## HIV and sex workers 5

# Male sex workers: practices, contexts, and vulnerabilities for HIV acquisition and transmission

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**Male sex workers who sell or exchange sex for money or goods encompass a very diverse population across and within countries worldwide. Information characterising their practices, contexts where they live, and their needs is limited, because these individuals are generally included as a subset of larger studies focused on gay men and other men who have sex with men (MSM) or even female sex workers. Male sex workers, irrespective of their sexual orientation, mostly offer sex to men and rarely identify as sex workers, using local or international terms instead. Growing evidence indicates a sustained or increasing burden of HIV among some male sex workers within the context of the slowing global HIV pandemic. Several synergistic facilitators could be potentiating HIV acquisition and transmission among male sex workers, including biological, behavioural, and structural determinants. Criminalisation and intersectional stigmas of same-sex practices, commercial sex, and HIV all augment risk for HIV and sexually transmitted infections among male sex workers and reduce the likelihood of these people accessing essential services. These contexts, taken together with complex sexual networks among male sex workers, define this group as a key population underserved by current HIV prevention, treatment, and care services. Dedicated efforts are needed to make those services available for the sake of both public health and human rights. Evidence-based and human rights-affirming services dedicated specifically to male sex workers are needed to improve health outcomes for these men and the people within their sexual networks.**

## Introduction

Men who sell sex for money or goods (male sex workers) are a very diverse population across regions and within countries worldwide. This group of men should be viewed as distinct from transgender women engaged in sex work because the transgender population have clearly different needs from those of gender-conforming men who sell sex. The sixth report in this Series on HIV and sex workers, by Poteat and colleagues,[1] addresses transgender women. Unfortunately, male sex workers are generally included either as a subset in reports focused on men who have sex with men (MSM), as a subgroup in studies of sex workers in which women predominate, or as part of a male sex worker category that can include transgender women.[2,3] Moreover, in most studies in which male sex work is analysed as a risk factor for HIV and sexually transmitted infections, researchers have focused on typically younger men with lower incomes who offer sex to older gay or bisexual men in exchange for food, gifts, drugs, shelter, or other means of economic support.

The HIV epidemics among gay men and other MSM are driven by a range of biological and structural factors that have been well characterised.[4] The spread of HIV infection among men who sell sex to other men is occurring within that context, although with specific features that we aim to identify in this report. Moreover, communities of gay men and other MSM are emerging in an increasingly globalised world, where new forms of, and strategies for, male-offered commercial sex are becoming possible in urban centres and tourist destinations, including the wide reach and versatility facilitated by communication technologies.[5] Taken together, these many complex factors challenge our understanding of HIV among male sex workers and our ability to provide meaningful HIV prevention and treatment services.

Although clients of male sex workers include women, commercial heterosexual sex probably encompasses a small proportion of all commercial sex offered by men,

### Key messages

- The burdens of HIV and health-related needs of men who sell sex are little studied, with most research done as part of studies of men who have sex with men, female sex workers, and transgender women
- Most clients of men who sell sex are other men; however, those male clients sometimes do not self-identify as gay or bisexual, and many have regular female partners
- Risks for HIV acquisition exist at many levels for male sex workers, including the efficient transmission of HIV in unprotected anal intercourse, high numbers of sexual partners, large and complex sexual networks, and compounded intersectional stigmas
- Criminalisation of sex work, same-sex practices, and HIV non-disclosure all represent barriers to safe commercial sex offered by men
- Improved access to condoms and condom-compatible lubricants is necessary and is a core strategy for HIV prevention, but it will not be sufficient to change the trajectory of sustained and growing HIV epidemics among male sex workers
- Combination HIV-prevention programmes for male sex workers should address not only the biological drivers of HIV infection, with antiretroviral prevention and treatment approaches, but also the social contexts in which male sex workers engage in selling sex
- Dedicated advocacy, funding, consistency of definitions for surveillance, and research initiatives for male sex workers are essential for the sake of not only public health but also social justice and human rights

because conditions for women to buy sex are far more restricted around the world.[6] Furthermore, HIV acquisition and transmission risks for men who sell sex only to women are also probably much lower than those affecting other male sex workers. Therefore, in this report, we focus mainly on adult men who sell sex mostly to other men or to transgender women, age 18 years and older, and we do not include transgender individuals. We obtained data characterising the burden of HIV among male sex workers both passively from country reports to UNAIDS and actively by reading peer-reviewed and non-peer-reviewed scientific literature. Moreover, this synthesis of information characterising men who sell sex leverages data from different regions of the world, describing the forms and contexts in which men (age 18 years and older) sell sex, risk factors for the acquisition and transmission of HIV (ranging from individual-level risk factors to structural drivers of HIV risk), and existing and potential future HIV prevention approaches for these men.

## Male sex workers or men who sell sex?

A few ethnographic studies have generated data characterising male sex workers in most parts of the world, and some important research was done in the mid-to-late 1990s.[7,8] Although we might use the label male sex workers, the connotations of female sex work cannot be extrapolated directly to male sex work. In most traditional and modern societies, the existence of women who regularly offer sexual services is taken for granted, and these women are more likely to identify their activity as prostitution or, more recently, sex work. Historically, male commercial sex—selling sex either to women or to men—has been infrequently reported as a social occurrence because of a combination of low population-level demand and little social acceptability for this form of commercial sex.[9] These factors could account partly for various characteristics of commercial sex offered by men that are distinct from female commercial sex. First, some male sex workers avoid recognising their practice as a regular income-generating activity and describe it as an informal practice to support themselves temporarily or to pay for an expensive item. Second, regularity of male sex work can vary substantially between individuals and the terms of the exchange (from fees to food, drinks, or presents). Third, the social and geographic organisation of male sex work varies substantially across societies. Fourth, male sex workers are usually less visible than female sex workers, not only because there are fewer male sex workers compared with their female counterparts but also because these men constitute a group less commonly studied—an outcome of the multilayered stigma affecting this population. Finally, in view of the hidden nature of male sex work and the restrictive legal frameworks surrounding this practice in many countries of low-to-middle and high income alike, acceptable sexual health services are frequently not available to this population at all.[10]

Some men who sell sex to men are attracted sexually to men and some identify themselves as gay or bisexual (or use local terms with similar meaning). They engage in commercial sex either because they need the income or because local culture endorses such relationships between older and younger men or across social classes. Importantly, other men who sell sex to men are not sexually attracted to men and do not identify as gay or bisexual. Many men who sell sex have regular female partners or have formed heterosexual families[11] but sell sex to men for various reasons (eg, as a last resort to deal with poverty or lack of opportunities) or because sex work is a fairly easy source of income. In some cases, children are forced or coerced into commercial sex and adapt to it. These factors not only highlight the limited value of adapting gay or bisexual community-driven HIV prevention approaches to male sex workers[12,13] but also emphasise the complexity of sexual networks among these men and the need for contextually appropriate responses. HIV among male sex workers should not, therefore, be regarded as an isolated problem; rather, it is a compelling example of the need for comprehensive HIV responses that address the needs of this diverse group.

