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Emerging Issues in Today's HIV Response: Debate 2

Behavior Change for HIV Prevention



The World Bank 2010

The second in the Emerging Issues debate series was held in Washington, DC and was broadcast to 18 video conference sites across the world.

Executive Summary¹

On June 29, 2010, the World Bank and the U.S. Agency for International Development (USAID) co-hosted the second in a series of debates on emerging issues in the global response to HIV. In an era when development aid is under heavy pressure and the dynamics of the pandemic are still changing, it is increasingly imperative that governments, civil society organizations, and other partners have the best evidence and knowledge to maximize development dollars and achieve results. The debate series was created with this in mind, designed to spark debate and advance discussion about thorny issues for the HIV community. The World Bank's Global Development Learning Network video conferencing and web-based technologies allowed country teams in Africa and other partners from across the globe to participate in real time in the debate, which took place in Washington, DC. Additional information about the debate series can be found at <http://go.worldbank.org/A47FWU5140>. A video recording of the debate itself can be found at <http://www1.worldbank.org/hdnetwork/external/Aids/wbusaid.wmv>.

The debate was based on the following proposition: "Behavior change in generalized epidemics has not reduced new HIV infections and is an unwise use of HIV prevention resources." Given the scarcity of research evidence for behavioral prevention efforts, questions about these efforts are being asked with increased intensity. Do behavioral prevention efforts work? If they do work, what kinds of interventions work best? How many new infections could behavioral interventions avert?

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¹ The views expressed in this report are not necessarily those of USAID, the World Bank, or the organizations to which the panelists are affiliated. Statements in this document by the debate panelists have not been checked for factual accuracy and should not be cited.

Prior to the International AIDS Conference in Vienna, Dr. Eric Goosby, the U.S. Global AIDS Coordinator, noted the difficulty of sustaining behavioral interventions. “I think people are realizing how difficult it is to put a prevention strategy in place that sustains a drop in high-risk behavior, not for a day, not a week, but forever,” he said. “It’s an ephemeral change in behavior we usually see. It’s not sustained. Nobody has done that well for a long period of time” (Donnelly 2010). This quote highlights the current reexamination of the effectiveness of behavior change programming—the latest chapter in a discourse that has been ongoing for the past 30 years.

The debate was moderated by Dr. Ward Cates, President for Research at Family Health International. Two panelists spoke in favor of the proposition: Dr. Myron Cohen, J. Herbert Bate Distinguished Professor of Medicine, Microbiology and Immunology and Public Health at the University of North Carolina at Chapel Hill; and Professor François Venter, Senior Director of Reproductive Health and HIV Research Unit at the University of the Witwatersrand, Johannesburg, South Africa. The two panelists who spoke against the proposition were Dr. Daniel Low-Beer, Director of Performance, Impact and Effectiveness at the Global Fund to Fight AIDS, Tuberculosis and Malaria; and Dr. James Shelton, Science Advisor, Bureau for Global Health at USAID.

The panelists who spoke in favor of the proposition argued that there have been no rigorous evaluations or convincing data to show that behavior change interventions are effective in promoting and sustaining positive behaviors. They contended that success in reducing HIV incidence can come only from broad policy changes and biomedical solutions. They also asserted that behavior change programs have not created exportable models from the success stories claimed in countries such as Uganda, where behavioral interventions are said to have reduced HIV prevalence. Furthermore, declines in HIV prevalence attributed to behavior change programming could be attributed to other causes, such as the natural course of the disease, behavior change without interventions (e.g. attending funerals every week could spark behavior change), or other contextual factors that may only be understood many years after the fact.

The panelists who spoke against the proposition contended that behavioral programs have been effective in diverse locations and in different stages of the epidemic, as shown in the significant decreases in population-level HIV incidence in countries such as Australia, Cambodia, Kenya, Malawi, Thailand, Uganda, and the United Kingdom. They highlighted six reasons as to why there should be more behavior change interventions: 1) behavior change is at the crux of the epidemic, especially with those who engage in multiple partnerships; 2) behavior change has worked in a number of other arenas, and it stands to reason it should work in HIV; 3) risky sexual behavior has declined in a number of places; 4) declines in transmission are partly the result of programmatic efforts; 5) behavior change permeates everything one wants to do in prevention, from condoms to adherence, alcohol risk, cross-generational sex, demand for services, and gender-based violence; and 6) public health professionals have a duty to warn populations of a clear and present danger. The panelists argued that behavior change is central to any intervention, even those that are primarily biomedical.

