Meeting report

Prevention and treatment of HIV and other sexually transmitted infections among men who have sex with men and transgender populations

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PREVENTION AND TREATMENT OF HIV AND OTHER SEXUALLY TRANSMITTED INFECTIONS AMONG MEN WHO HAVE SEX WITH MEN AND TRANSGENDER POPULATIONS

World Health Organization

UNDP

UNAIDS
UNHCR UNICEF WFP UNDP UNFPA UNODC ILO UNESCO WHO WORLD BANK
JOINT UNITED NATIONS PROGRAMME ON HIV/AIDS

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CONTENTS

Executive summary 5

1. Introduction 7

2. Definitions and descriptions of men who have sex with men and transgender people 8

3. Strategic information 11
   - 3.1 Population size estimates 11
   - 3.2 Epidemiology of HIV and other sexually transmitted infections 11
   - 3.3 Key conclusions and issues on strategic information 13

4. The legal framework 15

5. Programmatic responses and models of service delivery 17
   - 5.1 Country-level responses 17
   - 5.2 Indicators for monitoring the response 19
   - 5.3 Taking interventions to scale 20

6. Conclusions and recommendations 22

Appendix 1: Programme 27
Appendix 2: List of participants 29
Appendix 3: List of background documents 33
Appendix 4: Definition of the health sector 35
Appendix 5: Epidemiology of HIV and other sexually transmitted infections among men who have sex with men by country 38

References 44

ACRONYMS

ART	antiretroviral therapy
EIA	enzyme immunoassay
HIV	human immunodeficiency virus
HPV	human papillomavirus
IEC	information, education and communication
INGO	international nongovernmental organization
MSM	men who have sex with men
NGO	nongovernmental organization
OI	opportunistic infection
PAHO	Pan American Health Organization
PEP	post-exposure prophylaxis
PLHIV	people living with HIV
STI	sexually transmitted infection
UK	United Kingdom
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNGASS	United Nations General Assembly Special Session (on HIV/AIDS)
UNICEF	United Nations Children's Fund
USA	United States of America
VCT	voluntary counselling and testing
WHO	World Health Organization

EXECUTIVE SUMMARY

There is an urgent need to address the emerging and re-emerging epidemics of HIV and other sexually transmitted infections (STIs) among men who have sex with men (MSM) and transgender people. Strengthening strategic information systems and implementing interventions for the prevention and treatment of HIV and other STIs among MSM and transgender people should be considered a priority for all countries and regions as part of a comprehensive effort to ensure universal access to HIV prevention, care and treatment.

Reports from a diverse range of countries and regions have highlighted that prevalence of HIV and other STIs among MSM and transgender people is high when compared with men in the general population. Unprotected anal sex is common and surveys show that some MSM have female partners, many are married, some are engaged in sex work and some use drugs. Existing second-generation HIV surveillance systems, research, and efforts of national HIV/AIDS and STI programmes have not adequately captured biological and behavioural data on these populations, nor implemented prevention interventions on a sufficient scale. Resources to address HIV and STIs among MSM, transgender people and their partners do not match the burden of disease.

The risk of and vulnerability to infection are reinforced by societal attitudes, which deny human rights to MSM and transgender people, as well as their right to health.

Conclusions and recommendations

A meeting held on 15–17 September 2008 in Geneva brought together participants from the World Health Organization (WHO) and its United Nations (UN) partners along with representatives from 26 countries to discuss the role that the health sector can and should play in addressing prevention, treatment and care of HIV and other STIs among MSM, transgender people and their sexual partners. The following key principles were agreed on at the meeting:

- Adopting a rights-based approach guarantees the human rights of MSM and transgender people, and will ensure that they and their male and female sexual partners have the right to information and commodities that enable them to protect themselves against HIV and other STIs, protection from discrimination and criminalization, as well as information on where to seek appropriate care for these infections.
- Knowing the epidemic and the response to it means knowing where infections are occurring, who is at risk or vulnerable and who is infected. It also means understanding the local, social and structural determinants of risk.
- The HIV and STI epidemics among MSM and transgender people cannot be addressed by the health sector alone. It requires partnerships and engagement both across sectors (particularly with the legal and education sectors) and, crucially, with the MSM and transgender communities.

Priority recommendations for the health sector

1. Collect strategic information
    - Countries should collect strategic information and conduct surveys of MSM and transgender populations, at a minimum in urban settings (capital and main cities).
    - Every country should conduct formative research (if not already undertaken) that focuses on the role and impact of stigma and discrimination on MSM and transgender people.
    - It is crucial for countries to know about and understand sexual networks, especially of young MSM.
    - Countries should include appropriate information on MSM and transgender populations, age-disaggregated wherever possible, during routine HIV and STI surveillance, and case reporting.
    - Countries should regularly undertake monitoring and evaluation of interventions focused on MSM.
    - Surveillance and surveys of, and research on, MSM and transgender people should adhere to the highest standards of internationally accepted research ethics, and include them in research design, implementation and dissemination of results.
2. Provide basic services for HIV and other STIs
    - A minimum set of interventions for both service delivery settings and the broader health sector should include safe access to information and education about HIV and other STIs, condoms, water-based lubricants, HIV testing and counselling, and STI services.

3. Adopt a sexual health approach for MSM and transgender people
   - Interventions should be delivered within a framework of sexual health, which includes discussions of relationships, self-esteem, body image, sexual behaviours and practices, spirituality, sexual satisfaction and pleasure, sexual functioning and dysfunction, stigma, discrimination, and alcohol and drug use.
4. Define the role of the health sector
   - The health sector specifically should address the needs of sexual partners (both male and female) of MSM and transgender people in their programmes and services.
   - The health sector should build on local expertise, and involve both experts and end-users of services in adapting priority interventions and models of service delivery to address the specific local needs and situation.
   - WHO and its partners should review and revise existing guidelines and training materials for the prevention, treatment and care of HIV and other STIs to ensure that they adequately address the needs of MSM and transgender people in a non-stigmatizing way.
   - Health-care professionals should be sensitized and helped to overcome their prejudicial, homophobic and transphobic attitudes.
5. Ensure collaboration, partnership and advocacy
   - WHO should promote partnerships between the public sector, civil society and private (for profit and not) sector to address the prevention and treatment of HIV and STIs among MSM, transgender people and their partners.
   - National AIDS programmes in the ministries of health, with the support of WHO, should build and strengthen coalitions among civil society and other key stakeholders, including other ministries, to address the sexual health needs of MSM, transgender people and their partners.
   - WHO should take the lead in advocating with other UN agencies and sectors (education, justice, home affairs, gender, youth, human rights commissions, etc.) on promoting prevention of HIV and STI transmission among MSM and transgender people, and address homophobia and transphobia, including in health-care settings.
   - WHO, the Joint United Nations Programme on HIV/AIDS (UNAIDS), United Nations Development Programme (UNDP) and their partners should advocate for the inclusion of interventions to prevent HIV and STIs among MSM and transgender communities as a part of overall prevention efforts. This can be done at appropriate events such as ministerial meetings, the World Health Assembly, regional groupings, among others.
6. Define the role of Regional Offices
   - WHO Regional Offices should advocate, disseminate evidence and provide technical assistance to countries to ensure universal access to HIV prevention, treatment and care for MSM and transgender populations in all countries in their Regions.
7. Provide resources
   - Resources (financial, logistical and human) to support all of the above recommendations must be ensured. All countries and key funding agencies (including, but not limited to, the Global Fund to fight AIDS, TB and Malaria) must commit adequate financial and other resources to the prevention, care and treatment of HIV and other STIs in MSM, transgender people and their partners.
8. Suggested areas for further research

   Throughout the consultation, an number of areas were identified, warranting further research which included assessing the need for provision of human papillomavirus (HPV) vaccination for MSM and transgender populations, use of rectal microbicides, the role of serosorting and prevention messages in settings where same-sex relationships are illegal.

1. INTRODUCTION

Surveillance and special surveys in many parts of the world show that the prevalence of HIV and other sexually transmitted infections (STIs) is high among men who have sex with men (MSM) and transgender people compared with men in the general population. These infections can be transmitted to their sexual partners, who are men and, in some parts of the world, frequently women as well. In some countries where the epidemic had previously been contained, and in countries with good practices, a resurgence of HIV and other STIs has been noted, in particular, among populations of MSM. The reasons for this resurgence are not well understood. A high HIV prevalence among MSM and transgender people is being reported from countries that had previously ignored or denied the existence of MSM in their populations.

Despite epidemiological evidence of a widespread and, in some cases, an increasing problem, available health sector data show that, in many countries, coverage rates of essential prevention, care and treatment services are extremely low for MSM and transgender people. Moreover, a large number of countries are not reporting on indicators specific to MSM and transgender people; therefore, tracking coverage and trends over time is compromised. Universal access to HIV prevention, care and treatment cannot be achieved without dedicated action targeting these populations. There is a revival of interest in, and resources dedicated to, prevention, but in most parts of the world, resources to address HIV/STIs among MSM, transgender people and their sexual partners frequently do not match the burden of disease and high prevalence rates among them.

Nonetheless, in many countries, there is an increasing awareness at the highest political levels of the specific needs of, and problems faced by, MSM and transgender people. Social and structural factors inherent in many societies can and do lead to an increase in risk and vulnerability among MSM and transgender people. Stigma, discrimination, homophobia and laws that criminalize sexual behaviours make it difficult for such individuals in many countries to exercise their full human rights, including their right to seek health care, and access commodities such as condoms and lubricants to protect themselves. Addressing issues of social justice, tackling underlying inequalities and challenging human rights abuses faced by MSM and transgender populations are key components of improving health and well-being for all.

The Secretary General of the United Nations (UN) recently called on "all countries to live up to their commitments to enact or enforce legislation outlawing discrimination against people living with HIV and members of vulnerable groups" and further called on countries to "pass laws against homophobia."[1] His call to action was echoed by the Director General of the World Health Organization (WHO), Dr Margaret Chan, who told delegates to the 2008 International AIDS Conference held in Mexico City that "We must work much harder to fight stigma and discrimination, including institutionalized discrimination."[2]

The health sector can and should play an important role in addressing prevention, treatment and care of HIV and other STIs among MSM, transgender people and their sexual partners. To this end, a three-day consultation was held in Geneva from 15 to 17 September 2008. The purpose of the Consultation was to identify what more the health sector should do (*see* Appendix 1 for the programme of the Consultation).

The specific objectives of the Consultation were:

- To define and describe the populations of MSM and transgender people who engage in same-sex behaviours in different cultures and geographical regions;
- To examine the current epidemiology of HIV and other STIs among MSM and transgender people in different geographical regions;
- To review past, current and planned behavioural and interventional studies among MSM;
- To define interventions, including models of service delivery, for the prevention and treatment of HIV and other STIs among MSM; and
- To identify the best role for the health sector at the global, regional and country levels.

Forty-four participants from 26 countries attended the Consultation. They included members of civil society organizations, representatives of ministries of health, activists, academics, clinicians and staff of international nongovernmental organizations (INGOs) and bilateral agencies. Representatives from the Joint United Nations Programme on HIV/AIDS (UNAIDS), United Nations Development Programme (UNDP), United Nations Children's Fund (UNICEF) and staff from WHO Headquarters and Regions also participated in the meeting (*see* Appendix 2 for the list of participants).