## Epidemiology of HIV among male sex workers

In 2013, 27 of 192 countries reported data to the UN General Assembly Special Session (UNGASS) on HIV/AIDS for HIV prevalence among male sex workers, obtained between 2009 and 2013.[14] Seven countries reported an HIV prevalence equal to or greater than 20%, in ten countries the prevalence of HIV was 10–20%, and in ten countries the HIV prevalence among male sex workers was less than 10%. In ten European countries, the median HIV prevalence among male sex workers, reported between 2007 and 2013, was 8·9%. Data were available from five African countries, presenting a median HIV prevalence of 12·5% among male sex workers. However, sample sizes were mostly very small, with the highest burden of HIV reported in Côte d'Ivoire in 2012 from a sample of 96 male sex workers.[15] Between 2000 and 2012, reports with biologically measured HIV prevalence among male sex workers from 81 sites across 19 countries were published in peer-reviewed journals or as non-peer-reviewed reports, with clear descriptions of sampling methods (table 1; appendix pp 1–6).[15–53]

Study findings consistently show the high burden of HIV among male sex workers in North America, with estimates ranging from 5% to 31% (table 1). Compared with MSM not engaged in sex work, North American male sex workers present either higher or equivalent burdens of HIV and sexually transmitted infections.[54] This trend has been noted in other settings, with male sex workers reported to have a higher burden of HIV than other MSM, including studies completed across several countries, such as South Africa, Namibia, Tanzania, Nigeria, Vietnam, and El Salvador.[30,55–57] Compared with

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See Online for appendix

| | Location | Groups included | Sampling method | Sample size (n) | Prevalence (%) |
|---|---|---|---|---|---|
| Vuylsteke, 2012[15] | Côte D'Ivoire, Abidjan | Male sex worker | Clinic-based survey | 96 | 50·0% |
| Van der Elst, 2009[16] | Kenya, Mombasa | Male sex worker | Clinic-based survey | 259 | 19·7% |
| Muraguri, 2012[17] | Kenya, Nairobi | Male sex worker | Respondent-driven sampling | 273 | 26·3% |
| McKinnon, 2013[18] | Kenya, Nairobi | Male sex worker | Hotspot-based or snowball sampling | 507 | 40·0% |
| Azim, 2008[19] | Bangladesh, multi-city | Male sex worker | Non-random organisation | 284 | 0·7% |
| Abdul-Quader, 2012[20] | Bangladesh, Barisal | Male sex worker | Performance evaluation | 77 | 0·0% |
| Abdul-Quader, 2012[20] | Bangladesh, Chittagong | Male sex worker | Performance evaluation | 361 | 0·0% |
| Abdul-Quader, 2012[20] | Bangladesh, Dhaka | Male sex worker | Performance evaluation | 1381 | 0·5% |
| Abdul-Quader, 2012[20] | Bangladesh, Khulna | Male sex worker | Performance evaluation | 93 | 1·1% |
| Abdul-Quader, 2012[20] | Bangladesh, Rajshahi | Male sex worker | Performance evaluation | 619 | 0·0% |
| Abdul-Quader, 2012[20] | Bangladesh, Rangpur | Male sex worker | Performance evaluation | 40 | 0·0% |
| Abdul-Quader, 2012[20] | Bangladesh, Sylhet | Male sex worker | Performance evaluation | 305 | 0·0% |
| Shinde, 2009[21] | India, Mumbai | Male sex worker | Clinic-based survey | 24 | 17·0% |
| Brahmam, 2008[22] | India, multi-city | Male sex worker | Probability-based sampling | 2023 | 14·5% |
| Narayanan, 2013[23] | India, multi-city | Male sex worker | Clinic-based sampling or peer referral | 334 | 43·6% |
| Pisani, 2004[24] | Indonesia, Jakarta | Male sex worker | Community-based survey | 250 | 3·6% |
| Hawkes, 2009[25] | Pakistan, Abbottabad | Male sex worker, Banthas (male identity) | Respondent-driven sampling | 83 | 0·0% |
| Bokhari, 2007[26] | Pakistan, Karachi | Male sex worker | Venue-based sampling or peer referral | 409 | 3·9% |
| Altaf, 2006[27] | Pakistan, Karachi | Male sex worker | Integrated biological behavioural surveillance survey | 199 | 7·0% |
| Bokhari, 2007[26] | Pakistan, Lahore | Male sex worker | Venue-based sampling or peer referral | 400 | 0·0% |
| Hawkes, 2009[25] | Pakistan, Rawalpindi | Male sex worker, Banthas (male identity) | Respondent-driven sampling | 195 | 0·5% |
| Hawkes, 2009[25] | Pakistan, Rawalpindi | Male sex worker, Khusras (transgender) | Respondent-driven sampling | 253 | 2·4% |
| Hawkes, 2009[25] | Pakistan, Rawalpindi | Male sex worker, Khotki (feminised male) | Respondent-driven sampling | 364 | 0·0% |
| Mumtaz, 2010[28] | Pakistan, 2005 | Male sex worker | Respondent-driven sampling, national AIDS | 1779 | 0·4% |
| Mumtaz, 2010[28] | Pakistan, 2006–07 | Male sex worker | Respondent-driven sampling, national AIDS | 2289 | 1·5% |
| Mumtaz, 2010[28] | Pakistan, 2008 | Male sex worker | Respondent-driven sampling, national AIDS | 1200 | 0·9% |
| Toledo, 2010[29] | Thailand, Bangkok | Male sex worker | Venue-based sampling | 414 | 18·8% |
| Pham, 2012[30] | Vietnam, An Giang | Selling sex to males in past 12 months | Community-based survey | 197 | 7·6% |
| Clatts, 2007[31] | Vietnam, Hanoi | Male sex worker, heroin user (HIV status self-reported) | Time-location sampling | 79 | 29·1% |
| Hiep, 2011[32] | Vietnam, Ho Chi Minh | Male sex worker (HIV status self-reported) | Time-location sampling | 200 | 5·6% |
| Chow, 2012[33] | China, Beijing | Money boy | Clinic-based convenience | 85 | 5·9% |
| Chow, 2012[33] | China, Chengdu | Money boy | Not reported | 205 | 0·5% |
| Chow, 2012[33] | China, Chengdu | Money boy | Snowball sampling | 120 | 4·2% |
| Chow, 2012[33] | China, Chongqing | Money boy | Snowball sampling | 47 | 12·8% |
| Chow, 2012[33] | China, Chongqing | Money boy | Snowball sampling | 71 | 9·9% |
| Chow, 2012[33] | China, Chongqing | Money boy | Snowball sampling | 54 | 7·7% |
| Chow, 2012[33] | China, Chongqing | Money boy | Snowball sampling | 190 | 11·1% |
| Zhang, 2012[34] | China, Chongqing | Selling sex in past 6 months | Snowball sampling | 449 | 14·4% |
| Chow, 2012[33] | China, Guangzhou | Money boy | Venue-based purposeful sampling | 151 | 11·3% |
| He, 2009[35] | China, Guangzhou | Selling sex to males and females | Long-chain referral | 409 | 6·2% |
| Chow, 2012[33] | China, Jining | Money boy | Clinic-based sampling or peer referral | 41 | 7·3% |
| Zhao, 2012[36] | China, Shenzen | Money boy | Time-location sampling | 850 | 4·5% |
| Chow, 2012[33] | China, Shenzen | Money boy | Time-location sampling | 418 | 3·4% |
| Chow, 2012[33] | China, Shenzen | Money boy | Respondent-driven sampling | 505 | 3·6% |
| Cai, 2009[37] | China, Shenzen | Male sex worker | Time-location sampling | 394 | 5·3% |
| Chow, 2012[33] | China, Tianjin | Money boy | Venue-based sampling | 89 | 6·7% |

