# SEIZING THE MOMENT

## Tackling entrenched inequalities to end epidemics

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# CONTENTS

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*Like the HIV epidemic before it, the COVID-19 pandemic is exposing our world's fragilities—including persistent economic and social inequalities and woefully inadequate investments in public health.*

*In many parts of the world, COVID-19 is colliding with the ongoing HIV epidemic. As the latest UNAIDS report shows, the HIV epidemic remains enormous, unfinished business. Gender inequalities, gender-based violence and the criminalization and marginalization of vulnerable groups continue to drive HIV forward.*

*This crisis is a wake-up call to do things differently. We need a recovery based on economic and social justice since response gaps in pandemics, whether HIV or COVID-19, lie along the fault lines of inequality.*

**António Guterres**
United Nations
Secretary-General

# FOREWORD

The COVID-19 pandemic has changed our world immeasurably over the past six months.

I am proud that decades of experience in responding to HIV are being used in the response to the coronavirus, and that activists all over the world are working hard to make sure that the disruption to HIV services is minimized. This report profiles some activists, like Theary So from Cambodia who has been living with HIV for 15 years. Theary provides counselling services every day at the Khmer–Soviet Friendship Hospital in Phnom Penh, the country's first HIV treatment site that is now being used to respond to COVID-19.

Our progress towards ending AIDS as a public health threat by 2030 was already off track before the COVID-19 outbreak. Now this crisis has the potential to blow us even further off course. Modelling conducted on behalf of UNAIDS and the World Health Organization has shown that a six-month disruption to medical supplies could result in an additional 500 000 AIDS-related deaths in sub-Saharan Africa alone by the end of 2021.

We cannot allow the hard-fought gains made in the HIV response to be reversed. Especially as there is still so far to go to finish the job.

Of the 38 million people living with HIV, 25.4 million people are now on treatment. That means 12.6 million people are still waiting. New HIV infections have been reduced by 23% since 2010, thanks in large part to a substantial decrease of 38% in eastern and southern Africa. But HIV infections have increased by 72% in eastern Europe and central Asia, by 22% in the Middle East and North Africa and by 21% in Latin America.

Globally, there were still 690 000 AIDS-related deaths in 2019 and 1.7 million new infections. Our 2020 targets of reducing AIDS-related deaths to fewer than 500 000 and new HIV infections to fewer than 500 000 will be missed.

Gender-based violence and inequalities continue to drive the epidemic. In sub-Saharan Africa, young women and adolescent girls accounted for one in four new infections in 2019, despite making up about 10% of the total population.

It is estimated that globally 243 million women and girls (aged 15–49 years) have been subjected to sexual and/or physical violence perpetrated


by an intimate partner in the past 12 months. Meanwhile, we know that women who experience such violence are 1.5 times more likely to acquire HIV than women who have not experienced violence. Among marginalized groups, a high prevalence of violence is also linked with higher rates of HIV infection. Female sex workers have a 30-times greater risk of acquiring HIV than the general population.

We know how to treat HIV and how to prevent people from becoming infected. What we desperately need is a different politics to guarantee that everyone everywhere has the right to health.

This must include concerted efforts to dismantle the injustices and inequalities that put young women and girls, gay men and other men who have sex with men, sex workers, transgender people, people who use drugs, prisoners and migrants at greater risk of becoming infected with HIV.

The HIV prevention crisis must be tackled by granting everyone everywhere the right to health, tearing down the barriers that stop people receiving essential services. In tackling COVID-19, we must learn the painful lessons from a history of unequal access in dealing with HIV. Millions died of AIDS-related illnesses while there were medicines available that could have saved their lives. We must ensure that COVID-19 treatments and an eventual vaccine against the coronavirus are made available to everyone everywhere, free at the point of use. A People's Vaccine.

We need a multisectoral response to HIV and other epidemics by making sure, for example, that boys and girls complete secondary education, that people are no longer criminalized for who they are or who they love, that there is a rights-based public health approach to drug use.

Successful pandemic responses must be rooted in human rights, be evidence-based, community-led and fully funded. We must learn the lesson once and for all.

HIV has been slipping down the international agenda for some years. That is why I am calling on leaders to come forward to support a United Nations General Assembly High-Level Meeting on Ending AIDS in 2021 to address with urgency the outstanding issues that are holding us back from ending the epidemic as a public health threat by 2030.

We must not drop the ball on HIV.

The UNAIDS 2020 global report is a call to action. It highlights the scale of the HIV epidemic and how it runs along the fault lines of inequalities. We can and must close the gaps.

**Winnie Byanyima**
UNAIDS Executive Director

# INTRODUCTION AND SUMMARY

A deadly virus jumps the species barrier and quietly spreads. Little is done at first. Denial, discrimination and discord undermine an effective response. The poor and marginalized are the most exposed to infection and death, and the least able to cope with the broader impacts of the disease. Resentment and frustration build. Emotions boil over. Protestors march.

When HIV emerged as a global pandemic, change took years. When the calls from activists and the coffins of the dead could no longer be ignored, consensus was achieved, and global commitments were made. Public health actions that once seemed impossible are now commonplace.

An unprecedented global health crisis requires an unprecedented approach. For COVID-19, the time frame for debate and change has been compressed from years to weeks.

As health systems mobilize, communities lock down and economies slide into recession, COVID-19 has reminded the world of uncomfortable truths. Women are beset by violence in their own homes. Girls outside of school are exposed to harmful practices, including early marriage. Regulations and policing measures ostensibly aimed at maintaining law and order are used to harass and harm minority groups, the poor and the vulnerable. People who labour within informal economies work without a net, denied workplace health and safety standards, and ineligible for unemployment and health care benefits.

Efforts to undo centuries of inequality have been slow and prone to setbacks. The shackles of poverty, racism and sexism have been too easy for the privileged to ignore. A ravenous hunger for economic growth has too frequently overcome calls for action on climate change, and for expanded access to health care and strengthened social safety nets.

Simmering frustrations are again boiling over. Powerful men sexually assaulting young women cannot be tolerated. #MeToo. The killing of unarmed black men by white police officers is not a reasonable use of force. Black Lives Matter. Inequality must be confronted. Protestors again fill the streets.

WHEN HIV EMERGED AS A GLOBAL PANDEMIC, CHANGE TOOK YEARS. FOR COVID-19, THE TIME FRAME FOR DEBATE AND CHANGE HAS BEEN COMPRESSED FROM YEARS TO WEEKS.

Credit: Ericky Boniphace/AFP

## Coming up short in a milestone year for HIV responses

Demands for social transformation are building as the global HIV response reaches an important milestone. Four years ago, the United Nations (UN) General Assembly agreed that ending the AIDS epidemic by 2030 required an accelerated expansion of HIV services alongside rights-affirming and enabling environments for those services. Interim targets were agreed to be achieved by the end of 2020.

Significant progress has been achieved. Dozens of countries from a diverse range of geographic, economic and epidemic settings are on track or nearly on track to achieve many of these commitments, proving that bold targets can be met with sufficient political will, financial resources and community engagement. A common thread among these countries is determined political leadership on AIDS, strong community engagement, rights-based and multisectoral approaches, and the consistent use of scientific evidence to guide concerted action. These hallmarks of success are relevant not only for other countries' responses to HIV—they are vital lessons for the world as it mobilizes against a new pandemic threat.

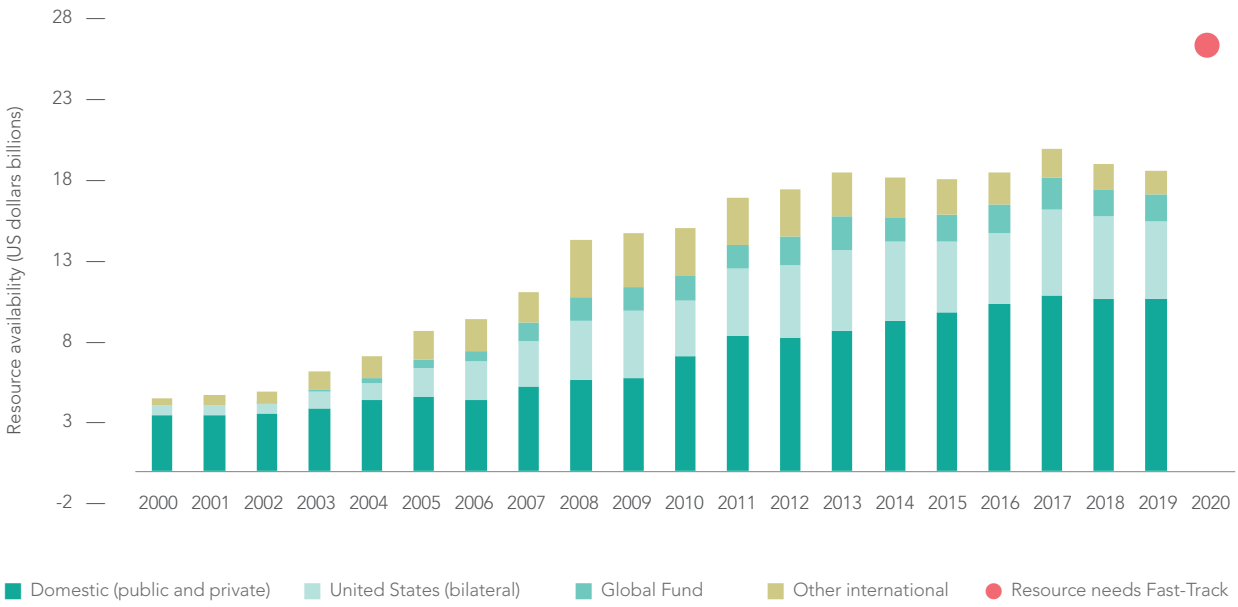
However, the sad truth is that successes in some countries and regions are tempered by failures in others. The global aggregate of country data reported to UNAIDS shows that the world has invested too few resources, provided too few people with services and failed to bend the curves of new HIV infections and AIDS-related deaths as significantly as was envisioned in the UNAIDS Fast-Track Strategy.

As a result, all global targets for 2020 will be missed.

The funding gap for HIV responses is widening. Momentum established by global agreement on the Millennium Development Goals (MDGs) in 2000 has been lost in the Sustainable Development

FIGURE 0.1

**Resource availability and key funding sources for HIV in low- and middle-income countries, 2000–2019, with 2020 target resource needs**




Source: UNAIDS financial estimates, July 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).
Note: Constant 2016 US dollars.

1 Resource availability estimates are presented in constant 2016 US dollars to account for inflation and thus be comparable to the target that was set by the UN General Assembly in the 2016 Political Declaration on Ending AIDS.

Goal (SDGs) era. Increases in resources for HIV responses in low- and middle-income countries stalled in 2017, and funding decreased by 7% between 2017 and 2019.[1] The total HIV funding available in these countries in 2019 amounted to about 70% of the 2020 target set by the UN General Assembly (Figure 0.1). Key enablers of effective HIV responses—equitable access to education and health care, and laws and justice systems that protect the rights of the most marginalized within society—remain neglected in dozens of countries across multiple regions.

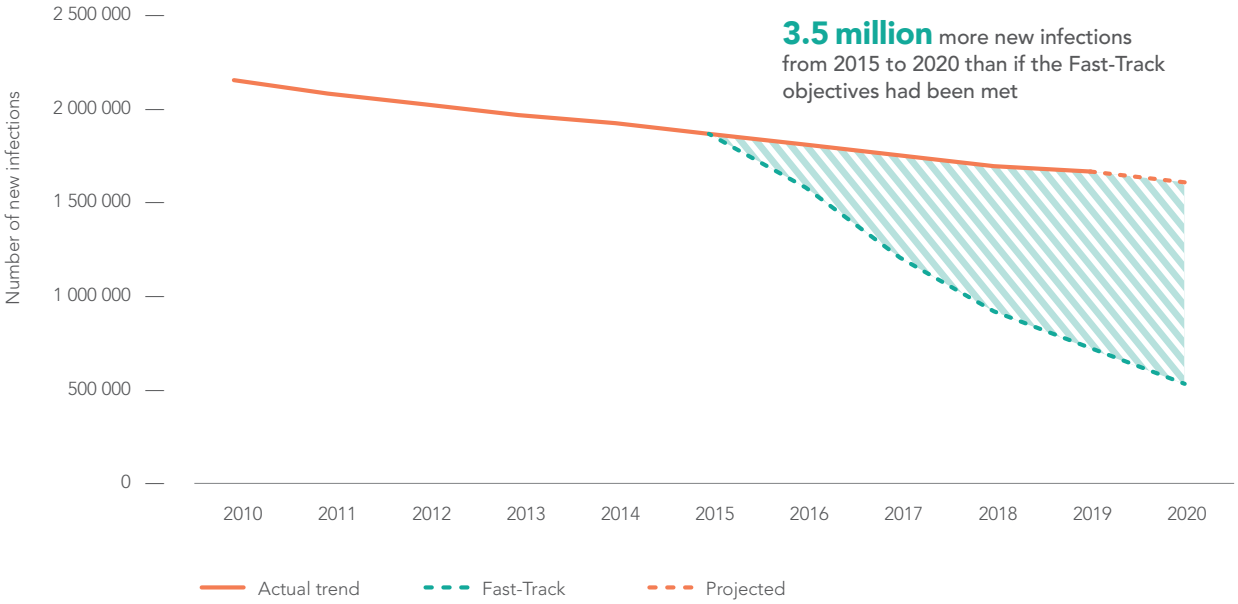
This collective failure to invest sufficiently in comprehensive, rights-based HIV responses comes at a terrible price: from 2015 to 2020, there were 3.5 million more HIV infections and 820 000 more AIDS-related deaths than if the world was on track to meet its 2020 targets (Figures 0.2 and 0.3).

The blueprint for success is widely available. The world can do better.


1 Resource availability estimates are presented in constant 2016 US dollars to account for inflation and thus be comparable to the target that was set by the UN General Assembly in the 2016 Political Declaration on Ending AIDS.

FIGURE 0.2

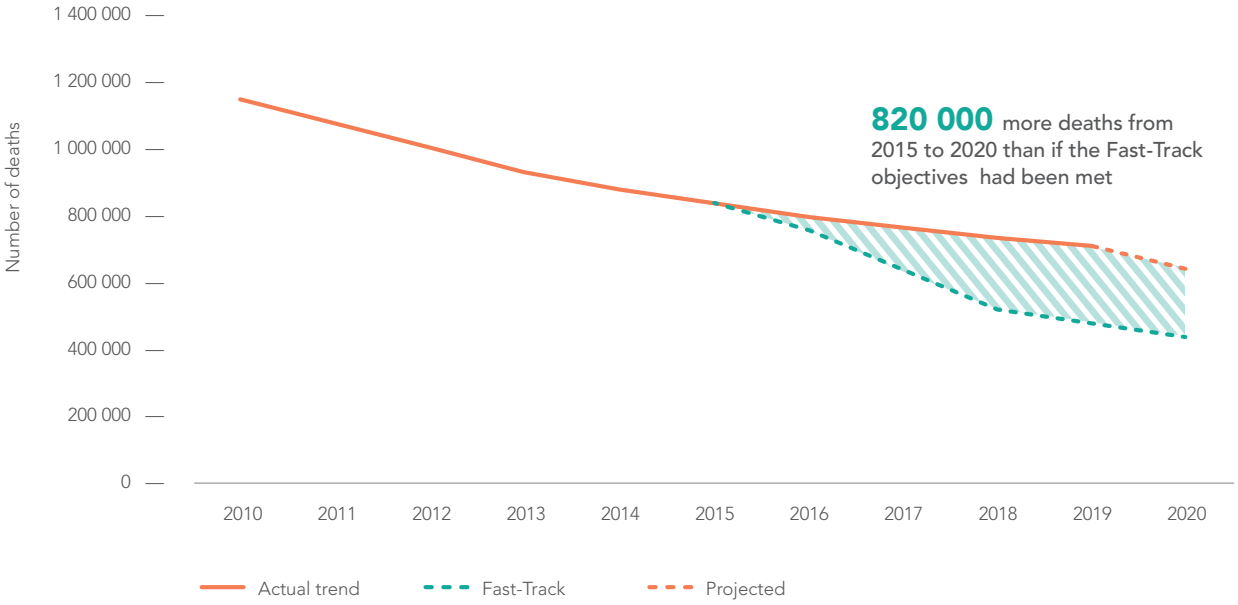
## New HIV infections projected through 2020, and modelled prediction resulting from Fast-Track interventions, global, 2010–2020




Source: Special analysis by Avenir Health using UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 0.3

## AIDS-related deaths projected through 2020, and modelled prediction resulting from Fast-Track interventions, global, 2010–2020




Source: Special analysis by Avenir Health using UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).
Note: Methods for the estimation of AIDS-related mortality have been improved since 2016. As a result, the most recent estimates for AIDS-related mortality (orange line) are lower before 2016 than the estimates that were used to calculate the 2020 targets (green dotted line).

## Progress towards the 90–90–90 targets

The first of 10 core commitments within the UN General Assembly's 2016 Political Declaration on Ending AIDS are the 90–90–90 targets, which aim to bring HIV testing and treatment to the vast majority of people living with HIV by 2020, and to reduce the amount of HIV in their bodies to undetectable levels that will keep them healthy and prevent further spread of the virus.

Achieving the 90–90–90 target results in a minimum of 73% of people living with HIV having suppressed viral loads. At the end of 2019, 14 countries three regions had achieved the 73% target—Australia, Botswana, Cambodia, Eswatini, Ireland, Namibia, the Netherlands, Rwanda, Spain, Switzerland, Thailand, Uganda, Zambia and Zimbabwe. Each has used epidemiological and programme data to dig deeper and bring HIV services to underserved subpopulations. Eswatini and Switzerland have made the remarkable achievement of surpassing the 2030 targets of 95–95–95, meaning that a minimum of 86% of people living with HIV have suppressed viral loads. Notably, Eswatini has achieved each of the 2030 targets: 95% of people living with HIV know their HIV status, 95% of people living with HIV who know their HIV positive status are accessing treatment and 95% of people on treatment have suppressed viral loads.

Increased access to antiretroviral therapy has averted an estimated 12.1 million AIDS-related deaths since 2010.

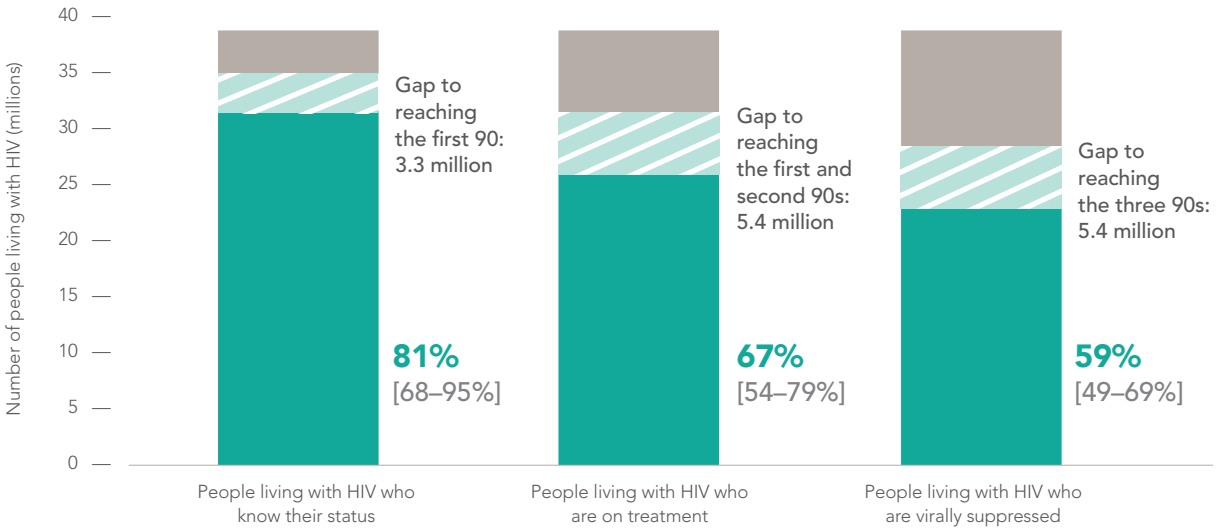
Globally, there have been gains across the HIV testing and treatment cascade. At the end of 2019, 81% [68–95%] of people living with HIV knew their HIV status, and more than two thirds (67% [54–79%]) were on antiretroviral therapy, equal to an estimated 25.4 million [24.5 million–25.6 million] of the 38.0 million [31.6 million–44.5 million] people living with HIV—a number that has more than tripled since 2010.

Gains in treatment effectiveness, as well as increases in the number of people who know their status and are on treatment, are reflected in the fact that rates of viral load suppression among all people living with HIV rose by 44% (or 18 percentage points) between 2015 and 2019. Almost 59% [49–69%] of people living with HIV globally had suppressed viral loads in 2019 (Figure 0.4).

Increased access to antiretroviral therapy has averted an estimated 12.1 million AIDS-related deaths since 2010. The estimated 690 000 [500 000–970 000] lives lost due to AIDS-related illnesses worldwide in 2019 is a 39% reduction since 2010, but still far too many people dying unnecessarily (Figure 0.6).

FIGURE 0.4

**HIV testing and treatment cascade, global, 2019**




Source: UNAIDS special analysis, 2020; see annex on methods for more details.

## ANTIRETROVIRAL THERAPY INNOVATIONS IMPROVE TREATMENT OUTCOMES

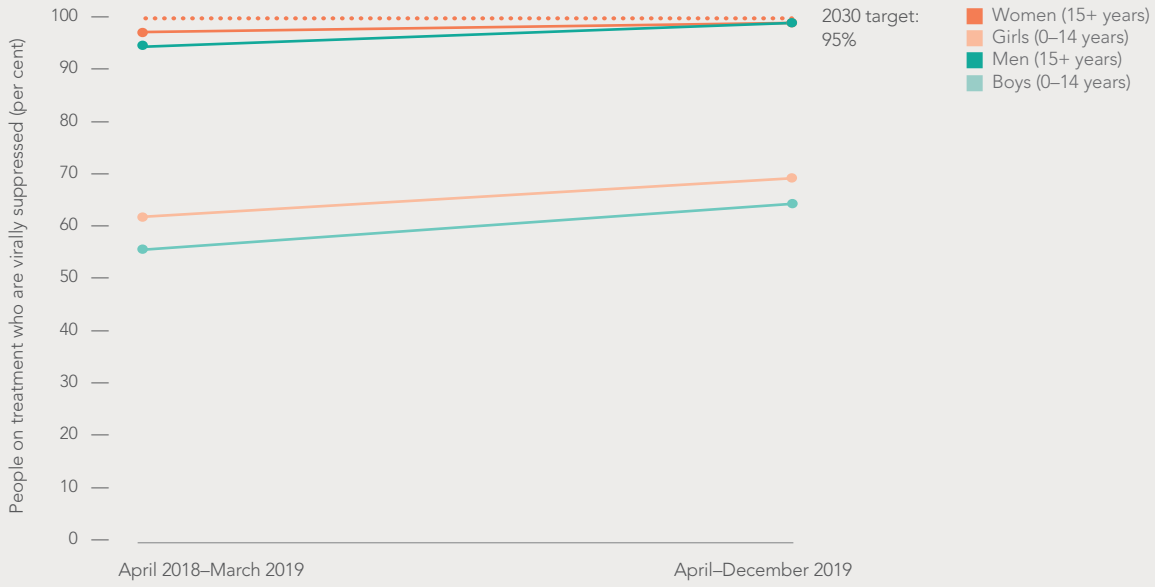
The introduction of dolutegravir as part of a fixed-dose combination of antiretroviral medicines has been shown to be better tolerated, less likely to lead to treatment disruption and more associated with rapid viral suppression than other first-line antiretroviral regimens currently in use. The impact of dolutegravir can be seen in the higher rates of viral suppression achieved among people on treatment in Malawi (Figure 0.5).

Meanwhile, a potential breakthrough treatment advancement is a step closer to reality. HIV medicines that can be taken once a month—or even less frequently—could soon be an option for people living with HIV, making treatment simpler and more convenient than the daily oral dosing that is currently used. The ATLAS and FLAIR trials found that a monthly or two-monthly injection with the antiretroviral drugs cabotegravir and rilpivirine is as effective as standard daily oral therapy *(1–4)*.

A large majority of study participants in the ATLAS and FLAIR trials said they preferred injections to daily oral treatment. In a separate, small study among HIV-positive women in the United States of America, a majority preferred the monthly injectable option, citing the convenience and confidentiality it afforded them *(5)*.

FIGURE 0.5

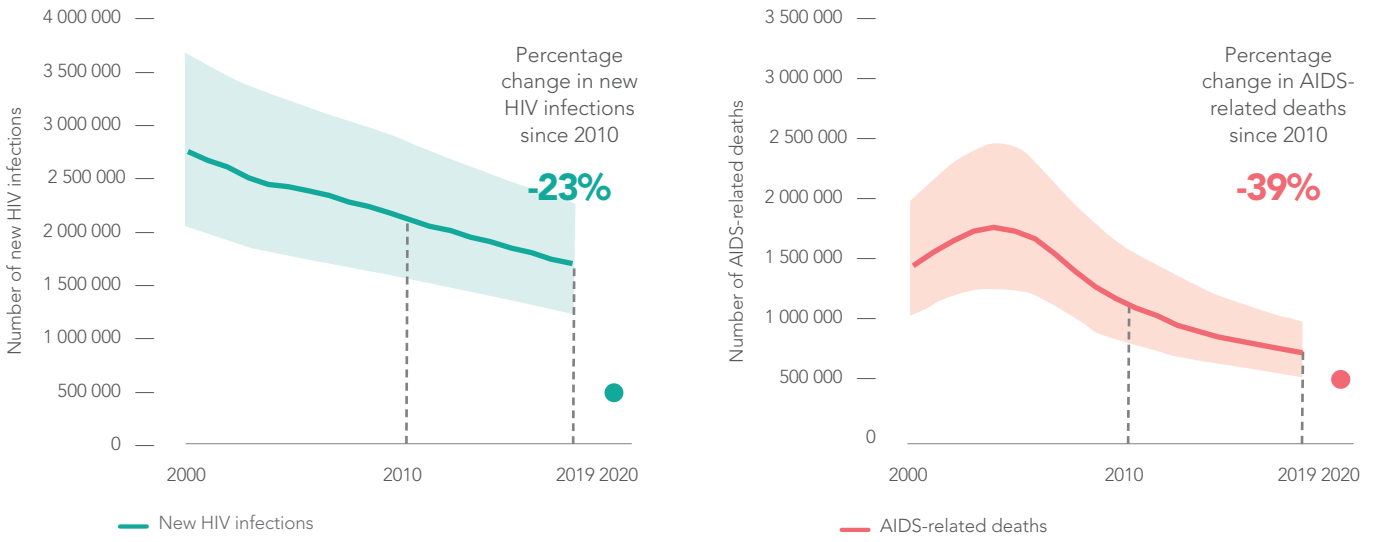
**Viral load suppression with introduction of dolutegravir in April 2019, Malawi, by sex and age, 2018–2019**




Source: Personal communication with Ms Tadala Hamisi, Pharmacist, Department for HIV and AIDS, Ministry of Health, Malawi, 23 June 2020.
Note: Threshold of detection: <1000 copies per mL.

FIGURE 0.6

**Number of new HIV infections and AIDS-related deaths, global, 1990–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

### *Combination prevention works, but gaps are limiting progress*

A combination approach to HIV prevention that includes behavioural, biomedical and structural approaches and is tailored to those in greatest need can lead to steep reductions in HIV infections. This has been demonstrated by four large cluster randomized trials involving more than a quarter of a million people in Botswana, Kenya, South Africa, Uganda and Zambia *(6–10)*.

The launch of the Global HIV Prevention Coalition in 2017 sparked renewed focus among participating countries towards achieving global prevention targets. More than 15 million men and boys across 15 priority countries have been voluntarily and medically circumcised since the beginning of 2016. The introduction of pre-exposure prophylaxis (PrEP) to the HIV prevention tool chest has contributed to steeper reductions in HIV infections among gay men and other men who have sex with men in several cities in North America, Europe and Australia.

However, major gaps remain, and some key aspects of HIV prevention may be sliding backwards. The budgets of condom social marketing programmes in sub-Saharan Africa have been slashed in recent years, and a new generation of sexually active young people has not been exposed to the intense condom promotion that was in place a decade ago. Condom use at last higher risk sex reported by young women and young men has recently declined in several countries in sub-Saharan Africa. Key populations in dozens of countries globally are unable to access multiple HIV prevention services. The vast majority of people who can benefit from PrEP cannot access it, and the condom use, voluntary medical male circumcision (VMMC) and PrEP targets set for 2020 are out of reach.

Progress on the prevention of HIV transmission remains far too slow. The estimated 1.7 million people [1.2 million–2.2 million] who acquired HIV worldwide in 2019 marked a 23% decline in new HIV infections since 2010, but that was more than three times higher than the milestone of 500 000 that was set for 2020 (Figure 0.6).

## Gaps expose entrenched inequalities

The gaps in HIV responses and resulting HIV infections and AIDS-related deaths lie upon fault lines of inequality.

Data from 46 countries in sub-Saharan Africa show a positive relationship between HIV prevalence and income disparity (Figure 0.7). After controlling for education, gender inequality and income per capita, a one-point increase in a country's 20:20 ratio corresponds to a two-point increase in HIV prevalence.[2]

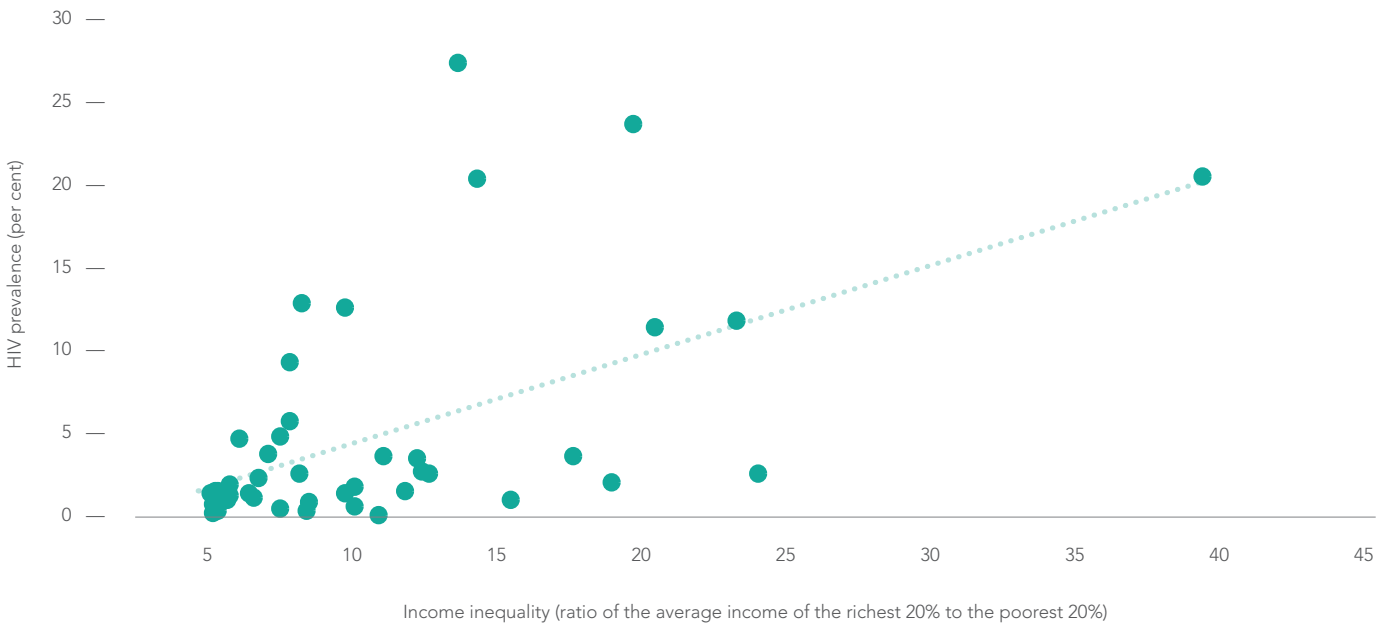
Unequal gender norms that limit the agency and voice of women and girls, reduce their access to education and economic resources, and stifle their civic participation contribute to the higher HIV risk faced by women in settings with high HIV prevalence.

Younger women are at particular risk. In sub-Saharan Africa, adolescent girls and young women (aged 15 to 24 years) accounted for 24% of HIV infections in 2019, more than double their 10% share of the population (Figure 0.9). Women and girls of all ages accounted for 59% of new HIV infections in sub-Saharan Africa.

Outside of sub-Saharan Africa, older adult men (aged 25 and above) account for the majority of new HIV infections (Figure 0.10). A considerable proportion of these men are gay men and other men who have sex with men. Transgender people are also at extremely high risk of acquiring HIV: on average, they have a 13 times greater risk of infection than adults in the general population. Gender norms in many cultures—including binary concepts of gender and taboos about sexuality—also perpetuate stigma, homophobia and transphobia. Lesbian, gay, bisexual, transgender and intersex (LGBTI) persons and

FIGURE 0.7

**HIV prevalence and income inequality, sub-Saharan African countries, 2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); World income inequality database (WIID3c) [database]. New York: United Nations; 2019 (https://www.wider.unu.edu/project/wiid-world-income-inequality-database, accessed 6 June 2020).
Note: The dotted line shows the linear relationship between HIV prevalence and income inequality after adjusting for differences across countries in levels of education, gender inequality, gross domestic production and corruption. For every one point increase in a country's income inequality, there is a two percentage point increase in HIV prevalence (regression coefficient: 0.51; 99% confidence intervals: 0.29–0.74).

2 The 20:20 ratio compares how much richer the top 20% of a given population is to the bottom 20% of that population.

marginalized women (such as sex workers or women who use drugs) who fear judgement, violence or arrest struggle to access sexual and reproductive health services, especially those related to contraception and HIV prevention.

Additional key populations at higher risk of HIV infection include people who inject drugs, sex workers and prisoners. Although they are a small proportion of the general population, key populations and their sexual partners accounted for more than 60% of new adult HIV infections globally in 2019 (Figure 0.8).

Although they are a small proportion of the general population, key populations and their sexual partners accounted for more than 60% of new adult HIV infections globally in 2019.

FIGURE 0.8

**Distribution of new HIV infections by gender and population, global, 2019**

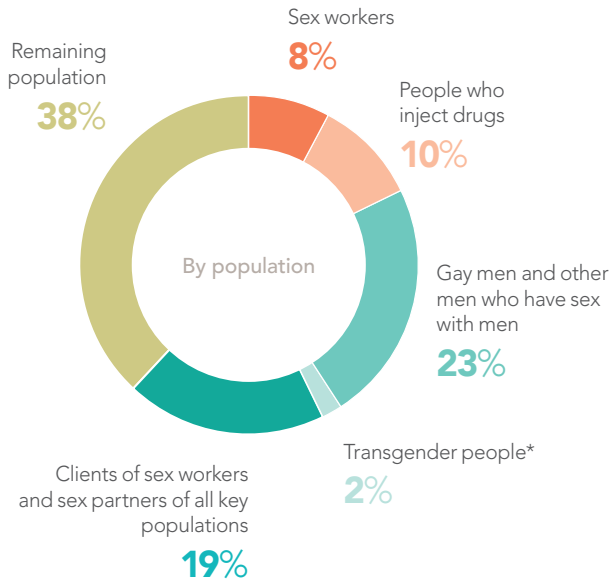
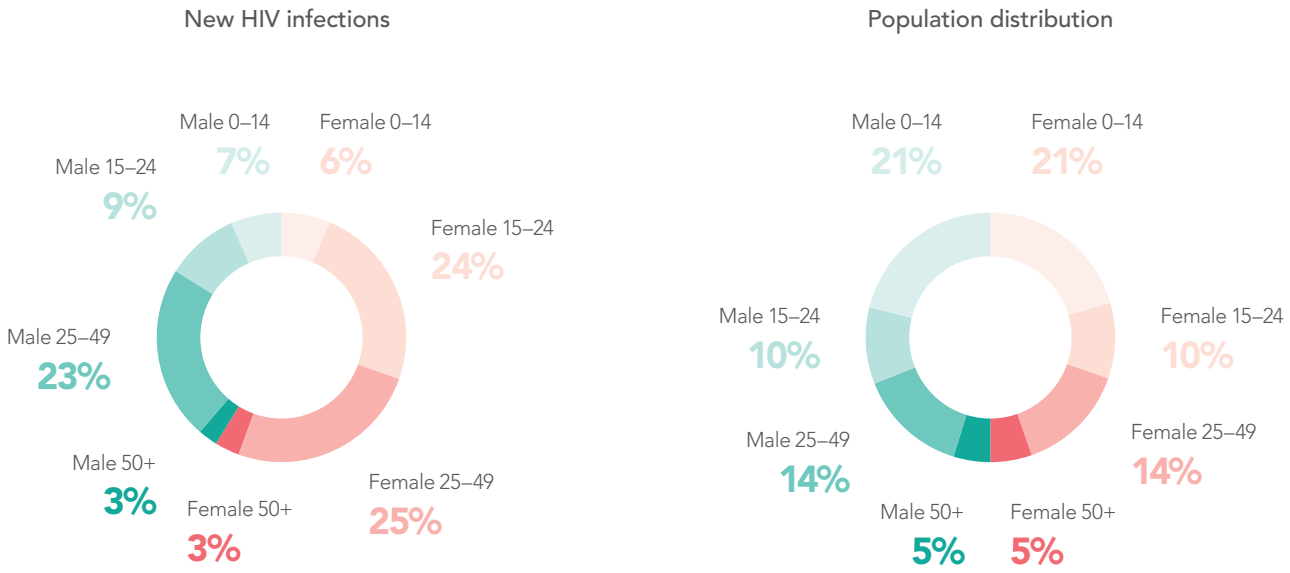



FIGURE 0.9

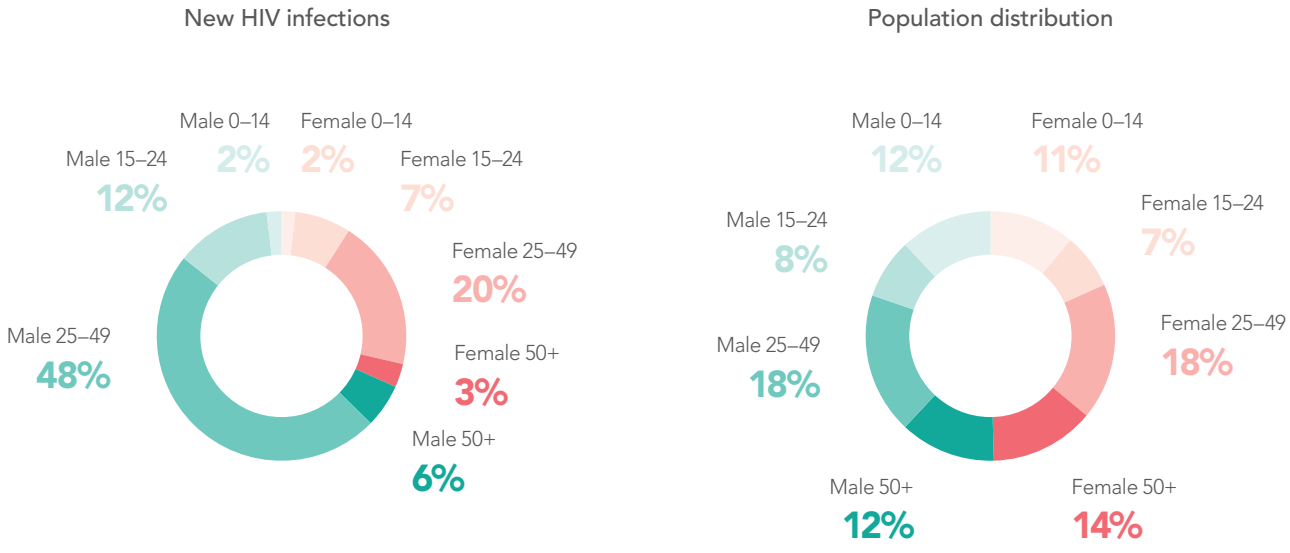
**Distribution of new HIV infections and of the population, by age and sex, sub-Saharan Africa, 2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 0.10

**Distribution of new HIV infections and of the population, by age and sex, outside of sub-Saharan Africa, 2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

### *COVID-19 amplifies inequalities*

The COVID-19 pandemic is affecting the lives and livelihoods of people everywhere, but the impact is especially severe among people who are socioeconomically disadvantaged and marginalized, and among people with underlying medical conditions *(11, 12)*.

The COVID-19 crisis is amplifying the deep inequalities that thwart the realization of individual and collective health rights. In some contexts, efforts aimed at controlling the spread of COVID-19 have penalized the most vulnerable in society, such as women, the homeless, those living in poverty, or those who are already marginalized, stigmatized or criminalized.

Extended confinement measures and restrictions on movement—compounded by economic and social stresses brought on by the pandemic—have coincided with reports in many countries of increased numbers of women and girls facing abuse *(13)*. Country-wide school closures implemented to fight the spread of the virus in more than 190 countries have led to more than 1.57 billion learners being out of school, including 743 million girls *(14, 15)*. The impact of this period of disrupted education will be far-reaching, and it is likely to hit marginalized girls the hardest *(16)*.

Lessons learned from the Ebola crisis show that school closures can lead to increases in gender-based violence, teenage pregnancies, child marriage, exploitation and other forms of abuse against adolescent girls (including online sexual exploitation and grooming). School closures may be especially devastating for girls with greater vulnerabilities, such as refugees, internally displaced persons, returnees and girls living with disabilities *(17)*.

There have been alarming reports of police powers being used to harass, harm and arrest vulnerable and criminalized groups, such as sex workers, people who use drugs, people living with HIV and LGBTI people. Sex workers all over the world are reporting increased discrimination and harassment, with reports of punitive crackdowns against sex workers resulting in raids on homes, compulsory COVID-19 testing, and arrests and threatened deportation of migrant sex workers *(18)*.

Restrictions created for the response to COVID-19 have also been specifically used to target marginalized communities, such LGBTI people in some countries, undermining public health objectives and threatening the health and safety of these groups. In Panama, for example, where a gender-based confinement regulation called for men and women to stay at home on alternating days, transwomen have reported experiencing harassment or even being detained for allegedly being a male out on the wrong day *(19, 20)*. In Hungary, the state of emergency was used to propose a new bill to remove the right of people to change their gender and name on official documents in order to ensure conformity with their gender identity, which is a clear breach of international human rights to the legal recognition of gender identity *(21)*.

As the new coronavirus spreads in sub-Saharan African countries with high HIV prevalence, there is evidence that people living with HIV should be considered a high-risk group for COVID-19 responses. In Western Cape, South Africa, patient data from more than 3.4 million adults between March and June 2020 show that people living with HIV had a modestly increased risk of COVID-19 death compared to HIV-negative patients, irrespective of viral suppression *(22)*. The study was not able to assess the effects of socioeconomic status of the patients. Data from population-based surveys from eight countries with a high burden of HIV suggest that people living with HIV have a greater likelihood of living in conditions that make physical distancing difficult. A preliminary analysis of Demographic Health Survey data from Angola, Haiti, Malawi, Mozambique, Rwanda, South Africa, Zambia and Zimbabwe suggests that people living with HIV have significantly higher odds of living in a household with a shared toilet and higher odds of living in a household without a radio (Figure 0.11) *(23)*.

### *Accelerating innovations to minimize COVID-19 disruptions to HIV services*

As the spread of the new coronavirus threatens to overwhelm health system capacities and lockdowns limit movement and strain economies, people living with HIV and people at higher risk of HIV infection are facing life-threatening disruptions to health and HIV services. VMMC, condom production and distribution, PrEP, HIV testing and treatment, and other programmes have all been negatively affected.

FIGURE 0.11

**Individuals living in a household who share a toilet with others and do not possess a radio, by HIV status, pooled analysis of eight countries**


* Statistically significant (P <0.05).
**Pooled odds ratio and 95% confidence interval for eight countries, adjusted for urban residence.
Surveys included: Angola 2015–2016 DHS, Haiti 2016–2017 DHS, Malawi 2015–2016 DHS, Mozambique 2015 AIS, Rwanda 2014–2015 DHS, South Africa 2016 DHS, Zambia 2016 DHS and Zimbabwe 2015 DHS.
Note: The data points in this graphic represent the odds that a person living with HIV lives in a household with a shared toilet or lives in a household that does not have a radio compared to the odds for those who are not living with HIV. An odds ratio of 1 means that individuals living with HIV are just as likely as those who are HIV-negative to live in a household with these characteristics. An odds ratio of more than 1 (as seen here) means that people living with HIV are more likely to live in households with these charactersitics.

Such disruptions could see the global HIV response fall further behind on its 2020 commitments. Recent modelling has estimated that a total disruption of antiretroviral therapy for six months could lead to more than 500 000 [471 000–673 000] additional deaths from AIDS-related illnesses (including tuberculosis) in sub-Saharan Africa in 2020–2021 *(24)*. An interruption of antiretroviral therapy for 20% of people living with HIV for six months would result in more than 110 000 additional AIDS-related deaths (Figure 0.12) *(24, 25)*. HIV and other critical health services must be maintained as communities, cities and countries respond to this new pandemic.

Countries around the world are accelerating HIV response innovations to minimize disruptions. HIV service delivery models that emphasize client autonomy and self-care—and that minimize physical contact with health facilities—are proving critical during a time when health facilities need to cater for the influx of COVID-19 patients, while at the same time maintaining vital health services without putting other clients at risk of COVID-19 infection.

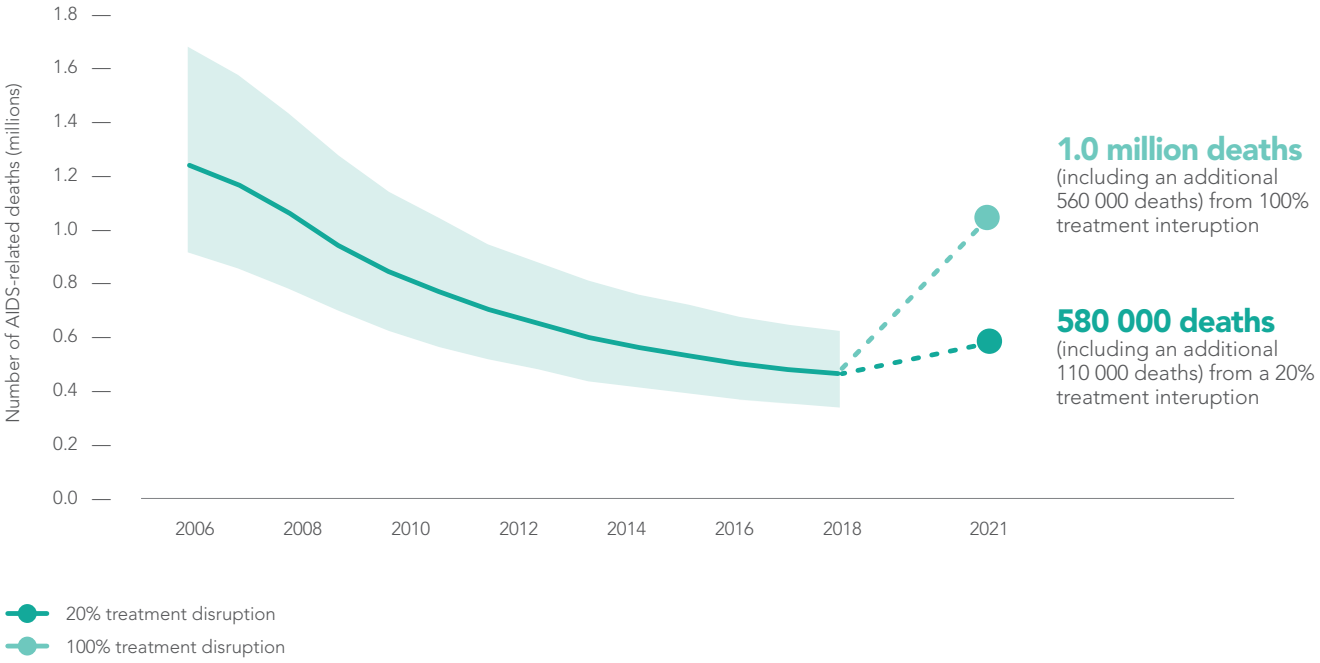
HIV self-testing, which empowers people to choose for themselves the circumstances in which they take an HIV test, has the advantage of decongesting health facilities and increasing access to HIV testing to populations at higher risk of HIV infection. Burundi, Eswatini, Guatemala and Myanmar are among the countries that have reported expanding HIV self-testing during the COVID-19 pandemic *(26)*.

Community-based services are also growing in importance. In Nigeria's Cross River State, for example, community treatment management teams have been responsible for 92% of HIV diagnoses since lockdown measures were put in place in March 2020 *(27)*.

In many countries, community organizations of people living with HIV and people at higher risk of HIV infection are playing leading roles in efforts to bring HIV prevention tools and information, self-test kits, antiretroviral medicines and other essential medications to the people who need them, including through social media platforms and home delivery. In remote communities

FIGURE 0.12

**The impact of six months of varying levels of treatment interruption on AIDS-related deaths, sub-Saharan Africa, 2020–2021**




Sources: UNAIDS epidemiological estimates, 2019. Projected estimated AIDS-related deaths and child new HIV infections were derived from mathematical modelling by five research groups exploring disruptions of HIV prevention and treatment services over periods of three and six months and their effect on HIV mortality and incidence in sub-Saharan Africa. For the 100% disruption: pre-print manuscript available at: Jewell B, Mudimu E, Stover J, Kelly SL, Phillips A, Smith JA et al. for the HIV Modelling Consortium. Potential effects of disruption to HIV programmes in sub-Saharan Africa caused by COVID-19: results from multiple models. Manuscript before publication. https://doi.org/10.6084/m9.figshare.12279914.v1. The 20% disruption projection was produced by Britta L Jewell; Department of Infectious Disease Epidemiology, Imperial College London; Edinah Mudimu, Department of Decision Sciences, University of South Africa; John Stover Avenir Health; Debra ten Brink, Burnet Institute; Andrew N Phillips, Institute for Global Health, University College London; 25 June 2020.

in the Republic of Moldova, for instance, nongovernmental organizations have been delivering antiretroviral medicines to the homes of about 800 people living with HIV and 100 people who are using PrEP *(28)*.

Multimonth dispensing of antiretroviral medicines is reducing the strain on health facilities and putting people living with HIV in greater charge of their treatment. Early adopters of multimonth dispensing have been better placed to avoid serious disruptions to their HIV treatment services during the COVID-19 pandemic. In Zimbabwe, for example, 80% of people on HIV treatment were already receiving three-month supplies of antiretroviral medicines in early 2020, and an eight-month national supply of first-line antiretroviral medicines stands as a solid buffer against stock-outs *(26)*. Other countries have accelerated multimonth dispensing during the COVID-19 crisis or temporarily adopted more liberal dispensing policies *(26)*. For instance, South Africa's Department of Health's Central Chronic Medicines Dispensing and Distribution programme decided in late May 2020 to provide automatic six- and 12-month extensions of antiretroviral medicine prescriptions *(29)*.

### *Stigma discourages people from seeking health services*

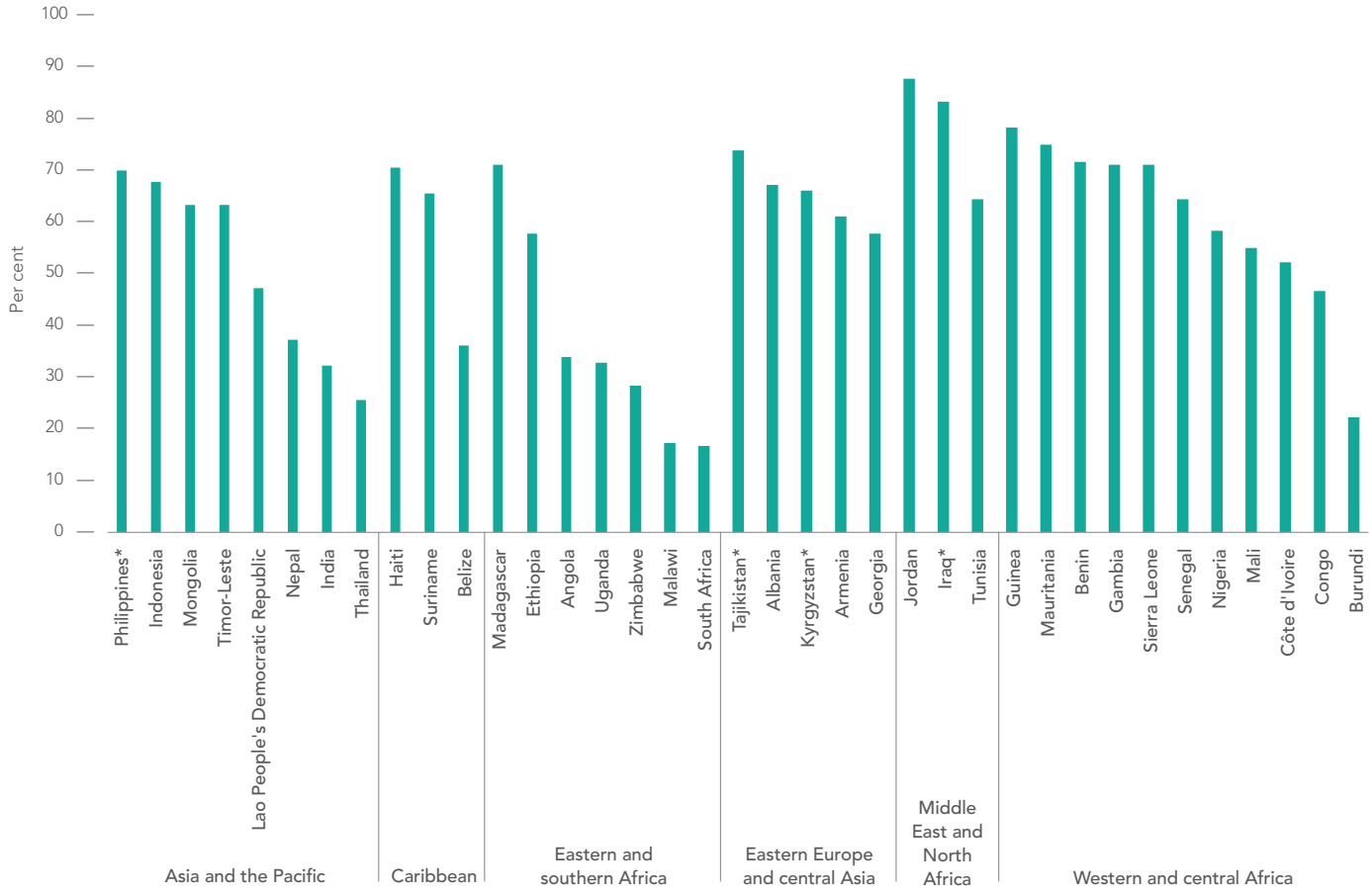
As the COVID-19 pandemic unfolds, old fears and prejudices are resurfacing. Some countries have taken the short-sighted step of using criminal law to sanction COVID-19 exposure and transmission, including the extreme case of a South African businessman arrested for attempted murder after allegedly testing positive for COVID-19 and then returning to work *(30, 31)*. Such state actions could discourage people from seeking testing and undergoing contact tracing. This has been the reality for millions of people living with HIV for decades.

Among 151 reporting countries, 92 continue to criminalize HIV exposure, transmission and non-disclosure—all grave violations of the rights of people living with HIV that also frustrate efforts to control HIV epidemics. These laws reinforce stigma and discrimination against people living with HIV and those more vulnerable to HIV infection, they disregard up-to-date knowledge on the science of HIV-related risks and harms, and they have adverse impacts on public health.

The most recent data from population-based surveys show that while discriminatory attitudes towards people living with HIV are declining consistently in some regions, they are rebounding in others. In eastern and southern Africa, for instance, discriminatory attitudes have been reduced to historically low levels in some countries. Elsewhere, however, disconcertingly large proportions of adults continue to hold discriminatory attitudes towards people living with HIV. In 25 of 36 countries with recent data on a composite indicator that includes two types of discriminatory attitudes, more than 50% of people aged 15 to 49 years reported having discriminatory attitudes towards people living with HIV (Figure 0.13).

FIGURE 0.13

**Percentage of people aged 15 to 49 years who report discriminatory attitudes towards people living with HIV, countries with available data, 2014–2019**




*Data are for women aged 15–49 only.
Source: Population-based surveys, 2014–2019.
Note: Discriminatory attitudes are measured through "No" responses to either of two questions: (1) Would you buy fresh vegetables from a shopkeeper or vendor if you knew this person had HIV?; and (2) Do you think that children living with HIV should be able to attend school with children who are HIV-negative?

Fear of prosecution can deter people living with HIV, or those at higher risk of HIV infection, from talking openly to their physicians or counsellors, disclosing their HIV-positive status or using available HIV testing and treatment services *(32–34)*. Surveys of people living with HIV confirm that stigma and discrimination at health-care facilities—in the shape of denial of care, dismissive attitudes, coerced procedures or breaches of confidentiality—remain disturbingly common.

Across 13 countries with available data, the percentage of people living with HIV who reported being denied health services at least once in the previous 12 months because of their HIV status ranged from 1.7% in Malawi to as high as 21% in Peru and Tajikistan. Coerced medical or health procedures remain common, as do breaches of confidentiality by health-care professionals (reported by at least 15% of people in eight of 13 countries with available data). Significant proportions of people living with HIV also reported that their ability to obtain antiretroviral therapy was conditional on them using certain forms of contraception.

### *Gender inequality and HIV risks*

Incremental gains towards gender equality in recent decades leave women and girls short of educational and economic opportunities, and they remain disproportionately affected by poverty, violence and injustice *(35)*.

Unequal gender norms deny women and girls the ability to make their own choices about health care, assign them with higher levels of domestic work and caregiving responsibilities, curtail their freedom to enter and remain in the labour force on terms that suit their needs, and ultimately impact women's economic independence, security and control. In much of the world, women continue to have insufficient access to high-quality sexual and reproductive health information, education and services—including family planning.

Violence impacts the lives of hundreds of millions of women and girls: nearly one in three women worldwide have experienced physical or sexual violence by an intimate partner, nonpartner sexual violence or both in their lifetime *(36)*. Across 46 countries with available data between 2014 and 2018, the percentage of women aged 15 to 49 years who reported having experienced physical and/or sexual violence by an intimate partner in the past 12 months ranged from 3.5% in Armenia to 47.6% in Papua New Guinea *(37)*. Women belonging to ethnic and other minorities, transgender women and women with disabilities face a higher risk of different forms of violence (38).

Adolescent girls and young women face particular challenges that can leave them at elevated risk of unintended pregnancy, violence and HIV. Many are unable to access the sexual and reproductive health services they need: of the 38 million sexually active adolescent girls aged 15 to 19 years globally, more than half are not using contraceptives *(39)*. At least 10 million unintended pregnancies occur each year among adolescent girls aged 15 to 19 years in low- and middle-income countries, and complications during pregnancy and childbirth are the leading cause of death globally for girls aged 15 to 19 years *(40–42)*.

Knowledge about sexual and reproductive health and the prevention of HIV and sexually transmitted infections (STIs) among adolescent girls and young women is also low: only about one third of women aged 15 to 24 years in sub-Saharan Africa have comprehensive knowledge about HIV *(43)*. This high level of vulnerability is fuelled by a complex interplay of social, economic and structural drivers, including poverty, gender inequality, unequal power and relationship dynamics, gender-based violence, social isolation and limited access to schooling.

Women living with HIV face particular challenges, as HIV stigma and gender inequality intersect and negatively impact their health *(44)*. While health-care settings should be safe spaces, as many as one in three women living with HIV across 19 countries report experiencing at least one form of discrimination related to their sexual and reproductive health in a health-care setting within the past 12 months *(45)*.

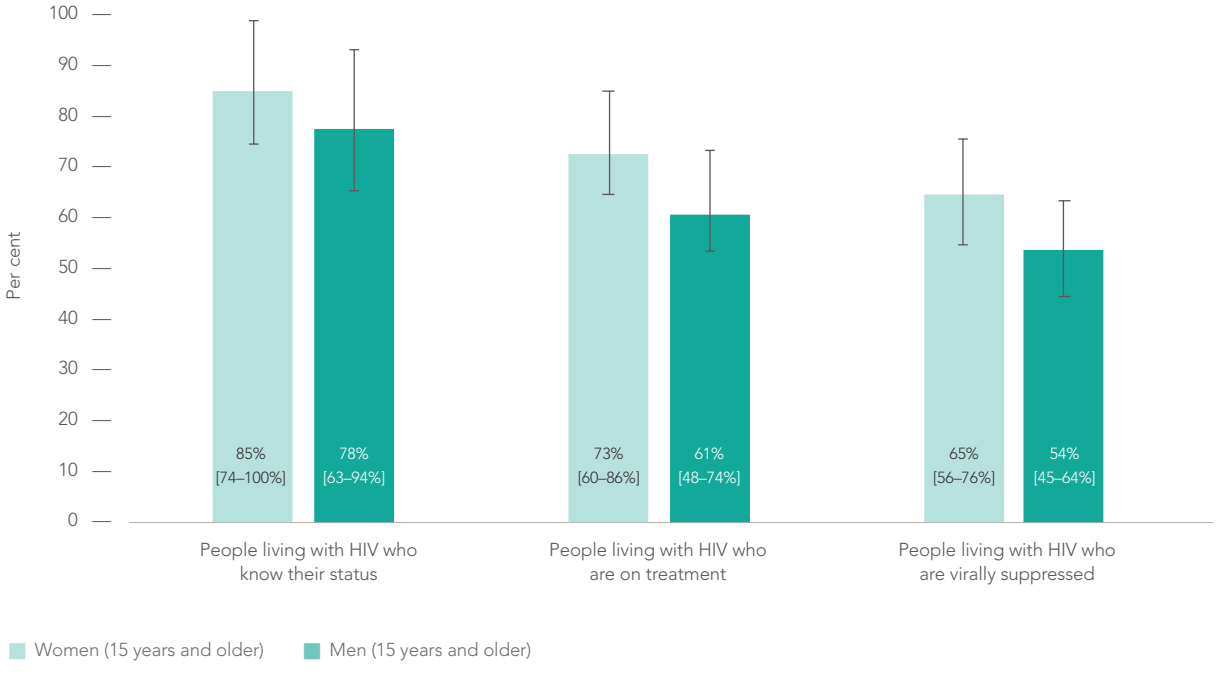
Women living with HIV are also about five times more likely to develop cervical cancer than their HIV-negative counterparts *(46)*. This risk is linked to the human papillomavirus (HPV), a common but preventable infection that women with compromised immune systems struggle to clear. High HPV vaccination coverage among girls—combined with dramatically scaled up cervical cancer screening and treatment—could


virtually eliminate cervical cancer *(47)*. Despite the clear benefits of such programmes, of the 118 million women who have received the HPV vaccine to date, only 1.4 million (1%) live in low- and middle-income countries *(48)*.

In nearly all regions, women living with HIV are more likely to access HIV testing and antiretroviral therapy than men, in part due to better health-seeking behaviour among women and the existence of HIV-related services designed specifically to reach women (such as services to prevent mother-to-child HIV transmission that are provided during antenatal care). In 2019, treatment coverage globally was 12 percentage points higher among women living with HIV than among men living with HIV, and viral suppression was 10 percentage points higher (Figure 0.14). This treatment gap among men living with HIV contributes to the higher number of new HIV infections among women in sub-Saharan Africa. Recent longitudinal studies have shown how closing these gaps accelerates declines in the incidence of HIV among women, especially young women *(49–51)*.

FIGURE 0.14

**HIV testing and treatment cascade among adults (aged 15 years and older), by sex, global, 2019**




Source: UNAIDS special analysis, 2020; see annex on methods for more details.

## People-centred approaches to pandemics

The COVID-19 pandemic has laid bare the need for systems to be more resilient, flexible and adaptable, and to provide everyone with the services they need in a more effective way *(11)*. Accelerated movement towards universal health coverage can help health systems achieve the highest possible standards of health and well-being for all people.

The guiding principle of universal health coverage is equity: everyone—irrespective of race, ethnicity, age, gender or social status—should receive the health services they need without suffering financial hardship due to the costs of paying for those services. A similar set of principles has guided the global HIV response for decades. Strategies that have successfully controlled HIV epidemics have generally followed the principle that no one should be left behind. They uphold people's rights, work with and take the lead from communities, and marshal strong political commitment and reliable financial support. They foster enabling legal, social and institutional environments, and they provide services that are tailored by and for the people in greatest need.

### *Comprehensive approaches for women and girls*

Calls for gender equality are growing louder as women leaders and community mobilizers mark the 25th anniversary of the Beijing Declaration and Platform for Action. A rights-based and gender-responsive approach is needed to overcome the many barriers faced by women and girls, and action is required on multiple fronts. All women require access to a comprehensive package of quality sexual and reproductive health and rights services that are: (a) accessible and gender-responsive; (b) free from coercion and stigma and discrimination; (c) grounded in a human-rights based approach; and (d) linked to other relevant services.

Studies in multiple settings have demonstrated the advantages of integrating HIV and sexual and reproductive health care:

- The Girl Power project in Malawi used a youth-friendly model that offered HIV testing, family planning and STI services in combination. Adolescent girls using the integrated services were 23% more likely to take an HIV test, 57% more likely to receive condoms, 39% more likely to access hormonal contraception and 16% more likely to use services for STIs *(52)*.

- In Viet Nam, the addition of peer education outreach to integrated sexual and reproductive health and HIV services led to a nearly fivefold increase in adolescents seeking HIV testing *(53)*. A systematic review of studies from Eswatini, Kenya, Uganda and the United States also found a potential for increased uptake of HIV testing *(54)*.

- Providing PrEP through routine family planning services is also a promising strategy to reach women in settings with a high burden of HIV, as shown in a study in South Africa where very high PrEP retention rates (92%) were achieved *(55)*.[3]

An important contributor to sexual and reproductive health and rights is comprehensive sexuality education for adolescents and young people of all genders. Comprehensive sexuality education is cost-effective and improves sexual and reproductive health outcomes, including delayed initiation of sexual intercourse, decreased number of sexual partners, reduced sexual risk-taking and increased use of condoms and contraception, all of which result in reduced rates of STIs, HIV infections and unintended pregnancies *(56–58)*.

Staying in school longer has a protective benefit in reducing the risk of HIV infection *(59–61)*. Higher levels of educational attainment among women are also associated with increased control over sexual and reproductive health and rights *(62)*. Cash transfers can keep young people, particularly girls, in school, improve their academic outcomes, increase their use of health services, delay their sexual debut, reduce early marriage and teen pregnancy, and promote safer sexual behaviours *(63, 64)*.

One of the largest efforts to provide adolescent girls and young women with a comprehensive, multisectoral package of services that addresses the multiple social, economic and structural drivers that fuel HIV risk is the DREAMS partnership, which is funded by the United States President's Emergency Plan for AIDS Relief (PEFPAR).[4] Safe

3 The World Health Organization (WHO) recommends considering offering PrEP in settings where the incidence of HIV is above 3%.
4 DREAMS is an acronym for "Determined, Resilient, Empowered, AIDS-Free, Mentored and Safe."

spaces are established for the provision of a tailored package of services that include evidence-informed HIV and violence prevention education, HIV prevention, testing and treatment services, educational and economic interventions, and contextual services for parents, male partners and community members to build a supportive environment.

This approach is having a positive effect on different HIV-related outcomes. In urban Zambia, for example, layering educational and economic interventions on top of safe spaces or social asset-building activities resulted in a reduced likelihood of HIV risk behaviours among adolescent girls, including reduced transactional sex and increased consistent condom use and HIV testing *(65)*.

### *Eliminating child infections and treating children living with HIV*

Alongside adolescent girls and young women, children living with HIV are often left without the support and services they need to stay healthy and build sustainable and enjoyable lives.

The number of new child infections resulting from the mother-to-child transmission of HIV has more than halved in less than two decades, progress that in large part reflects the increased provision of antiretroviral therapy to pregnant women living with HIV. Despite this vastly improved treatment coverage, progress towards the elimination of child HIV infections has largely stalled, and the 2018 and 2020 targets for reducing new HIV infections among children were missed. Analyses of epidemiological and programme data are guiding efforts to address the remaining challenges, including treatment coverage gaps among pregnant women living with HIV, interruptions in antiretroviral therapy during pregnancy and breastfeeding, and women acquiring HIV during pregnancy and breastfeeding.

Mentor mother and peer-to-peer models are effective at enabling women and children to access testing, adhere to treatment and remain in care, even in difficult circumstances. These models involve training HIV-positive women to provide front-line health services, advice and support to women and their families *(66)*. In Uganda, the mothers2mothers (M2M) programme significantly increased retention of mother–baby pairs: 82% were retained at six months after cessation of breastfeeding (compared with 42% in the control group), and 71% were retained at 18 months after birth (21% in the control group) *(67)*.

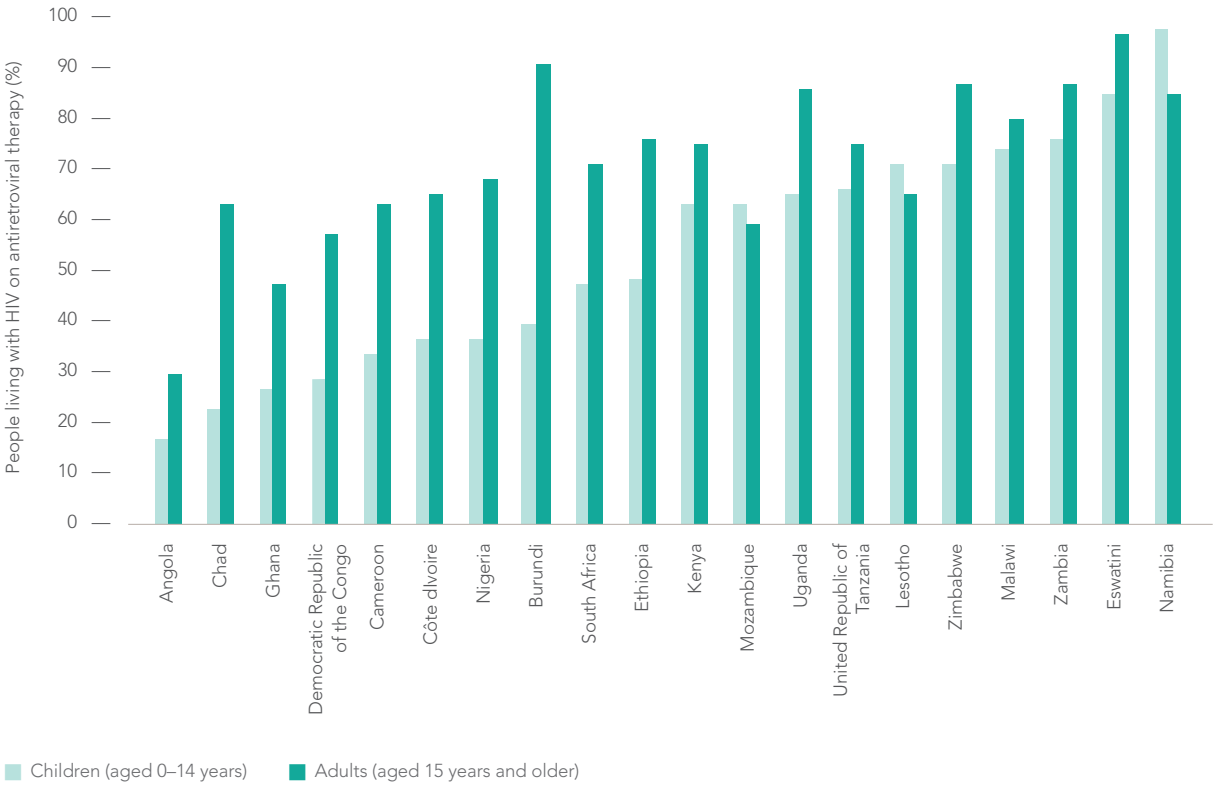
### *Older children are being missed*

Similarly, all of the paediatric treatment targets set in 2016 have been missed, despite a doubling of the number of children living with HIV accessing antiretroviral therapy since 2010. Treatment coverage among children living with HIV lags behind adult treatment coverage in most of the sub-Saharan African countries with large HIV epidemics (Figure 0.15). Across all countries, treatment coverage among children living with HIV in 2019 was just 53% [36–64%], representing a global failure to provide life-sustaining care to 840 000 children (see Chapter 2).

As vertical infections decline, the proportion of children aged 5 to 14 years who are living with HIV has increased. Of the estimated 840 000 children living with HIV not on treatment in 2019, 560 000 of them were between the ages of 5 and 14. Efforts to find and treat these undiagnosed children living with HIV must be accelerated. One strategy is to ensure that children who have lost one or both parents to AIDS-related illnesses have been reached by integrating HIV testing services into programmes supporting orphans and other vulnerable children *(68, 69)*. In addition, studies indicate that large proportions of people enrolled in HIV treatment have family members, including children, whose HIV status is unknown *(70–72)*. Testing those family members through index testing that is rights-based and gender-sensitive can be an effective strategy for identifying older children living with HIV *(70, 73–76)*. Index family testing also improves timely linkages to care, with initiation rates of 42–96% reported in various studies *(70, 71, 75, 77, 78)*. Such family-based approaches also enable parents and their children to access care jointly, which can improve retention *(79)*.

FIGURE 0.15

**Antiretroviral therapy coverage among children and adults, sub-Saharan African, focus countries of the Start Free, Stay Free, AIDS Free initiative, 2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).
Note: Botswana data are not available.

### *Neglected rights of migrants and sex workers leave them exposed to COVID-19 and HIV*

There were an estimated 272 million international migrants in 2019, equal to about 3.5% of the global population *(80)*.[5] Migration is increasingly forced by conflict and violence, natural disasters and the effects of climate change *(81)*. It is conservatively estimated that almost 71 million people were forcibly displaced in 2018, twice as many as two decades earlier *(82)*.

Living in crowded camps, emergency shelters and informal settlements with limited access to health care, displaced people often are highly vulnerable to health threats, including COVID-19. An extensive review of refugee and migrant health in Europe has found that any increased risk that refugees may have for specific diseases can largely be attributed to poor living conditions during and after migration, including in refugee camps *(83)*. Indeed, large proportions of migrants living with HIV were infected after migration *(84)*. User fees, discrimination, social isolation, language and cultural barriers, unsafe working conditions, fear of deportation and a lack of health insurance are among the factors hindering their access to health care *(81, 85, 86)*.

Regional cooperation can ameliorate the difficulties faced by people displaced by crises. For example, Latin American and Caribbean countries have agreed on a road map for the integration of refugees and migrants from the crisis-hit Bolivarian Republic of Venezuela. Within this "Quito Process", several countries are working to provide migrants living with HIV with high-quality antiretroviral medicines, regardless of their immigration status *(87)*.

Many migrants and sex workers share the common challenge of exploitative working conditions. Standard labour protections are denied to those who are forced to work outside the bounds of local labour laws, denying them health and safety benefits while they are working and unemployment benefits when they are not. Where any aspect of sex work is criminalized, sex workers lack legal protections against violence, discrimination and abuse. Denying sex workers the protections

provided to other workers is an exclusion that is particularly harmful during economic downturns and COVID-19 lockdowns *(88)*.

The decriminalization of sex work is a key component for securing rights, health and safety at work for sex workers, and for achieving their self-determination, amplifying opportunities for outreach and peer education, increasing transparency, and reducing stigma and discrimination *(89)*. Decriminalization also reduces the risk of HIV infection, with modelling studies suggesting that decriminalizing sex work could avert 33–46% of HIV infections over 10 years *(90)*. Following nongovernmental organization advocacy in China, the government ended a policy that allowed police to incarcerate sex workers for up to two years without charge, while the Northern Territory in Australia recently decriminalized sex work (see feature story on pg 158).

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5 International migrants are defined as persons who are either living in a country other than their country of birth or are in a country other than their country of citizenship.

### *Transgender people*

Transgender people across the world are subjected to intersecting punitive and discriminatory laws and policies that limit their freedoms, including bodily autonomy, legal identity, privacy and self-expression. In 2019, transgender people were criminalized and/or prosecuted in 19 of 134 reporting countries *(91)*. Transgender women have some of the highest rates of HIV reported for any population, with HIV prevalence of up to 40% reported in some studies *(92)*.

The stigma and discrimination endured by transgender people (including from health-care providers) is frequently associated with poor mental health, substance abuse, lack of familial and social support, homelessness and unemployment—all of which also compromise their access to HIV and other health services *(92–96)*.

### *Gay men and other men who have sex with men*

Impressive successes have been achieved in reducing HIV infections and AIDS-related deaths among gay men and other men who have sex with men in several cities within Australia, North America and western Europe. High levels of condom use, adherence to PrEP and viral suppression have been shown to enable gay men and other men who have sex with men to protect their own health and that of their sexual partners.

In other parts of the world, many communities of gay men and other men who have sex with men are treated as criminals and denied access to the health and HIV services they need. At least 69 countries have laws that criminalize same-sex sexual relations. These laws undermine the basic human rights of lesbians, bisexuals, transgender

persons, and gay men and other men who have sex with men, exposing them to hate speech, violence, forced anal examinations and forced heterosexual marriages.[6]

### *People who use drugs*

The positive public health impact of harm reduction programmes that bring together needle–syringe programmes, opioid substitution therapy, overdose treatment, services for HIV and hepatitis C viral infection, and other services is well established *(98)*. Only a minority of countries provide harm reduction services, however, mostly on a very small scale, and often in legal contexts that criminalize drug use and discourage people from accessing services.

Criminalization of drug use is a major barrier. The UN system has made a common commitment to supporting UN Member States to develop and implement responses to the world drug problem that are balanced, comprehensive, integrated, evidence-informed, human rights-based, development-oriented and sustainable *(98)*. The global community of people who use drugs has called for harm reduction services to be included in the benefits package of universal health coverage systems, arguing that the principles of universal health coverage demand that the needs of the poorest and most vulnerable people—including people who inject drugs—be addressed first *(99)*.

Integration of HIV and hepatitis C treatment (including the prevention of further transmission) can produce dramatic results for people who inject drugs. In a recent cluster randomized trial in India, people who inject drugs received hepatitis C testing and information at integrated care centres that provided HIV testing and treatment and harm reduction services. Those who did were four times more likely to test for hepatitis C and seven times more likely to know their hepatitis C status and initiate treatment than peers using standard care centres *(100)*.

### *People in prisons and other closed settings*

International guidelines recommend a comprehensive package of health interventions for prisons, including for HIV and tuberculosis *(101, 102)*. The risk of sexual violence among prisoners—and their insufficient access to condoms, lubricants, PrEP and harm reduction services—heighten their chances of acquiring HIV, hepatitis C and STIs *(103)*. Crowded, poorly ventilated and unsanitary conditions increase the risk of tuberculosis and other communicable respiratory diseases, including COVID-19 *(103–105)*. HIV testing and antiretroviral therapy coverage in prisons is improving, but gaps remain in several countries, including countries with a high prevalence of HIV within the general population. Challenges around confidentiality, discrimination and treatment interruptions upon release also remain *(106)*.

The COVID-19 pandemic has highlighted the obligation of all states under international human rights law to protect the health of people in prisons

6 Intersex people are not included here because they are not criminalized for being intersex. However, intersex people can have various sexual orientations and gender identities that may result in their criminalization. The human rights and health challenges that intersex people often experience are associated with the medicalization and pathologizing of their intersex status. This may lead to medical procedures, including surgeries, that are often performed without informed consent, and that could lead to long-lasting negative consequences for their health and well-being.

and detention facilities *(107)*. The United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules) make clear that health care for people in prison should be of the same standard as that available in the rest of the community *(101)*. Several countries are considering or applying practical reforms, including using detention as a last resort, avoiding pretrial detention, and allowing early release or home detention of persons convicted of nonviolent crimes *(108)*. There are growing calls—including from the UN Inter-Agency Standing Committee—to end the incarceration of people for minor offences or for offences not consistent with international law *(109, 110)*.

### *Integrating tuberculosis and HIV services*

Scale-up of antiretroviral therapy and improvements in the integrated delivery of HIV and tuberculosis services has reduced tuberculosis-related deaths among people living with HIV by 58% globally. Preventive treatment for tuberculosis among people living with HIV in 65 high-burden countries has improved dramatically in recent years, reaching 1.8 million in 2018.

Despite this progress, large gaps in tuberculosis detection and preventive treatment exist in several high-burden countries. In 66 countries with available data, coverage of tuberculosis preventive treatment among people living with HIV who were newly enrolled in care was just 49% in 2018. Among the 11 countries with a high TB/HIV burden that reported these data, coverage ranged from 10% in Indonesia to 97% in the Russian Federation. About 0.8 million of the 10 million new tuberculosis cases globally in 2018 were among people living with HIV *(111)*. Tuberculosis remains the most common cause of premature death among people living with HIV, claiming the lives of 251 000 [223 000–281 000] people living with HIV in 2018 *(111)*.

While the successes of the HIV response are vital contributions to the COVID-19 response, our collective failure to achieve the 2020 targets has exposed systemic weaknesses and entrenched inequalities, raising questions about what might have been. What if the UNAIDS Fast-Track Strategy had been fully implemented? What if global pandemic response capacities had been stronger?

### *Noncommunicable diseases and mental health*

Noncommunicable diseases are common comorbidities among people living with HIV, especially those of advanced age. A recent systematic review and meta-analysis of studies calculated pooled estimates for the prevalence of noncommunicable diseases among people living with HIV in low- and middle-income countries: hypertension prevalence was 21.2%, hypercholesterolemia prevalence was 22.2%, obesity prevalence was 7.8%, depression prevalence was 24.4%, and diabetes prevalence was 1.3–18% *(112)*.

Integration of noncommunicable disease services for people living with HIV is critically important to addressing their needs. When the SEARCH (Sustainable East Africa Research in Community Health) study applied a community health approach and integrated HIV into multidisease service delivery, it led to a range of improvements: HIV-associated tuberculosis incidence was reduced and hypertension control was improved alongside dramatic increases in HIV service coverage and reductions in HIV incidence and AIDS-related mortality *(113)*.

Mental health conditions are a leading cause of morbidity worldwide, and rates of mental health conditions are higher among people living with HIV than they are among the general population *(114)*. Mental health conditions also affect HIV treatment and care outcomes, with one large meta-analysis estimating that the likelihood of strong adherence to antiretroviral therapy was 42% lower in people experiencing depression *(115)*. Integrating screening and care for mental health conditions in HIV service settings can both strengthen HIV prevention and care outcomes and improve access to mental health care and support.

## Seizing the moment

As the world grapples with a new deadly global pandemic, the leadership, resources and infrastructure of the response to the HIV pandemic have been mobilized. Veterans of national HIV responses have emerged as COVID-19 response coordinators in dozens of countries. International HIV partnerships are helping to convene the world's best epidemiologists, scientists and medical professionals to collect data, develop treatments and vaccines, and provide financing and supplies to the countries and communities that need them most.

The expertise, analytical capacity, and surveillance and monitoring systems developed through HIV funding are also bolstering COVID-19 responses. For instance, laboratory systems that have been vastly expanded and improved as a result of HIV and tuberculosis investments are being mobilized for COVID-19 testing *(116, 117)*.

Activists and community organizations that are central features of the HIV response are leading efforts to ensure that COVID-19 responses are rights-based and gender-sensitive, and that they do not prejudice marginalized communities, such as LGBTI people. Communities are also stepping forward to lead local COVID-19 responses, challenging misinformation and stigmatization, delivering essential supplies to the vulnerable and organizing local support systems *(118)*. Efforts to maintain health services during COVID-19 lockdowns have underscored the value of community-led services that are grounded in lived realities and responsive to the needs, priorities and rights of most-affected populations.

While the successes of the HIV response are vital contributions to the COVID-19 response, our collective failure to achieve the 2020 targets has exposed systemic weaknesses and entrenched inequalities, raising questions about what might have been. What if the UNAIDS Fast-Track Strategy had been fully implemented? What if global pandemic response capacities had been stronger?

We cannot re-write the past. But as more and more people refuse to accept the inequalities of that past, the international community can seize this moment, imagine a better future and re-energize efforts to achieve global health, sustainable development and the end of the AIDS epidemic.

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# 01

# ADVANCING TOWARDS THE THREE ZEROS

# ADVANCING TOWARDS THE THREE ZEROS

## DATA POINTS

**1.7 MILLION**
PEOPLE ACQUIRED HIV IN 2019, MORE THAN THREE TIMES THE 2020 TARGET.

**690 000 LIVES**
WERE LOST TO AIDS-RELATED ILLNESSES IN 2019, DESPITE THE AVAILABILITY OF EFFECTIVE TREATMENTS.

62% OF NEW ADULT HIV INFECTIONS
GLOBALLY ARE AMONG
**KEY POPULATIONS AND THEIR SEXUAL PARTNERS.**

ADOLESCENT GIRLS AND YOUNG WOMEN ACCOUNT FOR
**1 IN 4 INFECTIONS**
IN SUB-SAHARAN AFRICA.

IN 25 COUNTRIES,
**MORE THAN 50%**
OF ADULTS HAVE DISCRIMINATORY ATTITUDES TOWARDS PEOPLE LIVING WITH HIV.

The vision of the global HIV response is to achieve three zeros: zero new HIV infections, zero AIDS-related deaths and zero discrimination. Ten years ago, when this vision was first articulated, the three zeros were largely aspirational—a distant dream. Five years later, in 2015, the three zeros served as the basis for the HIV targets within the 2030 Agenda on Sustainable Development. Measurable targets were set for 2030, and the United Nations (UN) General Assembly later articulated interim 2020 milestones in the 2016 Political Declaration on Ending AIDS:

- To reduce new HIV infections to fewer than 500 000 by 2020.
- To reduce AIDS-related deaths to fewer than 500 000 by 2020.
- To eliminate HIV-related stigma and discrimination by 2020.

The first two targets are approximately 75% reductions compared to a 2010 baseline, using the epidemiological estimates from 2016.[1] The elimination target is based on the human rights principle that a single case of discrimination globally is one too many.

With the end of 2020 approaching, the latest data from countries show both progress and challenges. As the complex reality of HIV epidemics is increasingly understood, more HIV responses are sharpening their ability to identify gaps and develop strategies to reach people who are being left behind. However, too few countries have taken sufficient action to reach the interim milestones, leaving the world off track to achieve the three zeros by 2030.

1 UNAIDS epidemiological estimates are revised each year using the latest available data from countries. In 2016, as the Political Declaration on Ending AIDS was being negotiated by UN Member States, UNAIDS estimated that there had been 2 205 000 [1 970 000–2 466 000] new HIV infections and 1 499 000 [1 300 000–1 700 000] AIDS-related deaths in 2010. The updated 2020 estimates suggest that there were 2 145 000 [1 585 000–2 894 000] new HIV infections and 1 137 000 [828 000–1 607 000] AIDS-related deaths in 2010.

PROGRESS ON THE PREVENTION OF HIV TRANSMISSION REMAINS FAR TOO SLOW, WITH THE ESTIMATED TOTAL NUMBER OF NEW INFECTIONS IN 2019 MORE THAN THREE TIMES HIGHER THAN THE MILESTONE THAT WAS SET FOR 2020.

## Zero new infections

The estimated 1.7 million people [1.2 million–2.2 million] who acquired HIV worldwide in 2019 marked a 23% decline in new HIV infections since 2010 (Figure 1.1). This was the lowest annual number of new infections since 1989.

However, progress on the prevention of HIV transmission remains far too slow, with the estimated total number of new infections in 2019 more than three times higher than the milestone of 500 000 that was set for 2020. An increasing number of countries are making remarkable progress, but many more are failing to adopt proven methods for preventing HIV infection at the required scale.

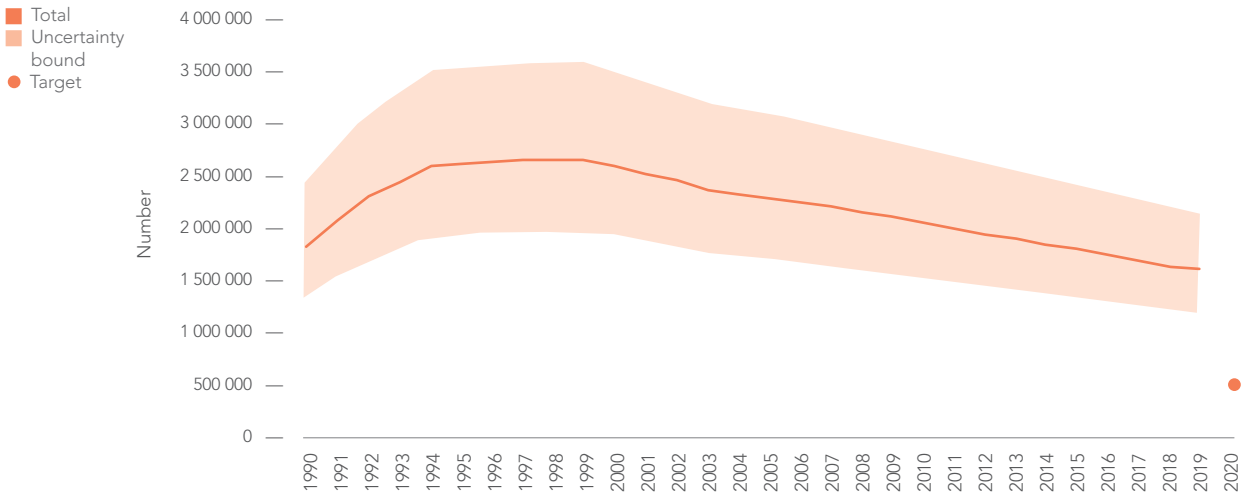
Globally, the annual number of new infections has been falling more rapidly among women and girls (a 27% decrease since 2010) than among men and boys (an 18% decrease) (Figure 1.2). There were fewer new infections in 2019 worldwide among women and girls (48% of total infections) than among men and boys (52%). Children (aged 0 to 14 years) accounted for 9% of new infections in 2019, with 84% of child infections occurring in sub-Saharan Africa (see Chapter 2 for trends).

The global decrease in new infections is driven by substantial reductions in new infections in eastern and southern Africa (a 38% reduction since 2010). Reductions were also achieved in the Caribbean (29%), western and central Africa (25%), western and central Europe and North America (15%), and Asia and the Pacific (12%). By contrast, the epidemic continued to grow in eastern Europe and central Asia, with new HIV infections rising by 72% between 2010 and 2019. There were also increases in the Middle East and North Africa (22%) and Latin America (21%).

A majority (62%) of new adult HIV infections globally in 2019 were among key populations and their sexual partners (Figure 1.3). These populations—which include sex workers, people who inject drugs, prisoners, transgender people, and gay men and other men who have sex with men—constitute small proportions of the general population, but they are at elevated risk of acquiring HIV infection, in part due to discrimination and social exclusion.

FIGURE 1.1

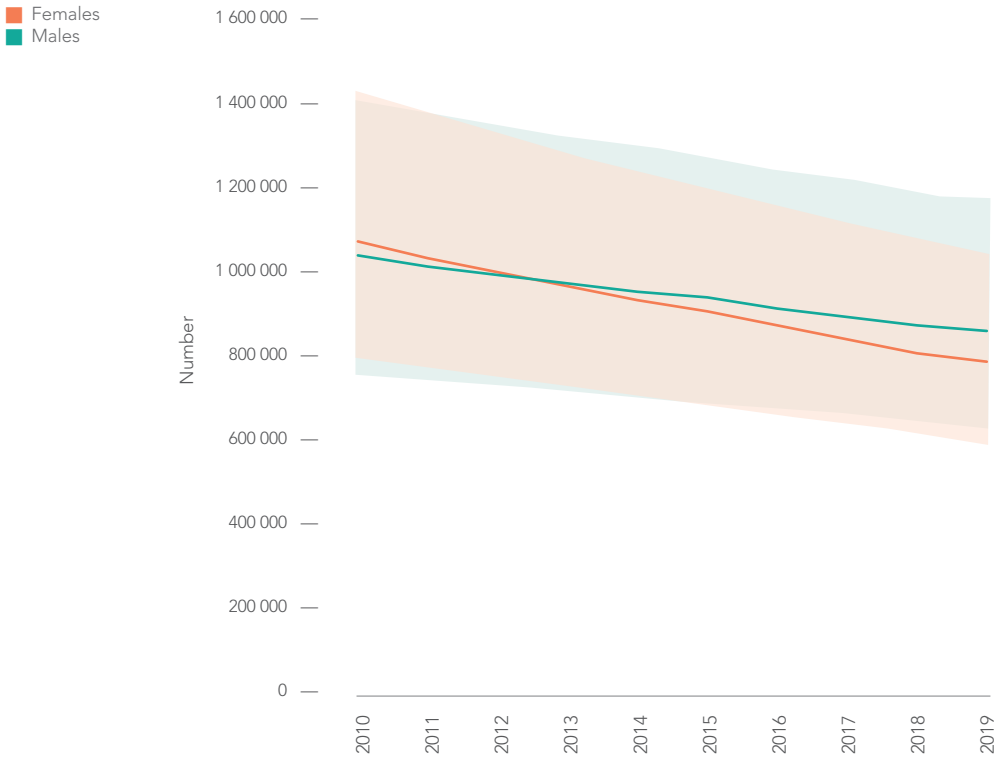
## Number of new HIV infections, global, 1990–2019




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 1.2

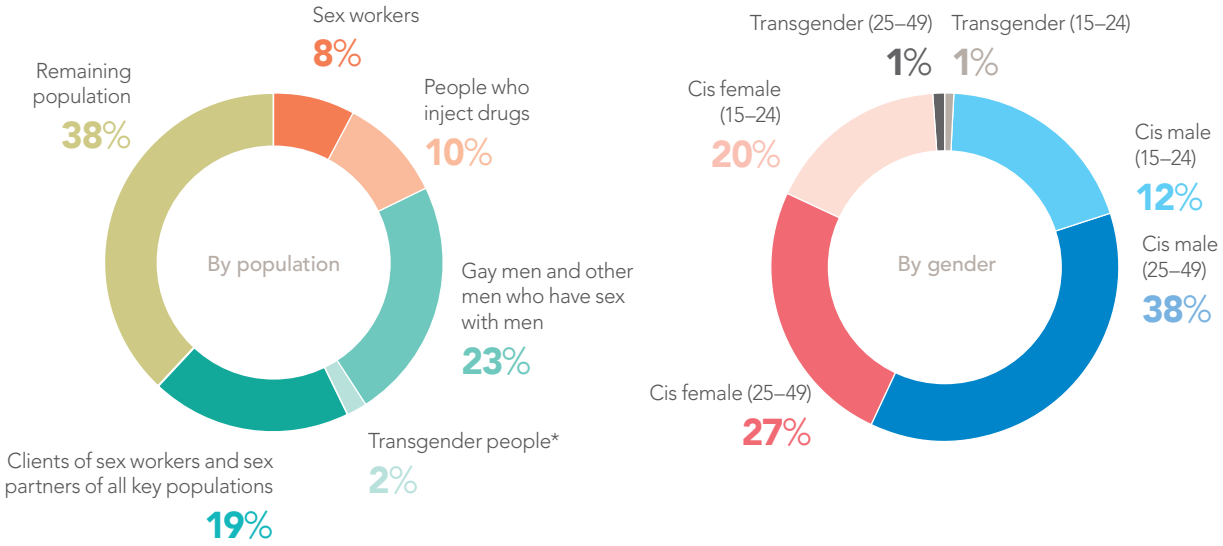
## Number of new HIV infections by sex, global, 2010–2019




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 1.3

**Distribution of new HIV infections by gender and population, global, 2019**




* Data only included from Asia and the Pacific, the Caribbean, eastern Europe and central Asia, Latin America, and western and central Europe and North America.
Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); UNAIDS special analysis, 2020 (see methods annex).
Note: Epidemiologic data from transgender populations are available primarily from the Asia and the Pacific, Caribbean and Latin America regions. Sparser data are available from the western and central Europe and North America region. Limited programme data are available from western and central Africa and eastern and southern Africa. Furthermore, data are primarily from transwomen, and among those transwomen, data are frequently from people who sell sex. Only a few data points were available from transmen. Nonetheless, the transgender population and their risks for acquiring HIV should not be fully ignored in UNAIDS analyses.

### *HIV risks vary by region*

HIV risk among adults is higher among specific ages, genders and subpopulations by region, depending on the type of epidemic within the countries, cities and communities of the region. In sub-Saharan Africa, adolescent girls and young women (aged 15 to 24 years) in particular are at higher risk of HIV infection: they accounted for about one in four new infections, despite comprising only 10% of the population. In the region most affected by HIV, eastern and southern Africa, adolescent girls and young women accounted for 30% of new infections (Figure 1.4 on pages 10 and 11).

Outside of sub-Saharan Africa, men accounted for the majority of new adult HIV infections in 2019, ranging from 57% in the Caribbean to 79% in western and central Europe and North America.

Globally in 2019, almost one quarter (23%) of new adult HIV infections were among gay men and other men who have sex with men. This population accounted for more than 40% of new infections in Asia and the Pacific and Latin America, and nearly two thirds (64%) of new infections in western and central Europe and North America. Young gay men and other men who have sex with men (aged 15 to 24 years) are at particular risk in high-income countries of western and central Europe and North America, accounting for 36% of infections in the region in 2019.

Approximately 10% of new adult HIV infections worldwide were among people who inject drugs. This population made up almost half (48%) of new infections in eastern Europe and central Asia, 43% in the Middle East and North Africa, 17% in Asia and the Pacific, and 15% in western and central Europe and North America. An estimated 8% of new adult infections globally were among sex workers of all genders, while transgender women accounted for a small share of new HIV infections worldwide but disproportionally large shares of new infections in Asia and the Pacific (7%), Latin America (6%) and the Caribbean (5%).

## Zero AIDS-related deaths

Increased access to antiretroviral therapy has averted an estimated 12.1 million AIDS-related deaths since 2010. Despite this progress, hundreds of thousands of people are dying each year of a disease that has multiple effective and relatively inexpensive treatment regimens available. The estimated 690 000 [500 000–970 000] lives lost due to AIDS-related illnesses worldwide in 2019 was a 39% reduction since 2010, but a ways off the 2020 target of less than 500 000 deaths (Figure 1.5).

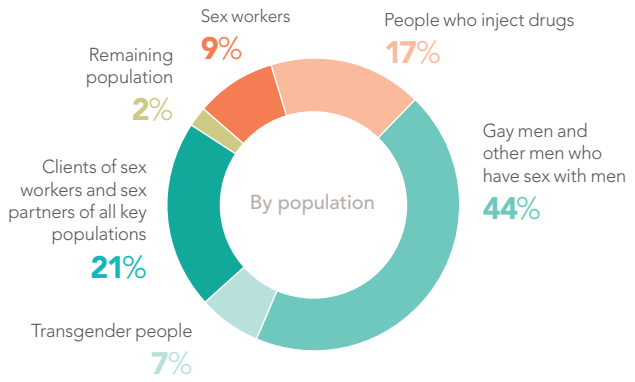
The generally higher coverage of antiretroviral therapy among women is reflected in the lower number of AIDS-related deaths among women and girls globally in 2019: 300 000 [220 000–420 000] compared with 390 000 [280 000–560 000] among men and boys (Figure 1.6). There were 46% fewer deaths due to AIDS-related illness among women and girls in 2019 than in 2010, compared with 32% fewer deaths among men and boys over the same period. Even though there are much more females than males among people living with HIV in sub-Saharan Africa (15.9 million women vs 9.8 million men), the epidemic claimed a similar number of lives in the region in 2019: an estimated 220 000 men and boys and an estimated 220 000 women and girls.

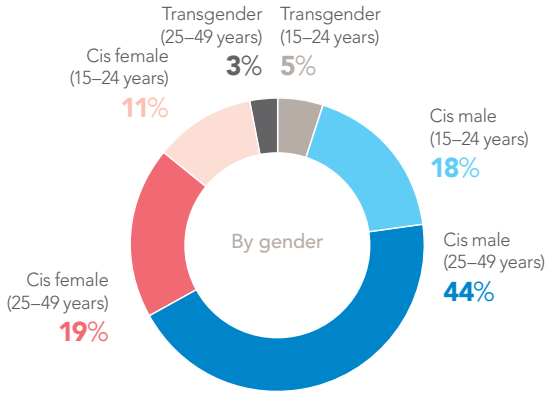
The region with the most rapid scale-up in HIV treatment, eastern and southern Africa, is unsurprisingly also the region with the most rapid decline in AIDS-related mortality: 49% between 2010 and 2019. The impact of expanded access to treatment is also evident in the Caribbean, western and central Africa, and western and central Europe and North America: all three regions had 37% fewer AIDS-related deaths in 2019 than in 2010. There were 28% fewer deaths due AIDS-related illnesses in Asia and the Pacific over the same period, while declines were less dramatic in Latin America (8%) and in the Middle East and North Africa (2%). An opposite trend prevails in eastern Europe and central Asia, where deaths due to AIDS-related causes increased by 24% between 2010 and 2019.

FIGURE 1.4

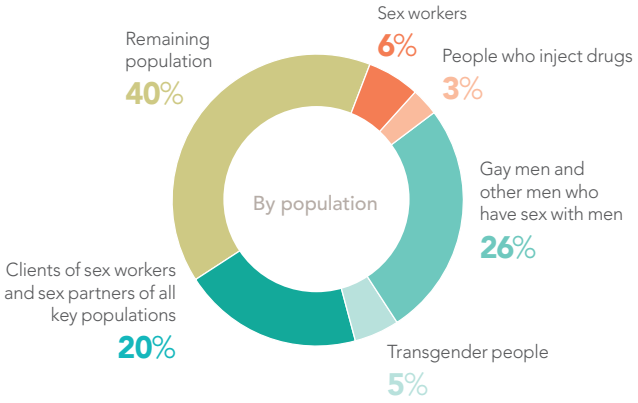
## Distribution of new HIV infections by gender and population, by region, 2019

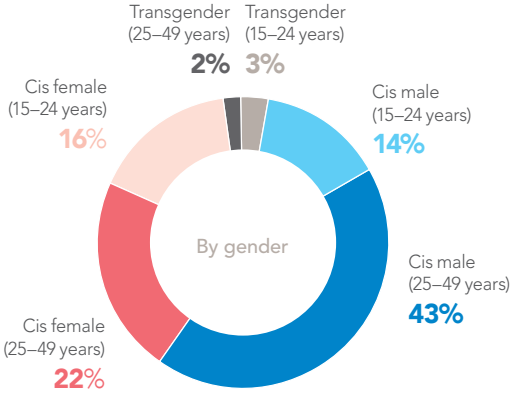
### Asia and the Pacific



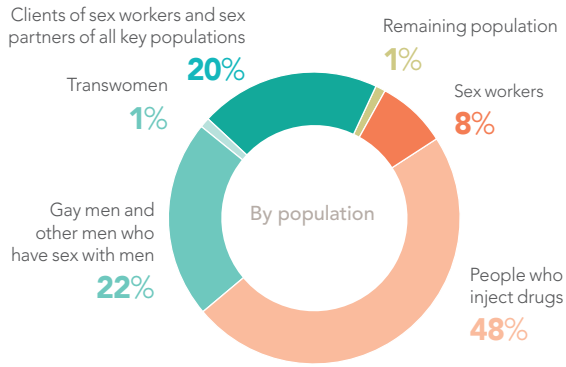



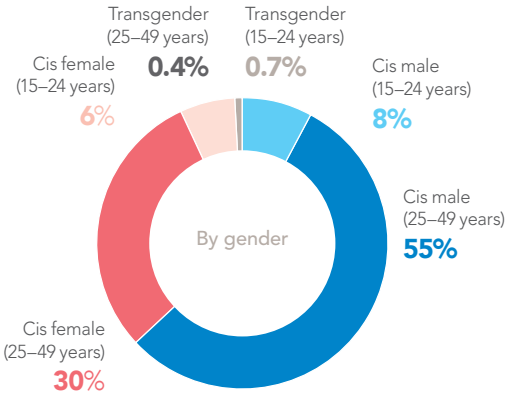

### Caribbean



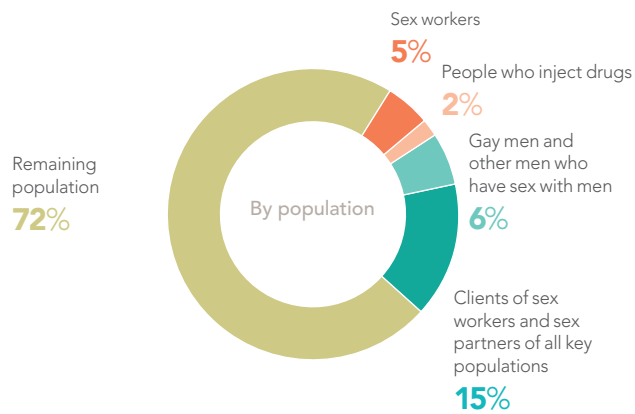



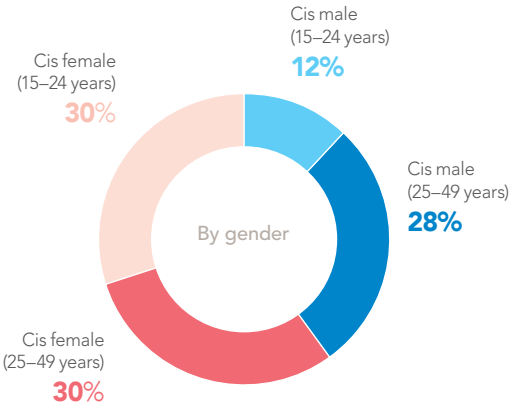

### Eastern Europe and central Asia



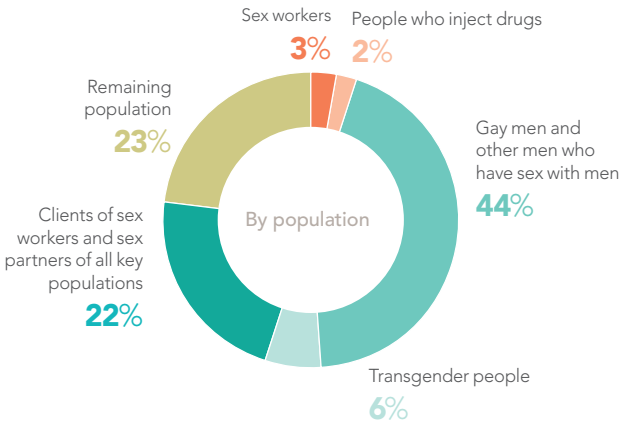



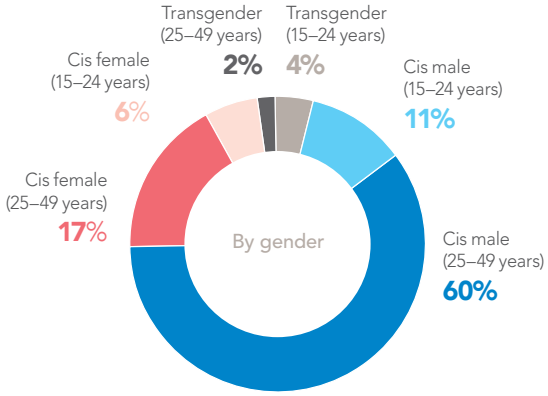

### Eastern and southern Africa



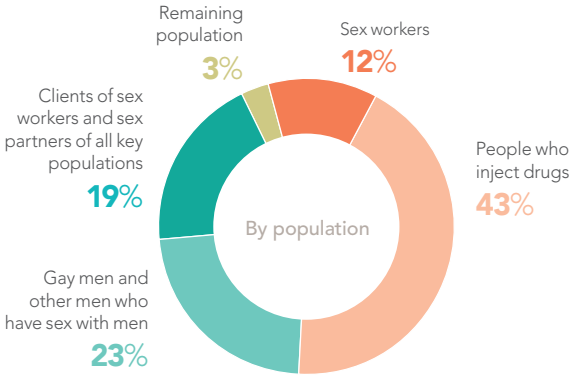



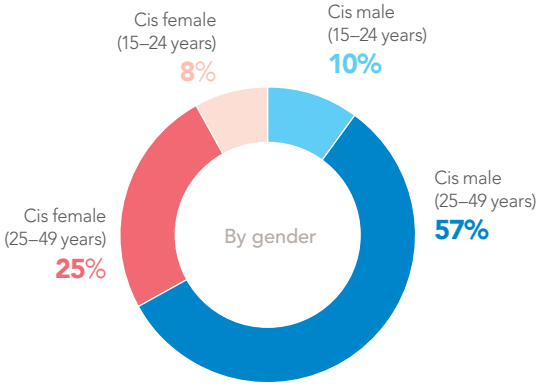
### Latin America



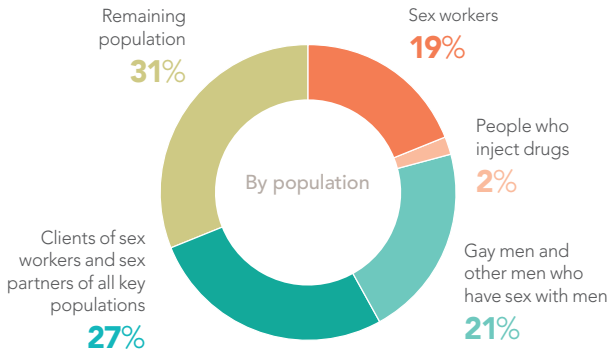



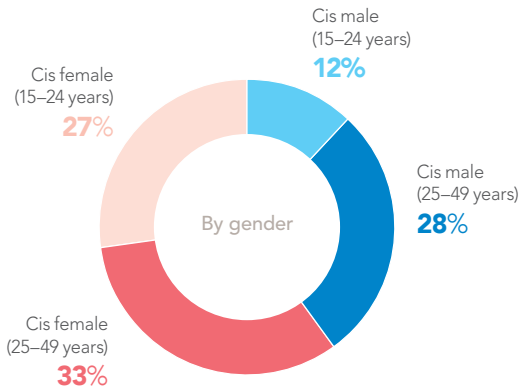

### Middle East and North Africa



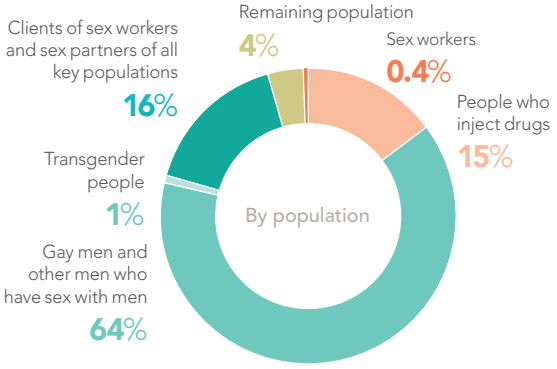



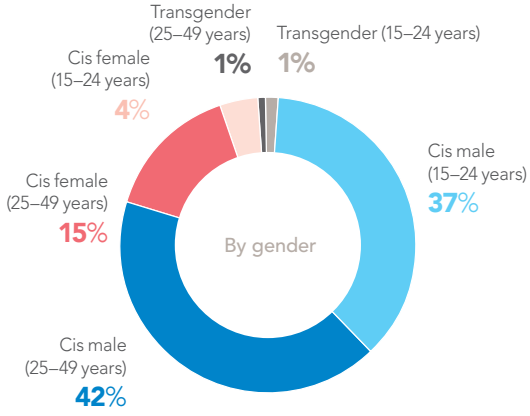

### Western and central Africa




### Western and central Europe and North America

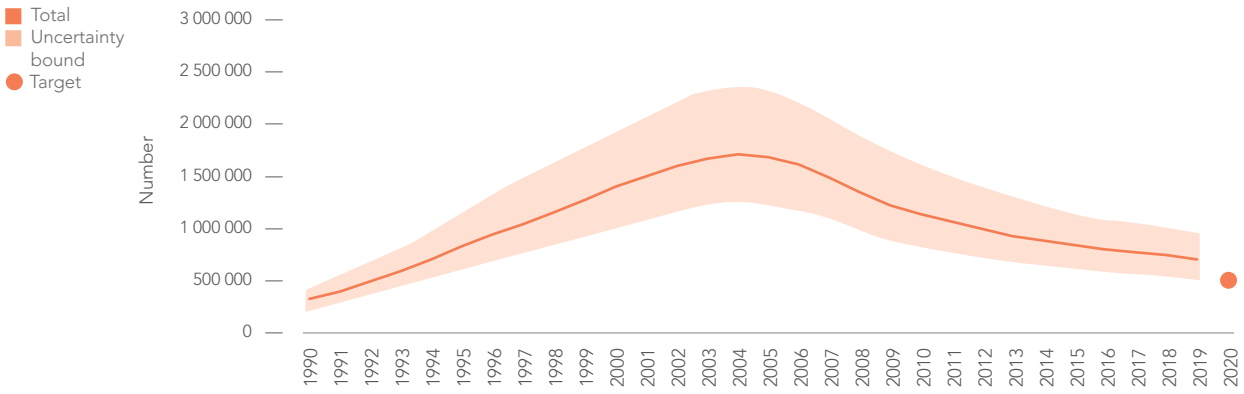



Note: Data regarding transgender people in some regions are not available for estimation of new HIV infections among that particular population. The unavailability of data does not imply that transgender people in the region are absent or unaffected by the HIV epidemic, however. It is more likely that they bear a disproportionate burden of HIV infection but are overlooked in surveillance activities for various social and technical reasons.
Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); UNAIDS special analysis, 2020 (see methods annex).

FIGURE 1.5

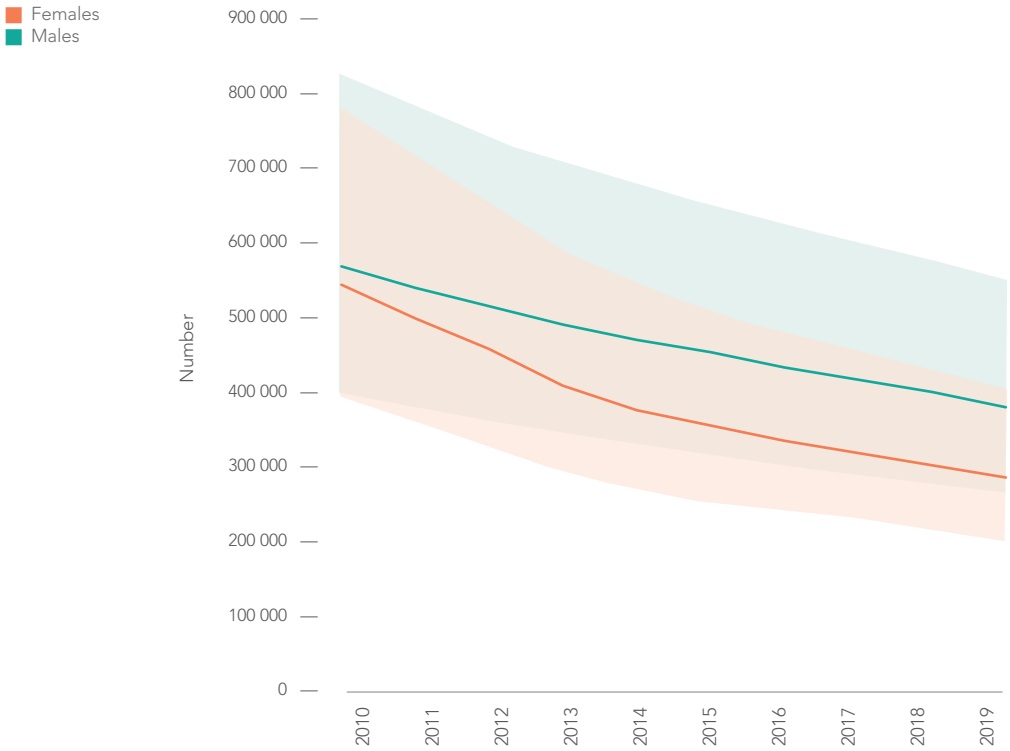
## AIDS-related deaths, global, 1990–2019




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 1.6

## AIDS-related deaths by sex, global, 2010–2019




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

## Zero discrimination

Misinformed fears of HIV infection—and denigrating attitudes and behaviours towards people living with HIV and people at much higher risk of acquiring infection—have been features of the HIV epidemic for decades. HIV-related stigma and discrimination continues to do harm by aggravating the HIV and other health threats that people face, and by obstructing people from acquiring the information and making use of the services they need to protect their health.

Legal systems in many countries are failing to protect the people that HIV responses are trying to reach. Criminalization of same-sex sexual relationships, sex work and drug use give license to discrimination, harassment and violence, isolating key populations and hindering them from accessing vital services. Overly broad criminalization of HIV non-disclosure, exposure or transmission also deters people from seeking to know their HIV status or from accessing HIV services.

Levels of HIV-related stigma and discrimination are currently tracked through population-based surveys, which reveal discriminatory attitudes within the general population, and through surveys that ask people living with HIV and members of key populations whether they have experienced stigma and discrimination within the previous 12 months. Efforts are ongoing to strengthen the monitoring of stigma and discrimination as countries and communities aim to reach the goal of zero discrimination.

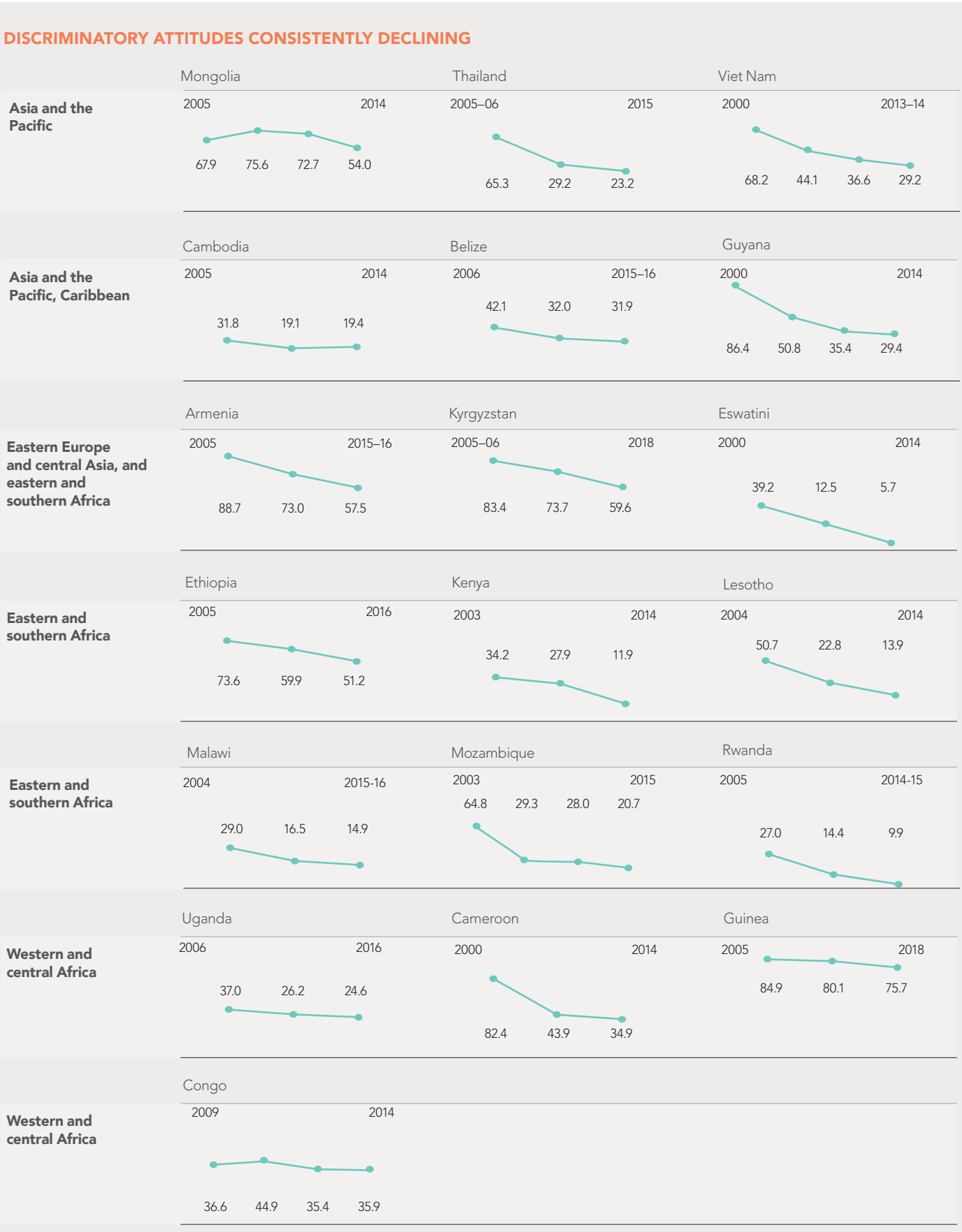
The most recent data from population-based surveys show that while discriminatory attitudes towards people living with HIV—measured by whether a person would buy fresh vegetables from a shopkeeper living with HIV—are declining consistently in some countries, they are rebounding in others. In eastern and southern Africa, for instance, discriminatory attitudes have been reduced in some countries to historically low levels. Elsewhere, however, disconcertingly large proportions of adults continue to hold discriminatory attitudes towards people living with HIV (Figure 1.7). In 25 of 36 countries with recent data on a composite indicator that includes two types of discriminatory attitudes, more than 50% of people aged 15 to 49 years reported having discriminatory attitudes towards people living with HIV (Figure 1.8).

Surveys of people living with HIV confirm that stigma and discrimination at health-care facilities—in the shape of denial of care, dismissive attitudes, coerced procedures or breach of confidentiality—remain disturbingly common. This discourages people living with HIV from knowing their HIV status and seeking care. Such poor treatment from health-care providers also makes it more difficult for people living with HIV to adhere successfully to treatment, achieve the sustainable viral load required for their own health and reduce the risk of transmitting HIV to others *(1–3)*.

Across 13 countries with available data, the percentage of people living with HIV who reported being denied health services at least once in the previous 12 months because of their HIV status ranged from 1.7% in Malawi to as high as 21% in Peru and Tajikistan. Coerced medical or health procedures remain common, as do breaches of confidentiality by health-care professionals (reported by at least 15% of people in eight of 13 countries with available data). Significant proportions of people living with HIV also reported that their ability to obtain antiretroviral therapy was conditional on them using certain forms of contraception (Figure 1.9).

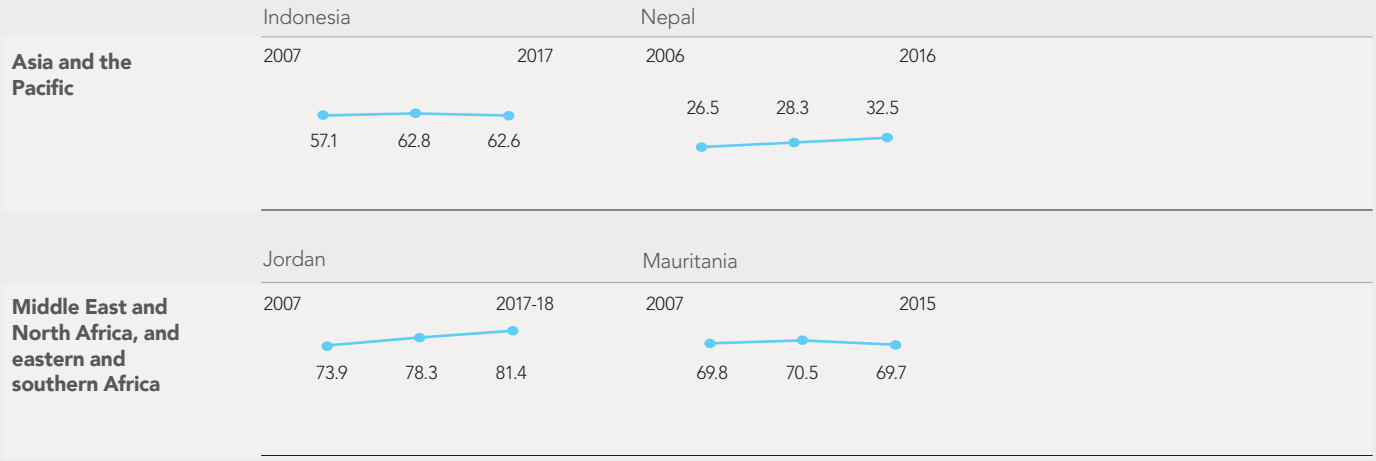
FIGURE 1.7

## Percentage of people aged 15 to 49 years who would not buy vegetables from a shopkeeper living with HIV, countries with available data, 2000–2019



## DISCRIMINATORY ATTITUDES DECLINING THEN INCREASING

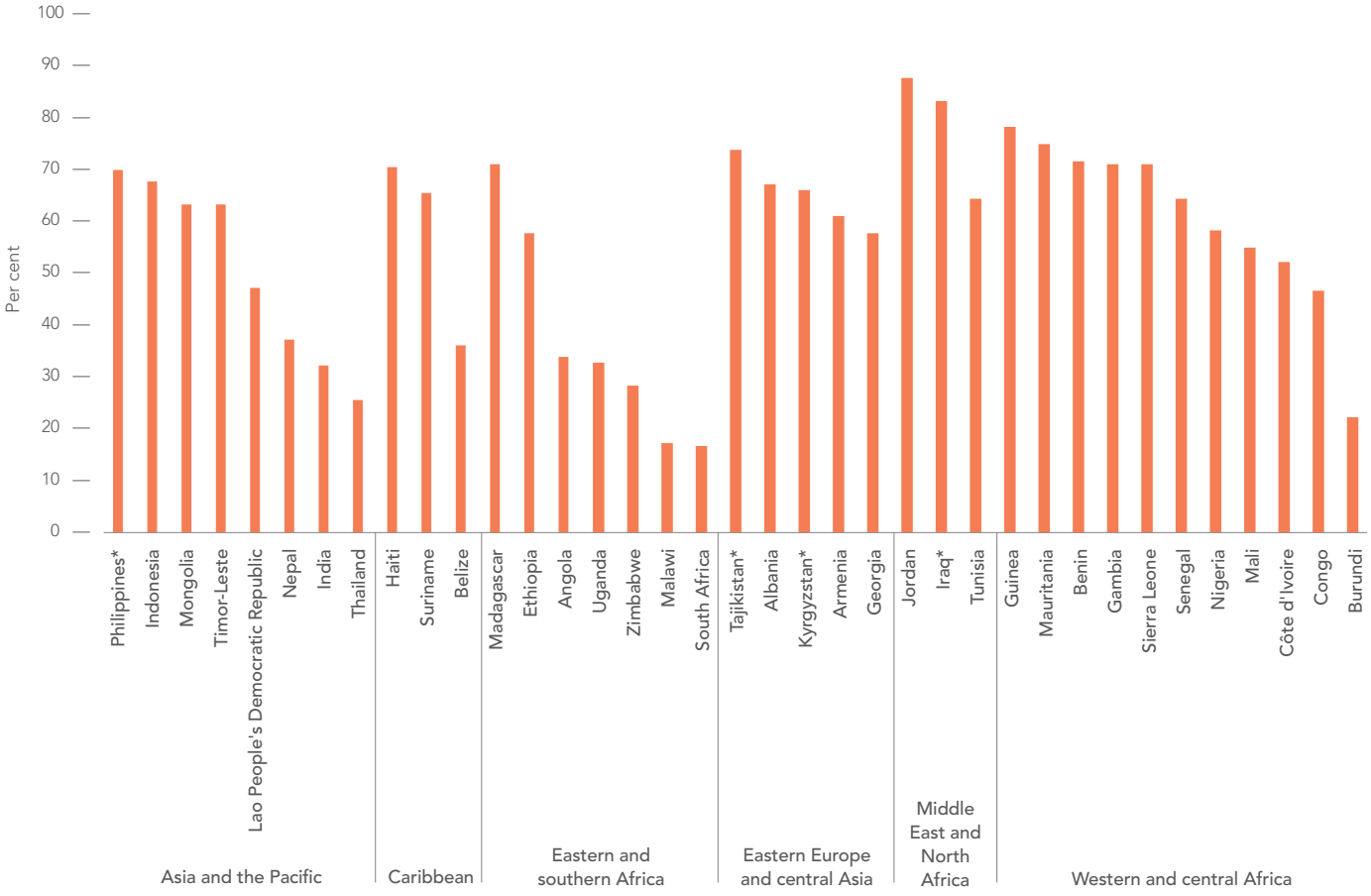

## DISCRIMINATORY ATTITUDES INCREASING OR REMAINING STABLE




Source: Population-based surveys, 2000–2019.
Note: Data for one survey in Mongolia, two surveys in Thailand, two surveys in Belize, one survey in Guyana, two surveys in Kazakhstan, one survey in Mauritania, two surveys in Jordan, two surveys in Cameroon, two surveys in Guinea-Bissau and for all surveys for Kyrgyzstan and Viet Nam are for female respondents only.

FIGURE 1.8

## Percentage of people aged 15 to 49 years who report discriminatory attitudes towards people living with HIV, countries with available data, 2014–2019




*Data are for women aged 15 to 49 only.

Source: Population-based surveys, 2014–2019.
Note: Discriminatory attitudes are measured through "No" responses to either of two questions: (1) Would you buy fresh vegetables from a shopkeeper or vendor if you knew this person had HIV?; and (2) Do you think that children living with HIV should be able to attend school with children who are HIV-negative?

FIGURE 1.9

**Percentage of people living with HIV who experienced different forms of discrimination in health-care settings, countries with available data, 2013–2018**


Source: People Living with HIV Stigma Index surveys, 2013–2018.

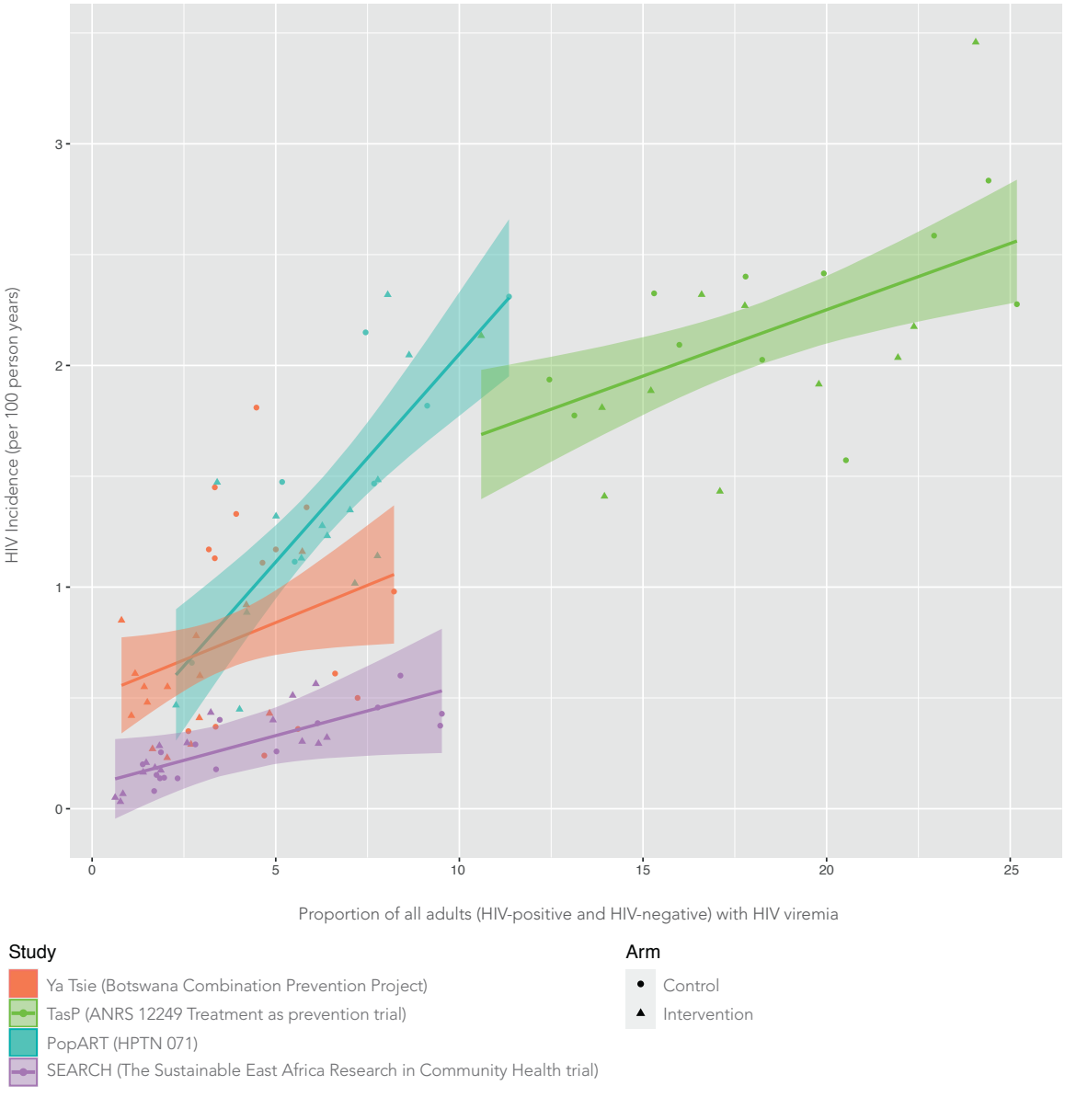
## Maximizing the impact of HIV responses

There have been steady reductions in HIV infections in diverse settings where a combination approach to HIV prevention has been followed, including behavioural (e.g., consistent condom use), biomedical (e.g., HIV testing and treatment, voluntary medical male circumcision and pre-exposure prophylaxis) and structural components (e.g., enabling girls to stay in school).