2. DEFINITIONS AND DESCRIPTIONS OF MEN WHO HAVE SEX WITH MEN AND TRANSGENDER PEOPLE

The definition of MSM encompasses both specific behaviours and multiple identities. As a consequence of the complexity of attempting to categorize the numerous individuals and communities of MSM, there exists a plethora of definitions, often even within the same country. From the perspective of the health sector, definitions are important for programmatic focus. The lack of standardized definitions and measurements complicates the task of surveillance programmes, which attempt to understand what the problem is, where and among whom it is located, and whether there are identifiable trends within the population in question over time. For epidemiological purposes, it is important to ensure that the key focus remains those behaviours which are known to directly increase the risk of HIV infection – notably, unprotected anal sex.

Over time, the development of the term “MSM” has evolved from an attempt to define clearly the key behaviours, or the group of specific behaviours, that characterize this risk group. Most data drawn from epidemiological studies use the simple metric of “men who have sex with men”. However, the reality is that, in some countries at least, even this seemingly simple category may not be so easy to measure. For example, in societies that are strongly influenced by “machismo”, it has been observed that same-sex interactions may be structured, in principle, in terms of a gender hierarchy, along active–passive lines.

The broad definition of MSM as any man who has sex with another man, regardless of sexual orientation or gender identity, and whether or not he also has sex with women, is in use by some programmes at the national level. In India, for example, a time period of the past one year is placed on self-reported behaviour. A time frame attempts to overcome a further complication associated with measurement; that is, the ability to discern current compared with lifetime MSM behaviours. Where data quality is good and data are readily available, it is possible to distinguish between those men who have ever had sex with men and those men for whom the behaviour is more recent and recurring. Where data are limited and no time frame has been applied to reported behaviours, it may be difficult to distinguish between those men who have explored or experimented with same-sex behaviours at some point in their lives and those who have recently been or currently are sexually active with men. Table 1 presents data from surveys reporting on behaviours across a range of countries, according to whether the behaviour was in the past year or at some point in the lifetime of the respondent.

Table 1. Cross-sectional surveys on reported prevalence of same-sex behaviours in adult male populations

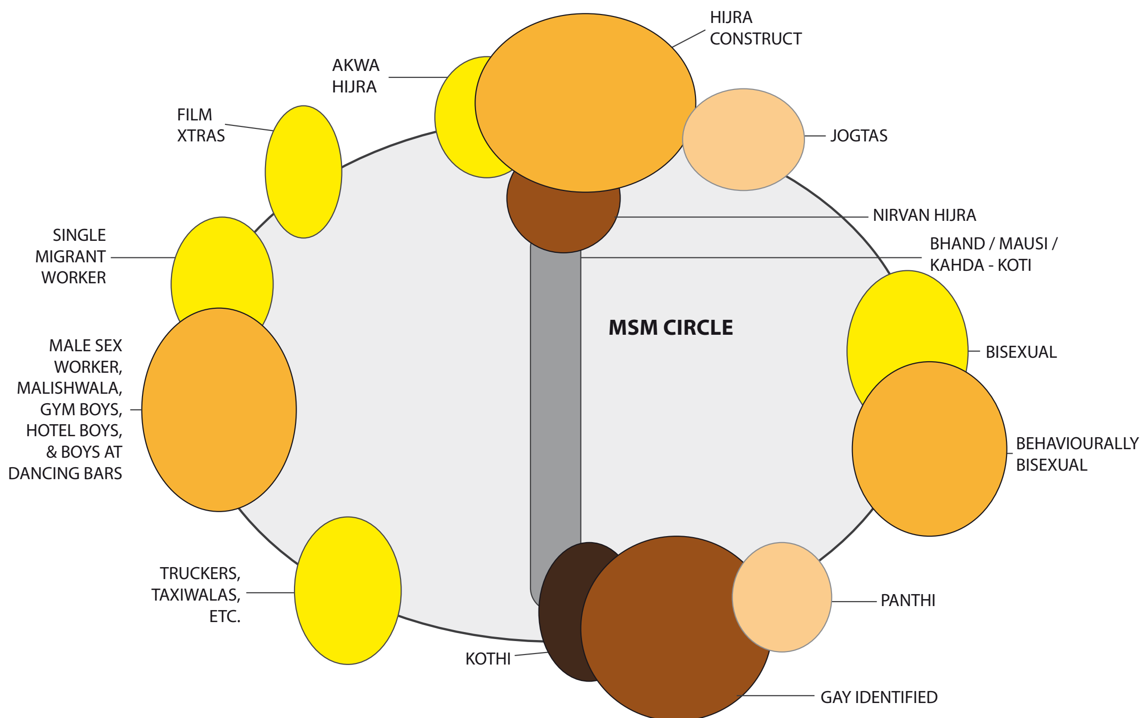
Country, site and year of survey	Population included in the survey	Reported prevalence (range) of life-time male same-sex behaviours	Reported prevalence (range) of male same-sex behaviours in the past one year
Myanmar, Mon and Kayin States, 2004	Male adolescents	4.5%	
Myanmar, Yangon and Mandalay, 2006		14.8%	
Thailand, Chiang Mai, 2002	Male adolescents	9%	
Thailand,1993–95	Military conscripts	16%	
Lao PDR, Vientiane, 2004	Young males	18%	
Pakistan, six-city survey, 2007	All men aged 18–49 years, household-based sampling		3% with another man, non-commercial; 1.4% with male sex worker; 0.8% with transgender person
India, Mumbai slum communities, 2006	All men aged 18–49 years, household-based sampling	1.4% report premarital sex; 0.7% report extramarital sex	
India, Maharashtra surveys in rural areas, 2001	Rural men aged 18–40 years; household-based sampling		10% unmarried men 3% married men
Peru, 2007	Low-income urban males	15%	
Brazil, 2007	Blood donors	10.6%	
Latin America, pooled data		4% (3–15%)	2% (1–14%)
Slovenia (2000)	Men aged 18–49 years	1%	
Serbia (2006)	Men aged 15–49 years		2.4%
Latvia (2003)	Men aged 15–49 years	4%	
Croatia (2005)	Men aged 18–24 years	4.9%	
Macedonia (2005)	Men aged 15–25 years	2.6%	

For purposes other than surveillance, however, it may be helpful to consider definitions that reflect the complexities of the social and behavioural differences between groups of people. An example of the complexity involved in defining MSM and transgender people was presented by a participant from India. The National AIDS Control Organization and UNAIDS in India operate with the following broad definition:

> *"Any man who has sex with another man, regardless of sexual orientation or gender identity, not considering the fact that he is also having sex with women, is defined as a man-having-sex-with-men (MSM)."*

This broad definition is then further subdivided according to specific (sexual) behaviours, occupations (film extras, truckers, hotel boys, etc.), caste (*hijra*, a recognized ethno-religious group, the third gender), and class (gay-identified, predominantly urban and middle class). This range of subdivisions is illustrated in Figure 1.

Figure 1. The Humsafar Trust's MSM circle



More detailed definitions reflect the highly pluralistic nature of MSM identities, and may be entirely specific to location and cultural norms. Such identities are important for understanding and responding to the environment of MSM at a particular time and location, but may have less immediate utility for epidemiological and surveillance purposes or for designing interventions. The Consultation discussed the meanings and definitions of MSM and transgender identities, but recognized that while understanding identity is an integral part of the response to the HIV epidemic, identifying at-risk *behaviours* is central to the control of the epidemic. Identifying who is at risk because they practise unprotected anal sex (irrespective of their self-reported or externally derived identity) is fundamental to public health efforts to limit the spread of the epidemic.

One important distinction that was emphasized during the Consultation is the identity of transgender populations – many transgender people object to being labelled as MSM, since they do not identify themselves as men. For the purposes of interventions and community activity, it is important to keep this distinction in mind.

3. STRATEGIC INFORMATION

The Consultation considered not only the epidemiology of HIV and other STIs among MSM and transgender people in different geographical regions, but also reviewed issues associated with the size of the population at risk, measurement of risk and programmatic responses, and generalizability of the findings.

3.1 Population size estimates

Of key importance, but often not available in many countries, is an estimate of the size of the MSM and transgender populations. As already noted, the illegality of MSM behaviours in many countries, coupled with social stigma and widespread discrimination, serve to make MSM behaviours and populations hidden. It is, nonetheless, important to have estimates of the size of the MSM/transgender populations; it serves not only important purposes as far as advocacy and human rights are concerned, but also allows those charged with programme planning and priority setting to make evidence-based decisions, and allocate resources more equitably.

Previous approaches by UNAIDS and others to estimate the size of the MSM/transgender populations in different settings have relied on literature searches, "best guesses" and cross-sectional surveys. The published literature yields a generalized figure of 2–4% of the adult male population in many settings where sex with another man is reported (time frame not specified).

There are several methods for engaging the population of interest, in this case MSM, and estimating the denominator. These methods include snowball sampling or respondent-driven sampling, capture–recapture, compartmental methods and others. Methods engaging general populations such as network scale up may provide a more accurate estimate of population denominator size in some settings. This approach relies upon asking questions to general population samples about friends and members of their networks. The method has been used to measure the prevalence of issues such as homelessness, and the incidence of events such as choking in children. It is now being piloted in some parts of the world to measure reported sexualities; "How many people do you know who are involved in same-sex relationships?" While there are potential problems related to disclosure ("hidden" behaviours), network scale up may provide a method of assessing the denominator size in some settings.

3.2 Epidemiology of HIV and other sexually transmitted infections

Analysis of the figures on HIV infection in some countries highlights the disproportionately high burden of HIV infections faced by MSM and transgender people. The data on HIV and STI prevalence presented during the Consultation are shown in Appendix 5.

3.2.1 Latin America

The HIV epidemic across most of Latin America is recognized as mainly affecting MSM and transgender people. The 2007 Report of the Pan American Health Organization (PAHO)[3] estimated that half of all HIV infections in the Region were assumed to have resulted from unprotected anal intercourse between men. Across the Region, the ratio of male:female HIV infection remains at 2–3:1.

The rate of other STIs among MSM and transgender people was also found to be high in studies across Latin America. For example, a review of seven studies across the Region found a prevalence of syphilis ranging from 5% to 29% among MSM populations in a number of countries.[4,5,6,7,8,9,10]

3.2.2 Sub-Saharan Africa

Data on HIV prevalence among MSM and transgender populations in sub-Saharan Africa have been limited till recently, with few studies of a cross-sectional nature, and even fewer that provide population estimates of denominator size. In the recent past, however, several studies have been conducted in a range of settings across Africa (*see* Appendix 5).

Cross-sectional surveys of HIV prevalence indicate that it is higher in MSM populations than in the general population of men and women in some settings. Interpretation of survey results, however, is limited by a lack of more detailed information on sexual behaviours, sexual networks, the role of transactional sex, and so on.

3.2.3 East and South-East Asia

Research studies and epidemiological surveys have been undertaken in a large number of settings in East and South-East Asia in the recent past. From a situation of no information on HIV prevalence among MSM in the Region

in the year 2000, the current, more widespread, understanding of HIV epidemiology among MSM and transgender people is illustrated in Appendix 5. Cohort studies are under way in Thailand and have allowed the measurement of HIV incidence data among MSM, including disaggregation by age group. These data show that the incidence has increased in each biennial survey (2003 onwards), with a notable increase in incidence among the youngest group of MSM (15–22 years old).

A smaller number of surveys have also measured the prevalence of other STIs among MSM and transgender populations, and have found prevalence levels ranging between 1.1% among MSM in Jakarta to 19.3% among transgender people in the same city.