The question and answer session addressed whether structural and behavioral interventions are different; whether interventions could be successful without changes in behavior, cultural, or gender norms; and how to target most-at-risk populations (MARPs) with behavioral interventions. Panelists were also asked to describe an ideal behavior change intervention.

The question and answer session made for a very lively exchange that ultimately called for additional research to demonstrate the effects of behavioral interventions, challenged views on the role of behavior in interventions and the efficacy of resources for behavior change, and proposed possible models for effective interventions based on situations where HIV prevalence had declined.

The debate was accessible via webcast but, due to technical difficulties, could not be accessed online in real time, although a link became available later to the more than 100 people who attempted to participate via webcast. The debate was also broadcast at 18 video conference sites across the world.

Behavior Change Debate Proceedings

Dr. Cates introduced the topic for debate: “Behavior change in generalized epidemics has not reduced new HIV infections and is an unwise use of HIV prevention resources.” The four panelists each had 10 minutes to present their arguments in favor of or against the proposition. Following the final presentation, each panelist had two minutes to rebut any arguments made. Once the rebuttals concluded, the moderator posed questions submitted by participants in Washington, DC and via video conference.

Arguments Defending the Proposition

The following is a summary of key points panelists made in defense of the proposition.

There are too many outstanding questions about whether behavior change interventions can reduce HIV incidence or sustain changes in behavior.

According to a panelist, the 2008 Cochrane Review provided a meta-analysis of 58 interventions for men who have sex with men (MSM), which showed an average seven percent reduction in unprotected sex acts. The meta-analysis demonstrated that behavior change programs, communications, and initiatives do little to cause and sustain behavior change. Another recent review (Padian et al. 2010) looked at seven randomized controlled trials of behavior change measuring the effects of intervention on HIV incidence. None of the trials had a statistically significant positive outcome. In a study published a few weeks earlier, 18,000 individuals in five countries at 138 sites participated in an intervention using the popular opinion leader approach to behavior change. No differences were seen between the control and the experimental groups. The panelist surmised that the results demonstrate little hope for positive outcomes in reducing incidence by relying on behavioral interventions.

One panelist conjectured that there are many outstanding questions about the results of behavior change interventions. Additionally, better research is needed to determine if how people engage in sex can be influenced by behavior change interventions. Given the current emphasis on preventing multiple concurrent partnerships, panelists alluded to the difficulty of introducing behavioral interventions for certain populations, such as married couples who are not accustomed to using condoms.

One panelist made the point that it is hard to support increased resources for behavior change interventions when the scientific community does not rigorously investigate the true results of behavior change interventions. A panelist commented that those who support behavior change need to become more critical of their own work and impose more rigor in its evaluation.

Behavior change alone was not responsible for the proclaimed “big victories” in Senegal, Thailand, and Uganda.

According to one panelist, the “big victories” in reducing HIV in Senegal, Thailand, and Uganda were declared “too long ago to remember.” The panelist rhetorically asked if the HIV community learned anything from these victories that applies to a generalized HIV epidemic. The proponents of the proposition cited other contributing factors that might have led to a reduction in incidence in each country:

- Although a 1999 Joint U.N. Programme on HIV/AIDS report attributed the success of HIV reduction to government policies, Senegal is a Muslim country that never had much of an HIV epidemic and was unlikely to ever have a generalized epidemic. Furthermore, because male circumcision’s protective role is now better understood, Senegal’s success might be better explained by its high rates of male circumcision.