Some epidemic models have suggested that universal HIV testing and treatment, combined with primary prevention, could reduce HIV transmission to such low levels that the epidemic could eventually be eliminated *(4)*. Four large cluster-randomized trials—involving more than a quarter of a million people—in Botswana, Kenya, South Africa, Uganda and Zambia between 2012 and 2018 demonstrated that it is feasible to reach very high coverage of testing and antiretroviral therapy, as

FIGURE 1.10

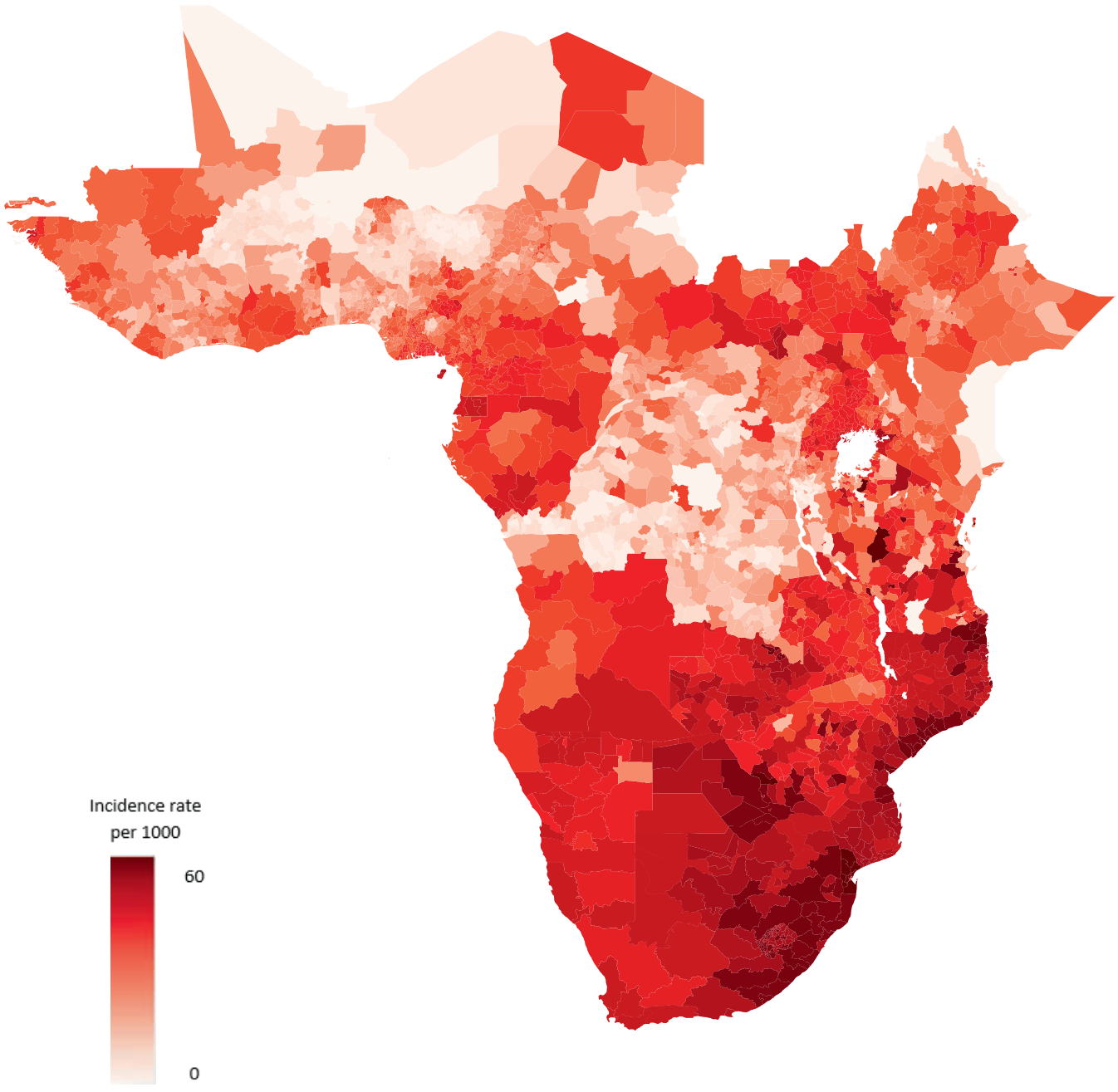
**HIV incidence and population-level viremia in clusters from four studies of universal HIV testing and treatment in adults, 2013–2018**




Source: Petersen ML, Larmarange J, Wirth K, Skalland T, Ayels H, Kamya MR et al. Population-level viremia predicts HIV incidence across university test & treat studies. Conference on Retroviruses and Opportunistic Infections (CROI), Boston, 8–11 March 2020. Abstract 47. For a webcast of this presentation, please see: https://www.croiconference.org/abstract/population-level-viremia-predicts-hiv-incidence-across-universal-test-treat-studies/.
Note: Population viremia, which is the proportion of all adults (HIV-positive and HIV-negative) with viral non-suppression, was measured at the midpoint of the trials.

FIGURE 1.11

**HIV incidence among adolescent girls and young women aged 15 to 24 years, subnational levels, sub-Saharan Africa, 2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/)
Note: HIV incidence estimated as new HIV infections per 1000 person-years at risk.
Countries: For selected countries in SSA that had the data required to produce subnational HIV estimates. See table A1, Methods section
Methods: See Methods section

well as very high levels of viral suppression *(5)*. In study areas where HIV viremia—the proportion of the entire population (regardless of HIV status) with detectable viral load—was lower, the incidence of HIV was also lower (Figure 1.10). This reflects the impact of HIV treatment and other combination prevention services.

### *Differential impact*

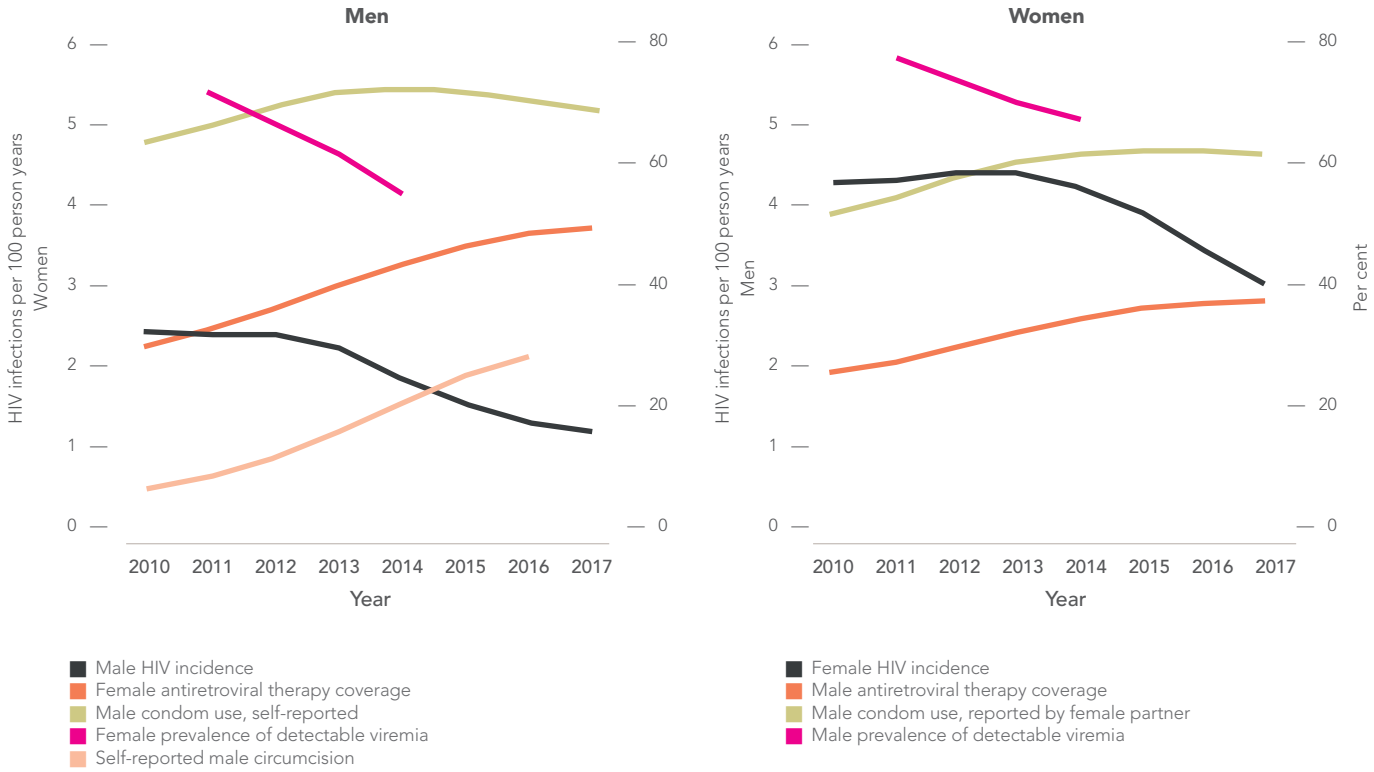
New HIV infection rates vary both across and within regions. In sub-Saharan Africa, for example, the incidence of HIV infection among adolescent girls and young women (aged 15 to 24 years) is generally highest in southern Africa, with sub-national data showing how there are districts across the region with high rates of HIV infection (Figure 1.11). Data collected from specific communities over many years are showing an uneven impact of intensive combination HIV prevention efforts—between men and women, different age groups and different locations.

According to longitudinal data from a cohort of almost 11 000 households, the scale-up of antiretroviral therapy services and voluntary medical male circumcision services in South Africa's KwaZulu-Natal province was followed by substantial declines in the incidence of HIV between 2012 and 2017 *(6, 7)*. However, the reductions in the number of new HIV infections were much larger among men (62%) than women (34%), and they also occurred much earlier among men (Figure 1.12) *(6)*.

The steeper decline in HIV incidence among men may seem counterintuitive, given that women were more likely than men to test for HIV, initiate treatment early, sustain treatment and achieve viral suppression. Among people living with HIV in South Africa and the wider eastern and southern Africa region, HIV-related morbidity and mortality is lower among women than men. However, when it comes to preventing HIV infections, it appears

FIGURE 1.12

**Trends in HIV incidence and selected determinants by sex, Hlabisa district, KwaZulu-Natal, South Africa, 2010–2017**




Source: Vandormael A, Akullian A, Siedner M, de Oliveira T, Bärnighausen T, Tanser F. Declines in HIV incidence among men and women in a South African population-based cohort. Nature Communications. 2019;10:5482. https://doi.org/10.1038/s41467-019-13473-y

Note: Trends in HIV incidence, self-reported condom use, self-reported voluntary medical male circumcision, opposite-sex antiretroviral therapy coverage, and opposite-sex prevalence of detectable viremia. The figure shows that male HIV incidence began to decline after 2012, following increased voluntary medical male circumcision coverage, female antiretroviral therapy coverage surpassing 35%, and a decrease in the female prevalence of detectable viremia. Declines in female HIV incidence after 2014 correspond with male antiretroviral therapy coverage reaching 35% and declines in the male prevalence of detectable viremia.

that men, at least initially, have been benefitting more from women's stronger engagement with the health-care system and from the impact of the local voluntary medical male circumcision programme *(7)*.

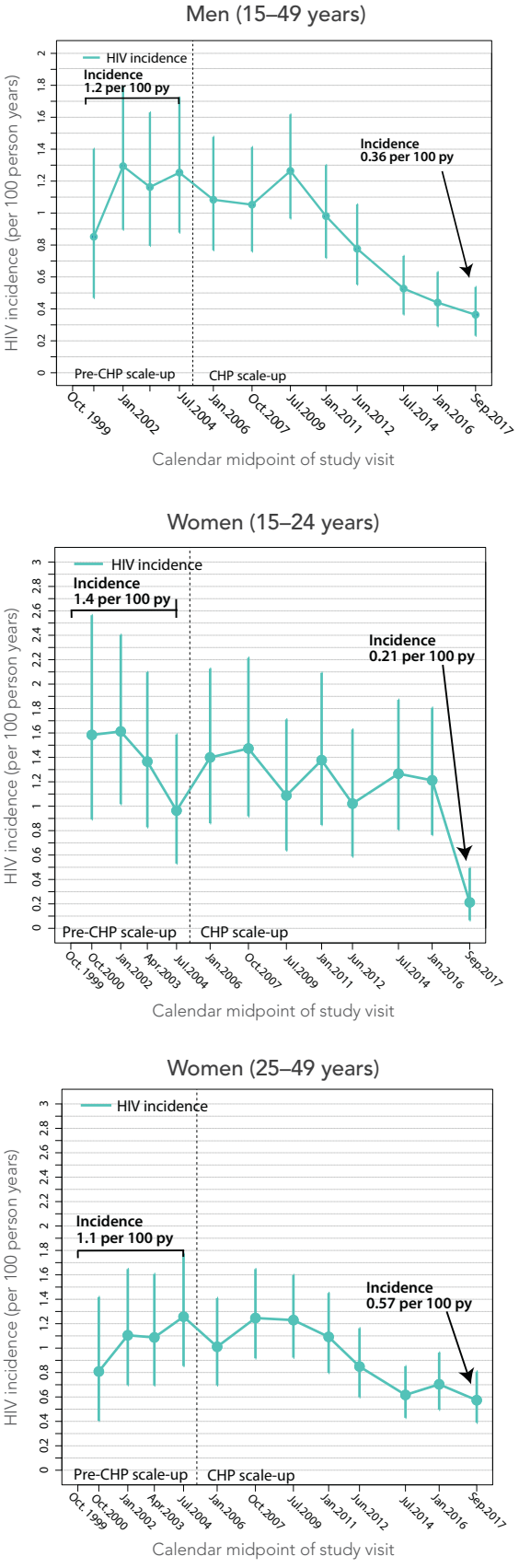
Low treatment coverage and viral suppression rates among men therefore not only threaten their own health, but they also put women at greater risk of HIV infection. As treatment coverage and viral suppression rates among men increase, women's risk of HIV acquisition tends to decrease, especially if other combination prevention services are also in wider use.

In Rakai, Uganda, when combination prevention programmes (including voluntary medical male circumcision, antiretroviral therapy and sexual behaviour change) were scaled up between 2006 and 2016, HIV incidence declined by 42% *(8)*. Similar to the South Africa study, treatment coverage and viral load suppression was consistently higher among women than men, and the HIV incidence declines were steeper among men (54%) than women (32%) (Figure 1.13 *(8)*. However, as HIV testing and treatment efforts intensified, incidence declines accelerated among women, especially young women. The trends among young women were likely due to a combination of increased delay in sexual debut and expanded HIV treatment and voluntary medical male circumcision coverage among men *(9)*.

Similarly, variable declines in HIV incidence are also seen in other studies from sub-Saharan Africa *(10, 11)*. Analysis of data from population-based HIV surveys in Eswatini, Lesotho and South Africa (Figure 1.14) show that high coverage of combination prevention options (including high levels of treatment coverage and viral suppression) drives down the incidence of HIV infection.

FIGURE 1.13

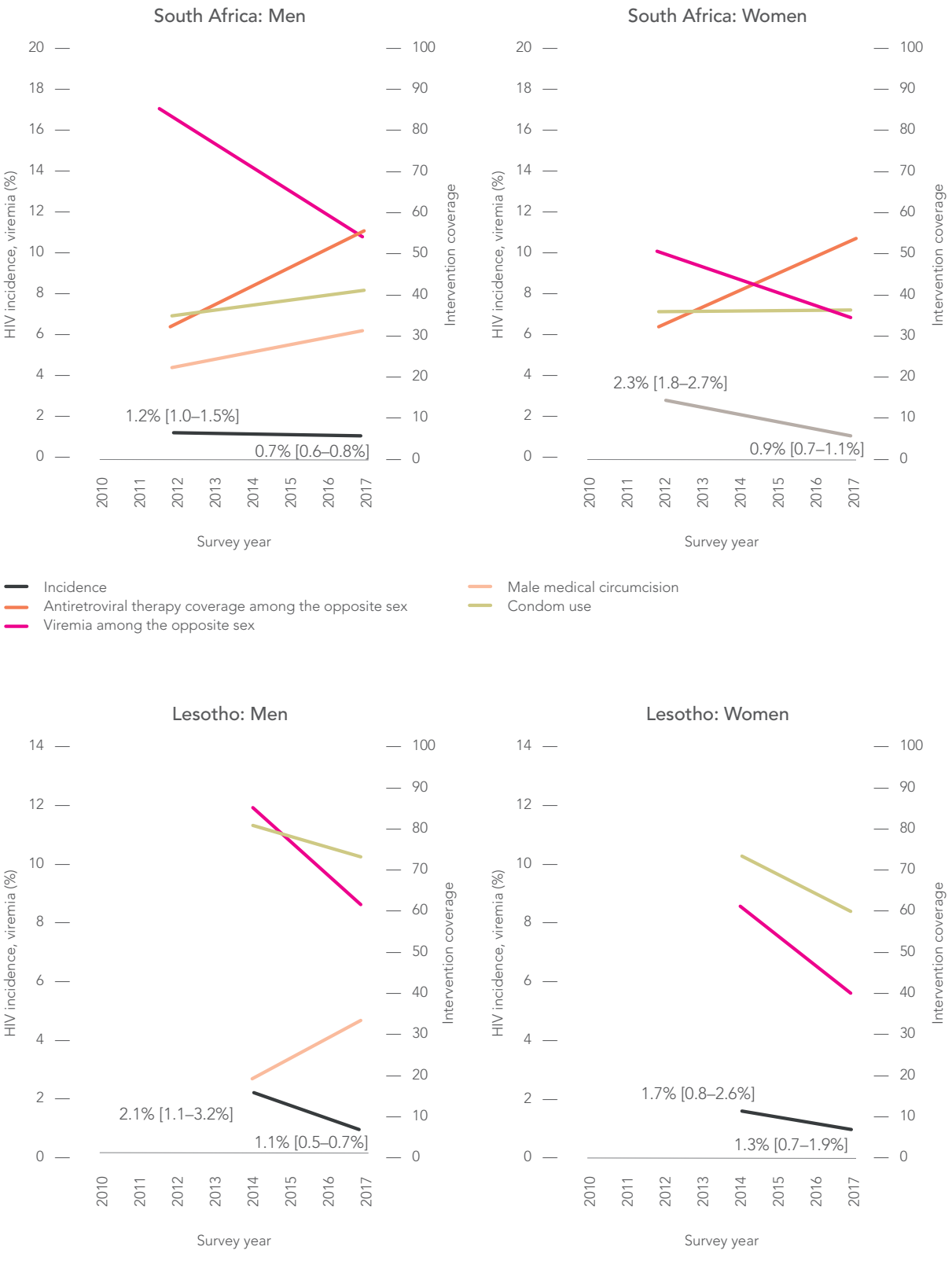
**Trends in HIV incidence, by age and sex, Rakai, Uganda, 1999–2017**

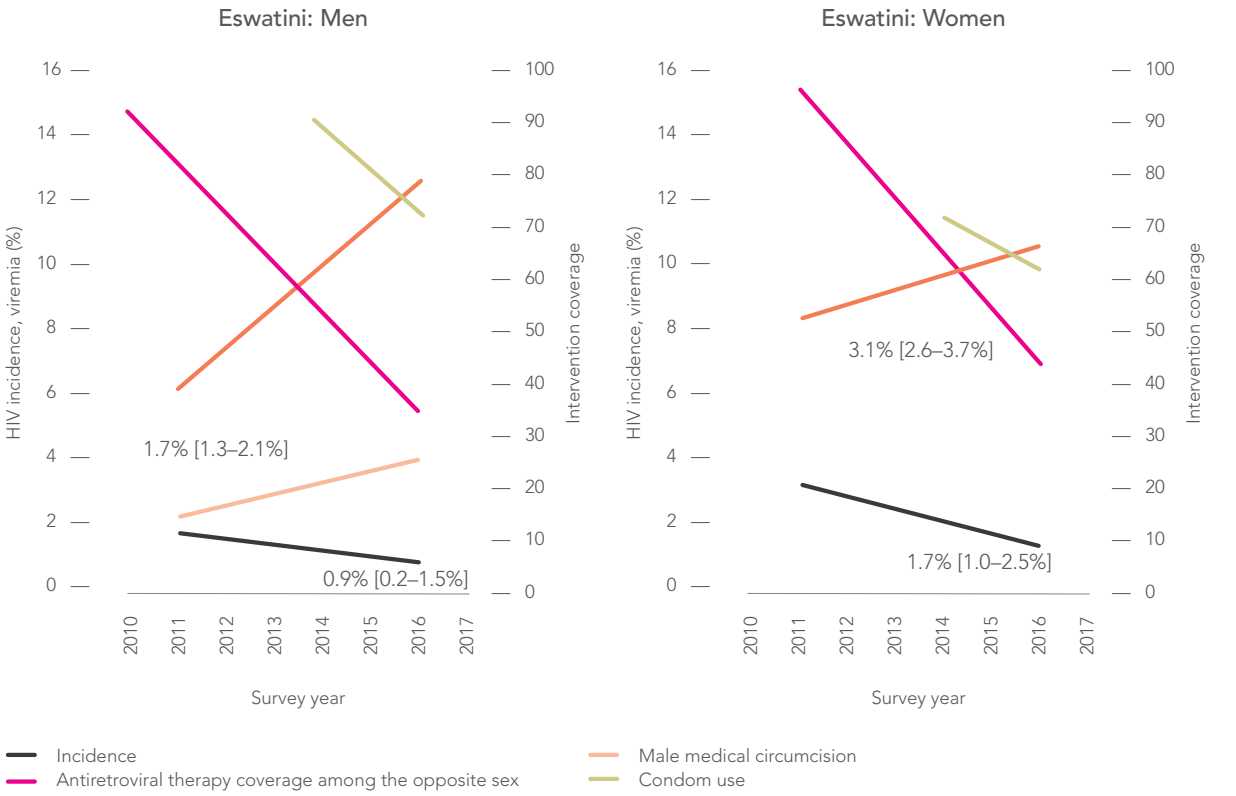



Source: Nakigozi G, Chang LW, Reynolds SJ, Nalugoda F, Kigozi G, Quinn TC et al. Rapidly declining HIV incidence among men and women in Rakai, Uganda. Conference on Retroviruses and Opportunistic Infections (CROI), Boston. Abstract 150. For a webcast of this presentation, please see: https://www.croiconference.org/abstract/rapidly-declining-hiv-incidence-among-men-and-women-in-rakai-uganda/.
Note: CHP = combination HIV prevention; py = person years.

FIGURE 1.14

**HIV incidence and determinants of HIV incidence in men and women, Eswatini, Lesotho and South Africa, 2010–2017**






Sources: Eswatini: Swaziland HIV Impact Surveys I and II, 2011 and 2017; Swaziland 2014 Multiple Indicator Cluster Survey; Lesotho: Lesotho Demographic and Healthy Survey 2014; Lesotho Population Health Impact Assessment 2017; South Africa: Human Sciences Research Council surveys 2012 and 2017. The calculation of viremia used HIV prevalence from Thembisa model 4.3 (University of Cape Town); 2016 PHIA SURVEY & 2011 Swaziland HIV Incidence Measurement Survey (SHIMS).

## Measuring HIV epidemic transitions

Several metrics have been established to measure whether an epidemic is expanding or being brought under control. One of these metrics, the reproduction number of an infectious disease—known as "$R_0$" or "R naught"—has entered mainstream discourse during the COVID-19 pandemic. The value of $R_0$ is the number of number of secondary infections produced by a single infectious person in an otherwise susceptible population.

If $R_0$ is below 1, the number of new infections will decline and the disease will disappear over the long run; if $R_0$ is above 1, the number of infections will rise and the disease will continue to spread (12). $R_0$ has limitations for measuring the trajectory of the HIV epidemic since it does not convey how HIV spreads through a population over a long period of time. $R_0$ can differ by population density (rural versus urban) and social structure (low-risk versus high-risk populations), thus a single overarching measure of $R_0$ may miss pockets of infections where the epidemic is increasing even as the overall trajectory appears to decline.

A similar metric calculates the ratio between the number of new HIV infections and the number of people living with HIV within a population. The incidence:prevalence ratio, which combines two desirable conditions: long, healthy lives for people living with HIV and a reduction in new infections. Assuming an average life expectancy of 30 years after a person acquires HIV infection, the total population of people living with HIV will progressively decrease if there are fewer than three new HIV infections per 100 people living with HIV per year. In such a scenario, the AIDS epidemic gradually disappears.

The global incidence:prevalence ratio was 4.4% in 2019, lower than the 7.0% in 2010; this reflects the important progress made against the epidemic in the past decade. The rate of decline varies among regions. In eastern and southern Africa, the ratio fell steeply from 7.0% in 2010 to 3.5% in 2019, making it a realistic prospect to reach the 3% target in the near future. Progress has been much slower in western and central Africa, however (Figure 1.15). Western and central Europe and North America as a region has reached an incidence:prevalence ratio of less than 3%, while the Caribbean is not far behind at 3.9%. The remaining regions have changed little since 2010.

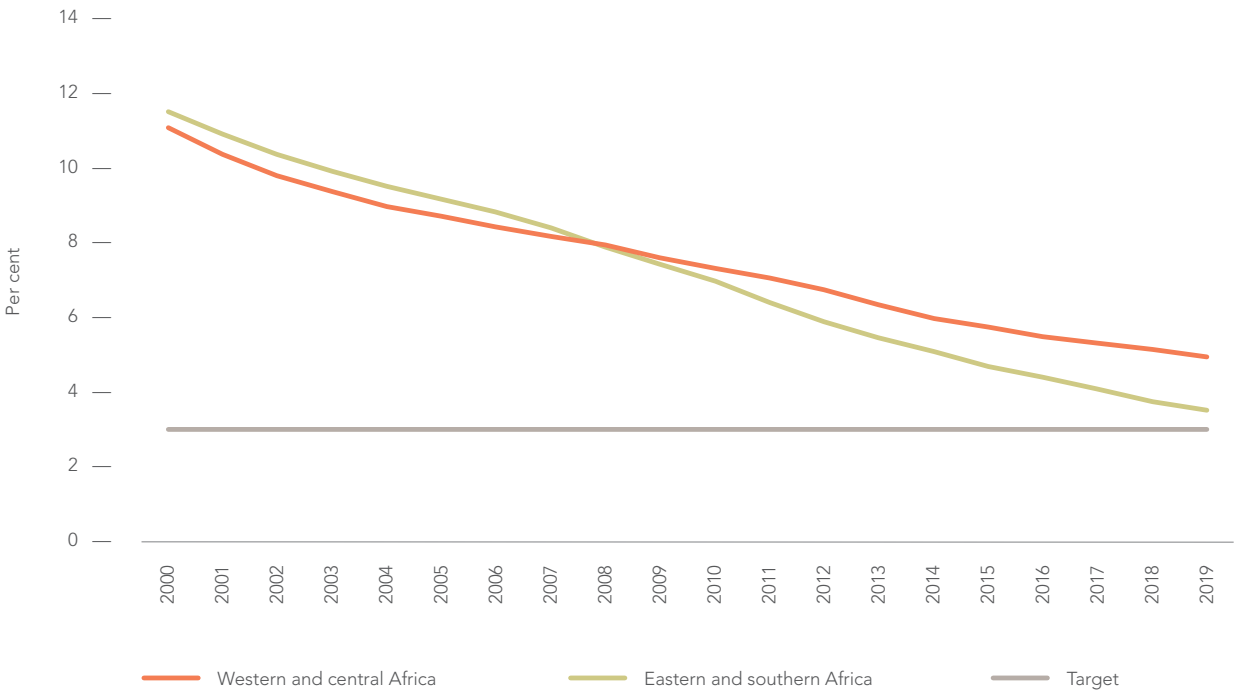
Among individual countries, 25 have reached the 3% milestone, which indicates that they are well on the way to ending their AIDS epidemics. Among them are some countries with large epidemics, such as Kenya, South Africa and Zimbabwe.

Another useful metric is the ratio of HIV incidence to AIDS-related mortality. When this ratio is less than 1 there are fewer new infections than deaths in a year, and thus a net decrease in the number of people living with HIV. The incidence:mortality ratio can be misleading, though. Although high AIDS-related mortality (due, for instance, to inadequate testing and treatment programmes) is certainly not desirable, it can push the incidence:mortality ratio below 1 when new infections are not increasing rapidly. The incidence:mortality ratio is therefore only useful in settings where antiretroviral therapy coverage and viral suppression levels are high and AIDS-related mortality is low—and new HIV infections are even lower.

Not many countries have achieved this. At the end of 2019, only a few countries with large HIV epidemics were approaching that threshold. The incidence:mortality ratio in Eswatini, for example, was estimated at 1.1 in 2019, reflecting steep reductions in new HIV infections and a steady decline in deaths due to AIDS-related illnesses (Figure 1.16). In South Africa, important progress is also evident, but much work needs to be done to push the ratio to 1.

FIGURE 1.15

**HIV incidence:prevalence ratio in eastern and southern Africa and western and central Africa, 2000–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 1.16

**New HIV infections, all-cause deaths among the HIV population and the incidence:mortality ratio, Eswatini and South Africa, 2000–2019**


Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

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# 02

# 2020 COMMITMENTS

# 2020 COMMITMENTS

## DATA POINTS

**4 IN 5**
PEOPLE LIVING WITH HIV KNOW THEIR HIV STATUS. 2 IN 3 ARE ON TREATMENT, AND 59% HAVE SUPPRESSED VIRAL LOADS

**ONLY 53% OF CHILDREN**
LIVING WITH HIV ARE ON TREATMENT

IN 6 OF 13 REPORTING COUNTRIES, LESS THAN HALF OF TRANSGENDER WOMEN ARE ABLE
**TO ACCESS AT LEAST 2 HIV PREVENTION SERVICES**

**4.2 MILLION MEN AND BOYS**
ACROSS 15 PRIORITY COUNTRIES HAD BEEN VOLUNTARILY AND MEDICALLY CIRCUMCISED IN 2019

FUNDING FOR HIV RESPONSES IN LOW- AND MIDDLE-INCOME COUNTRIES
**DECREASED BY 7%**
BETWEEN 2017 AND 2019

United Nations (UN) Member States agreed at the UN General Assembly in 2016 that achieving the three zeros and ending AIDS as a public health threat by 2030 required an accelerated expansion of HIV services alongside rights-affirming and enabling environments for those services. The resulting United Nations Political Declaration on Ending AIDS contains 10 core commitments—Fast-Track Targets to be achieved by 2020. Progress against those targets has been decidedly mixed.

Countries in a diverse range of geographic, economic and epidemic settings are on track or nearly on track to achieve many of these commitments, proving that bold targets can be met with sufficient political will, financial resources and community engagement. However, there are many more countries where high ambition has not been matched with Fast-Track actions; and in some countries, HIV epidemics have been allowed to continue expanding, causing entirely avoidable morbidity and mortality.

MORE PEOPLE LIVING WITH HIV THAN EVER BEFORE KNOW THEIR HIV STATUS, ARE ACCESSING ANTIRETROVIRAL THERAPY AND ARE VIRALLY SUPPRESSED, REFLECTING STRONG PROGRESS TOWARDS THE 90–90–90 TARGETS.

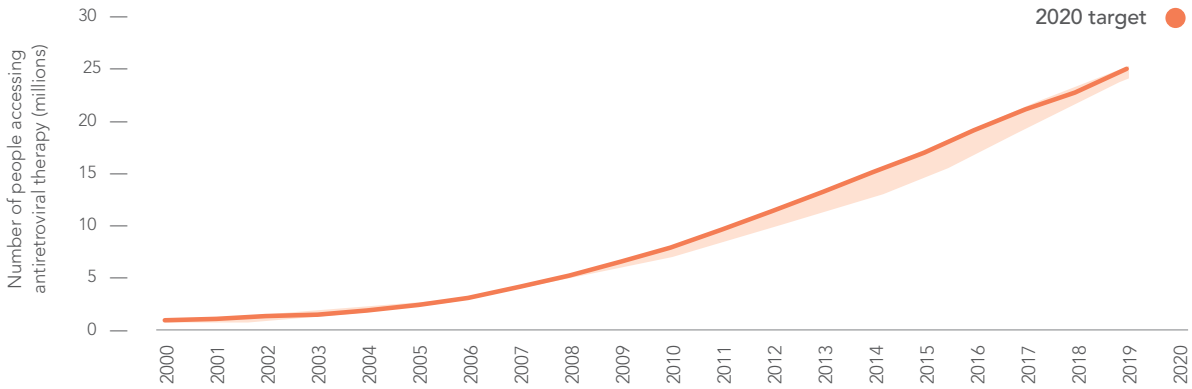
FAST-TRACK
**COMMITMENT**
1

**90–90–90**

ENSURE THAT 30 MILLION PEOPLE LIVING WITH HIV HAVE ACCESS TO TREATMENT THROUGH MEETING THE 90–90–90 TARGETS BY 2020.

FIGURE 2.1

**Number of people living with HIV accessing antiretroviral therapy, global, 2000–2019 and 2020 target**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).

## Gains in HIV testing and treatment

More people living with HIV than ever before know their HIV status, are accessing antiretroviral therapy and are virally suppressed, reflecting strong progress towards the 90–90–90 targets:

- 90% of people living with HIV know their HIV status.
- 90% of people who know their HIV-positive status are accessing treatment.
- 90% of people on treatment have suppressed viral loads.

When all three 90s are achieved, 73% of all people living with HIV have suppressed viral loads. An estimated 25.4 million [24.5 million–25.6 million] of the 38.0 million [31.6 million–44.5 million] people living with HIV worldwide were on antiretroviral therapy in 2019, a number that has more than tripled since 2010 (Figure 2.1). In spite of this impressive increase, the world may not achieve its target of 30 million on treatment by the end of 2020.

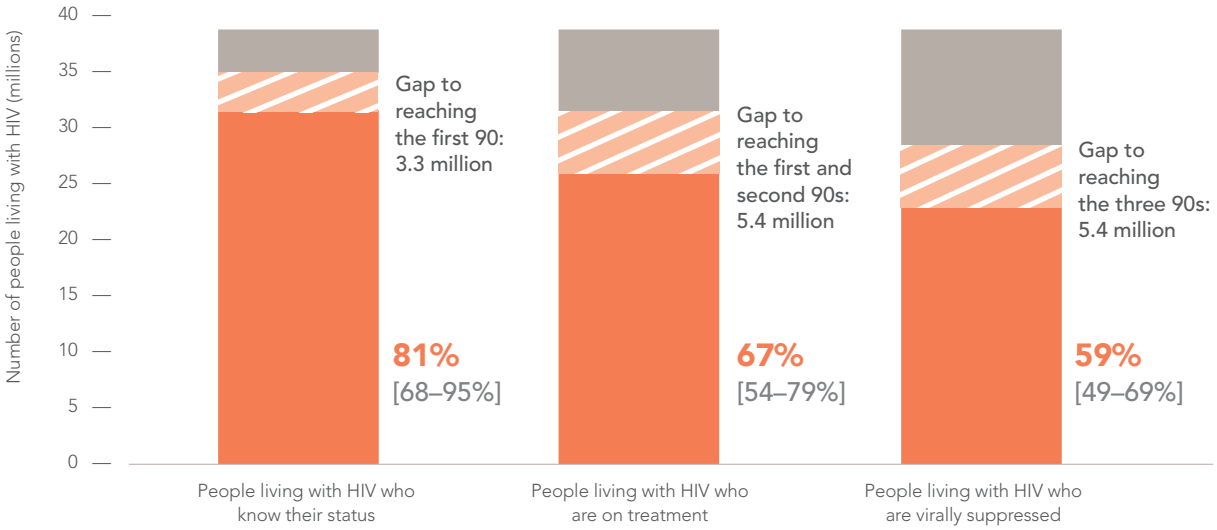
There have been gains across the HIV testing and treatment cascade. At the end of 2019, 81% [68–95%] of people living with HIV knew their HIV status, more than two thirds (67% [54–79%]) were on treatment, and almost 59% [49–69%] had suppressed viral loads (Figure 2.2). Gains in treatment effectiveness, as well as increases in the number of people who know their status and are on treatment, are reflected in the fact that rates of viral load suppression among all people living with HIV have risen by 44% (or 18 percentage points) between 2015 and 2019 (Figure 2.3).

Once people living with HIV start treatment, most are able to stay on treatment and achieve viral suppression, reflecting improvements in both

antiretrovial medicines and differentiated care. Progress towards the third 90 within the 90–90–90 targets—the percentage of people on treatment who have durable viral suppression—stood at 88% [71–100%] in 2019 (Figure 2.4). Progress has also been made towards the second 90, with 82% [66–97%] of people who know their HIV status on treatment. However, gaps across the testing and treatment cascade add up to 15.7 million people living with HIV globally who have an unsuppressed viral load, which endangers their health and facilitates the further spread of HIV.

FIGURE 2.2

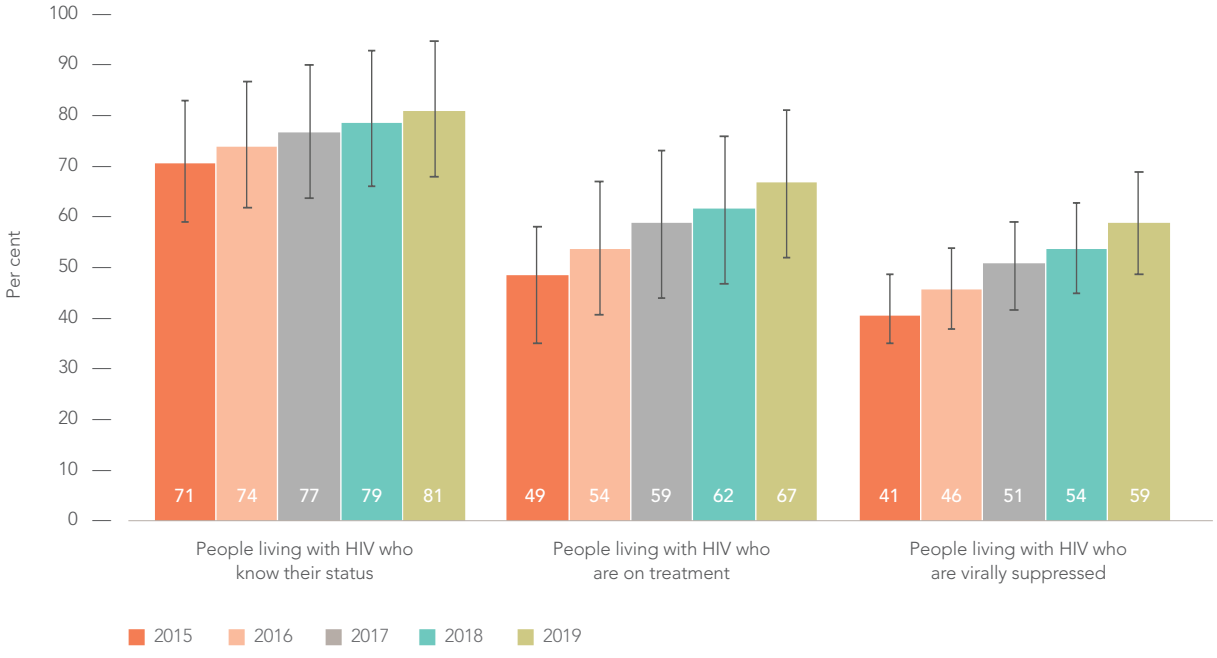
**HIV testing and treatment cascade, global, 2019**




Source: UNAIDS special analysis, 2020 (see annex on methods).

FIGURE 2.3

**HIV testing and treatment cascade, global, 2015–2019**




Source: UNAIDS special analysis, 2020 (see annex on methods).

FIGURE 2.4

**Progress towards 90–90–90 targets, global, 2019**


Source: UNAIDS special analysis, 2020 (see annex on methods).

Globally, and in nearly all regions, greater percentages of women are accessing antiretroviral therapy than men. In 2019, treatment coverage globally was 12 percentage points lower among men living with HIV than women living with HIV. This gap was largest in western and central Africa (67% treatment coverage among women and 49% treatment coverage among men), while treatment coverage among both sexes in western and central Europe and North America was equal at 81% (Figure 2.5).

FIGURE 2.5

**Coverage of antiretroviral therapy by sex, men and women (aged 15 years and older), regional, 2019**


Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).

## HIV testing and status awareness among key populations

There are significant gaps in HIV testing among key populations at higher risk of HIV infection. Analysis of data from special surveys show that, on average, about two thirds of sex workers and gay men and other men who have sex with men globally either had taken an HIV test and received the results within the past 12 months or had previously tested positive for HIV—meaning that about one third did not know their HIV status.[1] This testing gap was even larger for people who inject drugs (Figure 2.6).

FIGURE 2.6

**Average HIV testing and status awareness among key populations, global, 2016–2019**


Note: N = number of countries reporting. Data shown come from surveys, which are typically conducted in areas that have services available and thus may not be nationally representative. Data include members of key populations who have been tested in the past 12 months and know that their results are negative, and ever-tested members of key populations who know that they are living with HIV.
Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).

1 This testing gap does not include key populations living with HIV who know their HIV status.

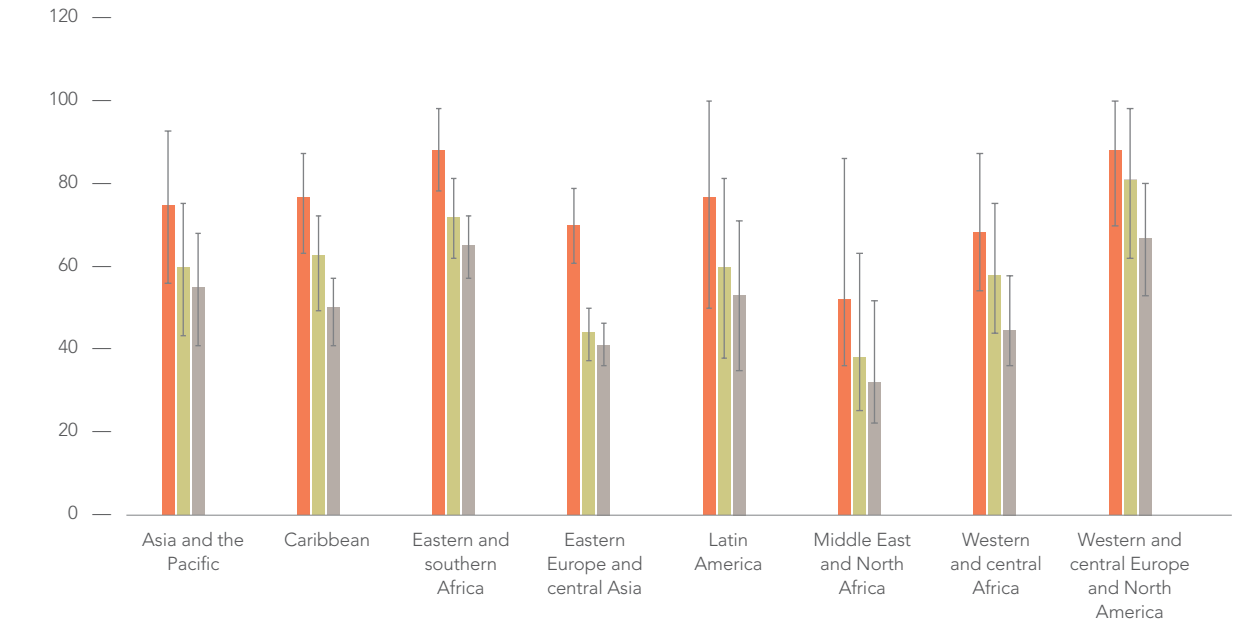
## Region and country progress

Progress across the HIV testing and treatment cascade varies by region. Eastern and southern Africa has made remarkable progress, second only to western and central Europe and North America (Figure 2.7). Meanwhile, several regions are significantly off-track. There is a huge testing gap in the Middle East and North Africa, where just 52% [36–86%] of people living with HIV know their HIV status, 38% [25–63%] were on treatment and 32% [22–52%] were virally suppressed. In eastern Europe and central Asia, where 70% [61–79%] of people living HIV know their status, there is a large gap between testing and treatment initiation: just 63% [52–71%] of people living with HIV who know their HIV status in the region are on treatment (Figure 2.8), leaving just 41% [34–46%] of all people living with HIV in the region virally suppressed.

Achieving each of the three 90s results in a minimum of 73% of people living with HIV having durably suppressed viral loads. At the end of 2019, 14 countries across three regions had achieved the 73% target—Australia, Botswana, Cambodia, Eswatini, Ireland, Namibia, the Netherlands, Rwanda, Spain, Switzerland, Thailand, Uganda, Zambia and Zimbabwe. Two of these countries, Eswatini and Switzerland, have made the remarkable achievement of surpassing the 2030 target of 95–95–95, which equates to a minimum of 86% of people living with HIV having suppressed viral loads. Notably, Eswatini has achieved each of the 2030 targets: 95% of people living with HIV know their HIV status, 95% of people living with HIV who know their HIV-positive status are accessing treatment and 95% of people on treatment have suppressed viral loads. An additional five countries across five regions are within reach of achieving the 90–90–90 targets by the December 2020 deadline, and dozens more have achieved or nearly achieved one or more of the 90s (Table 2.1). What is particularly noteworthy is the diverse range of income levels, HIV epidemics and geography among these stand-out countries—proving that ambitious HIV targets are achievable when sufficient political will, financial resources and an enabling environment are all in place.

FIGURE 2.7

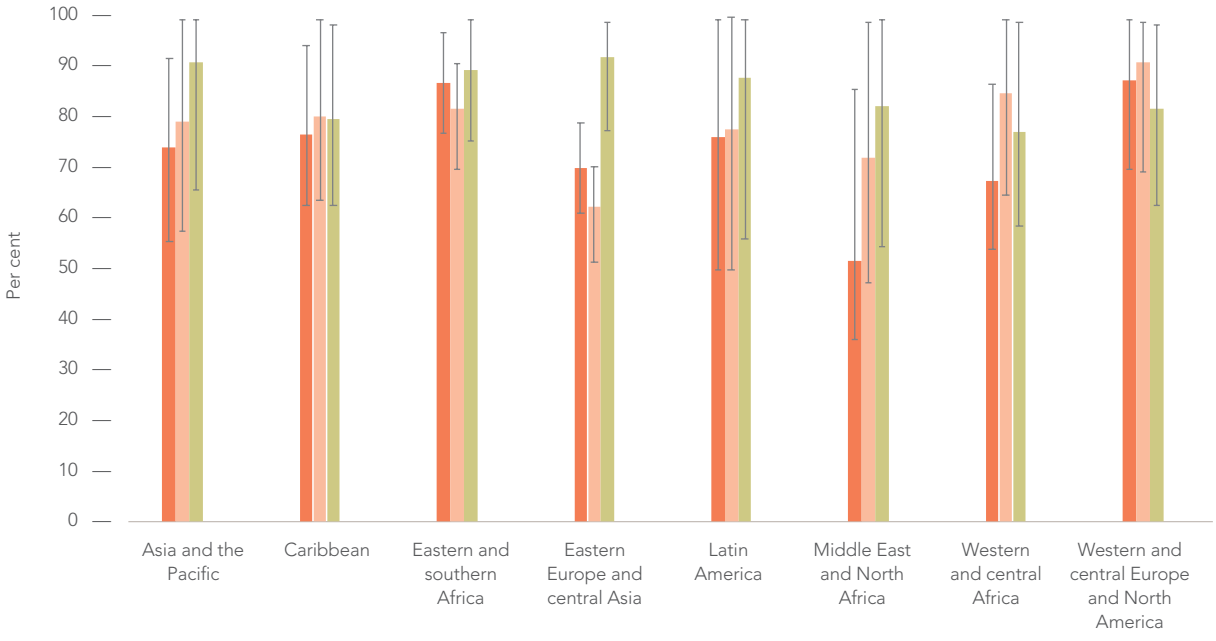
## HIV testing and treatment cascade, by region, 2019




Source: UNAIDS special analysis, 2020 (see annex on methods).

FIGURE 2.8

## Progress towards the 90–90–90 targets, by region, 2019




Source: UNAIDS special analysis, 2020 (see annex on methods).

TABLE 2.1

## Progress towards 90–90–90 targets, by country, among those with treatment coverage equal to or greater than the annual global average, 2019*

| | People living with HIV who know their status | People living with HIV who know their status and are on treatment | People on treatment who are virally suppressed | | Viral load suppression among people living with HIV |
|---|---|---|---|---|---|
| **ACHIEVED 2030 TARGET (95%)** | ***Eswatini***<br>**Namibia** | Burundi<br>Cambodia<br>Denmark<br>***Eswatini***<br>Haiti<br>Rwanda<br>Senegal<br>**Switzerland**<br>**Zambia** | **Australia**<br>Botswana<br>Cambodia<br>***Eswatini***<br>Germany<br>Ireland<br>Japan<br>Myanmar<br>**Netherlands**<br>**Switzerland**<br>Thailand<br>Viet Nam | **ACHIEVED 2030 TARGET (86%)** | ***Eswatini***<br>**Switzerland** |
| **ACHIEVED 2020 TARGET (90%)** | **Australia**<br>Botswana<br>Chile<br>Guyana<br>Ireland<br>Kenya<br>Malawi<br>**Netherlands**<br>South Africa<br>**Switzerland**<br>**Zambia**<br>Zimbabwe | **Australia**<br>Burkina Faso<br>Ethiopia<br>Germany<br>Morocco<br>**Namibia**<br>**Netherlands**<br>Singapore<br>Spain<br>Uganda<br>United Republic of Tanzania<br>Zimbabwe | Brazil<br>Chile<br>Kenya<br>Malawi<br>Morocco<br>**Namibia**<br>Rwanda<br>Singapore<br>South Africa<br>Spain<br>Trinidad and Tobago<br>Uganda<br>United Republic of Tanzania<br>**Zambia** | **ACHIEVED 2020 TARGET (73%)** | **Australia**<br>Botswana<br>Cambodia<br>Ireland<br>**Namibia**<br>**Netherlands**<br>Rwanda<br>Spain<br>Thailand<br>Uganda<br>**Zambia**<br>Zimbabwe |
| **NEARLY ACHIEVED 2020 TARGET (85–89%)** | Brazil<br>Burundi<br>Cuba<br>Italy<br>Romania<br>Rwanda<br>Spain<br>Uganda<br>United States of America | Algeria<br>Botswana<br>Cuba<br>Ireland<br>Italy<br>Luxembourg<br>Malawi<br>Peru<br>Portugal<br>Slovakia | Ethiopia<br>Guyana<br>Italy<br>Luxembourg<br>Portugal<br>Zimbabwe | **NEARLY ACHIEVED 2020 TARGET (68–72%)** | Italy<br>Kenya<br>Malawi<br>Myanmar<br>United Republic of Tanzania |

*Countries are eligible for inclusion in the table if HIV treatment coverage is equal to or greater than global HIV treatment coverage in the year they last reported data (global treatment coverage: 49% in 2015, 54% in 2016, 59% in 2017, 62% in 2018 and 67% in 2019). In addition, countries must also have published estimates of people living with HIV to be included in the columns describing progress towards people living with HIV who know their status and viral load suppression among people living with HIV. Estimates are for 2019, except as follows: for 2015: Japan; for 2016: Denmark, Italy, Portugal and Spain; for 2017: Germany, Peru and Slovakia; and for 2018: Australia, Ireland, the Netherlands, Singapore and the United States. Eswatini, in ***bold italics***, has reached all three of the 2030 95–95–95 target. Australia, Namibia, the Netherlands, Switzerland and Zambia, written in **bold**, have reported reaching each of the 2020 90–90–90 targets.

Estimates were not available at the time of publication for: Andorra, Argentina, Austria, the Bahamas, Bahrain, Bangladesh, Belgium, Bhutan, Brunei Darussalam, Canada, China, the Cook Islands, Cyprus, Czechia, Finland, France, Greece, Iceland, India, Indonesia, Iraq, Israel, Jordan, Kiribati, Kuwait, Latvia, Liechtenstein, Maldives, Malta, the Marshall Islands, Micronesia (Federated States of), Nauru, New Zealand, Niue, Norway, Palau, Panama, Paraguay, Poland, Qatar, the Republic of Korea, Sao Tome and Principe, Saudi Arabia, Serbia, Slovenia, Somalia, Sweden, the Syrian Arab Republic, Tonga, Turkey, Tuvalu, the United Arab Emirates, the United Kingdom of Great Britain and Northern Ireland, Uzbekistan and Vanuatu.
Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

## FAST-TRACK **COMMITMENT**

2

ELIMINATE NEW HIV INFECTIONS AMONG CHILDREN BY 2020 WHILE ENSURING THAT 1.6 MILLION CHILDREN HAVE ACCESS TO HIV TREATMENT BY 2018 AND 1.4 MILLION BY 2020.

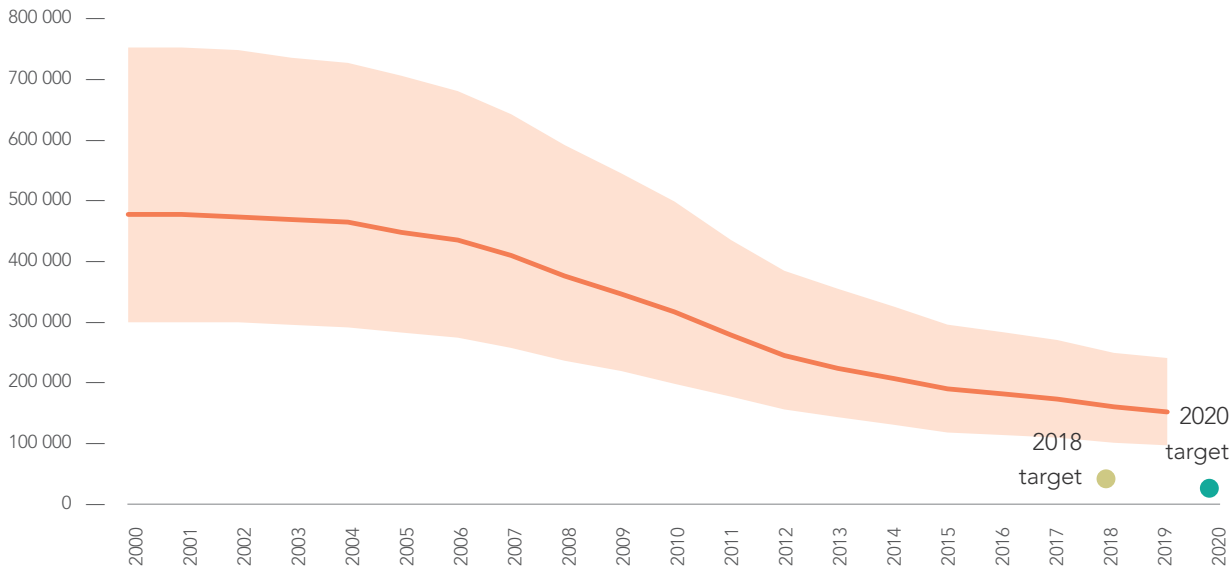
The number of new child infections resulting from the vertical transmission of HIV from mother-to-child has more than halved in less than two decades, progress that in large part reflects concerted efforts to increase the provision of antiretroviral therapy to pregnant women living with HIV. However, this decline falls far short of the targets set for 2018 and 2020. Globally, there were an estimated 150 000 [94 000–240 000] new HIV infections among children (aged 0 to 14 years) in 2019, compared to 310 000 [200 000–500 000] in 2010 (Figure 2.9).

Gaps in services to prevent vertical transmission—including uneven treatment coverage, women exposed to HIV during pregnancy and breastfeeding, and mothers living with HIV losing access to their antiretroviral therapy during breastfeeding—undermine further progress towards the target of eliminating new HIV infections among children.

Although the number of children living with HIV who are accessing treatment has more than doubled since 2010, all of the paediatric targets set in 2016 have been missed. In 2019, there were 950 000 [910 000–960 000] children living with HIV (aged 0 to 14 years) globally who were accessing antiretroviral therapy (Figure 2.10). Treatment coverage among children living with HIV in 2019 was 53% [36–64%]. The gap between that rate and adult treatment coverage (68% [54–80%]) represents nothing less than a global failure to provide life-sustaining care to the most vulnerable within our communities (see Chapter 5 for analysis of the challenges facing children living with HIV).

FIGURE 2.9

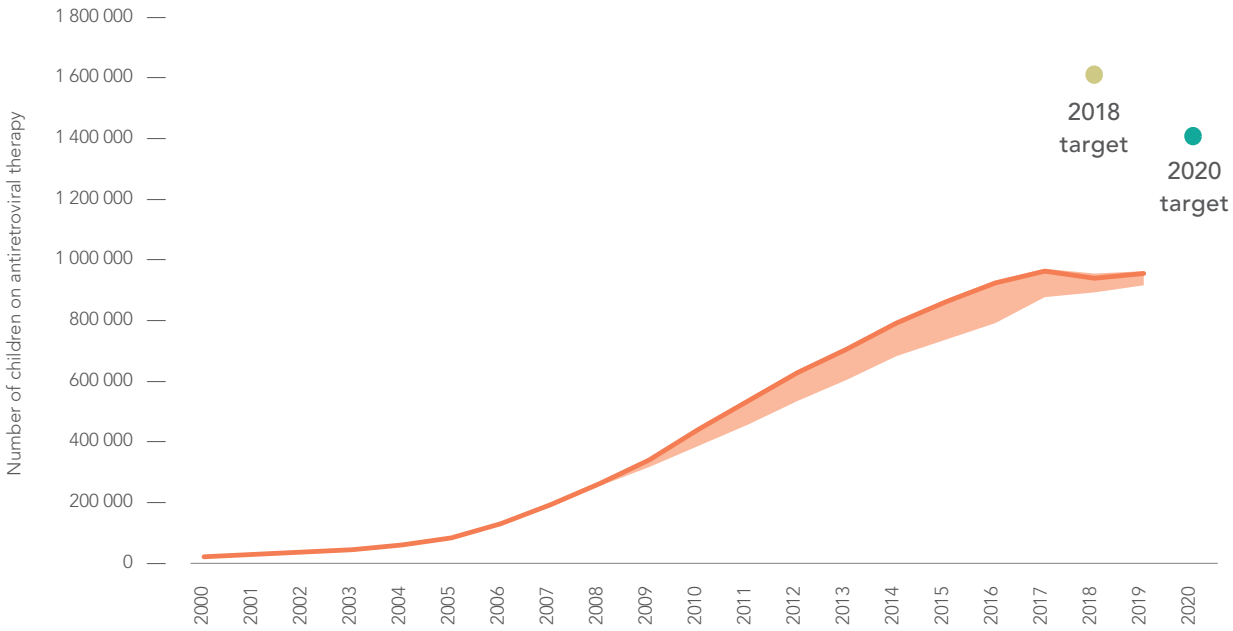
**Number of new child infections, global, 2000–2019**



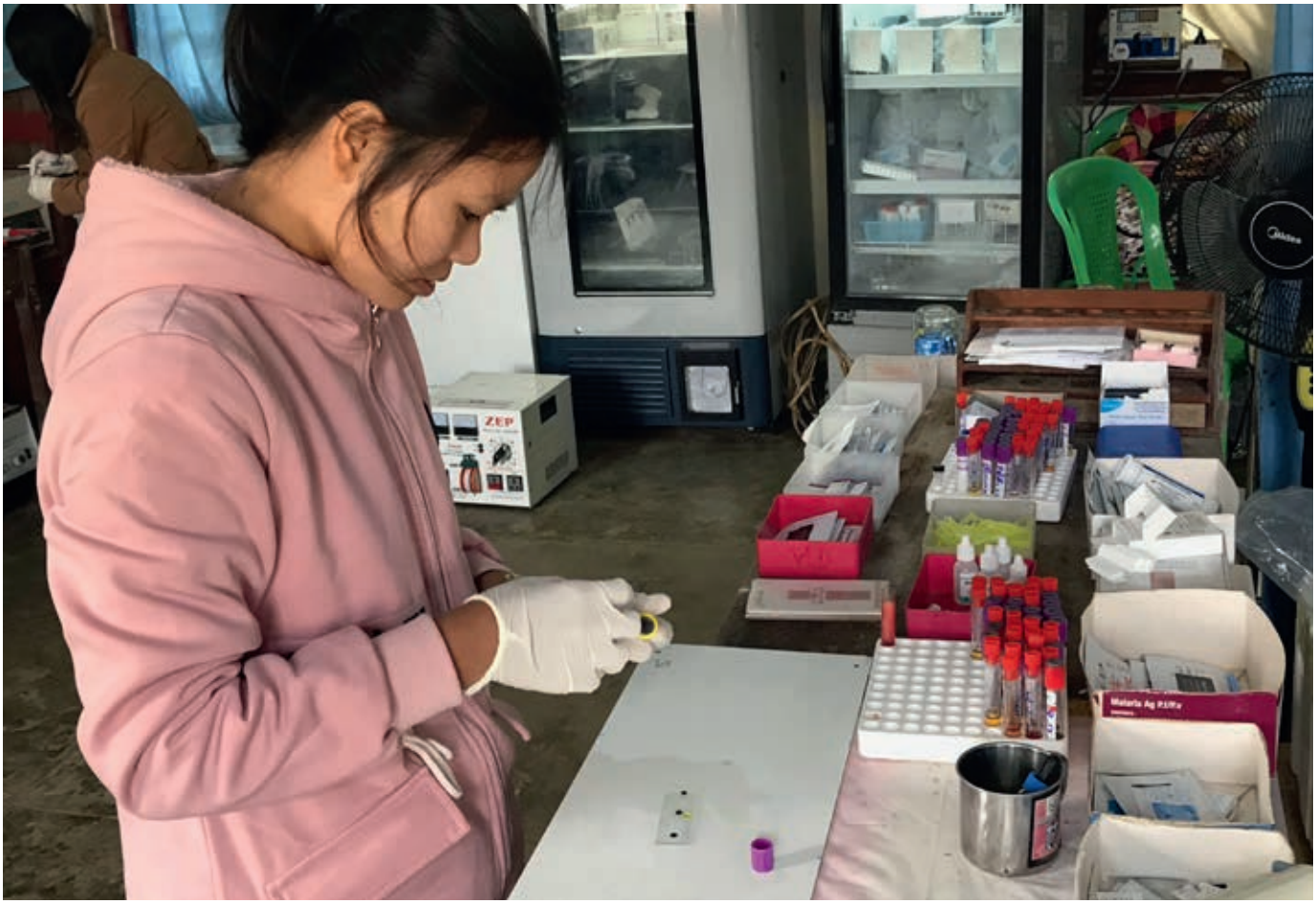

Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 2.10

**Number of children (aged 0–14 years) accessing antiretroviral therapy, global, 2000–2019 and 2018 and 2020 targets**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).



FAST-TRACK
**COMMITMENT**

3

ENSURE ACCESS TO COMBINATION PREVENTION OPTIONS, INCLUDING PRE-EXPOSURE PROPHYLAXIS, VOLUNTARY MEDICAL MALE CIRCUMCISION, HARM REDUCTION AND CONDOMS, TO AT LEAST 90% OF PEOPLE BY 2020, ESPECIALLY YOUNG WOMEN AND ADOLESCENT GIRLS IN HIGH-PREVALENCE COUNTRIES AND KEY POPULATIONS—GAY MEN AND OTHER MEN WHO HAVE SEX WITH MEN, TRANSGENDER PEOPLE, SEX WORKERS AND THEIR CLIENTS, PEOPLE WHO INJECT DRUGS AND PRISONERS.

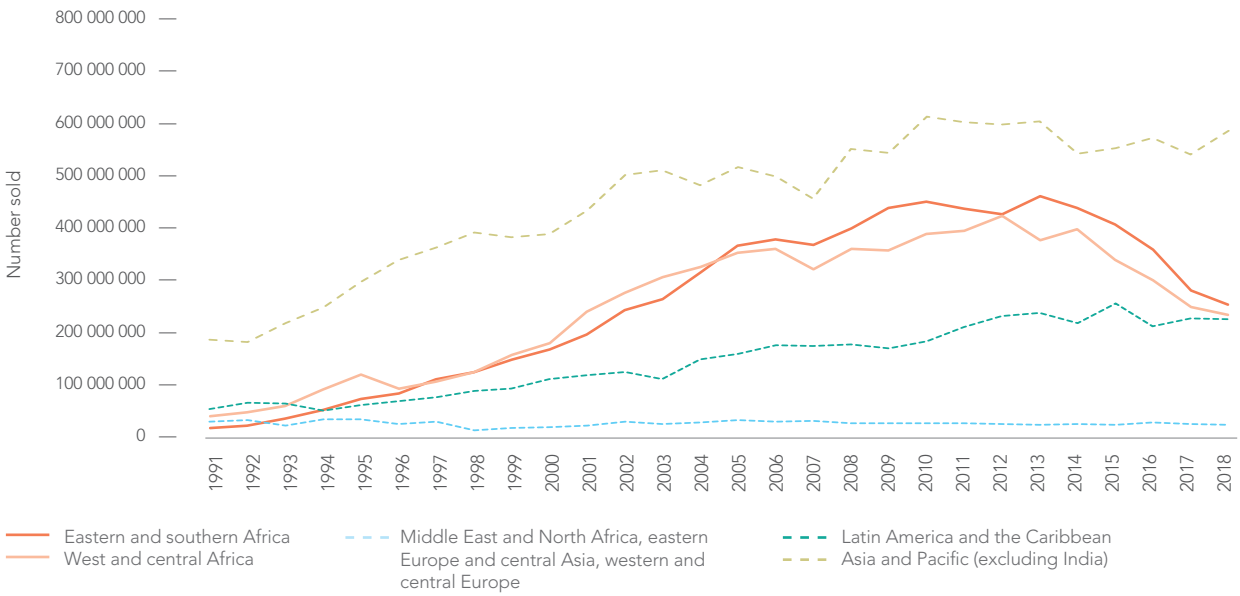
A combination approach to HIV prevention that includes behavioural, biomedical and structural approaches and is tailored to those in greatest need can lead to steep reductions in HIV infections. The launch of the Global HIV Prevention Coalition in 2017 sparked renewed focus among participating countries towards achieving global prevention targets. However, major gaps remain.

## Declines in condom use among young women

The defunding of condom social marketing programmes and decline in sales of socially marketed condoms in sub-Saharan Africa (Figure 2.11) is emblematic of a decreased focus on condom demand generation, reduced emphasis on condoms in family planning services and weak stewardship of condom programmes since 2010, leaving the world far off the 90% target for condom use. A new generation of sexually active young people has not been exposed to the intense condom promotion that was in place a decade ago. Condom use at last higher risk sex reported by young women (aged 15 to 24 years) declined in five countries in western and central Africa and three countries in eastern and southern Africa (Figure 2.12). Condom use at higher risk sex among men (aged 15 to 49 years) also declined in five out of nine countries (compared to the previous survey).

FIGURE 2.11

**Male condom sales through social marketing, by region, 1991–2018**

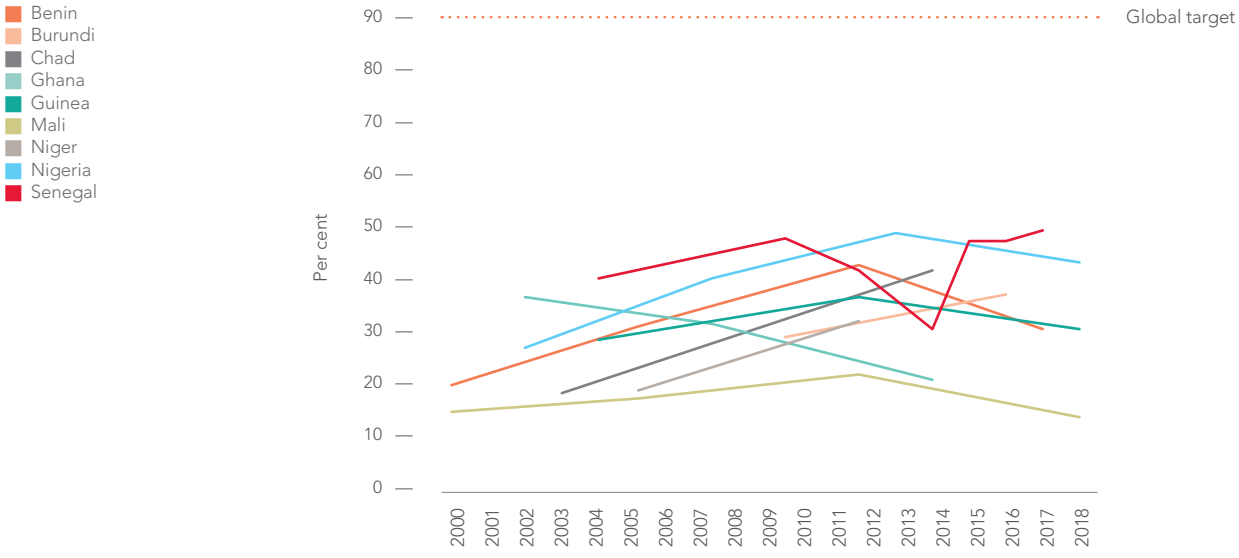



Source: Contraceptive social marketing statistics, 1991–Present. In: DKT International [Internet]. Washington (DC): DKT International; c2020 (https://www.dktinternational.org/contraceptive-social-marketing-statistics/, accessed 2 May 2020).

FIGURE 2.12

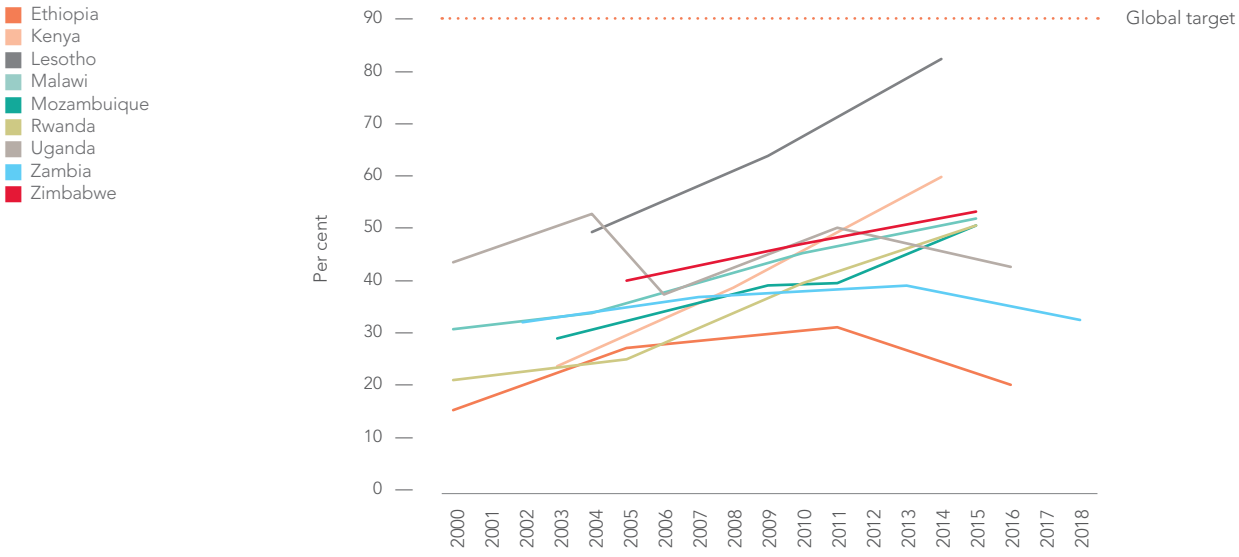
## Condom use at last higher risk sex, women (aged 15–24 years), by region, 2000–2018

### Western and central Africa




Source: Population-based surveys, 2000–2018.
Note: Condom use at last higher risk sex is defined as the percentage of respondents who say they used a condom the last time they had sex with a nonmarital, noncohabiting partner among those who did have sex with such a partner in the last 12 months.

### Eastern and southern Africa



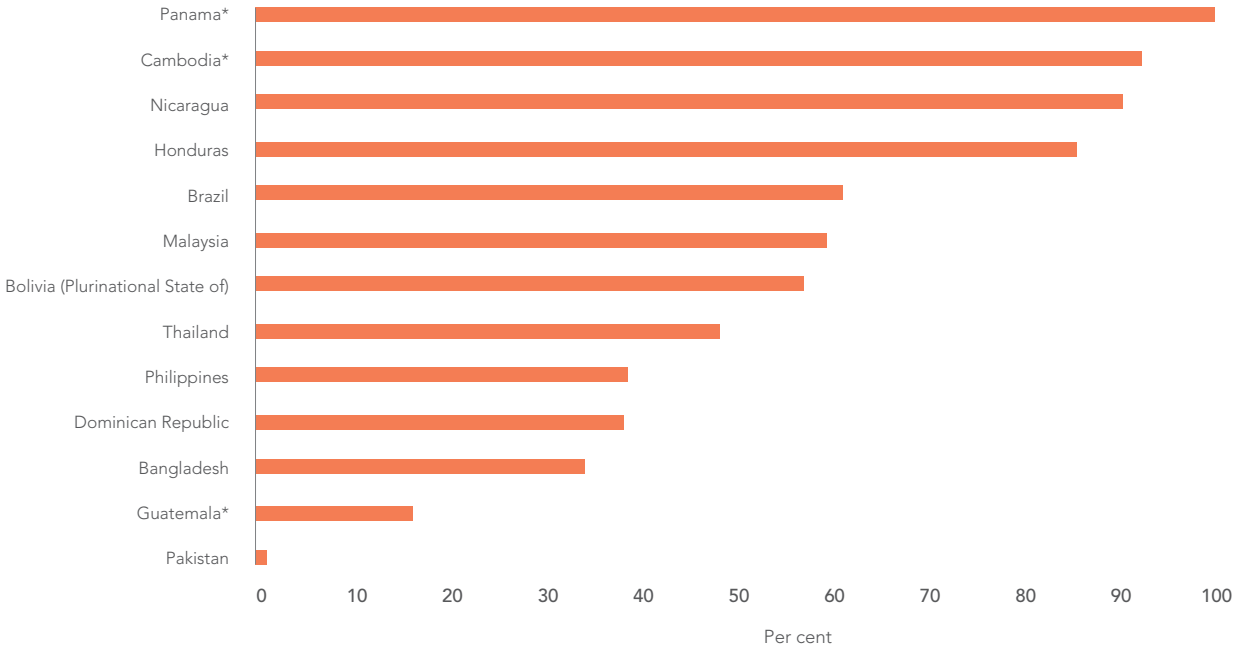

Source: Population-based surveys, 2000–2018.

## Combination prevention for key populations

Key population access to combination HIV prevention options varies greatly among countries, and it remains insufficient globally. In six of 13 countries that have conducted surveys since 2016 and reported those data to UNAIDS, less than half of transgender women stated that they were able to access at least two HIV prevention services in the past three months (Figure 2.13). The same is true for female sex workers in 16 of 30 reporting countries (Figure 2.14), for gay men and other men who have sex with men in 26 of 38 reporting countries (Figure 2.15) and for men who inject drugs in 10 of 14 reporting countries (Figure 2.16).

FIGURE 2.13

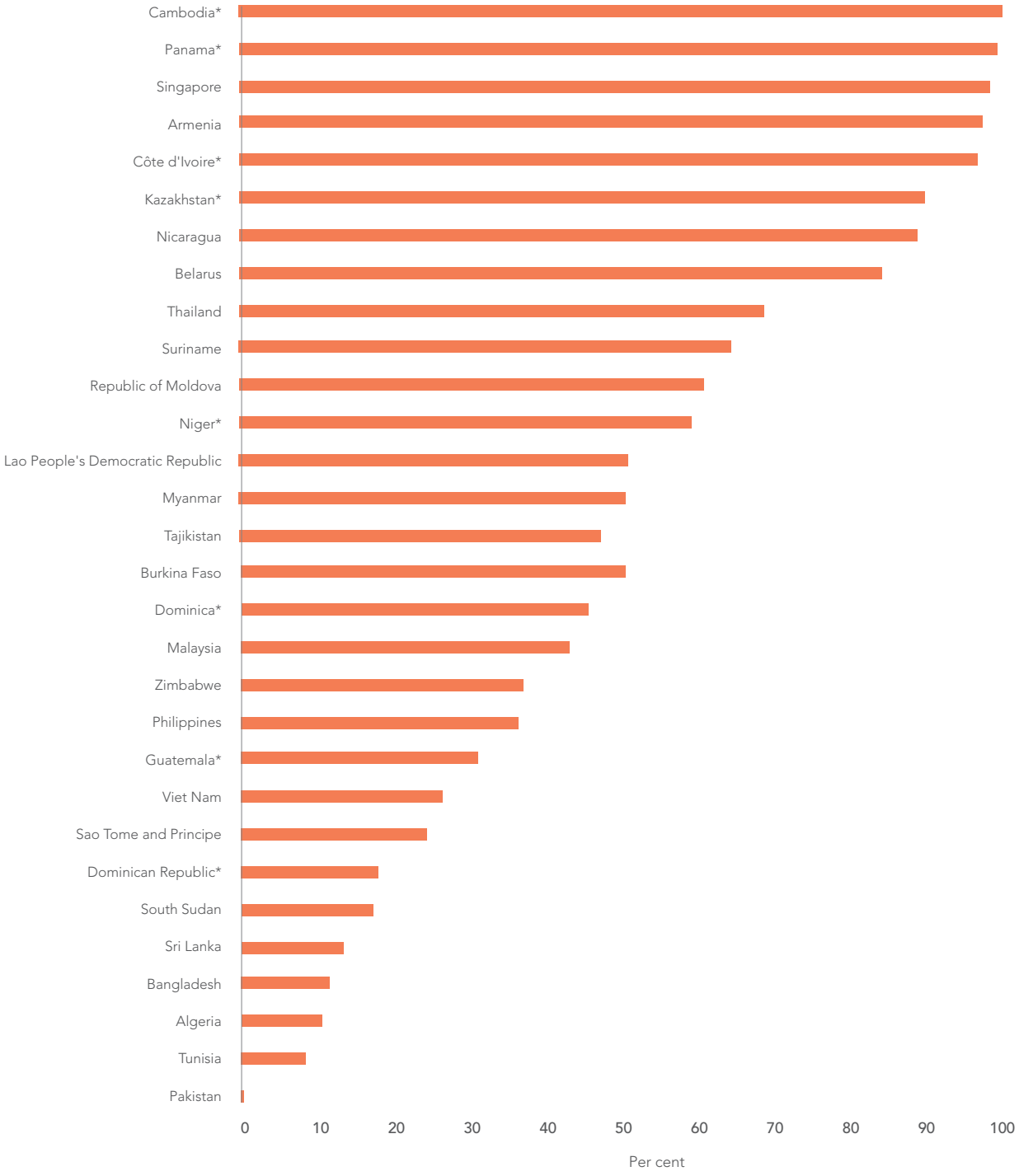
**Transgender women who reported receiving at least two prevention services in the past three months, countries with available data, 2016–2019**




Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).
Note: The use of an asterisk (*) indicates that data for marked countries come from programme data (which tend to show higher values) and not from a survey.
Possible prevention services received: condoms and lubricant, counselling on condom use and safe sex, and testing for sexually transmitted infections.

FIGURE 2.14

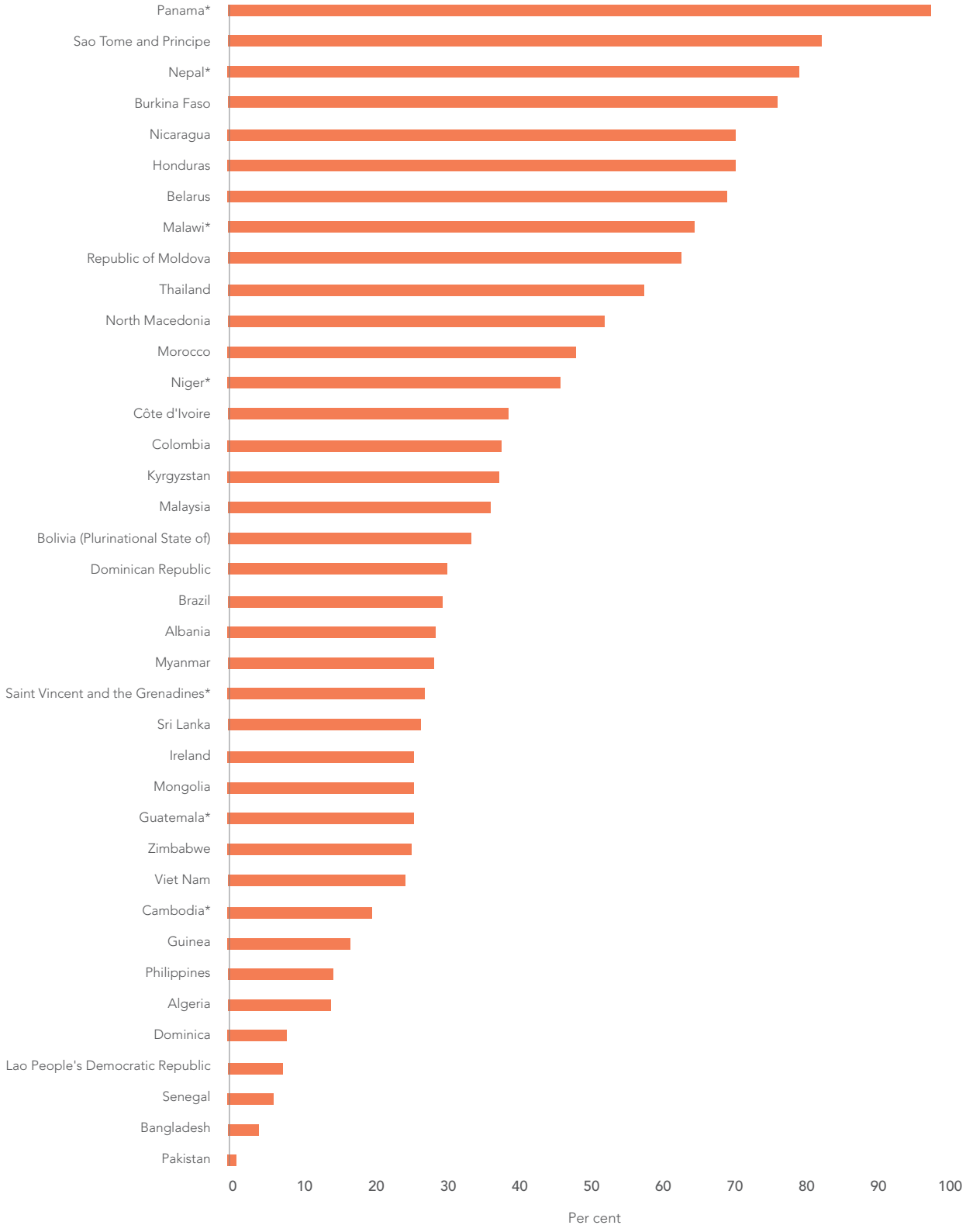
**Female sex workers who reported receiving at least two prevention services in the past three months, countries with available data, 2016–2019**




Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).
Note: The use of an asterisk (*) indicates that data for marked countries come from programme data (which tend to show higher values) and not from a survey.
Possible prevention services received: condoms and lubricant, counselling on condom use and safe sex, and testing for sexually transmitted infections.

FIGURE 2.15

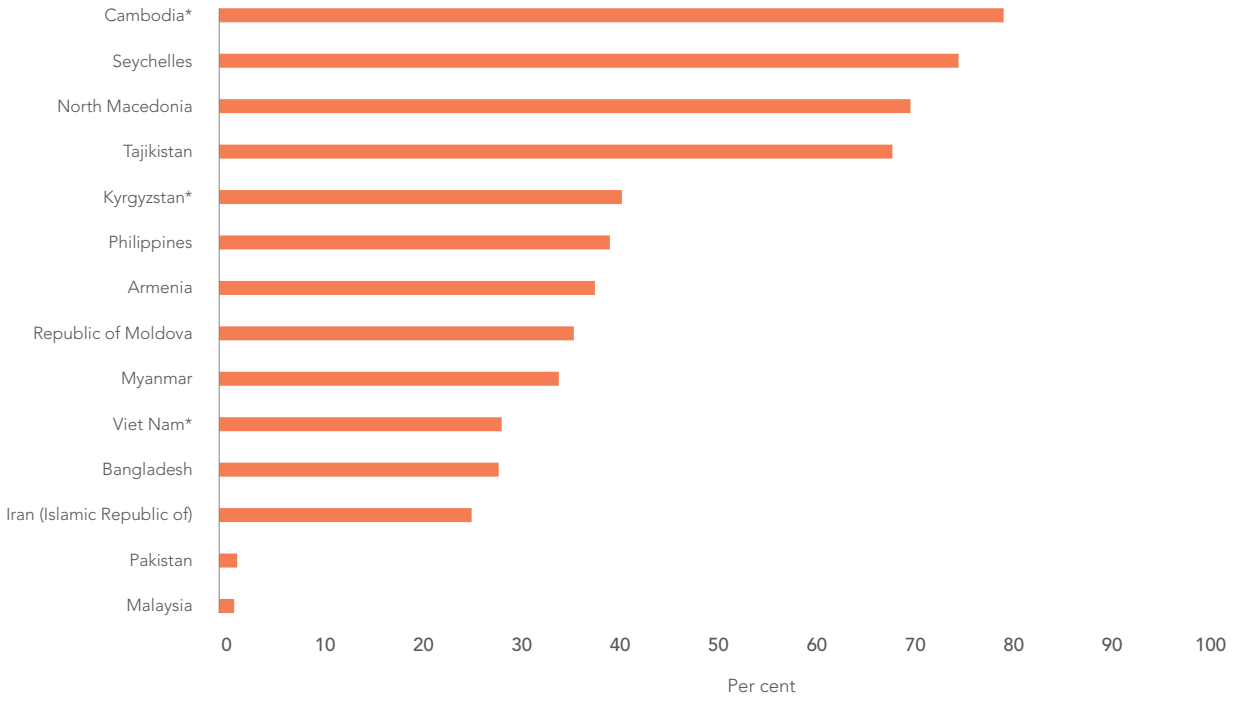
**Gay men and other men who have sex with men who reported receiving at least two prevention services in the past three months, countries with available data, 2016–2019**




Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).
Note: The use of an asterisk (*) indicates that data for marked countries come from programme data (which tend to show higher values) and not from a survey.
Possible prevention services received: condoms and lubricant, counselling on condom use and safe sex, and testing for sexually transmitted infections.

FIGURE 2.16

**Men who inject drugs who reported receiving at least two prevention services in the past three months, countries with available data, 2016–2019**



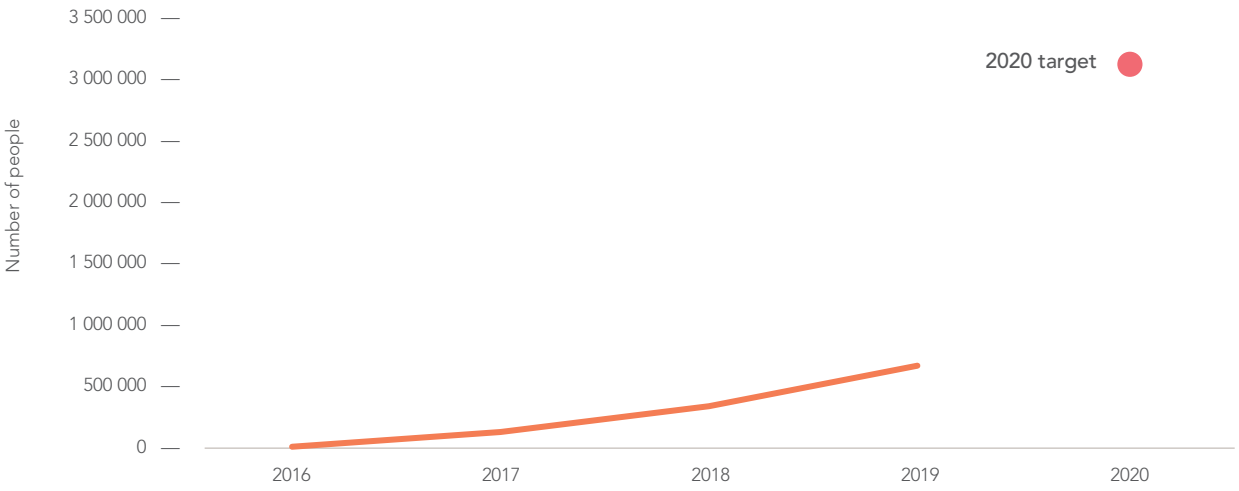

Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).
Note: The use of an asterisk (*) indicates that data for marked countries come from programme data (which tend to show higher values) and not from a survey.
Possible prevention services received: condoms and lubricant, counselling on condom use and safe sex, and sterile injecting equipment.

## Pre-exposure prophylaxis

The number of people reported to have received PrEP at least once in the previous year has increased dramatically in recent years, from fewer than 2000 in 2016 to more than 590 000 in 2019 (Figure 2.17). In several cities in North America, Europe and Australia where PrEP is widely available, this relatively new prevention tool has contributed to steep reductions in HIV infections among gay men and other men who have sex with men. Global coverage, however, is still far short of the 2020 target of 3 million receiving PrEP (see Chapter 5 for additional analysis).

FIGURE 2.17

**Number of people who received PrEP at least once during the reporting period, global, 2016–2019**




Source: UNAIDS Global AIDS Monitoring, 2017–2020 (see https://aidsinfo.unaids.org/); Country Updates. In: PrEPWatch [Internet]. AVAC; c2020 (https://www.prepwatch.org/in-practice/country-updates/); amfAR: PEPFAR Monitoring, Evaluation and Reporting Database [Internet]. amfAR; c2020 (https://mer.amfar.org/Manual/PrEP_NEW); Hayes R, Schmidt AJ, Pharris A, Azad Y, Brown AE, Weatherburn P et al. Estimating the "PrEP Gap": how implementation and access to PrEP differ between countries in Europe and central Asia in 2019. Eurosurveillance. 2019;24(41); and country documents and meeting reports (available on request).

## Voluntary medical male circumcision

Voluntary medical male circumcision (VMMC) provides lifelong partial protection against female-to-male HIV transmission, reducing heterosexual male vulnerability to HIV infection by approximately 60% *(1, 2)*. VMMC can also act as an entry point for providing men and boys with broader health packages to improve their health outcomes. When combined with high levels of treatment coverage and viral suppression, evidence shows that the impact of VMMC is particularly significant *(3)*.

By the end of 2019, more than 15 million men and boys across 15 priority countries had been voluntarily and medically circumcised since the beginning of 2016, 4.2 million of them in 2019 alone (Figure 2.18). Among 12 priority countries that reported age-disaggregated data, about 40% of those who underwent VMMC were between the ages of 10 and 14.

Among the priority countries, the United Republic of Tanzania performed the most VMMCs (nearly 800 000) in 2019. Annual circumcisions in the 15 priority countries have remained relatively stable since 2017, falling short of the annual amounts needed to reach the 2020 target of 25 million additional circumcisions since the beginning of 2016 (Figure 2.19).

FIGURE 2.18

## Annual number of males voluntarily circumcised in 15 priority countries, 2016–2019

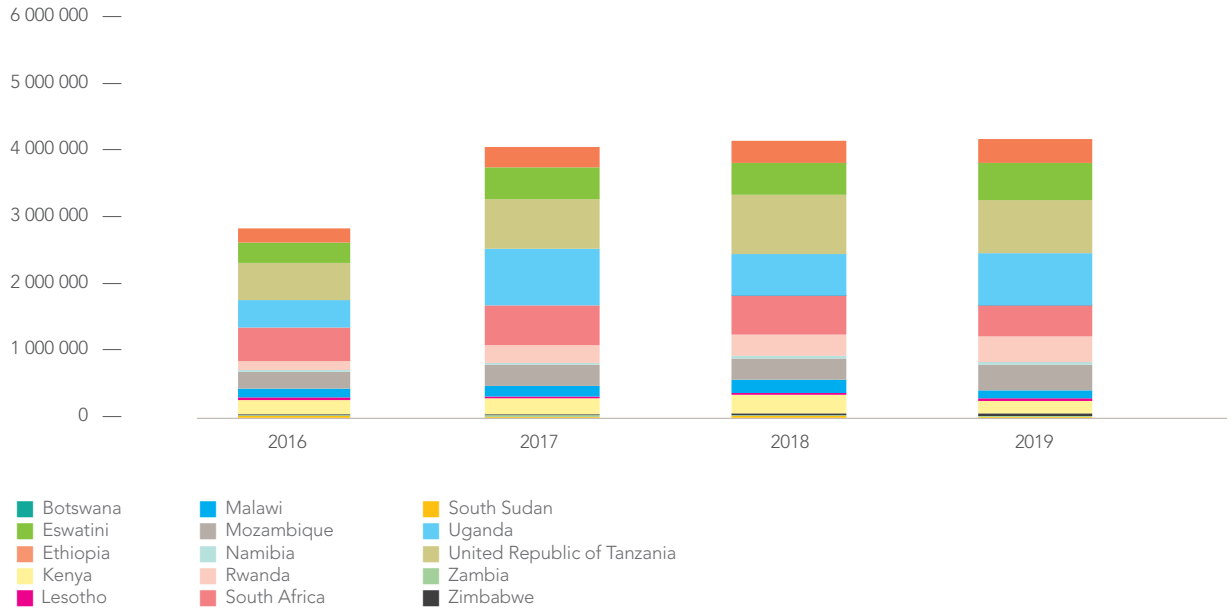
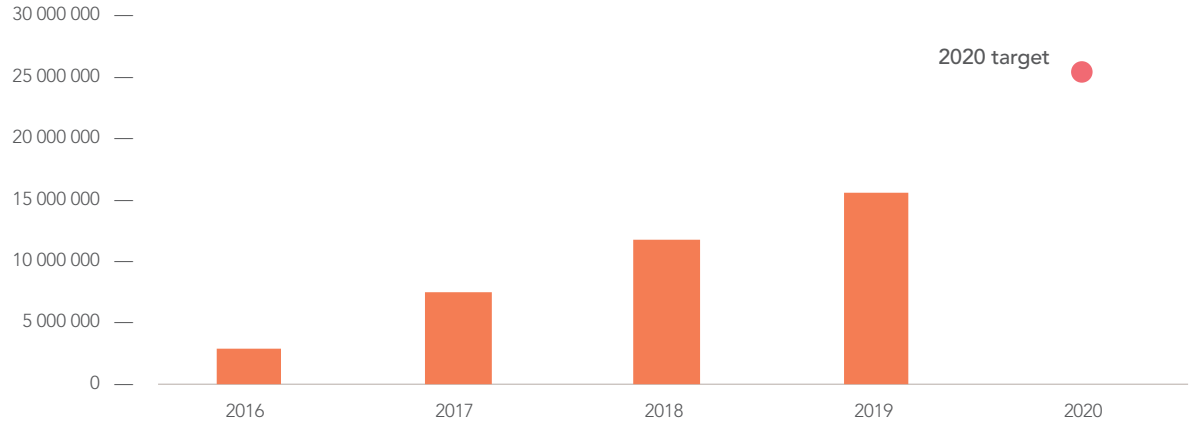



FIGURE 2.19

## Cumulative number of males voluntarily medically circumcised, 15 priority countries, 2016–2019




Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).
Note: The 15 priority countries are: Botswana, Eswatini, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, South Africa, South Sudan, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe.

KEY POPULATION ACCESS TO COMBINATION HIV PREVENTION OPTIONS VARIES GREATLY AMONG COUNTRIES, AND IT REMAINS INSUFFICIENT GLOBALLY. IN SIX OF 13 COUNTRIES THAT HAVE REPORTED DATA TO UNAIDS SINCE 2016, LESS THAN HALF OF TRANSGENDER WOMEN STATED THAT THEY WERE ABLE TO ACCESS AT LEAST TWO HIV PREVENTION SERVICES IN THE PAST THREE MONTHS.

## FAST-TRACK **COMMITMENT**

4

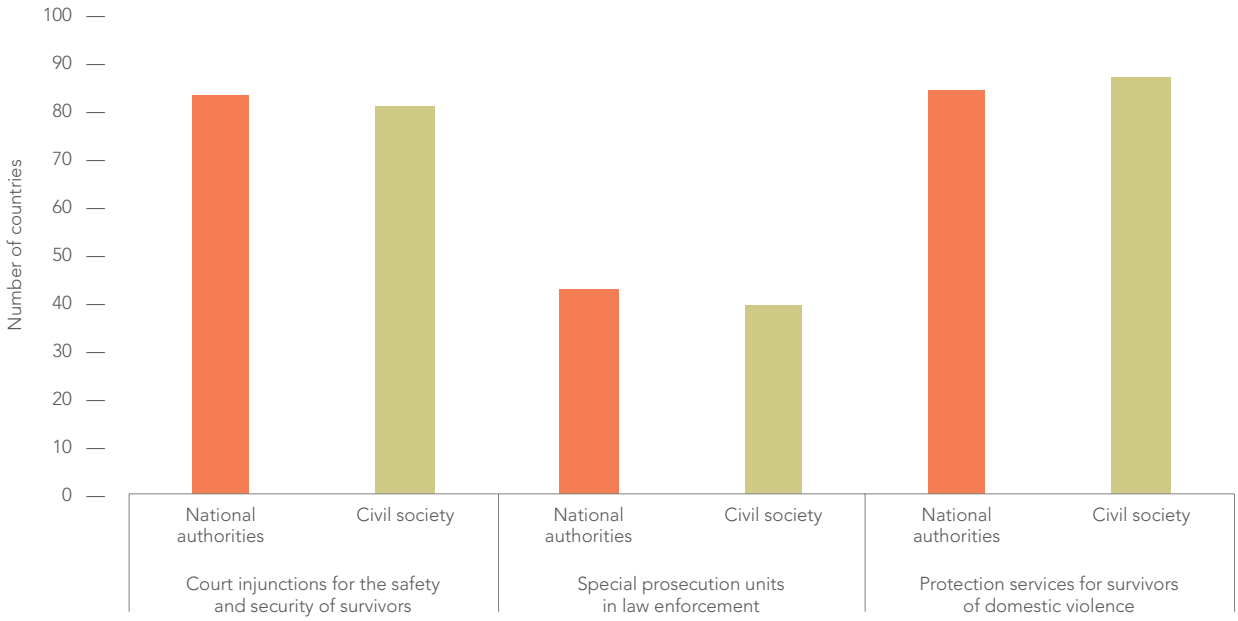
ELIMINATE GENDER INEQUALITIES AND END ALL FORMS OF VIOLENCE AND DISCRIMINATION AGAINST WOMEN AND GIRLS, PEOPLE LIVING WITH HIV AND KEY POPULATIONS BY 2020.

Gender inequality, stigma and discrimination, and violence continue to impact the lives of women and girls, people living with HIV and key populations in myriad negative ways (see Chapter 1 and Chapter 4 for more details).

National authorities and civil society representatives in dozens of countries reported to UNAIDS in 2019 that various provisions and services were in place to protect the health, safety and security of survivors of domestic and sexual violence (Figure 2.20). However, the degree to which policies and legislation are implemented and enforced—including their coverage and quality—varies widely. Prevention efforts are also lagging significantly, as evidenced by the high levels of intimate partner violence reported in surveys conducted around the world (Figure 2.22). Surveys conducted in 46 countries between 2014 and 2018 show that 19.7% of ever-married or partnered women and adolescent girls (aged 15 to 49 years) experienced physical and/or sexual violence by an intimate partner in the past 12 months. National prevalence of recent intimate partner violence ranged from 3.5% of respondents in Armenia to 47.6% in Papua New Guinea (Figure 2.22).

FIGURE 2.20

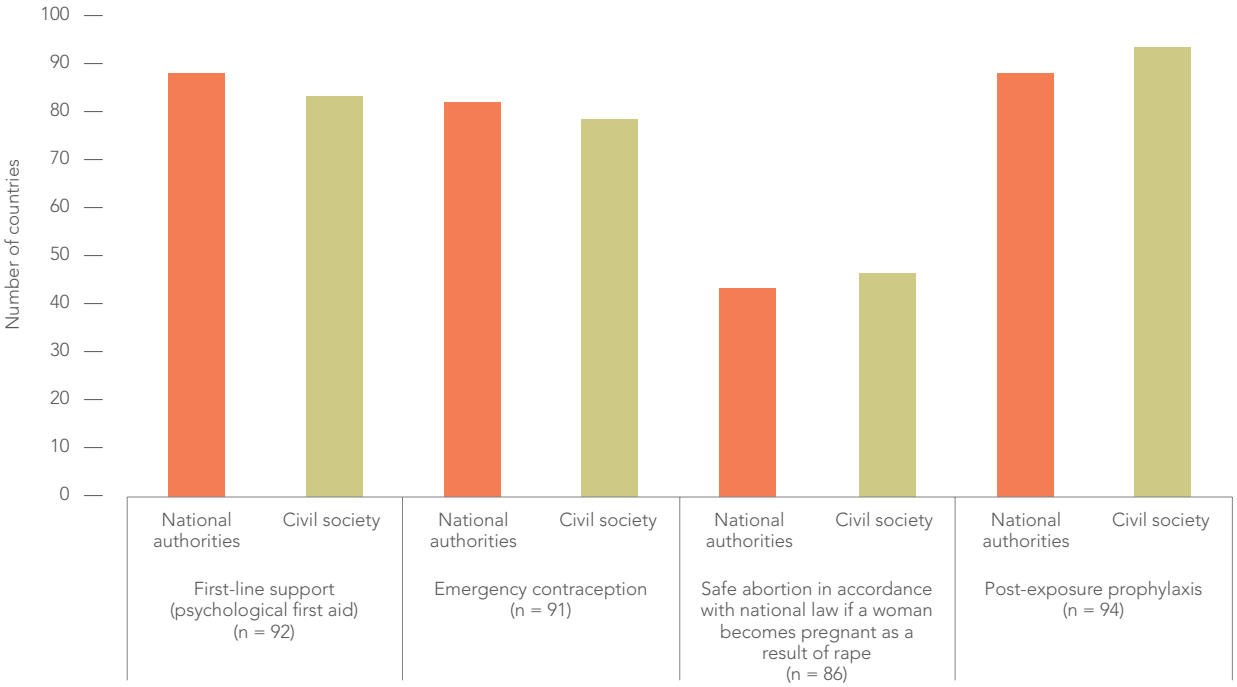
**Countries with provisions related to domestic violence, countries with available data, 2019**




Source: UNAIDS National Commitments and Policy Instrument, 2019 (see http://lawsandpolicies.unaids.org/).

FIGURE 2.21

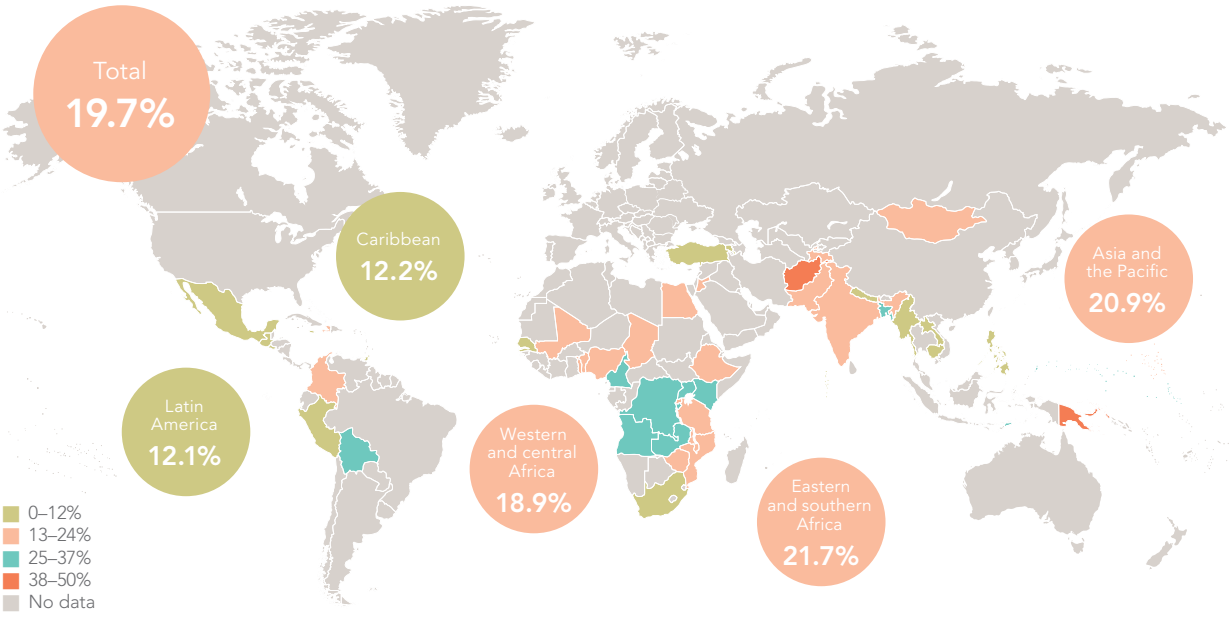
## Countries with service delivery points providing appropriate medical and psychological care and support for women and men who have experienced sexual violence, countries with available data, 2019




Source: 2019 National Commitments and Policy Instrument.

FIGURE 2.22

## Percentage of ever-married or partnered women aged 15 to 49 years who experienced physical and/or sexual violence by an intimate partner in the past 12 months, 2014–2018




Source: Population-based surveys, 2014–2018.
Note: Aggregates refer to the most recent data available from population-based surveys during the period of 2014 to 2018. Data coverage of aggregates: total: 46 countries, 43% of 2018 population; Asia and the Pacific: 12 countries, 48% of 2018 population; Caribbean: 3 countries, 40% of 2018 population; eastern and southern Africa: 11 countries, 84% of 2018 population; Latin America: 6 countries, 41% of 2018 population; western and central Africa: 10 countries, 85% of 2018 population. Aggregates for eastern Europe and central Asia, the Middle East and North Africa, and western Europe and North America are not shown, as data were available for few countries for the period of 2014 to 2018.

## FAST-TRACK **COMMITMENT**

5

ENSURE THAT 90% OF YOUNG PEOPLE HAVE THE SKILLS, KNOWLEDGE AND CAPACITY TO PROTECT THEMSELVES FROM HIV AND HAVE ACCESS TO SEXUAL AND REPRODUCTIVE HEALTH SERVICES BY 2020, IN ORDER TO REDUCE THE NUMBER OF NEW HIV INFECTIONS AMONG ADOLESCENT GIRLS AND YOUNG WOMEN TO BELOW 100 000 PER YEAR.

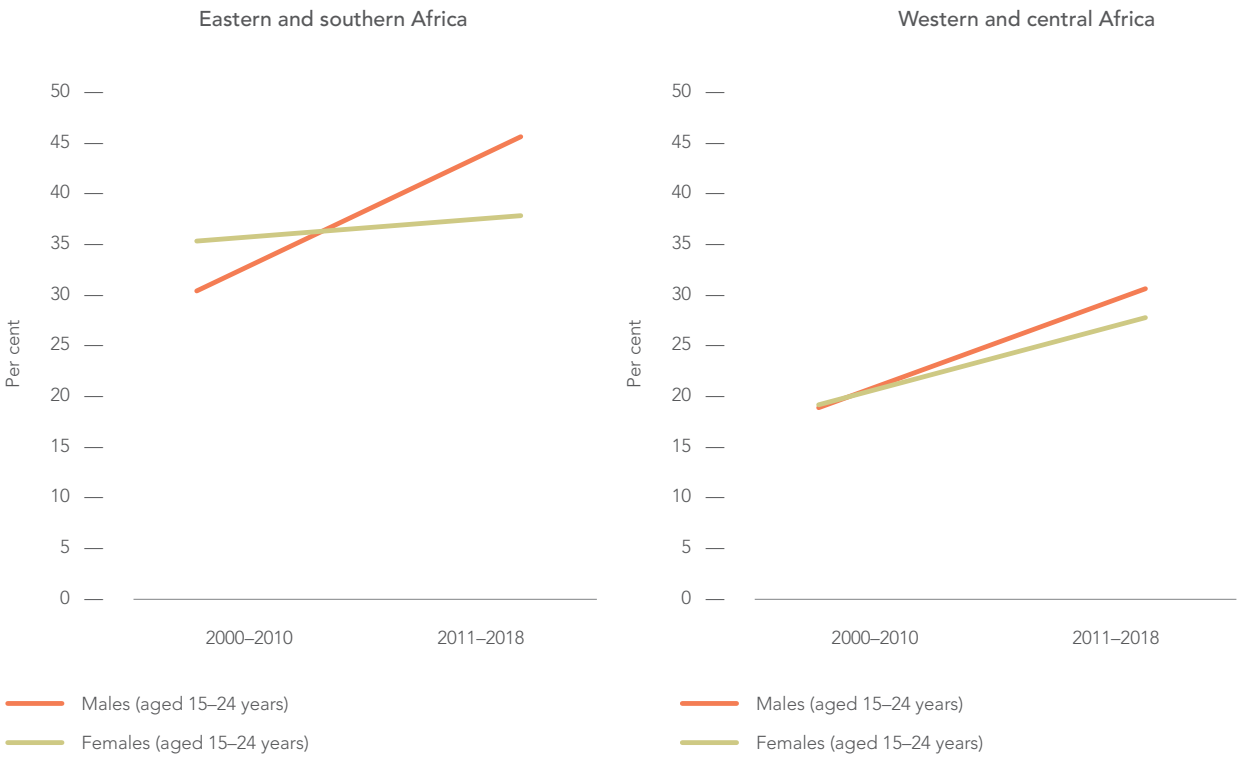
A critical component of HIV responses is ensuring that young people know both how to prevent HIV infections and where they can safely access HIV prevention and sexual and reproductive health services.

An analysis of population-based surveys conducted since 2000 suggests that comprehensive knowledge of HIV among young women and men in western and central Africa—and men in eastern and southern Africa—has steadily risen. However, there has been little progress in efforts to increase comprehensive knowledge of HIV among young women in eastern and southern Africa (Figure 2.23).

Recent surveys show that there is still significant work to be done. Among surveys conducted between 2011 and 2018, just 39% of young women (aged 15 to 24 years) in eastern and southern Africa—and 28% in western and central Africa—demonstrated comprehensive knowledge of HIV, compared to 46% and 31% of young men in the same age group, respectively.

FIGURE 2.23

**Comprehensive knowledge of HIV among young people (aged 15–24 years), select countries in sub-Saharan Africa, 2000–2018**




Source: Population-based surveys from countries with two or more such surveys, 2000–2018.

## FAST-TRACK **COMMITMENT**

6

ENSURE THAT 75% OF PEOPLE LIVING WITH, AT RISK OF AND AFFECTED BY HIV BENEFIT FROM HIV-SENSITIVE SOCIAL PROTECTION BY 2020.

The Sustainable Development Goals (SDGs) call for universal social protection and guaranteeing at least a basic level of social security for all. Increased efforts are needed to extend coverage: only 45% of the world's population are effectively covered by at least one social protection benefit, while the remaining 55%—about 4 billion people—are left unprotected *(4)*.

In countries with a high HIV burden, it is recommended that social protection schemes be made sensitive to the needs of people living with HIV, those at higher risk of HIV infection and others affected by the epidemic. Among 35 countries that account for nearly 90% of new HIV infections globally, 31 reported to UNAIDS in either 2019 or 2020 that they had an approved social protection strategy, policy or framework (Table 2.2). Of those, 26 reported that their strategies were being implemented. Among the approved strategies, 25 refer to HIV, 22 refer to people living with HIV as key beneficiaries, and 13 refer to key populations at higher risk of HIV infection as key beneficiaries. Only two countries (the Islamic Republic of Iran and Mozambique) reported that all HIV-sensitive elements are reflected within a social protection strategy that is being implemented.

Across 25 high HIV burden countries with available data, the proportion of the population covered by at least one social protection benefit ranged from 1.6% in Myanmar to 90.4% in the Russian Federation, with a median of 15.3%. Less than half of the population was covered by at least one social protection benefit in 19 of the 25 countries with available data *(5)*.

Among 21 high HIV burden countries that have strategies that refer to HIV and recognize people living with HIV as key beneficiaries, only five countries (Brazil, China, Indonesia, the Russian Federation and the United States of America) reported that at least half of the total population is covered by at least one social protection benefit.

TABLE 2.2

## Effective coverage of social protection benefits and HIV-sensitivity of social protection strategies, policies or frameworks in Fast-Track countries, 2019 and 2020

| | Proportion of the total population covered by at least one social protection benefit (SDG 1.3.1) | Has an approved social protection strategy, policy or framework | Refers to HIV | Recognizes people living with HIV as key beneficiaries | Recognizes key populations as key beneficiaries | Recognizes adolescent girls and young women as key beneficiaries | Recognizes children affected by HIV as key beneficiaries | Recognizes families affected by HIV as key beneficiaries | Addresses the issue of unpaid care work in the context of HIV |
|---|---|---|---|---|---|---|---|---|---|
| Angola | 9.9 | * | | | | | | | |
| Botswana | 15.4 | | | | | | | | |
| Brazil | 74.9 | | | | | | | | |
| Cameroon | 8.7 | | | | | | | | |
| Chad | Data not available | | | | | | | | |
| China | 63 | | | | | | | | |
| Côte d'Ivoire | Data not available | | | | | | | | |
| Democratic Republic of the Congo | 14.1 | | | | | | | | |
| Eswatini | Data not available | | | | | | | | |
| Ethiopia | 11.6 | | | | | | | | |
| Ghana | 18.3 | | | | | | | | |
| Haiti | Data not available | * | | | | | | | |
| India | 22 | | | | | | | | |
| Indonesia | 54 | | | | | | | | |
| Iran (Islamic Republic of) | Data not available | | | | | | | | |
| Jamaica | Data not available | | | | | | | | |
| Kenya | 10.4 | | | | | | | | |
| Lesotho | 9.2 | | | | | | | | |
| Malawi | 21.3 | * | | | | | | | |
| Mali | Data not available | | | | | | | | |
| Mozambique | 10.9 | | | | | | | | |
| Myanmar | 1.6 | | | | | | | | |
| Namibia | Data not available | | | | | | | | |
| Nigeria | 11 | | | | | | | | |
| Pakistan | 8 | * | | | | | | | |
| South Africa | 47.8 | | | | | | | | |
| South Sudan | Data not available | * | | | | | | | |
| Uganda | 2.9 | | | | | | | | |
| Ukraine | 73 | | | | | | | | |
| United Republic of Tanzania | 4 | | | | | | | | |
| Viet Nam | 37.9 | | | | | | | | |
| Zambia | 15.3 | | | | | | | | |
| Zimbabwe | Data not available | | | | | | | | |
| Russian Federation | 90.4 | | | | | | | | |
| United States of America | 76.1 | | | | | | | | |

Yes

No

Data not available

Source: UNAIDS National Commitments and Policy Instrument, 2019 and 2020 (see http://lawsandpolicies.unaids.org/); SDG Indicators Global Database [Internet]. New York: United Nations Statistics Division; c2020 (https://unstats.un.org/sdgs/indicators/database/, accessed 17 April 2020).
*Social protection strategy is not being implemented.

## FAST-TRACK **COMMITMENT**

7

ENSURE THAT AT LEAST 30% OF ALL SERVICE DELIVERY IS COMMUNITY-LED BY 2020.

Communities play a critical role in HIV responses, serving as leaders, advocates, service providers and monitors. UN Member States recognized the role that community organizations play by making a commitment on community-led service delivery. However, progress on that commitment has proved difficult to measure, in part because community-led service delivery was not well-defined. To address this issue, civil society and governments are working together within the UNAIDS Programme Coordinating Board to produce recommendations on the use of definitions for community-led responses to HIV.

## FAST-TRACK **COMMITMENT**

8

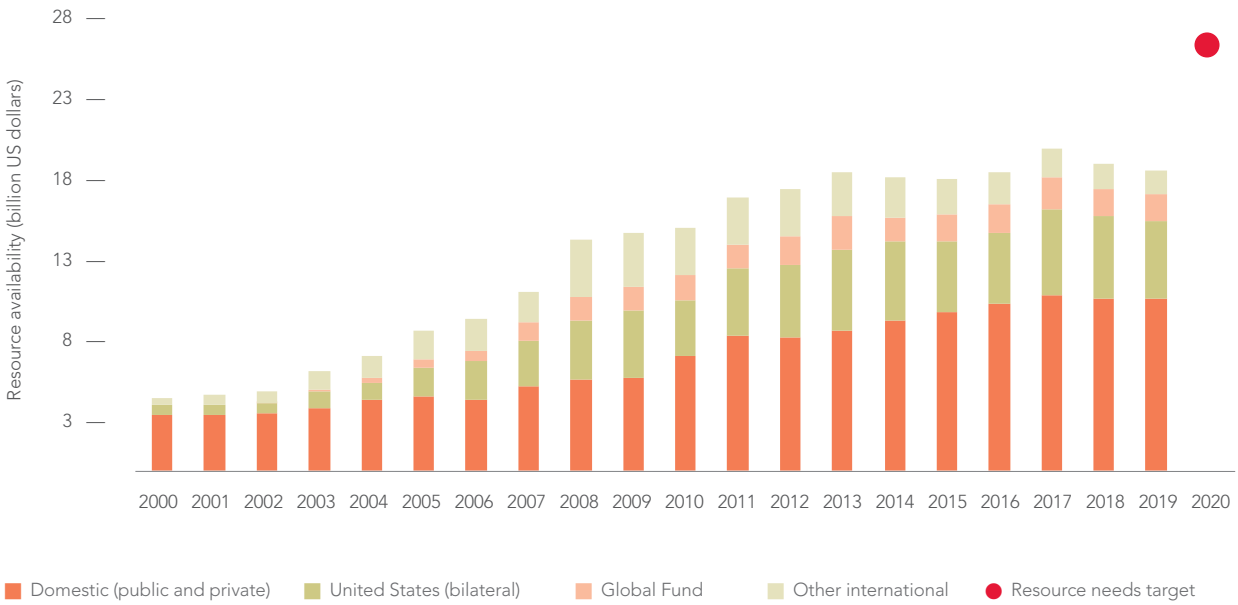
ENSURE THAT HIV INVESTMENTS INCREASE TO US$ 26 BILLION BY 2020, INCLUDING A QUARTER FOR HIV PREVENTION AND 6% FOR SOCIAL ENABLERS.

The funding gap for HIV responses is widening. Momentum established following global agreement on the Millennium Development Goals (MDGs) in 2000 has been lost in the SDG era. Increases in resources for HIV responses in low- and middle-income countries halted in 2017, with funding decreasing by 7% between 2017 and 2019 (to US$ 18.6 billion in constant 2016 US dollars) (Figure 2.24).[2] The total funding available in 2019 for HIV in these countries amounted to about 70% of the 2020 target set by the UN General Assembly.

Domestic investments in HIV responses in low- and middle-income countries have grown by 50% since 2010. This growth peaked in 2017 and then declined by 2% in the following two years (in real terms, adjusted for inflation).[3] Financial support for these countries provided through the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) increased by 26% between 2010 and 2017, but it then declined by 15% over the next two years, leaving a 7% total increase over the nine-year period. Bilateral funding provided to these countries by the United States Government—primarily through the United States President's Emergency Plan for AIDS Relief (PEPFAR)—increased by 50% between 2010 and 2017 before declining by 8% over the next two

FIGURE 02.24

**Resource availability and key funding sources for HIV in low- and middle-income countries, 2000–2019, with 2020 target resource needs**




Source: UNAIDS financial estimates, July 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).
Note: Constant 2016 US dollars.

2 Resource availability estimates are presented in constant 2016 US dollars to account for inflation and thus be comparable to the target that was set by the UN General Assembly in the 2016 Political Declaration on Ending AIDS.
3 The nominal decrease (not adjusted for inflation) was 4%.

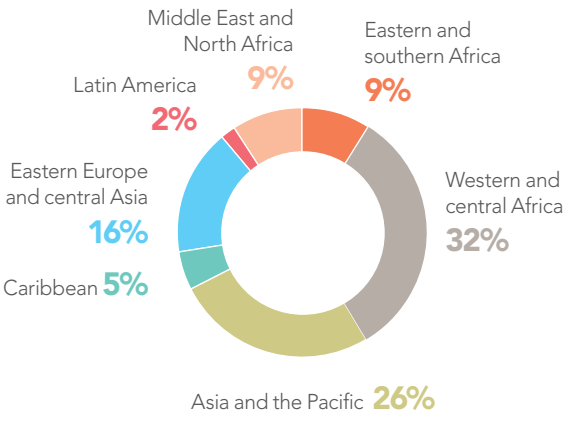
years, leaving a 38% total increase since 2010 (in constant 2016 US dollars). Contributions from other international sources have declined by 50% between 2010 and 2019. These trends reflect the fact that most bilateral donors have substantially reduced their contributions to the global HIV response in recent years. The United Kingdom of Great Britain and Northern Ireland, the second largest bilateral contributor of official development assistance for HIV, decreased its bilateral funding by 30% between 2017 and 2018, and then maintained the 2018 level of funding in 2019.

Further analysis of financial resource data shows how the mix of funding sources for HIV responses in low- and middle-income countries has changed significantly since 2010. The share of domestic resources grew from 47% of total funding in 2010 to 57% in 2019 (Figure 2.26). Bilateral funding from the United States increased from 23% to 26% over the same period, funding from the Global Fund decreased from 11% to 9%, and funding from other international donors dropped from 20% of total HIV resources in 2010 to only 8% in 2019.

Over that same period (2010–2019), funding for HIV responses increased in all regions except western and central Africa, the Caribbean, and the Middle East and North Africa (see the region chapters for details).

FIGURE 02.25

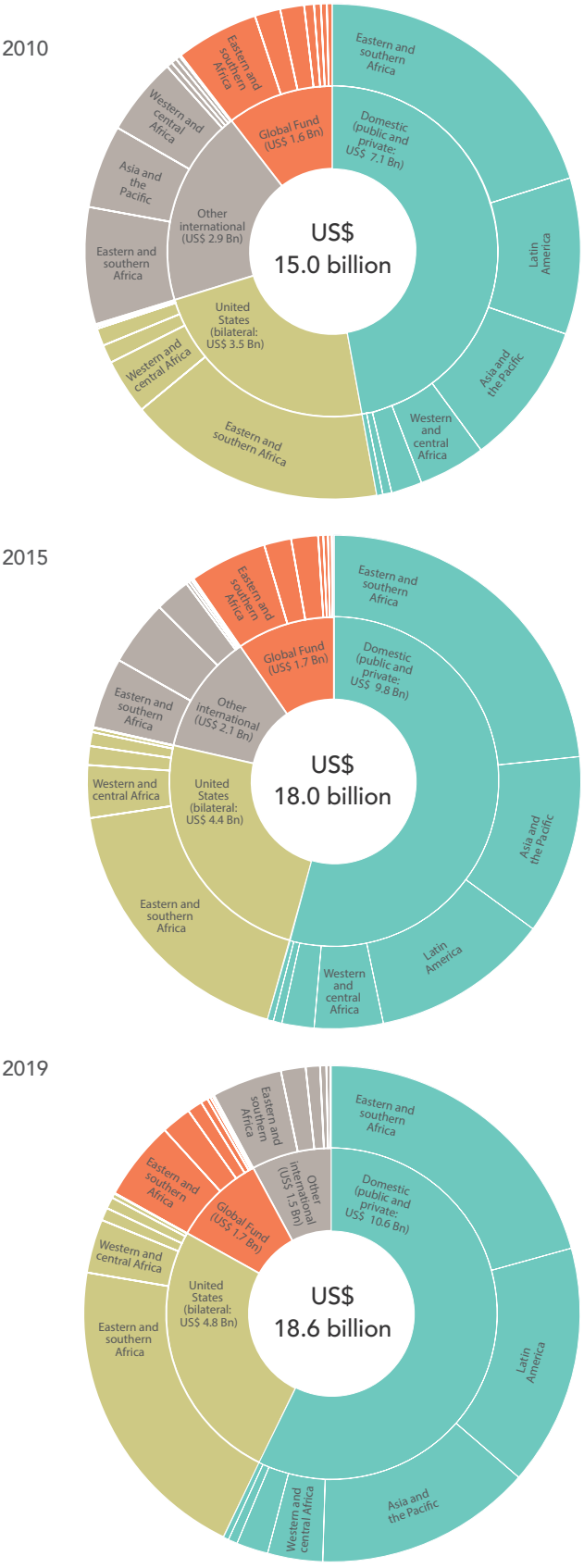
**Funding gap between 2019 resources and estimated need, 2020, by region**




Source: UNAIDS financial estimates, July 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).

FIGURE 2.26

**Changes in the HIV funding landscape, all sources, 2010–2019**



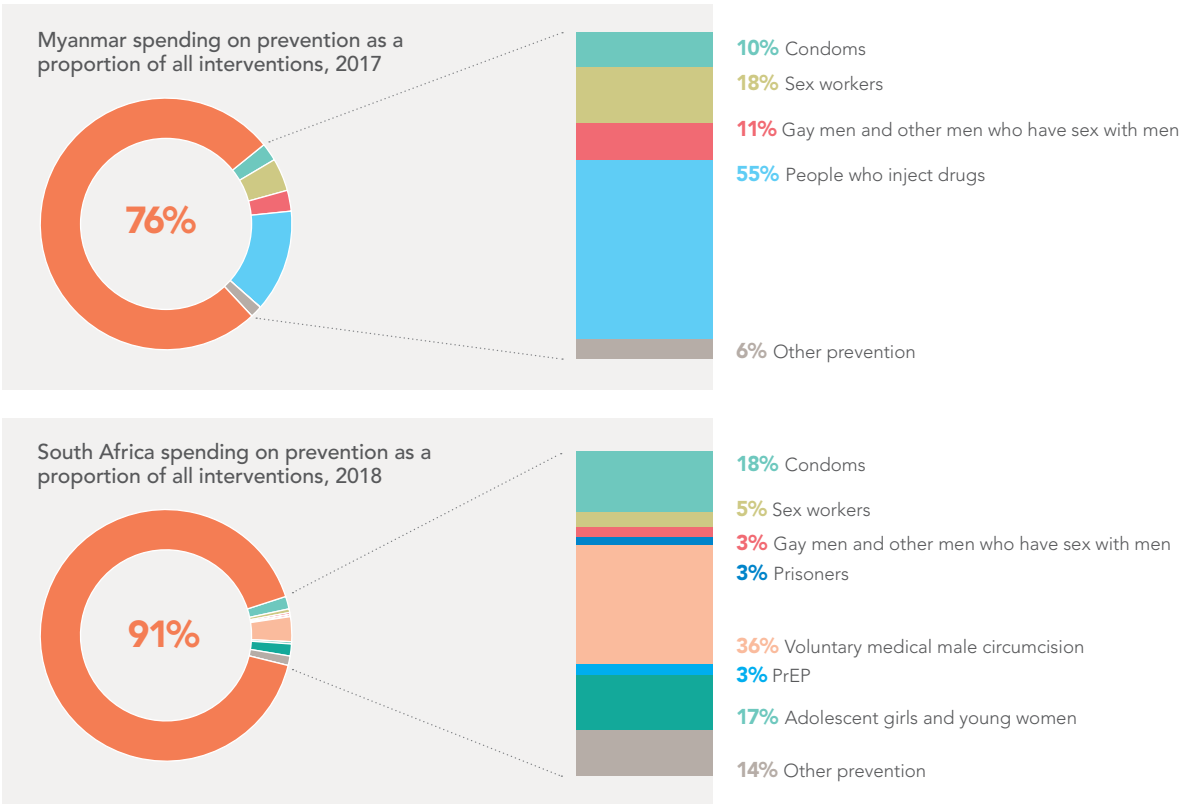

Note: All units in constant 2016 US dollars.
Source: UNAIDS financial estimates, July 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).

In Latin America, where HIV responses are predominantly funded by domestic resources, total resource availability increased by 38% between 2015 and 2019. Total HIV resources available in western and central Africa, by contrast, decreased by 14% in 2015–2019, reflecting both a steep drop (59%) in funding from international sources other than the United States and the Global Fund and an 18% decline in domestic HIV investments. Global Fund and bilateral United States support became increasingly focused on sub-Saharan Africa between 2010 and 2019 (see Chapter 5 for additional analysis). The regions with the largest shares of the overall resource gap in low- and middle-income countries in 2019 were western and central Africa (32%), Asia and the Pacific (26%), and eastern Europe and central Asia (17%) (Figure 2.25).

Large shares of HIV response spending in low- and middle-income countries go to HIV testing and antiretroviral therapy. UN Member States recognized in 2016 that HIV prevention efforts required greater attention, leading to a global commitment to spend a quarter of HIV response resources on prevention. The percentage of total spending needed for evidence-informed primary HIV prevention programmes varies from country to country, depending on the number of people living with HIV in the country, the per person cost of antiretroviral therapy and other variables.[4] In Myanmar, spending on HIV prevention that focused on populations in greatest need accounted for most of the 24% of total HIV spending that went to primary prevention in 2017 (Figure 2.27). In South Africa, the country with the most people living with HIV on treatment, spending on primary HIV prevention in 2018 was about 9% of total HIV spending. In addition, some countries continue to spend significant proportions of their HIV funding on less effective forms of HIV prevention.

FIGURE 2.27

**Country spending on prevention interventions as a proportion of total spending on HIV interventions, 2017 and 2018**




Note: Interventions included only when greater than 1% of prevention spending
Source: Country reports to UNAIDS; UNAIDS Global AIDS Monitoring, 2019–2020 (see https://aidsinfo.unaids.org/).

4 Priority primary HIV prevention interventions are: (i) combination prevention for adolescent girls and young women and their male partners in high-prevalence locations, mainly in sub-Saharan Africa; (ii) combination prevention programmes for all key populations; (iii) strengthened national condom and related behaviour change programmes; (iv) voluntary medical male circumcision; and (v) PrEP. See: HIV prevention road map 2020: accelerating HIV prevention to reduce new infections by 75%. Geneva: UNAIDS; 2016.

## FAST-TRACK **COMMITMENT**

9

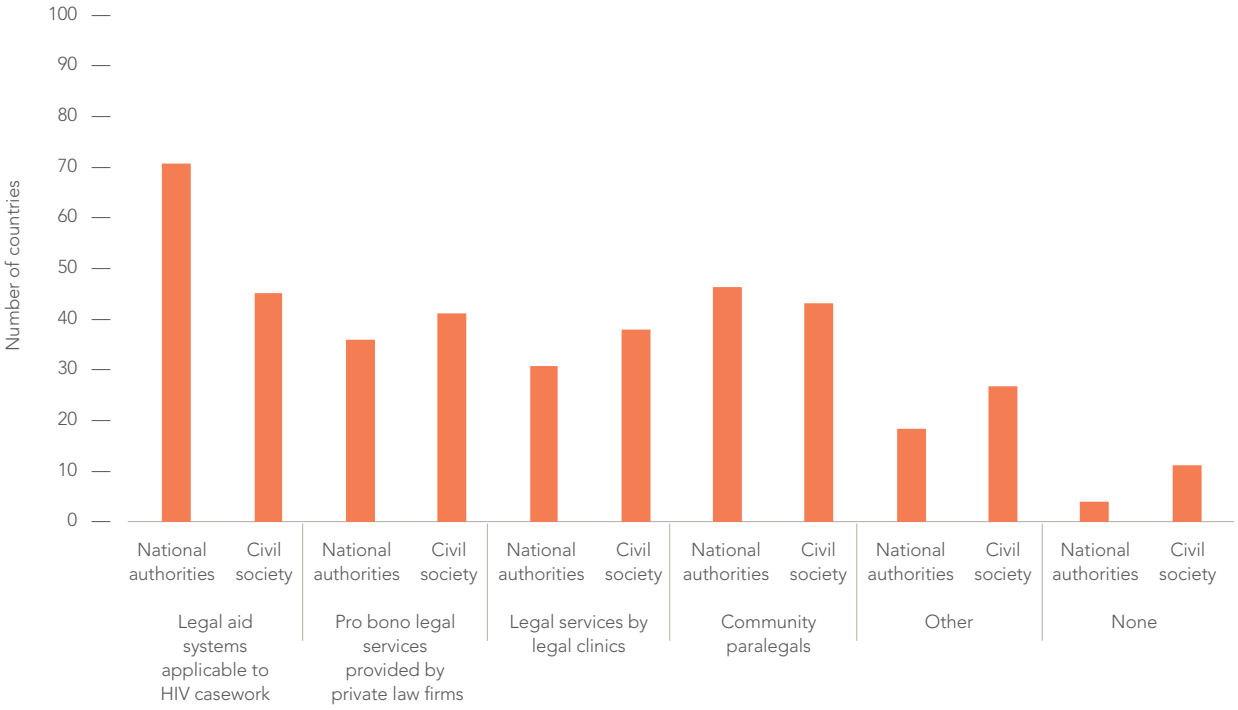
EMPOWER PEOPLE LIVING WITH, AT RISK OF AND AFFECTED BY HIV TO KNOW THEIR RIGHTS AND TO ACCESS JUSTICE AND LEGAL SERVICES TO PREVENT AND CHALLENGE VIOLATIONS OF HUMAN RIGHTS.

Effective HIV responses require legal, policy and social environments that empower people living with HIV, those at higher risk of HIV infection and others affected by the epidemic to claim their rights and receive redress when those rights are violated.

National authorities from 90 countries reported to UNAIDS in 2019 on whether various rights protection mechanisms were in place. Most (69) reported the existence of legal aid systems applicable to HIV casework, while half (45) reported the availability of community paralegals. Much less commonly reported were pro bono legal services provided by private law firms *(35)* and legal services provided by legal clinics *(30)*. Civil society representatives were less likely to report the existence of legal aid systems applicable to HIV casework, but they were more likely to report the existence of pro bono legal services and legal services provided by legal clinics (Figure 2.28).

FIGURE 2.28

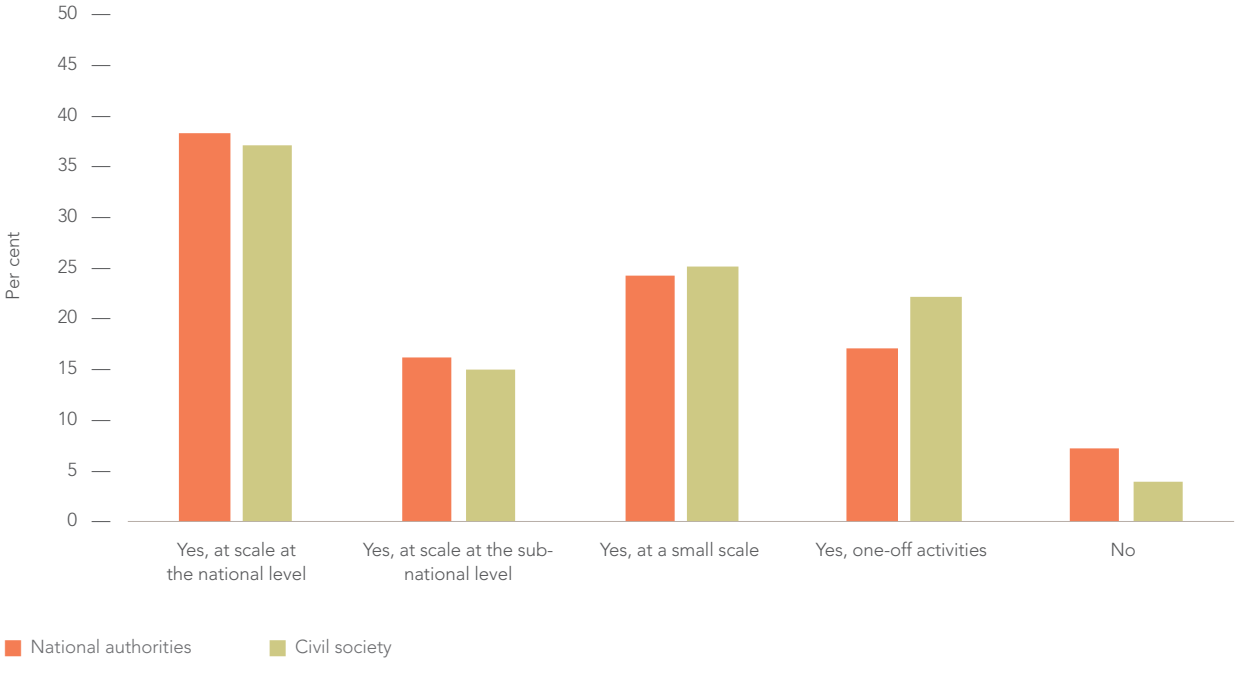
## Countries with mechanisms in place to promote access to affordable legal services, 2019




Source: UNAIDS National Commitments and Policy Instrument, 2019 (see http://lawsandpolicies.unaids.org/).
Note: Data correspond to reporting by national authorities from 90 countries and by civil society representatives from 89 countries. The National Commitments and Policy Instrument consists of two parts, the first completed by national authorites and the second by civil society and other nongovernmental partners engaged in the national response.