3.2.4 South Asia

MSM are included in surveillance and survey activities across South Asia. In some settings, a distinction is made between MSM, men who sell sex and transgender people. In other settings, (e.g. a large number of survey districts in southern India), no differentiation is made and results are reported for MSM, transgender people and male sex workers as a combined group. A wide range of STIs are prevalent (usually acute syphilis infection, gonorrhoea and/ or *Chlamydia*), with extremely high levels of acute syphilis infection recorded among transgender groups in Pakistan (up to 60% in Karachi, for example). Some surveys report a higher prevalence of acute syphilis compared with either of the bacterial anal infections (*Chlamydia* or gonorrhoea).[11]

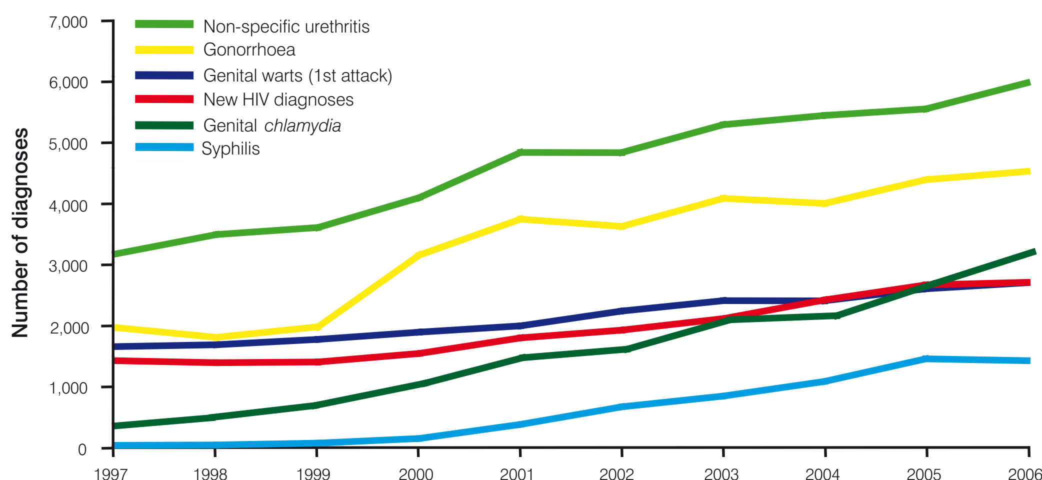
3.2.5 Central and Eastern Europe

The HIV epidemics in Central and Eastern Europe are predominantly focused among people who inject drugs and MSM. Data from surveys in central Europe (Cyprus, Croatia, Slovenia, Hungary, Slovakia) indicate that the epidemic among MSM accounts for a substantial proportion (over 30%) of all HIV infections in the country. However, other parts of the region are experiencing epidemics which are primarily concentrated in injecting drug user populations. Interpretation of the data is confounded in some areas by an underreporting of HIV transmission among MSM.

3.2.6 High-income countries

Interpreting evidence from high-income countries is facilitated by the existence of repeated data points over time. High HIV prevalence and mortality among MSM were key features during the 1980s in many urban settings in the United States of America (USA), Western Europe and Australia. Community advocacy, changing community norms and a strong public health intervention led to observed declines in incidence (followed by prevalence) in the 1990s. More recent epidemiological and behavioural evidence, however, points to a resurgence of HIV and other STI epidemics among MSM in many high-income countries. Data from one country, the United Kingdom (UK), are illustrative.

Figure 2. Diagnoses of HIV and selected STIs among MSM, UK



[1] Rates of new HIV diagnoses from 2003 onwards are adjusted for reporting delays.

Source: STI data from genitourinary medicine clinics and HIV/AIDS diagnoses

The data from the UK are not unique. In many cities in the USA, for example, there has been an average increase of 20% in new syphilis infections, predominantly among MSM.[12] Behavioural data from repeat surveys in Australia show that, in at least three states, there is an increase in the proportion of men who report unprotected anal intercourse with "casual" partners during the time period 1998–2006.[13] Several hypotheses to explain these increases have been put forward, including the disinhibiting effect that antiretroviral therapy (ART) may be having on sexual behaviours, i.e. MSM may be "abandoning" previous safer sexual practices in the face of longer life expectancies afforded by ART. Such interpretations should be approached with caution. Detailed analysis from Germany shows that HIV-positive MSM who are receiving ART report fewer bacterial STIs than those HIV-positive men not on ART (even after adjusting for the number of sex partners).

Whatever the underlying reasons for the increase in HIV incidence among MSM, it is clear that the early gains in HIV risk reduction (and attendant reductions in HIV incidence and prevalence) are being reversed across high-income settings.

3.3 Key conclusions and issues on strategic information

3.3.1 MSM and transgender populations are highly affected by the HIV epidemic

The regional presentations and published literature point to a higher prevalence of HIV among MSM and transgender people compared with men in the general population. Data on the proportion of men in the overall population who report MSM behaviours either over a lifetime or in the past twelve months are presented in Table 1. These data are important for understanding the proportion of HIV transmission that is attributable to male-to-male sexual activity in a country. Population-attributable fractions can help to address this issue and can thereby assist programme planners to ensure that the resources and programme effort devoted to any particular group of people is commensurate with the size of the problem.

The meeting heard that:

- Around 50% of all HIV infections in Latin America are assumed to have arisen through unprotected anal sex between men, but this is lower in some settings (e.g. 13% in Brazil).
- Data from Central and Eastern Europe show that sex between men accounts for a wide range of new HIV infections, from 0.1% of all new HIV infections in Ukraine to 60% of all new infections in Slovakia.
- Gouws et al. found that MSM activity may account for 20% of all new HIV infections in Thailand and 4.5% in Kenya.[14]

These calculations are important for ensuring that the distribution of resources, including financial resources, is proportional to address the identified need.

3.3.2 Behavioural survey data are important in understanding risk

As noted above, measurement of MSM and transgender behaviours is not straightforward. While the United Nations General Assembly Special Session (UNGASS) has defined a set of minimum indicators to assess key behaviours indicating both risk and risk reduction, applying these seemingly straightforward measures across time and place can make intercountry comparisons difficult. Nonetheless, information presented from several regions highlighted the following common themes:

- Many MSM have female as well as male sexual partners; in some parts of the world, the majority of MSM may be married to women.
- The prevalence of unprotected anal intercourse is relatively high in some settings, and may be more common with regular sexual partners.
- MSM and transgender people are inadequately covered by prevention services and commodities, and have poor access to appropriate interventions in many settings.
- Information on violence, when collected, shows that it is a prevalent feature in the lives of many MSM and transgender people, and is perpetrated by families, communities, clients (in the case of men and transgender people who sell sex) and representatives of the state.
- Stigma, discrimination and criminalization of sexual behaviour hinder the collection of accurate data and information from participants in surveys.

A more detailed analysis of reported behaviours in some high-income settings has identified trends with time across a range of behavioural indicators. The behavioural data show that although some increase was reported in partner numbers and anal intercourse during the 1990s, this has levelled off in recent years. In some MSM communities, recent approaches to perceived risk reduction include serosorting (seeking to engage in sexual activities with partners of the same HIV status as oneself) and strategic positioning (assuming the insertive or receptive position for anal sex based on perceived serostatus). Some data presented at the Consultation indicated that there may be a higher incidence of new infections among those who use serosorting compared with those who use other behavioural measures for risk reduction.

4. THE LEGAL FRAMEWORK

A presentation on the legal frameworks and a review of the situation of human rights in relation to sexual minorities highlighted the following issues:

- Fundamental human rights of people in sexual minority groups include, but are not limited to, the rights to respect and dignity, non-discrimination, equality, participation, life, identity, self-determination and access to health.
- Respect, protection and fulfilment of human rights (and recognition of human rights' violations) are key determinants of the HIV epidemic.
- Social exclusion means that many people in sexual minority groups are among the most marginalized and discriminated against in many parts of the world. This, in turn, leads to an increased vulnerability to many social and health problems, including an increased risk of HIV transmission. This vulnerability is compounded by a number of linked features:[15]
  - Membership in groups or subcultures with higher HIV prevalence, so that the likelihood of pairing with a partner living with HIV is higher;
  - Lower quality and coverage (in total numbers and in terms of population groups covered) of services and programmes;
  - Higher-level social/environmental influences such as laws, public policies, social norms, culture (e.g. discrimination), which configure an environment hostile to the integration and needs of certain groups.
- People belonging to sexual minorities suffer high levels of physical and structural violence in many parts of the world.

Worldwide, MSM and transgender people suffer high levels of social exclusion and challenges to equality. Their ability to realize their full health potential is limited in a number of settings by laws that criminalize same-sex relationships and sexual/gender diversity. A review[16] found that 85 Member States of the UN criminalized consensual same-sex acts among adults. Penalties ranged from fines and imprisonment to physical and capital punishment. In such settings, programme coverage for, or resources devoted to, sexual minorities are unlikely to be adequate. The absence of laws criminalizing sexual minorities does not guarantee a life free from discrimination. Cultural norms at a societal level may result in self-segregation of people belonging to sexual minorities and, at a more specific level, at health facilities not offering a welcoming service for members of sexual minorities, or by health planners failing to recognize the specific needs of such populations.

The review [16] also considered the legal frameworks and human rights' status with respect to sexual minorities and classified countries according to the legal status of their sexual minorities.

Repressive – countries whose laws prohibit sexual intercourse between people of the same sex

- **Highly repressive** – countries whose laws consider sodomy a crime and impose severe penalties such as death, heavy labour, imprisonment for at least five years
- **Moderately repressive** – countries whose laws consider sodomy a crime and impose penalties of less than five years or fines

Neutral – countries that do not have any legal prohibition of same-sex behaviour nor address sexual diversity

Protective – countries whose laws prohibit discrimination against sexual diversity in the constitution or legislation, with or without positive measures of recognition

- **Protective with protection measures** – countries whose laws prohibit discrimination against sexual diversity, but which do not demonstrate any positive measures of recognition
- **Protective with recognition measures** – countries whose laws include an explicit prohibition of discrimination against sexual diversity, with positive measures such as marriage, civil union, recognition of the rights of transgender people.

In summary, the authors note that repressive legal systems constitute obstacles to the promotion of human rights and realization of health, including HIV prevention, among sexually diverse populations. In some regions (particularly the Caribbean and sub-Saharan Africa), the legal traditions of Common Law and Customary Law are associated with repressive legal systems. However, it was noted that although legal systems are key, culture is also central to

the protection of human rights and health. Achieving the goal of human rights for all is likely to not only face legal barriers in some regions, but also political, institutional, cultural and religious barriers.

One common obstacle to the advancement of rights for MSM, transgender people and other sexual minority populations is the lack of knowledge and evidence about them in many countries of the world. In this regard, the HIV/AIDS epidemic and other issues in sexual and reproductive health may provide opportunities for countries to legitimize scientific enquiry about sexuality and reproduction. Such scientific research includes a focus on those behaviours that may otherwise remain clandestine or socially stigmatized. Scientific research may therefore act as an arena for bringing together those who are interested in promoting and defending human rights, and key leaders who are concerned about the well-being of all inhabitants in their country.

