



BLIND SPOT

Reaching out
to men and boys

Addressing a blind spot
in the response to HIV

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Foreword

In a world of gender inequalities that disadvantage women and girls, publishing a report on how men are not being reached by health services and are not exercising their right to health may seem counterintuitive. It was indeed perplexing for me to learn that men were less likely than women to know their HIV status and less likely to access and adhere to HIV treatment. As a consequence, more men are likely to die of AIDS-related illnesses than women. As the world strives to reach the high levels of HIV service coverage required to end AIDS as a public health threat, this blind spot in the response to HIV can no longer be ignored.

Women are still disproportionately more affected than men by HIV, and they continue to bear the brunt of the epidemic. A focus of the AIDS response in recent years has rightly been on preventing HIV infections among women and girls, as well as expanding their access to treatment, thereby keeping them healthy and preventing the transmission of HIV during childbirth. Progress has been achieved, but it would be even greater if more men were reached by health and HIV service providers.

Men and boys are influenced by many gender norms that affect their health and discourage them from accessing health services. The concept of masculinity and the stereotypes associated with it create conditions that make having safer sex, taking an HIV test, accessing and adhering to treatment—or even having conversations about sexuality—a challenge for men. Unhealthy eating habits and the use of alcohol, tobacco and drugs further exacerbate the situation.

We must challenge the notion that the greater strength and independence that many men enjoy give them a licence to take more risks. At the same time, we also must counter the norms of masculinity that encourage homophobia and transphobia.

In many countries, policies that criminalize drug use or do not allow for harm reduction services make it difficult for people who use drugs to protect themselves. And health services are not friendly to young men.

When men are able to access HIV prevention and treatment services, there is a triple dividend—they protect themselves, they protect their sexual partners and they protect their families. When a man is HIV-negative or virally suppressed he is unlikely to transmit HIV to his sexual partner. When fewer women are infected by men, fewer children are at risk of acquiring HIV.

Ending AIDS requires the engagement of everyone—men and women. Women are already on board. Now we need men to join in.

Michel Sidibé
UNAIDS Executive Director

A close-up photograph of a man's face, with the central portion obscured by a teal rectangular overlay. The man has dark, slightly messy hair and is wearing a blue and white checkered button-down shirt over a white t-shirt. The background is a plain, light grey color.

BLIND SPOT

Introduction

Introduction

Despite their many social and economic advantages, men are less likely than women to seek out health care, to take an HIV test or to initiate and adhere to HIV treatment.

As HIV responses around the world collect better data and strive to reach the global goal of ending AIDS as a public health threat by 2030, an often-overlooked gap is receiving greater attention: low health and HIV service utilization among men and boys.

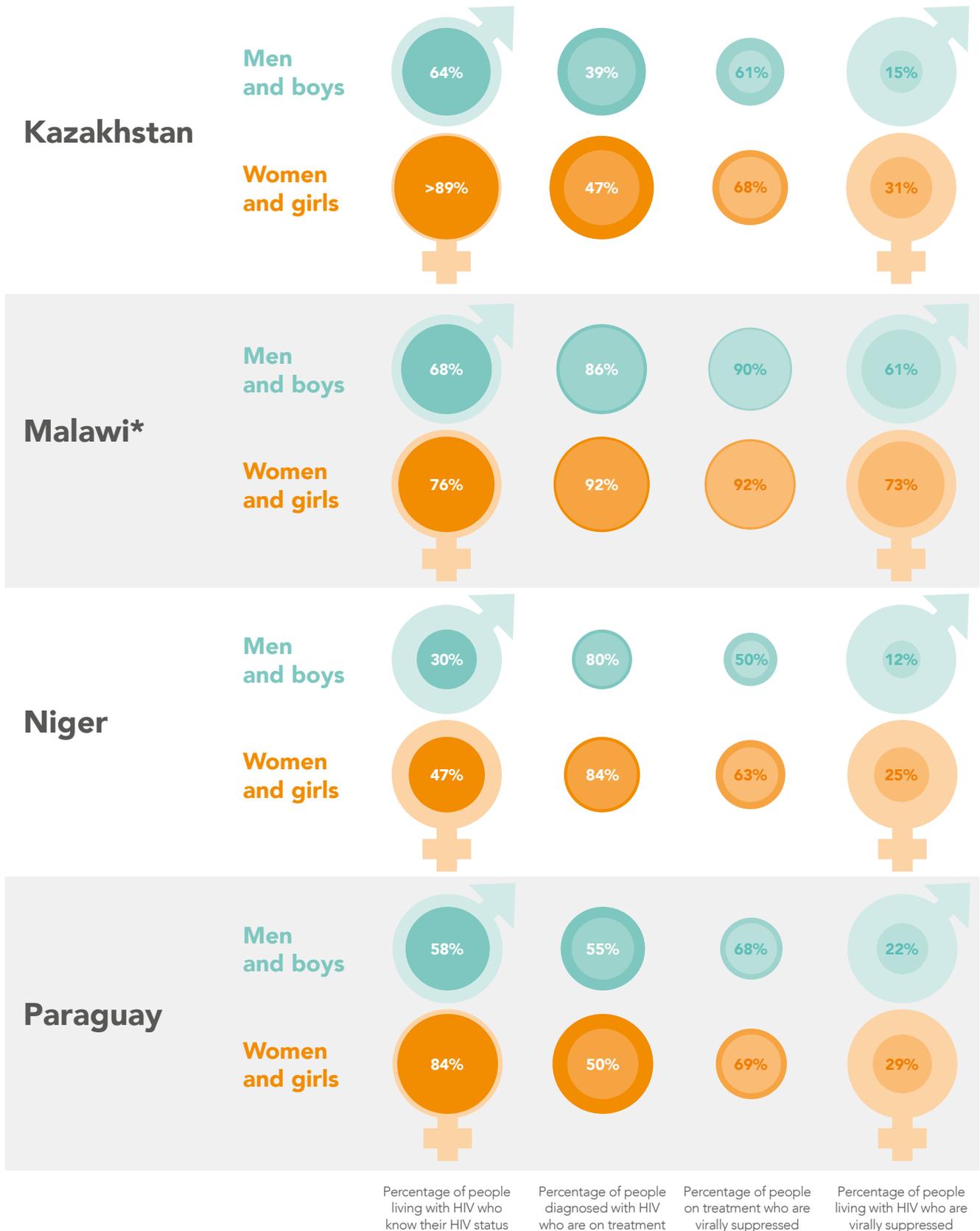
Although it is difficult to generalize among the diversity of men across social settings, geographic areas, cultures and income levels, a large body of data strongly suggest that, compared with women, male lifestyles and health behaviours on aggregate put them at greater risk for poor health and premature death. Despite their many social and economic advantages, men are less likely than women to seek out health care, to take an HIV test or to initiate and adhere to HIV treatment (1–4).

These service coverage gaps are evident across a range of geographic and epidemic settings, from North American cities to rural areas in southern Africa, threatening progress towards the 90–90–90 treatment targets. In Malawi, for example, men living with HIV are 12% less likely to be aware of their HIV status and 20% less likely to be virally suppressed than women living with HIV. In Kazakhstan and Niger, knowledge of HIV status among men living with HIV is a third lower than it is among women living with HIV, and viral suppression among men is half that of women (Figure 1). Across sub-Saharan Africa, men and boys living with HIV are 20% less likely than women and girls living with HIV to know their HIV status, and 27% less likely to be accessing treatment.

Globally, antiretroviral therapy coverage among men aged 15 years and older was 47% [35–57%] in 2016, compared with 60% [46–71%] among women. This disparity was greatest in western and central Africa, where 25% [17–32%] of men living with HIV and 44% [32–56%] of women living with HIV were accessing antiretroviral therapy, although significant gaps exist also in Asia and the Pacific, the Caribbean, and eastern and southern Africa (Figure 2). In eastern Europe and central Asia, Latin America, and western and central Europe and North America, treatment coverage among men and women living with HIV was roughly similar.

As a result, men are more likely than women to die of AIDS-related causes: globally, they accounted for about 58% of the estimated 1.0 million [830 000–1.2 million] AIDS-related deaths in 2016 (5, 6). This imbalance is particularly large in sub-Saharan Africa, where men accounted for 41% of people living with HIV and 53% of AIDS-related deaths in 2016.

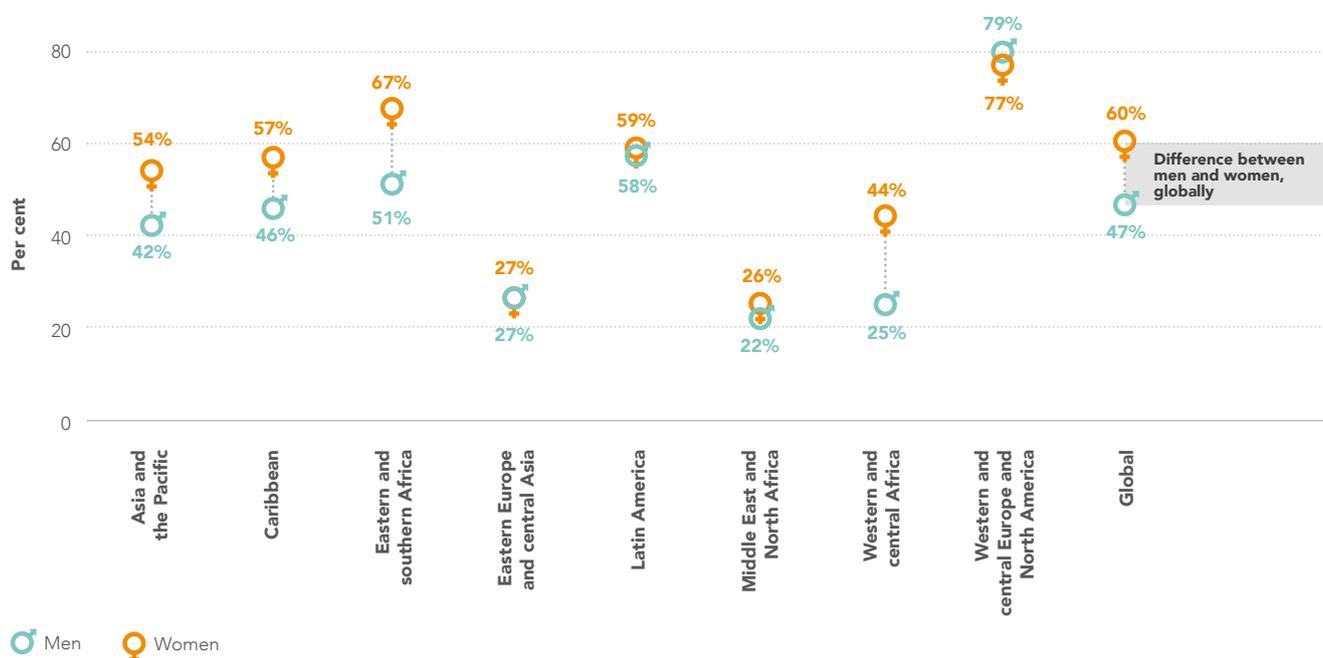
FIGURE 1
PROGRESS TOWARDS THE 90-90-90 TARGETS, BY SEX, SELECTED COUNTRIES, 2016



Sources: Kazakhstan, Niger and Paraguay: UNAIDS special analysis, 2017. The methods for this analysis are described in the annex on methods of the UNAIDS report *Ending AIDS: progress towards the 90-90-90 targets* (2017). Malawi estimates are from the 2015-2016 Malawi Population-based HIV Impact Assessment.

* Age ranges are 15-64 years for Malawi. All other countries are all ages.

FIGURE 2
COVERAGE OF ANTIRETROVIRAL THERAPY AMONG ADULTS (AGED 15 YEARS AND OLDER),
BY SEX, GLOBAL AND BY REGION, 2016



Source: UNAIDS 2017 estimates; Global AIDS Monitoring, 2017.

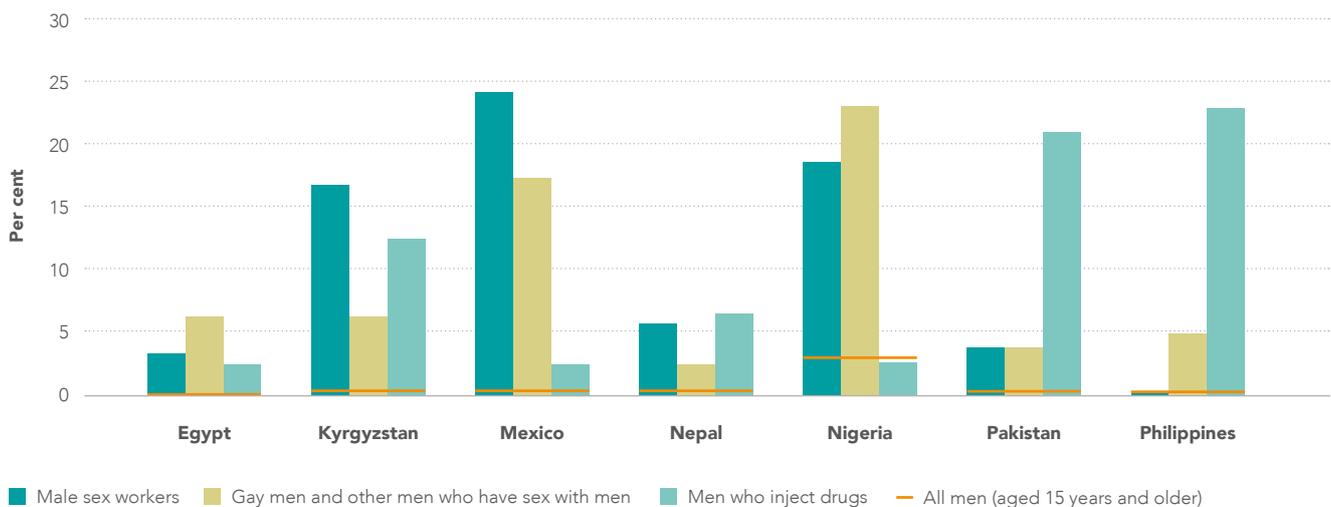
In high-prevalence settings, lower service coverage among men combines with gender inequalities that sanction the subordination of women and girls and magnify HIV risk. In eastern and southern Africa, for example, 57% of adult new HIV infections in 2016 were among women, and they accounted for 60% of adults living with HIV.

Many HIV prevention services that focus on men struggle to reach national and global targets. Gains in the promotion of condom use and other risk-reducing behaviour changes that were made early in the global AIDS response appear to have slowed in recent years. Uptake of voluntary medical male circumcision has lagged in some of the 14 priority countries in eastern and southern Africa, and the total annual number of voluntary medical male circumcisions across all of these countries is far short of the numbers needed to reach the 2020 target agreed at the United Nations General Assembly. Another recent innovation in HIV prevention, pre-exposure prophylaxis (PrEP), is being aggressively scaled up among gay men and other men who have sex with men in several western European and North American cities. Globally, however, the scale and impact of PrEP programmes is still limited.

Gaps in service utilization contribute to cycles of HIV infection from men to women, from women to men and from men to men. In high-prevalence settings, lower service coverage among men combines with gender inequalities that sanction the subordination of women and girls and magnify HIV risk. In eastern and southern Africa, for example, 57% of adult new HIV infections in 2016 were among women, and they accounted for 60% of adults living with HIV. The HIV risk within age-disparate relationships is greater when there are wide age gaps between young women and their male partners (7–11).

In regions where a larger proportion of new infections occur among key populations, the majority of new HIV infections are among men. Outside of eastern and southern Africa, men accounted for about 60% of the estimated 950 000 [730 000–1.3 million] new HIV infections among adults 15 years and older in 2016, and 58% of adults living with HIV in these regions were men. In all regions, HIV prevalence is consistently higher among men within key populations—including gay men and other men who have sex with men, male sex workers, clients of sex workers and men who inject drugs—than it is among the overall adult male population (Figure 3). Key populations are deterred from accessing services by punitive laws and policies, police harassment and stigma and discrimination within health settings (12). In many parts of the world, adolescent boys and young men who belong to key populations face heightened risks of HIV infection, yet they also demonstrate low knowledge, awareness and uptake of HIV services (13).

FIGURE 3
HIV PREVALENCE AMONG MALE KEY POPULATIONS AND THE GENERAL ADULT MALE POPULATION (AGED 15 YEARS AND OLDER), SELECTED COUNTRIES, MOST RECENT DATA, 2014–2016



Source: 2017 Global AIDS Monitoring; UNAIDS 2017 estimates.*

* Prevalences for male key populations are derived from surveys (2014–2016). The adult male prevalences are UNAIDS estimates for 2016.

Addressing a blind spot

Gender inequalities and harmful gender norms have the greatest negative impact on women and girls. They undermine women’s economic independence, subject women to violence and sexual aggression, deny women control over their sexual and reproductive lives and expose them to HIV (14, 15). Studies show, for example, that when men equate manhood with dominance over women, having multiple sex partners, refusal to use condoms, and alcohol and substance abuse, they put themselves and

their partners at heightened risk for HIV infection (16–18). Action must be taken to support women and girls and address these power imbalances, and the 2030 Agenda for Sustainable Development and the 2016 Political Declaration on Ending AIDS reflect this.

However, societal gender inequality and many efforts to address it share a common blind spot: how gender norms that encourage male dominance and emphasize myths of male invulnerability are also harmful to men and boys. Unhealthy diets, injuries due to violence and accidents, and the use of alcohol, tobacco and drugs are more common among men than women (19–22). Men are also more reluctant than women to seek professional medical help when they are ill or injured, or to disclose symptoms of disease or illness when they do seek assistance (23). These behaviours lead to poor health and lower life expectancy, and they contribute to gaps in men's access to and use of HIV services (24, 25). Service utilization among men is further compromised by stigma, concerns about confidentiality, the time spent travelling to and waiting at health facilities, inconvenient clinic operating hours and perceptions that health facilities are geared more towards serving women (26).

Alongside the vital work of addressing gender-based violence and reaching more women and girls with essential health and HIV services, political leaders, governments and local communities need to do a better job of reaching out to men and boys so they can utilize the health and HIV services they need.

Reaching significantly more men and adolescent boys with HIV prevention, testing and treatment services is a complex but attainable undertaking. Alongside the vital work of addressing gender-based violence and reaching more women and girls with essential health and HIV services, political leaders, governments and local communities need to do a better job of reaching out to men and boys so they can utilize the health and HIV services they need. At the same time, individual men need to take greater responsibility for their own health, and do more to support their partners and families to enjoy healthy lives. Changing harmful gender norms can lead to more equitable domestic relationships, encourage protective sexual behaviours, reduce intimate partner violence and prevent the spread of HIV and other sexually transmitted infections (27). A rich variety of examples compiled within this report show that major progress can be made when evidence-informed approaches are used with determination. Progress is required along two interconnected routes:

1. Reach more men with health and HIV services in the short term, and enable them to use and adhere to those services.
2. Introduce purposeful policies and practices that remove gender inequalities and promote more equitable gender norms and institutional arrangements to the benefit of both women and men.

It may take many years for some changes to be realized, but a great many improvements can be made rapidly.

The health and well-being of women and men are intertwined. By recognizing and addressing challenges faced by women and men in unison—and by taking proven approaches to sufficient scale—a decades-old blind spot on the health of men and boys can be removed, thus quickening the pace towards ending AIDS as a public health threat.