FIGURE 2.29

## Countries with training and/or capacity-building programmes for people living with HIV and key populations on their rights in the context of HIV, 2019



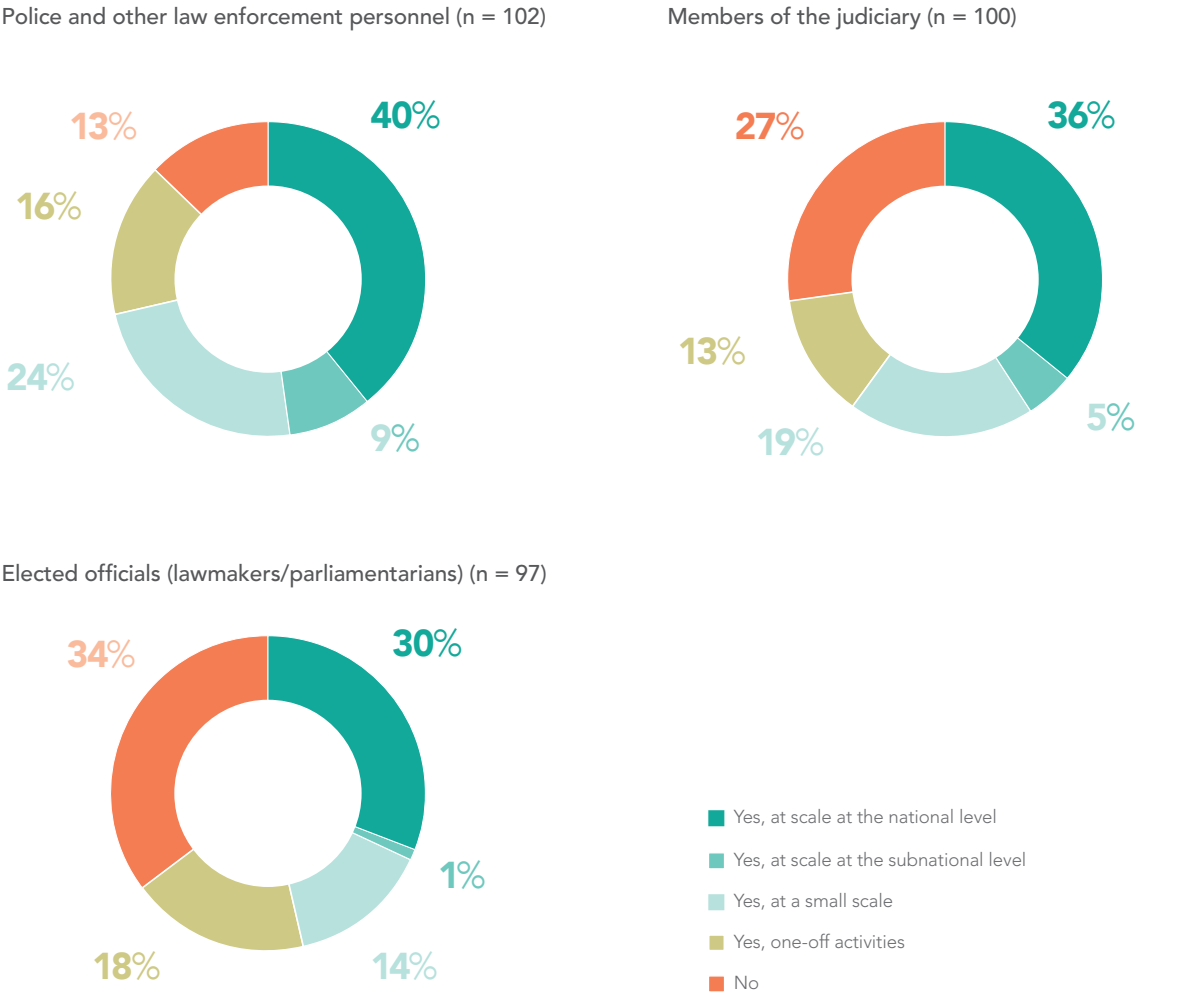

Source: UNAIDS National Commitments and Policy Instrument, 2019 (see http://lawsandpolicies.unaids.org/).

Reports from national authorities and civil society representatives were similar regarding whether training programmes for people living with HIV and key populations on their rights in the context of HIV were available in 2019, and at what level and scale (Figure 2.29). Country reporting to UNAIDS in 2019 show that training programmes on human rights and non-discrimination legal frameworks applicable to HIV are operating at scale at the national level for police and other law enforcement personnel in 40 out 102 reporting countries, for members of the judiciary in 36 out of 100 reporting countries, and for lawmakers and parliamentarians in 30 out of 97 reporting countries (Figure 2.30).

Reporting from national authorities and civil society representatives suggests that complaints procedures and systems to protect patient confidentiality and privacy in health-care settings are often in place, but that barriers to accessing these mechanisms are common. This includes limited awareness or knowledge of how to use these mechanisms, poor functionality of the mechanisms, cost constraints and a lack of HIV-sensitive approaches (Figure 2.31).

FIGURE 2.30

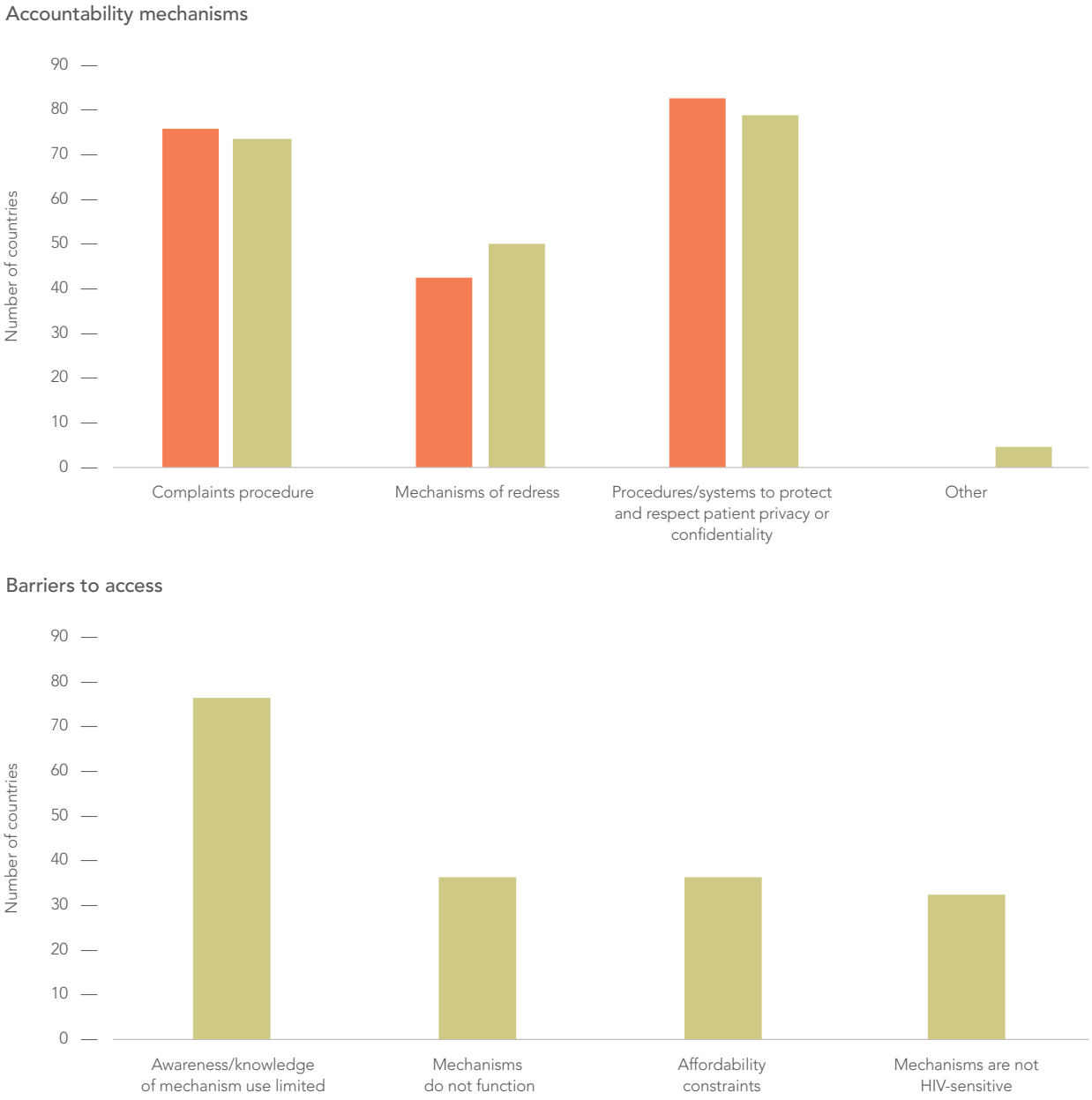
**Countries with training programmes on human rights and non-discrimination legal frameworks as applicable to HIV, 2019**




Source: UNAIDS National Commitments and Policy Instrument, 2019 (see http://lawsandpolicies.unaids.org/).

FIGURE 2.31

## Countries with accountability mechanisms on discrimination and human rights violations in health-care settings and barriers to accessing these mechanisms, global, 2019




Source: UNAIDS National Commitments and Policy Instrument, 2019 (see http://lawsandpolicies.unaids.org/).
Note: The National Commitments and Policy Instrument consists of two parts, the first completed by national authorities and the second by civil society and other non-governmental partners engaged in the national response.

## FAST-TRACK COMMITMENT

10

COMMIT TO TAKING AIDS OUT OF ISOLATION THROUGH PEOPLE-CENTRED SYSTEMS TO IMPROVE UNIVERSAL HEALTH COVERAGE, INCLUDING TREATMENT FOR TUBERCULOSIS, CERVICAL CANCER AND HEPATITIS B AND C.

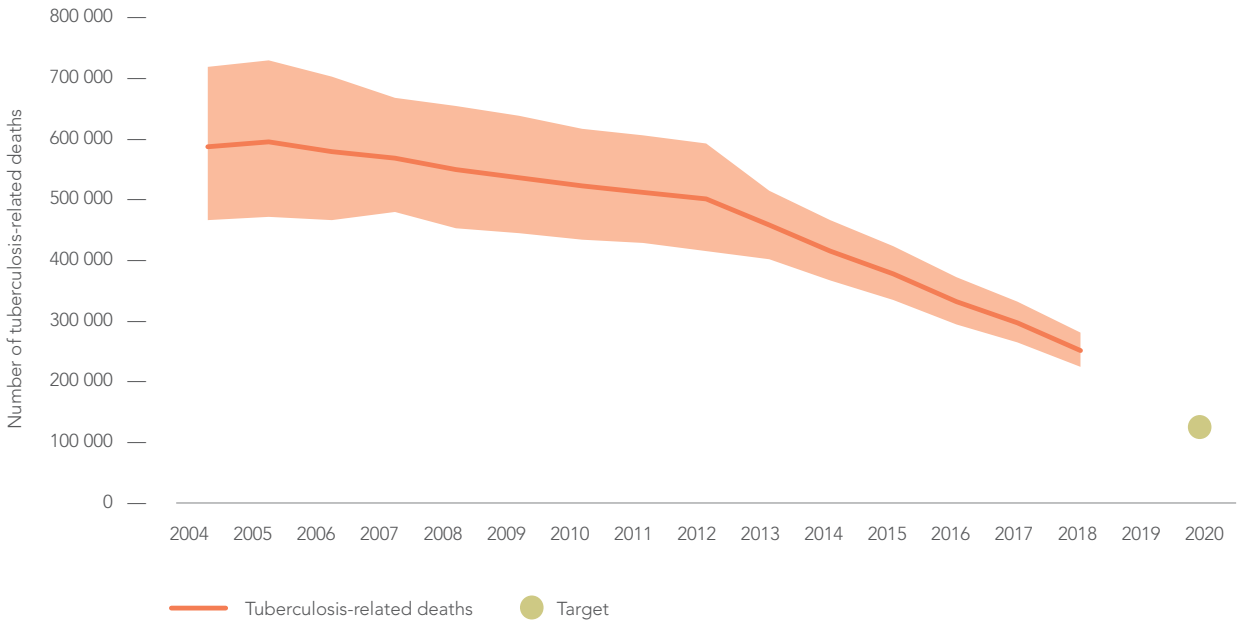
The risk of developing tuberculosis is 19 times higher (range, 15–22) for a person living with HIV than the rest of the world population. And tuberculosis remains the single largest cause of premature death among people living with HIV *(6)*.

Scale-up of antiretroviral therapy and improvements in the integrated delivery of HIV and tuberculosis services has reduced tuberculosis-related deaths among people living with HIV by 58% globally, from a 2005 peak of 590 000 [470 000–730 000] to 250 000 [220 000–280 000] in 2018 (Figure 2.32). Among the 135 countries that reported data to UNAIDS and the World Health Organization (WHO) in 2019, 47.5% of the estimated 862 000 [776 000–952 000] people living with HIV who developed tuberculosis (incident cases) received treatment for both HIV and tuberculosis.

Since 2010, tuberculosis-related deaths among people living with HIV have declined in all 10 countries that account for the majority of such deaths: the Democratic Republic of the Congo (33% decline), India (84% decline), Kenya (69% decline), Malawi (56% decline), Mozambique (49% decline), Nigeria (39% decline), South Africa (52% decline), Uganda (14% decline), the United Republic of Tanzania (60% decline) and Zambia (8% decline).

FIGURE 2.32

**Number of tuberculosis-related deaths among people living with HIV, global, 2004–2018 and 2020 target**




Source: Global tuberculosis report. Geneva: WHO; 2019.

The tuberculosis testing gap among people living with HIV is narrowing (Figure 2.33). However, the 477 461 tuberculosis cases among people living with HIV that were notified in 2018 represented just 56% of the estimated number of incident tuberculosis cases among people living with HIV that year. Among people living with HIV who were notified tuberculosis cases, 86% were accessing antiretroviral therapy in 2018.

Additional information on the integration of HIV and tuberculosis responses, including the provision of preventive treatment for tuberculosis among people living with HIV, can be found in Chapter 5.

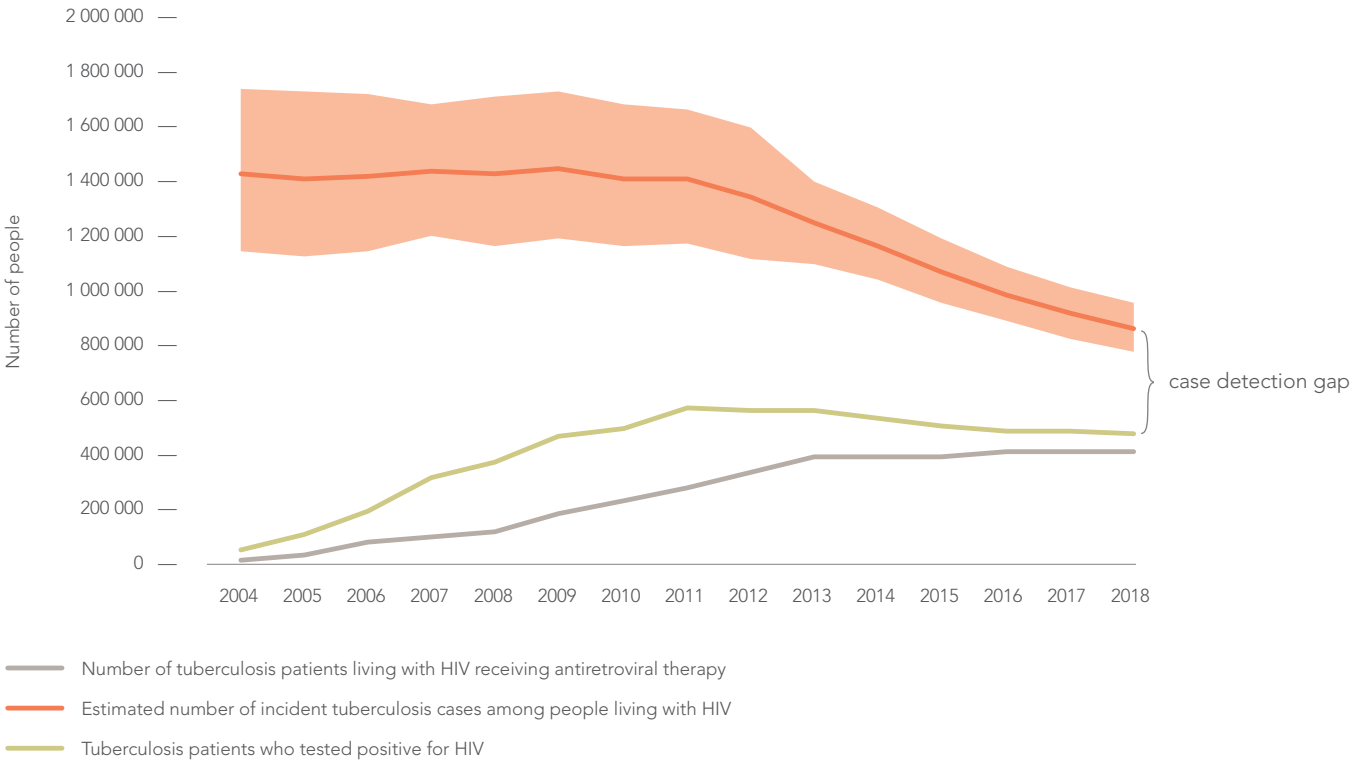
Hepatitis C coinfection with HIV is reported across all key populations at higher risk of HIV, especially among people who inject drugs. This is due to the ease with which both viruses are spread through the sharing of non-sterile drug preparation and injecting equipment (Figure 2.34). Additional information on the integration of HIV and viral hepatitis responses can be found in Chapter 5.

Cervical cancer is the most common cancer among women living with HIV, and the likelihood of a woman living with HIV developing invasive cervical cancer is up to five times greater than for a woman who is not living with HIV *(7)*. Almost all cases of cervical cancer are caused by human papillomavirus (HPV), a common but preventable infection that women living with HIV have a higher risk of acquiring, with the risk increasing when CD4 count is lower *(8)*. Data and analysis on efforts to expand HPV vaccination can be found in Chapter 5.

Most countries with high rates of cervical cancer are in sub-Saharan Africa. Cervical screening programmes are slowly building in high-burden countries, with a total of 11 countries in sub-Saharan Africa reporting having either opportunistic or organized population-based screening programmes for cervical cancer in 2019. The estimated coverage of cervical cancer screening programmes in the 11 countries varies, from less than 10% in Ethiopia, Guinea and Madagascar to 50–70% in Mozambique and South Africa (Table 2.3).

FIGURE 2.33

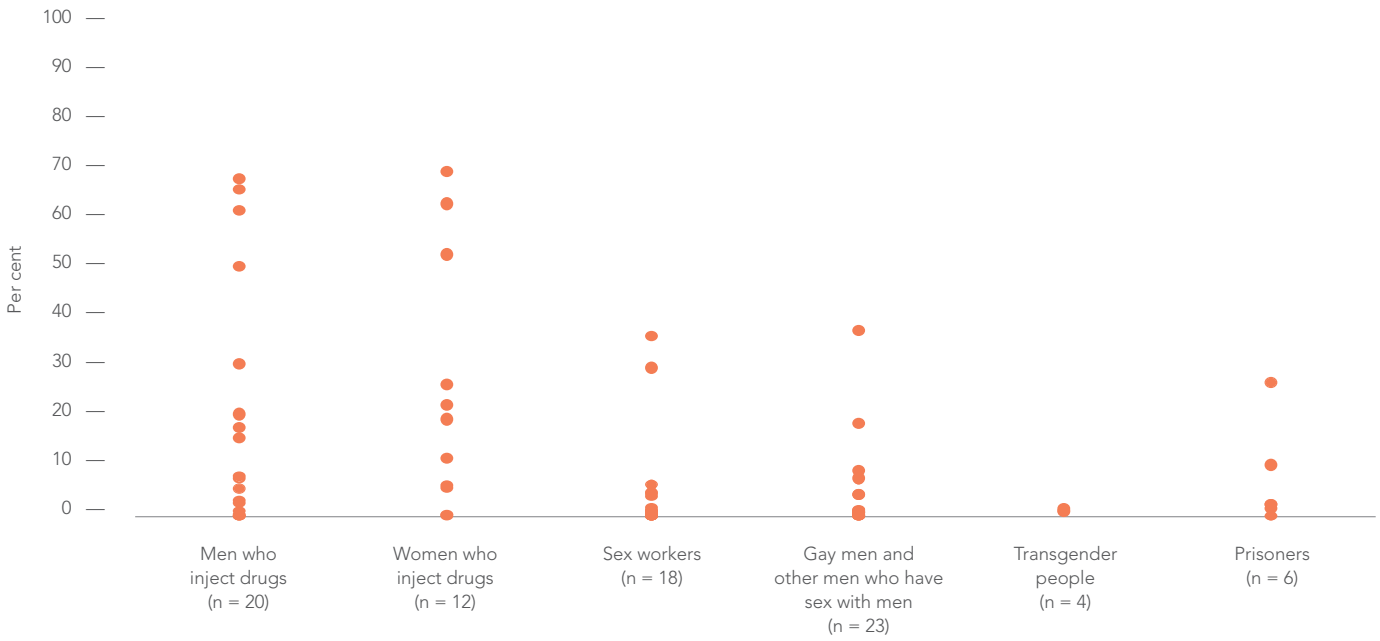
**Number of notified new and relapse tuberculosis cases known to be HIV-positive, number of HIV-positive tuberculosis patients receiving antiretroviral therapy, and estimated number of incident tuberculosis cases among people living with HIV, 2004–2018**




Source: UNAIDS Global AIDS Monitoring, 2019 (see https://aidsinfo.unaids.org/); Global tuberculosis report. Geneva: WHO; 2019.

FIGURE 2.34

## Distribution of coinfection with hepatitis C and HIV, by key population, countries with available data, 2016–2019




Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).

TABLE 2.3

## Sub-Saharan African countries reporting a cervical cancer screening programme, its characteristics and estimated coverage, 2019

| Estimated coverage | Country | Type of screening | Most widely used screening method |
|---|---|---|---|
| 50–70% | Mozambique | Opportunistic screening | Visual inspection[1] |
| | South Africa | Opportunistic screening | PAP smear |
| 10–50% | Burkina Faso | Organized population-based screening | Visual inspection[1] |
| | Côte d'Ivoire | Opportunistic screening | Visual inspection[1] |
| | Djibouti | Organized population-based screening | PAP smear |
| | Kenya | Opportunistic screening | HPV test |
| | Malawi | Organized population-based screening | Visual inspection[1] |
| | Senegal | Opportunistic screening | Visual inspection[1] |
| <10% | Ethiopia | Opportunistic screening | Visual inspection[1] |
| | Guinea | Opportunistic screening | Visual inspection[1] |
| | Madagascar | Opportunistic screening | Visual inspection[1] |

Source: Coverage of national cervical cancer screening program (%). In: The Global Health Observatory [database]. Geneva: WHO; c2020 (https://www.who.int/data/gho/data/indicators/indicator-details/GHO/coverage-of-national-cervical-cancer-screening-program-(-), accessed 2 June 2020).

[1] Visual inspection with acetic acid.

Note on coverage estimation methodology: WHO coverage recommendation is cervical cancer screening for all women over 30 years. Official country response to the WHO NCD Country Capacity Survey. Countries that indicated they had a national cervical cancer screening programme were asked to indicate its coverage: "less than 10%," "10% to 50%," "more than 50% but less than 70%" or "70% or more."

Note on type of screening: Organized screening programmes are preferred to an ad-hoc, opportunistic approach to achieve high screening coverage.

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# 03

# SYNERGIES BETWEEN PANDEMIC RESPONSES

# SYNERGIES BETWEEN PANDEMIC RESPONSES

## DATA POINTS

A SIX-MONTH DISRUPTION IN HIV TREATMENT WOULD CAUSE MORE THAN

**500 000 EXTRA**

DEATHS FROM AIDS-RELATED ILLNESSES IN SUB-SAHARAN AFRICA.

THE GLOBAL FUND TO FIGHT AIDS, TUBERCULOSIS AND MALARIA HAS MADE UP TO

**US$ 1 BILLION**

AVAILABLE TO HELP COUNTRIES FIGHT COVID-19.

**AT LEAST 101 COUNTRIES**

HAVE NATIONAL POLICIES FOR DISPENSING A THREE-MONTH SUPPLY OF MEDICINE FOR PEOPLE WHO ARE STABLE ON ANTIRETROVIRAL THERAPY, AND ANOTHER 14 COUNTRIES DISPENSE A SIX-MONTH SUPPLY FOR STABLE PATIENTS.

IF CURRENT MULTIMONTH DISPENSING POLICIES ARE FULLY IMPLEMENTED, AN

**ESTIMATED 28%**

REDUCTION IN CLINIC VISITS COULD BE ACHIEVED.

The COVID-19 pandemic is affecting the lives and livelihoods of people everywhere, but the impact is especially severe among people who are socioeconomically disadvantaged and marginalized, and among people with underlying medical conditions *(1, 2)*. As the coronavirus spreads in countries in sub-Saharan Africa with high HIV prevalence, there is evidence that people living with HIV and people with active tuberculosis are both at higher risk of COVID-related morbidity and mortality *(3)*.

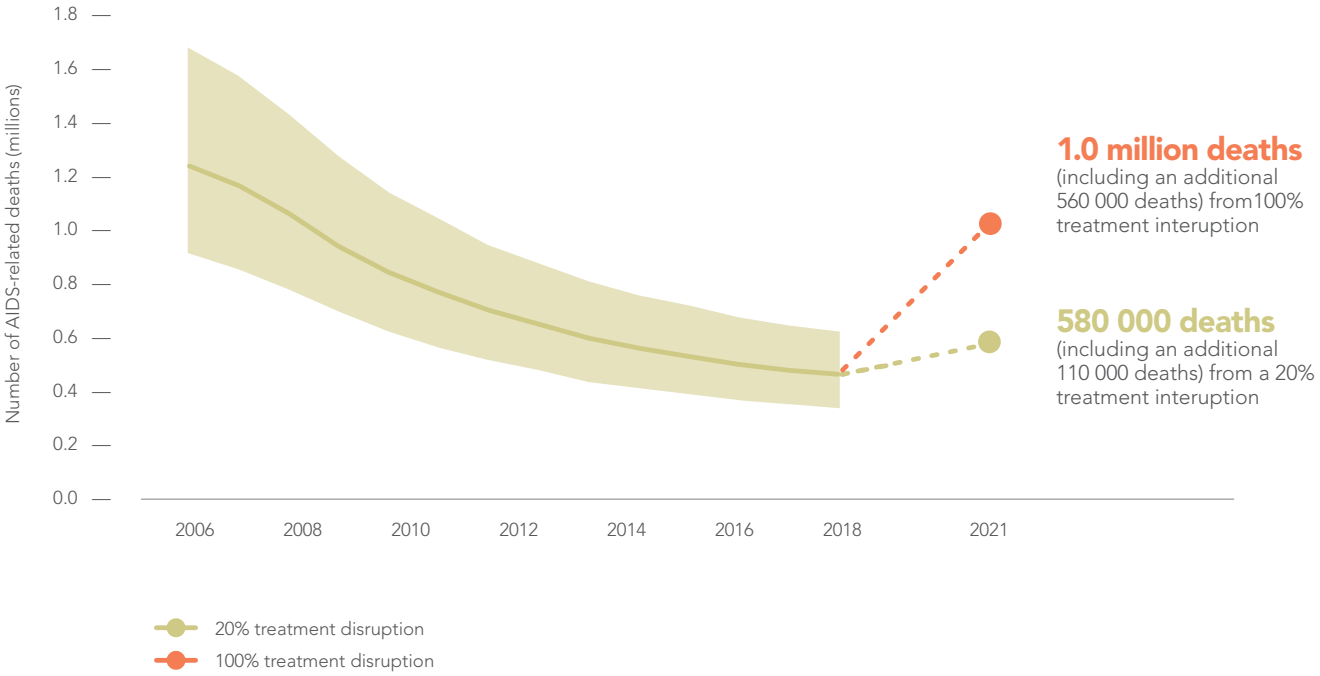
People living with HIV and people at higher risk of HIV infection are also facing life-threatening disruptions to health and HIV services as COVID-19 cases overwhelm health system capacities and lockdowns limit movement and strain economies. Voluntary medical male circumcision, condom production and distribution, pre-exposure prophylaxis (PrEP), HIV testing and treatment, and other programmes have all been negatively affected.

Recent modelling has estimated that a six-month disruption of antiretroviral therapy could lead to more than 500 000 [471 000–673 000] additional deaths from AIDS-related illnesses (including tuberculosis) in sub-Saharan Africa in 2020–2021 (Figure 3.1) *(4)*. If services to prevent mother-to-child HIV transmission were similarly halted for six months, the estimated increases in new child infections would more than double in Malawi, Uganda and Zimbabwe, and increase by 83% in Mozambique *(5)*.

AS COUNTRIES MOBILIZE AGAINST COVID-19 THEY ARE TAPPING INTO EXPERIENCE AND INVESTMENTS FROM THE HIV RESPONSE, LEVERAGING SYSTEMS AND APPLYING LESSONS LEARNED—LESSONS THAT STRESS THE IMPORTANCE OF POLITICAL LEADERSHIP, COMMUNITY ENGAGEMENT, RIGHTS-BASED AND MULTISECTORAL APPROACHES, AND GUIDING ACTIONS WITH EVIDENCE.

FIGURE 3.1

**The impact of six months of varying levels of treatment interruption on AIDS-related deaths, sub-Saharan Africa, 2020–2021**




Sources: UNAIDS epidemiological estimates, 2019. Projected estimated AIDS-related deaths and child new HIV infections were derived from mathematical modelling by five research groups exploring disruptions of HIV prevention and treatment services over periods of three and six months and their effect on HIV mortality and incidence in sub-Saharan Africa. For the 100% disruption: pre-print manuscript available at: Jewell B, Mudimu E, Stover J, Kelly SL, Phillips A, Smith JA et al. for the HIV Modelling Consortium. Potential effects of disruption to HIV programmes in sub-Saharan Africa caused by COVID-19: results from multiple models. Manuscript before publication. https://doi.org/10.6084/m9.figshare.12279914.v1. The 20% disruption projection was produced by Britta L Jewell; Department of Infectious Disease Epidemiology, Imperial College London; Edinah Mudimu, Department of Decision Sciences, University of South Africa; John Stover Avenir Health; Debra ten Brink, Burnet Institute; Andrew N Phillips, Institute for Global Health, University College London; 25 June 2020.

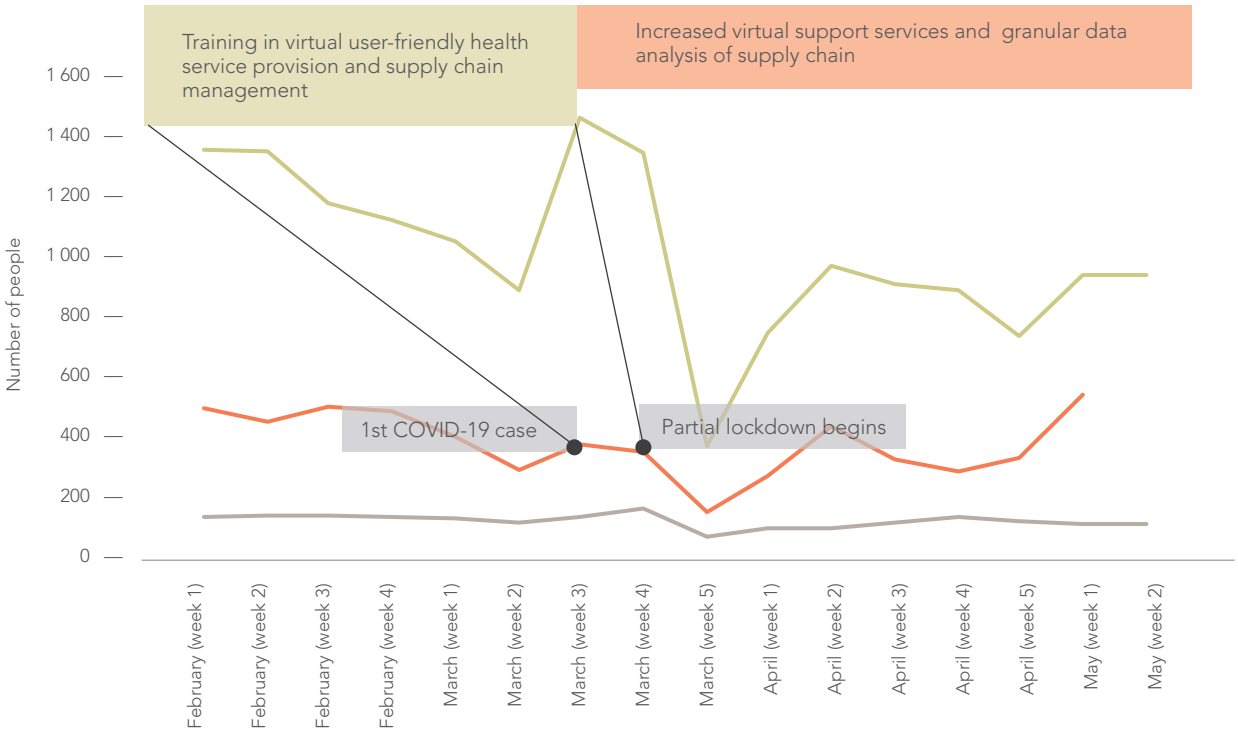
A six-month total disruption in these services is an extreme scenario, but HIV service disruptions caused by lockdowns and the huge additional burden that COVID-19 has placed on health systems are very real. In the weeks prior to a partial lockdown in Zambia, for instance, a project funded by the United States President's Emergency Plan for AIDS Relief (PEPFAR) that is providing antiretroviral therapy to almost 46 000 people living with HIV near military installations took special measures aimed at maintaining HIV testing and treatment services *(6)*. This included strengthening the clinics' patient communications approaches and safeguarding the logistics and supply chains for HIV medicines and test kits. As the partial lockdown began, the project nonetheless experienced steep drops in the number of HIV diagnoses, the number of people starting HIV treatment and the number of people living with HIV who were receiving their medications (Figure 3.2). The adjustments made before and during lockdown ultimately paid off, and services rebounded within a few weeks. However, they did not quite reach pre-crisis levels *(6)*.

Similar scenarios playing out across countries and regions could see the global HIV response fall further behind on its 2020 commitments. For instance, if the COVID-19 pandemic interrupts antiretroviral therapy for 20% of people living with HIV for six months, it would result in more than 110 000 additional AIDS-related deaths *(7)*.

HIV and other critical health services must be maintained as communities, cities and countries respond to this new pandemic. Countries around the world are accelerating HIV response innovations to minimize disruptions. At the same time, they are tapping into experience and investments from the HIV response, leveraging systems and applying lessons learned—lessons that stress the importance of political leadership, community engagement, rights-based and multisectoral approaches, and guiding actions with evidence.

FIGURE 3.2

**HIV testing and treatment services during COVID-19-related lockdown, Zambia Defence Forces Prevention, Care and Treatment project, February to May 2020**




Source: US/DHAPP Zambia Defense Forces Prevention, Care and Treatment (ZDFPCT) project, led by FHI 360, May 2020
Note: Population is from the military base catchment area

## Leveraging HIV leadership and lessons against a new pandemic threat

As countries grapple with a growing COVID-19 pandemic, the leadership, resources and infrastructure of HIV responses are being mobilized to meet the challenge. Veterans of national HIV responses have emerged as COVID-19 response coordinators in dozens of countries. In South Africa, a global leader in HIV prevention research is heading the medical advisory committee for the COVID-19 response, while the director of the national AIDS coordinating body is helping to coordinate the response *(8)*. In the United States of America, key leaders of the national COVID-19 response include the head of the PEPFAR programme and the director of the United States government agency that drove development of antiretroviral therapy. National AIDS directors or coordinators in countries such as Angola, Brazil, China, the Democratic Republic of the Congo, Ethiopia, Guatemala, Guinea, the Islamic Republic of Iran, Kenya, Malawi, Mexico, Nigeria, Viet Nam and Zambia are serving as members of national planning and decision-making bodies for national COVID-19 responses *(8)*.

International HIV partnerships have also been mobilized against COVID-19. The International AIDS Society, convener of the largest HIV-related international scientific conferences for nearly 40 years, is hosting a virtual international COVID-19 conference to share the latest scientific findings on the pandemic at this critical, early moment in the response. Unitaid, a multilateral, market-shaping organization created by five national governments

in response to the global HIV epidemic, is actively engaged in international efforts to ensure ready access to COVID-19 vaccines, diagnostics and treatments. The Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) has made up to US$ 1 billion available to help countries fight COVID-19.

### *Community leadership and engagement*

The leadership and engagement of communities remain central features of the HIV response. Local, national, regional and international community organizations contributing to HIV responses have quickly brought their energy and experience to the COVID-19 response. Civil society groups are leading efforts to ensure that COVID responses are rights-based and gender-sensitive, and that they do not prejudice marginalized communities, such as lesbian, gay, bisexual, transgender and intersex (LGBTI) people (see Chapter 3 for details). Communities are also stepping forward to lead local COVID-19 responses, challenging misinformation and stigmatization, delivering essential supplies to the vulnerable and organizing local support systems *(9)*.

By empowering and partnering with communities, responses can achieve a reach, impact and equity that government facilities could never realize on their own. According to a recent survey of 160 civil society organizations by the Civil Society Institute for HIV and Health West and Central Africa, a majority (72%) of HIV-focused organizations are already working to raise COVID-19 awareness in the general population, even though little or no funding has been made available for their efforts. In New York City, the HIV nongovernmental organization Housing Works, which helped pioneer a model of people-centred, supportive housing for homeless people living with HIV, opened two shelters specifically for homeless people who have tested positive for COVID-19 *(10)*. In Burkina Faso, community-based HIV organizations are engaged in the COVID-19 response, using differentiated approaches to mobilize communities, follow contacts of people with confirmed COVID-19 diagnoses and re-engage individuals who have been lost to follow-up *(8)*.

### *Laboratory and strategic information systems*

The expertise, analytical capacity, and surveillance and monitoring systems developed through HIV funding have great potential to support COVID-19 responses. Indeed, this is already occurring in some countries, such as Argentina, where the national HIV programme's coordinator of monitoring and research has been assigned to the country's COVID-19 epidemiology committee.

COVID-19 responses are also immediately benefiting from laboratory systems that have been vastly expanded and improved as a result of HIV investments. For example, GeneXpert machines procured through HIV and tuberculosis programmes are being mobilized for COVID-19 testing. In 2018, PEPFAR provided US$ 141 million in support to laboratory systems in HIV-affected countries, primarily in sub-Saharan Africa *(11)*. The World Health Organization (WHO) has established three consortia to address global market shortages in critical supplies required for the global COVID-19 response, especially in low- and middle-income countries with severely limited resources *(12)*. The African Union and the Africa Centres for Disease Control and Prevention's new PACT (Partnership to Accelerate COVID-19 Testing in Africa) is working with UNAIDS to leverage the community links and sentinel surveillance sites of the HIV response to support diagnosis and contract tracing for COVID-19 on the continent *(13)*.

## Adapting HIV services during the COVID-19 pandemic

Amid the upheaval associated with the COVID-19 pandemic, people-centred approaches pioneered by HIV programmes are demonstrating their ability to reach people with services, and they are being adopted more widely.

HIV service delivery models that emphasize client autonomy and self-care—and that minimize physical contact with health facilities—are critical during a time when health facilities need to manage the influx of COVID-19 patients, while at the same time maintaining vital health services without putting other clients at risk of COVID-19 infection.

HIV self-testing, which empowers people to choose for themselves the circumstances in which they take an HIV test, has the advantage of decongesting health facilities and increasing access to HIV testing to populations at higher risk of HIV infection. Burundi, Eswatini, Guatemala and Myanmar are among the countries that have reported expanding HIV self-testing during the COVID-19 pandemic *(8)*.

In Poland, mandatory stay-at-home orders grounded efforts to expand HIV testing, and all voluntary counselling and testing sites in the country were closed in April 2020. Project Test, part of a nationwide preventive campaign by the Foundation for Social Education, reacted by adding a new service—HIV counselling by phone, followed by mail delivery of a free-of-charge HIV testing kit *(14)*. The new service garnered media attention and public interest, and during six weeks of the lockdown, the Foundation distributed 600 tests, more than half of which were ordered by women. This represented a big change from normal voluntary counselling, where women in Poland account for only one in six HIV tests *(14)*. Fifty-three per cent of mail order HIV self-testing clients were also first-time testers *(14)*. The Foundation has decided to continue the service after the end of the lockdown.

FIGURE 3.3

**HIV testing during the COVID-19 outbreak and the increased role of community antiretroviral management teams, Cross River State, Nigeria, October 2019 to April 2020**


Source: USAID/PEPFAR Strengthening Integrated Delivery of HIV/AIDS Services (SIDHAS) project, led by FHI 360, May 2020

Community-based services are also growing in importance. In Nigeria's Cross River State, for example, improved HIV case-finding methods were introduced shortly before the COVID-19 pandemic reached the country. Community treatment management teams—composed of a clinician, pharmacist, lab scientist, and case managers and data entry clerks—were put in place in early 2020. Strategies used by the teams include index testing, geographic mapping of hotspots and targeted testing in areas of the community with a potentially high number of recent HIV infections. During daily reviews, high-performing teams share the strategies that gave them better results, and poor performing teams share the challenges they experienced and get real-time guidance *(15)*.

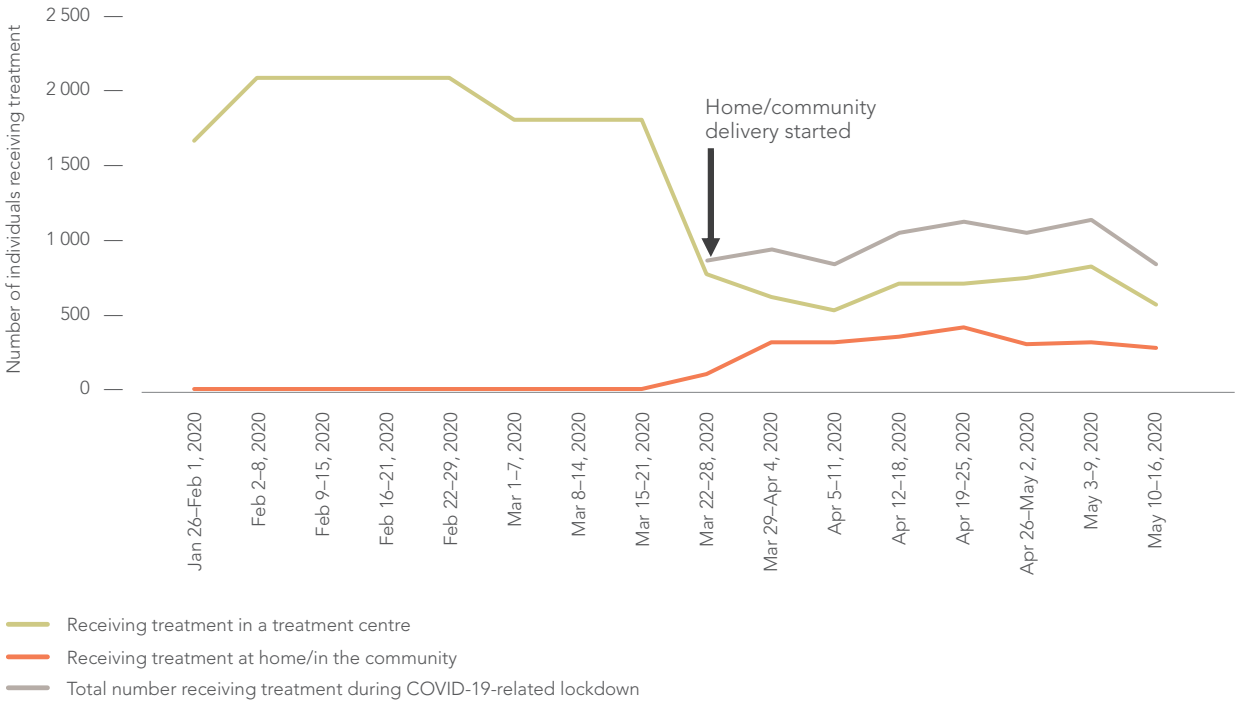
In their first month of operations, these teams were involved in 41% of HIV diagnoses recorded at PEPFAR-supported treatment sites. This rose to 71% of HIV diagnoses in February 2020 and a near doubling of total diagnoses since December 2019. As the COVID-19 pandemic advanced and lockdown measures were put in place, the teams' share of HIV diagnoses rose to 92% within an overall reduction in case-finding (Figure 3.3) *(15)*.

A community pharmacy model has also been introduced in Nigeria. About 15 000 people living with HIV are collecting their antiretroviral medicines at 320 pharmacies that have enrolled in the project. When appropriate, the pharmacies also refer clients to hub facilities for clinical assessment or viral load tests. The project has achieved an 88% retention rate and reduced attendance at nearby hospitals by up to half *(8)*.

The adaptation and broadening of differentiated, community-based HIV services in the face of challenges related to COVID-19 has also been achieved in Sierra Leone. The West African country's emergency preparedness plan for COVID-19 uses networks of service providers, community health workers and peer supporters to maintain HIV services, limit the burden on clinics and hospitals, and reduce exposure to the new coronavirus *(16)*. A special service package was developed that provides for the home delivery of multimonth supplies of medicines,

FIGURE 3.4

**Weekly trend in antiretroviral treatment distribution to people living with HIV and served by the LINKAGES project, Nepal, January to May 2020**




Source: LINKAGES Nepal project. Data provided by Rose Wilcher via email, 25 May 2020.

fast-tracked pick-up at health facilities, and home collection of blood samples for viral load testing and early infant diagnosis. Treatment adherence counselling is done by telephone. Volunteers from communities of people living with HIV are also supporting district health management teams to deliver antiretroviral medicines and provide tuberculosis, malaria and nutrition services *(16)*.

Home deliveries of HIV self-test kits, antiretroviral medicines and other essential medications during the COVID-19 lockdowns have also become increasingly common in other regions. In remote communities in the Republic of Moldova, for example, nongovernmental organizations have been delivering antiretroviral medicines to the homes of about 800 people living with HIV and 100 people who are using PrEP *(17)*.

In Nepal, the USAID- and PEPFAR-supported LINKAGES project arranged with local hospitals, community organizations and people living with HIV for antiretroviral medicines to be delivered directly to homes or collected at local drop-off points. By mid-April 2020, as lockdown measures greatly reduced the number of people living with HIV visiting the antiretroviral therapy centre, an average of more than 30% of people served by the project were receiving home deliveries of their medicines (Figure 3.4). Multimonth dispensing of antiretrovirals contributed to an overall drop in the number of medicine pick-ups *(18)*.

Lockdowns and physical distancing requirements have also forced a shift from in-person activities to virtual ones. Countries in sub-Saharan Africa, Asia and the Pacific, and the Caribbean have shifted community-based peer support services to social media and messenger apps *(8)*.[1] In Nepal, for example, treatment adherence support and case management moved online after the lockdown, with peer navigators using phone calls and social media to contact individuals. By May 2020, more than 1100 people living with HIV in Nepal were receiving treatment adherence support via LINKAGES-supported social media apps. Social media platforms also are being used in the country to provide information about COVID-19, perform risk assessments, and arrange consultations and referrals *(18)*.

1 Including in Botswana, Cambodia, Côte d'Ivoire, Eswatini, India, Jamaica, Kenya, Mali, Nepal and Thailand.

## CAMBODIAN PEER COUNSELLORS HELP MAINTAIN HIV TREATMENT DURING THE COVID-19 CRISIS

The chairs in the HIV clinic waiting room at the Khmer–Soviet Friendship Hospital in the Cambodian capital, Phnom Penh, have been carefully placed a few metres apart from each other. The patients sitting in them wear face masks to prevent the spread of COVID-19. Behind a small reception desk are a group of women living with HIV who are part of the clinic's essential staff—members of the Antiretroviral Users Association (AUA) who provide counselling, treatment literacy and support to people living with HIV.

Theary So is an AUA counsellor who has been living with HIV for 15 years. "I provide counselling services every day," she says. "I did not stop coming to work even though I am scared that I might get infected with COVID-19."

The Khmer–Soviet Friendship Hospital was the first HIV treatment site in Cambodia. Many years later, it is serving as the national COVID-19 centre, the country's flagship facility fighting the new pandemic. Theary's family worries about her continuing to work during the COVID-19 pandemic, but she soldiers on. "They all tell me to stop working in the antiretroviral therapy clinic. My children beg me to come home early."

She takes precautions—including the use of face masks, gloves and alcohol sanitizer—to ensure she neither acquires nor transmits the new coronavirus to her patients, her family and her neighbours. That level of vigilance has helped Cambodia largely contain the spread of COVID-19: in early June 2020, there were 126 confirmed cases in the country and zero deaths.

CHAMPION PROFILE

*Theary So provides group counselling on treatment adherence to people living with HIV at the Khmer–Soviet Friendship Hospital in Phnom Penh, Cambodia.*
*© UNAIDS Cambodia/2020/de la Guardia*

## Turning a crisis into an opportunity for multimonth dispensing of HIV medicines

Crises are accelerators of innovation, and the COVID-19 crisis has accelerated a multitude of innovations as individuals, families, organizations and societies adapt to the new realities of physical distancing and lockdown. HIV responses at the community, country and global level are no exception: more and more countries are shifting to multimonth prescription and dispensing of antiretroviral drugs so that people living with HIV are assured of uninterrupted supplies of their medications during the COVID-19 pandemic.

People-centred and differentiated approaches such as multimonth dispensing put people in charge of their HIV treatment, make health systems more adaptable and responsive, reduce the strain on standard health facilities, and free up those resources for other priorities. Multimonth dispensing does away with a patient's need for frequent, costly and time-consuming clinic visits that are strictly to collect antiretroviral medications. It also reduces the workload of health-care facilities, and in the context of the COVID-19 crisis, it reduces the chances of acquiring the new coronavirus for both health-care workers and patients.

Early adopters of multimonth dispensing have been better placed to avoid serious disruptions to their HIV treatment services during the COVID-19 pandemic. Zimbabwe introduced a multimonth dispensing policy in 2017, and by early 2020, 80% of people on HIV treatment were receiving three-month supplies of antiretroviral medicines, thus reducing their need for routine clinic visits *(8, 19)*. A rapid needs assessment survey among people living with HIV on treatment that was conducted just after the start of the lockdown by UNAIDS, the Zimbabwe National Network of People Living with HIV and the National AIDS Council found relatively high proportions of people living with HIV who had at least three months of stock of their medicines, and that 74% of respondents had more than one month of stock *(8)*. Importantly, Zimbabwe built a solid buffer against antiretroviral medicines stock-outs by maintaining at least eight months of stock for first-line antiretroviral medicines.

WHO first recommended multimonth dispensing in 2016 as part of differentiated service delivery and decentralization. Many countries have since adopted multimonth dispensing policies: among 101 countries that reported data to WHO in early 2020, 63 had national policies for three-month prescription and dispensing of antiretroviral medicines, and another 14 countries had policies allowing for the dispensing of a six-month supply for stable patients (Figure 3.5).

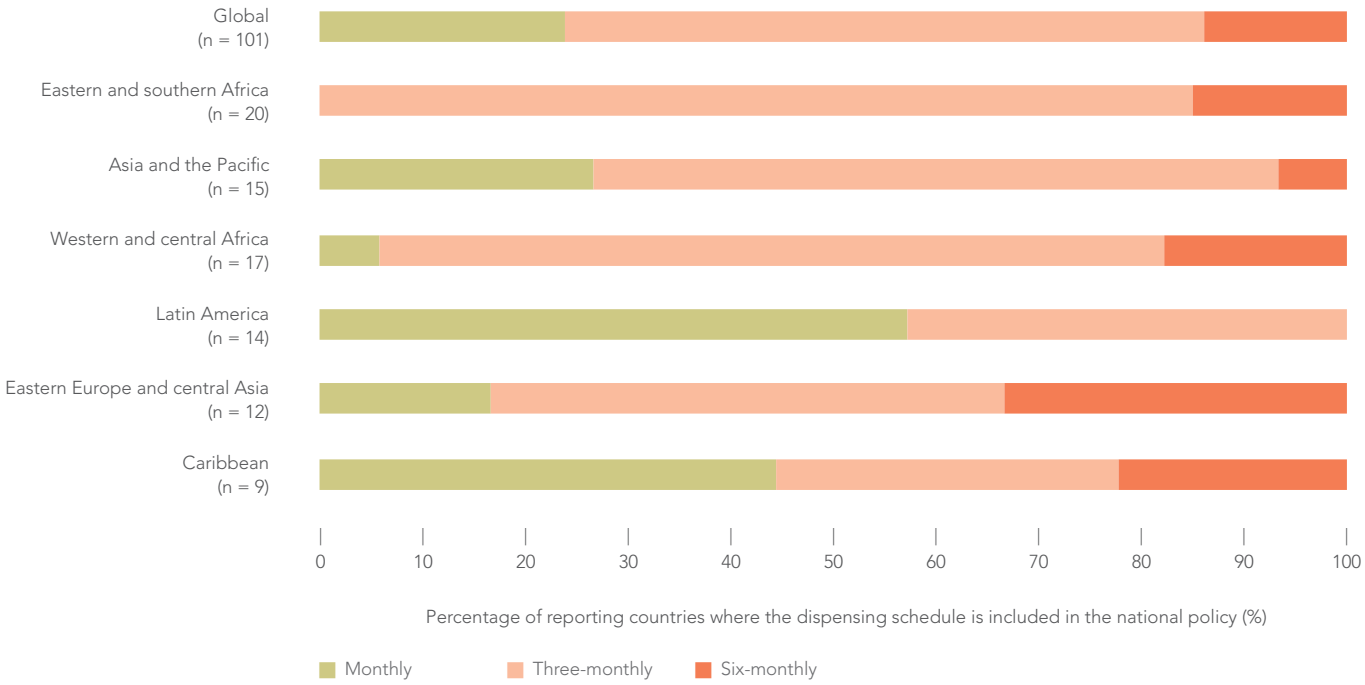
However, implementation of multimonth dispensing has lagged behind the passage of policies, often due to challenges in adapting procurement and supply chain management systems. Reports from UNAIDS country offices suggest that many people living with HIV in eastern and southern Africa receive only one or two months worth of supplies, despite the existence of three- or six-month policies *(8)*. The prospect of overwhelmed health facilities due to the COVID-19 pandemic has compelled many countries to accelerate the implementation of their multimonth dispensing policies *(8)*.

Malawi has had a six-month dispensing policy since early 2019 for specified categories of people receiving antiretroviral therapy. It relaxed those eligibility criteria in April 2020 as part of its COVID-19 response, and by early June 2020, the majority of people on HIV treatment in Malawi were eligible for six-month prescriptions, while pregnant and lactating women were receiving three-month prescriptions *(8)*. Zambia also stuck with an existing multimonth dispensing policy, which calls for six-month prescriptions for adults who are stable on treatment and three-month prescriptions for those who require additional assistance. Adherence counseling is also being provided by telephone or text messaging, a practice that is being widely adopted in other countries.

In Thailand, dispensing for three to six months of antiretroviral medicines was added to national treatment guidelines in 2017 as part of differentiated care services for HIV treatment. Among participating hospitals that provide antiretroviral therapy to 70% of all Thais living with HIV through the health insurance coverage of the National Health Security Office (NHSO), adoption of multimonth dispensing was initially slow. The COVID-19 pandemic, however, has accelerated

FIGURE 3.5

**Distribution of countries by national policy on the dispensing schedule of antiretroviral medicine refills, and proportion of the global number of people on treatment, by region, 2019**




Source: 2020 WHO Policy Data
Note: For each country, the maximum possible monthly dispensing schedule is reported.
Note: The western and central Europe and North America region is not included. The region accounts for 7% of the global total of people on HIV treatment.
Note: The Middle East and North Africa region is not included. The region accounts for <0.5% of the global total of people on HIV treatment.

multimonth dispensing to stable antiretroviral therapy patients. The postal service is being used to mail medications to patients both within and outside of Thailand, and people living with HIV are acting as volunteer outreach workers, supporting hospitals by bringing antiretroviral medicines closer to the homes of patients.

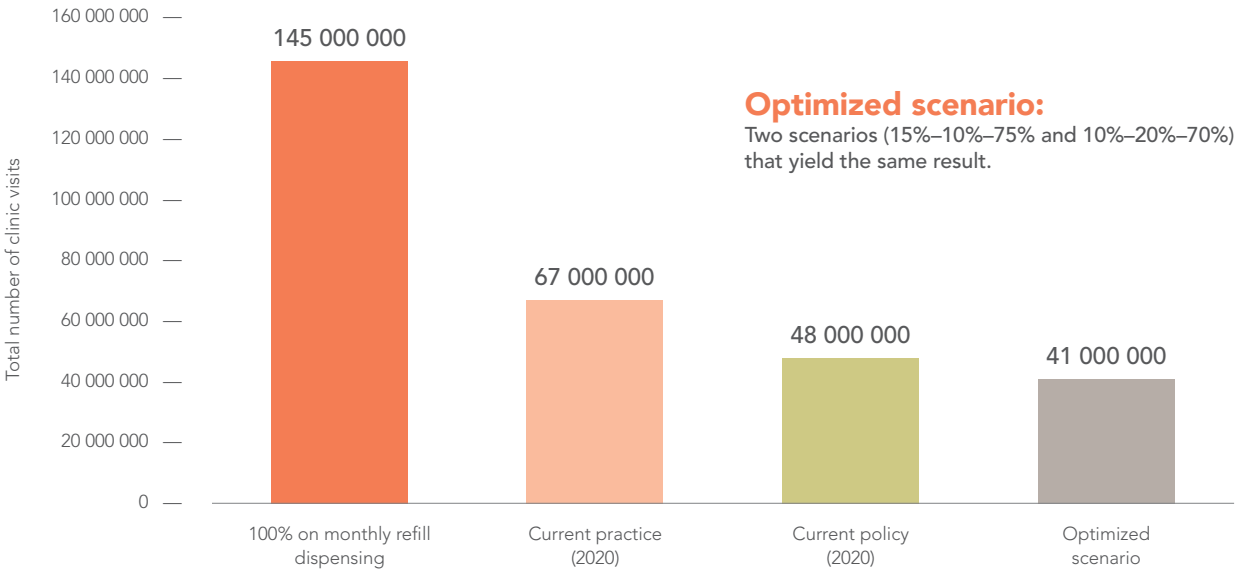
These efforts are having an impact. A May 2020 study conducted in 30 Thai hospitals found that over a 12-week period, 85% of stable patients benefited from multimonth dispensing *(20)*. National coverage of multimonth dispensing increased to 40% of all people living with HIV who are on treatment, and planning is underway to expand it through Thailand's universal health coverage scheme in order to allow the prescription of a six-month supply of antiretroviral medicines for all eligible people living with HIV *(21, 22)*.

Viet Nam has sped up the countrywide implementation of multimonth dispensing for all HIV-related drugs, including antiretroviral medicines and those for the prevention and treatment of tuberculosis and other opportunistic infections. As of May 2020, about 30% of people on HIV treatment were receiving a three-month supply of medicines through multimonth dispensing, up from 10% in January 2020 *(8)*.

Belarus, the Dominican Republic, Ethiopia, Mozambique, Papua New Guinea and South Africa are among the countries that have at least temporarily adopted more liberal dispensing policies for people who are stable on HIV treatment (8). For instance, as South Africa's health system worked to decongest health facilities in the face of rapidly rising COVID-19 cases, the Department of Health's Central Chronic Medicines Dispensing and Distribution programme decided in late May 2020 to provide automatic six- and 12-month extensions of antiretroviral medicine prescriptions, with the timeframe of the extension depending on the date of the prescription. This policy change,

FIGURE 3.6

**Comparison of different antiretroviral dispensing policies on the total number of visits to a health facility for people on HIV treatment, selected countries, 2020**




**Current practice:** The number of visits, as per current dispensing practice.
**Current policy:** The number of visits that would be possible if dispensing practice was fully coherent with policy.
**Optimized scenario:** The number of visits in a hypothetical scenario of 15% of people on treatment with one-month refills, 10% with three-month refills and 75% with six-month refills. This number of visits was the same as a scenario where 10% of people on treatment have one-month refills, 20% have three-month refills and 70% have six-month refills.
**100% on monthly refill dispensing:** The number of visits if all people living with HIV and on treatment attended a health-care facility monthly for refills. This was the intitial policy in 2016.

Note: The analysis is from 46 low- and middle-income countries, based on the estimated number of people receiving HIV treatment in 2019. This represents more than 40% of the global total of people on HIV treatment.
Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); UNAIDS special analysis, 2020 (see methods annex).

which includes alternative options for picking-up medications, expires in April 2021 *(23)*.

UNAIDS analysis of treatment data from 46 countries shows how implementation of multimonth dispensing policies has already more than halved the number of clinic visits, saving both time and money for health systems and people living with HIV *(8)*. If current multimonth dispensing policies were fully implemented, an additional 28% reduction in clinic visits could be achieved, and an optimized scenario where 70% of people living with HIV on treatment in those countries are provided with a six-month supply of antiretroviral medicines would result in 26 million fewer antiretroviral medicine-related health facility visits per year, a 39% reduction (Figure3.6) *(8)*.

UNAIDS has advised countries with sufficient stocks of antiretroviral medicines to switch to or extend multimonth dispensing, and to implement the necessary support services and systems (e.g., telephone or online adherence support and advice). In the context of the COVID-19 pandemic, multimonth dispensing should also be considered for other treatment programmes, including those for tuberculosis, viral hepatitis and various noncommunicable diseases, and for substitution therapy for opioid drug dependence. In Lesotho, for instance, tuberculosis patients can now receive three-month supplies of tuberculosis treatment.

## Avoiding antiretroviral medicine stock-outs during the COVID-19 pandemic

As COVID-19 lockdowns took effect across the world in March 2020, concerns grew about possible disruptions to procurement, supply and distribution chains for antiretroviral medicines and other essential health commodities.

All forms of freight transport have slowed during the pandemic, and the shutting of international (and, in some cases, internal) borders have added to the delays. This is affecting the sourcing of raw materials for medicines and the procurement and distribution of finished products. In addition, the concentration of generic antiretroviral medicine production in one country (India, which accounts for approximately 80% of the production) renders the supply chain vulnerable to production slowdowns or shutdowns *(24)*.

UNAIDS, the Global Fund, PEPFAR and other partners have been working with countries to avoid stock-outs. When the COVID-19 pandemic began spreading across Latin America and the Caribbean, country surveys conducted by UNAIDS and the Pan American Health Organization (PAHO) revealed possible shortages of antiretroviral medicines *(8)*. In response, loans and donations of medicines were coordinated between countries (for example, from Brazil to Panama, Haiti to El Salvador, and Paraguay to Honduras), and Global Fund resources were reallocated in some countries to procure additional stocks (e.g., Cuba) *(8)*. These coordinated actions help to avoid serious disruptions of HIV treatment.

Similarly, when lockdowns and flight suspensions in India and Nepal affected a consignment of antiretroviral medicines destined for Nepal, the LINKAGES project and PEPFAR identified alternative suppliers and transport options. The new stocks arrived a day before the original supplies ran out, thus avoiding supply disruptions for 18 000 people receiving antiretroviral therapy in Nepal *(25)*.

Governments, donors and suppliers can prevent stock-outs by closely monitoring production and stock levels of antiretroviral medicines to identify possible risks, and by communicating their findings and concerns with each other and with their supporting partners, improving forecasting and strengthening procurement and supply chain management systems.

# IRANIAN MOBILE HARM REDUCTION FACILITIES JOIN THE FIGHT AGAINST COVID-19

The Islamic Republic of Iran was hit early and hard by the new coronavirus. As the country mobilized its health system against the emerging COVID-19 pandemic, the experience and infrastructure of other communicable disease programmes played an important role, including mobile facilities normally used to provide services to people at higher risk of HIV infection.
The successful 2015 piloting of a mobile HIV testing programme called the AIDS Bus had been expanded in 2017 with UNAIDS support to provide vulnerable women with a comprehensive package of HIV, STI, and other sexual and reproductive health services *(26)*. In 2018, the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) and the United Nations Development Programme (UNDP) supported the Islamic Republic of Iran's Welfare Organization to establish 17 additional mobile units—including minibuses, vans and mobile stations—that also provide harm reduction services to people who inject drugs *(27)*.

As COVID-19 cases increased in early 2020 and the country went into lockdown, the Welfare Organization and UNDP teamed up to use the mobile units to help prevent the further spread of the new coronavirus. Staff were trained on COVID-19 preventive measures, and the mobile units were adapted and equipped with personal protective equipment, including masks, gloves, hand sanitizers, soap and alcohol pads *(28)*.

The units were then dispatched to hotspots around the country, where they have been distributing COVID-19 education material, personal protective equipment and food packages to vulnerable women and people who inject drugs. They also conduct coronavirus screening and referred suspected cases of infection to medical centres.

The mobile units are operating in 11 provinces: Alborz, Bushehr, East Azerbaijan, Hormozgãn, Kerman, Kermanshah, Khorasan Razavi, Khuzestan, Lorestan, Tehran and West Azerbaijan.

There are plans to expand the programme to a total of 52 mobile units, which are expected to play a key role in the country's efforts to end the HIV epidemic by 2030, to strengthen the resilience of its health system and to achieve universal health coverage *(29)*.


*Mobile HIV and harm reduction units provide COVID-19 information and personal and protective equipment to people at high risk of HIV infection in the Islamic Republic of Iran.*

## Adapting services for key populations during the COVID-19 pandemic

Key populations at higher risk of HIV infection already face a litany of challenges, and COVID-19 lockdowns have left them even more vulnerable than usual. Fears of contracting the novel coronavirus are compounded by the equally real danger of being exposed to aggressive enforcement of the lockdowns. There have been reports of sex workers and gay men and other men who have sex with men being scapegoated or harassed in Cameroon, Kenya, the Philippines, South Korea, Uganda and elsewhere *(30)*. These challenges are creating even greater barriers to services for HIV and other health needs.

Many have also lost their livelihoods. For example, when Thailand shut 23 000 entertainment venues as part of its lockdown, tens of thousands of sex workers were instantly left unemployed and without a source of income *(31)*. A rapid community-led assessment managed by the Service Workers in Groups (SWING), a Thai sex worker-led organization, showed many sex workers were unable to cover the cost of daily expenses, housing and medicine *(32)*. Community-based organizations, the Department of Disease Control, the Global Fund and United Nations agencies partnered to provide a support package for sex workers, including food, personal hygiene items, and COVID-19 and HIV prevention commodities (masks, hand sanitizers, condoms and lubricants) *(8)*.

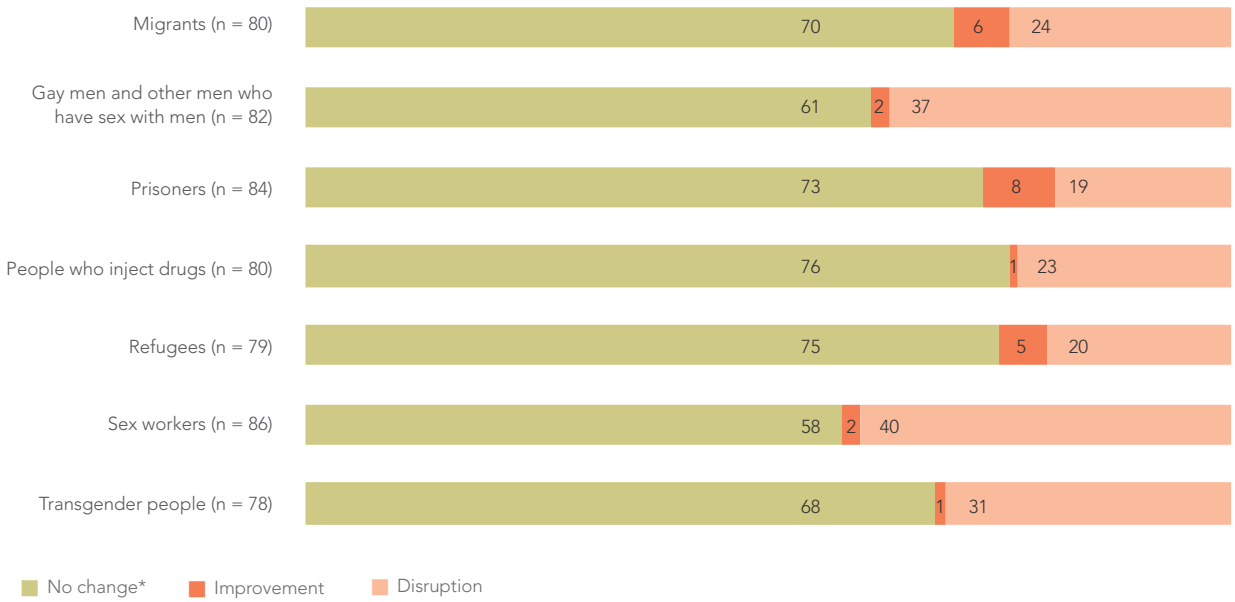
By June 2020, many UNAIDS country offices had reported that access to HIV services, commodities and harm reduction services had been disrupted (Figure 3.7). In more than two dozen countries, some HIV facilities were either shut, only open for limited hours or had been converted into sites for COVID-19 services *(8)*.

Uptake of HIV services has dropped in some places. In the United Kingdom of Great Britain and Northern Ireland, for example, a major sexual health clinic in London that mainly serves gay men and other men who have sex with men issued 80% fewer prescriptions (28 versus 161) for post-exposure prophylaxis (PEP) during the first four weeks of the lockdown, compared with a similar period prior to the lockdown *(33)*.

Health service providers and community organizations have responded by changing the ways they provide key population-focused HIV services and support. In Côte d'Ivoire, Indonesia,

FIGURE 3.7

**Disruptions of HIV services for key and other priority populations under COVID-19 lockdown, March to June 2020**




* No change, including for instances where no specific services existed before the COVID-19 epidemic.
Source: Data reported by UNAIDS country offices through the UNAIDS data portal.

Kenya, Nepal and elsewhere, health-care providers, community health workers or peer supporters are delivering antiretroviral and tuberculosis medicines and HIV self-testing kits to people's homes, or they are arranging for collection at community pharmacies or local drop-in centres. These methods are also relieving pressure on congested health facilities and helping people to avoid acquiring COVID-19 during facility visits.

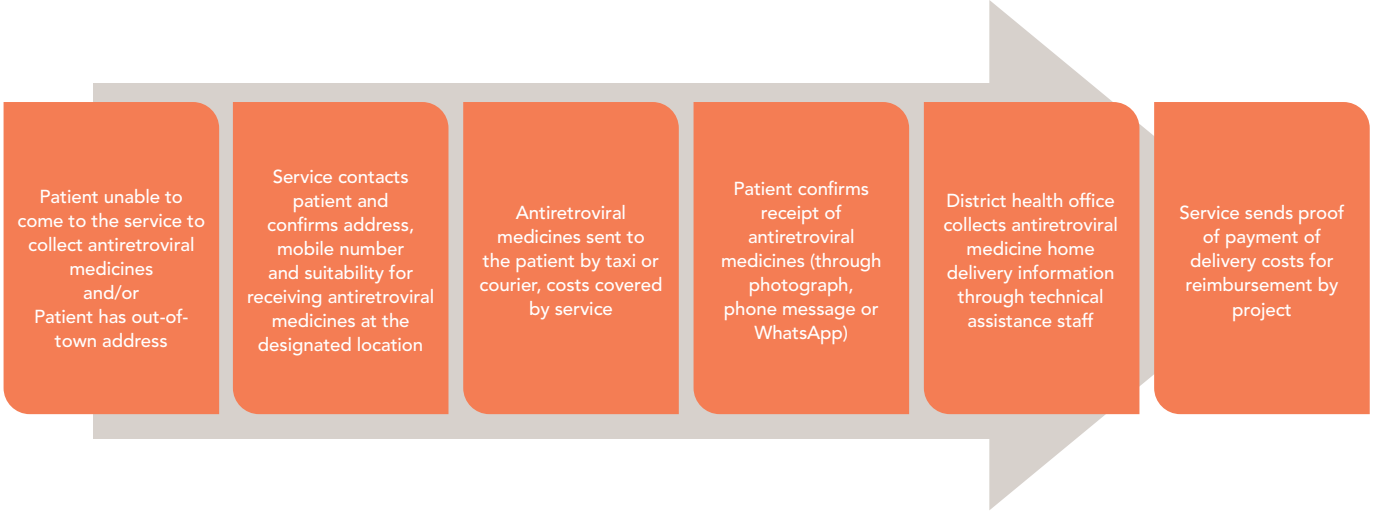
Early in India's pandemic, for example, the National Coalition of People Living with HIV (NCPI+) was arranging home deliveries of antiretrovirals to more than 45 000 people living with HIV *(34)*. They also persuaded policy-makers to allow patients to pick up their medications from any clinic in the country rather than requiring them to go to a designated facility. Also in India, the Human Touch Foundation, a community-based organization in Goa that focuses on supporting children and adolescents living with HIV, organized volunteers to deliver antiretroviral medication to people's doorsteps. The Foundation also delivers grocery and personal hygiene supplies to families of children living with HIV *(35)*.

In China, doctors have been delivering antiretroviral supplies to patients in rural parts of the country, while couriers make deliveries in cities. In the Indonesian capital, Jakarta, the Jak-Anter system—developed by the USAID- and PEPFAR-supported LINKAGES project—is using motorcycle and courier services to deliver medicines to people living with HIV (Figure 3.8) (36). Condoms, lubricants and HIV self-testing kits are being delivered to key population-friendly community distribution points in many countries, including Eswatini, Kenya and Nepal *(8)*.

The use of online platforms (such as social media and messenger apps), text messaging and phone calls for case management and support is no longer a novel innovation, but now it has become essential for maintaining core HIV services and for doing outreach and case management during times of physical distancing. In the second half of March 2020, for instance, face-to-face community-based outreach services supported by the LINKAGES programme in Nepal were halted and replaced with virtual services. By the third week of April, 3300 people were receiving prevention services via social media channels, an increase of one third over the number of people reached prior to the lockdown *(18)*. In Kenya and Malawi, LINKAGES is using its Key Populations Living with HIV Tracker to ensure that people on HIV treatment receive multimonth supplies of antiretroviral medicines, and that they are scheduled for viral load testing *(37)*.

FIGURE 3.8

**Facilitation of home delivery of antiretroviral medicines in a community HIV treatment project, Jakarta Indonesia, 2020**




Source: Adapted from Jak-Anter, USAID/PEPFAR LINKAGES Indonesia project, led by FHI 360, May 2020.

## MAKING EVERY LIFE COUNT IN CHENNAI

Intensified policing, curfews and shuttered services during the COVID-19 lockdown have made life even tougher for people who use drugs in Chennai, the capital of India's Tamil Nadu state.

HIV and harm reduction services were disrupted, and harsh policing during the lockdown left people who use drugs even more fearful than usual of trying to access health services. Many also avoided the relief measures available to residents for fear of being arrested or victimized. Those who live or spend most of their time on the streets have thus been left even more vulnerable to the COVID-19 pandemic and its disruptions.

Early in the lockdown, the Tamil Nadu's Drug Users Forum, a community network of people who use drugs, noted increases in opioid withdrawals, overdosing and mental health difficulties among people who use drugs. Working with partner organizations, it stepped up its efforts to manage overdoses, safely link people to available services, and arrange take-home doses of opioid substitution therapy *(38)*.

The Forum teamed up with the Hopers Foundation, a community-based organization that provides harm reduction services for people who inject drugs, in order to link street-based homeless people to opioid substitution therapy (buprenorphine) services managed by the Tamil Nadu State AIDS Control Society. The national authorities agreed to authorize the provision of take-home doses of opioid substitution therapy, and forum members were trained online to act as first responders due to the shortage of paramedics and other service providers *(39)*.

The Forum also arranged a deal with railway authorities that allowed homeless people who use drugs to sleep on Chennai's railway platforms and use the railway ablution facilities, and it has mobilized charities and faith-based organizations to provide meals *(38)*.

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# 04

# SECURING RIGHTS

# SECURING RIGHTS

## DATA POINTS

OF MARRIED OR IN-UNION

**WOMEN, JUST 55%**

USING ANY TYPE OF CONTRACEPTION, OR MAKE THEIR OWN DECISIONS REGARDING THEIR SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS.

IN 8 SUB-SAHARAN AFRICAN COUNTRIES, 33% OF

**TRANSGENDER WOMEN**

SAID THEY HAD BEEN PHYSICALLY ATTACKED AT SOME POINT, AND 28% HAD BEEN RAPED.

**ADOLESCENT GIRLS**

WHO RECEIVE MULTIPLE LAYERS OF SUPPORT ARE MORE LIKELY TO REPORT CONSISTENT CONDOM USE AND TO TEST FOR HIV.

DECRIMINALIZING SEX WORK COULD AVERT AN ESTIMATED

**33–46% OF**

HIV INFECTIONS OVER 10 YEARS.

AT LEAST

**69 COUNTRIES**

HAVE LAWS THAT CRIMINALIZE SAME-SEX SEXUAL RELATIONS.

**108 COUNTRIES**

REPORT THAT DRUG USE OR POSSESSION FOR PERSONAL USE IS A CRIMINAL OFFENSE; JUST 17 COUNTRIES ALLOW POSSESSION OF A CERTAIN AMOUNT OF DRUGS.

The gaps between the commitments made by all countries at the 2016 United Nations (UN) General Assembly High-Level Meeting on Ending AIDS and the progress achieved thus far reflect the many barriers faced by people living with HIV and those at risk of HIV infection. Multiple and intersecting other forms of discrimination—such as those based on income, race, age, ethnicity, disability, immigration status, sexual orientation and gender identity—are holding back HIV responses.

Gender inequality, underpinned by harmful gender norms and unequal power or relationship dynamics that reinforce notions of masculinity based on male control and strength and female vulnerability, continue to restrict women's control in deciding how, when and with whom they have sex. It also shapes women's use of HIV and other health services, and it limits their ability to lead lives that are free from violence. Calls for change are growing louder as women leaders and community mobilizers mark the 25th anniversary of the Beijing Declaration and Platform for Action.

For all genders, laws and policies aimed at discouraging or criminalizing individual behaviours—such as sex work, drug use and same-sex sexual relationships—can legitimize stigma and give license to discrimination and harassment. This isolates people who are at particularly high risk of acquiring HIV and hinders them from

SUBSTANTIAL PROGRESS HAS BEEN MADE TOWARDS IMPROVING ACCESS TO EDUCATION FOR GIRLS AND MOVING TOWARDS GENDER PARITY WITHIN EDUCATION SYSTEMS. THIS HAS BEEN ACCOMPLISHED THROUGH SUSTAINED EFFORTS TO ESTABLISH POLICIES AND PROGRAMMES AIMED AT CHANGING SOCIAL ATTITUDES, TO PROVIDE FINANCIAL SUPPORT TO FEMALE STUDENTS AND TO MAKE SCHOOLS MORE ACCESSIBLE TO GIRLS.

accessing the services they need, further elevating their risk of infection.

The COVID-19 pandemic threatens to magnify existing inequalities, including those related to gender and poverty. A rights-based and gender-responsive approach is needed to overcome these barriers. Empowering women in all of their diversity requires action on multiple fronts, from uprooting the harmful gender norms and patriarchal systems that perpetuate gender-based discrimination and violence, to confronting racism, providing comprehensive sexual and reproductive health services, keeping girls in school, achieving economic empowerment and reforming laws, policies and institutional practices. Securing the rights of all people creates an enabling environment for successful HIV responses, affirming the dignity and agency of individuals, creating more equitable access to services and leaving no one behind.

Empowering women in all of their diversity requires action on multiple fronts, from uprooting the harmful gender norms and patriarchal systems that perpetuate gender-based discrimination and violence, to confronting racism, providing comprehensive sexual and reproductive services, keeping girls in school, achieving economic empowerment and reforming laws, policies and institutional practices.

## Sexual and reproductive health and rights

Sexual and reproductive health and rights are central to empowering women and adolescent girls, fulfilling their human rights, ensuring their health and well-being, and creating gender-equal societies and economies. Investments in sexual and reproductive health yield enormous social and economic returns for women in all of their diversity, and for their families and societies, paying dividends across generations *(1)*.

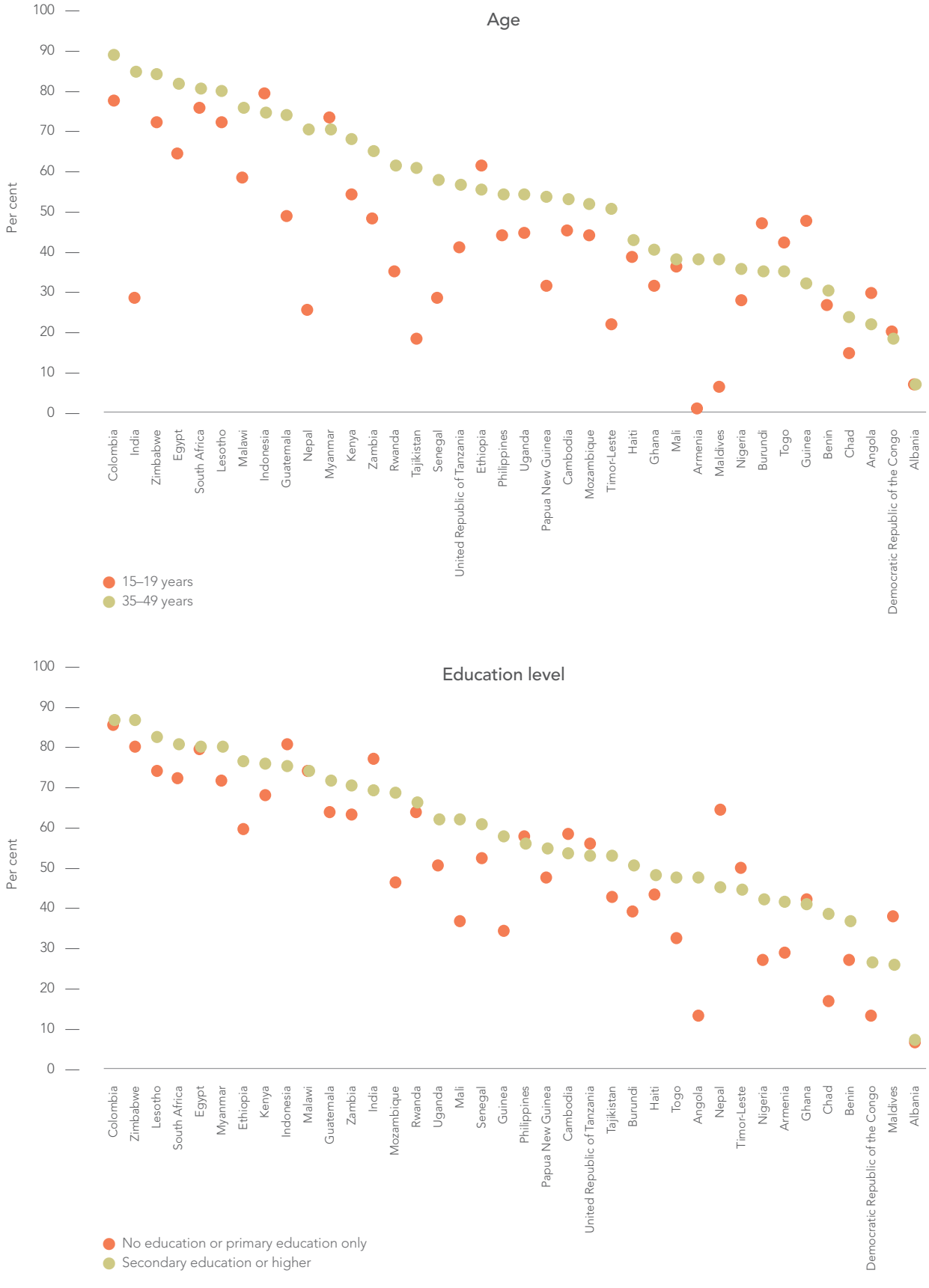
In much of the world, women continue to have insufficient access to high-quality sexual and reproductive health information, education and services—including family planning—all of which are central to realizing and protecting their sexual and reproductive rights and reducing HIV risk. According to recent population-based surveys, the percentage of women (aged 15 to 49 years) who had their demand for family planning satisfied by modern methods ranged from 6.3% in Albania to 86.6% in Colombia *(2)*.

Access to sexual and reproductive health information and services is often impeded by multiple intersecting forms of inequality and stigma and discrimination, creating barriers at the individual, interpersonal, community and societal levels *(3)*. Rural and urban poor, minority ethnic groups, adolescents and lesbian, gay, bisexual, transgender and intersex (LGBTI) people are particularly underserved *(4)*. In the majority of countries with recent survey data, women are less likely to have their demand for family planning satisfied by modern methods if they live in rural areas, have not attained a secondary or higher level of education, and/or are in the lowest wealth index quintile (Figure 4.1) *(2)*. The fact that the poorest women in Zimbabwe have greater access to family planning than the wealthiest women in 34 countries suggests that good policies and programmes can expand service access across all income levels.

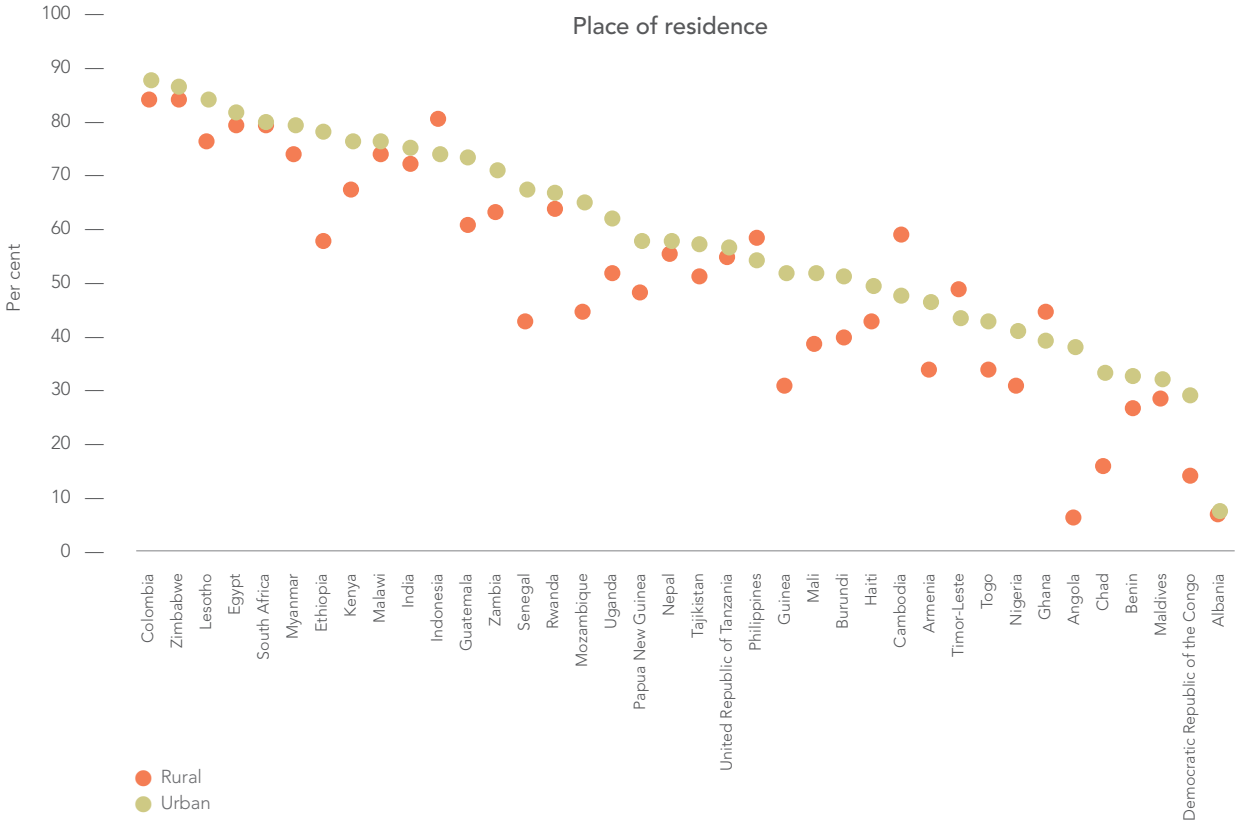
Women living with HIV face particular challenges, as HIV stigma and gender inequality intersect and negatively impact their health *(5)*. While health-care settings should be safe spaces, as many as one in three women living with HIV across 19 countries reported experiencing at least one form of discrimination related to their sexual and reproductive health in a health-care setting within the past 12 months *(6)*. Health rights abuses documented by various studies include unauthorized disclosure of status, being advised to not have children, forced and coerced sterilization or termination of a pregnancy, denial of sexual and reproductive health services, and related psychological violence *(6–8)*.

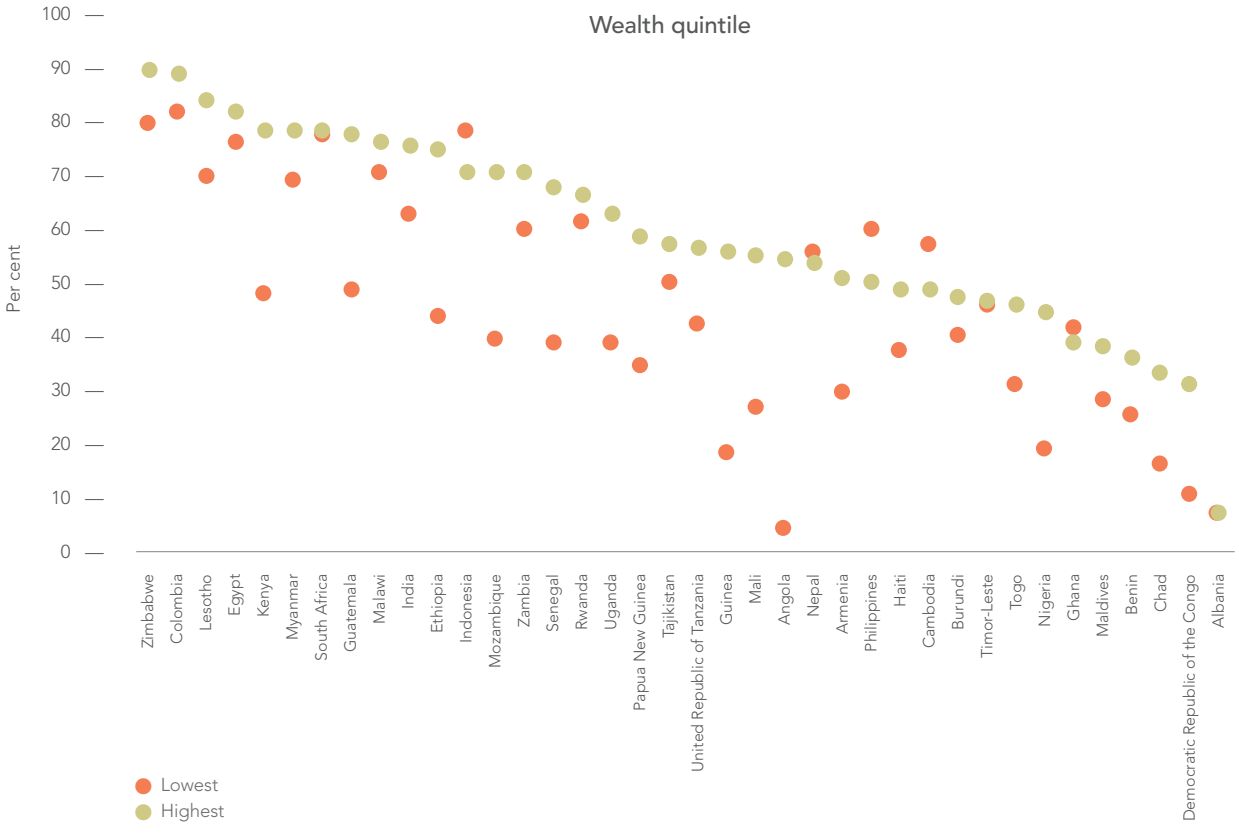
FIGURE 4.1

**Women aged 15 to 49 years who have their demand for family planning satisfied by modern methods, by age, education level, place of residence and wealth quintile, countries with available data, 2014–2018**




Source: Demographic and Health Surveys, 2014–2018.


Place of residence
Per cent
100
90
80
70
60
50
40
30
20
10
0
Colombia
Zimbabwe
Lesotho
Egypt
South Africa
Myanmar
Ethiopia
Kenya
Malawi
India
Indonesia
Guatemala
Zambia
Senegal
Rwanda
Mozambique
Uganda
Papua New Guinea
Nepal
Tajikistan
United Republic of Tanzania
Philippines
Guinea
Mali
Burundi
Haiti
Cambodia
Armenia
Timor-Leste
Togo
Nigeria
Ghana
Angola
Chad
Benin
Maldives
Democratic Republic of the Congo
Albania
Rural
Urban


Wealth quintile
Per cent
100
90
80
70
60
50
40
30
20
10
0
Zimbabwe
Colombia
Lesotho
Egypt
Kenya
Myanmar
South Africa
Guatemala
Malawi
India
Ethiopia
Indonesia
Mozambique
Zambia
Senegal
Rwanda
Uganda
Papua New Guinea
Tajikistan
United Republic of Tanzania
Guinea
Mali
Angola
Nepal
Armenia
Philippines
Haiti
Cambodia
Burundi
Timor-Leste
Togo
Nigeria
Ghana
Maldives
Benin
Chad
Democratic Republic of the Congo
Albania
Lowest
Highest

## Unequal gender norms undermine health rights

Patriarchal gender norms limit the agency and voice of women and girls, reduce their access to education and economic resources, and stifle their civic and political participation. Gendered power dynamics within intimate relationships, harmful masculinities and male controlling behaviour also constrain women's sexual and reproductive rights and health outcomes and limit their decision-making power, including their ability, to refuse unwanted sex, negotiate safer sex and mitigate HIV risk *(4, 9–11)*. For example, multiple studies show an association between lower relationship power and a lack of condom use, or more inconsistent condom use *(12, 13)*.

Based on data from 57 countries globally, only 55% of married or in-union adolescent girls and women aged 15 to 49 years who are currently using any type of contraception make their own decisions regarding sexual and reproductive health and rights *(15)*. Trends over time are mixed. Across 22 countries where at least two surveys were conducted since 2005, the percentage who were making their own sexual and reproductive health decisions has increased in eight countries, decreased in seven countries and remained similar (within five percentage points) in eight countries (Figure 4.2).

Even in settings where women make decisions about their health care, there are gaps in their sexual autonomy. In southern Africa, for example, population-based survey data show that 92% of married or in-union women make decisions about their health care, but only 75% report being able to say "no" to sex *(15)*. A 2019 study in Mozambique showed that men make the majority of decisions about fertility and family size, with respondents reporting that deeply patriarchal gender norms limit the agency and participation of women in decision-making, including around their own sexual and reproductive health. Both women and men reported that women must obtain permission from their male partners before seeking health services *(16)*.

Patriarchal and discriminatory gender norms in many cultures—including binary concepts of gender and taboos about sexuality—also perpetuate stigma, homophobia and transphobia.

**AGENCY:** WOMEN HAVE THE CAPACITY TO EXERCISE STRATEGIC CONTROL OVER THEIR LIVES.

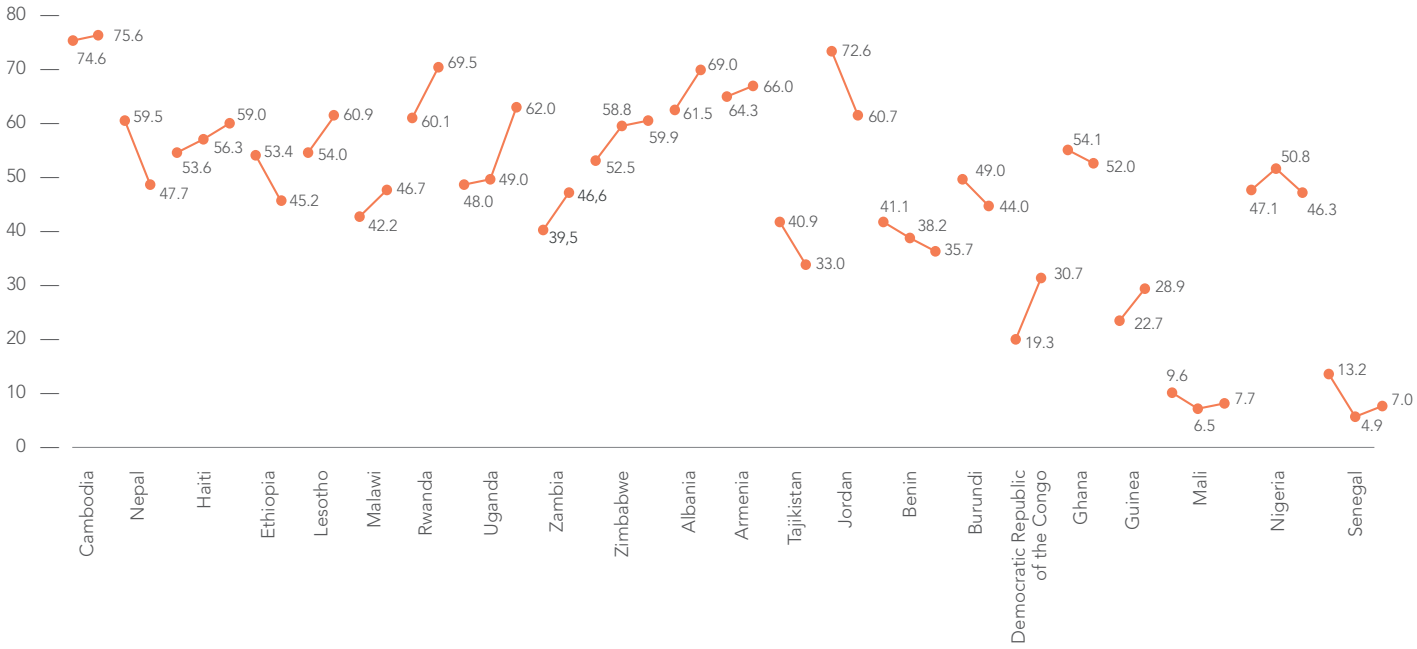
**VOICE:** WOMEN CAN DEFINE GOALS AND ACT ON THEM, AND THEY CAN NEGOTIATE THEIR RELATIONSHIPS WITH OTHERS *(14)*.

LGBTI persons and marginalized women (such as sex workers or women who use drugs) who fear judgement, violence or arrest struggle to access sexual and reproductive health services, especially those related to contraception and HIV prevention. In Mongolia, a survey of female sex workers found that 40% had avoided seeking health care in the previous 12 months due to fear of discrimination *(17)*. This percentage rises to 52% among women in Canada who inject drugs *(18)*.

Familial and societal rejection, denial of care, harassment and a lack of competent and sensitive service providers with adequate knowledge of transgender people's specific needs also are persistent barriers to the realization of transgender rights *(19, 20)*. In Thailand, for instance, 47% of transgender women report having had negative experiences when receiving health services due to their gender identity *(21)*. This form of structural stigma undermines the right of individuals to protect their health, prevent HIV and make informed decisions about their sexual and reproductive health and lives.

FIGURE 4.2

**Percentage of women aged 15 to 49 years who make their own informed decisions regarding sexual relations, contraceptive use and their own health care, countries with available data, 2005–2018**




Source: Population-based surveys, 2005–2018.
Note: Data refer to women aged 15 to 49 years who are currently married or in union who are using contraceptives. Survey years by country are: Albania (2008–2009 and 2017–2018), Armenia (2010, 2015–2016), Benin (2006, 2011–2012, 2017–2018), Burundi (2010 and 2016), Cambodia (2010 and 2014), the Democratic Republic of the Congo (2007 and 2013–2014), Ethiopia (2011 and 2016), Ghana (2008 and 2014), Guinea (2012 and 2018), Haiti (2006, 2012 and 2017), Jordan (2012 and 2017–2018), Lesotho (2009 and 2014), Malawi (2010 and 2015–2016), Mali (2006, 2012–2013 and 2018), Nepal (2011 and 2016), Nigeria (2008, 2013 and 2018), Rwanda (2010 and 2014–2015), Senegal (2011, 2016 and 2017), Tajikistan (2012 and 2017), Uganda (2006, 2011 and 2016), Zambia (2007, 2013–2014) and Zimbabwe (2005–2006, 2010–2011 and 2015).

## Gender-based violence

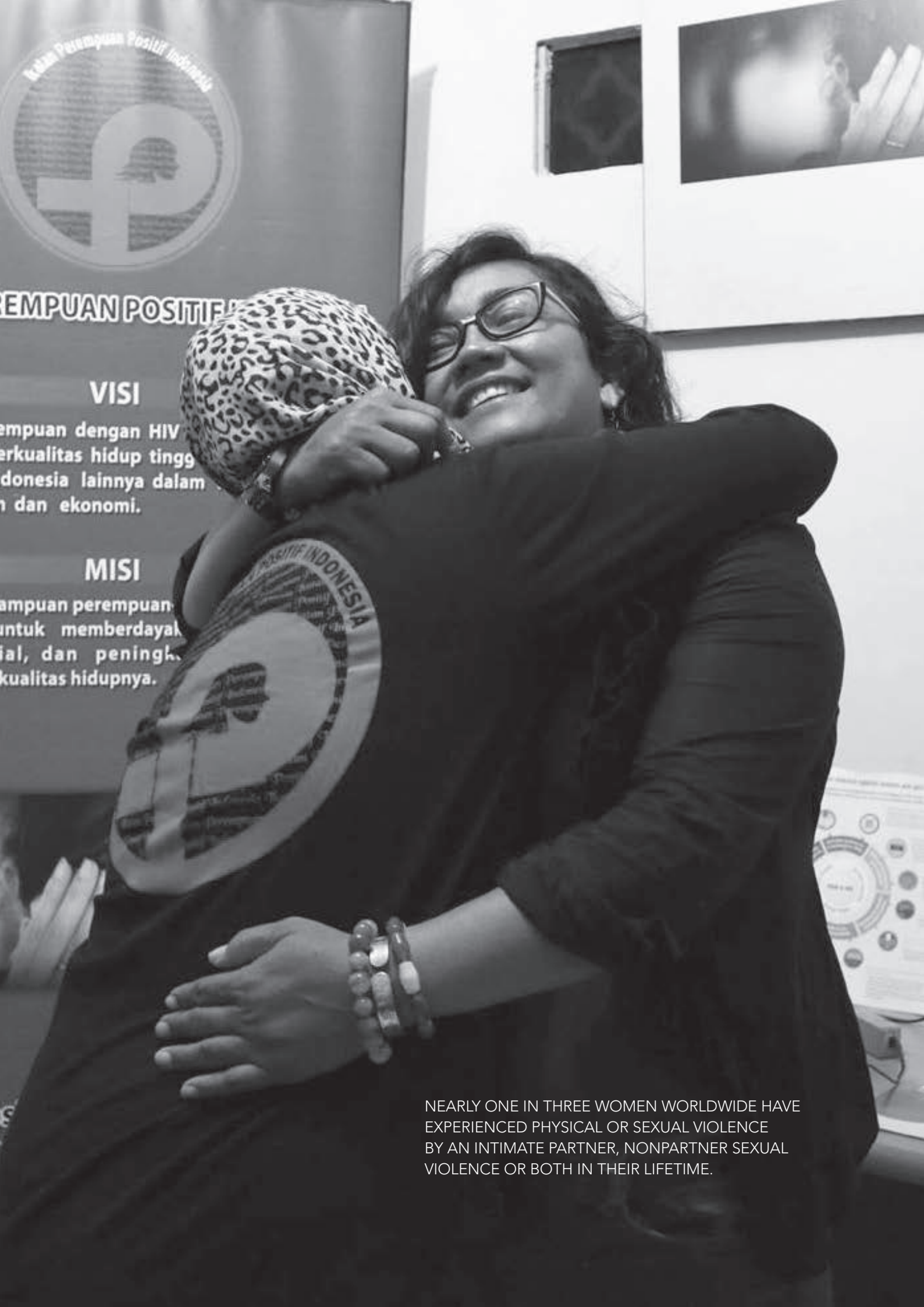
Unequal power dynamics, harmful gender norms and social constructs around masculinity—which promote men's dominance and control of women, including physical and sexual dominance—are root causes of violence against women and girls *(22)*.

Violence impacts the lives of hundreds of millions of women and girls. Nearly one in three women worldwide have experienced physical or sexual violence by an intimate partner, nonpartner sexual violence or both in their lifetime *(23)*. Across 46 countries with available data between 2014 and 2018, the percentage of women aged 15 to 49 years who reported having experienced physical and/or sexual violence by an intimate partner in the past 12 months ranged from 3.5% in Armenia to 47.6% in Papua New Guinea *(24)*. More than one third of women who are intentionally killed are killed by a current or former intimate partner *(25)*.

Violence often starts early in life. Data from violence against children surveys (VACS) conducted in nine countries between 2014 and 2017 show that the percentage of young people aged 18 to 24 years who experienced one or more types of violence (physical, sexual or emotional) during childhood (before age 18) was high, ranging between 21.4% in El Salvador and 75.6% in Uganda among males, and between 26.5% in Zimbabwe and 75.3% in Uganda among females (Figure 4.3).

Social and gender norms—introduced in childhood and consistently reinforced throughout life—drive such violence. In 24 of 43 countries with recent data from population-based surveys, more than 40% of young women (aged 15 to 24 years) stated that a husband is justified in hitting or beating his wife (Figure 4.4).

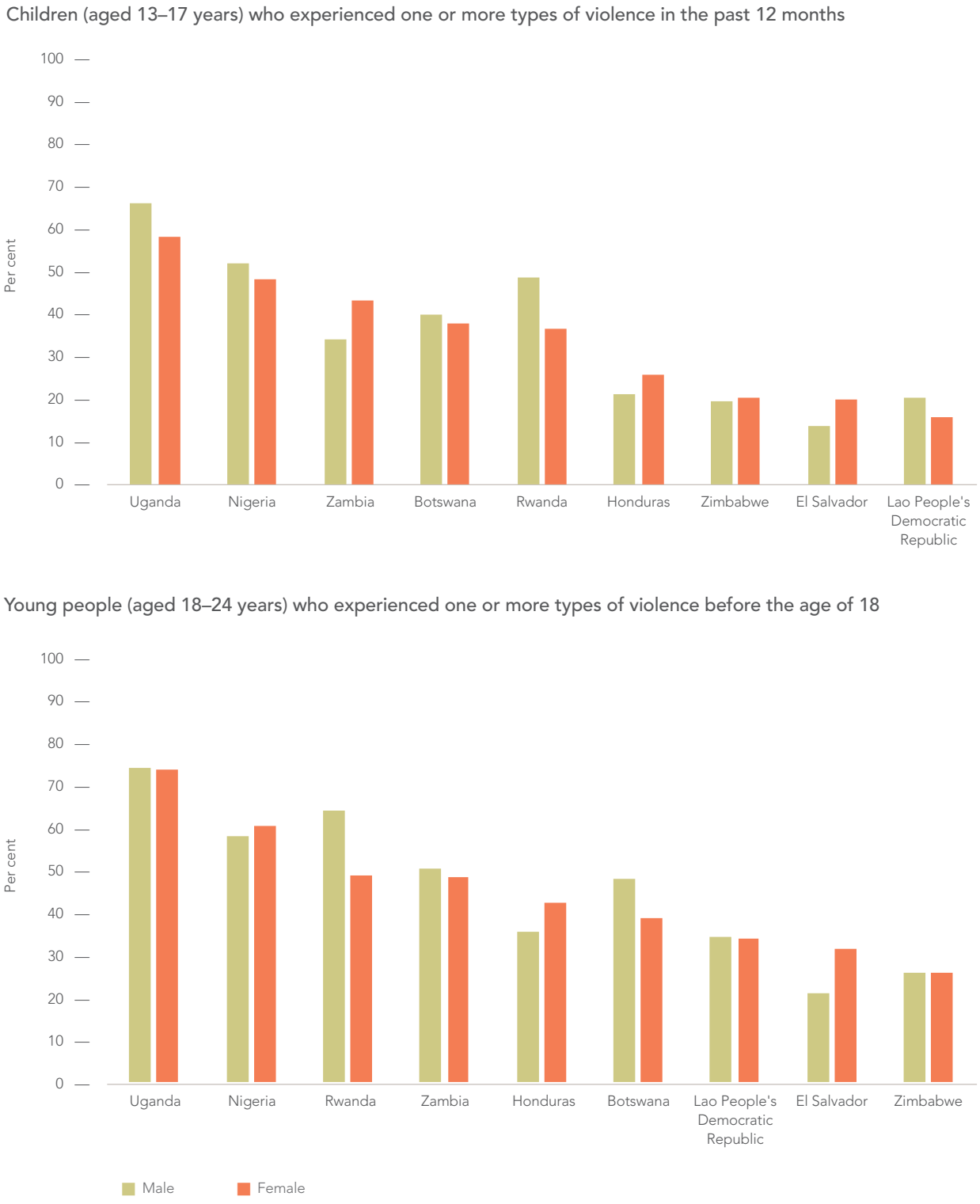
Adolescent girls, young women, women belonging to ethnic and other minorities, transgender women and women with disabilities face a higher risk of different forms of violence *(26)*. Rates of intimate partner violence and gender-based violence among women who inject drugs are up to five times higher than they are among women who do not use drugs *(27)*. It is estimated that 45–75% of adult female sex workers are assaulted or abused at least once in their lifetime, while mechanisms for reporting abuse or accessing services for survivors of violence, including sexual and reproductive health and HIV services, are often blocked due to the criminalization of sex work and related stigma and discrimination *(28)*.




NEARLY ONE IN THREE WOMEN WORLDWIDE HAVE EXPERIENCED PHYSICAL OR SEXUAL VIOLENCE BY AN INTIMATE PARTNER, NONPARTNER SEXUAL VIOLENCE OR BOTH IN THEIR LIFETIME.

FIGURE 4.3

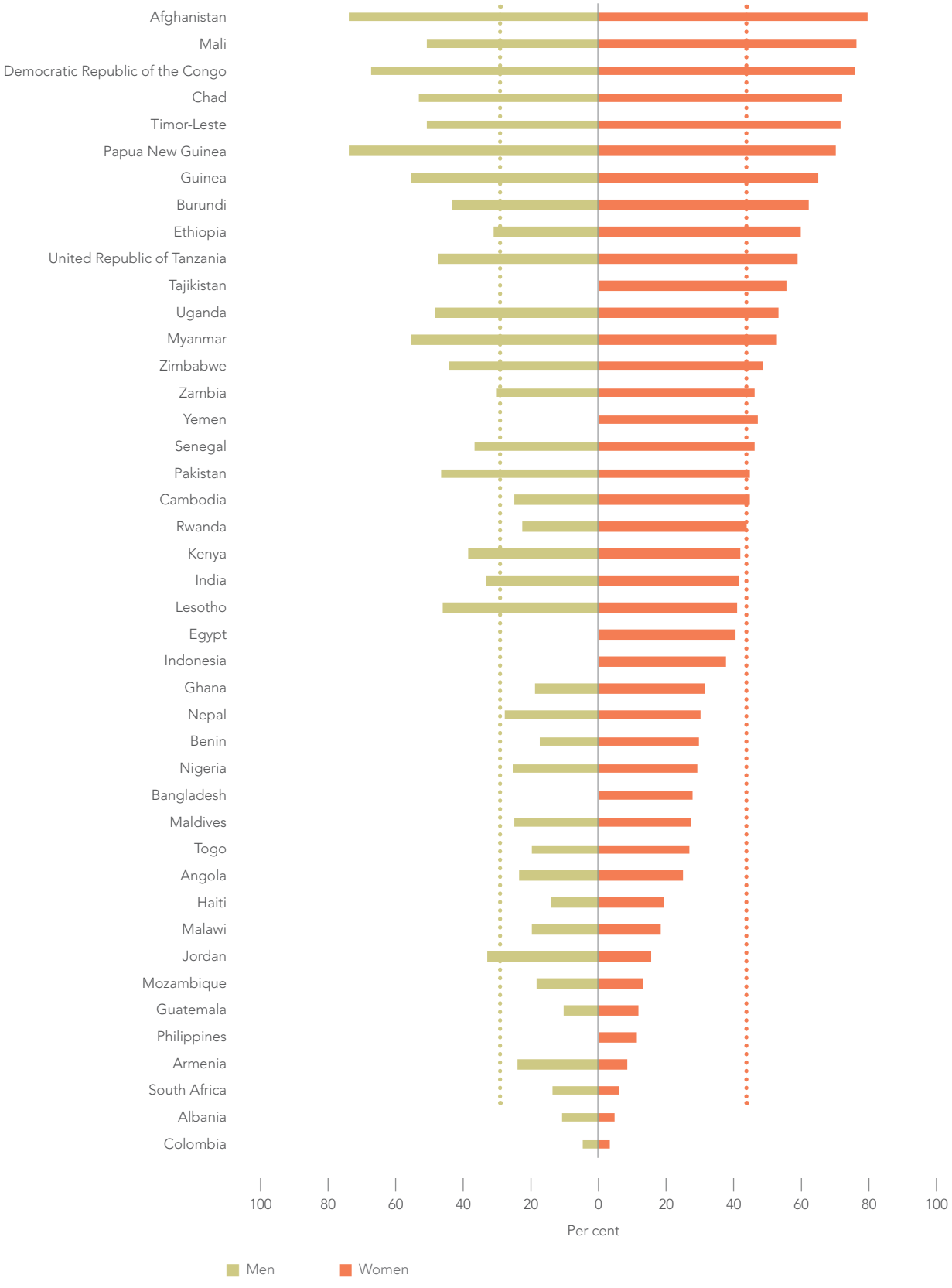
**Children and young people aged 13 to 24 years who experienced one or more types of violence in childhood, countries with available data, 2014–2017**




Source: Violence against children surveys, 2014–2017.

FIGURE 4.4

**Percentage of young women and men aged 15 to 24 years who agree that a husband is justified in hitting or beating his wife, countries with available data, 2014–2018**



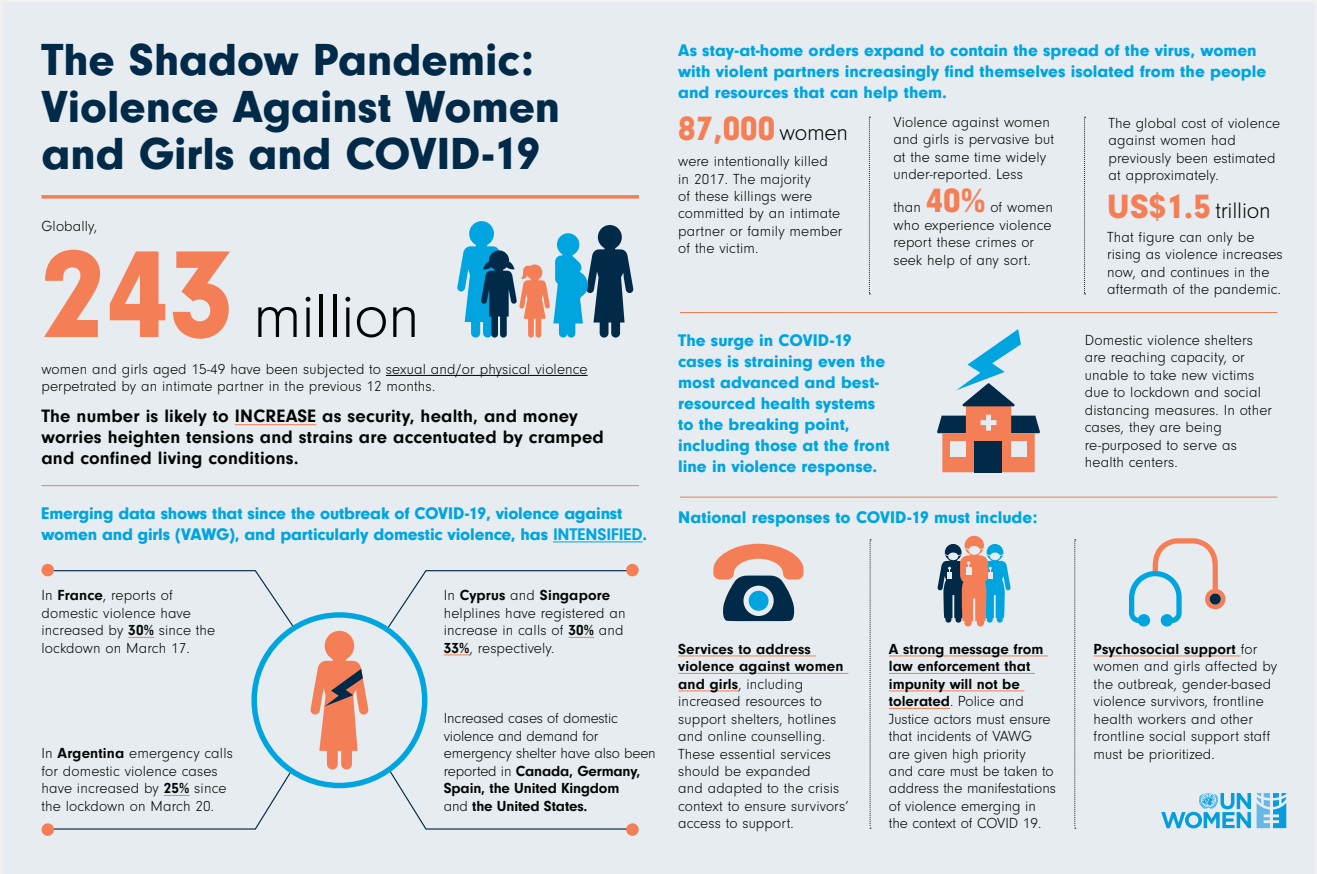

Source: Demographic and Health Surveys, 2014–2018.
Note: The dotted lines represent the median values across all countries with available data.

# VIOLENCE AGAINST WOMEN AND GIRLS UNDER LOCKDOWN

The response to the COVID-19 pandemic appears to be magnifying existing gender inequalities and vulnerabilities that contribute to gender-based violence *(30)*. Extended confinement measures and restrictions on movement in most countries across the globe, compounded by economic and social stresses brought on by the pandemic, have coincided with reports of increased numbers of women and girls facing abuse in many countries *(31)*. India reported double the usual number of domestic abuse cases in the first week of nationwide movement restrictions, according to the country's National Commission for Women *(32)*, while South African police reported 87 000 gender-based violence calls in the first week of that country's lockdown *(33)*. Helplines in Cyprus and Singapore registered 30% and 33% increases in calls, respectively *(34)*. The availability and continuity of key public services (including health centres and women's shelters)—along with referral pathways and support services—have been disrupted in many countries, with worrying implications for those who are at risk of (or already experiencing) violence *(35)*.

FIGURE 4.5

**UN women infographic on violence against women in Covid**




Source: COVID-19 and ending violence against women and girls. Rapid Response Brief by UN Women, 2020 (https://www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2020/issue-brief-covid-19-and-ending-violence-against-women-and-girls-en.pdf?la=en&vs=5006, accessed 4 June 2020).

Multiple intersecting forms of gender-based violence—including structural, physical and sexual violence, hate crimes and human rights abuses—are experienced by transgender and gender diverse people across the world. In a study in eight sub-Saharan African countries, 33% of transgender women said they had been physically attacked at some point, 28% had been raped and 27% said they were too afraid to use health-care services *(29)*.

Violence not only impacts the physical and mental health of survivors; it also limits access to sexual and reproductive health services, and it increases HIV risk. Forced sex and limited or compromised negotiation of safer sex due to violence or fear of violence lead to an increased risk of acquiring HIV. In areas of high HIV prevalence, intimate partner violence has been shown to increase women's risks of acquiring HIV by 50% *(36)*.

HIV can also be a trigger for violence. Women living with HIV frequently report experiences of violence or the fear of violence from intimate partners and family members *(37)*. Violence against women living with HIV—including intimate partner violence and institutional and obstetric violence—can lead to reduced access and adherence to treatment, lower CD4 counts and higher viral loads *(38)*.

## Challenges faced by adolescent girls and young women

Adolescent girls and young women face particular challenges that can leave them at elevated risk of unintended pregnancy, violence and HIV. They are unable to access the sexual and reproductive health services they need: of the 38 million sexually active adolescent girls aged 15 to 19 years, more than half are not using modern contraceptives *(1)*. At least 10 million unintended pregnancies occur each year among adolescent girls aged 15 to 19 years in low- and middle-income countries *(39)*, and complications during pregnancy and childbirth are the leading cause of death globally for girls aged 15 to 19 years *(40, 41)*.

Restrictive gender norms have been shown to contribute to stigma and discrimination in health-care settings and limit the uptake of sexual and reproductive health and HIV services *(42)*. A recent study in the United Republic of Tanzania found that culturally rooted biases held by health-care providers about the sexuality of adolescents and their sexual and reproductive health were linked to a lower willingness to prescribe pre-exposure prophylaxis (PrEP) *(43)*.

In many countries around the world, adolescent girls also experience high rates of gender-based and sexual violence. In eight of 31 countries with recent survey data, the percentage of adolescent girls (aged 15 to 19 years) who experienced intimate partner violence in the past 12 months was higher than among older women (aged 20 to 49 years) *(44)*. Surveys of adolescent girls and young women in Kenya and Zambia show that experiences of sexual violence were associated with negative health outcomes, including increased odds of sexually transmitted infection (STI) symptoms and increased levels of anxiety and depression *(45)*.

Child, early and forced marriage is a form of violence against girls that violates their rights to health, safety and education *(46)*. Girls married before 18 years of age also are more likely to report intimate partner violence and forced sex than those married after the age of 18 *(47–50)*. They tend to fall pregnant and have children earlier, are less able or likely to access education, and can be socially isolated *(51)*. Child marriage also often sees young girls married to older men, with whom they have less power to negotiate safe sex. Between 2013 and 2019, 35% of young women in sub-Saharan Africa were married before the age of 18 *(52)*.

Adolescent girls and young women in sub-Saharan Africa are at higher risk of HIV than young men, which is in part linked to their earlier sexual debut *(4)*. Knowledge about sexual and reproductive health and the prevention of HIV and STIs among adolescent girls and young women is also low: only about one third of women aged 15 to 24 years in sub-Saharan Africa have comprehensive knowledge about HIV *(53)*. This high level of vulnerability is fuelled by a complex interplay of social, economic and structural drivers, including poverty, gender inequality, unequal power and relationship dynamics, gender-based violence, social isolation and limited access to schooling.

## Access to education

Equitable access to quality education is a human right. It can advance gender equality by dismantling harmful gender stereotypes and norms *(54, 55)*. Education is also strongly associated with good health, and it is an important predictor of well-being among women and their children *(56)*. Multiple studies have shown that staying in school longer has a protective benefit in reducing the risk of HIV infection *(57–59)*. For example, after compulsory and free secondary education was expanded in Botswana, each additional year of secondary schooling led to an 8.1% reduction in the cumulative risk of HIV infection, and a 11.6% reduction in HIV risk among young women in particular *(60)*. Higher levels of educational attainment among women are also associated with increased control over sexual and reproductive health and rights *(4)*. Positive effects of enrolment in secondary school on reduced sexual risk-taking behaviour and rates of HIV infection were also found in Uganda and Zimbabwe, respectively *(61, 62)*.

Despite evidence for the multiple benefits of remaining in school, girls and young women in multiple settings around the world face significant barriers to education, driven by poverty, unequal social and cultural norms, harmful practices (such as child, early and forced marriage), poor infrastructure, gender-based violence and instability. Patriarchal norms that devalue the education of women and girls also limit their opportunities to access and stay in education. Analysis of the sixth round of the World Values Survey,[1] carried out in 51 countries between 2010 and 2014, showed that about 27% of respondents agreed that "a university education is more important for a boy than a girl," with shares ranging from 2% in Sweden to 56% in Pakistan and 59% in Haiti *(63, 64)*.

Pregnancy among adolescent girls can also spell the end of their education in many countries. This might be due to explicit policies or laws that prohibit pregnant girls from attending school, or to barriers they encounter when attempting to re-enter the education system after the birth of

1 The World Values Survey, Wave 6 (2010–2014). For more information, please see: http://www.worldvaluessurvey.org/WVSDocumentationWV6.jsp

their child. This can include discrimination among teachers and schools or a lack of child care or age-appropriate alternative education pathways that mainstream new mothers back into formal education. Approximately 12 million girls aged 15 to 19 years—and at least 777 000 girls under 15 years of age—give birth each year in developing regions *(39, 65)*.

As access to education is increased, efforts must be made to end school-related gender-based violence, which has far-reaching impacts on children and young people, including affecting their mental and physical well-being, education and health, including HIV status and early pregnancy *(66)*.

### LESSONS FROM THE EBOLA RESPONSE SHOW THAT EDUCATION DISRUPTIONS THREATEN ADOLESCENT GIRLS

The COVID-19 pandemic poses a significant threat to education, particularly the education of girls in low- and middle-income countries. Country-wide school closures implemented to fight the spread of the virus in more than 190 countries have led to more than 1.57 billion learners being out of school, including 743 million girls *(67, 68)*. More than 111 million of these girls are living in the world's least developed countries, where there are already significant gender disparities and multiple barriers to girls accessing and staying in education *(68)*.

The impact of this period of disrupted education will be far-reaching, and is likely to hit marginalized girls the hardest *(69)*. Lessons learned from the Ebola crisis show that school closures can lead to increases in gender-based violence, teenage pregnancies, child marriage, exploitation and other forms of abuse against adolescent girls (including online sexual exploitation and grooming). School closures may be especially devastating for girls with greater vulnerabilities, such as refugees, internally displaced persons, returnees and girls living with disabilities *(70)*.

While school gates will eventually reopen, some girls may never return to school. The Ebola crisis illustrated that the high burden of unpaid domestic labour carried by girls and young women, including caregiving responsibilities, negatively impact home learning, causing girls to fall behind *(71)*. In countries where limited social protection measures are in place, economic hardships caused by crises often force families to re-assess the financial and opportunity costs of educating their daughters, leading to school dropouts *(68)*.

Extreme poverty, exacerbated by the pandemic, can also drive harmful practices, such as child or early marriage or girls engaging in transactional sex. For example, Human Rights Watch research in several African countries shows that child marriage and resulting early pregnancies increase significantly during crises *(72)*. Similarly, the Malala Fund drew on data from the Ebola epidemic in Sierra Leone to estimate that approximately 10 million more secondary school-aged girls could be out of school after the COVID-19 pandemic if dropouts increase by the same rate *(73)*.

The spike in teen pregnancies during Sierra Leone's Ebola outbreak increased calls for the country to end its ban on pregnant girls attending secondary school. In December 2019, a court of the Economic Community of West African States ordered Sierra Leone to establish nationwide programmes to help pregnant girls return to school *(74)*. A few months later, Sierra Leone's leaders announced an end to the school ban *(75)*.

## Working without pay or protections

Unequal gender norms dictate the roles of women and girls within households in multiple contexts around the world, assigning higher levels of domestic work and caregiving responsibilities, denying women the freedom to enter and remain in the labour force on terms that suit their needs, and ultimately impacting women's economic independence, security and control.

The sixth round of the World Values Survey found that half of respondents agreed or strongly agreed with the statement that "when a woman works for pay, the children suffer." The idea was widespread in India and countries in the Middle East, such as Jordan, where more than 80% of respondents agreed or strongly agreed with the statement *(63)*.

There is a significant gender gap in the global labour force. Based on data from 84 countries, 95% of men aged 25 to 54 years are in the labour force, compared to just 52% of women *(76)*. The main reason reported by women for being out of the labour force was unpaid care work *(77)*.

Women perform 76.2% of the total hours of unpaid care work—more than three times as many as men *(78)*. Data from 64 countries indicate that 16.4 billion hours per day are spent on unpaid care work, the equivalent of more than 2 billion people working for eight hours a day with no remuneration. Were such services to be valued on the basis of an hourly minimum wage, they would amount to 9% of global GDP or US$ 11 trillion (purchasing power parity in 2011) *(78)*.

Of the women who are in the workforce, more than half are in the informal economy, often in jobs that lack security or rights. About 60% of countries lack legislation that ensure equal opportunities in hiring practices and require equal remuneration for work of equal value *(79)*. Data from 13 countries suggest that women living with HIV are less likely to be employed than men living with HIV and have less economic autonomy than their male counterparts *(80)*.

Transgender persons in many countries in the world also suffer high levels of discrimination from employers, forcing them into poverty and, in some cases, resulting in individuals turning to sex work to support themselves and their families *(81)*. Transgender sex workers are among the most marginalized and vulnerable sex workers due to widespread social and structural stigma, underpinned by transphobia *(82)*. Unemployment among transgender people living with HIV is also particularly high *(80)*.

CHAMPION PROFILE

# FAMILY PLANNING FOR WOMEN LIVING WITH HIV UNDER LOCKDOWN IN MOROCCO

*Fadoua Bakhadda (middle) and staff at the Moroccan Family Planning Association discuss strategies for reaching young people in Morocco. Credit: Francois Beauraim/IPPF*

Lockdown measures in Rabat, Morocco, are flattening the COVID-19 curve, but they are also making it more difficult for women to access sexual and reproductive health services. The Moroccan Family Planning Association has been working throughout the lockdown to ensure continued access to services for the most vulnerable. Services quickly switched to telephone and online formats, providing telemedicine and gender-based violence screening, referrals and at-home services.

**"Everyone is under crisis, but some are suffering more than others," says the Association's executive director, Fadoua Bakhadda. "Vulnerable people feel that directly accessing the services they've become used to is more difficult than ever. Doctors are busy with COVID-19 and not giving much attention to them."**

The association's HIV services are focused on young people and pregnant women. A network of more than 900 youth activists refers young people to the Moroccan Family Planning Association for HIV testing, while leaders within the local community of people living with HIV refer women living with HIV to services for HIV and gender-based violence. Support to women living with HIV also includes free contraceptives, STI screening, and other sexual and reproductive health services.

A primary concern during lockdown has been ensuring that people living with HIV still have access to antiretroviral medicines, and that pregnant women living with HIV are able to safely deliver their babies without risk to their own health (including COVID-19 exposure) and without risk of vertical transmission of HIV.

The psychological impact of disrupted services has been significant, including cases of attempted suicide. In response, the Moroccan Family Planning Association has prioritized psychological services, working with doctors and psychologists to provide counselling and support services.

**"One woman living with HIV called us in a panic, crying and telling us she will die because of the coronavirus," recalls Fadoua. "We went to her and took her to hospital, where she stayed for 36 hours. When she returned home, our team visited her every day to offer primary care for bedsores."**

Reflecting on the challenges of COVID-19, Fadoua explains that "vulnerability assessments are not the same in periods of crisis. Priorities need to be reviewed and contingency plans are a must. For women living with HIV, their concerns during this crisis have been more about gender-based violence and the health and safety of their children. They worry more about keeping their babies safe from HIV and COVID-19 rather than about themselves."

## Comprehensive approaches to empowerment and health

Realization of the rights of women in all their diversity requires action on multiple fronts: (a) uprooting harmful gender norms and patriarchal systems that perpetuate discrimination and violence; (b) reforming laws, policies and institutional practices; (c) building integrated services that meet diverse needs; (d) keeping girls in school; and (e) building economic empowerment and autonomy.

### *A comprehensive package for sexual and reproductive health and rights*

Sexual and reproductive health and rights are core to the empowerment of women and adolescent girls in all their diversity, to the enjoyment of their human rights, and to building gender-equal societies and economies. They must be part of universal health coverage. Investments in sexual and reproductive health yield enormous individual, social and economic returns across generations *(1)*. Beyond the immediate health benefits are long-term benefits, such as increases in education, earnings and savings at the individual and family levels, and increases in economic growth and reductions in poverty at the societal level *(83)*.

The United Nations Population Fund (UNFPA) and a panel of experts convened by the Guttmacher Institute and the Lancet recommended in 2018 a comprehensive package of quality sexual and reproductive health and rights services that are: (a) accessible and gender-responsive; (b) free from coercion and stigma and discrimination; (c) grounded in a human-rights-based approach; and (d) linked to other relevant services. The package is built around a definition of sexual reproductive health and rights that addresses violence, stigma and discrimination, respect for bodily autonomy, the rights of people to express their individual sexuality, and the sexual and reproductive health and rights of neglected groups (e.g., adolescent girls, LGBTI individuals, those living with disabilities, and people living with HIV) *(1, 4)*.

### *Comprehensive sexuality education*

Comprehensive sexuality education is a key element of good quality education and a vital component of sexual and reproductive health and rights. It is cost-effective and improves sexual reproductive health outcomes, including delayed initiation of sexual intercourse, decreased number of sexual partners, reduced sexual risk-taking and increased use of condoms and contraception, all of which result in reduced rates of STIs, HIV infections and unintended pregnancies *(15, 84, 85)*.

Studies show that taking a rights-based approach in comprehensive sexuality education programmes leads to short-term positive effects on knowledge and attitudes, including increased knowledge of one's rights within a sexual relationship, increased communication with parents about sex and relationships, and greater self-efficacy to manage high-risk situations *(86)*. There are also longer term positive effects on psychosocial and some behavioural outcomes *(87)*.

Evidence also shows that sexuality education has the greatest impact when school-based programmes are complemented with community elements, including condom distribution, providing training for health providers to deliver youth-friendly services, and involving parents and teachers (88). According to a United Nations Educational, Scientific and Cultural Organization (UNESCO) review, multicomponent programmes—especially those that link school-based sexuality education with youth-friendly health services that are not school-based—are particularly important for reaching marginalized young people, including those who are not in school *(85)*.

Comprehensive sexuality education that emphasizes gender, power and rights has been found to have a greater likelihood of reducing rates of STIs and unintended pregnancy *(89)*. Studies also suggest that comprehensive sexuality education may have the potential to: (a) prevent and reduce gender-based and intimate partner violence and discrimination; (b) support self-efficacy, confidence and gender-equitable norms; and (c) teach students to build stronger and healthier relationships *(90)*.

Gender-focused programmes are substantially more effective than so-called gender-blind programmes at achieving these health outcomes because they include transformative content and teaching methods that support students to question social and cultural norms around gender and to develop gender-equitable attitudes *(90)*.

# LAYERING INTERVENTIONS IMPROVES DREAMS FOR ADOLESCENT GIRLS AND YOUNG WOMEN

Adolescent girls and young women in sub-Saharan Africa are more than twice (2.4 times) as likely to acquire HIV than their male peers. While individual interventions have shown promise in addressing aspects of their HIV risk, no single intervention has dramatically reduced new HIV infections among this vulnerable group *(91)*.

Momentum is growing for a comprehensive, multisectoral approach that reaches beyond the health sector, and that is gender-transformative, rights-based and tailored to address the multiple social, economic and structural drivers that fuel the HIV risk of adolescent girls and young women. Studies of social protection programmes have shown that layering and combining social protection elements with health-care interventions and community-based activities can amplify benefits, especially in relation to HIV, with significant impacts noted among adolescent girls and young women *(92, 93)*.

*The DREAMS partnership uses a multisectoral layering approach to reduce HIV incidence among vulnerable adolescent girls and young women in districts with high HIV incidence.*
*Credit: PEPFAR*

Since 2015, the United States President's Emergency Plan for AIDS Relief (PEPFAR) has invested more than US$ 900 million in a multisectoral layering approach to reduce HIV incidence among vulnerable adolescent girls and young women in districts with high HIV incidence in 15 countries through the DREAMS (Determined, Resilient, Empowered, AIDS-Free, Mentored and Safe) partnership.[2] Each DREAMS country team develops a core package, including primary services by age group (10 to 14 years, 15 to 19 years and 20 to 24 years), which are made available to all participants. Secondary interventions are also made available that build upon the primary services, depending on the individual's needs.

Each core package is designed to empower adolescent girls and young women, reduce their HIV and related risks (e.g., gender-based violence), strengthen families and mobilize communities for positive change. It also aims to reduce HIV risk of their likely male sexual partners by leveraging HIV services supported by PEPFAR. The core package also includes contextual services for parents, caregivers and the wider community, as well as linkages to HIV services for male partners, to keep adolescent girls and young women HIV-free and safe from violence (Figure 4.6).

For example, in Kenya, an 18-year-old DREAMS beneficiary is assigned to a mentor-led safe space, where she is connected with a group of similarly aged young women who meet regularly with the mentor. During the safe space meetings, she receives an evidence-informed HIV and violence prevention curriculum and information about condoms, contraception and PrEP. She also receives lessons on basic financial literacy, either in her safe space or in another group setting. For clinical services, she is actively linked by her mentor to a nearby facility, and she also receives some services at the safe space. Additional needs-based services that she may receive include educational subsidies and post-violence care, and contextual services are made available to her parents, male partner and community members to build a supportive environment.