Reviewing the global findings regarding the characteristics of different legal traditions and development of policies which are repressive, neutral, protective or supportive, the authors identify several strategies for promoting and protecting the rights of MSM, TG and other sexual minority populations:[16]

- Consider using the judicial system in situations where the legislature is unlikely to be supportive of recognizing rights.
- In repressive legal systems with religious, customary or traditional influences, promoting awareness that inconsistencies exist within and between local traditions and religions on the issue of sexual diversity may lead to a protective understanding of sexual rights.In countries where regimes are neutral, and where national legal systems are of mixed origin, based on both Common and Customary Law, traditional approaches may be hostile to sexual diversity. It may be possible, however, to emphasize the perspective of human and sexual rights present in both Civil and Common Laws.
- Joining demands for human rights based on sexual diversity with those based on other factors such as gender, race and ethnicity may promote solidarity and increase the chances of overcoming legal barriers.
- In many countries, it is necessary to work with enforcement officials to enforce existing protective laws and create awareness among the general public and sexually diverse populations.
- In countries where national legal systems are repressive, regional or global courts may be used to propose the adoption of protective guidelines, thus creating external pressure in favour of internal demands for human rights.

5. PROGRAMMATIC RESPONSES AND MODELS OF SERVICE DELIVERY

In many countries, care is delivered through the model of an integrated service, where clients can receive all needed services at one stop. Even countries such as Thailand, which owe their early success in stopping a rapidly developing HIV epidemic to the existence of a large network of STI clinics and the surveillance data they generated, have adopted the integrated model and now provide, or attempt to provide, a variety of services under one roof.

However, although integrated services are appealing, attempting to deliver this model in many settings is beset with barriers, not least a shortage of the required resources, especially human resources to run the clinics. Providing targeted services for particular population groups (such as MSM and transgender people) may be particularly challenging in these circumstances.

The Consultation heard examples from a number of countries detailing how the health sector addresses the specific issues faced by MSM and transgender people.

5.1 Country-level responses

The following country data were presented at the meeting.

5.1.1 Brazil

The HIV prevalence in the adult population in Brazil is estimated at 0.8% in men and 0.42% in women, while for MSM it is 4.5–10.8%, with evidence that an increasing number of cases is being seen in younger compared with older men. The Government of Brazil has outlined opportunities for addressing MSM and transgender people in its national health plan, and aims to reduce vulnerabilities and implement appropriate responses for HIV prevention, health promotion and access to integral care. The opportunities to conduct programmes for MSM and transgender people are enhanced by the existence of active social movements in the country, and a protective legislative environment.

5.1.2 China

At the end of 2007, there were an estimated 700 000 people living with HIV (PLHIV) in China, with an annual incidence of 50 000 newly infected people that same year. Among the newly infected, it is estimated that 12% were MSM. Surveys in one city (Chengdu) showed an increase in HIV prevalence among MSM, from 0.6% in 2003 to 10.6% in 2007.

The Government of China has outlined specific responses and interventions for addressing the prevention and care of HIV among MSM populations:

- Providing dedicated financial support for community-based organizations
- Developing national working protocols and guidelines
- Organizing an annual meeting on preventing HIV in MSM
- Organizing a systematic training programme for the staff of the Chinese Centers for Disease Control and Prevention and MSM peer educators
- Providing free condoms and lubricants for MSM.

During the period 2007–09, the Government is funding a national pilot programme aiming to provide comprehensive HIV control for MSM. It is being implemented in 61 cities across the country and, in addition to enhanced clinical care services including STI services, the surveillance system has also been strengthened. Furthermore, interventions such as the use of popular opinion leaders for improved behaviour change communication are being implemented across the country. These strategies are being supported by involving managers or owners of entertainment venues (gay bars, saunas, bath houses), i.e. sites where high-risk behaviours may be taking place. Despite this level of activity, some challenges remain, such as a low uptake of HIV testing among MSM, continued reports of low condom use at last anal intercourse (between 40% and 50% in most surveys), and widespread stigma.

5.1.3 Mexico

Mexico registered its first case of AIDS in 1983, and now has an estimated 200 000 PLHIV, of whom 125 000 are MSM. The epidemic is highly concentrated among men, with a male:female case ratio of 5:1. It is estimated that MSM in the country have a 109 times higher risk of being HIV-positive (prevalence in MSM 15%) compared with the general population (adult prevalence 0.3%).

While the health sector has been providing MSM-dedicated services since 1997 (starting with an explicit priority to provide condoms to MSM), a number of barriers to service provision have been identified. These include: other HIV interventions taking priority over the needs of MSM; denial of the risk to MSM among some individuals and lack of health service capacity to address the issue of MSM. Overlying these barriers is a culture of machismo in Mexico, which may impede both provision of and equitable access to services. Mexico held an anti-machismo campaign in 2004, but the problems remain. Nonetheless, there is a high degree of political support for equitable policies and provision of services for MSM. In 2000, the President of Mexico stated that discrimination on the grounds of sexual orientation is wrong, and in 2001 the national constitution was amended to outlaw discrimination on the grounds of sexual orientation.

5.1.4 The Netherlands

The Netherlands has been addressing HIV prevention and treatment for the past 25 years, and has had MSM-focused programmes since then. From an early position of wishing to avoid potential discrimination against MSM (thus initially avoiding undertaking prevalence studies among MSM), to the current position of openly recognizing and addressing the higher risks faced by MSM, the programme in the Netherlands has evolved alongside the evolution of the epidemic itself.

Current priorities for HIV programmes recognize that MSM are disproportionately affected by the HIV epidemic, and are a priority group for the national programme (along with young people, sex workers and people from ethnic minorities). From the extensive experience of the Dutch programme, several important lessons emerge:

- Civil society engagement is crucial to programme response, but one should be wary of equating civil society engagement with involvement of the whole community.
- A multisectoral approach is important.
- Prevention is most effective when behavioural prevention is linked to access to testing, with a guarantee that treatment will be available to all who are HIV-positive.
- Research is important as it helps to “know your epidemic”.
- The epidemic is constantly changing, and responses should be innovative to keep pace with the epidemic.
- Linkage of HIV interventions and programmes with the general health system is important.
- Adequate resources for programme implementation are vital.

5.1.5 Uganda

Programme responses for MSM in Uganda are compounded by the relative “invisibility” of this population in society. Major obstacles to more targeted and relevant programmes for MSM include high levels of perceived and actual homophobia. Cultural and social norms that invoke “morality” result in high levels of stigma and discrimination, and are perpetuated by those who fear a loss of political capital.

Although the Ministry of Health recognizes that MSM are among the most-at-risk populations in Uganda (along with sex workers, fishing communities, truckers and others), sufficient resources are currently not devoted to MSM in the national programme. This may change in the future; small-scale interventions are currently under way and consultations with “MSM leaders” are in place.

5.1.6 High-income countries: the “one-stop shop” model

“One-stop shopping” clinics for MSM have been established in many cities in high-income countries. In these clinics, all services that may be needed are provided at one visit. Each visit is also used as an opportunity to reinforce basic prevention messages. The one-stop shop is usually a gay-identified service. How well the service works for MSM who do not identify themselves as gay has always been a question in these countries, and may be even more important in low- and middle-income ones, where exclusive MSM behaviour is less frequent and where social identification as being “gay” is less common than the behaviour.

The Consultation heard two presentations on the “one-stop shop” model in high-resource settings – London, UK and Seattle, USA.

London

Two centuries of experience in providing dedicated STI (and more recently HIV) services to MSM through both the public and private sectors were outlined, and highlighted the following components as being important for ensuring that the acceptability and effectiveness of service provision is high:

- Health services should be MSM-friendly – staff should be well trained, and confidentiality paramount and assured.
- Some MSM have other sexual health issues apart from STIs/HIV. These include physical conditions such as anal fissures, as well as psychological and mental health issues that need to be addressed.

An essential package of services designed specifically for MSM was outlined, i.e. over and above the services provided for all clients. These include routine screening and treatment as necessary for rectal and pharyngeal infections; screening for hepatitis viruses B and C; vaccination against hepatitis B virus and possibly hepatitis A, with discussions under way about vaccination against human papillomavirus (HPV); provision of post-exposure prophylaxis (PEP) for HIV exposure, as necessary; provision of condoms and lubricant; and MSM-specific risk reduction counselling.

In order to equip staff to provide these services in an MSM-friendly manner, specific training is provided to all staff. The training focuses on addressing attitudes and challenging prejudice, conducting motivational interviewing, with a strong emphasis on communication skills. Staff is also trained in the clinical diagnosis and management of anal conditions. They are supported in their service delivery with the use of tailored clinic proformas (e.g. with opportunities to record rectal and pharyngeal exposure), as well as specific protocols for the clinical investigation of MSM and administration of PEP. The presence of MSM among staff members builds confidence in the service and is believed to give clear signals that the service management does not discriminate against MSM.

The MSM clinics are run alongside other clinical services in the same building, and some clinics are integrated with more general services (for STIs and HIV). A separate STI/HIV clinic for young MSM (under the age of 21 years) ran for several months, but declining attendance rates led to its eventual incorporation into the mainstream services. It was noted that once young men knew about the overall clinic, they accessed appropriate services when convenient to them rather than only at the times when the young men's clinic was open.

Seattle

Like many of the settings mentioned during the Consultation, especially those in higher-income countries, Seattle has been experiencing an HIV epidemic that is highly concentrated among populations of MSM including a smaller number who are both MSM and injecting drug users.

One objective of the Seattle programme has been to provide "one-stop shops" for the sexual health needs of MSM; these include integrated services that provide voluntary counselling and testing (VCT), STI evaluation and treatment, and vaccination for hepatitis A and B. Integrated services face challenges in service delivery related to lack of resources including the specific problems faced by younger MSM who are often not covered by medical insurance. This includes problems with integrating medical records alongside the clinical services, and inadequacy of service staff qualified to provide all the services needed.

Ongoing research is looking at the optimal time for initiating ART based on CD4 count from an individual and community perspective, and rolling out more specialized diagnostic tests to community-level providers to better identify the newly infected in the "window" of time before antibodies are detectable with standard enzyme immunoassay (EIA) tests. An important underlying philosophy of all interventions and programmes is to work with the MSM community in order to identify what these men themselves want from the services.

5.2 Indicators for monitoring the response

MSM, injecting drug users and sex workers are among the key populations at higher risk for HIV transmission in many settings, and are often defined as being among the most-at-risk populations. Defining the extent of the HIV epidemic among MSM and transgender people in many countries is problematic for a number of reasons: behaviours are stigmatized or even illegal; individuals and populations remain hidden or hard to reach; and the size of the denominator (population at risk) is undefined.

Despite these difficulties, countries are required to report on key indicators for MSM as a component of their UNGASS reporting, which includes the following:

- Percentage of most-at-risk populations who received an HIV test in the past 12 months and know their results;
- Percentage of most-at-risk populations reached with HIV prevention programmes;
- Percentage of most-at-risk populations who both correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission;
- Percentage of men reporting the use of a condom the last time they had anal sex with a male partner;
- Percentage of most-at-risk populations who are HIV-infected.

In 2007, 83 countries reported on MSM indicators to UNGASS. However, UNGASS indicators are a broad-brush measure of risk, vulnerability and behaviours among MSM. Correctly defining, identifying and measuring the extent of risk and vulnerability among these men can be a complex process.

5.3 Taking interventions to scale

One of the challenges faced by all those involved in service delivery, or in rolling out interventions that are known to be effective, is how to move from pilot programmes which are found to work well on a small scale, to a scaled-up programme that achieves high coverage but retains its original levels of effectiveness. The Consultation heard details of one such programme that had the explicit objective of increasing coverage. The Avahan programme in India funded by the Bill and Melinda Gates Foundation supports interventions in six states across India. Details of the scaled-up programme in one state, Andhra Pradesh in south India, are presented in Figure 3. The components of the intervention for MSM include peer outreach; STI and basic primary care services; free condoms; activities relating to community orientation including, but not limited to, establishment of safe spaces (drop-in centres); a focus on reducing violence; and interventions with the police and media.

