Information and communications technologies

Engaging the private sector and communities in HIV programmes with gay men and other men who have sex with men



Contents

Introduction	2
Update on the global HIV situation and response among gay men and other men who have sex with men	6
Evidence on the potential role and impact of new information and communication technologies and smartphone applications	8
Private sector experience in building healthy online communities	14
Community perspectives	19
Innovative approaches across HIV programme cascades	24
Recommendations	28
Annexes	31
References	36

Introduction

HIV incidence among gay men and other men who have sex with men appears to be rising around the world; despite this, HIV programme coverage remains insufficient, declining from 59% in 2009 to 40% in 2013 (1). Where HIV programmes do exist for gay men and other men who have sex with men, they are often underresourced and insufficiently tailored to the specific needs of that population. Prevention programmes frequently exist in so-called silos, which results in significant gaps and loss to follow-up along the continuum of HIV prevention, care and treatment.

Information and communication technology (ICT) represents an important new resource for enhancing the reach and effectiveness of HIV programming. Gay men and other men who have sex with men already use ICT to facilitate many kinds of interactions, and a host of private for-profit platforms exist to help men negotiate offline social and sexual encounters. Since it facilitates discrete opportunities for social and sexual encounters and the sharing of information, ICT serves an important role for gay men and other men who have sex with men who otherwise may find it difficult to find and meet each other, particularly given the stigma and criminalization of same-sex sexual relations that exists in many parts of the world. It is because of this that ICT holds the potential to drive measurable programmatic improvements across the cascade of HIV prevention, care and treatment services: it can collect and disseminate information, link virtual content to physical services and complement offline components of HIV programmes.

Innovative projects are increasingly using ICT to strengthen the HIV response across the project cycle, from planning and implementation through monitoring and evaluation. Nonetheless challenges remain: most ICT projects are donorfunded with limited support from national governments, ICT-based programmes are rarely mentioned in descriptions of core HIV packages and programmes, and no international guidance exists regarding minimum standards, training requirements or measures of success. This impedes efforts to bring them to scale and ensure they have adequate coverage among gay men and other men who have sex with men.

Perhaps most crucially, the scale-up of publicprivate partnerships with respect to ICT is underexplored. Too often, the public and private sectors work separately with ICT and HIV messaging, or their relationship rarely goes beyond banner ads in apps and on websites.

Numerous large for-profit Internet companies including Grindr, Hornet, MR X/Daddyhunt and Online Buddies—support initiatives to foster the health and well-being of their clients. These initiatives could be strengthened through increased collaboration and integration with the services funded and provided by national health systems. This potential remains largely unrealized, however, in part due to the public sector's lack of familiarity and comfort with technology-mediated strategies and programmes. As a result, achieving scale with ICT programmes requires that the strengths and limitations of the private and public sectors—as well as those of community organizations and networks—are better understood and addressed.

In order to advance the global agenda on the use of ICT for the health and well-being of gay men and other men who have sex with men—as well its use in the provision of HIV prevention and care within that population—UNAIDS collaborated closely with the Global Forum on Men Who have Sex with Men and HIV (MSMGF), the LINKAGES project and the Health Policy Project (both of which are supported by the United States Agency for International Development, or USAID) to organize an actionoriented consultation. That meeting, held over two days in May 2015, convened experts in the areas of ICT and HIV among gay men and other men who have sex with men. Together, the participants discussed how to create meaningful and effective partnerships among the private and public sectors and communities in the use of ICT for the health and well-being of gay men and other men who have sex with men.

Objectives

The objectives of the consultation were as follows:

- Determine evidence-informed, replicable, scalable and ethical best practices in the use of ICT for HIV programmes.
- Develop inputs for a framework for engaging and linking the private and public sectors and communities in ICT programme planning, implementation, monitoring and evaluation.

Safety, security and privacy are of particular concern when developing such a framework.

- Identify information, evidence and capacity gaps related to the use of ICT across the cycle of HIV programme planning, implementation and evaluation.
- Agree upon one or more concrete opportunities for public-private-community partnerships in the use of ICT for the health and well-being of gay men and other men who have sex with men that will be pursued after the consultation.

Participants

Participants included implementers, researchers, advocates and experts in the area of utilizing new media technologies to deliver HIV prevention and care messages among gay men and other men who have sex with men. This included representatives of several private companies that own some of the most popular dating platforms.

This report summarizes the proceedings of the meeting. Presentations from the meeting should be read in conjunction with this report; they can be found at https:// www.dropbox.com/sh/s1dqehbrdggk5q4/ AAAzcl7hl0LozK7Cebb4RU2Da?dl=0.

Opening

The meeting was opened by representatives of the four convening organizations. UNAIDS Deputy Executive Director Luiz Loures called the meeting participants the game-changers that UNAIDS is looking for in order to Fast-Track the AIDS response and end the AIDS epidemic as a public health threat by 2030. He explained that what currently marks the response to the epidemic is the advancement in science and knowledge that has provided new options for treatment and prevention. The challenge, however, is how to reach new generations of people who are at higher risk of HIV—including young people, gay men and other men who have sex with men and migrants—so they have meaningful access to this technology and are able to make use of it. Doing so, he noted, requires doing business differently, which can only be achieved with the support of thought leaders in the area of ICT, who have the capacity to innovate in designing new approaches to reach communities and support social mobilization that can drive the overall AIDS response. According to Mr Loures, "We need to move and move quickly. In Europe, the United States of America, Africa, Asia and eastern Europe, the epidemic is expanding among gay men and other men who have sex with men, and if we continue in the same way we are doing business, there is a risk these populations will stay behind in the response. We don't want to see what we saw in the 80s and 90s, and you need to help us in this major battle, which may be the final one".

Jack Mackenroth, Senior Communications Officer at MSMGF, highlighted the encouraging evidence that ICT has significant reach and offers considerable potential for public health and HIV prevention, especially in the field of mobile apps. He emphasized the necessity of using new ICT to provide timely and focused information particularly about pre-exposure prophylaxis (PrEP) and treatment options—to people who need it.

Darrin Adams, Senior Technical Advisor with the Health Policy Project, and Matt Avery, Strategic Behavioural Communications Officer with the LINKAGES project, both welcomed the meeting as an opportunity for the private sector, communities and HIV organizations to better understand their respective roles, strengths and limitations. They also suggested that it was a chance to identify best practices and ways to build fruitful partnerships that can advance the ICT agenda for HIV programmes with gay men and other men who have sex with men.

