



CONFRONTING INEQUALITIES

Lessons for pandemic responses
from 40 years of AIDS



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CONTENTS

6 **FOREWORD**

8 **INTRODUCTION AND SUMMARY**

42 **HIV SERVICES: SUCCESSES AND CHALLENGES**

44 **01. Combination HIV prevention**

46 HIV data

66 Case studies

82 **02. Testing and treatment**

84 HIV data

94 Case studies

108 **03. Ending paediatric AIDS and eliminating vertical transmission**

110 HIV data

118 Case studies

126 **AN INEQUALITIES LENS**

128 **04. Community leadership**

132 Case study

136 **05. Gender equality**

138 HIV data

146 Case studies

154 **06. Removing punitive laws and policies**

156 HIV data

162 Case study

166 **07. Ending stigma and discrimination**

168 HIV data

178 **08. Social protection**

181 HIV data

184 Case study

IV 188 **ACCELERATING ACTION ON PANDEMICS AND GLOBAL HEALTH**

190 09. Investments to end AIDS

192 HIV data

202 Case study

206 10. COVID-19 AND HIV

210 HIV data

216 Case study

224 11. Integration and universal health coverage

226 HIV data

228 Case study

230 12. Mobile populations

232 Case studies

V 240 **REGIONAL PROFILES**

242 Eastern and southern Africa

253 Case study

256 Western and central Africa

267 Case study

274 Asia and the Pacific

287 Case study

290 Latin America

302 Case study

306 Caribbean

317 Case study

320 Middle East and North Africa

332 Case study

336 Eastern Europe and central Asia

346 Case study

350 Western and central Europe and North America

358 Case study

362 ANNEX ON METHODS

FOREWORD

We are at a critical inflection point in an AIDS pandemic that is far from over. What many said would be impossible—mobilizing cutting-edge science and rights-based public health responses to HIV at a global scale—has been shown to be achievable. This report shows how remarkable progress has been made in a diverse set of countries and communities. These successes prove what is possible when we do not accept the status quo and instead confront the inequalities that are at the root of so much needless suffering.

We are entering a new era in this historic effort to end AIDS. Forty years since the first cases of AIDS were reported, 25 years since the establishment of UNAIDS, and 20 years since the creation of the Global Fund to Fight AIDS, Tuberculosis and Malaria, the global AIDS response must shift to get on track to end AIDS by 2030. We have to leverage and bring to scale what is working and do the even harder work of ending the inequalities that are clearly visible in the data contained in this report. We have a new Global AIDS Strategy and an ambitious new United Nations General Assembly Political Declaration that call on all countries and all communities to make these shifts to end AIDS.

We are now 18 months into the COVID-19 pandemic, and the world has changed more than we could

have ever imagined. We rage against the injustices of the inequalities that COVID-19 has exposed and exacerbated, and we call for an equitable supply of COVID-19 vaccines—as a global public good, a People’s Vaccine, available to everyone, everywhere. While some countries look forward to bringing COVID-19 under control, vaccine apartheid is holding most of the world back, condemned to years of crisis and growing inequalities.

Despite the remarkable progress in the global HIV response, new HIV infections and AIDS-related deaths remain unacceptably high. HIV epidemics continue to grow in countries and communities where the benefits of science and human rights are still not reaching those being left behind. AIDS is still one of the deadliest pandemics of our times: despite global commitment to reduce AIDS-related deaths and new HIV infections to fewer than 500 000 by the end of 2020, 680 000 people were lost to AIDS-related illnesses last year and 1.5 million people were newly infected with HIV.

We have the knowledge and tools to prevent every single new HIV infection and avoid every AIDS-related death. Existing and growing inequalities—including in health care access, gender and racial inequalities, and denial of people’s human rights—are obstructing

progress in the HIV response and driving the AIDS pandemic.

To get back on track to end AIDS, we have to shift our focus. We must identify the inequalities that largely determine who has access to HIV services that meet their needs, who is experiencing HIV transmission and who is dying. Then we must adapt the AIDS response to prioritize programmes, laws, policies and services that will best empower those still being left behind and eliminate those inequalities.

This Global AIDS Update report highlights how antiretroviral medicines—once deemed too expensive and too complicated for people in low-resource settings—are now available to over 27.5 million people living with HIV. At least eight countries in a variety of geographic, epidemiological and socioeconomic settings have achieved the 90–90–90 testing and treatment targets. Globally in 2020, 84% (31.6 million) of people living with HIV knew their HIV status, 73% (27.4 million) were accessing treatment and 66% (24.8 million) were virally suppressed. This is a remarkable achievement, but we missed all of the global HIV targets for 2020. Now we must shift to looking at what these averages hide. Who are the 34% who are not virally suppressed and why? What new technologies, service models and rights-claiming work will ensure that viral suppression is equitable?



Credit: UNAIDS

This report shows that in sub-Saharan Africa, six in seven new HIV infections among adolescents (aged 15 to 19 years) are among girls, and young women (aged 15 to 24 years) are twice as likely to be living with HIV than men. To address this inequality, a key piece of the puzzle is keeping girls in secondary schools, which greatly reduces their risk of HIV and yields other social and economic benefits that advance health, gender equality and development. The COVID-19 pandemic has put many children out of school, placing them—especially girls—at higher risk of contracting HIV. Pairing education with science-based HIV prevention and sexual and reproductive health and rights services could end this disparity—and help end AIDS.

When we unpack the data, we see rapidly falling new HIV infections among key populations when they

are provided with the services they need. In Estonia, for example, HIV infections among people who inject drugs plummeted after comprehensive harm reduction was brought to scale. However, entire regions have seen little progress—or even rebounding epidemics—fuelled by laws and policies that marginalize and criminalize key populations, and deny them access to services. The gaps between those for whom the HIV response is working and those for whom it is failing are growing. We must close those gaps—which will require reforming punitive laws and re-imagining HIV services—so that HIV rates and AIDS-related deaths fall equitably across geography, identity and income.

The new Global AIDS Strategy 2021–2026: End Inequalities, End AIDS and the recently adopted United Nations General Assembly Political

Declaration on HIV and AIDS: Ending Inequalities and Getting on Track to End AIDS by 2030 provide urgent new momentum to get every country and every community on track.

I call on all countries to build on that momentum, and to fulfil their pledges and responsibilities. I also urge them to examine their national and subnational data, identify the gaps in their HIV responses and apply an equality lens to closing those gaps and implementing the Global AIDS Strategy and the Political Declaration on AIDS in full.

As this report shows: if we end inequalities, we end AIDS.

Winnie Byanyima
UNAIDS Executive Director



INTRODUCTION AND SUMMARY





CONFRONTING INEQUALITIES

As summer unfolds in the northern hemisphere in mid-2021, the chatter among freshly vaccinated families and friends around barbecues and beach blankets in developed countries is that life appears to be returning to normal.

Normal in the first quarter of the 21st century is a fraught vision. Normal means centibillionaires sailing giga-yachts in the Mediterranean as migrants fleeing conflict and famine drown in those very same waters. Normal means that women and girls in much of the world cannot choose whether and when to marry or start a family. Normal means being harassed, imprisoned or killed for rejecting the gender assigned to you at birth, or for choosing to spend the night or the rest of your life with a person of the same sex. Normal means that the colour of your skin may determine whether a police officer serves and protects, or stands on your neck. Normal means that your sex, your gender, your race and your income level will largely determine whether you have the agency and tools needed to protect yourself from disease and stay healthy. Normal means that 680 000 people die of AIDS-related causes because more than 10 million people living with HIV—including 800 000 children—are not accessing life-saving treatment that should be cheap and easily available.

Normal is a distinctly unequal world—both among and within countries—and the COVID-19 pandemic is widening many of these inequalities. Women and girls in both developed and developing countries, for example, are under higher threat of domestic violence during COVID-19 lockdowns (1, 2). The exclusion of noncitizens from national health and social protection systems has left migrants and other mobile populations especially vulnerable during the coronavirus pandemic. Sex workers in western Europe who are already at elevated risk of HIV have experienced a decline in clients and income, and the majority cannot access government COVID-19 support schemes (3).

COVID-19 vaccines that could save millions of lives trickle into developing countries as new waves of infections threaten to overwhelm their under-financed health systems. At the end of June 2021, just 1% of people in low-income countries and 11% in lower-middle-income countries had received at least one dose of a potentially life-saving COVID-19 vaccine, compared to 46% in high-income countries (4).



Credit: UNAIDS

This has huge implications for people living with HIV. Low-income and lower-middle-income countries are home to a majority of the world's people living with HIV, and an increasing body of evidence indicates that people living with HIV who acquire SARS-CoV-2 infection are at heightened risk of severe COVID-19 illness and death (5, 6). In sub-Saharan Africa, where two thirds (67%) of people living with HIV resided in 2020 (Figure 0.1), the highest rates of one-dose COVID-19 vaccination coverage in June 2021 were in Equatorial Guinea (19%), Botswana and Zimbabwe (9% each), and Namibia (6%). No other countries in the region exceeded 5% (Figure 0.2). After spending decades fighting for access to the HIV medicines available in rich countries, people living with HIV in the developing world are once again being denied their right to health by an international system that puts profits over people.

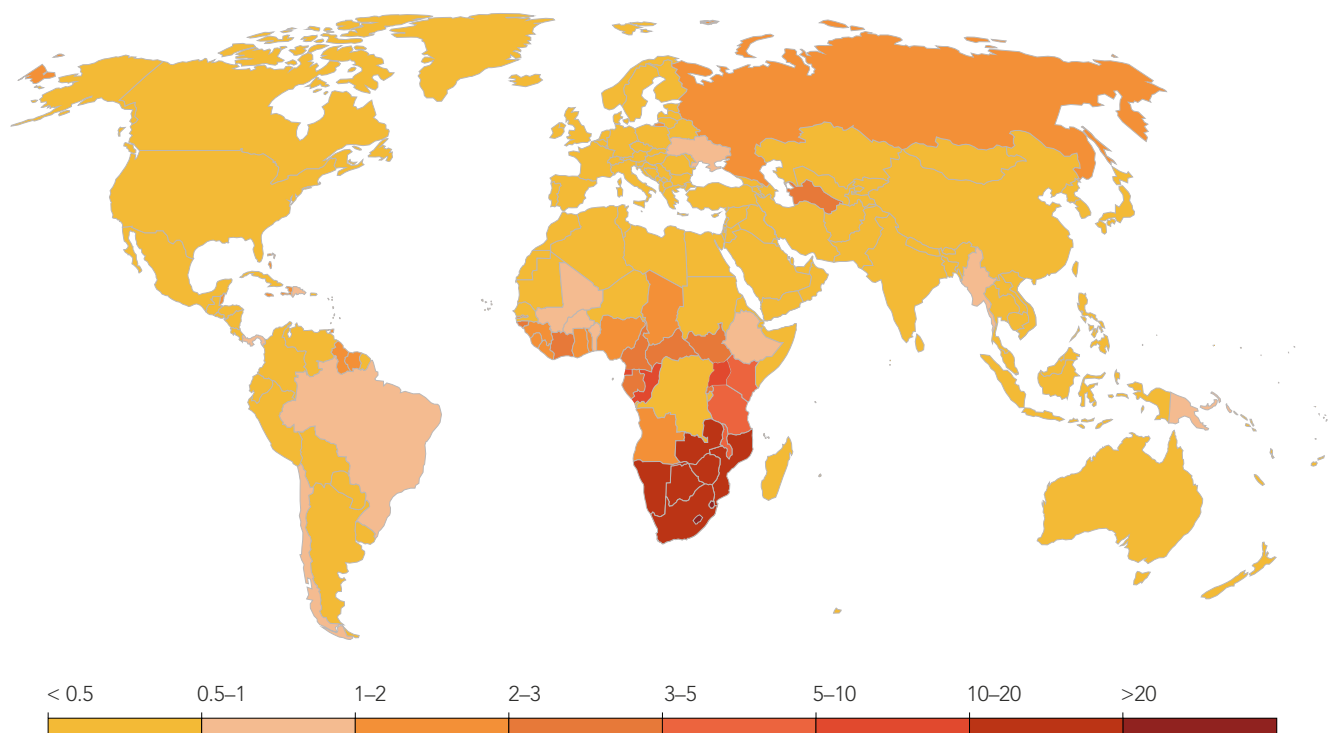
As the world responds to COVID-19 and prepares for future pandemics, it would be much better served by a close examination and application of the lessons learned over the 40-year fight against HIV. The data and case studies compiled by UNAIDS within this year's Global AIDS Update report show that great successes have been achieved against AIDS when sufficient resources are mobilized—and when the most affected communities are empowered to ensure that those resources are equitably used. By contrast, division, disparity and a disregard for human rights are among the failures that have allowed HIV to remain a global health crisis.



HIV remains a global health crisis.
In 2020, there were:

- 37.7 million people living with HIV, including 10.2 million who were not on treatment.
- 1.5 million new HIV infections.
- 680 000 AIDS-related deaths.

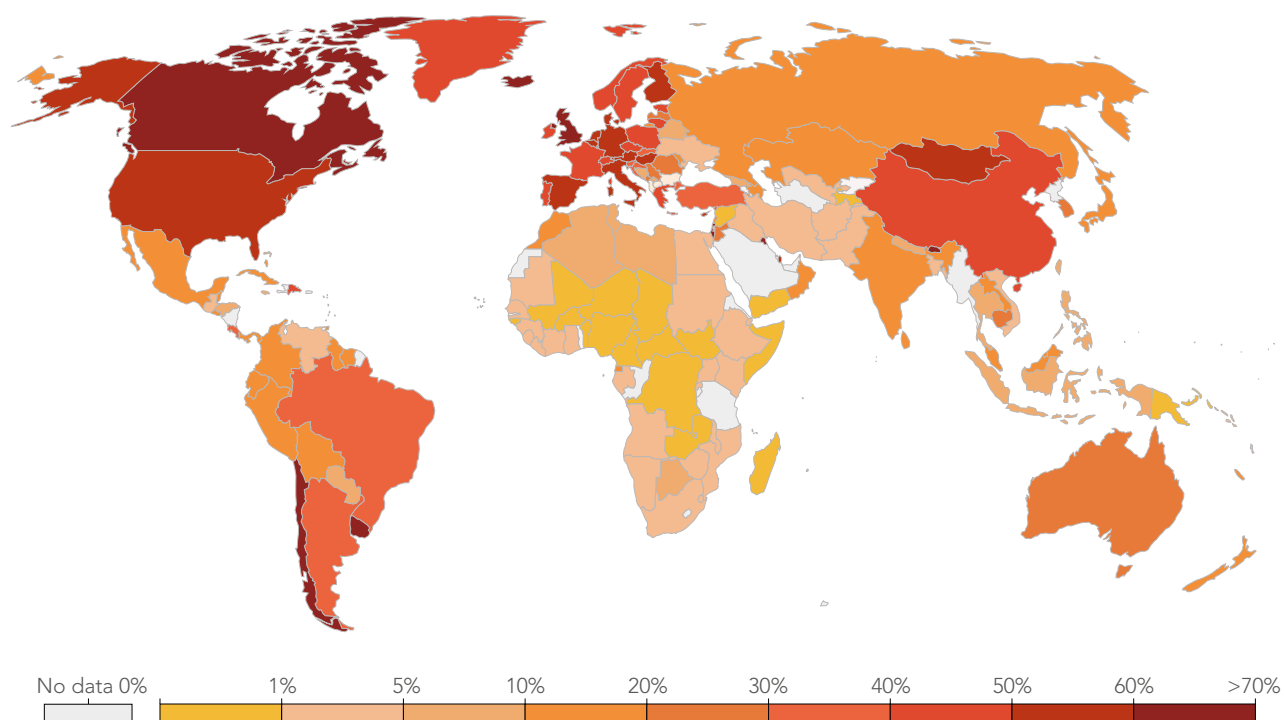
FIGURE 0.1 | HIV PREVALENCE AMONG ADULTS (AGED 15–49 YEARS), GLOBAL, 2020



Source: UNAIDS special analysis, 2021.

Note: Data includes 244 countries and territories.

FIGURE 0.2 | PERCENTAGE OF THE TOTAL POPULATION THAT HAS RECEIVED AT LEAST ONE COVID-19 VACCINE DOSE, BY COUNTRY, AS OF 23 JUNE 2021



Source: Official data collected by Our World In Data (<https://ourworldindata.org/covid-vaccinations>).

Note: The vaccine coverage indicated may not equal the share that are fully vaccinated if the vaccine requires two doses.

The 90–90–90 targets were missed, but not by much. At the end of 2020, 84% of people living with HIV knew their HIV status, 87% of people living with HIV who knew their HIV status were accessing antiretroviral therapy, and 90% of people on treatment were virally suppressed.

Building on two decades of progress against AIDS

The novel coronavirus sits atop a list of pandemic pathogens that humanity has so far failed to control, much less eliminate. Among them is HIV. Forty years after the first cases of AIDS were documented, the world must reckon with the 1.5 million [1.0 million–2.0 million] new HIV infections and 680 000 [480 000–1 000 000] deaths from AIDS-related causes that occurred in 2020. There were 37.7 million [30.2 million–45.1 million] people living with HIV in 2020, including 10.2 million [9.8 million–10.2 million] who were not on HIV treatment. Among those not on treatment, about 4.1 million did not know their HIV-positive status and 6.1 million knew their HIV status but could not access treatment.

The immense scale of the AIDS pandemic remains, despite the huge progress achieved in the 20 years since the United Nations (UN) General Assembly held its first special session on HIV. Antiretroviral medicines that were once deemed too expensive and too complicated for low-resource settings were being taken by an estimated 27.5 million [26.5 million–27.7 million] people living with HIV globally at the end of 2020.

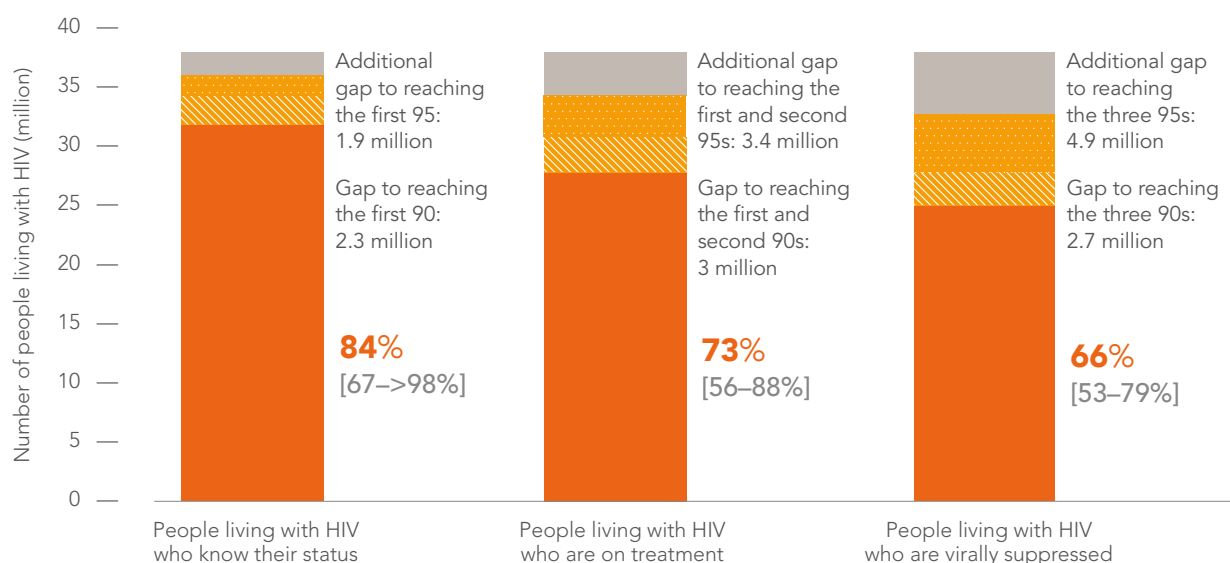
In recent years, the 90–90–90 targets have guided progress on HIV testing and treatment.¹ Achieving these targets means that a minimum of 73% of people living with HIV have suppressed viral loads, which helps to keep them healthy and prevents the further spread of the virus. Derided by some as an aspirational fantasy when they were first proposed by UNAIDS in 2014, the 90–90–90 targets were adopted by the UN General Assembly two years later as a global target for 2020. At the deadline, at least eight countries in a variety of geographic, epidemic and socioeconomic settings had fully achieved the targets, and another 11 had reached 73% viral load suppression among all people living with HIV. The average performance in eastern and southern Africa, the region most affected by HIV, nearly achieved the targets, and 74% of people living with HIV in western and central Europe and North America had suppressed viral loads.