BLIND SPOT

The challenge

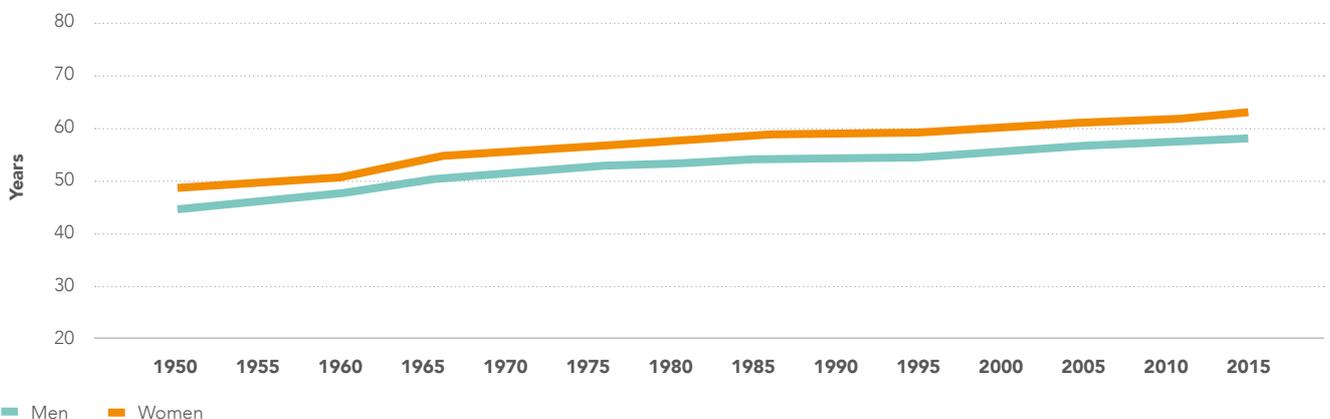
The challenge

Unbreakable? The health gap among men and boys

Men tend to be in worse health than women, a trend that is vividly reflected in life expectancy estimates. Globally, women have a longer average life expectancy than men. This gap in life expectancy between the two sexes has persisted over the past 65 years: among people who reach the age of 15 years, the difference in expected additional years of life between men and women increased from 3.1 years in 1950 to 4.5 years in 2015 (Figure 4) (1).

A large body of evidence shows that men are generally more likely to suffer injuries related to violence and accidents than women, and that they are less likely to pursue healthy lives and use health services (2–4). The pattern is evident in statistics for road injuries, smoking, noncommunicable diseases, the HIV epidemic and the global tuberculosis epidemic (among others) (6).¹ In 2016, fully 65% of the estimated 10.4 million [6.2 million–14.6 million] incident cases of tuberculosis were in men (Figure 5), and adult men (irrespective of their HIV status) were almost twice as likely to die of tuberculosis than their female counterparts (7).

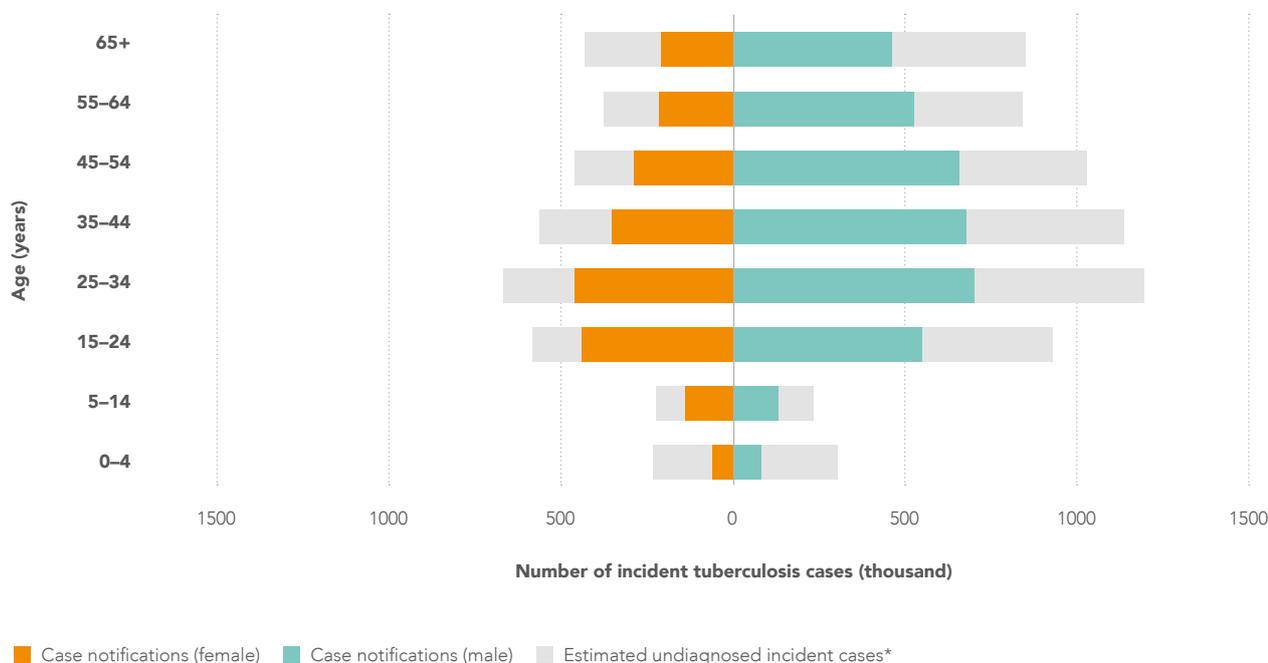
FIGURE 4
EXPECTED ADDITIONAL YEARS OF LIFE AT AGE 15 YEARS, BY SEX, GLOBAL, 1950–2015



Source: United Nations, Department of Economic and Social Affairs, Population Division (2017). World Population Prospects: The 2017 Revision (custom data acquired from Population Division website).

1. About three quarters of the 1.3 million people killed in road accidents in 2015 were men and boys (11).

FIGURE 5
ESTIMATED INCIDENT TUBERCULOSIS CASES AND TUBERCULOSIS CASE NOTIFICATIONS, BY
AGE AND SEX, GLOBAL, 2016



Source: Global tuberculosis report 2017. Geneva: World Health Organization; 2017.

* The number of incident tuberculosis cases is the sum of the orange bar and the grey bar, and the sum of the green bar and the grey bar, respectively.

Many studies have found that men visit primary care facilities less frequently than women, have fewer preventive health checks and, when they do seek medical help, ask fewer questions than women (3, 4, 8). Men also tend to be diagnosed for several life-threatening conditions at later stages than women, and to be less knowledgeable about specific diseases, risk factors and health in general (9–11). Women’s increased use of health services during their reproductive years may influence this disparity.

Harmful masculinities

Male and female social behaviour are heavily influenced by the cultural and societal norms that prevail at a given time and place. Male gender norms vary, but they tend to assign roles of power and authority to men, and to assert notions that men are more resilient and independent, less vulnerable and physically more robust than women (12). These dominant conceptions of masculinity also typically equate risk-taking, aggression and stoicism with so-called manliness, and they stigmatize illness and prudence. For many men, seeking help from a health professional conflicts with socialization that has taught them to prize self-reliance, physical fortitude and emotional reticence (4).

These gender norms also place high value on sexual conquest and the control of women (13). They are clearly damaging to women and girls—most obviously in the high prevalence of violence and abuse, sexual and otherwise, that men perpetrate against them. Such norms limit access to education for women and girls, stifle their career options, deny them economic autonomy and curb their decision-making power in the home and wider society. These systematic disadvantages compromise health and life prospects of women and girls generally, and they can place both women and men at greater risk of life-threatening infections such as HIV (14). Studies show, for example, that when men equate manhood with dominance over women, having multiple sex partners, refusal to use condoms, and alcohol and substance abuse, they put themselves and their partners at heightened risk for HIV infection (15–17).

ALCOHOL CONSUMPTION AND HIV

The harmful use of alcohol increases risk to a range of communicable and noncommunicable diseases, including HIV (18, 19). The link between alcohol use by men, increased sexual risk behaviour and the acquisition of HIV has been documented in a range of subpopulations and settings, including Angolan soldiers, central Asian migrant and non-migrant labourers in Kazakhstan and men who have sex with men in India (20–22). Heavy drinking has also been shown to increase the progression of disease within people living with HIV (23).

Modelling studies have suggested that reducing alcohol consumption could be a cost-effective way to prevent many new infections among people at risk of HIV and add quality-adjusted life years to people living with HIV (24). A systematic review found that relatively few efforts at HIV-alcohol risk reduction in sub-Saharan Africa to date have been successful, pointing towards a need for further research in this area (25). The same review noted evidence from other contexts showing that broader structural interventions—such as those that increase the price of alcohol, restrict the marketing of alcohol and reduce its availability—can reduce alcohol consumption and lower rates of sexually transmitted infections (25).

Violence against women

Nearly 30% of women globally experience physical and/or sexual violence at the hands of an intimate partner at least once in their lifetime (26). This trend has a major impact on the AIDS epidemic (27). A systematic review of 41 studies has shown that women who experience intimate partner violence are on average 1.5 times more likely to be living with HIV than women who do not (26). Violence—or the fear of violence—limits the ability of women to insist on safer sex and to benefit from HIV prevention and treatment interventions, or from sexual and reproductive health services (28–30). Gender-based violence is also associated with poorer clinical outcomes for women on antiretroviral therapy and with poor adherence to PrEP and post-exposure prophylaxis (31–34). Women belonging to key populations, notably sex workers and transgender women, are especially vulnerable to violence and abuse from clients or intimate partners, which can also discourage or deter them from using health and HIV services (35–38).

Just four countries—Australia, Brazil, the Islamic Republic of Iran and Ireland—have national men’s health policies in place, and in most countries, men’s health is not recognized by governments as an issue of concern.

Institutional barriers and policy gaps

Men’s health and their use of health services are not only matters of gender norms and personal attitudes: social and institutional hindrances contribute significantly to men’s health-seeking behaviours (39, 40). In some cases, their reluctance to use health services also makes them less willing to overcome the practical barriers they encounter, including the lack of extended opening hours, inconveniently located facilities, difficult-to-use booking systems, long delays between making an appointment and seeing a clinician, and unpredictable waiting times on the day of the appointment (41). Current health service models also tend to perpetuate stereotypes that present health care as a mainly female concern. For example, efforts to promote sexual health, healthy nutrition and other forms of preventive health often focus on women and girls, while health awareness campaigns are deliberately or inadvertently aimed primarily at women and often fail to engage men (42).

Health-service delivery is guided by strategies and policies. Growing recognition of the health gap among men and boys has for the most part not been translated into national policy. Men’s health advocates contend that just four countries—Australia, Brazil, the Islamic Republic of Iran and Ireland—have national men’s health policies in place, and that in most countries, men’s health is not recognized by governments as an issue of concern (11). A review of national policies on health, HIV, sexual and reproductive health and mental health in 14 countries in eastern and southern Africa commissioned by UNAIDS and the World Health Organization (WHO) found that the health of men and boys was well addressed in the health policy of just one country, Swaziland, where there is a specific strategy to provide a male-tailored comprehensive service package that includes health risk reduction, regular screening for noncommunicable diseases and a range of sexual and reproductive health and HIV services (43).

Understanding barriers to HIV services

The data compiled for this report show large gaps in HIV service utilization among men in a variety of settings, from North American cities to rural areas in southern Africa. In trying to understand and address gaps in services among men, it is important to avoid regarding men as a single, homogenous category. Men exist in great diversity, and their reasons for using or not using services vary across cultures, social classes and contexts.

Gay men and other men who have sex with men continue to share a disproportionately high burden of HIV infection. They are on average 24 times more likely to acquire HIV than men in the general population.

In a highly homophobic setting, for example, reasons for not using health services would likely differ for heterosexual men and for gay men and other men who have sex with men.

Men within key populations

Norms of masculinity often encourage homophobia, and they sanction the stigmatization and harassment of transgender people and gay men and other men who have sex with men. Such stigma and discrimination discourages or prevents people who experience it from accessing needed health and social services. Stereotypical norms of masculinity also may affect the behaviours of many gay men and other men who have sex with men towards one another (44–46).

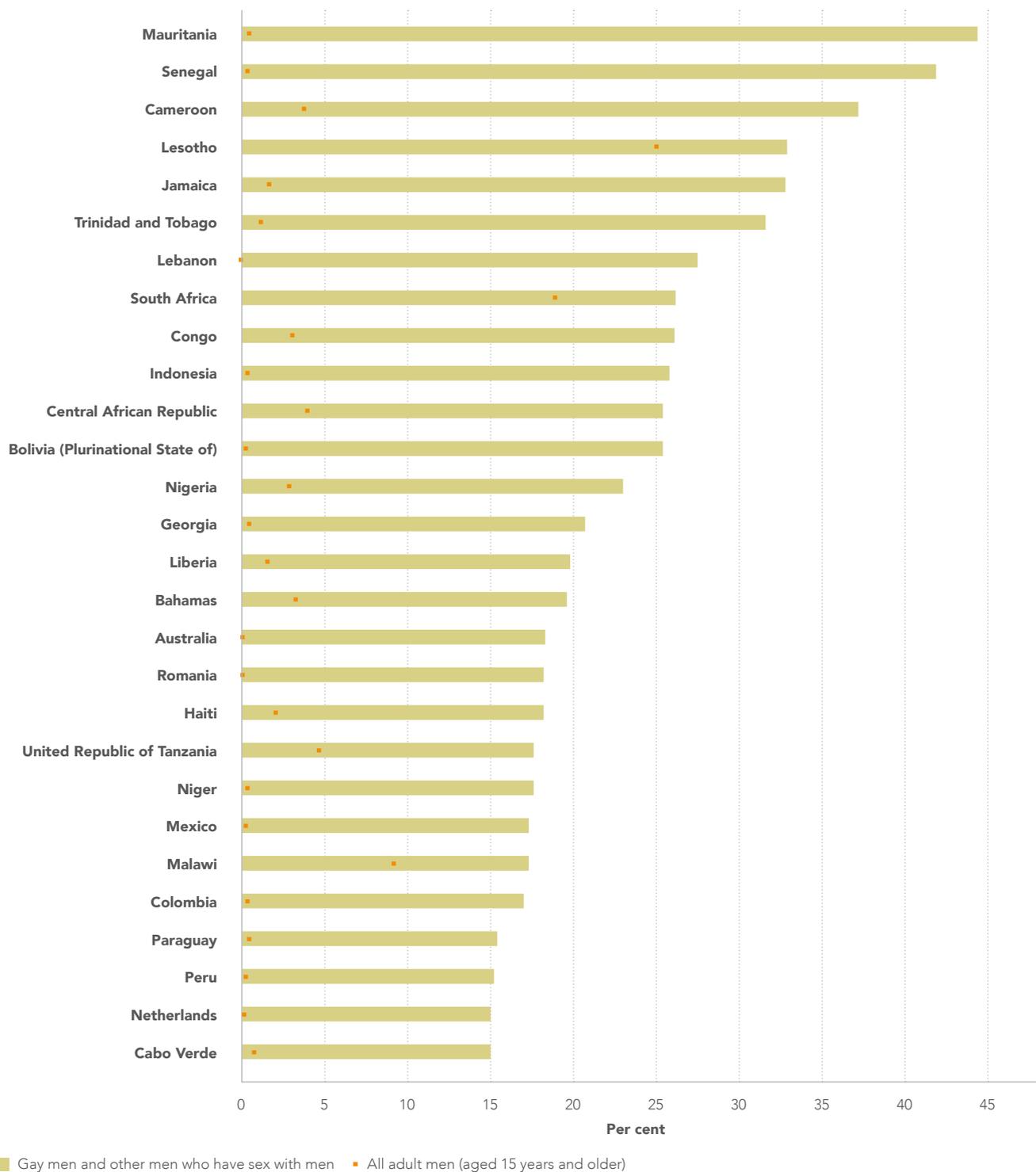
Gay men and other men who have sex with men continue to share a disproportionately high burden of HIV infection: a UNAIDS analysis has shown they are on average 24 times more likely to acquire HIV than men in the general population. In more than two dozen countries, surveys suggest that HIV prevalence among gay men and other men who have sex with men is 15% or higher (Figure 6).

Men also account for a majority within other key populations at higher risk of HIV infection. For instance, they comprise about 80% of the approximately 11.8 million [8.6 million–17.4 million] people who inject drugs worldwide; and it is estimated that 13.1% [10.9–18.3%] of people who inject drugs globally were living with HIV (47). HIV prevalence among people who inject drugs exceeds 25% in several countries, including Belarus, Estonia, Indonesia, Italy, Latvia, Mauritius, Mozambique, Myanmar, Pakistan, Philippines, Spain and Thailand (47).

Frequent detention or imprisonment of people who inject drugs in many countries—combined with poor living and health conditions in prisons—contributes to a high prevalence of HIV, viral hepatitis B and C and tuberculosis among prisoners and detainees. According to recent estimates, between 3% and 8% of incarcerated persons globally are living with HIV, and similar proportions are living with active tuberculosis (48). Overall, at least 90% of prisoners and detainees worldwide are male (49).

Men and HIV testing and treatment

The gendering of health is visible in the ways in which HIV testing is often provided. Until recently, HIV testing had been available mainly through antenatal services, even in many countries with low HIV prevalence or concentrated HIV epidemics. While this successful integration of HIV

FIGURE 6**HIV PREVALENCE AMONG GAY MEN AND OTHER MEN WHO HAVE SEX WITH MEN AND THE GENERAL ADULT MALE POPULATION, SELECTED COUNTRIES, MOST RECENT DATA, 2013–2016**

Source: 2017 Global AIDS Monitoring; UNAIDS 2017 estimates.*

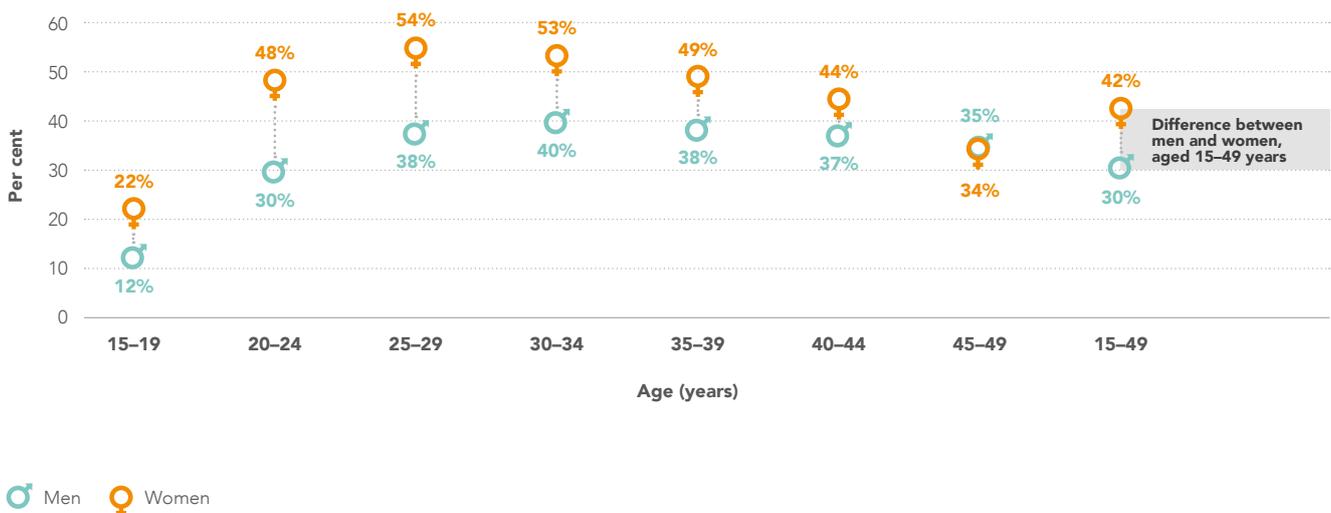
* Prevalences for gay men and other men who have sex with men are derived from local surveys (2013–2016). The values for adult male prevalence are national estimates for 2016, as published by UNAIDS.

testing into reproductive health services may be improving knowledge of HIV status among women, studies from Lesotho, Malawi and South Africa suggest that not pursuing the integration of HIV testing into other relevant clinical settings may be limiting access to and uptake of HIV testing among men (39, 50–52).