Figure 3. Steps to scaling up services for MSM in India

Source: AVAHAN, The India AIDS Initiative

In the first year of operation, interventions in seven coastal districts in Andhra Pradesh achieved the following levels of coverage: establishment of 49 drop-in centres and 131 STI clinics; and recruitment and training of 168 staff members, 243 peer educators and 187 community volunteers. As a result, early surveys show that in the first year of operation, 93% of over 10 000 MSM and transgender people in the project districts were contacted at least once a month by the project, and 37% of all eligible MSM and transgender people attended STI clinics at least once a month.

Moving to scale at such a rapid pace required considerable infrastructure and resource inputs, the support of the community being targeted, as well as of the wider Avahan project. The lessons learned from this scale up can be summarized as follows:

- A "franchised" approach to HIV prevention services allows for standardization of approaches with room for local innovation.
- It is possible to work with NGOs with limited experience in working with MSM communities by involving MSM from the inception stages to help understand their issues.
- Working on social/violence issues is important for demonstrating commitment to the community.
- Local advocacy is stronger when supplemented by advocacy at higher levels.

6. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The Consultation focused on the role that the health sector (*see* Appendix 4 for the WHO definition of health sector) could play in addressing the HIV and STI prevention, care and treatment needs of MSM and transgender people. The health sector is not limited to those services that provide clinical treatment and care services, but includes activities aimed at promoting and maintaining health. These services can be delivered by a broad range of institutions. The Consultation identified key components of both prevention and care interventions for preventing and treating HIV and other STIs in MSM and transgender people. It also identified a number of underlying principles which should guide the provision of these interventions and services in all settings. Predominant among these were the implementation of a rights-based approach, and the need for partnerships to increase coverage of services.

- **A rights-based approach**

  Adopting a rights-based approach guarantees the human rights of MSM and transgender people, and ensures that they and their male and female sexual partners have the right to information and commodities that enable them to protect themselves against HIV and other STIs, protection from discrimination and criminalization, as well as information on where to seek appropriate care for these infections. Importantly, it also ensures their right to access appropriate and effective prevention and care services of the highest possible quality, delivered free from discrimination.

- **Knowing the epidemic**

  Knowing the epidemic and the response to it means knowing where infections are occurring, who is at risk or vulnerable and who is infected. It also means understanding the local, social and structural determinants of risk.

- **Partnerships**

  Addressing the HIV and STI epidemics among MSM and transgender people cannot be achieved by the health sector alone, though it plays a crucial role. It requires partnerships and engagement both across sectors (particularly with the legal and education sectors) and, crucially, with the MSM and transgender communities.

Recommendations

1. Collect strategic information

Knowing the epidemic and the response to it means knowing where infections are occurring, who is at risk or vulnerable, who is infected, and how programmes are performing in order to reduce risk and vulnerability and provide interventions. It also means understanding the local determinants of risk, including its social and structural determinants. Understanding the barriers that MSM and transgender people face in fulfilling their sexual, social and economic lives will be key to identifying what works for the control of HIV and STI epidemics in different settings.

Countries should conduct surveys with MSM and transgender people, at a minimum in urban settings (capital and main cities). These surveys should address:

- *Population size estimation* (denominator). This could be addressed through the inclusion of appropriate questions on sexual behaviour in population-based surveys such as demographic and health surveys.
- *Biological and behavioural indicators* which focus on:
  - Sexual identity;
  - Sexual practices (use of barrier methods, sexual preferences, unprotected anal sex, sex with different partners including women);
  - Understanding sexual and social networks;
  - Experiences of stigma and discrimination in a variety of settings including health services;
  - Use of drugs and alcohol;
  - Availability and coverage of services;
  - Inclusion of the core UNGASS indicators (as noted earlier).

- *Routine HIV and STI surveillance* and case reporting should include appropriate information on MSM and transgender people, and the data should be age-disaggregated.

In order to accomplish this, every country should conduct formative and operations research if these have not already been undertaken. Such research should include a focus on elucidating and understanding the risk environment, as well as operations research focused on evaluating models of service delivery. Research should be tailored to meet the needs of specific groups of MSM and transgender people, for example, young men and adolescents, men in specific settings such as prisons or the uniformed services. This should include a stated element of capacity building for local institutions to conduct the research with community support. Interventions should be monitored and periodic evaluations planned for and undertaken.

Surveillance, surveys, monitoring and evaluation of and research on MSM and transgender people should adhere to the highest standards of internationally accepted research ethics, and include these groups in research design, implementation and dissemination of results.

2. Provide basic services for HIV and other STIs

Participants at the meeting recognized that it is critical to complement HIV prevention for those who are uninfected with services for PLHIV. For PLHIV, preventing inadvertent HIV transmission is only one of their needs. Others include preventing illness, receiving care for opportunistic infections (OIs) and accessing ART. Further details on recommended services for PLHIV are given in *Essential prevention and care interventions for adults and adolescents living with HIV in resource-limited settings*.[17]

Basic services that should be made available for all include the following:

- Provision of condoms and lubricants for MSM and transgender populations;
- Outreach and information, education and communication (IEC)/counselling services on sexual health, risk reduction and substance use;
- HIV testing and counselling;
- Detection and management of STIs including appropriate services for the diagnosis and treatment of oral and rectal infections;
- Provision of ART for MSM and transgender people who are HIV-positive and meet the recommended criteria for ART, as well as appropriate therapy to prevent or treat OIs;
- Where resources permit and the epidemiological picture justifies it, it is recommended that hepatitis B vaccination be made available for all MSM and transgender people.

3. Adopt a sexual health approach for MSM and transgender people

Participants emphasized the need to take a holistic approach to providing prevention and care services for MSM and transgender people. While prevention and care of HIV and other STIs was the prime focus of the Consultation, there was widespread recognition that provision of these services alone will not adequately meet the health needs of MSM and transgender people. Adopting a sexual health framework means acknowledging the rights of MSM and transgender people to also receive the following kinds of services:

- Support for sexual health problems that give rise to sexual dysfunction, anxiety, psychological problems, etc.;
- Care for substance use issues;
- Care for victims of violence, and referral to violence prevention programmes;
- Specific care for other clinical problems in the genital area (e.g. anal fissure);
- Provision of comprehensive care for gender reassignment, including appropriate use of hormonal therapy;
- Delivering priority interventions within a framework of sexual health care which includes, inter alia, discussions of relationships, self-esteem, body image, sexual behaviours and practices, spirituality, sexual satisfaction and pleasure, sexual functioning and dysfunction, stigma, discrimination, alcohol and drug abuse.

Some participants emphasized the desirability of providing a service that is able to meet the needs of individuals throughout the life-cycle. Such an approach would recognize that risk is not static, but changes with age. For example, younger MSM and transgender people may be involved in more high-risk activities compared with older ones.

4. Define the role of the health sector

Agreed objectives for the health sector included increasing coverage, thereby ensuring an increase in access for MSM and transgender populations; and that services are of high quality and delivered in a manner that is free from discrimination. The health sector, specifically national AIDS programmes in the ministries of health, public and private health services, NGOs, community groups, professional organizations and teaching institutions, should address the needs of sexual partners of MSM and transgender people (both male and female) in their programmes and services.

Key recommendations for the health sector to achieve improvements in service delivery include the following:

- Ensure that governance of health sector initiatives includes representatives from civil society organizations working with MSM and transgender people.
- Ensure that service delivery includes robust plans for monitoring and evaluation.
- Stress the importance of multisectoral collaboration to achieve health-specific goals.
- Build and strengthen coalitions among civil society and other key stakeholders to address the sexual health needs of MSM, transgender people and their partners.
- Highlight the role that "centres of excellence", among others, can play in improving service delivery elsewhere in the health sector. Such centres should be identified through consultation with MSM and transgender people.
- Build on local expertise, and involve both experts and end-users of services in adapting priority interventions and models of service delivery to address the specific local needs and situation.
- Ensure that service delivery staff are fully aware of issues specific to MSM and transgender people, and are sensitive to their particular needs through in-service training.
- Incorporate MSM and transgender issues into the training curriculum of health-care professionals, e.g. medical and nursing schools.
- Ensure that clinical guidelines and service delivery manuals are sensitive to the specific health issues of MSM and transgender people.

WHO and its partners should review, revise and standardize existing guidelines and training materials for the prevention, treatment and care of HIV and other STIs, and ensure that they adequately address the needs of MSM and transgender people in a non-stigmatizing way. Health-care professionals need training to sensitize and help them overcome their prejudicial, homophobic and transphobic attitudes.

5. Ensure collaboration, partnership and advocacy

- At the global level, WHO and its partners – particularly community partners – should define and refine a set of priority, evidence-based interventions for both service-delivery settings and the broader health sector. Experts recommended that minimum interventions should include safe access to information and education about HIV and other STIs through peer outreach, condoms, water-based lubricants, and HIV testing and counselling as well as STI services. The urgent need to sensitize health-care staff to MSM needs was also emphasized. These priority interventions should be delivered within a framework of sexual health care.

- WHO, as the lead agency in the UNAIDS partnership with responsibility for the health sector, should take the lead in advocating with other agencies (particularly UNDP) and sectors (education, justice, home affairs, gender, youth, human rights commissions, etc.) on promoting the prevention of HIV and STI transmission among MSM and transgender people, and address homophobia, including in health-care settings.

- WHO, UNAIDS, UNDP and their partners should advocate for the inclusion of prevention of HIV and STIs among MSM and transgender people as a part of overall prevention efforts at appropriate events such as ministerial meetings, the World Health Assembly, regional groupings.

6. Define the role of Regional Offices

- WHO Regional Offices should advocate, disseminate evidence and provide technical assistance to countries to ensure universal access to HIV prevention, treatment and care for all MSM and transgender populations in all countries in their Regions. Regional Offices should convene consultations on MSM and transgender issues if these have not already taken place.

The Consultation made specific recommendations for action to be implemented at the regional level. These are outlined below:

The African Region

- Improve data collection through national-level and small-scale studies.
- Conduct a regional consultation on availability, quality and collection of data on MSM.
- Initiate advocacy-level activities:
    - Document violations of human rights.
    - Conduct research on laws that prevent access to health services.
    - Work with WHO to create an enabling environment to evaluate the effect of existing sodomy laws.
    - Educate and engage with the media to bring about social understanding and change.
- Implement the following activities:
    - Provide condoms and lubricants.
    - Conduct training for health workers.
    - Adapt STI management guidelines.
    - Promote risk reduction measures.
    - Increase access to services for MSM and transgender people.
- Conduct research in the following areas:
    - Understanding male sexuality
    - Understanding the impact of culture and religion on societal beliefs and attitudes towards MSM.

The Pan American Region

- Promote country-level reporting on MSM indicators.
    - Identify three focal points for MSM and HIV in Latin America. Focal points should be from government, civil society and UN agencies.
    - Promote the adoption of "MSM-friendly" health services that can provide comprehensive, high-quality care.
    - Define a minimum package of prevention services and ensure that they are accessible to all MSM/transgender people. These would include
        - Provision of condoms and lubricants
        - Access to VCT
        - IEC programmes
        - Peer education
- Promote public policies that are friendly to MSM and transgender people to enable the development of supportive environments, support civil society, and ensure that all MSM and transgender people have universal access to services.