At the global level, however, these targets were missed, although not by a wide margin: at the end of 2020, 84% [67–>98%] of people living with HIV knew their HIV status, 87% [67–>98%] of people living with HIV who knew their HIV status were accessing

¹ The 90–90–90 targets are: 90% of people living with HIV know their HIV status, 90% of people who know their HIV-positive status are accessing treatment and 90% of people on treatment have suppressed viral loads.



FIGURE 0.3 | HIV TESTING AND TREATMENT CASCADE, GLOBAL, 2020



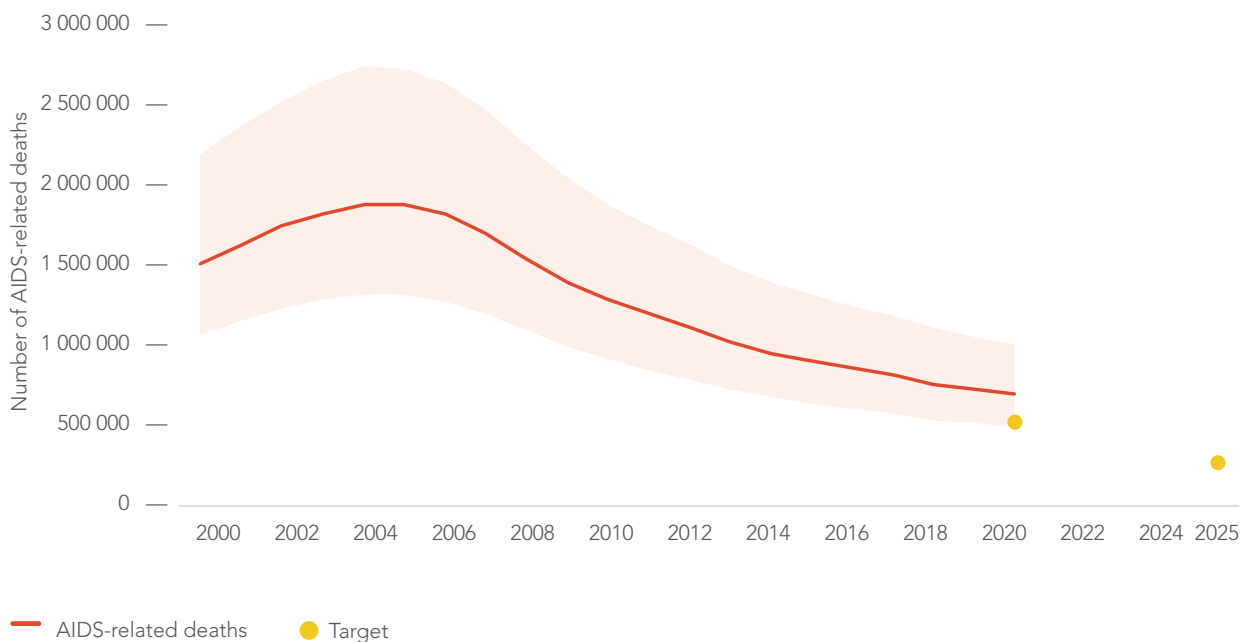
Source: UNAIDS special analysis, 2021.

antiretroviral therapy, and 90% [70→98%] of people on treatment were virally suppressed. These seemingly small gaps add up to leave more than one quarter (27%) of people living with HIV globally not on treatment, and roughly one third with unsuppressed viral loads (Figure 0.3). These gaps are even larger within subpopulations, including children, young people and men.

The global roll-out of HIV treatment has saved millions of lives: an estimated 16.6 million [11.7 million–24.2 million] AIDS-related deaths have been averted over the last two decades, including a 47% decline in AIDS-related mortality since 2010 (Figure 0.4).

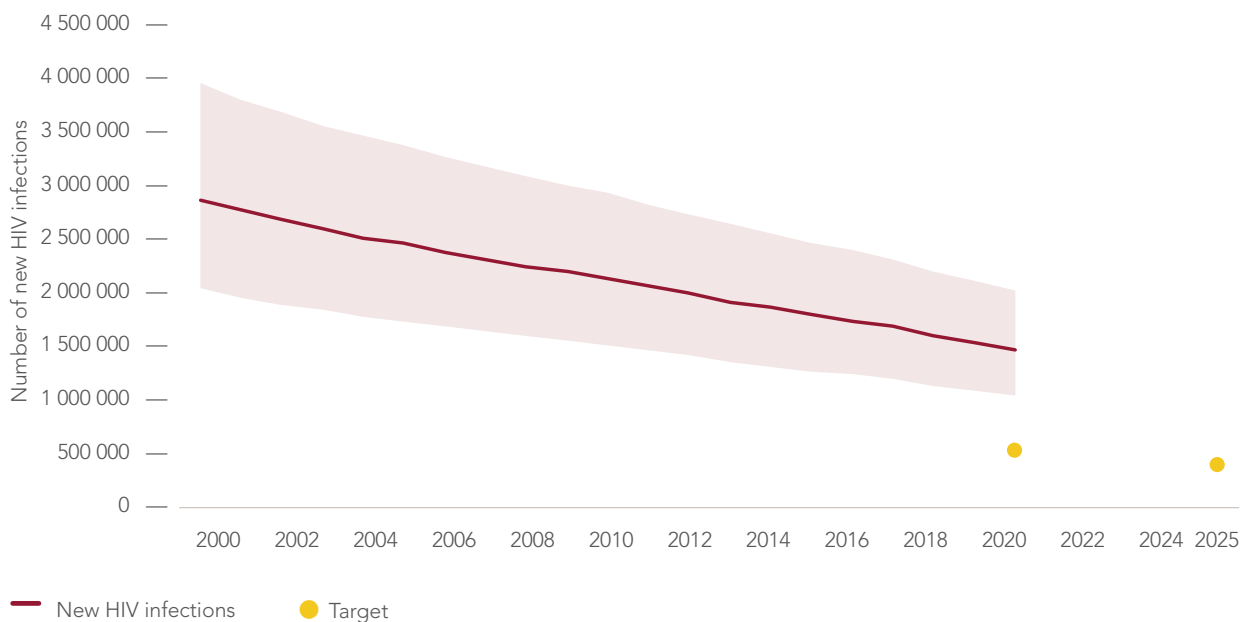
Efforts to prevent HIV infections have been less successful. The annual number of new infections among adults globally has hardly changed over the past four years, and total new infections have declined by just 31% since 2010, far short of the 75% target for 2020 that was set by the UN General Assembly in 2016 (Figure 0.5). Too many countries have failed to put in place the combination of structural, behavioural and biomedical approaches to HIV prevention focused on those at greatest risk that experience shows has the maximum impact. Consistent condom use, although possible, has proved difficult to achieve among all populations: women in many countries, for example, need greater agency and support to negotiate consistent condom use. Coverage of pre-exposure prophylaxis (PrEP) and voluntary medical male circumcision (VMMC) in 2020 also were well below the targets set five years earlier.

FIGURE 0.4 | AIDS-RELATED DEATHS, GLOBAL, 2000–2020, AND 2020 AND 2025 TARGETS



Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

FIGURE 0.5 | NEW HIV INFECTIONS, GLOBAL, 2000–2020, AND 2020 AND 2025 TARGETS



Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).
 Note: Please see the Annex on Methods for a description of how these estimates are calculated.

Reductions in new infections were strongest in sub-Saharan Africa and the Caribbean, but no region achieved the 75% declines that were agreed by the UN General Assembly in 2016 (Figure 0.6). Epidemics in large parts of eastern Europe and central Asia expanded in the face of serious legal and policy barriers and inadequate attention to the needs of people who inject drugs and gay men and other men who have sex with men. The annual number of new HIV infections also climbed in the Middle East and North Africa, and Latin America did not achieve any reduction in infections over the course of the last decade.

No region achieved the 75% declines in infections and deaths that were agreed by the UN General Assembly in 2016.

FIGURE 0.6 | **CHANGE IN NEW HIV INFECTIONS AND AIDS-RELATED DEATHS, BY REGION AND GLOBAL, 2010–2020**



Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

The gains made by the highest performing HIV programmes have been tempered by insufficient action in other countries.

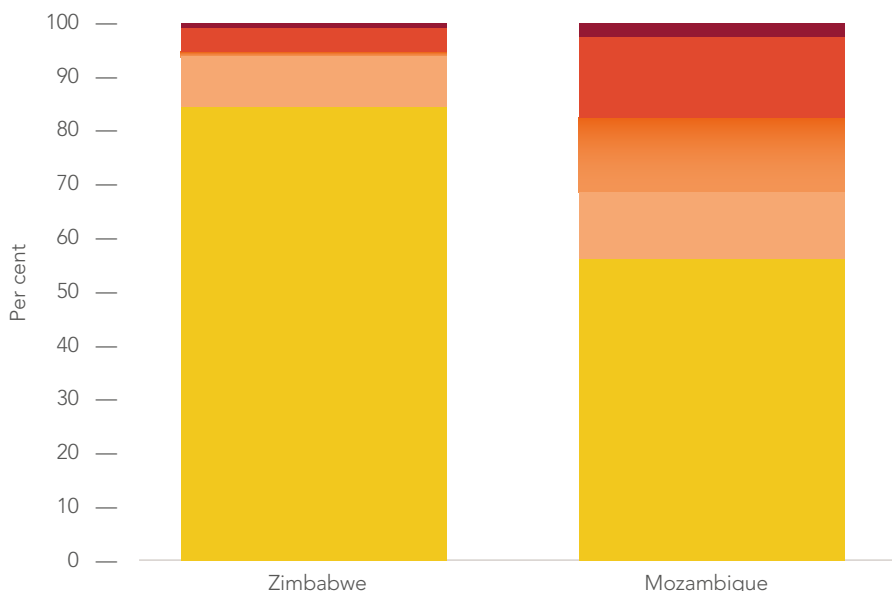
Inequalities at the heart of uneven progress

Progress against HIV has been uneven. The gains made through people-centred approaches within the highest performing HIV programmes have been tempered by insufficient action in other countries.

In Estonia, for example, the expansion of comprehensive harm reduction services was followed by a 61% countrywide reduction in HIV infections and a 97% reduction in infections among people who inject drugs between 2007 and 2016 (see case study on page 72) (7). In neighbouring Latvia, where needle-syringe programmes operated on a limited scale during the same period, new HIV infections increased by 72% overall (7).

Zimbabwe has been a HIV testing and treatment leader. The southern African country’s AIDS Levy has mobilized a significant amount of domestic funding, communities are strongly engaged in service delivery, and international financial and technical support has been strong and consistent. Achievements have been consistent with the 90–90–90 targets, with 82% of adults living with HIV in the country having suppressed viral loads. Neighbouring Mozambique, by contrast, has lagged behind the regional average, leaving nearly half (44%) of adults living with HIV in the country with unsuppressed viral loads (Figure 0.7). Conflict, climate change, high levels of poverty and poor health infrastructure are among the country’s many challenges.

FIGURE 0.7 | PEOPLE LIVING WITH HIV, PEOPLE NEWLY INFECTED IN THE PAST SIX MONTHS, AND HIV TESTING AND TREATMENT CASCADE, ADULTS (AGED 15+ YEARS), ZIMBABWE AND MOZAMBIQUE, 2020



- People living with HIV who were infected in the past six months
- People living with HIV who don't know their status and were infected more than six months ago
- People living with HIV who know their status but are not on treatment
- People living with HIV who are on treatment but are not virally suppressed
- People living with HIV who are on treatment and are virally suppressed

Source: UNAIDS special analysis, 2021.

Poverty and lack of schooling among barriers within countries

Inequalities within countries are also preventing the world from ending AIDS by 2030. Gaps in testing and treatment tend to be larger among the highly affected, the marginalized and those who struggle to access broader health services. The gaps among children, young people, men and key populations living with HIV are particularly notable. Intersecting inequalities related to age, sex, race and income level compound disparities in service access and health outcomes.

Poverty and lack of schooling are formidable barriers to health and HIV services. For example, population-based survey data from 32 low- and middle-income countries show that women were often more likely to have their demand for family planning satisfied using modern methods if they were in the highest wealth quintile compared with their peers in the lowest wealth quintile, were living in urban areas compared to rural areas, or had secondary or higher education (compared to no formal or only primary education). Uptake of VMMC services also appears to be related to income levels: in 11 of 12 countries with recent survey data, men in lower wealth quintiles were much less likely to report undergoing the procedure than those with higher incomes (see Chapter 01).

Poverty is also a driver of migration, which has been shown to complicate HIV service access. Studies show that access to HIV testing and treatment services for migrants is often inferior to that of non-migrants (8–12). National laws and regulations typically restrict access to services for irregular migrants, while fear of deportation deters many from accessing essential services. Stigma and discrimination further undermine their access to essential services, with migrants who belong to key populations likely to experience especially harsh discrimination in many countries (13, 14).

Inequalities within countries are also preventing the world from ending AIDS by 2030.

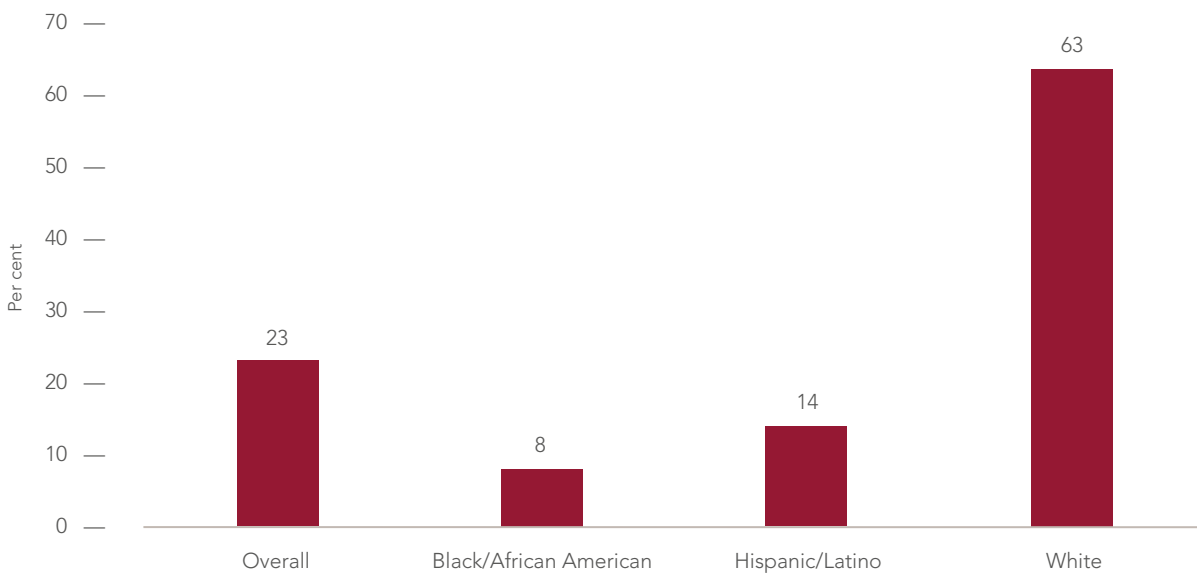
Credit: Karin Scherbrucker/Grassroot Soccer



HIV service disparities by race have been documented in several parts of the developed world.

HIV service disparities by race have been documented in several parts of the developed world. In the United States of America, black people account for a disproportionately large percentage of new HIV infections in the country: 41% in 2019, though they represent only about 13% of the national population (15). This is in part due to lower coverage of HIV prevention services. Just 8% of black Americans and 14% of Hispanics/Latinos who were eligible for PrEP were prescribed it, compared to 63% of whites (Figure 0.8) (15). Studies also report significant racial disparities in HIV treatment outcomes, with delayed initiation of treatment and care, lower adherence to antiretroviral therapy, increased stigma and discrimination, mistrust of or lack of access to health-care providers, and inadequate access to health insurance among the contributing factors (16–19). Many of these gaps are among black and Latino gay men and other men who have sex with men, who must contend with both racial inequalities and homophobia.

FIGURE 0.8 | PRE-EXPOSURE PROPHYLAXIS COVERAGE AMONG ELIGIBLE ADULTS, BY RACE/ETHNICITY GROUP, UNITED STATES OF AMERICA, 2019



Source: 2019 National HIV surveillance system reports. In: cdc.gov [Internet]. 27 May 2021. Atlanta (GA): Centers for Disease Control and Prevention; c2021 (<https://www.cdc.gov/nchstp/newsroom/2021/2019-national-hiv-surveillance-system-reports.html>).



Gaps in the testing of infants and children exposed to HIV have left more than two fifths of children living with HIV undiagnosed. The number of children on treatment globally has declined since 2019, leaving almost 800 000 children living with HIV not on antiretroviral therapy in 2020.

Nearly two thirds of children not on treatment are aged 5 to 14 years—children who cannot be found through HIV testing during postnatal care visits.

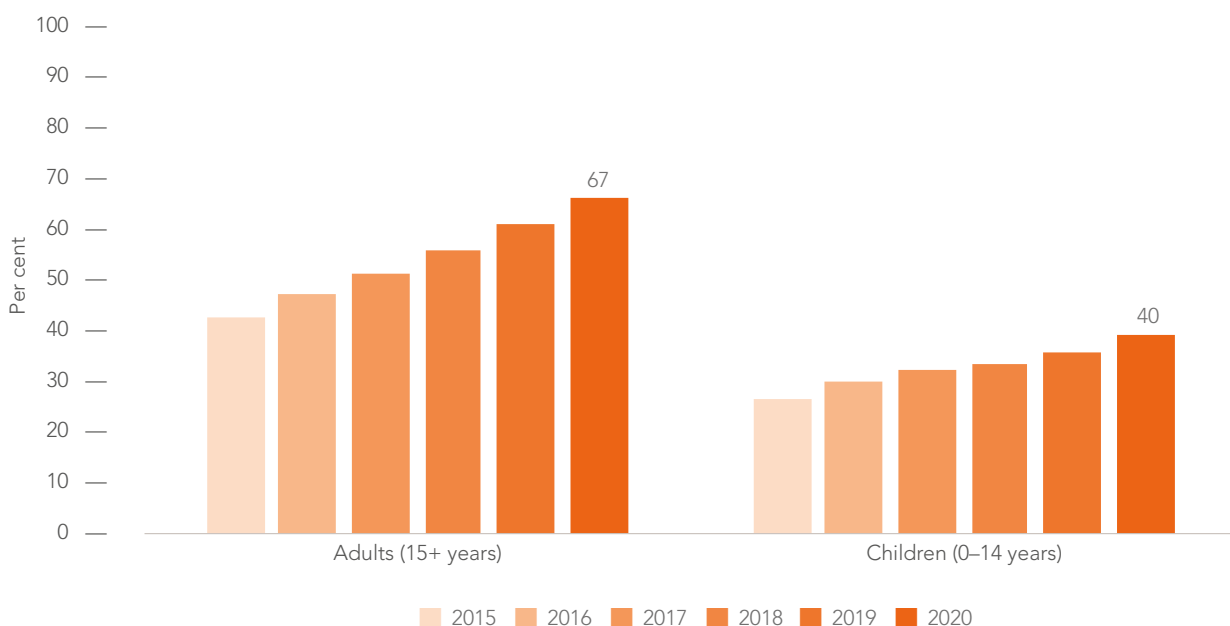
Children being left behind

New HIV infections among children declined by more than half (54%) from 2010 to 2020, due mainly to the increased provision of antiretroviral therapy to pregnant and breastfeeding women living with HIV. However, that momentum has slowed considerably, leaving particularly large gaps in western and central Africa, which is home to more than half of pregnant women living with HIV who are not on treatment.

Eliminating vertical HIV transmission requires improvements across the continuum of efforts to provide women with services as they become sexually active, plan families and go through pregnancy, childbirth and breastfeeding. Programmes need to become better at empowering women to protect themselves from HIV infection, and at finding women who acquire HIV and quickly providing them with antiretroviral therapy in order for them to achieve viral suppression.

Gaps in the testing of infants and children exposed to HIV have left more than two fifths of children living with HIV undiagnosed. The number of children on treatment globally has declined since 2019, leaving almost 800 000 children (aged 0 to 14 years) living with HIV not on antiretroviral therapy in 2020. Just 40% of children living with HIV had suppressed viral loads, compared to 67% of adults (Figure 0.9). Nearly two thirds of children not on treatment are aged 5 to 14 years—children who cannot be found through HIV testing during postnatal care visits. A priority for the next five years is to expand rights-based index, family and household testing and to optimize paediatric treatment in order to diagnose these children, link them to treatment and retain them in life-long care.