From a community perspective, Laurindo Garcia, Founder of B-Change, commended the representation of the voice of the developing world at the meeting, saying that he hoped it would inspire the private sector to focus its attention on sub-Saharan Africa, facilitating partnerships in developing markets that would improve the world of gay men and other men who have sex with men. Update on the global HIV situation and response among gay men and other men who have sex with men

Keith Sabin, Senior Adviser in Epidemiology at UNAIDS, provided an overview of the state of the HIV epidemic among gay men and other men who have sex with men, showing that the number of new infections among that population is rising in most world regions, and that access to prevention, testing and treatment services remains much too low.

According to Global AIDS Response Progress Reports (GARPR), the highest median HIV prevalence among gay men and other men who have sex with men were found in western and central Africa (19%), followed by eastern and southern Africa (13%). In all regions, the epidemic among gay men and other men who have sex with men is significantly higher than it is among the general population; it also is largely heterogeneous and tends to be urban.

GARPR also shows great disparities in access to HIV services and commodities among gay men and other men who have sex with men across and within countries. While the trend for condom use at last anal intercourse seems to be increasing in eastern Asia and western and central Europe, the trend is declining in South and South-East Asia and sub-Saharan Africa, and it is largely flat in the Caribbean, eastern Europe and central Asia. Trends for testing uptake also are essentially flat, standing at less than 55% across all regions. Furthermore, while PrEP has proven effective, there are at least 7 million gay men and other men who have sex with men who are at higher risk of acquiring HIV, and fewer than 10 000 gay men and other men who have sex with men are currently on PrEP (mostly in the United States).

Mr Sabin explained that data gathered by UNAIDS predominantly comes from governments (and occasionally civil society). As many countries do not report data related to gay men and other men who have sex with men—specifically when it comes to size estimates, incidence, new infections, behaviours and access to HIV programmes available data are largely patchy and insufficient to reflect the reality of the epidemic within this population (2).

Key issues highlighted

Following the update on the global HIV situation and response among gay men and other men who have sex with men, participants discussed the significant mismatch between the population size estimates presented by UNAIDS and the number of gay men and other men who have sex with men who are reached by dating apps. For example, the number of gay men and other men who have sex with men using Hornet (a dating app) in one city in Kenya exceeds UNAIDS size estimates for gay men and other men who have sex with men in Kenya as a whole.

Given that UNAIDS population size estimates usually come from highly localized surveys, questions were raised about how UNAIDS can use data from dating apps to develop more accurate estimates of the numbers of gay men and other men who have sex with men, particularly in low- and middle-income countries (where such estimates are essential to mobilizing funds for providing services to this population). Evidence on the potential role and impact of new information and communication technologies and smartphone applications

In this session, presentations were made to elaborate on ICT uptake among gay men and other men who have sex with men in the Asia–Pacific region, Europe, North America and sub-Saharan Africa, as well as the potential role that ICT can play in advancing sexual health.

Europe

Teymur Noori, Public Health Specialist at the European Centre for Disease Prevention and Control (ECDC), provided a brief overview of the epidemiological situation of HIV and sexually transmitted infections (STIs) among gay men and other men who have sex with men in Europe. This included the preliminary results, conclusions and next steps of a project carried out with the Terrence Higgins Trust (THT) to understand the impact of smartphone applications on gay men and other men who have sex with men—specifically their sexual health and STI and HIV prevention efforts that focus on them, and how these apps are being employed in programmes by HIV prevention organizations.

Mr Noori explained that sex between men is the predominant mode of transmission for gonorrhoea, syphilis and HIV in the European Union (EU), and that gay men and other men who have sex with men accounted for more than 40% of reported HIV cases in 2013 (3). Studies in Europe have shown that a significant proportion (76%) of gay men and other men who have sex with men who are not in a monogamous relationship use online plattforms to locate sexual partners, and that the use of apps was higher among those with greater numbers of sexual partners. Nonetheless, ECDC and THT found that there is no conclusive research to date that indicates smartphone apps are causing a change in risk-taking behaviour or the transmission of STIs and HIV among gay men and other men who have sex with men. It is clear, however, that websites and mobile apps do play an important role in the social and sexual lives of gay men and other men who have sex with men, and that using this channel should be a top priority in all areas of HIV prevention that focus on them.

Evidence on the implementation of HIV prevention using ICT in Europe has largely focused on online outreach, online advertising using digital spaces frequented by gay men and other men who have sex with men, and social media campaigns.

North America

David Novak, Senior Health Strategist at Online Buddies and Managing Director at the Online Buddies Research Institute, explained that attempts to use the Internet to address the sexual health needs of gay men and other men who have sex with men started in North America more than 11 years ago. At that time, the Centers for Disease Control and Prevention (CDC) in the United States held a consultation that brought together public health stakeholders and owners of dating websites in order to find ways to collaborate on reaching out to gay men and other men who have sex with men who use dating websites. It was only at that point that the private sector started being recognized as a full partner in addressing the HIV response among gay men and other men who have sex with men. More importantly, Mr Novak suggested, although there is evidence showing the huge reach of new ICTs, there

is no clear evidence about how these technologies can change people's attitudes and behaviours and reduce HIV infections. Generating this type of evidence will require guidance.

David Brennan, Associate Professor at the University of Toronto, presented results from an Ontario-wide, mixed-method community-based research study that aimed to inform online and mobile outreach for gay men and other men who have sex with men in the Canadian province. The study was based on qualitative interviews with 22 service providers and an online survey of 1830 gay men and other men who have sex with men who were recruited between December 2013 and January 2014 through online sites, mobile apps and community organizations. The study confirmed that gay men and other men who have sex with men often are online, using the Internet to meet other men, watch pornographic videos and access sexual health information. They also use a variety of apps at all times of the day. The study demonstrated that service providers must reconceptualize online outreach as a vital tool for HIV prevention. Despite this—and an awareness among providers of the increased demand for online outreach services for gay men and other men who have sex with men—staff capacity and ethical challenges pose barriers to providing effective online outreach services.

The Asia–Pacific region

Laurindo Garcia presented the state of ICT penetration in the Asia–Pacific region, which shows an upward trend that greatly exceeds the trends in other regions (such as Africa, the Arab States and the Commonwealth of Independent States).