- One panelist contended that Thailand’s success in reducing the spread of HIV was attributable to a structural intervention. Even though the government mandated that sex workers use condoms, which might appear to be an example of a behavioral intervention, the panelist argued these laws were more of a structural intervention. He elaborated that structural interventions are not solutions for generalized epidemics.
- The decrease in HIV incidence in Uganda was attributed to community mobilization and population-level avoidance,² yet none of the lessons learned in Uganda were successfully exported to the rest of sub-Saharan Africa. The proponents noted that one needs to look closer at the background data in Uganda to understand what happened, because Uganda’s famous “zero grazing” campaign to reduce sexual partners does not provide an adequate explanation on its own.

Combining biomedical solutions and structural interventions is more effective than behavioral interventions.

Panelists who spoke in favor of the proposition argued that the best hope for an effective intervention is combining biomedical solutions and structural interventions. A panelist explained that effective biomedical interventions have the advantage of working regardless of individual sexual behavior. A list of biomedical solutions was offered for consideration: circumcision, an HIV vaccine, antiretrovirals used to prevent mother-to-child transmission, microbicides, and oral pre-exposure prophylaxis. Furthermore, it is possible that the test-and-treat approach, which has garnered much interest recently, is another effective intervention. It was pointed out that, unlike a behavioral intervention, test-and-treat can be subjected to rigorous biomedical evaluation that can demonstrate its effectiveness.

Some of the newest behavior change strategies, including prevention for positives and cash transfers, hold little promise.

A panelist noted that there is no behavioral method that guarantees that individuals who test positive for HIV will engage in safer sex as a result of knowing their status. The cash transfer approach presumes that one can evoke desirable behaviors with money, but cash transfers are known to stop working when payments end. Past experience with using cash transfers to get people to stop smoking and lose weight have shown that recipients view cash transfers as being more like a job than an impetus to independently change and sustain healthy behavior, so once the cash transfers stop, the behaviors are not sustained.

There is a lack of positive results from decades of behavior change interventions in South Africa.

One panelist pointed to several statistics from South Africa that demonstrate behavioral interventions have not contributed to a decrease in the HIV/AIDS epidemic. South Africa currently has 18 percent—almost one-fifth—of HIV infections internationally, and it is anticipated that there will be 5 to 10 million more infections in South Africa to prevent in the next 20 years. South Africa has high condom use and a high HIV testing level. Furthermore, 90 percent of the South African population characterizes itself as very religious, and media campaigns emphasizing monogamy have been prevalent for decades. However, South Africans have consistently ignored sexual messaging from media campaigns. Tens of millions of dollars have been invested in behavior change messaging, and there is a high level of knowledge about HIV, but the epidemic persists at what the panelist described as an “obscene level.”

² Population-level avoidance refers to a phenomenon whereby a portion of a population assesses the risk of an HIV infection based on personal knowledge and modifies behavior to avoid infection.

Arguments Opposing the Proposition

The following is a summary of key points panelists made in opposition to the proposition.

Behavior change is at the heart of the epidemic.

A panelist commented that sexual behavior is central to HIV and ignoring this fact is denialism. He argued that behavior interventions have worked at the population level, and it would be unwise to exclude them. He also noted that the basic prevention strategy should be to promote a synergy of different interventions as we try to understand “the engine of transmission” behind the epidemic. The panelist described “thinning out” sexual networks as a potentially effective strategy, which mitigates the impact of multiple and concurrent partners during an acute stage of infection. He added that he sees no other way to explain the epidemic other than overlapping sexual networks. Anything that slows down the transmission of HIV, such as combining condoms and male circumcision, can provide a “synergistic effect” that creates a positive momentum to reduce incidence.

Behavioral interventions have worked in other fields of public health.

Behavior change interventions have worked for other public health concerns, including breastfeeding, oral rehydration, and female genital cutting, according to the opponents of the proposition. To make behavior change work in HIV prevention, a panelist suggested that the key is to promote behavior change through multiple coordinated channels—rather than just mass media campaigns—to evoke a community response.

Behavior changes have resulted in significant decreases in HIV incidence in key countries.