Population-based survey data from sub-Saharan Africa show that, across all age groups except 45–49 years, men were less likely than women to have ever taken an HIV test and received the results (Figure 7) (53). In 25 sub-Saharan African countries where sufficient survey and programme data were available, knowledge of serostatus was lower among men living with HIV compared to women living with HIV (Figure 8). In Burundi, Côte d’Ivoire, Liberia, Mozambique, Niger, Nigeria, Togo and Uganda, men living with HIV were about a third less likely to know their HIV status, and in Congo, the Gambia, Ghana and Sierra Leone, knowledge of HIV status among men living with HIV was about half the rate found among women (53).

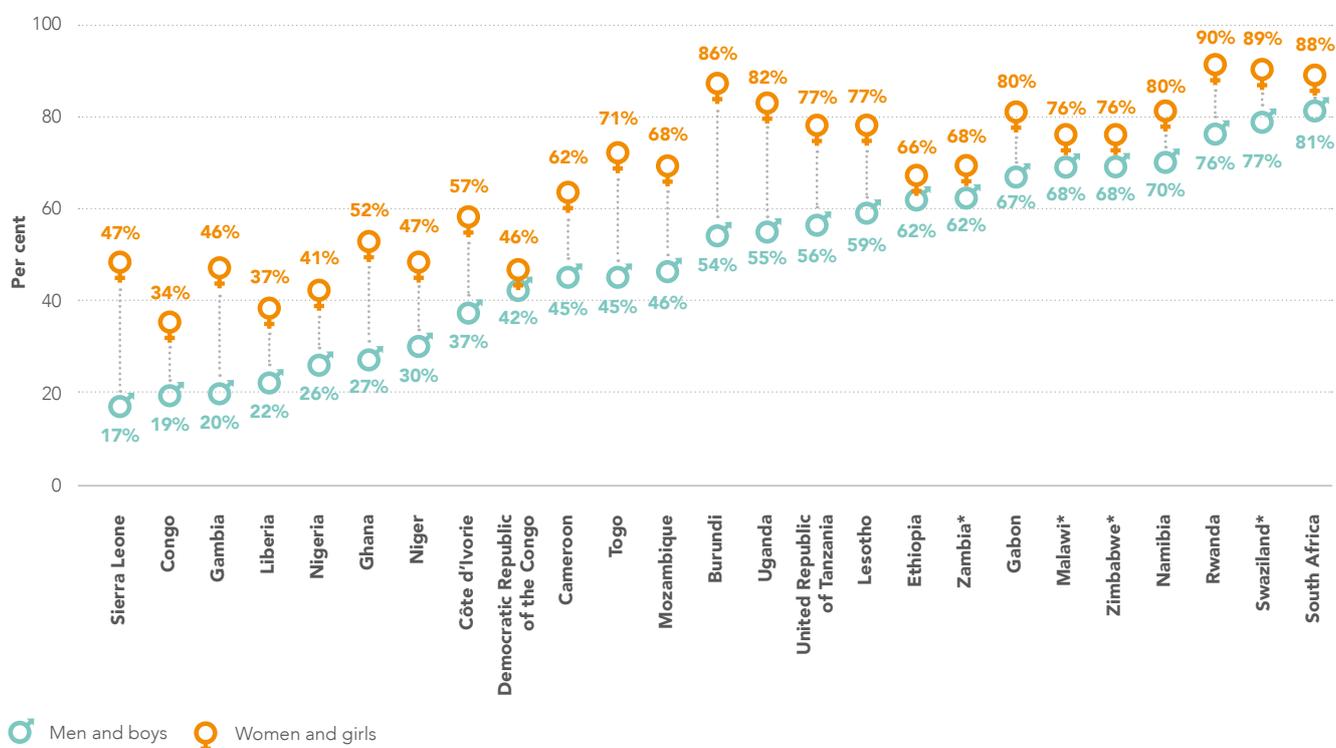
Knowledge of HIV status appears particularly low among young men in sub-Saharan Africa. According to population-based surveys, just 11% of men aged 15–19 years had ever taken an HIV test and received the result, compared to 30% of men aged 20–24 years and 38% of men aged 25–29

FIGURE 7
PERCENTAGE OF ADULTS WHO HAVE EVER TESTED FOR HIV AND RECEIVED THE RESULT, BY AGE AND SEX, SUB-SAHARAN AFRICA, 30 COUNTRIES, MOST RECENT DATA, 2011–2016



Source: Population-based surveys, 2011–2016.

FIGURE 8
PERCENTAGE OF PEOPLE LIVING WITH HIV WHO KNOW THEIR HIV STATUS, BY SEX, 25 COUNTRIES, SUB-SAHARAN AFRICA, 2016



Sources: Data for Malawi, Swaziland, Zambia and Zimbabwe are from Population-based HIV Impact Assessments conducted 2015–2017. All other countries are estimates from a UNAIDS special analysis, 2017. The methods for this analysis are described in the annex on methods of the UNAIDS report *Ending AIDS: progress towards the 90–90–90 targets* (2017).

* Age ranges are 15–64 years for Malawi and Zimbabwe, 15 years and older for Swaziland and 15–59 years for Zambia. All other countries are all ages.

Knowledge of HIV status, treatment coverage and viral suppression are lower among men than women in the majority of countries with available data.

years (53). The Population-based HIV Impact Assessment conducted in Malawi (MPHIA) in 2015–2016 found that nearly two thirds (63%) of young men aged 20–24 years living with HIV were unaware of their HIV status, compared to 42% of men aged 25–29 years living with HIV and about one quarter (27%) of men aged 35–39 years living with HIV (54). In South Africa, data collected in a district of KwaZulu-Natal province in 2014 and 2015 showed that 26% of men aged 20–24 years living with HIV knew their HIV status, compared to 33% of men aged 25–29 years living with HIV (55).

In many countries, uptake is lower for men than for women along the entire cascade of HIV testing and treatment services (56). Among the 16 countries where 2016 programme data across the HIV testing and treatment cascade were available to UNAIDS, 12 indicated that knowledge of HIV status was

lower among men living with HIV than women living with HIV. Furthermore, treatment coverage among men living with HIV who knew their HIV status was lower than it was among their female peers in nine countries, and viral suppression among people living with HIV was lower among men than women in 14 countries (Figure 9). Population-based HIV Impact Assessments conducted in Malawi, Swaziland, Zambia and Zimbabwe show that lower viral suppression among men compared to women is consistent across all age groups, and that younger men living with HIV are less likely to be virally suppressed than older men living with HIV (Figure 10) (54, 57–59). In Swaziland, for example, viral suppression was lowest among men aged 15–24 years living with HIV at 32.9%, steadily rising to 54.8% among men aged 25–34 years living with HIV and to 89.3% among men aged 55–64 years living with HIV (59). Across sub-Saharan Africa, men and boys living with HIV are 20% less likely than women and girls living with HIV to know their HIV status (58% [46-68%] versus 72% [57-84%]), and 27% less likely to be accessing treatment (44% [35-51%] versus 61% [48-71%]).

A study in Zimbabwe underscored the role that harmful masculinity norms play in inhibiting men from getting tested for HIV, coming to terms with their HIV-positive status, taking instructions from nurses and engaging in health-enabling behaviours. The study found a conflict between respondents' understandings of manhood and the behaviour required to be a good patient, including taking instructions from nurses, regularly visiting health facilities and refraining from alcohol and unprotected extramarital sex (60). In Uganda, some men reported they would rather avoid knowing their serostatus and receiving possibly life-saving treatment because they associated being HIV-positive with "emasculating" stigma (61). These dynamics contribute to poorer treatment outcomes for men in high-prevalence settings.

FIGURE 9
PROGRESS TOWARDS THE 90-90-90 TARGETS, BY SEX, 16 COUNTRIES, 2016



♂ Men and boys ♀ Women and girls

Sources: Data for Malawi, Swaziland, Zambia and Zimbabwe are from Population-based HIV Impact Assessments conducted 2015–2017. All other countries are estimates from a UNAIDS special analysis, 2017. The methods for this analysis are described in the annex on methods of the UNAIDS report *Ending AIDS: progress towards the 90–90–90 targets* (2017).

* Age ranges are 15–64 years for Malawi and Zimbabwe, 15 years and older for Swaziland and 15–59 years for Zambia. All other countries are all ages.

FIGURE 10
PEOPLE LIVING WITH HIV WHO ARE VIRALLY SUPPRESSED, BY AGE AND SEX, FOUR COUNTRIES, 2015–2017



Source: The Malawi Population-Based HIV Impact Assessment (MPHIA), 2015–2016; The Zambia Population-Based HIV Impact Assessment (ZAMPHIA), 2016; The Zimbabwe Population-Based HIV Impact Assessment (ZIMPHIA), 2015–2016; The Swaziland Population-Based HIV Impact Assessment (SHIMS2), 2016–2017.

SMOKING, MEN AND HIV

The fact that many people living with HIV smoke tobacco is often forgotten among the many other pressing health priorities they face. However, as access to antiretroviral therapy increases and mortality from AIDS-related causes decreases, there is an increase in the relative importance of smoking as a significant cause of preventable illness and death among people living with HIV. These risks are higher among men, as they are more likely to be smokers and they tend to smoke more heavily than women. Survey data from 28 low- and middle-income countries show higher tobacco smoking rates among people living with HIV than among those who have not acquired HIV (62). Among the people living with HIV surveyed, 24.4% of men identified themselves as tobacco smokers, compared to 1.3% of the women (62).

An analysis of people living with HIV who participated in cohort studies in Europe and North America found that smoking was associated with a twofold increase in mortality among people living with HIV who had been accessing antiretroviral therapy for at least a year, and that life expectancy of smokers was on average eight years less than that of nonsmokers. The study concluded that people living with HIV with long-term engagement on treatment may lose more life years through smoking and associated lifestyle factors than through HIV (63). In the United States of America, where 40% of people living with HIV are smokers—double the rate of the general population—a recent modelling exercise concluded that lung cancer is a leading cause of death among people living with HIV. The study suggests that nearly one third (29%) of men who enter HIV care in the United States at the age of 40 years and continue to smoke heavily will die of lung cancer by the age of 80 years, and that 10% of an estimated 644 200 people (aged 20–64 years) living with HIV who are in care in the United States are expected to die from lung cancer if their smoking habits do not change (64).

Smoking increases the risk of developing tuberculosis, accounting for about one fifth of the world's tuberculosis burden (65). Smoking is also associated with poorer outcomes of tuberculosis treatment and an increased risk of recurrent tuberculosis (66–68). Evidence from South Africa suggests that men living with HIV who smoke are more likely to develop pulmonary tuberculosis (69).

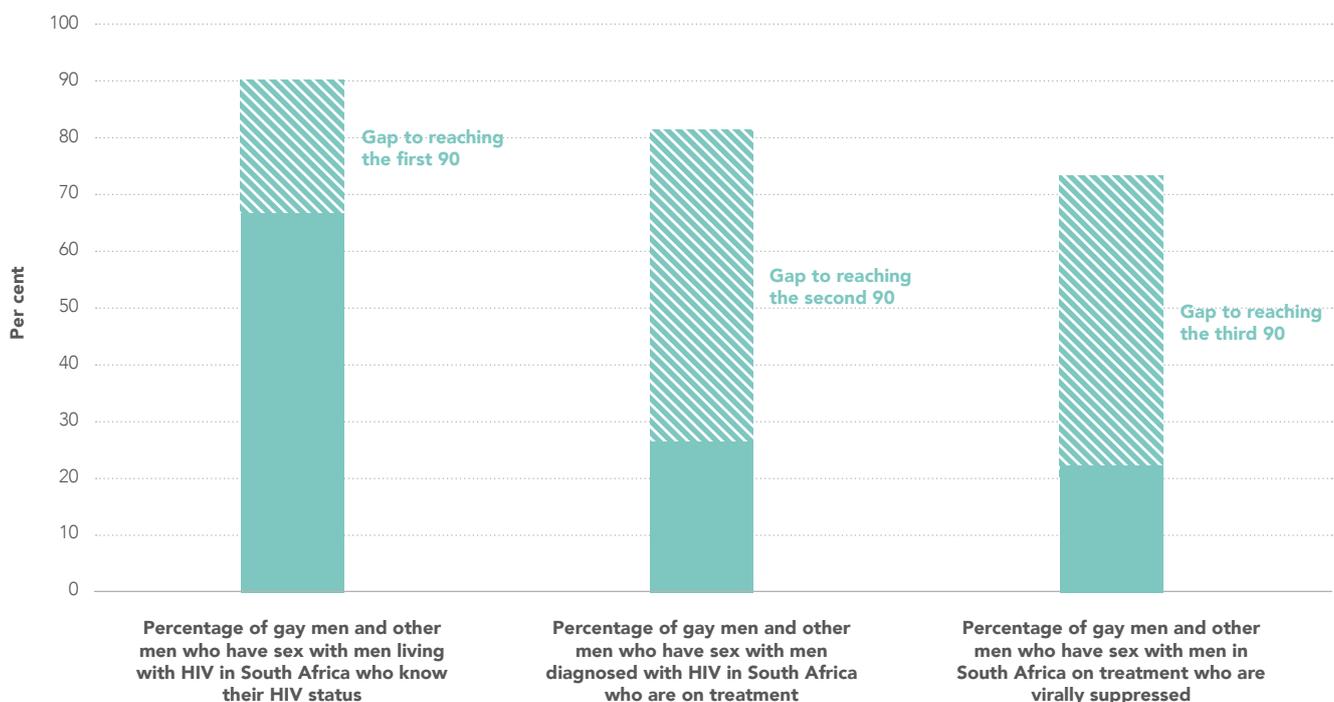
As the coverage and quality of HIV treatment continues to improve, advice and support for smoking cessation and reducing tobacco dependence should be a priority in the care of people living with HIV, potentially forming an important package of services that are offered to men to encourage them to access services.

HIV testing and treatment uptake among gay men and other men who have sex with men varies around the world. In several European and North American cities with robust responses and enabling legal and social environments—including London, New York City and San Francisco—HIV testing and treatment rates among gay men and other men who have sex with men have approached or exceeded the 90–90–90 targets (70–72). In sub-Saharan Africa and much of Asia, however, available data suggest low testing uptake within this key population. For example, among gay men and other men who have sex with men screened for the HIV Prevention Trials Network (HPTN) 075 trial in Kenya, Malawi and South Africa, only

about one in three HIV-positive men (37%) knew they were living with HIV (73). In Mozambique, fewer than 10% of gay men and other men who have sex with men living with HIV were aware of their serostatus (74). In Papua New Guinea, survey data show that less than one in four (24%) transgender women and gay men and other men who have sex with men living with HIV were aware of their HIV status (75). In an online survey in China, just over half of sexually active gay men and other men who have sex men who reported they had recently had sex without a condom said they had ever taken an HIV test (76).

Men living with HIV within key populations face formidable difficulties, including lower access to health services, greater likelihood of treatment interruptions, discriminatory behaviour among health-care workers and a range of social and structural barriers (77, 78). Linkages to care for gay men and other men who have sex with men living with HIV is challenging in most regions, notably in sub-Saharan Africa, where health-care workers seldom have training to address the special circumstances and health needs of this population. Gay men and other men who have sex with men in the region report frequent discrimination, harassment and denial

FIGURE 11
PROGRESS TOWARDS THE 90–90–90 TARGETS, GAY MEN AND OTHER MEN WHO HAVE SEX WITH MEN LIVING WITH HIV, 2013–2015, SOUTH AFRICA



Source: Scheibe A, Grasso M, Raymond HF, Manyuchi A, Osmand T, Lane T et al. Modelling the UNAIDS 90–90–90 treatment cascade for gay, bisexual and other men who have sex with men in South Africa: using the findings of a data triangulation process to map a way forward. *AIDS Behav.* 2017 Apr 25. doi: 10.1007/s10461-017-1773-y [Epub ahead of print].

of health services (79). This, in turn, affects their ability and willingness to access health and HIV services. For instance, a recent triangulation exercise based on data from South Africa indicates that while about 68% of gay men and other men who have sex with men living with HIV knew their serostatus, only 26% of these men were accessing antiretroviral therapy. Importantly, viral suppression rates were high (84%) among the men who were accessing treatment (Figure 11) (80). A study from Kenya found, however, that adherence to antiretroviral therapy was substantially lower among gay men and other men who have sex with men than it was among heterosexual men and women (81).

Globally, men are more likely than women to acquire HIV at an older age, to start treatment late, to interrupt treatment and to be lost to treatment follow-up (84–89). As a result, they face greater likelihood of death from AIDS-related causes while on treatment (90–93). These disparities are evident in longitudinal studies in sub-Saharan Africa and in national data (94). For example, analysis of clinic data from South Africa has shown that men were 25% more likely than women to die from AIDS-related causes, even though women were more likely to be living with HIV (95). Of the men who died from AIDS-related causes, 70% had never sought care for HIV, compared to only 40% of women (95).

Condom use

When used correctly and consistently, condoms are one of the most effective methods for preventing the transmission of HIV and other sexually transmitted infections, and for preventing unwanted pregnancies. Evidence linking reductions in new HIV infections to programmes promoting condom use and reductions in higher risk sex in the general population have been documented in urban Kenya, Malawi, South Africa, Uganda, Zambia and Zimbabwe (96–101), and among gay men and other men who have sex with men in Australia, India, Switzerland and the United Kingdom of Great Britain and Northern Ireland (102, 103).