The European Region and high-income countries

- Strengthen service capacity in clinics, prevention services and surveillance programmes through
    - Training of staff
    - Combating stigma and discrimination in the health sector
        - Implementing evidence-based practices
        - Defining an essential package of services.

- Promote structural and community-level interventions including addressing stigma and discrimination, and opposing the criminalization of same-sex relationships.
- Undertake research and exchange information on risk reduction, drug and alcohol use, understanding epidemic dynamics and effective interventions.
- Define secure funding streams for activities.

The South-East Asia, the Western Pacific and the Eastern Mediterranean Regions

- Conduct regional consultations on MSM and transgender issues.
- Identify local groups and NGOs working with MSM and transgender people, and collaborate with them.
- Promote advocacy for issues realated to MSM and transgender people.
- Ensure that there is adequate monitoring and evaluation of health service interventions.

7. Provide resources

- Resources (financial, logistical and human) are needed to support all of the above recommendations.
- It is now time to ensure that all countries and key funding agencies including, but not limited to, the Global Fund to fight AIDS, TB and Malaria commit adequate financial and other resources to the prevention, care and treatment of HIV and other STIs among MSM, TG and their partners.

8. Conduct further research

Throughout the Consultation, a number of areas were identified as important, warranting further research. Gathering more evidence in these areas is expected to lead to improved resource targeting for MSM and transgender people, and contribute to a reduction in HIV/STI transmission among them.

- Assessing the need for provision of HPV vaccination for MSM and transgender populations
- Use of rectal microbicides to prevent HIV and STI transmission
- The role that “serosorting” (selection of partners according to their stated HIV serostatus) can and should play in risk reduction strategies
- Ranking of messages for the prevention of HIV and STI transmission among MSM and transgender people. It was noted that “conventional” prevention messages may need to be reframed for MSM and transgender audiences in settings where same-sex relationships are illegal, and this needs further research.
- Understanding the reasons for the re-emergence of HIV epidemics. It was noted that there has been a resurgence of new infections (HIV and bacterial STIs) in countries where the rate of increase of the epidemic had previously slowed down.
- Understanding the relationship between the risk of transmission and perceived levels of stigma and discrimination. Participants heard that in some settings there is no direct correlation between HIV/STI transmission risk and the levels of institutional and individual stigma and discrimination against MSM and transgender people. Thus, those cities that are perceived to be “MSM/transgender-friendly” have been, in the past, and are once again, sites with the highest rate of new infections. Understanding the reasons for this apparent anomaly may help in guiding future interventions.

APPENDIX 1: PROGRAMME

Monday 15 September

Time	Session	Presenter
08:30–09:00	Registration	
09:00–09:20	Welcome by: Kevin De Cock, Director, HIV Department, WHO Geneva Paul de Lay, Director, Evidence, Monitoring, and Policy, UNAIDS Geneva	
09:20–10:00	Introductions and objectives of the meeting	Ying-Ru Lo, WHO Geneva
10:30–11:00	Epidemiology of HIV/STI among MSM: challenges for the health sector response	Kevin O'Reilly, WHO Geneva
11:00–11:30	Behavioural indicators and definitions of MSM populations, with attention to key subgroups, according to cultures and regions	Matthew Warner-Smith, UNAIDS Geneva
11:30–12:00	Estimating populations sizes for men having sex with men and HIV transmission	Rob Lyerla, UNAIDS Geneva
12:00–13:00	Review of HIV epidemiology and behaviours among MSM in low- and mid-income countries Latin America sub-Saharan Africa South-East Asia	 Carlos Caceres, Peru Eduard Sanders, Kenya Frits van Griensven, Thailand
14:00–15:00	Review of HIV epidemiology and behaviours among MSM in low- and mid-income countries (*continued*) South Asia Central and Eastern Europe	 Sarah Hawkes, United Kingdom Ivana Bozicevic, Croatia
15:30–16:00	Epidemiology of HIV, STI and hepatitis B and C in MSM in high-income countries	Markus Ulrich, Germany
16:00–17:30	Integrating MSM interventions as part of national AIDS response	National AIDS Programmes: Brazil, China, Netherlands, Mexico, Uganda

Tuesday 16 September

Time	Session	Presenter
09:00–9:30	Review of legal frameworks and the situation of human rights related to sexual diversity in low- and middle-income countries	Carlos Caceres, Peru
09:30–10:00	Key services for the prevention of sexual transmission of HIV and STIs among MSM and emerging controversial interventions in the UK	John Richens, United Kingdom
10:30–11:00	Health service interventions for MSM: one-stop shopping?	Bob Wood, USA
11:00–11:30	Structures and networks of MSM in Asia	Ashok Row Kavi, UNAIDS New Delhi
11:30–12:00	Starting and expanding interventions for MSM in India: Avahan Initiative	Philip Neil Kumar, India
12:30–13:00	Introduction to break-out groups Interventions, including models of service delivery, for the prevention of sexual transmission of HIV and STIs among MSM Biological and behavioural surveillance surveys, HIV case reporting of HIV and STIs among MSM	
14:00–17:00	Group work (*continued*)	

Wednesday 17 September

Time	Session	Presenter
09:00–10:00	Feedback from group work	
10:30–11:30	Introduction to break-out groups	
	Break-out groups Regional priorities sub-Saharan Africa Asia and Pacific, Eastern Mediteranean Latin America High-income countries	
11:30–12:00	Feedback from group work	
12:00–12:30	Recommendations to WHO/UNDP/UNAIDS and Regions in addressing this issue	Plenary
12:30–13:00	Conclusions and next steps	Ying-Ru Lo, WHO Geneva Michael Bartos, UNAIDS Geneva Jeff O'Malley, UNDP New York

APPENDIX 2: LIST OF PARTICIPANTS

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APPENDIX 3: LIST OF BACKGROUND DOCUMENTS

I. Epidemiology

Baral S et al. Elevated risk for HIV infection among men who have sex with men in low- and middle-income countries 2000–2006: a systematic review. *PLoS Medicine*, 2007, 4:e339.

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Thijs J W et al. Increase in HCV incidence among men who have sex with men in Amsterdam most likely caused by sexual transmission. *Journal of Infectious Diseases*, 2007, 196:230–238.

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II. Serosorting

Golden MR et al. HIV serosorting in men who have sex with men: is it safe? *Journal of Acquired Immune Deficiency Syndromes*, 2008, 49:212–218.

Truong H-H M et al. Increases in sexually transmitted infections and sexual risk behaviour without a concurrent increase in in HIV incidence among men who have sex with men in San Francisco: a suggestion of HIV serosorting? *Sexually Transmitted Infections,* 2006, 82:461–466.

III. Legal and human rights

Caceres C et al. *Review of legal frameworks and the situation of human rights related to sexual diversity in low and middle income countries*. Geneva, Switzerland, UNAIDS, in press.

IV. Meeting reports

World Health Organization. *HIV and other STIs among MSM in the European Region. Report on MSM consultation*. Copenhagen, Denmark, WHO Regional Office for Europe, 2008. Avalaible at: http://www.euro.who.int/document/SHA/bled_report.pdf (Accessed 5 February 2009)

Global advocacy for HIV prevention among MSM. Geneva, Switzerland, IAS, Bill and Melinda Gates Foundation, 2008.

V. Programmes and interventions

MSM, HIV, and the road to universal access: how far have we come? American Foundation for AIDS Research, August 2008. Available at: http://www.thebody.com/content/art48203.html (accessed on 28 December 2008).

Caceres C et al. *AIDS and male-to-male sex in Latin America: vulnerabilities, strengths and proposed measures. Perspectives and reflections from the point of view of public health, social sciences and activism*. Lima, Peru, UNAIDS, June 2002. Available at: http://www.who.int/hiv/topics/vct/sw_toolkit/foreword_contentsaids_male_male_sex_latin_america.pdf (Accessed 5 February 2009)

FHI/USAID. *Summary report of key findings and program recommendations from FHI MSM program evaluations (Bangladesh, Indonesia and Nepal).* Bangkok, Thailand, Family Health International, Asia Pacific Regional Office, 2007. Available at: http://www.fhi.org/NR/rdonlyres/et5m6cbr4qhzf5qec7qtpimpd4zikjcuvrlg4upepbixliiuxh4waeuwk7jqoo5k6wnow5ydt5qrnh/MSMProgramEvaluations.pdf (accessed on 5 February 2009).

Rapid assessment and response adaptation guide on HIV and men who have sex with men. Geneva, WHO, 2004. Available at: http://www.who.int/entity/hiv/pub/prev_care/en/msmrar.pdf (accessed on 5 February 2009).

APPENDIX 4: DEFINITION OF THE HEALTH SECTOR

The terms "health sector", "health system" and "health services" are often used interchangeably and usually incorrectly. WHO is the lead agency on the health sector and its definition of that sector, set forth in the Global Health Sector Strategy for HIV/AIDS and approved by the World Health Assembly in 2003, is as follows:

> *The health sector is wide-ranging and encompasses organized public and private health services (including those for health promotion, disease prevention, diagnosis, treatment and care); health ministries; nongovernmental organizations; community groups; and professional organizations; as well as institutions which directly input into the health-care system (e.g. the pharmaceutical industry, and teaching institutions).*

Previously, the *World Health Report* (2000) evaluated health systems and used a definition of health systems that is similar though less detailed than the one above:

> *A health system includes all the activities whose primary purpose is to promote, restore or maintain health.*

The essence of these two definitions is substantially the same. As a result, "health sector" and "health system" are often used interchangeably, though the preferred term is "health sector". Neither term should be confused with "health services", which are narrower and defined as:

> *Services for the diagnosis and treatment of disease and the maintenance of health*

From this definition, it is clear that "health services" are a key component of the "health sector" but only one aspect of it.