2 DREAMS is implemented in Botswana, Côte d'Ivoire, Eswatini, Haiti, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, South Africa, United Republic of Tanzania, Uganda, Zambia and Zimbabwe.

*Hadijah (far left), a mother of four children, lives in Mityana District in Uganda. She dropped out of school after becoming pregnant with her first child and engaged in transactional sex to help makes ends meet. Hadijah enrolled in DREAMS and received parenting and vocational skills training, as well as HIV testing and prevention and family planning services. Hadijah is now a safe space sports coordinator, the captain of her netball team, and runs a catering business. Credit: PEPFAR*

There is encouraging evidence on the benefits of layering multisectoral interventions. New HIV diagnoses among adolescent girls and young women have declined by 25% or more in nearly all geographic regions where DREAMS is implemented *(94)*. Studies in multiple DREAMS settings show outcomes that include stronger uptake of HIV testing and improved knowledge of HIV status, reductions in transactional sex and more consistent condom use *(95, 96)*. In Kenya, DREAMS has demonstrated significant reach among adolescent girls and young women in urban and rural settings, as well as rapid and sustained increases in knowledge of HIV status: an increase of 30% was documented in urban settings, and a 12% increase was seen in rural settings *(95)*. In both settings, sharper increases occurred among adolescents (<18 years) than among their older peers.

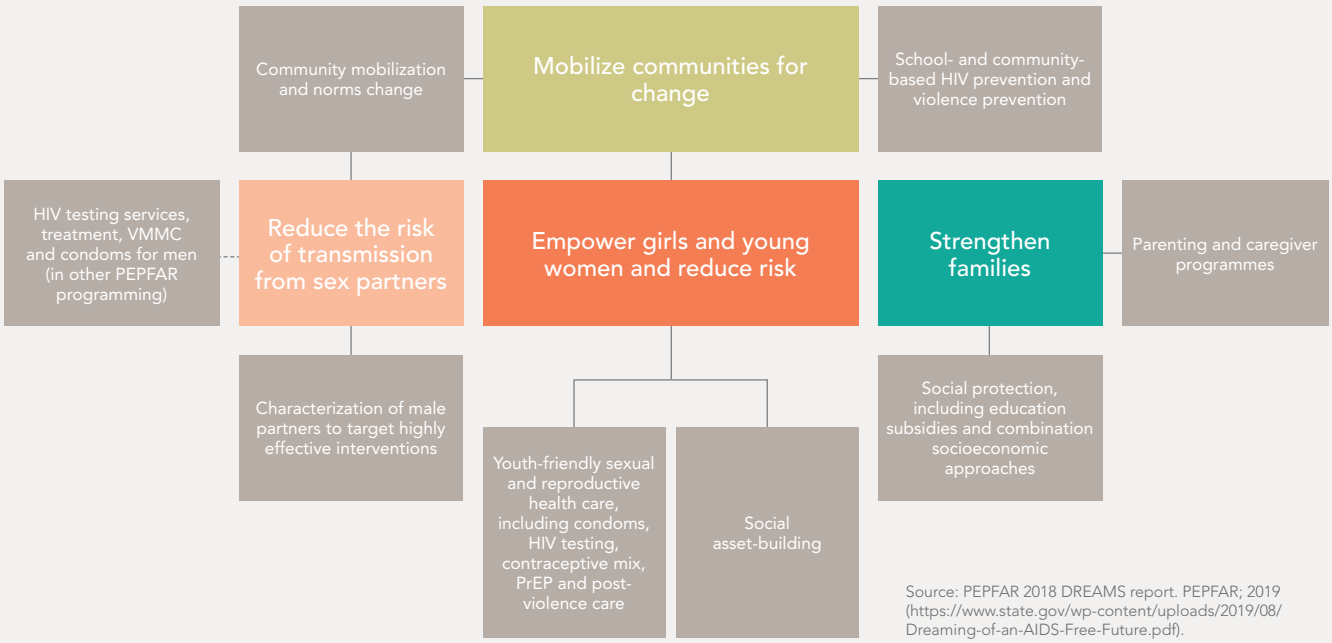
Evidence is also emerging about the influence that specific combinations of programme components have upon different HIV-related outcomes. In urban Zambia, for example, layering educational and economic interventions on top of safe spaces or social asset-building activities resulted in a reduced likelihood of HIV-risk behaviours among adolescent girls, including reduced transactional sex, increased consistent condom use and increased HIV testing *(97)*.

For girls aged 15 to 19 years who received youth-friendly health services, completed the social asset-building curriculum, and received economic and educational support, the likelihood of recent HIV testing increased from 73 to 83% *(96)* (Figure 4.7). Likelihood of consistent condom use also increased, from 33% to 57%, among those aged 15 to 19 years who received economic support, completed the social asset-building curriculum, and received educational support *(96)* (Figure 4.8). The girls aged 15 to 19 years least likely to report engaging in transactional sex were those who received education subsidies and social protection and completed the social asset-building curriculum, or those who received economic support but did not complete the social asset-building curriculum *(96)*.

Evidence also indicates that uptake of multiple, layered services tends to increase over a participant's time in DREAMS. In Uganda, for example, 88% of participants aged 15 to 19 years who had spent more than 24 months in the DREAMS programme had completed both the primary and secondary packages *(98)*. As DREAMS programmes mature and adapt over time, implementing

FIGURE 4.6

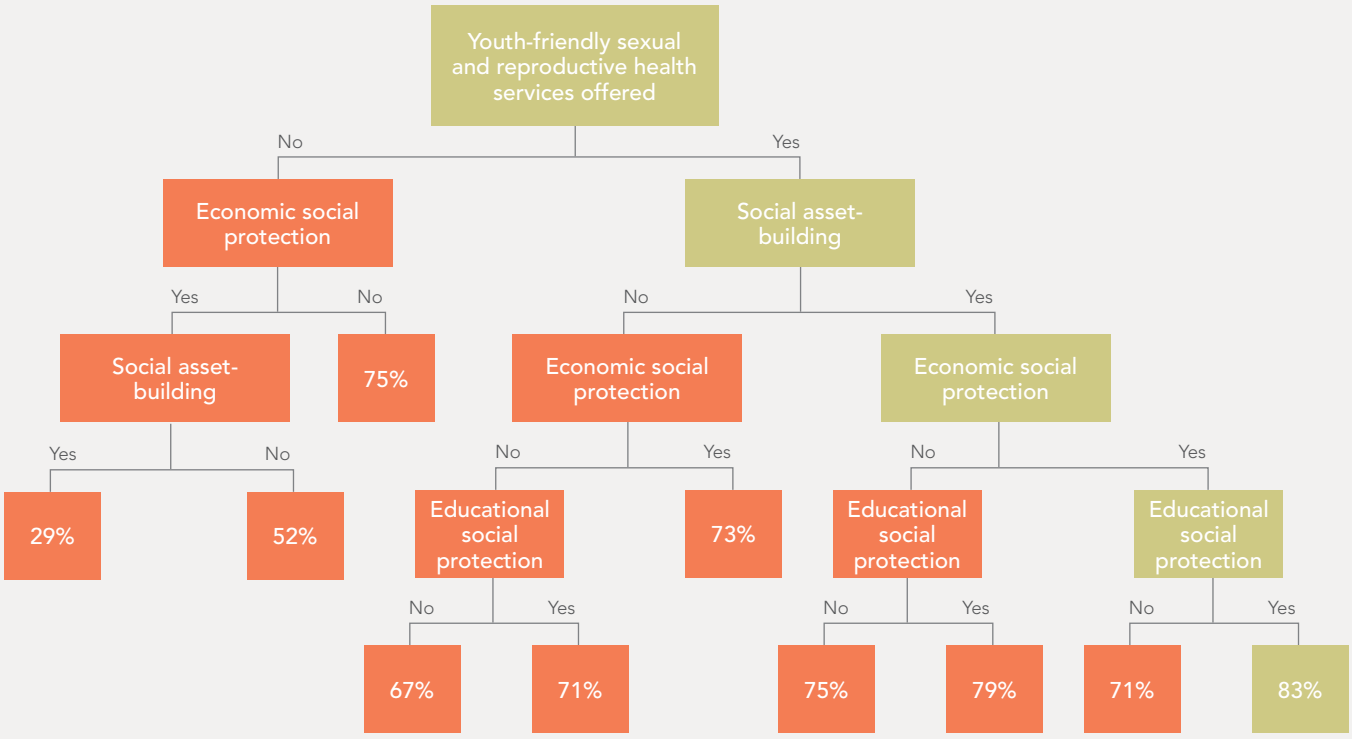
**Schematic outline of the DREAMS approach to empowering girls and young women to reduce their risk of HIV infection**




Source: PEPFAR 2018 DREAMS report. PEPFAR; 2019 (https://www.state.gov/wp-content/uploads/2019/08/Dreaming-of-an-AIDS-Free-Future.pdf).

FIGURE 4.7

**Optimal programme components to increase HIV testing among urban adolescent girls and young women (aged 15–19 years), Zambia, 2018**




Source: Mathur S, Pilgrim N, Heck CJ, Patel SK, Musheke M. What is the effect of layered prevention interventions on HIV risk among adolescent girls in Zambia? IAS 2019, Mexico City, 21–24 July 2019. Abstract TUAC024.
Note: Figures indicate the proportion of adolescent girls and young women reporting HIV testing after receiving programme components.

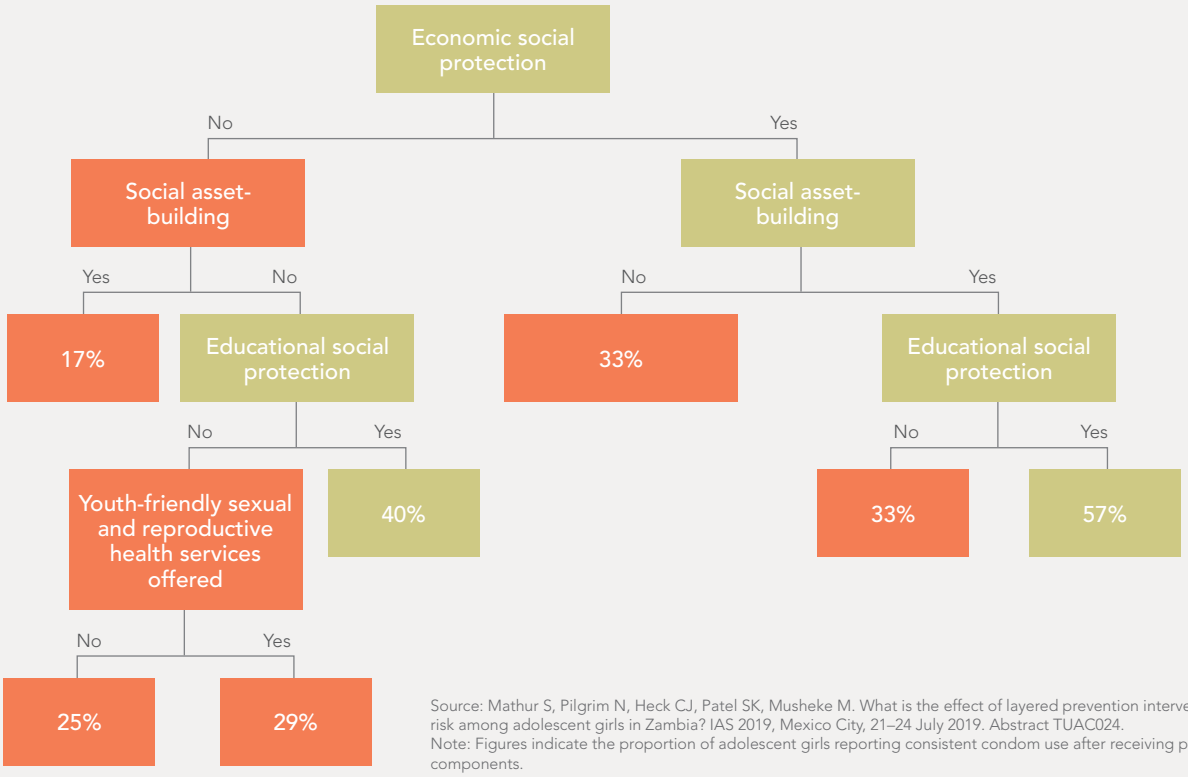
partners are also able to improve their delivery of layered services, which results in increased uptake. This has particularly been noted for the addition of new, non-health interventions, such as safe spaces, mentoring and social protection *(99)*.

In Uganda's Mukono District, 20-year-old Nakitto was unemployed and engaged in transactional sex to meet her basic financial needs. She enrolled in DREAMS and began attending a weekly safe space meeting with a mentor and 27 peers. Through the safe space, Nakitto learned about HIV transmission, received an HIV test, joined a savings group and received training to become a hair dresser. She now earns enough money to support herself and her family, and is working towards owning her own salon.

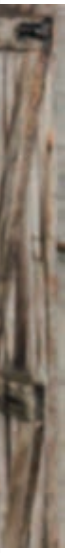
*Nakitto, 20, received layered support from DREAMS. She now earns enough money to support herself and her family, and is working towards owning her own salon. Credit: PEPFAR*

FIGURE 4.8

**Optimal programme components to increase consistent condom use among urban adolescent girls and young women (aged 15–19 years), Zambia, 2018**




Source: Mathur S, Pilgrim N, Heck CJ, Patel SK, Musheke M. What is the effect of layered prevention interventions on HIV risk among adolescent girls in Zambia? IAS 2019, Mexico City, 21–24 July 2019. Abstract TUAC024.
Note: Figures indicate the proportion of adolescent girls reporting consistent condom use after receiving programme components.



### *Service integration*

Integration of HIV and sexual and reproductive health services has improved service uptake and health outcomes in a variety of settings.

A recent systematic review found that the integration of HIV testing into family planning services is feasible, and that it has the potential for positive joint outcomes *(100)*. In Namibia, integrated HIV and sexual and reproductive health services improved accessibility, quality of antenatal care and nurse productivity, while reducing stigma and discrimination and time spent in health facilities—all without compromising the uptake of care or services *(101)*. In Zambia, a study that compared integrated family planning and HIV testing and counselling services found that integration was more efficient than vertical service provision, and that it increased the likelihood of clients accessing some additional needed health services *(102)*.

Integrated approaches adapted for adolescent girls and young women can be especially effective. In Cape Town, South Africa, youth clinics had 3.7 times more contraception visits and 1.9 times more voluntary counselling and testing visits than primary health-care facilities *(103)*.

Several studies and reviews have emphasized that the success of integration depends on contextual factors, including the strength of local health systems, supportive management and the integrity of logistical systems *(104–106)*. When the Zvandiri community peer support initiative in Zimbabwe linked HIV testing and treatment services with sexual and reproductive health, mental health and social protection services, the intervention group was almost four times more likely to adhere to HIV treatment *(107)*. Group members also reported significant increases in confidence and self-esteem.

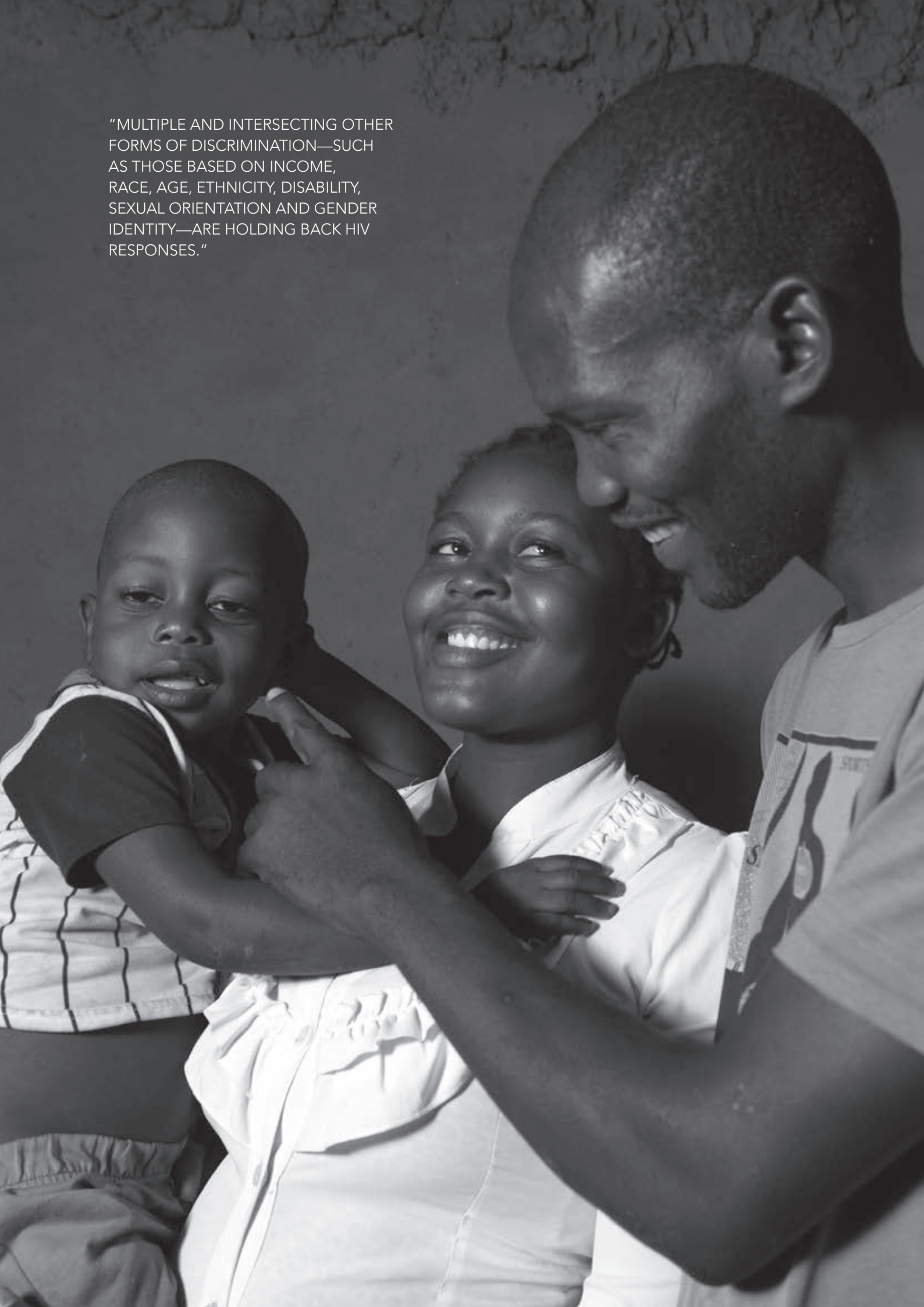
Gender-based violence prevention programmes and services for gender-based violence survivors also need to be integrated with sexual and reproductive health and HIV services as part of a broader intersectoral response. Broader intersectoral linkages should include legal aid, justice, education, financial and other social protection, safe housing and psychosocial support or care.

### *Engaging men and boys within gender-transformative approaches*

Several programmes—including SASA!, Stepping Stones, Program H and One Man Can—have illustrated that community-wide interventions engaging both women and men can change harmful social norms, reduce gender-based violence and prevent HIV. An evaluation of the Safe Homes and Respect for Everyone (SHARE) project in Uganda found reductions in physical and sexual intimate partner violence reported by women of 21% and 20%, respectively *(108)*. By challenging unequal gender norms and helping link women to services, the Rural Response System (RRS) in central and coastal areas of Ghana has reduced physical and sexual intimate partner violence and male controlling behaviour. Women also report decreased levels of depression under the programme. A trained Community-Based Action Team (COMBAT) nominated by the community (both women and men) facilitates activities in the community around gender, violence against women and girls, and the law. Counselling is also provided for couples experiencing "strife" and violence *(108)*.

In conflict-affected communities in the Democratic Republic of the Congo, faith leaders have been trained to model and communicate gender equality and nonviolence. Evaluations show that this approach has halved physical and sexual intimate partner violence and changed attitudes that justify domestic violence and male entitlement to sex *(108)*.

Gender-transformative approaches that address the causes of gender-based power imbalances and work to transform harmful gender roles, norms and relations have been shown to impact a range of health- and gender-related behavioural outcomes, including improving protective sexual behaviours and reducing HIV and STI risk *(109, 110)*. A recent study of efforts in Rwanda to promote male engagement in reproductive and maternal health and violence prevention led to significant impacts, including: (a) reductions in physical and sexual intimate partner violence experienced by women; (b) improvements in women's antenatal clinic attendance and men's accompaniment during antenatal clinic visits; (c) use of modern contraceptives; and (d) partner support during pregnancy *(111)*. It also found a decrease in men's



"MULTIPLE AND INTERSECTING OTHER FORMS OF DISCRIMINATION—SUCH AS THOSE BASED ON INCOME, RACE, AGE, ETHNICITY, DISABILITY, SEXUAL ORIENTATION AND GENDER IDENTITY—ARE HOLDING BACK HIV RESPONSES."

dominance in household decision-making and improvements in the household division of labor.

A systematic review found that the gender-transformative programmes that were most effective take a socioecological approach, whereby gendered power imbalances are not viewed in isolation within male and female partner relationships; rather, they are also addressed as occurring in families, communities and society at large, including in policies and laws at the local, subnational and national levels. It also found that critical reflection on gender norms, integration of multiple components and inclusion of the target audience in the design of the programme produce the most effective results *(110)*.

However, such male engagement efforts are few and far between. A recent global systematic review of sexual and reproductive health interventions involving men and boys found that only 8% of them included components to transform gender relations and unequal power dynamics, with most of the latter activities focused on HIV and addressing violence against women *(112)*.

Meaningful engagement of men and boys is needed to secure gender-equitable attitudes and behaviours, challenge harmful gender norms, refrain from and oppose gender-based violence, and build respect for women's sexual and reproductive health and rights and decision-making. Gender-transformative approaches can convince men and boys to become agents of change for gender equality.

### *Improving access to education*

Substantial progress has been made towards improving access to education for girls and moving towards gender parity within education systems. This has been accomplished through sustained efforts to establish policies and programmes aimed at changing social attitudes, to provide financial support to female students and to make schools more accessible to girls *(113)*.

For example, the Government of Sierra Leone recently overturned a law excluding pregnant girls from school. The decision marked a movement towards evidence-informed interventions as part of plans to build an inclusive education system where all children—regardless of their class, ethnicity, tribe, disability, location, gender, or reproductive or parenting status—are able to live and learn in safety and with dignity *(114)*.

Multiple studies have shown that cash transfers can be an effective method for keeping young people, particularly girls, in school, improving their academic outcomes, increasing their use of health services, delaying their sexual debut, reducing early marriage and teen pregnancy, and promoting safer sexual behaviours *(115, 116)*. In 2019, 47 countries were implementing cash transfer schemes that focused on young women: 22 were in sub-Saharan Africa and 13 were in Latin America and the Caribbean *(117)*.

Evidence around the impact of cash transfers on HIV risk has been limited *(118)*. However, recent studies in Eswatini and the United Republic of Tanzania have found a positive link between cash transfers and reduced HIV risk. The Sitakhela Likusasa study in Eswatini found that cash transfers linked to school attendance reduced HIV infections among recipients by as much as 25% compared to those who were not eligible to receive the incentive *(116)*. Participants who received cash transfers and who were entered into a raffle if they remained STI-free were 38% less likely to acquire HIV than the control group *(116)*. The incentives also contributed to reductions in teen pregnancies and enabled more pregnant participants to return to school after giving birth *(116)*. These results highlight the interconnectedness of interventions in health, education and economic well-being, as well as providing evidence that keeping adolescent girls and young women in education significantly reduces their chances of acquiring HIV.

The United Republic of Tanzania study suggests that a PEPFAR-supported cash transfer and financial education programme—DREAMS Sauti/WORTH+—for adolescent girls and young women who are out of school reduced HIV risk by reducing participant engagement in transactional sex. Reduced transactional sex was also linked to increased empowerment through the financial education component, and a reduction in dependence upon male sex partners to meet basic needs *(119)*.

## Laws and policies

Laws and policies that promote and protect human rights can improve the well-being and health of people, reduce their vulnerability to the HIV epidemic and other major health threats, and enhance the reach, quality and effectiveness of important health services. Unfortunately, criminal laws exist in many countries that violate the rights of people living with HIV and people at risk of HIV infection (Figure 4.9). Such laws and policies undermine privacy, confidentiality and bodily integrity, and they prevent people from accessing and using the services they need to protect their health and well-being. Some limit the sexual and reproductive choices of women and girls; others criminalize people on the basis of their sexual identity or gender expression, or for selling sexual services or using illegal drugs.

Progress has been made in repealing punitive and discriminatory laws in some countries. The Colombia Constitutional Court recently removed the section of the criminal code that criminalized HIV and tuberculosis transmission, ruling that it was unconstitutional and violated the principles of equality and non-discrimination. The Court also established that the law violated the sexual rights of people living with HIV and was ineffective in meeting any public health objectives *(120)*.

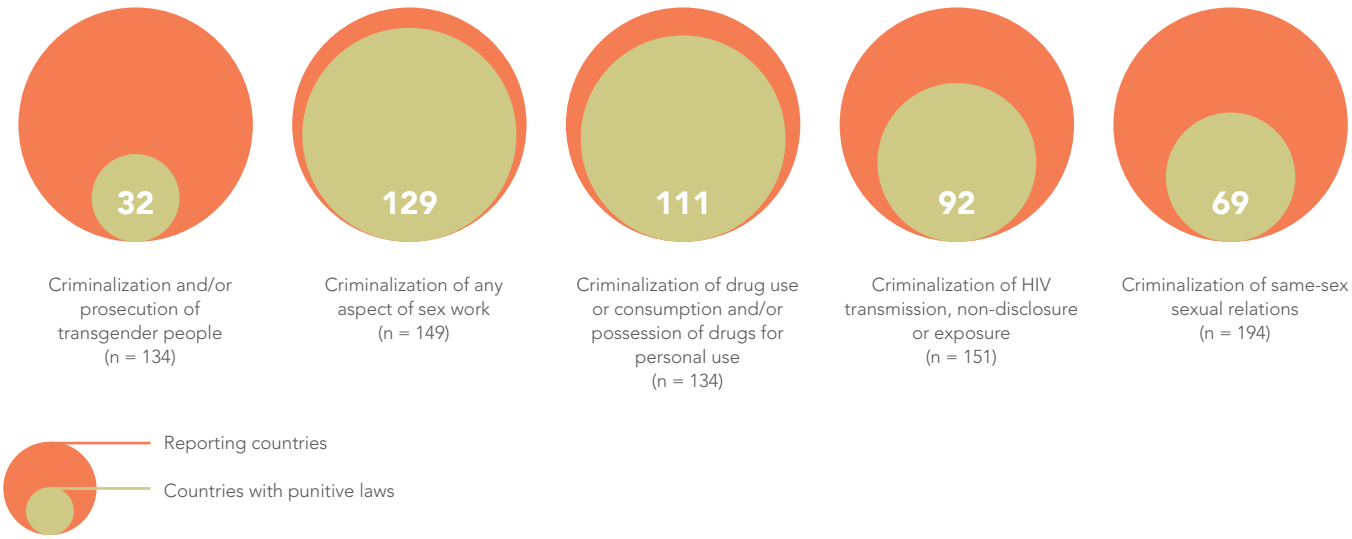
However, as new public health challenges emerge, old challenges resurface. As the COVID-19 pandemic unfolds, some countries have taken the short-sighted step of using criminal law to sanction COVID-19 exposure and transmission, including the extreme case of a South African businessman arrested for attempted murder after allegedly testing positive for COVID-19 and then returning to work *(121, 122)*. Such state actions could discourage people from seeking testing and undergoing contact tracing. This has been the reality for millions of people living with HIV for decades.

### *Criminalization of HIV non-disclosure, exposure and transmission*

Among 151 reporting countries, 92 continue to criminalize HIV exposure, transmission and non-disclosure—all grave violations of the rights of people living with HIV that also frustrate efforts to control HIV epidemics. These laws reinforce stigma and discrimination against people living with HIV and those more vulnerable to HIV infection. These laws are contrary to up-to-date knowledge on the science of HIV-related risks and harms, and they have adverse impacts on public health. Fear of prosecution can deter people living with HIV, or those most at risk of HIV infection, from

FIGURE 4.9

**Countries with discriminatory and punitive laws, global, 2019**




Sources: UNAIDS National Commitments and Policy Instrument, 2017 and 2019 (see http://lawsandpolicies.unaids.org/); supplemented by additional sources (see references in Annex).

talking openly to their physicians or counsellors, disclosing their HIV-positive status or using available HIV testing and treatment services *(123–125)*.

Women interact with health-care systems more frequently than men, and they are more likely to be tested for HIV than men. This means they often are the first person within a couple to know their HIV-positive status *(42)*. Fear of violence, loss of property, loss of child custody and rejection by family and community can prevent women living with HIV from disclosing their status. In countries where non-disclosure of HIV status is criminalized, these fears are compounded by the additional threat of prosecution. Despite these risks, women and girls living with HIV are among the least likely to access legal services *(42)*.

### *Laws that fuel harmful gender norms*

Unequal gender norms that underpin violence are often formalized in systems of power. For example, 19 countries have legal provisions that require a married woman to obey her husband *(126)*, 35 countries do not have legislation that specifically addresses domestic violence *(126)*, and 66 countries that do have domestic violence legislation do not explicitly criminalize marital rape *(127)*.

Women's access to land and other productive resources has been linked to gains in sustainable development, the response against HIV and efforts to address gender-based violence *(128)*. Despite this, their access to economic opportunities continues to be restricted by laws and customs in many countries. Customary laws and practices inhibit their access to land in 90 countries, daughters do not have the same inheritance rights as sons in 34 countries, and widows do not have inheritance rights in 36 countries *(42)*.

### *Criminalization of sex work*

Sex work is criminalized or otherwise punished through a variety of laws in most countries globally. At least 129 of 149 countries with available data currently have laws that criminalize some aspect of sex work. Criminalization of sex work increases both the risk of sex workers acquiring HIV and their vulnerability to violence perpetrated by clients, police and other third parties *(129)*. For example, a 2020 sociobehavioural study of 7259 female sex workers across 10 sub-Saharan African countries showed that increasingly punitive and nonprotective laws on sex work—in combination with the stigma and discrimination associated with them—increase HIV risk for sex workers *(130)*.

The criminalization of the clients of sex workers also has been repeatedly shown to have negative effects for sex workers in terms of their safety, health and overall living conditions *(131)*. Where any aspect of sex work is criminalized, sex workers lack legal protections against violence, discrimination and abuse. Not recognizing sex workers as legitimate workers also denies them the basic health and social safety nets provided to other workers, an exclusion that is particularly harmful during economic downturns and COVID-19 lockdowns *(132)*. Sex work criminalization thus contributes to other rights violations, including denial of housing, security, privacy and access to health services *(133)*.

According to a review of research conducted between 1990 and 2018, repressive policing of sex workers is also associated with an increased risk of sexual and physical violence (from clients or other parties) for sex workers, and with reduced condom use during paid sex. Where sex work is criminalized—either through the criminalization of the sex worker or of the client—the threat of harassment by police and arrest drives sex workers to operate in isolated locations, disrupting peer support networks and service access, and limiting risk reduction opportunities *(131)*.

The decriminalization of sex work is a key component for securing rights, health and safety at work for sex workers, and for achieving their self-determination, amplifying opportunities for outreach and peer education, increasing transparency and reducing stigma and discrimination *(134)*. Decriminalization also reduces the risk of HIV infection, with modelling studies suggesting that decriminalizing sex work could avert 33–46% of HIV infections over 10 years *(135)*. In China, the government ended a policy that allowed police to incarcerate sex workers for up to two years without charge, following nongovernmental organization advocacy, while the Northern Territory in Australia recently decriminalized sex work.

# RECOGNIZING SEX WORK AS WORK IN AUSTRALIA'S NORTHERN TERRITORY

In 2019, Australia's Northern Territory became one of a handful of jurisdictions globally to decriminalize sex work, recognizing it as work. The Northern Territory's Sex Industry Act 2019 and amendments to related legislation will remove punitive police registration and provide sex workers with the industrial protections afforded to other professions, securing their rights to health and safety at work, and supporting their access to justice.

Sex workers, including Aboriginal and migrant sex workers, played a central role in achieving this rights-based legal and policy reform, and they were actively engaged in every step of the legislative process, informing stakeholders and legislators about the impact of different legislative approaches.

"We have been advocating for sex work to be fully decriminalized in the Northern Territory for over 20 years," explains Leanne Melling, Coordinator of the Sex Worker Outreach Programme Northern Territory (SWOP NT). "The decriminalization process in the Northern Territory has provided a powerful example of collective sex worker advocacy in action. Achieving this has required meaningful and active consultation with us, as sex workers, and our organizations."

Sex workers, SWOP NT and the Sex Worker Reference Group, supported by Scarlet Alliance, lobbied political parties and unions. This resulted in motions in support of sex workers' rights and full decriminalization, including the commitment to repeal the Northern Territory Prostitution Regulation Act 1992 and to develop new, safer legislation. The negotiation of closed sessions in government hearings allowed street, private, agency, parlour and brothel-based sex workers to present case studies on the impact of the criminalization of sex work on their health, safety and rights, and to articulate how reforms can mitigate those issues, without fear of prosecution.

"The Government and other stakeholders took a strong partnerships approach, which allowed us to move together to ensure legislative reforms would work to protect all sex workers, as well as the wider community," says Melling. "We prepared formal submissions, briefing papers and guides for sex worker safety at work via community education stalls and info kits that informed submissions to Parliamentary Committees from individual sex workers, sex worker organizations and multiple other sectors."

"Everyone deserves to be safe at work," explains the Honourable Natasha Fyles, Attorney General and Minister for Health for the Northern Territory Government, "but until our 2019 reforms, sex workers weren't afforded that right. Being a sex worker is a recognized profession in the Northern Territory, [but] workers had no protection and minimal rights. This is why we worked hard to deliver a safer and more sustainable framework for sex workers, their industry and the wider community."

FEATURE STORY

*Sandra Nelson, a Member of the Northern Territory Legislative Assembly, shows her support for sex workers' rights and decriminalization of sex work. Politicians who supported passage of the Sex Industry Act 2019 wore hand-painted badges with the red umbrella that is a symbol for sex workers' rights.*
*Credit: SWOP NT*



The passing of the Sex Industry Act 2019 does not mark the end of the fight for sex workers' rights in the Northern Territory. For the full benefits of a decriminalized system to be realized, there are a number of additional intersecting protections that need to be achieved to ensure that sex workers have the same rights and industrial protections as other workers. This involves amendments being made to related Northern Territory legislation and policies, as well as the development of Work Health and Safety Guidelines. Sex workers are continuing to work with government and relevant stakeholders to ensure the intent and benefits of the Act are fully understood and implemented without discrimination.

"Sex workers in the Northern Territory will continue our advocacy to reduce systemic stigma and discrimination, including amendments to the Anti-Discrimination Act to ensure protections against vilification," says Melling. "The Northern Territory decriminalization model, when implemented, will not criminalize street-based workers or migrant sex workers, and will leave no sex worker behind."

### *Criminalization of same-sex sexual relations*

At least 69 countries have laws that criminalize same-sex sexual relations. These laws undermine the basic human rights of lesbians, bisexual women, transgender persons, and gay men and other men who have sex with men.[3] Such legislation and related regulations reinforce gender stereotypes and foster a climate where hate speech, violence, forced anal examinations and discrimination are condoned and perpetrated with impunity by both state and non-state actors *(136)*. They create barriers to reporting abuse or sexual violence (by both public and private actors), and they can prevent people from accessing public health services—including those for HIV—out of fear of stigma and discrimination, abuse, arrest or violence. Criminalization and homophobia can also force lesbian and bisexual women into heterosexual marriages with little or no control over their sexual and reproductive choices, which can leave them at risk of marital rape *(42)*.

Whether a legal environment is enabling or restrictive can have a significant effect on HIV outcomes. A recent study in Africa of gay men and other men who have sex with men showed that among those who were HIV-positive, knowledge of HIV status was three times higher in countries with the least repressive LGBTI laws than it was in the countries with the most repressive LGBTI laws *(137)*.

Transgender people across the world are subjected to intersecting punitive and discriminatory laws and policies that limit their freedoms, including bodily autonomy, legal identity, privacy and self-expression. In 2019, transgender people were criminalized and/or prosecuted in 32 of 134 countries with available data. Transgender people are often targeted under laws criminalizing same-sex sexual activity, while vague wording in some penal provisions also hands law enforcement agencies significant powers when deciding how they define and enforce these laws, leaving transgender people vulnerable to arbitrary and discriminatory arrest, disproportionate enforcement measures and police brutality *(42)*. Transgender people who are victims of criminal acts often face discrimination and abuse when seeking assistance from the legal system. In prison settings, these challenges are often exacerbated: significant numbers of transgender people in correctional institutions report abuse committed by criminal justice personnel, including discrimination, harassment, assault and a lack of protection from other prisoners *(138)*.

At least nine countries constitutionally prohibit discrimination on the ground of sexual orientation, and a total of 74 have laws prohibiting employment discrimination on the grounds of sexual orientation *(139)*. In 2019, the World Association for Sexual Health endorsed the Declaration on Sexual Pleasure, which affirms sex as a natural part of human experience and sexual pleasure derived from consensual and voluntary sexual behaviour as a universal right for all persons reaching the age of consent. It also affirms the rights of all people of diverse sexual orientation and gender identity to self-expression and the freedom to take the sexual partner of their choice *(140)*.

On 11 June 2019, the High Court of Botswana decriminalized consensual same-sex sexual acts, determining that the provisions that criminalized "carnal knowledge against the order of nature" were incompatible with the Constitution of Botswana, and that they were in opposition to its fundamental freedoms clause (Article 3), right to privacy clause (Article 9) and non-discrimination clause (Article 15) *(141)*. In line with numerous precedents, the Court ruled that the term "sex" should be "generously and purposively interpreted to include 'sexual orientation'" *(142)*. That same month, Iceland's parliament passed a law that makes it easier for transgender people to change their legally registered gender and access health care that is specific to their needs *(143)*.

### *Criminalization of drug use or possession*

Drug use or consumption and/or the possession of drugs for personal use is specified as a criminal offence in 111 of 134 countries with available data, with 17 countries reporting that possession of a certain amount of drugs is allowed by law. Repressive enforcement of drugs laws, including harsh criminal penalties and the registration of convicted drug users, force people who use drugs away from public health services into

3 Intersex people are not included because they are not criminalized for being intersex. However, intersex people can have various sexual orientations and gender identities that may result in their criminalization. The human rights and health challenges that intersex people often experience are associated with the medicalization and pathologizing of their intersex status. This may lead to medical procedures, including surgeries, that are often performed without informed consent, and that could lead to long-lasting negative consequences for their health and well-being.

hidden environments, increasing their risk-taking behaviours and heightening the chance of acquiring or transmitting HIV.

Recent research supports previous evidence that repressive street policing drives high-risk injection behaviours and creates barriers to harm reduction services, such as needle–syringe programmes and opioid substitution therapy *(144, 145)*. In some contexts, police target facilities providing these services, harassing and detaining large numbers of people who use drugs in order to boost arrest numbers, which reinforces fears associated with seeking prevention and treatment services. Laws that prohibit the possession of injecting equipment also lead to multiperson use of injecting equipment or the unsafe disposal of contaminated injecting equipment *(145)*.

International and domestic antidrug policies are the leading cause of rising rates of incarceration of women *(146)*. While men are significantly more likely than women to use, possess or sell drugs, it is women who are proportionately more likely to be imprisoned for drug-related convictions in nearly all countries where data were available *(145)*. Some 714 000 women and girls are held in prisons and other closed settings, either sentenced or in pretrial detention—approximately 7% of the world's prison population. The number of women in prison has increased by about 53% since 2000, compared with around 20% for the male population *(147)*.

Women who use drugs continue to face major challenges in accessing sexual and reproductive health services and the human rights-based,

public health-focused and gender-responsive HIV prevention, treatment and care that they urgently need. Discriminatory laws, policies and practices, and multiple intersecting forms of violence, stigma and discrimination—including those related to accessing health, education, employment, and social and legal protection services, or when interacting with law enforcement—are among the barriers that have a significant negative impact on their access to health care.

Countries that have adopted a human-rights based, gender-responsive and health-oriented approach to drug use—including the provision of comprehensive harm reduction services—are delivering better health outcomes for people who inject drugs *(148)*. A coalition of UN Member States, the World Health Organization (WHO), the United Nations Development Programme (UNDP), UNAIDS, the International Centre on Human Rights and Drug Policy at the University of Essex, and leading human rights and drug policy experts developed the *International guidelines on human rights and drug policy*, which provide a comprehensive set of international legal standards for placing human dignity and sustainable development at the centre of Member State responses to illicit drug economies. The 2019 *Guidelines* cover a diverse set of substantive issues ranging from development to criminal justice and public health *(149)*. The International Drug Policy Consortium reported in January 2020 that 29 countries have adopted various drug decriminalization models *(150)*.

### *Consent laws*

Age of consent laws dictate the age at which people can consent to and access health services

without parental permission. While these laws aim to protect young people, in practice, they actually create a barrier to accessing comprehensive sexuality education, sexual and reproductive health, and HIV prevention, testing and treatment services. Reducing the age when a person can autonomously consent has been shown to improve health-seeking behaviours. A 2019 study of national age of consent laws for HIV testing in sub-Saharan Africa showed a 74% increased likelihood of HIV testing among adolescents aged 15 to 18 years in instances where the age of consent for testing is under 16 years compared to countries where it is 16 years or older *(151)*.

Spousal consent laws similarly compromise the rights of women and adolescent girls to health and privacy, making them less likely to seek sexual and reproductive health information and services, including contraception, thus exposing them to unwanted pregnancies, unsafe abortions, and HIV and other STIs. Five countries reported to UNAIDS in 2019 that they have laws requiring spousal consent for married women to access any sexual and reproductive health service.

### RESPONSES TO THE COVID-19 PANDEMIC CAN THREATEN THE RIGHTS AND LIVELIHOODS OF THE MOST VULNERABLE

The global HIV response has generated a strong body of evidence in support of a human rights-based and gender-responsive approach to tackling communicable diseases. It has also illustrated the negative impacts of excessive and ineffective criminal laws on human rights and public health.

The COVID-19 crisis has drawn into sharp focus the dangers posed by deep inequalities in the realization of individual and collective health rights. In some contexts, the policing of regulations aimed at controlling the spread of COVID-19 has penalized the most vulnerable in society, such as the homeless, those living in poverty, or those who are already marginalized, stigmatized or criminalized.

There have been alarming reports of the use of police powers to harass, harm and arrest vulnerable and criminalized groups, such as sex workers, people who use drugs, people living with HIV and LGBTI people. Sex workers all over the world are reporting increased discrimination and harassment, with reports of punitive crackdowns against sex workers resulting in raids on homes, compulsory COVID-19 testing, and arrest and threatened deportation of migrant sex workers *(152)*.

Restrictions created for the response to COVID-19 have also been specifically used to target marginalized communities, such LGBTI people in some countries, undermining public health objectives and threatening the health and safety of these groups. For example, in Panama, where a gender-based confinement regulation called for men and women to stay at home on alternating days, transwomen have reported experiencing harassment or even being detained for allegedly being a male out on the wrong day *(153, 154)*. In Hungary, the state of emergency was used to propose a new bill to remove the right of people to change their gender and name on official documents in order to ensure conformity with their gender identity, which is a clear breach of international human rights to the legal recognition of gender identity *(155)*.

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# 05

# SUSTAINABLE, PEOPLE-CENTRED APPROACHES

# SUSTAINABLE, PEOPLE-CENTRED APPROACHES

## DATA POINTS

HIV COUNSELLING AND TESTING SERVICES ARE INTEGRATED WITH SEXUAL AND REPRODUCTIVE HEALTH SERVICES IN

**ALL OR SOME HEALTH FACILITIES**

IN NEARLY ALL REPORTING COUNTRIES.

**24% OF NEW HIV INFECTIONS IN CHILDREN**

IN 2019 WERE LINKED TO MOTHERS LOSING ACCESS TO HIV CARE, EITHER DURING PREGNANCY OR BREASTFEEDING.

PREVENTIVE TREATMENT FOR TUBERCULOSIS WAS PROVIDED TO

**1.8 MILLION PEOPLE LIVING WITH HIV**

IN 65 HIGH-BURDEN COUNTRIES IN 2018.

**JUST 53 COUNTRIES**

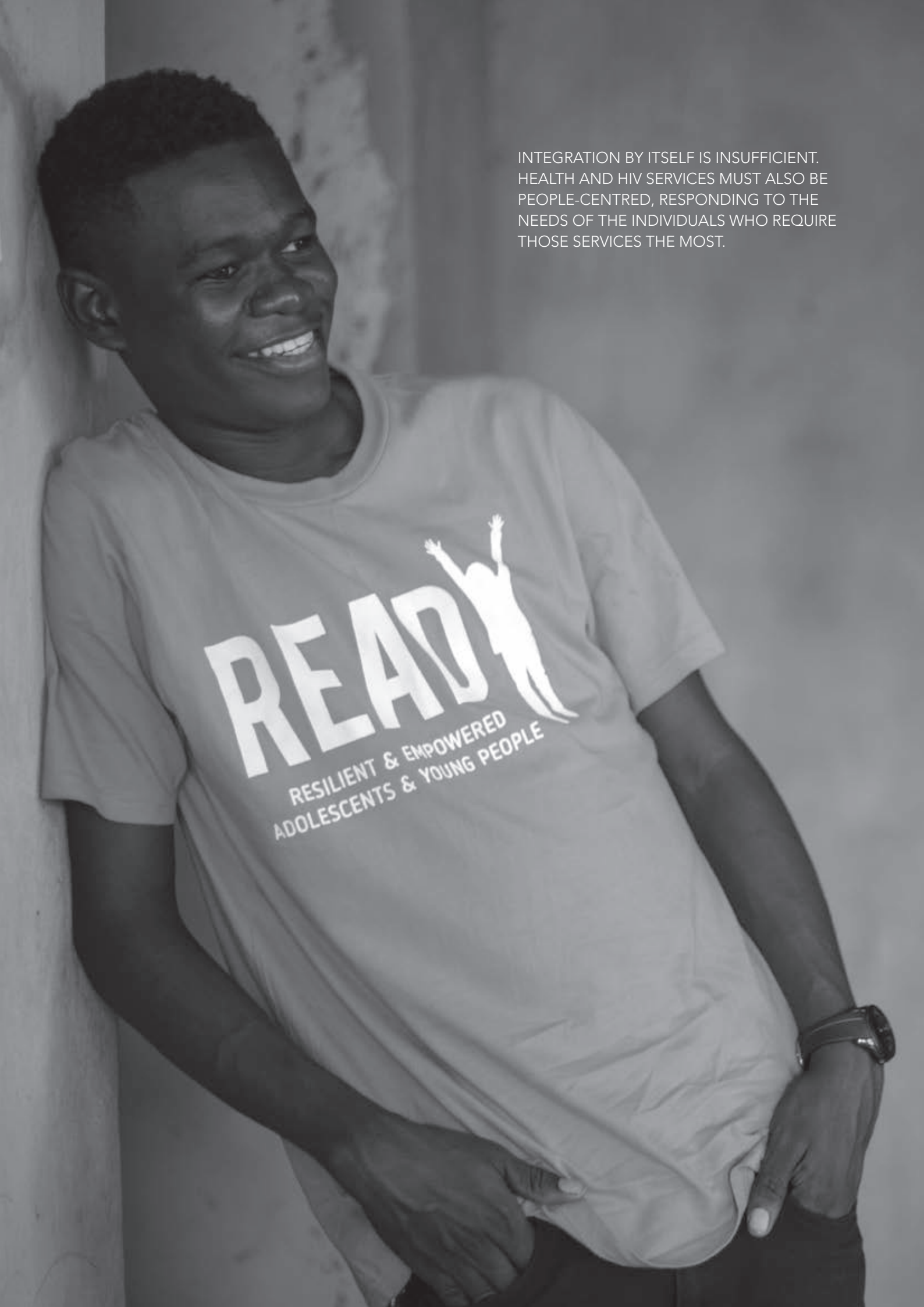
REPORTED IN 2019 THAT THEIR NATIONAL POLICIES INCLUDED EXPLICIT SUPPORTIVE REFERENCES TO HARM REDUCTION.

**ONLY 56 OF 99 COUNTRIES**

WITH RECENT DATA FROM SEX WORKER SURVEYS SHOWED THAT AT LEAST 80% OF RESPONDENTS REPORTED CONDOM USE AT LAST PAID SEX.

Health systems must manage an increasingly complex array of communicable and noncommunicable diseases with finite human and financial resources. The COVID-19 pandemic has laid bare the need for systems to be more resilient, flexible and adaptable, and to provide everyone with the services they need in a more effective way *(1)*. Accelerated movement towards universal health coverage can help health systems achieve the highest possible standards of health and well-being for all people.

The Lancet Global Health Commission on High Quality Health Systems in the SDG Era found that health systems across the world were operating inefficiently, largely due to fragmented services that also compromise the quality of care provided *(2)*. It is estimated that approximately 8.6 million deaths per year in low- and middle-income countries (including almost 300 000 among people living with HIV) could be attributed to the less-than-ideal functioning of health systems. Deeper integration across programmes and services can help health systems become flexible and resilient enough to manage shifting and interlinked burdens of disease, sudden epidemic outbreaks and other emerging health challenges *(3)*.




INTEGRATION BY ITSELF IS INSUFFICIENT. HEALTH AND HIV SERVICES MUST ALSO BE PEOPLE-CENTRED, RESPONDING TO THE NEEDS OF THE INDIVIDUALS WHO REQUIRE THOSE SERVICES THE MOST.

However, integration is not a solution for all health service shortcomings. Health and HIV services must also be people-centred, responding to the needs of the individuals who require those services the most. The previous chapter highlighted the importance of addressing the determinants of health, and how layered approaches that reach beyond the health sector help reduce HIV risk among adolescent girls and young women. This chapter presents additional evidence that a combination of more integrated, people-centred approaches improves service uptake and health outcomes for children living with HIV, adolescent girls, young people and women.

People-centred approaches also better respond to the needs of people at higher risk of HIV infection, such as sex workers, people who inject drugs, transgender people, prisoners and gay men and other men who have sex with men. Ensuring that

health and HIV programmes reach migrants and refugees is also important from the perspective of both human rights and public health. Efforts to maintain health services during COVID-19 lockdowns have underscored the value of differentiated services, including community-led services that are grounded in lived realities and responsive to the needs, priorities and rights of most-affected populations.

## HIV responses and universal health coverage

United Nations (UN) Member States endorsed a comprehensive political declaration on health at the UN High-Level Meeting on Universal Health Coverage in September 2019, agreeing to an ambitious set of targets that aim to ensure that everyone everywhere has affordable health coverage by 2030 *(4)*.

The guiding principle of universal health coverage is equity: everyone—irrespective of race, ethnicity, age, gender, disability or other social status—should receive the quality health services they need without suffering financial hardship due to the costs of paying for those services. A similar set of principles has guided the global HIV response for decades. Public financing is essential for countries to make sustainable progress towards universal health coverage, with funding used efficiently and in a way that ensures equitable access to quality health services. Mobilizing sufficient domestic financing is a particular challenge in low- and middle-income countries, and external assistance provides vital support to the public health systems of many of these countries *(5)*.

Research from Indonesia, Kenya, Uganda and Ukraine has revealed additional concerns as countries move towards universal health coverage and transition to greater domestic funding for HIV programmes *(6)*. For example, if access to HIV treatment requires being part of a national contributory health insurance scheme, individuals who cannot afford to contribute to the scheme may be denied service. To avoid such exclusion, countries are making exceptions by keeping certain services free of charge, as is often the case for vaccinations *(7–9)*.

Concerns remain that some approaches to universal health coverage do not sufficiently address the forces that trap some populations on the margins of society *(10)*. To be truly universal, universal health coverage go beyond health service delivery and address the social determinants of health and promote community participation *(11)*.

Universal health coverage efforts can fruitfully draw on the groundwork laid by HIV programmes in developing multipurpose strategic information tools and systems, equitable service delivery approaches, and inclusive health governance and accountability. In addition, integrating HIV responses into national universal health coverage efforts and health systems can help sustain many of the achievements of the HIV response, such as by integrating HIV services into primary health care or by contracting nongovernmental organizations to provide services to marginalized and vulnerable groups *(8)*.

The laws that facilitate universal health coverage should explicitly uphold human rights and be non-discriminatory, which is best achieved by involving civil society and communities in designing and implementing universal health coverage arrangements—one of the big lessons from the HIV response *(12)*. Universal health coverage also needs a strong accountability framework that includes

### HIV SERVICES WITHIN AN ESSENTIAL HEALTH SERVICE PACKAGE

A defined essential health service package is a central element of universal health coverage. It is a core set of services for which financial resources must be secured. A comprehensive package of HIV services that is sensitive to the needs of diverse communities should be part of an essential health service package *(9)*.

civil society and communities, and that has clear indicators for monitoring the quality, accessibility and results of services *(9)*. It is therefore important to preserve the ability of community-based organizations to influence health policies and participate in their implementation *(13)*. Thailand's National Health Assembly is an example of a participatory health governance structure that includes strong civil society engagement, including from the HIV sector *(14)*.

Universal health coverage is best approached not as an end in itself, but as a tool that countries can use alongside more sweeping efforts to achieve the highest possible standards of health and well-being for all. A central tenet of the AIDS movement has been the insistence that health justice is rooted in broader social and economic struggles for equity. As the HIV response has shown, the success of universal health coverage will depend on whether it puts people first and addresses the contextual factors that shape their health. This is becoming ever more crucial as health crises such as COVID-19 and climate change-related shocks accumulate.

### MANY FORMS OF INTEGRATION

Integration can occur at multiple domains or levels. Decisions on integration must carefully consider the best interests of clients: how health systems can deliver higher quality, more convenient and more cost-effective services that meet clients' needs.

*Law and policy integration* combines separate, disease-specific policies, strategies and plans to provide a unified structural framework and governance process, within which integrated services can be delivered. Such a high-level, unified policy framework can guide service providers and make clear the need for them to act in a unified, holistic and comprehensive manner.

*Systems linkages* can establish unified support systems that facilitate and enable delivery of integrated services. Linked systems include health worker education and training, procurement and supply chain management, pharmacy and laboratory services, health management information and client management systems, and integrated budgeting. This can enhance coordination and support more streamlined and efficient services *(21)*.

*Service integration* can range from linking certain services or adding them to specialized platforms, to fully integrating services in one location (so-called one-stop shops). Integration can also occur at different levels.

*Full service-level integration* has many advantages for health-care users. When clinical services (e.g., for HIV and tuberculosis, or for HIV and sexual and reproductive health) are integrated, it can favour people-centred approaches. But this level of integration can also involve trade-offs with respect to staff workloads, the quality of care and the provision of tailored services, and human rights violations such as discrimination and breaches of confidentiality also can occur. Finally, it can be challenging and expensive to bring the necessary services together in a single place.

*Multifacility integration* involves networking health facilities and other service providers so that people with complex problems can conveniently access specialist care. Coordination can be difficult, though. Another model involves a case manager overseeing care and referring patients to specialists, as needed. This requires highly skilled case managers, who may be difficult to recruit and retain in health systems that are facing health worker shortages *(21)*.

## Integrating HIV and other health services

Integration involves delivering health services in complementary and coherent ways so that people get the care they need in ways that are effective, efficient and equitable *(2)*.

Closer integration of HIV and other relevant health services has the potential to increase the reach and uptake of services, enhance efficiency, be cost-effective, make services more people-centred and improve their quality *(15–17)*. Integrated services can better satisfy the intersecting health care needs of people than traditional, separated delivery models *(18)*. As programme budgets come under increased pressure, the prospect of cost savings is also especially attractive to planners.

While there is good evidence that integration can have such positive effects, it is not always beneficial, and there can even be counterproductive results *(19, 20)*.

### *Integrating HIV and sexual and reproductive health care*

Women need greater integration of services for HIV and sexual and reproductive health, especially in high HIV burden settings in sub-Saharan Africa (see Chapter 4). Studies in multiple settings have demonstrated the advantages of integration:

- The Girl Power project in Malawi used a youth-friendly model that offered HIV testing, family planning and sexually transmitted infection (STI) services in combination. Adolescent girls using the integrated services were 23% more likely to take an HIV test, 57% more likely to receive condoms, 39% more likely to access hormonal contraception and 16% more likely to use services for STIs *(22)*.

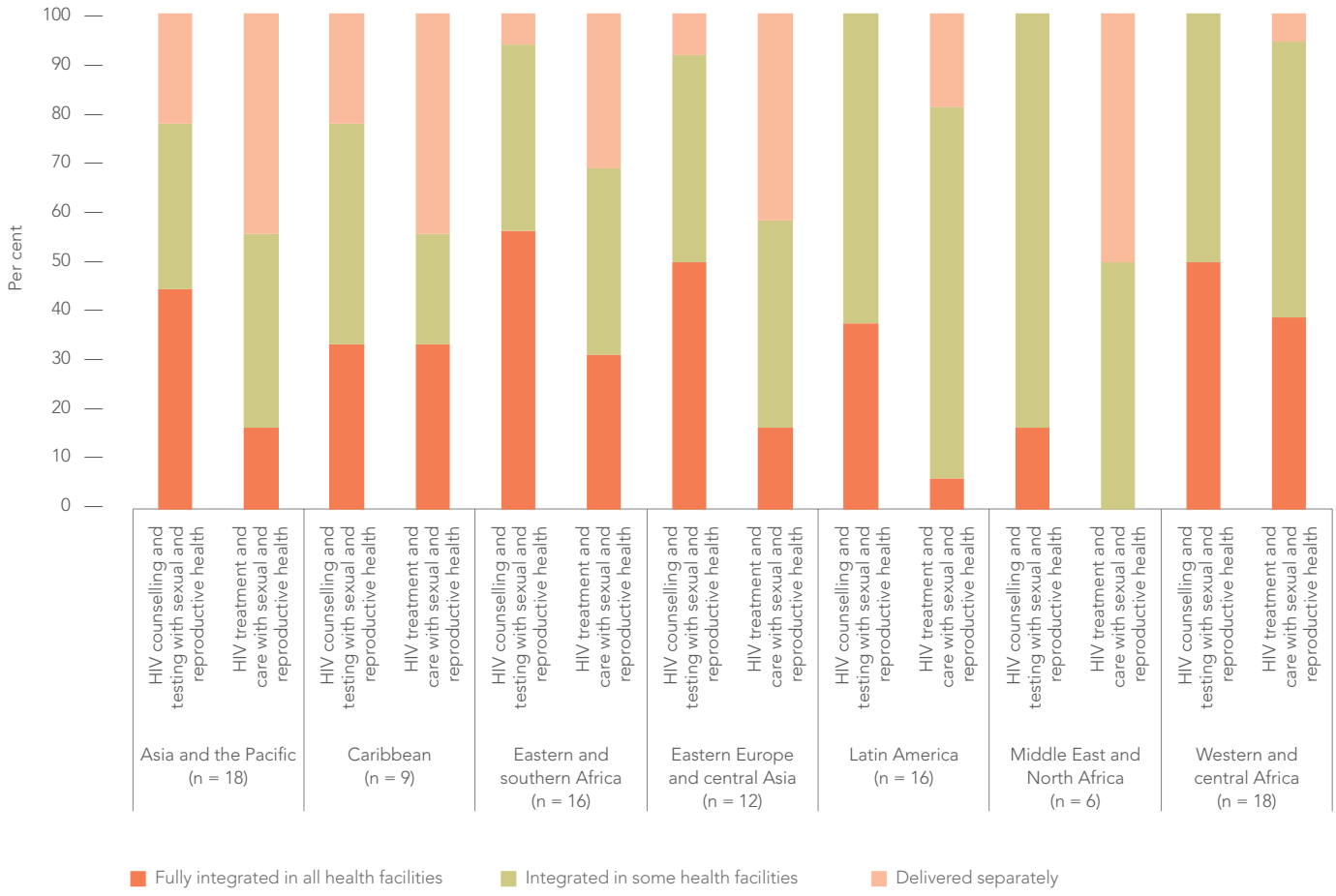
- In Viet Nam, the addition of peer education outreach to integrated sexual and reproductive health and HIV services led to a nearly fivefold increase in adolescents seeking HIV testing *(23)*. A systematic review of studies from Eswatini, Kenya, Uganda and the United States of America also found a potential for increased uptake of HIV testing *(24)*.

- Providing pre-exposure prophylaxis (PrEP) through routine family planning services is also a promising strategy to reach women in high HIV burden settings, as shown in a study in South Africa where very high PrEP retention rates (92%) were achieved *(25)*.[1]

Other studies, including many analysed in a 2016 nonsystematic review, have also shown that integration can increase the uptake of services, but they add important caveats *(26)*. The significance of contextual factors is emphasized frequently, including the strength of local health systems, the quality of management support and the integrity of logistical systems *(1, 3, 19, 27)*.

FIGURE 5.1

**Percentage of reporting countries that deliver sexual and reproductive health services integrated with HIV services, by region, 2019**




UNAIDS National Commitments and Policy Instrument, 2019 (see http://lawsandpolicies.unaids.org/).

1 The World Health Organization (WHO) recommends considering offering PrEP in settings where the incidence of HIV is above 3%.

HIV counselling and testing services have been integrated with sexual and reproductive health services in all or some health facilities in nearly all countries that reported these data to UNAIDS in 2019, with full integration most common in eastern and southern Africa and least common in the Middle East and North Africa (Figure 5.1). Integration of HIV treatment and care with sexual and reproductive health services was less common, but it was still fully integrated in all health facilities in about one third of reporting countries in the Caribbean, eastern and southern Africa, and western and central Africa.

### *Improving maternal and child health*

The integration of maternal and child health and HIV services is well-developed in many countries with large HIV epidemics, where it plays a key role in the scale-up of antiretroviral therapy for mothers living with HIV and steep reductions in new HIV infections among children. Several studies, including large systematic reviews, have shown that integrating antenatal care and HIV services increases the uptake of services and improves health outcomes *(28–30)*.

- Women living with HIV who received a family-focused, integrated combination of care services in Nigeria were almost three times more likely to initiate antiretroviral therapy (97% versus 37%) and much more likely to remain in care after giving birth (75% versus 7%, 12 weeks post-partum) compared with the standard model of care *(31)*.

- When postnatal care was integrated with HIV care at a maternal and child health clinic in Cape Town, South Africa, 77% of mothers living with HIV achieved viral suppression at 12 months compared with 56% in the control group *(32)*.

- A study from Karnataka, India, found that integration of nutrition support and services to prevent mother-to-child HIV transmission improved health outcomes for HIV-exposed infants and was cost-effective, and that combined immunization and HIV testing interventions increased infant HIV testing coverage *(33)*.

Those kinds of outcomes are not guaranteed, though, often due to wider constraints—including health system frailties, poor working conditions, and social and economic barriers *(34–36)*.

## IMPROVING PREVENTION OF VERTICAL HIV TRANSMISSION

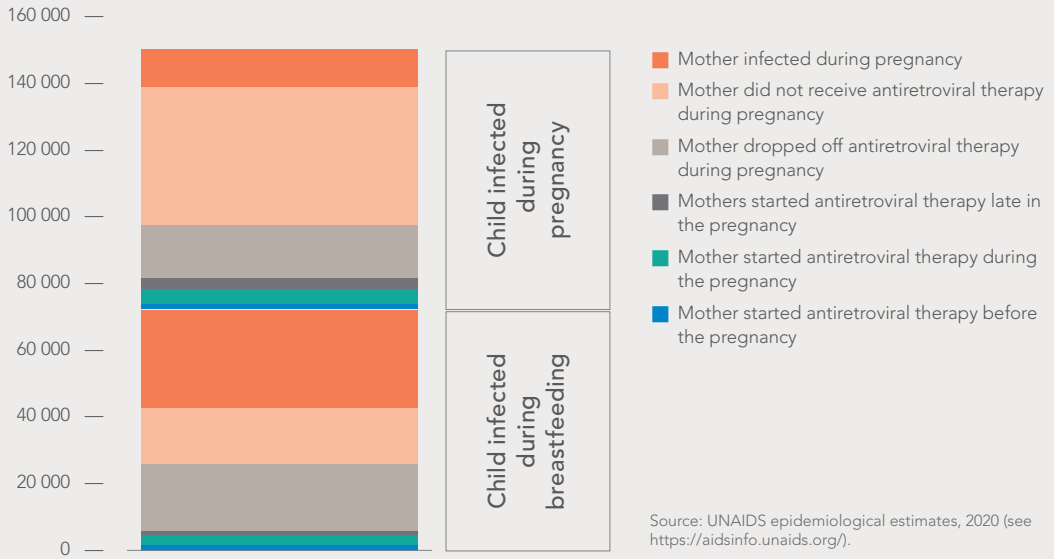
The past decade has brought important reductions in new HIV infections among children (see Chapter 2). But progress has been uneven, and the pace of decline is slowing. The remaining treatment gaps among pregnant women living with HIV, women exposed to HIV during pregnancy and breastfeeding, and women living with HIV who lose access to their antiretroviral therapy during pregnancy and breastfeeding undermine further progress (Figure 5.2). It is necessary to analyze these gaps in each country and directly address them them in order to eliminate new HIV infections among children.

In many settings, pregnant women living with HIV are not diagnosed and linked to treatment: about 41 000 new child HIV infections in 2019 were attributable to pregnant HIV-positive women not being provided antiretroviral therapy during pregnancy *(37)*. Diagnosing women living with HIV early and improving linkages to care has been shown to reduce the vertical transmission of HIV. A study in Kenya and Uganda found that universal testing and a patient-centred care model (which included welcoming staff, flexible clinic hours, and referrals between antenatal care and HIV clinics) reduced the rate of vertical transmission to 0.5% among women who had been diagnosed with HIV *(38)*.

Women's retention in care is an additional challenge. According to analysis done in 2019, one in five women living with HIV who had started antiretroviral therapy during pregnancy were no longer taking their medication 12 months later. Interruptions in care were even higher among women who had started treatment before becoming pregnant: one in four were no longer taking antiretroviral medicines nine months later *(39)*. Globally, an estimated 36 000 new HIV infections in children in 2019 were linked to mothers losing access to HIV care either during pregnancy or breastfeeding. HIV acquisition during pregnancy and the

FIGURE 5.2

**New child HIV infections by prevention of vertical transmission intervention, global, 2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

breastfeeding period is another important factor in vertical transmission *(40)*, accounting for an estimated 41 000 child infections.

Reasons for dropping out of care include the need for multiple clinic visits, user fees and transport costs, long waiting times, stock-outs of medicines and diagnostics, stigmatizing behaviour of health-care providers, poor counselling, lack of support from families or partners, and side-effects of antiretroviral medicines *(41–43)*.

Mentor mother and peer-to-peer models are effective at enabling women and children to access testing, adhere to treatment and remain in care, even in difficult circumstances. These models involve training HIV-positive women to provide front-line health services, advice and support to women and their families *(44)*. In Uganda, the mothers2mothers (M2M) programme significantly increased retention of mother–baby pairs: 82% were retained at six months after cessation of breastfeeding (compared with 42% in the control group), and 71% were retained at 18 months after birth (21% in the control group) *(45)*.

### *Integrating HIV and tuberculosis services*

Tuberculosis is one of the top 10 causes of death worldwide and the leading cause of death among people living with HIV (see Chapter 2). Preventive treatment for tuberculosis among people living with HIV in 65 high-burden countries has improved dramatically in recent years, reaching 1.8 million in 2018 (Figure 5.3).

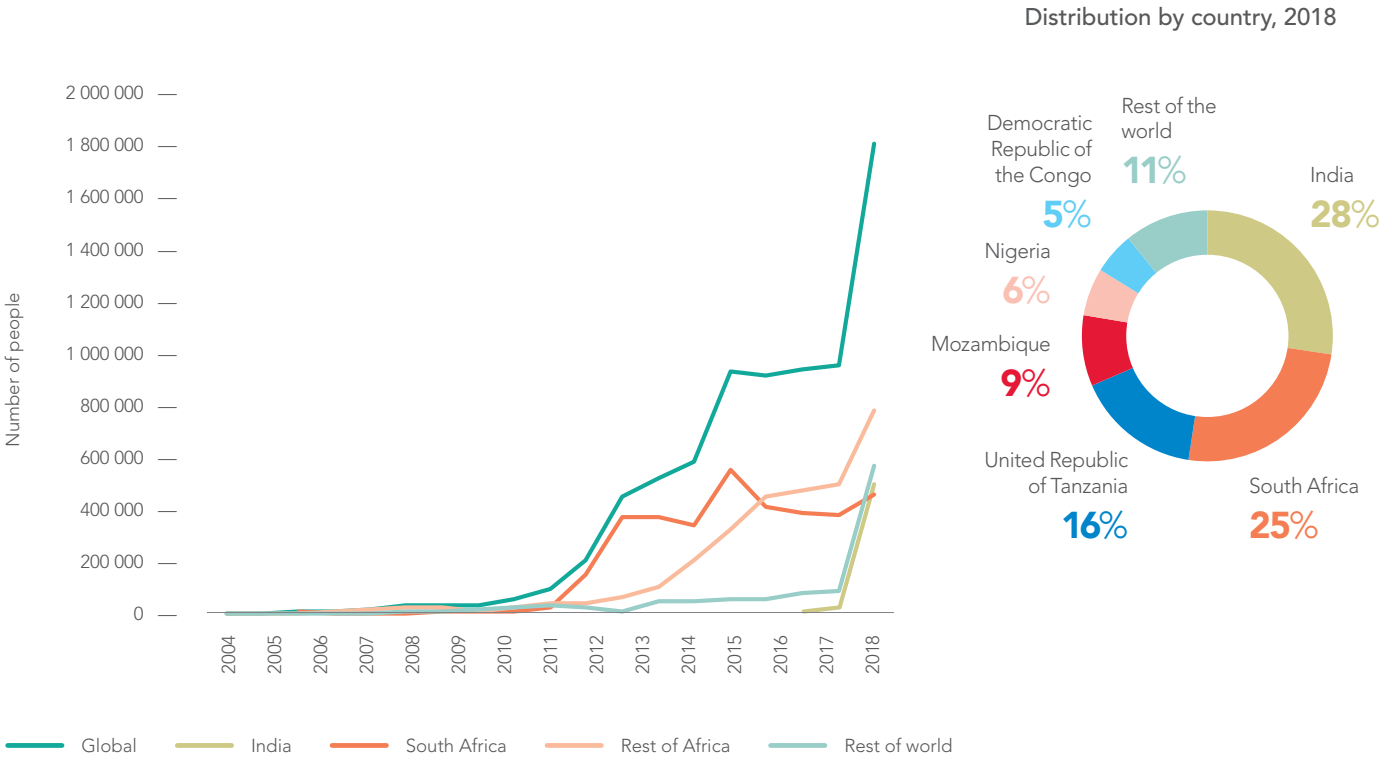
Despite this progress, large gaps in tuberculosis detection and preventive treatment exist in several high-burden countries (Figure 5.4). In 66 countries with available data, coverage of tuberculosis preventive treatment among people living with HIV who were newly enrolled in care was just 49% in 2018. Among the 11 high TB/HIV burden countries that reported these data, coverage ranged from 10% in Indonesia to 97% in the Russian Federation. About 0.8 million of the 10 million new tuberculosis cases globally in 2018 were among people living with HIV *(46)*.

Integrating tuberculosis and HIV services is therefore vitally important for the control of both diseases. Among 30 countries with high burdens of both HIV and tuberculosis, 11 reported having countrywide (i.e., greater than 95% of health facilities providing HIV treatment and care) colocation of services providing HIV testing with WHO-recommended rapid molecular tuberculosis diagnostics; just five reported that both antiretroviral therapy and tuberculosis treatment are provided in the same health facility countrywide (Table 5.1).

Deeper integration can be difficult in poorly resourced health systems. Facilities may lack staff with sufficient training to provide integrated care *(47)*, and they may not be equipped to provide the prompt tuberculosis screening and testing that is required *(48–50)*. Study evidence from South Africa, Uganda and Zambia show that such hurdles can be overcome, with success requiring the management

FIGURE 5.3

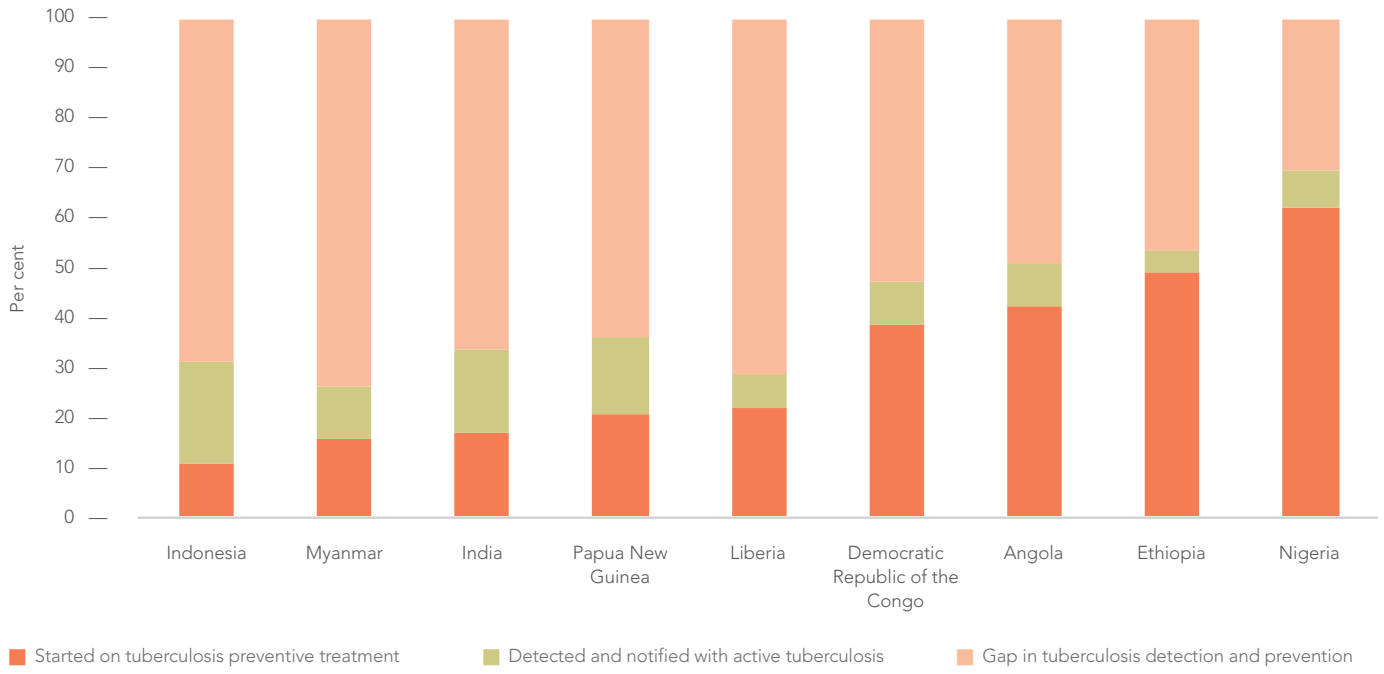
**People living with HIV who received preventive treatment for tuberculosis, 2000–2018**




Source: UNAIDS Global AIDS Monitoring, 2019 (see https://aidsinfo.unaids.org/); Global tuberculosis report. Geneva: WHO; 2019.
Note: Until 2016, countries reported the number of people living with HIV newly enrolled in HIV care who received preventive treatment for tuberculosis. As of 2017, countries could report the number of people living with HIV both newly and/or currently enrolled in HIV care who received preventive treatment for tuberculosis.

FIGURE 5.4

**Percentage of people living with HIV newly enrolled in HIV care who were detected and notified with active tuberculosis or started on tuberculosis preventive treatment, select countries, 2018**




Source: UNAIDS Global AIDS Monitoring, 2019 (see https://aidsinfo.unaids.org/); Global tuberculosis report. Geneva: WHO; 2019.
Note: Countries included are among the 30 high tuberculosis–HIV burden countries that had available data on the number of people living with HIV who were newly enrolled in HIV care, those who received tuberculosis preventive treatment, and those who were detected and notified of having active tuberculosis during the reporting period. These countries represent an estimated 27% of incident tuberculosis cases among people living with HIV in 2018.

of potential increases in staff workload, dealing with record-keeping challenges and maintaining effective infection control *(51–53)*. Strong and supportive management is especially important, as shown in a recent review from South Africa *(50)*.

### *Tackling HIV and hepatitis C coinfection*

The overlap of the viral hepatitis and HIV epidemics, especially among people who inject drugs, makes closer service integration highly advisable: it has been estimated that half (49.3%) of people who inject drugs have acquired hepatitis C infection *(54)*. The evidence suggests that the integration of services for hepatitis C and substance use can improve engagement along the continuum of hepatitis C care among people who inject drugs *(55)*.

Direct-acting antiviral medicines—introduced in 2013 and with cure rates of more than 90%—have revolutionized the treatment of hepatitis C infection. Initial affordability barriers have been reduced substantially, with heightened competition between manufacturers of generic direct-acting antivirals leading to steep price reductions *(56)*. Globally, 5 million people diagnosed with hepatitis C infection had been treated using direct-acting antivirals by the end of 2017.

Integration of HIV and hepatitis C treatment (including to prevent further transmission) can produce dramatic results for people who inject drugs. In a recent cluster randomized trial in India, people who inject drugs received hepatitis C testing and information at integrated care centres that provided HIV testing and treatment and harm reduction services. They were four times more likely to test for hepatitis C and seven times more likely to know their hepatitis C status and initiate treatment than peers using standard care centres *(57)*.

TABLE 5.1

## Tuberculosis and HIV policy scorecard, 30 countries with high TB/HIV burden, 2020

| | Tuberculosis preventive treatment recommended for people living with HIV in national strategies, policies, plans or guidelines | Transitioning to three-month preventative regimens (or less) in national guidelines | Adopted the 2015 WHO policy update on the use of LF-LAM for the diagnosis and screening of active tuberculosis in people living with HIV | WHO-recommended rapid molecular diagnostics are colocated with HIV testing and care | People living with HIV who have tuberculosis received antiretroviral therapy and tuberculosis treatment in the same place |
|---|---|---|---|---|---|
| Angola | Yes | No | Yes | Countrywide (>95% of health facilities providing HIV testing and care) | Countrywide (>95% of health facilities) |
| Botswana | Yes | Yes | Yes | Countrywide (>95% of health facilities providing HIV testing and care) | Countrywide (>95% of health facilities) |
| Brazil | Yes | No | Data not available | In few (<50%) health facilities providing HIV testing and care | Data not available |
| Cameroon | Data not available | Data not available | Data not available | Data not available | Data not available |
| Central African Republic | Yes | No | No | In many (50–95%) health facilities providing HIV testing and care | In many (50–95%) health facilities |
| Chad | Data not available | Data not available | Data not available | Data not available | Data not available |
| China | Data not available | Data not available | Data not available | Data not available | Data not available |
| Congo | Yes | No | Yes | In many (50–95%) health facilities providing HIV testing and care | In many (50–95%) health facilities |
| Democratic Republic of the Congo | Data not available | Data not available | Data not available | Data not available | Data not available |
| Eswatini | Yes | Yes | Yes | Countrywide (>95% of health facilities providing HIV testing and care) | Countrywide (>95% of health facilities) |
| Ethiopia | Data not available | Data not available | Data not available | Data not available | Data not available |
| Ghana | Yes | Yes | No | Not integrated in practice | In many (50–95%) health facilities |
| Guinea-Bissau | Data not available | Data not available | Data not available | Data not available | Data not available |
| India | Data not available | Data not available | Data not available | Data not available | Data not available |
| Indonesia | Yes | No | No | In many (50–95%) health facilities providing HIV testing and care | Data not available |
| Kenya | Yes | No | Yes | Countrywide (>95% of health facilities providing HIV testing and care) | No |
| Lesotho | Yes | Yes | Yes | Countrywide (>95% of health facilities providing HIV testing and care) | In many (50–95%) health facilities |
| Liberia | Data not available | Data not available | Data not available | Data not available | Data not available |
| Malawi | Yes | Yes | Yes | Countrywide (>95% of health facilities providing HIV testing and care) | In many (50–95%) health facilities |
| Mozambique | Data not available | Data not available | Data not available | Data not available | Data not available |
| Myanmar | Yes | Yes | Yes | Not integrated in practice | No |
| Namibia | Data not available | Data not available | Data not available | Data not available | Data not available |
| Nigeria | Yes | No | No | Countrywide (>95% of health facilities providing HIV testing and care) | No |
| Papua New Guinea | Data not available | Data not available | Data not available | Data not available | Data not available |
| South Africa | Yes | No | Yes | Countrywide (>95% of health facilities providing HIV testing and care) | Countrywide (>95% of health facilities) |
| Thailand | Yes | No | No | Not integrated in practice | In many (50–95%) health facilities |
| Uganda | Yes | No | Yes | Countrywide (>95% of health facilities providing HIV testing and care) | Countrywide (>95% of health facilities) |
| United Republic of Tanzania | Yes | No | No | In many (50–95%) health facilities providing HIV testing and care | No |
| Zambia | Yes | Yes | Yes | Countrywide (>95% of health facilities providing HIV testing and care) | In many (50–95%) health facilities |
| Zimbabwe | Yes | Data not available | No | Countrywide (>95% of health facilities providing HIV testing and care) | Countrywide (>95% of health facilities) |

Source: UNAIDS National Commitments and Policy Instrument, 2020 (see http://lawsandpolicies.unaids.org/).

HALF OF PEOPLE WHO INJECT DRUGS HAVE ACQUIRED HEPATITIS C INFECTION. INTEGRATION OF HIV AND HEPATITIS C TREATMENT CAN PRODUCE DRAMATICALLY IMPROVED HEALTH OUTCOMES FOR THIS POPULATION.

## GEOSPATIAL DATA REVEAL THE HIDDEN PATTERNS OF HIV EPIDEMICS

Advances in the collection and analysis of geospatial data are improving understanding of how viruses spread through communities—and how programmes can better prevent new infections.

In India's capital, New Delhi, the use of biometric and geolocation data is yielding fresh insight into the spread of HIV and viral hepatitis C infections through networks of people who inject drugs. A cohort of more than 2500 people who inject drugs in the city took biannual HIV and hepatitis C tests between 2017 and 2019 and provided confidential, encrypted biometric data. Those data were used to map a detailed network of incident and prevalent HIV and hepatitis C infections across locations and social networks *(58)*.

The sociospatial network mapping shows how HIV and hepatitis C infections were transmitted along individuals' immediate and extended injection networks. The proximity of a network to specific hotspot locations, where up to 1000 people who inject drugs pass through daily, were the strongest predictors of HIV and hepatitis C incidence (Figure 5.5).[2] This suggests that identifying such hotspots and targeting them for disease prevention, testing and treatment interventions (including harm reduction and PrEP) could improve efforts to control HIV and hepatitis C epidemics within networks of people who inject drugs *(58)*.

A new analysis from Rakai district, Uganda, suggests that focusing interventions on high-prevalence communities would not be enough to control the area's HIV epidemic.

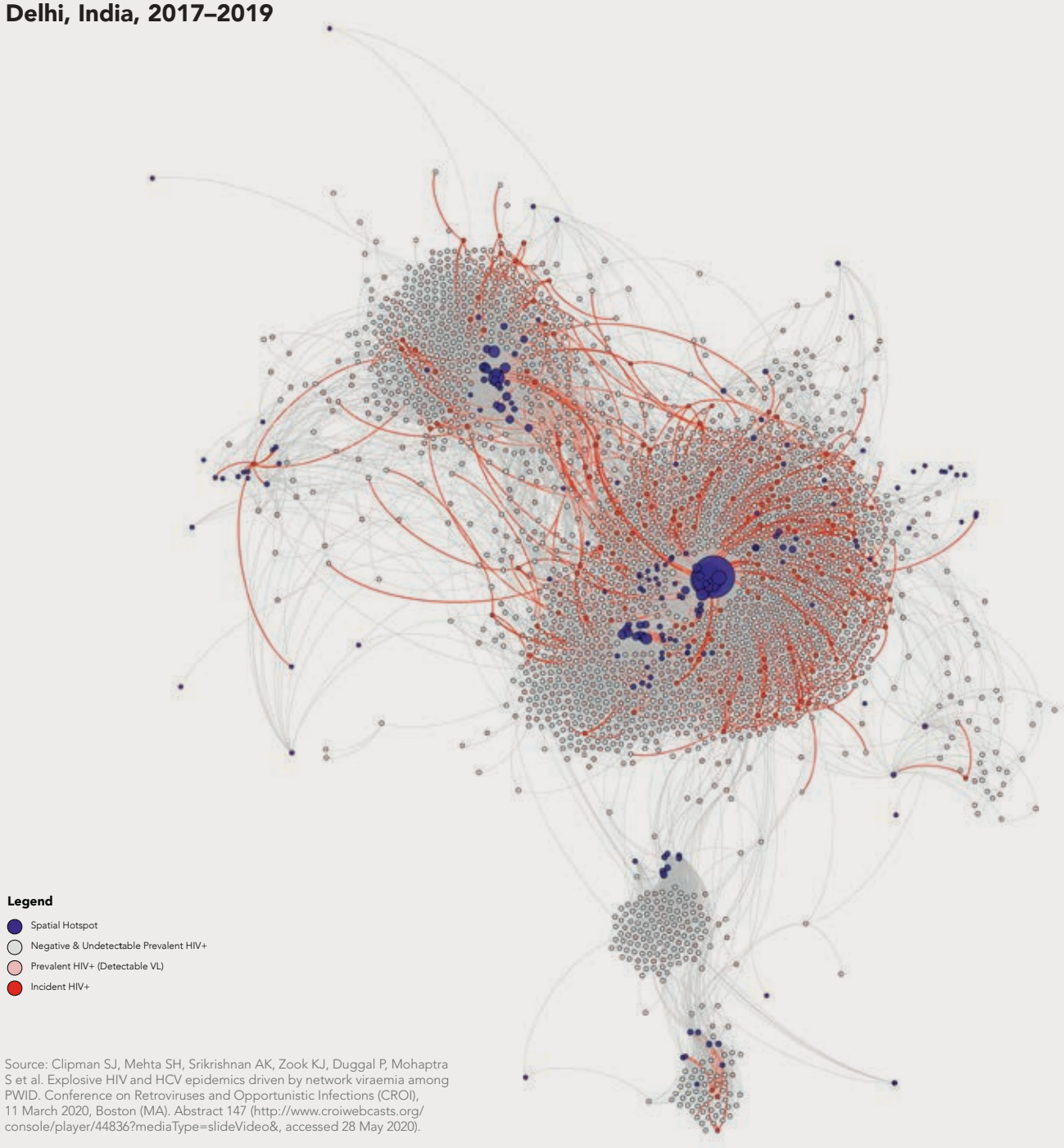
Within the district, HIV prevalence in fishing communities on the shores of Lake Victoria (40%) is almost three times higher than in neighbouring inland communities (14%). It is generally assumed that HIV spreads from areas with a high prevalence of untreated infection to areas with a low prevalence of untreated infection. However, phylogenetic analysis of population-based survey data found that the smaller lakeside communities were not a major source of HIV transmissions to the larger, inland areas. Cross-community HIV transmission was rare, and when it did occur, the route of transmission tended to flow into the high-prevalence lakeside areas rather than from them (Figure 5.6) *(59)*.

The analysis also found that men were disproportionately contributing to onward HIV transmission, a pattern that highlights the need for interventions that are better at protecting women from acquiring HIV, including achieving much higher levels of testing, treatment and viral suppression among men who are living with HIV *(59)*.

2 An animated version of the graphic is available at: http://www.croiwebcasts.org/console/player/44836?mediaType=slideVideo&

FIGURE 5.5

**Social and spatial network and HIV incidence among people who inject drugs in New Delhi, India, 2017–2019**

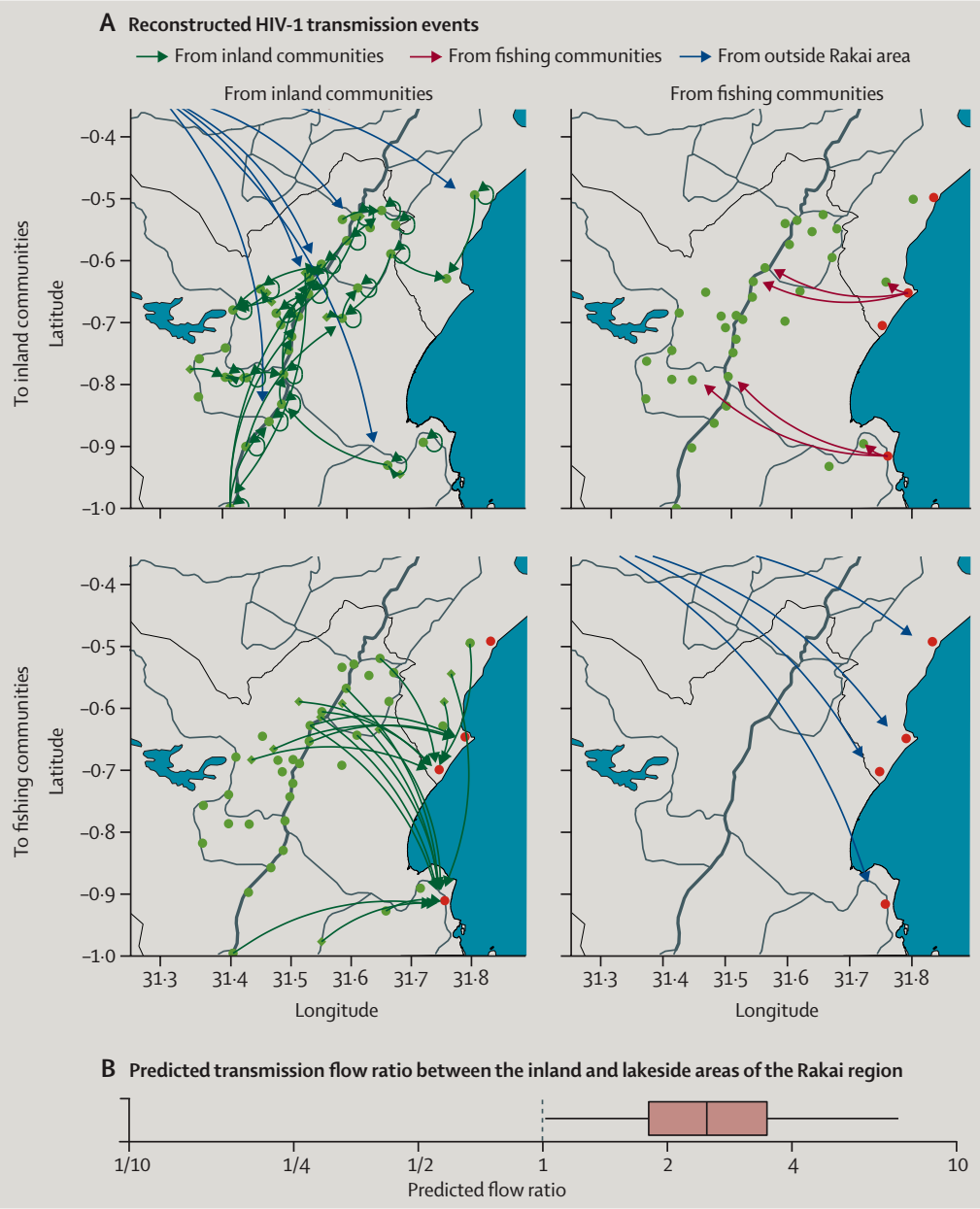



Source: Clipman SJ, Mehta SH, Srikrishnan AK, Zook KJ, Duggal P, Mohaptra S et al. Explosive HIV and HCV epidemics driven by network viraemia among PWID. Conference on Retroviruses and Opportunistic Infections (CROI), 11 March 2020, Boston (MA). Abstract 147 (http://www.croiwebcasts.org/console/player/44836?mediaType=slideVideo&, accessed 28 May 2020).

Note: n = 2512

FIGURE 5.6

## Direction of HIV transmission flows to and from fishing communities, Rakai, Uganda, 2011–2015




Source: Ratmann O, Kagaayi J, Hall M, Golubchick T, Kigozi G, Xi X et al. Quantifying HIV transmission flow between high-prevalence hotspots and surrounding communities: a population-based study in Rakai, Uganda. The Lancet HIV. 2020;7(3):E173-E183 (https://doi.org/10.1016/S2352-3018(19)30378-9, accessed 28 May 2020).
Note 1: From phylogenetic analysis of 293 source–recipient pairs.
Note 2: Predicted transmission flow ratio (inland to lake compared to lake to inland) = 2.50 (95% credible interval; 1.02–7.30).

### *Integrating HIV and noncommunicable disease services*

An estimated 41 million people worldwide died of noncommunicable diseases in 2016, equivalent to 71% of all global deaths. Four noncommunicable diseases caused most of those deaths: cardiovascular diseases, cancer, chronic respiratory diseases and diabetes *(60)*. Noncommunicable diseases are common comorbidities among people living with HIV, especially those of advanced age. A recent systematic review and meta-analysis of studies calculated pooled estimates for the prevalence of noncommunicable diseases among people living with HIV in low- and middle-income countries: hypertension prevalence was 21.2%, hypercholesterolemia prevalence was 22.2%, obesity prevalence was 7.8%, depression prevalence was 24.4%, and diabetes prevalence was 1.3–18% *(61)*.

Integration of noncommunicable disease services for people living with HIV is critically important to addressing their needs. Efforts can capitalize on the systems and partnerships already established for HIV service delivery in many countries, and on the rights-based lessons of the HIV response. The prevention of risk factors for noncommunicable disease, such as alcohol dependency and tobacco use, is also an important strategy for improving health outcomes among people living with HIV *(62, 63)*.

A 2017 review of studies from low-income countries concluded that an integrated approach would be sensible and feasible given the overlapping burdens of disease and similar service delivery requirements *(64)*. These findings were reinforced by a 2018 review of various models of HIV and noncommunicable disease care integration in sub-Saharan Africa *(65)*. When the SEARCH (Sustainable East Africa Research in Community Health) study applied a community health approach and integrated HIV into multidisease service delivery, it led to a range of improvements: in addition to producing dramatic increases in HIV service coverage and reductions in HIV incidence and mortality, HIV-associated tuberculosis incidence was reduced and hypertension control was improved *(66)*. Community stigma was also reduced. The costs of this streamlined care approach were similar to or lower than other cost estimates for HIV care services in sub-Saharan Africa *(66)*.

Caution is needed, though, to avoid overburdening clinics and compromising service quality *(67)*. Supportive institutional structures, dedicated resources, appropriately trained and incentivized health workers, and adapted workforce policies are vital *(68, 69)*.

### *Preventing and treating cervical cancer*

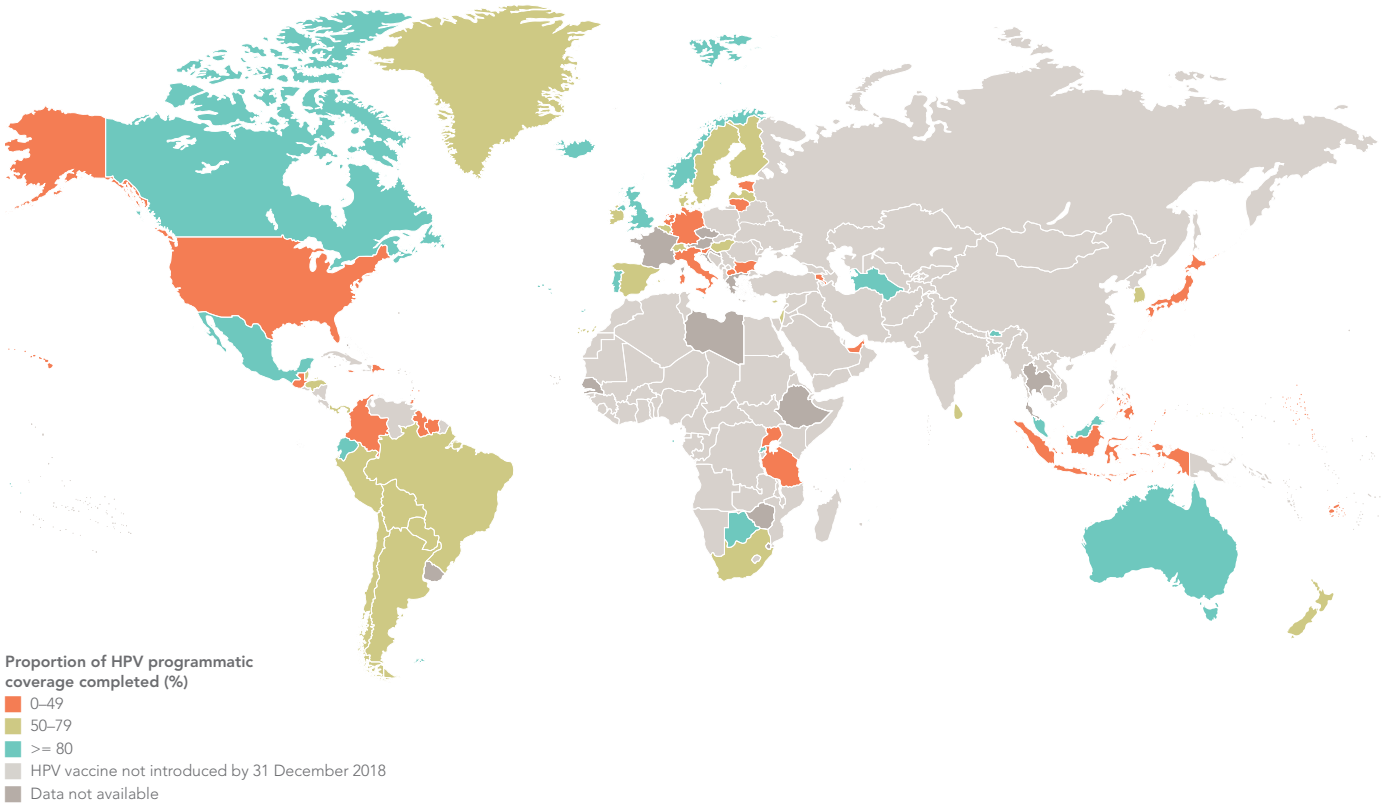
Cervical cancer is the fourth leading cause of cancer deaths among women worldwide, and it is the leading cause of cancer-related deaths in women in sub-Saharan Africa *(70, 71)*. Women living with HIV are about five times more likely to develop cervical cancer than their HIV-negative counterparts. Even HIV-positive women who are otherwise well and receiving antiretroviral therapy continue to experience higher cervical cancer rates than their HIV-negative peers *(72)*. This risk is linked to the human papillomavirus (HPV), a common but preventable infection that women with compromised immune systems struggle to clear.

Countries in sub-Saharan Africa with a high prevalence of HIV account for the majority of countries with a high prevalence of HPV infection and cervical cancer incidence and mortality. A global scale-up of HPV vaccination and cervical cancer screening and treatment has the potential to make cervical cancer a rare disease in the decades to come. Addressing the link between HIV and HPV/cervical cancer is a critical component of the global strategy to accelerate the elimination of cervical cancer as a public health problem that was recently adopted by the World Health Assembly *(73, 74)*.

High HPV vaccination coverage of girls—combined with dramatically scaled up cervical cancer screening and treatment—can lead to the elimination of cervical cancer in most low- and middle-income countries, including those with the highest disease burden *(75)*. HPV immunization programmes are also cost-effective *(76)*. Despite the clear benefits, of the 118 million women who have received the HPV vaccine to date, only 1.4 million (1%) live in low- and middle-income countries (Figure 5.7) *(77)*.

FIGURE 5.7

**Proportion of girls aged 15 that have completed the human papillomavirus vaccination, global, 2018**




Source: WHO/UNICEF joint reporting. Data, statistics and graphics [database]. In: WHO: Immunization, Vaccines and Biologicals [Internet]. Updated 7 June 2020. Geneva: WHO; c2020 (https://www.who.int/immunization/monitoring_surveillance/data/en/); WHO estimates of human papillomavirus immunization coverage 2010–2018 [Excel file]. In: WHO: Immunization, Vaccines and Biologicals [Internet]. Updated 21 April 2020. Geneva: WHO; c2020 (https://www.who.int/immunization/hpv/monitor/en/).
Note: Proportion of females turning 15 in the reporting year who received the full recommended schedule of HPV vaccine at any time between ages of 9 and 14, in countries where the HPV vaccination had been introduced by 31 December 2018.

Adding cervical cancer screening to sexual and reproductive health and HIV services is a highly cost-effective way of increasing the uptake of screening and reducing the disability and deaths associated with cervical cancer *(78)*. A systematic review of 21 studies found the integration of cervical cancer screening and treatment with HIV services was feasible and acceptable to women living with HIV *(79)*. The Go Further partnership initiative and programmes supported by the United States President's Emergency Plan for AIDS Relief (PEPFAR) in eight sub-Saharan African countries have shown that rapid scale-up of cervical cancer screening and treatment of cervical precancerous lesions in HIV treatment settings is possible and further scalable *(80)*.

However, such integration is still rare, and only a minority of women living with HIV receive regular screening for cervical cancer *(81)*. Among 26 of the 35 countries with large populations of people living with HIV that reported data to UNAIDS in 2019, only four (the Islamic Republic of Iran, Jamaica, Namibia and Ukraine) reported that cervical cancer screening was integrated with HIV services in all health facilities. Another 12 of these countries reported that these services were integrated in some health facilities.

It is also a source of concern that some studies have found high levels of failure to retain women needing treatment. For example, loss to follow-up reached 50% in a study of integrated cervical cancer services in Kenya *(82)*, and it was 37% in a study among women living with HIV in Ethiopia *(83)*. Health system constraints were among the reasons cited for this, including poorly trained staff (due to frequent staff turnover), supply stock-outs and malfunctioning equipment. In the Ethiopian study, training multiple health workers at each project site helped achieve consistent and sustainable services, despite high staff turnover *(70)*. A study in Kenya

showed that another key challenge is a lack of awareness and poor knowledge of cervical cancer, which leads to late health-seeking behaviour, especially within low-income households: only 22% of the poorest had heard of cervical cancer screening compared to 61% of those who were wealthier *(104)*.

### *Improving mental health*

Mental health conditions are a leading cause of morbidity worldwide, and rates of mental health conditions are higher among people living with HIV than they are among the general population *(85)*. In South Africa, 26–38% of people living with HIV are estimated to have a mental health condition compared with 13% of the overall population *(86)*. A study in Ontario, Canada, found 41% of people living with HIV had a mental health condition, compared with 22% among the rest of the population *(87)*, while a study among people living with HIV in India found that 59% showed signs of major depression *(88)*. Mental health conditions also affect HIV treatment and care outcomes, with one large meta-analysis estimating that the likelihood of strong adherence to antiretroviral therapy was 42% lower in people experiencing depression *(89)*.

Integrating screening and care for mental health conditions in HIV service settings can both strengthen HIV prevention and care outcomes and improve access to mental health care and support. In two studies from Denmark and the United States, it was shown that integrating mental health services into the standard of care for people living with HIV led to improvements in mental health, virologic and immunologic outcomes, and to increased resilience through enhanced coping self-efficacy *(90, 91)*. Diverse integration approaches (such as single-facility and multifacility integration and coordinated care) are being used. However, each presents distinct challenges. Single-site integration could ease coordination and reduce access barriers, but it can be difficult to implement in low-resource settings, while multifacility integration requires robust coordination and referral mechanisms. Active case management by nonclinicians offers considerable potential, especially in low-resource settings with shortages of mental health specialists, but appropriate training and support are essential *(92)*.

Unfortunately, care and treatment for mental health conditions and substance use disorders are rarely integrated into essential packages of care, including those for HIV, and there is a lack of research in low- and middle-income countries to guide an expansion of these efforts *(92, 93)*.

### *Integrated services for key populations*

Given that key populations at higher risk of HIV infection face overlapping health and social challenges, integrated forms of service provision that use community-led and rights-based approaches can improve service coverage and health outcomes.

A systematic review of facility-based sexual and reproductive health services for female sex workers in Africa found that many projects were successful at providing condoms and basic testing and treatment services for HIV and other STIs. However, wider sexual and reproductive health needs (such as family planning and cervical cancer screening) were often neglected *(94)*.

A 2018 review of 19 studies from Asia, Latin America and sub-Saharan Africa found that integrated reproductive health and HIV services tailored for sex workers are cost-effective, with the most cost-effective models combining biomedical, structural and behavioural components within existing health programmes *(95)*. A similar approach in South India combined focused sexual and reproductive health and HIV services for sex workers, which led to an increase in uptake of services *(96, 97)*. Integrating health care and HIV services that are tailored to the needs of transgender people can also be an effective approach. For example, the integration of gender-affirming primary care and peer support with HIV services in Lima, Peru, was found to be highly acceptable by transgender women *(98)*.

Health-care provider training and peer outreach is especially important for increasing service uptake. Some studies have found that hiring transgender staff and/or partnering with transgender organizations can be especially important, as is addressing the many interlinked factors that heighten the HIV and other health risks of individuals *(99–101)*.

Suitably trained and sensitized health-care workers, adequate clinic capacity and close community consultation are important for successful integrated service delivery to gay men and other men who have sex with men. This was emphasized by Mexico City's Clínica Condesa, which uses an integrated model combining HIV and STI testing, treatment and care services, condom promotion, safe sex workshops, mental health services and peer support. A slimmed-down version of the Clínica Condesa model, known as CAPASITS (Centro Ambulatorio para la Prevención y Atención en SIDA e Infecciones de Transmisión Sexual), is providing homophobia- and transphobia-free services at more than 70 locations around Mexico *(102)*.

There is strong evidence from several regions of the beneficial effects of integrating HIV, hepatitis C and harm reduction programmes for people who inject drugs. Benefits include increased HIV and hepatitis C testing and uptake of antiretroviral therapy, improved viral suppression, increased uptake of opioid substitution therapy and reduced mortality *(103–106)*. A review of 44 studies (almost all from high-income countries) found that integrated care models could improve people's engagement in hepatitis C care *(55)*.

The structured nature of places of incarceration offers ideal opportunities to use integrated approaches to prevent, diagnose and manage serious health conditions, including HIV, tuberculosis and hepatitis C infection *(107, 108)*. Zambia has shown that integrated, evidence-informed strategies to prevent and treat HIV, hepatitis C, hepatitis B and tuberculosis can be successful in places of incarceration *(109)*. In Malawi's Zomba Central Prison, 95% of prisoners living with HIV who remained on antiretroviral therapy and underwent routine viral load testing achieved viral suppression *(110)*. Similarly, when it is available, hepatitis vaccination programmes inside prisons and other places of confinement have achieved moderate levels of vaccine coverage *(108)*.

## Leaving no one behind

Strategies that have successfully controlled HIV epidemics have generally followed the principle that no one should be left behind. They uphold people's rights, work with and take the lead from communities, and marshal strong political commitment and reliable financial support. They foster enabling legal, social and institutional environments, and they provide services that are tailored by and for the people in greatest need.[3]

Alongside adolescent girls and young women, children living with HIV are often left without the support and services they need to stay healthy and build sustainable and enjoyable lives. People who inject drugs, sex workers, transgender people, prisoners, and gay men and other men who have sex with men remain at elevated risk of HIV infection. People on the move and other marginalized populations, such as indigenous peoples, are often missed or ignored by health systems, leaving them vulnerable to HIV and other health problems. When HIV and health services are unavailable or inappropriate, HIV prevalence in these populations can skyrocket.

### *Children living with HIV*

Treatment coverage among children living with HIV in 2019 was just 53% [36–64%], representing a global failure to provide life-sustaining care to 840 000 children (see Chapter 2).

As increased coverage of antiretroviral therapy among pregnant and breastfeeding women living with HIV reduces the number of children infected with HIV each year, the proportion of children living with HIV who are aged 5 to 14 years has increased (Figure 5.8). Of the estimated 840 000 children living with HIV not on treatment in 2019, 560 000 were between the ages of 5 and 14.

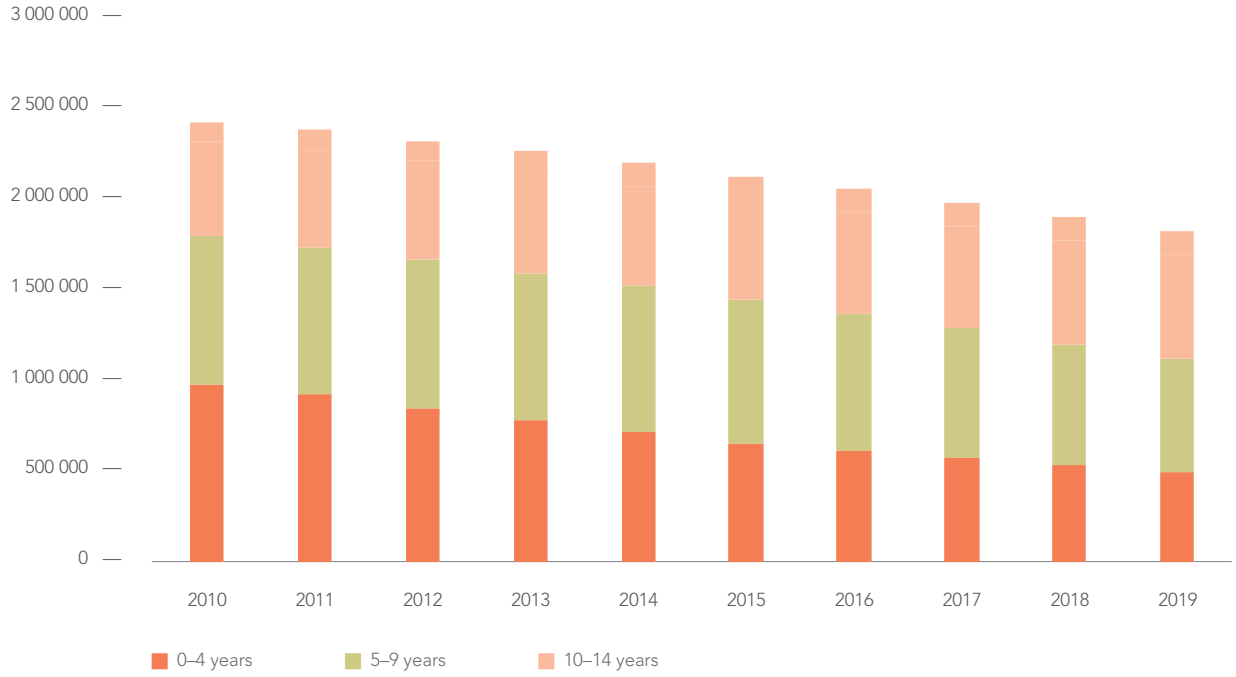
Many undiagnosed children living with HIV were infected because their mothers did not have access to (or were not retained in) treatment during pregnancy and breastfeeding. These undiagnosed children often do not present at health facilities until they are seriously ill *(119)*. When they are eventually diagnosed and started on antiretroviral therapy, their health outcomes tend to be worse than children living with HIV who are linked to treatment before they display AIDS-related symptoms *(120–123)*.

Efforts to find and treat undiagnosed children living with HIV must be accelerated. One strategy is to ensure that children who have lost one or both parents to AIDS-related illnesses have been reached by integrating HIV testing services into programmes supporting orphans and other vulnerable children *(124, 125)*. In addition, studies indicate that large proportions of people enrolled in HIV treatment have family members, including children, whose HIV status is unknown *(126–128)*. Testing those family members through index testing that is conducted with a rights-based and gender-sensitive approach can be an effective strategy for identifying older children living with HIV *(126, 129–132)*. Index family testing also improves timely linkages to care, with initiation rates of 42–96% reported in various studies *(126, 127, 131)*.

3 The measures needed to achieve rights-based health responses are described in several guides, including: Fast-Track and human rights: advancing human rights in efforts to accelerate the response to HIV. Geneva: UNAIDS; 2017 (https://www.unaids.org/sites/default/files/media_asset/JC2895_Fast-Track%20and%20human%20rights_Print.pdf); International guidelines on HIV/AIDS and human rights: 2006 consolidated version. Geneva: OHCHR, UNAIDS; 2006 (https://www.ohchr.org/Documents/Publications/HIVAIDSGuidelinesen.pdf); and Global Commission on HIV and the Law: risks, rights and health supplement. New York; UNDP; 2018 (https://hivlawcommission.org/wp-content/uploads/2019/11/Hiv-and-the-Law-supplement_EN.pdf).

FIGURE 5.8

**Number of children living with HIV, by age, global, 2010–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

In Uganda, for instance, a family-centred service model was associated with a 40-fold increase in the number of children enrolled in HIV care over seven years *(133)*, while in the Democratic Republic of the Congo, systematic index testing led to a fourfold increase in the identification of previously undiagnosed children living with HIV within six months *(134)*. Such family-based approaches also enable parents and their children to jointly access care, which can improve retention *(135)*.

Effective treatment services during childhood have the potential to establish lifelong treatment adherence. Updated WHO guidelines issued in 2019 clarify the latest available scientific evidence on optimal antiretroviral regimens for children living with HIV, including their transition to more suitable, fixed-dose regimens as they age *(136)*.

A third of children living with HIV who are not accessing treatment are under 5 years old. Swift testing of infants exposed to HIV and an immediate start of antiretroviral therapy upon diagnosis are the first steps to ensuring the survival of children who have acquired HIV during pregnancy and delivery *(111)*. Without early diagnosis and treatment, about half of infants with HIV die by the age of two years *(112)*. Many HIV-exposed infants in low- and middle-income countries are not accessing early infant diagnosis, while the caregivers of infants who do undergo diagnosis can wait months for the results *(113)*.

The use of point-of-care early infant diagnosis has been shown to improve the rate of return of test results to caregivers (98% test results returned, compared to 19% for traditional laboratory-based results) and to reduce waiting times for test results significantly *(112)*. Quicker turnarounds of test results makes timely treatment for HIV-positive infants more likely *(114, 115)*, which can reduce their morbidity and mortality, as shown in several African countries *(112, 116)*.

In Mozambique, for instance, point-of-care early infant diagnosis increased the proportion of infants initiating antiretroviral therapy within two months by sevenfold *(117)*, while in Malawi, same-day results raised the rate of antiretroviral therapy initiation to 91% *(118)*. Since 2015, Unitaid has committed more than US$ 150 million to support the introduction and integration of affordable point-of-care early infant diagnosis technologies in national diagnostic programmes in 15 countries.

However, early infant diagnosis at six to eight weeks will only capture about 50% of new child infections. Children exposed to HIV during breastfeeding need to be tested to ensure they are promptly identified and started on treatment.

### *Sex workers*

The unmet HIV service needs of sex workers seriously undermine their health and contribute significantly to overall HIV transmission—including the large epidemics in sub-Saharan Africa *(137, 138)*. Criminalization of some or all aspects of sex work in most countries in the world is a major barrier to HIV and other health services for sex workers (see Chapter 4).

Many countries are not achieving the very high levels of condom use during paid sex that are required to reduce new HIV infections decisively among sex workers, clients and their other sexual partners: only 56 of 99 countries with recent data from sex worker surveys showed that at least 80% of respondents reported condom use at last paid sex. UNAIDS estimates suggest that the risk of HIV infection among female sex workers globally is 30 times that of women in the general population.

Interventions that work with and empower sex workers have been shown to have a dramatic positive impact *(139, 140)*. In India's Mumbai and Thane districts, for example, interventions that empowered sex workers and supported collective action led to increased use of condoms during paid sex *(141, 142)*. Safer paid sex can, in turn, have a big impact on HIV epidemics: a recent analysis from Yaoundé, Cameroon, found that increased condom use during paid sex had averted an estimated 18% [9–37%] of new HIV infections in that city since 1980 *(143)*.

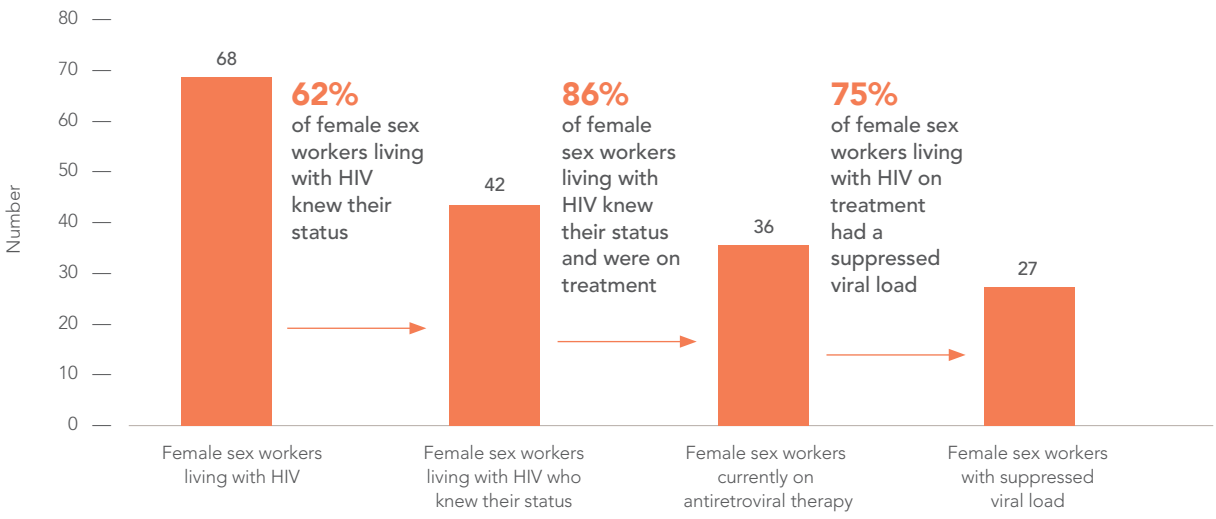
Increased access to PrEP and HIV self-testing through community-based programmes would be a major boost to combination HIV prevention among sex workers, especially for young sex workers who may struggle to negotiate safer sex with clients and partners. In Zimbabwe, for example, the Sisters Project offers integrated services in collaboration with community groups as part of a national programme for sex workers *(144)*.

Studies among sex workers of all genders have found strong interest in PrEP *(145, 146)*, but they have also identified important implementation challenges, and low retention rates are not uncommon *(144, 147–149)*. Supportive interventions, including ones that address the full range of sex workers' health needs and reduce violence against them, are needed to increase PrEP uptake and retention *(144, 150)*. Also emphasized in recent studies is the need to combine interventions such as PrEP with services that respond to the family planning needs of female sex workers *(151)*.

Sustained investments in community and structural interventions are needed so that sex workers can benefit more fully from prevention, testing and treatment interventions *(152)*. Where testing and

FIGURE 5.9

**Female sex workers testing and treatment cascade, Zomba, Malawi, 2018**




Source: USAID, PEPFAR, Linkages, UNC Project, CEDEP, the Global Fund. PLACE report Malawi. 2018 (https://www.fhi360.org/sites/default/files/media/documents/resource-linkages-malawi-place-report.pdf, accessed 16 May 2020).

### PROGRESS ACHIEVED ON LONG-ACTING PrEP AND ANTIRETROVIRAL THERAPY

HIV medicines that can be taken once a month—or even less frequently—could soon be an option for both PrEP and antiretroviral therapy, making HIV prevention and treatment simpler and more convenient than the daily oral dosing that is currently used.

The ATLAS and FLAIR trials found that a monthly or two-monthly injection with the antiretroviral drugs cabotegravir and rilpivirine is as effective as standard daily oral therapy *(155–158)*. Preliminary data from the HPTN 083 trial also indicate that bimonthly injections of long-acting cabotegravir PrEP are safe and effective in preventing HIV in cisgender men and transgender women who have sex with men *(159)*.

A large majority of study participants in the ATLAS and FLAIR trials said they preferred injections to daily oral treatment. In a separate, small study among HIV-positive women in the United States, a majority preferred the monthly injectable option, citing the convenience and confidentiality it afforded them *(160)*.

Long-acting injectable antiretrovirals may better suit the needs, preferences and constraints of some individuals. They would also have some constraints. Injections administered by a clinician, for example, would imply more frequent clinical appointments than current oral therapy, which may not suit everybody *(161, 162)*.

treatment services are accessible, acceptable and convenient for sex workers, large proportions of them start treatment and achieve viral suppression, as was seen in Zomba, Malawi, in 2018 (Figure 5.9) *(153)*. Community-empowering approaches, such as those used in the Abriendo Puertas (Opening Doors) model in the Dominican Republic, have also been shown to increase condom use, protect against violence and boost treatment uptake *(154)*.

## *Gay men and other men who have sex with men*

Impressive successes have been achieved in reducing HIV infections and AIDS-related deaths among gay men and other men who have sex with men in several cities within Australia, North America and western Europe. High levels of condom use, adherence to PrEP and viral suppression have been shown to enable gay men and other men who have sex with men to protect their own health and that of their sexual partners.

In particular, PrEP has emerged as a breakthrough addition to combination prevention among gay men and other men who have sex with men (see box). According to new research, PrEP also reduces the risk of hepatitis B at least tenfold *(163)*.[4] High rates of STIs in the context of expanding PrEP use, however, are a reminder of the ongoing need for integrated HIV and STI services *(164)*.

The provision of PrEP to populations of gay men and other men who have sex with men is also uneven, with demand outstripping supply, including in high-income countries where awareness of PrEP is relatively high *(165)*. A 2019 survey in the United Kingdom of Great Britain and Northern Ireland revealed that one in five gay men and other men who have sex with men who felt they would benefit from PrEP were unable or unsure how to access it *(166)*. Even in the United States, which is the largest provider of PrEP globally, a recent study found that a sizeable minority of persons at higher risk of HIV lived in locations with no nearby PrEP provider *(167)*.

4 PrEP contains two antiretroviral drugs (tenofovir disoproxil fumarate and emtricitabine), both of which are also active against hepatitis B.

Country reporting to UNAIDS shows that Brazil (with an estimated 15 000 total PrEP users, including more than 11 000 gay men and other men who have sex with men) was one of just a handful of countries in Latin America and the Caribbean providing PrEP at any significant scale in 2019. Country reports show that PrEP access among gay men and other men who have sex with men is also increasing in some sub-Saharan African countries (including Kenya, South Africa and Zimbabwe) and in Thailand *(168)*.

HIV prevention gaps among communities of gay men and other men who have sex with men remain in many countries. Condom use is often low: in 23 of the 99 countries that have reported survey data to UNAIDS since 2015, less than 50% of gay men and other men who have sex with men said they used a condom the last time they had anal sex. Only 14 countries reported 80% or greater condom use at last anal sex among this population.

Insufficient HIV treatment coverage among gay men and other men who have sex with men is another huge lost opportunity to save lives and prevent future HIV infections. There is overwhelming evidence that the risk of HIV transmission during sex is effectively zero when an HIV-positive person has an undetectable viral load *(169)*. In Australia, for example, community-level viral suppression was strongly associated with a steep drop in the number of new HIV diagnoses among gay and bisexual men between 2012 and 2017 *(170)*.

The success of U = U (undetectable equals untransmissable) as a prevention strategy, however, depends on people having an accurate understanding of their current viral load—which is not always the case. A recent study in three cities in the United States (Atlanta, Boston and Chicago) reported that one fifth of HIV-positive gay men and other men who have sex with men in a current relationship with an HIV-negative partner mistakenly believed they had an undetectable viral load *(171)*. Such findings highlight the need for strategies that combine the pursuit of high levels of viral suppression with primary prevention of HIV infection through condom use and PrEP.

## IN AUSTRALIA, PrEP IS REDUCING HIV INCIDENCE AND RESHAPING SAFER SEX

PrEP is an increasingly popular prevention option for gay men and other men who have sex with men in New South Wales, Australia, where it is contributing to an overall increase in HIV prevention coverage and a sustained decline in new HIV cases *(172)*.

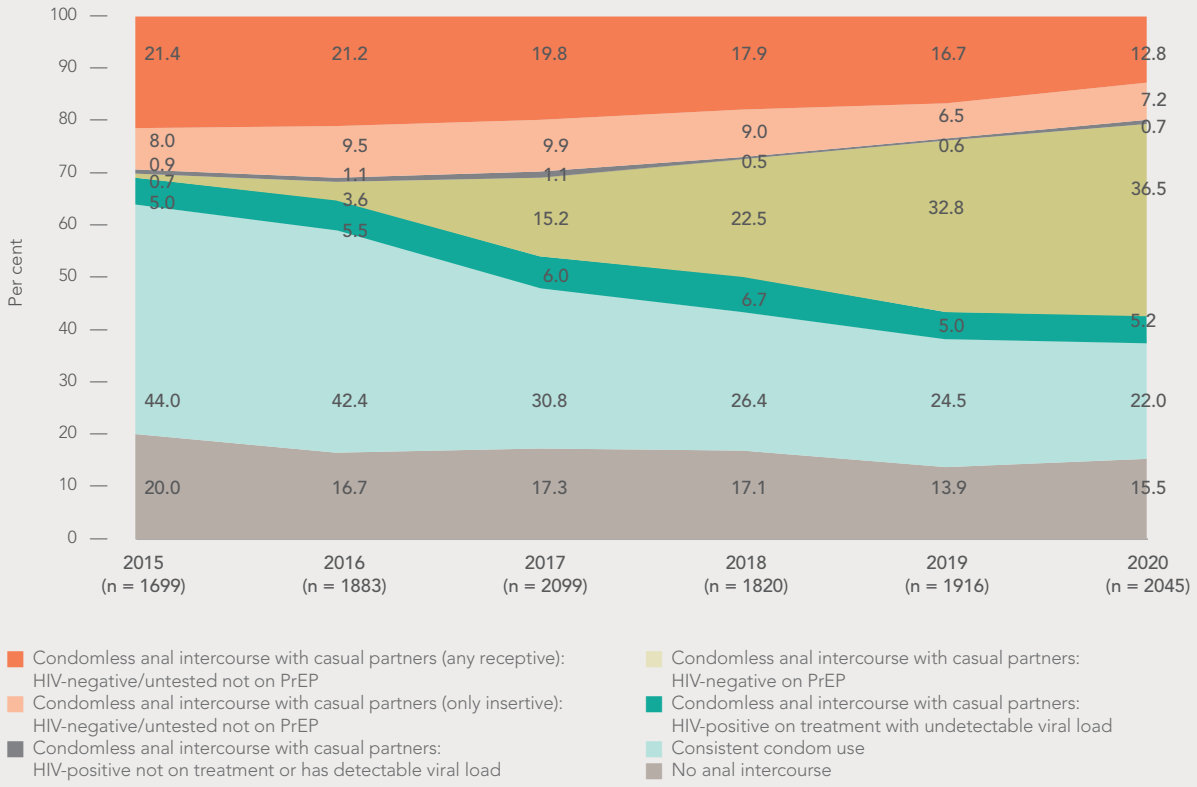
The number of gay and bisexual men newly diagnosed with HIV in 2019 (n = 215) was 15% lower than the average for the previous five years. Diagnoses of early stage infections also declined, which suggests that HIV incidence is falling *(173)*.

The decline in new HIV cases coincides with an increase in the proportion of gay men and other men who have sex with men with casual partners who reported at least one form of safe sex (e.g., avoiding anal intercourse, using condoms, using PrEP or having an undetectable viral load). According to data from the annual Sydney Gay Community Periodic Survey, that proportion rose from 69.8% in 2015 to 79.9% in 2020 *(174)*.

More than 12 100 people considered to be at higher risk of HIV infection (99% of them male) were dispensed PrEP at least once in New South Wales between April 2018 and September 2019 *(173)*. The actual number of men using PrEP is likely to be higher, since some men purchase supplies independently from abroad.

FIGURE 5.10

**Proportion of gay men and other men who have sex with men with casual partners reporting consistent condom use, biomedical prevention and any condomless anal intercourse in the previous six months, Sydney, Australia, 2015–2020**




Source: Broady T, Power C, Mao L, Bavinton B, Chan C, Bambridge C et al. Gay Community Periodic Survey: Sydney 2019. Sydney: Centre for Social Research in Health, UNSW Sydney; 2019. 2020 data shared via email by Martin Holt, Centre for Social Research in Health, Sydney, Australia, 11 May 2020.

Note: Consistent condom use includes men who report condom use for anal sex with casual male partners in the six months prior to the survey and no condomless anal intercourse with those partners.

The increasing use of PrEP appears to be changing the mix of favoured HIV prevention methods, with a greater reliance on PrEP to prevent HIV transmission. The latest Sydney Gay Community Periodic Survey data show that 36.5% of gay men and other men who have sex with men who reported condomless anal intercourse with casual partners were using PrEP to prevent HIV infection in March 2020, compared with 0.7% in March 2015 (Figure 5.10). The proportion of their peers who reported consistent condom use with casual partners decreased from 44.1% to 22.0% in the same period *(174, 175)*.

### *Transgender people*

The struggles of the estimated 25 million transgender people worldwide have entered mainstream debate and policy-making in recent years, with gains achieved in legal rights and cultural acceptance in several countries and regions *(176)*. However, transgender people still face distressing cultural, social and structural stigma and discrimination in the vast majority of countries.

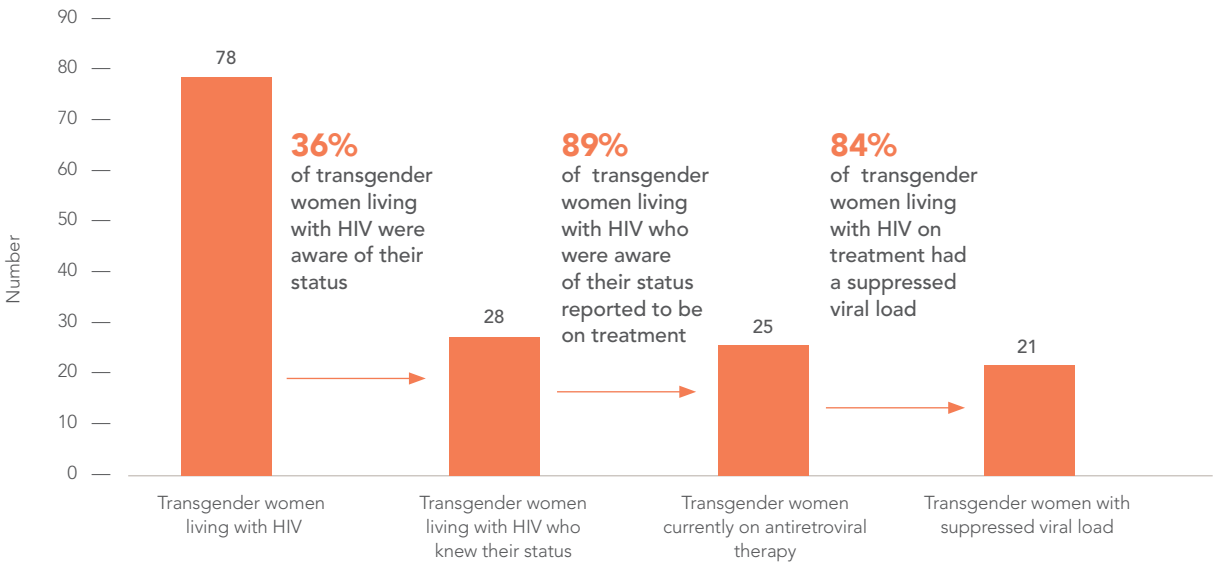
Transgender women have some of the highest rates of HIV reported for any population, with HIV prevalence of up to 40% reported in some studies *(177)*. A recent study in six large cities in the United States found HIV prevalence of 29% among transgender women, with at least half of the study participants having at least one STI *(178)*. Intersecting factors stoke the vulnerability of transgender people to HIV infection and other health threats, including transphobia, social exclusion, violence and stigma (including self-stigma) *(177)*. HIV risk can be especially high among transgender women who have been sexually assaulted, as shown in a recent study from Haiti, where transgender women with a history of forced sex were seven times more likely to be HIV-positive than peers who had been spared such experiences *(179)*.

The stigma and discrimination endured by transgender people (including from health-care providers) is frequently associated with poor mental health, substance abuse, lack of familial and social support, homelessness and unemployment—all of which also compromise their access to HIV and other health services *(177, 180–183)*. Among the 16 countries reporting data to UNAIDS since 2016, coverage of HIV prevention programmes among transgender people was under 60% in 11 countries.

PrEP can be highly effective in reducing HIV incidence among transgender people, as seen in a recent study from Washington State in the United States *(184)*. Availability of PrEP is increasing, although some studies have highlighted uptake, retention and adherence challenges *(185–187)*. Similarly, studies from Brazil and the United States have reported low rates of HIV testing and retention in HIV care, and low levels of treatment adherence and viral suppression among transgender women *(188–190)*. Socioeconomic insecurity, anti-transgender discrimination, mistrust of health-care providers and a lack of transgender-specific information are major hindrances *(191–194)*.

FIGURE 5.11

**Transgender women testing and treatment cascade, Harare, Zimbabwe, 2019**




Source: Harris T, Parmley L, Mapingure M, Mugurungi O, Rogers JH, Apollo T et al. HIV care cascade: men who have sex with men & transgender women/genderqueer, Zimbabwe. Conference on Retrovirology and Opportunistic Infections (CROI), Boston (MA), 8–11 March 2020. Abstract 1097.

However, once HIV-positive transgender women know they are living with HIV, their levels of treatment initiation and viral suppression can be high, as has been seen in Zimbabwe (Figure 5.11) and San Francisco *(191, 195)*. In the latter case, retention in care was associated with the outreach efforts of a partnership of community clinics, local public health organizations and researchers, which built on work done by the city's longstanding transgender health clinics *(196)*.

### *People who inject drugs*

More than 12% of the estimated 14.2 million people who injected drugs globally in 2019 were living with HIV, and the latest UNAIDS estimates suggest that a person who injected drugs in 2019 had a risk of acquiring HIV that was 29 times greater than a person who did not inject drugs.

The positive public health impact of harm reduction programmes that bring together needle–syringe programmes, opioid substitution therapy, overdose treatment, services for HIV and hepatitis C viral infection, and other services is well established *(197)*. For example, New Zealand set up a needle–syringe exchange programme in the late 1980s, which grew to become a network of regional outlets, pharmacies and other providers that supply injecting drug users with free sterile injecting equipment and empathetic advice and information. A new study shows there was an average of one new HIV diagnosis per year among people who inject drugs in New Zealand from 1996 to 2018 *(198)*.

Only a minority of countries provide harm reduction services, mostly on a very small scale and often in legal contexts that criminalize drug use and discourage people from accessing services (see Chapter 4 on decriminalization). Just 53 countries reported in 2019 that their national policies included explicit supportive references to harm reduction. The numbers of needles and syringes distributed in the majority of programmes also are insufficient (Table 5.2). Similarly, opioid substitution therapy services were provided in 86 countries globally in 2018, but few provide these services at sufficient scale.

Among the 14 countries that reported sex-disaggregated opioid substitution therapy coverage data to UNAIDS since 2015, just two achieved the recommended target of 40% coverage among men who inject drugs, and none had reached the target among women who inject drugs (Figure 5.12). Women who inject drugs have higher mortality rates and HIV prevalence than their male counterparts *(199)*. They also experience higher rates of gender-based and intimate partner violence, which undermines their ability to practice safer sex *(200, 201)*. Few gender-sensitive harm reduction programmes exist, but those that do offer encouraging examples of the kinds of interventions that can succeed (Table 5.3).