(Table 1 continues on next page)

| | Location | Groups included | Sampling method | Sample size (n) | Prevalence (%) |
|---|---|---|---|---|---|
| (Continued from previous page) | | | | | |
| Chow, 2012[33] | China, multi-city | Money boy | Respondent-driven sampling | 95 | 0·0% |
| Chow, 2012[33] | China, city not reported | Money boy | Venue-based sampling or peer referral | 118 | 5·1% |
| Chow, 2012[33] | China, city not reported | Money boy | Peer referral | 86 | 0·0% |
| Estcourt, 2000[38] | Australia, Sydney | Male sex worker | Records from sexually transmitted infection clinics | 94 | 6·5% |
| Vella, 2012[39] | Australia, Victoria | Sex workers who are also men who have sex with men | Sentinel surveillance | 700 | 1·1% |
| Sethi, 2006[40] | UK, London | Male sex worker | Clinic-based sampling | 636 | 9·0% |
| Mor, 2012[41] | Israel, Tel Aviv | Male sex worker, street | Venue-based sampling | 32 | 6·3% |
| Mor, 2012[41] | Israel, Tel Aviv | Male sex worker, internet-based | Internet-based sampling | 21 | 4·5% |
| Weber, 2001[42] | Canada, Vancouver | Sex trade worker | Community-based survey | 126 | 7·3% |
| Katsulis, 2012[43] | Mexico, Tijuana | Male sex worker | Purposive cross-sectional sampling | 40 | 5·0% |
| Minichiello, 2013[44] | USA, Atlanta | Male sex worker | Not original data | 234 | 29·4% |
| Reisner, 2008[45] | USA, Massachusetts | Male sex worker | Wide recruitment | 32 | 31·0% |
| Bacon, 2006[46] | USA, San Francisco | Male sex worker | Street recruitment | 154 | 14·0% |
| Farias, 2011[47] | Argentina, multi-city | Male sex worker | Venue-based sampling and peer referral | 114 | 11·4% |
| Tun, 2008[48] | Brazil, Campinas | Male sex worker | Respondent-driven sampling | 106 | 13·0% |
| Bayer, 2010[49] | Peru, Lima | Male sex worker, high socioeconomic status | Venue-based sampling | 24 | 4·2% |
| Bayer, 2010[49] | Peru, Lima | Male sex worker, low socioeconomic status | Venue-based sampling | 61 | 23·0% |
| Valderrama, 2007[50] | Peru, Andes region | Male sex worker | Venue-based sampling | 1206 | 4·1% |
| Valderrama, 2007[50] | Peru, Coastal cities | Male sex worker | Venue-based sampling | 1206 | 9·1% |
| Valderrama, 2007[50] | Peru, Jungle cities | Male sex worker | Venue-based sampling | 1206 | 13·9% |
| Lama, 2006[51] | Peru, city not specified | Work as a sex worker | Convenience sample | 349 | 24·4% |
| Montano, 2005[52] | Uruguay, Montevideo | Male sex worker | Street-based recruitment | 317 | 21·8% |
| Parsons, 2007[53] | Internet-based | Male escort | Internet-based recruitment | 46 | 13·0% |

The appendix (p 7) contains a glossary of regional terms for male sex workers.

***Table 1:*** **HIV prevalence among samples of men who sell sex, 2000–12**

female sex workers and men in general, the prevalence of HIV and sexually transmitted infections is consistently high among male sex workers.[58] In Latin America, several studies have characterised the high prevalence and incidence of HIV among male sex workers. In Argentina, estimates of HIV prevalence among male sex workers are consistent at about 10%, although incidence of HIV ranges from 2·3 per 100 person-years to 6·1 per 100 person-years, highlighting the differential risk status of these men.[59] Studies and surveillance to ascertain the incidence of HIV among male sex workers are important for us to better understand the complex dynamics of HIV acquisition and transmission among these men across different periods.