In many countries, however, condom use among men is far from consistent. Less than 60% of adult men said they used a condom at last sex with a nonregular partner in 13 of the 35 low- and middle-income countries with recent national survey data (2012–2016) (53). In sub-Saharan Africa, the percentage of men who use a condom during higher risk sex declines dramatically among older men. Data from population-based surveys conducted in 23 countries in sub-Saharan Africa between 2008 and 2016 show that 36% of men aged 20–24 years did not use a condom during their last sexual intercourse with a nonmarital, noncohabitating partner, compared to 47% of men aged 30–34 years and 90% of men aged 55–59 years (Figure 13). These older men were more likely to be living with HIV, as HIV prevalence across all 23 countries peaks at 6.8% among men aged 40–44 years, among whom 50% did not use a condom during their last

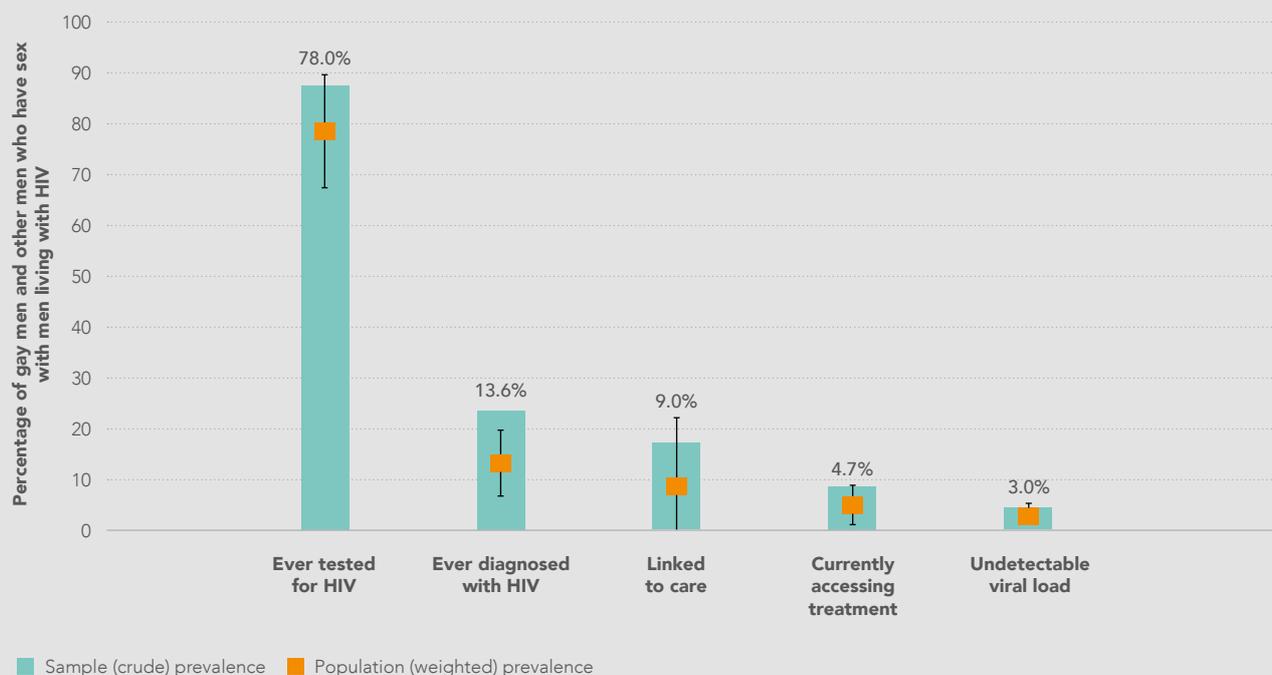
TESTING AND TREATMENT ACCESS AMONG GAY MEN AND OTHER MEN WHO HAVE SEX WITH MEN IN MOSCOW

In the Russian Federation, one of the few countries where the annual number of new HIV diagnoses continues to rise, there has been a major emphasis on HIV testing through Federal AIDS Centres, private facilities and nongovernmental services. Research in Moscow suggests that these testing efforts are benefiting gay men and other men who have sex with men, at least in major urban centres: a recent study found that 87% of gay men and other men who have sex with men had taken at least one HIV test, and 69% had been tested in the previous year. Fully 16% of the men were living with HIV (82).

However, service coverage for this population falters badly along the rest of the testing and treatment cascade. Only 9% of the men who have sex with men living with HIV had been linked to care, less than 5% were accessing antiretroviral therapy and 3% had suppressed viral loads (Figure 12). These extremely low rates suggest that gay men and other men who have sex with men are especially disadvantaged, particularly in the current climate of growing social stigma against them. The passage of so-called anti-gay propaganda laws in several provinces and municipalities appears to have emboldened homophobic behaviour, and it is aggravating stigma against gay men and other men who have sex with men (83).

New testing technologies, such as HIV self-testing, may offer alternatives for gay men and other men who have sex with men to determine their HIV status and, if necessary, engage in care. This advance, however, will need to be supplemented with drastic improvements in linkages to care and treatment adherence (82).

FIGURE 12
HIV TESTING AND TREATMENT CONTINUUM AMONG GAY MEN AND OTHER MEN WHO HAVE SEX WITH MEN LIVING WITH HIV, MOSCOW, RUSSIAN FEDERATION



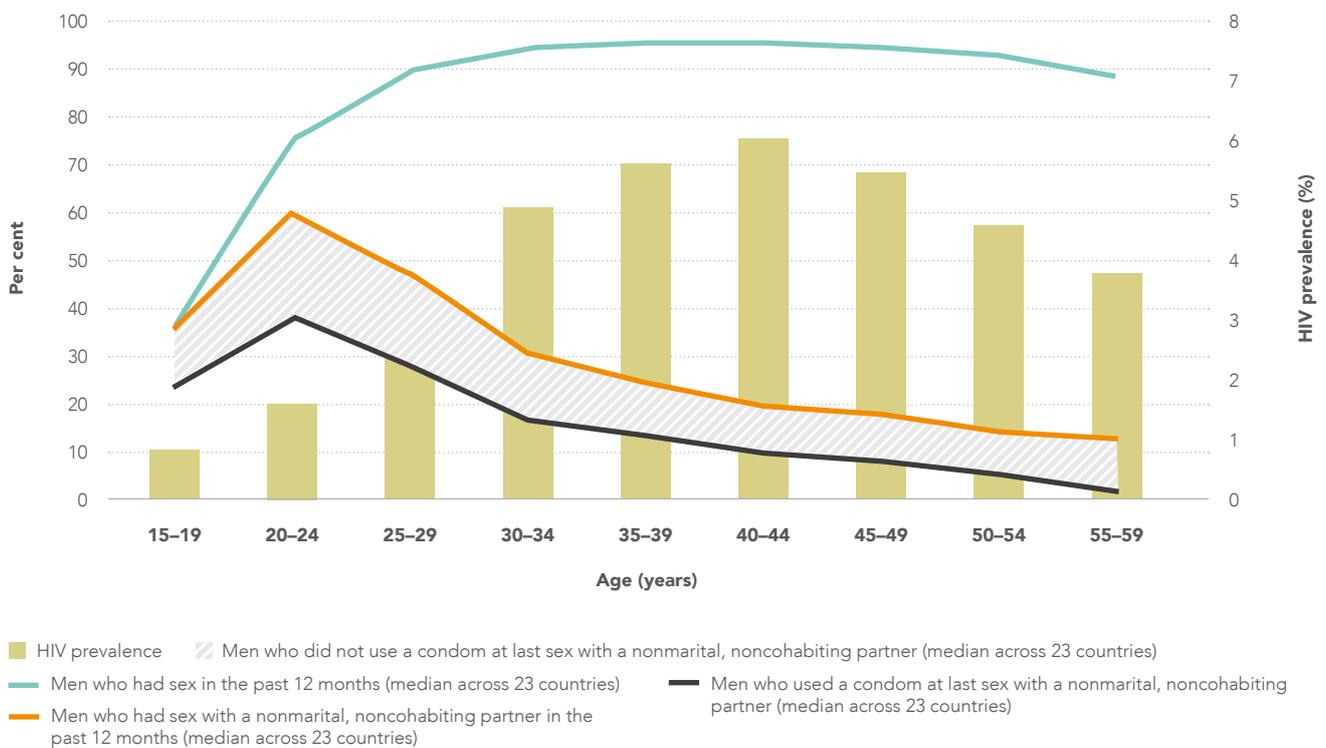
Source: Wirtz AL, Zelaya CE, Latkin C, Peryshkina A, Galai N, Mogilniy V et al. The HIV care continuum among men who have sex with men in Moscow, Russia: a cross-sectional study of infection awareness and engagement in care. *Sex Transm Infect.* 2016;92(2):161–7.

Surveys from sub-Saharan Africa show that condom use during high-risk sex is much lower in older men—data that appear consistent with studies showing a cycle of HIV transmission in high-prevalence settings from older men to younger women, and from adult women to adult men of a similar age.

sexual intercourse with a nonmarital, noncohabitating partner (53). The data appear consistent with cohort analyses that suggest there is a cycle of HIV transmission in high-prevalence settings from older men to younger women, and from adult women to adult men of a similar age (104).

In eastern and southern Africa, the region most affected by HIV, condom use during risky sex appears to be higher than other regions where population-based surveys have been conducted. Across all countries in the region with available data, almost two thirds (63%) of men aged 15–49 years who had more than one sexual partner said they used a condom the last time they had sex (53). However, higher risk sex appears to be on the increase. The percentage of men who reported having a nonregular sexual partner within the last 12 months increased in all 11 countries where multiple surveys were conducted between 2005 and 2016; the percentage of men who reported having sex with more than one sexual partner within the last 12 months increased in 10 of those countries; and the percentage of men who reported engaging in paid sex increased in five of those countries (105).

FIGURE 13
SEXUAL RISK BEHAVIOUR AND HIV PREVALENCE AMONG MEN, BY AGE, SUB-SAHARAN AFRICA, MOST RECENT DATA, 2008–2016



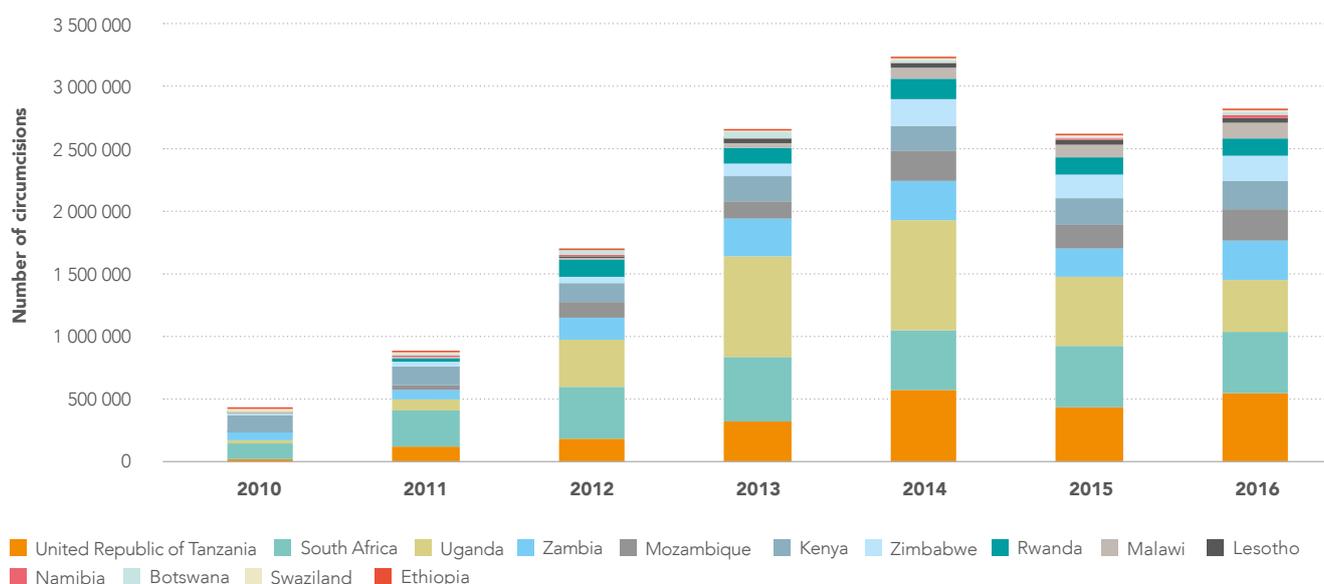
Source: UNAIDS 2017 estimates; population-based surveys, 2008–2016.

Voluntary medical male circumcision

For men and adolescent boys, voluntary medical male circumcision is a highly cost-effective, one-time HIV prevention intervention that reduces the risk of heterosexual transmission of HIV from women to men by about 60% (106–108). Additional benefits include reductions in the incidence of herpes simplex virus type 2 and human papillomavirus (108).

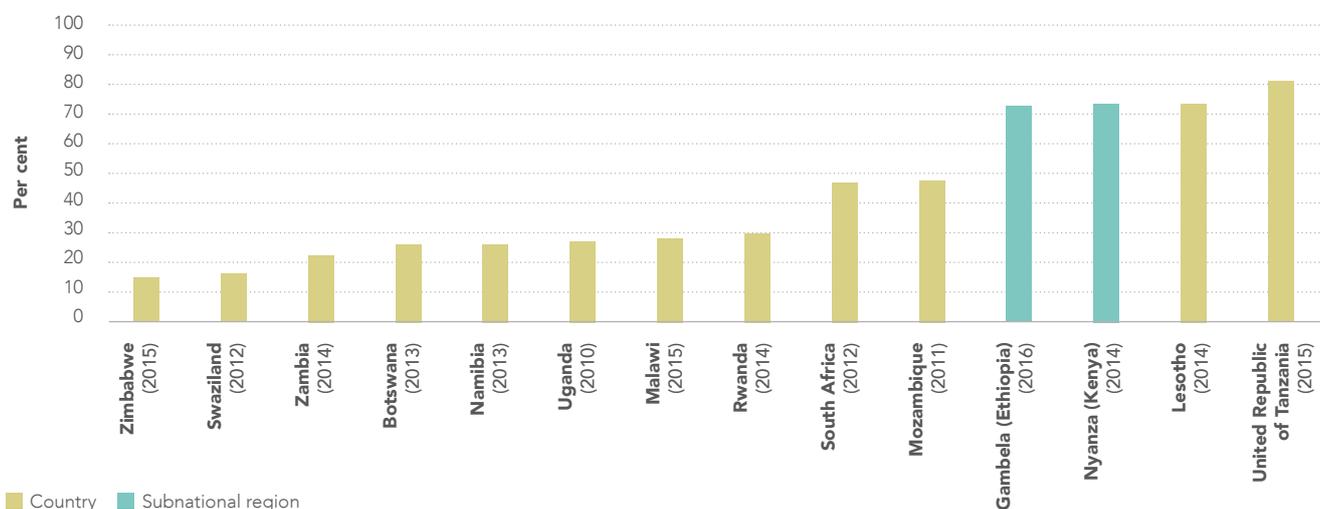
Great effort has been made to scale up voluntary medical male circumcision in 14 priority countries in eastern and southern Africa that have high levels of HIV prevalence and low levels of male circumcision. At the end of 2016, approximately 14.5 million voluntary medical male circumcisions had been performed since 2008 in the 14 priority countries.² As greater percentages of men are circumcised, efforts to reach the global targets are growing more challenging. Year-on-year progress peaked in 2014, when 3.2 million circumcisions were performed in priority countries. In 2015 and 2016, the annual number of circumcisions fell under 3 million (Figure 14). That number needs to increase to 5 million annually if the 2021 target of 90% coverage among boys and men aged 10–29 years in priority settings in sub-Saharan Africa is to be reached (108).

FIGURE 14
ANNUAL NUMBER OF VOLUNTARY MEDICAL MALE CIRCUMCISIONS, 14 PRIORITY COUNTRIES, 2010–2016



Source: Global AIDS Monitoring, 2017; Global AIDS Response Progress Reporting, 2010–2016.

2. South Sudan was named a priority country in 2016. The global target includes high-prevalence settings within 15 countries—the original 14, plus South Sudan. However, data were only available for 14 countries.

FIGURE 15**PERCENTAGE OF MEN (AGED 15 YEARS AND OLDER) WHO ARE CIRCUMCISED, 12 COUNTRIES AND TWO SUBNATIONAL REGIONS IN EASTERN AND SOUTHERN AFRICA, MOST RECENT DATA, 2010–2016**

Source: Population-based surveys, 2010–2016.

Trends varied among the priority countries. In Kenya, Malawi, Mozambique, Namibia, Swaziland and Zimbabwe the numbers of circumcisions conducted have steadily increased; in Botswana, Ethiopia, Lesotho, Rwanda, South Africa, the United Republic of Tanzania and Zambia, recent reductions were partially reversed in 2016. In Uganda, where massive scale-up was achieved in 2012–2014, annual circumcisions declined in 2015 and 2016.

Population-based survey data on circumcision suggest that there is room for much greater progress, with less than half of adult men (aged 15 years and older) reporting they were circumcised in 10 priority countries (Figure 15) (109).

Meeting the target requires encouraging uptake among successive new cohorts of sexually active adolescent boys and men. A recent review identified several barriers in voluntary medical male circumcision services for adolescents, including imposed feelings of shame, reiteration of traditional gender roles and responsibilities, lack of trust between service providers and adolescents, violations of privacy, and fear of physical pain and discomfort (110).

For many adolescent males in sub-Saharan Africa, voluntary medical male circumcision services may represent their first cognizant encounters with the health-care system, so the services present an especially useful opportunity for engaging adolescent males in services for HIV prevention, sexual and reproductive health, and other health needs (110). Yet this has often been a missed opportunity (111). For example, recent qualitative research in South Africa, the United Republic of Tanzania and Zimbabwe found that

Among countries that reported data to UNAIDS in 2017, 44 out of 100 reported having laws that specifically criminalize same-sex sexual activity; 84 out of 110 countries reported criminalizing some aspect of sex work; and 78 out of 90 countries reported that drug use or possession of drugs for personal use is a criminal offence or grounds for compulsory detention.

adolescents who agreed to voluntary medical male circumcision received scant information about HIV prevention and care, and they were rarely provided with condoms (111). Similarly, integrating voluntary medical male circumcision into broader health services that are useful to men has the potential to increase uptake of HIV and other health services, but that it is currently done too infrequently (112).

HIV prevention services for male key populations

Proven, cost-effective methods exist for preventing HIV acquisition within key populations, yet many countries do not use them or do so on too small of a scale to have a significant, lasting impact (113). Societal stigma towards key populations—chiefly sex workers, people who inject drugs, transgender people and gay men and other men who have sex with men—has driven legislation and policies in many countries that use criminal punishment against members of these populations.

Civil society organizations and academic institutions have reported that 72 countries criminalize same-sex sexual activity, 32 countries retain the death penalty for drug offences and over 100 countries criminalize some aspect of sex work (114–116). Among countries that reported data to UNAIDS in 2017, 44 out of 100 reported having laws that specifically criminalize same-sex sexual activity (117).³ Eighty-four out of 110 countries reported criminalizing some aspect of sex work, and 17 out of 116 reported criminalizing or prosecuting transgender people (117).⁴ Regarding drug use or possession of drugs, 78 out of 90 countries reported that drug use or possession of drugs for personal use is a criminal offence or grounds for compulsory detention, and nine out of 107 countries reported imposing the death penalty for drug-related offences (117).