One panelist presented the cases where HIV incidence had declined significantly. The major factor in different settings was national HIV prevention affecting behaviors. He argued that this factor was very clear in the peer-reviewed scientific literature. Where population-level HIV behavior change programming has not been implemented, the delivery of individual services and projects, clinical services, voluntary counseling and testing, antiretroviral therapy (ART), and counseling have not significantly affected the population’s behaviors and prevalence. The panelist described this outcome as “the unwise use of resources.”

In countries where population-level HIV prevention has worked, the panelist listed three elements that have been shown to effectively reduce HIV incidence in different situations: 1) intense, focused, and systematic national communications on AIDS by politicians and in all media; 2) engagement with social networks that work systematically through groups at risk, village meetings, local leaders, and care networks to get prevention on the agenda; and 3) AIDS has to be an official health fact that is diagnosed and notated on death certificates and at funerals to allow community and care networks to form. The panelists provided examples of the aforementioned elements at work in each stage of the epidemic:

- In the early stages of the epidemic, where HIV was seen as a threat in the United Kingdom, individual services, clinics, and testing were not slowly scaled up as has been recommended to Africa. Rather, population-level HIV prevention was added directly and intensely. HIV prevention was directly communicated by political leaders and with blanket media coverage on radio and television. HIV interventions worked systematically through social networks, with outreach to groups at risk and in schools, and every household in the country was sent a letter about HIV. Within six months of the onset of the program, sexually transmitted infections (STIs) declined by around 50 percent. Some argued that the decline would be short-lived, but it took 15 years for the return to preintervention levels.
- In stages where the epidemic has already started, in Cambodia, Thailand, and Uganda, the panelists asserted that behavior change for HIV prevention has also worked. The peer-reviewed literature on Uganda links the role of catalyzing communication and behavior change to declines in HIV incidence. These declines are more than individual services captured in the results of individual trials. Population-level national prevention efforts targeting behavior in Uganda resulted in a nationwide 55 percent decline in prevalence. In Thailand, the prevention of 5 million HIV infections has been attributed to behavior change interventions. The government again implemented intense national communication:

AIDS was on all 70 radio stations and television stations for 90 seconds every hour, every day, every week, every month. Secondly, the government systematically engaged the population through social networks including brothel owners, sex workers, taxi drivers, and the workforce to disseminate messages about condom use. The intervention resulted in an increase in condom use and a 60 percent decline in men frequenting sex workers.

- In the later stages of the epidemic, HIV prevention behaviors have also worked in Kenya and Malawi. In the first decade of the epidemic in Kenya, services had been delivered but HIV had not declined. In 1999, the Kenyan parliament requested to know why HIV prevention was not working, and they organized the first ever emergency parliamentary session on AIDS. The parliament declared AIDS a national emergency and required all politicians to return to their communities each weekend with materials about AIDS. The topic of AIDS was brought into the school curriculum, and STI treatment was widened. The late addition of an integrated community response resulted in behavior changes and a reduction in HIV incidence.

A panelist added recent evidence from Zimbabwe based on evidence from Tim Hallett (Gregson 2010) also demonstrating the effectiveness of behavior change interventions. In 1999, there was a decline in the expected course of the epidemic that could only be explained by behavior change, according to the panelist. The decline was attributable to an educated population, the beginning of an economic decline that depleted the number of mobile men with money who could pay for multiple partners, and a semi-self adopted behavior change. Furthermore, people interviewed at the time indicated that they did receive messaging from churches, mass media, nongovernmental organizations, and music.

Furthermore, a panelist added that there is evidence in South Africa that things are starting to change. A recent study (Rehle et al. 2010) shows a marked decline in HIV incidence among young women, which tracks well with reported increases in condom use. The 2009 National Communications Survey in South Africa demonstrated a decline in the reported number of partners for the first time due in part to the sexual messaging from the OneLove and Scrutinize mass media campaigns.

Any effective HIV prevention intervention will require behavior change.

Biomedical solutions such as male circumcision include counseling—which is a behavior change intervention targeted to individuals—to ensure that men do not adopt more risky behaviors after being circumcised and to create adequate demand for male circumcision services. ART must address issues of risk compensation, and the demand for testing involves adherence. Moreover, even in concentrated epidemics or MARPs-focused programming, behavior change interventions are key to increasing consistent and correct condom use and avoiding the sharing of needles.