FIGURE 0.9 | PROPORTION OF ADULTS (AGED 15+ YEARS) AND CHILDREN (AGED 0–14 YEARS) WITH SUPPRESSED VIRAL LOAD AMONG PEOPLE LIVING WITH HIV, GLOBAL, 2015–2020



Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

Criminalization of key populations slowing HIV responses

In every region of the world, there are key populations who are particularly vulnerable to HIV infection. People who inject drugs are at 35 times greater risk of acquiring HIV infection than people who do not inject drugs; transgender women are at 34 times greater risk of acquiring HIV than other adults; female sex workers are at 26 times greater risk of acquiring HIV than other adult women; and gay men and other men who have sex with men are at 25 times greater risk of acquiring HIV than heterosexual adult men. Overall, key populations and their sexual partners accounted for 65% of HIV infections worldwide in 2020 and 93% of infections outside of sub-Saharan Africa (Figure 0.10).

Key populations continue to be marginalized and criminalized for their gender identities and expression, sexual orientation and livelihoods. An ecological analysis led by Georgetown University's O'Neill Institute for National and Global Health has reinforced smaller-scale studies showing that the criminalization of key populations has a negative effect on HIV outcomes (20). Where same-sex sexual relationships, sex work and drug use were criminalized, levels of HIV status knowledge and viral suppression among people living with HIV were significantly lower than in countries that opted not to criminalize them. Conversely, there was a positive correlation between better HIV outcomes and the adoption of laws that advance nondiscrimination, the existence of human rights institutions and responses to gender-based violence (20).



The risk for key populations to acquire HIV infection in 2020 was:

Gay men and other men who have sex with men: **25 times greater risk** than heterosexual men.

Female sex workers: **26 times greater risk** than women in the general population.

Transgender women: **34 times greater risk** than other adults.

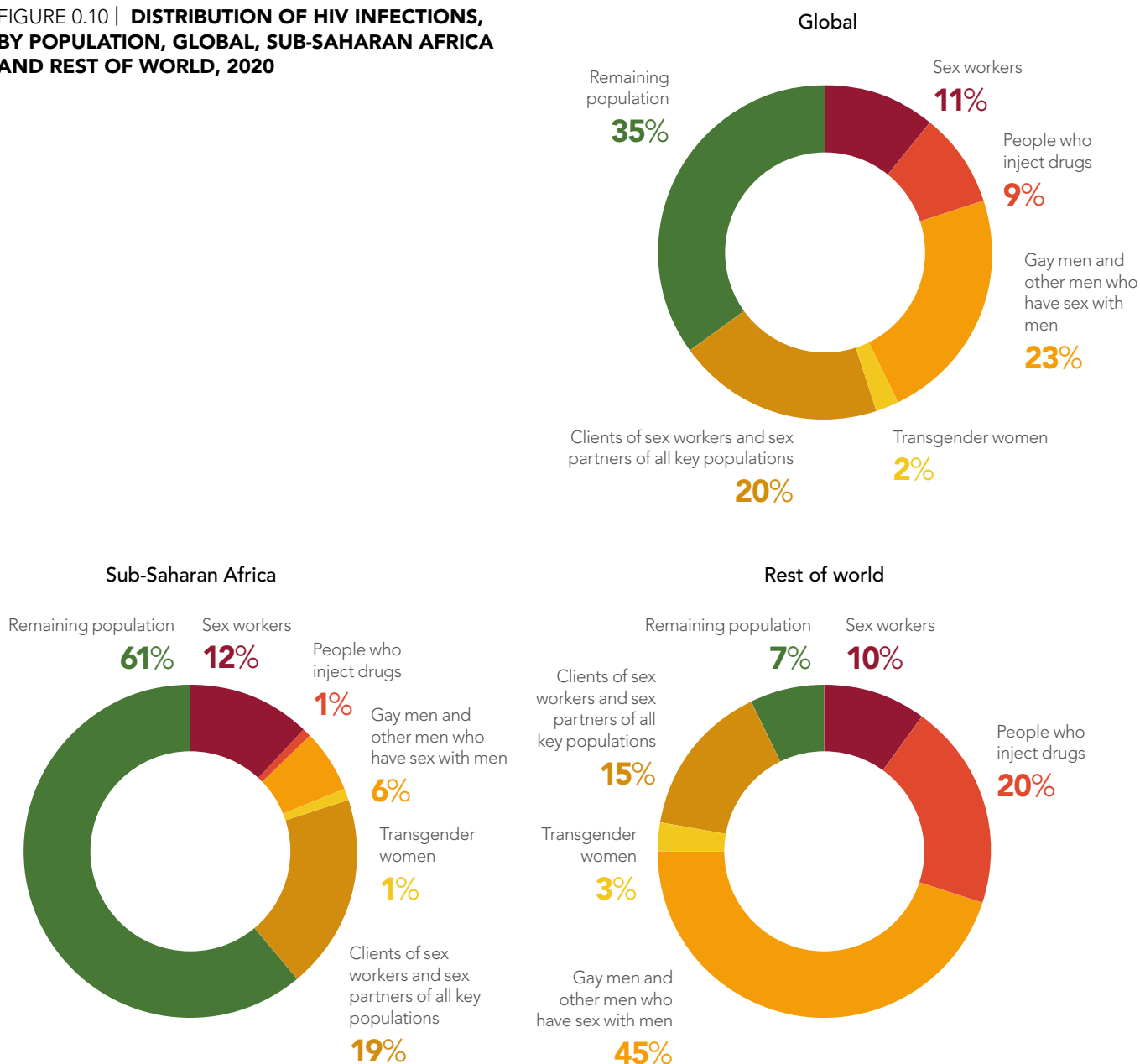
People who inject drugs: **35 times greater risk** than people who do not inject drugs.

A transgender woman speaks at a UN-supported photo exhibition in Peru. Credit: UNAIDS

Key populations continue to be marginalized and criminalized for their gender identities and expression, sexual orientation and livelihoods.

Across countries and regions, important HIV prevention services for key populations are unevenly accessible or entirely absent. Harm reduction services for people who inject drugs, for example, are seldom provided on a meaningful scale across all regions. Similarly, coverage of prevention programmes for gay men and other men who have sex with men is still low, including among many high-income countries. Coverage of prevention programmes for transgender people is meagre in all but a handful of countries. Coverage of prevention programmes among sex workers in eastern and southern Africa is still low. People in prisons and other closed settings are often not provided HIV services, despite the relative ease of reaching them.

FIGURE 0.10 | DISTRIBUTION OF HIV INFECTIONS, BY POPULATION, GLOBAL, SUB-SAHARAN AFRICA AND REST OF WORLD, 2020



Source: UNAIDS special analysis, 2021 (see Annex on Methods).

Women, men and young people face different challenges

Gender inequality and discrimination robs women and girls of their fundamental human rights, including the right to education, health and economic opportunities. The resulting disempowerment also denies women and girls sexual autonomy, decision-making power, dignity and safety. Gender-based violence is among the most egregious manifestations of gender inequality: it has been shown to increase the risk of acquiring HIV infection for women and girls, and among women living with HIV, it can lead to reduced access and adherence to treatment (21, 22). These impacts are most pronounced in sub-Saharan Africa, where adolescent girls and young women (aged 15 to 24 years) accounted for 25% of HIV infections in 2020, despite representing just 10% of the population (Figure 0.11).

Sexual and reproductive health and rights are the foundation of the ability of women and girls to prevent the acquisition of HIV. The UN General Assembly has committed to ensuring that 95% of women and girls of reproductive age have their HIV and sexual and reproductive health service needs met by 2025, but very few low- and middle-income countries are currently within reach of that target.

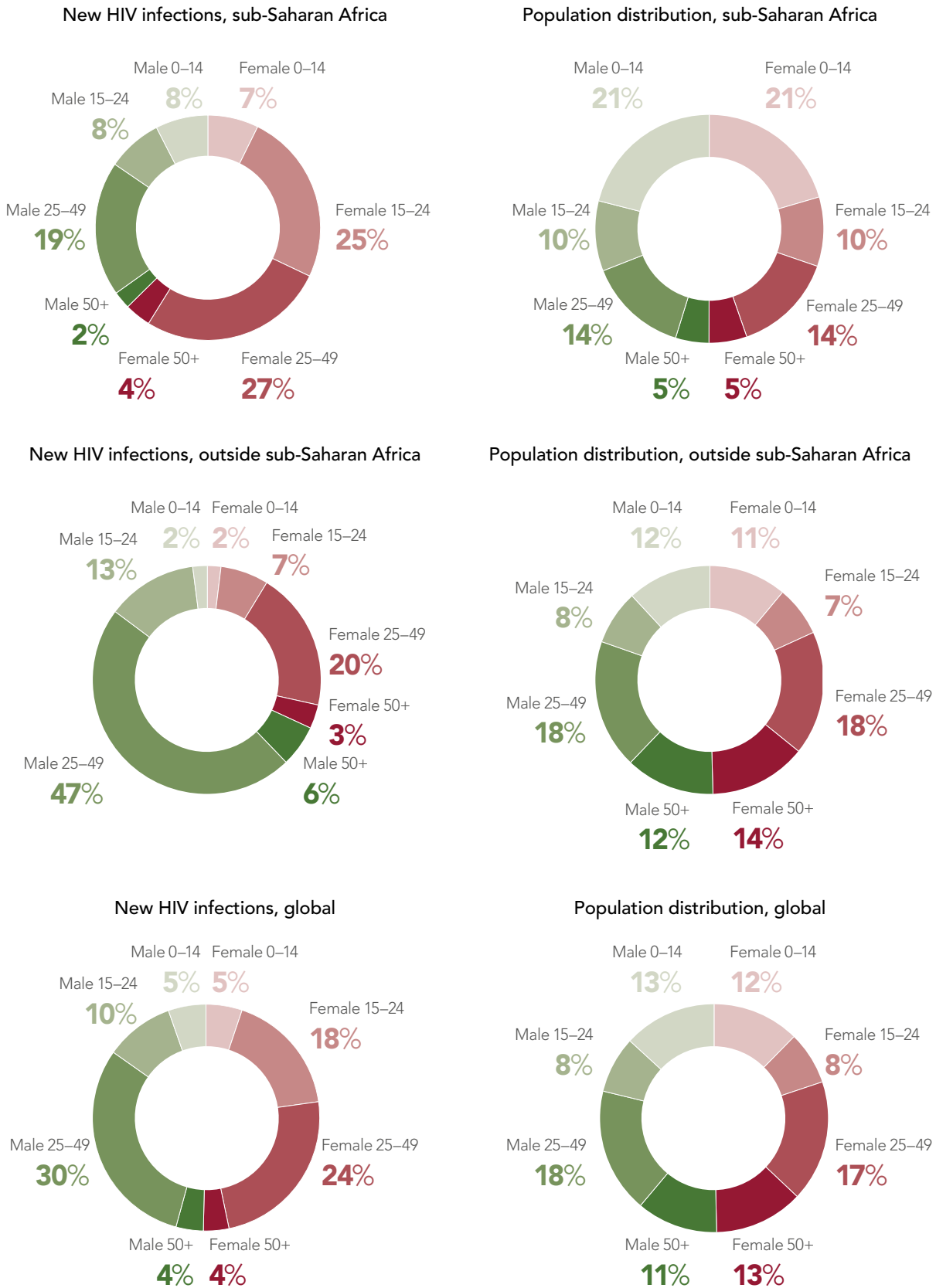
There is evidence that completing secondary education can help protect girls against acquiring HIV infection in places where HIV is common, in addition to its broader social and economic benefits (23). In many countries, however, girls are less likely to complete secondary education than boys, and the quality of their education suffers due to discrimination in schools. Several comprehensive prevention projects are being implemented for adolescent girls and young women in settings with a high incidence of HIV infections. However, the totality of these efforts still lacks the required scale, leaving many women and girls in settings with high HIV burden at substantial risk of infection.

Outside of sub-Saharan Africa, men and boys accounted for 58% of HIV infections in 2020, in part because there are more men than women within key populations and among their sexual partners globally. Across nearly all regions, men are less likely to access HIV services, and men living with HIV consistently fare worse than women across the HIV testing and treatment continuum. Compared to women living with HIV, there are 1 million more men living with HIV who do not know their HIV status, 1.8 million more men who know their status but are not on treatment and 1.6 million more men who are not virally suppressed.

Gender norms that prize male strength and stoicism may partly explain why many men delay seeking care, but other factors are also at play (24). Primary health-care services in eastern and southern Africa place a great deal of focus on women of reproductive age, and reproductive, maternal and child health services offer ideal entry points for HIV services. Similar entry points for men are not commonplace (25, 26). Focused efforts to reach men with HIV services—including through workplace-based interventions and greater use of self-testing approaches, and by providing services at outpatient

Sexual and reproductive health and rights are the foundation of the ability of women and girls to prevent the acquisition of HIV.

FIGURE 0.11 | DISTRIBUTION OF NEW HIV INFECTIONS AND OF THE POPULATION, BY AGE AND SEX, GLOBAL, SUB-SAHARAN AFRICA AND OUTSIDE SUB-SAHARAN AFRICA, 2020



Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).
 Note: Due to rounding, the percentages do not add up to 100%.

departments—will improve their health outcomes and also help prevent transmission of HIV to their sexual partners.

Young people, including young people within key populations, accounted for 27% of HIV infections in 2020. Young people face parental consent barriers to HIV and sexual and reproductive health services. They also have insufficient access to quality and age-appropriate comprehensive sexuality education, leaving them vulnerable to myths and misinformation about sex and sexuality. Students who receive comprehensive sexuality education are empowered to take responsibility for their own decisions and behaviours, and the ways in which they may affect others. Comprehensive sexuality education also plays a role in preventing gender-based violence, increasing the use of contraception, decreasing the number of sexual partners and delaying the initiation of sexual intercourse.

Young people face parental consent barriers to HIV and sexual and reproductive health services. They also have insufficient access to quality and age-appropriate comprehensive sexuality education, leaving them vulnerable to myths and misinformation about sex and sexuality.



The 2021 Political Declaration on AIDS features bold new global commitments and targets for 2025 that are ambitious but achievable if countries and communities follow the evidence-informed guidance within the UNAIDS Strategy.

New strategy and 2025 targets provide global direction

Ending inequalities alongside efforts to end AIDS is the central theme of The Global AIDS Strategy 2021–2026: End Inequalities, End AIDS, which UNAIDS has called on countries to use as a guide for their HIV responses. The Strategy also served as the starting point for a UN General Assembly Special Session on the global AIDS pandemic in June 2021. UN Member States took counsel from people living with HIV, senior UN officials, and representatives of international organizations, the private sector, civil society, academia and other stakeholders as they debated how to overcome the many challenges that have caused the world to fall behind in its efforts to end the AIDS pandemic as a public health threat by 2030, as agreed within the Sustainable Development Goals.

After weeks of intense debate, the General Assembly adopted the 2021 Political Declaration on HIV and AIDS: Ending Inequalities and Getting on Track to End AIDS by 2030. The Declaration features bold new global commitments and targets for 2025 that are ambitious but achievable if countries and communities follow the evidence-informed guidance within the UNAIDS Strategy.



Credit: UNAIDS

2025 TARGETS AND COMMITMENTS

What's new, different and ambitious within the 2021 Political Declaration on AIDS

- **Ending inequalities:** Commitment to take urgent and transformative action to end the social, economic, racial and gender inequalities that perpetuate the AIDS pandemic.
- **Equitable outcomes and granular targets:** Commitment to achieve HIV combination prevention, testing and treatment targets across relevant demographics, groups and geographic settings.
- **Prioritized combination HIV prevention:** Commitment to prioritize comprehensive packages of HIV prevention services and ensure they are available and used by 95% of people at risk of HIV infection.
- **Key populations:** Acknowledgement that key populations—including men who have sex with men, people who inject drugs, female sex workers, transgender people, and people in prisons and other closed settings—are at particular risk of HIV infection.
- **New HIV cascade:** Commitment to reach the new 95–95–95 testing, treatment and viral suppression targets within all demographics, groups and geographic settings, ensuring that at least 34 million people living with HIV access treatment.
- **Undetectable = Untransmittable (U = U):** Acknowledgement that viral suppression through antiretroviral therapy is a powerful component of combination HIV prevention because people living with HIV with undetectable viral loads will not transmit their infection to others.
- **Elimination of new HIV infections in children:** Commitment to ensure 95% of pregnant and breastfeeding women have access to combination HIV prevention, antenatal testing and re-testing; 95% of women living with HIV achieve and sustain viral suppression before delivery and during breastfeeding; and 95% of HIV-exposed children are tested within two months and, if HIV-positive, are provided with optimized treatment.
- **Fully fund the AIDS response:** Invest US\$ 29 billion annually in low- and middle-income countries, including at least US\$ 3.1 billion towards societal enablers.
- **10–10–10 targets for societal enablers:**
 - To reduce to less than 10% the number of women, girls and people living with, at risk of and affected by HIV who experience gender-based inequalities and sexual and gender-based violence.
 - To ensure that less than 10% of countries have restrictive legal and policy environments that lead to the denial or limitation of access to services.
 - To ensure that less than 10% of people living with, at risk of and affected by HIV experience stigma and discrimination.
- **Sexual and reproductive health:** Commitment to ensure that 95% of women and girls of reproductive age have their HIV and sexual and reproductive health-care service needs met.
- **Access to affordable medicines, diagnostics, vaccines and health technologies:** Commitment to ensure global accessibility, availability and affordability of safe, effective and quality-assured medicines, including generics, vaccines, diagnostics and other health technologies to prevent, diagnose and treat HIV infection, its co-infections and comorbidities.
- **Service integration:** Commitment to invest in systems for health and social protection systems that provide 90% of people living with, at risk of and affected by HIV with people-centred and context-specific integrated services for HIV and other services.
- **Community leadership, service delivery and monitoring:** Commitment to increase the proportion of community-led HIV services and ensure relevant networks and communities are sustainably financed, included in HIV response decision-making, and can generate data through community monitoring and research.
- **GIPA:** Explicit reference to the Greater Involvement of People Living with HIV, known as the GIPA Principle.

Stronger and smarter investments needed to end AIDS

Ending AIDS will require substantial additional domestic investments, reinvigorated international contributions, more efficient allocation of available resources and creative solutions to the reductions in fiscal space caused by the COVID-19 pandemic.

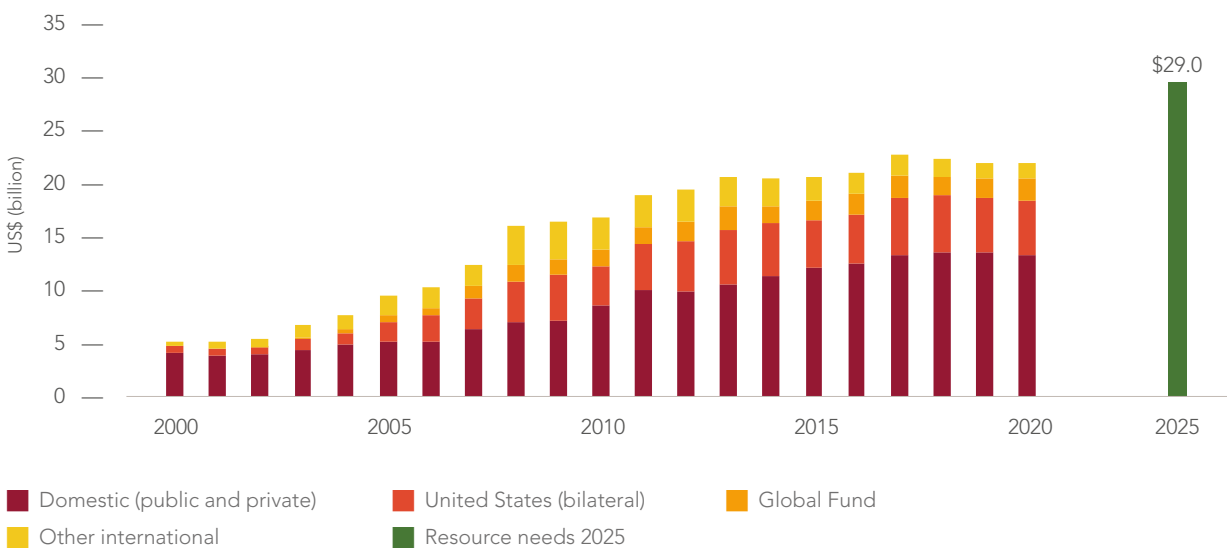
Under-investment in the HIV responses of low- and middle-income countries was a major reason why global targets for 2020 were missed. Financial resource availability during the last five years was consistently below the resources needed, and in 2020, it was 29% less than the US\$ 26 billion target for that year (in constant 2016 US dollars).^{2,3} Domestic funding (public and private), which had been the main source of investment growth for HIV responses in low- and middle-income countries over the last decade, has plateaued and begun to decline. International contributions have fluctuated for 10 years; in 2020, they were at the same level as in 2010. When domestic and donor resource trends are combined, there have been three straight years of decline in total resource availability.