Reports of higher HIV prevalence in male sex workers than in other MSM are inconsistent across regions and possibly reflect several factors: different sex roles assumed by sex workers in specific countries; varying frequencies of condom use; diverse baseline prevalence among MSM, and discrepant levels of representativeness of those figures; and potential oversampling of younger men who have short cumulative HIV acquisition periods. In Sydney, Australia,[38] HIV prevalence in male sex workers was reported to be 6·5%, much greater than recorded among female sex workers (0·4%) but less than in MSM not reporting sex work (23·9%). These differences probably reflect the differing risk levels among these diverse populations. Male sex workers reported more non-work sexual partners than did female sex workers, but they were less likely to report unprotected anal intercourse with non-paying partners than were other MSM.[38] Figures for male sex workers from the Australian Pleasure and Sexual Health (PASH) online national survey completed in 2009 showed that 18·7% of male respondents had ever been paid for sex with another man, with 4·3% having been paid for sex in the previous year.[60] Compared with men who had not been paid for sex in the previous year, these men reported a higher number of recent sexual partners and were more likely to engage in unprotected anal intercourse with casual partners. Furthermore, at least 10% of men reporting male sex work in the past 12 months were infected with HIV.[61] In China, HIV prevalence among money boys (a term used in China to describe male sex workers; appendix p 7) is comparable with or lower than that for other MSM; in a study from Shenzhen, HIV prevalence was 4·5% among money boys

and 7·0% for MSM not reporting sex work.[11,62] Although money boys had more male partners than did MSM, they were also more likely to report consistent condom use, particularly for commercial sex. In Tel Aviv, a study of sex workers and other MSM further delineated divergent risks among these populations by investigating prevalence and sexual practices among male sex workers, high-risk MSM, and low-risk MSM.[63] Knowledge of transmission of HIV and sexually transmitted infections, practices, and burden did not differ between groups. Among male sex workers, high-risk MSM, and low-risk MSM, the burden of sexually transmitted infections was 28·3%, 23·5%, and 10·3%, respectively, and the HIV burden was 5·6%, 9·2%, and 0%, respectively. Taken together, these data highlight the need for increased prospective surveillance of HIV and other sexually transmitted infections among male sex workers. Younger male sex workers might be more likely to be sampled, representing potentially higher HIV incidence with low population-level incidence. To support appropriate interpretation of comparisons of the burden of HIV among male sex workers with that of other MSM or even that of other men, age-stratified HIV incidence data are needed.

## Limitations of HIV data-reporting systems

Data gathered by UNGASS and GARPR (Global AIDS Response Progress Reporting) have several limitations. Worldwide, the sample size reported to UNGASS ranges from a few people to thousands of participants, with data sources of varying quality. This broad representation complicates comparisons across countries or regions and interpretations of trends. For instance, fewer than ten participants were included in reports from diverse settings including Cape Verde, Cameroon, Algeria, Romania, and Kyrgyzstan. Moreover, many studies incorporated transgender women under the indicator of male sex workers, thus confounding interpretation further. For example, although Pakistan reported data specifically for the indicator of male sex workers, the study was focused almost exclusively on hijras (a third gender in India and Pakistan).[64] UNGASS reports also have limited scope and not all regions report on male sex workers as a formal behavioural category: for instance, male sex workers are excluded as an official HIV risk-transmission category in North America. Thus, HIV epidemiological data specific to male sex workers are not reported routinely by existing surveillance programmes.[65] Although the extramural peer-reviewed research we discuss here does not share the same biases as country-reported data, several methodological limitations hinder inferential conclusions drawn from these studies, including varying and sometimes rudimentary sampling strategies (pertinent data are generally derived from convenience samples with scant generalisability to the broader population of male sex workers) and the absence of a standard behavioural recall window (eg, life history *vs* past 3, 6, or 12 months). In both UNGASS reports and extramural research, issues surrounding definitions emerge: UNGASS defines sex work as "consensual sexual services offered by adults in return for cash or payment in kind",[66] which can be interpreted subjectively; however, extramural research variably includes other compensation, including drugs, food, and shelter, potentially conflating sex work with both drug–sex exchanges and survival sex. Moreover, the increasing trend of sex work transitioning from being street-based to internet-based further complicates identification, sampling, and assessment, limiting the scientific rigour of epidemiological research.[67] With these caveats posed by the proportion of partners of different types and risk practices by partner types, epidemiological data suggest that, worldwide, male sex workers remain at very high risk for HIV acquisition and transmission, even compared with other high-risk populations.

## HIV surveillance recommendations

Consistent application of surveillance definitions and methods is crucial to advance the knowledge base for male sex workers, including standardisation of definitional measures for male sex workers and delineation of male sex workers as a risk-transmission category in HIV/AIDS reporting. Therefore, we recommend five changes to data collection and reporting methods specific to male sex workers, to support country-led programming.

First, current surveillance definitions (ie, consensual sexual services between adults for cash or payment in kind in the past year) could be clarified to distinguish sex-for-cash not only from drug–sex exchanges but also from survival sex (ie, sex for food or shelter) and from less traditional benefits (eg, transport or entertainment), and potentially from more indirect sexual services (such as webcam performances) that might confound commercial sexual risks. Second, surveillance guidelines should specifically suggest distinguishing between lifetime sex work and current (past year) sex work, to facilitate better estimations of the prevalence of male sex workers in communities and of the associations between past sex work and current HIV-related health outcomes. Third, ensuring that risk-transmission categories encompass multiple options will allow for better distinctions between populations with intersecting risk behaviours (eg, male sex workers who are also MSM). Fourth, better quantification of risks specific to male sex workers could be achieved by assessing commercial sexual risk according to partner type and sex (eg, querying for non-commercial, paying, and paid sexual partnerships by partner sex and associated HIV risk behaviour). Finally, assessing career duration and sex work frequency (ie, number of paid sexual acts) might contribute to better understanding of dose-response associations between selling sex and HIV transmission risk and could provide useful context for optimum intervention delivery. Although this level of disaggregation might not be necessary for all agencies tracking the burden of HIV,

these indicators would support organisations and agencies focused on the implementation and evaluation of programmes supporting male sex workers.