Health professionals have the moral obligation to inform and warn individuals.

A panelist noted that health professionals have an obligation to warn communities and individuals of “a clear and present danger.” Health professionals should tell people that having multiple partners and/or a partner with multiple partners poses a higher risk of transmission.

KEY POINTS RAISED DURING THE REBUTTAL

By Panelists Defending the Proposition

The panelists defending the proposition made the following points in response to the opponents’ arguments:

- Behavior change happens on its own in the natural course of an infectious disease, and there is insufficient evidence that directive behavior change programming is the source of declines in incidence or prevalence.

- Behavior change researchers are quick to claim the effectiveness of behavior change (i.e., pointing to the success of mass media campaigns like Scrutinize in South Africa) to change self-reported behavior, but the effects could have been from other sources.
- From a clinician’s point of view, it is difficult to change individual behavior.
- Much of the evidence used in behavior research is based on retrospective historical data and anecdotes rather than evaluation methods that can demonstrate clear causal links.
- There has not been a program or model (e.g., Uganda) that could be successfully exported from one country to another to decrease HIV incidence.
- Proponents concede that HIV incidence and prevalence are decreasing in parts of the world, but they are not ready to attribute their decline to behavior change. A panelist summed up it up this way: “We are always at a netherworld of not always understanding what we are seeing,” but “maybe 10 to 20 years later we will understand it.” One example of this is Senegal, where early successes were attributed to effective behavioral interventions, but studies now highlight that high rates of male circumcision have also contributed to Senegal’s ability to keep HIV rates low.
- Structural determinants and government policies have been described as effective strategies that might be a better use of resources than trying to change behavior one person at a time.

By Panelists Who Opposed the Proposition

The panelists opposing the proposition made the following points in response to the proponents’ arguments:

- Behavior plays a central role in many interventions. There cannot be biomedical solutions without behavioral elements. Whether structural or individual, the proponents all but admitted the role of prevention and behaviors in explaining population-level HIV trends.
- There is a long history of epidemiology not just in clinics and not just about drug testing in analyzing population-level disease. This is real epidemiology and dismissing it ignores much of the most important peer-reviewed scientific literature on HIV, which comes to clear conclusions in describing declines in prevalence.
- Behavioral programs have worked in such diverse situations and locations as the gay communities in New York, Australia, the United Kingdom, Cambodia, Thailand, Uganda, Kenya, and Malawi.
- Individual behavior change may be the focus, but there is also a social norm component to behavior change. Focusing on changing norms to, for example, reject multiple partnerships or use condoms is extremely important.
- Behavior change does not have to happen at a massive scale to contribute to a decrease in new infections at the population level. The recent qualitative research from Zimbabwe provides evidence that some individuals changing their sexual behavior results in declines in HIV.

KEY THEMES COVERED DURING THE QUESTION AND ANSWER SESSION

How Structural and Behavioral Interventions are Different?

A member of the audience asked why one would argue against behavior change interventions when structural interventions are behavioral interventions at the population level. A panelist responded that how an intervention is characterized depends on how many resources have been invested in it and how much it

focuses on individuals' sexual behavior. Governments have successfully changed policy that had broad ranging effects; an example is seat belt laws, which changed behavior quickly. The focus should be on what to do tomorrow in terms of managing and changing individual level behavior.

Can Interventions without Changes in Behavior, Culture, and Gender Norms Ever be Considered Successes?

An audience member asked if health professionals have failed in their duty to warn the 20 million or so pregnant women worldwide who have been tested for HIV that their greatest risk of infection comes from their partners. A panelist noted that recent evidence suggests that during pregnancy, women are at increased risk of acquiring HIV, and the idea of not treating a woman as part of a couple is not acceptable. Prevention of mother-to-child transmission was described as a "major missed opportunity to coordinate messages for the kind of behavior change we need to have not just for a woman but her partner." The panelist noted that this example illustrates that behavior has to be addressed in all HIV services and interventions delivered.

