

UNAIDS Technical Consultation on Social Change Communication.

Background paper by Thomas Scalway.

Introduction

This document serves as a background document to the UNAIDS Consultation on Social Change Communication, a technical consultation called to clarify and build a shared understanding of what this kind of communication can do to contribute to HIV prevention efforts.

The term “social change communication” is being used loosely. Much of the thinking outlined later in this paper has developed under slightly different labels, including “communication for social change” and “participatory communication”. Agreeing definitions and terminology has to be left for the consultation’s meeting itself. Meanwhile, much of this document’s value will be in provoking discussion of these broad issues, rather than providing any kind of definitive background.

There is a considerable sense of urgency underlying these efforts. Within the current effort to scale up towards universal access to treatment, care, support and prevention, prevention has fallen behind. While there are broad areas of consensus about what is needed to deliver treatment, what is needed to deliver prevention and measure its progress remains far less clear. The desired outcomes for HIV prevention have been stipulated in various declarations and policy papers such as the United Nations Declaration of Commitment on HIV/AIDS¹. These outcomes include reducing the proportion of infants infected by HIV and reducing infection rates amongst young people. Yet what is required to bring about these outcomes remains the subject of debate, particularly on the role of different types of health communication.

The UNAIDS Prevention Reference Group meeting in April 2007 asked the UNAIDS Secretariat to consult a range of partners and experts in order to provide countries with guidance on the definitions, core components and quality standards for HIV prevention. Through this process, UNAIDS will review and expand its advice and guidance on the scale and types of efforts necessary to reduce HIV risk behaviour in different epidemic scenarios and to address the drivers which impede prevention efforts by individuals and communities. As countries develop costed national universal access plans, they need a list, including costings, of the core components of HIV prevention. Much has been said about how much social change communication has to offer. Yet before UNAIDS can provide guidelines for countries, a fresh look is required at what social change communication entails, and how it can contribute to HIV prevention.

This technical consultation is not the first work of this kind to take place. In various regional centres there is a growing body of knowledge and expertise about developing communication approaches to address the local situation. One example was the SADC Regional Consultation on Social Change Communication for HIV Prevention, Swaziland 2006². In this SADC consultation, the local drivers of the epidemic were identified and examples of successful communication programming were examined and shared. Ultimately, national experiences, expertise and programming is more instructive than any kind of generic global consultation and guidelines. Yet many countries have no access to such advice and support in communications. For these countries, the adaptable approaches and guidelines coming from UNAIDS Technical Consultation on Prevention and Social change communication will be particularly important.

A background on HIV Prevention.

¹ Declaration of Commitment on HIV/AIDS – United Nations General Assembly Special Session on HIV/AIDS. New York, United Nations, 2001.

² SADC Regional Consultation on Social Change Communication for HIV Prevention, 3 – 4 October 2006, Ezulwini, Swaziland

Despite the fact that funding for AIDS has increased six fold between 2001 and 2006³ global efforts around prevention are faltering. For every one person put on to HIV treatment in 2006, six people contracted the virus. 4.3 million people were infected with HIV in 2006, over 11 thousand a day. The latest report from the Global Prevention Working Group presents a bleak portrait of prevention efforts globally, where only 9% of risky sexy acts worldwide are protected by a condom, and where only 11 percent of HIV-infected pregnant women receive the simple treatment required to protect their unborn children⁴.

The way in which HIV is spreading varies greatly from country to country, and differs amongst places and groups within countries. Epidemics can either be low-level, concentrated, generalised or hyper-endemic. Within each of these scenarios a different mix of prevention responses is required. In concentrated epidemics, for example, there may be a need to aim for containment, targeting vulnerabilities amongst key groups. In hyper-endemic scenarios, where HIV is spreading through the general population at high levels, making concerted efforts to change widely held social norms, attitudes and beliefs may be more appropriate. Comprehensive overviews of the challenges in HIV prevention, and guidelines and recommendations for policy and programming have been laid out in “*Intensifying HIV Prevention: UNAIDS Policy Paper*”⁵ and “*Practical Guidelines for Intensifying HIV Prevention*”⁶.