Based on desk research conducted by B-Change Foundation that drew on data from a variety of sources, the number of smartphone users among gay men and other men who have sex with men in selected key cities in Asia reached over 12 million in 2014. The average number of users among young lesbian, gay, bisexual, transgender and intersex populations (LGBTI) in selected cities in China, Indonesia and the Philippines reached approximately 1 million each. Mr Garcia also demonstrated how gay men and other men who have sex with men are receptive to online services in the region: different social platforms are used among gay men and other men who have sex with men, with the most dominant being Facebook (although short message service (or SMS) and instant messaging apps also are popular).

Mr Garcia highlighted that gay men and other men who have sex with men who do go online are not a homogenous group, and that they do not go online just to hook up and look for sexual partners: they also enjoy cruising, chatting and locating sexual health information and services. As a result of this varied behaviour, user-centric approaches that acknowledge a wide range of online activities are critical for successfully approaching them.

Sub-Saharan Africa

Riaan Norval, Media Coordinator with the Anova Health Institute, indicated that the high penetration of mobile phones in Africa has inspired innovations in technology and created new industries to solve problems specific to Africa. Nevertheless, the penetration of smartphones and other dataenabled devices (such as tablets) remains low on the continent, where feature phones dominate.¹

Mr Norval described the Anova Health Institute's Health4Men initiative in South Africa, which is a mobi site that allows gay men and other men who have sex with men to access discreet, accurate and topical information for gay men and other men who have sex with men via their cell phones.² The information provided includes information on STIs, substance abuse, sex, HIV prevention and transmission, and antiretroviral therapy. Using the mobi site, members can find their nearest gay-friendly public clinic, and they can send anonymous questions to Health4Men's team of doctors. They also can read sexual healthrelated articles written by contributing writers and participate in monthly polls. In 2015 alone, Health4Men had approximately 10 300 users.

In East Africa, where homophobia is high, gay men and other men who have sex with men now have access to Afya4Men, a comprehensive resource on male sexual health designed for their specific needs. Created to be accessible on any computer

¹ A feature phone is a type of mobile phone that has more features than a standard cellphone, but fewer than a smartphone. Feature phones can make and receive calls, send text messages and provide some (but not all) of the advanced features found on a smartphone. Feature phones were primarily designed for consumers who want a multifunctional mobile phone, but who are not willing to pay the higher prices associated with true smartphones.

² A mobi site is a regular website that is accessible from Internet browsers on any device, including desktop computers. In order to register a .mobi domain name, a site must meet specific requirements that make it easy to view and use from mobile devices (such as smartphones and personal digital assistants).



or mobile phone with an Internet connection, Afya4men was launched in November 2014 and already has 1600 users as of May 2015.

Key issues highlighted

In the discussions following this session, the following were key issues:

- ICT innovations are occurring at a rapid pace across all regions, and many of the gay men and other men who have sex with men who once used websites to find sexual partners, create safe spaces, build communities and access sexual health information have since moved to using smartphone-based applications.
- There is no one-size-fits all ICT platform, and many gay men and other men who have sex with men do not look just for hook-ups or HIV information; they also are cruising, chatting and looking for entertainment opportunities. Usercentric approaches are critical, as are finding ways to plug into platforms that are already in use.
- HIV is only one of many concerns for gay men and other men who have sex with men; in some cases, it may not be a concern at all. There are issues of culture, homophobia and even poverty that arise, and any response should consider the different needs of the population.
- Since gay men and other men who have sex with men are not a heterogeneous group, the choice of programme should be based on the specifics of the group the programme aims to reach. For example, because of costs associated

with its use, technology may be less accessible for poorer men in sub-Saharan Africa than it is among men who are more educated or well-off. In addition, different vocabularies and approaches should be used with men who do not identify as gay and who would thus not react to programmes tailored to gay men.

- While online health promotion advertising that focuses on gay men and other men who have sex with men has proven particularly effective—and social media has become central to successful HIV prevention campaigns—online outreach is facing unique challenges. These can be attributed to the structural constraints of some sites, the need for skills that are different than traditional online skills, and difficulties in securing access or support from the app or website owners.
- Organizations working with dating apps have been experiencing challenges, including a lack of funding for carrying out online prevention work, a lack of understanding among local funders about the importance of online outreach for local gay men and other men who have sex with men, a lack of knowledge or skills for developing and conveying appropriate messages on apps, high costs for advertising, and the occasional lack of contact with (or support from) app owners.
- Sub-Saharan Africa may need special attention, not only because of the particularly dire legal situation of gay men and other men who have sex with men and the slim chances of public sector investment in health programmes for gay men and other men who have sex with

men in many countries, but also because of rapidly increasing web, mobile and smartphone penetration that offers great new opportunities.

- Evidence of the effectiveness and impact of ICT programmes on both HIV infection and the attitudes and behaviours of people is needed in order to advocate with the public sector for funding ICT utilization in programmes with gay men and other men who have sex with men.
- The notion of "evidence of what works" varies between the private sector (which tends to focus on its enormous reach and the rate of visits and clicks) and the public sector (which demands proof of impact, such as demonstrating how clicks and visits within messages contribute to behavioural change and uptake of services).

Private sector experience in building healthy online communities

Representatives of companies that own and operate dating apps provided an overview of how their platforms work and the audience they reach. They also presented the sexual health and HIV work of their companies, their future activities to address HIV, and what they felt were the challenges and opportunities of working with the public sector and nongovernmental organizations (NGOs).

Steve Levin, Head of Global Sales at Grindr, highlighted how Grindr is the largest mobile gay network in the United States and one of the largest globally, reaching a total of 8 million users. In its HIV-related work, Grindr has primarily partnered with the CDC, and it is working closely with the San Francisco AIDS Foundation, local gay and lesbian centres, and other organizations to advocate for HIV testing, education and prevention. Since it has a critical mass of users, Grindr has been connecting users to pre-made HIV campaigns (such as the National HIV Testing Day and World AIDS Day), and it offers a significant amount of free advertising to various nonprofit organizations.

