had 16,224 participants and included some that had been conducted in Canada, Brazil, and Eastern Europe (Johnson et al., 2005). The first recent review of 33 studies covered those available as of July 2003. The interventions had been associated with significant decreases in unprotected anal intercourse (20 studies) and number of sexual partners (9 studies), as well as, specifically, an increase in condom use during anal intercourse (9 studies). This translates into a 23 percent reduction in the odds of unprotected anal intercourse and a 61 percent increase in the odds of condom use during anal sex. These changes remained significant up to 12 months after the intervention. Comparing those conducted before the introduction of HAART and after showed no differences, but interventions that had been based on the theoretical models of diffusion of peer norms or relapse prevention had better results, as did those where 4 or more delivery methods were used, where interpersonal skills were emphasized, and where exposure was intense, i.e. greater than one session, 4 or more hours covering 3 or more weeks.

In the second recent review with far more studies, analysis showed a 27 percent reduction in unprotected anal intercourse and a 16 percent reduction of the proportion of men reporting any unprotected anal intercourse, in both small-group and community-level interventions. The most favorable small group interventions emphasized losses ('unsafe sex exposes you') rather than gains ('safer sex protects you'). The same was true among individual-level interventions, but in community-level programs, better results were associated with personal skills, such as self-reinforcement for behaviour change efforts. In community-level interventions high exposure levels were critical. Significant effects were seen only when 82 percent reported having been exposed.

In a sub-set of 15 interventions for HIV-positive individuals, a 21 percent reduction in unprotected anal intercourse was attained, most among small-group interventions. The authors remark that very high risk persons may be best addressed in individual-level interventions because small-groups introduce them to other high risk people and then they 'hook up' and both engage in unprotected sex. This has been found in several studies (Imrie et al., 2001; Mimiaga et al., 2006). They also point out, as have others, that recording the number of episodes (e.g. of unprotected sex) is a far more sensitive measure than di- or trichotomous outcomes (i.e. all, some, none).

These are the findings so far in well designed prevention research programs mostly conducted in the USA and other English speaking countries, such as New Zealand, Australia, Canada and the UK. There are several biomedical prevention research programs in process, including one aimed at reducing susceptibility to HIV infection among HIV- negative MSM in six countries by treating their herpes (HSV-2) infections with twice-daily acyclovir, and the converse, treating men who have both HIV and HSV-2 in order to reduce their transmissibility. Other studies are trialing pre-exposure prophylaxis using tenofovir (Wegbriet et al., 2006).

An additional valuable review was published recently by CDC in the USA of the 18 most reputationally strong programs they had funded since 1996 (Eke et al., 2006). They found that implementers and researchers alike must tailor the interventions to respond to each unique context, addressing such variables as employment and sociocultural norms and practices. Also, those programs that were judged strongest were those in which committed, dedicated CBO/NGO workers were supported by their central administration in a friendly and appropriate way with adequate resources.

More recently USA funding agencies and others have begun to realize that within each American sub-culture there are different understandings and experiences of male-to male sex. An increasing number of studies have examined these different contexts, particularly the far greater levels of stigmatization and oppression of males who have sex with males in Asian, Latino and African American sub-cultures (Wheeler 2006; Yoshikawa et al., 2003). To date, no well-documented intervention with any of these sub-cultural ethnic groups has been successful (Carballo-Diéguez et al., 2005).

Intervention issues and effects in the Asia-Pacific region

In the Asia-Pacific Region interventions for males who have sex with males, even if funded and permitted within the national AIDS response, often suffer from the effects of social stigma, and in some countries, legal impediments. These forces often remain so strong that the implementing personnel are scared to allow their presence to become too well-known and therefore, hold back, stalling the introduction of important components, such as clinics, or a stronger outreach program or the establishment of drop-in centers. In some cases, funding is given to persons who are not themselves males who have sex with males and a basic homophobic tension prevails, keeping those in need at arm's length.

In the Asia-Pacific region, as elsewhere, an anthropological viewpoint is essential (Silenzio 2003). Identities act in many ways to create 'little tribes' of people who look within their own networks for support and confidentiality. They often do not want to be in the same intervention spaces as others, and those who are unidentified are even more loathe to associate with those having stigmatized identities. Social and sexual networks do not always overlap. Class differences may be highly salient, with male sex workers often stigmatized by other males. There are reports in China of age differences having similar influence (Bao et al., 2005; Choi et al., 2004) Therefore, even when basic components are the same, specific adjustments are needed for each sub-group of males.