For HIV communication the challenges are enormous. The UNAIDS practical guidelines and policy paper on HIV prevention urge for a dynamic understanding of epidemics, focusing on “where the next 1000 infections will come from”⁷. This turns the communication objectives into moving targets, depending on types of risks and networks that drive infection in any setting. Similarly, understanding the nature of risk and networking with any particular setting must be multi-faceted. The role of culture is central in HIV prevention, with writers urging both understanding the roles of culture in perpetuating risky behaviour, as well as the role of culture in addressing these issues⁸.

The current drive to scale up HIV prevention is part of a broader effort on universal access. In the 2006 Political Declaration on HIV/AIDS governments around the world committed to moving “*towards the goal of universal access to comprehensive prevention programmes, treatment, care and support by 2010*”⁹. Updates on progress towards reaching universal access are available from UNAIDS^{10 11}, and civil society perspectives are gathered on various web-sites¹².

Within universal access, the steps needed to deliver on treatment, care and support are relatively straight forward with measurable and specific *programmatic output indicators*. These include, for example, the number of people on AIDS treatment, availability of healthcare services, and the reach of home-based care services. For HIV prevention, output indicators are less well known, and there is a focus instead on *outcome indicators*, including age of sexual debut, and number of sexual partners¹³. Various outputs are

³ *Bringing HIV Prevention to Scale: An Urgent Global Priority*. Global Prevention Working Group, June 2007

⁴ *Bringing HIV Prevention to Scale: An Urgent Global Priority*. Global Prevention Working Group, June 2007

⁵ *Intensifying HIV Prevention: UNAIDS Policy Paper*, UNAIDS 2006

⁶ *Practical Guidelines Towards Scaling Up Prevention Towards Universal Access*, UNAIDS, 2005

⁷ *Intensifying HIV Prevention: UNAIDS Policy Paper*, UNAIDS 2006

⁸ *Focusing on the Forest Not just the Tree, Cultural Strategies for Combating AIDS*. Arvind Singhal, MICA Communications Review (2003) 1 (2): 21-28

⁹ Declaration of Commitment on HIV/AIDS – United Nations General Assembly Special Session on HIV/AIDS. New York, United Nations, 2001.

¹⁰ United Nations Secretary-General Ban Ki-Moon (2007). Declaration of Commitment on HIV/AIDS and Political Declaration on HIV/AIDS: focus on progress over the past 12 months. United Nations General Assembly, 61st Session, A/61/816.

¹¹ UNICEF, WHO, UNAIDS (2007). Towards universal access: scaling up priority HIV/AIDS interventions in the health sector: Progress Report, February 2007.

¹² Including www.ua2010.org

¹³ *UNAIDS Expert Consultation on Behaviour Change in the prevention of sexual transmission of HIV, highlights and recommendations*, UNAIDS 2007

known, for example mass-media interventions and community dialogues, but how these can be mixed and organised within a balanced overall prevention response remains often a matter of chance and donor prioritisation. CADRE's study of communication interventions shows some of the compound effects of different programmes¹⁴, and there is considerable analysis made of communication successes in the past, including Uganda¹⁵, but extracting any kind of formula of programmes that can be applied to other settings remains challenging¹⁶. While we know we want to reduce behavioural risk, can we in all confidence say what kinds of communication work, or programmatic outputs, can achieve this?

What is driving these infection rates?

HIV is passed through a number of human behaviours, including unsafe sex and sharing non-sterile injecting equipments. Over the years, there have been various candidates for the risk factor most associated with HIV transmission. In the recent SADC Regional Consultation on Social Change Communication for HIV Prevention the significance of multiple concurrent partners was underlined as the single most important behaviour to address regionally. While this factor is undoubtedly important, especially in that regional context, it is not the sole risk factor associated with HIV transmission. In other regions, such as Eastern Europe, the sharing of injecting equipment has been associated with the most explosive growth in HIV transmission. Across a variety of risk factors and settings, changing individual behaviours can reduce risk. The goal of containing and reversing the spread of HIV by targeting individuals with knowledge and skills in order to change risk behaviours is one obvious priority within health communication.

Much investment in health communication is directed towards this kind of individual behaviour change. Social marketing of condoms, awareness raising through print and broadcast media and targeted sensitisation campaigns, all serve to focus on the individual behaviours that drive HIV infections. Some of these communication activities are shown to have strong results, which one can see in various programme reports¹⁷, or collated on the Communication Initiative website¹⁸. Yet the results can be short lived unless the programmes are part of long term efforts, ideally mixing a number of different types of communication intervention. Additionally, targeting individuals' behaviour assumes that the individuals have the power or inclination to change their actions. This approach carries the assumption that those at risk from HIV are acting logically or rationally, and that all they lack is the information required in order to make better choices.