Through its Grindr 4 Equality project, the company seeks to educate Grindr users, encourage healthy sexuality (as well as mental and physical health), engage users for activist research, and mobilize them to participate in activism, direct services and community-building. It tries to ensure that users know where and when they can access STI/HIV testing, shares the most up-to-date information with users to make informed decisions about using protection every time they have sex, increases access to STI prevention tools like PrEP, and supports users who are HIV-positive to gain access to treatment. Some of the main limitations and challenges that Grindr faces in working on HIV include limited access to smartphones in many high-prevalence countries, limited access to users' demographic and behavioural data due to the importance of respecting anonymity, difficulty creating compelling messages that enhance user experiences, and making users comfortable with using mobile apps for more than just meeting people.

Sean Howell, Chief Executive Officer of Hornet, explained that Hornet has a large presence in many emerging markets—including Brazil, China, South Africa and Thailand—as well as San Francisco (where it is based). Hornet, which is available in several languages, is the first app to introduce the Know your Status (KYS) campaign to mobile social networks for gay men and other men who have sex with men. In the KYS campaign, HIV-positive or recently tested men can self-disclose their status, in which case they receive a marker on their profile. Users who choose an HIV-negative status have the option to enter the date of their most recent test; those who do also receive a marker on their profile and are reminded about upcoming tests. Members who choose not to be tested after being reminded will have their KYS status lapse. Hornet also integrated the Aids.Gov feature into its app. which sends members to the nearest test locations and informs them how to schedule their test. This establishes a safer environment for app users, who are encouraged to share their HIV status in their Hornet profile, and to keep it current, both for their own health benefit and for others. It also helps create a community that is open and welcoming for HIV-positive members. As a result, Hornet is able to

respond to HIV stigma in its community, and it has complemented these efforts by collaborating with organizations around the world to reach gay men and other men who have sex with men with AIDS campaigns on a range of subjects.

Geng Le, Chief Executive Officer of the Danlan Gay Men's Network, explained the work of his nonprofit organization, which created Blued, the first Chinese gay dating app. The Danlan Gay Men's Network was developed to pursue social solidarity rather than profit, and it represents a comprehensive project that links online outreach and motivation with outdoor activities and services. Its dating app, Blued, is the largest gay dating app in the world (with 15 million users in China and overseas), and it provides users with information about HIV prevention tools, treatment and care options, the rights of gay men and other men who have sex with men, and the risks associated with unsafe sex. It also directs users to locations where they can access HIV testing and counselling.

Danlan's network runs a free HIV rapid testing outlet that provides services to gay men and other men who have sex with men in partnership with public health agencies. It also organizes campaigns against discrimination and provides technical support on web-based HIV prevention and treatment initiatives. It is currently expanding into other countries, with new offices forthcoming in Thailand and the United States.

The main challenge faced by Danlan in China is claims that its website and the Blued app are responsible for spreading HIV by providing sexual networking opportunities. As a result, Danlan is actively pursuing advocacy to increase acceptance of both people of different sexual orientations and people living with HIV. It also is working towards official policy changes at the national level, including antidiscrimination laws against people living with HIV.

Carl Sandler, Chief Executive Officer of DaddyHunt and MR X, noted that the DaddyHunt.com website and the MR X smartphone app represent the largest online community for men over 40 and their admirers. MR X has roughly 2 million users and continues to be downloaded thousands of times per day. The MR X manifesto encourages members to live "HIV Neutral." It asks users if they are open to dating someone of any HIV status, and users who indicate that they are get a badge on their profiles that states they "live stigma free."

The company has been assisting public health departments with disease outbreaks and participating in public health forums, World AIDS Day and other coordinated initiatives. It sells discount banner space, and it provides free banners on select websites or apps for public health departments that want to reach gay men and other men who have sex with men, but that have limited time or budgets. The company also offers to work with agencies to test, develop and measure new initiatives to drive HIV testing, awareness and education. For Mr Sandler, too many different agencies and organizations—each thinking, in his words, "small"—are reaching out to apps for advertisement, but no one within the digital landscape is "managing the brand" of sexual health for gay men and other men who have sex with men.

David Novak concluded the session by explaining that Online Buddies is the parent company of the Jack'd and Manhunt dating platforms, which collectively serve over 10 million members in virtually every country in the world. Online Buddies has long demonstrated its commitment to protecting the health of its members; this was reflected in the early establishment of a health department and a dedicated health site—and, later, a research institute—to consolidate health and research across its family of brands. Online Buddies has pioneered the activities of Internet-based partner notification by public health providers (through virtual media, such as email, instant messaging and chat rooms) and Internet outreach by community-based organizations (through chat rooms, social networks, bulletin boards, email groups and other online communities) in the United States.

Online Buddies has forged partnerships with companies that provide home or online testing for HIV and STIs, condom companies, inpatient LGBTI substance abuse treatment centres, and LGBTI media, health and advocacy organizations. In addition to this, it has coordinated a number of projects that use the Internet to carry out studies with gay men and other men who have sex with men, including the European and Caribbean men's internet surveys (EMIS and CARIMIS, respectively), its own Men's National Sex Study in the United States (MNSS), the Elton John AIDS Foundation/United Kingdom Internet partner notification pilot project, and PrEP acceptability and uptake studies (both before and after the Pre-exposure Prophylaxis Initiative study, also known as IPrEx). It also has promoted a variety of other pre-approved global studies.

Common opportunities and strengths discussed by the providers of dating apps include the following:

- Their ability to reach millions of users with geotargeted messages at any time or in any location (including in high-risk areas).
- Smartphone growth rates continue to rise, especially in developing countries.
- More people are seeking information on mobile devices rather than desktops.
- Their ability to combine the sexual lives of gay men and other men who have sex with men with resources and information to make them safer.
- Their ability to reach closeted individuals who may not otherwise seek information about HIV or safe sex.
- Their ability to elicit an immediate response from users following any potential call to action.
- Their ability to track members over time to see if they seroconverted, were tested, are on PrEP, etc.

The common limitations and challenges of contributions that dating apps can make to HIV programmes can be summarized as follows:

- The geotargeting of individuals can be used in harmful ways (e.g. tracking by the police).
- They are unable to create compelling messages that enhance user experience.

- Getting users to use mobile apps for more than just meeting people can be a challenge (e.g. using them to seek health services).
- There must be an entity that leads when it comes to messaging related to HIV and STIs, and that coordinates the relationships with the providers of dating apps.
- Public health providers are simply running banner ads that are limited and not engaging; they do not have strong methods of testing whether the ads were effective or used widely.
- The misperception among the public about the relationship between the spread of HIV among gay men and other men who have sex with men and the development of the Internet is problematic.
- Dating app providers need professional guidance regarding the technical content of messaging and the latest developments in the field of prevention. Additional resources to implement effective programmes also are required.