## HIV acquisition and transmission risks

Several approaches are available to assess determinants of risk and vulnerability to HIV in specific populations and contexts. The modified social ecological model consists of multiple layers of risks for HIV acquisition and transmission, ranging from individual-level features (such as biological and behavioural factors that promote HIV infection), characteristics of sexual networks, community-level determinants (including access to HIV-prevention services and potential barriers to those services), and national policies that increase or mitigate the potential coverage of HIV prevention, treatment, and care programmes for male sex workers.[68] Syndemics theory[69] facilitates understanding of how these disparities and consequent psychosocial health conditions further predispose male sex workers to increased HIV risk compared with other populations of MSM (table 2).[30,41,46,51,54,55,57,70–79]

The biological risks of HIV acquisition among male sex workers are shared with those of other MSM. These biological risks have been well characterised and include the efficient transmission of HIV during unprotected anal intercourse. Male sex workers have high numbers and frequencies of male partnerships, resulting in large and non-dense sexual networks, both of which have been established as risk factors for HIV among MSM.[4] These risks have also been described among male sex workers in some countries, such as Nigeria and Kenya (figure 1).[56,80] Across sub-Saharan Africa, consistent use of condoms is variable among male sex workers, with levels ranging from 36% in Kenya to more than 70% in Côte D'Ivoire.[15,81] Southern and eastern Africa are among the few places in the world where HIV disproportionately affects women and where heterosexual male sex workers and female non-paying sexual partners and female clients might be at risk of either acquiring HIV or transmitting infection themselves.[82] Similarly, the limited supply of condom-compatible lubricants in many low-income and middle-income countries might further increase risks among male sex workers.[83]

Several themes emerge across regions when reviewing HIV risks affecting individual male sex workers, including economic disparities, sexual and physical abuse, drug misuse, and low socioeconomic status, in

| | Location | Study population | Sampling frame | Sample size (n) | Measure of association | Risk ratio (95% CI) |
|---|---|---|---|---|---|---|
| Has been paid for sex by a man[46] | USA | MSM, PWID | Street recruitment | 227 | Odds ratio | 1·67 (0·64–4·36) |
| Works as a sex worker[51] | Peru | MSM | Surveillance study | 3280 | Odds ratio | 1·91 (1·31–2·79; adjusted) 1·89 (1·03–3·47) |
| Independent correlates of unprotected anal intercourse, ever sold sex[70] | China | MSM | Respondent-driven sampling | 428 | Odds ratio | 2·2 (1·20–4·20) |
| Selling sex[55] | Vietnam | MSM | Cross-sectional | 599 | Odds ratio | 8·61(1·20–61·69) |
| Had commercial sex[57] | Malawi, Namibia, Botswana | MSM | Non-probability | 537 | Odds ratio | 1·7 (1·10–2·70) |
| Has paid for sex with men in past 6 months[71] | China | MSM | Cross-sectional survey | 1692 | Odds ratio | 2·1 (1·10–3·80) |
| Self-reported money boy[72] | China | MSM | Snowball sampling | 513 | Odds ratio | 6·43 (1·54–28·86) |
| Commercial anal intercourse[73] | South Africa | MSM | Venue-based sampling | 542 | Odds ratio | 2·8 (1·0–8·3) |
| Paid by someone for sex in the past 12 months[74] | Tanzania | MSM | Respondent-driven sampling | 509 | Odds ratio | 4·6 (1·0–21·4) |
| Sold sex in the past 12 months[75] | El Salvador | MSM | Respondent-driven sampling | 596 | Bivariate proportion | 17·9 (7·8–29·9; p=0·006) |
| Male sex worker[41] | Israel | MSM, male sex workers | Venue-based sampling | 283 | Odds ratio | 0·6 (0·1–12·4; male sex worker *vs* high-risk MSM) |
| Selling sex in the past 12 months[30] | Vietnam | MSM | Community-based survey | 381 | Prevalence ratio | 1·56 (0·70–3·47) |
| Exchanging sex for money in the past 6 months[76] | China | MSM | Respondent-driven sampling | 503 | Odds ratio | 2·3 (0·4–13·0) |
| Received money for sex from a male in past 12 months[54] | Canada | MSM | Venue-based survey | 3304 | Crude odds ratio | 1·7 (1·11–2·61) |
| Got money or drugs for sex[77] | USA | MSM, men who have sex with women | Respondent-driven sampling | 2092 | Odds ratio | 0·79 (0·51–1·21) |
| Engaged in commercial sex[78] | China | MSM | Non-probability and respondent-driven sampling | 250 | Odds ratio | 5·93 (1·92–13·89) |
| Sex work ever[79] | Ecuador | MSM | Respondent-driven sampling | 416 | Odds ratio | 3·30 (1·20–8·60) |

MSM=men who have sex with men. PWID=people who inject drugs.

***Table 2:*** **Commercial sex behaviours that are significant risk factors for HIV infection among men who have sex with men, 2000–12**


***Figure 1:*** **Inside the HOYMAS community centre in Nairobi, at a training of peer educators for male sex workers**
HOYMAS (Healthy Options for Young Men on HIV, AIDS, and Sexually transmitted infections) is a community organisation for both male sex workers and men who have sex with men living with HIV, AIDS, and sexually transmitted infections. The slogans read: "Na hustle ku achieve life poa. Nipo!" (I hustle to achieve a good life. I am here!) and "Nikijiamini, wengine wataniamini" (If I trust myself, others will trust me) or (If I believe in myself, others will believe in me).

addition to the occupation-related risks associated with commercial sex. In many places and contexts, some male sex workers report high levels of background adversities, including sexual and physical abuse,[58] homelessness,[84] and low educational attainment.[42] Furthermore, male sex workers are more likely than other MSM to report racial and sexual minority statuses,[58] which are associated with a higher likelihood of serodiscordant sexual partnerships in many high-income settings (eg, the USA and the UK).[85] One of the most consistent and important findings among male sex workers is reporting of concurrent substance misuse, ranging from alcohol to injected drugs. In North America, substance misuse is associated with high-risk practices and low socioeconomic status among male sex workers.[86] Alcohol use in Kenya, and misuse of injecting and non-injecting drugs in Asia, are both associated with high-risk sexual acts among male sex workers.[87] Furthermore, among male sex workers in the USA who inject drugs, a higher number of male paying partners is associated with greater HIV prevalence.[46] Similar findings have been described among male sex workers in several Latin American countries, including Mexico, Nicaragua, Argentina, and Peru, suggesting the consistent applicability of syndemic theory to male sex work.[88] At the same time, data from Africa show that injecting drug use among male sex workers is very low (usually <3%).[15,89]