Vaughan outlines a number of theories of human behaviour change related to HIV prevention¹⁹. Arguing that information and knowledge is not enough to change behaviour, he lays out key influencing factors: self-efficacy beliefs about control of one's behaviour; interpersonal communication with trusted sources; perceived vulnerability; belief in the efficacy of prevention behaviours; social norms; and the perceived barriers to changing behaviours²⁰. Relevant behaviour change models to help make sense of this range

¹⁴ *HIV Communication In The Context Of A Severe HIV/AIDS Epidemic In South Africa: Findings Of The First National Survey On AIDS Communication* D. Lawrence Kincaid, D. Lawrence Kincaid, Warren Parker, Patrick Coleman & Patrick Coleman & Saul Johnson Poster session at the 3rd SOUTH AFRICAN AIDS CONFERENCE Durban, South Africa, June 5-8, 2007.

¹⁵ Hogle, A. J. (ed.) (2002) *What happened in Uganda Declining HIV Prevalence, Behaviour Change and the National Response*, USAID Report.

¹⁶ *Behaviour and Communication Change in Reducing HIV. Is Uganda Unique?* Health and Population Evaluation Unit, Cambridge University, 2004.

¹⁷ *Preventing HIV/AIDS in Young People: A Systematic Review of the Evidence from Developing Countries*, David A. Ross, Bruce Dick and Jane Ferguson (Eds.), UNAIDS Inter-agency Task Team on Young People 2006

¹⁸ www.comminit.com.

¹⁹ *Entertainment-Education and HIV/AIDS Prevention. A Field Experiment in Tanzania*. Peter W. Vaughan. *Journal of Health Communication*, Volume 5 (Supplement) pp 81-100, 2000

²⁰ *Entertainment-Education and HIV/AIDS Prevention. A Field Experiment in Tanzania*. Peter W. Vaughan. *Journal of Health Communication*, Volume 5 (Supplement) pp 81-100, 2000

from cognitive models such as the health belief model²¹ and the theory of reasoned action²², through to psychosocial models, including social cognitive theory²³ and diffusion theory²⁴. These different models go some way towards emphasising the importance of the context in which behaviour takes place. Yet ultimately, understanding the dynamics of HIV transmission cannot be separated from an understanding of the broader context of poverty, inequality and social exclusion which create conditions where unsafe behaviour flourishes.

In its Global Strategy Framework on HIV/AIDS published in June 2001 to coincide with the UN General Assembly Special Session on AIDS, UNAIDS proposed an expanded response to AIDS operating on three levels: the reduction of risk, the reduction of vulnerability and the reduction of impact. Subsequently, in the UNAIDS Practical Guidelines for Intensifying HIV Prevention²⁵ there is clear recognition of importance of tackling the drivers of the epidemic. Three specific social drivers are repeatedly cited as being particularly central: human rights, stigma and discrimination, and gender inequality. The way in which these drivers interact with the epidemiology of AIDS in different settings, and the patterns of individuals' behaviour is described in detail in the UNAIDS policy and guidelines for HIV prevention. The breadth and scope of these UNAIDS guidelines appear formidable when considering how to link them with a set of practical communication interventions which can address these drivers.

Looking at broad trends in communication on HIV prevention

The focus on the drivers of the epidemic in the UNAIDS prevention policy paper and practical guidelines resonates with recent communication thinking that emphasises the importance of social context in the interpretation and impact of health messages. This has been well documented in Silvia Waisbord's "Family Tree" document²⁶. This outlines how an understanding of information as the magic bullet in health and development communication was superseded by a range of more nuanced understandings of the communication process.

While this family tree has branched out into many separate approaches, one principle carries increasing consensus: the need to broaden the focus from the individual through to the social. As Arvind Singh puts it, "*Needed are more culturally based-approaches, as opposed to individual-centred rational approaches. Needed are more community-based, dialogic approaches, as opposed to individual-based approaches*"²⁷

Within this communication thinking, approaches emphasising social change emerged as a central within the last ten years, captured by the Panos Institute in 1999²⁸ in a position paper for the Rockefeller Foundation.