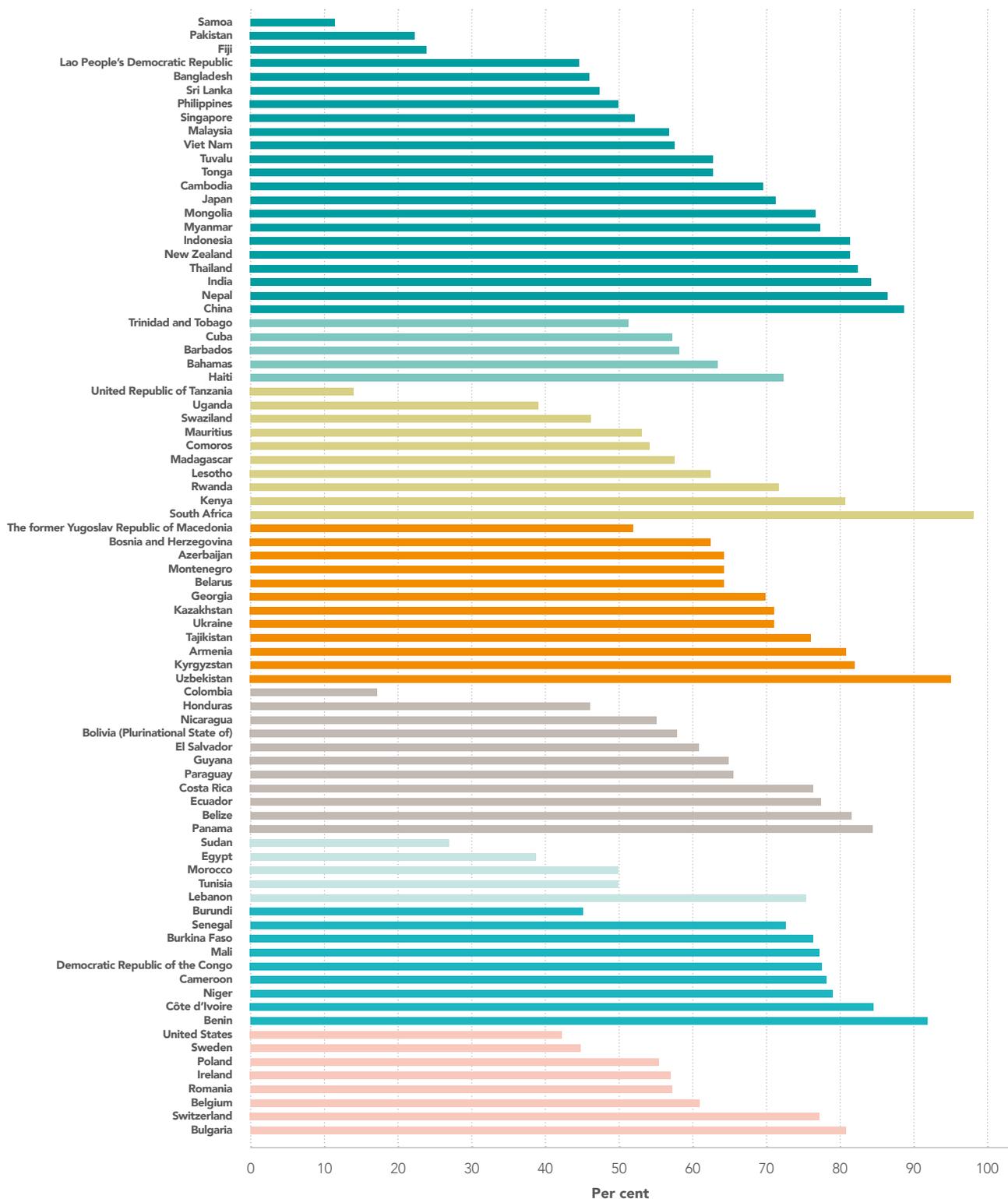
In recent years, several countries have passed new laws that further criminalize certain key populations, including anti-gay legislation in the Gambia, Nigeria and the Russian Federation (118). For example, following the passage of the Same-Sex Marriage Prohibition Act in Nigeria in 2014, a greater proportion of gay men and other men who have sex with men in the country reported being afraid to seek health care (119). In a recent study from Zambia, people who use drugs and gay men and other men who have sex with men cited stigma, discrimination and fear of arrest as reasons for avoiding HIV services (120).

3. Another 29 countries out of the 100 reported that they had no specific legislation criminalizing same-sex sexual activity, but they did not state that same-sex sexual activity was legal or decriminalized.

4. Countries also were asked if they have laws criminalizing cross-dressing. Overall, 23 out of 114 reporting countries stated that they criminalized or prosecuted transgender persons and/or criminalized cross-dressing.

FIGURE 16

CONDOM USE AT LAST ANAL SEX AMONG GAY MEN AND OTHER MEN WHO HAVE SEX WITH MEN, BY COUNTRY, MOST RECENT DATA, 2014–2016



Source: Global AIDS Monitoring, 2015–2017.

Condom use among gay men and other men who have sex with men varies hugely among countries. This reflects different social and legal contexts, and the varying availability and relevance of prevention services. Less than 60% of men in this key population said they had used a condom at last anal sex in about half of the countries that recently reported survey data to UNAIDS (Figure 16).

In high-income countries—where legal, policy and social barriers are often lower—ongoing high HIV incidence and high rates of other sexually transmitted infections among gay men and other men who have sex with men suggest that safer sex campaigns have lost traction. A recent systematic review of studies examining behavioural trends from 1990 to 2013 in Australia, Europe and the United States found increasing trends of anal sex without condom use among gay men and other men who have sex with men, which may be linked to increases in new HIV infections over the same period (121). In the United States, for example, the percentage of HIV-negative gay men and other men who have sex with men who engaged in anal sex without using condoms increased from 35% to 41% between 2011 and 2014 (122). Estimated new HIV infections increased by 23% from 2010 to 2014 among young men in the United States who belong to this key population (123).

Condom use is almost universally low among people who inject drugs and among transgender people (124). Among prisoners, at least 90% of whom are male, condoms and lubricants are rarely available, even though their provision in prisons is a simple, feasible and necessary intervention (49, 125).

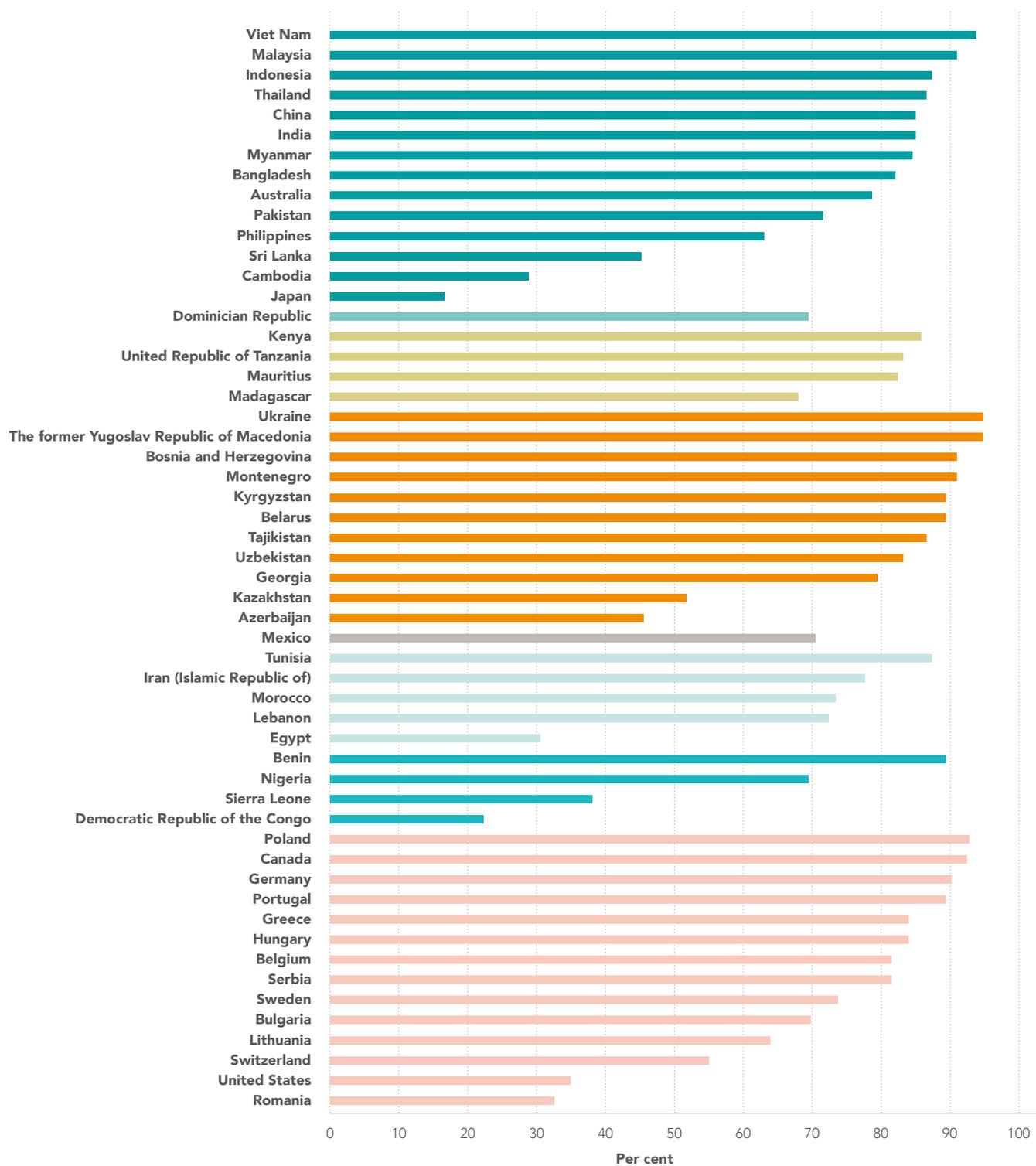
A small but growing number of national health systems have approved PrEP for use: as of June 2017, some level of PrEP access had been reported in more than 60 countries, at least twice as many as in 2016.

PrEP empowers individuals to take control of their own HIV risk discreetly through daily doses of antiretroviral medicines. When taken regularly, PrEP is highly effective at reducing HIV infections among people at high risk of HIV infection. Cities in North America and western Europe—such as Paris, New York and San Francisco—have been strengthening their HIV responses through rapid scale-up of PrEP, mostly among gay men and other men who have sex with men (126, 127). A small but growing number of national health systems also have approved PrEP for use: as of June 2017, some level of PrEP access has been reported in more than 60 countries, at least twice as many as in 2016. Overall, the number of people who started on PrEP between 2012 and early 2017 has been estimated at nearly 250 000 (128), with the majority (220 000) in the United States, where an estimated 124 000 people were taking PrEP monthly in 2017 (129). However, the global scale—and, consequently, impact—of PrEP remains limited.

Men comprise about 80% of the approximately 11.8 million people worldwide who inject drugs (47). Modelled projections suggest that even moderate coverage of harm reduction programmes could achieve a 78% reduction in new HIV infections and a 65% drop in deaths from AIDS-related causes among people who inject drugs by 2030 (130).

FIGURE 17

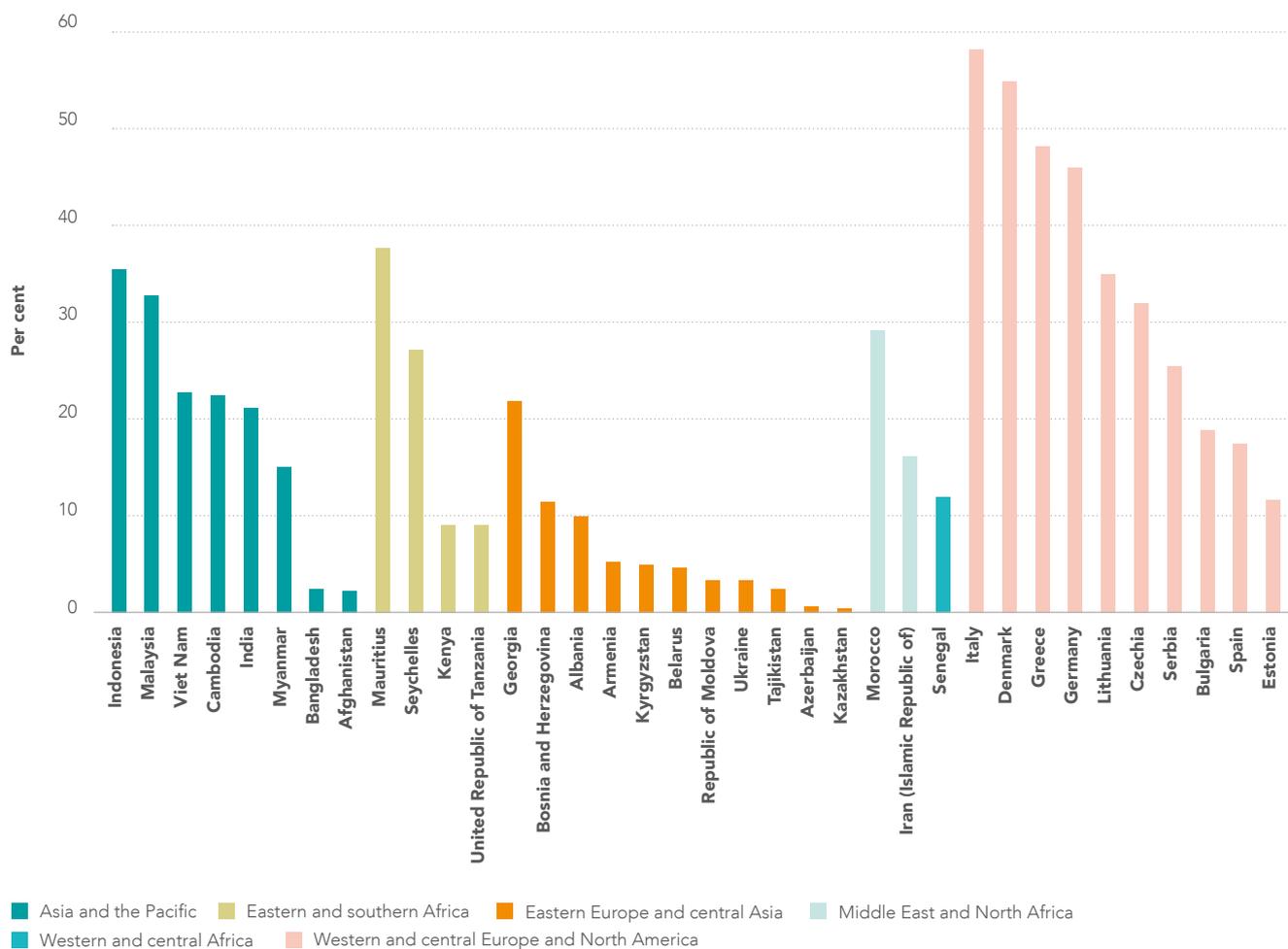
PERCENTAGE OF MEN WHO INJECT DRUGS USING A STERILE NEEDLE-SYRINGE AT LAST INJECTION, SELECTED COUNTRIES, BY REGION, 2015–2016



■ Asia and the Pacific
 ■ Caribbean
 ■ Eastern and southern Africa
 ■ Eastern Europe and central Asia
 ■ Latin America
 ■ Middle East and North Africa
 ■ Western and central Africa
 ■ Western and central Europe and North America

Source: Global AIDS Monitoring, 2016–2017.

FIGURE 18
PERCENTAGE OF MALE INJECTING DRUG USERS WHO RECEIVED OPIOID SUBSTITUTION THERAPY, SELECTED COUNTRIES, BY REGION, 2015–2016



Source: Global AIDS Monitoring, 2016–2017.

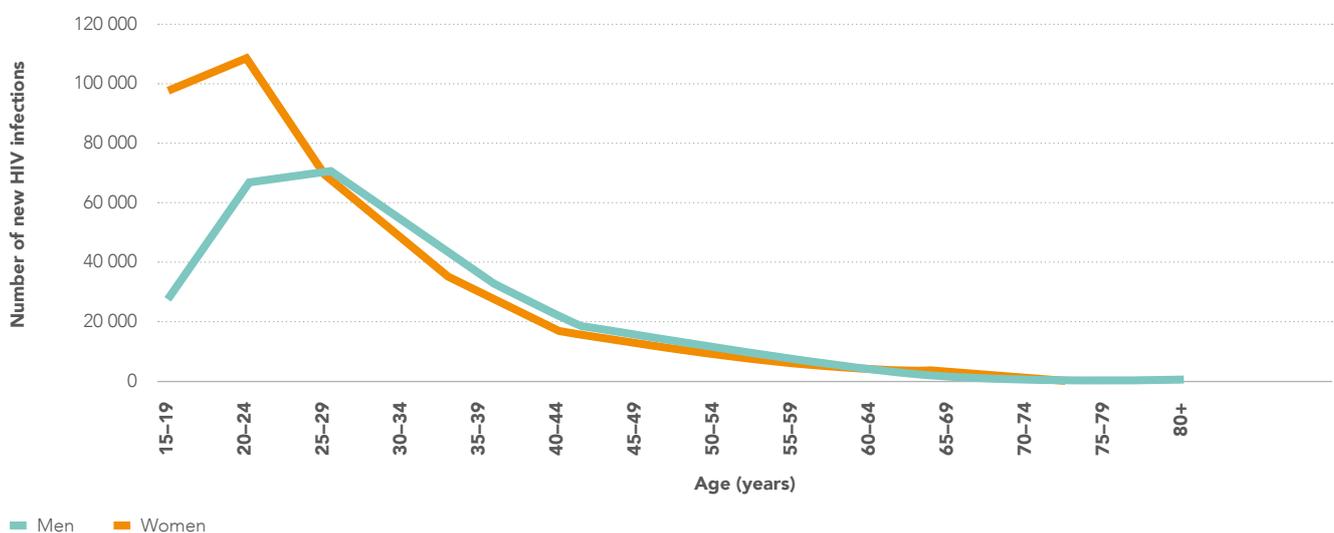
Sterile needles and syringes are unevenly available across countries that have drug-injecting populations. As a result, the percentage of men who inject drugs using sterile injecting equipment during their last drug injection varies greatly between countries (Figure 17). Coverage of opioid substitution therapy for men who inject drugs appears to be increasing in some countries, but coverage levels remain low (Figure 18). While community-based and other nongovernmental organizations manage the bulk of needle–syringe programmes in most countries, opioid substitution therapy tends to be government-provided (131).

Implications of low service utilization among men

Antiretroviral therapy, especially early initiation of treatment, significantly reduces the transmission of HIV to sexual partners (132). When men living with HIV are not diagnosed, do not start on HIV treatment or fail to remain on treatment, it jeopardizes not only their own health, but also the well-being and prospects of their partners, households, extended families and communities. The failure to reach greater numbers of men with HIV testing and early treatment, combined with the limited impact that other prevention interventions have on the risk of men acquiring or transmitting HIV, is driving ongoing cycles of HIV transmission in high-prevalence settings.

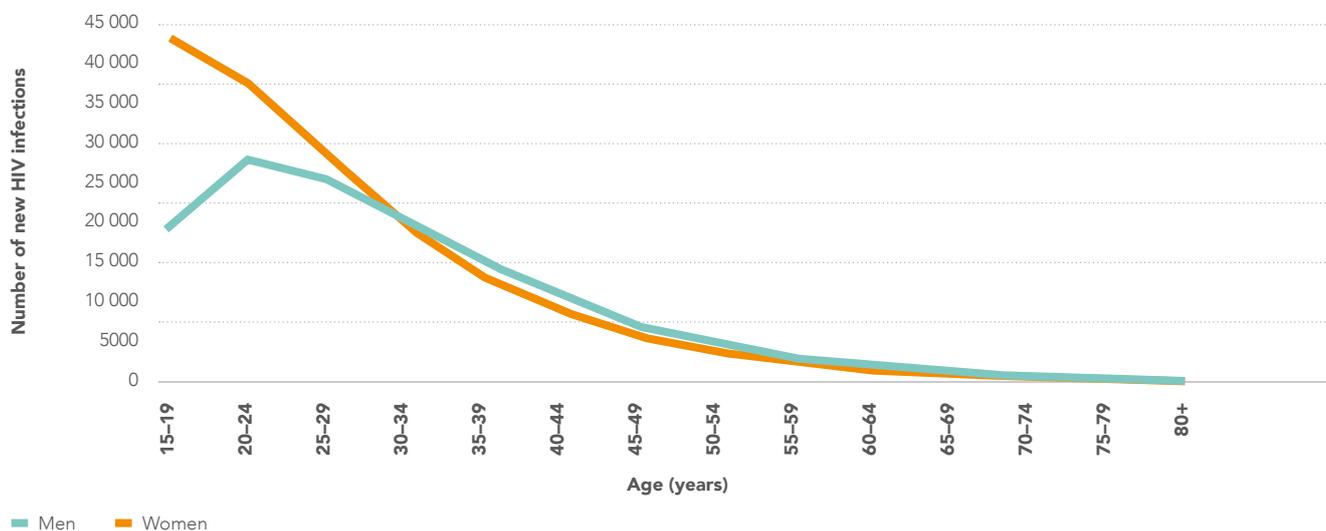
In eastern and southern Africa, young women aged 15–24 years are at especially high risk of HIV infection, while numbers of new infections among men tends to be highest among those aged 25–34 years (Figure 19). The pattern is similar in western and central Africa (Figure 20). A phylogenetic study conducted in KwaZulu-Natal, South Africa, suggests that age-disparate sexual relationships are an important factor within high-prevalence epidemics, with men often acquiring HIV from women of the same age, and young women often acquiring HIV from older men. As those young women grow older, the cycle continues (104). Other studies have found that the chances of acquiring HIV among young women appear to increase as the age gap between them and their male partners widens (104, 133). Such age mixing usually occurs in the broader context of pronounced gender inequalities, the generally superior economic status of men and harmful notions of masculinity.