TABLE 5.2

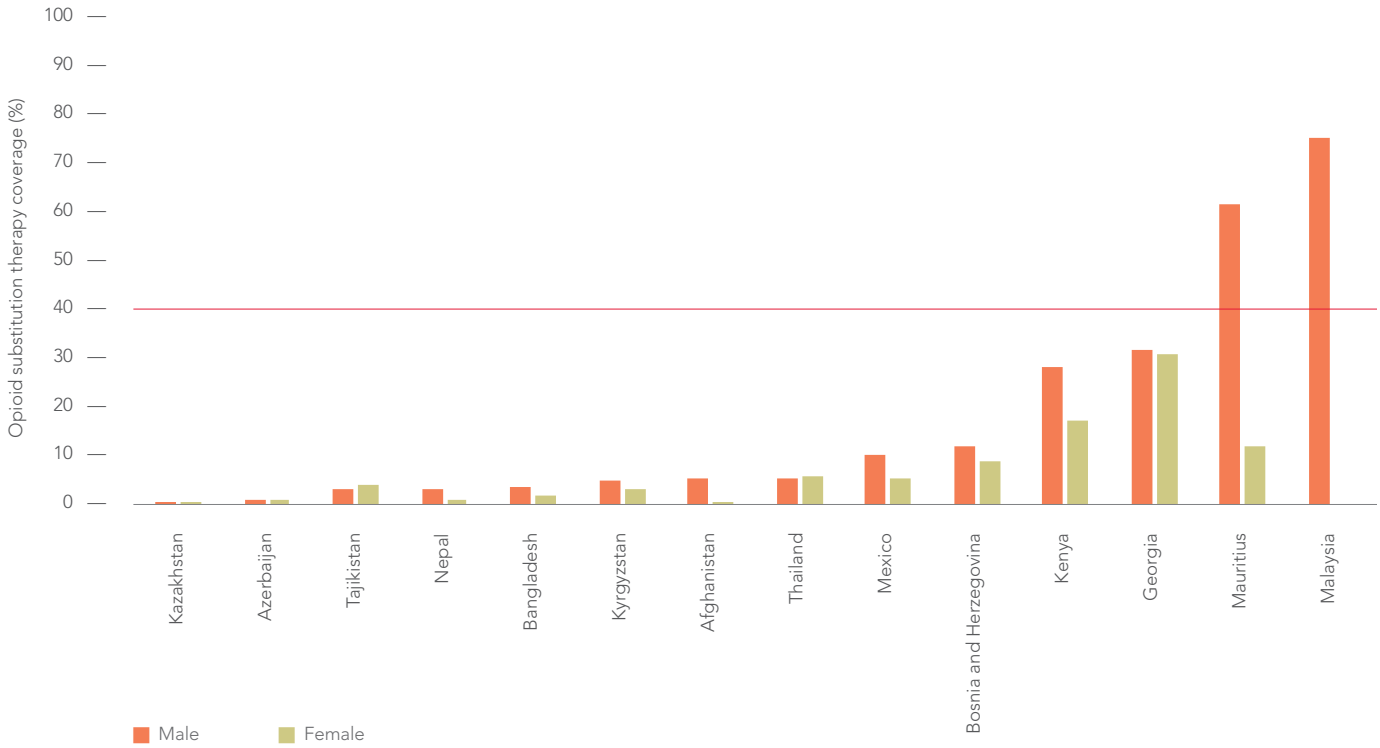
**Coverage of needles and syringes distributed per person who injects drugs by needle–syringe programmes, countries with available data, 2015–2019**

| HIGH COVERAGE >200 | MEDIUM COVERAGE 100–200 | LOW COVERAGE <100 |
|---|---|---|
| Australia, Austria, Cambodia, Finland, India, Luxembourg, Myanmar, New Zealand and Norway | Afghanistan, Bangladesh, Bosnia and Herzegovina, Czechia, Estonia, France, Ireland, Kenya, Kyrgyzstan, Malta, Montenegro, Morocco, Slovenia, Spain, Tajikistan, Uzbekistan and Viet Nam | Albania, Armenia, Azerbaijan, Belarus, Belgium, Bulgaria, Colombia, Cyprus, the Dominican Republic, Georgia, Greece, Hungary, Indonesia, Iran (Islamic Republic of), Israel, Italy, Kazakhstan, the Lao People's Democratic Republic, Latvia, Lithuania, Madagascar, Malaysia, Mali, Mauritius, Mexico, Nepal, North Macedonia, Pakistan, the Republic of Moldova, Romania, Senegal, Serbia, Seychelles, Thailand, Tunisia, Ukraine and the United Republic of Tanzania |

Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 5.12

**Opioid substitution therapy coverage among people who inject drugs, by sex, countries with available data, 2015–2019**




Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).

TABLE 5.3

## Examples of best programme practices for women who inject drugs

| Country | Example of Best Practice |
|---|---|
| Canada [i] | In Vancouver, SHEWAY provides specialized services to pregnant women who use drugs, focusing on the elimination of violence for women who use drugs and ensuring the best birth outcomes for their babies. The services offered include education, nutrition and substitution therapies. Pregnant women who use drugs are supported in their choice to continue or stop using drugs during their pregnancy, with differentiated approaches for both scenarios: focusing on the quality of drugs used if continuing or initiating substitution therapy if stopping drug use. |
| India [ii] | As part of providing HIV and harm reduction services to people living with HIV and people who use drugs (including their partners and families), the Social Awareness Service Organisation runs a programme dedicated to women who inject drugs. This programme includes a drop-in centre and provides harm reduction services. It also serves as a night shelter for homeless women who inject drugs, and there are plans to develop other services, such as vocational training and microcredit programmes. |
| Mauritius [ii] | The Harm Reduction Community Container project, developed by Collectif Urgence Toxida, works to identify and support women who inject drugs, young people who inject drugs and others. It blends community-based health-care services (including HIV and viral hepatitis counselling, information on safe injecting practices and provision of sterile injecting equipment and condoms) with mobile units (that include a large proportion of women, many of whom have a history of injecting drug use) for people unwilling to attend the static site. |
| Spain [iii] | In Catalonia, Metzineres, Environments of Shelter for Womxn who Use Drugs Surviving Violence is a grass-roots, client-led and holistic harm reduction programme exclusively for women, offering health, support, vocational and housing services. It is the first integrated harm reduction programme dedicated to women who use drugs in Catalonia and offers direct and flexible access to flexible services respectful of women's particular situations and lived experiences. |
| United Republic of Tanzania [i] | There is growing interest in the development of harm reduction services for women who inject drugs in Tanzania following efforts by Médecins du Monde to offer a gender-sensitive approach. The services include a weekly women-only evening with gender-based violence support, sexual health-care services covering sexually transmitted infections, peer-education activities, nutritional support, the provision of various commodities (injecting equipment, condoms, hygiene materials) and hair, make-up and washing. |
| Ukraine [i] | Initiated by the United Nations Office on Drugs and Crime (UNODC) and handed to municipal services across Ukraine since 2013, the Women for Women initiative has expanded availability of gender-sensitive HIV and harm reduction services. Services offered to women who inject drugs include prevention of gender-based violence (including counselling for male sexual partners), legal assistance, child care, hygiene and food supplies, shelter, self-esteem skills-building and employment support. Women who inject drugs are involved in delivering these services. |

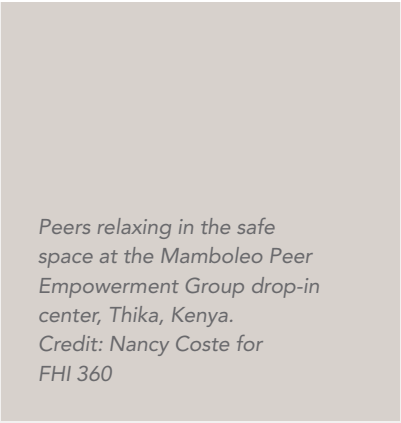
Source: IAS Co-Infections and Co-Morbidities Initiative. Women who inject drugs: overlooked, yet invisible. Geneva: International AIDS Society; 2019 (https://www.iasociety.org/Web/WebContent/File/2019__IAS__Brief__Women_who_inject_drugs.pdf, accessed 16 May 2020) based on i) UNODC, INPUD, UNAIDS, UNDP, UNFPA, WHO, USAID, PEPFAR. Implementing Comprehensive HIV and HCV Programmes with People Who Inject Drugs: Practical guidance for collaborative interventions, 2017. ii) UNODC, INPUD. Addressing the specific needs of women who inject drugs: Practical guide for service providers on gender-responsive HIV services. New York, 2016. iii) WHRIN members survey report on the status of harm reduction for women who use drugs, 2018.

A lack of political will and gaps in funding block the provision of harm reduction services in many countries *(202)*. In 31 countries that reported expenditure data to UNAIDS between 2014 and 2018, 71% of spending on HIV services for people who use drugs was financed by external donors. The global community of people who use drugs has called for harm reduction services to be included in the benefits package of universal health coverage systems, arguing that the principles of universal health coverage demand that the needs of the poorest and most vulnerable people—including people who inject drugs—be addressed first *(203)*.

Supportive legal and law enforcement contexts are essential *(204, 205)*. A recent systematic review of studies from nine countries has shown how the enforcement of punitive laws heightens HIV risk among people who inject drugs.[5] In a study conducted in Mexico, people whose injecting equipment had been confiscated by the police in the previous six months were 2.4 times more likely to acquire HIV. People who inject drugs in Ukraine and who had recently avoided buying syringes for fear of the police were 3.3 times more likely to acquire HIV *(206)*.

5 The nine countries are Canada, China, India, Malaysia, Mexico, the Russian Federation, Thailand, Ukraine and the United States.

# SUSTAINING COMMUNITY-LED SERVICES FOR KEY POPULATIONS IN KENYA AND MALAWI



*Peers relaxing in the safe space at the Mamboleo Peer Empowerment Group drop-in center, Thika, Kenya. Credit: Nancy Coste for FHI 360*

Community-led approaches to reaching key populations in Kenya and Malawi with HIV and gender-based violence services are being adopted by national HIV programmes following the success of innovative projects.

The two countries are among more than 30 where the USAID- and PEPFAR-funded LINKAGES project has worked since 2014 to reduce HIV transmission among key populations and improve their enrollment and retention in HIV treatment and care *(207, 208)*.

With an estimated 1.1 million and 1.5 million people living with HIV in 2019, respectively, Kenya and Malawi have two of the largest HIV epidemics in the world. They have been making progress nationally in reducing new infections and diagnosing and treating increasing numbers of people living with HIV. However, there had been few specific efforts to reach key populations until 2015, when LINKAGES set up in areas with the highest HIV prevalence among key populations: six districts in Malawi (focused chiefly on female sex workers, their clients, and gay men and other men who have sex with men) and 17 counties in Kenya (focused on female sex workers, gay men and other men who have sex with men, and people who inject drugs).

Programme details varied between the two countries, but the building blocks for success were similar. The technical and organizational capacity of local partners was developed, which enabled many of them to qualify for direct external funding and to manage projects. Drop-in centres were established, giving members of key populations safe spaces to gather and access HIV and other health services, including HIV testing and antiretroviral therapy. Key population community members were trained to support the operation of the drop-in centres, and local health authorities authorized the centres to serve as HIV treatment sites. Crisis response teams and procedures were introduced for screening, reporting and responding to incidents of gender-based violence against individuals who visit the centres.

New methods were introduced to increase case detection among key populations, including index testing, an enhanced peer outreach approach and risk network referrals *(209)*. This proved so effective in Kenya that the HIV case-finding rate among female sex workers, their clients, and gay men and other men who have sex with men at LINKAGES sites more than tripled in 2019, while the overall number of tests administered fell by 50%.[6] In Malawi, case-finding among gay men and other men who have sex with men at LINKAGES sites improved from 4% in 2016 to 17% in 2019, and among female sex workers, it improved from 22% to 27% in 2018–2019. In early 2019, self-testing services were introduced at drop-in centres.

The project developed monitoring tools, such as unique identifier codes and a system that monitors the clinical service needs of key populations living with HIV and facilitates the scheduling of appointments for check-ups and viral load testing. Kenya's Ministry of Health later adopted the system.

Those same tools are being used to implement Malawi's viral load monitoring strategy. They show high levels of viral suppression among gay men and other men who have sex with men (86%) and female sex workers (93%) who are retained in care and receive their viral load test results. A system known as LINK was also introduced in Malawi to monitor stigma and

6 The case-finding rate is the number of diagnoses divided by the number of HIV tests. A 3% case-finding rate, for example, is an average of three HIV diagnoses for every 100 HIV tests.

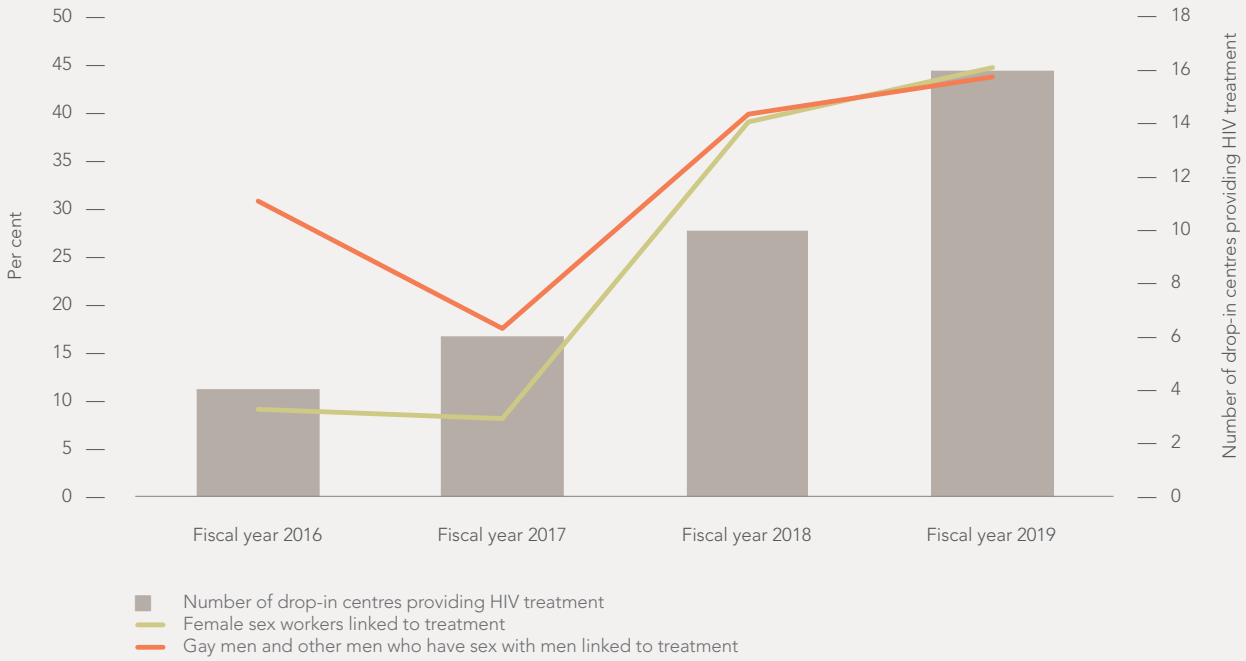


discrimination against key populations at public health facilities, to identify the most key population-friendly facilities, and to guide training and sensitization interventions among service providers *(210)*.

When the LINKAGES project in Kenya ended in September 2019, almost half of female sex workers and gay men and other men who have sex with men diagnosed with HIV through the LINKAGES programme initiated treatment at the drop-in centres (Figure 5.13). Working with the Bill & Melinda Gates Foundation-supported Jilinde project, LINKAGES also helped provide PrEP to about 9700 members of key populations in Kenya. The legacy of the project lives on at 35 drop-in centres run by local nongovernmental organizations, 16 of which operate as antiretroviral therapy satellite sites for county health facilities.

FIGURE 5.13

**Percentage of female sex workers and gay men and other men who have sex with men who are linking to treatment at project drop-in centres, Kenya, 2016–2019**




Source: LINKAGES Kenya. Summary of achievements, March 2016–October 2019. Durham (NC): FHI 360; 2019 (https://www.fhi360.org/sites/default/files/media/documents/resource-linkages-kenya-achievements.pdf, accessed 21 May 2020).
Note: Only includes people who tested positive through the LINKAGES programme. In 2017, the case-finding increased faster than the number of drop-in centres providing treatment, so the proportion of gay men and other men who had sex with men who tested positive and could link to care at a drop-in centre was lower.

### *People in prisons and other closed settings*

On any given day, approximately 11 million people worldwide are in confinement *(211)*. The vast majority of them are men, although the number of female prisoners is increasing: the number of women held in prisons and other closed settings globally has risen by 53% since 2000 (compared with a 20% increase among men) *(212)*. Incarcerated women have specific health care needs that are seldom adequately met during incarceration *(213)*. There is also evidence that transgender people experience higher rates of violence, particularly sexual violence, than cis-gendered people in prison *(214)*.

Drug injection and sexual intercourse occur worldwide in prisons. The risk of sexual violence among prisoners—and their insufficient access to condoms, lubricants, PrEP and harm reduction services—heighten their chances of acquiring HIV, hepatitis C and STIs *(107)*. Among people who inject drugs, recent incarceration is associated with an 81% and 62% increased likelihood of HIV infection and hepatitis C infection, respectively *(215)*.

Access to harm reduction in prisons remains low. In 2019, only six countries reported to UNAIDS that needle–syringe programmes were operational in prisons, and 20 countries reported that opioid substitution therapy programmes were operating in prisons. Many of these were pilot projects with low coverage *(216)*. Necessary HIV prevention services, such as condoms and lubricants, are also seldom available *(217, 218)*. Of the 99 countries that reported these data to UNAIDS in 2019, 37 stated that condoms and lubricants were available in at least some prisons. Consequently, the prevalence of HIV and hepatitis C virus in prisons and other closed settings is several times higher than in the broader community. Data reported to UNAIDS since 2015 suggest that 4.3% of incarcerated persons globally are living with HIV, rising to 16.4% in eastern and southern Africa. An estimated 1.8% of prisoners globally are living with HIV and hepatitis C coinfection.

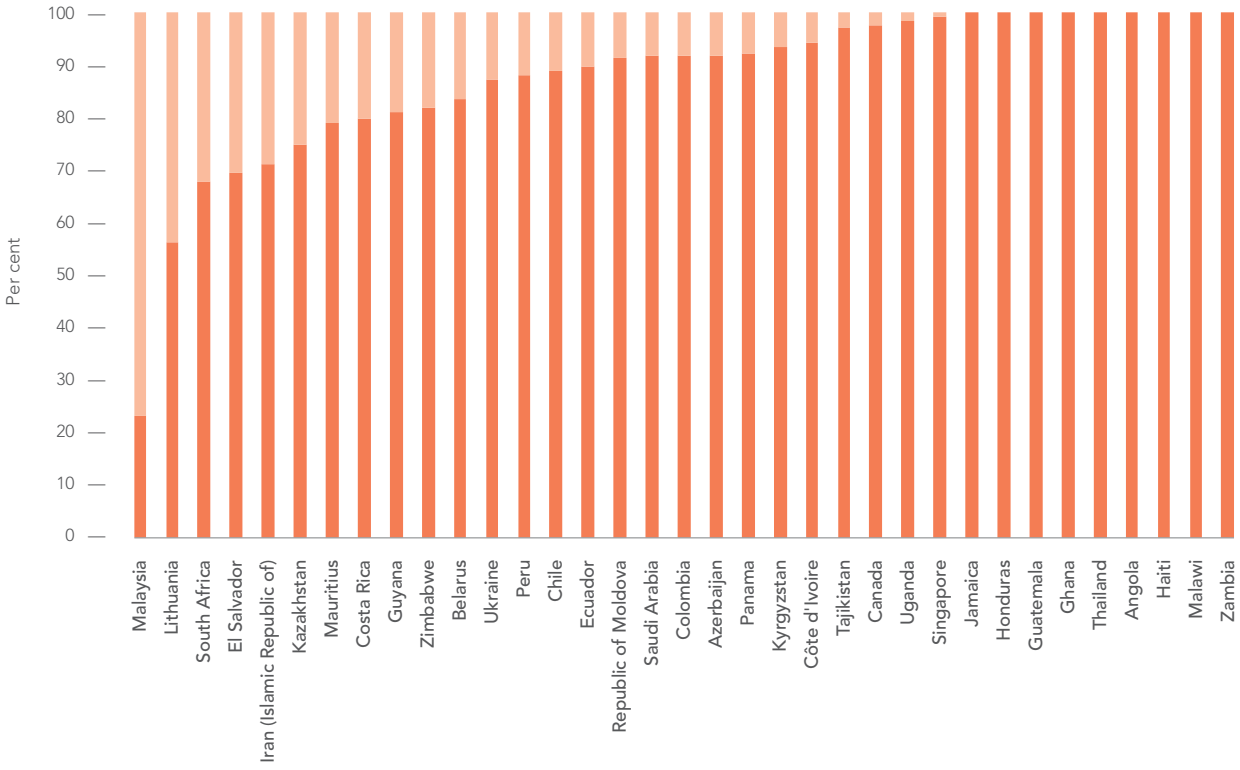
Closed settings should, in theory, favour the delivery of effective testing and treatment services, although treatment interruptions and concerns about confidentiality and discrimination pose challenges *(219)*. In 2019, 78 countries reported to UNAIDS that HIV testing was available at any time during detention or imprisonment, and 104 countries reported that antiretroviral therapy was available to all prisoners living with HIV. Coverage of antiretroviral therapy is improving, although gaps remain (Figure 5.14). The provision of hepatitis C virus testing and treatment is less extensive: 42 countries offered testing and 39 countries had treatment services in at least one prison in 2017 *(220)*.

Crowded, poorly ventilated and unsanitary conditions increase the risk of tuberculosis and other communicable respiratory diseases, including COVID-19 *(107, 221, 222)*. Many of the world's prisons are overcrowded, often by orders of magnitude. In the Philippines, for example, the prison occupancy rate exceeded capacity by more than 530% in March 2020 *(223)*. The risk of acquiring tuberculosis is on average 23 times greater for incarcerated persons than for people in the general population *(224, 225)*.

The United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules) make clear that health care for people in prison should be of the same standard as that available in the rest of the community *(226)*. International guidelines recommend a comprehensive package of health interventions for

FIGURE 5.14

**Gaps in antiretroviral therapy coverage among prisoners living with HIV, countries with available data, 2016–2019**




Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).

prisons, including for HIV and tuberculosis *(226, 227)*. Despite this, health-care services in closed settings are typically under-staffed and rudimentary *(221, 228)*.

Individual, community and institutional barriers complicate HIV care and treatment adherence for people after their release, with women especially affected *(214, 229, 230)*. These barriers can be overcome, however, if medical and case management needs are identified before people are released, and if arrangements are made for continuity of care between prison and community settings *(231)*.

The COVID-19 pandemic has highlighted the obligation of all states under international human rights law to protect the health of people in prisons and detention facilities *(232)*. Extremely high rates of COVID-19 infection and deaths have been observed in some prison settings, affecting both prisoners and prison staff *(233, 234)*. People who remain incarcerated should have access to all necessary prevention, diagnostic and treatment services, including the ability to self-isolate *(235)*.

Several countries are considering or applying practical reforms, including using detention as a last resort, avoiding pretrial detention, and allowing early release or home detention of persons convicted of nonviolent crimes *(235)*. There are growing calls—including from the UN Inter-Agency Standing Committee—to end the incarceration of people for minor offences or for offences not consistent with international law *(236, 237)*.

## *People on the move*

There were an estimated 272 million international migrants in 2019, equal to about 3.5% of the global population *(238)*.[7] About two thirds of them were labour migrants *(239)*. Migration is increasingly forced by conflict and violence, natural disasters and the effects of climate change *(240)*. It is conservatively estimated that almost 71 million people were forcibly displaced in 2018, twice as many as two decades earlier, and this includes 26 million refugees, 3.5 million asylum seekers and 41.3 million internally displaced persons *(241)*. The vast majority of these people were living in sub-Saharan Africa and the Middle East and North Africa. Their numbers are expected to keep increasing: the World Bank estimates that up to 140 million people in densely populated regions of the world will be displaced by 2050 due to the effects of climate change *(242)*.

A landmark study by The Lancet of global immigration patterns dating to the mid-1990s concluded that the health of people who migrate depends greatly on structural and political factors that determine the impetus for migration, the conditions of their journey and their destination. It also found that discrimination, gender inequalities and exclusion from health and social services repeatedly emerge as negative health influences for migrants *(243)*.

Living in crowded camps, emergency shelters and informal settlements with limited access to health care, displaced people are often highly vulnerable to health threats, including COVID-19. Basic public health measures for COVID-19—such as physical distancing, proper hand hygiene and self-isolation—are extremely difficult to implement in refugee camps, leaving their inhabitants extremely vulnerable to an outbreak *(244)*.

Despite increased efforts to integrate sexual and reproductive health services into humanitarian responses, many conflict-affected girls and women do not have adequate access to those services. Family planning services are especially neglected *(245)*. A 2018 review of systematic reviews on perinatal outcomes among refugee and asylum-seeking women has noted widespread, adverse pregnancy outcomes that are complicated by discrimination and poor access to services *(246)*. The toll on the health of women is severe: an estimated 61% of maternal deaths globally occur in humanitarian crisis or fragile settings *(247)*.

Research, such as a study among refugees from the Syrian Arab Republic, show that mental health is an important concern for migrant and refugee populations *(248, 249)*. Many refugees and displaced people have survived repeated traumas, including during their transit, and the research reveals high levels of forced labour and widespread sexual violence and exploitation, including in humanitarian settings *(239, 250)*.

7 International migrants are defined as persons who are either living in a country other than their country of birth or are in a country other than their country of citizenship.

An extensive review of refugee and migrant health in Europe has found that any increased risk that refugees may have for specific diseases can largely be attributed to poor living conditions during and after migration, including in refugee camps *(251)*. Those privations—combined with limited entitlements to public services—compromise the health of migrant workers, putting them at risk of HIV and/or tuberculosis infection *(252–254)*.

A systematic review of studies among migrants to high-income countries found that large proportions of migrants living with HIV were infected after migration *(255)*. In a large study from Uganda, for instance, the first two years after migration were associated with increased risk of HIV acquisition, with the risk diminishing afterwards *(256)*. Migrants also are less likely than nationals to receive the health care they need should they become ill *(257, 258)*. In the systematic review, migrants living with HIV presented for care later and were less likely to have good treatment outcomes than their non-migrant peers *(255)*.

A lack of health insurance, user fees, discrimination, social isolation, language and cultural barriers, exploitative working conditions, and fear of deportation are among the factors hindering access to health care *(240, 259, 260)*. A study from the Netherlands, for example, found widespread uncertainty among migrants about their rights to health care and cited language problems as a major issue *(261)*. A 2019 study among health-care providers in Portugal cited administrative complexities as a significant obstacle *(262)*. In response to the COVID-19 pandemic in early 2020, however, Portugal granted temporary residency rights to immigrants and asylum seekers who had applied for residency in the country, enabling them to access social and health benefits, including the national health service *(263)*.

Incorporating migrants in national health programmes (including HIV programmes) makes sense from both human rights and public health perspectives. A modeling analysis from Botswana has found that excluding migrants from HIV services was holding back the country's HIV response: achieving the 2020 Fast-Track Targets for both citizens and migrants could prevent 34% more new HIV infections and avert 26% more AIDS-related deaths (against a 2010 baseline) compared with limiting services to only citizens *(264)*.

Multimonth dispensing of antiretrovirals is an attractive option for migrant workers who travel back and forth between their home and host countries. In a study among Lesotho migrants working in South Africa, almost all of the participants (93%) preferred collecting three to six months of antiretroviral refills in Lesotho over accessing treatment in South Africa *(265)*. Small, practical adjustments can also make a difference. In Yemen's capital, Sana'a, people living with HIV were given health cards that described their antiretroviral regimens and provided advice on what to do if they were unable to reach a health facility (including contacting an emergency hotline if they ran out of medication) *(266)*.

Interventions to uphold the rights of migrant workers and strengthen their entitlements to health care are also needed *(243)*. The International Organization for Migration (IOM), the International Labour Organization (ILO) and WHO have developed guidance and proposed actions to fulfil such obligations, including for the management of HIV and tuberculosis *(267, 268)*.

CHAMPION PROFILE

# DEMANDING ACTION AGAINST RAPE AND CHILD MARRIAGE UNDER LOCKDOWN IN SOUTH SUDAN


*Riya Williams Yuyada (left) was among the organizers of a silent march calling for greater protection of women and girls from rape during South Sudan's COVID-19 lockdown (right).*

In conflict-ravaged South Sudan, the COVID-19 pandemic and resulting confinement measures—including school closures and movement restrictions—have been linked to a spike in violence against women, including cases of rape and a reported rise in incidences of child marriage *(269)*.

Women's rights and peace activist, Riya Williams Yuyada, is among the activists bringing these abuses to light and demanding action.

**"Women's and girls' rights and COVID-19 are intertwined. There have been many cases of rape, including the gang rape of an eight-year-old girl and a woman who was seven months pregnant," Riya explains. "We are among the people taking them to hospital for treatment and advocating for them. We also organized a socially distanced silent march during lockdown to deliver a petition to Parliament that demands for women and girls to be protected."**

The co-founder of Crown the Woman–South Sudan, a grass-roots, women-led organization that protects and advocates for the rights of women and girls in the country, Riya is also concerned about reported increases in child marriage coinciding with girls being out of school during the COVID-19 lockdown.

**"We are hearing that there are more child marriages happening. Because of confinement, they are happening quietly and out of our reach, so we are less able to act and engage the families to prevent it. We don't have the same opportunities to reach the girls themselves either. Normally we reach them at school, through our gender-based violence clubs, but when they are out of school, we don't know where they are staying."**

Crown the Woman–South Sudan is figuring out how to reach women and girls during confinement, using social media to counter fake news about COVID-19 and conducting rural outreach activities to provide hand soap, gloves and information on the new coronavirus. The organization is also raising awareness on gender-based violence and using a national gender-based violence hotline (established with support from the United Nations Population Fund) that women and girls can use to report abuses and be connected to support.

**"COVID-19 has affected us in multiple ways—socially, politically, economically," reflects Riya. "In South Sudan, we have an ongoing peace process which commits to 35% inclusion of women in all levels of government. COVID-19 has slowed implementation, and we are worried that the commitment to include women will be lost. The peace process is a key way to ensure the rights of women and girls are integrated and upheld to stop gender-based violence."**

## Investment and sustainability

The funding mobilized for HIV over the past decades has saved millions of lives and strengthened the health systems of dozens of countries.

Free-of-charge antiretroviral medicines, HIV tests, condoms and other commodities—along with huge cadres of community health workers, enhanced health information and laboratory systems, strengthened procurement and supply chain management systems, and revived community health systems—are lasting legacies of the unprecedented global movement to fight HIV. Many of these resources are now playing important roles in the response to the COVID-19 pandemic.

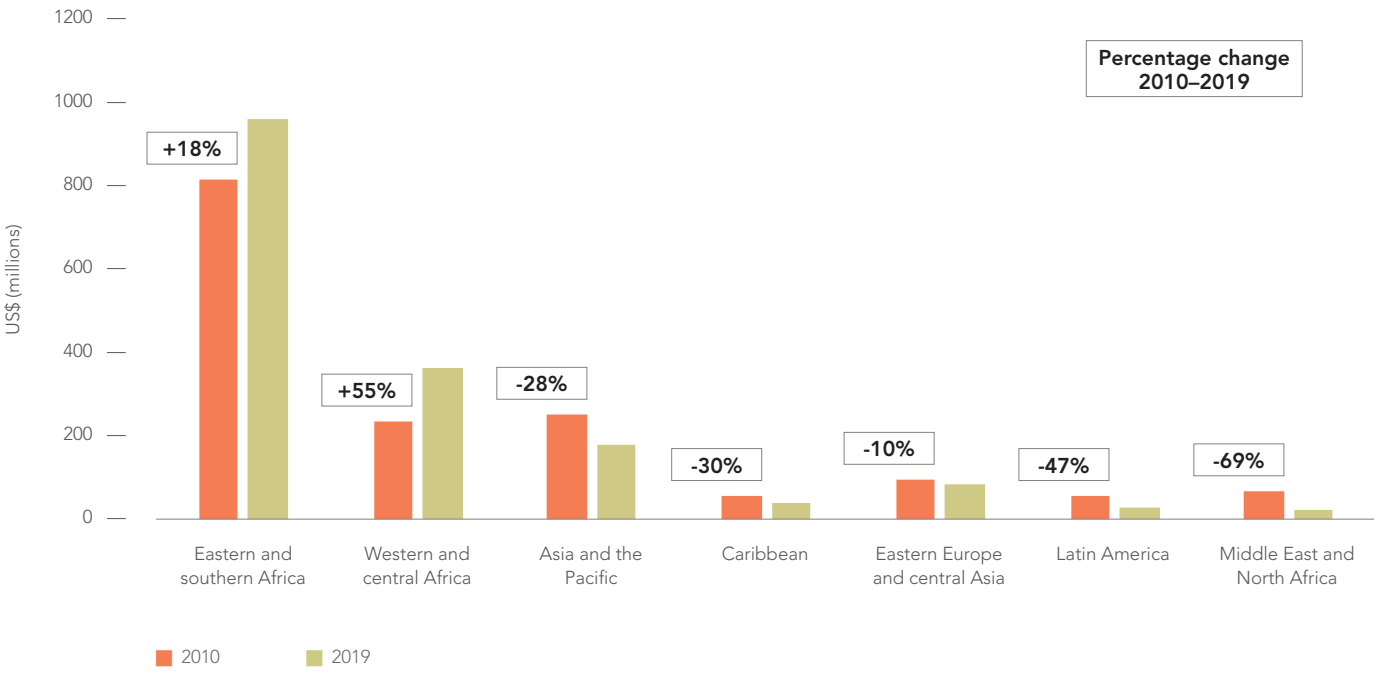
Despite their importance, however, pandemic response capacities have been under threat in recent years. The latest data show that the total resources available for HIV programmes in low- and middle-income countries have waned within the Sustainable Development Goals era, leaving HIV funding well short of the 2020 target set by the UN General Assembly in 2016. Financial resources from international sources for the HIV responses in these countries have declined by nearly 10% since 2015, with a 10% increase in bilateral funding from the United States Government—primarily through PEPFAR—offset by a 3% decline in funding from the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) and a 31% decline in multilateral and bilateral contributions from other sources (see Chapter 2 for more details).[8]

The destinations of United States Government bilateral funding and Global Fund resources for HIV have shifted since 2010. Annual Global Fund disbursements to eastern and southern Africa and western and central Africa increased by 18% and 55%, respectively, during 2010–2019, and they decreased in all other regions (Figure 5.15). The trend reflects Global Fund Board decisions to concentrate the organization's support in regions with the largest burdens of disease and the least capacity to self-finance HIV programmes *(270)*. Bilateral funding from the United States Government has similarly shifted to HIV responses in sub-Saharan Africa, including a US$ 1.3 billion increase in annual funding to countries in eastern and southern Africa and an increase of more than US$ 100 million in annual funding to countries in western and central Africa between 2010 and 2019 (Figure 5.16). United States Government bilateral funding for HIV responses in eastern Europe and central Asia also tripled during this period, from US$ 13 million annually to US$ 55 million annually.

8 Resource availability estimates are presented in constant 2016 US dollars to account for inflation and thus be comparable to the target that was set by the UN General Assembly in the 2016 Political Declaration on Ending AIDS.

FIGURE 5.15

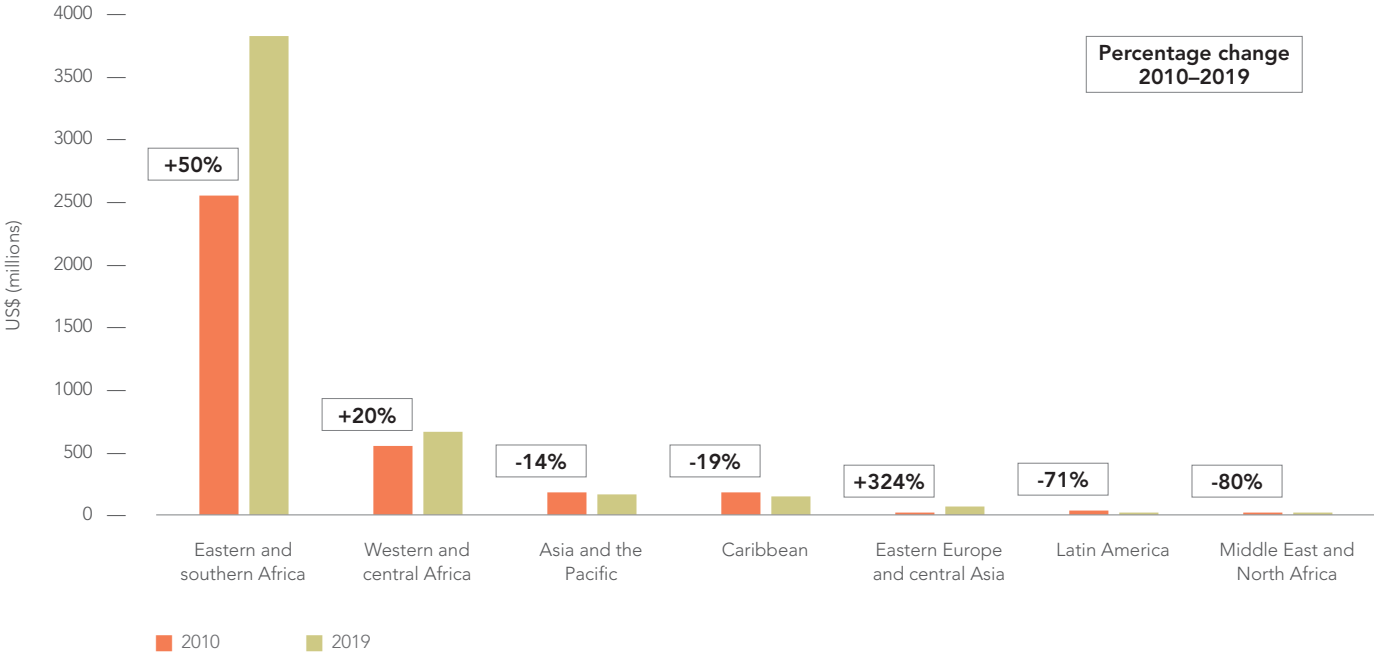
## Change in disbursements by the Global Fund to Fight AIDS, Tuberculosis and Malaria, by region, 2010–2019




Source: Financials. In: The Global Fund [Internet]. Geneva: The Global Fund; c2020 (see https://www.theglobalfund.org/en/financials/); UNAIDS financial estimates, June 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).

FIGURE 5.16

## Actual and percentage change in bilateral disbursements by the United States of America, by region, 2010–2019




Source: UNAIDS financial estimates, July 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).

## HIV funding is losing momentum

Domestic funding increased steadily over most of the past decade, and by 2019, it comprised 57% of total investments in the HIV responses of low- and middle-income countries. This is in line with broader health financing trends in those countries, where donor funding as a share of health spending has been declining for much of the past decade *(271)*.

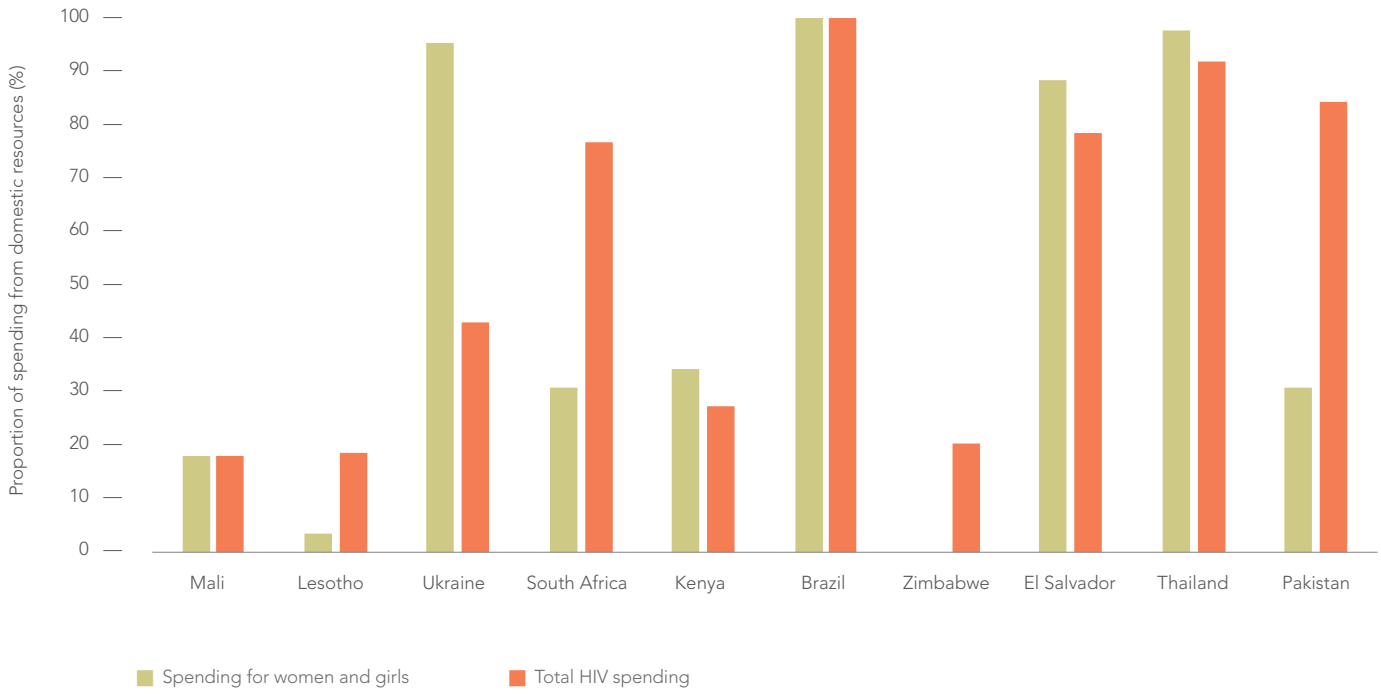
Momentum was lost in 2017, however, and domestic funding declined by 2% over the next two years.[9] The biggest decreases in domestic investments in HIV during the 2017–2019 period were in eastern Europe and central Asia (27% decrease), eastern and southern Africa (14% decrease) and western and central Africa (12% decrease).

National HIV responses in low-income countries still heavily rely on external funding, while many middle-income countries have struggled to transition to primarily domestically financed responses. Components of HIV programmes that depend heavily on external funding, such as those focused on key populations at higher risk of HIV infection, are at particular risk during funding transitions.

Financing for HIV-related interventions that focus on women and girls also may be vulnerable. The domestic share of spending on those interventions varies widely between countries—a proportion that can be quite different than the domestic share of total HIV spending (Figure 5.17). International assistance accounts for the vast majority of spending on women- and girls-focused interventions in several countries where women and girls are disproportionately affected by HIV, especially in southern Africa.

FIGURE 5.17

**Percentage of programme spending for women and girls and total HIV spending from domestic public resources, reporting countries, 2016–2019**




Source: UNAIDS Global AIDS Monitoring, 2018–2020 (see https://aidsinfo.unaids.org/).
Note: The interventions included cash transfers to girls (high-prevalence countries), PrEP for young women and adolescent girls (high-prevalence countries), gender programmes and the prevention of the vertical transmission of HIV.
Note: All data was reported in 2019, except: South Africa (2018); Ukraine and Lesotho (2017); and Mali (2016).

9 The nominal decrease (not adjusted for inflation) was 4%.

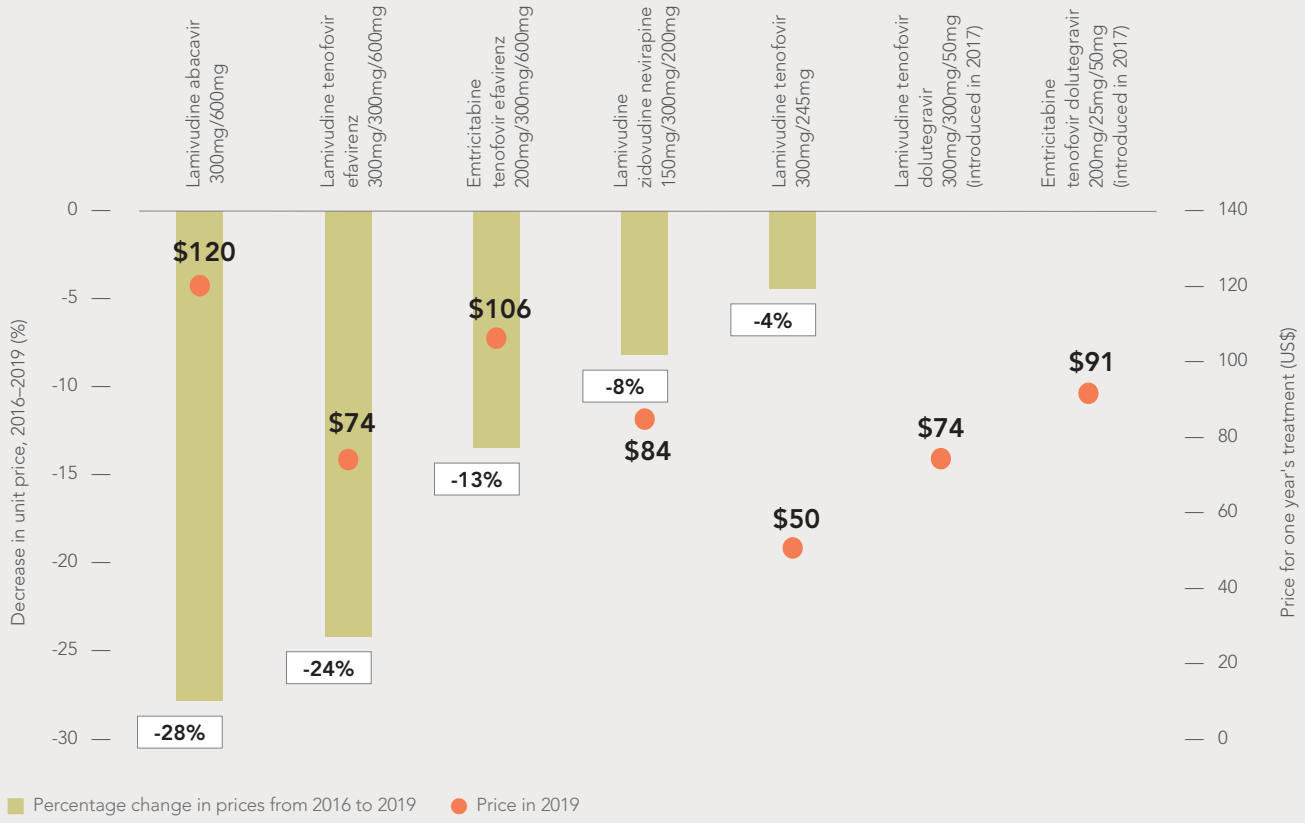
## HIV TREATMENT SUPPLIES AND PRICES THREATENED BY THE COVID-19 PANDEMIC

Disruptions caused by the COVID-19 pandemic are threatening the supply of life-saving antiretroviral medicines and adding to the risk of price increases that can set back the HIV treatment programmes of low- and middle-income countries.

Civil society activism and competition from manufacturers of generic drugs drove down the prices of antiretroviral medicines from about US$ 14 000 per person per year for first-line regimens in high-income countries in 1990 to about US$ 1200 per year in low- and middle-income countries in 2003 *(272)*. By 2018, the price per person per year in sub-Saharan Africa was under US$ 100 for most fixed-dose combinations that include tenofovir (Figure 5.18) *(273)*. The prices of other fixed-dose combinations also have continued to decline over the past few years *(274)*.

FIGURE 5.18

**Change in prices of antiretroviral medicines, 2016–2019**



UNAIDS estimates that the market value for generic antiretroviral medicines within low- and middle-income countries was about US$ 1.8 billion in 2018. Approximately 80% of generic antiretroviral medicines procured by low- and middle-income countries are currently manufactured in one country: India *(273, 275–277)*.

While there remains significant scope for further price reductions in countries where generic antiretroviral drugs are not yet easily accessible, disruptions caused by the COVID-19 pandemic could have an opposite effect. Lockdowns, halted production, border closures and transport disruption threaten to affect the supply of materials and the manufacture and distribution of HIV medicines, with tighter supply factors possibly leading to pressure on market prices *(278)*.

For example, supplies of key starting materials (which are precursors to active pharmaceutical ingredients) were affected by factory shutdowns in China during the first quarter of 2020. As of May 2020, there were indications that active pharmaceutical ingredient prices were increasing for tenofovir, efavirenz and ritonavir. Lockdown restrictions in India and elsewhere also reduced the production output of antiretroviral medicine manufacturers, while air freight charges (both to and from India) have also increased *(278)*.

UNAIDS estimates suggest that those factors—and other cost drivers—could increase the final cost of some generic antiretroviral regimens by between 10% and 25% within just a few months if the risks imposed by COVID-19 are not mitigated *(280)*. The severe economic impact of the COVID-19 pandemic—combined with possible volatile currency fluctuations—will leave many countries with little capacity to absorb cost increases in their HIV treatment programmes.

UNAIDS estimates and country-reported data indicate that more than 80% of people on HIV treatment in low- and middle-income countries are receiving either tenofovir/lamivudine/efavirenz or tenofovir/lamivudine/dolutegravir combinations as first-line regimens *(278)*. Since those products may face potential supply chain delays, it is crucial to determine the risks to stock levels in countries, take early precautions to avert stock-outs and anticipate possible price increases.

## HIV financing during global crises

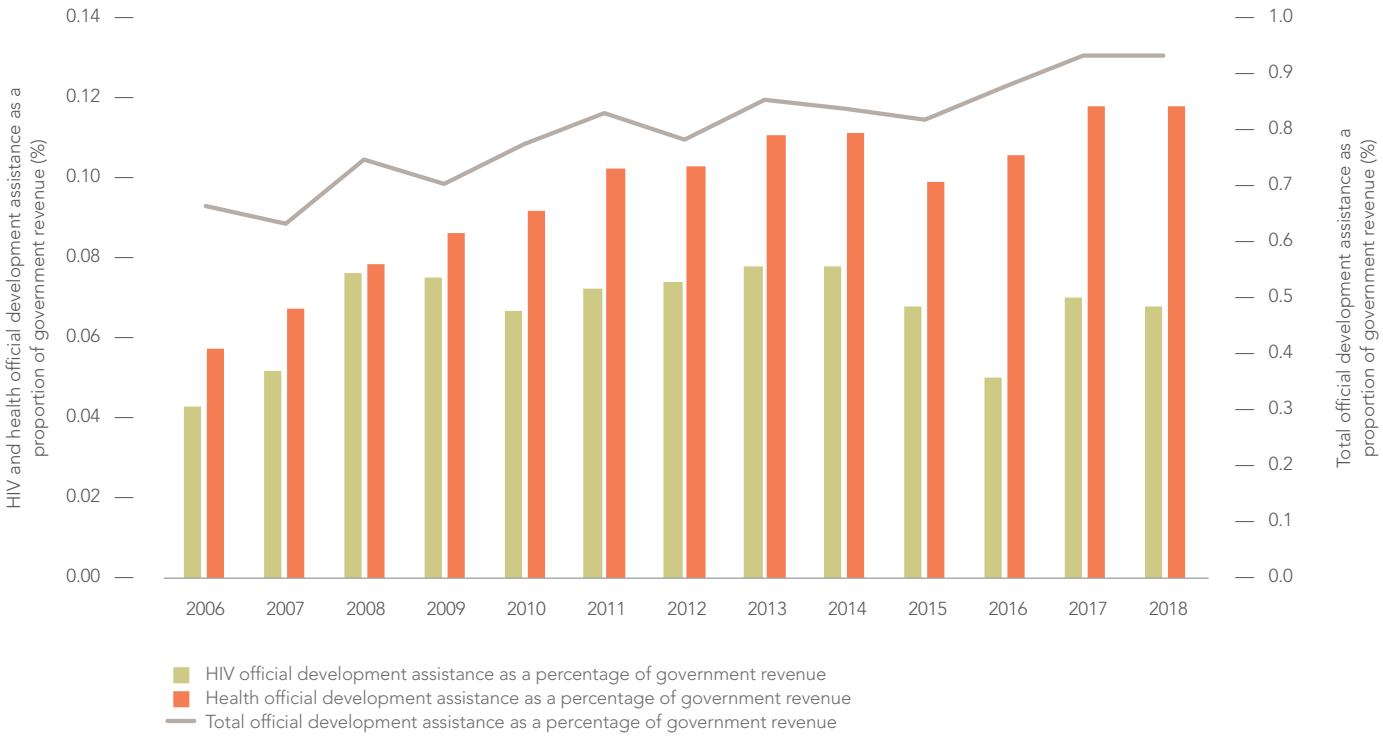
The turmoil associated with the COVID-19 pandemic presents all countries with difficult resource allocation decisions. Efficiency gains and budget cuts may be emphasized as governments seek ways to meet rising demands with limited resources. Recent history suggests that the HIV response could be negatively affected by this decision-making.

In the past decade, international funding for HIV was significantly affected after the 2008–2009 global financial crisis, the 2012–2013 Eurozone debt crisis and the European Union reaction to the increased flows of migrants and refugees in 2014–2015. During these periods, the reductions in official development assistance for HIV were more pronounced than the decreases in official development assistance for health overall. While the trend in assistance for health broadly followed trends in total official development assistance as a percentage of government revenue in donor countries, assistance for HIV was hit hard (Figure 5.19). The effects were offset somewhat by the United States Government's increased funding for HIV. Official development assistance for HIV from other donors decreased in total, with a larger percentage allocated through multilateral channels. HIV funding from these donors has not yet recovered to pre-2014 levels (Figure 5.20).

In addition to a global health crisis, the COVID-19 pandemic and response is an economic shock of unprecedented scale. The International Monetary Fund (IMF) and World Bank expect the global economy to contract by about 3% in 2020 *(279, 280)*. By comparison, during the 2008–2010 financial crisis, global real GDP growth shrank by 0.1% in 2009 (compared with 2008). The ILO has predicted that the pandemic could wipe out almost 7% percent of working hours globally by mid-2020, equal to 195 million full-time workers *(281)*.

FIGURE 5.19

**Official development assistance as percentage of donor government revenue from all donor countries except the United States of America, 2006–2018**




Source: Creditor Reporting System (CRS). In: OECD.Stat [database]. OECD; c2020 (https://stats.oecd.org/Index.aspx?DataSetCode=CRS1, accessed May 2020); World economic outlook, April 2020: the great lockdown. Washington (DC): International Monetary Fund; 2020; World Bank Open Data [database]. Washington (DC): World Bank; c2020 (data.worldbank.org); UNAIDS financial estimates, 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).

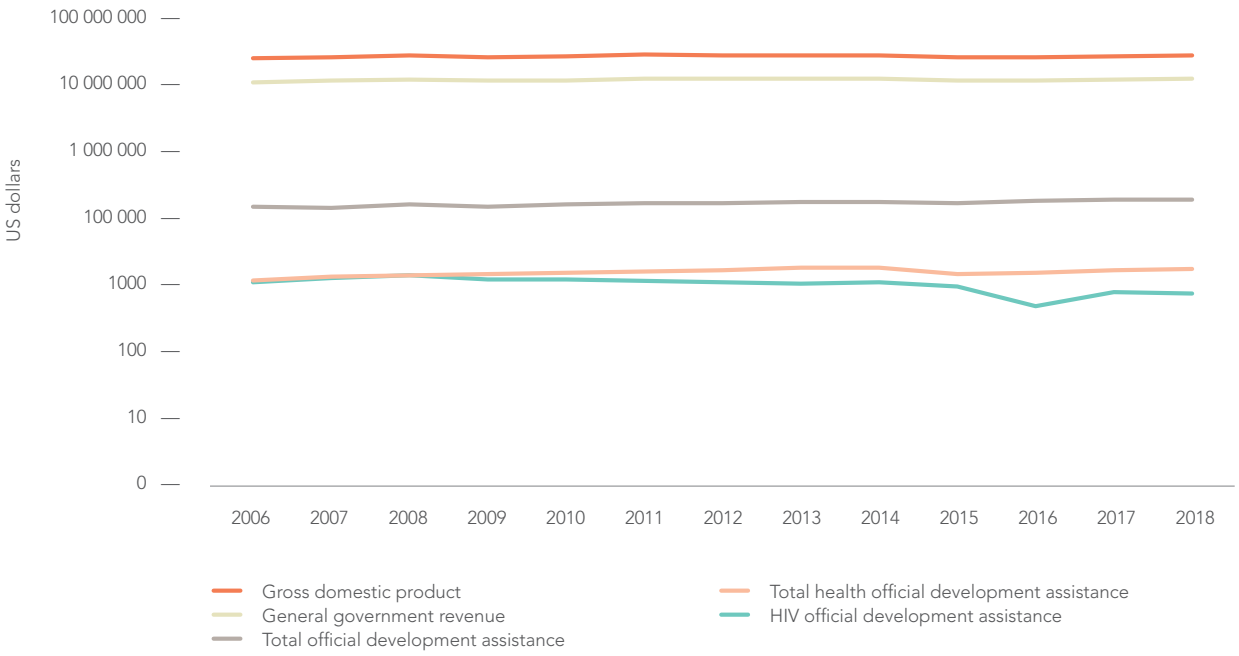
Government revenue is shrinking, just as additional investments are needed to protect people against the health, social and economic disruptions triggered by the pandemic. Low- and middle-income countries are especially at risk: many already are stricken with economic slowdowns, massive capital outflows and forbidding debt obligations *(282)*. In sub-Saharan Africa, GDP growth is expected to slow from 2.4% in 2019 to well under -2% in 2020, marking the region's first recession in 25 years *(280)*. Countries dependent on commodity exports—including the region's largest economies: Angola, Nigeria and South Africa—will be especially hard-hit.

High levels of debt exposure add to the vulnerability of countries. Indebtedness increased after the 2009 financial crisis as countries sought to bridge domestic investment savings gaps, encouraged by unusually low interest rates and exceptional levels of global liquidity. Due to sluggish global economic growth, however, commodity prices did not recover strongly enough to fuel the anticipated surges of economic growth across low- and middle-income countries. Even before the COVID-19 pandemic, more than 40% of low-income countries carried debt loads that were considered to be high-risk or in distress *(283)*.

It's highly likely that most low- and middle-income countries will need external resources, including concessional finance, to cope with the impact of the pandemic *(283)*. In April 2020, the UN proposed a three-phased approach for providing debt relief. This would involve a debt moratorium, followed by targeted debt relief, and then measures to address structural issues in the international debt architecture and prevent defaults *(283)*. The World Bank and IMF have called for a temporary suspension of debt repayments for the poorest countries, pending other actions to address financing and debt relief needs *(284)*. Debt repayments of some low-income countries were suspended in April 2020, and G20 countries pledged to free US$ 20 billion in fiscal space for those countries to respond to COVID-19 *(285)*.

FIGURE 5.20

**Change in official development assistance and macroeconomic variables, 2006–2018**




Note: The graph shows official development assistance from all donors, excluding the United States of America.
Note: The y axis uses a logarithmic scale, which allows large differences to be shown on the same graph. Between two points on the y axis, there is a tenfold difference: the difference between the first two points on the y axis is US$ 9, between the next two points it is US$ 90, and between the top two points it is US$ 90 million.
Source: OECD Creditor Reporting System (CRS). In: OECD.Stat [Internet]. OECD; 2020 (https://stats.oecd.org/Index.aspx?DataSetCode=CRS1, accessed May 2020); World economic outlook, April 2020: the great lockdown. Washington (DC): IMF; 2020; World Bank Open Data [database]. Washington (DC): World Bank; c2020 (data.worldbank.org); UNAIDS financial estimates, 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).

## THE FALSE ECONOMY OF USER FEES

As the COVID-19 pandemic progresses, fiscal pressures might tempt a greater reliance on user fees and other forms of out-of-pocket payments to finance health care. Decades of evidence show that such recourse would be short-sighted and counterproductive.

According to the World Bank, people in low- and middle-income countries spend half a trillion US dollars annually—more than US$ 80 per person—out of their own pockets to access health services *(286)*. Total out-of-pocket spending (including user fees) more than doubled in low- and middle-income countries from 2000 to 2017, reaching about 40% of total health spending (Figure 5.21) *(271)*. It comprised even larger shares in some of the most populous low- and middle-income countries, such as India (>65%), Indonesia (>48%) and Pakistan (>66%) *(287, 288)*.

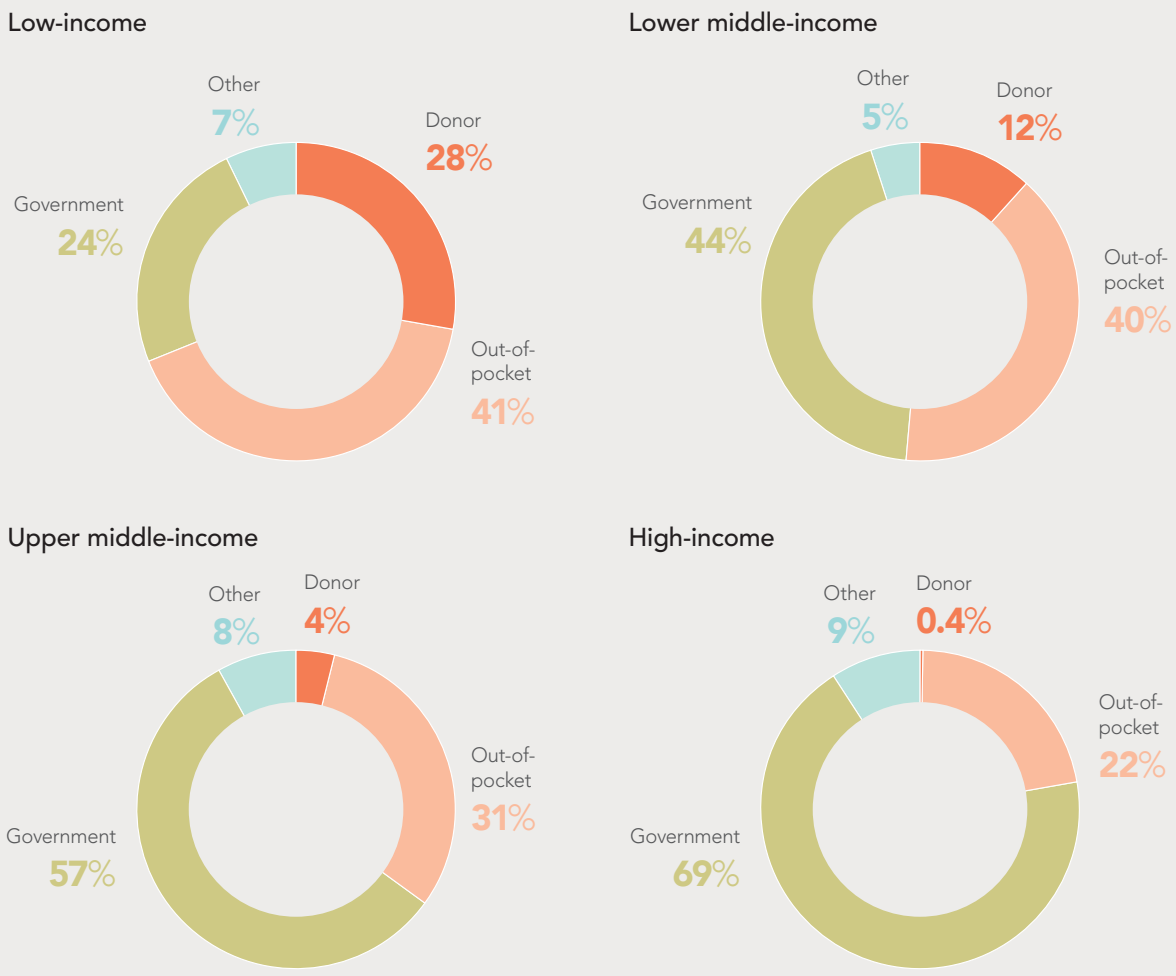
Similarly, evidence from western and central Africa shows that user charges (in the form of so-called consultation fees or payments required for HIV tests, CD4 cell counts, and viral load or other laboratory tests) undermine uptake of nominally free antiretroviral therapy, hinder the retention of people in care and reduce the quality of care (due to opportunistic infections going undiagnosed) *(289)*. Other studies in Botswana, Nigeria, Senegal and Uganda confirmed that user fees undermine adherence to HIV treatment *(290–293)*.

The fees have similar effects on general health service use *(294)*. Surveys in Burundi, Chad, the Democratic Republic of the Congo, Haiti, Mali and Sierra Leone found that fees deter people from using public health facilities, forcing many to delay care, seek alternative care in the unregulated private sector or experiment with self-treatment *(295)*. User fees also are an inefficient financing mechanism for health services, with anticipated revenue increases and improvements in service quality typically minor or absent *(294, 296–298)*.

User fees are a false economy. Large amounts of funding are invested in health programmes aimed at reaching all in need, such as global programmes for HIV testing and treatment, tuberculosis prevention and treatment, and maternal and child health. When user fees and other supplementary fees (such as consultation or attendance fees) are imposed at health facilities, those charges prevent the poor and most vulnerable from accessing or benefiting from those services, undermining the aims of those investments.

FIGURE 5.21

**Health expenditures by source, by country income level, 2017**




Note: Shares of overall health spending in 2017.
Source: Global spending on health: a world in transition. Geneva: WHO; 2019 (https://www.who.int/health_financing/documents/health-expenditure-report-2019.pdf?ua=1, accessed 8 June 2020).

## No simple trade-offs

As the COVID-19 pandemic unfolds, the systems and programmes built to subdue epidemics and keep health threats at bay must be sustained. Simple trade-offs are not available: in making allocative decisions, governments and development partners have to consider the knock-on effects for the rest of the public health landscape *(299)*.

The 2014–2015 Ebola outbreak in western Africa offers instructive lessons. One study estimated that a 50% reduction in access to health services during that outbreak led to an additional 10 600 deaths from malaria, AIDS-related illness and tuberculosis, almost equal to the number of deaths directly caused by Ebola *(300)*. There also have been numerous reports during the COVID-19 crisis of disrupted access to services, including maternal care and immunization, HIV and tuberculosis care, and dialysis and cancer treatment. A rapid assessment in India, for example, indicated an almost 80% decline in daily tuberculosis notifications in April 2020 during the country's COVID-19 lockdown *(301)*. As many as 117 million children worldwide could miss out on measles vaccinations due to the suspension of immunization campaigns during lockdowns *(299)*.

Recent modelling has estimated that interruption of antiretroviral therapy for 20% of people living with HIV for six months would result in more than 110 000 additional AIDS-related deaths *(302)*. A total disruption of antiretroviral therapy for six months could lead to more than 500 000 [471 000–673 000] additional deaths from AIDS-related illnesses (including tuberculosis) in sub-Saharan Africa in 2020–2021 *(303)*. This would effectively turn the clock back to 2008, when the treatment roll-out was still gathering pace and almost 1 million people in that region died due to AIDS-related illnesses. Disrupted antiretroviral therapy would fuel HIV incidence and accelerate the spread of HIV drug resistance, setting back the HIV response even further *(303, 304)*.

The Global Fund has estimated that US$ 28.5 billion is needed over a 12-month period to adapt HIV, tuberculosis and malaria programmes to mitigate the impact of COVID-19, to train and protect health workers, to reinforce systems for health so they don't collapse, and to respond to COVID-19 itself, particularly through testing, tracing and isolation, and by providing treatments as they become available *(305)*. This amount is in addition to the resources already needed to keep the responses to these three disease on track.

Saving lives from COVID-19 cannot come at the expense of lives from other threats. Pitting spending on COVID-19 against spending on other potentially rampant public health threats, such as HIV and tuberculosis, conjures false and damaging trade-offs. This report has described in detail how the successes of the responses to HIV, tuberculosis, malaria, Ebola and other communicable diseases are vital contributions to the COVID-19 response.

Likewise, the world's collective failure to achieve the 2020 HIV targets exposes systemic weaknesses and entrenched inequalities. The gaps in the HIV response raise questions about what might have been. What if the required investments had been made and the UNAIDS Fast-Track Strategy had been fully implemented? What if global pandemic response capacities had been stronger when COVID-19 found its first human host? The international community cannot re-write the past, but it can move forward together on a shared commitment to make strong investments in global pandemic response capacity and the community health systems that have become the backbone of HIV programmes across the world *(306)*.

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# REGION PROFILES

# EASTERN AND SOUTHERN AFRICA

## DATA POINTS

NEW HIV INFECTIONS HAVE
**DECLINED BY 38%**
AND AIDS-RELATED DEATHS BY 49% IN THE REGION SINCE 2010

ADOLESCENT GIRLS AND YOUNG WOMEN ACCOUNT FOR
**26% OF NEW INFECTIONS**
IN THE REGION

CONDOM USE DURING HIGH-RISK SEX HAS DECLINED IN
**3 COUNTRIES**
IN THE REGION

**72% OF PEOPLE LIVING WITH HIV**
IN THE REGION ARE ON TREATMENT, AND 65% HAVE SUPPRESSED VIRAL LOADS

**7 COUNTRIES**
HAVE ALREADY REACHED THE 90–90–90 TARGETS, AND 3 OTHERS ARE VERY CLOSE TO DOING SO

THE REGION'S INCIDENCE:PREVALENCE RATIO HAS
**NARROWED TO 3.5**

The decrease in new HIV infections in eastern and southern Africa since 2010 is larger than in any other region. Sustaining that progress demands more effectively addressing the gender dynamics of the epidemic. Three in five new infections in 2019 were among women, and the incidence of HIV infections among adolescent girls and young women (aged 15 to 24 years) remains inordinately high: they are 2.5 times more likely than their male peers to acquire HIV infection. A comprehensive approach is required, including combination prevention programmes that take account of gender inequalities, improving girls' access to secondary education (which can have a protective effect against HIV), and increasing access to sexual and reproductive health services.

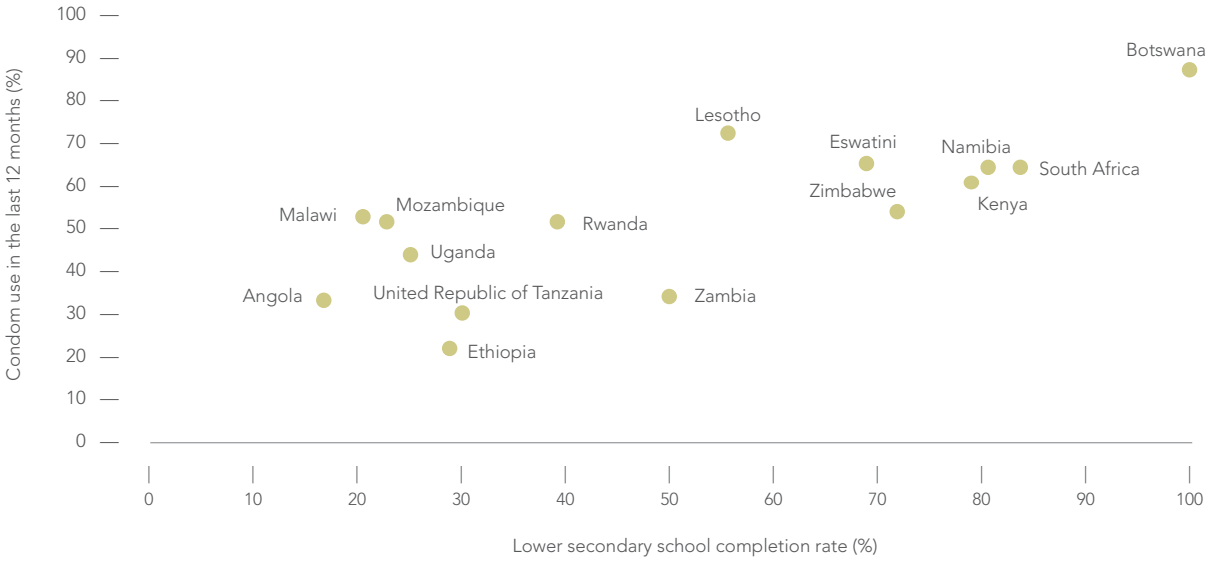
The region is closing in on the 90–90–90 testing and treatment targets. Seven countries have reached those Fast-Track Targets (Botswana, Eswatini, Namibia, Rwanda, Uganda, Zambia and Zimbabwe), and three others are very close to doing so (Kenya, Malawi and the United Republic of Tanzania). Despite considerable progress made in reaching people in the region with treatment, the percentage of children with a suppressed viral load was only 40% (compared to 66% among adults). Community-led services within differentiated care approaches are adding vital momentum to treatment programmes.

The roll-out of HIV testing and treatment programmes is reflected in the 49% decrease in AIDS-related deaths since 2010—a steeper reduction than in any other region. Nonetheless, an estimated 300 000 [230 000–390 000] people died due to AIDS-related illnesses in 2019. There is scope for increasing the coverage of HIV testing and treatment among men and young women.

A substantial proportion (roughly one quarter) of new infections are among key populations and their sexual partners, a reminder of the need for conducive laws and policies, and for programmes that serve the HIV-related needs of these populations.

FIGURE 6.1

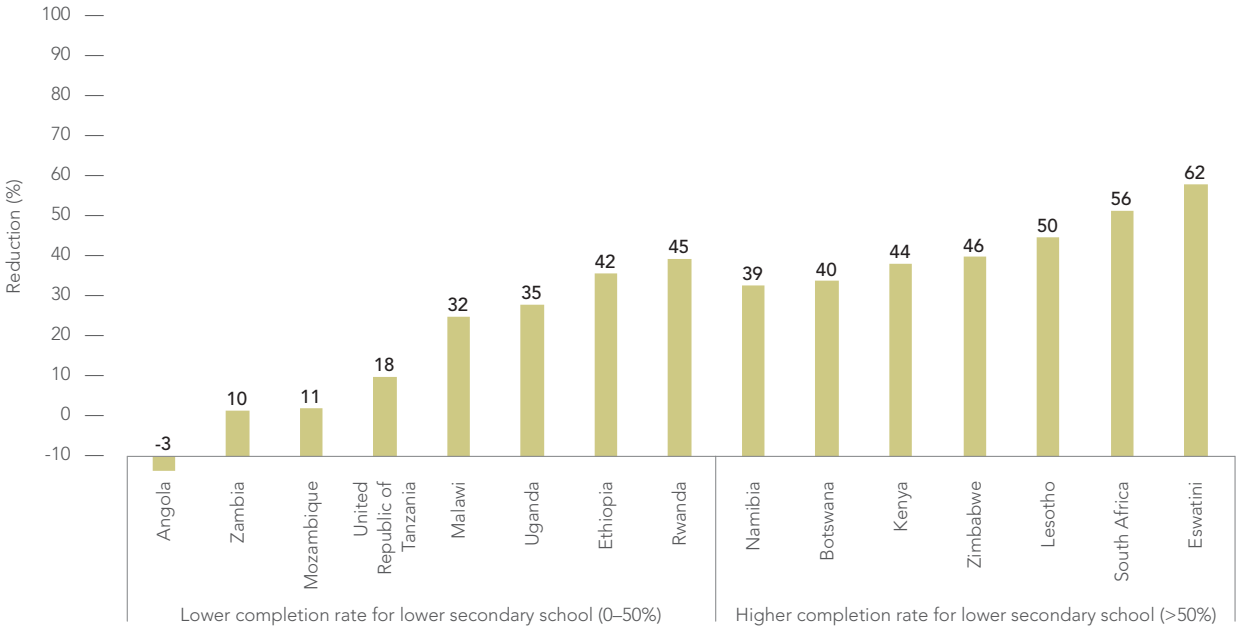
**Condom use at last higher-risk sex with a nonmarital, noncohabiting partner in the last 12 months, and lower secondary school completion rate among adolescent girls and young women (ages 15–24 years), eastern and southern Africa, 2012–2018**




Source: Population-based surveys, 2012–2018; UNESCO Institute for Statistics (UIS).
Note: Lower secondary school age is approximately 12 to 16 years of age.

There is a positive association between condom use at last higher-risk sex and completion rates of lower secondary school among adolescent girls and young women in eastern and southern Africa. Additionally, greater gains have been made in reducing new HIV infections among adolescent girls and young women in countries that have higher completion rates for lower secondary school (>50%). Keeping girls in school reduces both HIV risks and new infections (see Chapter 3).

**Relative reduction in new HIV infections since 2010 among adolescent girls and young women (ages 15–24 years), by completion rate for lower secondary school, eastern and southern Africa**

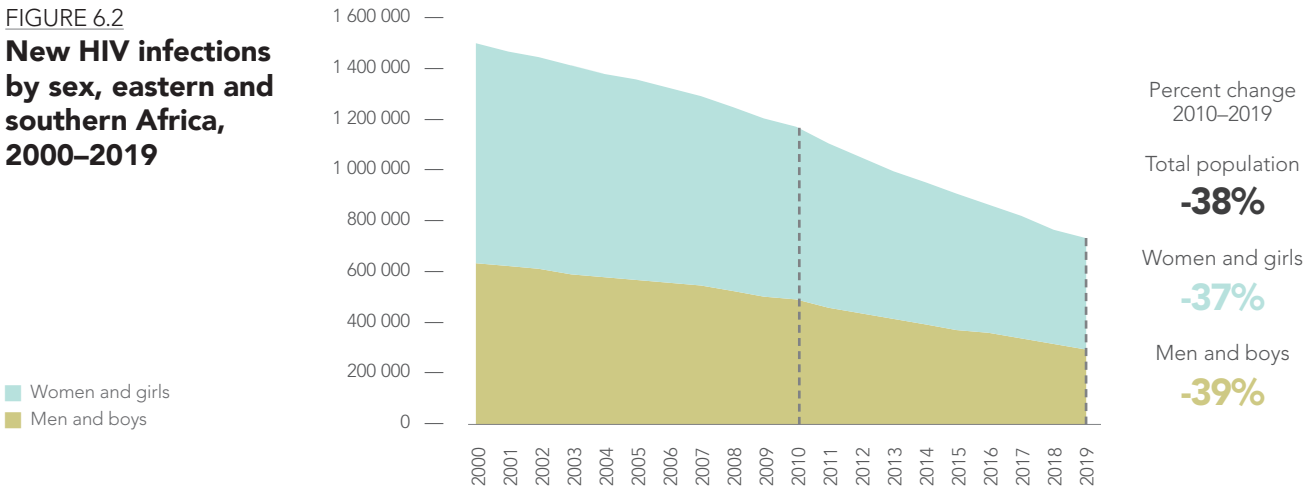



Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); UNESCO Institute for Statistics (UIS).

## State of the epidemic

FIGURE 6.2

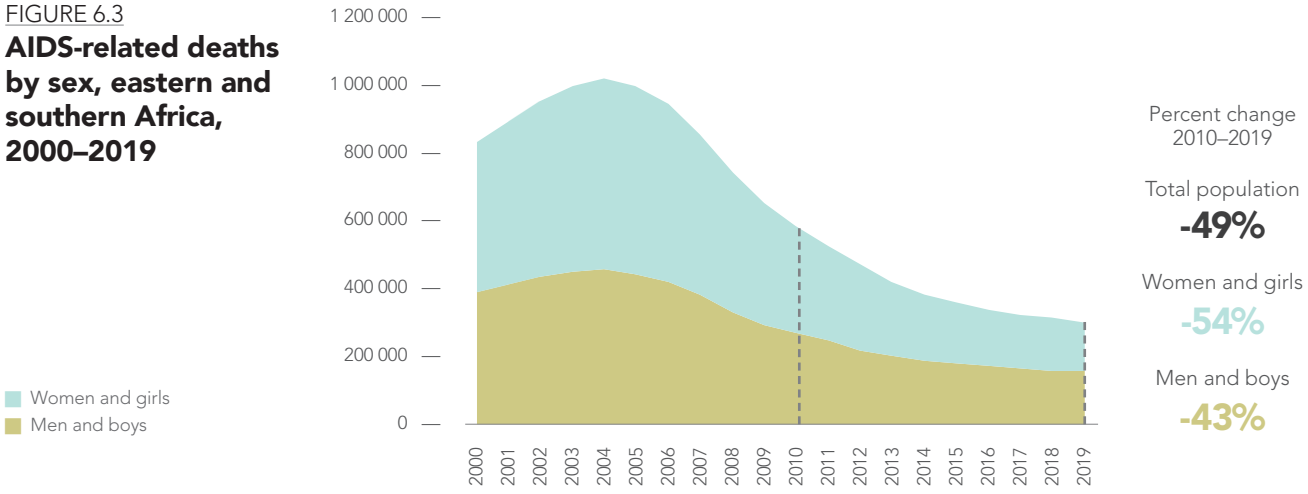
**New HIV infections by sex, eastern and southern Africa, 2000–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 6.3

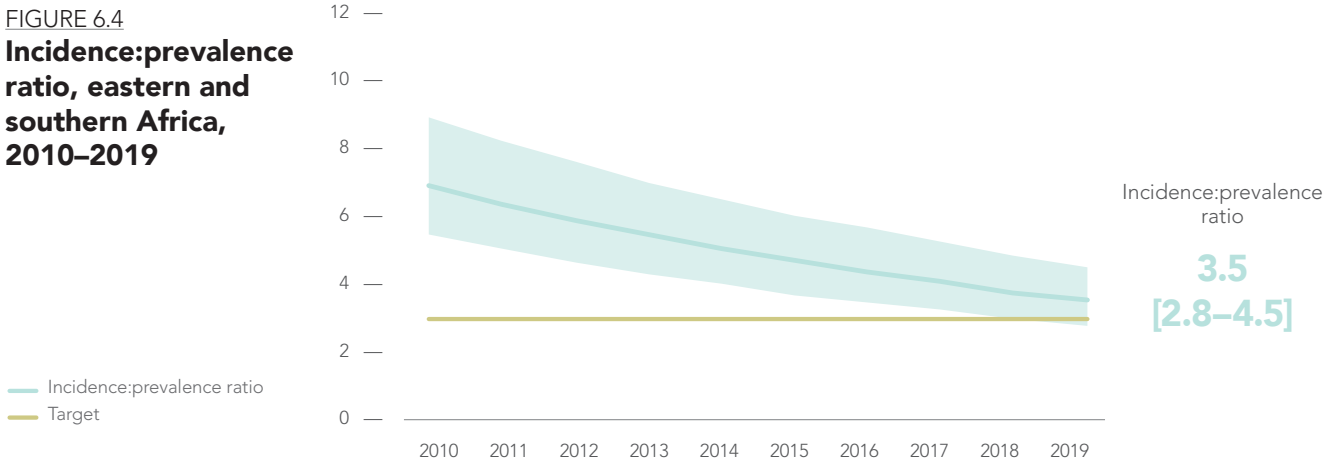
**AIDS-related deaths by sex, eastern and southern Africa, 2000–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 6.4

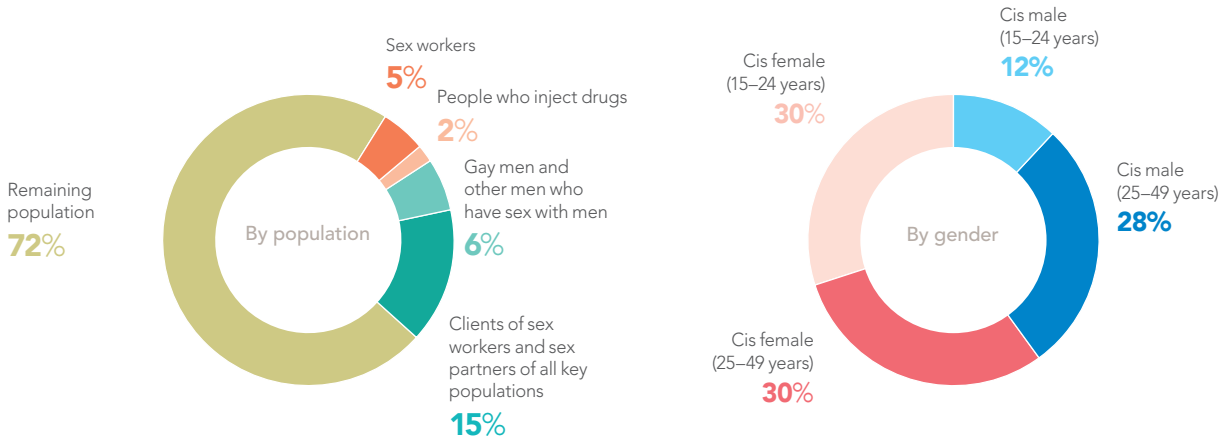
**Incidence:prevalence ratio, eastern and southern Africa, 2010–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 6.5

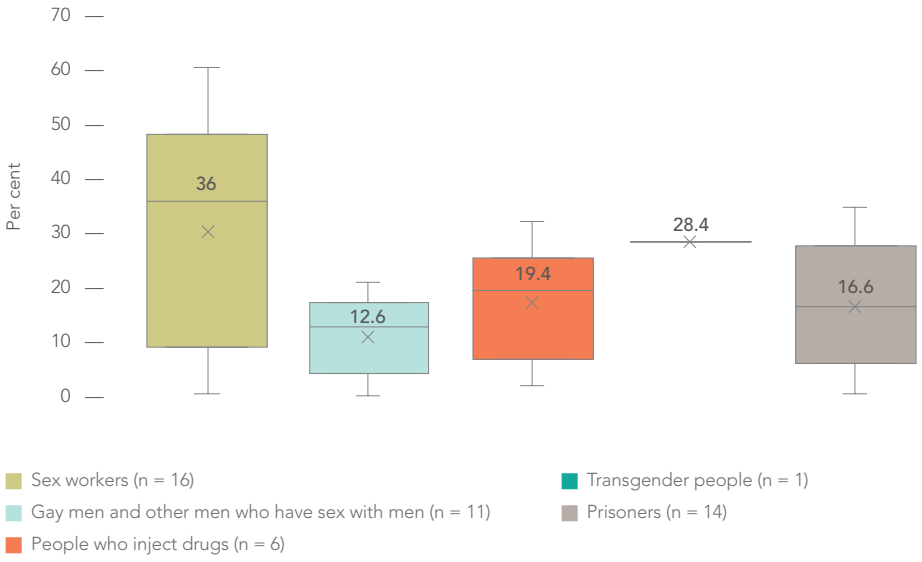
## Distribution of new HIV infections by population (aged 15–49 years), eastern and southern Africa, 2019




Source: UNAIDS special analysis, 2020 (see methods annex).

FIGURE 6.6

## HIV prevalence among key populations, eastern and southern Africa, 2015–2019




Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).
Note (n = number of countries reporting)

TABLE 6.1

## Estimated size of key populations, eastern and southern Africa, 2018–2019

| | National adult population (15+), 2018 | National adult population (15+), 2019 | Sex workers | Sex workers as percentage of adult population (15+) | Gay men and other men who have sex with men | Gay men and other men who have sex with men as percentage of adult population (15+) | People who inject drugs | People who inject drugs as percentage of adult population (15+) | Transgender people | Transgender people as percentage of adult population (15+) | Prisoners | Prisoners as percentage of adult population (15+) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Comoros | 500 000 | 520 000 | | | | | | | | | | |
| Kenya | 28 100 000 | 28 900 000 | | | | | | | | | | |
| Lesotho | 1 360 000 | 1 360 000 | | | | | | | | | | |
| Madagascar | 15 600 000 | 16 100 000 | | | | | | | | | | |
| Malawi | 10 100 000 | 10 400 000 | | | | | | | | | 14 000 | 0.14% |
| Seychelles | 75 000 | 75 000 | | | | | | | | | 400 | 0.53% |
| South Africa | 40 900 000 | 41 500 000 | | | | | | | | | | |
| South Sudan | 7 400 000 | 7 500 000 | | | | | | | | | | |
| Uganda | 21 300 000 | 22 300 000 | | | | | | | | | | |
| United Republic of Tanzania | 30 500 000 | 31 600 000 | | | | | | | | | | |
| Zambia | 9 500 000 | 9 800 000 | | | | | | | | | 22 000 | 0.22% |
| Zimbabwe | 9 300 000 | 9 500 000 | | | | | | | | | 19 000 | 0.20% |

- National population size estimate
- Local population size estimate
- Insufficient data
- No data

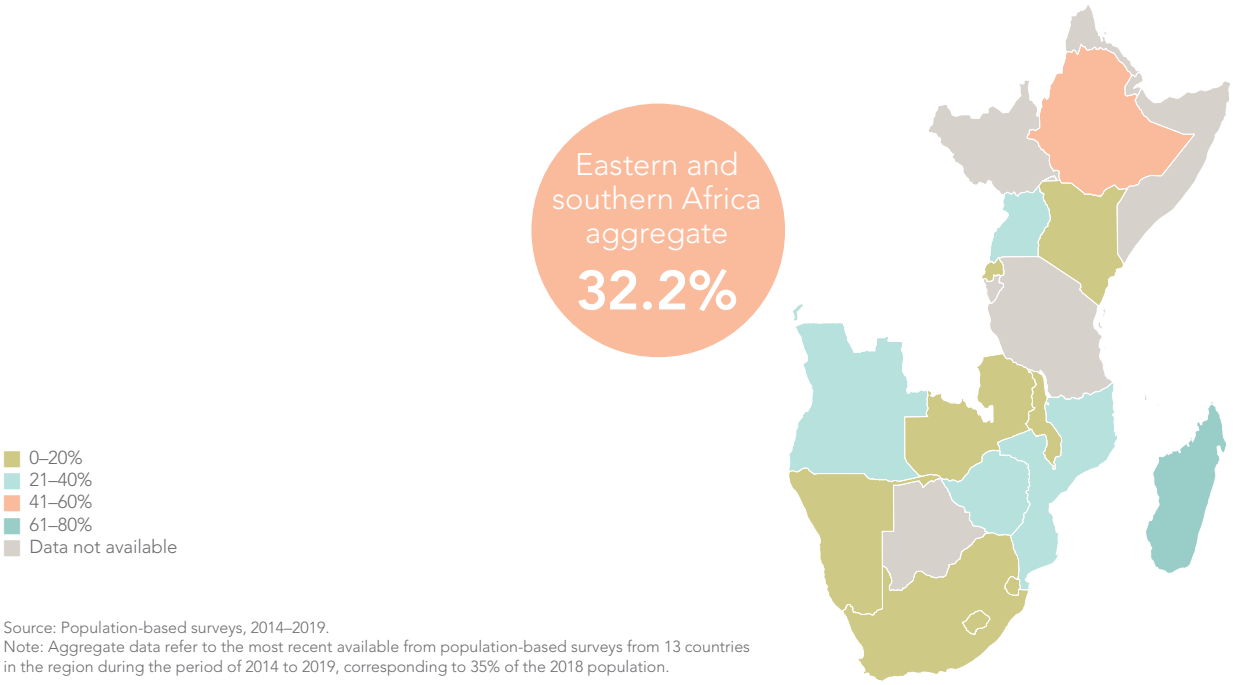
Sources: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/); Spectrum Demproj module, 2020; World Population Prospects 2019 [Internet]. New York: United Nations Department of Economic and Social Affairs; c2020 (https://population.un.org/wpp/)(custom data acquired via website).
Note 1: Estimates shown are government-provided estimates reported in 2018–2019. Additional and alternative estimates may be available from different sources, including the Key Populations Atlas (https://kpatlas.unaids.org/), academic publications or institutional documents.
Note 2: The regions covered by the local population size estimates are as follows:

| | |
|---|---|
| Lesotho | Butha Buthe, Leribe, Mafeteng and Maseru |
| South Africa | Cape Town Metro, Durban Metro and Johannesburg Metro |
| South Sudan | Wau and Yambio |
| Zimbabwe | Bulawayo and Harare |

## Stigma and discrimination and violence

FIGURE 6.7

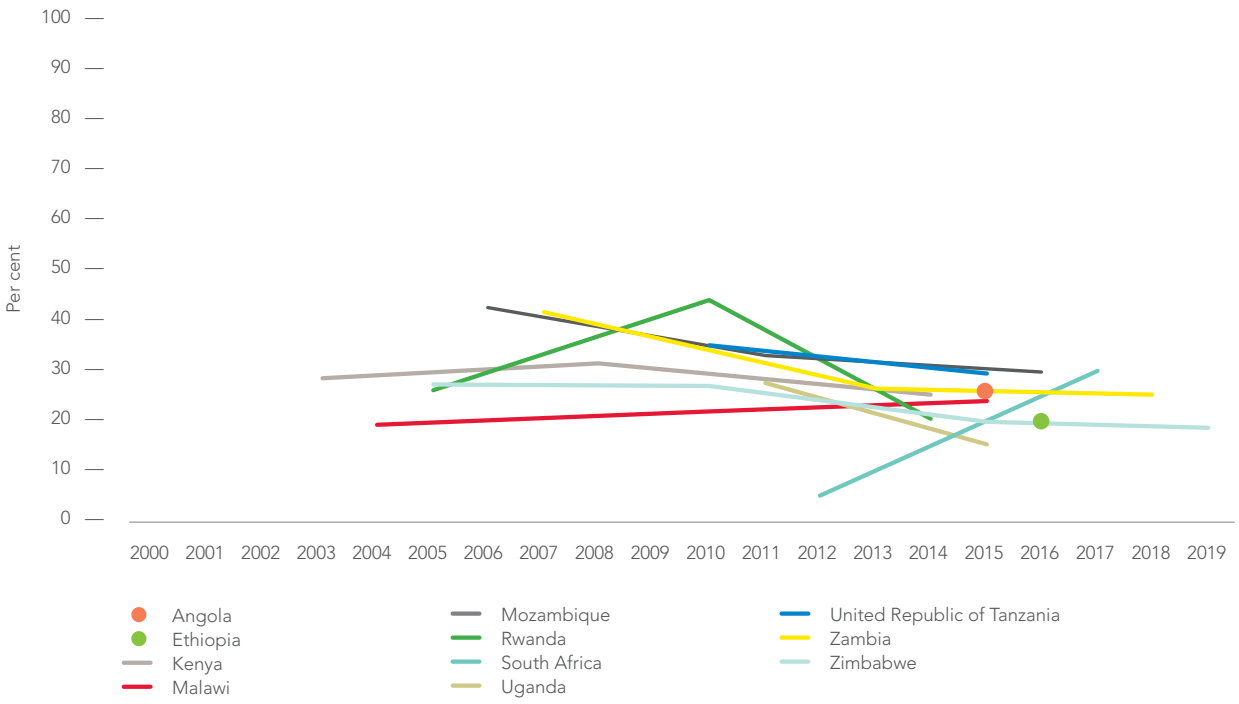
**Percentage of people aged 15–49 years who would not purchase vegetables from a shopkeeper living with HIV, eastern and southern Africa, 2014–2019**




Source: Population-based surveys, 2014–2019.
Note: Aggregate data refer to the most recent available from population-based surveys from 13 countries in the region during the period of 2014 to 2019, corresponding to 35% of the 2018 population.

FIGURE 6.8

**Ever-married or partnered women aged 15–49 years who experienced physical and/or sexual violence by an intimate partner in the past 12 months, countries with available data, eastern and southern Africa, 2000–2019**




Source: Population-based surveys, 2000–2019.

## Laws and policies

TABLE 6.2

### Laws and policies scorecard, eastern and southern Africa, 2019

| | Criminalization of transgender people | Criminalization of sex work | Criminalization of same-sex sexual acts | Drug use or possession for personal use an offence | Parental consent for adolescents to access HIV testing | Spousal consent for married women to access sexual and reproductive health services |
|---|---|---|---|---|---|---|
| Angola | b | | l | | b | b |
| Botswana | b | b | m | b | b | b |
| Comoros | b | b | n | b | b | b |
| Eritrea | | c | l | o | | |
| Eswatini | b | d | b | b | b | b |
| Ethiopia | a | b | b | a | b | b |
| Kenya | b | b | l | b | b | b |
| Lesotho | b | e | b | p | t | b |
| Madagascar | b | f | b | b | b | b |
| Malawi | b | g | b | b | b | b |
| Mauritius | b | b | b | b | b | b |
| Mozambique | b | b | b | b | u | b |
| Namibia | b | h | b | q | b | b |
| Rwanda | a | i | l | a | v | b |
| Seychelles | b | b | b | b | b | b |
| South Africa | b | j | b | b | w | b |
| South Sudan | b | b | b | b | b | b |
| Uganda | b | b | b | r | b | b |
| United Republic of Tanzania | b | b | b | b | b | b |
| Zambia | b | k | b | b | b | b |
| Zimbabwe | b | b | b | s | b | b |

Criminalized and/or prosecuted
Neither criminalized nor prosecuted
Data not available

Any criminalization or punitive regulation of sex work
Sex work is not subject to punitive regulations or is not criminalized
Issue is determined/differs at the subnational level
Data not available

Death penalty
Imprisonment or no penalty specified
Data not available

Laws penalizing same-sex sexual acts have been decriminalized or never existed, or no specific legislation

Compulsory detention for drug offences

Possession of drugs for personal use or drug use or consumption are specified as a criminal offence

Data not available

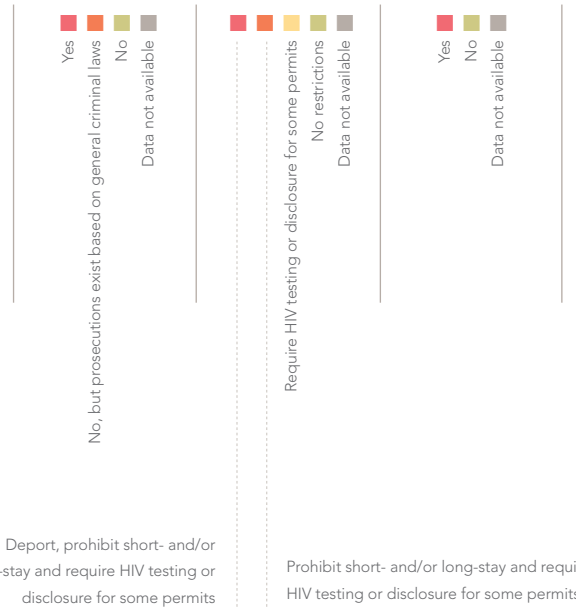
Possession of drugs for personal use or drug use or consumption are not punished by laws or regulations

Possession of drugs for personal use or drug use or consumption is specified as a non-criminal offence

Yes, for adolescents younger than 18
Yes, for adolescents younger than 14 or 16
Yes, for adolescents younger than 12
No
Data not available

Yes
No
Data not available

| Laws criminalizing the transmission of, non-disclosure of or exposure to HIV | Laws or policies restricting the entry, stay and residence of people living with HIV (y) | Mandatory HIV testing for marriage, work or residence permits or for certain groups |
|---|---|---|
| x | | b |
| b | | b |
| b | | b |
| | | |
| b | | b |
| b | | b |
| b | | b |
| b | | b |
| b | | b |
| b | | b |
| b | | b |
| b | | b |
| a | | b |
| b | | b |
| a | | b |
| b | | b |
| b | | b |
| b | | b |
| b | | b |
| b | | b |




Sources:
a. UNAIDS National Commitments and Policy Instrument, 2017 (see http://lawsandpolicies.unaids.org/).
b. UNAIDS National Commitments and Policy Instrument, 2019 (see http://lawsandpolicies.unaids.org/).
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d. Eswatini. The Crimes Act, 61 of 1889. Article 49 (http://www.osall.org.za/docs/2011/03/Swaziland-Crimes-Act-61-of-1889.pdf); Eswatini. Sexual Offences and Domestic Violence Act, 2018. Articles 13–18.
e. Lesotho. Penal Code Act, 2010. Article 55 (https://lesotholii.org/ls/legislation/num-act/6).
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h. Namibia. Combating of Immoral Practices, Act 21 of 1980 (https://laws.parliament.na/cms_documents/combating-of-immoral-practices-2c85487772.pdf).
i. Rwanda. Organic Law Instituting the Penal Code. Section 4 (https://sherloc.unodc.org/res/cld/document/rwa/1999/penal-code-of-rwanda_html/Penal_Code_of_Rwanda.pdf).
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k. Zambia. The Penal Code Act. Article 178a (http://www.parliament.gov.zm/sites/default/files/documents/acts/Penal%20Code%20Act.pdf).
l. Mendos LR. State-sponsored homophobia 2019. 13th ed. Geneva: ILGA: 2019.
m. Botswana judgement decriminalizing homosexuality (https://www.southernafricalitigationcentre.org/wp-content/uploads/2019/06/Botswana-decrim-judgment.pdf).
n. Comoros. Penal Code. Article 318(3) (http://comoresdroit.comores-droit.com/wp-content/dossier/code/penal.pdf).
o. Eritrea. Penal Code of the State of Eritrea. Article 395 (http://www.ilo.org/dyn/natlex/docs/ELECTRONIC/101051/121587/F567697075/ERI101051%20Eng.pdf).
p. Lesotho. Drugs of Abuse Act, 2008. Article 43 (https://lesotholii.org/ls/legislation/act/5/DRUGS%20OF%20ABUSE%20ACT%202008.pdf).
q. Namibia. Abuse of Dependence-producing Substances and Rehabilitation Centres, 41 of 1971.
r. Uganda. Narcotic Drugs and Psychotropic Substances Control Act, No. 3 of 2016. Sections 4 and 6 (https://ulii.org/system/files/legislation/act/2019/3/the-narcotic-drugs-and-psychotropic-substances-control-Act.pdf).
s. Zimbabwe. Criminal Law (Codification and Reform) Act. Chapter VII, article 157 (https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/72803/74195/F858899812/ZWE72803.pdf).
t. Lesotho. Children's Protection and Welfare Act, 2011. Section 233 (http://jafbase.fr/docAfrique/Lesotho/children%20act%20lesotho.pdf).
u. Mozambique. Law 19/2014 Lei de Proteccao da Pessoa, do Trabalhador e do Candidato a Emprego vivendo con HIV e SIDA. Article 26 (http://www.ilo.org/aids/legislation/WCMS_361981/lang--en/index.htm).
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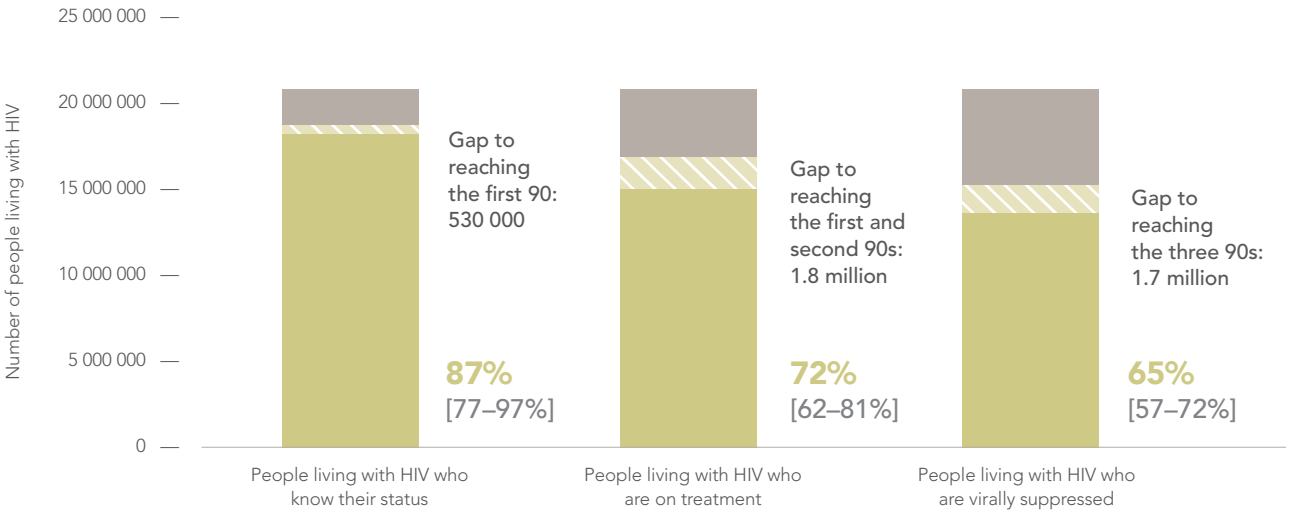
y. Still not welcome: HIV-related travel restrictions. Geneva: UNAIDS, UNDP; 2019 (https://www.unaids.org/sites/default/files/media_asset/hiv-related-travel-restrictions-explainer_en.pdf).

## HIV testing and treatment

FIGURE 6.9

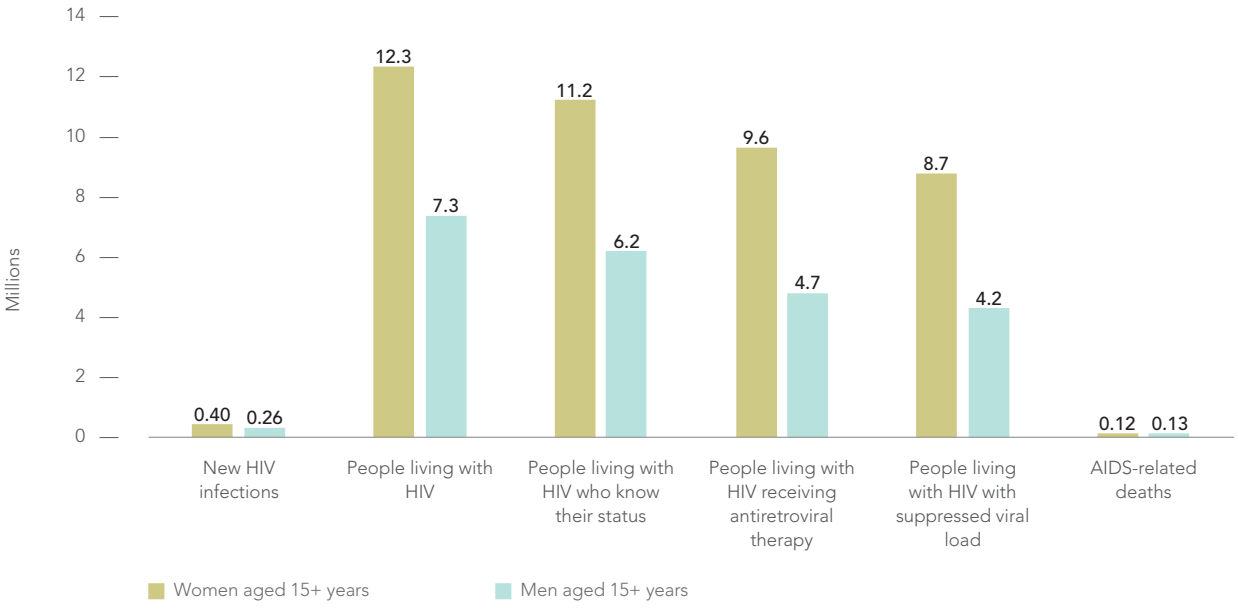
### HIV testing and treatment cascade, eastern and southern Africa, 2019




Source: UNAIDS special analysis, 2020 (see methods annex).

FIGURE 6.10

### Gender differences in key HIV metrics among adults, eastern and southern Africa, 2019




UNAIDS epidemiological estimates 2020 (see https://aidsinfo.unaids.org/).

Unequal gender norms contribute to the higher HIV risk faced by women in eastern and southern Africa. Each year, far more women are infected than men, and in 2019, there were 12.3 million women living with HIV in the region compared to 7.3 million men. Higher rates of HIV testing, treatment coverage and viral load suppression among women, however, translates to lower AIDS-related mortality rates among them compared to men: despite the much larger HIV burden among women, there were more AIDS-related deaths among men (130 000) than women (120 000) in 2019.

TABLE 6.3

## 90–90–90 country scorecard: Eastern and southern Africa, 2019

| | First 90: percentage of people living with HIV who know their status | | | Second 90: percentage of people who know their status who are on treatment | | | Third 90: percentage of people living with HIV on treatment who are virally suppressed | | | **Viral load suppression: percentage of people living with HIV who are virally suppressed** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) |
| **Eastern and southern Africa** | 87 | 91 | 84 | 83 | 86 | 77 | 90 | 91 | 90 | 65 | 71 | 58 |
| Angola | 62 | 69 | 62 | 44 | 42 | 44 | | | | | | |
| Botswana | 92 | 95 | 91 | 89 | 98 | 78 | 96 | 97 | 96 | 79 | 90 | 68 |
| Comoros | 82 | 96 | 74 | 73 | 84 | 60 | 86 | 84 | 90 | 51 | 68 | 40 |
| Eritrea | 86 | 90 | 90 | 73 | 75 | 67 | 85 | 87 | 87 | 53 | 58 | 52 |
| Eswatini | 98 | 100 | 97 | 98 | 100 | 93 | 97 | 97 | 97 | 92 | 97 | 87 |
| Ethiopia | 82 | 83 | 85 | 91 | 90 | 90 | 89 | 90 | 90 | 66 | 68 | 69 |
| Kenya | 90 | 94 | 88 | 82 | 86 | 73 | 92 | 93 | 94 | 68 | 74 | 61 |
| Lesotho | 93 | 95 | 92 | 71 | 75 | 63 | 93 | 93 | 94 | 61 | 66 | 54 |
| Madagascar | 15 | 18 | 13 | 90 | 88 | 93 | | | | | | |
| Malawi | 90 | 94 | 86 | 88 | 93 | 78 | 92 | 94 | 93 | 72 | 81 | 62 |
| Mauritius | 69 | 59 | 73 | 37 | 42 | 34 | 68 | 68 | 68 | 17 | 17 | 17 |
| Mozambique | 77 | 86 | 66 | 77 | 79 | 70 | 75 | 78 | 75 | 45 | 53 | 35 |
| Namibia | 95 | 96 | 92 | 90 | 93 | 83 | 91 | 93 | 91 | 78 | 83 | 69 |
| Rwanda | 89 | 93 | 89 | 97 | 98 | 95 | 91 | 92 | 92 | 79 | 84 | 78 |
| Seychelles | | | | | | | 91 | | | | | |
| South Africa | 92 | 94 | 91 | 75 | 80 | 69 | 92 | 92 | 92 | 64 | 69 | 58 |
| South Sudan | 27 | 36 | 16 | 68 | 56 | 100 | 80 | 84 | 79 | 14 | 17 | 13 |
| Uganda | 89 | 93 | 86 | 94 | 97 | 89 | 90 | 92 | 89 | 75 | 83 | 68 |
| United Republic of Tanzania | 83 | 85 | 81 | 90 | 98 | 78 | 92 | 93 | 92 | 69 | 78 | 58 |
| Zambia | 90 | 93 | 87 | 95 | 97 | 90 | 90 | 91 | 90 | 77 | 82 | 71 |
| Zimbabwe | 90 | 95 | 87 | 94 | 94 | 92 | 86 | 88 | 86 | 73 | 79 | 69 |

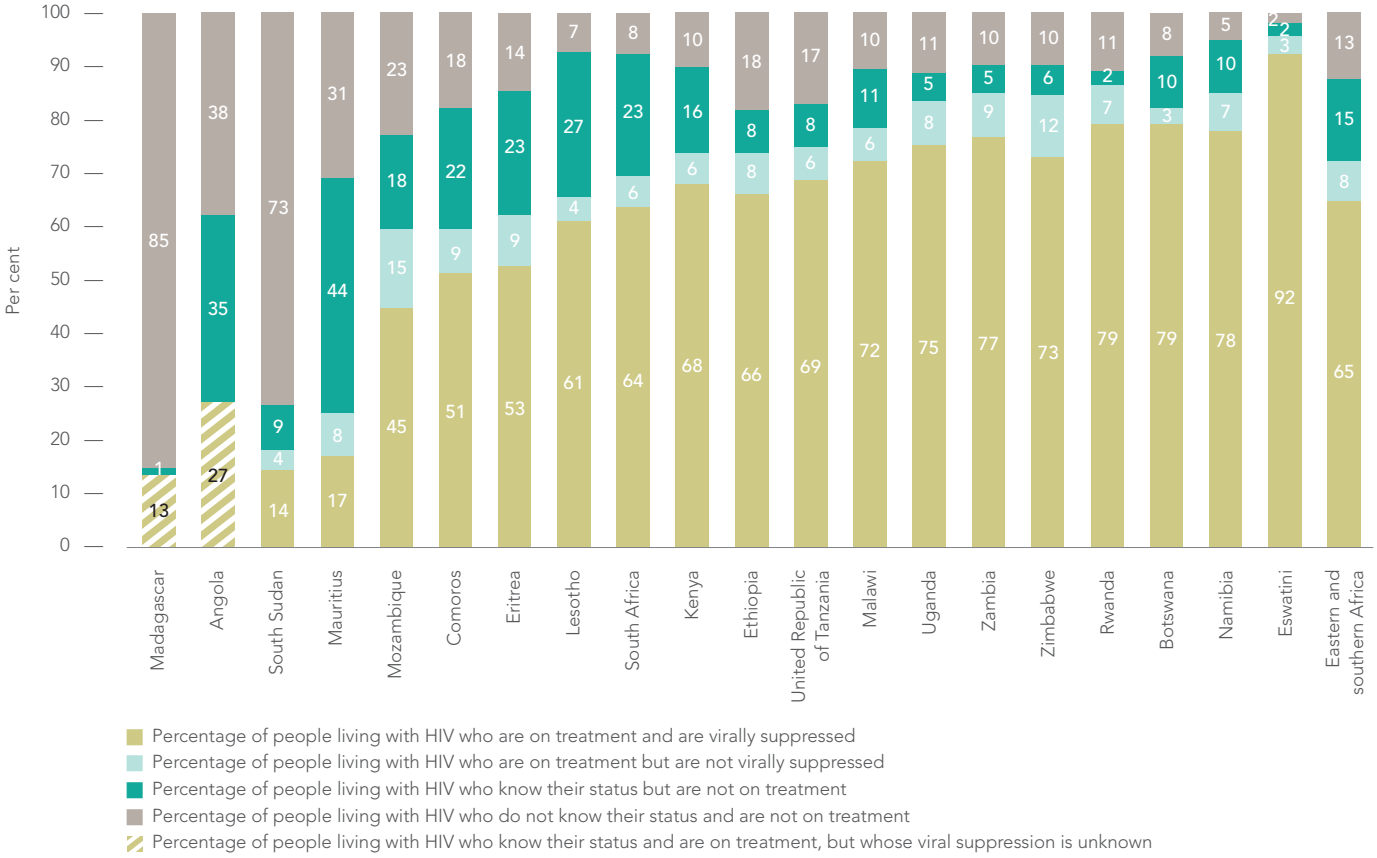
**Legend for 90–90–90**
- 95% and above
- 90–94%
- 85–89%
- 70–84%
- 50–69%
- Less than 50%

**Legend for viral load suppression**
- 86% and above
- 73–86%
- 65–72%
- 40–64%
- 25–39%
- Less than 25%

Source: UNAIDS special analysis, 2020.
Note: Estimates for 2019 except: Seychelles (2018).

FIGURE 6.11

**Knowledge of status, treatment and viral suppression gaps by country, eastern and southern Africa, 2019**

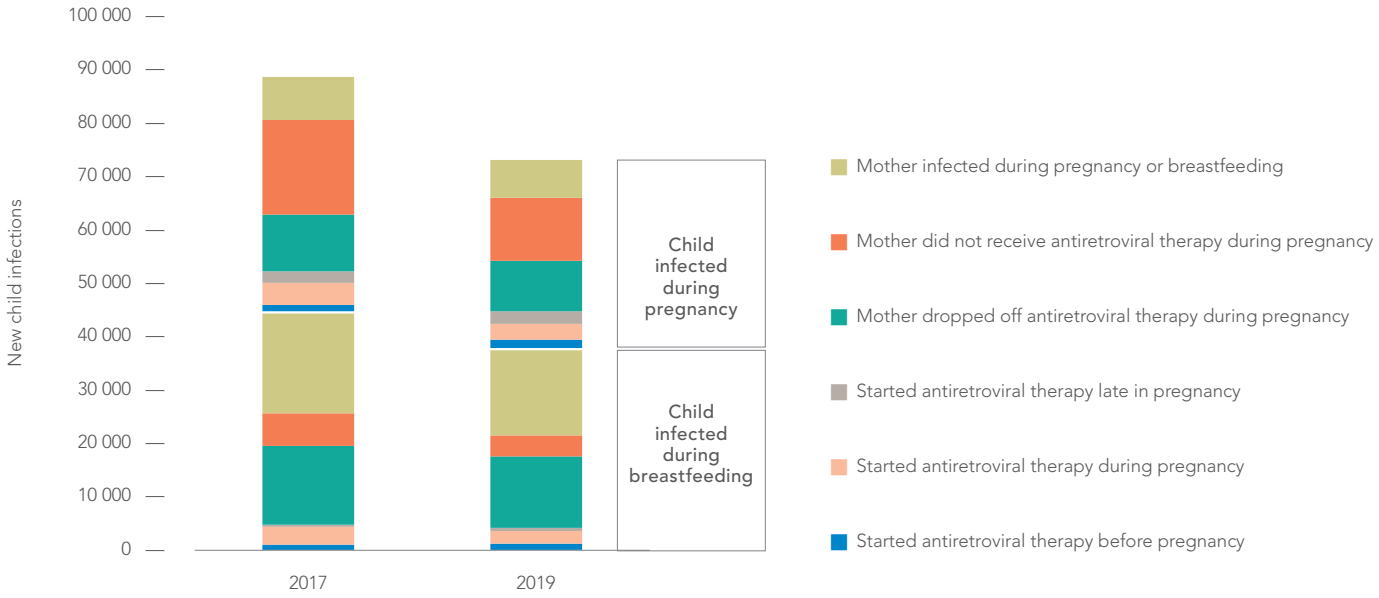



Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

Among countries in eastern and southern Africa, viral suppression is above 70% for all people living with HIV in eight countries—a remarkable achievement within the region most affected by the HIV pandemic. However, alarming gaps in the HIV testing and treatment cascade exist in many countries. Testing gaps are particularly large in Madagascar and South Sudan, while in Angola and Mauritius, there are large percentages of people living with HIV who know their HIV status but are not accessing treatment.

FIGURE 6.12

**New child infections due to gaps in prevention of vertical transmission, eastern and southern Africa, 2017 and 2019**

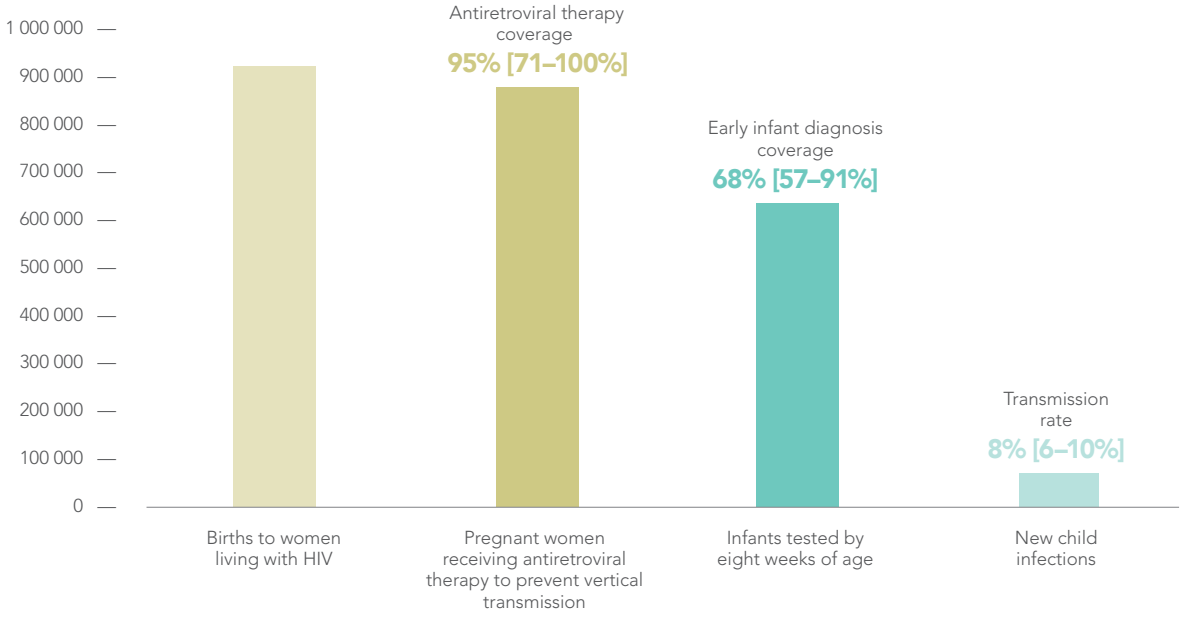



Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

## People-centred services

FIGURE 6.13

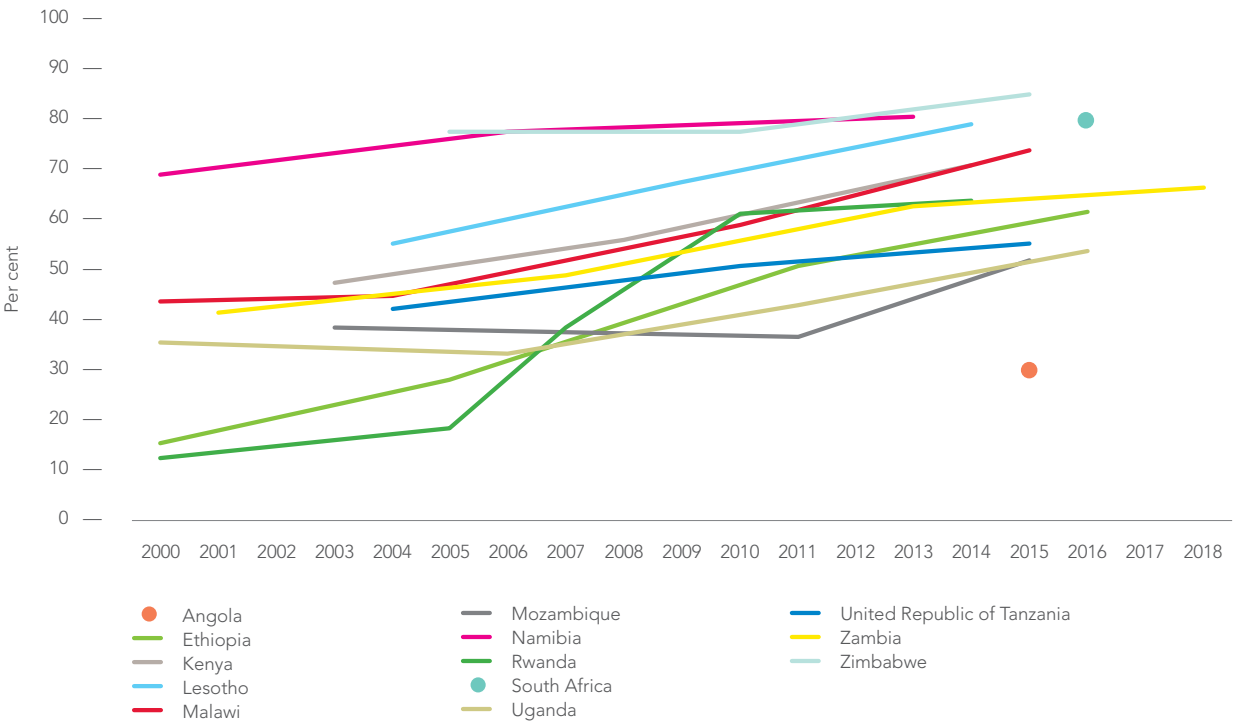
**Services for pregnant women living with HIV, early infant diagnosis, number of new vertical infections and transmission rate, eastern and southern Africa, 2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 6.14

**Women aged 15 to 49 years who have their demand for family planning satisfied by modern methods, countries with available data, eastern and southern Africa, 2000–2018**




Source: Population-based surveys, 2000–2018.

FIGURE 6.15

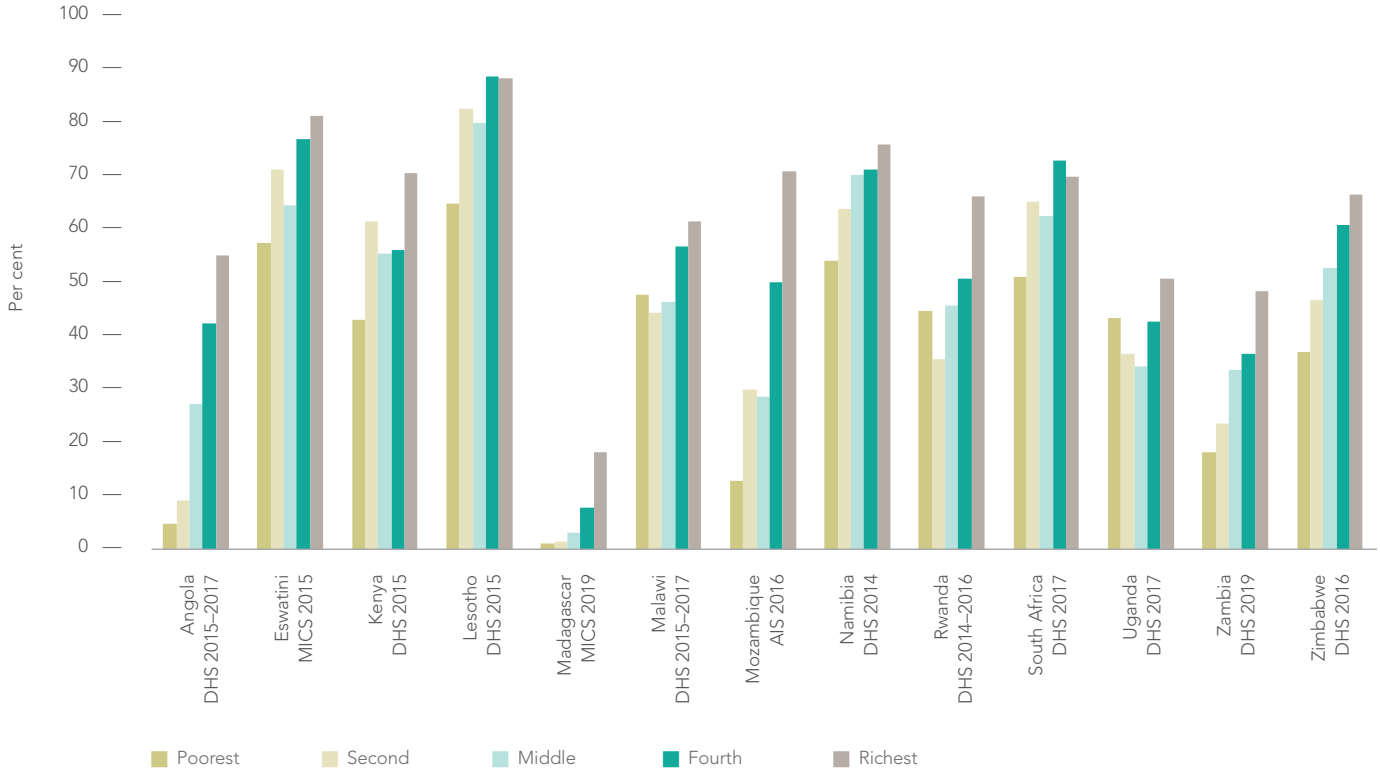
**Unmet need for family planning among married and sexually active unmarried adolescent girls and young women (aged 15–24 years), with the proportion of HIV-positive pregnant women aged 15 to 24 years, by country, eastern and southern Africa, 2012–2018**


Source: Population-based surveys, 2012–2018; UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

Population-based surveys show that unmet need for family planning services is generally high among women and adolescent girls in Angola and Comoros. By contrast, unmet need for family planning is generally low in Lesotho, Namibia and Zimbabwe. In six out of 14 countries with recent survey data, unmet need is significantly higher (>1.5 times) among sexually active unmarried adolescent girls or young women than it is among their married counterparts, which has implications for sexual and reproductive health and rights programming among specific age groups and by marital status. In some countries in the region up to one third of pregnant women living with HIV are in the age group 15 to 24 years. Ensuring that young women living with HIV have the ability to make decisions about their fertility will help to reduce vertical transmission.

FIGURE 6.16

**Condom use at last sex with nonmarital, noncohabiting partner in the last 12 months among adolescent girls and young women**




Source: Population-based surveys, 2014–2018.
Note: Wealth quintile is a composite measure of household asset ownership (e.g., TV sets or bicycles), materials used for housing construction, and types of water access and sanitation facilities.

Evidence from population-based surveys suggest that poorer women are less able to negotiate condom use. In most countries of the region, there is a clear pattern of lower use of condoms at last sex with a nonmarital, noncohabiting partner among adolescent girls and young women in poorer wealth quintiles. Exceptions were Malawi, Rwanda and Uganda. Across the region, condom use at last high-risk sex is less than 60% for adolescent girls and young women belonging to the poorest wealth quintiles. In several countries (Angola, Madagascar, Uganda and Zambia), condom use at last sex with a nonmarital, noncohabiting partner among adolescent girls and young women is less than 50% across all wealth quintiles.

## Investing to end AIDS

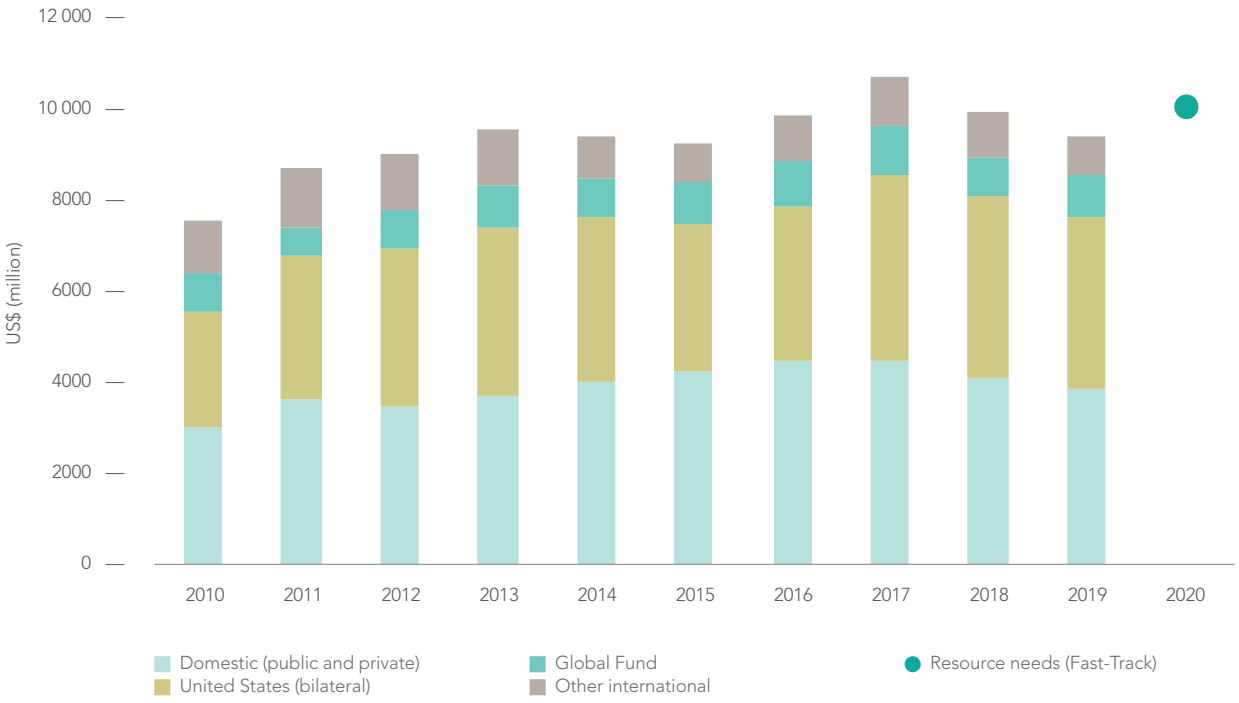
A shared commitment to the HIV response among the region's governments and the international community has translated into levels of funding that are in line with the 2020 target. Funding for HIV responses in the region increased by 25% between 2010 and 2019, including a 26% increase in domestic funding, a 50% increase in United States Government bilateral funding and a 18% increase in contributions from the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) (all trends measured in constant 2016 US dollars to control for inflation).

HIV financing peaked in 2017 and then declined by 12% between 2017 and 2019. Financing for HIV between 2018 and 2019 decreased from nearly all sources: domestic (-5%), United States Government bilateral (-5%) and other international sources (-10%). The Global Fund, however, increased investments in the region by 5% between 2018 and 2019, following a 14% decrease in the previous year—a pattern that likely reflects fluctuations in grant management cycles.

Domestic sources accounted for 41% of total HIV funding in 2019, United States Government bilateral funding for 40% and the Global Fund for 10%. South Africa was responsible for most of the domestic spending in eastern and southern Africa, with the other countries in the region depending on external sources for about 80% of their HIV response financing.

FIGURE 6.17

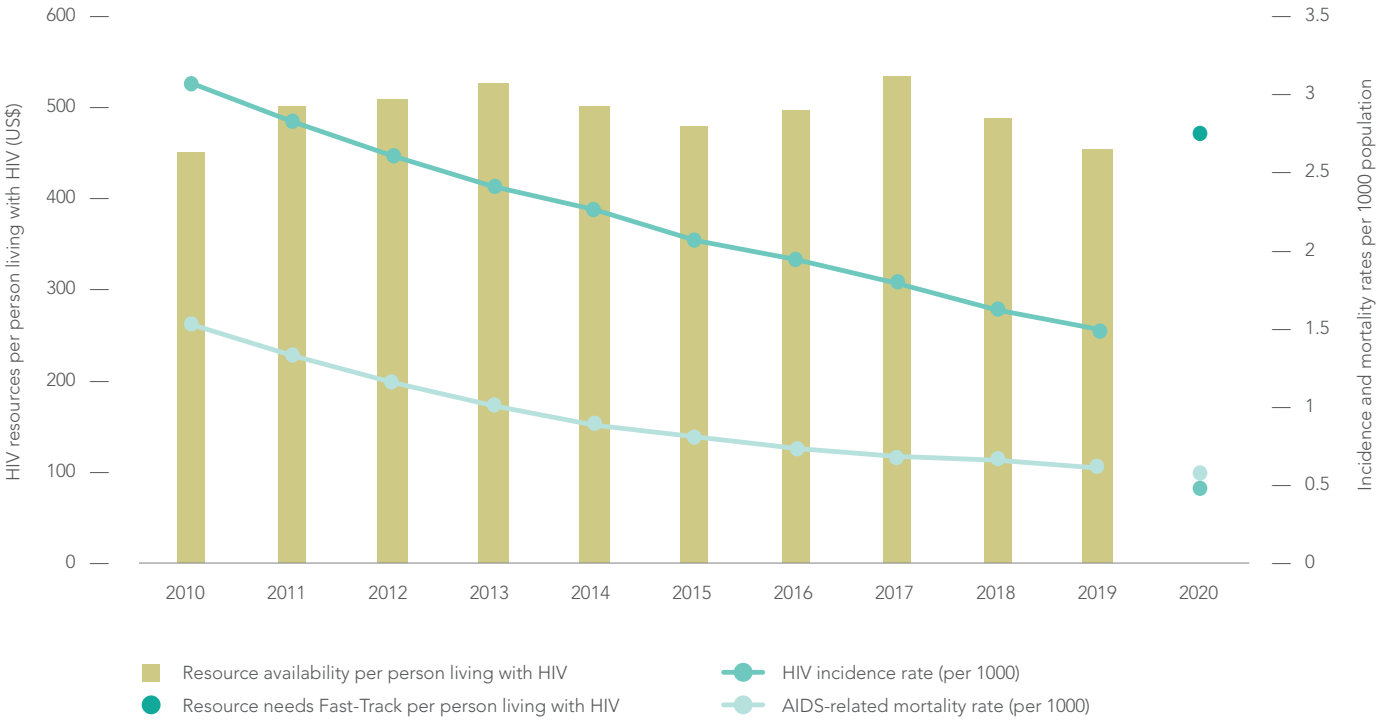
**Resource availability for HIV by source, 2010–2019, and estimated Fast-Track resource needs in 2020, eastern and southern Africa**




Source: UNAIDS financial estimates, 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).