Key issues highlighted

In the ensuing discussion, a number of key issues were raised:

 Gay men and other men who have sex with men are connected via Facebook, apps and social media, but efforts to reach them with health messages are not coordinated.

- A coordinated coherent strategy to reach gay men and other men who have sex with men through dating apps is necessary. Every app is different and communities are unique. Working with specific apps to ensure users get the specific information they need requires guidance, support, funding and clear goals.
- The public health community has to simplify messages and support more effective strategies.
 For example, rather than focusing on banner ads (which are limited in effect and often misused), it would be more cost-effective to work with apps to change the way user profiles are designed.
- Offering free advertisements within apps is not sustainable because the companies providing the apps rely on advertisements for revenue. Public health departments should reallocate funds to areas that produce the greatest impact, and public health officials need to manage the programme cascade from start to finish, beginning with the promotion of the message or announcement through to the outcomes and the establishment of the right mechanisms to evaluate programmes.
- Content is essential: it must be fun, entertaining, educational and on-message. Public health workers must partner with dating apps providers and users to create original health content that is attractive and nonthreatening. That content must be appealing and accessible to users while still following the guidelines and usage rules of the app providers. There also must be consistent messaging and coordination across geographical areas.

- There are important health issues that many communities of gay men and other men who have sex with men do not fully understand. This includes PrEP and post-exposure prophylaxis (PEP). Key HIV information must be provided in a more timely and effective manner by the public sector and United Nations organizations (such as UNAIDS).
- Organizations interested in partnering with companies that provide dating apps in order to reach gay men and other men who have sex with men need to submit formal proposals and grants outlining their plan. Those proposals would then be subjected to a review process to allow companies to decide whether or not they are interested in what is proposed.
- While dating apps usually need to receive funds to provide advertisements, they have provided advertising for free in certain situations (such as during outbreaks or when funds were unavailable). The results were sometimes so positive that governments later provided budgets for advertising.
- Small organizations that approach dating apps for support need to become part of a coordinated effort—they need to connect with larger organizations for their social media outreach.

Community perspectives

Community representatives from Kenya, the Philippines and South Africa presented community perspectives on HIV programmes and services delivered via ICT platforms, including what they want and need from the approach, and what they consider to be the primary challenges and opportunities associated with it. They also discussed what they felt were the opportunities and challenges related to collaboration between communities and the private and public sectors when it comes to the use of ICT.

Denis Nzioka, an LGBTI activist and journalist from Kenya, explained that an ICT revolution is taking place in the country, with 93% of Kenyans using mobile phones and low-cost Internet penetration at 52.3%. Kenyan gay men and other men who have sex with men are using various ICT outlets to communicate and hook up, including SMS, social media (such as Facebook, Twitter, Instagram and WhatsApp), email, blogs, websites and apps. A number of programmes exist that utilize ICT to reach gay men and other men who have sex with men, including websites of organizations for the LGBTI community that have specific sections for health information, personal or organizational blogs, Facebook pages by gay men's health and HIV activists, e-health platforms such as Afya4Men, SMS subscriptions and hotlines that allow users to speak to trained nurses about their health concerns. Although issues of HIV, anal sex, condom use, and HIV and STI services are key in such programmes, interrelated issues—such as mental health, drug use, domestic violence, physical and mental abuse, post-trauma, sex work, coming out and identitiesshould not be ignored.

A major challenge facing existing programmes is the content of the messaging. Some critical content could be missing or some content may be misleading or wrong. It also is important to consider issues of anonymity, accessibility, affordability, availability, safety and security.

According to Mr Nzioka, the main factor in the opportunity to reach gay men and other men who have sex with men is the rise of the smartphone, which has established thriving markets for mobile apps that are revolutionizing the way people do almost everything in their life. Developing an application that attends to the health needs of gay men and other men who have sex with men in Africa can be effective if it provides the right content at the right time and in the right way.

Laurindo Garcia highlighted how communitybased organizations and public health systems in the Asia–Pacific region have had limited capacity for carrying out strategic communication with gay men and other men who have sex with men. Until recently, community-based organizations have made strategic communication via the Internet a very low priority, instead concentrating on engaging decision-makers. No budget lines have been allocated for ICT in community-based organizations because the needed skills and capacities do not exist at the community level. Since 2012, however, this situation has been improving, and there have been examples of ICT-based approaches by community-based organizations and service providers, primarily in areas related to reducing stigma and discrimination. Other approaches have focused on demand generation and referral

to services, including through advertising in apps (when budgets were available) and broad stakeholder engagement.

B-Change foundation, a nonprofit organization registered in the Philippines since 2011, has been promoting social change through technology, using technology-based approaches to build more effective relationships among beneficiaries and the various government, private sector and civil society stakeholders. The Foundation is subsidized by B-Change Insights and B-Change Technology. It also relies on a diverse portfolio of financial and in-kind support, including gifts, donations, grants, technical assistance, volunteer work and pro bono services.

B-Change has focused on providing support and advocacy services using apps, social media and other technology-based approaches for different groups of young people (including young people living with HIV). Working in five languages and designed to be able to use alternative models and methodologies and adopt a user-centric approach, B-change is a hybrid: it is a technology company in Singapore that builds software for community development organizations, a philanthropic organization in Manila, Philippines, that uses technology to support advocacy and provide care and support for young people in need of assistance, and a research bureau in New York, United States, that produces analyses and other knowledge products around social issues. All of B-Change's current programmes have been designed to contribute to its Connecting the Dots strategy, which was launched on International Human Rights



Day 2013 to articulate how the group will bring community engagement to the next level in a Web 2.0 world. The focus of the strategy is to support the well-being of young LGBTI people and their allies in developing and emerging countries by promoting health, human rights and civic participation.

Luiz De Barros, Publisher and Editor of MambaOnline, discussed LGBTI website MambaOnline. The largest LGBTI site in South Africa, MambaOnline has existed for 12 years and has 65 000 unique users with 450 000 impressions every month from Africa. The website is mobile-friendly and generates income through advertising. It offers news articles, lifestyle features, events announcements, LGBTI interest entertainment news and dating services. It also provides critical perspectives on South African LGBTI issues, highlights LGBTI role models in South Africa (and Africa as a whole), generates discussions and debate (including on social media), and helps build a healthy LGBTI community.