FIGURE 19
ESTIMATED NEW HIV INFECTIONS AMONG ADULTS (AGED 15 YEARS AND OLDER), EASTERN AND SOUTHERN AFRICA, BY AGE AND SEX, 2016



Source: UNAIDS 2017 estimates.

FIGURE 20
ESTIMATED NEW HIV INFECTIONS AMONG ADULTS (AGED 15 YEARS AND OLDER), WESTERN AND CENTRAL AFRICA, BY AGE AND SEX, 2016



Men Women
 Source: UNAIDS 2017 estimates.



BLIND SPOT

Addressing
the blind spot

Addressing the blind spot

Men and boys must be active partners in the drive to change the norms that legitimize gender inequalities and gender-based violence, and that jeopardize the health and well-being of women, girls, men and boys.

Addressing the blind spot towards men and boys that exists in the HIV response requires tackling the underlying reasons for the current disparities in their use of services. Some reasons pertain to the ways in which HIV services are organized, provided and perceived at health facilities—issues that can be addressed relatively quickly. Others require more systematic and prolonged efforts to address deeper societal and structural issues. Crucially, efforts to improve service utilization among men and boys should not come at the expense of the rights of women and girls or their access to services. What is needed are approaches that can improve the health of men and boys and reduce their susceptibility to HIV while challenging their gender privileges. Men and boys must be active partners in this drive to change the norms that legitimize gender inequalities and gender-based violence, and that jeopardize the health and well-being of women, girls, men and boys.

Boosting men's use of health services

Men's comparatively poor health and limited health-seeking behaviours have become a growing source of concern in recent years, especially in high-income and upper-middle-income countries. This has spawned several attempts to improve men's access to and use of health services (1, 2). This concern has also focused attention on the health of marginalized men—such as men in prison and gay men and other men who have sex with men—who have a higher burden of disease and lower life expectancy than the general male population (2).

The establishment of men's health centres in several countries has successfully attracted more men to undertake health check-ups, especially when these facilities extend their operating hours into the evenings, as has been done in Scotland, United Kingdom, and the Netherlands (3). Men's use of primary care services also increased in Brazil when clinic operating hours were extended (4). Pharmacies are being used effectively to deliver health services to men, as seen in a heart disease screening campaign conducted by community pharmacies in Birmingham, United Kingdom, where almost two thirds of the screening uptake was among men (3). Other interventions have focused on reaching men in places of work or leisure, including pubs and sports clubs. A gender-sensitive programme focusing on overweight football fans in Scotland, for example, resulted in significant weight loss among male participants (5).

Efforts to engage men systematically in decisions about reproductive and sexual health have shown promise (8). Engaging men in projects for sexual and reproductive health, maternal and child health, and HIV prevention can positively influence their health-related attitudes and behaviours (9).

Providing sexual health and HIV services through clinics in Australia, Europe and North America that are tailored to the needs of gay men and other men who have sex with men has facilitated high uptake of these services (10–12). Training that improves the awareness and skills of health-care workers so that they become more alert and responsive to men's health issues and behaviours also has been effective, making health-care workers more able to communicate with men, including when raising and addressing potentially embarrassing matters (13).

Similarly, new communication technologies, such as mobile phone apps, are being used to link gay men and other men who have sex with men to health clinics that provide stigma-free services. The Health4Men project in South Africa, for example, uses mHealth technology to direct men to public health clinics where health-care workers have been trained and mentored to provide men from this key population with services that are free of prejudice and stigma (14).

BRINGING MEN INTO SEXUAL HEALTH CLINICS

Providing men's sexual health services in spaces traditionally reserved for women is a challenge, but it can be done. This was shown in San Diego, California, where family planning clinics successfully increased the screening of young men for sexually transmitted chlamydia (6). The clinics actively addressed issues that had been undermining men's sexual health, including the sense that sexual health is a women's issue, concerns over wait times and cost, and a perceived lack of support among peers for seeking sexual health care.

Clinics reached out to men through local community-based organizations to encourage their use of sexual health services and to increase awareness of men's services. Clinic processes also were adapted to reduce wait times, staff received training to boost their understanding of men's sexual health needs, and protocols and educational material were adapted to reflect men's issues. Community engagement was key to overcoming the fear that many men have of the stigma that may result from being seen at a clinic that provides sexual and reproductive health services (7).

The measures taken by the study clinics saw health visits by young men increase by 109% (as opposed to 18% at comparison clinics), and the number of chlamydia screening tests increased by 152% (in contrast to only 6% at comparison clinics). There was no change in services provided to women during the intervention period (6).

A NEW SERVICE PACKAGE TO HELP IMPROVE THE SEXUAL AND REPRODUCTIVE HEALTH OF MEN AND ADOLESCENT BOYS

Efforts to meet the diverse sexual and reproductive health needs of men and boys received a boost in late 2017 with the launch of a global sexual and reproductive health service package for men and adolescent boys by International Planned Parenthood Federation and the United Nations Population Fund (15). This comprehensive service package is built around a set of core components that are grouped into categories of clinical services and non-clinical support strategies.

The service package aims to support efforts to reach universal access to sexual and reproductive health and reproductive rights, as called for in the Sustainable Development Goals. It identifies seven essential and interlinked building blocks for enhancing men's sexual and reproductive health:

1. Using a gender transformative approach.
2. Delivering quality gender-transformative clinical services.
3. Meeting men's diverse sexual and reproductive health needs through different approaches.
4. Including a focus on young men and couples.
5. Adapting to the local context and needs.
6. Building a committed organization and workforce.
7. Adopting a primary prevention and integrated approach.

Improving HIV services for men and boys

Principles and approaches used to improve men's access to health services generally also are relevant to the continuum of HIV prevention, testing, treatment, care and support services. Strategies can be grouped along three lines: establishing a supportive legal and policy environment, ensuring that services address common barriers and accommodate the diverse needs and realities of men and boys (especially those who are marginalized), and challenging and changing harmful gender norms. These strategies have been successfully employed in a range of settings, illuminating a path for the systematic application of the comprehensive approach needed to address the gap and service utilization among men and boys and to contribute to efforts to achieve gender equality.

Changing harmful gender norms and behaviours

Adopting or rejecting norms about masculinity is not a simple matter of individual belief or choice. Gender norms are socially produced and embedded within social systems and social institutions—such as schools,

media and popular culture—and within networks of peers, colleagues, family members and communities (16). There is growing evidence that promoting positive models of manhood and changing harmful gender norms not only addresses structural barriers to men’s health behaviours, but that it also can improve the health of their partners (17, 18). When successful, such interventions can lead to more equitable domestic relationships, encourage protective sexual behaviours, reduce intimate partner violence and prevent the spread of HIV and other sexually transmitted infections (2).

Experiences show that many men are willing and able to abandon rigid and discriminatory gender roles, reject harmful versions of masculinity and embrace alternative, gender-equitable norms. Initiatives such as Yaari Dosti in India, Men as Partners in South Africa, the SASA! community mobilization programme in Uganda and various Stepping Stones participatory learning projects have been found to reduce both risk behaviours in men and intimate partner violence (19–24).

A systematic review of 64 studies across six continents found that students who received school-based sex education interventions had significantly stronger HIV knowledge and higher levels of condom use, and that they were more likely to delay their sexual debuts than students who lacked such education.

Integrating HIV services with actions aimed at reducing gender-based violence and supporting survivors of violence can help address the links between intimate partner violence, increased HIV risk and lower treatment adherence. Promising approaches include screening for intimate partner violence within standard antenatal care and other health services, and training health-care providers to provide support and referrals to women who have experienced such violence (25, 26). The Safe Homes and Respect for Everyone (SHARE) project in Uganda has shown that a combination of community programming and clinic-based services can reduce both intimate partner violence and HIV incidence in women (27). More countries need to follow suit: in 2016, only 53% of the 128 countries with a national AIDS strategy reported including interventions for improving gender relations and dealing with the links between gender-based violence and HIV in their strategy, and only 57% of those (39 countries) had a dedicated budget for implementing the interventions (28).

School-based comprehensive sexuality education is another opportunity to promote more equitable gender norms and to reduce HIV-related risks. Firmly grounded in human rights, including the rights of the child and the empowerment of children and young people, these programmes ensure that young people receive comprehensive, life skills-based sexuality education, and that they gain the knowledge and skills to make conscious, healthy and respectful choices about relationships and sexuality. A systematic review of 64 studies across six continents found that students who received school-based sex education interventions had significantly stronger HIV knowledge and higher levels of condom use, and that they were more likely to delay their sexual debuts than students who lacked such education (29). Comprehensive sexuality education programmes that have an explicit focus on gender rights and power dynamics also have been shown to be more effective than those that do not (30).

Diagnosing more men who are living with HIV

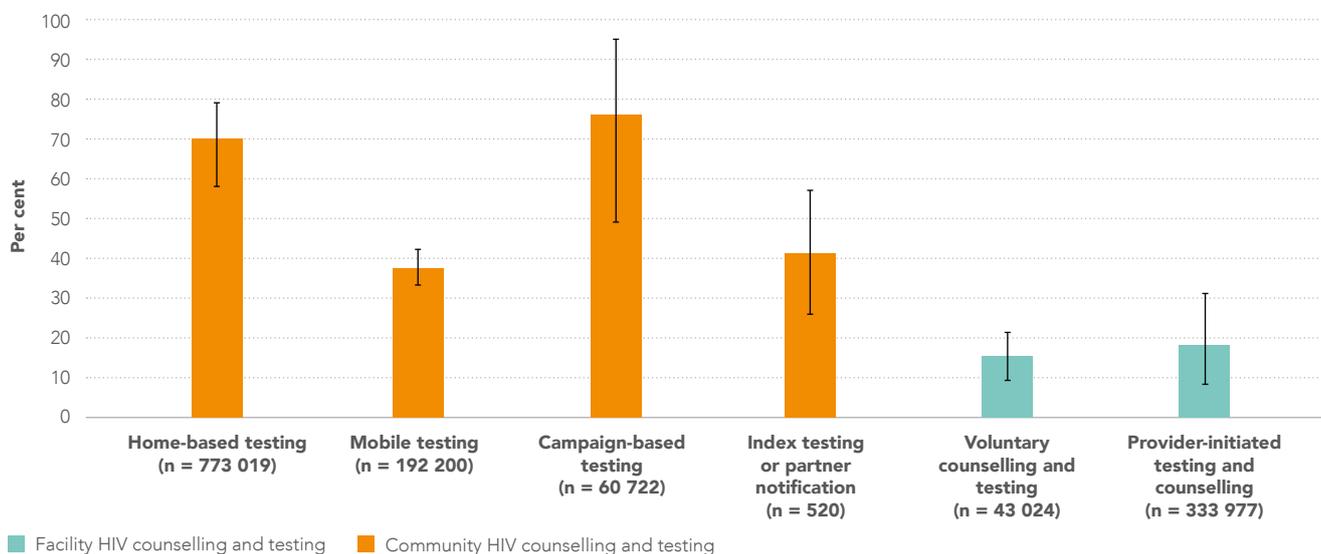
Men and boys living with HIV need to be diagnosed as early as possible, and they should be linked promptly and effectively to high-quality treatment and care. Several factors can encourage HIV testing among men, including men's concerns about their health, an accurate perception of their HIV risk, a sense of responsibility to their partners and families, knowledge of someone who has taken an HIV test and support from a partner or friend (31–33). An HIV test has also been shown to be more appealing when the service is more convenient, when men's concerns about stigma and confidentiality are addressed and when perceptions of health facilities as women's spaces are reduced (34, 35).

Studies suggest that many men prefer taking HIV tests outside of traditional clinical settings. Community-based testing and counselling methods, community outreach and self-testing are therefore important options. A range of other adaptations also are showing promise, including shifting operating hours and streamlining processes at clinics, undertaking active partner tracing, conducting couples testing or male-partner testing (including within programmes for preventing mother-to-child HIV transmission), making HIV testing a part of multidisease health campaigns, and integrating testing with sexual, reproductive and other health services (36, 37). Web-based campaigns to promote testing also have been successful in increasing the uptake of HIV testing among gay men and other men who have sex with men (38).

Community-based testing

Community-based testing and counselling includes home-based testing (involving door-to-door visits), mobile testing (provided at temporary facilities set up in communities) and other forms of outreach to workplaces and social venues. The approach has been shown to be highly acceptable to clients, with the potential to reach much greater numbers of men, and it can substantially boost the uptake of testing (Figure 21) (39, 40). In a large community study in three countries, for example, the introduction of community-based testing services alongside standard facility-based services coincided with a fourfold increase in the number of people in the United Republic of Tanzania receiving their first HIV test, and threefold and ninefold increases in Thailand and Zimbabwe, respectively (41).

In 2016, 98 countries reported using some form of community-based testing, many of them in sub-Saharan Africa, where the approach is reaching large numbers of first-time testers and diagnosing people living with HIV at earlier stages of HIV infection (28, 35). A systematic review of studies has also confirmed a clear preference for community-based testing approaches among gay men and other men who have sex with men (31), while more recent meta-analysis of studies from Asia, Europe and sub-Saharan Africa found that uptake among gay men and other men who have sex with men was higher when peer-led methods were used (42).

FIGURE 21**COMMUNITY-BASED HIV TESTING AND COUNSELLING ACHIEVES HIGHER TESTING COVERAGE* THAN FACILITY-BASED TESTING, SUB-SAHARAN AFRICA, SYSTEMATIC REVIEW OF HUMAN STUDIES PUBLISHED BETWEEN 2000 AND 2015**

Source: Sharma M, Ying R, Tarr G, Barnabas R. Systematic review and meta-analysis of community and facility-based HIV testing to address linkage to care gaps in sub-Saharan Africa. *Nature*. 2015;528(7580):S77–85.

* Coverage is defined as total number of people tested/total number of people in the target population.

To successfully reach men, community-based testing services must adapt to the realities of men's lives. In Botswana, a home-based testing project reached 85% of women but only 50% of men because visits were done during working hours, when employed people (many of them men) were away from home (43). A similar trial in South Africa conducted during the workday reached 74% of women and 50% of men (44).

Workplace outreach, however, can boost men's use of HIV services (see box). A trial in Zimbabwe, for example, had 53% uptake when workplace testing was offered on-site, compared to 19% for off-site testing, underscoring the importance of convenient testing access (45). Buy-in from both trade unions and employers is important, especially for programmes in large workplaces. Similarly, experiences in South Africa suggest that outreach work in communities would further enhance the success of testing in large workplaces (46).

Multidisease campaigns that integrate HIV testing and counselling with screening for other diseases and general health promotion are a promising approach, especially for reaching people who have never been tested (49–51). For example, when the Sustainable East Africa Research on Community Health (SEARCH) combined HIV testing with screening and treatment for diabetes, hypertension and malaria in communities in Kenya and Uganda, 86% of male community residents participated in community health campaigns or home-based testing (49).

GETTING HIV TESTING TO WORK

The International Labour Organization (ILO), UNAIDS and other partners launched the VCT@WORK Initiative in 2013 to provide adults with HIV testing services where they spend much of their daily lives—at work (47).

The aim of VCT@WORK was to reach working populations that are particularly vulnerable to HIV, such as entertainment and garment workers in Cambodia, mining and transport workers in India, cross-border traders and migrant workers in Mozambique, retail workers in South Africa, maritime workers in Ukraine and informal sector workers in Zimbabwe. A variety of approaches have been used. For example, testing services were integrated into multidisease and health screening campaigns in Mozambique and Zimbabwe, taken into large work sites in India and the Russian Federation, and provided by mobile units in informal trading zones in South Africa.

By the end of 2016, VCT@WORK had enabled 4.1 million workers in at least 18 countries⁵ to take an HIV test, of whom nearly 105 000 tested HIV-positive and 103 000 were referred for HIV treatment (47). Strikingly, 69% of the men reached with these services took an HIV test, compared with 67% of women—a reminder that, when services are appealing and convenient, the gap in service utilization can be closed (47). Men who accessed HIV testing through the initiative had a higher positivity rate than women, suggesting that the approaches used are reaching men who may be missed by other testing approaches.

Certain features appeared to be highly effective. Peer educators at workplaces were important promoters of testing and counselling services. In Mozambique, including testing services within broader health and wellness programmes helped defuse stigma around HIV testing and facilitated especially high uptake by men (48). Liaising with trade unions and employers helped service providers gain access to work sites and build trust within the workforce. Maximizing impact requires reliable tracking of referrals from workplaces to testing centres and then onward to treatment and care facilities.

5. Cambodia, Cameroon, China, Democratic Republic of the Congo, Egypt, Guatemala, Haiti, Honduras, India, Indonesia, Kenya, Mozambique, Nigeria, Russian Federation, South Africa, Ukraine, United Republic of Tanzania and Zimbabwe.

HIV self-testing

HIV self-testing is a convenient, low-cost and discreet approach, with many possible advantages for users who may not otherwise test for HIV (52). Experiences in sub-Saharan Africa suggest that when self-testing is provided as part of a community-based approach, it can increase uptake of testing services and facilitate linkages to care, especially among persons who are at high risk of HIV infection (40). A feasibility study conducted in Malawi suggested that home-based self-testing was men's preferred option for future testing, and a follow-up self-testing study in urban areas of Malawi recorded high uptake in two important and hard-to-reach groups: men and adolescents (53, 54). However, a current barrier to wider adoption of self-testing is the relatively high retail cost of the oral HIV test kit and its overly complicated instructions (55). While home-based tests, mobile testing and self-testing can overcome many of the hindrances associated with facility-based testing, they do not provide an HIV diagnosis—that still requires a

confirmatory test at a health facility. Proximity to clinics, follow-up and the structure of clinical operations therefore remain important considerations.

Couples testing

A study in Kenya found that distributing self-testing kits to pregnant and post-partum women achieved 91% testing coverage in male partners within three months, compared to 51% among men who were invited to take a test at a clinic.

People in stable relationships are estimated to account for close to two thirds of new HIV infections in sub-Saharan Africa, and half of those infections are the result of transmission within the couple (56). Couples testing and counselling is an effective, feasible and acceptable intervention that can reduce HIV transmission and increase condom use among serodiscordant couples (57).