In North America, occupational health risks among male sex workers include: conditions of economic necessity fomenting unprotected sex;[43] sex with multiple partners; sexual role versatility, depending on client preferences; and sex with male, female, and transgender partners, and reciprocal sex exchange—ie, purchasing sex from other sex workers.[90] The burden of prevalent and incident genital ulcerative diseases augments the high acquisition and transmission risks associated with unprotected anal intercourse. In some countries of Latin America and the Spanish-speaking Caribbean, sex workers are typically offered free medical check-ups at public health clinics.[91] However, male sex workers are less willing to use these services than are female or transgender sex workers, because they generally do not regard themselves (or might be unwilling to come forward) as sex workers; thus, access to periodic screening, prevention, and care services for sexually transmitted infections is diminished for this population. As a result, asymptomatic or minimally symptomatic sexually transmitted infections among these men are clinically significant, since condom use is less effective for prevention of such infections, compared with HIV. Similarly, for sub-Saharan Africa, high rates of human papillomavirus (HPV) and consequent anal papillomas are probably associated with increasing acquisition risks among male sex workers in coastal regions of Kenya.[92,93]

Male sex workers are more likely to report having male partners who are older than themselves, a finding that is associated with high rates of HIV infection among African-American MSM.[85] Although research into young people and adolescent men selling sex is scant, because of the complexities of obtaining appropriate informed consent and the inherent legal issues, many male sex workers across several regions report initiating sex work at young ages, sometimes under coercion or force.[94] The high prevalence of HIV recorded among men in their late teens and early twenties in many regions suggests that the risks of acquiring HIV are probably relevant during adolescence for some of these individuals.

At the community level, risk might be mitigated by available HIV prevention, treatment, and care services if barriers to the uptake of those services are removed. The most important barrier is stigma, an obstacle that is often big enough to prevent male sex workers from accessing HIV prevention services. Stigma acts by devaluing, labelling, and stereotyping male sex work, resulting in these men suffering a loss of status, unfair and unjust treatment, and social isolation.[95] Male sex workers can face intersecting stigmas: having sex with other men; engaging in illegal sexual activity; presumption of HIV infection or drug use; and differential socioeconomic status among racial minorities. The illegal nature of sex work in much of the world, coupled with the likelihood of male sexual partners, engenders an environment of multilayered marginalisation. Even in locales with high acceptance of sexual diversity, the commercial nature of sex work creates a milieu removed from traditional gay community norms, which—according to power dynamics—favours riskier sexual practices.[90] In many places, although men from diverse backgrounds engage in commercial sex, society's most

| | Study location (country) | Sampling method | Male sex workers (n) | Underlying behaviour change theory | Prevention evaluation results | Findings and suggestions for further research or intervention development |
|---|---|---|---|---|---|---|
| Simon, 1993[99] | New Orleans (USA) | Convenience (street) | 211 | Health belief model | NA | Risk-taking associated with economic dependency on sex work, high pleasure in sex work, and diminished control over the situation<br>Perception of severity of HIV not associated with risk behaviour<br>Increased perceived susceptibility and perceived benefit of condom use associated with increased risk-taking behaviour |
| Ziersch, 2000[100] | London (UK) | Convenience (escort agencies) | 88 | Peer education and role-modelling | Inconclusive | Intervention increased referrals but failed to change knowledge of HIV and sexually transmitted infections and risk behaviour<br>Collective action (social transformatory model) might be more appropriate than peer-education model |
| McCamish, 2000[101] | Pattaya and Bangkok (Thailand) | Convenience (bars) | >100 | Peer education | Ineffective | Interventions previously provided have been discontinuous and diffuse in focus<br>Bar-based interventions need to be developed that are focused on behaviour and agency, not identity, and that build peer and managerial support |
| Toole, 2006[102] | Vientiane (Laos) | Purposive/ time-location sampling | 12 | NA (formative) | NA | Comprehensive education about HIV and sexually transmitted infections<br>Promotion of 100% condom use model suggested for male sex workers |
| Williams, 2006[103] | Houston (USA) | Targeted sampling (street) | 399 | Harm reduction; theory of reasoned action; social-cognitive theory; rational choice theory | Effective | Prevention activities among male sex workers must be brief; targeting HIV-positive individuals should be developed<br>Younger, heterosexual, HIV-negative male sex workers were least likely to complete the intervention<br>Interventions with social-cognitive theory and theory of reasoned action components were no more effective than basic harm reduction |
| Parsons, 2007[53] | Unstated, probably New York City (USA) | Convenience (Internet-based escorts) | 46 | NA (formative) | NA | Interventions should include internet-based safer sex work information, treatment for substance misuse, mental health counselling, social support and networking, health care and insurance, money management, and legal assistance |
| Reisner, 2008[45] | Boston (USA) | Convenience | 32 | NA (formative) | NA | Intervention development activity using qualitative research indicated need for multipronged, incentivised, comprehensive risk counselling and services-type interventions that also attend to legal needs |
| Padilla, 2008[104] | Santo Domingo and Boca Chica (Dominican Republic) | Respondent-driven sampling | 72 | NA (formative) | NA | Individual-level or behavioural-level approaches unlikely to be effective in altering important contextual factors contributing to HIV risk<br>Interventions should be developed that are comprehensive and multi-level and that reduce stigma associated with male sex work<br>More focus should be given to understanding context relative to more proximate behavioural determinants |
| Infante, 2009[105] | Mexico City (Mexico) | Convenience | 36 | NA (formative) | NA | Targeted interventions are not currently offered<br>Interventions should be developed that address structural vulnerabilities: access to health care, prevention information, and methods; community social support; stigma and discrimination; and sexual exploitation |
| van der Elst, 2009[16] | Mombasa (Kenya) | Not provided (newly enrolled cohort study) | 259 | NA (survey methodology) | NA | Though not appropriate for male sex workers with poor reading skills (about 20%), ACASI might derive more honest responses on sexual risk behaviours in intervention surveys compared with face-to-face interviewing in locales with high homophobia and sex work-related stigma |
| Lippman, 2010[106] | Corumba (Brazil) | Not provided | 19 | Social-environmental: cohesion, networks, resources | Effective | Increased perceptions of social cohesion were marginally associated with fewer reported unprotected sex acts<br>Wider access to and better management of social and material resources were significantly associated with fewer unprotected sex acts |
| Zhao, 2011[107] | Shenzen (China) | Time-location sampling | 394 | NA | Suggestive | Current health promotion efforts in entertainment venues are probably effective<br>More attention should be paid to male sex workers in parks and family clubs, targeted at migrant male sex workers from areas with high prevalence of HIV |
| He, 2011[108] | Mainland China | Meta-analysis of published reports | NA | NA | Suggestive | Unprotected anal intercourse among male sex workers declined significantly between 2004 and 2005 and 2006–07 |
| Geibel, 2012[81] | Mombasa (Kenya) | Time-location sampling | 425 (baseline); 442 (follow-up) | Peer education, HIV counselling, testing, and referaral services, drop-in centre, condom distribution | Effective | Increased uptake of HIV testing; increased condom use with male partners (both paying and non-paying); increased knowledge of HIV risk from unprotected anal intercourse<br>Peer education dose-associated with condom use for anal intercourse with male paying partners; HIV testing uptake; drop-in centre attendance; and knowledge of HIV risk from unprotected anal intercourse |