FIGURE 6.18

**Total HIV resource availability per person living with HIV, HIV incidence and AIDS-related mortality rates in low- and middle-income countries, eastern and southern Africa, 2010–2019 and 2020 target**




Source UNAIDS financial estimates, 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).
Note: Resource availability per person living with HIV and resource needs are in constant 2016 US dollars.

# WESTERN AND CENTRAL AFRICA

## DATA POINTS

SINCE 2010, NEW HIV INFECTIONS IN THE REGION HAVE

**DECREASED BY 25%**

AND AIDS-RELATED DEATHS HAVE DECREASED BY 37%

ADOLESCENT GIRLS AND YOUNG WOMEN ACCOUNT FOR

**20% OF NEW HIV INFECTIONS**

IN THE REGION

**NEARLY 7 OF 10**

INFECTIONS IN THE REGION ARE AMONG KEY POPULATIONS AND THEIR SEXUAL PARTNERS

**JUST 45%**

OF PEOPLE LIVING WITH HIV HAVE SUPPRESSED VIRAL LOADS

**MORE THAN 40%**

OF ADULTS EXPRESSED DISCRIMINATORY ATTITUDES TOWARDS PEOPLE LIVING WITH HIV IN 9 OF 17 COUNTRIES WITH RECENT SURVEY DATA

The HIV epidemic in western and central Africa has not received the same domestic and international attention as in eastern and southern Africa. As a result, progress has been lower. Humanitarian challenges caused by armed conflict, population displacement, food insecurity and intercommunal strife continue to strain community resilience and health systems in several countries in the region.

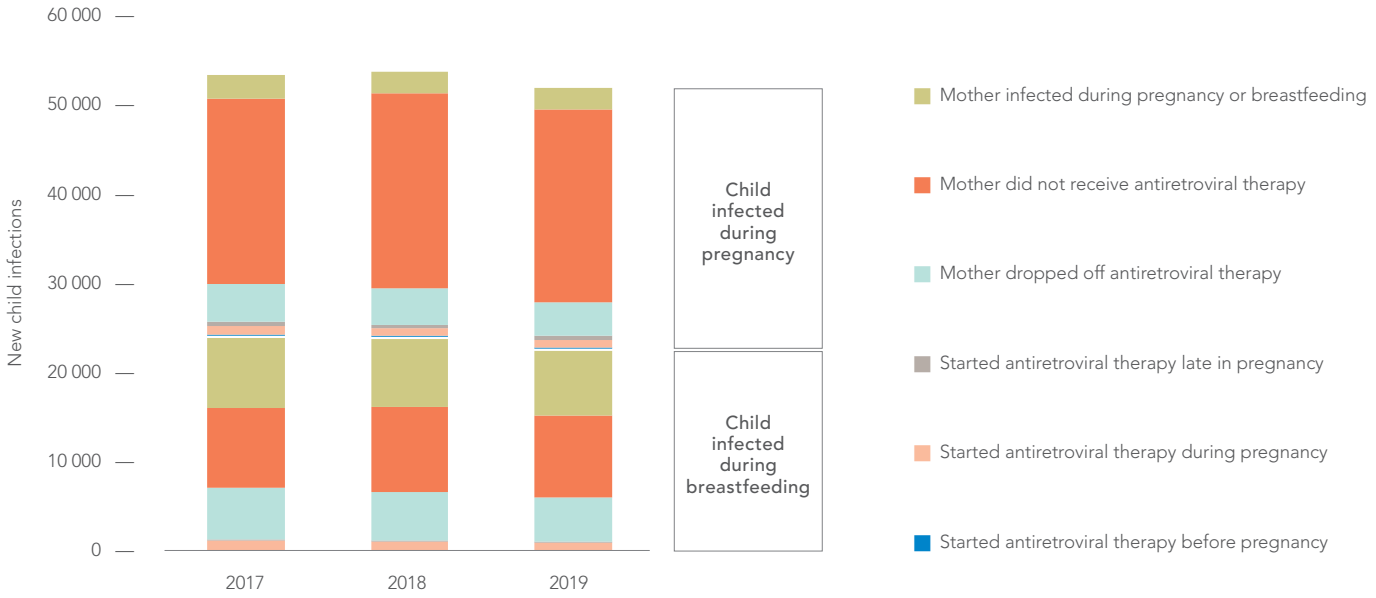
Women and girls accounted for 58% of the estimated 240 000 [150 000–390 000] new infections in 2019, reflecting the continuing role of gender inequalities in the region's epidemic. In particular, adolescent girls and young women remain at higher risk of HIV infection in western and central Africa. Furthermore, surveys conducted between 2015 and 2018 show that just 37% of young women (aged 15 to 24 years) in the region demonstrated comprehensive knowledge of HIV.

Prevention programmes also do not focus sufficiently on key populations, who make up a large share of new infections and who also contend with hostile legal and social environments. About two thirds of new adult HIV infections in 2019 were among sex workers (19%), gay men and other men who have sex with men (21%), and the clients of sex workers and the sexual partners of people belonging to key populations (27%).

The region remains a long way from reaching the 90–90–90 targets. Only 58% of people living with HIV were accessing antiretroviral therapy in 2019. An estimated 58% [40–78%] of pregnant women living with HIV received antiretroviral therapy to prevent vertical transmission of HIV and protect their own health in 2019, among the lowest coverage in the world.

FIGURE 7.1

**New child infections due to gaps in prevention of vertical transmission, western and central Africa, 2017–2019**



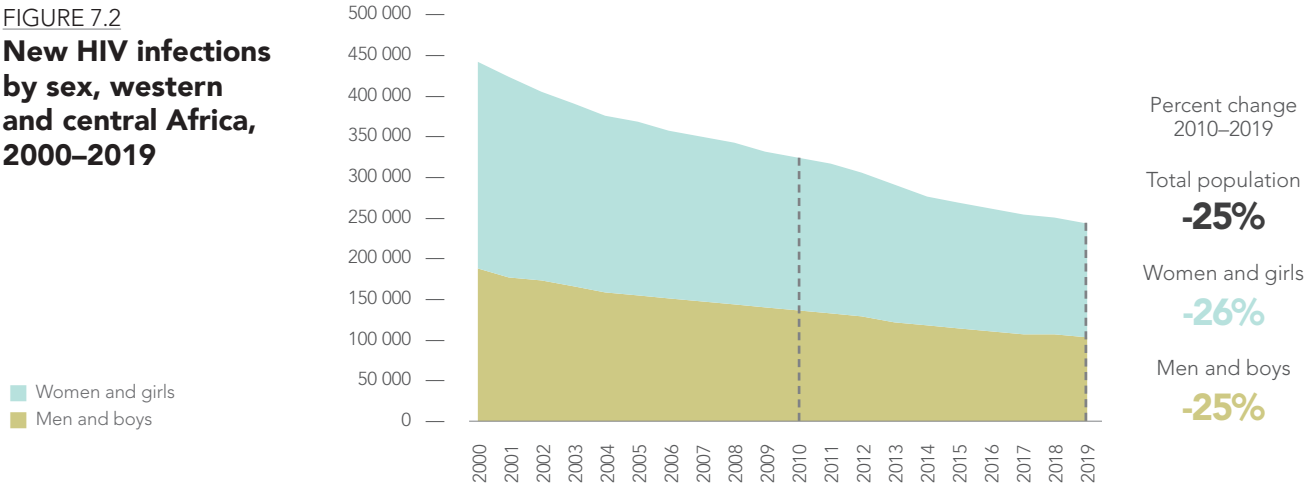

Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

Gaps along the continuum of services for the prevention of mother-to-child HIV transmission in western and central Africa are leaving too many children exposed to HIV. The vast majority of new child HIV infections in the region are due to the low coverage of antiretroviral therapy among pregnant women living with HIV: 42% of child infections in 2019 occurred because HIV-positive expectant mothers did not receive antiretroviral medicines during pregnancy. A further 18% of new child infections occurred because mothers living with HIV did not receive antiretroviral medicines during breastfeeding, and another 14% occurred because the mother seroconverted during breastfeeding.

## State of the epidemic

FIGURE 7.2

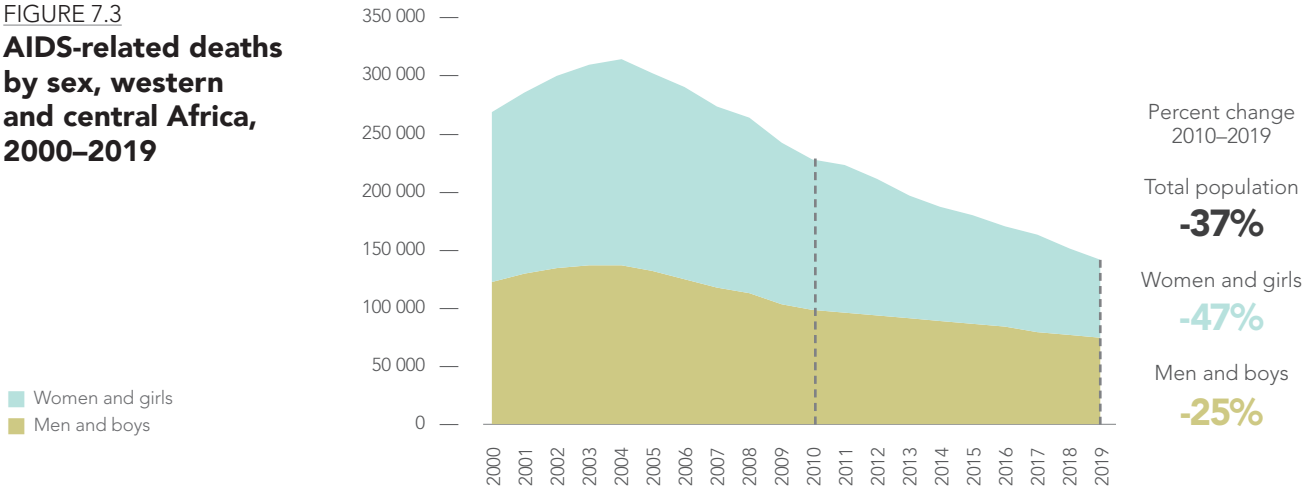
**New HIV infections by sex, western and central Africa, 2000–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 7.3

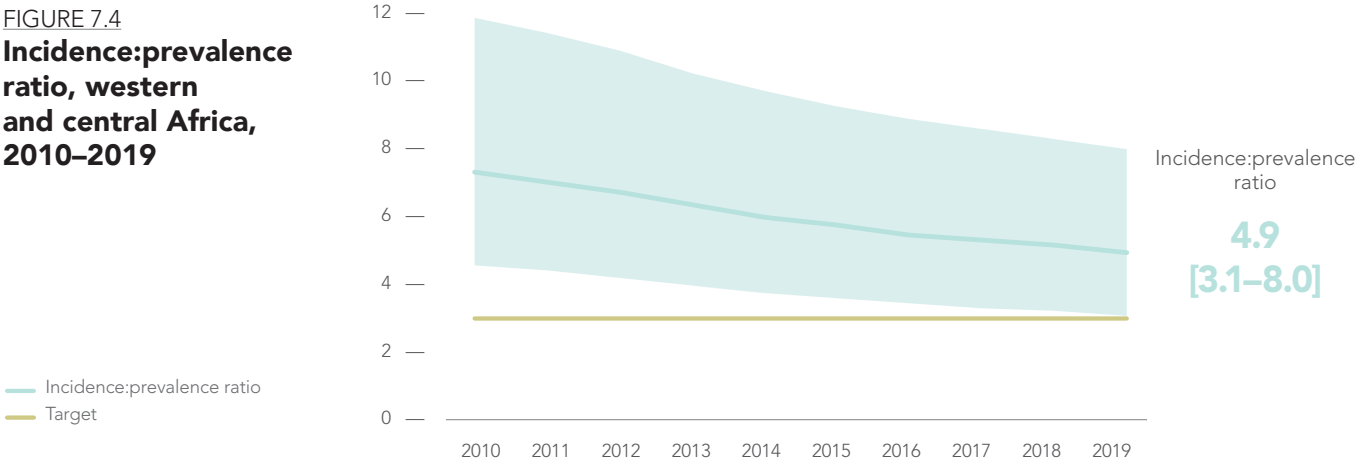
**AIDS-related deaths by sex, western and central Africa, 2000–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 7.4

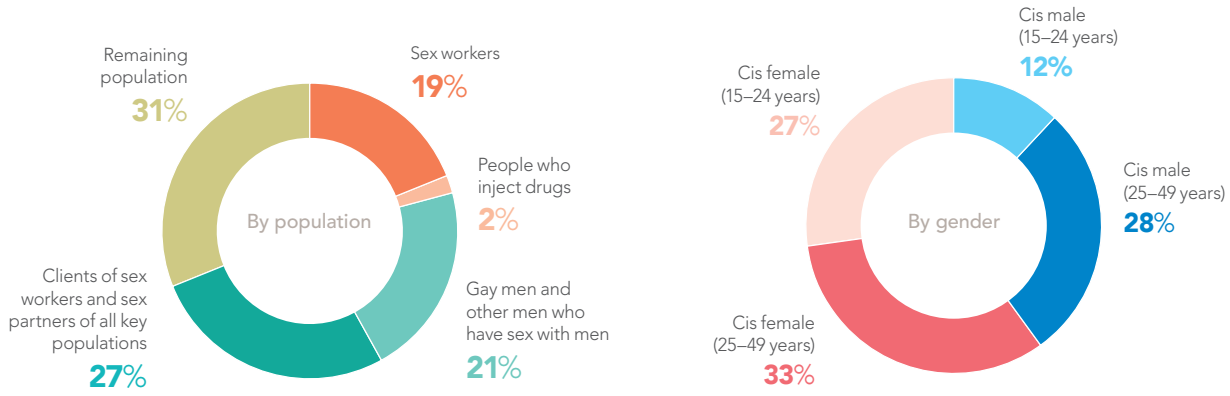
**Incidence:prevalence ratio, western and central Africa, 2010–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 7.5

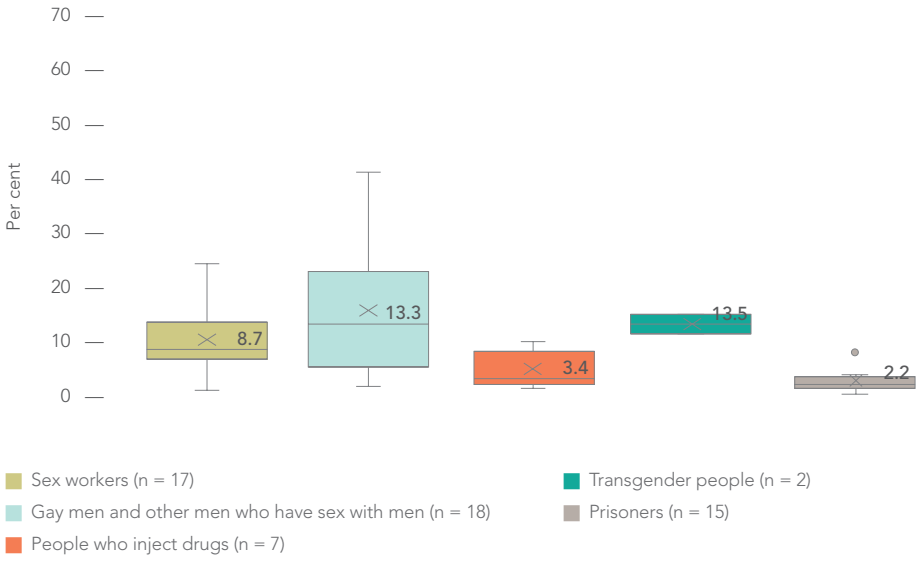
## Distribution of new HIV infections by population (aged 15–49 years), western and central Africa, 2019




Source: UNAIDS special analysis, 2020 (see methods annex).

FIGURE 7.6

## HIV prevalence among key populations, western and central Africa, 2015–2019




Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).
Note (n = number of countries reporting).

TABLE 7.1

## Estimated size of key populations, western and central Africa, 2018–2019

| | National adult population (15+), 2018 | National adult population (15+), 2019 | Sex workers | Sex workers as percentage of adult population (15+) | Gay men and other men who have sex with men | Gay men and other men who have sex with men as percentage of adult population (15+) | People who inject drugs | People who inject drugs as percentage of adult population (15+) | Transgender people | Transgender people as percentage of adult population (15+) | Prisoners | Prisoners as percentage of adult population (15+) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cameroon | 14 400 000 | 14 900 000 | | | | | | | | | | |
| Côte d'Ivoire | 14 100 000 | 14 400 000 | | | | | | | | | 41 000 | 0.29% |
| Democratic Republic of the Congo | 55 500 000 | 58 100 000 | 350 000 | 0.63% | 190 000 | 0.35% | 160 000 | 0.28% | | | | |
| Gambia | 1 290 000 | 1 270 000 | | | | | | | | | | |
| Mali | 10 000 000 | 10 300 000 | | | | | | | | | | |
| Niger | 11 100 000 | 11 700 000 | | | | | | | | | | |
| Senegal | 8 900 000 | 9 200 000 | | | | | 3100 | 0.04% | | | 9500 | 0.11% |
| Togo | 4 600 000 | 4 700 000 | | | | | | | | | 5100 | 0.11% |

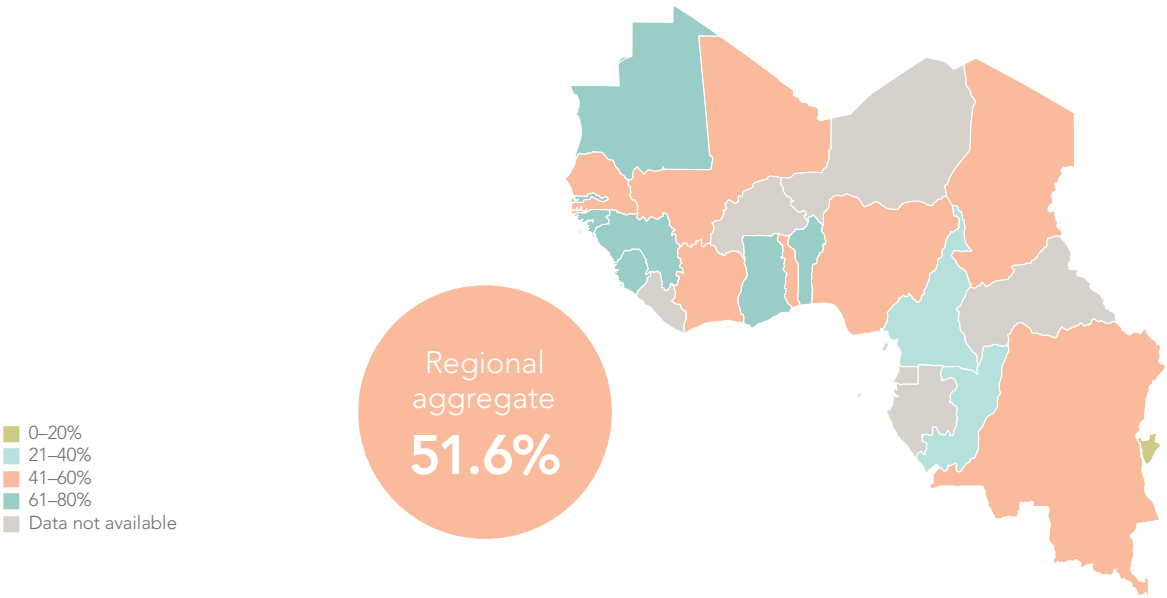
National population size estimate
Local population size estimate
Insufficient data
No data

Sources: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/); Spectrum Demproj module, 2020.
Note 1: Estimates shown are government-provided estimates reported in 2018–2019. Additional and alternative estimates may be available from different sources, including the Key Populations Atlas (https://kpatlas.unaids.org/), academic publications or institutional documents.
Note 2: The regions covered by the local population size estimates are as follows:
Côte d'Ivoire: Bouaké, San-pedro and Yamoussoukro
Gambia: Banjul
Mali sex workers: Bamako, Kayes, Koulikoro, Mopti, Ségou and Sikasso
Mali gay men and other men who have sex with men: Bamako, Gao, Kayes, Koulikoro, Mopti, Ségou and Sikasso

## Stigma and discrimination and violence

FIGURE 7.7

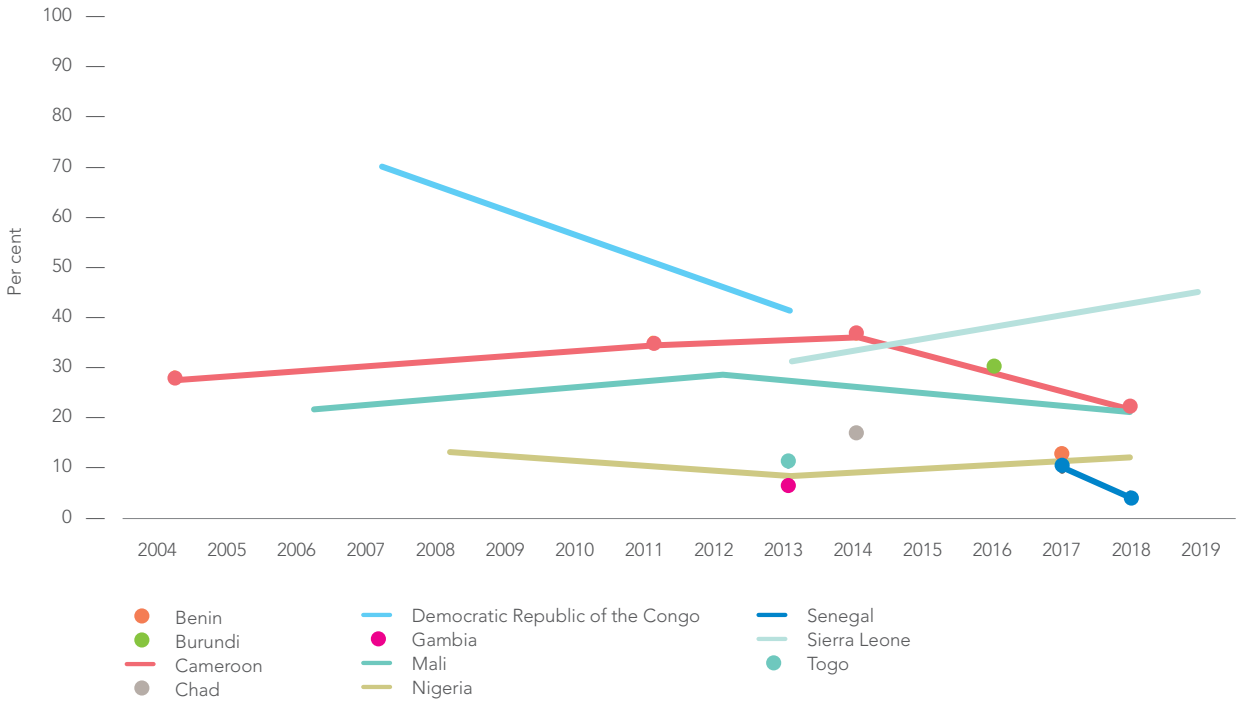
**Percentage of people aged 15–49 years who would not purchase vegetables from a shopkeeper living with HIV, western and central Africa, 2014–2018**




Source: Population-based surveys, 2014–2019.
Note: Aggregate data refer to the most recent available from population-based surveys from 17 countries in the region during the period of 2014 to 2018, corresponding to 43% of the 2018 population.

FIGURE 7.8

**Ever-married or partnered women aged 15 to 49 years who experienced physical and/or sexual violence by an intimate partner in the past 12 months, countries with available data, western and central Africa, 2006–2019**




Source: Population-based surveys, 2006–2019.

## Laws and policies

TABLE 7.2

### Laws and policies scorecard, western and central Africa, 2019

| | Criminalization of transgender people | Criminalization of sex work | Criminalization of same-sex sexual acts | Drug use or possession for personal use an offence | Parental consent for adolescents to access HIV testing | Spousal consent for married women to access sexual and reproductive health services |
|---|---|---|---|---|---|---|
| Benin | b | b | b | b | b | b |
| Burkina Faso | b | c | b | b | b | b |
| Burundi | a | d | m | r | w | w |
| Cabo Verde | | am | m | | | |
| Cameroon | b | b | b | b | x | b |
| Central African Republic | b | e | b | b | b | b |
| Chad | | an | n | | y | l |
| Congo | b | b | b | b | b | b |
| Côte d'Ivoire | b | b | b | b | w | b |
| Democratic Republic of the Congo | b | b | b | b | z | |
| Equatorial Guinea | a | ao | m | s | a | a |
| Gabon | b | f | o | t | b | b |
| Gambia | | g | p | u | b | b |
| Ghana | b | b | b | b | b | b |
| Guinea | b | h | b | b | aa | b |
| Guinea-Bissau | b | b | b | b | ab | |
| Liberia | b | b | b | b | b | b |
| Mali | b | i | b | b | b | b |
| Mauritania | b | b | b | b | b | b |
| Niger | b | b | q | b | ac | b |
| Nigeria | b | b | b | v | b | b |
| Sao Tome and Principe | b | b | b | b | b | b |
| Senegal | b | j | b | b | b | b |
| Sierra Leone | b | k | b | b | b | b |
| Togo | b | l | b | b | b | b |

Criminalized and/or prosecuted
Neither criminalized nor prosecuted
Data not available

Any criminalization or punitive regulation of sex work
Sex work is not subject to punitive regulations or is not criminalized
Issue is determined/differs at the subnational level
Data not available

Death penalty
Imprisonment or no penalty specified
Data not available

Compulsory detention for drug offences
Data not available

Yes, for adolescents younger than 18
Yes, for adolescents younger than 14 or 16
Yes, for adolescents younger than 12
No
Data not available

Yes
No
Data not available

Possession of drugs for personal use or drug use or consumption are not punished by laws or regulations

Laws penalizing same-sex sexual acts have been decriminalized or never existed, or no specific legislation

Possession of drugs for personal use or drug use or consumption is specified as a non-criminal offence

Possession of drugs for personal use or drug use or consumption are specified as a criminal offence

| Laws criminalizing the transmission of, non-disclosure of or exposure to HIV | Laws or policies restricting the entry, stay and residence of people living with HIV (a, j) | Mandatory HIV testing for marriage, work or residence permits or for certain groups |
|---|---|---|
| b | | b |
| ad | | b |
| ad | | w |
| ad | | |
| ae | | b |
| b | | b |
| af | | ak |
| b | | b |
| ag | | b |
| ah | | b |
| ad | | |
| b | | b |
| ah | | b |
| b | | b |
| ad | | b |
| ad | | b |
| b | | b |
| b | | b |
| b | | b |
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| ai | | b |
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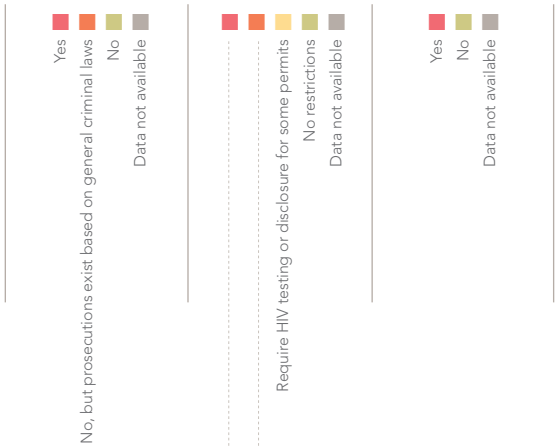
| b | | b |

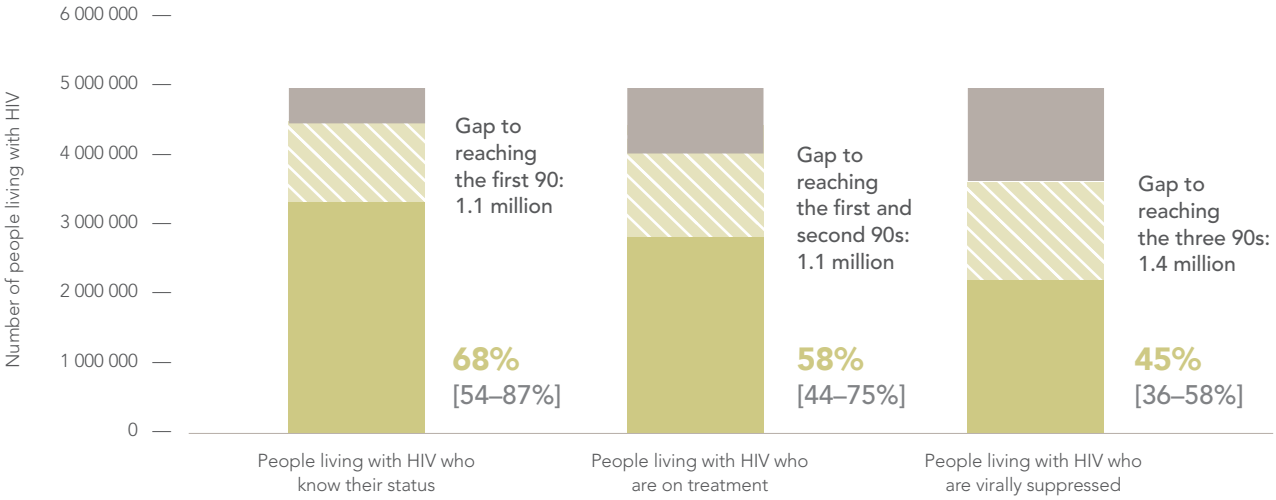



Sources:
a. UNAIDS National Commitments and Policy Instrument, 2017 (see http://lawsandpolicies.unaids.org/).
b. UNAIDS National Commitments and Policy Instrument, 2019 (see http://lawsandpolicies.unaids.org/).
c. Burkina Faso. Penal Code 2019. Article 533-20; Burkina Faso. Loi no. 025-2018. Articles 533-20, 533-27, 533-28 (https://www.refworld.org/docid/3ae6b5cc0.html).
d. Burundi. Penal Code 2009. Article 538 and 548 (https://ihl-databases.icrc.org/applic/ihl/ihl-nat.nsf/0/cb9d300d8db9fc37c125707300338af2/$FILE/Code%20P%c3%a9nal%20du%20Burundi%20.pdf).
e. Central African Republic. Penal Code. Article 90 (https://www.wipo.int/edocs/lexdocs/laws/fr/cf/cf003fr.pdf).
f. Gabon. Penal Code, 2018. Article 402-1 (http://www.droit-afrique.com/uploads/Gabon-Code-2019-penal.pdf).
g. Gambia. Criminal Code. Article 248 (https://www.wipo.int/edocs/lexdocs/laws/en/mu/mu008en.pdf).
h. Guinea. Penal Code. Articles 346 and 351 (https://www.refworld.org/docid/44a3eb9a4.html).
i. Mali. Penal Code Articles 179 and 183 (https://wipolex.wipo.int/en/text/193676).
j. Senegal. Penal Code. Article 323 (https://www.refworld.org/docid/49f5d8262.html).
k. Sierra Leone. Sexual Offences Act. Article 17 (http://www.sierra-leone.org/Laws/2012-12.pdf).
l. Togo. Penal Code. Article 91 (https://www.wipo.int/edocs/lexdocs/laws/fr/tg/tg003fr.pdf).
m. Mendos LR. State-sponsored homophobia 2019. 13th ed. Geneva: ILGA: 2019.
n. Chad. Penal Code 2017. Article 354 (https://www.droit-afrique.com/uploads/Tchad-Code-penal-2017.pdf).
o. Gabon. Penal Code. Chapter VII (https://www.wipo.int/edocs/lexdocs/laws/fr/ga/ga026fr.pdf).
p. Gambia. Criminal Code Amendment of 2014. Article 144A (https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/101060/121595/F-454549913/GMB101060.pdf).
q. Niger. Penal Code, 2003 (https://ihl-databases.icrc.org/applic/ihl/ihl-nat.nsf/0/3e747f82e6028e32c1257084002f7245/$FILE/Niger%20-%20Criminal%20Code%202008%20fr.pdf).
r. Burundi. Loi n°97-019 du 7 août 1997 relative au contrôle des stupéfiants, des substances psychotropes et des précurseurs et à l'extradition et à l'entraide judiciaire en matière de trafic des stupéfiants, des substances psychotropes et des précurseurs. Articles 101 and 102 (https://www.unodc.org/res/cld/document/cmr/loi-97-019_html/Loi_n_97-019.pdf).
s. Equatorial Guinea. Decreto Ley 3/1.993 de fecha, 15 de septiembre, por el que se prohibe - la producción, la venta, el consumo y el tráfico ilícito de drogas en la República de Guinea Ecuatorial (http://www.droit-afrique.com/upload/doc/guinee-equatoriale/GE-Decret-loi-1993-vente-production-trafic-drogues-ESP.pdf).
t. Gabon. Penal Code, Loi N°21/63 du 31 Mai 1963. Article 208 (http://www.droit-afrique.com/upload/doc/gabon/Gabon-Code-1963-penal.pdf).
u. Gambia. Drug Control Act (2003). Article 35 (http://www.dleag-gambia.org/en/article/drug-laws).
v. Nigeria. National Drug Law Enforcement Agency Act. Section 19 (https://nigeria.tradeportal.org/media/NDLEA%20Act.pdf).
w. UNAIDS National Commitments and Policy Instrument, 2018 (see http://lawsandpolicies.unaids.org/).
x. Cameroon. Loi du 11 juillet 2014 portant régime de prévention, de protection et répression en matière de lutte contre le VIH et le SIDA (https://www.ilo.org/aids/legislation/WCMS_250391/lang--fr/index.htm).
y. Chad. Loi N°019/PR/2007 du 15 Novembre 2007 portant lutte contre VIH/SIDA/IST et protection des Droits des Personnes Vivant avec le VIH/SIDA. Articles 10 and 21 (https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---ilo_aids/documents/legaldocument/wcms_126793.pdf).
z. Sexual Rights Initiative [database]. Sexual Rights Initiative; c2016 (http://sexualrightsdatabase.org/map/21/Adult%20sex%20work).
aa. Guinea-Bissau. Loi n° 5/2007 du 10 septembre 2007. Bulletin Officiel de la République de Guinée-Bissau. The Republic of Guinea-Bissau (https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---ilo_aids/documents/legaldocument/wcms_126823.pdf).
ab. Guinea. Loi L/2005025/AN. Adoptant et promulguant la loi relative à la prévention, la prise en charge et le contrôle du VIH/sida, 2005 (http://www.ilo.org/aids/legislation/lang--en/index.htm).
ac. Niger. Loi n° 2007-08 du 30 avril 2007, relative à la prévention, la prise en charge et au contrôle du Virus de l'Immunodéficience Humaine (VIH) (http://www.ilo.org/aids/legislation/lang--en/index.htm).
ad. Cameron S, Bernard EJ. Advancing HIV justice 3: growing the global movement against HIV criminalisation. Amsterdam: HIV Justice Network; May 2019.
ae. Cameroon. Penal Code 2016. Article 260 (https://www.droit-afrique.com/uploads/Cameroun-Code-2016-penal1.pdf).
af. Cameroon. Loi 2007 on HIV. Articles 55 and 59 (https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---ilo_aids/documents/legaldocument/wcms_126793.pdf).
ag. Côte d'Ivoire. Loi du 11 juillet 2014 portant régime de prévention, de protection et répression en matière de lutte contre le VIH et le SIDA (https://www.ilo.org/aids/legislation/WCMS_250391/lang--fr/index.htm).
ah. Bernard EJ, Cameron S. Advancing HIV justice 2. Building momentum in global advocacy against HIV criminalisation. Brighton and Amsterdam: HIV Justice Network, GNP+; 2016 (https://www.scribd.com/doc/312008825/Advancing-HIV-Justice-2-Building-momentum-inglobal-advocacy-against-HIV-criminalisation).
ai. Nigeria. HIV Law of 2014 (https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---ilo_aids/documents/legaldocument/wcms_398045.pdf).
aj. Still not welcome: HIV-related travel restrictions. Geneva: UNAIDS, UNDP; 2019 (https://www.unaids.org/sites/default/files/media_asset/hiv-related-travel-restrictions-explainer_en.pdf).
ak. Chad. HIV Law, 2007. Article 22 (https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---ilo_aids/documents/legaldocument/wcms_126793.pdf).
al. Chad. HIV Law, 2007 (https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---ilo_aids/documents/legaldocument/wcms_126793.pdf).
am. Cabo Verde. Penal Code, 2004. Article 148 (https://www.wipo.int/edocs/lexdocs/laws/pt/cv/cv001pt.pdf).
an. Chad. Penal Code, 2017. Articles 351, 335 and 336 (https://www.droit-afrique.com/uploads/Tchad-Code-penal-2017.pdf).
ao. Equatorial Guinea. Penal Code. Article 452(bis) (https://acjr.org.za/resource-centre/penal-code-of-equatorial-guinea-1963/view).

## HIV testing and treatment

FIGURE 7.9

**HIV testing and treatment cascade, western and central Africa, 2019**




Source: UNAIDS special analysis, 2020 (see methods annex).

TABLE 7.3

## 90–90–90 country scorecard, western and central Africa, 2019

| | First 90: percentage of people living with HIV who know their status | | | Second 90: percentage of people who know their status who are on treatment | | | Third 90: percentage of people living with HIV on treatment who are virally suppressed | | | **Viral load suppression: percentage of people living with HIV who are virally suppressed** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) |
| **Western and central Africa** | 68 | 77 | 63 | 85 | 88 | 78 | 78 | 79 | 78 | 45 | 53 | 38 |
| Benin | 72 | 86 | 56 | 91 | 91 | 88 | 73 | 73 | 73 | 48 | 58 | 36 |
| Burkina Faso | 73 | 86 | 65 | 93 | 100 | 77 | | | | | | |
| Burundi | 86 | 98 | 81 | 98 | 100 | 94 | | | | | | |
| Cabo Verde | | | 94 | | | 91 | 53 | 53 | 53 | 50 | 54 | 45 |
| Cameroon | 79 | 84 | 78 | 78 | 80 | 72 | | | | | | |
| Central African Republic | 70 | 75 | 66 | 65 | 71 | 51 | | | | | | |
| Chad | 65 | 72 | 69 | 89 | 96 | 77 | | | | | | |
| Congo | 51 | 58 | 46 | 49 | 46 | 51 | | | | | | |
| Côte d'Ivoire | 73 | 82 | 64 | 86 | 86 | 84 | 79 | 80 | 80 | 50 | 57 | 43 |
| Democratic Republic of the Congo | 54 | 53 | 72 | 98 | 97 | 100 | | | | | | |
| Equatorial Guinea | 69 | 79 | 61 | 52 | 65 | 30 | | | | | | |
| Gabon | 88 | 91 | 86 | 58 | 58 | 60 | | | | | | |
| Gambia | 42 | 51 | 32 | 68 | 72 | 52 | | | | | | |
| Ghana | 58 | 70 | 44 | 77 | 77 | 75 | 68 | 68 | 68 | 31 | 37 | 22 |
| Guinea | 57 | 62 | 49 | 99 | 100 | 94 | | | | | | |
| Guinea-Bissau | 54 | 63 | 47 | 75 | 87 | 46 | | | | | | |
| Liberia | 58 | 71 | 46 | 57 | 60 | 46 | | | | | | |
| Mali | 43 | 47 | 43 | 85 | 89 | 75 | | | | | | |
| Mauritania | 78 | 66 | 96 | 73 | 93 | 58 | | | | | | |
| Niger | 66 | 76 | 58 | 93 | 95 | 87 | 73 | 74 | 72 | 44 | 53 | 36 |
| Nigeria | 73 | 86 | 63 | 89 | 93 | 80 | | | | | | |
| Sao Tome and Principe | | | | | | | | | | | | |
| Senegal | 71 | 89 | 54 | 98 | 100 | 94 | 81 | 84 | 80 | 57 | 75 | 41 |
| Sierra Leone | 48 | 64 | 37 | 88 | 90 | 82 | | | | | | |
| Togo | 73 | 82 | 65 | 88 | 92 | 77 | | | | | | |

**Legend for 90–90–90**

- 95% and above
- 90–94%
- 85–89%
- 70–84%
- 50–69%
- Less than 50%

**Legend for viral load suppression**

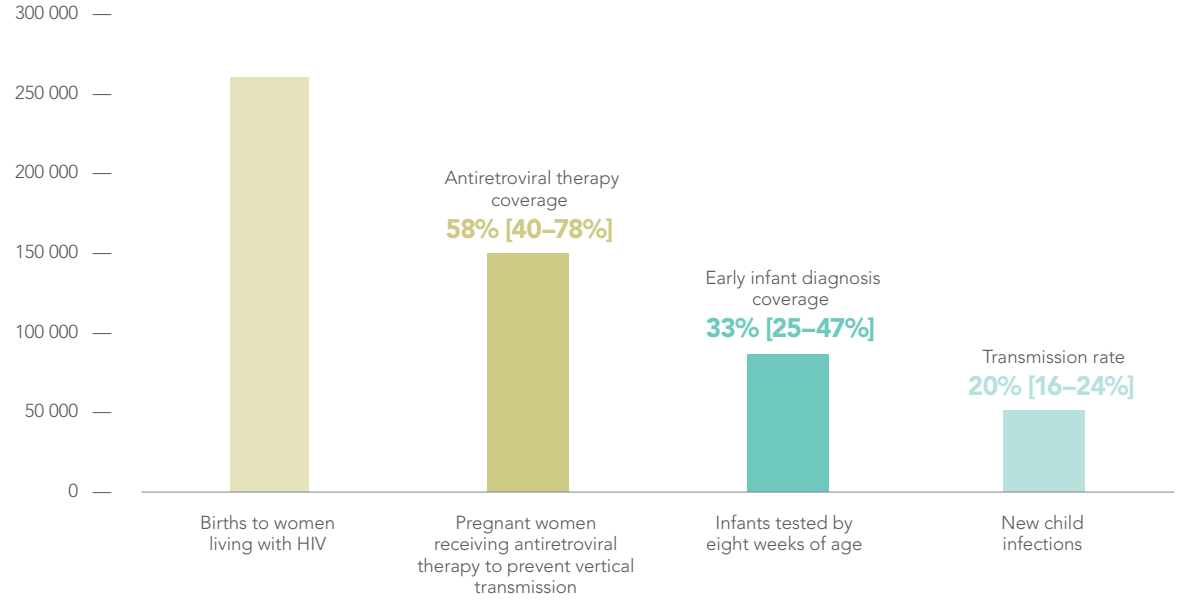
- 86% and above
- 73–85%
- 65–72%
- 40–64%
- 25–39%
- Less than 25%

Source: UNAIDS special analysis, 2020 (see methods annex).

## People-centred services

FIGURE 7.10

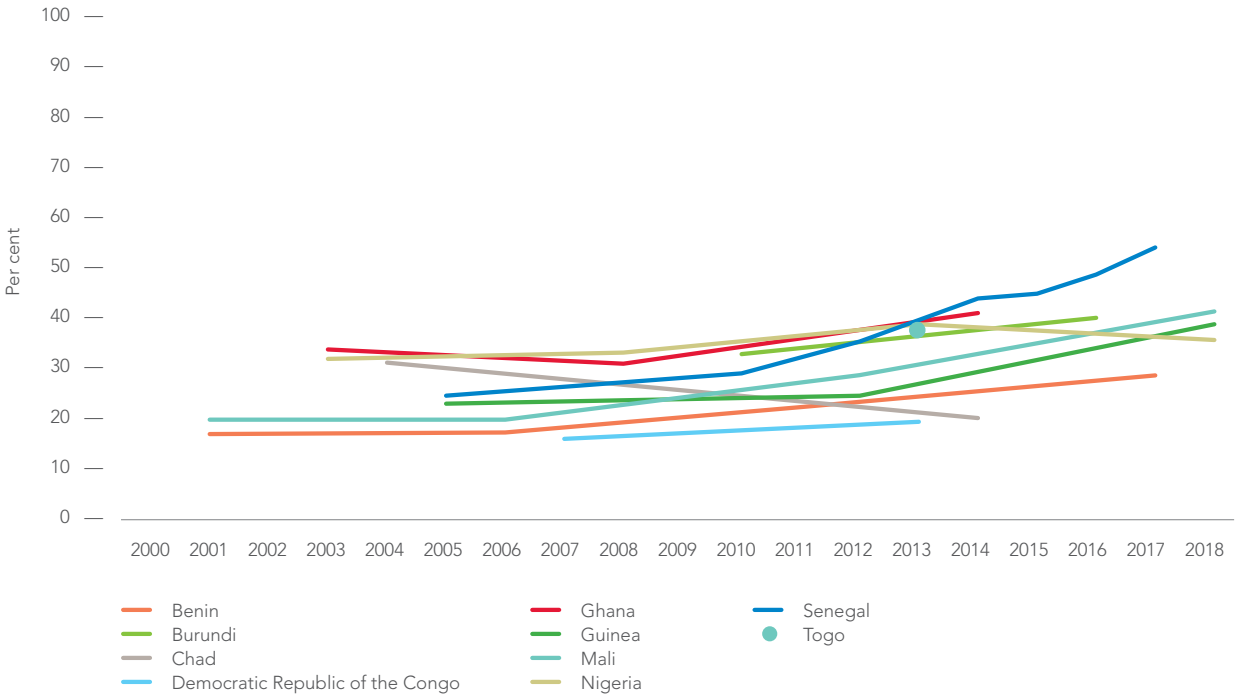
**Services for pregnant women living with HIV, early infant diagnosis, number of new vertical infections and transmission rate, western and central Africa, 2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 7.11

**Women aged 15 to 49 years who have their demand for family planning satisfied by modern methods, countries with available data, western and central Africa, 2001–2018**




Source: Population-based surveys, 2001–2018.

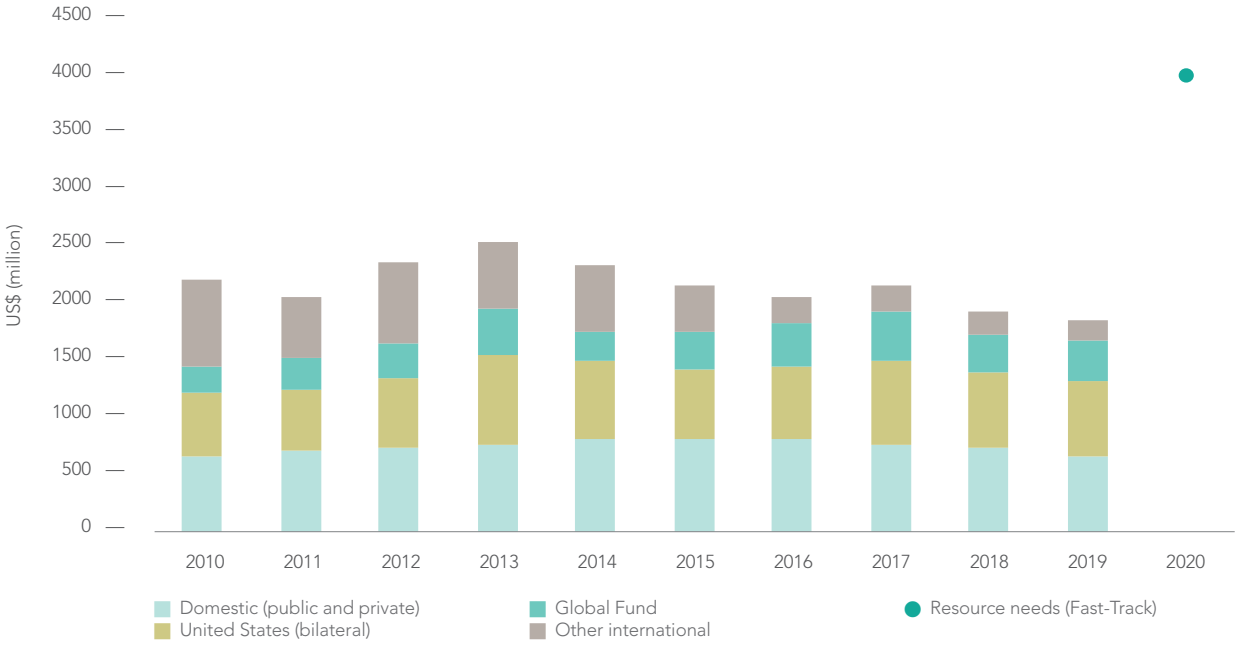
## Investing to end AIDS

The resources available for HIV responses in western and central Africa in 2019 were only 46% of the 2020 target. HIV financing in the region peaked in 2013, with funding from all sources declining by 14% between 2015 and 2019 (all trends measured in constant 2016 US dollars to control for inflation). The sources of funding for HIV responses in the region have been domestic spending (36% in 2019), United States Government bilateral contributions (35% in 2019) and the Global Fund to Fight AIDS, Tuberculosis and Malaria (20% in 2019).

United States Government bilateral contributions and Global Fund financing have increased by 20% and 55%, respectively, between 2010 to 2019, while domestic resources decreased by 1% and other international contributions decreased by 77% over the same period. All funding sources experienced declines between 2018 and 2019, except for the Global Fund, which increased by 10% after having decreased disbursements in the region by 23% from 2017 to 2018 due to grant management cycles.

FIGURE 7.12

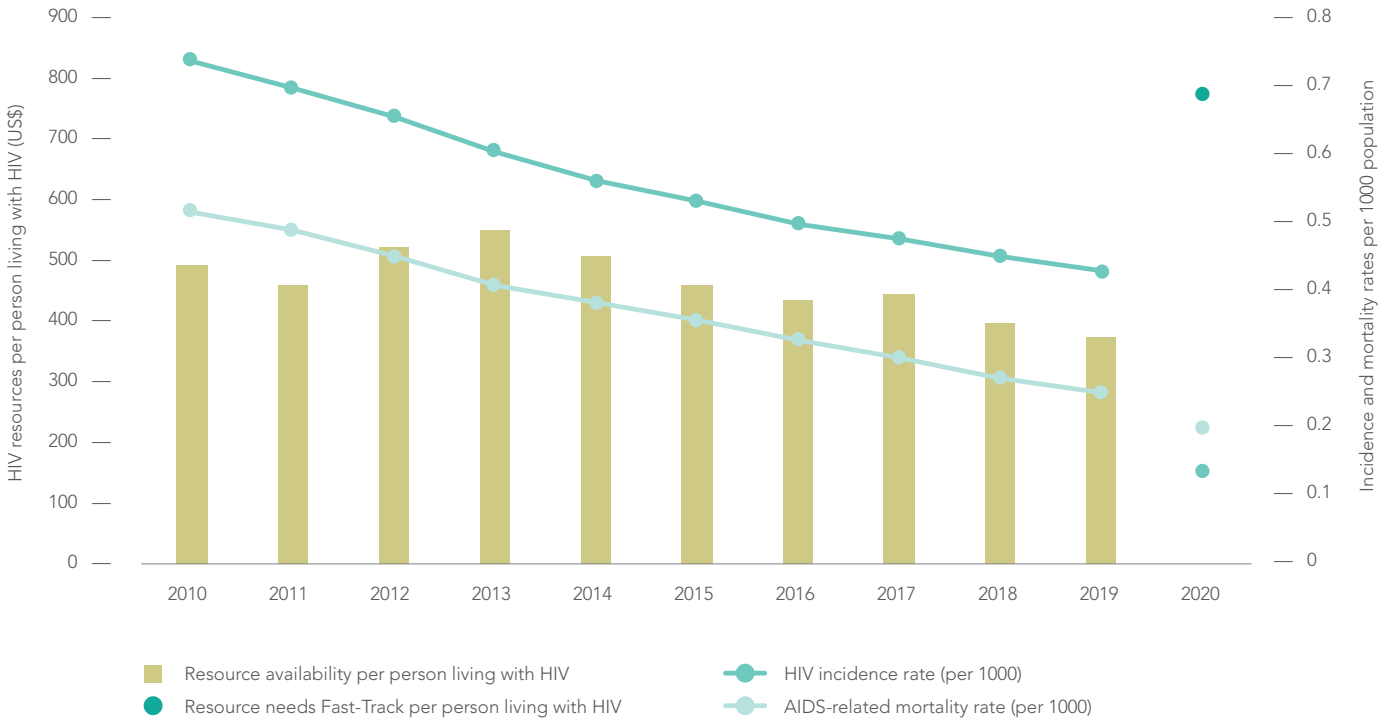
**Resource availability for HIV by source, 2010–2019, and estimated Fast-Track resource needs in 2020, western and central Africa**




Source: UNAIDS financial estimates, 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).

FIGURE 7.13

**Total HIV resource availability per person living with HIV, HIV incidence and AIDS-related mortality rates in low- and middle-income countries in western and central Africa, 2010–2019 and 2020 target**




Source UNAIDS financial estimates, 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).
Note: Resource availability per person living with HIV and resource needs are in constant 2016 US dollars.

# ASIA AND THE PACIFIC

## DATA POINTS

**A 12% DECLINE**

IN NEW HIV INFECTIONS IN THE REGION OBSCURES INCREASES IN SOME COUNTRIES

GAY MEN AND OTHER MEN WHO HAVE SEX WITH MEN ACCOUNT FOR

**44% OF NEW INFECTIONS**

**3 QUARTERS**

OF PEOPLE LIVING WITH HIV IN THE REGION KNOW THEIR HIV STATUS.

GREATER ACCESS TO HIV TREATMENT HAS

**REDUCED AIDS-RELATED DEATHS BY 29%**

SINCE 2010

**5 COUNTRIES**

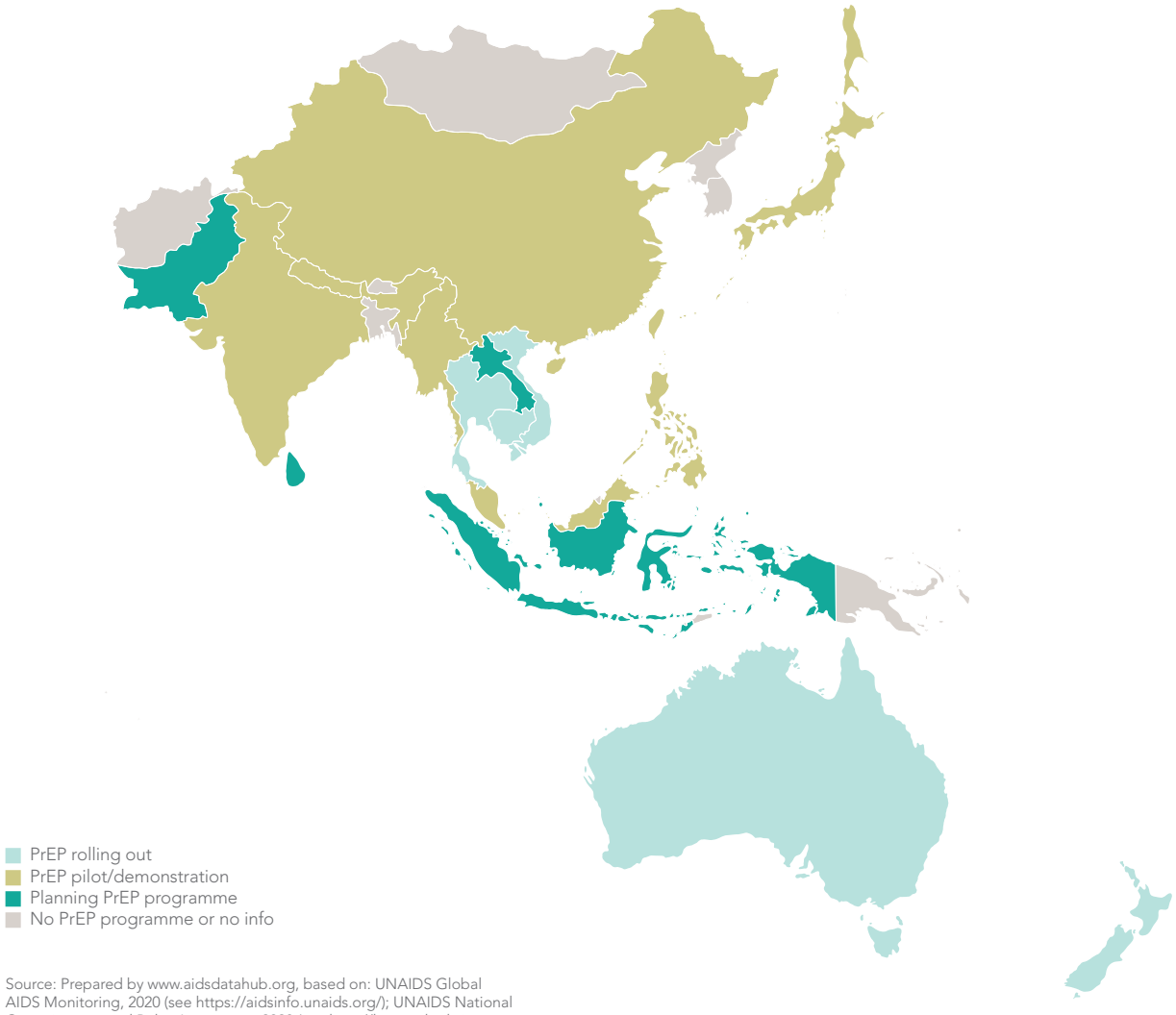
HAVE PREP PROGRAMMES ROLLING OUT NATIONALLY, AND 7 HAVE PILOT OR DEMONSTRATION PROJECTS

HIV infections in Asia and the Pacific have declined slightly, with reductions in Cambodia, Myanmar, Thailand and Viet Nam offset by sharp increases in Pakistan and the Philippines. Key populations and their partners accounted for an estimated 98% of new HIV infections, and more than one quarter of new HIV infections were among young people (aged 15 to 24 years). Rising numbers of new infections among gay men and other men who have sex with men are a major concern. An overall slowing in reductions in new HIV infections coincides with a decline in political and programmatic commitment, alongside punitive laws and policies and rising stigma and discrimination that block effective AIDS responses.

Key populations are insufficiently served by HIV prevention programmes. Some progress has been made in introducing innovative prevention tools, such as pre-exposure prophylaxis (PrEP). A small minority of countries have both high coverage of needle–syringe programmes and moderate coverage of opioid substitution therapy. Evidence indicates increased use of methamphetamine drugs linked to HIV transmission, and there is a need for innovative harm reduction services that respond to changing patterns in drug use. Civil society organizations are widely involved in HIV prevention programmes, but these community-led services are not available at sufficient scale.

The 29% reduction in AIDS-related deaths since 2010 speaks to successful testing and treatment programmes in several countries. Australia, Cambodia and Thailand have achieved the 90–90–90 targets, but AIDS-related mortality rates are rising in Afghanistan, Pakistan and the Philippines. Late diagnosis and poor adherence to treatment are missed opportunities to prevent onward transmission and AIDS-related deaths. About half of key populations living with HIV are not aware of their HIV status, but assisted testing and self-testing could increase the rates of HIV diagnosis.

FIGURE 8.1
**Status of PrEP availability in Asia and the Pacific, 2019**



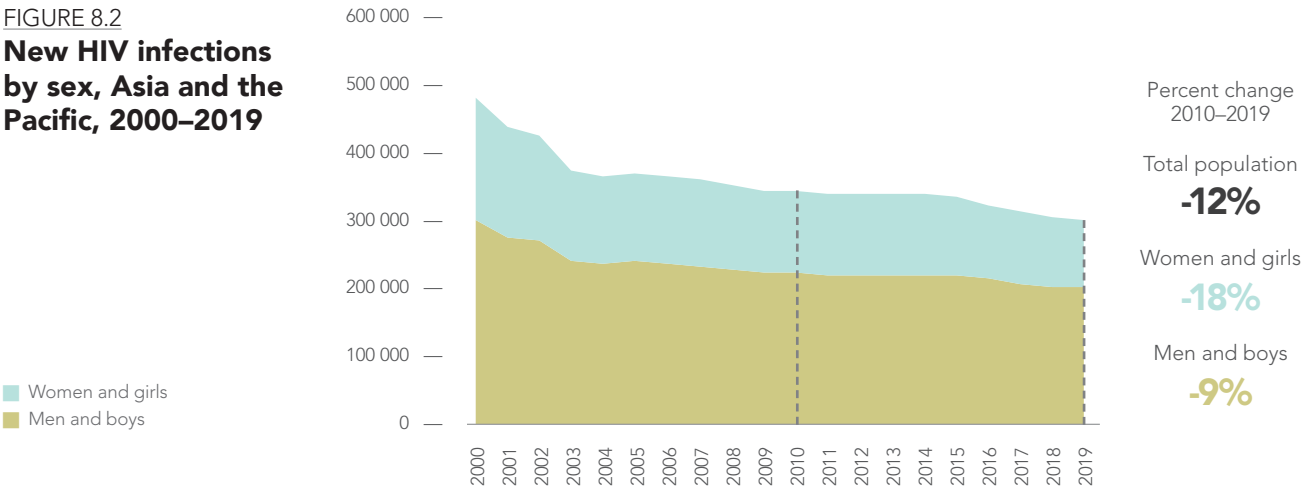

Source: Prepared by www.aidsdatahub.org, based on: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/); UNAIDS National Commitments and Policy Instrument, 2020 (see http://lawsandpolicies.unaids.org/); and information from national programmes.

PrEP is an additional prevention choice for people at substantial risk of HIV infection. Outstanding examples have been set by Australia, Cambodia, New Zealand, Thailand and Viet Nam, with PrEP rolling out and PrEP provision increasing. The population-level prevention benefits of PrEP, however, have not yet been realized in most countries of the region because its availability and accessibility is still limited.

## State of the epidemic

FIGURE 8.2

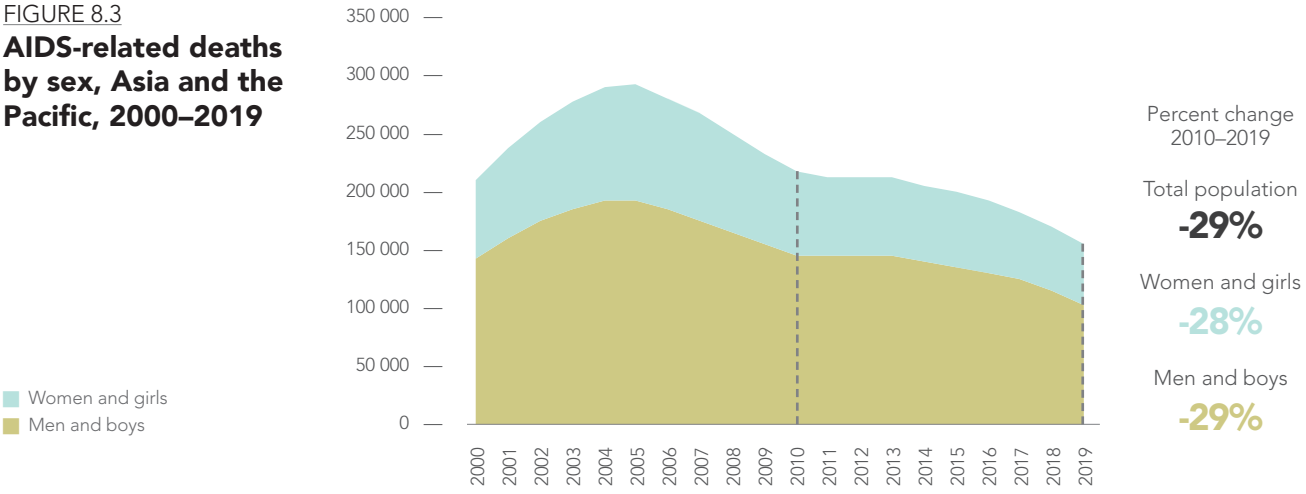
### New HIV infections by sex, Asia and the Pacific, 2000–2019




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 8.3

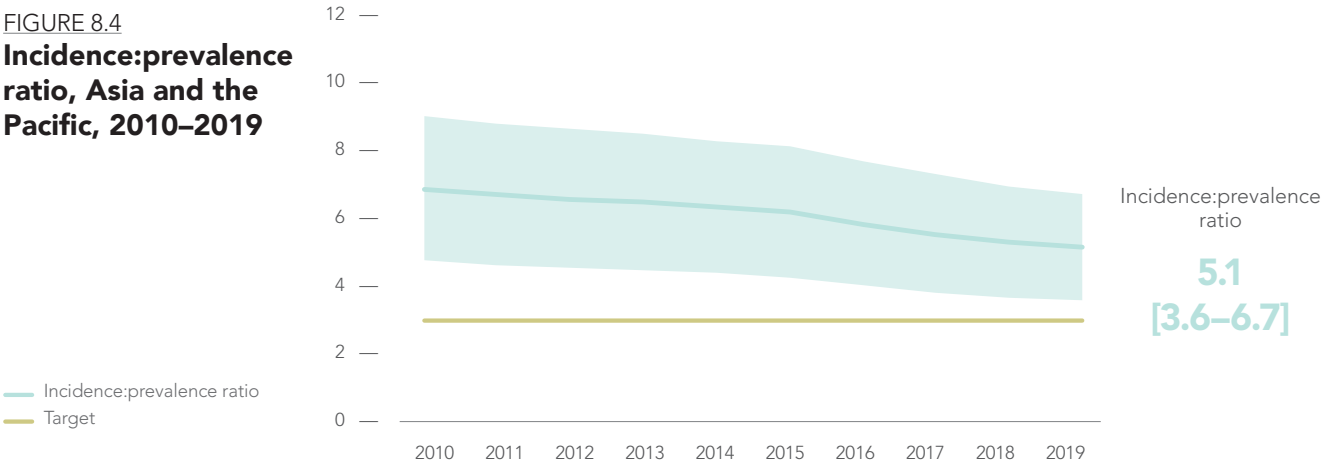
### AIDS-related deaths by sex, Asia and the Pacific, 2000–2019




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 8.4

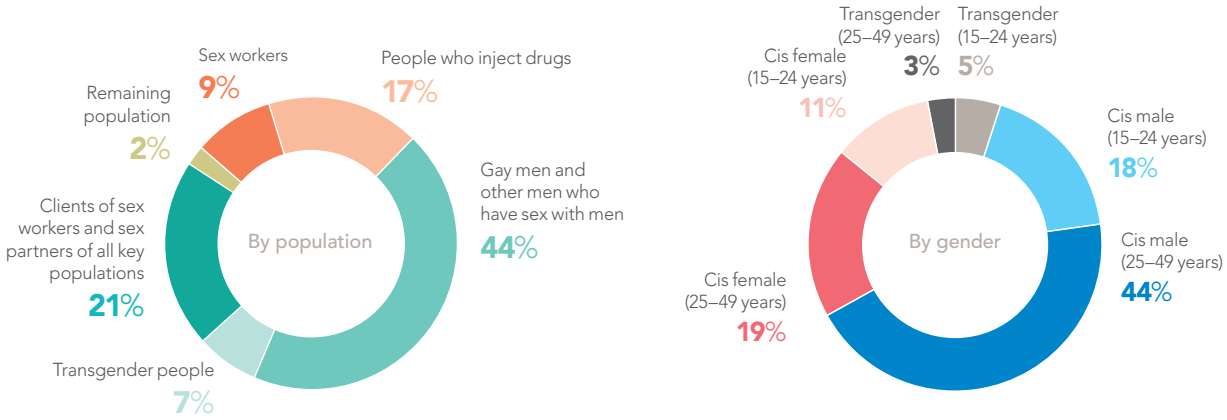
### Incidence:prevalence ratio, Asia and the Pacific, 2010–2019




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 8.5

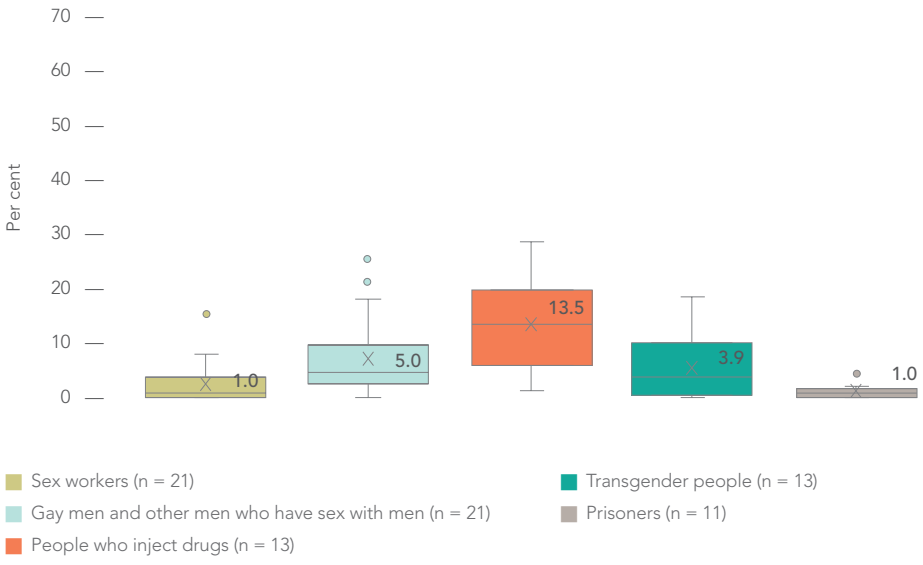
## Distribution of new HIV infections by population (aged 15–49 years), Asia and the Pacific, 2019




Source: UNAIDS special analysis, 2020 (see methods annex).

FIGURE 8.6

## HIV prevalence among key populations, Asia and the Pacific, 2015–2019




Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).
Note: (n = number of countries responding).

TABLE 8.1

## Estimated size of key populations, Asia and the Pacific, 2018–2019

| | National adult population (15+), 2018 | National adult population (15+), 2019 | Sex workers | Sex workers as percentage of adult population (15+) | Gay men and other men who have sex with men | Gay men and other men who have sex with men as percentage of adult population (15+) | People who inject drugs | People who inject drugs as percentage of adult population (15+) | Transgender people | Transgender people as percentage of adult population (15+) | Prisoners | Prisoners as percentage of adult population (15+) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Afghanistan | 20 700 000 | 21 400 000 | | | | | | | | | | |
| Cambodia | 11 600 000 | 11 700 000 | | | | | | | | | | |
| Lao People's Democratic Republic | 4 720 000 | 4 810 000 | | | | | | | | | | |
| Malaysia | 24 300 000 | 24 700 000 | 37 000 | 0.15% | | | 75 000 | 0.31% | | | | |
| Mongolia | 2 220 000 | 2 290 000 | | | | | | | | | | |
| Nepal | 19 500 000 | 20 100 000 | | | | | | | | | 22 000 | 0.11% |
| New Zealand | 3 770 000 | 3 870 000 | | | | | 15 000 | 0.39% | | | 10 000 | 0.26% |
| Papua New Guinea | 5 600 000 | 5 800 000 | 48 000 | 0.84% | 36 000 | 0.63% | | | | | | |
| Philippines | 73 300 000 | 75 400 000 | 210 000 | 0.28% | 830 000 | 1.10% | | | 190 000 | 0.25% | | |
| Singapore | 3 490 000 | 3 480 000 | | | | | | | | | 11 000 | 0.32% |
| Sri Lanka | 16 100 000 | 16 200 000 | 30 000 | 0.19% | 74 000 | 0.46% | 2700 | 0.02% | 2200 | 0.01% | | |
| Thailand | 57 300 000 | 57 800 000 | | | | | | | | | 370 000 | 0.64% |
| Viet Nam | 73 000 000 | 73 800 000 | | | | | | | | | | |

- National population size estimate
- Local population size estimate
- Insufficient data
- No data

Sources: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/); Spectrum Demproj module, 2020.
Note 1: Estimates shown are government-provided estimates reported in 2018–2019. Additional and alternative estimates may be available from different sources, including the Key Populations Atlas (https://kpatlas.unaids.org/), academic publications or institutional documents.
Note 2: The regions covered by the local population size estimates are as follows:

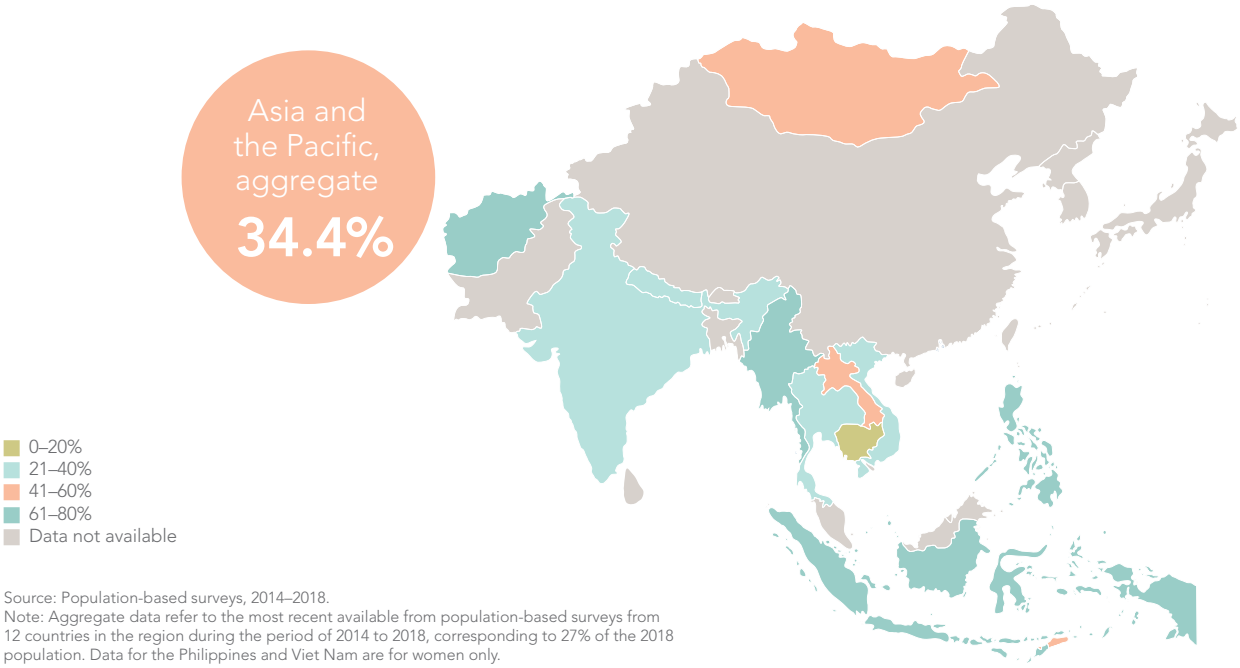
Afghanistan — Gay men and other men who have sex with men: Herat, Kabul, Kandahar, Kunduz, Jalalabad and Mazar
People who inject drugs: Faizabad, Herat, Jalalabad, Kabul, Kandahar, Kunduz, Mazar and Zaranj

Mongolia — Sex workers: Darkhan, Dornod, Khuvsgul and Ulaanbaatar
Gay men and other men who have sex with men: Darkhan, Dornod, Orkhon and Ulaanbaatar

## Stigma and discrimination and violence

FIGURE 8.7

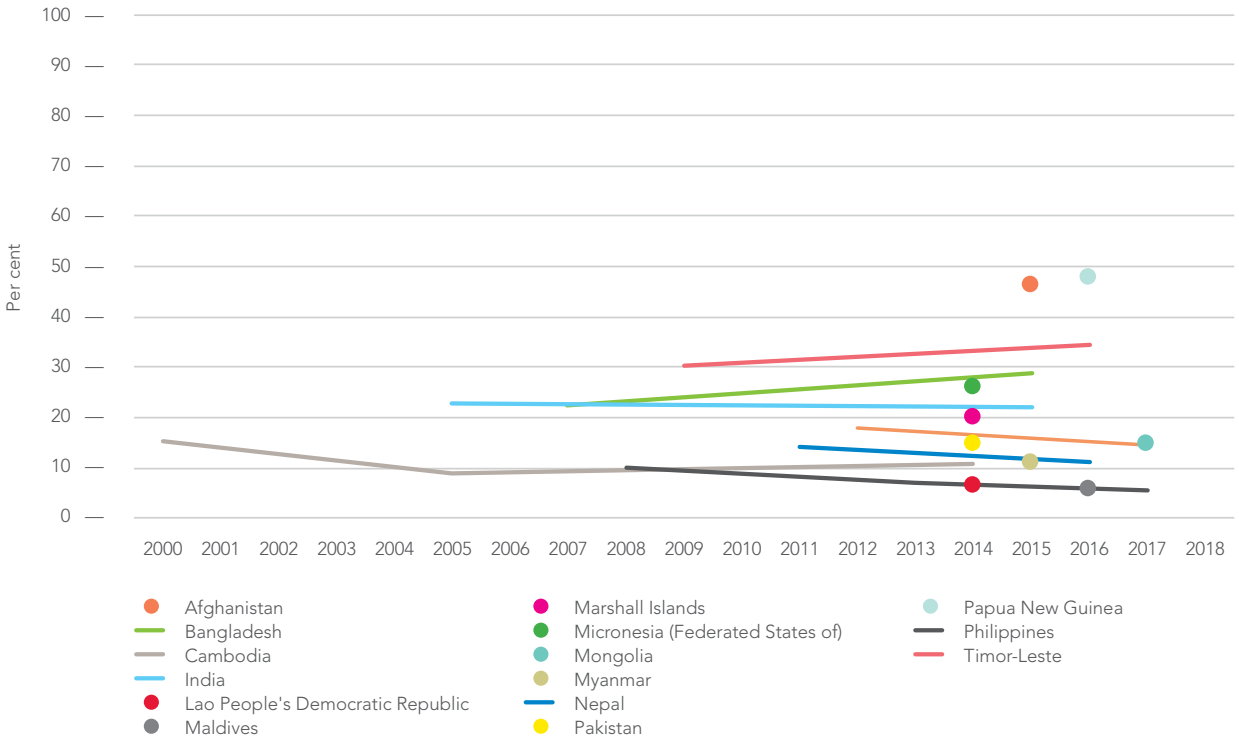
**Percentage of people aged 15 to 49 years who would not purchase vegetables from a shopkeeper living with HIV, Asia and the Pacific, 2014–2018**




Source: Population-based surveys, 2014–2018.
Note: Aggregate data refer to the most recent available from population-based surveys from 12 countries in the region during the period of 2014 to 2018, corresponding to 27% of the 2018 population. Data for the Philippines and Viet Nam are for women only.

FIGURE 8.8

**Ever-married or partnered women aged 15 to 49 years who experienced physical and/or sexual violence by an intimate partner in the past 12 months, countries with available data, Asia and the Pacific, 2000–2018**




Source: Population-based surveys, 2000–2018.

## Laws and policies

TABLE 8.2

### Laws and policies scorecard, Asia and the Pacific, 2019

| | Criminalization of transgender people | Criminalization of sex work | Criminalization of same-sex sexual acts | Drug use or possession for personal use an offence | Parental consent for adolescents to access HIV testing | Spousal consent for married women to access sexual and reproductive health services |
|---|---|---|---|---|---|---|
| Afghanistan | a | a | f | a | a | b |
| Australia | | p | f | | | |
| Bangladesh | a | c | a | a | a | a |
| Bhutan | | q | f | | | |
| Brunei Darussalam | | r | f | | a | a |
| Cambodia | a | s | a | a | am | a |
| China | a | a | a | a | a | a |
| Cook Islands | | | | | | |
| Democratic People's Republic of Korea | | t | f | | | |
| Fiji | b | u | f | b | b | b |
| India | a | a | a | a | a | a |
| Indonesia | | | f | | i | i |
| Japan | | v | f | | | |
| Kiribati | a | d | g | a | a | a |
| Lao People's Democratic Republic | b | w | f | h | b | b |
| Malaysia | b | e | f | a | a | a |
| Maldives | | x | f | | | |
| Marshall Islands | b | y | f | | b | b |
| Micronesia (Federated States of) | b | z | f | b | b | b |
| Mongolia | a | a | a | a | a | a |

Criminalized and/or prosecuted
Neither criminalized nor prosecuted
Data not available

Any criminalization or punitive regulation of sex work
Sex work is not subject to punitive regulations or is not criminalized
Issue is determined/differs at the subnational level
Data not available

Death penalty
Imprisonment (14 years life, up to 14 years) or no penalty specified
Data not available

Compulsory detention for drug offences
Data not available

Yes, for adolescents younger than 18
Yes, for adolescents younger than 14 or 16
Yes, for adolescents younger than 12
No
Data not available

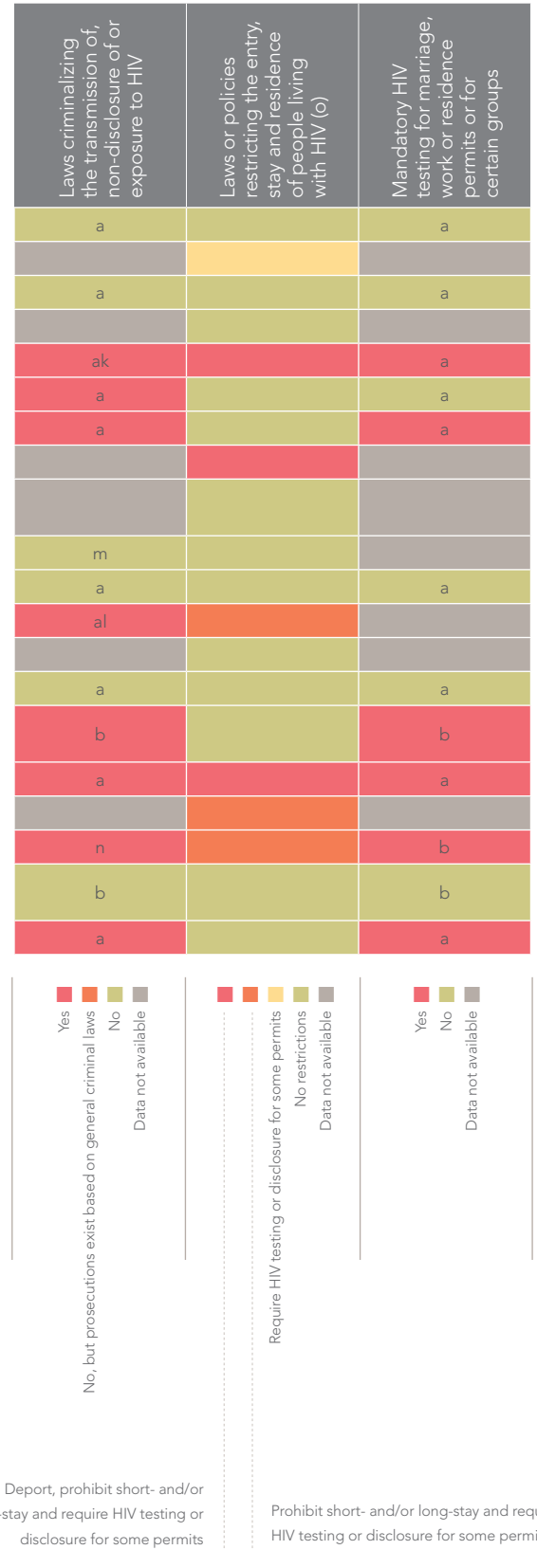
Yes
No
Data not available

Laws penalizing same-sex sexual acts have been decriminalized or never existed, or no specific legislation

Possession of drugs for personal use is specified as a criminal offence or drug use or consumption is a specific offence in law

Possession of drugs for personal use or drug use or consumption are not punished by laws or regulations

Possession of drugs for personal use or drug use or consumption is specified as a non-criminal offence

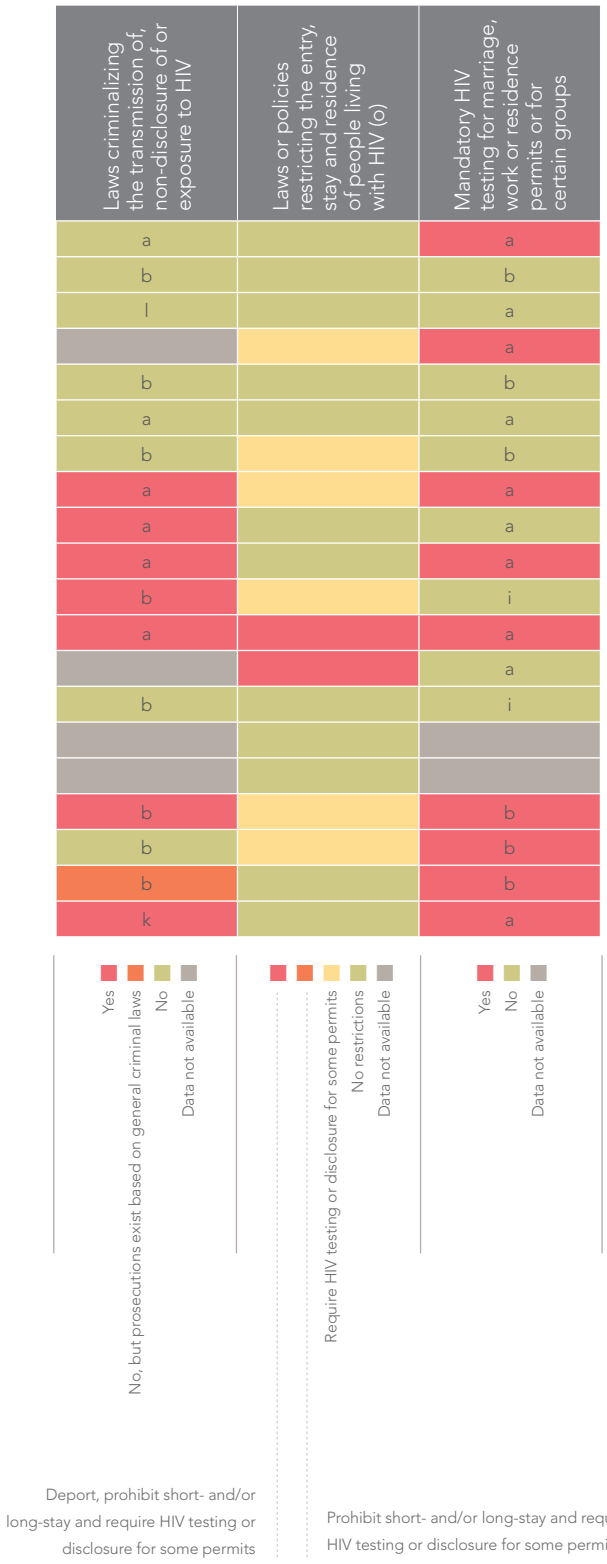



Sources:
a. UNAIDS National Commitments and Policy Instrument, 2019 (see http://lawsandpolicies.unaids.org/).
b. UNAIDS National Commitments and Policy Instrument, 2017 (see http://lawsandpolicies.unaids.org/).
c. Bangladesh. Penal Code. Section 290.
d. Kiribati. Penal Code. Article 167.
e. Malaysia. Penal Code. Article 372A and 373 (http://www.agc.gov.my/agcportal/uploads/files/Publications/LOM/EN/Penal%20Code%20%5BAct%20574%5D2.pdf).
f. Mendos LR. State-sponsored homophobia 2019. 13th ed. Geneva: ILGA: 2019.
g. Kiribati. Penal Code [Cap 67]. Revised Edition 1977. Section 153, 154 and 155 (https://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=70701&p_country=KIR&p_count=62&p_classification=01&p_classcount=21).
h. Lao People's Democratic Republic. Penal Law. Article 146.
i. UNAIDS National Commitments and Policy Instrument, 2018 (see http://lawsandpolicies.unaids.org/).
j. Cameron S, Bernard EJ. Advancing HIV justice 3: growing the global movement against HIV criminalisation. Amsterdam: HIV Justice Network; May 2019.
k. Viet Nam. Law on HIV/AIDS Prevention and Control (https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---ilo_aids/documents/legaldocument/wcms_113364.pdf).
l. Nepal. The National Penal Code Act 2017. Article 105 (http://www.moljpa.gov.np/en/wp-content/uploads/2018/12/Penal-Code-English-Revised-1.pdf).
m. Fiji. HIV/AIDS (Amendment) Decree 2011 (http://www.health.gov.fj/wp-content/uploads/2014/09/10_HIV-AIDS-Amendment-Decree-20111.pdf).
n. Marshall Islands. Communicable Diseases Prevention and Control Act, 1988. S 1511 (http://rmiparliament.org/cms/images/LEGISLATION/PRINCIPAL/1988/1988-0028/CommunicableDiseasesPreventionandControlAct1988_1.pdf).
o. Still not welcome: HIV-related travel restrictions. Geneva: UNAIDS, UNDP; 2019 (https://www.unaids.org/sites/default/files/media_asset/hiv-related-travel-restrictions-explainer_en.pdf).
p. South Australia. Summary Offences Act 1953. Section 25; Victoria. Sex Work Act 1994. Section 13; New South Wales. Summary Offence Act 1988. Section 19; Western Australia. Prostitution Act 2000. s25.
q. Bhutan. Penal Code, 2004. Chapter 26, articles 373–377 (https://www.wipo.int/edocs/lexdocs/laws/en/bt/bt019en.pdf).
r. Brunei Darussalam. Penal Code 1951 (2016 edition). Prostitution, S 26/2012, section 294A (https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/78238/83493/F1602044948/BRN78238%202016%20Edition.pdf).
s. Cambodia. Penal Code 2010. Articles 284, 291, 298 (https://www.unodc.org/res/cld/document/khm/criminal_code_of_the_kingdom_of_cambodia_html/Cambodia_Criminal-Code-of-the-Kingdom-of-Cambodia-30-Nov-2009-Eng.pdf).
t. Democratic People's Republic of Korea. Criminal Law. Article 261 (Prostitution) (https://www.hrnk.org/uploads/pdfs/The%20Criminal%20Law%20of%20the%20Democratic%20Republic%20of%20Korea_2009_%20(1).pdf).
u. Fiji. Crimes Decree 2009. Section 231 (https://www.steptoe.com/images/content/2/3/v1/2393/3984.pdf).
am. Cambodia. Law on the Prevention and Control of HIV/AIDS. Article 19 (https://www.aidsdatahub.org/sites/default/files/documents/Cambodia_Law_on_the_Prevention_and_Control_of_HIV_AIDS.pdf.pdf).

TABLE 8.2 contd.

## Laws and policies scorecard

| | Criminalization of transgender people | Criminalization of sex work | Criminalization of same-sex sexual acts | Drug use or possession for personal use an offence | Parental consent for adolescents to access HIV testing | Spousal consent for married women to access sexual and reproductive health services |
|---|---|---|---|---|---|---|
| Myanmar | a | a | a | a | a | a |
| Nauru | b | aa | f | b | b | b |
| Nepal | a | a | a | a | a | a |
| New Zealand | a | a | a | a | a | a |
| Niue | b | | b | b | b | b |
| Pakistan | a | a | a | a | a | b |
| Palau | b | ab | f | | b | b |
| Papua New Guinea | a | a | a | a | a | b |
| Philippines | a | ac | f | | a | a |
| Republic of Korea | a | a | a | a | a | a |
| Samoa | b | ad | f | b | i | i |
| Singapore | a | a | a | a | a | a |
| Solomon Islands | | ae | f | | | |
| Sri Lanka | b | af | f | | i | i |
| Thailand | | ag | f | | i | i |
| Timor-Leste | | | f | | | |
| Tonga | b | ah | f | b | a | b |
| Tuvalu | b | ai | f | | b | b |
| Vanuatu | b | aj | f | b | b | b |
| Viet Nam | a | a | a | a | a | a |

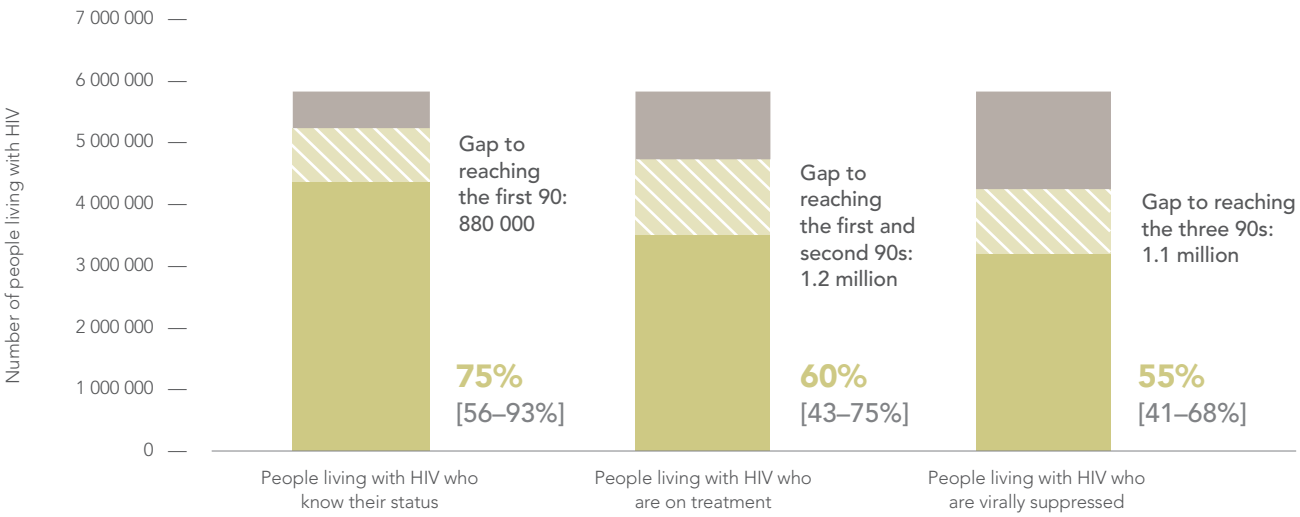



v. Japan. Anti-Prostitution Law (1956).
w. Lao People's Democratic Republic. Penal Code, 2018.
x. Maldives. Penal Code 2014. Sections 615, 620 and 621 (https://www.law.upenn.edu/live/files/4203-maldives-penal-code-2014).
y. Marshall Islands. Criminal Code 2011. Article 251 (http://rmiparliament.org/cms/images/LEGISLATION/PRINCIPAL/2011/2011-0059/CriminalCode2011_1.pdf).
z. Federated States of Micronesia. Chuuk State Code. Title 12, chapter 28 (http://fsmlaw.org/chuuk/code/title12/T12_CH28.htm).
aa. Nauru. Crimes Act 2016. Section 107 (https://tbinternet.ohchr.org/Treaties/CEDAW/Shared%20Documents/NRU/INT_CEDAW_ARL_NRU_28029_E.pdf).
ab. Palau. Code of Palau. Anti-Prostitution Act. Chapter 36 (https://www.legal-tools.org/doc/1c32a2/pdf/).
ac. Philippines. Revised Penal Code. Article 202 (https://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/PHL_revised_penal_code.pdf).
ad. Samoa. Crimes Act 2013. Sections 72 and 73 (https://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=93579&p_country=WSM&p_classification=01.04).
ae. Solomon Islands. Penal Code. Section 153 (http://www.paclii.org/sb/legis/consol_act/pc66/).
af. Sri Lanka. The Vagrants Ordinance (http://hrlibrary.umn.edu/research/srilanka/statutes/Vagrants_Ordinance.pdf).
ag. Thailand. Prevention and Suppression of Prostitution Act B.E. 2539 (1996). Section 5 (https://www.ilo.org/dyn/natlex/docs/WEBTEXT/46403/65063/E96THA01.htm).
ah. Tonga. Criminal Offences Act. Section 81(4) (https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/73337/95725/F665862081/TON73337.pdf).
ai. Tuvalu. Penal Code. Sections 145 and 146 (http://tuvalu-legislation.tv/cms/images/LEGISLATION/PRINCIPAL/1965/1965-0007/PenalCode_1.pdf).
aj. Vanuatu. Penal Code. Section 148 (https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/88512/101229/F1616956608/VUT88512.pdf).
ak. Brunei Darussalam. Infectious Diseases Act. Section 24 (http://www.agc.gov.bn/AGC%20Images/LAWS/ACT_PDF/Cap204.pdf).
al. Indonesia. Regional Regulation of Papua Province, No. 8, 2010 on the Prevention and Control of HIV and AIDS. Article 15; Indonesia. Regional Regulation of West Kalimantan Province Number 2 of 2009 about Prevention and Management of HIV and AIDS in West Kalimantan Province. Articles 20 and 45 (1).

## HIV testing and treatment

FIGURE 8.9

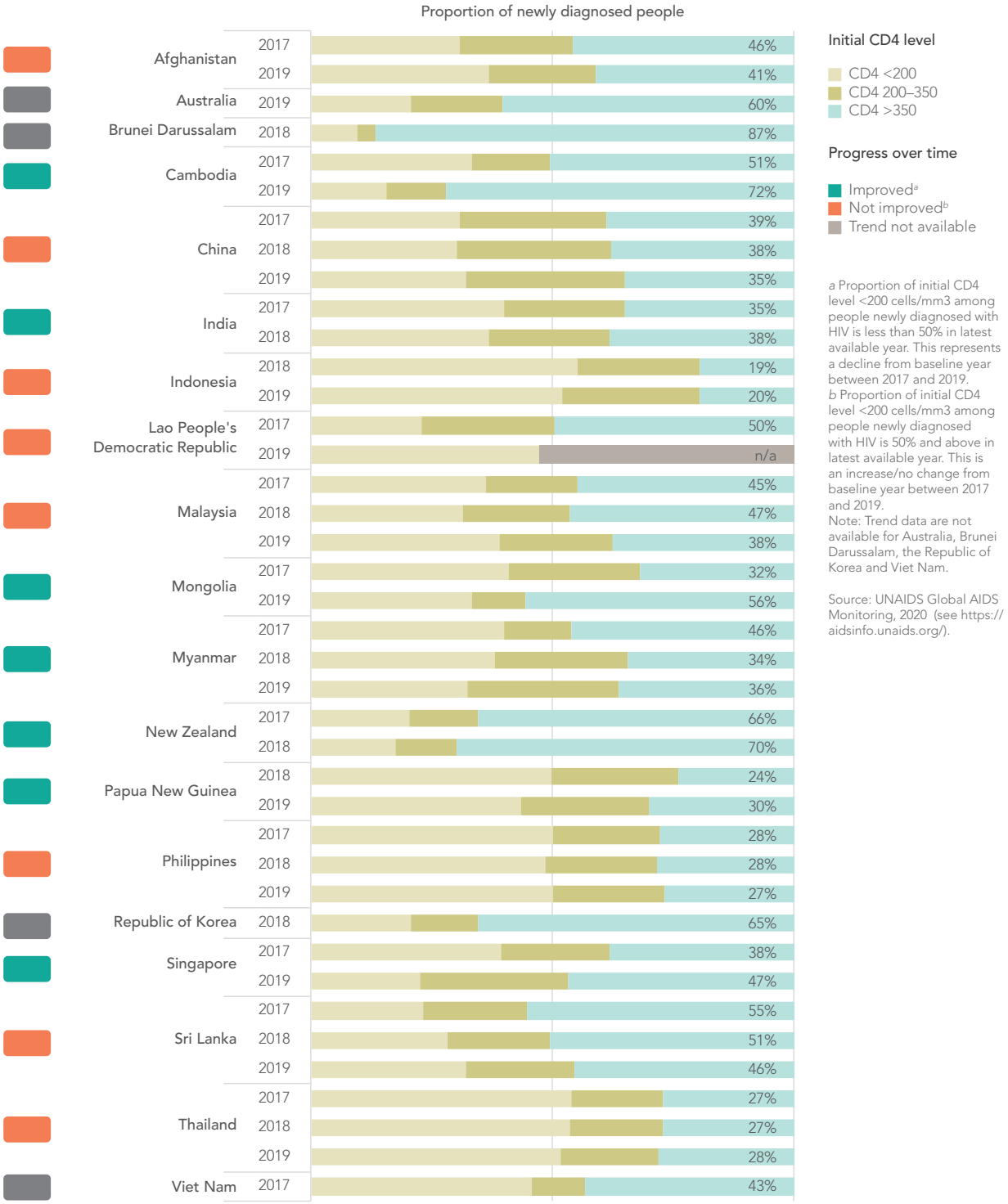
### HIV testing and treatment cascade, Asia and the Pacific, 2019




Source: UNAIDS special analysis, 2020 (see methods annex).

FIGURE 8.10

## Trends in change in CD4 level among people newly diagnosed with HIV, Asia and the Pacific, 2017–2019




*a* Proportion of initial CD4 level <200 cells/mm3 among people newly diagnosed with HIV is less than 50% in latest available year. This represents a decline from baseline year between 2017 and 2019.
*b* Proportion of initial CD4 level <200 cells/mm3 among people newly diagnosed with HIV is 50% and above in latest available year. This is an increase/no change from baseline year between 2017 and 2019.
Note: Trend data are not available for Australia, Brunei Darussalam, the Republic of Korea and Viet Nam.

Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).

Despite progress on HIV testing, treatment and viral suppression in the region, a significant proportion of people living with HIV have low CD4 counts upon diagnosis, suggesting that they acquired HIV some time ago. Early diagnosis, treatment initiation and viral suppression is critical to maximizing treatment outcomes and the preventative benefits of antiretroviral therapy.

TABLE 8.3

## 90–90–90 country scorecard: Asia and the Pacific, 2019

| | First 90: percentage of people living with HIV who know their status | | | Second 90: percentage of people who know their status who are on treatment | | | Third 90: percentage of people living with HIV on treatment who are virally suppressed | | | **Viral load suppression: percentage of people living with HIV who are virally suppressed** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) |
| **Asia and the Pacific** | 75 | 78 | 73 | 80 | 82 | 78 | 91 | 93 | 91 | 55 | 59 | 52 |
| Afghanistan | 27 | 21 | 28 | 36 | 45 | 33 | | | | | | |
| Australia | 91 | 89 | 91 | 90 | 92 | 89 | 97 | 97 | 96 | 79 | 79 | 78 |
| Bangladesh | | | | | | | | | | | | |
| Bhutan | | | | | | | | | | | | |
| Brunei Darussalam | | | | | | | | | | | | |
| Cambodia | 84 | 86 | 83 | 100 | 100 | 100 | 96 | 97 | 97 | 81 | 83 | 80 |
| China | | | | | | | | | | | | |
| Cook Islands | | | | | | | | | | | | |
| Democratic People's Republic of Korea | | | | | | | | | | | | |
| Fiji | 50 | 81 | 35 | 82 | 82 | 73 | 71 | 65 | 75 | 29 | 43 | 19 |
| India | | | | | | | | | | | | |
| Indonesia | | | | | | | | | | | | |
| Japan | | | | | | | 99 | 99 | 99 | | | |
| Kiribati | | | | | | | | | | | | |
| Lao People Democratic Republic | | | | | | | | | | | | |
| Malaysia | 89 | 74 | 92 | 57 | 95 | 50 | | | | | | |
| Maldives | | | | | | | | | | | | |
| Marshall Islands | | | | | | | | | | | | |
| Micronesia (Federated States of) | | | | | | | | | | | | |
| Mongolia | 39 | 39 | 39 | 83 | 76 | 85 | 93 | 100 | 91 | 30 | 29 | 30 |
| Myanmar | | | | | | | 95 | 95 | 95 | 72 | 83 | 66 |
| Nauru | | | | | | | | | | | | |
| Nepal | 78 | 79 | 77 | 81 | 92 | 69 | 86 | 89 | 86 | 55 | 65 | 46 |
| New Zealand | | | | | | | | | | | | |

| | First 90: percentage of people living with HIV who know their status | | | Second 90: percentage of people who know their status who are on treatment | | | Third 90: percentage of people living with HIV on treatment who are virally suppressed | | | **Viral load suppression: percentage of people living with HIV who are virally suppressed** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) |
| Niue | | | | | | | | | | | | |
| Pakistan | 21 | 12 | 24 | 58 | 73 | 53 | | | | | | |
| Palau | | | | | | | | | | | | |
| Papua New Guinea | 71 | 76 | 67 | 88 | 89 | 85 | | | | | | |
| Philippines | 73 | 73 | 74 | 61 | 32 | 62 | | | | | | |
| Republic of Korea | | | | | | | | | | | | |
| Samoa | | | | 100 | 100 | 100 | 55 | 33 | 67 | | | |
| Singapore | 79 | 75 | 80 | 91 | 85 | 91 | 93 | 89 | 94 | 67 | 56 | 68 |
| Solomon Islands | | | | | | | 77 | 78 | 75 | | | |
| Sri Lanka | 51 | 50 | 51 | 100 | 100 | 100 | | | | | | |
| Thailand | | | | | | | 97 | 97 | 97 | 78 | 78 | 77 |
| Timor-Leste | | | | | | | | | | | | |
| Tonga | | | | | | | | | | | | |
| Tuvalu | | | | | | | | | | | | |
| Vanuatu | | | | | | | | | | | | |
| Viet Nam | | | | | | | 95 | 95 | 95 | 66 | 74 | 62 |

**Legend for 90–90–90**

- 95% and above
- 90–94%
- 85–89%
- 70–84%
- 50–69%
- Less than 50%

**Legend for viral load suppression**

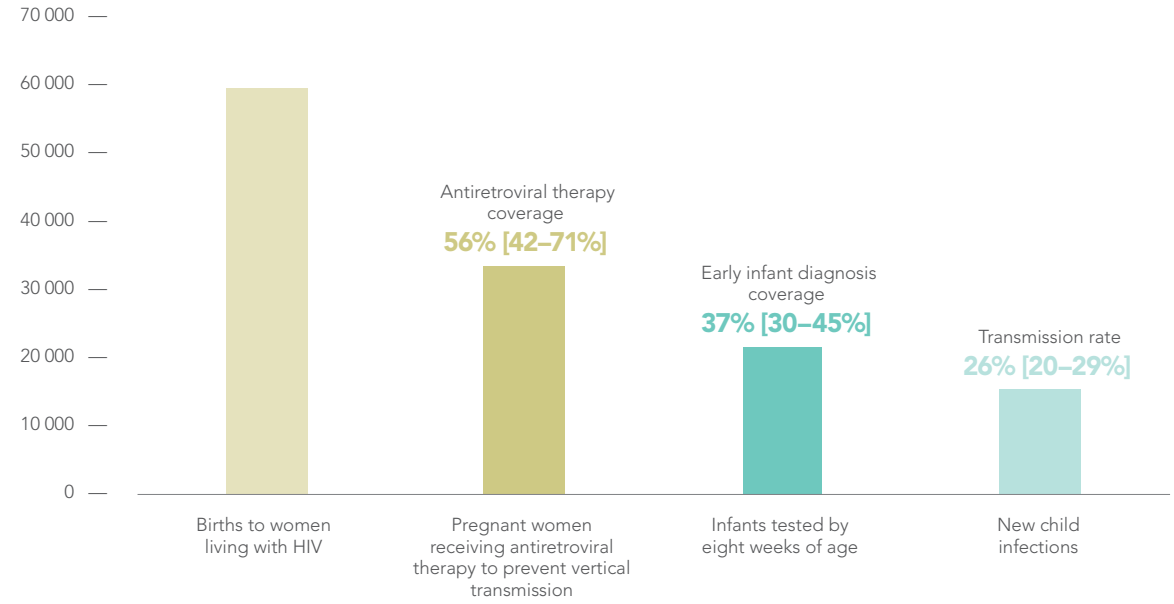
- 86% and above
- 73–86%
- 65–72%
- 40–64%
- 25–39%
- Less than 25%

Source: UNAIDS special analysis, 2020 (see methods annex).
Note: Estimates for 2019 except: Australia, Singapore and the Solomon Islands (2018); and Japan (2015).

## People-centred services

FIGURE 8.11

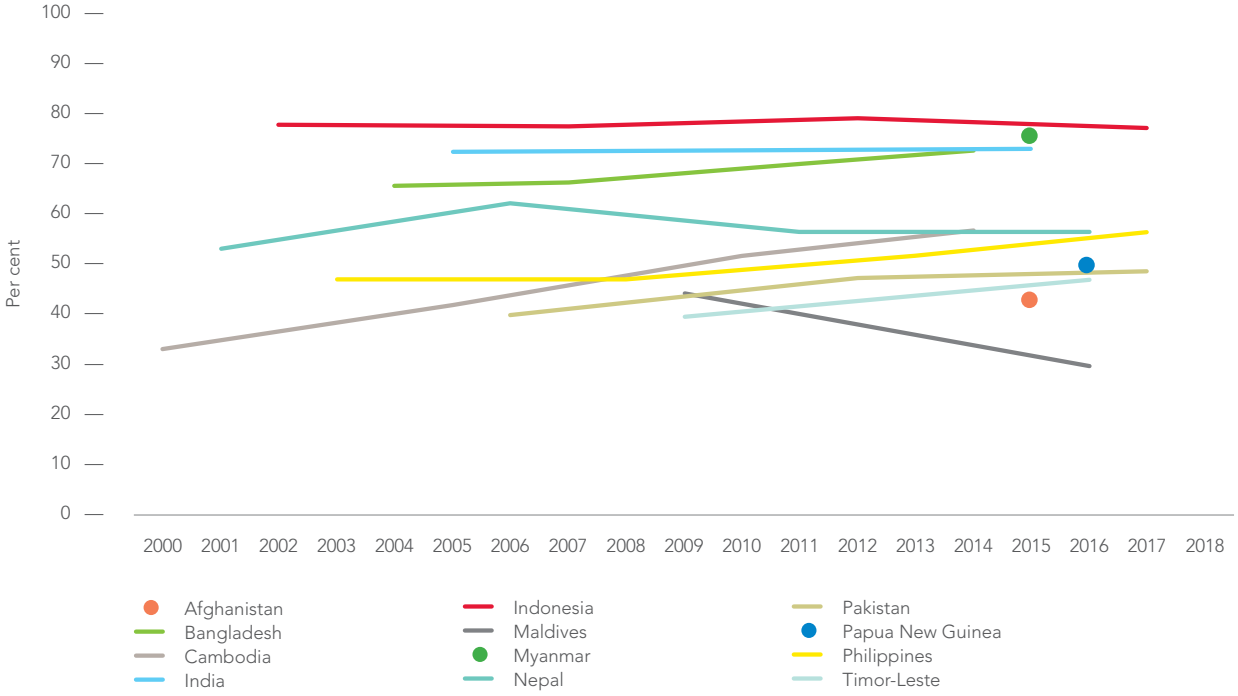
**Services for pregnant women living with HIV, early infant diagnosis, number of new vertical infections and transmission rate, Asia and the Pacific, 2019**




Source: UNAIDS epidemiological estimates 2020 and Global AIDS Monitoring 2020 (see https://aidsinfo.unaids.org/).

FIGURE 8.12

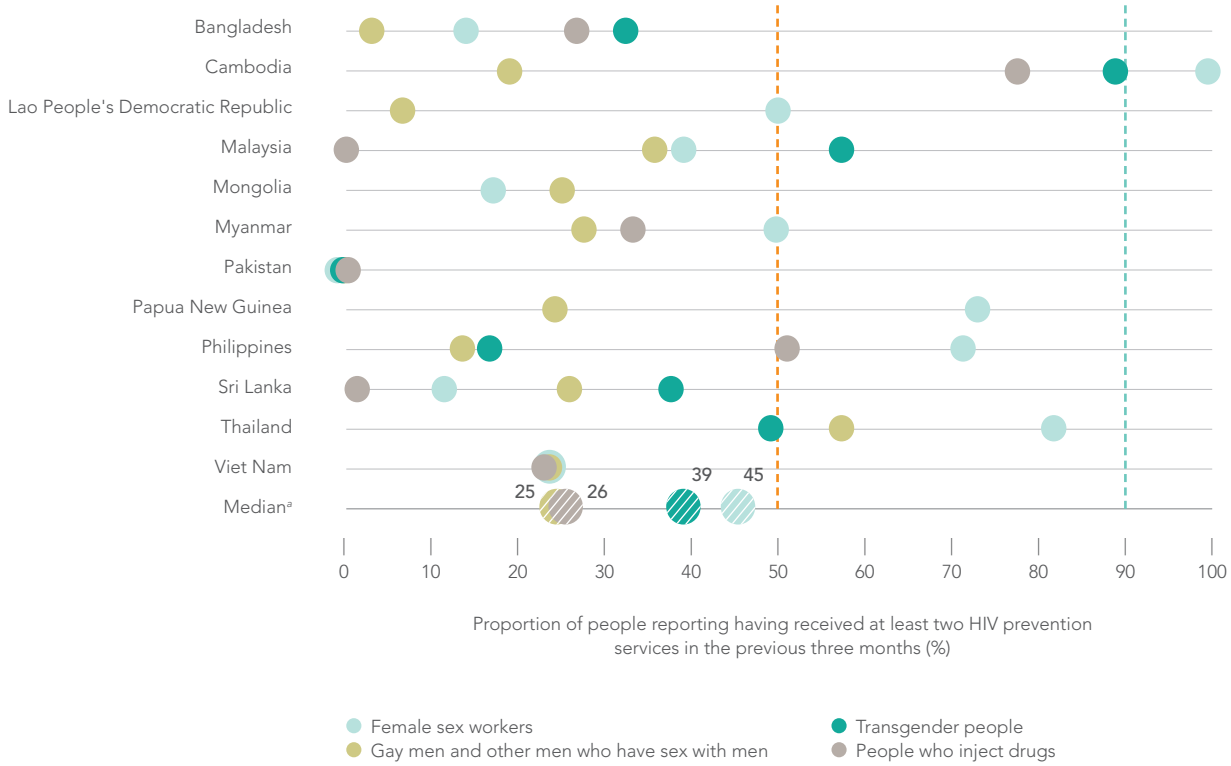
**Women aged 15 to 49 years who have their demand for family planning satisfied by modern methods, countries with available data, Asia and the Pacific, 2000–2018**




Source: Population-based surveys, 2000–2018.
Note: Data for Afghanistan (2015), Bangladesh (2014) and Pakistan (2017–2018) are only for currently married women.

FIGURE 8.13

**Prevention intervention coverage among key populations, select countries, Asia and the Pacific, 2016–2019**

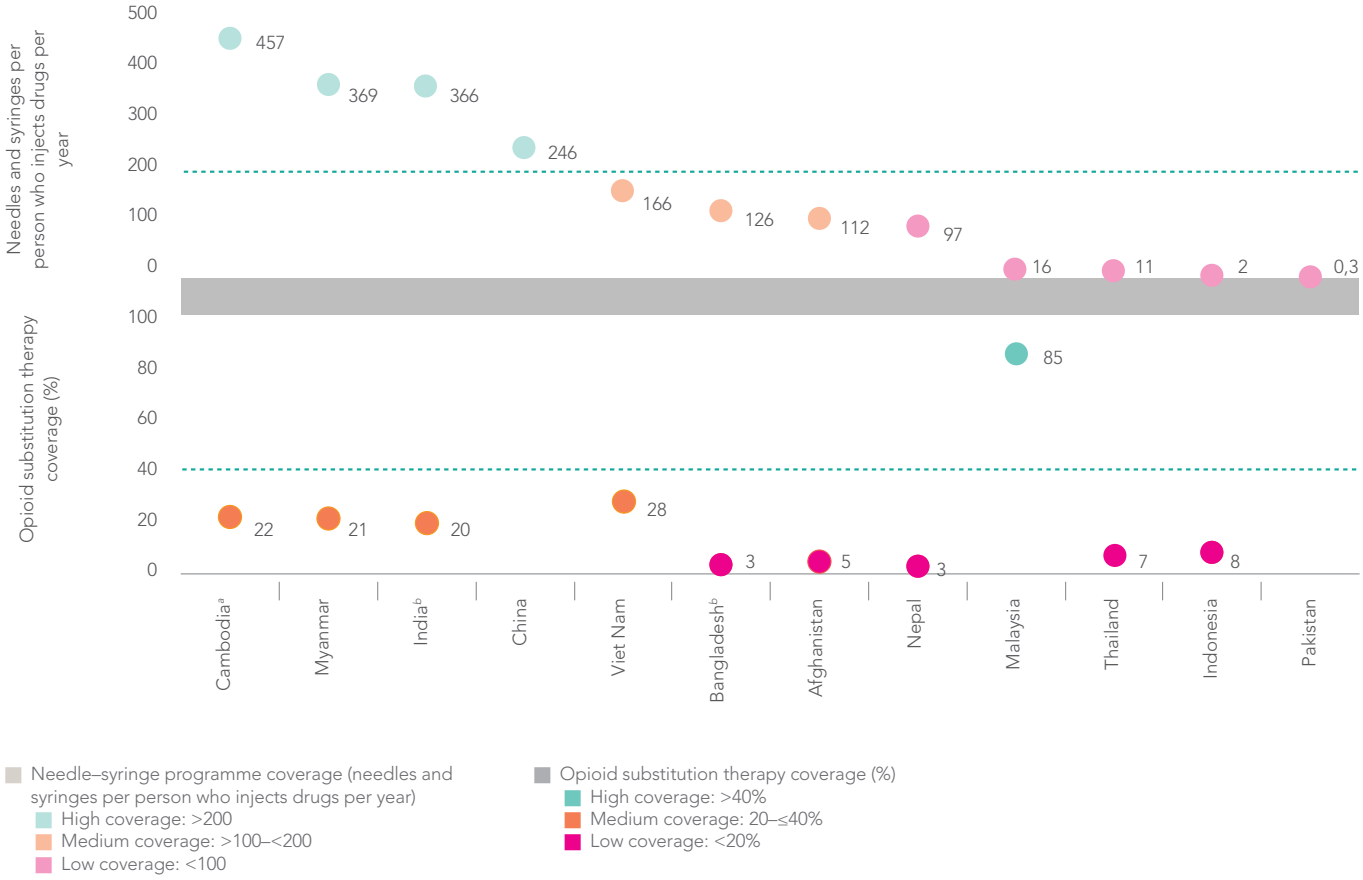



a Calculated based on 12 reporting countries for female sex workers and gay men and other men who have sex with men, seven reporting countries for transgender people, and eight reporting countries for people who inject drugs.
Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).
Note: Prevention coverage is measured as the percentage of people in a key population who report having received a combined set of HIV prevention interventions in the past three months (at least two out of three services: 1) given condoms and lubricants; 2) received counselling on condom use and safe sex; 3) tested for STIs for transgender people, sex workers and gay men and other men who have sex with men, or received sterile needles or syringes for people who inject drugs).

Only one quarter of gay men and other men who have sex with men and people who inject drugs in the region—and less than half of transgender people and female sex workers—receive the HIV prevention services they need. These regional averages obscure variations in coverage across Asia and the Pacific.

FIGURE 8.14

**Coverage of needle–syringe programmes and opioid substitution therapy among people who inject drugs, reporting countries, Asia and the Pacific, 2019**

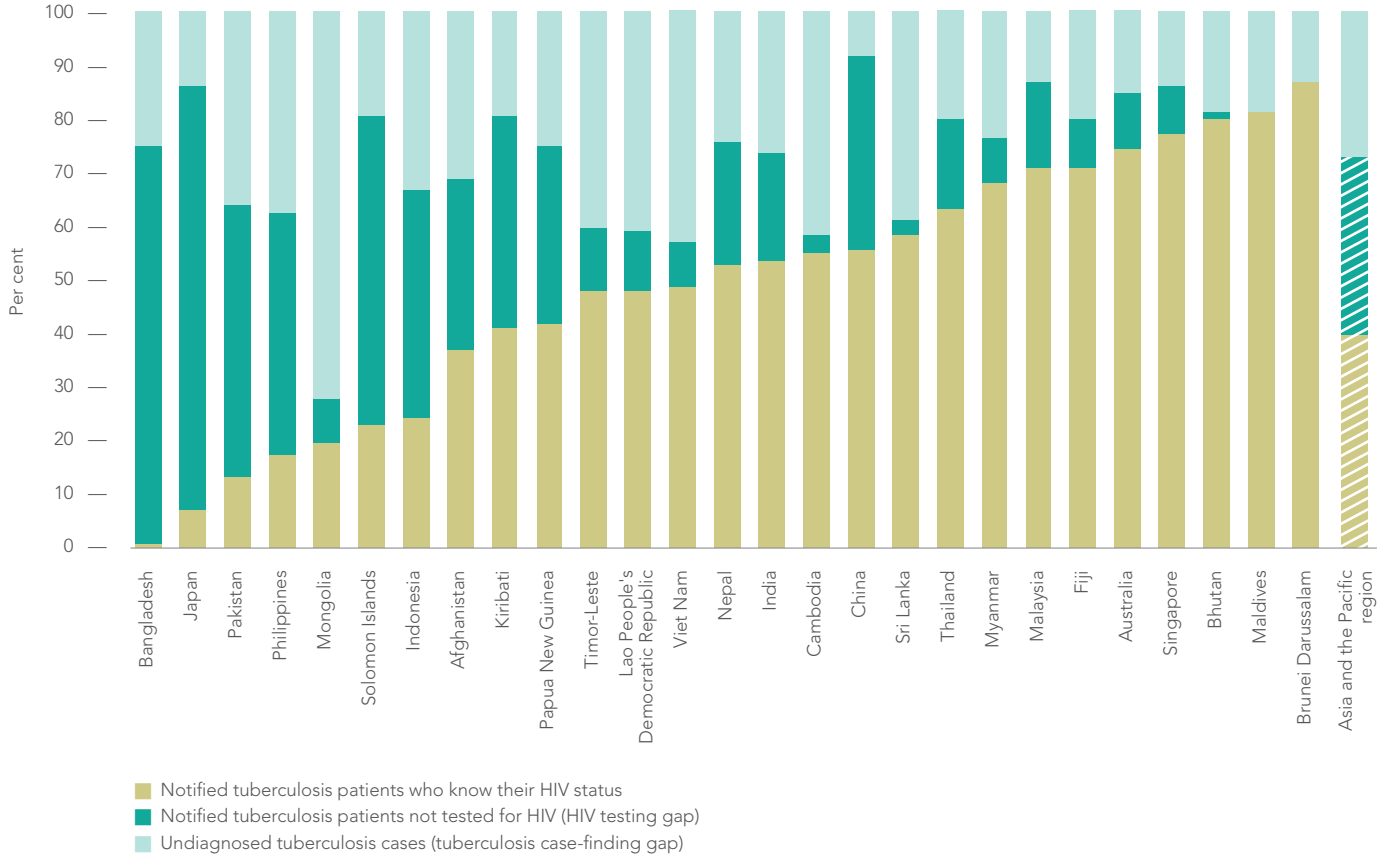



*a* Data are from 2016 data for opioid substitution therapy and 2018 for needle–syringe programme coverage.
*b* Data are from 2018.
Source: UNAIDS Global AIDS Monitoring, 2016–2020 (see https://aidsinfo.unaids.org/).

High coverage of both needle–syringes programmes (>200 needles and syringes per person who injects drugs per year) and moderate coverage of opioid substitution therapy services (between 20% and 40% of people who inject drugs) have been reported in Cambodia, India and Myanmar. Needle–syringe programme coverage is low in Indonesia, Malaysia, Pakistan and Thailand, and opioid substitution therapy services are either not available or the coverage is 10% or lower in Afghanistan, Bangladesh, Indonesia, Nepal, Pakistan and Thailand.

FIGURE 8.15

**Service gap to tuberculosis case-finding and HIV testing**



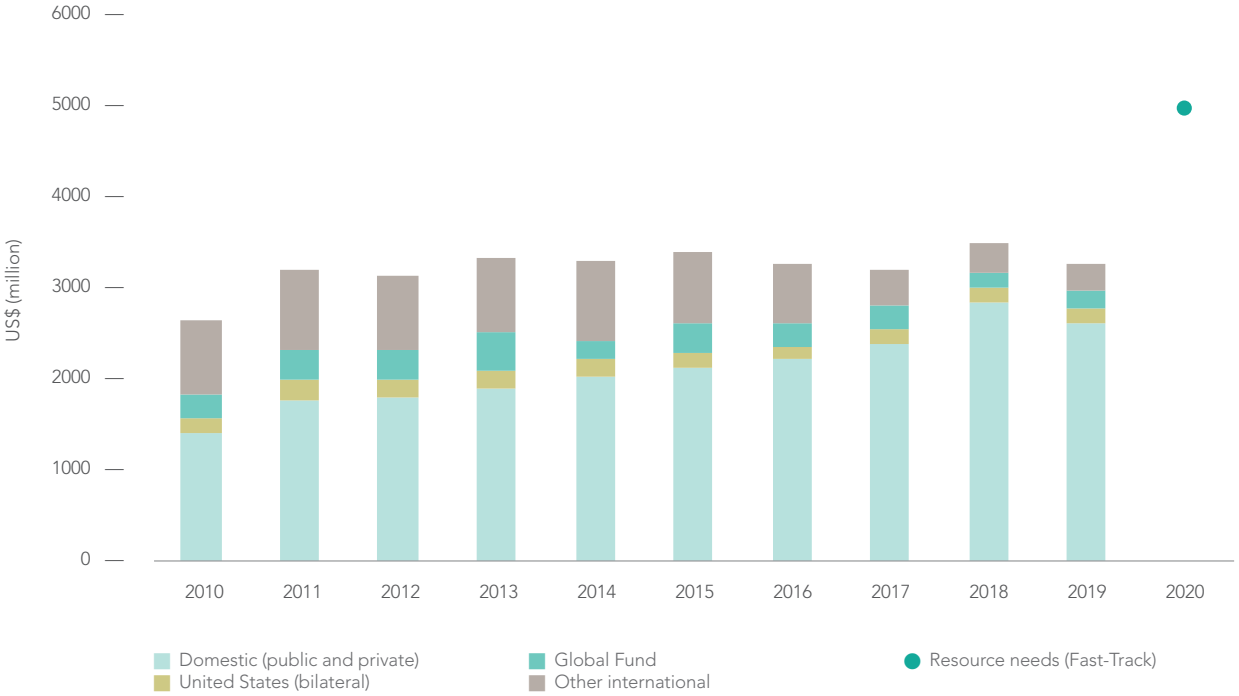

Source: Global tuberculosis report, 2019. Geneva: WHO; 2019.

Tuberculosis is one of the top 10 causes of death worldwide, and it is the leading cause of death among people living with HIV. Almost half (46%) of diagnosed tuberculosis patients in Asia and the Pacific do not know their HIV status, and about one in four estimated tuberculosis cases in the region are undiagnosed.

## Investing to end AIDS

FIGURE 8.16

**Resource availability for HIV by source, 2010–2019, and estimated Fast-Track resource needs in 2020, Asia and the Pacific**




Source: UNAIDS financial estimates, 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).

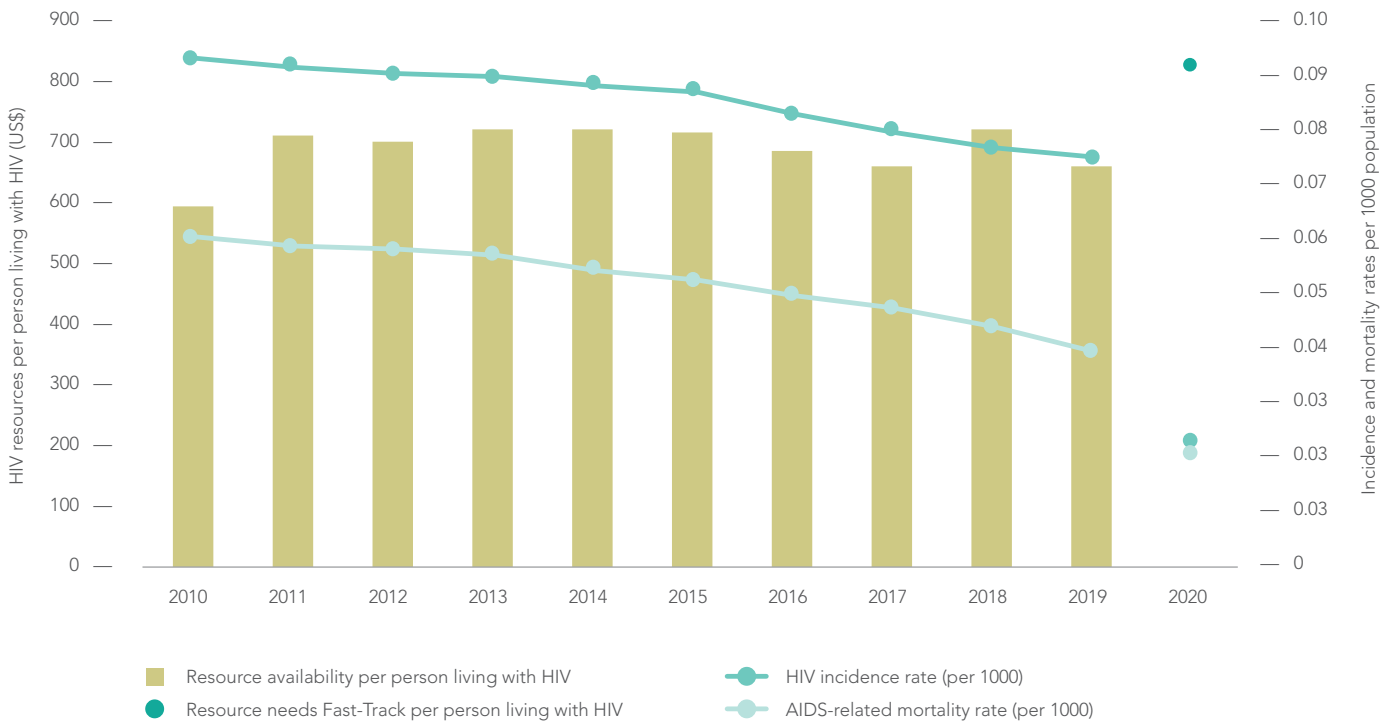
Recent overall trends in funding for HIV responses in Asia and the Pacific (measured in constant 2016 US dollars to account for inflation) largely reflect trends in domestic funding, which accounted for 81% of the total spending on HIV in the region in 2019. United States Government bilateral contributions and those from the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) accounted for 5% and 6%, respectively, of total resource availability in the region in 2019. Other international sources accounted for 9%.

HIV resource availability from domestic sources increased by 87% between 2010 and 2019. By contrast, all international sources of HIV funding declined by 63% over the same period, including a 14% fall in United States Government bilateral funding, a 28% decline in Global Fund contributions and a 28% decline in funding from other international sources. These declines mostly affect HIV prevention services for key populations, which are heavily dependent on international funding, while domestic resources often prioritize funding for HIV treatment and care. The overall HIV funding in the region is 66% of its 2020 target.

The Global Fund was the only rising source of funds between 2018 and 2019, with a 10% increase in disbursements that followed a 31% decrease the previous year—fluctuations that are due to grant management cycles.

FIGURE 8.17

**Total HIV resource availability per person living with HIV, HIV incidence and AIDS-related mortality rates in low- and middle-income countries in Asia and the Pacific, 2010–2019 and 2020 target**




Source: UNAIDS financial estimates, 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).
Note: resource availability is in constant 2016 US dollars

# LATIN AMERICA

## DATA POINTS

NEW HIV INFECTIONS IN THE REGION HAVE

**INCREASED BY 21%**

SINCE 2010

AIDS-RELATED DEATHS IN THE REGION HAVE

**DECREASED BY 8%**

SINCE 2010

GAY MEN AND OTHER MEN WHO HAVE SEX WITH MEN ACCOUNT FOR 44%

OF NEW HIV INFECTIONS IN THE REGION

**77% OF PEOPLE**

LIVING WITH HIV IN THE REGION KNOW THEIR HIV STATUS, AND 60% ARE ON TREATMENT

**IN 4 OF 5 COUNTRIES**

WITH RECENT DATA, MORE THAN ONE THIRD OF ADULTS EXPRESS DISCRIMINATORY ATTITUDES TOWARDS PEOPLE LIVING WITH HIV

**6% OF NEW INFECTIONS**

IN THE REGION ARE AMONG TRANSGENDER PEOPLE

Gains have been made against the humanitarian crises in Latin America, but high levels of migration are stressing health care and education systems as well as labour markets. Marginalization of key populations, competing public health priorities and limited government investment in health systems has largely stalled progress against HIV. New infections have climbed in recent years.

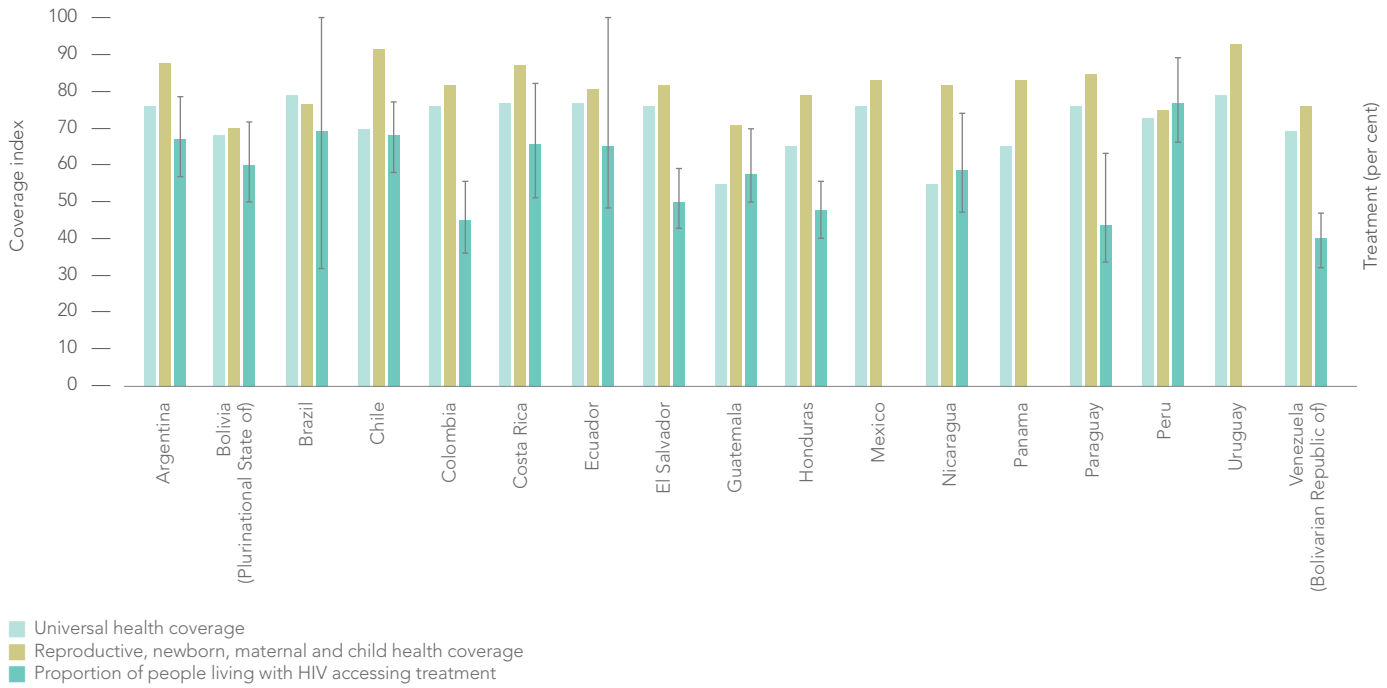
HIV-affected populations in the region continue to experience high levels of stigma and discrimination and violence, preventing many from seeking and accessing services. Nearly a quarter of people living with HIV do not know their HIV status, and 40% are not accessing antiretroviral therapy.

Sustained progress has been made in HIV testing and antiretroviral therapy coverage among pregnant women in the region, leading to a reduction in the rate of mother-to-child HIV transmission, which declined from 20% [12–24%] in 2010 to 15% [12–18%] in 2019. Progress varies between countries, with several approaching the goal of eliminating mother-to-child HIV transmission.

Brazil is the only country in the region that provides pre-exposure prophylaxis (PrEP) through the public health system. However, PrEP is also available through private clinics, the Internet, nongovernmental organizations and pilot studies in Chile, Colombia, Costa Rica, Ecuador, Guatemala, Haiti, Mexico, Panama, Paraguay, Peru and Uruguay. The overall number of people on PrEP across the region remains insufficient to have a significant impact on the epidemic. HIV self-testing and the transition to dolutegravir-based first-line treatment regimens are moving forward in countries in the region.