In particular, male-to-female transgenders stand out as having unique needs. For several cultural and historical reasons, there may be more male-to-female transgenders in our region than anywhere else in the world. Yet this region also has a high concentration of intensely patriarchal gender systems that devalue females. Once a biological male has shifted his public identity to female, for whatever reasons, she then must bear the social status of female in her society, plus additional stigma for having shifted gender. While some transgendered identities remain fairly well grounded in both male and female role components, giving rise to the notion of a third gender, these persons spend a great deal of effort to feminize themselves and often do not want to be engaged in men's interventions. Transgenders are best served by having their own funding, organizations and intervention designs (Kenagy, 2002; Hoque et al, 2004; Jenkiins et al., 2006;).

In most of Asia the best data available to assess the effectiveness of HIV interventions are of two types: one is time trend data, usually acquired through surveillance systems, and the second is comprised of comparisons of people exposed and not exposed to an intervention in a particular area. The problem with the latter type of data is that we can never know if those who report having not been exposed are people who avoided the intervention out of their own volition. Such individuals may deliberately want to avoid the influence of an intervention. They may be the most at risk, or not at any risk, but it is impossible to know. For that reason, more controlled intervention research designs assign people randomly to exposed and non-exposed groups, or find other ways to diminish bias. To date, few if any experimentally designed interventions have been funded in this region.

INDONESIA

The most successful MSM HIV intervention, according to the data available, appears to be that of Family Health International's AKSI STOP AIDS (ASA) project in Indonesia. Unfortunately, there are no biomarker data to confirm this success, but there are, in fact, few such data anywhere. The programs began when surveillance data had shown that 21.7 percent of Jakarta's waria (transgenders) were HIV positive as were 3.5 percent of male sex workers and 2.5 percent of gay-identified men. The following analysis is based on a participatory evaluation conducted in 2006 (Coghlan 2006).

The approach is instructive. The work is implemented through 4 agencies in Surabaya and Jakarta and a few more in other cities. Waria (transgenders), male sex workers and 'other MSM', many of who call themselves 'gay' in Indonesia, are segmented, with one implementing agency for waria and another for MSW and gays in each city. Safer sex packs, consisting of a condoms and a lube sachet, were developed with specific cover photos for waria. These are given out for free by intervention staff.

Other components include STI services, 'educatainment' activities, networking with other agencies, advocacy, specific educational materials and dedicated peer educators. Size estimations were made but have not been officially accepted. The field activities began in early 2003 and have self-reported measures of effectiveness through comparison of the BSS results in Surabaya and Jakarta between 2002 and 2004. Program process indicators are also available, though greater harmonization is needed between aims, indicators, data collection and data management.

In the case of the gay agencies, staffed by gay men, the local AIDS commission provided outreach workers with identity cards which helps protect them from police harassment. This was not achieved for the waria groups who emphasized, in the evaluation, their need to improve advocacy and reduce harassment.

STI treatment is carried out mainly through referral as there are no drop-in centers and only one dedicated clinic. In Jakarta, ASA supports one clinic dedicated to waria and males who have sex with males; this is mainly staffed by gay men and waria. In Surabaya, clinical services are provided by government and private physicians but given training and sensitization by FHI. Every three months screening is recommended for waria and male sex workers and once a year for other MSM. If a participant goes to any of the clinics, tests are carried out for syphilis, gonorrhoea, non-specific urethritis and proctitis. Diagnosis and treatment are not free, nor are HIV tests.

The most impressive results were found among the waria of Jakarta and clearly show the value of community organization. Through their own social structures, they have achieved 55 percent coverage in Jakarta, defined as having been contacted by peer-outreach workers and having received a Safe Sex Package and was referred to an STI clinic and received either IEC material or condom (calculated using the BSS probability sample frames). In Surabaya 54 percent coverage was attained. The following positive changes in behaviour were measured using 2002 and 2004 BSS data in both program areas (all statistically significant with a p value < 0.05):

- Increase in condom use at last anal sex with a client - Jakarta, from 43 percent in 2002 to 81 percent in 2004 (p<.0001); Surabaya, from 40 percent to 71 percent (p< 0.001);
- Increase in consistent condom use during anal sex with clients - Jakarta, from 14 percent to 56 percent (p<.0001); Surabaya, from 10 percent to 49 percent (p < 0.001);
- Increase in use of water-based lubricant with condoms at last anal sex - Jakarta, from 13 percent in 2002 to 43 percent in 2004 (p < 0.001); Surabaya, from 11 percent to 22 percent (p < 0.001);
- Increase in seeking VCT services - Jakarta, 0 percent in 2002 to 43 percent 2004 (p < 0.001); Surabaya, 6 percent to 20 percent (p < 0.001);
- Decrease in any unprotected anal sex in the past month - Jakarta, from 66 percent to 48 percent (p<.0001); Surabaya- 88 percent to 47 percent (p < 0.001).