Offers of testing and counselling for male partners of pregnant women can be appealing, especially when supported with messaging that testing could help protect the unborn child, or when it is combined with broader health screening (58). An evaluation of the Men as Partners programme in South Africa showed a 46% increase in men testing with their partners and an 88% increase in the number of men joining their partners for antenatal care visits (59). Similarly, a trial in Nigeria achieved 84% HIV testing coverage among male partners of pregnant women (compared with 38% in the control group) by linking the offer of an HIV test with screening for malaria, sickle cell genotype, hepatitis B and syphilis (60).

Home-based testing for male partners of pregnant women is an additional option. A study in Kenya found that distributing self-testing kits to pregnant and post-partum women achieved 91% testing coverage in male partners within three months, compared to 51% among men who were invited to take a test at a clinic (61). A similar approach proved highly acceptable to both women and men in a cluster randomized trial in Malawi, with men saying it spared them the possible loss of income and other costs associated with having to visit a clinic (62).

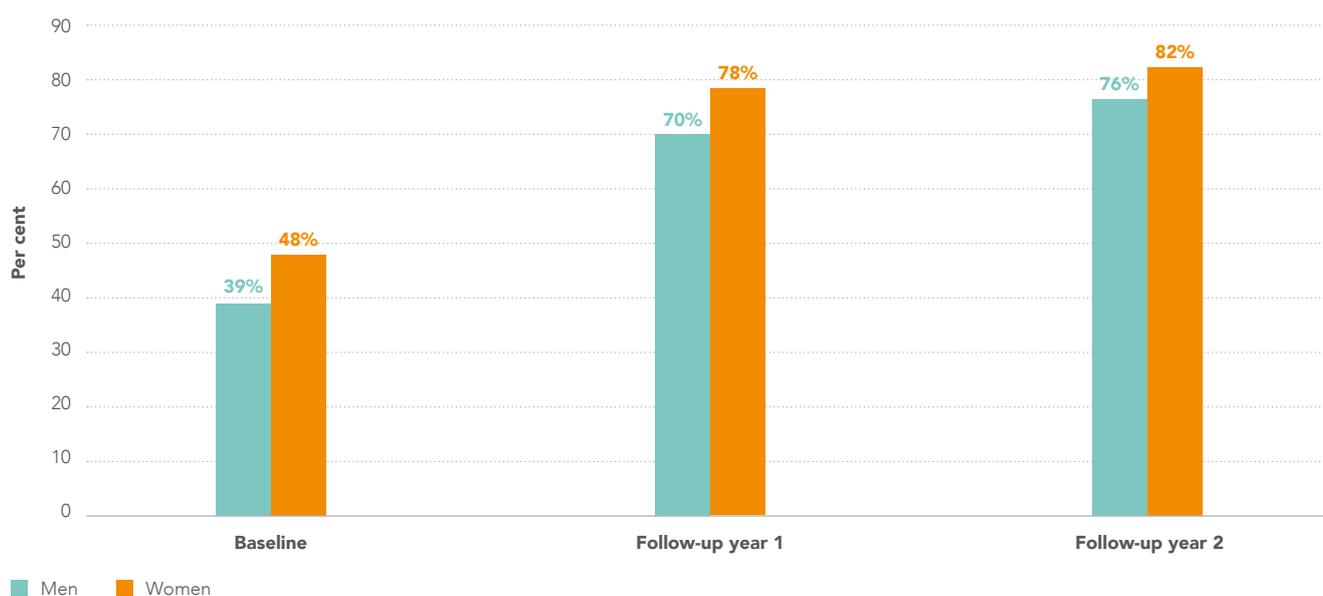
Active or assisted partner notification involves health-care workers tracing, notifying and then offering testing and counselling to the partners of persons recently diagnosed with HIV infection. Studies show it is an effective and safe strategy for identifying undiagnosed HIV cases (63). Importantly, active tracing does not appear to be associated with increases in partner violence or abuse (64). The approach tends to reach more men than passive notification (when newly diagnosed individuals are asked to notify their sexual partners themselves and refer them to a clinic) (41). Assisted partner notification could also be combined with PrEP. A large demonstration project has shown that offering time-limited PrEP to the HIV-negative partner in a serodiscordant couple is highly effective at preventing HIV infection while the seropositive partner initiates treatment and moves towards viral suppression (65). However, assisted notification does impose additional workload on health-care workers, which could be a challenge in settings with staff and other resource constraints. In Europe, partner notification has proven to be highly acceptable among gay men and other men who have sex with men (66, 67).

Enabling more men to start and stay on HIV treatment

Linking men who test HIV-positive to care and enabling them to remain on treatment and achieve stable viral suppression is a major challenge. For example, community-based testing and self-testing may sidestep some of the barriers associated with facility-based testing, but individuals must still travel to clinics (sometimes repeatedly) and wait to be linked to care and initiate antiretroviral therapy (44). For example, initial data from the large PopART study in Zambia show very high uptake of community-based HIV testing, but being linked to care was still a prolonged affair (68). A study among fishing communities in Uganda made a similar finding: home-based testing identified more people living with HIV than community event-based testing, but it linked only a small proportion of the diagnosed individuals to care (69).

Test-and-treat strategies that immediately initiate antiretroviral therapy once a person is diagnosed with HIV can strengthen linkages to treatment; they also are associated with high rates of retention and viral suppression (34). The results of some efforts have been particularly strong among men. When the SEARCH study in Kenya and Uganda used a test-and-treat approach alongside community-based and multidisease testing in 32 communities,

FIGURE 22
VIRAL SUPPRESSION AMONG MEN AND WOMEN LIVING WITH HIV, 16 SEARCH INTERVENTION COMMUNITIES, KENYA AND UGANDA



Source: Petersen M, Balzer L, Kwarsiima D, Sang N, Chamie G, Ayieko J et al. Association of Implementation of a universal testing and treatment intervention with HIV diagnosis, receipt of antiretroviral therapy and viral suppression in East Africa. JAMA. 2017;317(21):2196–2206. doi: 10.1001/jama.2017.5705

LEARNING BY DOING: REACHING MEN IN THE HPTN071 (POPART) TRIAL

A research study involving more than 1 million people in southern Africa is providing valuable lessons on how to reach more men and boys with HIV services.

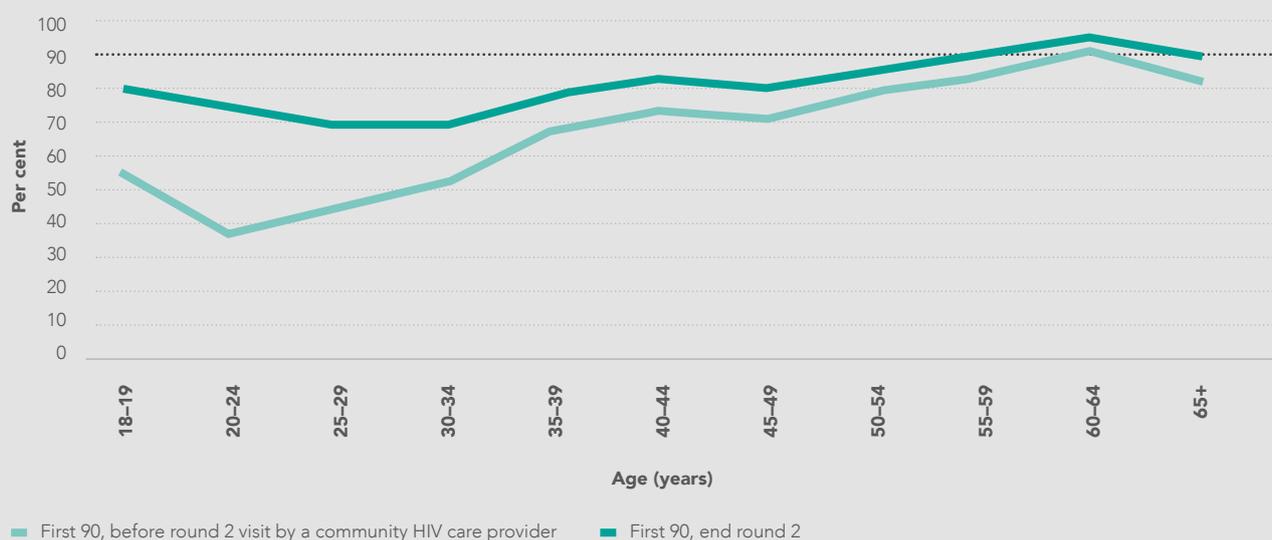
The HIV Prevention Trials Network HPTN071(PopART) trial is evaluating the impact of a combination HIV prevention package, including universal testing and treatment, on HIV incidence in 21 communities across Zambia and South Africa's Western Cape province (81). After one year of the intervention, it became clear that men in the target communities in Zambia were much less likely to know their HIV status than women: 77% of men knew their HIV status, compared with 90% of women (82). To address this gap, the study team explored alternative ways to reach men.

The team held focus group discussions with men and met with community advisors. These interactions revealed a desire for a range of broader health checks and other services, including information about community development, livelihood improvement and alcohol and drugs misuse. Three basic strategies for male-friendly services emerged: conduct home visits when men are most likely to be at home, take HIV services to where men work and socialize, and provide services that are most likely to interest men.

A campaign was launched, entitled Man Up Now, that included weekend community health events promoted by staff and volunteers. Large tents were erected on event days, and residents were offered a range of health services, including blood pressure readings, eye and dental check-ups, diabetes screening, voluntary medical male circumcision services and tests for tuberculosis, HIV and other sexually transmitted infections. Lottery tickets were handed out as incentives (83).

Although Man Up Now focused on engaging men, about 20% of the participants were women. Blood pressure readings, eye tests and screening for diabetes were the most popular services. Despite the turnout, only about one quarter of the men participating in the weekend events had not previously been reached by the study—a somewhat disappointing return on the additional time and resources invested (83). The cost of reaching each new man through the campaign was estimated to be about US\$ 50 (84).

In addition, the study team changed the timing of home visits by community HIV service providers in South Africa. As a result, they found that more men took HIV tests on Saturdays and when door-to-door visits were carried out from 11:00 to 19:00, as opposed to 09:00 to 17:00 (85). In Zambia, workplace testing services also improved uptake of HIV testing, especially in combination with community-based services (83). However, many young men aged 20–35 years were still not engaged in services, and after two years, the target of 90% of men living with HIV knowing their HIV status had not been reached, with younger age groups having the largest gap (Figure 23) (86).

FIGURE 23**KNOWLEDGE OF HIV STATUS AMONG MEN LIVING WITH HIV BEFORE AND AFTER COMMUNITY-BASED SERVICE DELIVERY, BY AGE, ROUND 2 OF THE HPTN 071 (POPART) TRIAL, ZAMBIA, 2015–2016**

Source: Global sexual and reproductive health service package for men and adolescent boys. London and New York: International Planned Parenthood Federation, the United Nations Population Fund; 2017.

In response, an HIV self-testing trial was conducted in four of the Zambian communities being reached by PopART. After three months, the percentage of men who knew their HIV status was significantly higher in the areas where self-testing was offered (60% as opposed to 55%), with the biggest increase achieved among young men aged 16–29 years (87)

These modest gains are a reminder that there is no silver bullet for engaging men in health services. Men differ, as do their life circumstances. Nonetheless, these efforts highlighted several important lessons:

- ▶ Community-based HIV service providers need to provide other services that appeal to men and meet their needs.
- ▶ Since men are unlikely to travel to health facilities unless they feel ill, services should reach out to them in places and at times that are convenient.
- ▶ Incorporating HIV testing services within wider health campaigns is an effective approach for increasing uptake among men and women, and it is particularly effective for identifying substantial numbers of men living with HIV and linking them to treatment.
- ▶ Men find community-based self-testing interventions appealing. HIV self-testing should be considered as a complement to other strategies to deliver HIV testing services in communities, especially for men and mobile populations who are difficult to reach.

it achieved viral suppression among 76% of all men living with HIV in the service area within two years (Figure 22) (70).

The ENGAGE4HEALTH study in Mozambique also found that both linkages to care and retention in care were higher when people were offered immediate initiation of treatment and sent phone message reminders: 70% remained in care after 12 months, compared to 46% in the control group (71). Using a similar approach, the Link4Health study in Swaziland achieved high rates of treatment initiation and retention, with no difference between men and women (72).

While not all methods for improving treatment adherence work everywhere, studies show that adherence among men and women tends to be strongest when services address people's concerns about confidentiality and stigma, when services are decentralized and organized in ways that minimize travel and wait times, when trusting relationships exist between patients and caregivers, and when patients recognize the effect of treatment on their health and their ability to provide for their partners and families (73–76). Flexible clinic hours, awareness training for health-care workers about men's specific concerns and needs, streamlined and less complicated referral processes, and more convenient pick-up arrangements for medicines have been shown to be particularly effective at increasing treatment adherence among men (34).

Since the cost and inconvenience of travelling to clinics is a common reason for failing to link to care or for dropping out of care, approaches that include the option of community-based treatment should be considered. Current evidence shows that community-based antiretroviral therapy is not inferior to facility-based programmes, and it may even be cost-saving (77–79). In Malawi, a study found that treatment uptake was higher when people living with HIV had the option of initiating treatment with the assistance of a community health-care worker at home (rather than having to go to a clinic or hospital), and that there was no difference in retention after six months (80). Dispensing antiretroviral medicines outside health facilities also may increase retention. Home, workplace or mobile pickup sites for medicines can be particularly convenient for men, and home visits by community health-care workers and mobile phone message reminders can be useful for supporting their retention in care (39).

Increasing HIV prevention among men and boys

The basic elements of successful HIV prevention are well established, but the ways in which interventions are prioritized, packaged and implemented should reflect the particular realities and needs of men and boys in different settings.

Greater reductions in new HIV infections can be achieved through a more aggressive roll-out of innovations that are proven to increase uptake of services among men and boys.

Recent modelling underlines the massive potential impact of greater investment in condoms. If the entire unmet need for condoms across 81 countries between 2015 and 2030 was filled, it could prevent up to 400 million unwanted pregnancies, 16.8 million new HIV infections and more than 700 million sexually transmitted infections (88).

The supply, distribution and use of male condoms and lubricants can be improved through diversified social marketing, the integration of condom promotion and distribution within other health services, and by finding the most effective mixes of private and public distribution.

Creative marketing and trendsetting can counter the negative preconceptions and questions that persist about condoms, especially among men. Such efforts need to reach men where they socialize. Campaigns on condom use that focus on football fans, for example, have been staged in many countries (89). There also is great potential for scaling up interventions in bars and other drinking venues where customers may be especially likely to meet non-regular sexual partners (90). For instance, a project in South Africa that recruited male drinkers to special workshops reported an increase in men's awareness of safer sex behaviours and increased condom use (91).

Reaching voluntary medical male circumcision targets in the 14 priority countries of eastern and southern Africa is an important pillar in the drive to end AIDS as a public health threat by 2030. It is also a valuable opportunity to deliver a range of other HIV services and to link men to wider health services.

Reviews of demand generation efforts in sub-Saharan Africa have found that effective strategies for increasing the uptake of voluntary medical male circumcision include the following:

- ▶ Financial compensation to relieve the transport and opportunity costs associated with undergoing the procedure.
- ▶ Using peer influence, including through sports-based programmes.
- ▶ Tailoring messages that focus on benefits besides HIV prevention, such as hygiene and sexual pleasure.
- ▶ Engaging traditional and religious leaders.
- ▶ Deploying community mobilizers to address individual concerns (92, 93).

Imaginative social marketing can be used to increase social acceptance and demand for the procedure. In Zambia, market research was used to generate demand creation tools segmented for men with different knowledge and attitudes, which allowed community health-care workers to tailor their

messaging to potential clients. Health-care workers who piloted the new tools booked 26% more circumcision appointments, which in turn led to a 39% increase in actual circumcisions compared to the standard level of care (94).

In South Africa, behavioural science and mobile technology have been employed to increase uptake of voluntary medical male circumcision. In three provinces where 97% of households have access to mobile phones, booking a circumcision appointment was made easier through a toll-free number, and SMS text messages were sent for booking confirmations and reminders the day before the appointment. Over a two-month period, more than 48 000 people accessed the toll-free number and more than 11 000 men (24%) were circumcised. The number of circumcisions performed in the pilot areas in November 2016 was 30% higher than it was in the previous year (95).

Service packages that are relevant and attractive to youth are especially important for reaching new cohorts of adolescents. Adolescent-focused services seem to be most effective when they engage parents and the wider community, occur in an adolescent-friendly environment and provide counselling in a manner that is easy to grasp (96). In Swaziland, a three-day male mentoring camp is successfully allaying fear and suspicion about male circumcision among young men (15–29 years) and providing a comprehensive package of health services. The residential camp combines edutainment games and cultural practices, sensitization on masculinity and gender awareness, and information on HIV and male health issues and services. At the end of the camp, participants are offered a comprehensive package of male health services, including voluntary medical male circumcision and testing and counselling for HIV and other sexually transmitted infections. Uptake of voluntary medical male circumcision and HIV testing were 86% and 87%, respectively, compared to a national average of 19% (97).

In the United Republic of Tanzania, the recruitment of early circumcision adopters as voluntary community advocates contributed to a fivefold increase in the number of circumcisions conducted at 27 sites (98). A relatively intensive method that has successfully increased uptake in South Africa used trained male circumcision advisers to perform motivational interviews and financial compensation for those who undergo the procedure.⁶ Seventy per cent of male participants agreed to be circumcised, with the highest uptake among men in their 40s. Most of the men who opted for the procedure said they had taken the decision after discussing the matter with partners, friends or relatives (99).

Incentives have also been successfully used within primary and secondary schools in Malawi to increase the uptake of voluntary medical male circumcision. When recipients received a voucher that covered the cost of transport, their caregiver for the procedures and two follow-up visits, they were seven times more likely to be circumcised than individuals who did not receive a voucher (100).

6. The financial compensation was equivalent to 2.5 days of work at the minimum wage in South Africa.

Effective strategies for increasing the uptake of voluntary medical male circumcision include: financial compensation to relieve the transport and opportunity costs; peer influence, including through sports-based programmes; tailoring messages that focus on benefits besides HIV prevention; engaging traditional and religious leaders; and deploying community mobilizers to address individual concerns.

Demand-creation costs money, and there are concerns that low- and middle-income countries could struggle to maintain robust circumcision programmes without international support. However, a study conducted in the Tabora region of the United Republic of Tanzania found that demand creation efforts—including the use of peer promoters, creation of age group-specific waiting areas, information sessions for female partners and messages that focused on older men—more than doubled the number of male circumcisions conducted, which in turn led to lower unit costs (101).

Voluntary medical male circumcision programmes are more affordable when they are used to increase utilization of other HIV and health services. A review of voluntary medical male circumcision programmes in five countries found that 94.5% of clients were tested for HIV; of those who did, 1.2% of the clients tested positive, with 86.4% of those representing new diagnoses (102). Circumcision programmes are thus an important opportunity to improve knowledge of HIV status, linkage to care, antiretroviral therapy coverage and viral load suppression among men living with HIV. They are also an opportunity to advocate for gender equality, to address harmful cultural norms and sexual violence, and to emphasize the important role of men in their family's health.

Voluntary medical male circumcision can also be offered as part of an integrated package of health services that includes risk reduction counselling, sexual health information, condom promotion and HIV testing and referral to treatment (92). Long-term sustainability of male circumcision for HIV prevention is being explored through the introduction of early infant male circumcision within maternal and child health services (103, 104).