The failure to achieve programmatic and impact targets has translated to more people living with HIV and more people at risk of HIV infection who are in need of services. Higher levels of resources are now needed to get the AIDS pandemic response back on track towards the global goal of ending AIDS by 2030. Annual HIV investments in low- and middle-income countries need to rise from the US\$ 21.5 billion (in constant 2019 US dollars) in resources available in 2020 to reach the 2025 target set within the 2021 Political Declaration on AIDS: US\$ 29 billion (in constant 2019 dollars) for low- and middle-income countries, which in 2020–2021 included countries formerly classified as high-income (Figure 0.12).

² The group of low- and middle-income countries included in the resource availability and needs estimates of this chapter follow the World Bank’s country income-level classification for 2020–2021.

³ The percentage shortfall compared to the 2020 target uses a 2020 resource availability estimate (US\$ 18.5 billion) measured in 2016 US dollars to match the resource targets in the 2016 Political Declaration on Ending AIDS. The other resource availability and needs estimates in this chapter are measured in 2019 US dollars, consistent with the resource targets in the 2021 Political Declaration on AIDS.

FIGURE 0.12 | RESOURCE AVAILABILITY FOR HIV IN LOW- AND MIDDLE-INCOME COUNTRIES, 2000–2020 AND 2025 TARGET



Source: UNAIDS financial estimates and projections, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).

Note: The resource estimates are presented in constant 2019 US dollars. The countries included are those that were classified by the World Bank in 2020 as being low- and middle-income.

Reaching the global price tag for the AIDS response is just part of the challenge—where funds come from, where they go and how they are spent also require close attention.

Eastern and southern Africa, the region with the highest burden of HIV, accounts for 29% of the estimated resource needs among all low- and middle-income countries for 2025. Asia and the Pacific's substantial share (32%) of total resource needs is due mainly to HIV prevention efforts for its much larger population, as well as higher unit costs in some countries. Higher unit costs also contribute to the relatively high per capita resource needs in Latin America and eastern Europe and central Asia.

Regional patterns in resource availability demonstrate that greater impact is achieved where sufficient funds are invested and used wisely (Figure 0.13). In eastern and southern Africa, for instance, a combination of domestic and international investments has fuelled the rapid expansion of HIV prevention, testing and treatment in areas with a high burden of HIV, resulting in strong and steady reductions in the rate of HIV infections and AIDS-related mortality. Even though the per capita amounts of resources available in eastern and southern Africa and the Caribbean in 2020 met or even surpassed 2025 investment targets, reductions in infections and deaths are not on track to achieve the 2025 impact targets, reflecting the need for greater efficiency in resource allocation and use within several countries in the region. This pattern is more pronounced in Latin America, where relatively high levels of spending per person living with HIV have been maintained, and HIV prevention efforts have stalled at relatively low incidence (0.16 HIV infections per 1000 population).

In western and central Africa, large resource shortfalls and continued reliance on out-of-pocket expenditures (such as user fees for health services) are associated with more modest declines in the incidence of HIV infection and the rate of AIDS-related mortality. In Asia and the Pacific, where the incidence of HIV infections and AIDS-related mortality are relatively low, the mortality rate is declining, but reductions in HIV incidence are slow, demonstrating the need for increased investment in HIV prevention in many countries of the region. Skyrocketing infections and deaths in eastern Europe and central Asia—and rising infections in the Middle East and North Africa—reflect massive underspending on HIV responses among most of the countries in these two regions.

Under-investment in the HIV responses of low- and middle-income countries was a major reason why global targets for 2020 were missed.



The Global AIDS Strategy calls for a doubling of domestic and international funding for primary HIV prevention interventions, such as condoms, PrEP and VMMC.

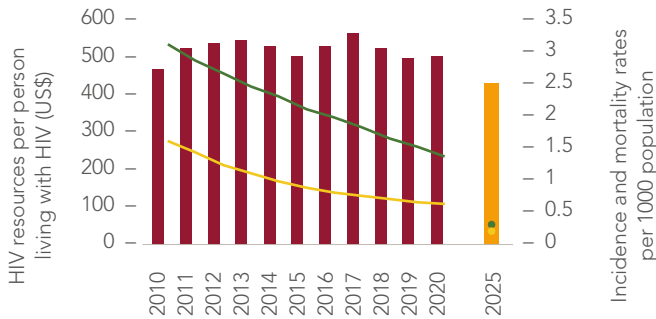
The resources allocated to effective combinations of HIV prevention services for populations at higher risk of HIV infection are insufficient across most regions. The Global AIDS Strategy 2021–2026 calls for a doubling of domestic and international funding for primary HIV prevention interventions, such as condoms, PrEP and VMMC, increasing from the US\$ 5.2 billion in estimated total expenditures in low- and middle-income countries in 2019 to about US\$ 9.5 billion in 2025. A substantial share of these additional resources for HIV prevention should be focused on key populations in all regions, and on adolescent girls and young women in areas in sub-Saharan Africa with high HIV burden.

Much of the gap between 2020 resource availability and 2025 resource needs for HIV responses is in upper-middle-income countries that generally have more fiscal space to increase domestic resource allocations. By contrast, low-income countries remain heavily reliant on donor resources, in part because some of the countries spend a substantial proportion of their tax revenues on servicing debt. Deficit spending related to the COVID-19 pandemic in countries across all income levels threatens to impact funding availability for HIV responses in the coming years.

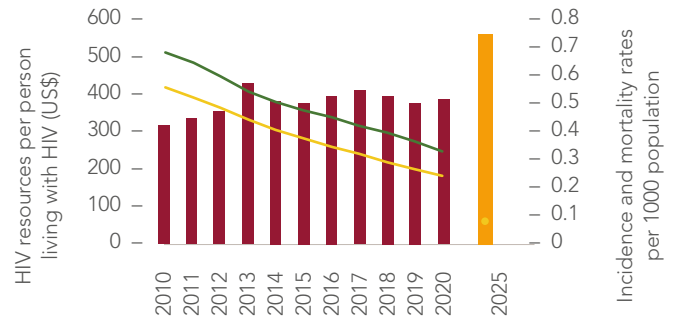


FIGURE 0.13 | TOTAL HIV RESOURCE AVAILABILITY PER PERSON LIVING WITH HIV, HIV INCIDENCE AND AIDS-RELATED MORTALITY RATES, LOW- AND MIDDLE-INCOME COUNTRIES, 2010–2020 AND 2025 TARGET

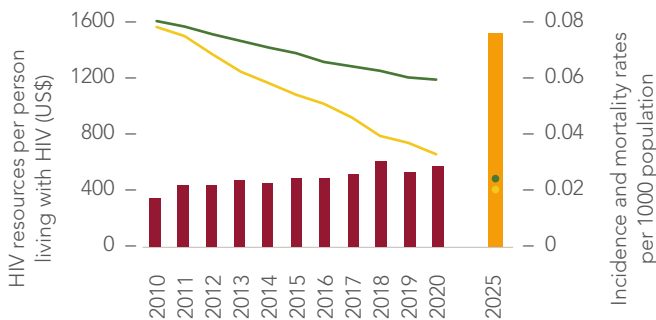
Eastern and southern Africa



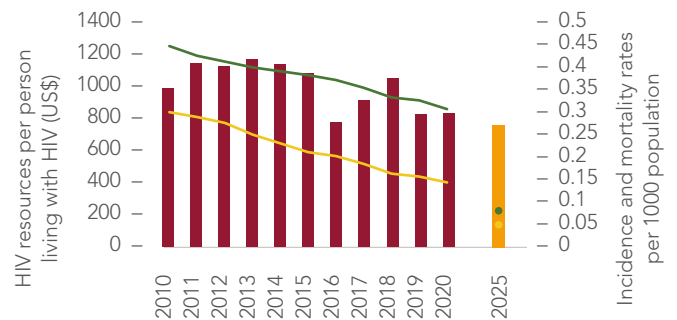
Western and central Africa



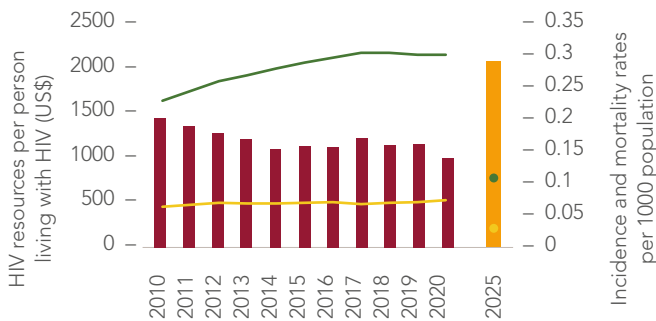
Asia and the Pacific



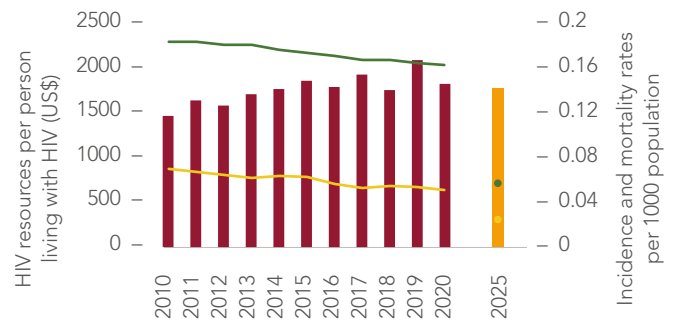
Caribbean



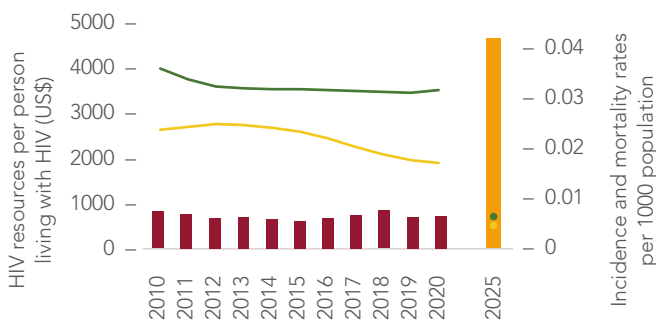
Eastern Europe and central Asia



Latin America



Middle East and North Africa



- Resource availability per person living with HIV
- Resource needs per person living with HIV (2025)
- Incidence per 1000 population
- Mortality per 1000 population

Source: Analysis based on UNAIDS epidemiological and financial estimates and projections, 2021.

Ensuring that economic relief happens is step one. Step two is to ensure that money flows to health budgets to protect people from COVID-19, HIV and other critical health problems.

COVID-19 shocks are deepening inequalities

The International Monetary Fund (IMF) has warned that the COVID-19 pandemic has exacerbated pre-existing inequalities and poverty. The world's richest countries have ratcheted up budget deficits and allocated trillions of dollars to their COVID-19 responses, cushioning their economies and populations from the worst health emergency and economic shock in decades (27). Just a sliver of this largesse has gone to developing countries, however, with only an extra US\$ 10 billion of official development assistance made available amid warnings of future cuts in development aid (28).

In low-income countries, meanwhile, a collapse in revenues caused by the pandemic-driven economic downturn and high levels of public debt have deeply constrained their abilities to deal with the crisis (27, 29). In 2019, low- and middle-income countries were spending an average of 10.7% of government revenue on health care and 12.2% on external debt payments (30). During the pandemic, many of these countries have been largely unable to allocate additional resources to their health systems and social safety nets. Continued low vaccine coverage in the developing world and new waves of variant-driven infections make it clear that a significant amount of low- and middle-income countries need urgent debt cancellation.

The G20 grouping of the world's wealthiest nations agreed to US\$ 7 billion in debt suspensions for 46 low-income countries in 2020, and a similar amount is expected to be postponed in 2021 (31). However, the amount postponed in 2020 was only 24% of the debt repayments those countries owed, so they kept paying three out of every four dollars they owed—funding that is desperately needed during an unprecedented crisis. The debt payments were also merely postponed until 2022, with larger future bills standing in the way of recovery.

New financing sources are being tapped, with the largest-ever allocation of US\$ 650 billion in Special Drawing Rights—an international reserve asset created by the IMF—announced in April 2021. The allocation will provide countries with additional liquidity without increasing their debt (32). However, civil society activists warn that these funds are allocated in proportion to IMF member quotas, with rich countries expected to receive about two thirds of the total, and low-income countries around 1% (33). Experts, academics and civil society have called for this Special Drawing Rights allocation to be increased to between US\$ 1 trillion and US\$ 3 trillion, in line with the magnitude of the COVID-19 crisis, and for wealthy nations to transfer their unused allocations to poorer countries (34). Ensuring that economic relief happens is step one, but step two is to ensure that money flows to health budgets to protect people from COVID-19, HIV and other critical health problems.



In low-income countries, the pandemic-driven economic downturn and high levels of public debt have deeply constrained their abilities to deal with the crisis. Continued low vaccine coverage in the developing world and new waves of variant-driven infections make it clear that a significant amount of low- and middle-income countries need urgent debt cancellation.

As waves of COVID-19 infections overwhelm health systems in developing countries and vaccine coverage remains low, the debate over the global intellectual property regime for life-saving medicines, vaccines and other health technologies has intensified.

HIV lessons guide pandemic responses

The gains made in HIV testing and treatment are a testament to what can be achieved when countries listen to those who are most affected by a crisis and work together to address those needs. For decades, communities of people living with HIV and other key populations have been driving the global AIDS response forward, demanding access to affordable medicines and sufficient funding for HIV responses in both developed and developing countries. For people living with HIV, these are life-and-death issues.

In the late 1990s, Brazil's production of lower-cost generic antiretrovirals and South Africa's efforts to make these affordable medications available to its growing population of people living with HIV resulted in fierce opposition from multinational pharmaceutical companies and developed countries (35). In 2000, a year's worth of antiretroviral medicines cost about US\$ 10 000 per patient per year, limiting access to just a few thousand patients in wealthy nations. The AIDS Support Organization (TASO) in Uganda and South Africa's Treatment Action Campaign (TAC) were among the civil society organizations that led calls for access to antiretroviral therapy for all. As annual AIDS-related deaths surpassed 1.6 million [1.1 million–2.4 million] in 2001, devastating entire regions of sub-Saharan Africa, member states of the World Trade Organization adopted the Doha Declaration on the TRIPS Agreement and Public Health, which affirmed that intellectual property protections such as patents should not stand in the way of a country's response to a public health crisis, including those related to HIV, tuberculosis, malaria or other epidemics (36).⁴ Compulsory licensing of patented medicines and other health technologies allowable under the Declaration—as well as voluntary licensing mechanisms—accelerated generic production and internationally assisted procurement and distribution of affordable health products. The average price per person for a year of highly active triple therapy in low- and middle-income countries has since fallen to under US\$ 100 per year.⁵

As waves of COVID-19 infections overwhelm health systems in developing countries and vaccine coverage remains low, the debate over the global intellectual property regime for life-saving medicines, vaccines and other health technologies has intensified. HIV response leaders, including UNAIDS and networks of people living with HIV, have joined this debate as part of the People's Vaccine initiative. The urgent steps advocated by the initiative include: a temporary waiver of intellectual property on COVID-19 vaccines, treatments and related technologies; the sharing by pharmaceutical companies of COVID-19-related technology and know-how through the World Health Organization (WHO) COVID-19 Technology Access Pool; and a large and immediate investment of public money to ramp up the global production of vaccines, and to ensure that COVID-19 vaccines, treatments and tests are free of charge (37).

⁴ "TRIPS" stands for Trade-Related Aspects of Intellectual Property Rights.

⁵ First- and second-line treatment regimens available in 2020 at this price per person per year include TDF/3TC/DTG, TDF/3TC/EFV, AZT/3TC/NVP and TDF/FTC/EFV. See Chapter 09 (Investments to End AIDS) for further details.

THE GIPA PRINCIPLE

From the very beginning of the AIDS pandemic response, people living with HIV have rightly demanded a seat at the decision-making table. HIV-affected communities are also at the forefront of community engagement in the delivery of health and social services, demanding the repeal of obstructive laws and practices, going the last mile to deliver services to marginalized communities, and monitoring programmes to strengthen effectiveness and accountability.

The Greater Involvement of People Living with HIV, known as the GIPA Principle, was voiced at one of the first-ever large meetings of activists living with HIV in 1983. The GIPA Principle was formalized at the 1994 Paris AIDS Summit, when 42 countries agreed to “support a greater involvement of people living with HIV at all . . . levels [and to] . . . stimulate the creation of supportive political, legal and social environments” (38).

Community leadership and service delivery within countries has proved critical against COVID-19, just as it has against HIV. In Côte d’Ivoire, Indonesia, Kenya and elsewhere, community groups have delivered antiretroviral and tuberculosis medicines to people’s homes or local drop-in centres, while their peers in Eswatini and Kenya have delivered condoms, lubricants and HIV self-testing kits to key population-friendly community distribution points (39). Community-led organizations have also added COVID-19 tasks to their activities, including awareness-raising and the distribution of personal protective equipment (40).

At the UN General Assembly’s 2021 High-Level Meeting on AIDS, intensive dialogue between representatives of people living with HIV, key populations and UN Member State delegations was followed by a reaffirmation of the GIPA Principle within the 2021 Political Declaration on AIDS, as well as a commitment to ensure that global, regional, national and subnational networks and other affected communities are included in HIV response decision-making, planning, implementing and monitoring, and that they are provided with sufficient technical and financial support.

*A woman living with HIV speaks at an advocacy event in South Africa.
Credit: UNAIDS*



COVID-19 is a wake-up call. The world was not prepared for a pandemic that scientists knew would someday come. Many around the world in 2021 crave nothing more than getting back to normal. But normal is unacceptable. The data and the positive examples within this report are proof that the world can and should aim much higher.

High-performing countries provide a path for others to follow

The direction provided by the 2021–2026 Global AIDS Strategy and the 2021 Political Declaration on AIDS are grounded in the experiences of countries and communities that are confronting inequalities and making strong progress against their AIDS epidemics.

In Eswatini, strong national leadership and international support, combined with intensive community mobilization and differentiated service delivery, has seen the lower-middle-income country's HIV treatment programme grow into a world leader that has achieved the 95–95–95 targets (in aggregate) years ahead of schedule (see case study on page 94).

A new UN-supported effort in western and central Africa to provide HIV tests to the families and household members of people recently diagnosed with HIV—known as family-based index testing—is finding thousands of undiagnosed people living with HIV and linking them to antiretroviral therapy (see case study on page 122). In Nigeria, treatment monitoring efforts led by the national network of people living with HIV are focusing on resolving service barriers faced by women, girls and key populations (see case study on page 132). In South Africa, peer coaches are closing gaps in HIV testing and treatment among men living with HIV by addressing the fears and insecurities that are at the heart of male avoidance of health services (see case study on page 98).

As COVID-19 measures disrupted HIV testing and treatment services in Latin America and the Caribbean, multimonth dispensing and community distributions of antiretroviral medicines was rapidly expanded with the support of UNAIDS, the Pan-American Health Organization (PAHO) and WHO (see case study on page 216). Belgium and Colombia are reaching migrants with HIV services, despite the additional challenges of COVID-19 (see case studies on pages 358 and 232).

Sri Lanka, a universal health coverage leader that provides free services for maternal and child health, sexual and reproductive health, and family planning to all its citizens, has joined the small but growing list of countries to have officially achieved the elimination of vertical transmission of HIV and syphilis (see case study on page 118).

The Go Further partnership is expanding cervical cancer services in 12 countries with high HIV burden, where this form of cancer is alarmingly common among women living with HIV, whose immune systems struggle to clear human papillomavirus (HPV). Since its launch in May 2018, Go Further has supported about 1.5 million cervical cancer screenings for women living with HIV and has ensured that more than 60 000 women with precancerous lesions received treatment (see case study on page 228).

In the Caribbean, community-led groups are using strategic litigation to overturn laws that sanction rights violations against lesbian, gay, bisexual, transgender and intersex (LGBTI) communities and put their health and lives at risk (see case study on page 317). In Peru, parental consent barriers that impede young people's access to HIV testing and sexual and reproductive health services laws have been broken down following years of dogged campaigning by activists (see case study on page 302).