(Table 3 continues on next page)

| | Study location (country) | Sampling method | Male sex workers (n) | Underlying behaviour change theory | Prevention evaluation results | Findings and suggestions for further research or intervention development |
|---|---|---|---|---|---|---|
| (Continued from previous page) | | | | | | |
| Liu, 2012[109] | Shenzen (China) | Convenience | 28 | NA (formative) | NA | Interventions for money boys should include psychological assistance, information on sexually transmitted infections and risk reduction, physical safety, and employment skills<br>Internet-based information pages and education provided by managers ("mommies") are suggested |
| Reza-Paul, 2012[110] | Mysore (India) | Purposive sampling | Not provided | Structural: drop-in centre; police liaisons; peer education; rapid response teams | Effective (male and female sex worker aggregate data) | Structural interventions (drop-in centre, police liaisons, rapid response team) and peer education associated with longitudinal decrease in violent incidents reported by sex workers (male and female sex worker results aggregated) |
| Friedman, 2013[90] | Miami and Fort Lauderdale (USA) | Convenience | 119 | RESPECT and enhanced RESPECT;[111] rational choice theory | NA (baseline results only) | Bisexually behaving male sex workers might benefit from network-level interventions that include mental health care and substance use treatment components |

NA=not applicable. ACASI=audio computer-assisted self-interview. RESPECT=an HIV intervention package incorporating client-focused HIV prevention counselling.[111]

***Table 3:*** **Reported HIV prevention studies for men who sell sex**

vulnerable men are more likely to become involved, frequently in less secure conditions, and they might also increase their vulnerability: in the USA, young men who engage in commercial sex show disparately higher rates of depression and substance misuse, which can persist after involvement in sex work, perhaps attributable to the stresses of endured stigma.[58]

Most public policies affecting male sex workers represent structural barriers to care rather than improved access to it. Broadly, three categories of criminalisation intersect with male sex work: the illegality of sex work, of same-sex practices, and of non-disclosure of HIV infection. These policies or stigmatising contexts might drive male sex workers to emigrate to countries with supportive legislation and improved working environments.[96] For example, some countries in eastern Europe have adopted punitive laws analogous to those existing in Sweden, in which buying or selling sex is targeted with misdemeanour or criminal charges; male sex workers from this region have been known to migrate to countries in central and western Europe, such as Germany and Switzerland. The relation between criminalisation of same-sex practices and difficulty in researching and addressing the HIV prevention, treatment, and care needs of MSM has been well described in scientific literature. Moreover, criminalisation of non-disclosure of HIV infection is relevant to male sex workers in many countries as a potential barrier to the uptake of HIV-related services, including testing.[97] In a report from Human Rights Watch in Tanzania,[98] multiple accounts of rape of male sex workers by police highlight the limited repercussion of rights violations affecting these men. The general absence of legal recourse after violence noted in many settings, limited economic resources, and an increasing tendency to view the possession of condoms as evidence of sex work all further complicate safer male sex work.

## HIV prevention, treatment, and care

Despite the high burden of HIV infection and amplified risk status, few intervention studies have addressed specifically the needs of male sex workers (table 3).[16,45,53,81,90,99–110] Randomised controlled trials of techniques to help male sex workers reduce their HIV risk are scarce, although many methods for MSM and female sex workers have been tested. The need for HIV-prevention programmes targeting male sex workers is pressing, because of the efficient transmission of HIV during anal intercourse and the persistent need for male sex workers to have many sexual partnerships to support income. In view of the complex risk environment for these men, and akin to other populations, the most effective intervention designs possibly represent combinations of behavioural, biomedical, and structural approaches.

Intervention designs should probably be very specific to local context, paying attention to the legal framework, levels of visibility, and specific identities of male sex workers, and the availability of HIV services that are both general and focused on MSM. By no means should interventions expose male sex workers to public sight beyond their own choices and legal threats should be specifically prevented.

In various contexts, formative research suggests that individual-level and network-level interventions incorporating incentivised harm-reduction approaches,[99] access to social services and resources, and medical (including mental health) care[90] could be coupled with community-level antistigma campaigns[104] for maximum effectiveness. Biobehavioural approaches that include use of antiretroviral drugs for pre-exposure and postexposure prophylaxis are relevant options for male sex workers.[112] Some male sex workers report difficulties negotiating condom use during anal sex with clients, or they might accept higher rates for unprotected sex; these

situations could arise, in particular, for male sex workers of low socioeconomic status working in open-space venues who have concurrent psychosocial risks for HIV. Innovations in HIV testing are important for addressing the crucial problem of undiagnosed infections.[113] In view of scant targeted services, substantial social stigma, and a high incidence and prevalence of HIV among many male sex workers, individuals who acquire HIV infection might remain undiagnosed for a long time. Addressing the needs of male sex workers living with HIV is vital to ensure that their own health needs are considered, including prevention of HIV superinfection and onward transmission of HIV to all sexual partners.[114] Furthermore, mean and total viral load in a population has been linked to population-level transmission rates of HIV.[115] For male sex workers, antiretroviral-based prevention approaches are a relevant option, because these drugs might enable them to control their HIV risk not solely with condom use, although strategies to ensure adherence would be needed if such approaches were used.[116] Intervention designs that help male sex workers remediate background risk factors such as substance misuse, depression, legal assistance, employment readiness, educational attainment, homelessness, and low social capital—while also providing HIV prevention and testing, medical care, and pre-exposure and postexposure prophylaxis—will be ideally suited to this population with multiple needs. Such an approach is being implemented and evaluated.[117]