Other initiatives in South Africa that provide ICT platforms for gay men and other men who have sex with men include the OUT LGBT Wellbeing organization and the Health4Men initiative of Annova Health, which provide direct health services to the LGBTI community, as well as general lifestyle advice and support through national clinics and service providers. These initiatives reach out to the community through messaging campaigns and web banners that include messages about HIV, STIs and sexual health. Health4Men further provides links to a searchable national database of clinics that are friendly to gay men and other men who have sex with men.

The main challenges of working through ICT to reach gay men and other men who have sex with men, particularly in the sub-Saharan Africa context, are as follows:

- There is persistent stigma around nontraditional sexuality and living with HIV.
- The population of gay men and other men who have sex with men is diverse in terms of language, culture, education and socioeconomic status.
- Communication imaging often is too "Western" and does not represent African audiences.
- There are constraints in the use of explicit sexual images.

Key issues highlighted

Participants raised the following points during their discussions:

 It is essential to consider the broad scope of available tools and platforms that are suitable for outreach: not only does it include dating apps, but also websites, social media, blogs, email and SMS. Not all countries, particularly in sub-Saharan Africa, have a 4G telecommunications system (for smartphone apps) and there is no one-size-fits-all ICT platform. Focusing on dating apps to reach gay men and other men who have sex with men cannot be the only solution, and successful examples exist where gay men and other men who have sex with men are being reached in resource-constrained settings through other technologies (such as Facebook and SMS).

- Efforts by smaller HIV NGOs to reach gay men and other men who have sex with men with prevention messages or information about available services through ICT has yet to take advantage of the large scope and reach of mobile technology. Additionally, programmes in some areas have been inefficient, with uncoordinated messaging and limited focus or capacity when it comes to monitoring and evaluating the effectiveness of online and mobile programmes.
- A number of key challenges face communitybased organizations in developing countries that attempt to reach gay men and other

men who have sex with men through ICT. These include limited finances and technical capacities for developing such projects, as well as a lack of understanding in the public sector about the potential that ICTs have to improve public health.

- To develop a strategy for sub-Saharan Africa that involves dating apps, it is essential to understand the penetration of these apps in the region and to strategize what the different players can contribute to support a region where budgets are extremely constrained, access to the Internet is not affordable and same-sex sexual relations are is criminalized.
- More innovative ways are needed to encourage NGOs and dating apps to collaborate in a way that is beneficial to both sides. One aspect of such collaboration could be for NGOs to promote dating apps or to support them when they are accused of spreading HIV and STIs.

Innovative approaches across HIV programme cascades

In this session, implementers presented case studies of ICT projects used to reach gay men and other men who have sex with men. This was done to share lessons learned and explain gaps that should be addressed in order to improve work in the future. The case studies focused on how ICT was used to inform specific aspects of project cycles, namely programme design, planning, implementation, monitoring and evaluation.

Cary James, Head of Programmes at THT in the United Kingdom, described the design and planning of It Starts with Me, a two-year campaign to raise HIV awareness and communicate messages about testing and condoms to black African men and gay men and other men who have sex with men in the United Kingdom. Pretesting of the campaign was conducted through focus group discussions that sought to determine which campaign headlines and narratives resonated the most with the intended audience, and which were most relevant and had the greatest chance of success. People were asked to react to messages and decide which they felt were motivating; they also were asked to give their opinion on the campaign models, languages, colours and other elements of design.

Recruitment, promotion and outreach utilized digital media, including Facebook, Twitter, phone apps, digital display networks and adult entertainment sites. People were able to order free test kits online and receive testing services via the postal service. It was found that one message on an app could generate 1000 test orders within four hours, proving that ICT can be a powerful tool for programme scope planning and that integrated ICT platforms provide the best results.

Leon Sierra Paez, Deputy Executive Director of Kimirina in Ecuador, gave a presentation on the project of Ponteonce, an online platform that aims to reach gay men and other men who have sex with men in order to complement peer promotion strategies and strengthen contact with public health systems. Ponteonce is a bold, interactive communication strategy based on so-called provocation for prevention or prevention porn, where sexual videos can be displayed with messages on safe sex and the importance of using condoms. Ponteonce has moved away from traditional or medical approaches to explore and incorporate the language and communication methods that key populations are using. It promotes responsible attitudes, links prevention to community rights, and adopts outreach strategies and peer education that can be implemented through virtual promoters.

Based on a study of ICT user behaviour in Ecuador, Ponteonce uses a cloud-based website, Facebook and Twitter to promote good health for all, albeit with an emphasis on gay men and other men who have sex with men. The site gives visibility to networking organizations and groups working in health prevention and the promotion of community rights, and it ensures the creation and consolidation of community spaces. It has several levels of interaction, including a live cam, chat spaces and a "playful" exercise involving self-assessment of health and prevention knowledge. Mlewa Kalama, Programme Director at the Kenya AIDS NGOs Consortium (KANCO), presented the m-Klinic innovation in Kenya, a mobile health (m-health) application on mobile phones intended to improve the quality of service access among key populations. m-Klinic provides a platform for outreach workers, service providers and clients that facilitates client enrollment, referral and follow-up; it also allows clinical officers to monitor referrals and review the medical history of clients for accurate diagnosis and treatment. m-Klinic does not require an Internet connection because it uses Unstructured Supplementary Service Data (USSD) interactions to allow access to the application.³ Other features include periodic SMS notifications to clients for follow-up and monitoring, a unique client coding system, real-time notifications (through registration, referral and reminders), broadcasting information (either to select groups or to the entire network of m-Klinic users), and customized service report generation.

Finally, Juliane Böthner of Deutsche AIDS-Hilfe presented a number of projects that are designed to help gay men and other men who have sex with men to protect themselves from HIV and other STIs, care for their health and assess sexual risks. One such initiative is the I Know What I'm Doing campaign,

³ USSD is a protocol used by Global System for Mobile Communication (GSM) cellular phones to send text between a mobile phone and an application program in the network. Applications may include prepaid roaming or mobile chatting. Although it is similar to SMS, USSD provides cost-effective messaging worldwide, allows messages to take place during a call, does not incur charges for roaming, works with interactive menus as well as notifications (nSMS), is much faster than other messaging options, and is not mobile software or SIM-base (i.e. it only requires a connection to the GSM network).

which is a Germany-wide campaign for gay men and other men who have sex with men that uses a variety of media to provide information on the transmission risks of HIV and STIs, make risk management strategies safer by providing differentiated information, facilitate and motivate communication, empower the community, destigmatize HIV and provide a holistic view on health matters among gay men and other men who have sex with men.