Around the same time, UNAIDS produced its HIV/AIDS communication framework, widely acclaimed as being a major contribution to the field²⁹. This framework stressed the importance of a number of different domains of social context when targeting individual's behaviour. In many senses it is

²¹ Rosenstock, I. M, Strecher, V.J, and Becker, M.H (1994). The health belief model and HIV risk behaviour change. In F.J DiClemente and J.L Peterson (Eds), *Preventing AIDS: Theories and methods of behavioural interventions*. New York: Plenum

²² Fishbein, M. Middlestadt, S.E, Hitchcock, P.J (1994) Using information to change std related behaviours: An analysis based on the theory of reasoned action.

²³ Bandura, A (1994). Social cognitive theory and exercise of control over HIV infection. In R.J.DiClemente and J.L Peterson (Eds.) *Preventing AIDS: Theories and methods of behavioural interventions*. New York: Plenum

²⁴ Rogers, E.M. (1995). *Diffusion of innovations (4th ed.)*. New York: Free Press.

²⁵ *Practical Guidelines Towards Scaling Up Prevention Towards Universal Access*, UNAIDS, 2005

²⁶ Family Tree of Theories, Methodologies & Strategies in Development Communication: Convergences & Differences S. Waisbord; Rockefeller Foundation Communication Initiative, 2000

²⁷ Focusing on the Forest Not just the Tree, Cultural Strategies for Combating AIDS. Arvind Singhal, MICA Communications Review (2003) 1 (2): 21-28

²⁸ <http://www.communicationforsocialchange.org/pdf/positionpaper.pdf>

²⁹ UNAIDS (1999) *Communications Framework for HIV/AIDS: A New Direction* Bummi Makinwa and Dan Odello. UNAIDS/Penn State.

disappointing that UNAIDS did not continue to develop and promote this model over the succeeding years.

Since this time at least four related, often converging, bodies of thought emerge loosely under the banner of social change communication.

The first is a line of thinking, initially supported by the Rockefeller Foundation and which now finds a focal point within the Communication for Social Change Consortium. It defines communication for social change as “*a process of public and private dialogue through which people themselves define who they are, what they need and how to get what they need in order to improve their own lives. It utilizes dialogue that leads to collective problem identification, decision making and community-based implementation of solutions to development issues*”³⁰.

The second school of thought is broader, focusing on the importance of moving from message to voice in HIV communication. Here the emphasis is on creating an enabling environment for all kinds of voices to emerge, including the policy environment, the civil society environment, and the media environment. This has been documented by the Panos Institute, in *Missing the Message: 20 Years of Learning on HIV*³¹.

The third looks at the way in which locally driven efforts, often uncoordinated and totally decentralised, are changing the response to HIV. This analysis forms some of the framework for commentary by Warren Feek³² and builds partly on an analysis of modern mass participation within the commercial sector, for example in websites such as *My Space* and *You Tube*. Loosely related to this is a new emerging interest in social movement approaches, as typified by Panos’ latest document on social movements against AIDS.³³

The fourth school looks at social and behavioural change communication within an ecological model of individuals’ risk and behaviour. This approach has also been allied to strong monitoring and evaluation frameworks, which often aim to marry the principles of communication for social change with evidence based strategic communication³⁴.

In the past there was some polarisation between different approaches, but past distinctions in approach are now more blurred. One basic question for the forthcoming UNAIDS technical consultation on social change communication remains: is social change communication about communicators changing societies, or societies changing themselves?

In order to give structure for the technical consultation, UNAIDS is encouraging communication experts to focus on how three social drivers in particular can be addressed: human rights, stigma and discrimination and gender inequality. None of these drivers will be dealt with by AIDS communication programmes alone, no matter how enlightened their approaches may be. These drivers are shaped partly by systems of power relations and political economy that are more the province of legislators and economists than they are by health communication practitioners. Yet social change communication efforts can play an important role in tackling the drivers, either as an *object of communication* or within a *process of communication*.