COVID-19 is a wake-up call. The world was not prepared for a pandemic that scientists knew would someday come. The coronavirus has re-exposed and aggravated the inequalities that leave the poor and marginalized so exposed to crises, from disease outbreaks to natural disasters, from climate change to conflict. Four decades of experience and lessons learned on HIV—both the successes and the failures—show that countries and communities working together to confront inequalities is the key to preparing for and responding to pandemics.

Many around the world in 2021 crave nothing more than getting back to normal. But normal is unacceptable. The data and the positive examples within this report are proof that the world can and should aim much higher.



Credit: UNAIDS

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HIV SERVICES: SUCCESSIONS AND CHALLENGES





01 COMBINATION HIV PREVENTION

Combinations of evidence-informed HIV prevention options tailored to the needs of populations at higher risk of infection have been proven effective in a variety of epidemic and cultural settings. Countries with diverse epidemics and resources—including Burkina Faso, Eswatini, Nepal, the Netherlands, Thailand, Viet Nam and Zimbabwe—are succeeding in markedly reducing new HIV infections. Significant declines in new HIV infections can be achieved when strong political commitment is mobilized, structural barriers are addressed, resources are strategically targeted where they can have the maximum impact, and community-led activities are supported and integrated with prevention programmes.

When they are used at scale and in combination, the impact of these interventions is formidable. Condom use is estimated to have averted more than 100 million infections globally since 1990, while voluntary medical male circumcision (VMMC) is contributing to declining HIV incidence in several priority countries in sub-Saharan Africa (1–3). Although access to pre-exposure prophylaxis (PrEP) is still far from the target levels, widening use of this powerful prevention tool is accelerating declines in HIV infections in urban areas of Australia, the United Kingdom of Great Britain and Northern Ireland, and the United States of America. Antiretroviral therapy also has made a significant contribution to reductions in HIV infections among adults and children over the last two decades: sustained treatment suppresses HIV within the bodies of people living with HIV, making the virus undetectable and HIV infection untransmittable.

The Global HIV Prevention Coalition has helped increase global attention to HIV prevention, with all 28 of the Coalition's focus countries having adopted ambitious national HIV prevention targets. United Nations (UN) Member States' commitments within the 2021 United Nations Political Declaration on AIDS build on the Coalition's efforts to urgently resource, intensify and expand effective prevention interventions. The Declaration requires that 95% of people at risk of HIV infection within all epidemiologically relevant groups, age groups and geographic settings have access to and use appropriate, prioritized, person-centred and effective combination prevention options. It also notes that key populations are at greatly elevated risk of HIV acquisition, and it calls for annual HIV infections among adolescent girls and young women to be reduced below 50 000 by 2025.

Too many countries, however, are not following this approach at sufficient scale or intensity, and societal barriers—such as punitive laws—often remain unaddressed. Rising HIV infections in many of these countries are offsetting the reductions achieved by high-performing countries. As a result, the annual number of new infections among adults globally has hardly changed in the past four years—and in 2020, it was only 31% lower than it was in 2010.



*Methadone is dispensed for opioid substitution therapy at Putao District Hospital in Myanmar.
Credit: UNAIDS*

2025 TARGETS AND COMMITMENTS in the 2021 Political Declaration on AIDS

- Reduce new HIV infections to under 370 000.
- Ensure that 95% of people at risk of HIV infection, within all epidemiologically relevant groups, age groups and geographic settings, have access to and use appropriate, prioritized, person-centred and effective combination prevention options.
- Tailor HIV combination prevention approaches to meet the diverse needs of key populations, including among sex workers, men who have sex with men, people who inject drugs, transgender people, people in prisons and other closed settings and all people living with HIV.
- Reduce the number of new HIV infections among adolescent girls and young women to below 50 000.
- Ensure availability of PrEP for people at substantial risk of HIV and post-exposure prophylaxis for people recently exposed to HIV.
- 95% of people within humanitarian settings at risk of HIV use appropriate, prioritized, people-centred and effective combination prevention options.

HIV DATA

Condoms a critical part of combination prevention

When used correctly and consistently, male and female condoms and lubricant offer very high protection against HIV, sexually transmitted infections (STIs) and unintended pregnancy. Condom use has had an enormous impact on the global AIDS pandemic: model simulations show that increased condom use since 1990 has averted an estimated 117 million new infections (Figure 1.1), close to half (47%) of them in sub-Saharan Africa and more than one third (37%) in Asia and the Pacific (1).

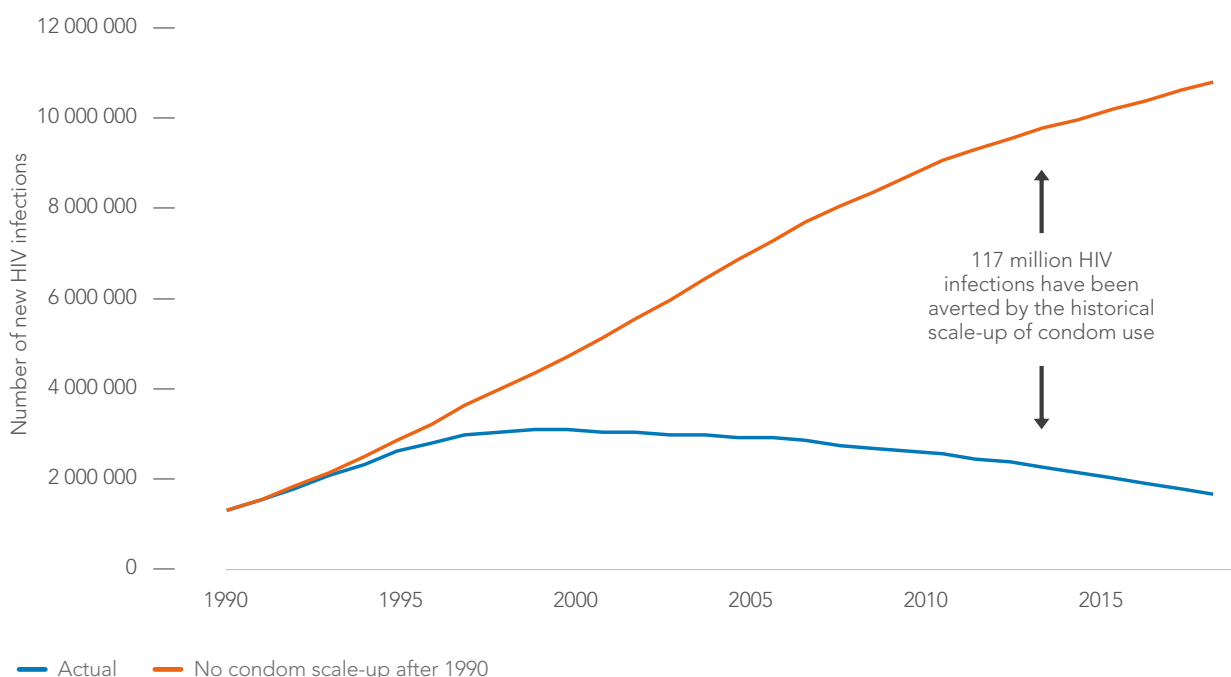
Condom programmes are among the most cost-effective interventions in the HIV response (4). Assuming an average cost of about US\$ 0.18 for each male condom distributed, each averted HIV infection during 1990–2019 cost approximately US\$ 230 (1). In recent years, however, condom social marketing programmes and condom demand generation have declined. Data from population-based surveys conducted after 2015 also suggest that condom use has declined among young people in several countries in sub-Saharan Africa.

Consistent condom use, although possible, has proved difficult to achieve among all populations. Women in many countries, for example, need greater agency and support to negotiate consistent condom use. Condoms alone, therefore, are not sufficient to control HIV epidemics: if condom use rates are increased to reach the 2025 target of 95% of higher risk sex acts and all other prevention interventions remain at 2019 coverage levels, about one third of the required reductions in HIV infections will be achieved (Figure 1.2). Full achievement of the 2025 targets requires combining increases in condom availability and use with a full range of prevention choices (1).

Increased condom use since 1990
has averted an estimated
117 million new infections.

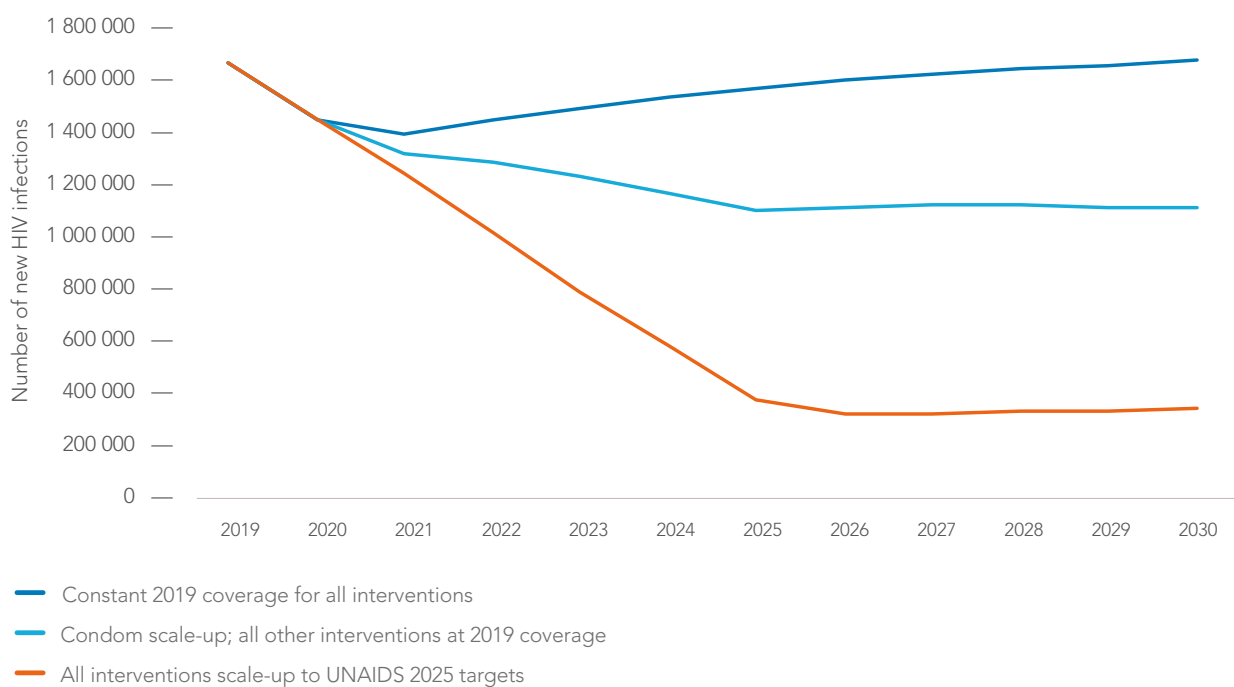


FIGURE 1.1 | NEW HIV INFECTIONS WITH AND WITHOUT SCALE-UP OF CONDOM USE, GLOBAL, 1990–2019



Source: Stover J, Teng Y. The impact of condom use on the HIV epidemic [version 1]. Gates Open Res. 2021;5:91. doi: 10.12688/gatesopenres.13278.1

FIGURE 1.2 | THE IMPACT OF CONDOM USE ON NEW HIV INFECTIONS IN THE FUTURE UNDER THREE SCENARIOS, GLOBAL, 2019–2030



Source: Stover J, Teng Y. The impact of condom use on the HIV epidemic [version 1]. Gates Open Res. 2021;5:91. doi: 10.12688/gatesopenres.13278.1

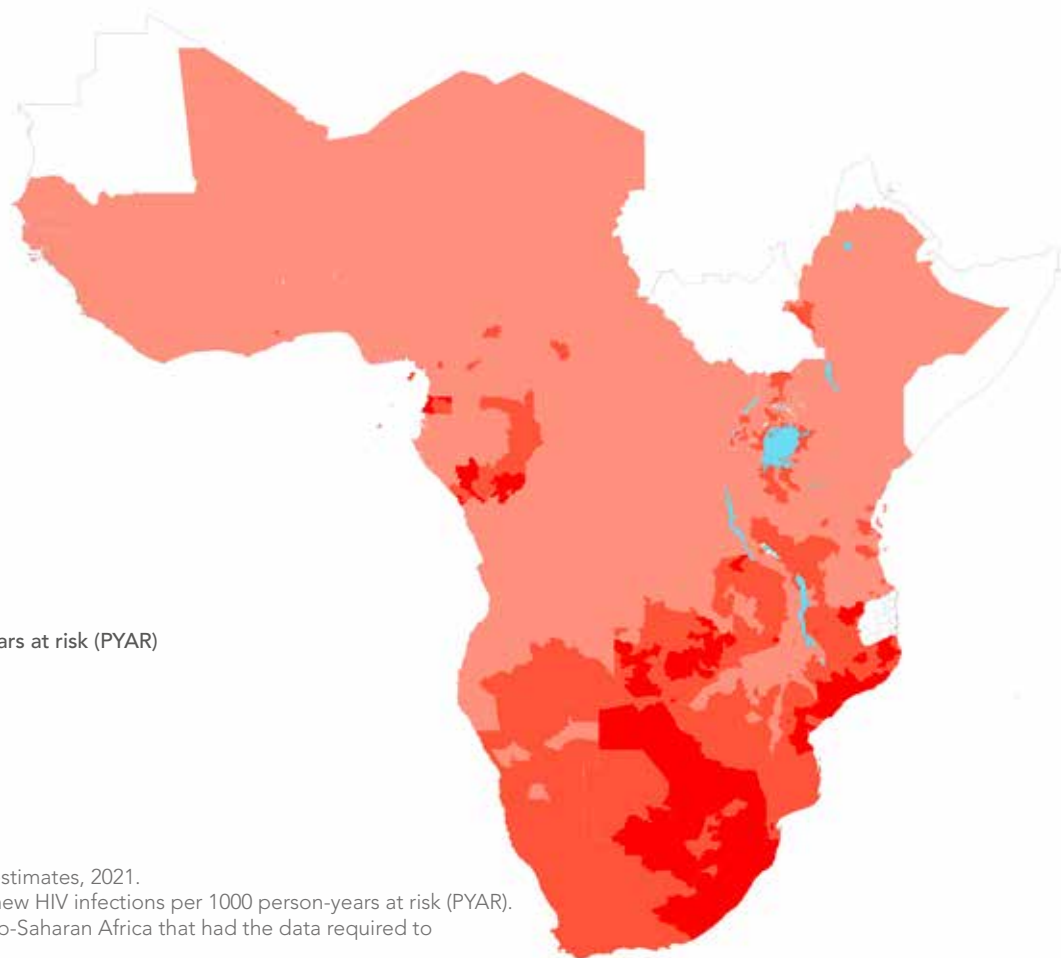
HIV DATA

HIV prevention for adolescent girls and young women lacks scale and impact

Gender inequality, underpinned by harmful gender norms, restricts women’s access to HIV and sexual and reproductive health services. There were 260 000 [150 000–390 000] HIV infections among adolescent girls and young women globally in 2020, far shy of the 2025 target of 50 000. Eighty-three per cent of these infections occurred in sub-Saharan Africa, where adolescent girls and young women (aged 15 to 24 years) account for 25% of HIV infections, despite representing just 10% of the population.

Despite several comprehensive prevention projects being implemented for adolescent girls and young women through the United States President’s Emergency Plan for AIDS Relief (PEPFAR) DREAMS partnership, the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund), the United Nations Children’s Fund (UNICEF) and national programmes such as South Africa’s She Conquers, the response in settings with high HIV incidence still lacks in scale and impact. Out of the 38 countries in sub-Saharan Africa with subnational HIV incidence data, 20 countries had a total of 555 subnational locations of high, very high or extremely high HIV incidence (Figure 1.3). Out of those subnational locations, just 30% (200) had dedicated HIV programmes for adolescent girls and young women in 2020.

FIGURE 1.3 | HIV INCIDENCE AMONG ADOLESCENT GIRLS AND YOUNG WOMEN (AGED 15–24 YEARS), SUBNATIONAL LEVELS, SUB-SAHARAN AFRICA, 2020



Incidence rate per 1000 person-years at risk (PYAR)

- No data
- < 3 per 1000 PYAR (low)
- 3–< 10 per 1000 PYAR (high)
- 10–30 per 1000 PYAR (very high)

Source: UNAIDS epidemiological estimates, 2021.
 Note: HIV incidence estimated as new HIV infections per 1000 person-years at risk (PYAR).
 Countries: Selected countries in sub-Saharan Africa that had the data required to produce subnational HIV estimates.

Women often denied sexual and reproductive health and rights

Sexual and reproductive health and rights are the foundation of women and girls' ability to prevent the acquisition of HIV. The UN General Assembly has committed to ensuring that 95% of women and girls of reproductive age have their HIV and sexual and reproductive health service needs met by 2025, but very few low- and middle-income countries are currently within reach of that target (Figure 1.4). Family planning services are an important component of sexual and reproductive health and rights, but the availability of these services varies widely. Across 32 countries with available data between 2015 and 2020, the percentage of women aged 15 to 49 years who had their demand for family planning satisfied by modern methods ranged from about 6% in Albania to 87% in Colombia.

Fulfilment of family planning needs varies by background characteristics. Women were more likely to have their demand for family planning satisfied using modern methods if they were living in urban areas compared to rural areas (in 19 of 32 countries), or if they had secondary or higher education compared to no formal or only primary education (in 21 of 32 countries). That percentage also tended to be higher for older women compared to younger women, and for women in the highest wealth quintile compared with their peers in the lowest quintile. In 17 of the 32 countries, that disparity was not very large (<10%) or not present at all, but it was very wide (>25%) in several others (Angola, Cameroon, Guinea, Mali, Nigeria, Papua New Guinea and Uganda).

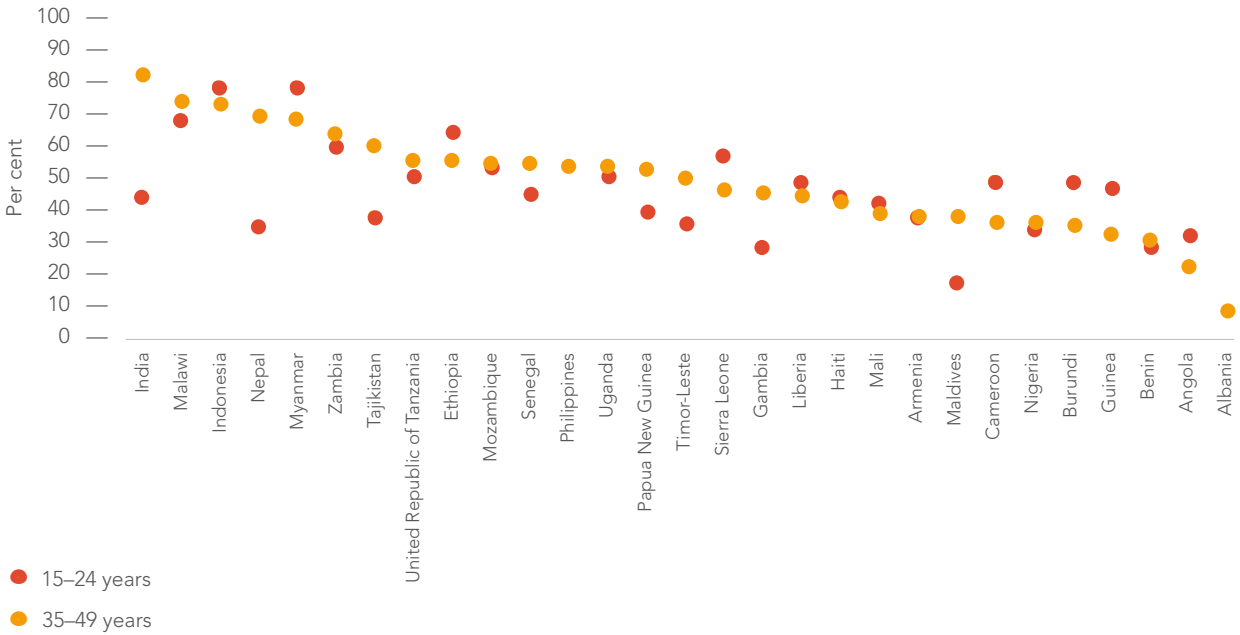
Family planning services are an important component of sexual and reproductive health and rights, but the availability of these services varies widely.