Another question was how behavior change can be effective in areas where women continue to have little or no power. A panelist answered that gender relations are an important aspect of future behavior change models that include social norms about how men and women relate to each other sexually. Future behavior change strategies should present a positive model for sexual relationships so that men understand what it means to have healthy relationships. In the ensuing discussion, another panelist expressed doubt if behavior change around gender norms could significantly reduce HIV prevalence by 30 to 40 percent.

A participant asked how panelists would introduce male circumcision in a culture that does not traditionally circumcise without behavioral interventions in place. A panelist responded that offering circumcision does not require much effort to change behavior; in many communities, many men decide to undergo circumcision when it becomes available without intensive behavior change campaigns.

Another audience member asked if there have been any lessons learned about risk compensation by men who have been circumcised. A panelist responded that in clinical trials thus far, risk compensation has not been a problem. However, clinical trials are not the real world, so it is hard to know what would happen in areas where quality of care is poor. In Orange Farm, South Africa, where there has been intense outreach, there is a 50 percent prevalence of male circumcision, primarily among younger men. A panelist noted that he is worried that that rate might be "as high as it can get." Given that older men have higher rates of infection, the uptake of younger men means that circumcision will not have an immediate impact on the pandemic, and impact will not be seen until after young men reach the age of highest risk in these hyperendemic countries.

What Would Have Happened Without Behavior Change Interventions?

A participant asked how much worse the HIV epidemic might have been if behavior change had not happened. One panelist responded that they have no idea because there is no research available. South Africa was cited as an example of a country where massive investment in media campaigns targeting behavior change had been made, with the panelists debating the effectiveness of those efforts. Some panelists questioned the effectiveness of mass media behavior change interventions, while others felt that such campaigns contribute by focusing on partner reduction and providing positive gender norms for men. It was agreed that mass media campaigns will not change gender norms overnight but create incremental changes to improve those norms.

Proposed Prevention Strategies.

A participant asked what the ideal prevention package would be for a generalized epidemic. A panelist responded that it would include such services as male circumcision and ART, and it would also include HIV prevention programming at the population level, which would address behaviors. He added that national-level HIV prevention programming is a recent development in South Africa. It is still very difficult in South Africa for people to work in care because there is still a lot of stigma. Historically, the success stories of decreased incidence show that it is important to put AIDS on the agenda and work through community

networks with groups at risk and with people with authority in villages. Building on the community response can mobilize something much larger than itself in a way that clinical interventions cannot. In the four or five countries where HIV has declined, all have created intense discussion about HIV, from interpersonal discussions throughout sexual networks to national mass media campaigns.

Another audience member asked if instead of focusing on individual-level interventions, what combination of biomedical, behavioral, individual, and structural interventions should be a focus. One panelist answered that circumcision is difficult to argue against because it is a permanent solution that, while not complete, is very helpful. One panelist offered three tiers of interventions where at the highest level there is male circumcision, behavior change interventions, and the wide availability of condoms. On the second tier, there is counseling and testing, prevention for individuals with HIV, and interventions with MARPs. The third level includes STI treatment, some targeted use of ART for prevention, and some selective structural interventions.

Targeting Most-at-Risk Populations and Individuals in Remote Areas.

The panelists were asked how to involve groups such as MSM in countries where homosexual sex is illegal, and how to target populations in remote areas. A panelist responded that interventions targeting MSM are critically important, regardless of the legal status of homosexual behavior. However, MSM have a set of behaviors similar to those of the general population, and general messaging should focus on partner limitation, using condoms, and decreasing anal intercourse. Panelists added that in remote areas such as those in Botswana (from where the question was asked), individuals have access to mass media, since people listen to the radio and are literate. It was stressed that for populations in remote areas, prevention needs to be reinforced by engagement at the community level via events such as village meetings and through local leaders.

Next Debate.

The next debate will be held on August 26, 2010, and will focus on the contribution that discordant couples make toward epidemic potential, and therefore are a public health priority in arresting new infections.

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