Deutsche AIDS-Hilfe has further professionalized its media strategy to ensure that its website is responsive, more useful and easier to access; it also has worked to increase Facebook page usage and to engage more people in the campaign through YouTube, blogs and mobile ads.

The Health Support project—a joint effort between Austria, Germany and Switzerland that began in 2007—is an online peer-to-peer counselling approach that uses the Gay Romeo application (a dating platform that is popular in Austria, Germany and Switzerland). The project features Health Supporters, volunteers or professionals with expertise in a range of areas (such as behaviours related to fetishes, chemsex⁴ and so on) who provide peer counselling through the Gay Romeo website and app. The project currently has more than 60 different profiles of Health Supporters, and its coordination, training and quality assurance is conducted and guaranteed by Deutsche AIDS-Hilfe. Users of Gay Romeo can anonymously contact Health Supporters by sending an email with questions related to HIV, STIs, HIV testing, risk behaviours, primary and secondary prevention, health issues for gay men and other men who have sex with men, and more. The Health Supporter will answer the enquiries confidentially and directly when he logs into the service.

Deutsche AIDS-Hilfe also recently developed an open source tool that connects users and counsellors to each other through any mobile device, providing an instant messaging chat tool like WhatsApp. The tool is independent and can be integrated into any community of gay men and other men who have sex with men, and it ensures anonymity, data protection and security.

Key issues highlighted

Reflections on the work of innovative programmes implementing online outreach centres on the following points:

- Engaging gay men and other men who have sex with men in research and campaign promotion on social media platforms such as Facebook, Twitter and dating apps has proven to be an effective way of reaching a wide range of gay men and other men who have sex with men.
- A few programmes in China, Germany, the United Kingdom and other countries have spearheaded the creation of multipurpose platforms by combining dating services with chat rooms, health

⁴ Chemsex is a common term used by gay men on sexual networking sites and smartphone apps to refer to the use of three specific drugs ("chems") in a sexual context. The three drugs are meth, meph and G. Chemsex involves using one or more of these three drugs, in any combination and with or without other substances, to facilitate or enhance sex.

information, social networking opportunities and more. In many countries, however, efforts to make ICT a key component of national programmes have been weak or nonexistent.

- Flexibility is required for the adjustment of messages delivered through ICT platforms in order to deal with the diversity of population, languages and expectations of multiple users.
- The construction of networks and dialogue between community groups can end up forming a closed circuit where information becomes circular

and endogenous. For that reason, it is important to foster outreach to the general public and promote interaction.

 Some participants suggested that it is more effective in certain contexts to reach out to gay men and other men who have sex with men by providing explicit pornographic content with the health messages being delivered. This represents a challenge, however, when funding organizations or dating apps do not allow such strategies.

Recommendations

Discussions throughout the meeting highlighted how creating meaningful and effective partnerships among everyone involved in using ICT for the health and well-being of gay men and other men who have sex with men required the following steps.

Strengthening information and communication technologies capacity among the public sector and civil society, and providing them with technical assistance

- National governments and public health officials, donors and local public health units should be briefed on the potential of using ICT in health and HIV programmes. They also should be aware of how to integrate ICT components into programmes for gay men and other men who have sex with men.
- National AIDS programmes and larger NGOs dealing with HIV among gay men and other men who have sex with men should establish dedicated ICT capacity, both in terms of infrastructure and staffing needs.
- The communication and technology capacities of young people should be used to better effect, and the involvement of young people in organizations that implement programmes for gay men and other men who have sex with men should be strengthened.
- Community groups should be encouraged to leverage existing platforms and tools rather than spending valuable resources developing websites and platforms from scratch.

- UNAIDS should consider developing guidance on using ICT in programmes for gay men and other men who have sex with men and creating a repository of best practices, policies, tools and methodologies related to its use.
- Opportunities for training around ICT platforms should be created (e.g. through webinars or regional workshops or during international AIDS conferences).
- Evidence-informed programmes that demonstrate results in behaviour change and service uptake should be designed and tested. Linkages between virtual ICT platforms and physical services and programmes need to be investigated, measured and strengthened.

Improving coordination of different stakeholders and consistency in messaging and campaigning

- Civil society networks at the global, regional and national levels should communicate among themselves—and collaborate with national programmes and bodies such as UNAIDS—to build a consensus on coherent, coordinated campaigns that have enough coverage or intensity to track and achieve outcomes.
- ICT work at the country level should take place within the framework of a national HIV agenda, including the integration of ICT and communication plans into national AIDS strategies.
- UNAIDS should consider appointing regional and national ICT focal points to work with community networks and help coordinate ICT capacity-building and messaging.

 Dating app providers should consider developing a checklist for all public health organizations submitting requests to post ads that clarify the criteria against which proposals might be assessed (e.g. clarity of purpose, reach or consistency with other campaigns).

Better use of existing data and strengthening the evidence base

- Data generated by dating apps should be used to establish better population size estimates for gay men and other men who have sex with men and better denominators for service coverage.
- Existing data from dating apps, Facebook or Twitter should be mined for population sociodemographic characteristics and sexual behaviours trend analysis, information about STI/ HIV, testing, drug use and other data related to the areas of risk and prevention.
- A concerted effort should be made to provide dating apps with maps of testing and other service sites that they then can make available to their clients.
- Evidence-informed programmes that demonstrate results in behaviour change and service uptake—and that have the potential to contribute to reducing new HIV infections should be designed, tested and brought to the attention of policy-makers and funders. Linkages between virtual ICT platforms and physical services and programmes need to be investigated, measured and strengthened.

 UNAIDS should consider forming a working group to engage interested parties from academia, dating apps and communities to consider how to use big data to produce better population size estimates, improve the tracking of risk behaviour and service uptake over time, and measure the effectiveness and impact of ICT-related programmes.