Credit: UNAIDS

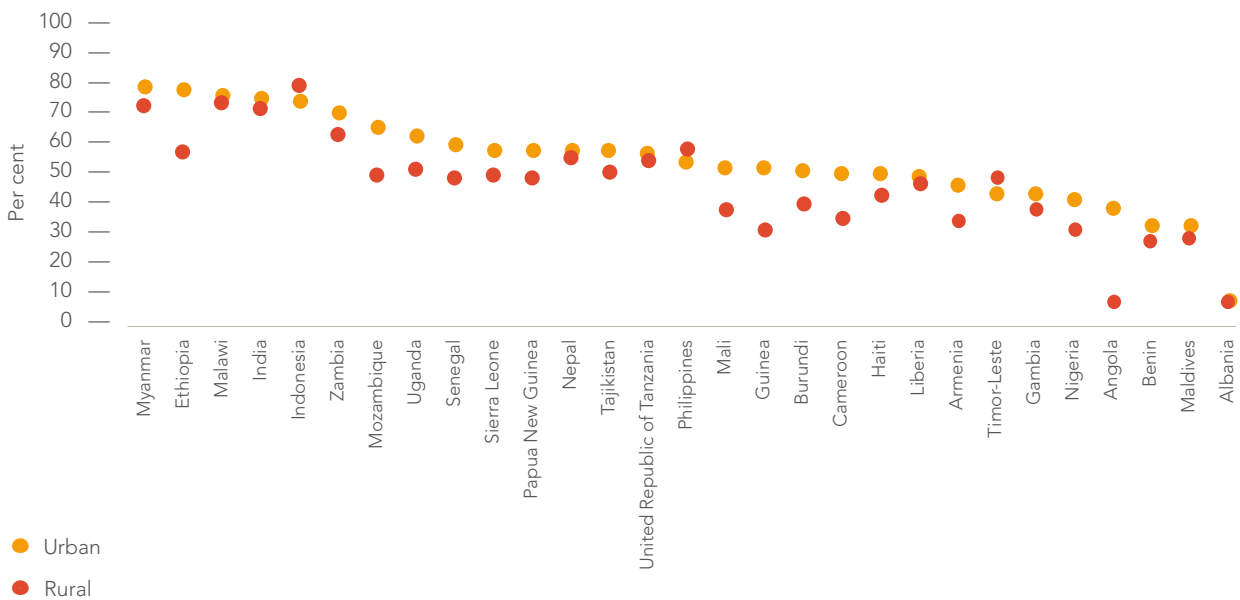
FIGURE 1.4 | WOMEN (15–49 YEARS) WHO HAVE THEIR DEMAND FOR FAMILY PLANNING SATISFIED BY MODERN METHODS, BY AGE, EDUCATION LEVEL, PLACE OF RESIDENCE AND WEALTH QUINTILE, COUNTRIES WITH AVAILABLE DATA, 2015–2020

AGE



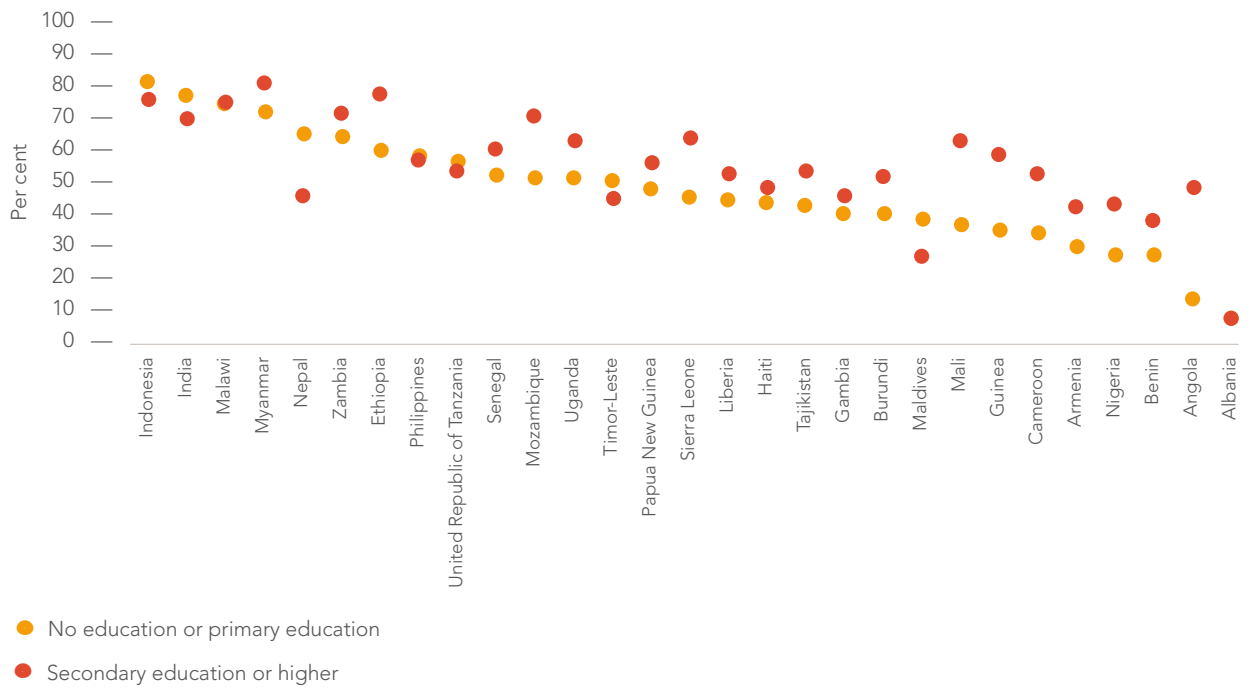
Source: Demographic and Health Surveys, 2015–2020.

PLACE OF RESIDENCE



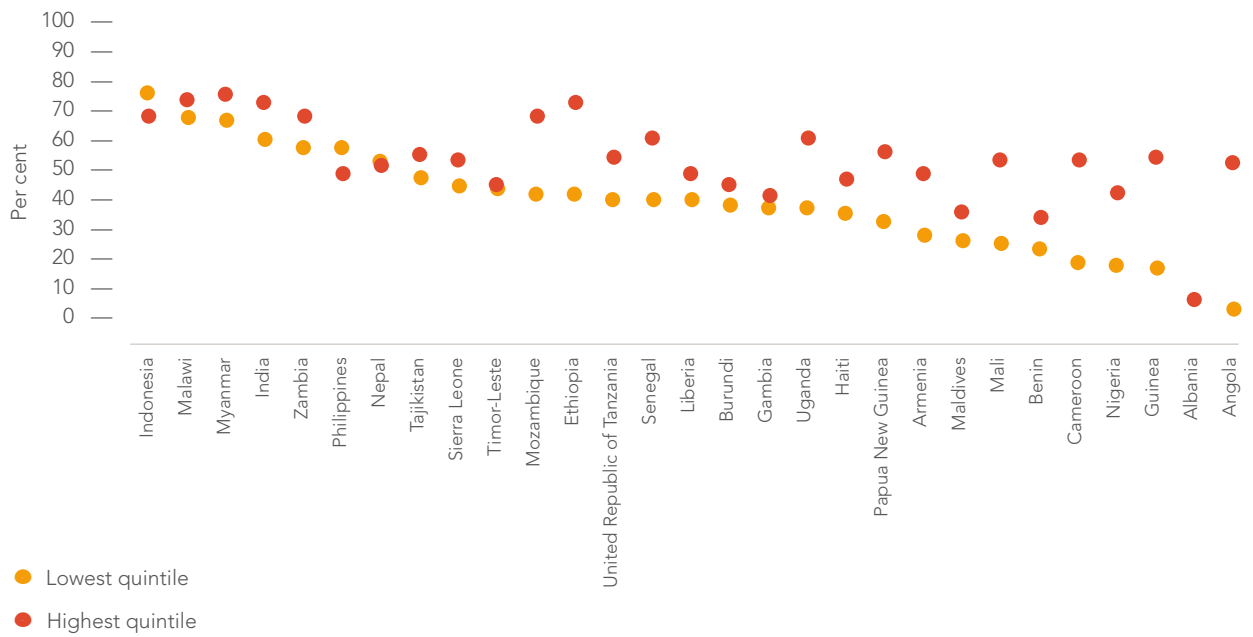
Source: Demographic and Health Surveys, 2015–2020.

EDUCATION LEVEL



Source: Demographic and Health Surveys, 2015–2020.

HOUSEHOLD WEALTH



Source: Demographic and Health Surveys, 2015–2020.

HIV DATA

Prevention programmes for key populations perform well when community-led organizations are closely involved in designing and implementing them, and when punitive laws and policies are absent or not enforced.

Uneven coverage of prevention options for key populations

Across countries and regions, important HIV prevention services for key populations are unevenly accessible or entirely absent. Harm reduction services for people who inject drugs, for example, are seldom provided on a meaningful scale. Similarly, coverage of prevention programmes for gay men and other men who have sex with men is still uniformly low, including among high-income countries.

Coverage of prevention programmes for transgender people is meagre, except in Latin America, although countries in Asia and the Pacific, western and central Africa, and eastern Europe and central Africa reported relatively high levels (>70%) of condom use at last higher risk sex among transgender people (Figure 1.5).

In eastern and southern Africa, coverage of prevention programmes among sex workers is still low, and condom use at last higher risk sex is below the levels required to drastically reduce HIV transmission during paid sex. Levels of condom use by sex workers during paid sex are much higher in all of the other regions, except for the Middle East and North Africa.

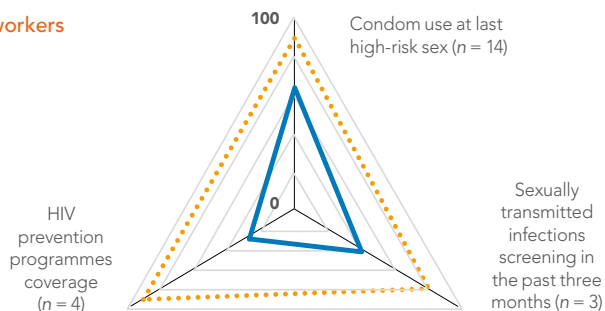
Levels of use of condoms or sterile injecting equipment tend to be captured in surveys that are conducted in places where relevant programmes are being implemented. The data suggest that when prevention programmes for key populations are provided at scale, they perform relatively well. Programmes also perform well when community-led organizations are closely involved in designing and implementing them, and when punitive laws and policies are absent or not enforced.

People in prisons and other closed settings are often not provided HIV services despite their elevated risk of HIV and other communicable diseases. Among countries that reported to UNAIDS between 2017 and 2021 regarding whether various services were available, 52 of 137 reporting countries said that condoms and lubricants were made available to prisoners, 32 of 140 reporting countries said that opioid substitution therapy programmes were operational in prisons, and just 11 of 141 reporting countries said that needle–syringe programmes were operational in prisons.

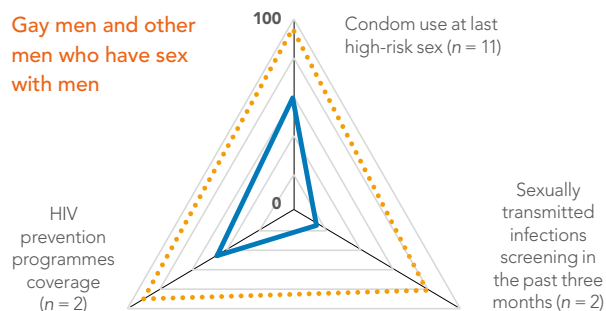
FIGURE 1.5 | GAP TO ACHIEVE THE COMBINATION PREVENTION TARGETS AMONG KEY POPULATIONS, BY INTERVENTION, 2016–2020

EASTERN AND SOUTHERN AFRICA

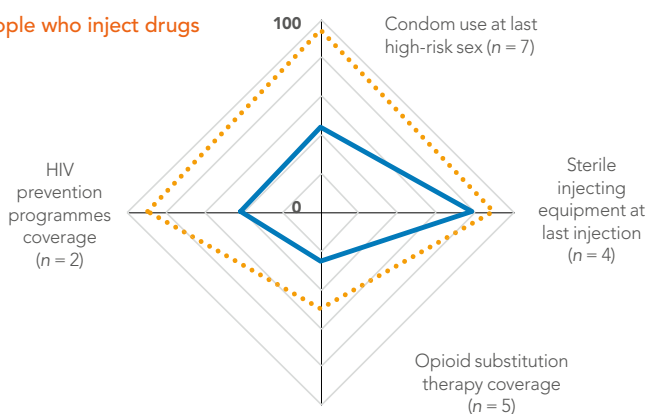
Sex workers



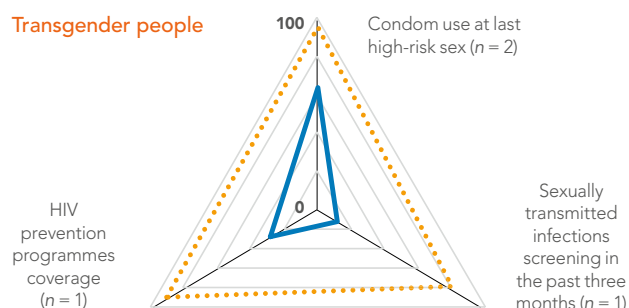
Gay men and other men who have sex with men



People who inject drugs

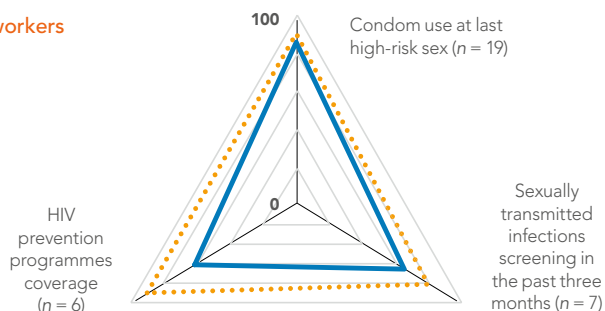


Transgender people

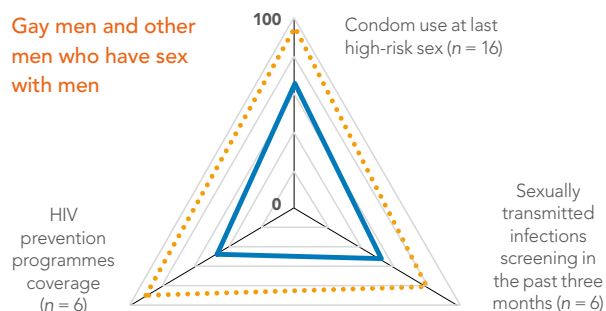


WESTERN AND CENTRAL AFRICA

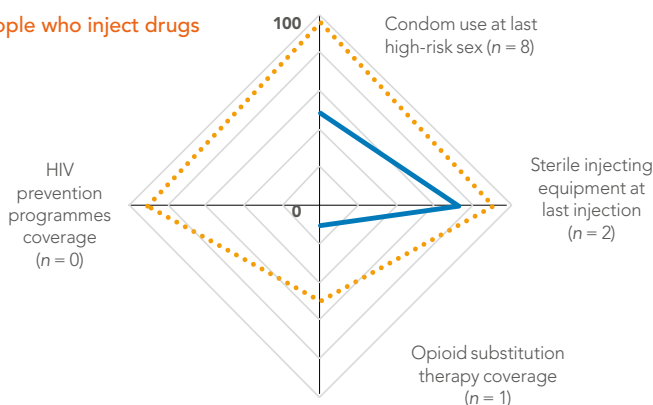
Sex workers



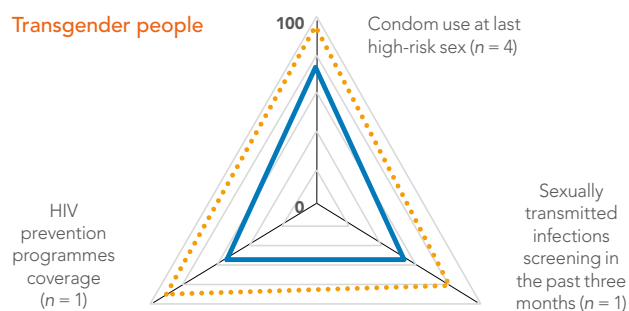
Gay men and other men who have sex with men



People who inject drugs

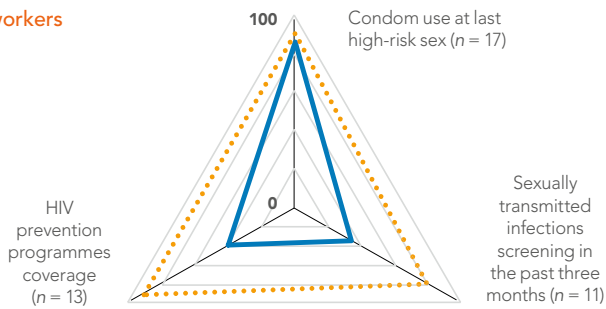


Transgender people

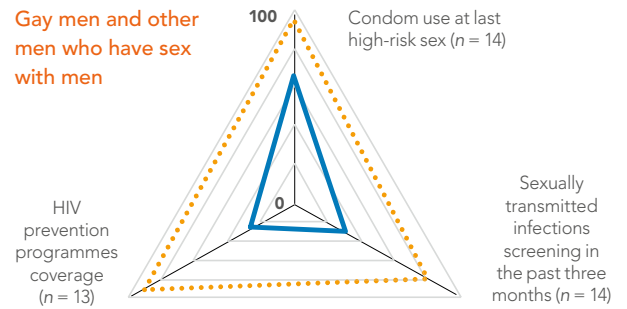


ASIA AND THE PACIFIC

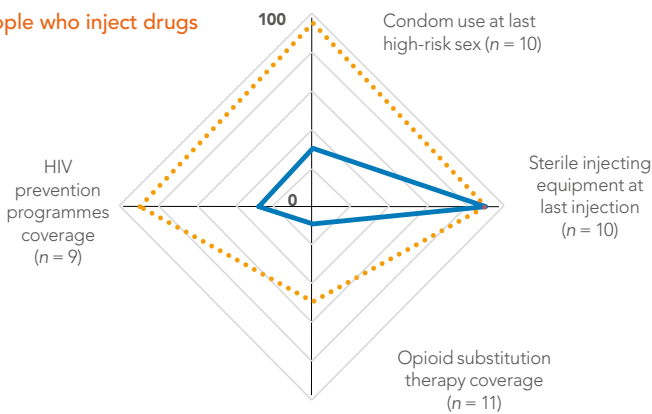
Sex workers



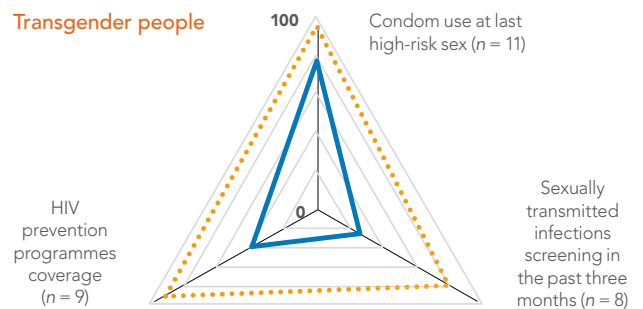
Gay men and other men who have sex with men



People who inject drugs

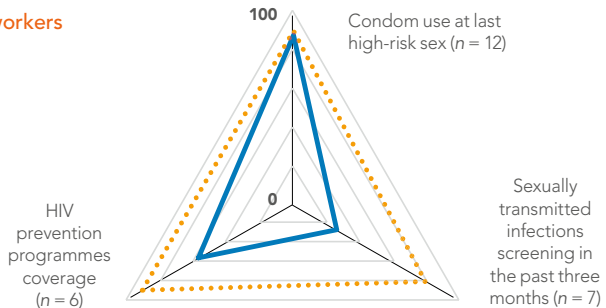


Transgender people

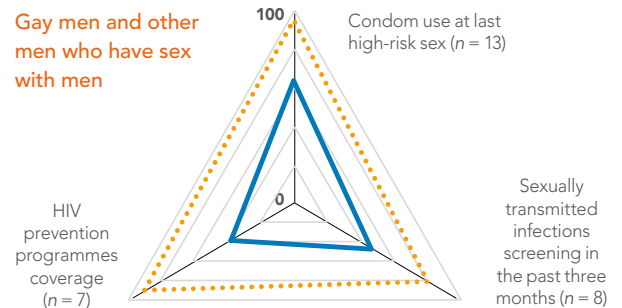


LATIN AMERICA

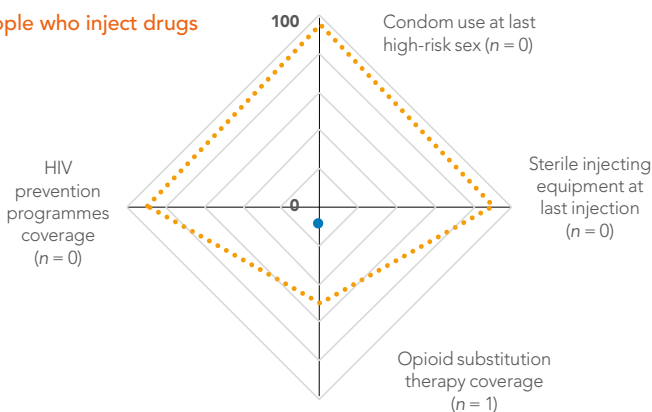
Sex workers



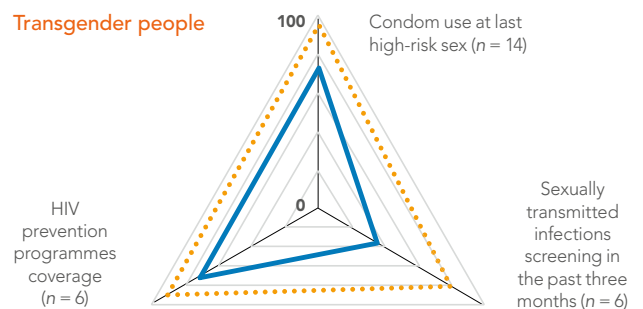
Gay men and other men who have sex with men