APPENDIX 5: EPIDEMIOLOGY OF HIV AND OTHER SEXUALLY TRANSMITTED INFECTIONS BY COUNTRY

Data souce	Country	Site	Year	Population sampled	Size of population in study	N	N	HIV prevalence (%)
Latin America and Caribbean								
Pando et al (STD, 2006)	Argentina	Buenos Aires	2000	MSM	694	95.772	96	13.80%
Soto el al (JAIDS, 2007)	El Salvador	San Salvador	2001	MSM	347	53.091	53	15.30%
Soto el al (JAIDS, 2007)	Guatemala	Guatemala City	2001	MSM	158	19.118	19	12.10%
Soto el al (JAIDS, 2007)	Honduras	Tegucigalpa & San Pedro Sulas	2001	MSM	332	41.168	41	12.40%
Soto el al (JAIDS, 2007)	Nicaragua	Managua	2001	MSM	171	12.654	13	7.40%
Soto el al (JAIDS, 2007)	Panama	Panama City	2001	MSM	409	36.401	36	8.90%
Caceres et al (AIDS Behav, 2008)	Peru	Lima, Trujillo & Chiclayo	2002	MSM	171	16.416	16	9.60%
Clark et al (PloS ONE, 2007)	Peru	Lima, Trujillo & Chiclayo	2002	MSM	85	0	0	0%
Konda et al (AIDS Behav, 2007)	Peru	Lima, Trujillo & Chiclayo	2002	MSM	131	0	0	0%
Sanchez et al (JAIDS, 2007)	Peru	Lima	2002	MSM	1358	302.834	303	22.30%
Lama et al (JID, 2006)	Peru	Sullana, Piura, Iquitos, Pucallpa & Arequipa	2002	MSM	1922	153.76	154	8%
Toro-Alfonso et al (USAID-CONECTA, 2005)	Republica Dominicana	Santo Domingo, Puerto Plata & Samana	2002	MSM	597	63.879	64	10.70%
Montano et al (JAIDS, 2005)	Colombia	Bogota	2002	MSM	660	130.02	130	19.70%
Montano et al (JAIDS, 2005)	Ecuador	Quito & Guayaquil	1999	MSM	490	110.74	111	22.60%
Montano et al (JAIDS, 2005)	Ecuador	Other 4 city ports	2001	MSM	142	3.976	4	2.80%
Montano et al (JAIDS, 2005)	Bolivia	La Paz & Santa Cruz	2001	MSM	234	51.012	51	21.80%
Montano et al (JAIDS, 2005)	Bolivia	Three other cities	2002	MSM	52	8.008	8	15.40%
Montano et al (JAIDS, 2005)	Paraguay	Asuncion	2002	MSM	92	11.96	12	13.00%
Montano et al (JAIDS, 2005)	Uruguay	Montevideo	1999	MSM	317	69.106	69	21.80%
Montano et al (JAIDS, 2005)	Uruguay	5 border cities with Brazil	2001	MSM	102	2.04	2	2%
Montano et al (JAIDS, 2005)	Argentina	Buenos Aires	2000	MSM	742	114.268	114	15.40%
Montano et al (JAIDS, 2005)	Argentina	Seven other cities	2001	MSM	77	5.005	5	6.50%
Avila et al (IAS 2004 Abstract)	Argentina	Buenos Aires	2003	MSM	897	77.142	77	8.60%
Garcia-Abreau et al (World Bank Report, 2003)	Mexico	Several cities	1991, study extended from 1991 to 1997	MSM	7500	1125	1125	15%
Industrialized countries								
MSM behaviour survey	Belgium	French-speaking part of Belgium	2004/05	Internet (online), print questionnaire distributed in gay venues and gay press	409 online, 533 print			11%
Annual MSM behaviour surveys, 2001–2006	Australia	Sydney, Melbourne, Brisbane	2001-2006	convenience samples, gay social and sex venues, community events	cumulative numbers of participants - Sydney ~16 000; Melbourne ~ 12 000; Brisbane ~ 7200			Sydney: 16%-13%; Melbourne: 8%-9%; Brisbane: 6%-8%

Data souce	Country	Site	Year	Population sampled	Size of population in study	N	N	HIV prevalence (%)
Repeated MSM behaviour surveys, 1992–2004	Switzerland	National	1992, 1994, 1997, 2000, 2004	convenience samples, gay press, gay saunas, gay associations, gay websites (2004 only)	934 (1992), 1195 (1994), 1097 (1997), 918 (2000), 1158 (2004 offline), 1101 (2004 online)			11%, 10%, 11%, 11%, 9% offline, 7% online
Repeated MSM behaviour surveys, 2002–2005	USA	New York	2002-2005	convenience sample at a yearly gay event	688-783/year			13-17
MSM behaviour survey “Enquete Presse Gay 2004”	France	National	2004	convenience sample, gay press	6.184			13%
Repeated MSM behaviour surveys “Enquete Presse Gay 1986–2004”	France	National	1986-2004	convenience sample, gay press				22 (1986) - 13 (2004)
MSM behaviour survey “Barometre gay 2005”	France	Paris region	2005	convenience sample, gay venues	3.292			15%
HIV prevalence survey	UK	London	2001	convenience sample, gay venues	1.314			11%
MSM behaviour survey	UK	National	2002	internet survey	2.233			12%
Repeated MSM behaviour surveys	Germany	National	1991-2007	convenience samples, gay press, gay venues, gay websites (since 2003)	3307 (1991), 2802 (1993), 2954 (1996), 2885 (1999), 4632 (2003), 8145 (2007)			6, 7, 8, 12, 8, 7
Eastern Europe								
Bino S et al. Albania – Behavioural and biological surveillance study report. Arlington, Family Health International, 2006.	Albania	Tirana	2005	MSM	200			0.8
Grigoryan S et al. HIV epidemiological surveillance in the Republic of Armenia. Yerevan, National AIDS Foundation, 2008	Armenia	Yerevan	2007	MSM	100			2
Meleshko LA et al. Results of sentinel surveillance of HIV infection in the Republic of Belarus; report on surveys conducted in 2006. Minsk, Kovcheg LLC, 2007.	Belarus	Minsk	2007	MSM	279			0
Bulgaria UNGASS progress report. Sofia, Council of Ministers of the Republic of Bulgaria, National Committee for Prevention of AIDS and STIs, 2008.	Bulgaria	Sofia and Varna	2006	MSM	199			0
Bozicevic I et al. Prevalence of sexually transmitted infections among men who have sex with men in Zagreb, Croatia. AIDS and Behavior (forthcoming).	Croatia	Zagreb	2006	MSM	360			4.5
Johnston LG et al. Efficacy of convenience sampling through the Internet versus respondent driven sampling among males who have sex with males in Tallinn and Harju County, Estonia: Challenges reaching a hidden population. [unpublished].	Estonia	Tallin and Harju	2007	MSM	59			5
Tatishvili M, Miminoshvili T. Characteristics, high-risk behaviours and knowledge of STI/HIV/AIDS and STI/HIV prevalence of men who have sex with men in Tbilisi, Georgia. Tbilisi, Association Tanadgoma, 2006.	Georgia	Tbilisi	2005	MSM	70			4.2
[National UNGASS report for Kazakhstan]. Almaty, National AIDS Center, 2008 [in Russian].	Kazakhstan	Several sites	2007	MSM	450			0

Data souce	Country	Site	Year	Population sampled	Size of population in study	N	N	HIV prevalence (%)
Report on the conduct of the sentinel epidemiological surveillance among MSM in the Kyrgyz Republic. Bishkek, National AIDS Center, 2006.	Kyrgyzstan	Bishkek	2006	MSM	100			1
Prevalence of HIV among homosexual and bisexual oriented persons in Latvia. Riga, Safe Sex Association of Latvia, 1998.	Latvia	Riga	1998	MSM	242			5.4
National Centre of Health Management. National report: Monitoring the Declaration of Commitment on HIV/AIDS. Chisinau, National Centre of Health Management, 2008.	Moldova	Chisinau	2007	MSM	94			4.8
Izdebski Z. Research on men who have sex with men. Warszaw, TNS OBOP for National AIDS Centre, 2004.	Poland	Several sites	2004	MSM	404			4.7
Smolskaya TT et al. HIV sentinel surveillance in high-risk groups in Azerbaijan, Republic of Moldova and the Russian Federation. Copenhagen, World Health Organization Regional Office for Europe, 2004.	Russian Federation	Tomsk	2003	MSM	114			0
Smolskaya TT et al. HIV sentinel surveillance in high-risk groups in Azerbaijan, Republic of Moldova and the Russian Federation. Copenhagen, World Health Organization Regional Office for Europe, 2004.	Russian Federation	Yekaterinburg	2003	MSM	124			4.8
HIV prevalence and risks among men having sex with men in Moscow and Saint Petersburg. Copenhagen, World Health Organization Regional Office for Europe, 2007.	Russian Federation	Moscow	2005	MSM	303			0.9
HIV prevalence and risks among men having sex with men in Moscow and Saint Petersburg. Copenhagen, World Health Organization Regional Office for Europe, 2007.	Russian Federation	St Petersburg	2005	MSM	217			3.8
HIV/AIDS study of forms of risky behavior and the use of medical services by men having sex with men in two regions of the Russian Federation. Washington, PSI Research Division, 2007.	Russian Federation	Krasnoyarsk	2006	MSM	267			0.8
HIV/AIDS study of forms of risky behavior and the use of medical services by men having sex with men in two regions of the Russian Federation. Washington, PSI Research Division, 2007.	Russian Federation	Perm	2006	MSM	239			2.2
[HIV-related sentinel surveillance. Results of a sentinel survey conducted among MSM, 2007]. (http://www.antispid.com/ru/docs/46/101/102/, accessed 9 April 2008 [in Russian].	Russian Federation	Nizhniy Novgorod	2006	MSM	108			9.3
Staneková D. HIV infection and sexual behaviour among homosexual and bisexual men in Bratislava. Central European Journal of Public Health, 2000, 8:172–175.	Slovakia	Bratislava - surveys done in two clubs	1996	MSM	170			5.4
as above			1996	MSM	124			1.6
Klavs I et al. Infection with HIV in Slovenia: annual report 2006. Ljubljana, Institute of Public Health of the Republic of Slovenia, 2007.	Slovenia	Ljubljana	2006	MSM	136			2.1
Operations research on key STIs and HIV in Turkey. Ankara, ICON Institute for Public Health, 2007.	Turkey	Ankara	2006	MSM	166			1.8

Data souce	Country	Site	Year	Population sampled	Size of population in study	N	N	HIV prevalence (%)
Balakiryeva ON et al. Report on the survey monitoring behaviours of men having sex with men as a component of second generation surveillance. Kiev, International HIV/AIDS Alliance in Ukraine, 2008.	Ukraine	Kiev	2007	MSM	90			4.4
as above		Kryviy Rig	2007	MSM	100			8
as above		Mykolayiv	2007	MSM	100			10
as above		Odessa	2007	MSM	69			23.2
Oostvogels R, Mikkelsen H. Assessment of the situation regarding HIV and men who have sex with men in Tashkent, Uzbekistan. Taskhent, UNAIDS, 1998.	Uzbekistan	Tashkent	2006	MSM	102			10.8
Africa								
abd El-Rahman A. Risky behaviors for HIV/AIDS infection among a sample of homosexuals in Cairo city, Egypt [Abstract WePeC6146]. The XV International AIDS Conference; 11–16 July 2004; Bangkok, Thailand. Available at: http://www.iasociety.org/Default.aspx?pageId=11&abstractId=2167490 (accessed on 30 October 20070.	Egypt	Cairo	2004	MSM	73	1	1	1.37
Soliman C. Key findings of Bio-BSS among high risk groups in the Middle East, Egypt case study [Abstract TUPE0273]. AIDS 2008—XVII International AIDS Conference; 3–8 August 2008, Mexico City, Mexico.	Egypt	Cairo	2008	MSM	406	25	25	6.2
Angala P et al. Men who have sex with men (MSM) as presented in VCT data in Kenya [Abstract MOPE0581]. AIDS 2006—XVI International AIDS Conference; 13–18 August 2006; Toronto, Ontario, Canada. Available at: http://www.iasociety.org/Default.aspx?pageId=11&abstractId=2196877 (accessed on 30 October 2007).	Kenya	91 sites	2006	MSM	780	83	83	11
				Men who have sex with men exclusively	239	31	31	13
				Men who have sex with men and women	541	52	52	9.6
Sanders EJ et al. Establishing a high risk HIV-negative cohort in Kilifi, Kenya. AIDS Vaccine 2006 Conference. Amsterdam, August 2006 [Abstract 470.00].	Kenya	Kilifi	2006	MSM	60	23	23	38
Sanders EJ. HIV-1 infection in high risk men who have sex with men in Mambosa, Kenya. London, Gower Academic Journals, 2007.	Kenya	Mombasa	2007	MSM	285	70	70	25
				Men who have sex with men exclusively	114	49	49	43.0 (34-52)
				Men who have sex with men and women	171	21	21	12.3 (7-17)
Umar E. A cross-sectional evaluation of the HIV prevalence and HIV-related risk factors of men who have sex with men (MSM) in Malawi [Abstract MOPE0421]. AIDS 2008—XVII International AIDS Conference, 3–8 August 2008, Mexico City, Mexico.	Malawi		2008	MSM	200			21.0 (15.9-27.2)
USAID. HIV/STI integrated biological and behavioural surveillance survey (IBBSS) 2007. Available at: http://www.fhi.org/NR/rdonlyres/ehwjf6koqtv2qkugofxrtx4nxwuz74ugjxzhec4dj63f43z2zwxdhnvwsha2kr56tg66pspk4firzm/NigeriaIBBSSReport2008HV.pdf.	Nigeria	Cross River	2007	MSM	293	8	8	2.8
		Kano		MSM	293	34	34	11.7
		Lagos		MSM	293	74	74	25.4