A special project addressing the needs of gay men and other men who have sex with men in sub-Saharan Africa

- Demonstrating their strong commitment to collaborating on the use of ICT to improve the health of gay men and other men who have sex with men, meeting participants from across the different sectors proposed the development of a pilot project that would help build new virtual communities among gay men and other men who have sex with men in sub-Saharan Africa. This pilot would benefit from the already wide and growing access to dating applications in African countries.
- The proposed project would involve creating a community assessment application to survey the health and well-being of gay men and other men who have sex with men in sub-Saharan Africa and to assess their engagement, needs and behaviour. The secondary aspect of the application would be to talk about issues related to PrEP, treatment as prevention, HIV testing and other prevention strategies within the African context.

- The app would collect data over time and push out new messages to the community. Messages could start small and initially focus on testing or PrEP.
- The project could follow the examples of the EMIS and CARAMIS surveys, as well as the Cities Initiative and the new Rainbow Cities approach.
- The entire concept of the new app could benefit from the Blued dating app of China, which provides a comprehensive platform that links online outreach with offline services. Blued also has several features that serve to mobilize the communities around issues that are of concern to them.

Next steps

- UNAIDS is to review and finalize the draft recommendations and meeting report.
- The Prevention Division is to brief UNAIDS staff about the meeting and its results, and it will organize a teleconference with the steering group to discuss next steps.
- MSMGF will share the recommendations with its regional networks and solicit reactions and suggestions to further support the implementation of meeting outcomes.
- UNAIDS will develop a concept note on the community assessment application.
- UNAIDS will form two working groups: one on data and research and the other on the special Africa project.

Annexes

Annex 1. Agenda

DAY 1: Tuesday, 19 May 2015

Time	Session	Chair/Speakers
08:30–09:00	Registration	
09:00–09:45	Welcome by UNAIDS and MSMGF	Luiz Loures, Deputy Executive Director, UNAIDS
	Welcome remarks from organizing group members	Jack Mackenroth, MSMGF Darrin Adams, Health Policy Project
	Round of introductions	Matt Avery, LINKAGES Laurindo Garcia, B-Change
09:45–09:50	Meeting objectives	Karl Dehne, UNAIDS
09:50–10:30	Update on global HIV situation and the response among gay men and other gay men and other men who have sex with men	Keith Sabin, UNAIDS
	 Topics to be covered: Trends in new HIV infections among gay men and other men who have sex with men. Update on what works. Condom use, testing, PrEP and treatment coverage. Legal and policy environment. Fast-Track targets. 	
10:30–10:45	Coffee break	
10:45–12:00	 Evidence on the potential role and impact of new ICT and smartphone applications for sexual health of gay men and other men who have sex with men Topics to be discussed: Findings from research in Africa, the Asia–Pacific region, Europe and North America. Reach, role and types of ICT. Potential evidence of impact on behaviours and service utilization—what works? 	Chair: Darrin Adams, Health Policy Project David Brennen, Univ. of Toronto Laurindo Garcia, B-Change Teymur Noori, ECDC Riaan Norval, Anova Health David Novak, Online Buddies

12:00–13:00	 Private sector experience in building healthy online communities Topics to be discussed: Presentations on the sexual health and HIV work of different private sector companies. Present and future directions of their work on sexual health and HIV. Perceived strengths weaknesses, challenges and opportunities when working with the public sector and NGOs. 	Chair: Karl Dehne, UNAIDS Sean Howell, Hornet Geng Le, Danlan Gay Men's Network Steve Levin, Grindr
13:00–14:00	Lunch break	
14:00–15:00	Private sector experience in building healthy online communities (session continued) Discussion	David Novak, Online Buddies Carl Sandler, MR X
15:00–15:45	 Community perspectives Setting the stage: the role of community organizations in the digital world Topics to be discussed: Community preferences for HIV programmes and services delivered via ICT platforms. Challenges and opportunities related to reaching gay men and other men who have sex with men through ICT. Opportunities and challenges to work with private and public sectors. 	Chair: Jack Mackenroth, MSMGF Luiz De Barros, South Africa Laurindo Garcia, Philippines Denis Nzioka, Kenya
15:45–16:00	Coffee Break	
16:00–16:30	Community perspectives (continued) Discussion	
16:30–17:00	Reflections on private sector and community partnerships	Darrin Adams, Health Policy Project
19:00	Dinner	
DAY 2: Wedne	sday, 20 May 2015	
Time	Session	Chair/Speakers
09:00–09:15	Recap of Day 1	

09:15–10:45	 Round table: innovative approaches across HIV programmes cascade Setting the stage: who are the implementers, how do we work (programme cycle) and what do we work on (HIV cascade) Case study on use of ICT to inform programme design and planning. Case studies on use of ICT for programme implementation with a focus on: messaging and recruitment; and service delivery (i.e. counselling, social support and adherence monitoring). Case study on use of ICT for programme monitoring and evaluation. 	Chair: Matt Avery, LINKAGES Cary James, THT, UK Juliane Böthner, Deutsche AIDS-Hilfe (Germany) Leon Sierra, Ecuador Mlewa Kalama, Kenya
	Questions to be discussed: • What we know works? (Best practices). • What we know doesn't work? (Lessons learned). • What questions are still unanswered? (Gaps for future work).	
10:45–11:00	Coffee break	
11:00–12:30	Group work on reinforcing partnerships between communities and the public and private sectors	
	 Questions to be addressed: What comparative advantage does the private sector have/what guidance can it give? What elements are key for a joint framework to strengthen responses to HIV among gay men and other men who have sex with men? How can community-based organizations, NGOs and the public sector approach private industry? How can coordination between the public sector, the private sector and the community be improved? What role could the UNAIDS and other UN agencies play? 	
12:30–13:00	Reports back from group work	Richard Burzynski, UNAIDS (facilitator)
13:00–14:00	Lunch break	
14:00–14:30	Reports back from group work (continued)	
14:30–15:00	Plenary to make recommendations on next steps	
15:00–16:00	UNAIDS program branch meeting Dating app providers to showcase their work and engage in a discussion with UNAIDS staff.	Dating app providers
16:00–16:15	Coffee break	
16:15–17:00	Plenary discussion to make recommendations on next steps (part two)	Richard Burzynski, UNAIDS (facilitator) Karl Dehne , UNAIDS
17:00–17:15	Closing remarks	Karl Dehne, UNAIDS MSMGF

Annex 2. List of participants

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