In both cities, the proportion of persons with diagnosed STIs among those screened dropped significantly in ASA-supported clinics, from 34 percent to 13 percent in Jakarta and 17 percent to 7 percent in Surabaya. These are epidemiologically significant achievements in risk reduction and are supported by process data showing generally increasing and intensifying coverage.

ASA's work with male sex workers showed moderate success. The implementing agencies achieved lower levels of coverage than did the waria groups, reaching only 46 percent of MSWs in Jakarta and 37 percent in Surabaya. Between 2002 and 2004, MSWs reported the following:

- Increase in condom use at last anal sex with a client - Jakarta, from 56 percent to 84 percent ($p < 0.001$); Surabaya, from 53 percent to 47 percent (0.6, ns);
- Increase in consistent condom use during anal sex with clients - Jakarta, from 16 percent to 53 percent ($p < 0.001$); Surabaya, from 18 percent to 29 percent ($p < 0.05$);
- Increase in use of water-based lubricant with condoms at last anal sex - Jakarta, from 15 percent to 69 percent ($p < 0.001$); Surabaya, from 0 percent to 24 percent ($p < 0.001$);
- Increase in seeking VCT services - Jakarta, from 0 to 21 percent ($p < 0.001$); Surabaya, from 2 percent to 15 percent ($p < 0.001$);
- Decrease in any unprotected anal sex in the past month - Jakarta, from 71 percent in 2002 to 46 percent in 2004 ($p < 0.001$); Surabaya, from 58 percent to 50 percent ($p = 0.1$, ns).

The work with gay-identified and other MSM, however, was somewhat less successful. In Jakarta less than 20 percent of the MSM interviewed in the 2004 BSS reported being contacted by outreach workers and less than 50 percent in Surabaya. The proportion of 'other MSM' in Surabaya who reported consistent condom use with non-commercial male partners remained stable at 23 percent in 2002 and 19 percent in 2004 ($p = 0.347$), though a rise was registered in Jakarta, from 13% in 2002 and 49% in 2004 ($p < 0.001$). However, the proportion of 'other MSM' in Surabaya who reported any unprotected anal sex in the past month decreased significantly from 84 percent in 2002 to 56 percent in 2004 ($p = 0.001$) and in Jakarta, from 58% in 2002 to 36% in 2004 ($p < 0.001$).

The participatory evaluation done in 2006 recognized that, while the waria were strong and active, the other groups were weaker. Further, the situation keeps changing, for example, greater use of non-injected recreational drugs than when the program began, and other possible changes in risk settings and behaviours. There are plans to address this as well as recommendations concerned with strengthening of the capacity of the NGO workers, establishing drop-in centers and other needs.

SOUTHEAST ASIA

Interventions for some subgroups of males who have sex with males are taking place in Cambodia, Vietnam, Laos, Myanmar and Thailand. Few of these have yet been evaluated for outcomes. Where some data are available, coverage appears relatively low. Nonetheless, in two cases, preliminary data clearly show that increased exposure to intervention components is associated with increased condom use.

CHINA

China is reported to have many programs, the majority of which appear to consist of informational websites and hotlines. There have been attempts to make VCT available but there are no dedicated clinics for males who have sex with males. A few projects have outreach to gay venues and male sex workers or so-called 'money boys', distribute condoms and use theatrical performance to spread HIV messages. Inquiries did not elicit any statistics on behavior change or extent of coverage.

SOUTH ASIA

Data from interventions in India have not been made available to this review. Other programs with some indications of success include the Blue Diamond Society in Kathmandu and Bandhu Social Welfare Society in Bangladesh; however, these programs appear to accomplish far less than they could and recent evaluations indicate that coverage remains a serious problem.

Successful intervention components

As most of the interventions in the Asia-Pacific Region are relatively young, it is useful to review intervention components that have been shown to be effective.