USING FOOTBALL TO MAKE HEALTHY LIVES THE GOAL

Sport offers big opportunities for promoting behaviour change among young people, including boys and young men. A leading example, Grassroot Soccer, uses football to educate and mobilize at-risk youth to overcome health challenges and live healthy lives. Its SKILLZ curriculum uses football-based activities to engage adolescent girls and boys around health risks and to train young community leaders as health educators. In addition to creating safe spaces for young women and girls, Grassroot Soccer uses football to encourage healthy habits and equitable gender norms among teenage boys, and it assists with referrals to various health services, including sexual and reproductive health services (105). The programme has reached almost 2 million people in 45 countries, and its graduates show significant improvements in knowledge of risky behaviours and awareness of local resources for support (105).

Among Grassroot Soccer's activities is a brief, low-cost intervention known as Make-The-Cut-Plus, which aims to boost demand for voluntary medical male circumcision among males (aged 14–20 years) in secondary schools in Botswana, Kenya, South Africa, Swaziland, Zambia and Zimbabwe. The project employs a trained, recently circumcised young male coach who leads one-hour football-themed sessions at schools. Afterwards, the coach follows up with participants who expressed interest in voluntary medical male circumcision and arranges transport to a clinic. A study conducted at 26 schools in Bulawayo, Zimbabwe, found that the intervention more than doubled the odds of service uptake (106). The personal interaction and support of the football coach appeared to be a key factor in the increased uptake of voluntary medical male circumcision (107).

Reforming or removing discriminatory and punitive laws and implementing protective legal norms empowers individuals and communities, providing an environment where people feel they can access health services safely, with dignity and on an equal basis with others.

Expanding HIV services for male key populations

Many of the strategies for reaching more men and boys in the general population with HIV services also apply to men and boys within key populations. These strategies include adapting service opening hours to suit client needs, training and supporting health-care workers to overcome personal and institutional discriminatory attitudes and actions, and ensuring that services are delivered respectfully and confidentially.

Argentina has established a policy on key population-friendly health services in order to reduce stigma and discrimination towards gay men and other men who have sex with men, transgender people and sex workers, and to increase their access to (and uptake of) HIV-related and other health services. Civil society organizations and networks are involved in outreach activities and the design and implementation of services. Twenty-one key population-friendly health centres have been established within the public health system, with interdisciplinary teams of health and social workers providing a variety of health and social services (and in some cases, legal or referral services) that are tailored to the needs of lesbian, gay, bisexual and transgender (LGBT) populations and sex workers. For example, services are open in the afternoon and evening to make it easier for people from key populations to access them (108). In Kenya, providing health-care workers with a two-day web-based sensitivity training course decreased homophobic attitudes and increased their knowledge of health issues faced by gay men and other men who have sex with men. The biggest impact was seen among workers who had the most negative attitudes towards gay men and other men who have sex with men (109).

In Viet Nam, increased survival rates among people living with HIV who inject drugs was achieved through the introduction of community-based care and stigma reduction interventions and individual counselling interventions. Individuals who received both community and individual interventions were more likely to initiate antiretroviral therapy; they also had the highest survival rates. The results were most dramatic among those who were at an advanced stage of disease (CD4 cell count <200 cells/mm³) and not accessing treatment when they entered the study: 84% were still alive after 24 months when they received both community and individual interventions, compared to 61% who received the usual standard of care (110).

Reforming or removing discriminatory and punitive laws and implementing protective legal norms empowers individuals and communities, providing an environment where people feel they can access health services safely, with dignity and on an equal basis with others. It also strengthens mechanisms

TRANSGENDER MEN, HIV RISK AND SERVICE ACCESS

Transgender men (female-to-male transgender people) are rarely considered by HIV programmes that are focused on men who have sex with men, and data on them are sparse. However, the available evidence suggests that a significant proportion of transgender men engage in behaviours that elevate their risk of HIV acquisition. For example, a review of the medical records of 23 transgender men at a Boston health-care facility found that a quarter had engaged in sexual risk behaviour in the previous three months, and that depression, anxiety and alcohol use were common (113). A respondent-driven sampling survey in Ontario, Canada, found that 21% of transgender men reported at least one male sexual partner within the past year (116). Transgender people are rarely considered within health-care education and policy, and health-care workers are often ill-prepared to provide appropriate services and care (117).

Similar to other transgender people, transgender men often face stigma and discrimination, and they frequently report negative experiences in health-care settings (118, 119). These experiences may lead to the refusal, delay or avoidance of care. In a global survey focused on gay men and other men who have sex with men, for example, transgender men who were included in the study reported lower access to HIV testing than their cisgender counterparts (117). These studies support calls from transgender community activists for transgender men to be included in research and guideline development for the expansion of PrEP, including offering PrEP within gender transition services (120, 121). Access to HIV testing also can be improved by integrating it with gender-affirming primary care: for transgender men, peer-assisted HIV testing and self-testing may be viable options for increasing uptake of HIV testing (122). Overall, sexual health clinics require the clinical competence to attend to transgender people's bodies and specific needs.

The California HIV/AIDS Research Program is funding three demonstration projects to learn more about PrEP for transgender people. The studies will examine the effect of a trans-specific social marketing campaign and online education to increase knowledge about PrEP, as well as a sexual risk assessment tool, peer navigators and adherence reminders delivered via text messaging (123).

and institutions, increasing access to HIV services, health care and other social services. For example, Portugal's decriminalization of the possession of drugs for personal use has been accompanied by an ongoing decline in the incidence of HIV infection related to injecting drug use (111).

When same-sex sexual behaviour and relationships are not punishable by law, gay men and other men who have sex with men and transgender people are better able to seek out the health care and other services they need. In 2009, the High Court of Delhi overturned laws criminalizing same-sex sexual behaviour on the basis that these laws violated the Indian Constitution, which provides for the equality of all Indian citizens and the right to live with dignity (112–114).⁷ A 2013 study found that the ruling had resulted in increased self-acceptance and self-confidence among gay men and other men who have sex with men, other sexual minorities and outreach workers (112). It had also

7. This decision was reversed by the Supreme Court in 2013. In 2015, the Court agreed to review the decision again.

contributed to reduced harassment by state actors and increased societal and familial acceptance.

Maximizing the impact of pre-exposure prophylaxis

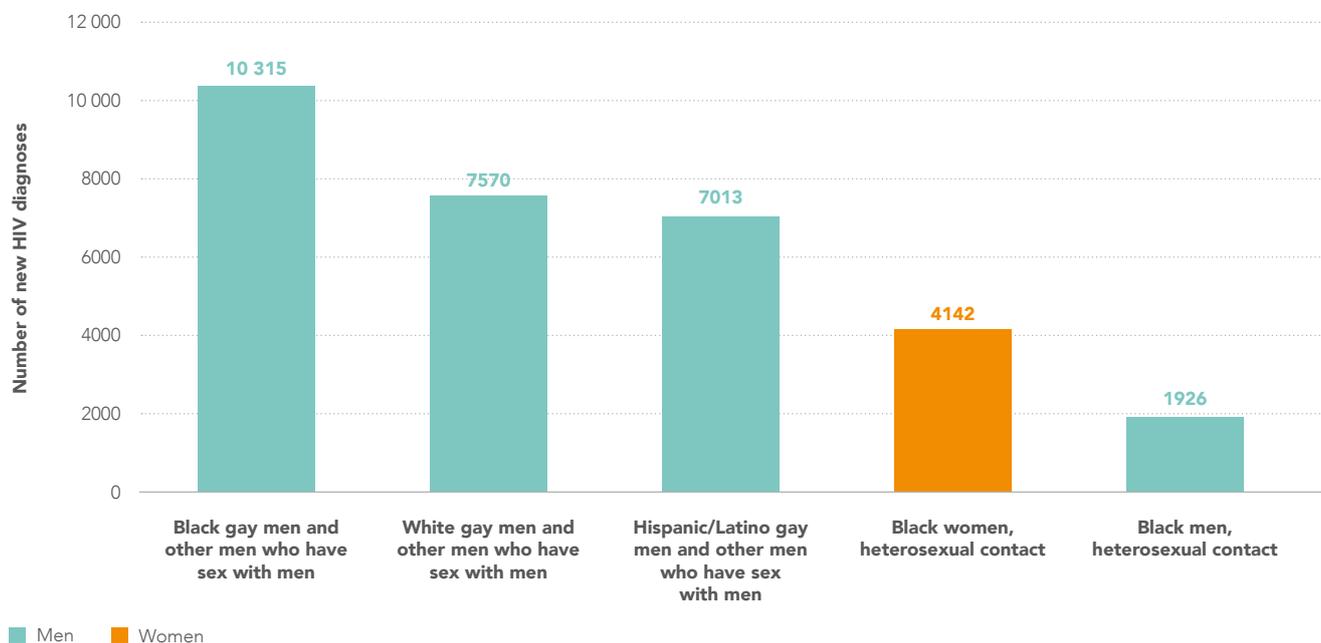
PrEP is a powerful method for preventing HIV transmission. This can be seen in the United States, where new HIV infections in San Francisco decreased significantly—by 51% from 2012 to 2016—after PrEP was added to the city's AIDS response (124). Current evidence from a range of settings shows that PrEP adherence among gay men and other men who have sex with men is good and that the benefits far outweigh the costs. For instance, a recent study in the United Kingdom concluded that a PrEP programme for gay men and other men who have sex with men would be cost-effective in the short-term and eventually cost-saving, since it decreases the number of men who would need lifelong HIV treatment (125). In Brazil, a study found that 83% of young (aged 18–24 years) gay men and other men who have sex with men and transgender women were adhering to PrEP after 48 weeks (126). However, studies in China, Malaysia and African-American communities in the United States indicate that additional publicity and support is needed in some settings to boost uptake of PrEP and to bolster adherence (127–130).

There is also value in enhancing other sexual health services alongside PrEP, since people at the greatest risk of HIV exposure also are at high risk of other sexually transmitted infections (131). In particular, PrEP would have the maximum effect if it was used by those who are most likely to transmit or acquire HIV. A recent phylogenetic study among gay men and other men who have sex with men suggested that at least 40% of the onward spread of the HIV epidemic in Quebec, Canada, can be ascribed to only 30 clusters of people, each varying in size from 20 to 140 individuals (132). Self-identification of high risk, combined with a few screening questions, could identify those men who are at very high risk of HIV infection and therefore ideal candidates for PrEP.

When rolling out PrEP in male key populations, it is important to ensure that strategies are inclusive and equitable, and that they reach all men with high HIV risks. In the United States, for example, the Centers for Disease Control and Prevention estimate that over 490 000 sexually active gay men and other men who have sex with men are at high risk for acquiring HIV and should be offered PrEP. A large proportion of new HIV infections in the United States occur among black or Latino men who have sex with men (Figure 24), yet PrEP uptake appears to be disproportionately low within these groups (133–135). Challenges include a lack of affordable health insurance, multilayered stigma and discrimination, and a lack of awareness about PrEP services (136, 137).

More inclusive access to (and uptake of) PrEP can be achieved by investing in community awareness and education campaigns, removing financial barriers (including expanding health insurance coverage for PrEP), tailoring services to reach young men and men within ethnic minorities, addressing

FIGURE 24
NUMBER OF HIV DIAGNOSES BY MOST-AFFECTED SUBPOPULATIONS, UNITED STATES, 2015



Source: HIV surveillance report. Diagnoses of HIV infection in the United States and dependent areas, 2015. Atlanta: Centers for Disease Control and Prevention; 2016.

the needs of transgender people and educating health-care providers about PrEP. In the United States, Project PrIDE is helping state health departments implement PrEP demonstration projects that focus on gay and bisexual men within ethnic minorities (138).

Mobile phone dating apps can also be used to publicize PrEP and promote its uptake. A survey of more than 12 000 users of the gay dating app Hornet found that 10% said they were living with HIV and that 14% of HIV-negative users reported using PrEP (139). Hornet has a Know Your Status (KYS) feature that allows gay men and other men who have sex with men to indicate their HIV status affirmatively within their online profile. The feature, which is available to around 25 million users of the app in 27 languages, aims to reduce stigma and increase knowledge of PrEP and the benefits of viral suppression. KYS also sends reminders to HIV-negative users to test periodically for HIV and to users living with HIV to initiate and adhere to treatment (140).

There is evidence that sexual risk behaviours may increase among men using PrEP, emphasizing that PrEP programmes should stress to clients that PrEP is not a substitute for safe sex: rather, it is an additional prevention choice in combination with other forms of HIV prevention, including the use of condoms and lubricants (141, 142).

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Making harm reduction services more widely available

Cities and countries that have adopted a comprehensive approach to harm reduction are delivering better health outcomes for people who inject drugs, including reductions in HIV infections and more effective management of drug use and drug-related crime (143). In British Columbia, Canada, a modelled analysis of data from 1996 to 2013 found that harm reduction services played a major role in reducing HIV incidence in the province (144). In Switzerland—where harm reduction services include the provision of sterile injecting equipment, safe injecting rooms and drug dependence treatment—the percentage of new HIV infections due to multiperson use of injecting equipment declined from 50% of all new HIV infections in the 1980s to just 3% of new HIV infections in recent years (145).

Harm reduction services require supportive legislative changes and an end to human rights abuses against people who inject drugs. Public advocacy is crucial for gaining support for those changes among politicians, bureaucrats and their constituencies. It also is important that health-care workers and law enforcement personnel are sensitized to the public health and other benefits of harm reduction programmes. Community pharmacists can play an important role in making harm reduction services more widely available, including by selling condoms and sterile injecting equipment, providing counselling on safer sex practices and dispensing oral methadone for opioid dependence (146). These interventions also can be linked to other HIV testing and treatment services, and to services that address coinfections (such as tuberculosis and viral hepatitis).

Expanding community-led services

The importance and impact of community-led HIV interventions has been evident since the early days of the AIDS epidemic. In many settings, community-based or nongovernmental organizations are the only groups capable of effectively providing HIV services to marginalized populations, including men who inject drugs and gay men and other men who have sex with men (147–149). Prevention programmes built around strong community involvement have substantially reduced new HIV infections among gay men and other men who have sex with men in Australia, India, Switzerland, the United Kingdom and elsewhere (147, 150). Community-led service delivery also has been instrumental in delivering harm reduction programmes such as those managed by the Alliance for Public Health and its partners in Ukraine and by Rumah Singgah PEKA in Indonesia's West Java province (151).

Tapping the full potential of community-based actions requires a suitable policy and legal environment that supports decentralized HIV services and allocates financial resources to community-based providers. Among the 127 countries that reported data on the subject to UNAIDS in 2017, 112 stated they had legal and other safeguards allowing community-based and other civil society organizations to provide HIV services for key populations; 83 of 100 reporting countries stated that their national prevention strategy for gay men and other men who have sex with men featured community-based outreach and services (28). The Global Fund to Fight AIDS, Tuberculosis and Malaria and the United States President's Emergency Plan for AIDS Relief (PEPFAR) have special funding opportunities that encourage countries to take community-led services to scale and to forge closer collaboration with formal health systems in order to design service delivery models that integrate community and centralized approaches into resilient systems for health. Several low- and middle-income country governments—including in Argentina, Brazil, India and Malaysia—allocate domestic funding to community-based organizations through national policies that recognize and support civil society (152).

A close-up photograph of a man's face, focusing on the eyes and nose area. A large, solid blue rectangle is superimposed over the center of the face, partially obscuring the eyes. The man has dark hair and a beard. The background is a plain, light color.

BLIND SPOT

Conclusion

Conclusion

Improving the utilization of HIV prevention, testing and treatment services by men and adolescent boys is a complex but feasible challenge. Gender inequalities and harmful gender norms stand in the way, disadvantaging women and girls in a multitude of ways, putting the health of both men and women at risk and slowing progress against the AIDS epidemic. When men refrain from using HIV services or are unable to use them, they increase their odds of acquiring HIV, transmitting the infection to their partners and succumbing to serious illness and premature death—all of which can have a dire impact on their partners, children and families.

Progress is needed along two intertwined paths:

1. Reach more men with health and HIV services in the short term, and enable them to use and adhere to those services.
2. Introduce purposeful policies and practices that remove gender inequalities and promote more equitable gender norms and institutional arrangements to the benefit of both women and men.

Numerous efforts in diverse settings show that substantial progress is possible. The following transformative actions are required on a large scale to achieve global goals.

Enabling environment

- ▶ Ensure that supportive legal and policy frameworks underpin systematic change. Laws and policies that violate human rights or undermine public health should be reformed or abandoned.
- ▶ Invest in long-term gender-transformative programmes, particularly those that engage men and boys, to alter harmful gender norms, reduce gender-based violence and promote much stronger gender equality.
- ▶ Adopt a firm public health approach to health and HIV service access among key populations, including comprehensive harm reduction approaches, and remove policies and laws that criminalize key populations or sanction their harassment and discrimination.

Systems for health

- ▶ Improve understanding of the disparities in health behaviours of men and women, including through standard sex disaggregation of HIV and other health data.
- ▶ Revise health and HIV strategies and policies to address gaps and disparities in access to and use of services, whether for men and boys or women and girls.
- ▶ Adapt health systems so they reach deeper into communities and meet the diverse health needs of men and women. Make health insurance more accessible and affordable to low-income earners, and reduce point-of-care expenses for individuals when they seek health-care assistance.
- ▶ Sensitize and train health-care workers to improve their competence in dealing with the diverse health issues and behaviours of men and boys.

Service delivery

- ▶ Make health and HIV services more easily accessible and appealing for men and boys. Clinics should be open outside standard working hours on at least some days of the week, and clinic procedures and environments should be more responsive to men's health-related concerns, including the desire for confidentiality.
- ▶ Make HIV services available outside of traditional clinical settings, including within the workplace and at places of leisure (including sports activities). Time the provision of mobile and other community-based services outside of standard working hours so they reach as many men as possible.
- ▶ Use community-based HIV testing and counselling (including mobile and home-based testing), community outreach and self-testing more extensively, and integrate testing into multidisease campaigns and events.
- ▶ Ensure HIV testing is confidential to achieve earlier diagnosis of HIV infection in men, and use test-and-treat strategies so that men initiate treatment as soon as possible after diagnosis.
- ▶ Strengthen treatment adherence by decentralizing services, including drug dispensing, minimizing the travel and wait times of clinic visits and emphasizing the benefits of treatment for partners and families.
- ▶ Reach men through their sexual partners and spouses, and engage them more systematically in maternal and child health services and sexual and reproductive health services, including through strategies such as couples HIV testing and partner-assisted notification.

- ▶ Counter perceptions of sexual health as a woman's issue and responsibility. Enlist community leaders and other figures of respect to dispel misconceptions and promote gender-equitable behaviours. Peer influence is a powerful factor in encouraging men and boys to alter their behaviours.
- ▶ Use creative marketing and trendsetting to promote the use of condoms and lubricants, voluntary medical male circumcision and other proven HIV prevention measures. These efforts must be socially marketed so they speak to the diversity of men's perceptions, desires, needs and concerns.
- ▶ Use social media nudges and reminders, including via mobile phone apps and SMS messages, to discretely provide health information and linkage to services, and to support adherence to prevention, treatment and care.

All of these actions must consider the great diversity of men across and within the world's cultures, recognizing that men belonging to marginalized populations face unique challenges when accessing health services. Achieving some changes may take a generation, but others could be accomplished within a year. A concerted effort on both short-term and long-term actions is needed to reach the global goal of ending AIDS as a public health threat by 2030.

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Introduction

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