³⁰ <http://www.communicationforsocialchange.org/mission.php>

³¹ “*Missing the Message: 20 Years of learning from HIV/AIDS*”, Thomas Scalway, Panos Institute, 2003

³² http://www.comminit.com/drum_beat_400.html

³³ *We are one but we are many. New thinking on how communication can support HIV social movements to achieve inclusive social change*, Panos London, 2006

³⁴ For example, see *Communication for social and behavioral change: an integrated framework for AIDS prevention programs*. Kincaid DL, Figueroa ME. *Int Conf AIDS*. 2002 Jul 7-12; 14: abstract no. MoPeF3994. Johns Hopkins University, Baltimore, United States

At the heart of each of these drivers of the epidemic are systems of social injustice and inequality that are often deeply entrenched. These power relations persist through various *structural factors*, such as control of legislation, but also through *social dynamics*, such as who has the ability to speak out on various issues. HIV prevention communication can either address the structural issues as an object of their efforts, for example advocacy efforts to protect the human rights of people living with HIV. Or they can address the social dynamics, for example by empowering people living with HIV to speak out. Deciding what blend of communication approaches best tackles these different levels of the drivers is an important and complicated task. Within this next phase of work there will be significant challenges in drawing together the diverse approaches within the communication field within one, coherent, generalised framework that can be used to guide efforts in radically different settings around the world.

Before moving on to looking at the drivers of the epidemic it is worth considering situations where bottom-up communication seems to have played less of a role. The Cuban response to AIDS, which had some comparatively draconian measures particularly in relation to containment, was successful in curbing infection rates through robust state intervention. In Thailand, concentrated advertising through government controlled media has been attributed a major factor in success. In China, also, the state plays a strong role in containing the epidemic. Evidently the environments in which communication takes place are diverse, with the state and civil society taking different levels of dominance within social discourse. HIV prevention communication will need to be adapted accordingly, with social change meaning something different in each setting.

Communication and human rights, gender and stigma and discrimination.

The link between AIDS and human rights has been much researched and documented. The latest International Guidelines on HIV/AIDS and Human Rights, 2006³⁵ are comprehensive with a sophisticated analysis of the interactions between rights abuses and AIDS. Communication on HIV and human rights offers a great example of how the issue can be tackled as an object of communication or within a process of communication. Firstly one can look at communication for human rights, for example Treatment Action Campaign's work which has directly confronted the South African government with the claim that its policies and inaction are a denial of the right to life of people living with HIV³⁶. At a more general level, UNICEF has a model of human rights communication that has been laid out in the *Journal of Health Communication*³⁷. In this model, groups – “rights-holders”- develop a shared vision, and then negotiate for its fulfilment by communicating in a variety of rights-related dialogues.

Stigma and discrimination have fuelled the transmission of HIV from the moment the virus was discovered. They continue to amplify the pain and suffering of AIDS. With countless expressions across different cultures, HIV-related stigma and discrimination continue to be manifest in every country of the world, creating some of the greatest barriers to preventing further infection, alleviating impact and providing adequate care, support and treatment. Documentation on stigma includes the *UNAIDS Case Studies On HIV Related Stigma, Discrimination and Human Rights Violations*³⁸ For communicators, it is key to note that frameworks for understanding stigma are numerous and sophisticated, describing cycles and processes for the causes and effects of stigma in relation to AIDS³⁹.

³⁵ *International Guidelines on HIV/AIDS and Human Rights*, UNAIDS, 2006 http://data.unaids.org/Publications/IRC-pub07/jc1252-internguidelines_en.pdf

³⁶ *The Treatment Action Campaign and The History of Rights-Based, Patient Driven HIV/AIDS Activism in South Africa*, Research Report No. 29, Mandisa Mbali, University of Kwazulu Natal Centre for Civil Society.

³⁷ Neil Ford and Rozanne Chorlton (UNICEF) with Dan Odallo (UNAIDS) 'Communication from a Human Rights Perspective: Responding to the HIV/AIDS Pandemic in Eastern and Southern Africa', *Journal of Health Communication* 2003.

³⁸ *HIV Related Stigma, Discrimination and Human Rights Violations, Case Studies of Successful Programmes*. UNAIDS 2005 http://data.unaids.org/publications/irc-pub06/JC999-HumRightsViol_en.pdf

³⁹ *Safe Passages to Adulthood*, Southampton University. <http://www.safepassages.soton.ac.uk/pdfs/Stigma.pdf>

Gender inequality drives the spread of HIV in various ways. Once again, this is an area with a broad literature⁴⁰. With the feminisation of the epidemic, women increasingly bear the brunt of the impact of AIDS, often because of harmful gender roles and norms. Gender norms and expectations often drive discrimination against men who have sex with men, and fuel men's risky sexual behaviour. A practical initial reference is the UNAIDS "Operational Guide on Gender and HIV/AIDS, a rights-based approach"⁴¹.