People who inject drugs



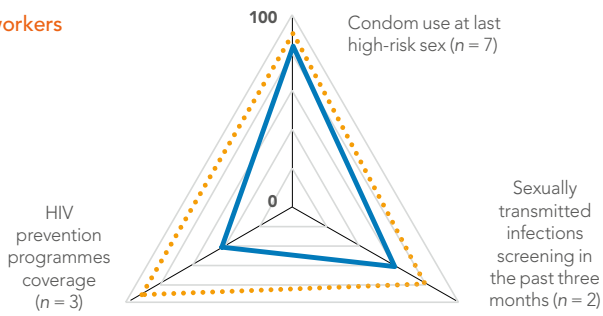
Transgender people



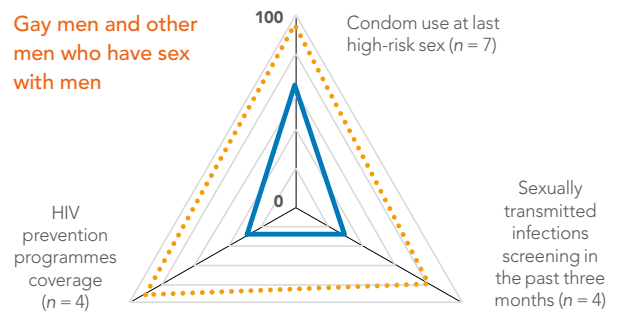
— Region Target

CARIBBEAN

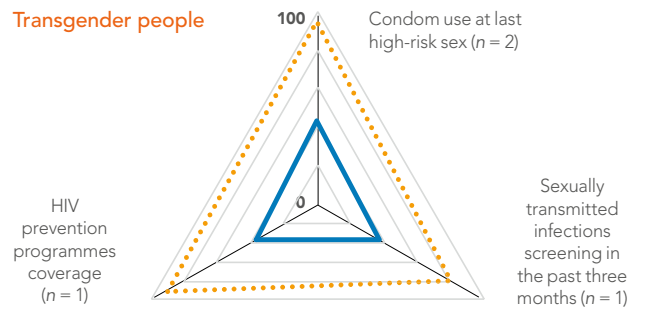
Sex workers



Gay men and other men who have sex with men

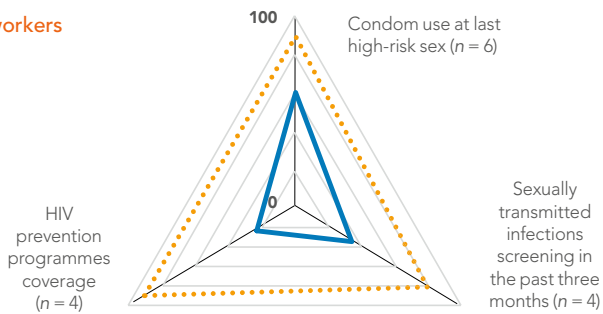


Transgender people

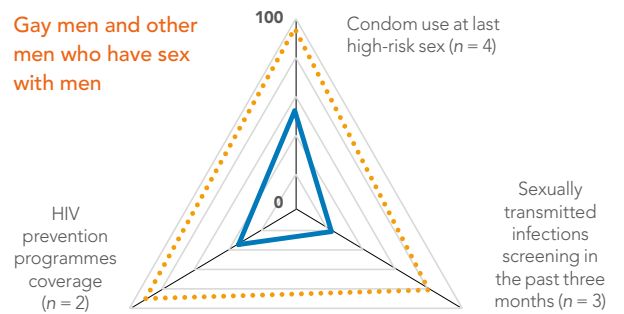


MIDDLE EAST AND NORTH AFRICA

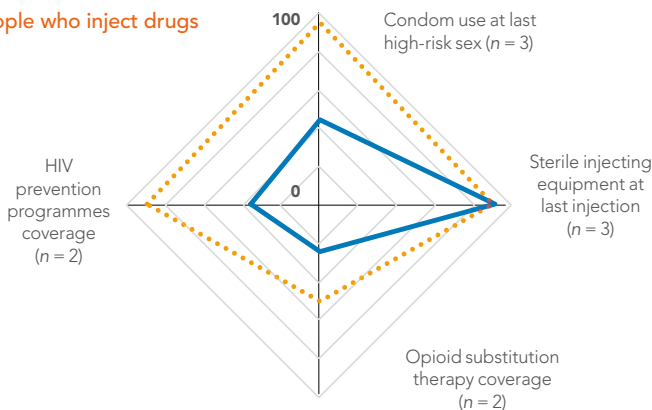
Sex workers



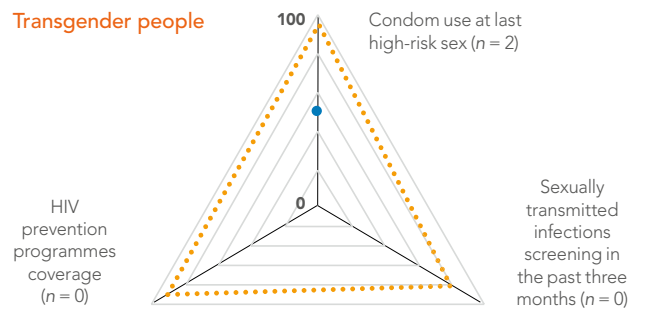
Gay men and other men who have sex with men



People who inject drugs

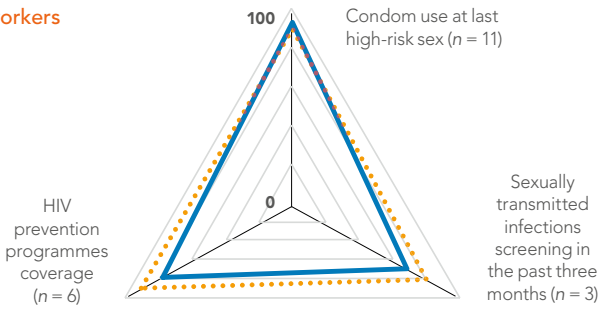


Transgender people

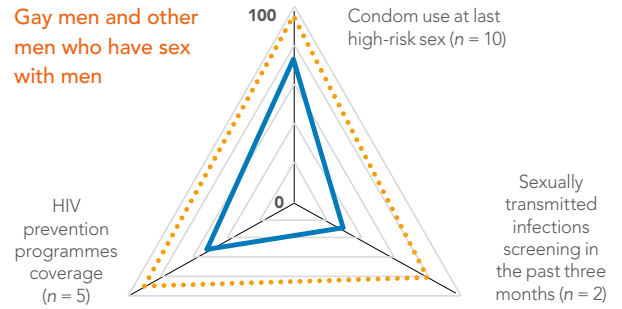


EASTERN EUROPE AND CENTRAL ASIA

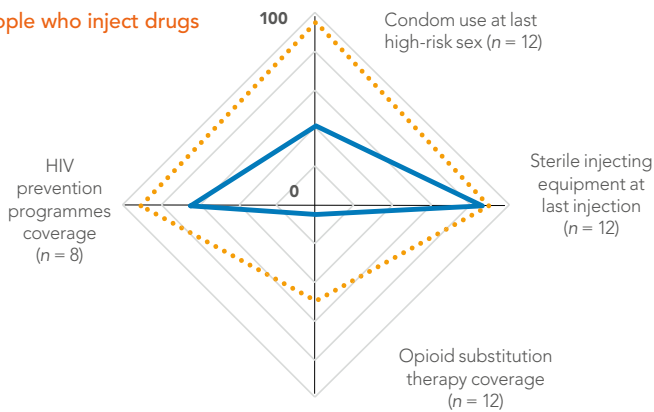
Sex workers



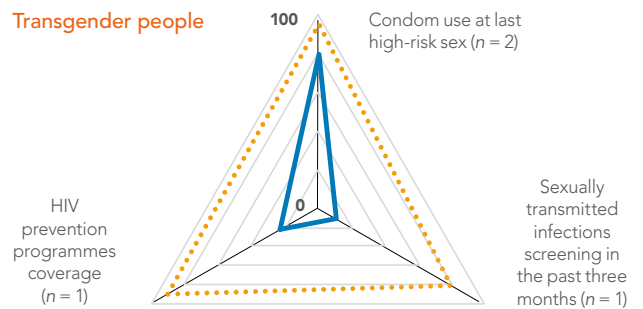
Gay men and other men who have sex with men



People who inject drugs

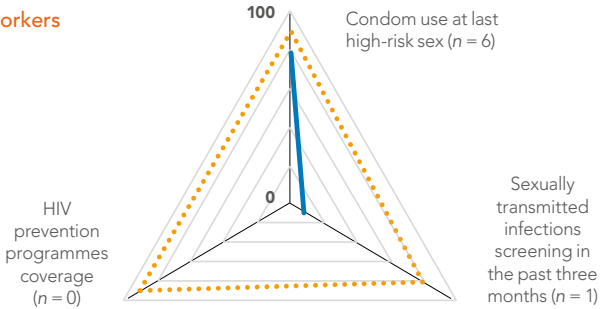


Transgender people

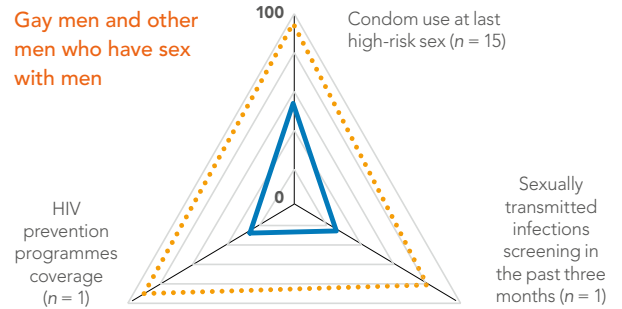


WESTERN AND CENTRAL EUROPE AND NORTH AMERICA

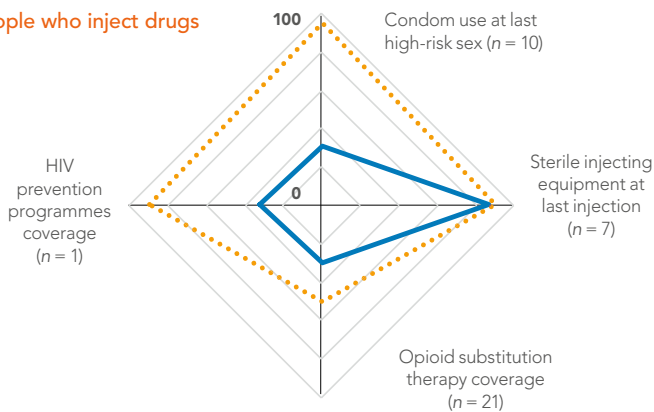
Sex workers



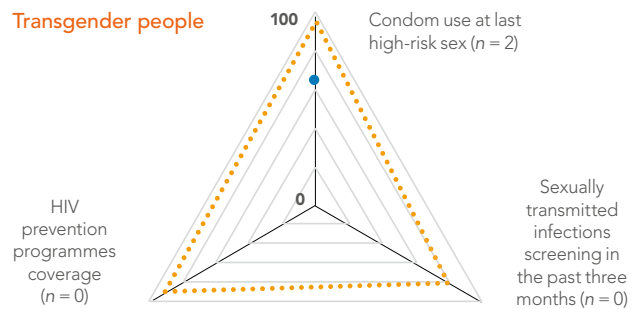
Gay men and other men who have sex with men



People who inject drugs

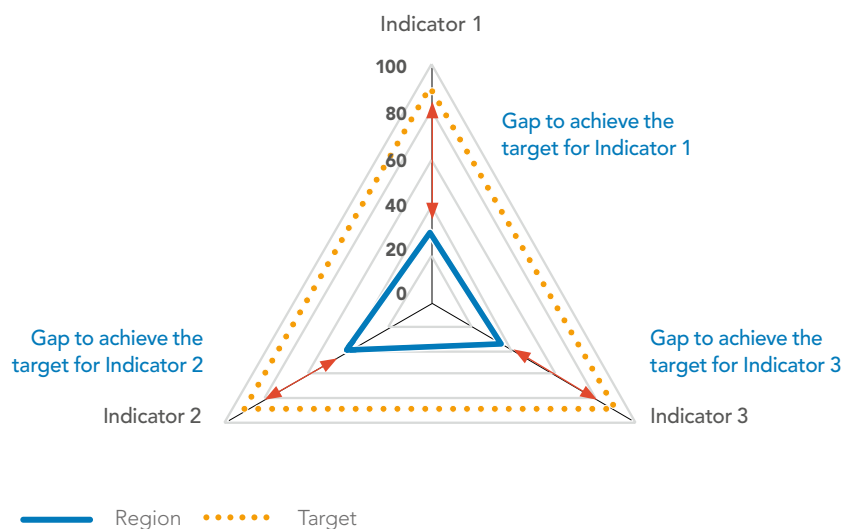


Transgender people



— Region Target

HOW TO READ THIS GRAPHIC



Source: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>).

Note: “HIV prevention programmes coverage” refers to the key populations that reported receiving at least two prevention services in the past three months. Possible prevention services received include: condoms and lubricant and counselling on condom use and safe sex (all key populations); testing for sexually transmitted infections (sex workers, transgender people and gay men and other men who have sex with men); and sterile injecting equipment (people who inject drugs).

Condom use at last high-risk sex among gay men and other men who have sex with men, people who inject drugs and transgender people does not take into account those taking pre-exposure prophylaxis (PrEP), and therefore the proportion of protected sex acts can be underestimated.

The use of sterile injecting equipment the last time a person has injected primarily come from surveys, which are typically conducted in areas that have services available, and thus may not be nationally representative.

Coverage data on PrEP use by key populations and antiretroviral treatment use by their partners are not available and therefore are not shown in the figure.

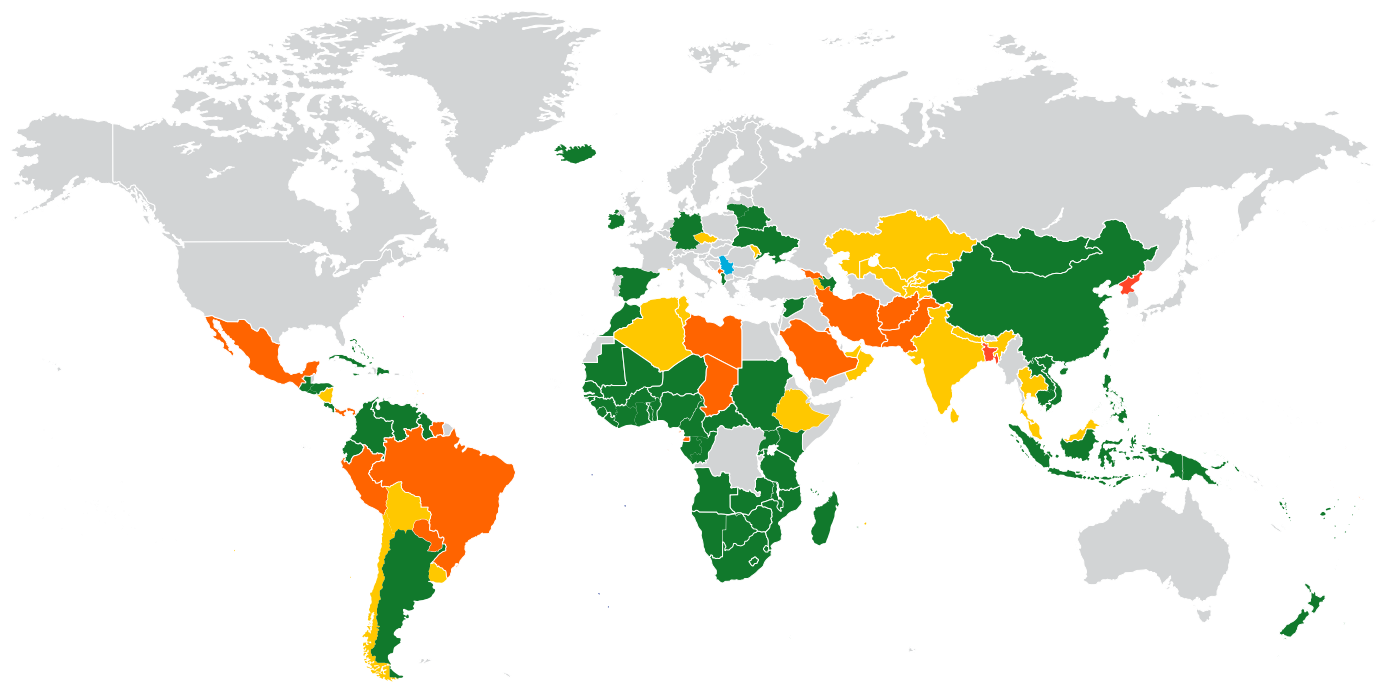
HIV DATA

Comprehensive sexuality education empowers young people

Comprehensive sexuality education plays a vital role in promoting health, well-being and critical thinking skills among young people and in strengthening responsible citizenship. When it comes to sex and sexuality, young people are vulnerable to myths and misinformation. Students who receive comprehensive sexuality education, however, are empowered to take responsibility for their own decisions and behaviours, and the ways in which their actions may affect others. This helps them make healthier sexual choices and better equips them to seek help when it is needed.

Gender-transformative, age- and culturally-appropriate comprehensive sexuality education—both in and outside of school—is a key component of HIV and STI prevention for adolescents and young people. It also plays a role in preventing gender-based violence, increasing the use of contraception, decreasing the number of sexual partners and delaying the initiation of sexual intercourse. Among the 137 countries that have reported data to UNAIDS between 2017 and 2021, 85 (63%) reported having education policies that guide the delivery of life skills-based HIV and sexuality education according to international standards in primary schools, and 111 (81%) reported having such policies in secondary schools. Overall, 84 (62%) reported having such policies for both primary and secondary schools (Figure 1.6).