Data souce	Country	Site	Year	Population sampled	Size of population in study	N	N	HIV prevalence (%)
Adebajo S. HIV and sexually transmitted infections among men who have sex with men (MSM) in Nigeria [Abstract MOPE0411]. AIDS 2008—XVII International AIDS Conference, 3–8 August 2008, Mexico City, Mexico.	Nigeria		2008	MSM	1125			13.4
Wade AS. HIV infection and sexually transmitted infections among men who have sex with men in Senegal. London, Gower Academic Journals, 2005.	Senegal	Dakar and 4 urban locations	2005	MSM	463	100	100	21.5 (17.8-25.6)
Wade A. Reduction of risk behaviors among MSM in Senegal after targeted prevention interventions [Abstract TUPE0349]. AIDS 2008—XVII International AIDS Conference, 3–8 August 2008, Mexico City, Mexico.	Senegal	Capital city and two medium-sized towns	2008	MSM	501	109	109	21.8 (18.3-25.7)
Sandfort T. Race-related differences in rates of HIV testing and infection in South African MSM [Abstract TUPE0729]. AIDS 2008—XVII International AIDS Conference, 3–8 August 2008, Mexico City, Mexico.	South Africa		2008	MSM	732			13.9
Burrell E. Exploratory study to determine rights violations and HIV prevalence among township men who have sex with men (MSM) in Cape Town, South Africa [Abstract LBPE1195]. AIDS 2008—XVII International AIDS Conference, 3–8 August 2008, Mexico City, Mexico.	South Africa	Cape Town	2008	MSM	68	21	21	30.9
Parry C et al. Rapid assessment of HIV risk behavior in drug using sex workers in three cities in South Africa. New York, NY, Kluwer Academic/Plenum Publishers, 2008.	South Africa	Cape Town	2008	MSM	24 (test 21)	9	9	42.9
		Durban		MSM	14 (test 12)	3	3	25
		Pretoria		MSM	8 (test 4)	1	1	25.0
Elrashied S. Prevalence, knowledge and related risky sexual behaviors of HIV/AIDS among receptive men who have sex with men (MSM) in Khartoum State, Sudan, 2005 [Abstract TUPE0509]. AIDS 2006—XVI International AIDS Conference, 13–18 August 2006, Toronto, Ontario, Canada. Available at: http://www.iasociety.org/Default.aspx?pageId=11&abstractId=2197292 (accessed on 30 October 2007).	Sudan	Khartoum State	2006	MSM	713	66.3	66	9.3
Holman A. HIV risk factors and injection drug use among men who have sex with men in Zanzibar(Unguja), Tanzania [Abstract THAC0206]. AIDS 2008—XVII International AIDS Conference, 3–8 August 2008, Mexico City, Mexico.	Tanzania	Zanzibar	2008	MSM	not clear			11.8
				MSM IDU	66	16	16	24.7
				MSM not IDU	443	44	44	10.0
Asia								
National HIV serological surveillance, 2004–2005 Bangladesh	Bangladesh		2004-2005	MSW				0
TREATASIA -- MSM and HIV/AIDS risk in Asia: what is fueling the epidemic among MSM and how can it be stopped (August 2006 Special Report)	Bangladesh		2006	MSM				0.1
				TG				0.2
Girault P et al. HIV, STIs and sexual behaviors among men who have sex with men in Phnom Penh, Cambodia. AIDS Edu Prev, 2004, 16:31-44.	Cambodia	Phnom Penh	2000	MSM	206			14.4
				TG	39			36.7

Data souce	Country	Site	Year	Population sampled	Size of population in study	N	N	HIV prevalence (%)
Neal JJ et al. HIV, sexually transmitted infections and related risk behavior among Cambodian men who have sex with men. Abstract presented at the 8th International Congress on AIDS in Asia and the Pacific, Colombo, Sri Lanka, August 19-23, 2007 [Abstract # MO OPB02-02]	Cambodia	Phnom Penh	2005	MSM	299			8.7
		Battambang and Siem Reap		MSM	249			0.8
Zhang BC, Chu QS. MSM and HIV/AIDS in China. Cell Research, 2005,15:858–864.	China	Heilongjiang	2001-2004	MSM	503			1.4
Jiang J et al. High prevalence of sexually transmitted diseases among men who have sex with men in Jiangsu Province, China. Sex Transm Infect, 2006, 33:118–123.	China	Harbin	2002	MSM	144			1.3
		Jiang Su	2003	MSM	154			0.0
Choi KH et al. Emerging HIV-1 epidemic in China in men who have sex with men. Lancet, 2003, 361:2125–2126.	China	Beijing	2003	MSM	481			3.1
Zhang DP et al. Changes in HIV prevalence and sexual behavior among men who have sex with men in a northern Chinese city: 2002-2006. J Infect, 2007, 55:456–463.	China	Harbin	2004	MSM	320			0.9
		Harbin	2006	MSM	674			2.2
Choi KH et al. The influence of social and sexual networks in the spread of HIV and Syphilis among men who have sex with men in Shanghai, China. J Acquir Immune Defic Syndr, 2007, 45:77–84.	China	Shanghai	2004-2005	MSM	526			1.5
Ma X et al. Trends in prevalence of HIV, syphilis, hepatitis C, hepatitis B and sexual risk behavior among men who have sex with men: results of 3 consecutive respondent-driven sampling surveys in Beijing, 2004 through 2006. J Acquir Immune Defic Syndr, 2007, 45:581–587.	China	Beijing	2004	MSM	325			0.4
		Beijing	2005	MSM	427			4.6
		Beijing	2006	MSM	540			5.8
Ruan YH et al. Relationship between syphilis and HIV infections among men who have sex with men in Beijing, China. Sex Transm Dis, 2007, 34:592–597.	China	Beijing	2005	MSM	526			3.2
TREATASIA - MSM and HIV/AIDS risk in Asia: what is fueling the epidemic among MSM and how can it be stopped (August 2006 Special Report).	India	Andhra Pradesh	2005	MSM				6.5
		Tamil Nadu	2005	MSM				6.8
		Mumbai	2005	MSM				6.8
		Maharashtra	2003	MSM				16.8
		Chennai	2003	MSM				4.4-18
Pisani E et al. HIV, syphilis infection, and sexual practices among transgenders, male sex workers, and other men who have sex with men in Jakarta, Indonesia. Sex Transm Infect, 2004, 80:536–540.	Indonesia	Jakarta	2002	MSM	279			2.5
			2002	MSW	250			3.6
			2002	TG	241			22.0
Sheridan S et al. HIV prevalence and risk behaviour among men who have sex with men in Vientiane Capital, Lao People' s Democratic Republic. AIDS, 2008 (in press).	Loas	Vientiane	2007	MSM	540			5.6
National AIDS Committee of the Government of the Union of Myanmar. National strategic plan on HIV and AIDS, 2006–2010. Yangon, 2007	Myanmar	Mandalay and Yangon	2004	MSM				33.0
		Mandalay and Yangon	2008	MSM (projected)				31.0

Data souce	Country	Site	Year	Population sampled	Size of population in study	N	N	HIV prevalence (%)
TREATASIA - MSM and HIV/AIDS risk in Asia: what is fueling the epidemic among MSM and how can it be stopped (August 2006 Special Report).	Nepal		2006	MSM				4.0
			2006	MSW				5.0
Hernandez LI. Reducing the vulnerabilities of HIV and AIDS among MSM in Olongapo and Davao Cities, Philippines. Abstract presented at the 8th International AIDS Conference in Asia and the Pacific, August 19–23, 2007, Colombo, Sri Lanka. Abstract # WeOPC 16-01	Philippines	Baguio	2005	MSM				0
		Manila	2005	MSM				0
National study of reproductive tract and sexually transmitted infections, Karachi and Lahore, Pakistan (2005)	Pakistan	Lahore	2005	MSW				0
				TG				0.5
		Karachi		MSW				4
				TG				2
Bokhari A et al. HIV risk in Karachi and Lahore, Pakistan: an emerging epidemic in injecting and commercial sex networks. Int J STD AIDS, 2007, 18:486–492.	Pakistan	Lahore	2007	MSW	400	0	0	0
				TG	203	1	1	0.5
		Karachi		MSW	409	16	16	3.9
				TG	199	3	3	1.5
van Griensven F et al. Evidence of a previously undocumented epidemic of HIV infection among men who have sex with men in Bangkok, Thailand. AIDS, 2005, 19:521–526.	Thailand	Bangkok	2003	MSM	1121			17.3
Centers for Disease Control and Prevention. HIV prevalence among populations of men who have sex with men – Thailand, 2003 and 2005. MMWR Morb Mortal Wkly Rep, 2006, 55:844–848.	Thailand	Bangkok	2005	MSM	399			28.3
		Chiang Mai		MSM	222			15.3
		Phuket		MSM	200			5.5
		Bangkok		MSW	350			18.9
		Chiang Mai		MSW	202			11.4
		Phuket		MSW	202			14.4
		Bangkok		TG	200			11.5
		Chiang Mai		TG	148			17.6
		Phuket		TG	126			11.9
Ministry of Public Health. Annual HV sero-surveillance, round 23, 2005. Ministry of Public Health, Nonthaburi, 2006.	Thailand	Phuket	2005	MSW	226			8.9
		Had Yai		MSW	38			10.5
		Pattaya		MSW	150			6.7
Tantirattanawong V, Kladwsawad K. National response to the HIV epidemic in MSM. In: Proceedings of the Annual Conference of the Department of Disease Control, Bangkok, 11-13 February , 2008. Available at: http://www.kmddc.go.th/kmcms/UserFiles/File/HIV.pdf	Thailand	Bangkok	2007	MSM	400			30.8
		Chiang Mai		MSM	242			16.9
		Phuket		MSM	150			20.0
		Bangkok		MSW	200			27.0
		Chiang Mai		MSW	200			15.5
		Phuket		MSW	150			19.3
		Chiang Mai		TG	113			16.8
Colby DJ. HIV knowledge and risk factors among MSM in Ho Chi Minh City, Viet Nam. AIDS, 2003, 32:80–85.	Viet Nam	Ho Chi Minh City	2000	MSM	208			5.8

Data souce	Country	Site	Year	Population sampled	Size of population in study	N	N	HIV prevalence (%)
Tuan NA. Sexual behaviors and risk factors of HIV transmissions among men who have sex with men in Ho Chi Minh City (report to the World Health Organization). Hanoi, Ministry of Health, Government of Viet Nam, 2004.	Viet Nam	Ho Chi Minh City	2004	MSM	600			8.0
National Institute of Epidemiology and Family Health International. Results from HIV/STI integrated behavioral and biological surveillance (IBBS) in Viet Nam, 2005-2006. Hanoi, Ministry of Health, Government of Viet Nam, 2007.	Viet Nam	Ho Chi Minh City	2006	MSM	393			5.3
		Hanoi	2005-2006	MSM	397			9.4

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