FIGURE 9.1

**Antiretroviral therapy coverage among people living with HIV and universal health care coverage, Latin America, 2019**



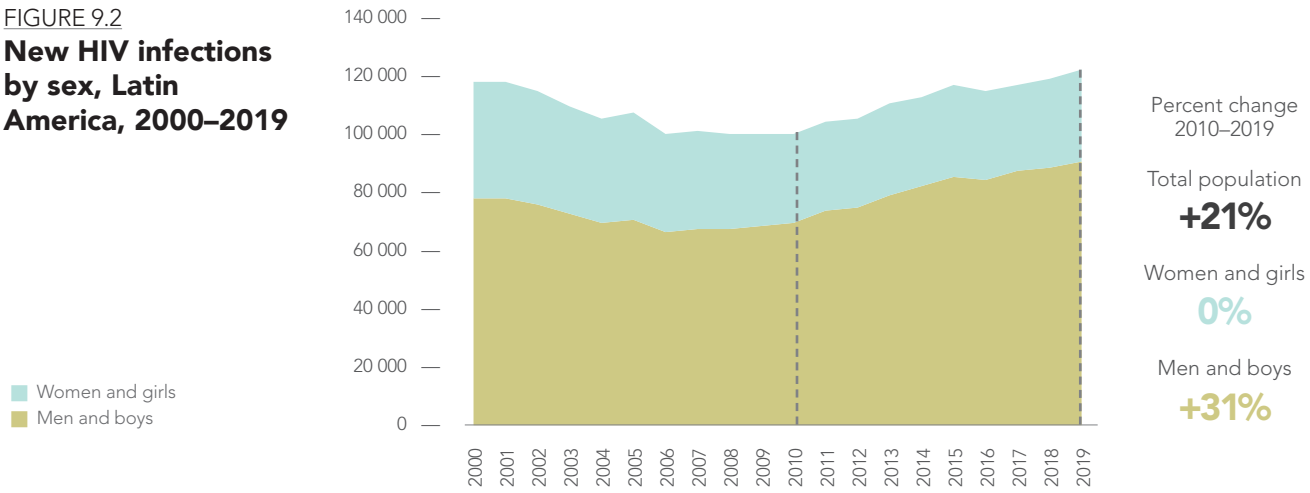

Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); Global Health Observatory [database]. Geneva: WHO; c2020 (https://www.who.int/data/gho/data/major-themes/universal-health-coverage-major).

Coverage of universal access to health care is higher than antiretroviral therapy coverage in at least 11 countries within Latin America, suggesting obstacles to accessing HIV-related services relative to other health services among people living with HIV. Recent Stigma Index studies show that 21% of people living with HIV in Peru and 2% in Brazil report having been denied health services due to their HIV status. In Guatemala, 6% of women living with HIV and 3% of men living with HIV said they had been denied health services. In Panama, 11% of transgender women living with HIV reported being denied health services, compared to 4% of women living with HIV and 2% of men living with HIV.

## State of the epidemic

FIGURE 9.2

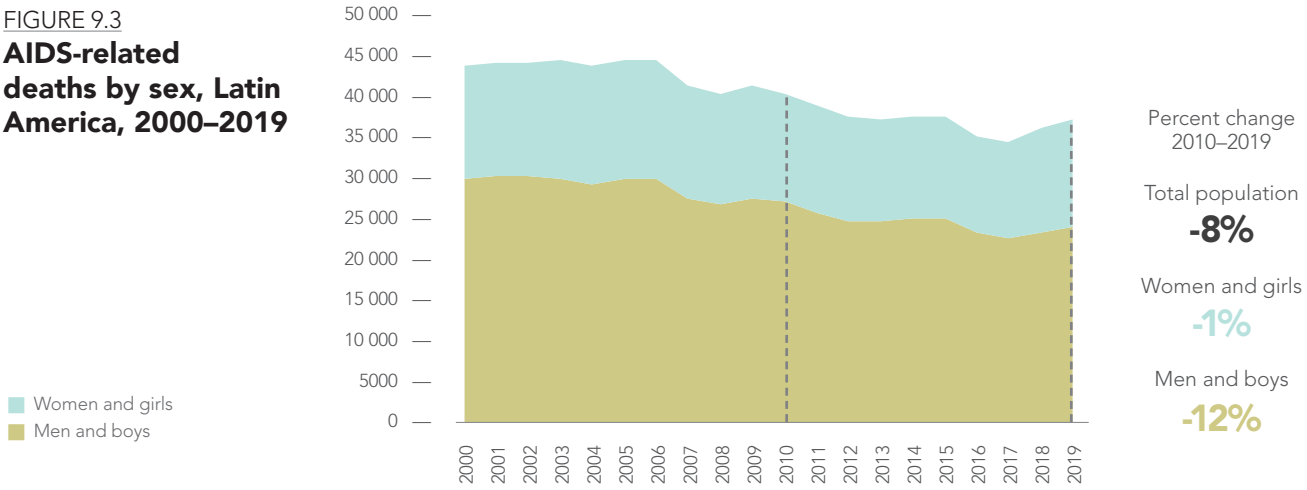
### New HIV infections by sex, Latin America, 2000–2019




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 9.3

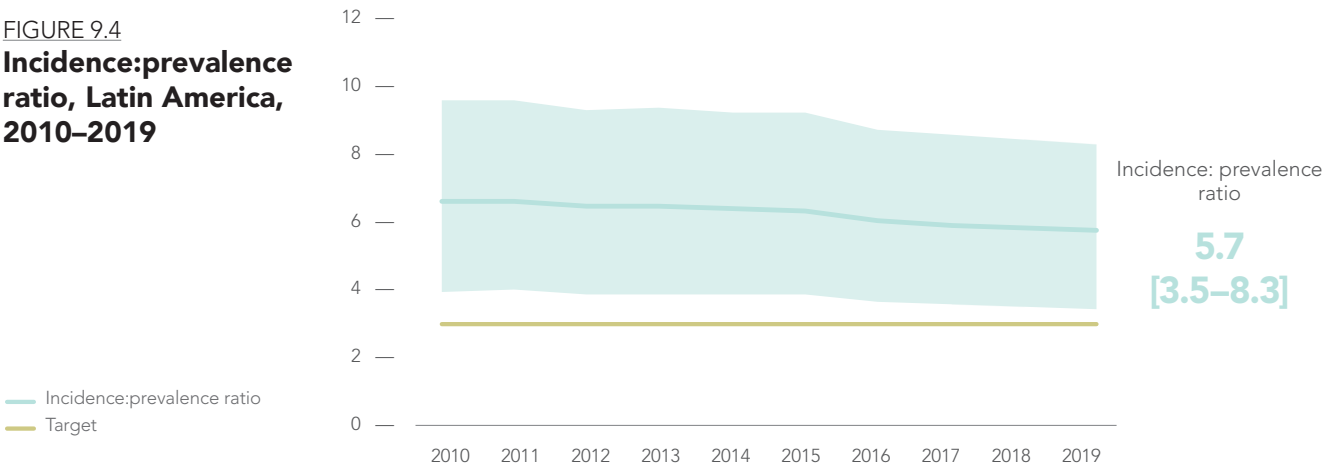
### AIDS-related deaths by sex, Latin America, 2000–2019




Source: UNAIDS epidemiological estimates estimates, (see https://aidsinfo.unaids.org/).

FIGURE 9.4

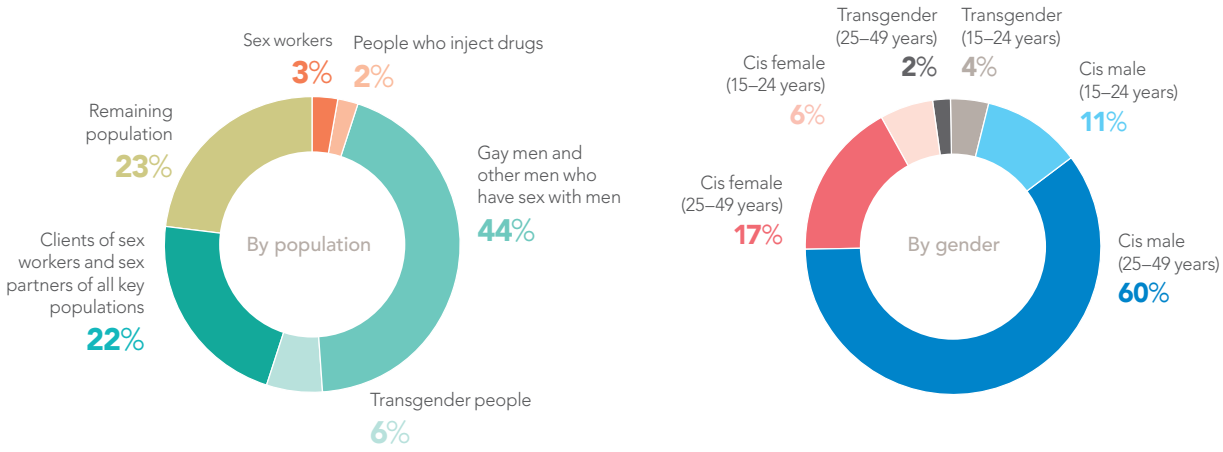
### Incidence:prevalence ratio, Latin America, 2010–2019




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 9.5

## Distribution of new HIV infections by population (aged 15–49 years), Latin America, 2019




Source: UNAIDS special analysis, 2020 (see methods annex).

FIGURE 9.6

## HIV prevalence among key populations, Latin America, 2015–2019


Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).
Note: (n = number of countries reporting)

TABLE 9.1

## Estimated size of key populations, Latin America, 2018–2019

| | National adult population (15+), 2018 | National adult population (15+), 2019 | Sex workers | Sex workers as percentage of adult population (15+) | Gay men and other men who have sex with men | Gay men and other men who have sex with men as percentage of adult population (15+) | People who inject drugs | People who inject drugs as percentage of adult population (15+) | Transgender people | Transgender people as percentage of adult population (15+) | Prisoners | Prisoners as percentage of adult population (15+) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bolivia (Plurinational State of) | 7 700 000 | 7 900 000 | | | | | | | | | | |
| Brazil | 164 200 000 | 166 500 000 | | | | | | | | | 760 000 | 0.46% |
| Chile | 15 400 000 | 15 600 000 | | | | | | | | | 42 000 | 0.27% |
| Colombia | 38 500 000 | 39 200 000 | | | | | | | | | 120 000 | 0.32% |
| Costa Rica | 3 850 000 | 3 950 000 | | | | | | | | | 100 | 0.00% |
| Mexico | 96 800 000 | 99 000 000 | 240 000 | 0.25% | 1 200 000 | 1.23% | | | 120 000 | 0.12% | 200 000 | 0.20% |
| Panama | 2 970 000 | 3 060 000 | | | | | | | | | | |
| Paraguay | 4 900 000 | 4 900 000 | 9100 | 0.19% | 30 000 | 0.60% | | | | | | |
| Peru | 23 700 000 | 24 000 000 | | | | | | | | | | |
| Uruguay | 2 770 000 | 2 780 000 | 6900 | 0.25% | | | | | 1600 | 0.06% | | |
| Venezuela (Bolivarian Republic of) | 20 000 000 | 20 100 000 | | | | | | | 15 000 | 0.07% | | |

- National population size estimate
- Local population size estimate
- Insufficient data
- No data

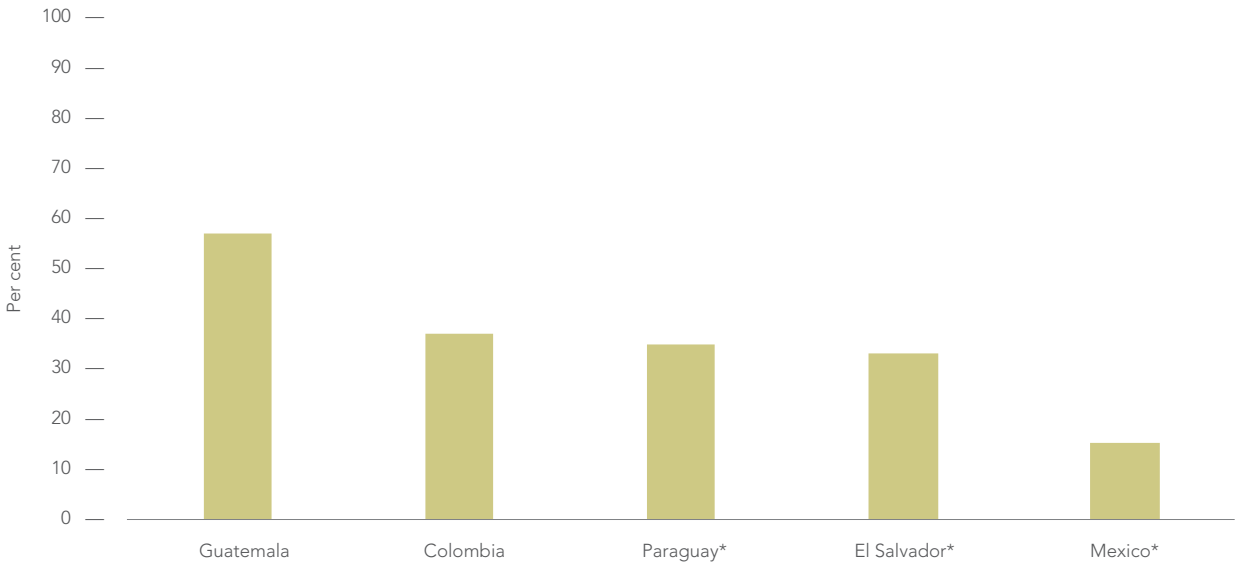
Sources: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/); Spectrum Demproj module, 2020.
Note 1: Estimates shown are government-provided estimates reported in 2018–2019. Additional and alternative estimates may be available from different sources, including the Key Populations Atlas (https://kpatlas.unaids.org/), academic publications or institutional documents.
Note 2: The regions covered by the local population size estimates are as follows:

| | |
|---|---|
| Colombia | Bogotá, Cali and Medellín |
| Costa Rica | Gran Área Metropolitana |
| Panama | Azuero, Bocas del Toro, Chiriquí, Coclé, Comarca Ngäbe-Buglé, Panamá Centro, Panamá Este, Panamá Norte, Panamá Oeste and Veraguas |

## Stigma and discrimination and violence

FIGURE 9.7

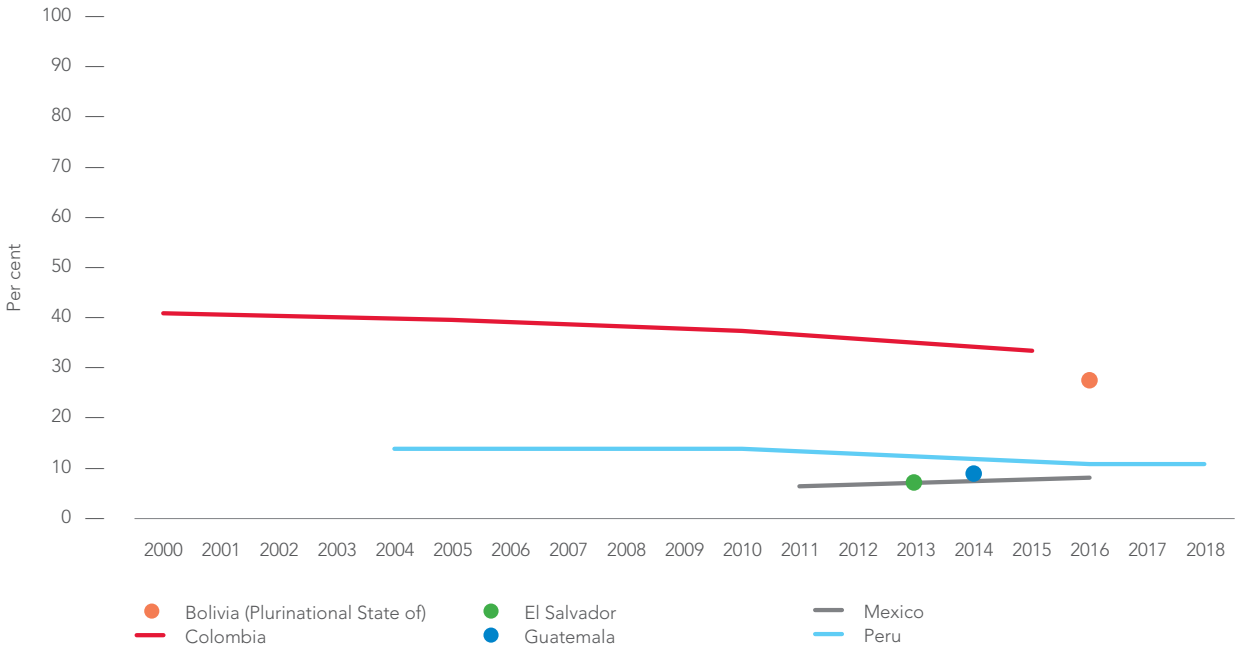
**Percentage of people aged 15 to 49 years who would not purchase vegetables from a shopkeeper living with HIV, Latin America, 2014–2016**




*Data are for women only.
Source: Population-based surveys, 2014–2016.

FIGURE 9.8

**Ever-married or partnered women aged 15 to 49 years who experienced physical and/or sexual violence by an intimate partner in the past 12 months, countries with available data, Latin America, 2000–2018**




Source: Population-based surveys, 2000–2018.

## Laws and policies

TABLE 9.2

### Laws and policies scorecard, Latin America, 2019

| | Criminalization of transgender people | Criminalization of sex work | Criminalization of same-sex sexual acts | Drug use or possession for personal use an offence | Parental consent for adolescents to access HIV testing | Spousal consent for married women to access sexual and reproductive health services |
|---|---|---|---|---|---|---|
| Argentina | a | a | a | a | a | a |
| Bolivia (Plurinational State of) | a | a | a | a | a | a |
| Brazil | a | a | a | a | n | a |
| Chile | a | a | f | a | a | a |
| Colombia | a | a | a | h | a | a |
| Costa Rica | a | a | a | a | a | a |
| Ecuador | a | a | a | i | a | a |
| El Salvador | a | b | a | a | a | a |
| Guatemala | a | c | a | a | a | a |
| Honduras | a | a | a | a | a | a |
| Mexico | a | a | a | j | a | a |
| Nicaragua | a | d | a | a | a | a |
| Panama | a | a | a | k | a | a |
| Paraguay | a | a | a | a | a | a |
| Peru | | | g | l | a | a |
| Uruguay | a | a | a | m | a | a |
| Venezuela (Bolivarian Republic of) | a | e | g | a | a | a |

Criminalized and/or prosecuted
Neither criminalized nor prosecuted
Data not available

Any criminalization or punitive regulation of sex work
Sex work is not subject to punitive regulations or is not criminalized
Issue is determined/differs at the subnational level
Data not available

Death penalty
Imprisonment or no penalty specified
Data not available

Compulsory detention for drug offences
Data not available

Yes, for adolescents younger than 18
Yes, for adolescents younger than 14 or 16
Yes, for adolescents younger than 12
No
Data not available

Yes
No
Data not available

Laws penalizing same-sex sexual acts have been decriminalized or never existed, or no specific legislation

Possession of drugs for personal use or drug use or consumption are specified as a criminal offence

Possession of drugs for personal use or drug use or consumption are not punished by laws or regulations

Possession of drugs for personal use or drug use or consumption is specified as a non-criminal offence

| Laws criminalizing the transmission of, non-disclosure of or exposure to HIV | Laws or policies restricting the entry, stay and residence of people living with HIV (s) | Mandatory HIV testing for marriage, work or residence permits or for certain groups |
|---|---|---|
| a | | a |
| a | | a |
| a | | a |
| a | | a |
| a | | a |
| a | | a |
| o | | a |
| p | | a |
| a | | a |
| q | | a |
| a | | a |
| r | | a |
| a | | a |
| a | | a |
| a | | a |
| a | | a |
| a | | a |


Sources:
a. UNAIDS National Commitments and Policy Instrument, 2019 (see http://lawsandpolicies.unaids.org/).
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c. Guatemala. Codigo Penal Decreto 9-2009. Articulo 39 (https://www.refworld.org/pdfid/4a03e3d22.pdf).
d. Nicaragua. Ley 641. Articulo 178 (https://www.poderjudicial.gob.ni/pjupload/noticia_reciente/CP_641.pdf).
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l. Peru. Decreto Legislativo N°635 Código Penal. Décimo segundo edición official. Article 299. Lima: Ministerio de Justicia y Derechos Humanos; 2016 (http://spij.minjus.gob.pe/content/publicaciones_oficiales/img/CODIGOPENAL.pdf).
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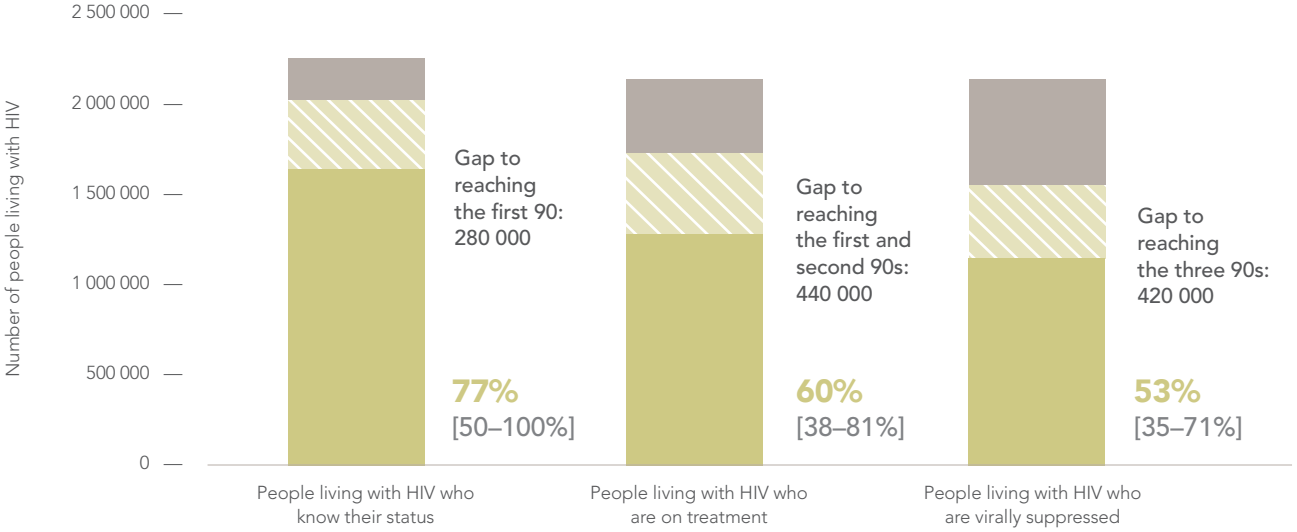
## HIV testing and treatment

FIGURE 9.9

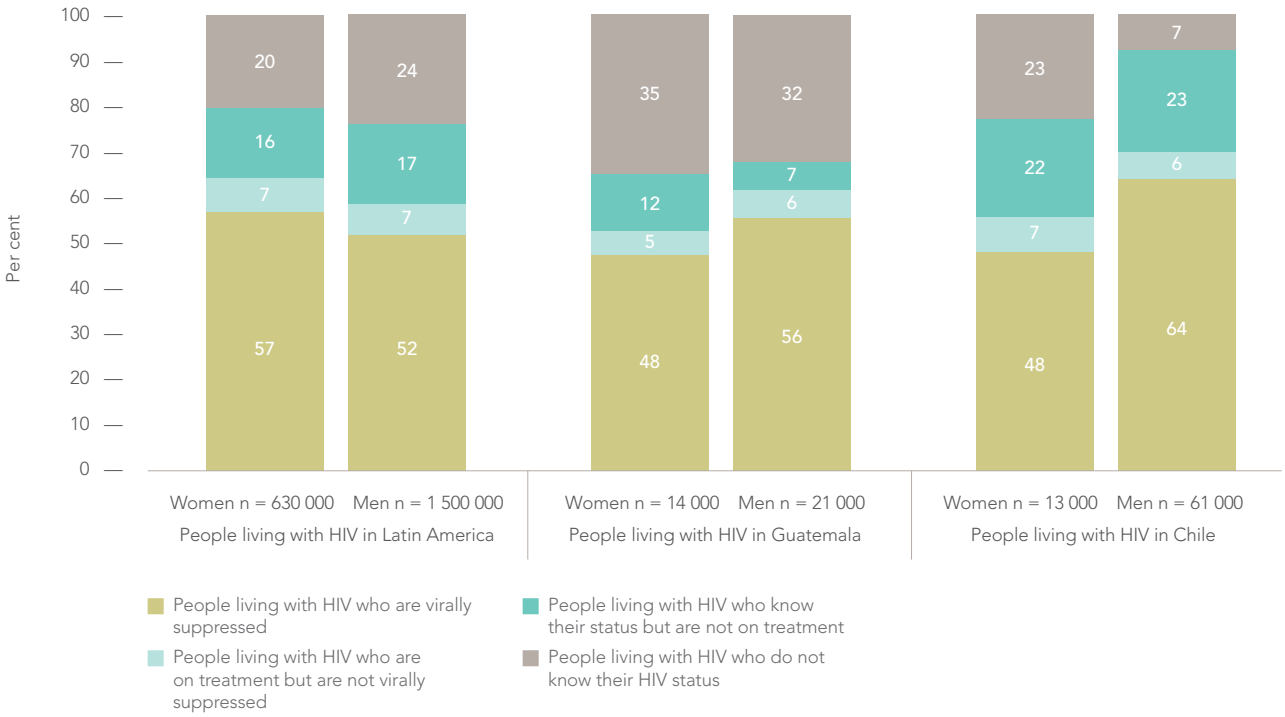
### HIV testing and treatment cascade, Latin America, 2019




Source: UNAIDS special analysis, 2020 (see methods annex).

FIGURE 9.10

### Estimates of gaps in knowledge of status, HIV treatment and viral suppression among people living with HIV, by sex, Latin America, 2019




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).

Knowledge of status, treatment coverage and viral suppression in Latin America are higher among women living with HIV than among men living with HIV. Notable exceptions are Chile and Guatemala.

TABLE 9.3

## 90–90–90 country scorecard: Latin America, 2019

| | First 90: percentage of people living with HIV who know their status | | | Second 90: percentage of people who know their status who are on treatment | | | Third 90: percentage of people living with HIV on treatment who are virally suppressed | | | **Viral load suppression: percentage of people living with HIV who are virally suppressed** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) |
| **Latin America** | 77 | 80 | 76 | 78 | 80 | 77 | 88 | 89 | 88 | 53 | 57 | 52 |
| Argentina | | | | | | | | | | | | |
| Bolivia (Plurinational State of) | | | | | | | 76 | 70 | 78 | 46 | 44 | 46 |
| Brazil | 88 | | | 78 | | | 94 | | | 65 | | |
| Chile | 90 | 77 | 93 | 75 | 72 | 75 | 91 | 87 | 92 | 62 | 48 | 64 |
| Colombia | 60 | 53 | 64 | 75 | 81 | 73 | | | | | | |
| Costa Rica | | | | | | | | | | | | |
| Ecuador | 80 | 85 | 78 | 82 | 81 | 82 | 75 | 79 | 73 | 49 | 54 | 47 |
| El Salvador | 72 | 72 | 72 | 69 | 68 | 70 | | | | | | |
| Guatemala | 68 | 65 | 68 | 86 | 81 | 90 | 90 | 90 | 90 | 52 | 48 | 56 |
| Honduras | 58 | 67 | 51 | 84 | 85 | 83 | 87 | 86 | 88 | 42 | 49 | 38 |
| Mexico | | | | | | | 89 | 89 | 90 | | | |
| Nicaragua | 92 | 91 | 93 | 64 | 63 | 64 | | | | | | |
| Panama | | | | | | | | | | | | |
| Paraguay | | | | | | | | | | | | |
| Peru | 70 | 70 | 71 | 87 | 97 | 85 | | | | | | |
| Uruguay | | | | | | | 81 | 90 | 75 | | | |
| Venezuela (Bolivarian Republic of) | 62 | 49 | 73 | 64 | 53 | 69 | | | | | | |

**Legend for 90–90–90**

- 95% and above
- 90–94%
- 85–89%
- 70–84%
- 50–69%
- Less than 50%

**Legend for viral load suppression**

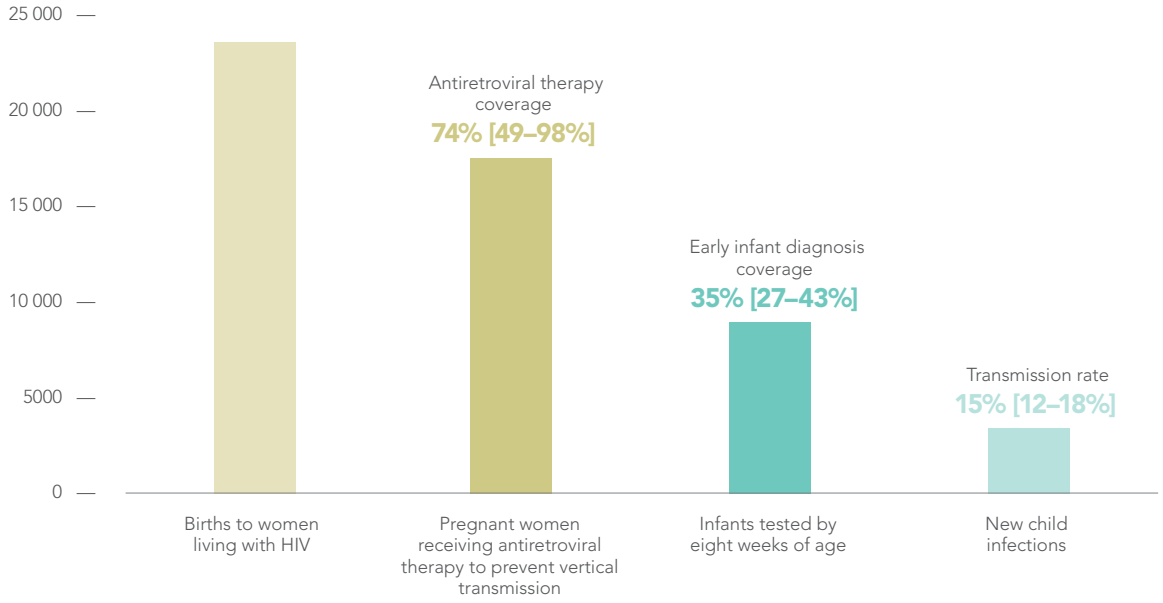
- 86% and above
- 73–82%
- 65–72%
- 40–64%
- 25–39%
- Less than 25%

Source: UNAIDS special analysis, 2020 (see methods annex).
Note: Estimates for 2019 except: Peru and Uruguay (2017).

## People-centred services

FIGURE 9.11

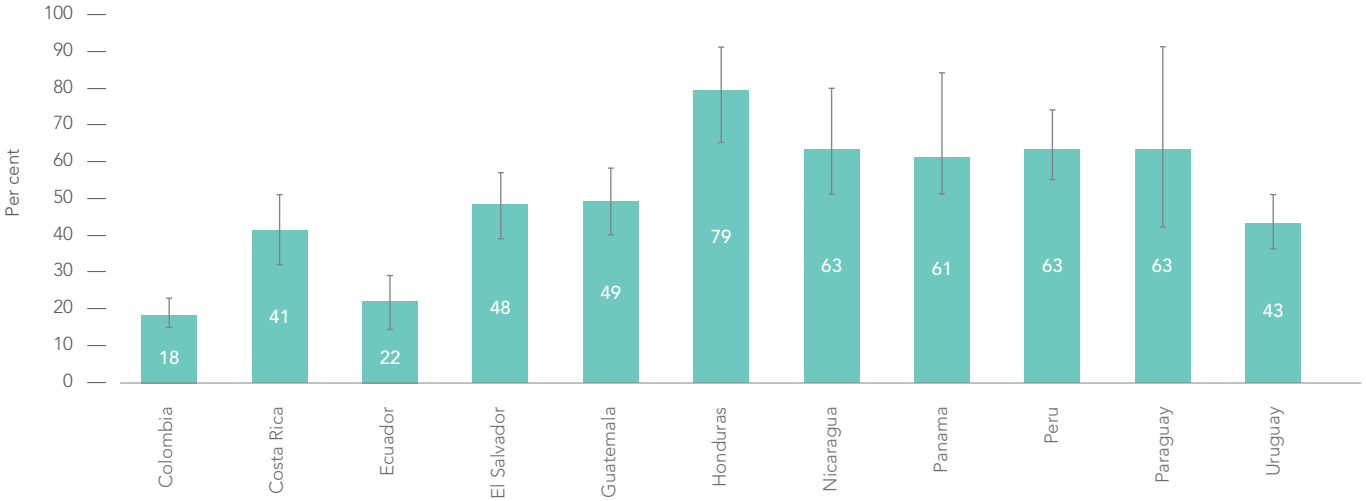
**Services for pregnant women living with HIV, early infant diagnosis, number of new vertical infections and transmission rate, Latin America, 2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 9.12

**Percentage of infants born to pregnant women living with HIV who received an HIV test within two months of birth, Latin America, 2019**

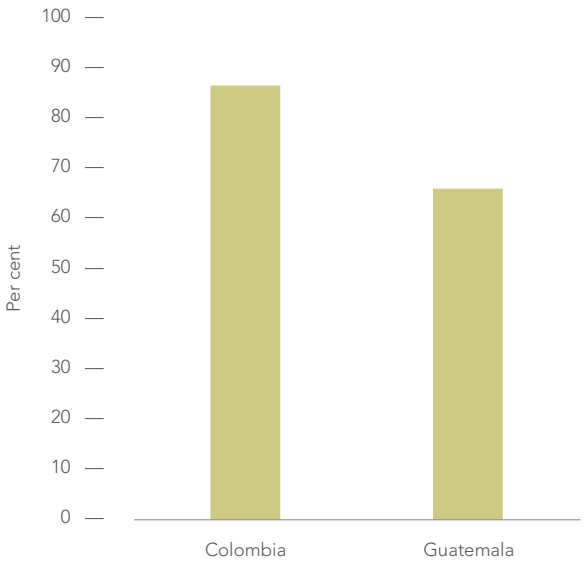



Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); Global Health Observatory [database]. Geneva: WHO; c2020 (https://www.who.int/data/gho/data/major-themes/universal-health-coverage-major).

Swift testing of infants exposed to HIV and an immediate start of antiretroviral therapy upon diagnosis are the first steps to ensuring the survival of children who have acquired HIV. Coverage of virological testing for early infant diagnosis in Latin America varies from 79% in Honduras to 18% in Colombia.

FIGURE 9.13

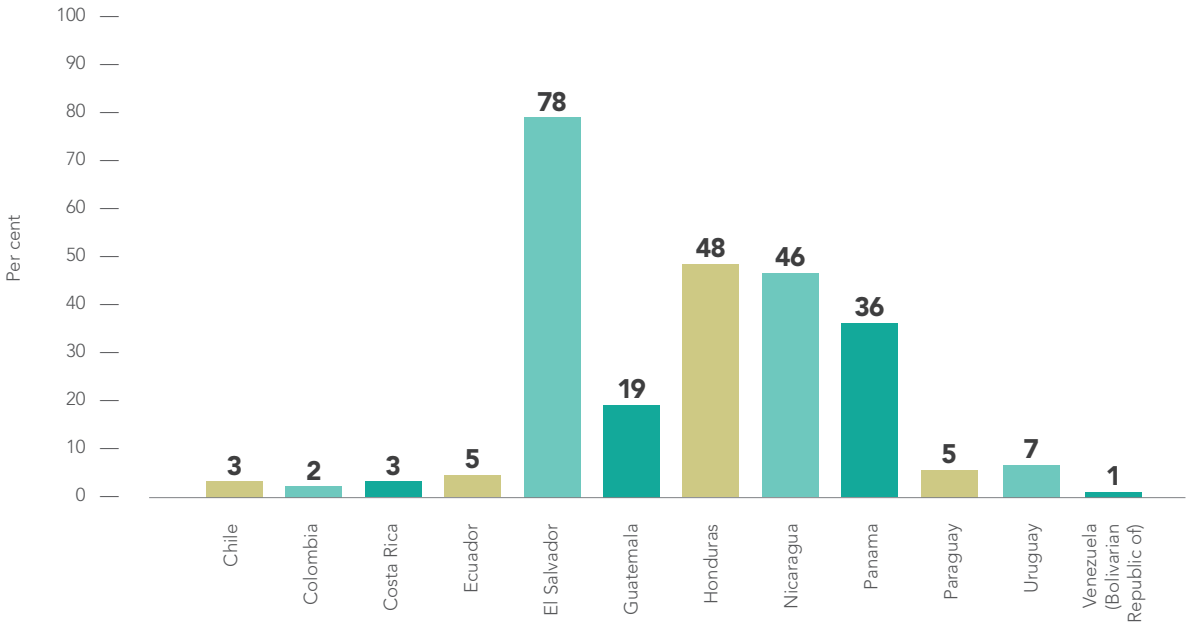
**Women aged 15 to 49 years who have their demand for family planning satisfied by modern methods, countries with available data, Latin America, 2014–2015**




Source: Population-based surveys, 2014–2015.

FIGURE 9.14

**Proportion of people living with HIV who started preventative treatment for tuberculosis infection, Latin America, 2019**




Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).

Tuberculosis is the most common cause of premature death among people living with HIV globally. Despite this heighted risk, large gaps in preventive treatment for tuberculosis infection for people living with HIV exist in many countries of the region.

## Investing to end AIDS

FIGURE 9.15

**Resource availability for HIV by source, 2010–2019, and estimated Fast-Track resource needs in 2020, Latin America**


Source: UNAIDS financial estimates, 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).

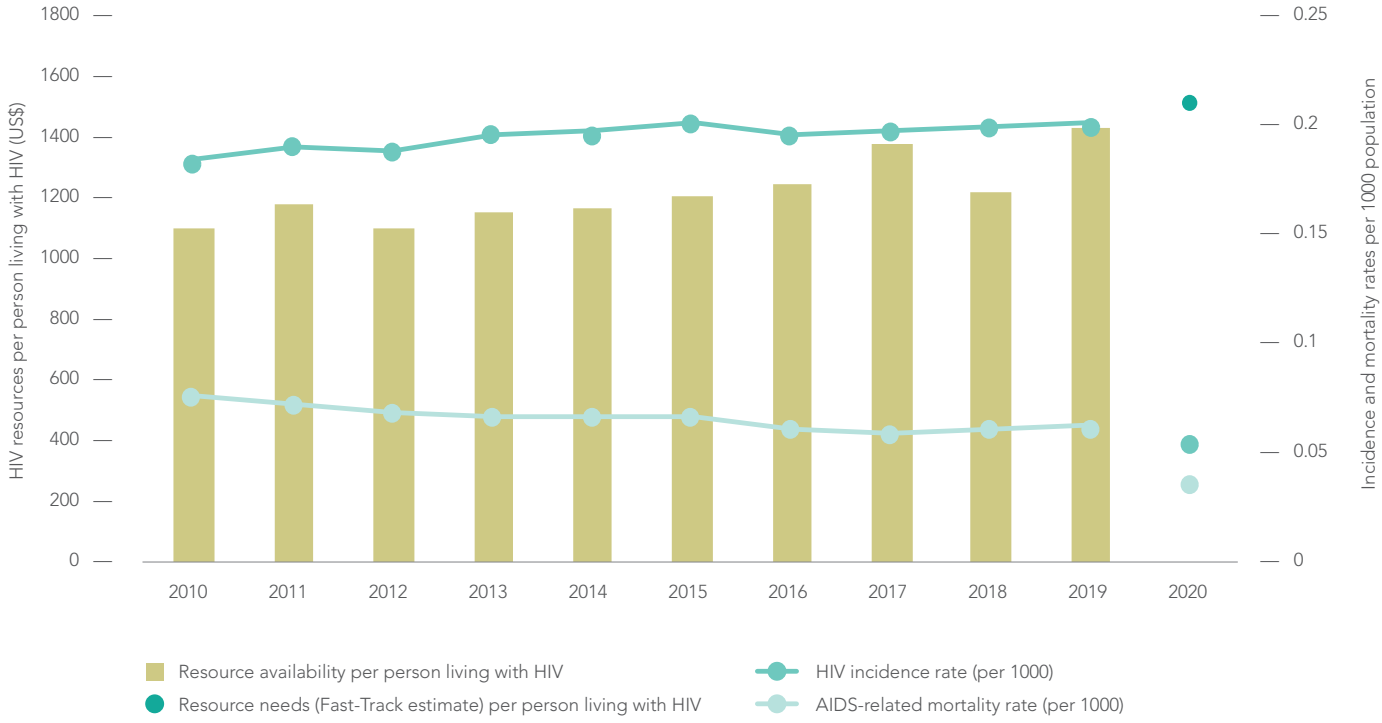
Financing for HIV responses in Latin America has increased steadily since 2010, and by 2019, the resources available had reached 96% of the 2020 target. Domestic sources accounted for 96% of total funding in 2019, while the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) accounted for 1%, United States Government bilateral sources accounted for 0.2% and other international sources accounted for 2%.

HIV resource availability from domestic sources almost doubled (a 91% increase) between 2010 and 2019, while contributions from United States Government bilateral sources and the Global Fund decreased by 71% and 47%, respectively (all trends are measured in 2016 US dollars to control for inflation). Funding from all other international sources increased by 32% during this nine-year period.

The majority of countries in the region have increased their HIV response investments in recent years. Total resource availability for HIV in the region increased 12% between 2017 and 2019 and 21% between 2018 and 2019.

FIGURE 9.16

**Total HIV resource availability per person living with HIV, HIV incidence and AIDS-related mortality rates in low- and middle-income countries, Latin America, 2010–2019 and 2020 target**




Source UNAIDS financial estimates, 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).
Note: Resource availability per person living with HIV and resource needs are in constant 2016 US dollars.

# CARIBBEAN

## DATA POINTS

NEW HIV INFECTIONS HAVE

**DECREASED BY 29%**

SINCE 2010, AND AIDS-RELATED DEATHS HAVE DECREASED BY 37%

KEY POPULATIONS AND THEIR SEXUAL PARTNERS ACCOUNT FOR

**60% OF NEW HIV INFECTIONS**

IN THE REGION

**HALF OF PEOPLE LIVING WITH HIV**

IN THE REGION HAVE SUPPRESSED VIRAL LOADS

**57% OF NEW INFECTIONS**

IN THE REGION ARE AMONG MEN, AND 26% ARE AMONG GAY MEN AND OTHER MEN WHO HAVE SEX WITH MEN

VERTICAL TRANSMISSION OF HIV HAS

**DECREASED BY NEARLY 50%**

SINCE 2010

Across the Caribbean, progress has been made in reducing new HIV infections and AIDS-related deaths, with the incidence:prevalence ratio of the region decreasing steadily from 6.1% in 2010 to 3.9% in 2019.

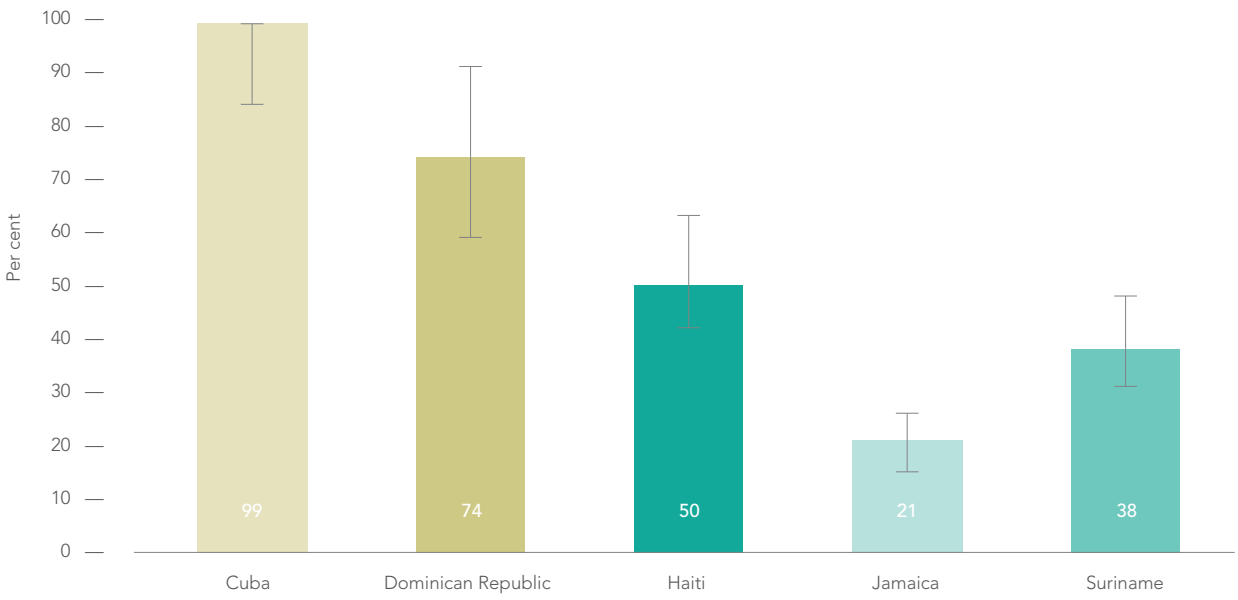
Great strides continue to be made in the Caribbean towards the elimination of mother-to-child HIV transmission, with seven countries achieving revalidation. More than 90% of pregnant women living with HIV knew their status in five of the nine countries in the region that reported 2019 data to UNAIDS. Scale-up of effective strategies is needed to ensure early presentation for antenatal care and continuity of treatment for pregnant women living with HIV, including those in poverty and those who are migrants or survivors of gender-based violence.

Progress across the testing and treatment cascade has slowed, highlighting the need to expand proven methods of active case-finding and linkage to (and retention in) care, including through community-based programmes. Roll-out of comprehensive prevention interventions is also incomplete in the region. The Bahamas and Barbados remain the only countries that have national programmes providing pre-exposure prophylaxis (PrEP) through the public health sector. Nongovernmental organizations are providing PrEP in the Dominican Republic, and it is available in Jamaica and Suriname through the private sector and pilot studies.

An ongoing challenge for HIV responses in the region is high levels of migration that place health-care systems, education systems and labour markets under pressure. Government health systems are also struggling to absorb programmes that are traditionally funded by international donors, including HIV prevention and key population-focused initiatives. Innovative financing strategies are needed to ensure sustained progress.

FIGUR 10.1

**Proportion of infants born to mothers living with HIV who received an HIV test within two months of birth, Caribbean, 2019**



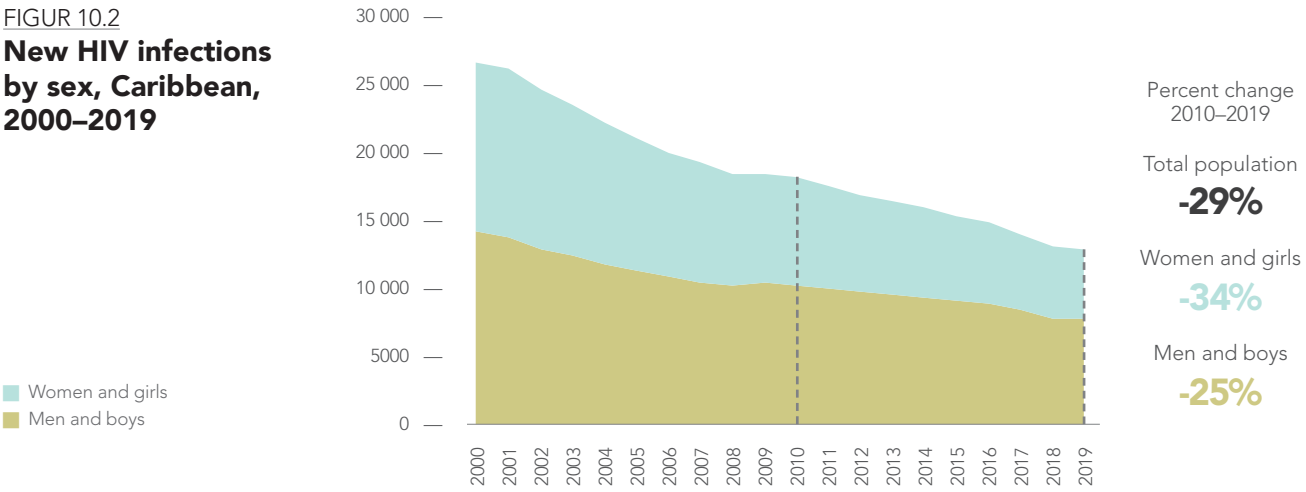

Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).
Note: Includes only countries with valid estimates of women eligible for prevention of mother-to-child HIV transmission services.

Swift testing of infants exposed to HIV and an immediate start of antiretroviral therapy upon diagnosis are the first steps to ensuring the survival of children who have acquired HIV. Coverage of virological testing for early infant diagnosis in the Caribbean varies from 21% in Jamaica to 99% in Cuba.

## State of the epidemic

FIGUR 10.2

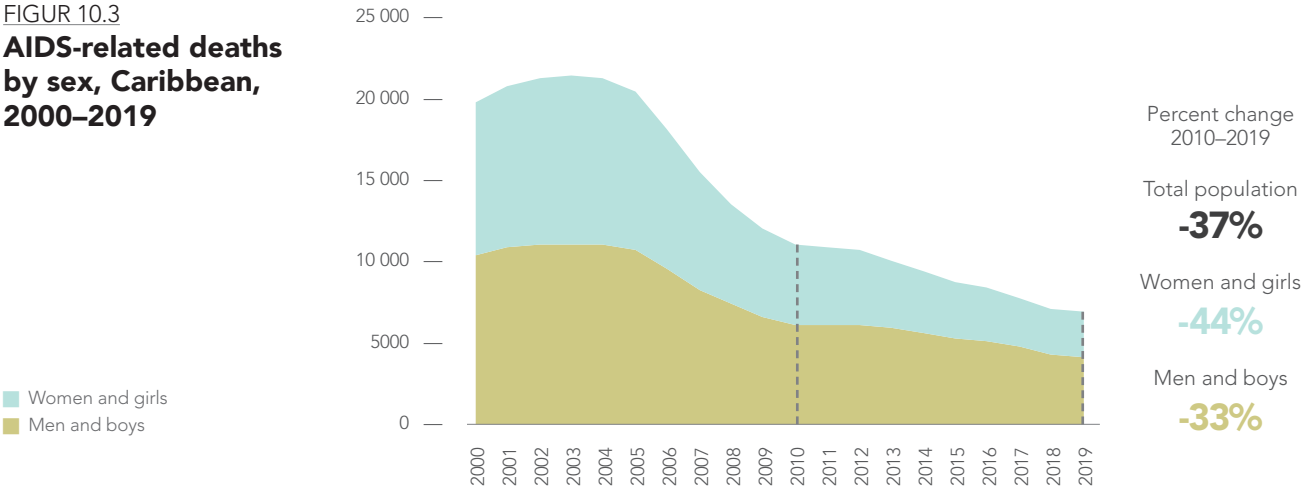
### New HIV infections by sex, Caribbean, 2000–2019




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGUR 10.3

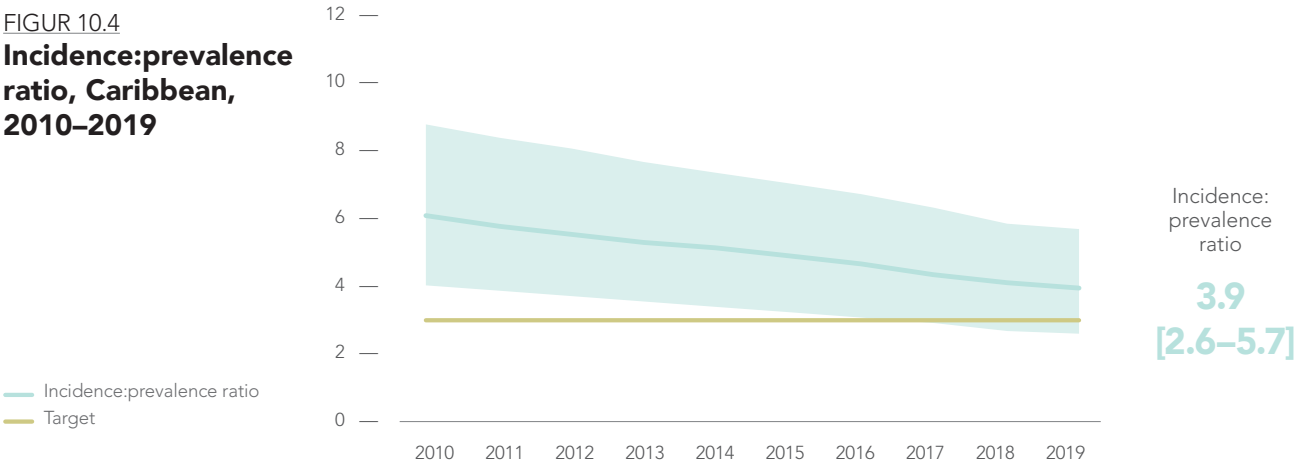
### AIDS-related deaths by sex, Caribbean, 2000–2019




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGUR 10.4

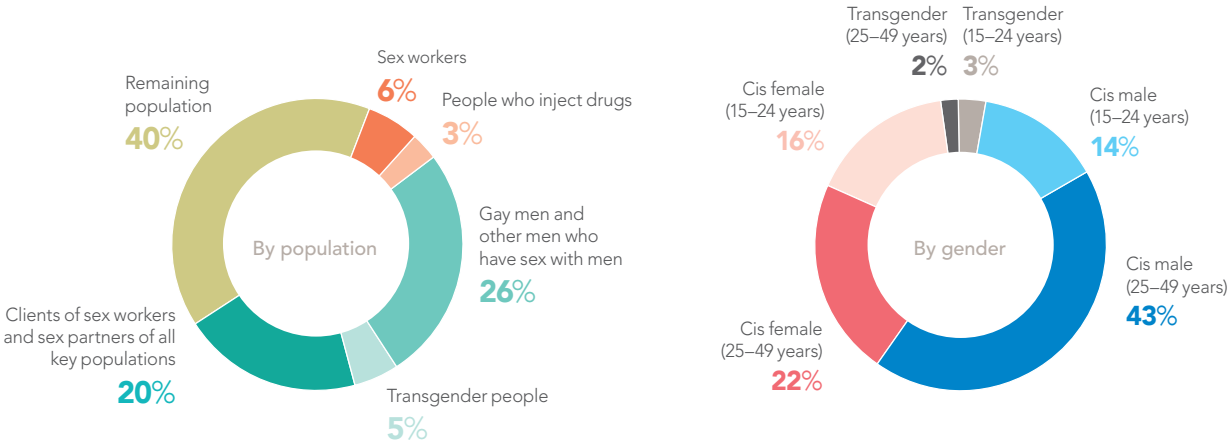
### Incidence:prevalence ratio, Caribbean, 2010–2019




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGUR 10.5

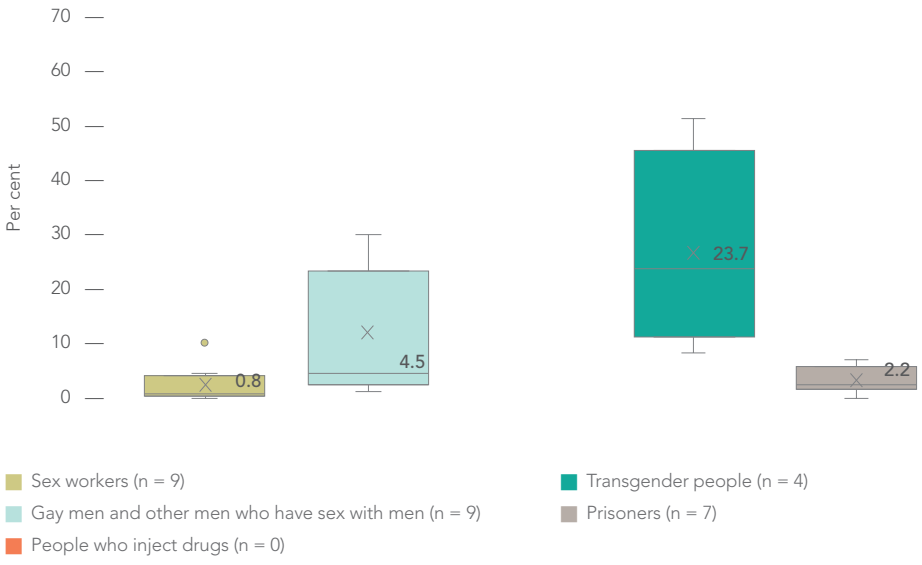
## Distribution of new HIV infections by population (aged 15–49 years), Caribbean, 2019




Source: UNAIDS special analysis, 2020 (see methods annex).

FIGUR 10.6

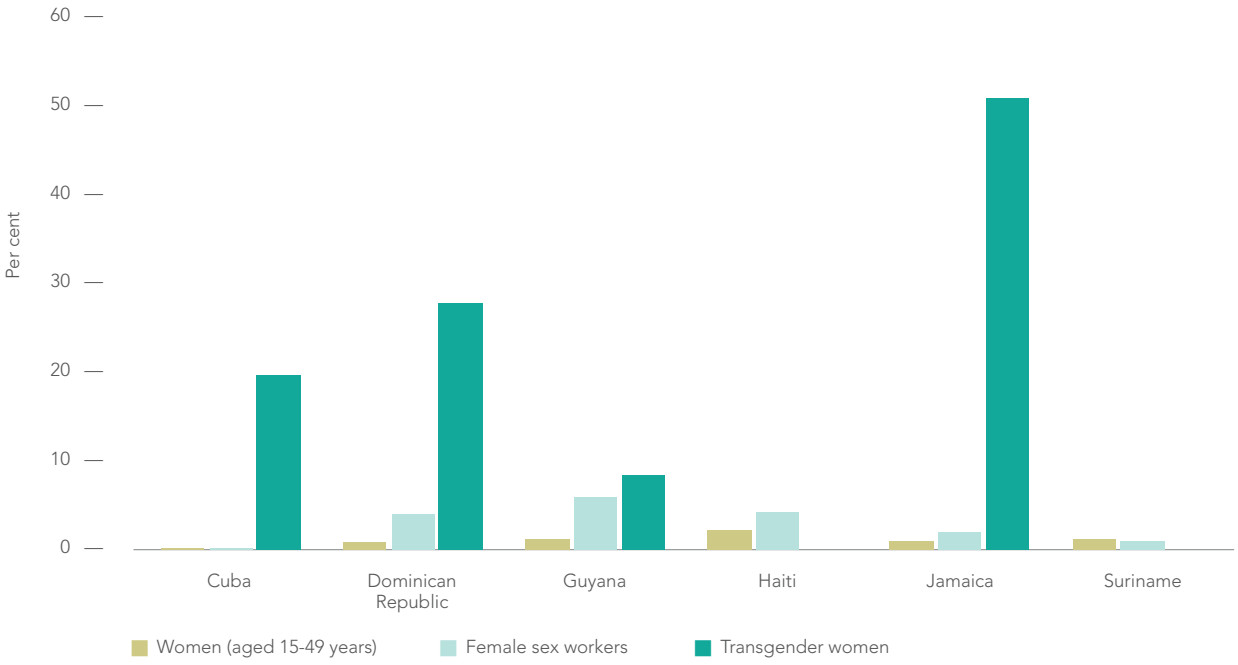
## HIV prevalence among key populations, Caribbean, 2015–2019




Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).
Note: (n = number of countries reporting).

FIGUR 10.7

**HIV prevalence among transgender women, female sex workers and all women aged 15 to 49 years, Caribbean, 2015–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); UNAIDS Global AIDS Monitoring, 2015–2020 (see https://aidsinfo.unaids.org/).

Transphobia, social exclusion, violence and stigma are among the intersecting factors that exacerbate the vulnerability of transgender people to HIV infection and other health threats. Among countries in the Caribbean with recent survey data, HIV prevalence among transgender women is higher than among female sex workers. More than half of transgender women surveyed by a study in Jamaica were found to be living with HIV.

TABLE 10.1

## Estimated size of key populations, Caribbean, 2018–2019

| | National adult population (15+), 2018 | National adult population (15+), 2019 | Sex workers | Sex workers as percentage of adult population (15+) | Gay men and other men who have sex with men | Gay men and other men who have sex with men as percentage of adult population (15+) | People who inject drugs | People who inject drugs as percentage of adult population (15+) | Transgender people | Transgender people as percentage of adult population (15+) | Prisoners | Prisoners as percentage of adult population (15+) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bahamas | 318 000 | 320 000 | | | | | | | | | 2300 | 0.74% |
| Dominican Republic | 7 700 000 | 7 800 000 | | | 130 000 | 1.73% | | | 9400 | 0.12% | 29 000 | 0.37% |
| Haiti | 7 400 000 | 7 500 000 | | | | | | | | | 11 000 | 0.14% |
| Jamaica | 2 300 000 | 2 310 000 | | | 42 000 | 1.86% | | | 3800 | 0.17% | | |
| Saint Lucia | 149 000 | 150 000 | | | 3000 | 2.01% | | | | | 500 | 0.34% |
| Saint Vincent and the Grenadines | 85 000 | 87 000 | | | | | | | | | | |
| Suriname | 420 000 | 420 000 | | | | | | | | | | |

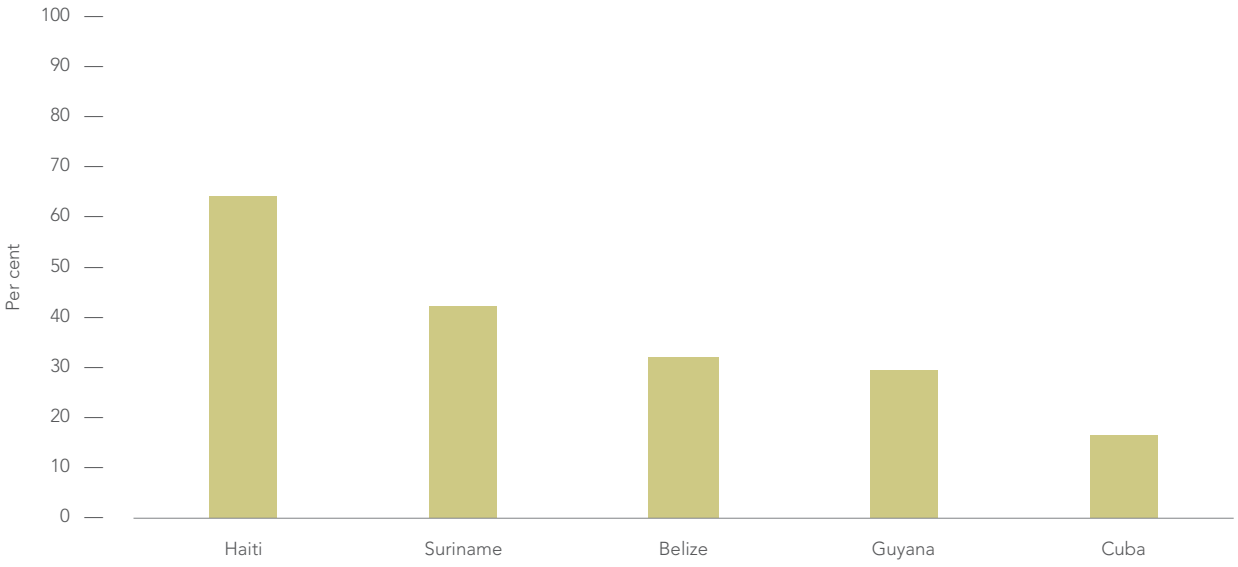
National population size estimate
Local population size estimate
Insufficient data
No data

Sources: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/). Spectrum Demproj module, 2020; World Population Prospects 2019 [Internet]. New York: United Nations Department of Economic and Social Affairs; c2020 (https://population.un.org/wpp/)(custom data acquired via website).
Note: Estimates shown are government-provided estimates reported in 2018–2019. Additional and alternative estimates may be available from different sources, including the Key Populations Atlas (https://kpatlas.unaids.org/), academic publications or institutional documents.

## Stigma and discrimination and violence

FIGUR 10.8

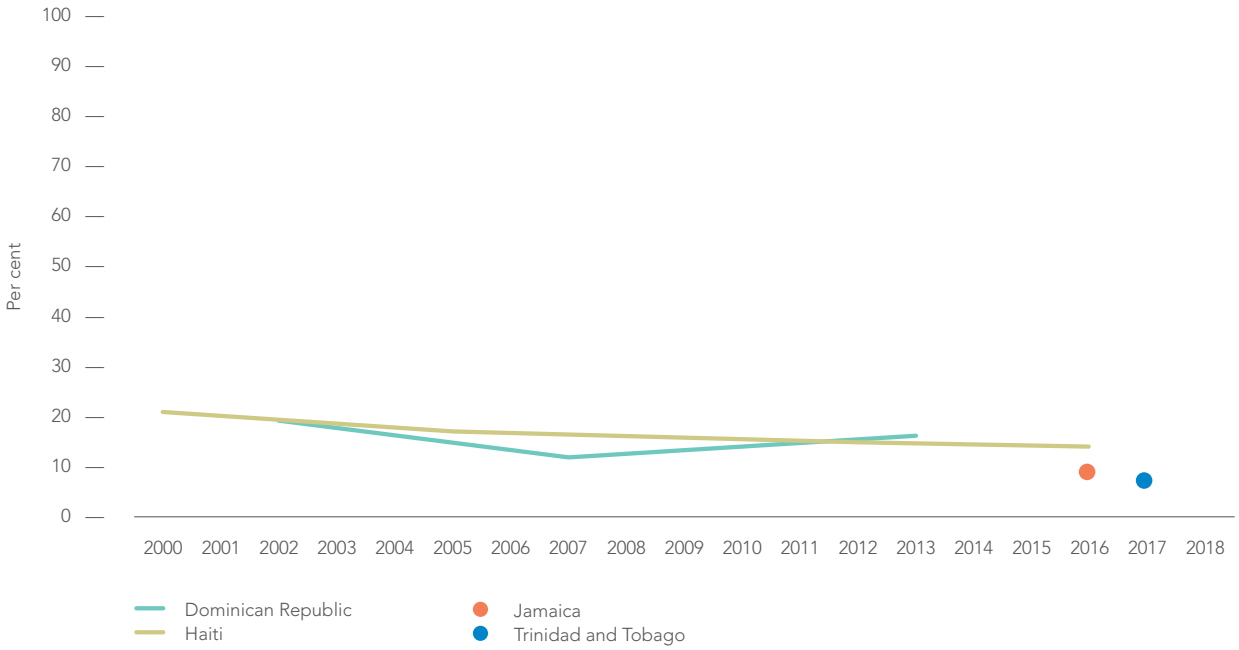
**Percentage of people aged 15 to 49 years who would not purchase vegetables from a shopkeeper living with HIV, Caribbean, 2014–2018**




Source: Population-based surveys, 2014–2018.

FIGUR 10.9

**Ever-married or partnered women aged 15 to 49 years who experienced physical and/or sexual violence by an intimate partner in the past 12 months, countries with available data, Caribbean, 2000–2017**



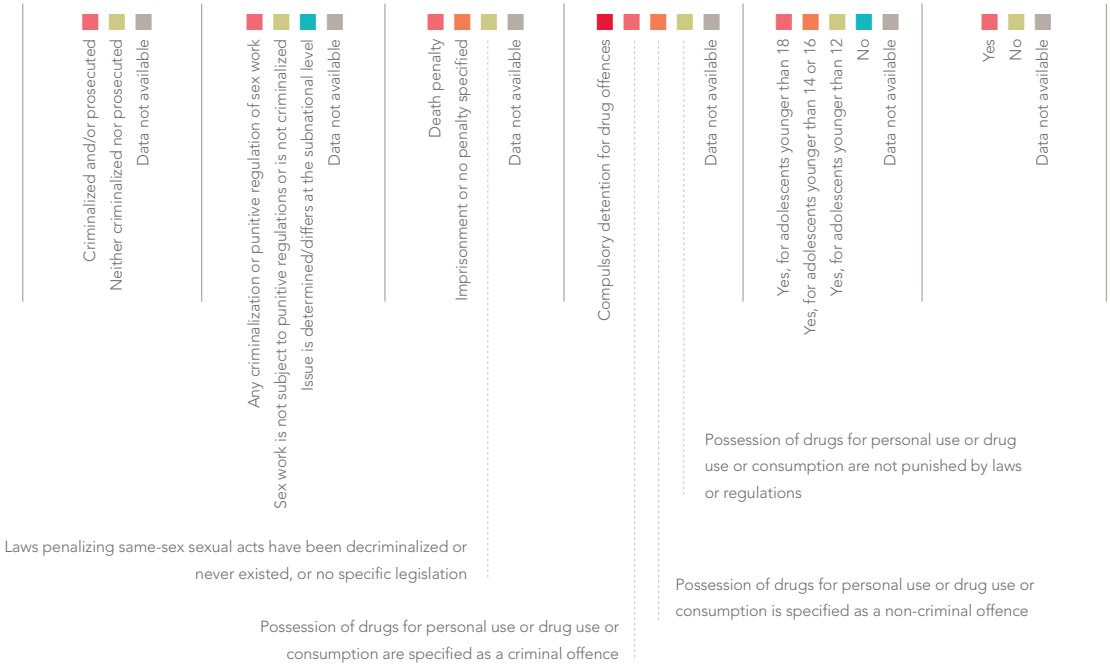

Source: Population-based surveys, 2000–2017.

## Laws and policies

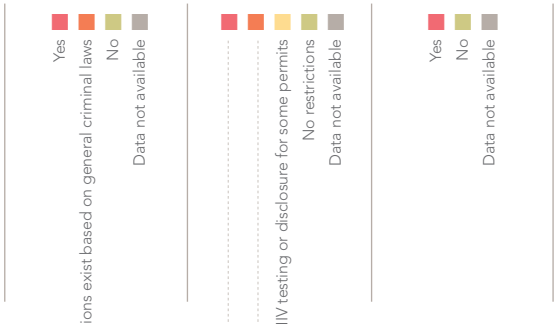
TABLE 10.2

### Laws and policies scorecard, Caribbean, 2019

| | Criminalization of transgender people | Criminalization of sex work | Criminalization of same-sex sexual acts | Drug use or possession for personal use an offence | Parental consent for adolescents to access HIV testing | Spousal consent for married women to access sexual and reproductive health services |
|---|---|---|---|---|---|---|
| Antigua and Barbuda | a | a | h | a | a | a |
| Bahamas | a | a | a | a | a | a |
| Barbados | a | c | i | b | a | a |
| Belize | | | j | k | p | |
| Cuba | a | g | j | b | a | a |
| Dominica | b | | j | b | b | b |
| Dominican Republic | a | a | a | a | a | a |
| Grenada | | d | j | l | | |
| Guyana | a | a | a | a | p | a |
| Haiti | a | e | a | a | a | a |
| Jamaica | a | a | a | b | a | a |
| Saint Kitts and Nevis | | | j | m | q | q |
| Saint Lucia | a | a | a | a | a | a |
| Saint Vincent and the Grenadines | | a | a | n | | a |
| Suriname | b | | j | b | q | q |
| Trinidad and Tobago | | f | j | o | r | |



| Laws criminalizing the transmission of, non-disclosure of or exposure to HIV | Laws or policies restricting the entry, stay and residence of people living with HIV (t) | Mandatory HIV testing for marriage, work or residence permits or for certain groups |
|---|---|---|
| a | | a |
| b | | a |
| a | | a |
| s | | |
| a | | a |
| b | | b |
| a | | a |
| | | |
| a | | a |
| a | | a |
| a | | a |
| | | a |
| a | | a |
| a | | a |
| b | | q |
| | | |




Deport, prohibit short- and/or long-stay and require HIV testing or disclosure for some permits

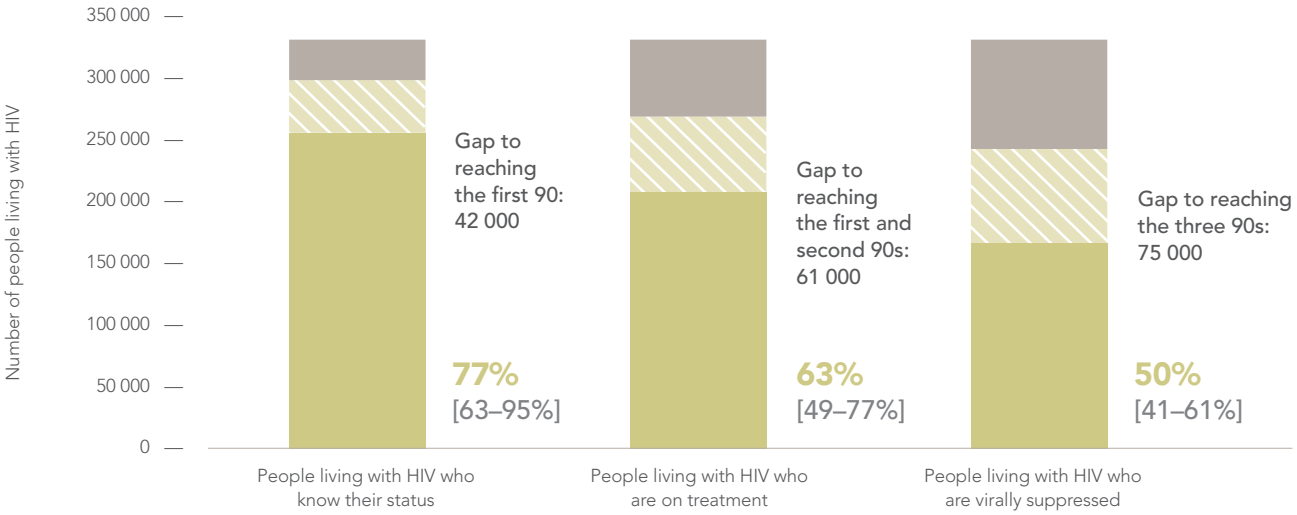
Prohibit short- and/or long-stay and require HIV testing or disclosure for some permits

Sources:
a. UNAIDS National Commitments and Policy Instrument, 2019 (see http://lawsandpolicies.unaids.org/).
b. UNAIDS National Commitments and Policy Instrument, 2017 (see http://lawsandpolicies.unaids.org/).
c. Barbados. Sexual Offences Act, 1992. Sections 18 and 20.
d. Grenada. Criminal Code. Chapter 72A (76 of 1958), section 137 (30) (https://prostitution.procon.org/sourcefiles/GrenadaCriminalCode.pdf).
e. Haiti. Código Penal de Haiti (https://wipolex.wipo.int/en/text/200018).
f. Trinidad and Tobago. Sexual Offences Act. Article 23 (https://rgd.legalaffairs.gov.tt/laws2/alphabetical_list/lawspdfs/11.28.pdf).
g. Cuba. Penal Code. Article 302 (https://www.wipo.int/edocs/lexdocs/laws/es/cu/cu004es.pdf).
h. Antigua and Barbuda. The Sexual Offences Act, 1995 (https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/42538/79312/F1146620290/ATG42538.pdf).
i. Barbados. Sexual Offences Act, 1992. Section 9 (http://www2.ohchr.org/english/bodies/hrc/docs/ngos/lgbti2.pdf).
j. Mendos LR. State-sponsored homophobia 2019. 13th ed. Geneva: ILGA: 2019.
k. Belize. Misuse of Drugs Act, Chapter 103. Revised edition (2000). Section 7 (http://www.cicad.oas.org/fortalecimiento_institucional/legislations/PDF/BZ/misuse_of_drugs_act.pdf).
l. Grenada. Drug Abuse (Prevention and Control) Act (7 of 1992). Chapter 84A, section 6 (http://www.easterncaribbeanlaw.com/wp-content/uploads/2014/07/Microsoft-Word-Cap84A-Drug-Abuse-_Prevention-and-Control_-Act.doc.pdf).
m. St Christopher and Nevis. Drugs (Prevention and Abatement of the Misuse and Abuse of Drugs) Act. Revised edition. Section 6(1) (http://www.easterncaribbeanlaw.com/wp-content/uploads/2014/08/drugs_act.pdf).
n. Saint Vincent and the Grenadines. Drugs (Prevention of Misuse) Act. Revised edition 1990. Chapter 219, section 7(1) (http://www.cicad.oas.org/fortalecimiento_institucional/legislations/PDF/VC/drugs_act.pdf).
o. Republic of Trinidad and Tobago. Dangerous Drugs Act (38 of 1991). Chapter 11:25, section 5 (http://rgd.legalaffairs.gov.tt/laws2/alphabetical_list/lawspdfs/11.25.pdf).
p. Sexual Rights Initiative [database]. Sexual Rights Initiative; c2016 (http://sexualrightsdatabase.org/map/21/Adult%20sex%20work).
q. UNAIDS National Commitments and Policy Instrument, 2018 (see http://lawsandpolicies.unaids.org/).
r. National HIV testing and counselling policy. Port of Spain: Ministry of Health, Trinidad and Tobago; 2006 (www.health.gov.tt/downloads/DownloadItem.aspx?id=258).
s. Cameron S, Bernard EJ. Advancing HIV justice 3: growing the global movement against HIV criminalisation. Amsterdam: HIV Justice Network; May 2019.
t. Still not welcome: HIV-related travel restrictions. Geneva: UNAIDS, UNDP; 2019 (https://www.unaids.org/sites/default/files/media_asset/hiv-related-travel-restrictions-explainer_en.pdf).

## HIV testing and treatment

FIGUR 10.10

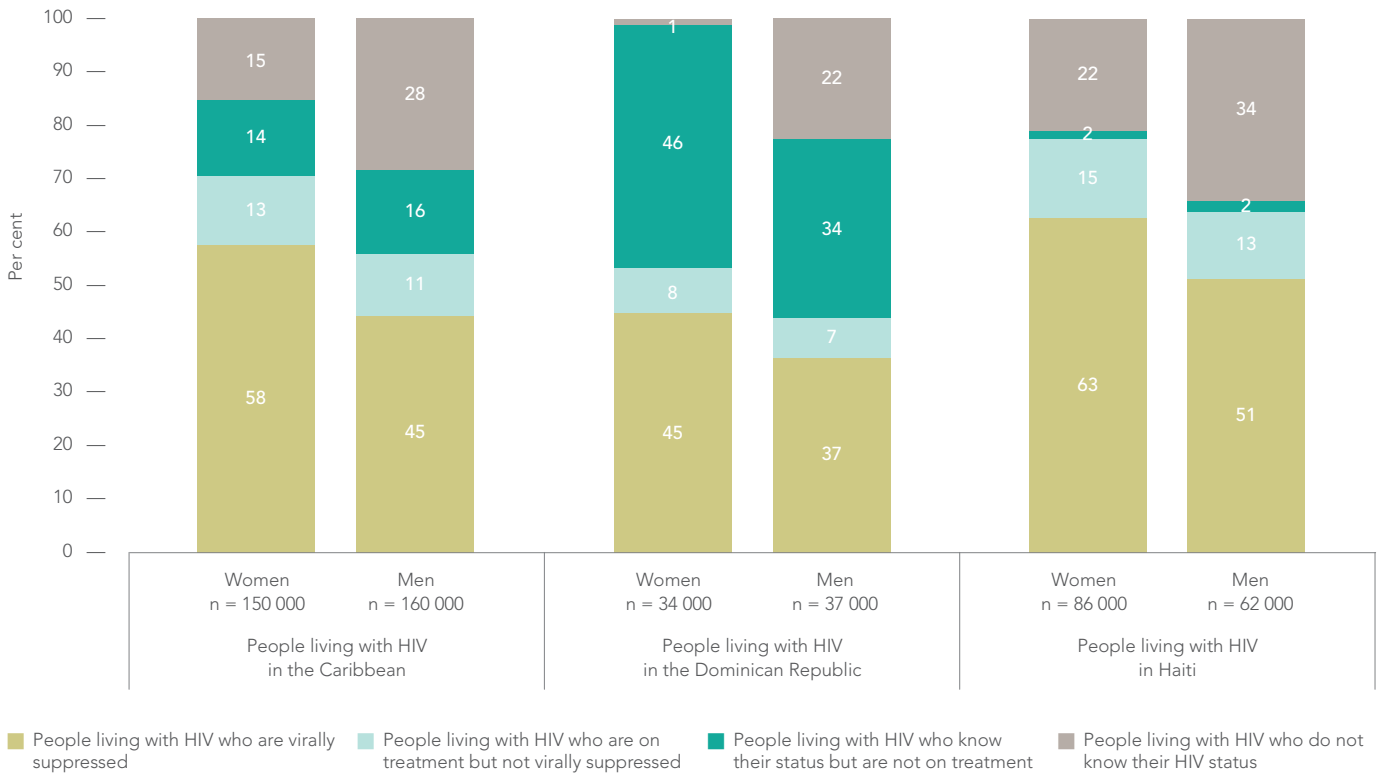
### HIV testing and treatment cascade, Caribbean, 2019




Source: UNAIDS special analysis, 2020 (see methods annex).

FIGUR 10.11

**Estimates of gaps in knowledge of status, HIV treatment and viral suppression among people living with HIV, by sex, Caribbean, 2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).

Uptake of HIV testing and treatment services in the Caribbean is significantly higher among women living with HIV than among men living with HIV. For example, viral suppression among women living with HIV in the region is 13 percentage points higher than among their male peers. This gap is slightly smaller in the Dominican Republic and Haiti.

TABLE 10.3

## 90–90–90 country scorecard: Caribbean, 2019

| | First 90: percentage of people living with HIV who know their status | | | Second 90: percentage of people who know their status who are on treatment | | | Third 90: percentage of people living with HIV on treatment who are virally suppressed | | | **Viral load suppression: percentage of people living with HIV who are virally suppressed** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) |
| **Caribbean** | 77 | 85 | 72 | 81 | 83 | 78 | 80 | 82 | 80 | 50 | 58 | 45 |
| Antigua and Barbuda | | | | | | | 65 | 64 | 66 | | | |
| Bahamas | | | | | | | | | | | | |
| Barbados | 90 | 89 | 91 | 58 | 57 | 59 | 89 | 89 | 88 | 46 | 45 | 47 |
| Belize | | | | | | | 65 | 65 | 67 | | | |
| Cuba | 85 | 97 | 83 | 89 | 92 | 89 | | | | | | |
| Dominica | | | | 27 | 35 | 23 | 62 | 68 | 57 | | | |
| Dominican Republic | 88 | 99 | 78 | 55 | 54 | 57 | 84 | 84 | 84 | 40 | 45 | 37 |
| Grenada | | | | | | | | | | | | |
| Guyana | 94 | 96 | 97 | 73 | 83 | 64 | 87 | 86 | 88 | 60 | 68 | 54 |
| Haiti | 72 | 79 | 66 | 98 | 98 | 97 | 80 | 81 | 80 | 56 | 63 | 51 |
| Jamaica | | | | | | | 79 | 79 | 79 | 35 | 53 | 25 |
| Saint Kitts and Nevis | | | | | | | 60 | 73 | 55 | | | |
| Saint Lucia | | | | 41 | 46 | 37 | 40 | 43 | 37 | | | |
| Saint Vincent and the Grenadines | | | | | | | 82 | 84 | 81 | | | |
| Suriname | 60 | 70 | 52 | 83 | 84 | 83 | 90 | 91 | 89 | 45 | 54 | 38 |
| Trinidad and Tobago | | | | | | | 91 | 91 | 93 | 67 | 66 | 71 |

**Legend for 90–90–90**

- 95% and above
- 90–94%
- 85–89%
- 70–84%
- 50–69%
- Less than 50%

**Legend for viral load suppression**

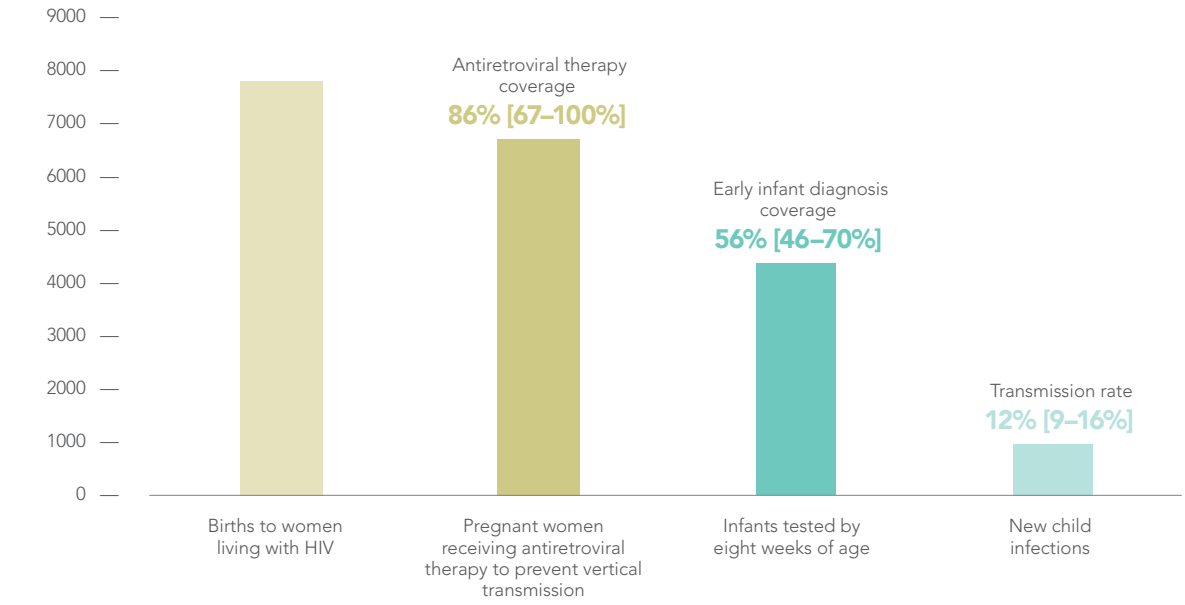
- 86% and above
- 73–82%
- 65–72%
- 40–64%
- Less than 25%

Source: UNAIDS special analysis, 2020 (see methods annex).
Note: Estimates for 2019 except: Antigua and Barbuda (2017); and Belize, Grenada, Saint Kitts and Nevis, and Saint Vincent and the Grenadines (2018).

## People-centred services

FIGUR 10.12

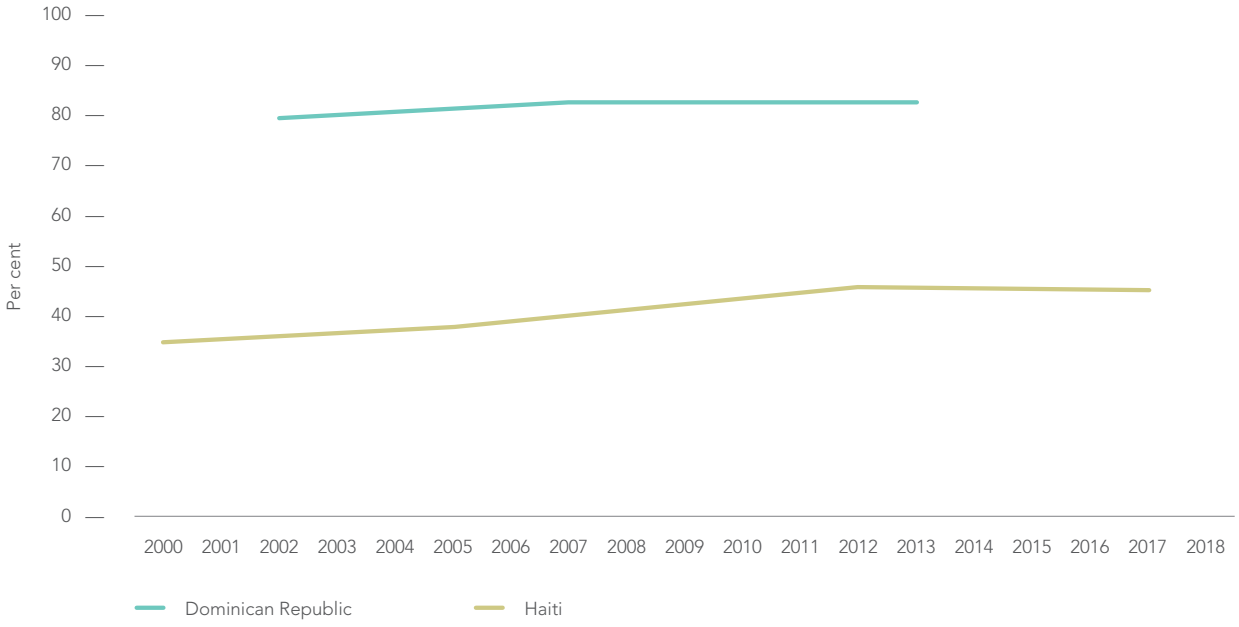
**Services for pregnant women living with HIV, early infant diagnosis, number of new vertical infections and transmission rate, Caribbean, 2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).

FIGUR 10.13

**Women aged 15 to 49 years who have their demand for family planning satisfied by modern methods, countries with available data, Caribbean, 2000–2017**




Source: Population-based surveys, 2000–2017.

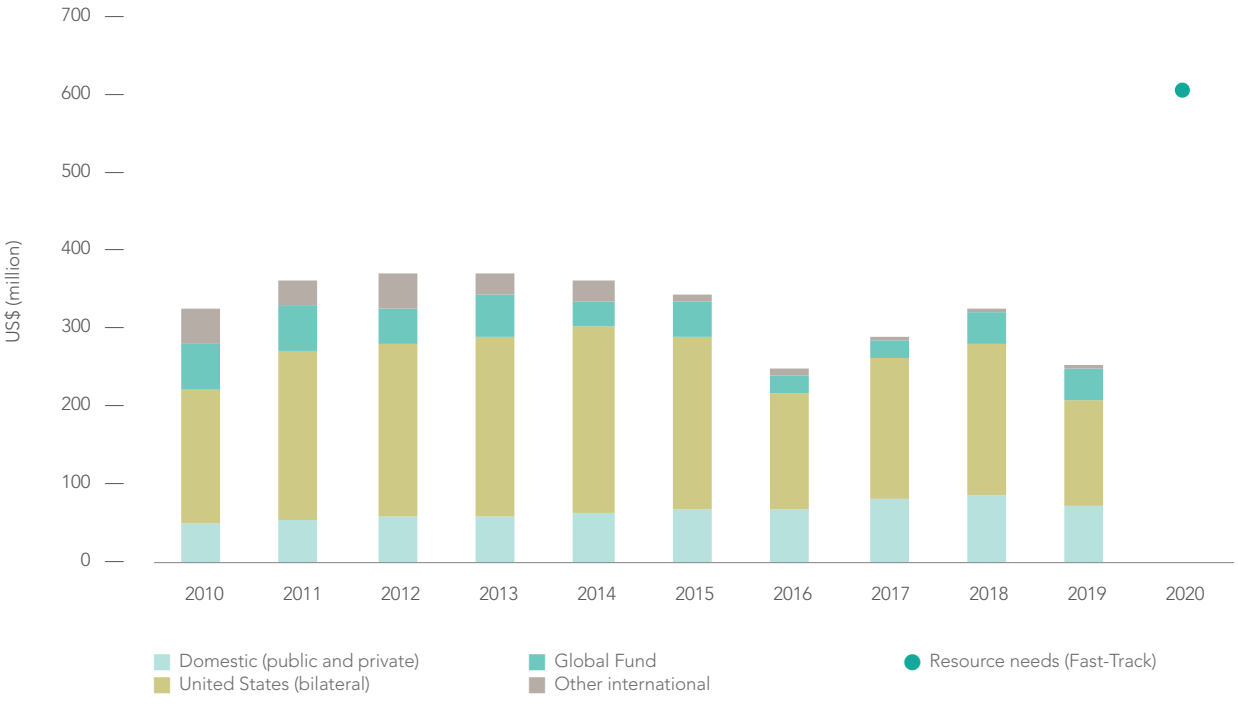
## Investing to end AIDS

The resources available for HIV responses in the Caribbean peaked in 2013 and declined precipitously until 2016, followed by a recovery through 2018. HIV response resources then declined by 22%, leaving the region at just 42% of its 2020 target.

The main source of funding for HIV responses in the region is United States Government bilateral sources, which accounted for 54% of the total in 2019. Domestic resources constituted 28% of the total, the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) accounted for 16% and other international sources accounted for 1%. HIV resource availability from domestic sources increased by 38% from 2010 to 2019, while funding from United States Government bilateral sources, the Global Fund and all other international sources decreased by 19%, 30% and 92%, respectively (all trends measured in constant 2016 US dollars to control for inflation). The Global Fund is the only source that increased between 2018 and 2019.

FIGUR 10.14

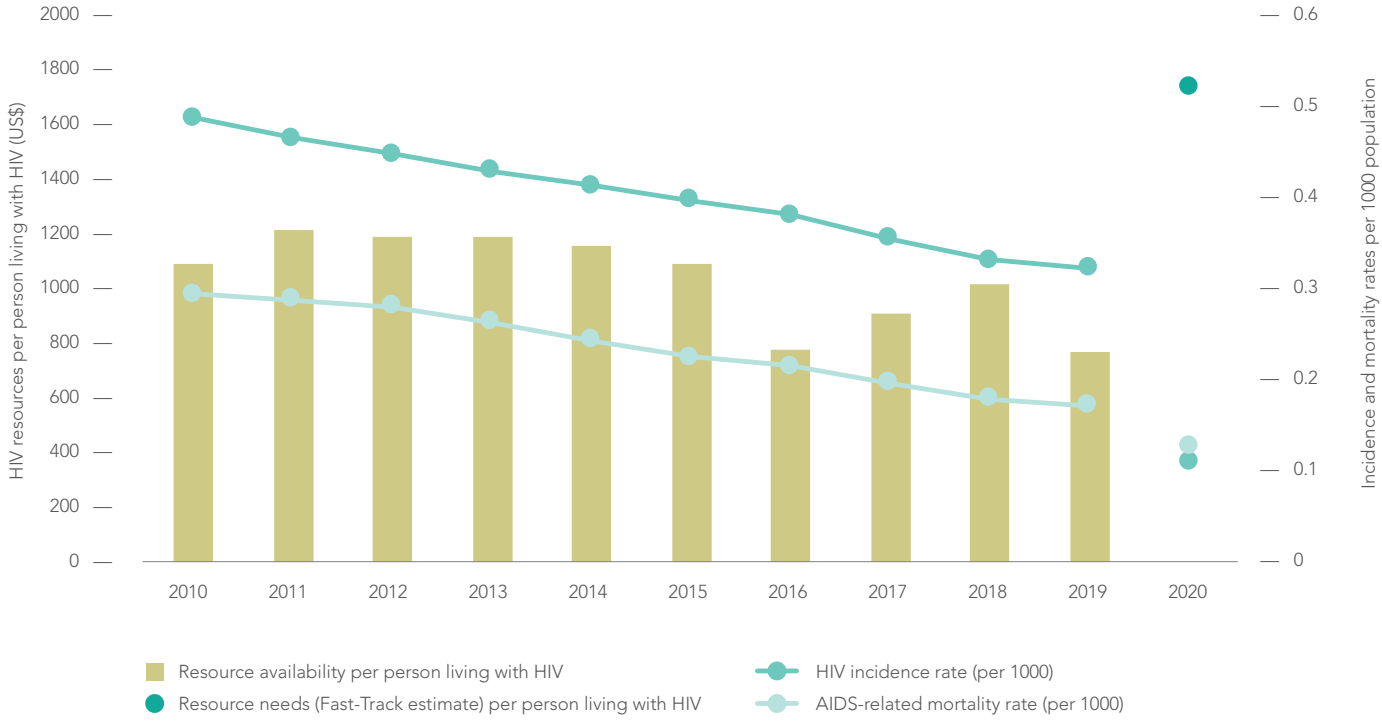
**Resource availability for HIV by source, 2010–2019, and estimated Fast-Track resource needs in 2020, Caribbean**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGUR 10.15

**Total HIV resource availability per person living with HIV, HIV incidence and AIDS-related mortality rates in low- and middle-income countries, Caribbean, 2010–2019 and 2020 target**




Source UNAIDS financial estimates, 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).
Note: Resource availability per person living with HIV and resource needs are in constant 2016 US dollars.

# MIDDLE EAST AND NORTH AFRICA

## DATA POINTS

NEW INFECTIONS

**INCREASED BY 22%**

IN 2010–2019, WHILE AIDS-RELATED DEATHS REMAINED STABLE

WITH AN

**INCIDENCE: PREVALENCE RATIO OF 8.2%,**

THE REGION IS FAR FROM CONTROLLING ITS HIV EPIDEMIC

**TWO THIRDS OF NEW INFECTIONS ARE AMONG MEN,**

MOSTLY MEN WHO INJECT DRUGS AND GAY MEN AND OTHER MEN WHO HAVE SEX WITH MEN

**WOMEN LIVING WITH AND AFFECTED BY HIV**

REMAIN VULNERABLE, WITH LIMITED ACCESS TO SERVICES

**52% OF PEOPLE LIVING WITH HIV**

KNEW THEIR STATUS IN 2019, 38% WERE ACCESSING ANTIRETROVIRAL THERAPY, AND LESS THAN ONE THIRD WERE VIRALLY SUPPRESSED

The HIV epidemic in the Middle East and North Africa is still growing. The estimated 20 000 [11 000–38 000] new infections in 2019 marked a 25% increase over the 16 000 [8700–31 000] new infections in 2010.

The epidemic in the region is highly concentrated among key populations and their sexual partners. People who inject drugs accounted for 43% of new HIV infections in 2019, and gay men and other men who have sex with men another 23%. Combination prevention programmes focusing on key populations need to expand, including the use of HIV self-testing to increase coverage of PrEP and HIV treatment. Women living with and affected by HIV in the region are particularly vulnerable to gender-based violence and stigma and discrimination, resulting in limited access to HIV services. Coverage of services for the prevention of mother-to-child HIV transmission is among the lowest in the world.

The ongoing humanitarian emergencies in the region—and the associated large-scale movements of people—present massive challenges for public health systems in general and HIV programmes in particular. Community-based organizations can play important roles in the region's HIV response, but they are constrained in many countries by limited civic space and resources. Punitive laws and widespread stigma against people living with HIV and key populations pose additional difficulties.

Ending the AIDS epidemic in the region by 2030 requires renewing political leadership, addressing gender equality, securing sufficient and sustainable financing and scaling up the implementation of innovative programmes, such as HIV self-testing and pre-exposure prophylaxis (PrEP) using rights-based and evidence-informed approaches.

FIGURE 11.1

**Reports of stigma and discrimination and violence among women at risk of or living with HIV in the multicountry LEARN MENA study, April to December 2018**

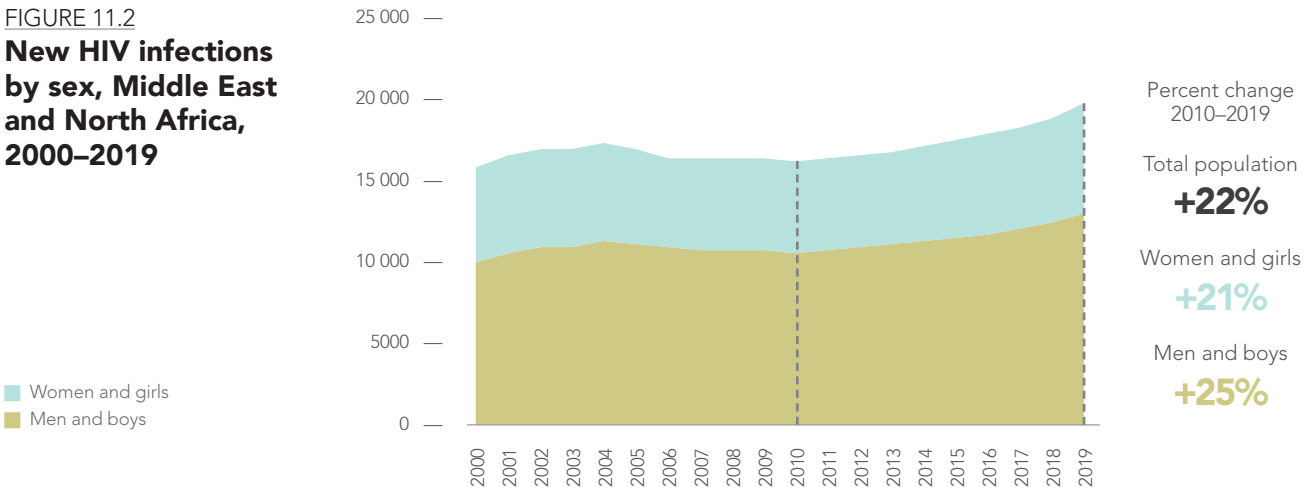

Sources: Salamander Trust, Frontline AIDS, South African Medical Research Council, MenaRosa, Positive Women's Network. ALIV[H]E in action: key examples of the action linking initiatives on violence against women and HIV everywhere(ALIV[H]E) framework. London: Salamander Trust; 2019 (https://salamandertrust.net/wp-content/uploads/2017/11/ALIVHE_in_Action_FINAL_Salamander_et_al_March2019.pdf, accessed 12 June 2020); Linkages between HIV and gender-based violence in the Middle East and North Africa: key findings from the LEARN MENA project. LEARN MENA; 2018 (http://frontlineaids.org/wp-content/uploads/2019/02/Linkages_between_HIV_and_gender-basaed_violence_in_MENA_original.pdf, accessed 12 June 2020).
Note: LEARN MENA is a project that explores the linkages between violence against women and HIV in the Middle East and North Africa. It is led by women living with or at higher risk of HIV. Participants reside in seven countries: Algeria, Egypt, Jordan, Lebanon, Morocco, Sudan and Tunisia.

Violence is both a cause and consequence of HIV. Findings from the LEARN MENA project have reinforced existing evidence on this two-way relationship between HIV and gender-based violence, and how that violence is underpinned and sustained by inequitable gender norms. More than half (54%) of the women participating in the project said that violence or fear of violence had affected their ability to protect themselves from acquiring HIV, and two thirds reported experiences of violence in health-care settings. Governments, development partners and civil society should ensure that women living with HIV and those affected by the epidemic are at the forefront of transformational and systematic change across all levels. There is an urgent need to review and reform laws and policies that expose women in all their diversity to gender-based violence.

## State of the epidemic

FIGURE 11.2

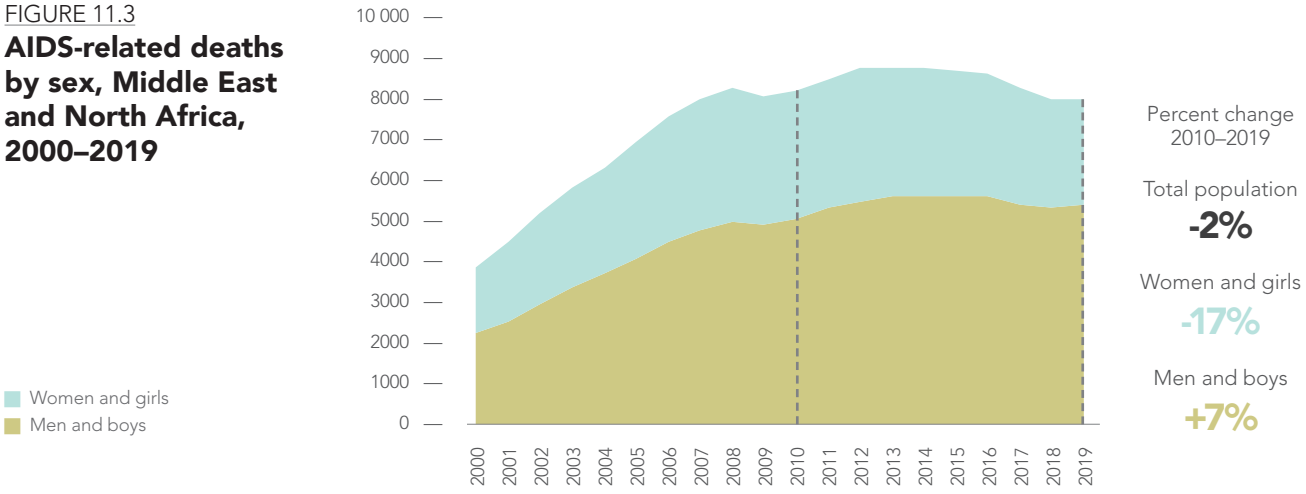
**New HIV infections by sex, Middle East and North Africa, 2000–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 11.3

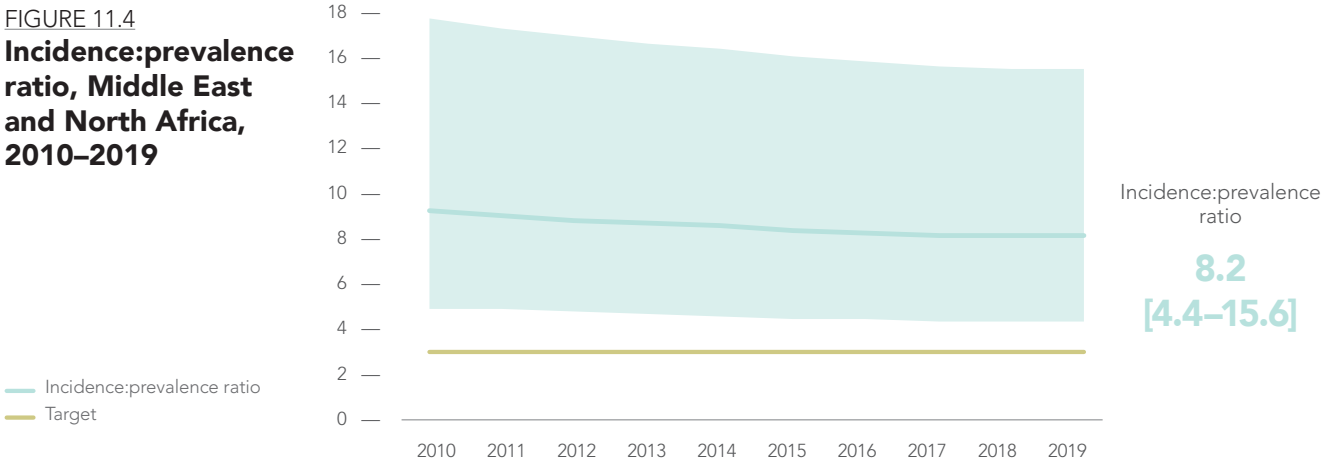
**AIDS-related deaths by sex, Middle East and North Africa, 2000–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 11.4

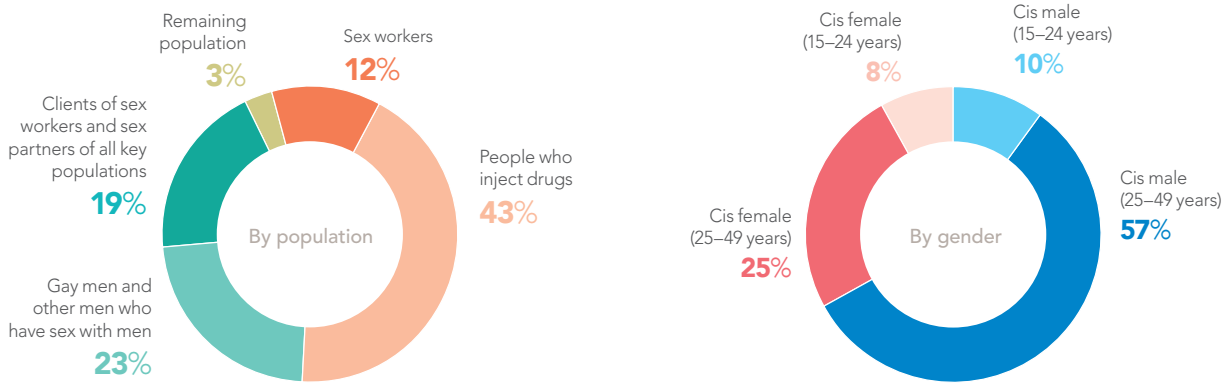
**Incidence:prevalence ratio, Middle East and North Africa, 2010–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 11.5

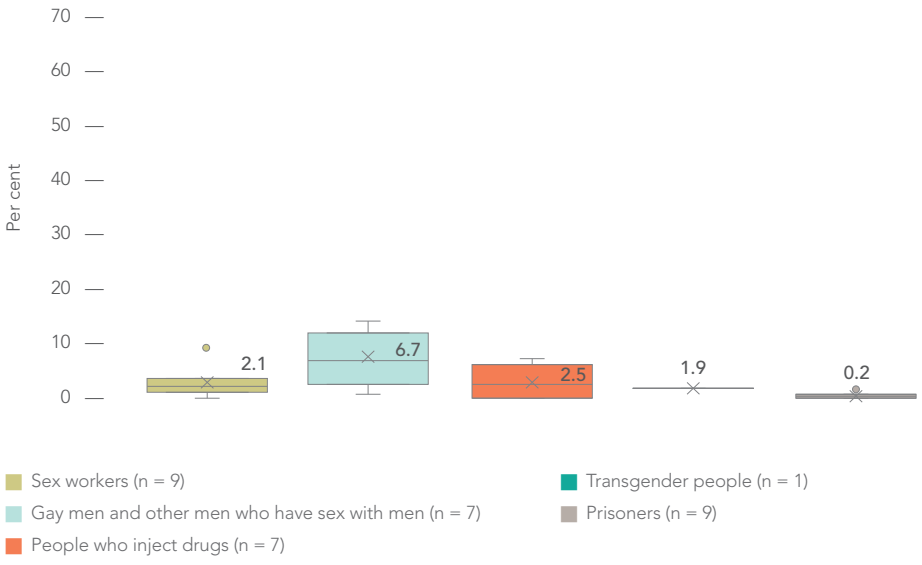
## Distribution of new HIV infections by population (aged 15–49 years), Middle East and North Africa, 2019




Source: UNAIDS special analysis, 2020 (see methods annex).

FIGURE 11.6

## HIV prevalence among key populations, Middle East and North Africa, 2015–2019




Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).
Note: (n = number of countries reporting)

TABLE 11.1

## Estimated size of key populations, Middle East and North Africa, 2018–2019

| | National adult population (15+), 2018 | National adult population (15+), 2019 | Sex workers | Sex workers as percentage of adult population (15+) | Gay men and other men who have sex with men | Gay men and other men who have sex with men as percentage of adult population (15+) | People who inject drugs | People who inject drugs as percentage of adult population (15+) | Transgender people | Transgender people as percentage of adult population (15+) | Prisoners | Prisoners as percentage of adult population (15+) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Iran (Islamic Republic of) | 62 500 000 | 63 200 000 | | | 240 000 | 0.39% | 190 000 | 0.30% | | | 190 000 | 0.30% |
| Kuwait | 986 000 | 987 000 | | | | | | | | | 5100 | 0.54% |
| Lebanon | 4 640 000 | 4 680 000 | | | 16 000 | 0.35% | | | | | | |
| Morocco | 26 300 000 | 26 600 000 | | | | | | | | | 84 000 | 0.32% |
| Oman | 2 100 000 | 2 200 000 | | | | | | | | | | |
| Tunisia | 8 800 000 | 8 900 000 | | | | | | | | | 22 000 | 0.25% |

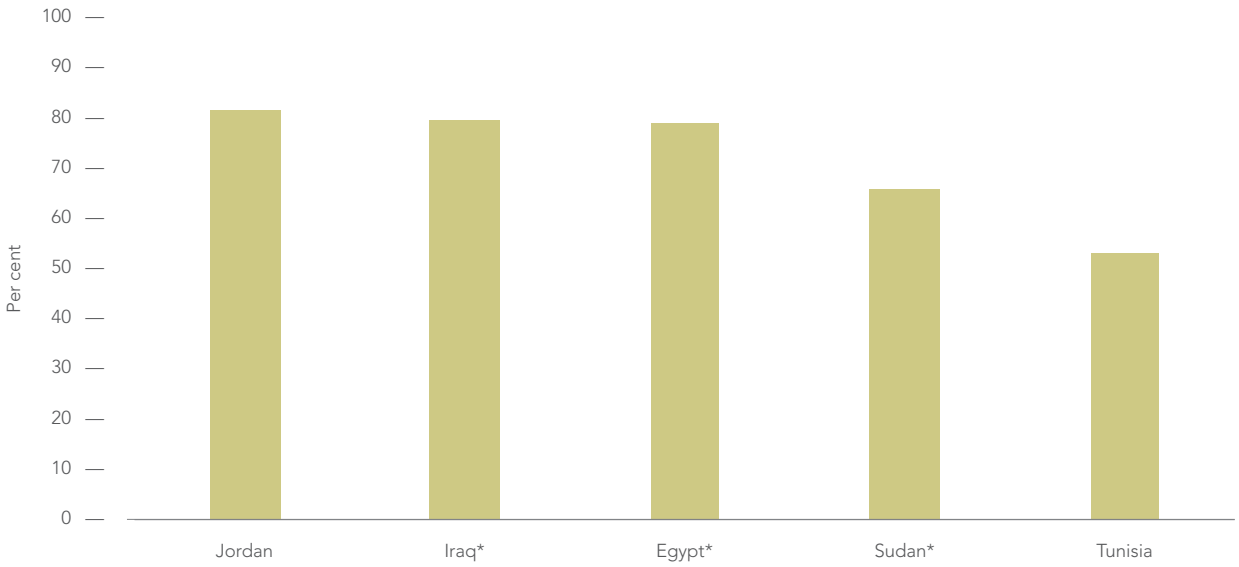
National population size estimate
Insufficient data
No data

Sources: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/); Spectrum Demproj module, 2020.
Note: Key population size estimates shown are government-provided estimates reported in 2018–2019. Additional and alternative estimates may be available from different sources, including the Key Populations Atlas (https://kpatlas.unaids.org/), academic publications or institutional documents. See annex for more details.

## Stigma and discrimination and violence

FIGURE 11.7

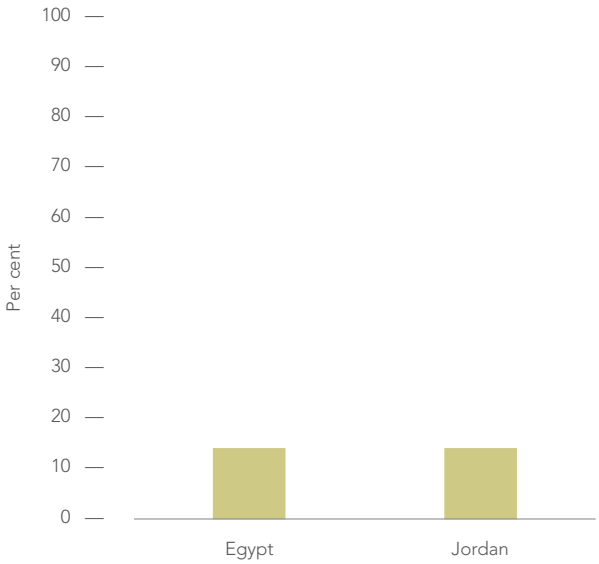
**Percentage of people aged 15 to 49 years who would not purchase vegetables from a shopkeeper living with HIV, Middle East and North Africa, 2014–2018**




Source: Population-based surveys, 2014–2018.
*Data are for women only

FIGURE 11.8

**Ever-married or partnered women aged 15 to 49 years who experienced physical and/or sexual violence by an intimate partner in the past 12 months, countries with available data, Middle East and North Africa, 2014–2018**




Source: Population-based surveys, 2014–2018.

## Laws and policies

TABLE 11.2

### Laws and policies scorecard, Middle East and North Africa, 2019

| | Criminalization of transgender people | Criminalization of sex work | Criminalization of same-sex sexual acts | Drug use or possession for personal use an offence | Parental consent for adolescents to access HIV testing | Spousal consent for married women to access sexual and reproductive health services |
|---|---|---|---|---|---|---|
| Algeria | a | c | j | z | r | r |
| Bahrain | | d | j | l | | |
| Djibouti | | e | j | m | s | |
| Egypt | b | b | b | n | b | b |
| Iran (Islamic Republic of) | b | b | b | b | b | b |
| Iraq | | f | k | o | | |
| Jordan | | g | j | | r | r |
| Kuwait | a | h | j | a | r | r |
| Lebanon | | h | j | | | |
| Libya | b | b | j | b | t | r |
| Morocco | ab | b | b | b | b | b |
| Oman | b | b | b | b | b | b |
| Qatar | | b | j | b | | |
| Saudi Arabia | b | b | j | b | b | b |
| Somalia | | ab | j | | | |
| Sudan | | i | j | p | a | a |
| Syrian Arab Republic | a | a | j | | a | a |
| Tunisia | b | b | b | b | b | b |
| United Arab Emirates | a | | j | q | | a |
| Yemen | | | j | | | |

Criminalized and/or prosecuted
Neither criminalized nor prosecuted
Data not available

Any criminalization or punitive regulation of sex work
Sex work is not subject to punitive regulations or is not criminalized
Issue is determined/differs at the subnational level
Data not available

Death penalty
Imprisonment or no penalty specified
Data not available

Laws penalizing same-sex sexual acts have been decriminalized or never existed, or no specific legislation

Compulsory detention for drug offences

Possession of drugs for personal use or drug use or consumption are specified as a criminal offence

Data not available

Possession of drugs for personal use or drug use or consumption are not punished by laws or regulations

Possession of drugs for personal use or drug use or consumption is specified as a non-criminal offence

Yes, for adolescents younger than 18
Yes, for adolescents younger than 14 or 16
Yes, for adolescents younger than 12
No
Data not available

Yes
No
Data not available


Sources:
a. UNAIDS National Commitments and Policy Instrument, 2017 (see http://lawsandpolicies.unaids.org/).
b. UNAIDS National Commitments and Policy Instrument, 2019 (see http://lawsandpolicies.unaids.org/).
c. Algeria. Code Penal. Article 343 (https://www.wipo.int/edocs/lexdocs/laws/fr/dz/dz020fr.pdf).
d. Bahrain. Bahrain Penal Code, 1976. Article 326 (https://www.unodc.org/res/cld/document/bhr/1976/bahrain_penal_code_html/Bahrain_Penal_Code_1976.pdf).
e. Djibouti. Penal Code of Djibouti, 1995 (https://acjr.org.za/resource-centre/penal-code-of-djibouti-1995/view).
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l. Bahrain. Law No. 15 of 2007 with Respect to Narcotic Drugs and Psychotropic Substances. Article 2 (https://www.nhra.bh/Departments/LAU/).
m. Djibouti. Penal Code of Djibouti. Articles 355–359 (https://acjr.org.za/resource-centre/penal-code-of-djibouti-1995/view).
n. Egypt. Law No. 122 of 1989 Amending Certain Provisions of Decree–Law No. 182 of 1960 Concerning the Control of Narcotic Drugs and Regulation of their Utilization and Trade in Them. Article 7 (https://www.unodc.org/res/cld/document/egy/law-no-122-of-1989_html/egypt-law_122-89.pdf).
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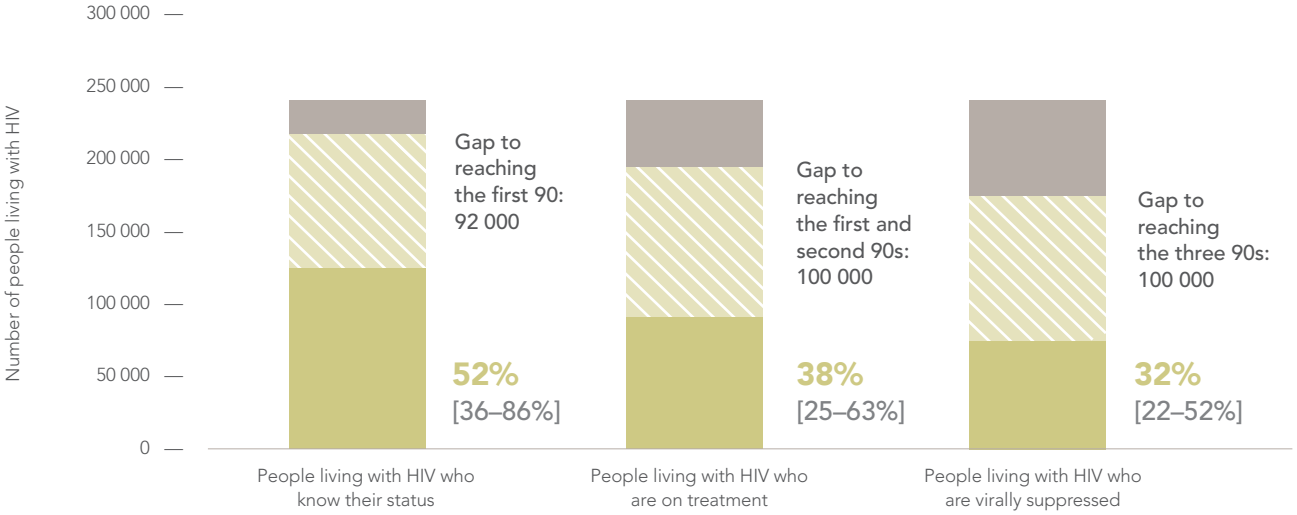
p. Sudan. Narcotic Drugs and Psychotropic Substances Act, 1994. Article 12.
q. United Arab Emirates. Federal Law 14, 1995 (https://www.unodc.org/res/cld/document/are/federal-law-no-14-of-1995_html/UAE-fedlaw_14-95.pdf).
r. UNAIDS National Commitments and Policy Instrument, 2018 (see http://lawsandpolicies.unaids.org/).
s. Djibouti. Décret N° 2008-0182/PR/MS portant Institution des Normes et Directives en Matière de Conseil Dépistage Volontaire du VIH/SIDA en République de Djibouti. Article 19 (https://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=79215).
t. Libya. HIV testing guidelines, 2010.
u. Bahrain. 2017 law on the protection of society against HIV.
v. Cameron S, Bernard EJ. Advancing HIV justice 3: growing the global movement against HIV criminalisation. Amsterdam: HIV Justice Network; May 2019.
w. Bernard EJ, Cameron S. Advancing HIV justice 2. Building momentum in global advocacy against HIV criminalisation. Brighton and Amsterdam: HIV Justice Network, GNP+; 2016 (https://www.scribd.com/doc/312008825/Advancing-HIV-Justice-2-Building-momentum-inglobal-advocacy-against-HIV-criminalisation).
x. Still not welcome: HIV-related travel restrictions. Geneva: UNAIDS, UNDP; 2019 (https://www.unaids.org/sites/default/files/media_asset/hiv-related-travel-restrictions-explainer_en.pdf).
y. UNGASS country progress report: Kingdom of Bahrain. Reporting period: January 2012–December 2013. Kingdom of Bahrain; 2014 (http://www.unaids.org/sites/default/files/country/documents/BHR_narrative_report_2014.pdf).
z. Algeria. The Law N. 04-18 on the Prevention and Repression of Illicit Use and Trafficking of Narcotic Drugs and Substances Psychotropics (https://sherloc.unodc.org/cld/en/legislation/dza/loi_no._04-18_relative_a_la_prevention_et_a_la_repression_de_lusage_et_du_traffic_illicites_de_stupefiants/chapitre_iii/articles_12-28/loi_04-18.html).
aa. Jordan. Law on Residency, No. 24 (https://www.refworld.org/docid/3ae6b4ed4c.html); The Jordanian Constitution (https://www.refworld.org/pdfid/3ae6b53310.pdf); Civil Servant Policy no 82 (https://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=95849&p_country=JOR&p_count=1); Work Law no 8 (https://www.ilo.org/dyn/natlex/docs/WEBTEXT/45676/65048/E96JOR01.htm).
ab. Aboutaieb, Pr Rachid and Pr Abderrachid Chakri, Revue de l'environnement législatif et réglementaire lié au VIH/Sida au Maroc, 2016.

## HIV testing and treatment

FIGURE 11.9

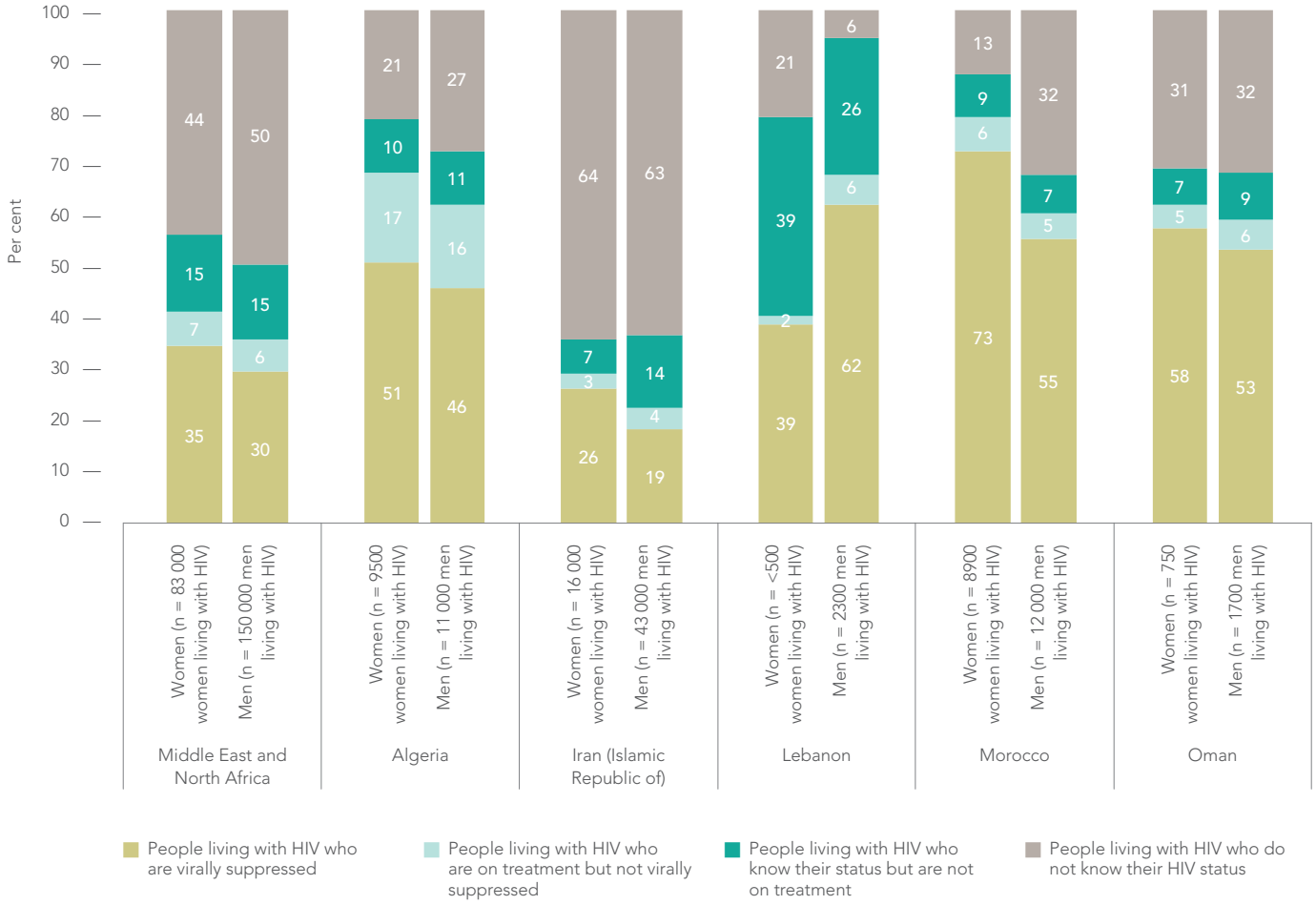
### HIV testing and treatment cascade, Middle East and North Africa, 2019




Source: UNAIDS special analysis, 2020 (see methods annex).

FIGURE 11.10

**Gaps in knowledge of status, HIV treatment and viral suppression by sex, countries with estimates for all three 90–90–90 targets, Middle East and North Africa, 2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

Knowledge of HIV status, treatment access and viral suppression varies between men and women living with HIV in the region. Access to testing and treatment services is improving in some countries, such as Algeria and Morocco, but due to poor service coverage in several other countries, only 38% [25–63%] of people living with HIV in the region were accessing antiretroviral therapy in 2019.

TABLE 11.3

## 90–90–90 country scorecard, Middle East and North Africa, 2019

| | First 90: percentage of people living with HIV who know their status | | | Second 90: percentage of people who know their status who are on treatment | | | Third 90: percentage of people living with HIV on treatment who are virally suppressed | | | **Viral load suppression: percentage of people living with HIV who are virally suppressed** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) |
| **Middle East and North Africa** | 52 | 56 | 50 | 73 | 73 | 71 | 83 | 84 | 83 | 32 | 35 | 30 |
| Algeria | 76 | 79 | 73 | 88 | 87 | 85 | 75 | 74 | 74 | 50 | 51 | 46 |
| Bahrain | | | | | | | | | | | | |
| Djibouti | 80 | 83 | 94 | 47 | 53 | 39 | 78 | 79 | 79 | 30 | 35 | 29 |
| Egypt | | | | | | | | | | | | |
| Iran (Islamic Republic of) | 37 | 36 | 37 | 67 | 81 | 61 | 85 | 91 | 83 | 21 | 26 | 19 |
| Iraq | | | | | | | | | | | | |
| Jordan | | | | | | | | | | | | |
| Kuwait | | | | | | | | | | | | |
| Lebanon | 91 | 79 | 94 | 69 | 51 | 72 | 92 | 96 | 91 | 58 | 39 | 62 |
| Libya | | | | | | | | | | | | |
| Morocco | 77 | 87 | 68 | 91 | 90 | 89 | 92 | 92 | 92 | 64 | 73 | 55 |
| Oman | 69 | 69 | 68 | 88 | 90 | 86 | 90 | 93 | 90 | 55 | 58 | 53 |
| Qatar | | | | | | | | | | | | |
| Saudi Arabia | | | | | | | | | | | | |
| Somalia | | | | | | | 73 | 73 | 73 | 24 | 28 | 22 |
| Sudan | 38 | 39 | 40 | 60 | 54 | 62 | | | | | | |
| Syrian Arab Republic | | | | | | | | | | | | |
| Tunisia | 20 | 32 | 16 | 98 | 98 | 98 | | | | | | |
| United Arab Emirates | | | | | | | | | | | | |
| Yemen | 22 | 36 | 17 | 100 | 100 | 100 | | | | | | |

**Legend for 90–90–90**

- 95% and above
- 90–94%
- 85–89%
- 70–84%
- 50–69%
- Less than 50%

**Legend for viral load suppression**

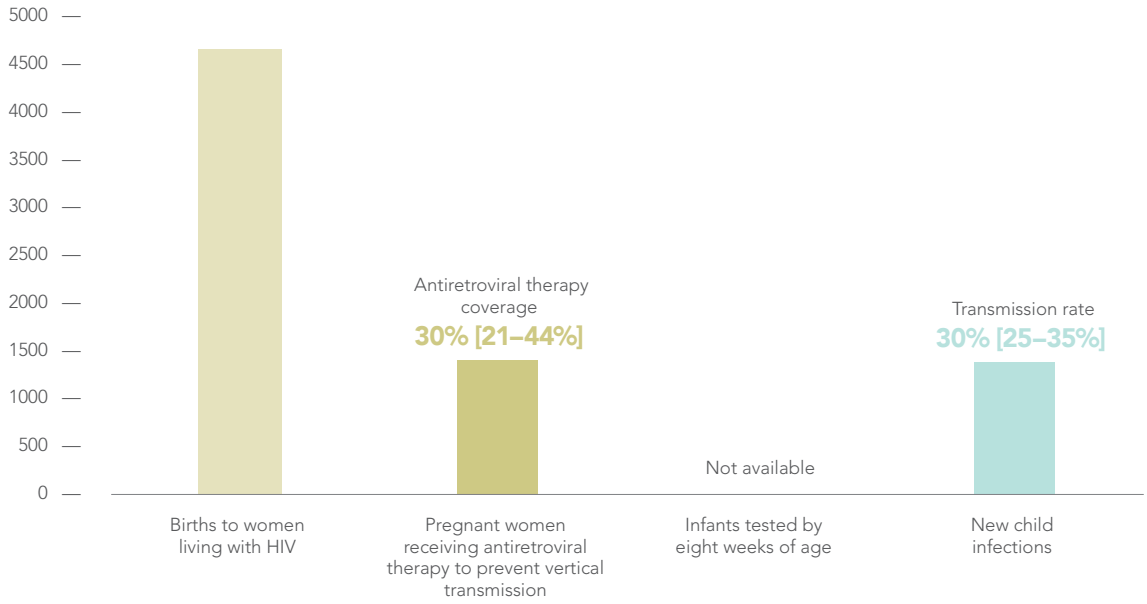
- 86% and above
- 73–82%
- 65–72%
- 40–64%
- Less than 25%

Source: UNAIDS special analysis, 2020 (see methods annex).
Note: Estimates for 2019 except: Djibouti and Yemen (2018).

## People-centred services

FIGURE 11.11

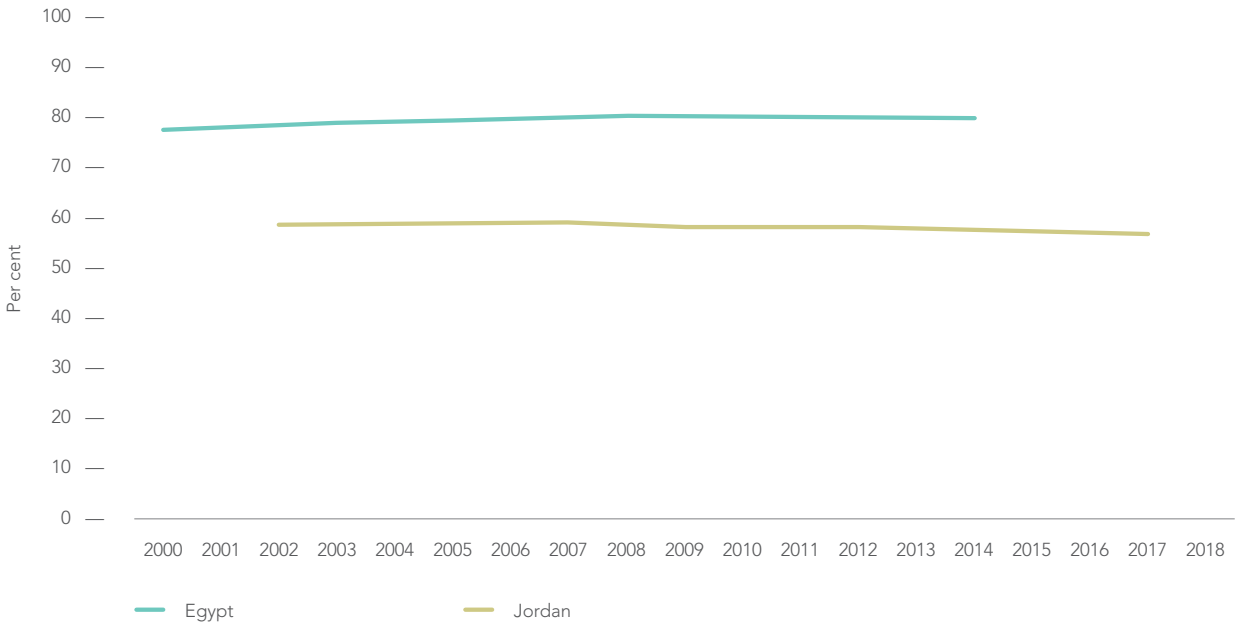
**Services for pregnant women living with HIV, early infant diagnosis, number of new vertical infections and transmission rate, Middle East and North Africa, 2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/); UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 11.12

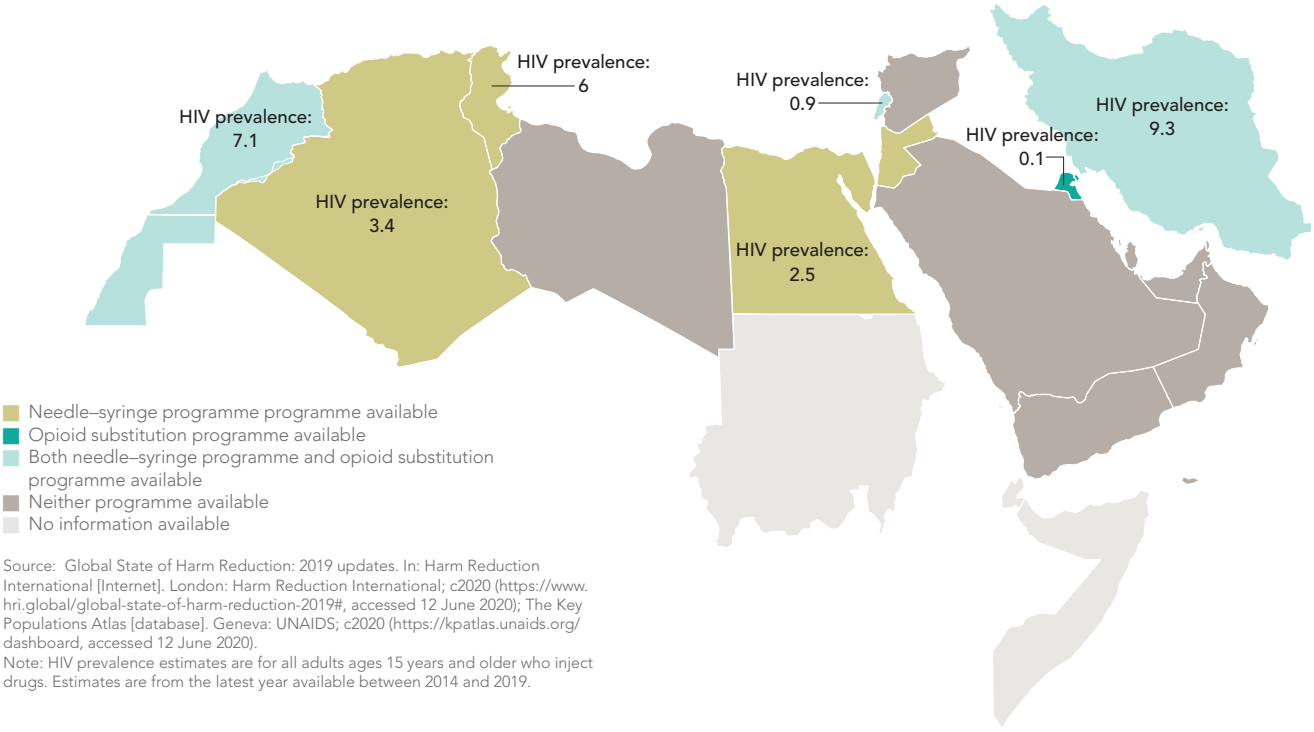
**Women aged 15 to 49 years who have their demand for family planning satisfied by modern methods, countries with available data, Middle East and North Africa, 2000–2018**




Source: Population-based surveys, 2000–2018.
Note: Data for Jordan for 2017–2018 are for currently married women only.