The role of structural changes to meet the needs of male sex workers, including amendments to legal frameworks, is fundamental in many parts of the world. In South Africa, protective constitutional provisions for gay men and other MSM are at odds with sex work remaining illegal. As a result, no national programme exists to address the needs of male sex workers, and such a task is covered in part by non-governmental organisations such as the Sex Worker Education and Advocacy Taskforce (SWEAT). The work of SWEAT and its allies resulted in the South African Government including decriminalisation of sex work in early iterations of its national health strategic plan, although decriminalisation was ultimately not included in the final national plan. Decriminalisation of sex work has been included again in the country's revised 2012 current national health strategic plan, and the hope is that decriminalisation will take place during 2014–15. Such a move in South Africa would be akin to the Delhi High Court overturning Penal Code 377 (which criminalised same-sex activities) as a means of protecting public health.[118] Decriminalisation of sex work and access to protective public health and legal structures would probably improve our understanding of health issues specific to male sex workers, increase service uptake, and—from an occupational health perspective—foster better working conditions.[119] However, legal frameworks affecting MSM are increasing in complexity, with new laws enacted in Nigeria and Uganda[120] and, in 2013, the reinstatement of Penal Code 377 in India. These laws might further limit the ability to address effectively the needs of male sex workers. In the USA and Canada, sex work is largely illegal; even in some Mexican cities, where sex work is quasilegal and registered, male sex workers do not typically register with municipal authorities for fear of adverse consequences.[43] The provision of legal protection to adult film actors in Los Angeles, in addition to surveillance and treatment of HIV and sexually transmitted infections among this group, could be used as a model to deliver such services to the broader population of male sex workers,[121] where legal and cultural contexts make such a move feasible. In Brazil, male sex workers can report sex work as an official occupation, facilitating access to social benefits, and this country has a history of antihomophobia social marketing campaigns sponsored by the government. However, recent government changes in Brazil might negate these advances in HIV prevention.[122] Thus, although governmental entities are crucial stakeholders, communities of male sex workers need to be supported to provide an effective response to their needs.

Several active community-driven networks include male sex workers. For example, the Sex Workers Rights Advocacy Network (SWAN) operates in central and eastern Europe and central Asia and includes male sex workers on the steering committee and advisory board. SWAN is a network of civil society organisations engaged in advocating for the human rights of sex workers in central and eastern Europe, the Commonwealth of Independent States, and south-eastern Europe. Another relevant regional entity for


***Figure 2:*** **STAR-STAR supporting the V-day campaign in Macedonia, 2013**
STAR-STAR (Start Together for Art and Romance) is the Association for Support of Marginalized Workers based in Skopje, Macedonia. This organisation is a member of the Sex Workers' Advocacy Network, the International Committee for Sex Workers' Rights, and the Global Network for Sex Workers Projects. V-Day is a global movement to end violence against women and girls. The global slogan of last year's campaign was: "1 billion rising for justice".

For more on **V-Day** see http://www.vday.org/

For more on **SWAN** see http://www.swannet.org

For more on **ICRSE** see http://www.sexworkeurope.org

male sex workers is the International Committee on the Rights of Sex Workers in Europe (ICRSE), of which most of the Board are sex workers. The ICRSE strives: to raise awareness about the social exclusion of female, male, and transgender sex workers in Europe; to promote the human and civil rights of all sex workers at national, regional, and global levels; and to create strong alliances between sex workers, allies, and other civil society organisations. Finally, the Global Network of Sex Work Projects (NSWP) is the biggest sex worker-led network and includes leadership from male sex workers. Small-scale resources include HOOK, which promotes safer sex work and positive cultural identity. In view of the recent proliferation of internet sites and smartphone applications among male sex workers to arrange commercial sex encounters (appendix p 8), new interventions provided in virtual spheres have great potential for saliency and reach, although they have—so far—been evaluated sparingly.

For more on **NSWP** see http://www.nswp.org

For more on **HOOK** see http://www.hookonline.org

## Moving forward

Men who sell sex represent a subset of individuals who have been mostly ignored to date in the context of the global response to HIV/AIDS. Although few studies and scant systematic surveillance have been done of the burden of HIV among these men, evidence indicates consistently that the HIV burden of this population has been sustained or is increasing, within the broader context of rising HIV rates among MSM. Several clear facilitators exist for HIV acquisition and transmission, including biological, behavioural, and structural factors. However, many public health questions about male sex workers remain poorly studied. In view of the diverse identities and contexts of male sex workers, to what extent could partly standardised definitions be used to facilitate programme design and implementation? How profound are the HIV-related health disparities of male sex workers, compared with other MSM, after controlling for multiple cultural factors (eg, young age, racial or ethnic minority status)? What are the factors at the individual, community, and structural level that mediate and modify HIV risks posed by commercial sex? How could male sex workers be offered comprehensive health services that, respecting their autonomy, can prevent escalation of their vulnerability? What are the positive and protective aspects of male sex worker involvement beyond immediate sustenance (eg, social capital, social mobility)? Does scientific stigma surround research into HIV prevention with male sex workers and has this obstacle manifested to limit our knowledge base?

Encouragingly, public and private funders are recognising that high-impact HIV prevention and care has to include key populations such as male sex workers, as part of comprehensive HIV responses.[123,124] The numbers of programmes are increasing, such as STAR-STAR in Macedonia, which was founded and governed by male sex workers to support their peers (figure 2) and is funded partly by the Global Fund for AIDS, Tuberculosis, and Malaria. Moreover, USAID, the President's Emergency Plan for AIDS Relief (PEPFAR), and the US Centers for Disease Control and Prevention are funding research into HIV prevention, treatment, and care and programming for male sex workers. Initiatives such as these are crucial to ensure a changing trajectory of the HIV epidemic among these men by strengthening community groups focused on the needs of male sex workers specifically to ensure provision and uptake of proven and emerging HIV prevention, treatment, and care strategies. Ultimately, dedicated advocacy, funding, surveillance, research initiatives, and a range of preventive options for male sex workers are essential not only for public health but also for social justice and human rights.

**Contributors**

Authors completed in-person and digital consultations for different regions: MRF for North America, CFC for Latin America and the Caribbean, SG for east Africa, KR for southern Africa, BB for Europe, DD for western Africa, and RC for Asia. KS provided access to UNAIDS country-reported data. CEH completed reviews and data abstraction for epidemiology and risk factors and MRF undertook these tasks for prevention approaches for male sex workers. All authors provided input and guidance on the idea and outline of the report. Every author wrote sections of the report, with guidance from SDB. SDB, MRF, and CFC incorporated the various sections while writing the final report.

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We declare no competing interests.

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