All interventions try to raise the knowledge levels of their target communities through a variety of methods. These include one-on-one outreach education, small group educational sessions, printed materials, audio materials, phone counseling, websites, SMS messages and lectures or seminars. Generally, the greater the number of communication methods used, the better. Although some programmes find increased knowledge and understanding of risk are associated with increased condom use, other programmes have not found that association. In fact, there is evidence of condom use rising without knowledge or attitudes changing very much at all.

Peer education or peer counseling hold a central place as a medium to transfer knowledge and skills. As we know knowledge alone has little impact and emphasis on skills building is the more critical element. These skills include proper male and female condom use and disposal, use of lubricants, personal communication skills with sexual partners (both male and female) and reducing drug and alcohol abuse. Peer pressure and peer modeling have specifically strong effects but may require greater supervision than most peer outreach programs have in place. Continued training and oversight is needed for strong peer outreach programs. Depending on unpaid volunteers rarely is a sustainable or effective strategy.

Individual counseling, not necessarily by peers, has been commonly utilized in the USA in a number of interventions, though there have been few studies showing greater impact via this mode of motivating change than through others. There is evidence, however, that a minority of men need tailored professional help as their unsafe sex appears to be part of a generalized low mental-emotional health status. This has been documented numerous times and recently was well demonstrated in a large group of HIV-infected French men who have sex with men (Bouhnik et al., 2006).

Community-based programs that have drop-in centers of one sort or another that provide a safe space for open discussions and learning have been shown to be highly valuable in some contexts. Social events, at which dance, drama or other forms of 'edutainment' are performed serve well to gather some groups of MSM together. Repeatedly, in all at-risk group interventions, the prior existence or new creation of a sense of social solidarity among persons living the same life-style has been shown to move interventions forward. Where drop-in centers are utilized to build a sense of community and solidarity among a target group, they can have the greatest impact. It should be pointed out that simply gathering the same group of males together repeatedly will make an impact on them, but does not spread the intervention or create new social norms. The use of safe spaces and other forms of gatherings to build a sense of community requires skills in organizational development and a clear plan with step-by-step actions, usually with the ultimate aim of building capacity so that the 'community' becomes capable of maintaining its own services.

Most interventions provide STI services either by referral or within the premises of the intervention. Various sub-groups of males who have sex with males often do not wish to be seen together and may need separate services. This varies from place to place. In any case, it is especially important that health providers are specifically trained to meet the needs of various males who have sex with males. Psycho-sexual counseling is important for both HIV-negative and positive men, particularly those complaining of sexual dysfunction.

Condoms and lubricant are usually made available free through the intervention and/or socially marketed, either through the intervention or in the general market. Often interventions place free condoms in venues where men meet, such as bars, saunas and clubs.

VCT with care, support and treatment are offered in some countries as well as are harm reduction services and social services for those in need, for example, housing, access to social benefits and medical care.

Advocacy for legal rights and social acceptance may form a part of the intervention in some countries. In Australia, Brazil and Mexico, national anti-homophobia campaigns have been mounted by the national authorities. Even in the USA, CDC recommends that more must be done to reduce homophobia in society (CDC 2001) as there is copious evidence that low self-esteem, depression and other negative emotional

states, especially among males who have been sexually abused/raped by others, are associated with unsafe sex. While local advocacy can be effective in neutralizing harassment from police or others, society-wide social and legal change is not ordinarily a feasible goal for most HIV prevention implementers. Such action requires well planned legal and social attitude change campaigns buttressed by political will and societal leaders.

Summary and recommendations

In summary, effective interventions in the region are scant on the ground. Most have inadequate coverage, may or may not be well designed, are rarely based on any theoretical foundations of behaviour change, are usually started without sound (or officially accepted) size estimations or epidemiological baselines, and have little investment in adequate monitoring and evaluation. The best documented effective program has been with transgenders, i.e. warias in Indonesia, who already had a sense of solidarity, recognized leaders, and could easily mobilize their members. Where gay or otherwise identified males have no such community organization, interventions are not as effective. Unidentified males who have sex with males are far less often engaged in such interventions. Specific programmes designed for HIV positive men or for younger men do not seem to have been developed.