Monitoring and evaluation

Proving the impact of social change communication in HIV prevention will be critical in moving forward. Already much evidence exists. People have volunteered reams of impact evidence on the Communication Initiative site, and many studies, publications and journals have shown the impact of HIV prevention efforts. Yet little of this body of evidence has been subjected to external impartial scrutiny or robust peer review, nor has the technical work of developing, standardizing and validating respective indicators for this work been undertaken.

Nevertheless, three efforts to evaluate social change communication are particularly worth noting. The first is the Soul City evaluation on their programming, which was ambitious in its scope and rigour and has set a lasting example of how social change communication can be proven to work⁴². The second are the guidelines produced by Communication for Social Change Consortium on participatory monitoring and evaluation, which lay out a number of different approaches for allowing the beneficiaries of communication programmes to be part of evaluating their success⁴³. Finally, Johns Hopkins University created a thorough and systematic model for monitoring and evaluation of social change communication, which, at the time, created lively debate on the nature of social change and evaluation⁴⁴.

For national AIDS programme managers, behavioural outcomes need to form the endpoint of evaluation efforts. From these outcomes, possible programmes and policy actions need to be identified. These should include indicators measuring their coverage and intensity. The various suggested interventions and inputs necessary for these programmes and policies also need to be laid out, once again accompanied by tools and reference guides for evaluating efficacy.

This focus on impact indicators and pre-defined tools for measuring short-term success militates away from the approaches of many in the social change communication community. Balancing the need for a listing of concrete, measurable and generic prevention communication approaches with principles favouring localised indigenous responses, where success is measured by the communities involved, and where the process is often considered as important as the result, will not be straight-forward.

Challenges ahead.

Within social change communication some differences seem to persist between those who advocate for programmes which empower people to speak out and those who advocate for social change communication programmes which more clearly link to a range of predefined impact indicators. These different approaches also play out in different ways in relation to the architectures and priorities of

⁴⁰ www.genderandaids.org

⁴¹ *Operational Guide on Gender and HIV/AIDS. A rights-based approach. Prepared for the UNAIDS Interagency Task Team on Gender & HIV/AIDS 2005* <http://www.unfpa.org/hiv/docs/rp/op-guide.pdf>

⁴² <http://www.soulcity.org.za/publications/papers-1/evaluating-health-communication.pdf/view>

⁴³ *Who Measures Change: An introduction to Participatory Monitoring and Evaluation of Communication for Social Change*. Will Parks with Denise Gray-Felder, Jim Hunt and Ailish Byrne, Communication for Social Change Consortium.

⁴⁴ Maria Elena Figueroa et. al. (2002) *Communication for Social Change: An Integrated Model for Measuring the Process and Its Outcome*; Communication for Social Change Working Paper <http://www.cominit.com/stcfscindicators/sld-5997.html>.

different donor communities. This creates a situation where combining these approaches within one integrated programme remains difficult. None of this makes selling progressive communication programmes to donors easy. One way to address this is to persuade donors of the need to redefine what “success” means in communication programmes, away from immediate impacts on key behaviours and towards long term processes of empowerment and social change.

Information is needed about the costs associated with social change communication programming. Communicators need to explain the level of intensity of programming required to affect real change, and put a price tag to all the elements needed to bring this about. For these approaches to be recommended to national AIDS authorities the case needs to be made that effective and empowering communication approaches can be rolled out at speed and scale. Within the current drive to provide universal access by 2010, timeframes tend to be tight and programme managers are feeling the pressure. There are few examples of where social change communication programming have been taken to scale.

Conclusion

The forthcoming UNAIDS technical Consultation on Social Change Communication marks an exciting opportunity to take this work to the next level and to establish this important intervention more centrally within national AIDS action plans. A number of challenges lie ahead, but large areas of convergence and consensus now exist. A broadly supported framework for social change communication on HIV prevention should be possible, and could be a major contribution towards UNAIDS efforts towards universal access. Reaching an understanding of the “state of the art” of social change communication and its practical application in HIV prevention efforts is the first step towards its accelerated scale-up.

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