FIGURE 11.13

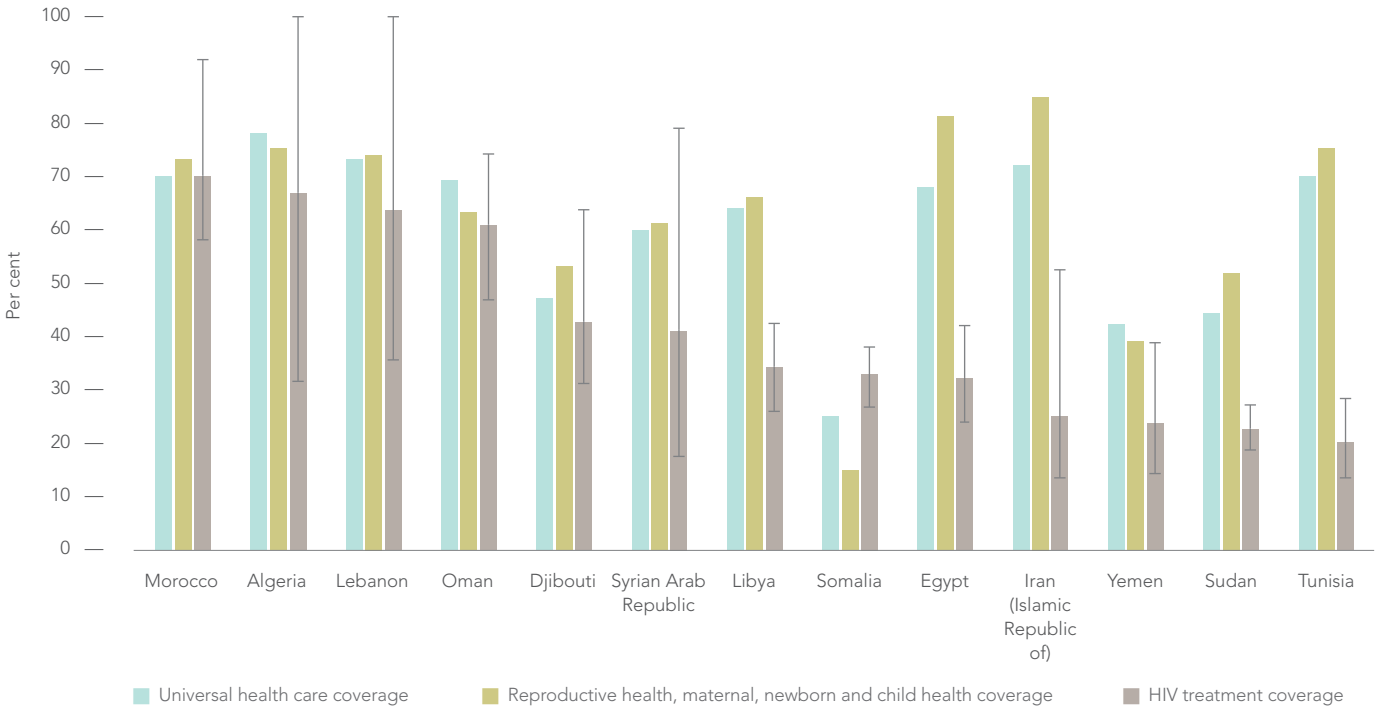
## Availability of harm reduction services and HIV prevalence among people who inject drugs, select countries with available data, Middle East and North Africa, 2019




Source: Global State of Harm Reduction: 2019 updates. In: Harm Reduction International [Internet]. London: Harm Reduction International; c2020 (https://www.hri.global/global-state-of-harm-reduction-2019#, accessed 12 June 2020); The Key Populations Atlas [database]. Geneva: UNAIDS; c2020 (https://kpatlas.unaids.org/dashboard, accessed 12 June 2020).
Note: HIV prevalence estimates are for all adults ages 15 years and older who inject drugs. Estimates are from the latest year available between 2014 and 2019.

FIGURE 11.14

## Antiretroviral therapy coverage among people living with HIV and universal health coverage, Middle East and North Africa, 2019




Source: The Global Health Observatory [database]. Geneva: WHO; c2020 (https://www.who.int/data/gho/data/major-themes/universal-health-coverage-major).
Notes: The Universal Health Coverage Index is a measure of Sustainable Development Goal Indicator 3.8.1, which is coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, noncommunicable diseases, and service capacity and access among the general and most disadvantaged population). Average availability of recent primary data (since 2010) across tracer indicators was used to compute the Universal Health Care Coverage Index. For more information, please see: https://apps.who.int/gho/portal/uhc-service-coverage-v3.jsp

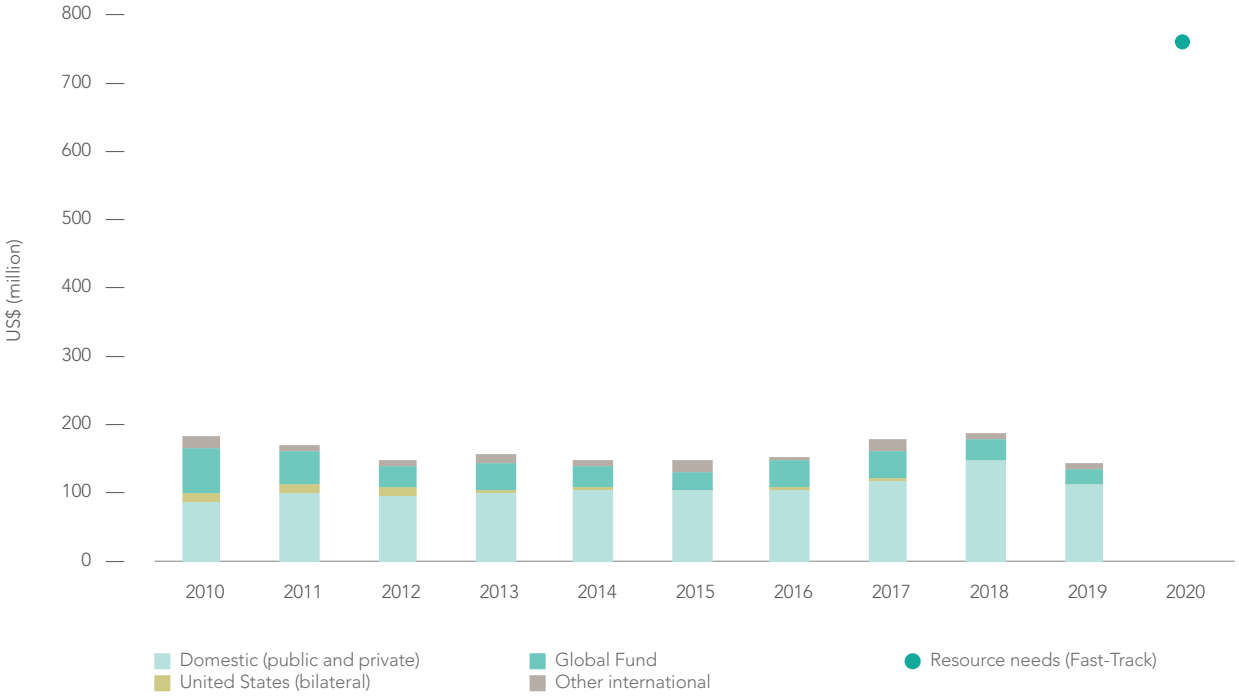
## Investing to end AIDS

Funding in 2019 for HIV responses in the region was just 19% of the 2020 target. Financing steadily increased between 2015 and 2018, followed by a 23% decline between 2018 and 2019.

Domestic funding accounted for 77% of total HIV financing in 2019. The Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) provided 14%, the United States Government provided 2% and other international sources provided 7% of the total. The HIV resource availability from domestic sources increased (after controlling for inflation by comparing constant 2016 US dollars) by 28% from 2010 to 2019, while the resources from the United States government, the Global Fund and all other international sources decreased by 80%, 69% and 30%, respectively.

FIGURE 11.15

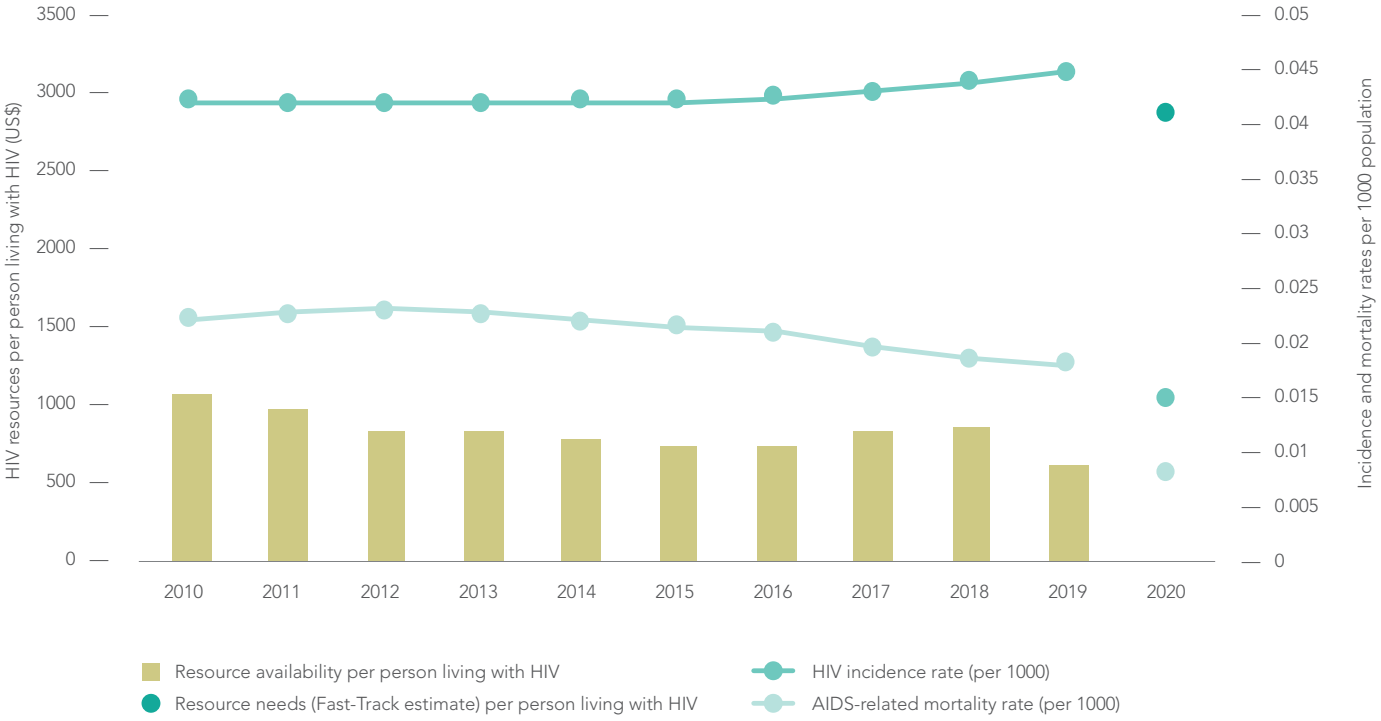
**Resource availability for HIV by source, 2010–2019, and estimated Fast-Track resource needs in 2020, Middle East and North Africa**




Source: UNAIDS financial estimates, 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).

FIGURE 11.16

**Total HIV resource availability per person living with HIV, HIV incidence and AIDS-related mortality rates in low- and middle-income countries, Middle East and North Africa, 2010–2019 and 2020 target**




Source UNAIDS financial estimates, 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).
Note: Resource availability per person living with HIV and resource needs are in constant 2016 US dollars.

# EASTERN EUROPE AND CENTRAL ASIA

## DATA POINTS

**94% OF PREGNANT WOMEN**
LIVING WITH HIV IN THE REGION ARE ACCESSING ANTIRETROVIRAL THERAPY

SINCE 2010, NEW HIV INFECTIONS IN THE REGION HAVE
**INCREASED 72%,**
AND AIDS-RELATED DEATHS HAVE INCREASED 24%

**48% OF INFECTIONS**
IN THE REGION ARE AMONG PEOPLE WHO INJECT DRUGS

AMONG WOMEN WHO HAVE NEWLY ACQUIRED HIV, NEARLY
**TWO THIRDS INJECT DRUGS OR SELL SEX**

Eastern Europe and central Asia is one of only three regions where the HIV epidemic is growing. In 2019, the incidence:prevalence ratio of 10.1 was higher than in any other region. There is an urgent need to scale up HIV prevention services, especially in the Russian Federation, and there is a large gap between HIV testing and treatment initiation. Just 63% [52–71%] of people living with HIV who know their HIV status in the region are on treatment, leaving only 41% [34–46%] of all people living with HIV in the region virally suppressed.

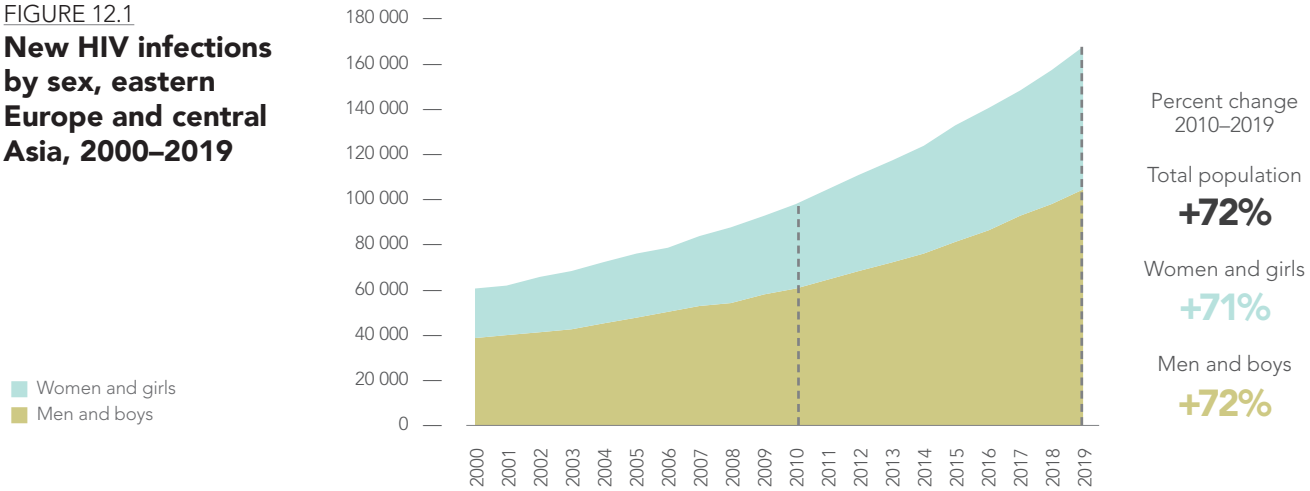
Key populations and their sexual partners are disproportionately impacted, accounting for 99% of new HIV infections in 2019. High levels of stigma and discrimination faced by lesbian, gay, bisexual, transgender and intersex (LGBTI) people and people living with HIV impede the provision of effective combination HIV prevention services. High levels of physical, sexual and emotional violence towards women and girls are also significant barriers to HIV services.

Major efforts are needed to reverse current trends, including increased provision of community-led HIV services—such as HIV self-testing, harm reduction and pre-exposure prophylaxis (PrEP)—that are focused on the most affected groups. Community-based organizations require increased capacity-building support and adequate funding to play their critical role. Improved domestic funding of the national HIV response is also required to minimize dependence on international donors, particularly for key populations programming.

## State of the epidemic

FIGURE 12.1

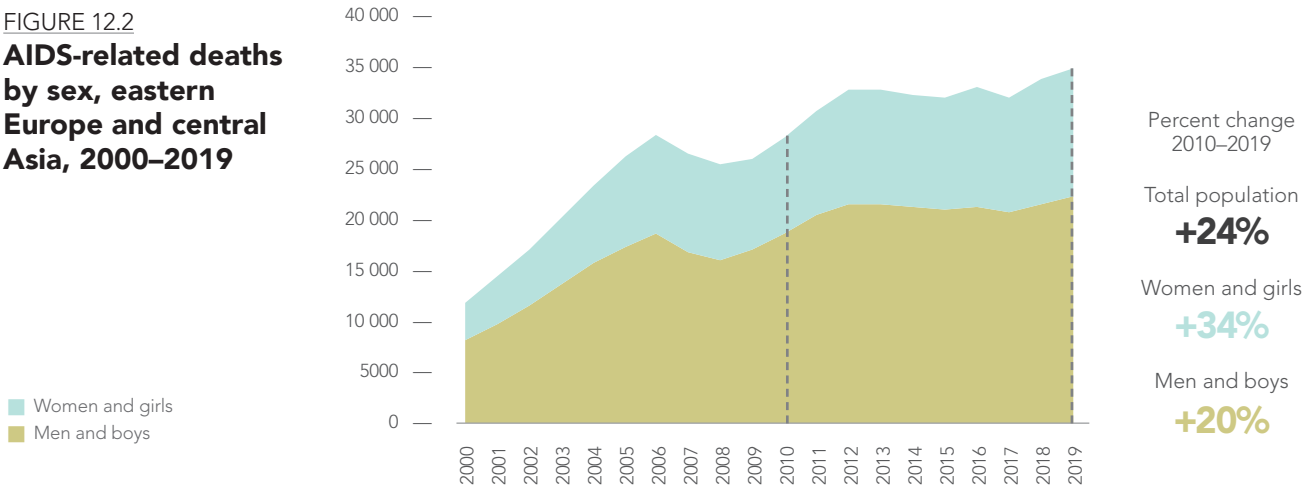
**New HIV infections by sex, eastern Europe and central Asia, 2000–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 12.2

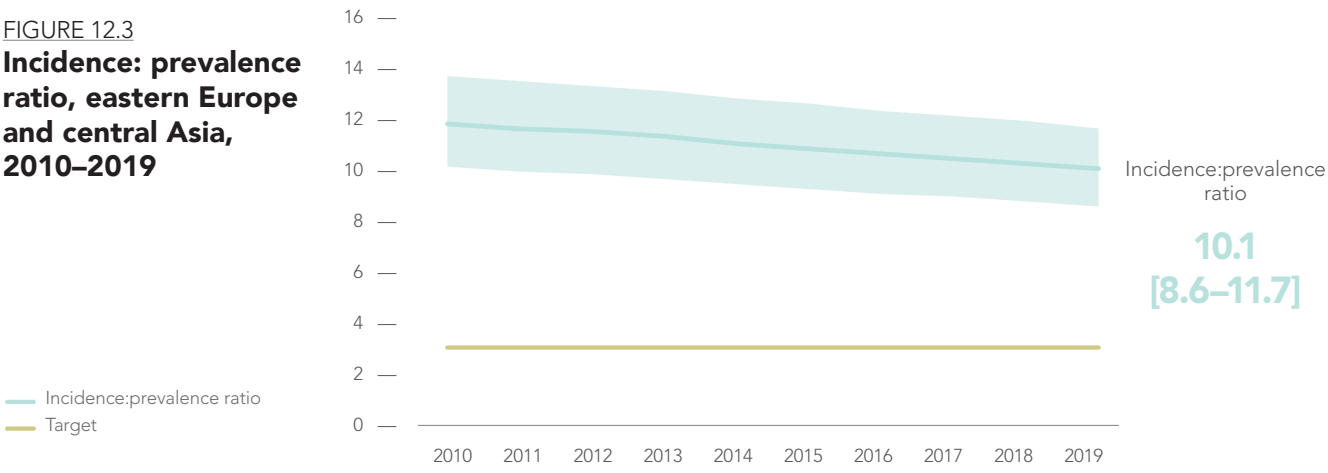
**AIDS-related deaths by sex, eastern Europe and central Asia, 2000–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 12.3

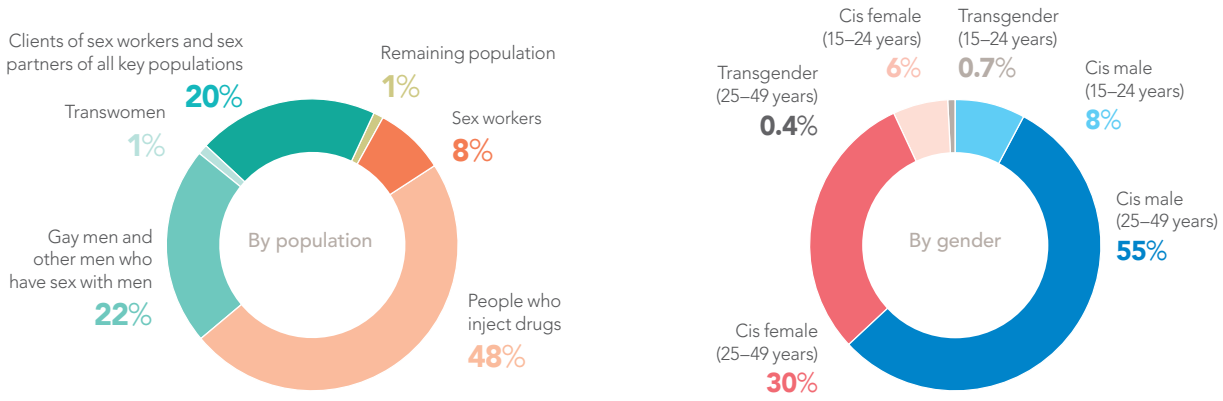
**Incidence: prevalence ratio, eastern Europe and central Asia, 2010–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 12.4

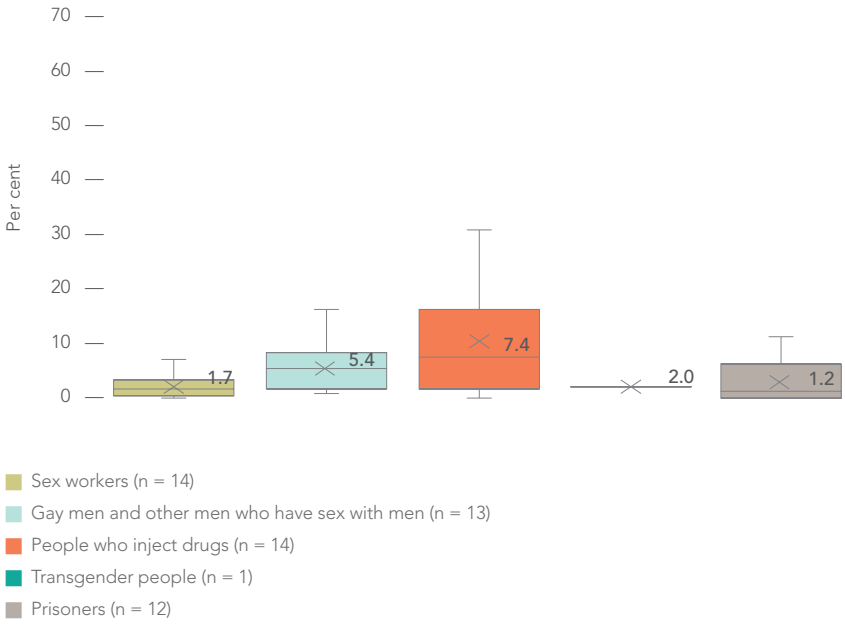
## Distribution of new HIV infections by population (aged 15–49 years), eastern Europe and central Asia, 2019




Source: UNAIDS special analysis, 2020 (see methods annex).

FIGURE 12.5

## HIV prevalence among key populations, eastern Europe and central Asia, 2015–2019




Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/).
Note: (n=number of countries reporting)

TABLE 12.1

## Estimated size of key populations, eastern Europe and central Asia, 2018–2019

| | National adult population (15+), 2018 | National adult population (15+), 2019 | Sex workers | Sex workers as percentage of adult population (15+) | Gay men and other men who have sex with men | Gay men and other men who have sex with men as percentage of adult population (15+) | People who inject drugs | People who inject drugs as percentage of adult population (15+) | Transgender people | Transgender people as percentage of adult population (15+) | Prisoners | Prisoners as percentage of adult population (15+) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Albania | 2 460 000 | 2 470 000 | | | | | | | | | 2800 | 0.11% |
| Armenia | 2 350 000 | 2 340 000 | 4600 | 0.20% | 16 000 | 0.69% | 9000 | 0.38% | | | | |
| Azerbaijan | 7 740 000 | 7 760 000 | 32 000 | 0.41% | 24 000 | 0.31% | 60 000 | 0.78% | | | | |
| Belarus | 9 440 000 | 9 540 000 | | | | | | | | | | |
| Georgia | 3 200 000 | 3 200 000 | | | 19 000 | 0.58% | | | | | 10 000 | 0.31% |
| Kazakhstan | 13 300 000 | 13 300 000 | 21 000 | 0.16% | | | | | | | | |
| North Macedonia | 5 700 000 | 5 800 000 | | | | | 6800 | 0.39% | | | 2300 | 0.13% |
| Tajikistan | 1 750 000 | 1 760 000 | 18 000 | 0.30% | | | | | | | | |
| Ukraine | 37 900 000 | 37 700 000 | 87 000 | 0.23% | 180 000 | 0.47% | 350 000 | 0.92% | | | 53 000 | 0.14% |

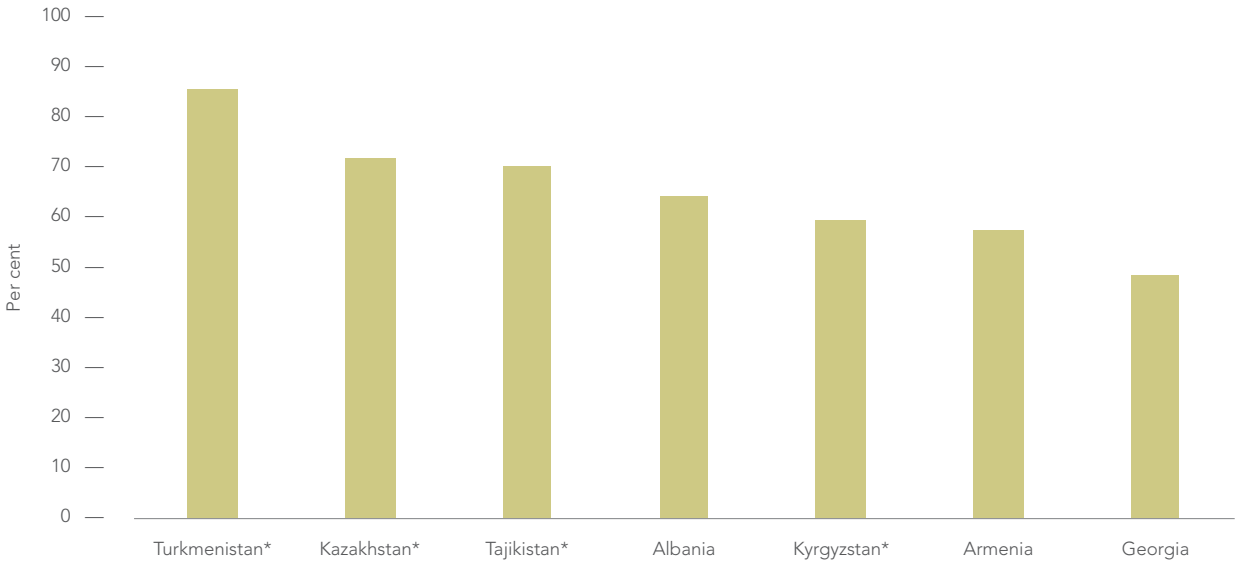
National population size estimate
Local population size estimate
Insufficient data
No data

Sources: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/); Spectrum Demproj module, 2020.
Note: Estimates shown are government-provided estimates reported in 2018–2019. Additional and alternative estimates may be available from different sources, including the Key Populations Atlas (https://kpatlas.unaids.org/), academic publications or institutional documents.

## Stigma and discrimination and violence

FIGURE 12.6

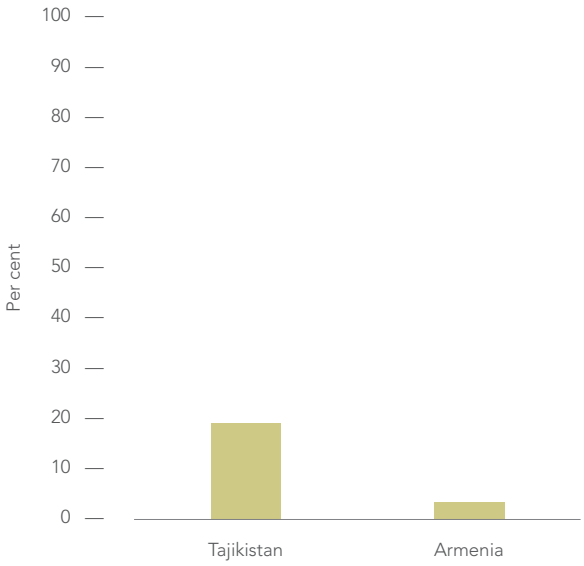
**Percentage of people aged 15 to 49 years who would not purchase vegetables from a shopkeeper living with HIV, eastern Europe and central Asia, 2015–2018**




*Data are for women only.
Source: Population-based surveys, 2015–2018.

FIGURE 12.7

**Ever-married or partnered women aged 15 to 49 years who experienced physical and/or sexual violence by an intimate partner in the past 12 months, countries with available data, eastern Europe and central Asia, 2015–2017**




Source: Population-based surveys, 2015–2017.

## Laws and policies

TABLE 12.2

### Laws and policies scorecard, eastern Europe and central Asia, 2019

| | Criminalization of transgender people | Criminalization of sex work | Criminalization of same-sex sexual acts | Drug use or possession for personal use an offence | Parental consent for adolescents to access HIV testing | Spousal consent for married women to access sexual and reproductive health services |
|---|---|---|---|---|---|---|
| Albania | a | a | a | a | a | a |
| Armenia | a | a | a | a | a | a |
| Azerbaijan | a | b | a | i | p | a |
| Belarus | a | a | a | a | a | a |
| Bosnia and Herzegovina | | c | h | | | |
| Georgia | a | a | a | a | a | a |
| Kazakhstan | a | d | a | j | a | a |
| Kyrgyzstan | a | a | a | a | a | a |
| Montenegro | a | a | a | a | a | a |
| North Macedonia | | g | h | | | |
| Republic of Moldova | a | e | a | a | a | a |
| Russian Federation | a | f | h | k | a | a |
| Tajikistan | a | a | a | a | a | a |
| Turkmenistan | | | h | | | |
| Ukraine | a | a | a | a | a | a |
| Uzbekistan | a | a | h | o | q | a |

a Criminalized and/or prosecuted
Neither criminalized nor prosecuted
Data not available

b Any criminalization or punitive regulation of sex work
c Sex work is not subject to punitive regulations or is not criminalized
d Issue is determined/differs at the subnational level
Data not available

e Death penalty
f Imprisonment or no penalty specified
g Data not available

Laws penalizing same-sex sexual acts have been decriminalized or never existed, or no specific legislation

h Compulsory detention for drug offences

Possession of drugs for personal use or drug use or consumption are specified as a criminal offence

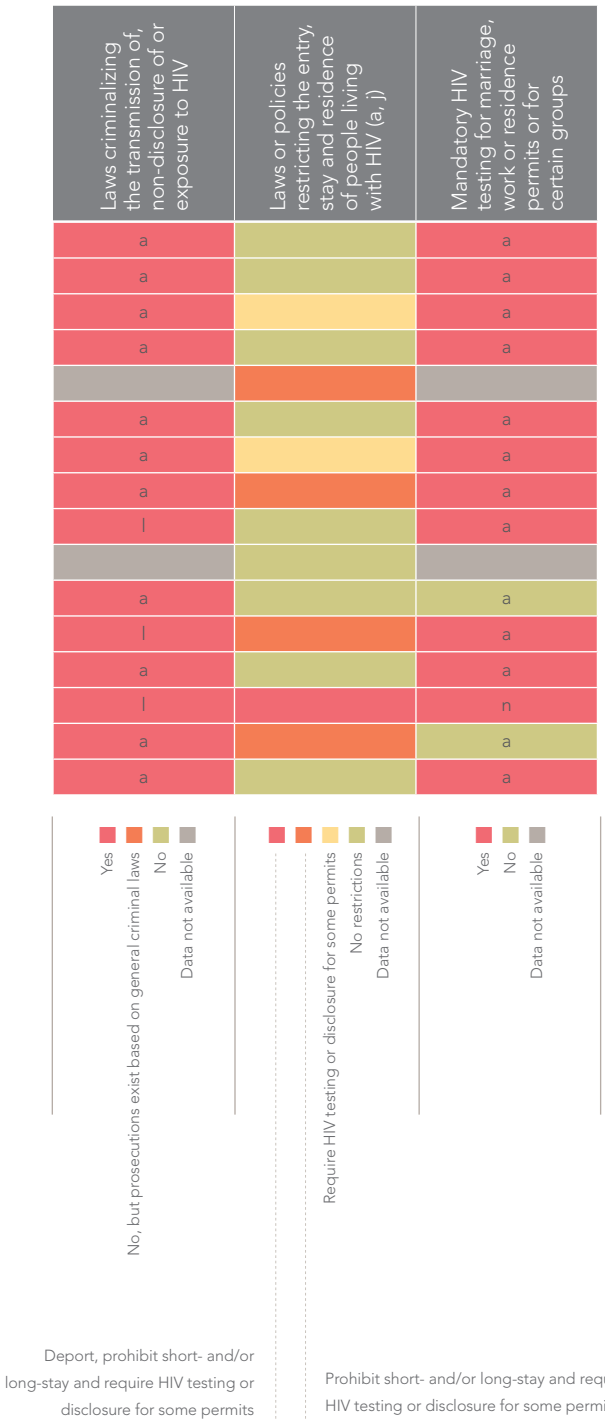
i
j
k Data not available

Possession of drugs for personal use or drug use or consumption is specified as a non-criminal offence

l Yes, for adolescents younger than 18
m Yes, for adolescents younger than 14 or 16
n Yes, for adolescents younger than 12
o No
Data not available

Possession of drugs for personal use or drug use or consumption are not punished by laws or regulations

p Yes
q No
Data not available

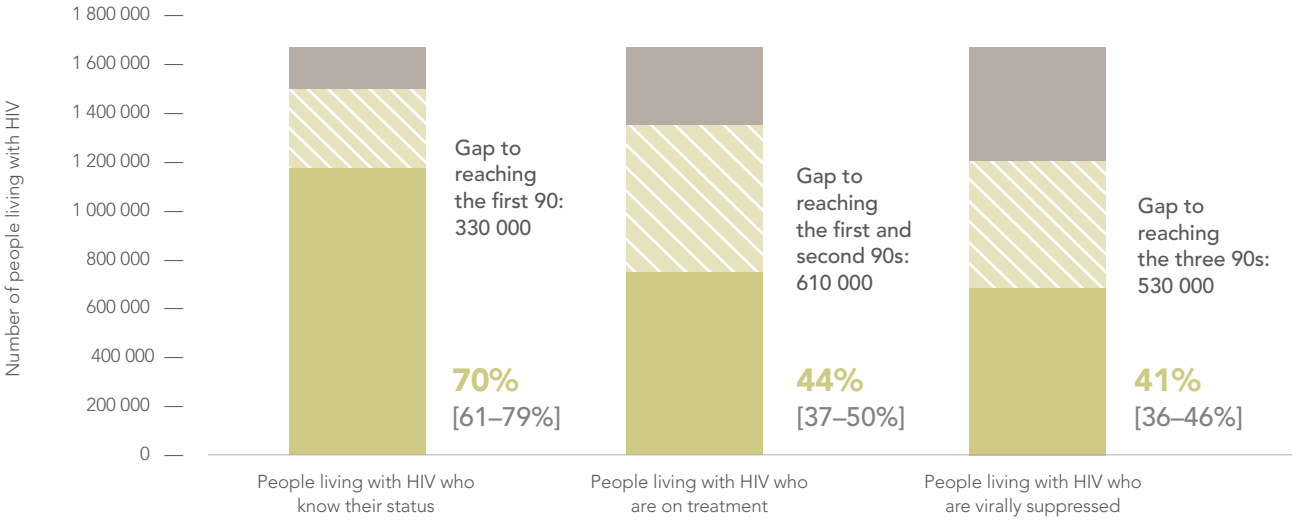



Sources:
a. UNAIDS National Commitments and Policy Instrument, 2019 (see http://lawsandpolicies.unaids.org/).
b. Azerbaijan. Code of the Azerbaijan Republic on Administrative Violations, 2000 (https://www.legislationline.org/download/id/3439/file/Azerbaijan_Code%20on%20Administrative%20offences_2000_eng.pdf).
c. Bosnia and Herzegovina. The Criminal Code of Bosnia and Herzegovina (https://www.legislationline.org/download/id/8499/file/CC_BiH_am2018_eng.pdf).
d. Kazkhstan. Criminal Code. Article 309.
e. The Republic of Moldova. Criminal Code. Article 220.
f. The Russian Federation. The Criminal Code of the Russian Federation. No. 63–Fz of 13 June 1996. Article 241 (http://www.wipo.int/edocs/lexdocs/laws/en/ru/ru080en.pdf).
g. North Macedonia. Law on Misdemeanors against the Public Order. Article 19 (https://www.refworld.org/pdfid/5aa126e07.pdf).
h. Mendos LR. State-sponsored homophobia 2019. 13th ed. Geneva: ILGA: 2019.
i. UNAIDS National Commitments and Policy Instrument, 2017 (see http://lawsandpolicies.unaids.org/).
j. Kazakhstan. Penal Code. Article 296 (https://www.unodc.org/res/cld/document/penal-code_html/New_penal_code.pdf).
k. The Russian Federation. The Criminal Code of the Russian Federation. No. 63–Fz of 13 June 1996. Article 228, amended in 2012 (http://www.wipo.int/edocs/lexdocs/laws/en/ru/ru080en.pdf).
l. Cameron S, Bernard EJ. Advancing HIV justice 3: growing the global movement against HIV criminalisation. Amsterdam: HIV Justice Network; May 2019.
m. Still not welcome: HIV-related travel restrictions. Geneva: UNAIDS, UNDP; 2019 (https://www.unaids.org/sites/default/files/media_asset/hiv-related-travel-restrictions-explainer_en.pdf).
n. Turkmenistan. Law of Turkmenistan on the Prevention of the Spread of Diseases Caused by the Human Immunodeficiency Virus (HIV), 2016. Article 13 (http://www.parahat.info/law/2016-04-06-zakon-turkmenistana-oprotivodeystvii-rasprostraneniyu-zabolevaniya-vyzyvaemogo-virusom-immunodeficita-cheloveka-vich-infekciya).
o. Uzbekistan. Criminal Code of the Republic of Uzbekistan (https://www.ctbto.org/fileadmin/user_upload/pdf/Legal_documents/national_provisions/Uzbekistan_CriminalCode_220994.pdf).
p. Azerbaijan Laws of the Republic of Azerbaijan dated October 17, 2014 No. 1070-IVQD, April 5, 2016 No. 197-VQD, May 4, 2018 No. 1131-VQD (http://ecuo.org/mvdev/wp-content/uploads/sites/4/2016/09/AIDS-zakon.pdf).
q. Analytical review of the legislation of the Republic of Uzbekistan on human rights in the context of HIV / AIDS. - Tashkent. National Center of the Republic of Uzbekistan for human rights. 2019.40 p. (https://www.unodc.org/documents/centralasia/2019/_RU_12.02.pdf).

## HIV testing and treatment

FIGURE 12.8

**HIV testing and treatment cascade, eastern Europe and central Asia, 2019**




Source: UNAIDS special analysis, 2020 (see methods annex).

TABLE 12.3

## 90–90–90 country scorecard: eastern Europe and central Asia, 2019

| | First 90: percentage of people living with HIV who know their status | | | Second 90: percentage of people who know their status who are on treatment | | | Third 90: percentage of people living with HIV on treatment who are virally suppressed | | | **Viral load suppression: percentage of people living with HIV who are virally suppressed** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) |
| **Eastern Europe and central Asia** | 70 | 72 | 69 | 63 | 66 | 59 | 93 | 93 | 93 | 41 | 44 | 38 |
| Albania | 71 | 86 | 66 | 60 | 64 | 58 | 79 | 81 | 78 | 34 | 44 | 30 |
| Armenia | 75 | 75 | 75 | 83 | 85 | 80 | 88 | 93 | 86 | 55 | 59 | 52 |
| Azerbaijan | 70 | 60 | 74 | 75 | 83 | 71 | 81 | 90 | 76 | 42 | 45 | 40 |
| Belarus | | | | | | | 75 | 75 | 75 | 48 | 49 | 47 |
| Bosnia and Herzegovina | | | | | | | | | | | | |
| Georgia | 64 | 60 | 66 | 87 | 91 | 86 | 91 | 91 | 91 | 51 | 49 | 52 |
| Kazakhstan | 77 | 93 | 68 | 68 | 73 | 64 | 80 | 80 | 80 | 42 | 55 | 35 |
| Kyrgyzstan | 62 | 73 | 54 | 64 | 70 | 56 | 82 | 86 | 79 | 33 | 44 | 24 |
| Montenegro | 66 | 64 | 67 | 74 | 75 | 74 | 94 | 100 | 93 | 46 | 48 | 46 |
| North Macedonia | | | | | | | 93 | 100 | 93 | | | |
| Republic of Moldova | 64 | 79 | 56 | 71 | 74 | 69 | 84 | 85 | 83 | 38 | 49 | 32 |
| Russian Federation | | | | | | | | | | | | |
| Tajikistan | 63 | 97 | 48 | 82 | 89 | 73 | 73 | 76 | 70 | 37 | 65 | 25 |
| Turkmenistan | | | | | | | | | | | | |
| Ukraine | 67 | 70 | 65 | 80 | 82 | 78 | 95 | 95 | 95 | 51 | 54 | 48 |
| Uzbekistan* | | | | | | | | | | | | |

**Legend for 90–90–90**

- 95% and above
- 90–94%
- 85–89%
- 70–84%
- 50–69%
- Less than 50%

**Legend for viral load suppression**

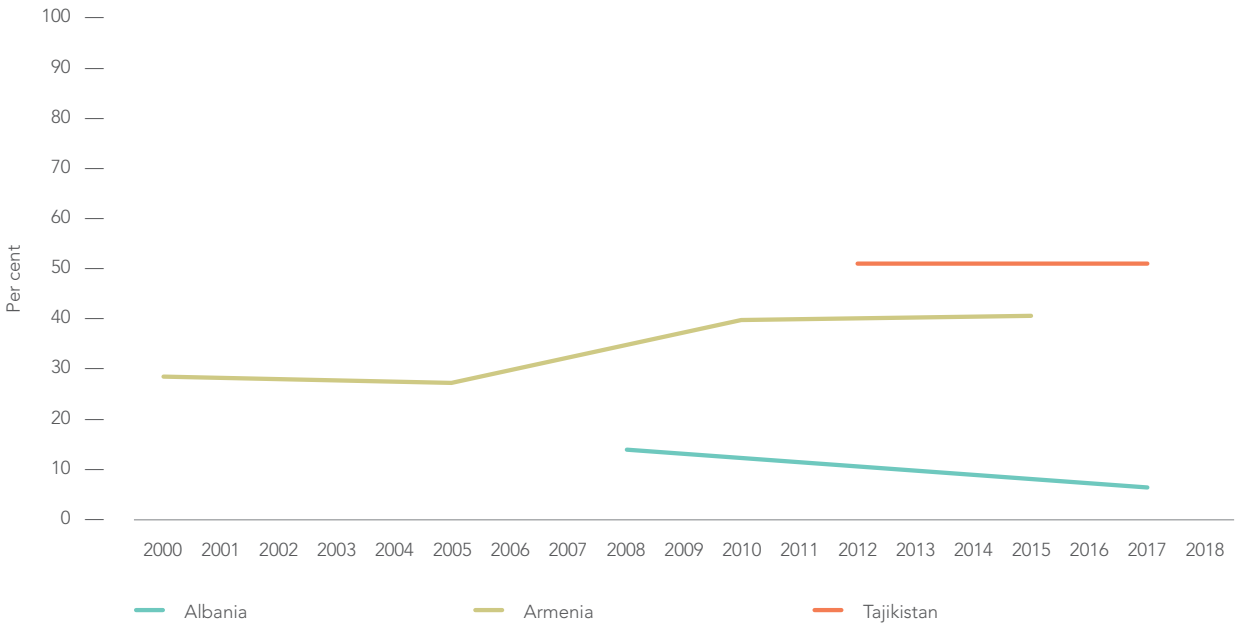
- 86% and above
- 73–82%
- 65–72%
- 40–64%
- 25–39%
- Less than 25%

* Unable to reconcile final estimates in time for the final report
Source: UNAIDS special analysis, 2020 (see methods annex).
Note: Estimates for 2019 except: North Macedonia (2017).

## People-centred services

FIGURE 12.9

**Women aged 15 to 49 years who have their demand for family planning satisfied by modern methods, countries with available data, eastern Europe and central Asia, 2000–2018**

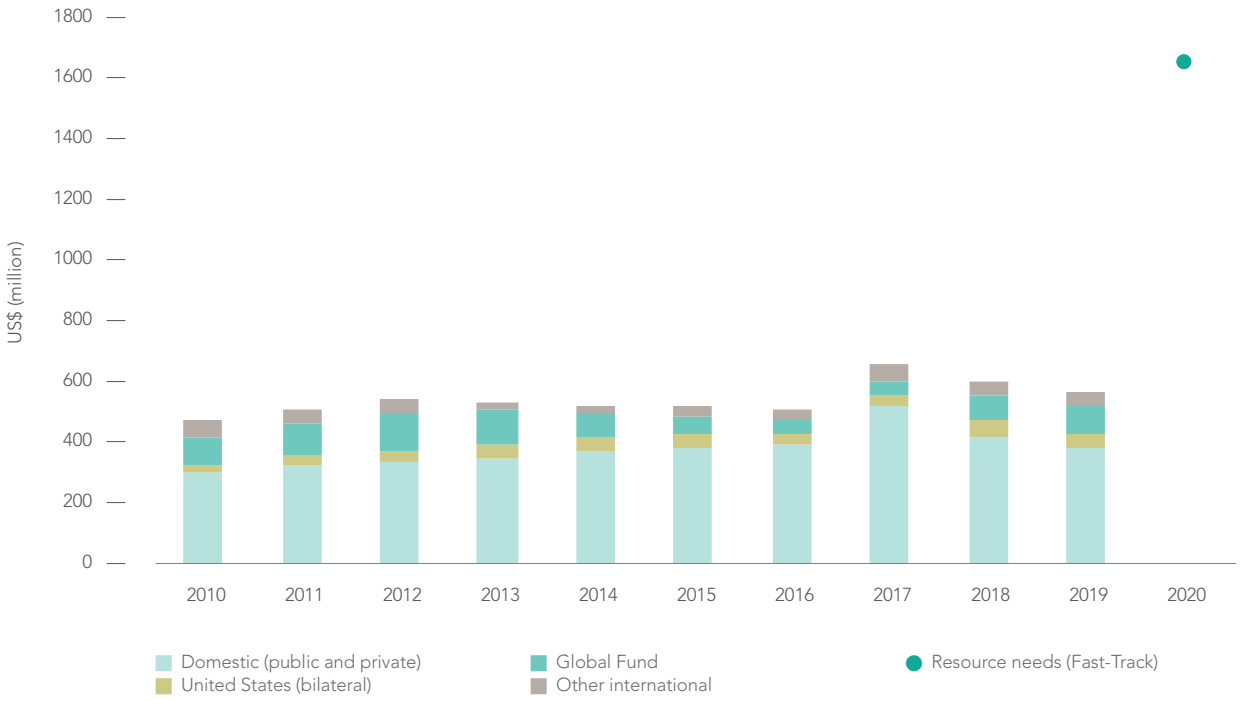



Source: Population-based surveys, 2000–2018.

## Investing to end AIDS

FIGURE 12.10

**Resource availability for HIV by source, 2010–2019, and estimated Fast-Track resource needs in 2020, eastern Europe and central Asia**




Source: UNAIDS financial estimates, 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).

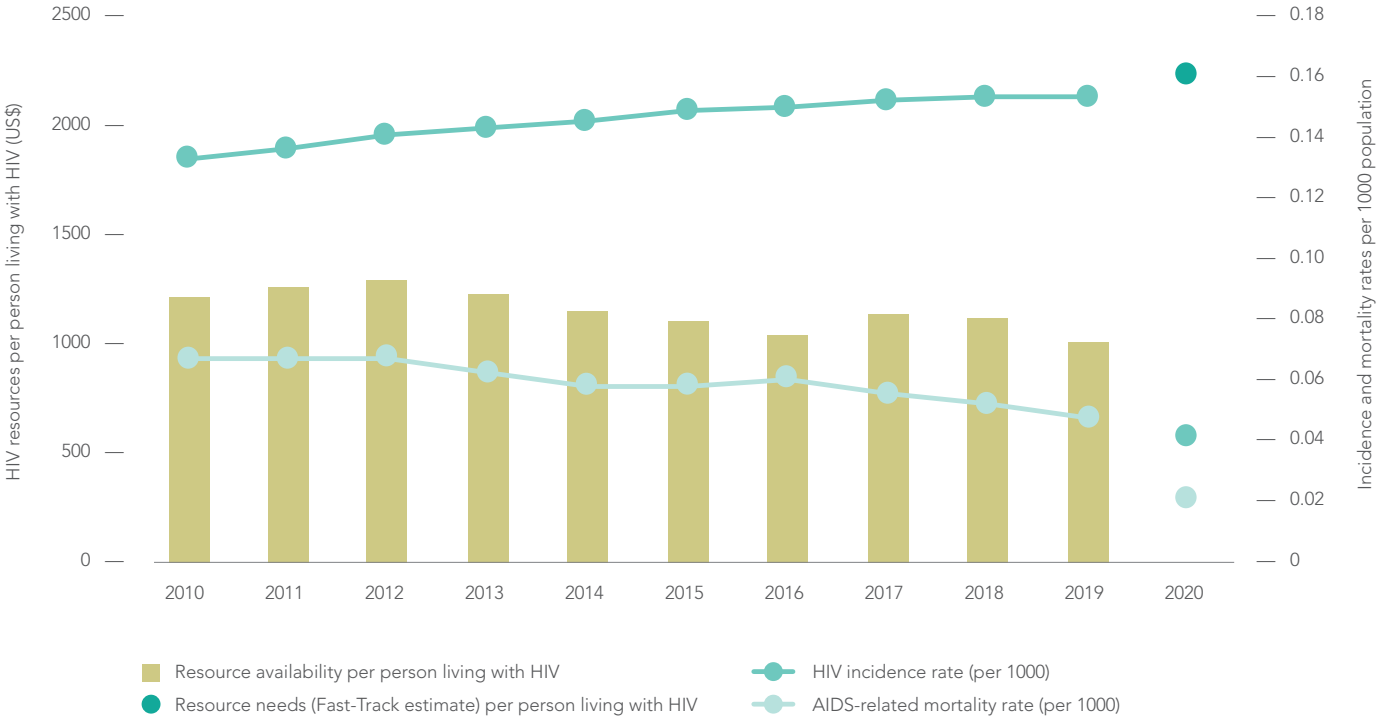
Funding for HIV responses in eastern Europe and central Asia (excluding the Russian Federation) peaked in 2017, before declining by 14% between 2017 and 2019, leaving the region at just 56% of its 2020 resource target.

The main funding source for the region's HIV response is domestic funding, accounting for 67% of the total in 2019. That same year, United States Government bilateral sources provided 10% of the total, the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) provided 15% and other international donors provided 9%.

HIV response funding from domestic sources increased by 24% from 2010 to 2019, while contributions from the Global Fund and all other international sources decreased by 10% (all trends are measured in constant 2016 US dollars to control for inflation). Bilateral United States Government funding tripled during the nine-year period. The longer term trends obscure a recent decline in resources for HIV responses. Between 2017 and 2019, increased contributions from United States Government bilateral and Global Fund sources of 2% and 6%, respectively, were outweighed by decreases in domestic resource availability and financing from other international sources of 9% and 10%, respectively. The Global Fund was the only source that increased its funding between 2018 and 2019.

FIGURE 12.11

**Total HIV resource availability per person living with HIV, HIV incidence and AIDS-related mortality rates in low- and middle-income countries, eastern Europe and central Asia, 2010–2019 and 2020 target**




Source UNAIDS financial estimates, 2020 (see http://hivfinancial.unaids.org/hivfinancialdashboards.html).
Note: Resource availability per person living with HIV and resource needs are in constant 2016 US dollars.

# WESTERN AND CENTRAL EUROPE AND NORTH AMERICA

## DATA POINTS

LOW HIV INCIDENCE AND HIGH TREATMENT COVERAGE HAVE SEEN THE REGION ACHIEVE THE

**INCIDENCE: PREVALENCE RATIO BENCHMARK OF 3.0**

**MORE THAN 4 IN 5 PEOPLE LIVING WITH HIV**

ARE ON TREATMENT, AND 2 IN 3 ARE VIRALLY SUPPRESSED

**HIV PREVALENCE REMAINS HIGH AMONG KEY POPULATIONS,**

INCLUDING TRANSGENDER PEOPLE (6.9%) AND GAY MEN AND OTHER MEN WHO HAVE SEX WITH MEN (5.8%)

KEY POPULATIONS AND THEIR SEX PARTNERS ACCOUNTED FOR

**96% OF HIV INFECTIONS IN THE REGION IN 2019**

Strong HIV responses in most of western and central Europe and North America have seen this high-income region achieve an incidence:prevalence ratio of 3.0, which signals steady reductions in new HIV infections and that most people living with HIV are accessing treatment and living long and healthy lives.

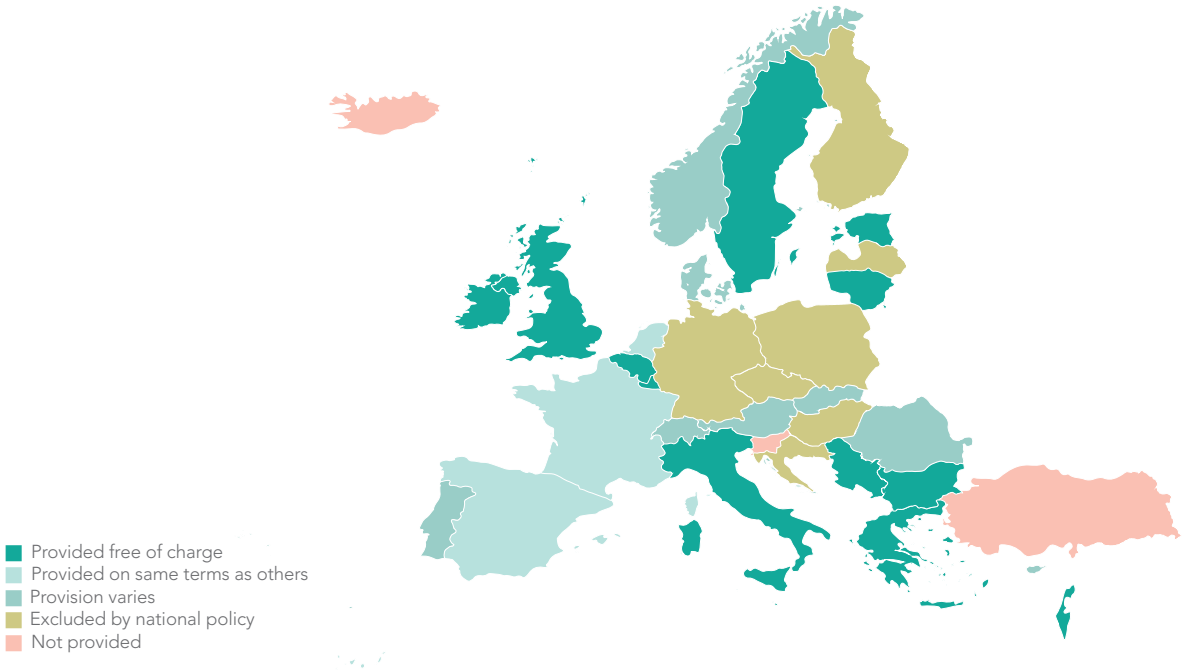
HIV testing and treatment coverage in the region is approaching the 2020 targets, with 88% [70–100%] of people living with HIV knowing their HIV status, 81% [62–98%] on treatment and 67% [53–80%] with durably suppressed viral loads. High coverage of pre-exposure prophylaxis (PrEP) in several cities of the region has contributed to reductions in new HIV infections among gay men and other men who have sex with men.

This aggregate success obscures many challenges. In western and central Europe, undocumented migrants living in insecure and precarious situations have less access to HIV services, including HIV treatment (Figure 13.1) and new prevention tools (such as PrEP). In the United States of America, black and Latino people are disproportionately affected by HIV, with HIV diagnosis rates that are several-fold higher than among whites and Asians (Figure 13.2).

Gay men and other men who have sex with men accounted for nearly two thirds of new HIV infections in the region in 2019. More than one third (36%) of total infections were among young gay men and other men who have sex with men (aged 15 to 24 years).

FIGURE 13.1

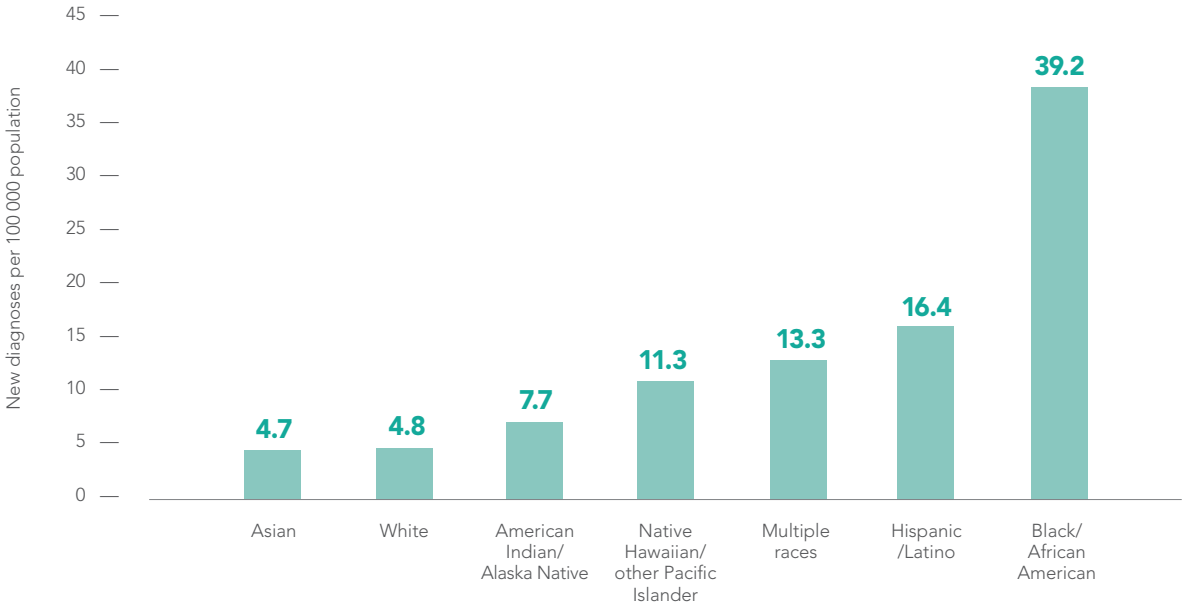
## Access to antiretroviral therapy for undocumented migrants, western and central Europe, 2018




Source: HIV and migrants: monitoring implementation of the Dublin Declaration on partnership to fight HIV/AIDS in Europe and Central Asia (2018 progress report). Stockholm: European Centre for Disease Prevention and Control; 2019 (https://www.ecdc.europa.eu/en/publications/hiv-migrants-monitoring-implementation-dublin-declaration-2018-progress-report).
Note: the "key" indicator that best describes the experience of access to treatment for undocumented migrants (as identified by countries) is recorded.

FIGURE 13.2

## Rate of new HIV diagnoses in the United States of America, by ethnic group, 2018

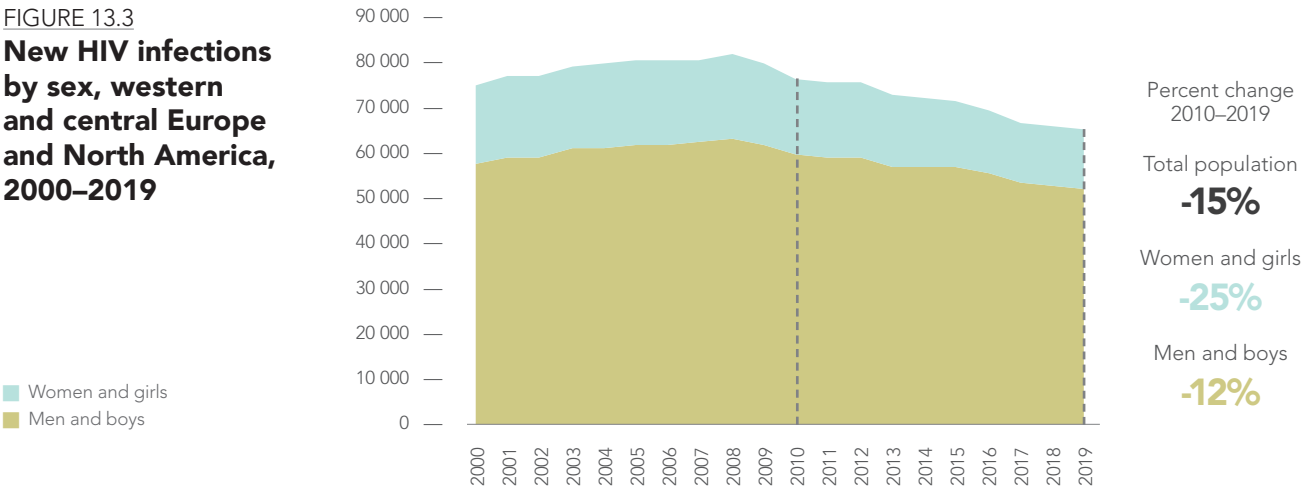



Source: Diagnoses of HIV Infection in the United States and Dependent Areas, 2018: Diagnoses [database]. Last reviewed 7 May 2020. Atlanta: United States Centers for Disease Control and Prevention; 2020 (https://www.cdc.gov/hiv/library/reports/hiv-surveillance/vol-31/content/diagnoses.html#data).
Note: Rates of new HIV diagnoses per 100 000 population

## State of the epidemic

FIGURE 13.3

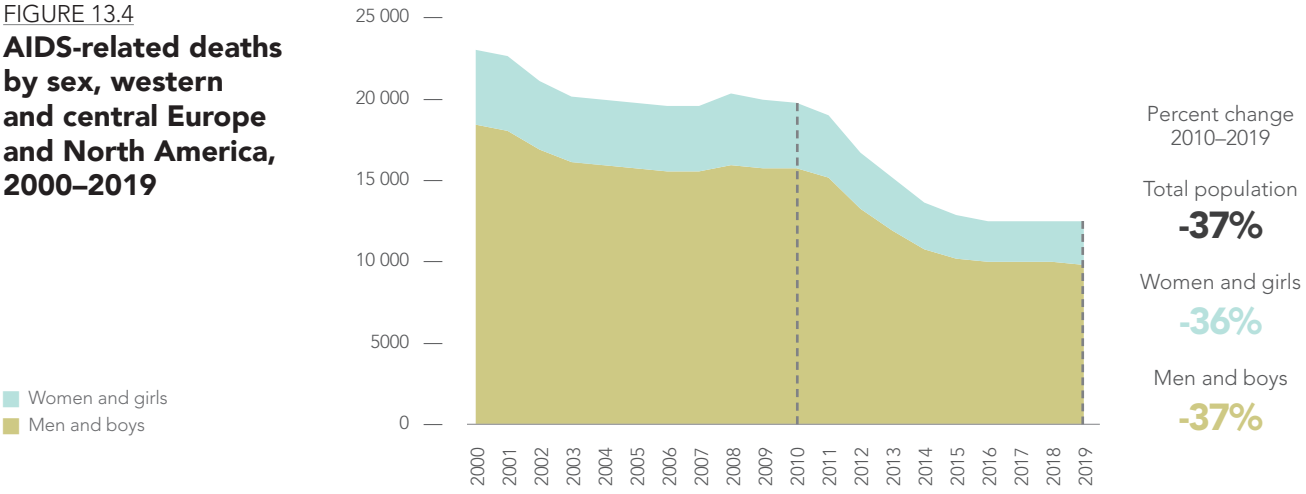
**New HIV infections by sex, western and central Europe and North America, 2000–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 13.4

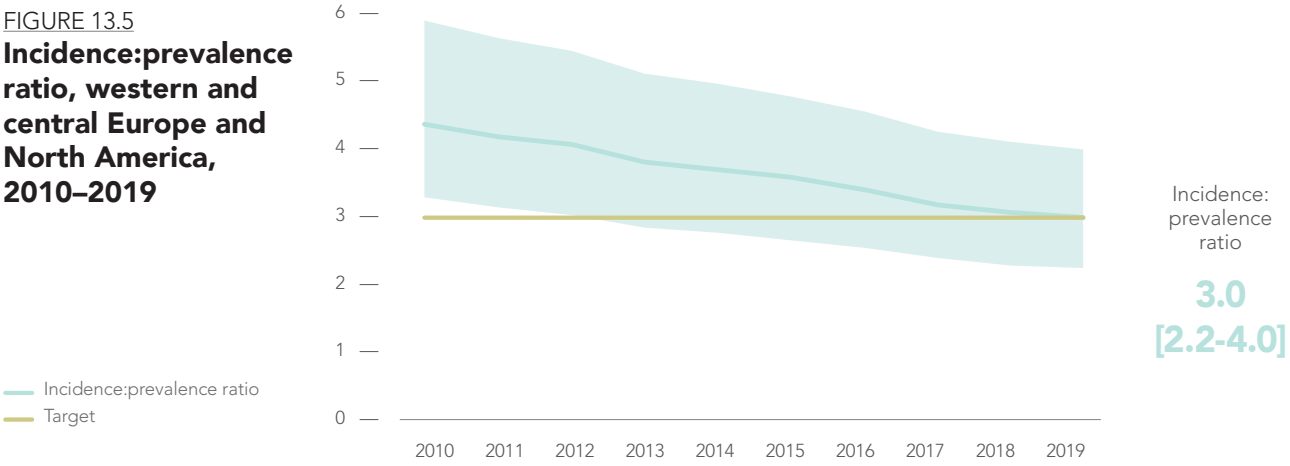
**AIDS-related deaths by sex, western and central Europe and North America, 2000–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 13.5

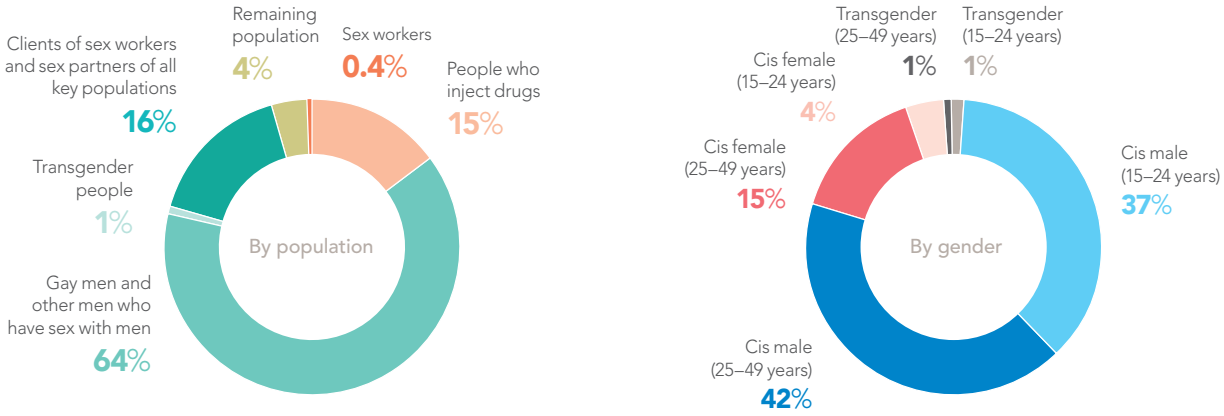
**Incidence:prevalence ratio, western and central Europe and North America, 2010–2019**




Source: UNAIDS epidemiological estimates, 2020 (see https://aidsinfo.unaids.org/).

FIGURE 13.6

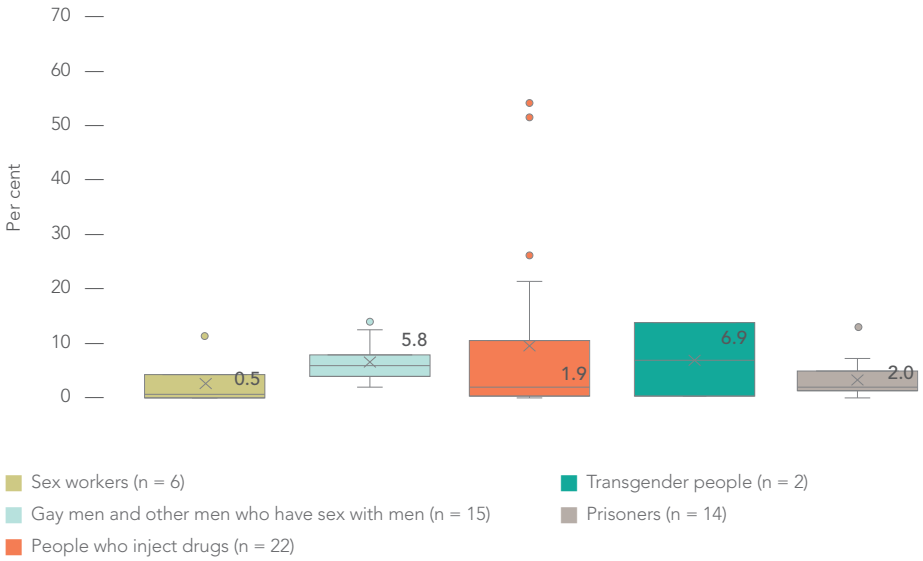
## Distribution of new HIV infections by population (aged 15–49 years), western and central Europe and North America, 2019




Source: UNAIDS special analysis, 2020 (see methods annex).

FIGURE 13.7

## HIV prevalence among key populations, western and central Europe and North America, 2015–2019




Source: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/)
Note (n=number of countries reporting).

TABLE 13.1

## Estimated size of key populations, western and central Europe and North America, 2018–2019

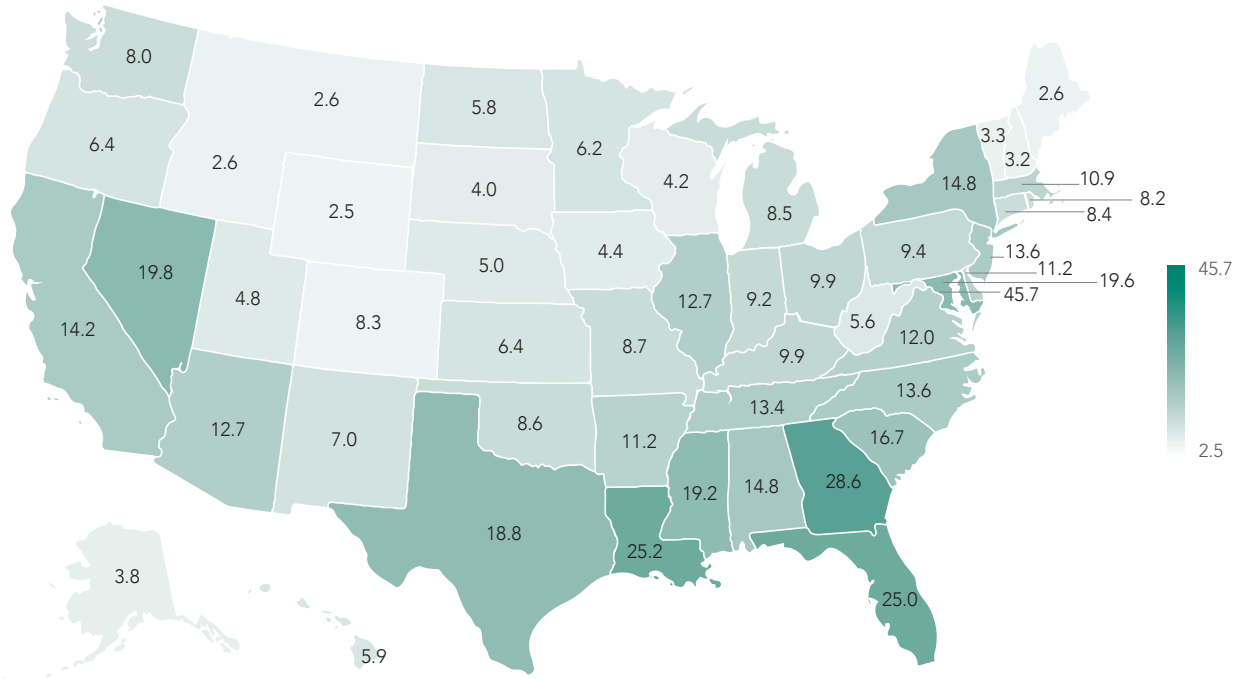
| Country | National adult population (15+), 2018 | National adult population (15+), 2019 | Sex workers | Sex workers as percentage of adult population (15+) | Gay men and other men who have sex with men | Gay men and other men who have sex with men as percentage of adult population (15+) | People who inject drugs | People who inject drugs as percentage of adult population (15+) | Transgender people | Transgender people as percentage of adult population (15+) | Prisoners | Prisoners as percentage of adult population (15+) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Canada | 31 000 000 | 31 200 000 | | | | | | | | | 14 000 | 0.05% |
| Czechia | 8 960 000 | 8 970 000 | | | | | | | | | 22 000 | 0.24% |
| Estonia | 1 090 000 | 1 080 000 | | | | | | | | | 2100 | 0.19% |
| Israel | 6 170 000 | 6 170 000 | | | | | | | | | | |
| Serbia | 7 290 000 | 7 310 000 | | | | | | | | | | |
| United States of America | 265 200 000 | 267 100 000 | | | | | | | 1 000 000 | 0.38% | | |

National population size estimate
Local population size estimate
Insufficient data
No data

Sources: UNAIDS Global AIDS Monitoring, 2020 (see https://aidsinfo.unaids.org/); Spectrum Demproj module, 2020.
Note: Estimates shown are government-provided estimates reported in 2018–2019. Additional and alternative estimates may be available from different sources, including the Key Populations Atlas (https://kpatlas.unaids.org/), academic publications or institutional documents.

FIGURE 13.8

**Rate of HIV diagnoses, by state, United States of America, 2018**

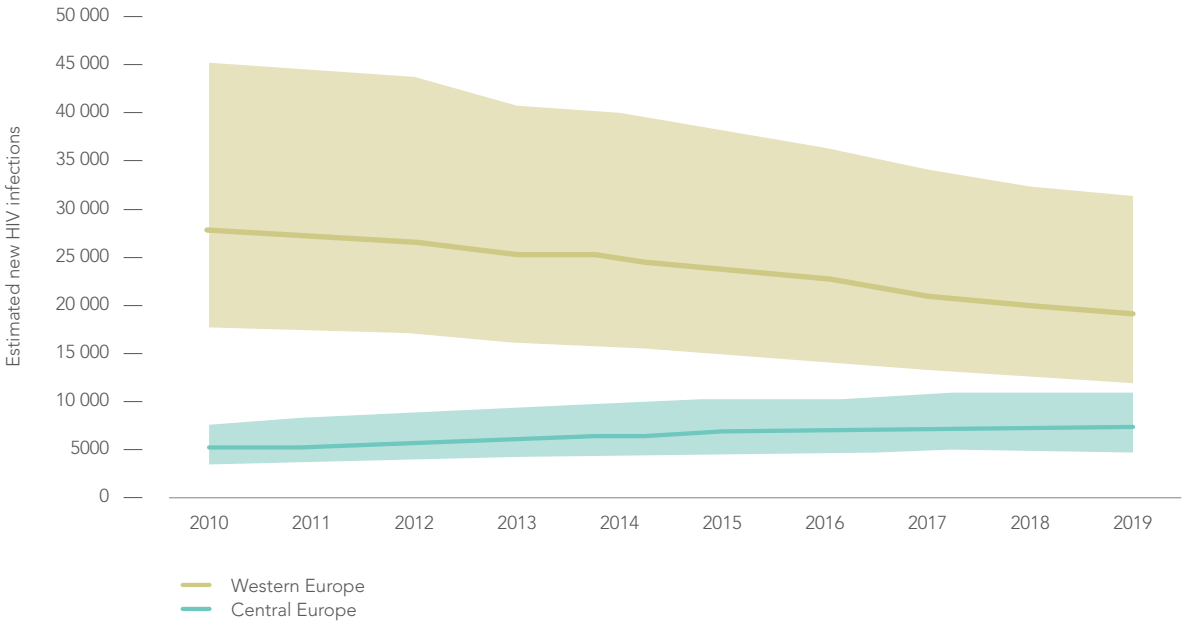



Source: Table 18. Diagnoses of HIV Infection, by Area of Residence, 2017 and 2018–United States and 6 Dependent Areas. In: Diagnoses of HIV Infection in the United States and Dependent Areas, 2018: Diagnoses [database]. Last reviewed 7 May 2020. Atlanta: United States Centers for Disease Control and Prevention; c2020 (https://www.cdc.gov/hiv/library/reports/hiv-surveillance/vol-31/content/tables.html).
Note: Rates are per 100 000 population and represent new HIV diagnoses amongst adults and adolescents (aged 13 years and older), 2018.

The HIV epidemics within both North America and western and central Europe have important geographic differences. New diagnoses continue to decline in the United States, but there is substantial variation by subpopulation, geography and ethnicity. Many southern states have much higher rates of HIV diagnosis than the national average, as do California, Maryland, the District of Columbia, Nevada and New York.

FIGURE 13.9

**Estimated new HIV infections in West and Centre Europe, by region, 2010–2019**



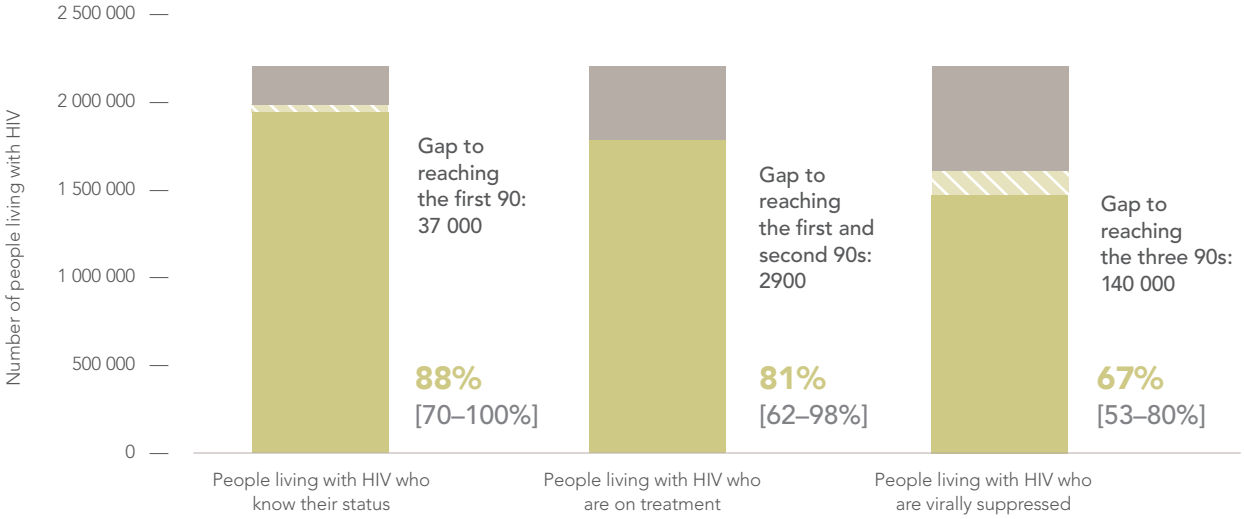

Note: The figure reflects the West and Centre subregions of the WHO European Region with the following modifications. The Centre subregion was modified to reflect the UNAIDS western and central Europe subregion: Estonia, Latvia and Lithuania are included, and Albania, Bosnia and Herzegovina, Montenegro and North Macedonia are excluded.
Source: UNAIDS special analysis, 2020, using UNAIDS epidemiological estimates 2010–2020 (see methods section and https://aidsinfo.unaids.org/).

There are stark differences in the trends of new HIV infections in western Europe and central Europe. The 20 countries in the western part of the continent saw a 30% decline in infections between 2010 and 2019, while annual HIV infections in 14 countries in central Europe saw HIV infections rise by 45% over the same period.

## HIV testing and treatment

FIGURE 13.10

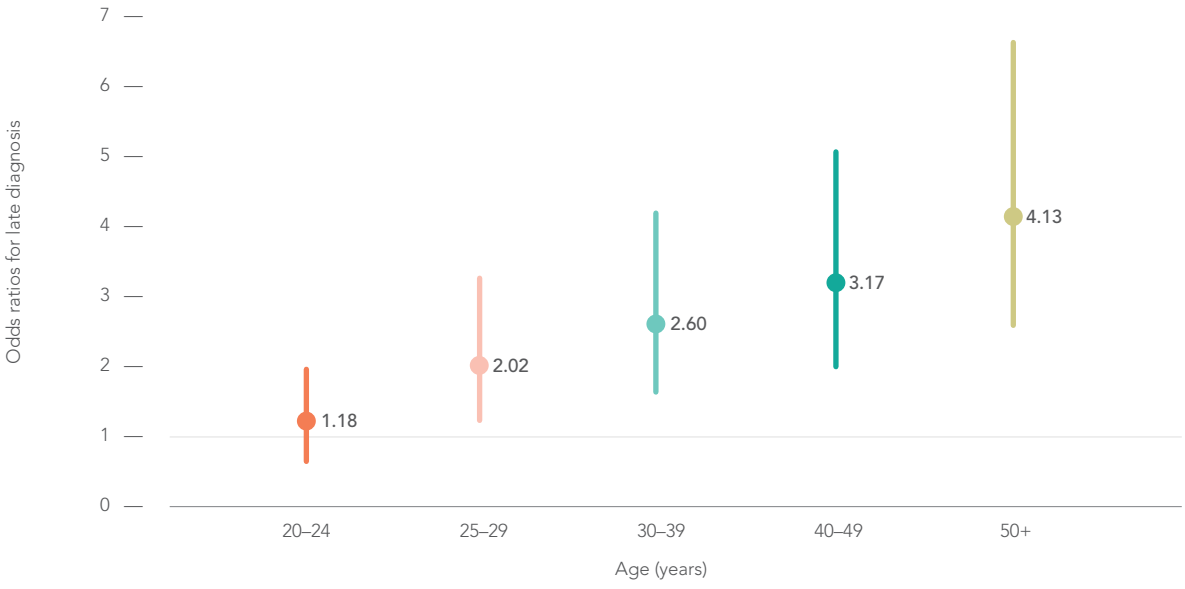
### HIV testing and treatment cascade, western and central Europe and North America, 2019




Source: UNAIDS special analysis, 2020 (see methods annex).

FIGURE 13.11

### Late HIV diagnosis among women, by age group, western Europe, 2018




Source: Mårdh O, Quinten C, Kuchukhidze G, Seguy N, Dara M, Amato-Gauci A et al. HIV among women in the WHO European Region – epidemiological trends and predictors of late diagnosis, 2009–2018. Eurosurveillance. 2019;24(48):pii=1900696.
Note: Adjusted odds ratios with whiskers representing 95% confidence intervals. Late diagnosis defined as CD4 ≤350 cells/mm3 at diagnosis. Reference population is women diagnosed with HIV aged 15 to 19 years. Sample size = 3614.

More than half of women diagnosed with HIV in the World Health Organization (WHO) European Region in 2018 were diagnosed late, and late diagnosis was much more common among older women living with HIV. Understanding the characteristics of women diagnosed with HIV can inform gender-sensitive prevention services, including PrEP and early testing and linkage to care.

TABLE 13.2

## 90–90–90 country scorecard, western and central Europe and North America, 2019

| | First 90: percentage of people living with HIV who know their status | | | Second 90: percentage of people who know their status who are on treatment | | | Third 90: percentage of people living with HIV on treatment who are virally suppressed | | | **Viral load suppression: percentage of people living with HIV who are virally suppressed** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) |
| **Western and central Europe and North America** | 88 | 90 | 88 | 92 | 89 | 92 | 82 | 83 | 82 | 67 | 67 | 66 |
| Andorra | | | | | | | | | | | | |
| Austria | | | | | | | | | | | | |
| Belgium | | | | | | | | | | | | |
| Bulgaria | 85 | 86 | 84 | 59 | 49 | 61 | 86 | 87 | 86 | 43 | 36 | 44 |
| Canada | | | | | | | | | | | | |
| Croatia | 79 | | | | | | | | | | | |
| Cyprus | | | | | | | | | | | | |
| Czechia | | | | | | | | | | | | |
| Denmark | | | | 95 | 96 | 94 | | | | | | |
| Estonia | | | | 71 | 71 | 70 | 90 | 90 | 90 | | | |
| Finland | | | | | | | | | | | | |
| France | | | | | | | | | | | | |
| Germany | | | | 93 | 94 | 92 | 95 | 95 | 95 | | | |
| Greece | | | | | | | | | | | | |
| Hungary | | | | 62 | 64 | 61 | | | | | | |
| Iceland | | | | | | | | | | | | |
| Ireland | 90 | 90 | 90 | 89 | 88 | 88 | 96 | 96 | 96 | 76 | 76 | 76 |
| Israel | | | | | | | | | | | | |
| Italy | | | | | | | | | | | | |
| Latvia | | | | | | | | | | | | |
| Liechtenstein | | | | | | | | | | | | |
| Lithuania | 83 | 72 | 87 | 43 | 47 | 41 | 91 | 92 | 91 | 32 | 31 | 32 |
| Luxembourg | | | | 89 | 90 | 89 | 89 | 86 | 90 | | | |
| Malta | | | | | | | | | | | | |
| Monaco | | | | | | | 100 | 100 | 100 | | | |

**Legend for 90–90–90**

- 95% and above
- 90–94%
- 85–89%
- 70–84%
- 50–69%
- Less than 50%

**Legend for viral load suppression**

- 86% and above
- 73–86%
- 65–72%
- 40–64%
- 25–39%
- Less than 25%

Note: Selected data for western and central Europe provided by the European Centres for Disease Control and Prevention Dublin Declaration reporting. Estimates for 2019 except: Denmark, Italy, Portugal and Spain (2016); Croatia, Germany and Slovakia (2017); and Estonia, Hungary, Ireland, Luxembourg, Monaco, the Netherlands, and the United States (2018).
Source: UNAIDS special analysis, 2020. European Centre for Disease Prevention and Control. Continuum of HIV care. Monitoring implementation of the Dublin Declaration on partnership to fight HIV/AIDS in Europe and Central Asia: 2018 progress report. Stockholm: ECDC; 2018.

| | First 90: percentage of people living with HIV who know their status | | | Second 90: percentage of people who know their status who are on treatment | | | Third 90: percentage of people living with HIV on treatment who are virally suppressed | | | **Viral load suppression: percentage of people living with HIV who are virally suppressed** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) | All ages | Women (15 years and older) | Men (15 years and older) |
| Netherlands | 91 | 96 | 89 | 94 | 91 | 94 | 98 | 96 | 98 | 83 | 84 | 82 |
| Norway | | | | | | | | | | | | |
| Poland | | | | | | | | | | | | |
| Portugal | | | | 88 | 88 | 88 | 89 | 89 | 89 | | | |
| Romania | 86 | 84 | 88 | 79 | 76 | 78 | 80 | 80 | 80 | 54 | 51 | 55 |
| San Marino | | | | | | | | | | | | |
| Serbia | 88 | 90 | 87 | 76 | 75 | 75 | 90 | 90 | 90 | 60 | 60 | 59 |
| Slovakia | | | | 85 | 85 | 85 | | | | | | |
| Slovenia | | | | | | | | | | | | |
| Spain | 87 | 85 | 87 | 93 | 96 | 93 | 90 | 93 | 90 | 73 | 76 | 73 |
| Sweden | | | | | | | | | | | | |
| Switzerland | 93 | | | 96 | | | 97 | | | 86 | | |
| Turkey | | | | | | | | | | | | |
| United Kingdom of Great Britain and Northern Ireland | | | | | | | | | | | | |
| United States of America | 86 | 90 | 85 | | | | | | | | | |

**Legend for 90–90–90**

- 95% and above
- 90–94%
- 85–89%
- 70–84%
- 50–69%
- Less than 50%

**Legend for viral load suppression**

- 86% and above
- 73–86%
- 65–72%
- 40–64%
- 25–39%
- Less than 25%

# ANNEX ON METHODS

# Part 1. Methods for deriving UNAIDS HIV estimates

## *Introduction*

UNAIDS annually provides revised global, regional and country-specific modelled estimates using the best available epidemiological and programmatic data to track the HIV epidemic. Modelled estimates are required because it is impossible to count the exact number of people living with HIV, people who are newly infected with HIV or people who have died from AIDS-related causes in any country: doing so would require regularly testing every person for HIV and investigating all deaths, which is logistically impossible and ethically problematic. Modelled estimates—and the lower and upper bounds around these estimates—provide a scientifically appropriate way of describing HIV epidemic levels and trends.

## *Partnerships in developing methods for UNAIDS estimates*

Country teams use UNAIDS-supported software to develop estimates annually. The country teams are primarily comprised of monitoring and evaluation specialists, programme officers, epidemiologists, demographers and others from the national ministry of health, national AIDS bodies and technical partners.

The software used to produce the estimates is Spectrum (developed by Avenir Health) with additional models that interact with Spectrum to estimate HIV incidence.[1] The UNAIDS Reference Group on Estimates, Modelling and Projections provides technical guidance on the development of the HIV component of the software.[2]

## *A brief description of methods used by UNAIDS to create estimates*[3]

For countries where HIV transmission is high enough to sustain an epidemic in the general population, available epidemiological data typically consist of HIV prevalence results from pregnant women attending antenatal clinics and from nationally representative population-based surveys. Many countries have historically conducted HIV sentinel surveillance among women attending antenatal clinics, which requires collecting data from a selection of clinics for a few months every few years. More recently, a number of countries have stopped conducting sentinel surveillance among pregnant women and are now using the data from the routine HIV tests conducted when pregnant women attend antenatal clinics and are tested for HIV. These data avoid the need to conduct a separate surveillance effort, and they provide a complete set of data from all clinics across the country instead of samples from specific sites.

The trends from pregnant women at antenatal clinics, whether done through surveillance or routine data, can be used to inform estimates of national prevalence trends, whereas data from population-based surveys—which are conducted less frequently but have broader geographical coverage and also include men—are more useful for informing estimates of national HIV prevalence levels. Data from these surveys also contribute to estimating age- and sex-specific HIV prevalence and incidence levels and trends. For a few countries in sub-Saharan Africa that have not conducted population-based surveys, HIV prevalence levels are adjusted based on comparisons of antenatal clinic surveillance and population-based survey data from other countries in the region. HIV prevalence trends and numbers of people on antiretroviral therapy are then used to derive an estimate of HIV incidence trends.

Historically, countries with high HIV transmission have produced separate HIV prevalence and incidence trends for rural and urban areas when there are well-established geographical differences in prevalence. To better describe and account for further geographical heterogeneity, an increasing number of countries have produced subnational estimates (e.g., at the level of the province or state) that, in some cases, also account for rural and urban differences. These subnational or rural–urban estimates and trends are then aggregated to obtain national estimates.

1 More information on Avenir Health can be found at www.avenirhealth.org.
2 For more on the UNAIDS Reference Group on Estimates, Modelling and Projections, please visit www.epidem.org.
3 A set of articles describing the methods is available in a 2019 supplement (Volume 33, Supplement 3) of the journal AIDS: https://journals.lww.com/aidsonline/toc/2019/12153.

In the remaining countries, where HIV transmission occurs largely among key populations at higher risk of HIV and the epidemic can be described as low-level, the estimates are derived from either surveillance among key populations and the general, low-risk population, or from HIV case reporting data, depending on which data are most reliable in a particular country. In countries with high-quality HIV surveillance data among the key populations, the data from repeated HIV prevalence studies that are focused on key populations are used to derive national estimates and trends. Estimates of the size of key populations are increasingly derived empirically in each country; when studies are not available, they are derived based on regional values and consensus among experts. Other data sources—including HIV case reporting data, population-based surveys and surveillance among pregnant women—are used to estimate the HIV prevalence in the general, low-risk population. The HIV prevalence curves and numbers of people on antiretroviral therapy are then used to derive national HIV incidence trends.

For most countries in western and central Europe and North America—and many countries in Latin America, the Caribbean, and the Middle East and North Africa that have insufficient HIV surveillance or survey data, but that have robust disease reporting systems—HIV case reporting and AIDS-related mortality data from vital registration systems are used to inform trends and levels in national HIV prevalence and incidence. These methods also allow countries to take into account evidence of underreporting or reporting delays in HIV case report data, as well as the misclassification of deaths from AIDS-related causes.

In all countries where UNAIDS supports the development of estimates, assumptions about the effectiveness of HIV programme scale-up and patterns of HIV transmission and disease progression are used to obtain age- and sex-specific estimates of people living with HIV, people newly infected with HIV, people dying from AIDS-related illness and other important indicators (including treatment programme coverage statistics). These assumptions are based on systematic literature reviews and analyses of raw study data by scientific experts. Demographic population data, including fertility estimates, are derived from the United Nations Population Division's *World population prospects 2019* data files or recent census data.

Selected inputs into the model—including the number of people on antiretroviral therapy and the number of women accessing services to prevent the vertical transmission of HIV—are reviewed and validated in partnership with the United Nations Children's Fund (UNICEF), the World Health Organization (WHO), the Government of the United States of America, the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund), and other partners.

Final country-submitted files containing the modelled outputs are reviewed at UNAIDS to ensure that the results are comparable across regions and countries and over time.

In 2020, subnational estimates were created and used by 39 countries in sub-Saharan Africa. The methods for creating these subnational estimates are provided in Part 4 of this annex.

### *Uncertainty bounds around UNAIDS estimates*

The estimation software calculates uncertainty bounds around each estimate. These bounds define the range within which the true value lies (if it can be measured). Narrow bounds indicate that an estimate is precise, while wide bounds indicate greater uncertainty regarding the estimate.

In countries using HIV surveillance data, the quantity and source of the available data partly determine the precision of the estimates: countries with more HIV surveillance data have smaller ranges than countries with less surveillance data or smaller sample sizes. Countries in which a national population-based survey has been conducted generally have smaller ranges around estimates than countries where such surveys have not been conducted. Countries producing subnational estimates at the provincial level have wider ranges. In countries using HIV case reporting and AIDS-related mortality data, the number of years of data and the magnitude of the cases reported or AIDS-related deaths observed will contribute to determining the precision of the estimate.

The assumptions required to arrive at the estimate also contribute to the extent of the ranges around

the estimates: in brief, the more assumptions, the wider the uncertainty range, since each assumption introduces additional uncertainties. For example, the ranges around the estimates of adult HIV prevalence are smaller than those around the estimates of HIV incidence among children, which require additional data on prevalence among pregnant women and the probability of mother-to-child HIV transmission that have their own additional uncertainty.

UNAIDS is confident that the actual numbers of people living with HIV, people who are newly infected with HIV or people who have died from AIDS-related causes lie within the reported ranges. Over time, more and better data from countries will steadily reduce uncertainty.

## *Improvements included in the 2020 UNAIDS estimates model*

Country teams create new Spectrum files every year. The files may differ from one year to the next for two reasons. First, new surveillance and programme data are entered into the model; this can change HIV prevalence and incidence trends over time or antiretroviral therapy coverage rates, including for past years. Second, improvements are incorporated into the model based on the latest available science and statistical methods, which leads to the creation of more accurate trends in HIV incidence. Occasionally, countries will also change the incidence modeling option within Spectrum based on improvements in the data available in the country. Due to these improvements to the model and the addition of new data to create the estimates, the results from previous years cannot be compared with the results from this year. A full historical set of estimates are created each year, however, enabling a description of trends over time.

Between the 2019 estimates and the 2020 estimates, the following changes were applied to the model under the guidance of the UNAIDS Reference Group on Estimates, Modelling and Projections and based on the latest scientific evidence.

### *Breastfeeding among women living with HIV*

In 2020, a new option was added to allow countries to enter antiretroviral therapy drop-off rates for breastfeeding women during the first year of breastfeeding and for 12 or more months. This reflects research showing that the first year of breastfeeding had higher drop-out levels than subsequent years *(1)*.

In addition, the patterns of breastfeeding duration for women living with HIV were updated. In previous versions of the software, data from a recent population-based survey informed the distribution of breastfeeding duration. In the 2020 model, however, the distribution was improved to use a distribution from the region by HIV status of the woman to improve the accuracy of those estimates.

### *Changes to case surveillance and vital registration model*

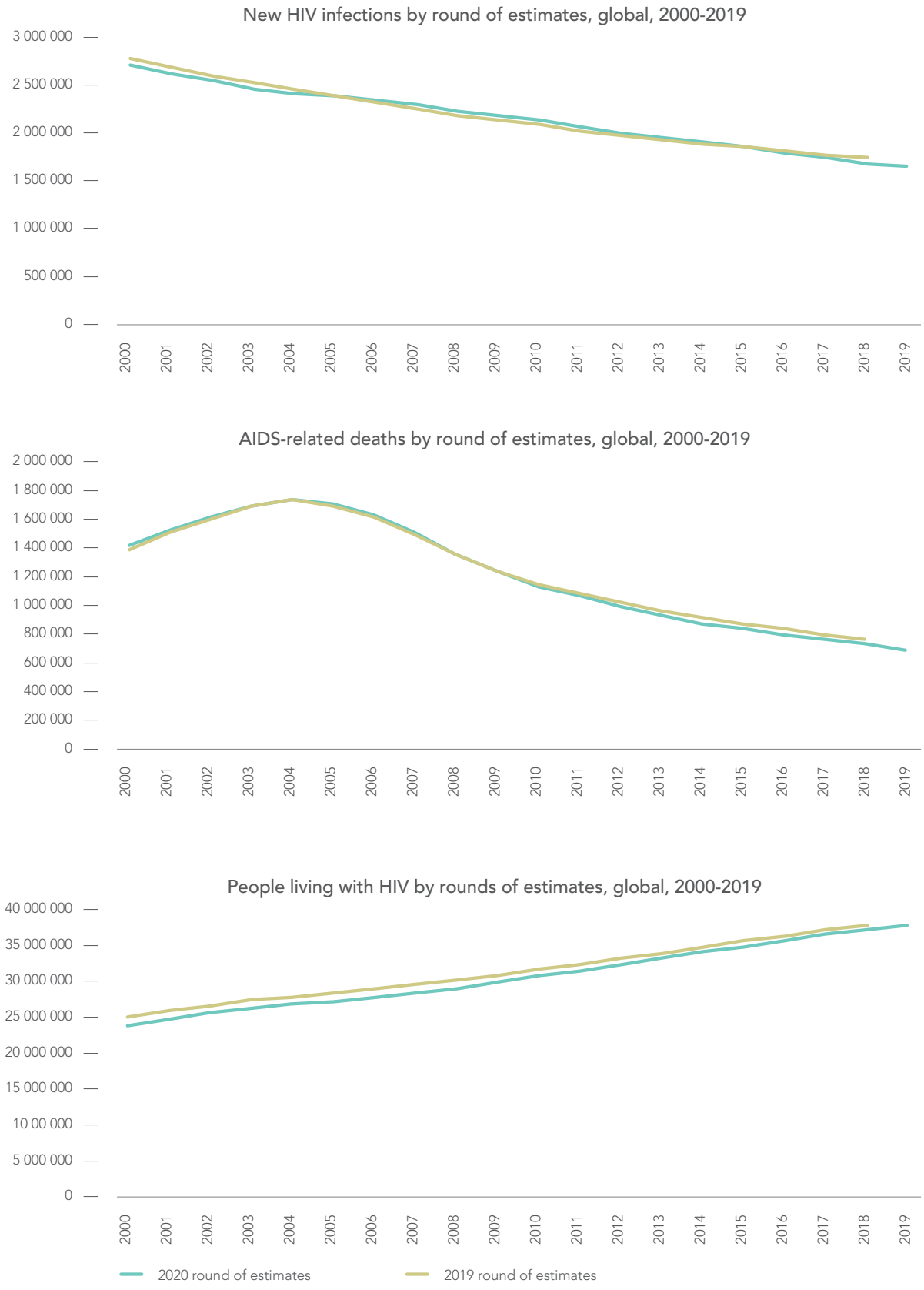
Under the technical guidance of the UNAIDS Reference Group on Estimates, Modelling and Projections, the Case Surveillance and Vital Registration model fitting tool was modified to fit to age- and sex-specific new diagnosis and mortality data. The option to fit to CD4 count data at the time of diagnosis from case surveillance systems was dropped from the model, while additional analyses are being conducted to assess the utility of these data.

Revisions to the HIV diagnosis model were made to permit a more flexible diagnosis rate, which included an initial "pulse" of HIV testing and a "second wave" of HIV testing that follows a logistic curve, as well as the addition of HIV testing driven by opportunistic infections. Finally, fitting approaches using the double logistic and spline curve fitting were modified to improve curve fits.

At the global level, trends in new HIV infections, AIDS-related deaths and people living with HIV are similar to the 2019 round, although there are shifts within regions.

FIGURE 05.03

**Comparison of 2019 to 2020 UNAIDS estimates: new HIV infections, AIDS-related deaths and people living with HIV, global, 2000-2019**




Source: UNAIDS 2020 and 2019 epidemiological estimates

### *Publication of country-specific estimates*

UNAIDS aims to publish estimates for all countries with populations of 250 000 or more (according to the United Nations Population Division *World population prospects 2019*. For the countries with populations of 250 000 or more that did not submit estimates, UNAIDS developed estimates using the Spectrum software based on published or otherwise available information. These estimates contributed to regional and global totals, but they were not published as country-specific estimates.

In countries with low-level epidemics, the number of pregnant women living with HIV is difficult to estimate. Many women living with HIV in these countries are sex workers or people who use drugs—or they are the sexual partners of people who use drugs or gay men and other men who have sex with men—making them likely to have different fertility levels than the general population. UNAIDS does not present estimates of mother-to-child HIV transmission, including estimates related to children in some countries that have concentrated epidemics, unless adequate data are available to validate these estimates. UNAIDS also does not publish estimates related to children for countries where the estimated number of pregnant women living with HIV is less than 50.

With regard to reporting incidence trends, if there are not enough historical data to state with confidence whether a decline in incidence has occurred, UNAIDS will only publish data for the most recent year. This is done to prevent users from making inaccurate inferences about trends. Specifically, incidence trends are not published if there are fewer than four data points for the key population or if there have been no data for the past four years for countries using repeated survey or routine testing data. Trends prior to 2000 are not published for countries using case surveillance models if there are no early case surveillance or mortality data available.

Finally, UNAIDS does not publish country estimates when further data or analyses are needed to produce justifiable estimates. More information on the UNAIDS estimates and the individual Spectrum files for most countries can be found on the UNAIDS website (www.UNAIDS.org). Data from the estimates can be found in the AIDSinfo section of the UNAIDS website (http://aidsinfo.unaids.org).

## Part 2. Methods for deriving the 90–90–90 targets

### *Introduction*

Since 2015, UNAIDS has reported estimates of global, regional and country-specific progress against the 90–90–90 targets. Progress toward these targets is monitored using three basic indicators:

- Indicator 1 (the first 90): The percentage of people living with HIV who know their HIV status.
- Indicator 2 (the second 90): The percentage of people living with HIV who know their status and are accessing treatment.
- Indicator 3 (the third 90): The percentage of people living with HIV on treatment who have suppressed viral loads.

Indicators 2 and 3 can also be expressed as a percentage of all people living with HIV. When numbers or coverage of the treatment target are expressed relative to the total number of people living with HIV, this is called "the HIV testing and treatment cascade." Annual estimates of antiretroviral therapy coverage among people living with HIV are available from the time when treatment was first introduced in countries.

### *Data sources for constructing country measures*

Country-level progress against the 90–90–90 targets was constructed using reported data from Spectrum, the Global AIDS Monitoring tool and (for selected countries in western and central Europe) the Dublin Declaration monitoring process. Estimates are published for all people and separately for children (0 to 14 years) and adults (15 years and older by sex). Upper and lower ranges of uncertainty for country-level estimates were calculated from the range of estimated numbers of people living with HIV. This range may not fully capture uncertainty in the reported estimates.

A description of the target-related indicators that countries report against is provided in the UNAIDS 2019 Global AIDS Monitoring guidelines *(2)*. Data sources are also briefly described. A summary of the number of countries that are publicly reporting on each measure is provided in Table 05.01, organized by region.

The final set of country measures of progress against the 90–90–90 targets for 2015 through 2019 are available at http://aidsinfo.unaids.org. Not all countries were able to report against all three prongs of the 90–90–90 targets: complete treatment cascades are published for 60 countries, the same as in the previous round.

#### *Estimates of people living with HIV*

All progress measures in this report are based on UNAIDS global, regional and country-specific modelled estimates from Spectrum of the numbers of people living with HIV. Estimates of people living with HIV are developed for all countries with populations above 250 000. More details about how UNAIDS derives estimates and uncertainty bounds around the number of people living with HIV can be found in Part 1 of this annex.

Estimates of people living with HIV in 2019 were available for 170 of 194 countries and territories and they were published for 122. Published country estimates of people living with HIV (available at http://aidsinfo.unaids.org) represent 80% of the total global estimated number of people living with HIV in 2019.

#### *Knowledge of HIV status among people living with HIV*

Estimates of the number of people living with HIV who know their status were derived using the most recent HIV surveillance, programme data and nationally representative population-based survey data. Where data were available separately for children (aged 0–14 years) and adults (aged 15 years and older, by sex), the age- and sex-specific measures were first calculated and then aggregated to produce a national measure.

For countries outside of eastern and southern Africa and western and central Africa, published estimates of the number of people living with HIV who knew their HIV status are based on HIV surveillance case notification data, programme registers or modelled estimates derived from case surveillance data. If the estimate from these

sources was lower than the number of people accessing antiretroviral therapy, the reported value was excluded. For countries using HIV surveillance or programme data, a country should have included this measure only if the HIV surveillance system had been functioning since at least 2014 and people who have died, emigrated or have otherwise been lost to follow-up are removed.

Although HIV surveillance systems, including those based on programme registers, can be a reasonably robust source of data to estimate the number of people living with HIV who know their status, biases in the reported numbers may still exist. For example, a country's measure of the knowledge of status may be underestimated if not all people diagnosed are reported to the surveillance system in a timely manner. The measure also may be overestimated if people are reported to the system or included on a register more than once and these duplicates are not detected. Similarly, if people die or emigrate but are not removed from the system, the number of people living with HIV who are reported to know their HIV status also will be overstated.

For most countries in eastern and southern Africa and western and central Africa, estimates of the numbers of people living with HIV who knew their status were derived using the UNAIDS-supported mathematical model Shiny90. This model uses population-based survey and HIV testing service programme data—together with country-specific HIV epidemic parameters from the standard UNAIDS Spectrum model—to produce outputs of knowledge of HIV status for adults, by sex. More details on the modelling approach are available elsewhere *(3)*.

Knowledge of HIV status from the Shiny90 model for eastern and southern Africa and western and Central Africa has a number of strengths compared with other approaches that rely directly on population survey data and programme treatment coverage data. Most importantly, the Shiny90 model uses population survey data to estimate the proportion of people living with HIV who report ever having an HIV test who are aware of their HIV status and those who likely seroconverted after their last HIV-negative test. This distinction is informed by the national incidence trend calculated in Spectrum and is consistent with national published estimates of HIV prevalence and reported antiretroviral therapy coverage. The Shiny90 tool also uses assumptions from Spectrum and the population survey data to estimate knowledge of status by sex and age, assuming male-to-female testing ratios have remained relatively constant over time. Estimates of knowledge of status are also available since 2010.

An important model limitation, similar to other estimation approaches, is that caution should be used in interpreting results in instances when the last population-based survey was conducted more than five years ago, or if there are concerns about the accuracy of self-reported testing history in the survey. Countries can include HIV testing data from HIV programmes to improve trends in years where the population survey data are not available. Another limitation is that model results are only for those aged 15 years and older. UNAIDS continues to recommend that countries conservatively estimate knowledge of status among children as the proportion of children living with HIV on treatment (unless other information from case surveillance data are available).

***People accessing antiretroviral therapy***

Global and regional measures of antiretroviral therapy numbers are abstracted from country-reported programme data through the UNAIDS-supported Spectrum software, the Global AIDS Monitoring reporting tool and the Dublin Declaration reporting process. In the 2020 round, 118 countries publicly reported treatment numbers, and between 2015 and 2019, 144 countries had at least one publicly available estimate of the number of people on treatment (representing 85% of all people on treatment). For the small number of countries where reported numbers of people on treatment are not available in selected years—primarily in western and central Europe and North America, and in China, India and the Russian Federation—estimates of the number of people on treatment are developed either in consultation with the public health agency responsible for monitoring the national treatment programme or based on published and unpublished sources.

In partnership with UNICEF, WHO, the United States Government, the Global Fund and other partners that support treatment service delivery in countries, UNAIDS annually reviews and validates treatment numbers that countries have reported

to UNAIDS through Global AIDS Monitoring and Spectrum. UNAIDS staff also provide technical assistance and training to country public health and clinical officers to ensure the quality of the treatment data reported. Nevertheless, this measure may overestimate the number of people on treatment if people who transfer from one facility to another are reported by both facilities. Similarly, coverage may be overestimated if people who have died, disengaged from care or emigrated are not identified and removed from treatment registries. Treatment numbers also may be underestimated if not all clinics report the numbers on treatment completely or in a timely manner.

In 2016, UNAIDS completed a triangulation of data to verify the UNAIDS global estimate of people accessing antiretroviral therapy at the end of 2015. Since early 2017, UNAIDS and other international partners have supported more than 15 countries, primarily in sub-Saharan Africa, to verify that the number of people reported to be currently on treatment is accurate. For more details about how confident UNAIDS is in reported treatment numbers, please see *How many people living with HIV access treatment?* [4]

***People who have achieved viral suppression***

Progress towards the viral suppression target among people on treatment and as a proportion of all people living with HIV was derived from data reported in Spectrum and through the online Global AIDS Monitoring reporting tool and the Dublin Declaration reporting process. For the purposes of reporting, the threshold for suppression is a viral load of less than 1000 copies per ml. Some countries may set lower thresholds or require persons to achieve an undetectable viral load, and where these lower thresholds are reported by a country, an estimate of the number of people who would have been suppressed at 1000 copies per ml is added to the number reported to be suppressed at the lower threshold. The Global AIDS Monitoring guidance describes this adjustment in more detail. This guidance also specifies that only a person's last test result from the reporting year should be submitted, so the reported number suppressed among those tested should represent people and not tests performed.[5]

UNAIDS 2019 Global AIDS Monitoring guidelines were revised from those of 2018 to clarify that countries should report viral load suppression outcomes, regardless of testing coverage. However, viral load testing results will only be published in countries where access to testing is nationally representative of all people on treatment (typically 50% or higher testing coverage). Table 1 shows the increase in the number of countries able to report on viral load suppression compared to previous years. In 2015, only 29 countries had reliable estimates; in 2019, there were 70 countries with reported data.

4 The document is available at http://www.unaids.org/en/resources/documents/2016/how-many-people-living-with-HIV-access-treatment.
5 This document is available at https://www.unaids.org/sites/default/files/media_asset/global-aids-monitoring_en.pdf

TABLE 05.01

## Data availability for constructing UNAIDS measures of progress against the 90–90–90 targets, 2015–2019

| | | 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 | Global |
|---|---|---|---|---|---|---|---|---|---|---|
| Number of countries | | 38 | 16 | 16 | 21 | 17 | 20 | 25 | 40 | 193 |
| Number of countries in UNAIDS global estimates | | 28 | 10 | 20 | 16 | 17 | 19 | 24 | 36 | 170 |
| Number of countries with publicly available data on estimates of people living with HIV | 2015 | 18 | 7 | 20 | 12 | 14 | 13 | 24 | 11 | 119 |
| | 2016 | 18 | 7 | 20 | 12 | 14 | 13 | 24 | 11 | 119 |
| | 2017 | 18 | 7 | 20 | 12 | 14 | 13 | 24 | 11 | 119 |
| | 2018 | 18 | 7 | 20 | 12 | 14 | 13 | 24 | 11 | 119 |
| | 2019 | 18 | 7 | 20 | 12 | 14 | 13 | 24 | 10 | 118 |
| Number of countries with publicly available data on knowledge of HIV status | 2015 | 8 | 6 | 18 | 9 | 5 | 7 | 22 | 15 | 90 |
| | 2016 | 10 | 6 | 19 | 9 | 7 | 7 | 22 | 19 | 99 |
| | 2017 | 11 | 6 | 19 | 9 | 8 | 7 | 22 | 23 | 105 |
| | 2018 | 11 | 6 | 19 | 10 | 9 | 8 | 22 | 19 | 104 |
| | 2019 | 11 | 6 | 20 | 10 | 10 | 7 | 23 | 6 | 93 |
| Number of countries with publicly available data on treatment | 2015 | 22 | 9 | 20 | 15 | 17 | 17 | 24 | 20 | 144 |
| | 2016 | 22 | 9 | 20 | 13 | 17 | 17 | 24 | 19 | 141 |
| | 2017 | 23 | 9 | 20 | 14 | 17 | 18 | 24 | 17 | 142 |
| | 2018 | 21 | 9 | 20 | 13 | 16 | 16 | 24 | 14 | 133 |
| | 2019 | 18 | 7 | 20 | 12 | 15 | 13 | 24 | 9 | 118 |
| Number of countries with publicly available data on people with suppressed viral load | 2015 | 6 | 2 | 3 | 6 | 4 | 3 | 1 | 4 | 29 |
| | 2016 | 6 | 4 | 8 | 6 | 8 | 4 | 2 | 8 | 46 |
| | 2017 | 7 | 6 | 6 | 9 | 10 | 6 | 3 | 7 | 54 |
| | 2018 | 8 | 8 | 14 | 9 | 9 | 7 | 7 | 8 | 70 |
| | 2019 | 9 | 7 | 18 | 12 | 7 | 6 | 6 | 5 | 70 |

Source: UNAIDS special analysis, 2020.

For countries with nationally representative but not universal access to viral suppression testing, the estimate of viral suppression among those tested (i.e., the third 90) was multiplied by the number of people on treatment to obtain overall viral suppression levels in the country.

A number of challenges exist in using country-reported data to monitor the viral load suppression target. First, routine viral load testing may not be offered at all treatment facilities, and those facilities that do offer it may not be representative of the care available at facilities without viral load testing. Since it is not possible to know for certain suppression in the untested population, we assume that the percentage of people suppressed among those accessing viral load testing is representative of all people on treatment.

Another challenge in measuring the accuracy of viral load suppression estimates is that UNAIDS

guidance requests routine (e.g., annual) viral load testing results only for people who are on treatment and eligible for testing. If people newly initiated on treatment achieve viral suppression but have not yet been offered viral load testing, they will be incorrectly counted as not suppressed, and the resulting viral suppression estimate will be understated. UNAIDS also requests countries to only report results from routine viral load testing: if countries report test results primarily performed because of suspected treatment failure, the number of people virally suppressed in these countries will be underestimated. UNAIDS validates country submissions for quality, but it is not always possible to identify cases where both routine and other types of testing are occurring.

Finally, UNAIDS guidance recommends reporting viral load test results only for people on antiretroviral therapy; persons who are not on treatment and who naturally suppress the virus will not be included in this measure.

### *Methods for constructing the 90–90–90 treatment target at the regional and global levels*

All programme data submitted to UNAIDS were validated by UNAIDS and its partners prior to publication. Country-submitted data that did not meet the required validation checks for quality either at the indicator level or across the treatment cascade were not included in the composite regional or global measures.

To estimate regional and global progress against the 90–90–90 targets, UNAIDS imputed missing country data for the first and third 90 targets using a Bayesian hierarchical model with uncertainty based on regional trends, sex differences and country-specific data for those countries reporting data for some but not all years. Estimates are available by sex for adults 15 years and older from 2015 to 2019. As in previous years, results of global and regional progress towards the 90–90–90 targets presented in this report supersede all previously published estimates. Additional details on the modelling approach are available elsewhere *(5)*.

The proportion of estimates of knowledge of status and viral load suppression imputed by region from 2015 to 2019 to account for countries with missing data are shown in Table 2. Due to large differences in the proportion of virally suppressed people in western and central Europe and the United States for the years in which data were available, subregional estimates were separately calculated for North America and western and central Europe and then combined to estimate the western and central Europe and North America regional results at large. Upper and lower ranges of uncertainty around the global and regional estimates of the HIV testing and treatment cascade are provided that reflect uncertainty in the number of people living with HIV and uncertainty (from missing country data) in the number of people who know their HIV status and the number of people who are virally suppressed. Based on reports from data quality reviews through 2019, uncertainty from possible overreporting or underreporting of treatment numbers was added to the bounds of treatment coverage among people living with HIV and the second and third 90s. Upper and lower ranges of uncertainty for the 90s do not capture uncertainty in the reported or missing programme data on the numbers of people who know their HIV status or the number of people on treatment who are virally suppressed.

One primary limitation that arises from incomplete availability of country estimates is that it is difficult to quantify the extent to which progress in countries that reported data to UNAIDS is similar to that of countries in the region that do not have data. This is particularly true for viral load suppression estimates, where reported data in some regions—especially in 2015 and 2016—are limited. For example, viral load testing coverage in western and central Africa was especially low between 2015 and 2017, with most estimates derived from countries reporting data in 2018 and 2019. In Asia and the Pacific, national-level estimates of viral load suppression are not available in any year for India and not prior to 2018 for China. In western and central Europe and North America, HIV testing and treatment reporting, including viral load suppression through the Dublin Declaration, was suspended due to the COVID-19 pandemic, and the last reported estimate of viral load suppression by the United States at the time of this report was 2016.

TABLE 05.02

## Proportion of imputed data of the number of people living with HIV who know their status and the number of people living with HIV on treatment who are virally suppressed, 2015–2019

| | | 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 | Global |
|---|---|---|---|---|---|---|---|---|---|---|
| Estimates of people living with HIV where knowledge of status is imputed (%) | 2015 | 84 | 15 | 0 | 8 | 27 | 29 | 0 | 30 | 17 |
| | 2016 | 83 | 15 | 0 | 8 | 23 | 30 | 0 | 13 | 16 |
| | 2017 | 23 | 15 | 0 | 7 | 19 | 31 | 0 | 29 | 7 |
| | 2018 | 49 | 15 | 0 | 6 | 13 | 27 | 0 | 39 | 11 |
| | 2019 | 79 | 16 | 0 | 2 | 58 | 34 | 0 | 97 | 21 |
| Estimates of people living with HIV on treatment where viral suppression is imputed (%) | 2015 | 83 | 91 | 57 | 76 | 31 | 63 | 99 | 18 | 63 |
| | 2016 | 84 | 88 | 33 | 9 | 28 | 59 | 99 | 2 | 47 |
| | 2017 | 85 | 56 | 47 | 7 | 17 | 42 | 91 | 92 | 61 |
| | 2018 | 14 | 2 | 25 | 5 | 24 | 41 | 63 | 96 | 33 |
| | 2019 | 73 | 14 | 1 | 4 | 28 | 45 | 87 | 98 | 31 |

Source: UNAIDS special analysis, 2020.

## Part 3. Data on key populations

### *Distribution of new HIV infections by subpopulation*

The distribution of new HIV infections among subpopulations globally and by region was estimated based on data for 170 countries using four data sources.

The underlying number of new infections for each country is estimated with Spectrum. New infections among men and women aged 15 to 49 years are used.

For countries that model their HIV epidemic based on data from subpopulations, including key populations, the numbers of new infections were extracted from Spectrum 2020 files. This source provided data for sex workers from 60 countries, for people who inject drugs from 37 countries, for gay men and other men who have sex with men from 62 countries, and for transgender people from 20 countries (all of which were located in Latin America, the Caribbean, and Asia and the Pacific). Additionally, 18 countries (mostly from Asia and the Pacific) had data from clients of sex workers.

New HIV infections for western and central European countries were derived from European Centre for Disease Prevention and Control (ECDC) and WHO Regional Office for Europe HIV/AIDS surveillance in Europe 2019 (2018 data) *(6)*. The proportions of new diagnoses for each region in Europe (western, central and eastern) were applied to UNAIDS estimates of new infections in each country for people who inject drugs, gay men and other men who have sex with men, and transgender people. Data for sex workers were not available from the ECDC report. New HIV infections in China, India, the Russian Federation and the United States were taken from the most recent available national reports of new diagnoses or other published sources.

New HIV infections among countries without a direct data source were calculated from regional benchmarks. The benchmarks were set by the median proportion of new infections in the specific subpopulation in all available countries in the same region. The majority of these countries were

located in sub-Saharan Africa. There were 115 countries that used benchmark values for the sex worker estimate, 97 countries for the people who inject drugs estimate, 72 countries for the gay men and other men who have sex with men estimate, and 143 countries for the transgender people estimate.

New infections among sex partners of key populations were estimated using the number of sex partners and transmission probabilities from the literature. These include non-injecting sex partners of people who inject drugs, female sex partners of gay men and other men who have sex with men, spouses/steady sexual partners of sex workers, clients of sex workers and the clients' spouses/steady sex partners.

### *Quality of population size estimates*

Population size estimates are used to calculate the relative risks presented in this report. The Global AIDS Monitoring system collects population size estimates. Some of the submitted size estimates are considered subnational, and UNAIDS uses regional medians of the population proportions of submitted size estimates to fill in missing information or extrapolate from subnational estimates.

The regional sections of this report include tables on the estimated size of key populations. These data are based on values reported through Global AIDS Monitoring in 2019. A comprehensive review of the data was conducted during this reporting round, and estimates therefore should not be compared with data presented in previous UNAIDS reports. As a result of this process, the estimates reported can be categorized as follows:

- "National population size estimate" refers to estimates that are empirically derived using one of the following methods: multiplier, capture–recapture, mapping/enumeration, network scale up method (NSUM) or population-based survey, or respondent-driven sampling-successive sampling (RDS-SS). Estimates had to be national or a combination of multiple sites with a clear approach to extrapolating to a national estimate.
- "Local population size estimate" refers to estimates that are empirically derived using one of the previously mentioned methods, but only for a subnational group of sites that are insufficient for national extrapolation.
- "Insufficient data" refers either to estimates derived from expert opinions, Delphi, wisdom of crowds, programmatic results or registry, regional benchmarks or unknown methods, or estimates derived prior to 2010. Estimates may or may not be national.

## Part 4. Subnational HIV estimates for sub-Saharan Africa and the Caribbean

Subnational HIV estimates were generated for 39 countries in sub-Saharan Africa and Haiti in the Caribbean. The indicator displayed in Figure 1.11 is the incidence of HIV infection among females aged 15 to 24 years by subnational level.

Two methods were used to generate the subnational estimates: the Naomi model was used by 20 countries (19 in sub-Saharan Africa and Haiti), while a simpler district disaggregation method was used for 18 other countries in sub-Saharan Africa (see Table 05:04).

**Naomi model:** This model uses small area estimation to jointly model HIV prevalence and people living with HIV, antiretroviral therapy coverage and HIV incidence. The model combines subnational-level data about multiple outcomes from several sources in a Bayesian statistical model. It uses national population-based survey data and antiretroviral therapy and antenatal clinic testing service provision data to provide robust indicators of subnational HIV burden. It provides estimates and uncertainty ranges for a number of indicators (including HIV prevalence, people living with HIV, antiretroviral therapy coverage, HIV incidence and new infections) by sex, five-year age groups and subnational level.

The model produces estimates at three time points: the year of the most recent population-based survey, the year of the last round of HIV national estimates (2019), and short-term, one-year projections for HIV programme planning purposes. Subnational population estimates by sex and age group are sourced from consensus sources in each country and adjusted to match the populations used within Spectrum by sex and age group.

Cross-sectional estimates for HIV prevalence, antiretroviral therapy coverage and HIV incidence are produced at the mid-point of the most recent nationally representative household survey. For HIV prevalence, the model is calibrated to survey data on HIV prevalence by subnational level, sex and five-year age group from the most recent population-based survey (Demographic and Health Survey or Population HIV Impact Assessment). Since the survey sample size in each district is relatively small, routinely reported data about HIV prevalence among pregnant women attending their first antenatal care visit, extracted from the national health information system, are used to improve estimates of the spatial pattern of HIV.

Antiretroviral therapy coverage by district, age and sex is estimated from population-based survey data about the presence of antiretroviral biomarkers in HIV-positive survey respondents. Routinely reported antiretroviral therapy coverage among pregnant women prior to their first antenatal care visit is used as a covariate for the spatial pattern of antiretroviral therapy coverage. The antiretroviral therapy coverage and HIV prevalence are also calibrated so that the total number on antiretroviral therapy matches that report in the Spectrum national file.

A challenge for estimating treatment coverage at the district level is that persons may access antiretroviral therapy services in a different district than their residence (for instance, if facilities are closer or felt to provide better services). The model allows for a probability that resident people living with HIV access antiretroviral therapy in a neighbouring district. The prior assumption is that the large majority of people living with HIV will access antiretroviral therapy in their district of residence, but this probability can vary based on district data about the number of people receiving antiretroviral therapy compared to HIV prevalence, antiretroviral therapy coverage and population.

Direct estimates of HIV incidence are not available at the subnational levels. While some recent household surveys have measured HIV incidence at the national level based on biomarker measures for recent HIV infections, too few recent infections are observed in any district to make a robust estimate. Therefore, to estimate HIV incidence at the subnational level, the HIV transmission rate from Spectrum estimates is calculated and applied to small area estimates of HIV prevalence and antiretroviral therapy coverage in each subnational area. The sex and age distribution in each

subnational area is based on HIV incidence rate ratios from Spectrum applied to the population structure in each area.

The model projects from the most recent household survey to the current period by creating a one-step projection of the population to 2019. Population estimates are updated with official population estimates. The number of people living with HIV is projected forward based on survival estimates by province, sex and age group from Spectrum over the same period (which accounts for HIV disease progression and the effects of antiretroviral therapy scale-up on reducing AIDS mortality). Antiretroviral therapy coverage is updated based on the number on treatment in 2019 from service provision data.

**District disaggregation method:** A tool was used to obtain subnational estimates for people living with HIV and new infections by disaggregating the national HIV estimates from the national Spectrum file. The disaggregation was done based on the distribution of people living with HIV aged 15 to 49 years and the subnational total population data provided by the national HIV estimates team. To produce these estimates, the tool requires inputs on the population aged 15 to 49 years, and HIV prevalence among people aged 15 to 49 years by subnational area. The tool first calculates the proportion of people living with HIV aged 15 to 49 years at the national level that are in each district. These proportions are then used to disaggregate other indicators calculated in the Spectrum file. The same distributions are applied to any age and sex group.

The incidence rate among young women aged 15 to 24 years was calculated as follows:

New infections among females aged 15 to 24 years in 2019 / (population of females aged 15 to 24 years – HIV-positive females aged 15 to 24 years) in 2019 * 1000

TABLE 05.04

## Method used for subnational HIV estimates

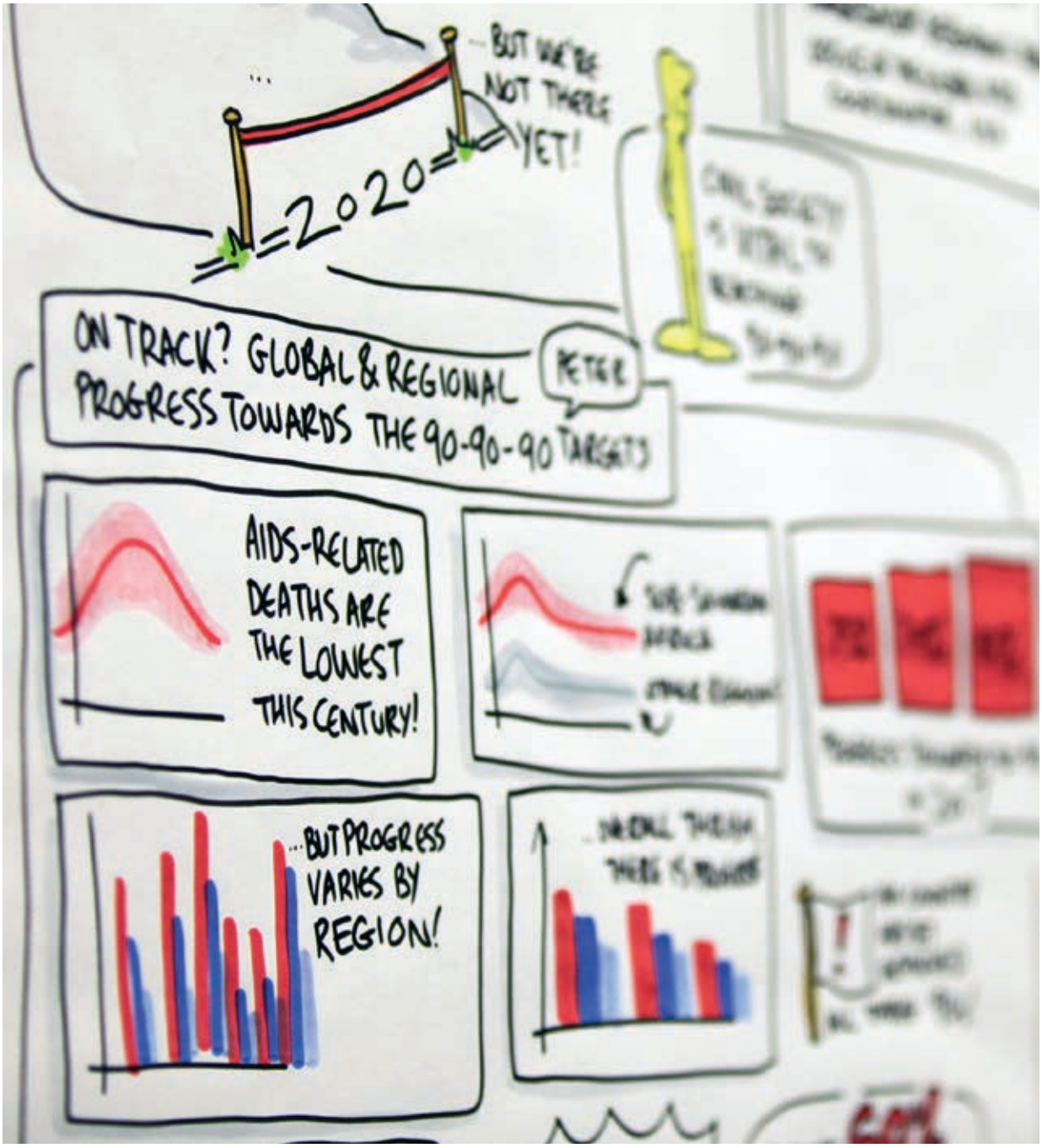
| No. | Country | Subnational method |
|---|---|---|
| 1 | Angola | District tool |
| 2 | Benin | District tool |
| 3 | Botswana | District tool |
| 4 | Central African Republic | District tool |
| 5 | Chad | District tool |
| 6 | Congo | District tool |
| 7 | Equatorial Guinea | District tool |
| 8 | Eritrea | District tool |
| 9 | Gabon | District tool |
| 10 | Gambia | District tool |
| 11 | Ghana | District tool |
| 12 | Guinea | District tool |
| 13 | Guinea Bissau | District tool |
| 14 | Liberia | District tool |
| 15 | Mali | District tool |
| 16 | Niger | District tool |
| 17 | Sierra Leone | District tool |
| 18 | South Sudan | District tool |
| 19 | Burkina Faso | Naomi |
| 20 | Burundi | Naomi |
| 21 | Cameroon | Naomi |
| 22 | Côte d'Ivoire | Naomi |
| 23 | Democratic Republic of the Congo | Naomi |
| 24 | Eswatini | Naomi |
| 25 | Ethiopia | Naomi |
| 26 | Haiti | Naomi |
| 27 | Kenya | Naomi |
| 28 | Lesotho | Naomi |
| 29 | Malawi | Naomi |
| 30 | Mozambique | Naomi |
| 31 | Namibia | Naomi |
| 32 | Nigeria | Naomi |
| 33 | Rwanda | Naomi |
| 34 | South Africa | Naomi |
| 35 | Togo | Naomi |
| 36 | Uganda | Naomi |
| 37 | United Republic of Tanzania | Naomi |
| 38 | Zambia | Naomi |
| 39 | Zimbabwe | Naomi |

## Part 5. Laws and policies scorecards

The regional laws and policies scorecards were constructed based on data reported by countries through the 2017, 2018 and 2019 National Commitments and Policy Instrument, a component of Global AIDS Monitoring *(2)*.

Data submitted by countries through the National Commitments and Policy Instrument are reviewed by UNAIDS. During this review process, UNAIDS liaises with national Global AIDS Monitoring focal points to request clarification or to revise data submitted through the tool.

Data reported through the National Commitments and Policy Instrument have been complemented with data available from other sources, including global databases and primary sources.



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