These programs face many challenges. Many appear to be grappling to a large extent with prejudice and stigmatization, fear and complacency. Where an implementing agency spends a great deal of its time fighting for the rights to try to meet the needs of males who have sex with males, including HIV care and treatment, it often shortchanges the safer sex behaviour work. It is time for donors and national AIDS programs alike to recognize that, in order to reduce HIV transmission to and through males who have sex with males, a far greater investment will be required, including funding of structural interventions, such as educational and rights-oriented work quite separately from HIV prevention-oriented work. Where, as in India, anachronistic laws continue to criminalize male-to-male sex, the question remains if the AIDS leadership is strong enough to have them repealed (Agoramoorthy and Hsu 2006).

In addition to poor coverage (Choi et al., 2004), most programs in this region lack properly sampled baseline surveys conducted in a manner in which future comparisons can be made. In no case has there been a strong experimental design with control groups, or randomized participants. Behavioural and biomarker evidence are likely to become available in some countries in the near future, but inadequate investment in unbiased monitoring allows implementing agencies to continue operations without frequent feedback as to whether their approaches are effective.

Further, as participatory evaluations often reveal, many agencies want to do a great deal. They want to provide VCT, care, support and treatment for positive males. They want to run websites and improve national networking; they want to improve social acceptability through advocacy, they want to establish the rights of sexual minorities in their countries. These aims are not easily achieved by any single NGO, especially if its prime work is HIV prevention.

Future interventions for the region

Experience beyond this region as well as a few interventions within this region demonstrate that risk behaviours can be significantly changed among men who have sex with men. Achieving change on a scale great enough to lower HIV rates or keep them low over time requires that local norms change, and norm change requires deeper understanding of the motivations for current norms. Norm change also requires social and community mobilization, a process that includes organizational development and considerable investment in knowledge and skills-building. Monitoring change in norms is possible by conducting quantitative and qualitative surveys that investigate both individual behaviors and the perceptions of others' behaviours.

Any reductions achieved in high risk HIV transmission behaviours over the next few years will require hard work to maintain. Both the usual 'safer sex fatigue' as well as increasing utilization of HAART for positive men can be expected to become associated with waning rates of safer sex behaviours. There seems to be widespread skepticism that steady partners can also adapt greater condom use and safer sex activities. As human behaviour is subject to change and can be influenced, it seems far too premature to abandon any efforts in this direction. VCT with couple counseling has worked with male-female discordant couples and could be adapted for male couples.

Condom quality and type do matter as does the cost of both condoms and good quality lubricant. The use of the female condom for anal sex has been accepted in some groups of men and offers an option that could be introduced more widely.

Drug use represents a major challenge as ecstasy, methamphetamine, GHB, Viagra and others rise in popularity, but alcohol is still likely to remain a very serious threat to safer sex, as numerous studies have documented around the world. Special programs to address the needs of drug and alcohol-using MSM are highly important.

Websites seem popular as a potential communication channel but behaviour change through this channel alone has not yet been shown to make an impact anywhere. More often websites appear to contribute to greater opportunities for unsafe sex.

Greater promotion of VCT and HIV testing has value in that some portion of men will diminish their risk behaviours when they learn they are positive (Gorbach et al., 2005); however, experience elsewhere shows that increased access to needed treatment can contribute to complacency and reductions in safer behaviours, setting up an epidemiological negative feedback loop. Tailoring prevention methods for positive men in Asian and Pacific societies where the stigma of AIDS remains high will be a major challenge. Well-designed programs should be set up and evaluated as soon as possible. Prevention research for a variety of situations is needed in the region.

Where being identified as a man who has sex with men remains too risky, it seems likely that the majority of these men will avoid contact with interventions. In order to manage this problem, larger male sexual health programs might be effective. Setting up clinics specifically for males and training providers in MSM issues may offer a means to conduct prevention education for unidentified MSM. However, if a heartfelt sense of solidarity could be developed among these men, male sex workers and other identified males who engage in male-to-male sex, could become the most effective promoters of safer sex to their unidentified sexual partners.

Improving the knowledge and skills of implementation agencies will require a far greater investment in technical assistance than has taken place so far. Developing short courses on behavior change theory, size estimation, sampling and various research techniques as well as principles of effective communication and organizational development are needed and should be considered.

One thing is certain: if scaled-up effective HIV prevention programs are not put in place rapidly, the scenario will become increasingly complex as larger numbers of HIV-positive men require treatment, support and new approaches to prevention. Right now, in most of the Asia-Pacific Region, HIV levels are low to moderately high among males who have sex with males (Pisani and Brown 2005), but there is no country doing enough to defeat the on-going rise in HIV prevalence among men who have sex with men.

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