FIGURE 1.6 | EDUCATION POLICIES THAT GUIDE THE DELIVERY OF LIFE SKILLS-BASED HIV AND SEXUALITY EDUCATION, ACCORDING TO INTERNATIONAL STANDARDS, BY COUNTRY, 2017–2021



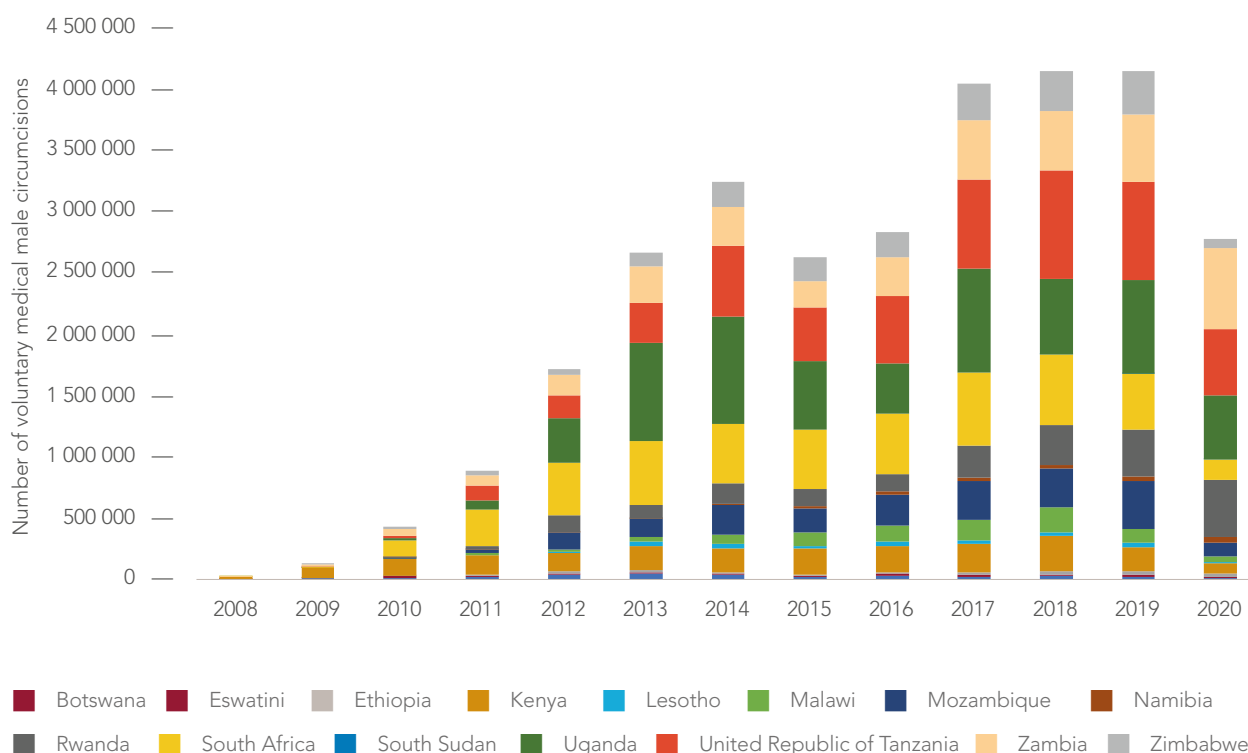
Source: UNAIDS National Commitments and Policy Instrument, 2017–2021.

Male circumcisions disrupted by COVID-19, fall short of the 2020 target

In areas with high HIV prevalence and low rates of male circumcision, VMMC can greatly contribute to HIV prevention. Despite this, there was a steep drop in the number of VMMCs performed in the 15 priority countries in 2020, due mainly to service disruptions caused by the COVID-19 pandemic: approximately 2.8 million procedures were performed in 2020, compared with 4.1 million in 2019 (Figure 1.7). Several countries suspended their programmes when the pandemic took hold, including South Africa, where service coverage has been declining since 2018. Despite this, programmes in some countries proved resilient enough to recover quickly and expand during the rest of 2020—notably in Rwanda and Zambia, where programme coverage grew by about 15%. In these countries, adjustments for the safe continuation of VMMC services during COVID-19 included changes in promotion and demand generation, client transportation, service delivery at a health facility or in the community, and post-procedure follow-up appointments. For example, personal protective equipment was provided to VMMC community mobilizers, clients and staff.

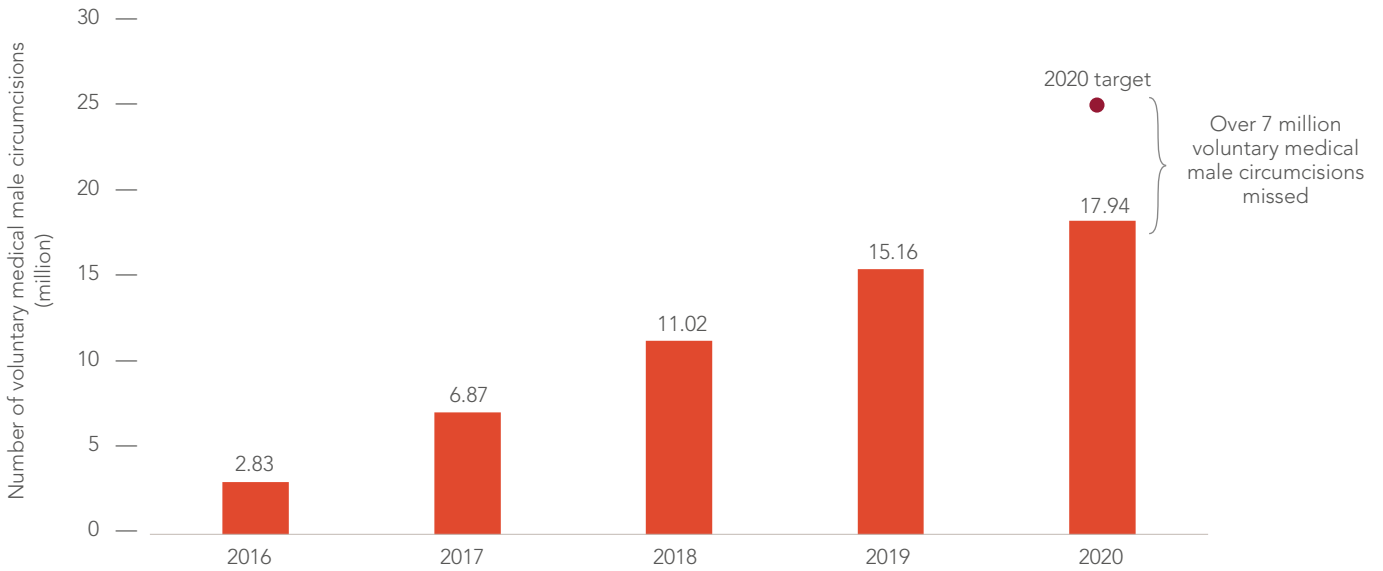
A total of about 18 million VMMCs were performed in 2016–2020, far shy of the 2020 target of 25 million (Figure 1.8). As well as COVID-19, an additional setback in 2015 and 2016 was the detection of tetanus cases in Uganda, which led to activities being scaled back in that country.

FIGURE 1.7 | ANNUAL NUMBER OF VOLUNTARY MEDICAL MALE CIRCUMCISIONS, 15 PRIORITY COUNTRIES, EASTERN AND SOUTHERN AFRICA, 2008–2020



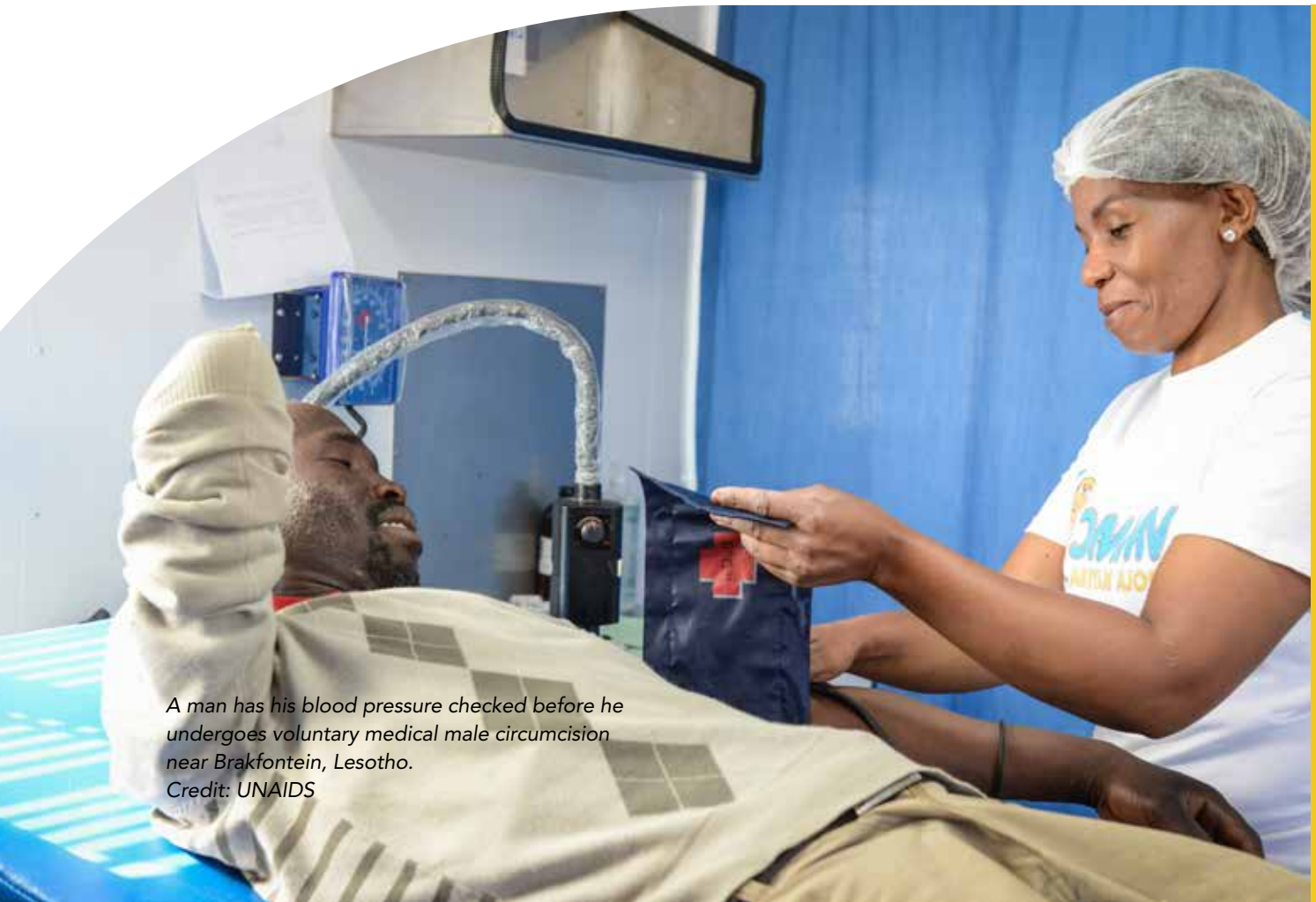
Source: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>).

FIGURE 1.8 | CUMULATIVE NUMBER OF VOLUNTARY MEDICAL MALE CIRCUMCISIONS TOWARDS THE 2020 TARGET, 15 PRIORITY COUNTRIES, EASTERN AND SOUTHERN AFRICA, 2016–2020, AND TARGETS FOR 2020



Source: UNAIDS Global AIDS Monitoring, 2021 (<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.



*A man has his blood pressure checked before he undergoes voluntary medical male circumcision near Brakfontein, Lesotho.
Credit: UNAIDS*

HIV DATA

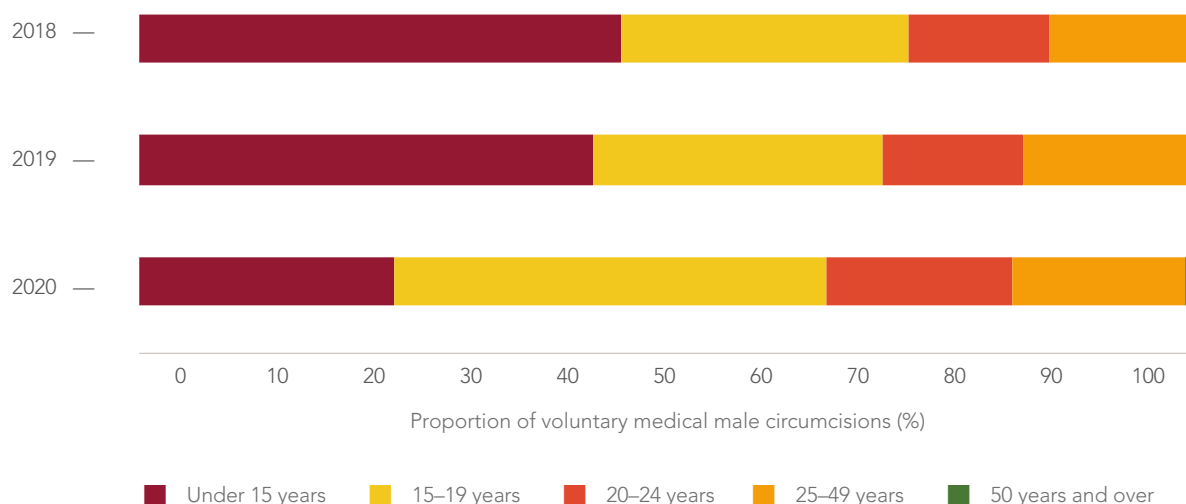
Adolescent boys and young men increasingly reached with VMMC

In areas of low prevalence of circumcision and high HIV burden, the focus of VMMC services should be on providing services to sexually active adolescents 15 years and older and to adult men at higher risk of HIV infection in order to make an immediate impact on HIV incidence (5). In areas where the prevalence of circumcision among sexually active men is already high, a focus on sustaining and expanding VMMC services for adolescent boys over 15 years of age is needed to maintain these high coverage levels and reap the health benefits of the services.

Several priority countries are increasing their VMMC focus on young men, in line with recommendations in the 2020 World Health Organization (WHO) guidance on the subject (5). This has led to a steady increase in the percentage of procedures conducted among young men aged 15 years and older in several countries, but in a number of other countries—including Eswatini, Lesotho, Mozambique and Zimbabwe—at least 30% of VMMCs in 2020 were among males younger than 15 years (Figure 1.9).

The focus of VMMC services should be on sexually active adolescent boys and adult men at higher risk of HIV infection.

FIGURE 1.9 | PROPORTION OF VOLUNTARY MEDICAL MALE CIRCUMCISIONS, BY AGE GROUP, 10 COUNTRIES WITH AVAILABLE DATA, 2018–2020



Source: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>).

Note: The countries with available data are: Botswana, Eswatini, Kenya, Lesotho, Mozambique, Rwanda, South Sudan, United Republic of Tanzania, Zambia and Zimbabwe.

HIV DATA

Voluntary medical male circumcision more often reaches men in higher wealth strata

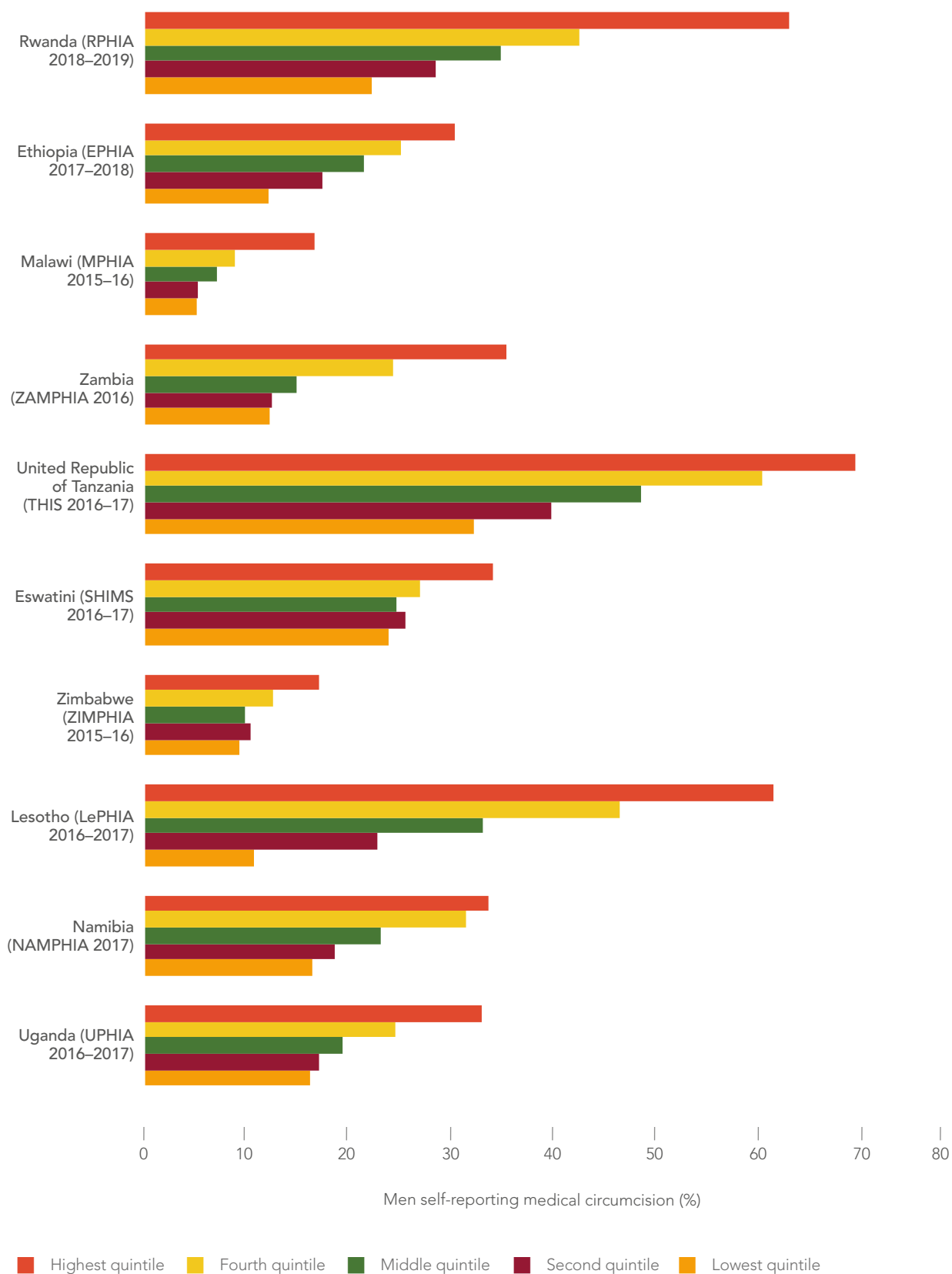
VMMC uptake in most priority countries appears to be correlated to household wealth. In 10 countries with available survey data, men in lower wealth quintiles were less likely to report undergoing the procedure than those in higher wealth quintiles (Figure 1.10). This suggests that programmes in these countries may not be reaching men with low socioeconomic status, many of whom reside in rural areas or work in informal sectors of the economy. Most existing programmes operate in urban areas, and they often focus on workplace and education settings.



Credit: UNAIDS

Men in lower wealth quintiles were much less likely to report undergoing VMMC than those with higher incomes.

FIGURE 1.10 | SELF-REPORTED MEDICAL CIRCUMCISION AMONG MEN AGED 15 YEARS AND OLDER, BY HOUSEHOLD WEALTH, PRIORITY COUNTRIES WITH AVAILABLE DATA, 2015–2019



Source: Population-based HIV Impact Assessments, 2015–2019.

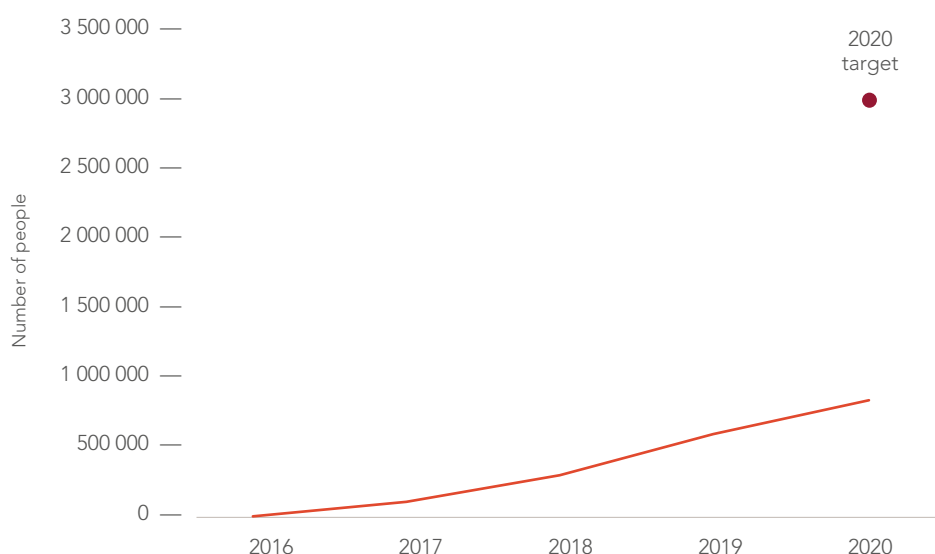
HIV DATA

Pre-exposure prophylaxis use expands, but not fast enough

It has been more than a decade since the first evidence of the efficacy of daily oral PrEP was published. PrEP is now a valuable additional option for people who are at higher risk of acquiring HIV, and its global uptake has continued to increase, despite the COVID-19 pandemic: country data show that approximately 845 000 people in at least 54 countries received PrEP in 2020—a 43% increase since 2019, and a 182% increase since 2018 (Figure 1.11). Much of the PrEP scale-up is still highly concentrated in a fairly small number of countries, notably the United States and in eastern and southern Africa, where Kenya and South Africa accounted for 158 630 (19%) of people who received PrEP at least once during 2020 in the region.

There continue to be substantial gaps in the availability of PrEP, however: the total number of people using this prevention option in 2020 was just 28% of the target of 3 million in low- and middle-income countries, which represents only 8% of the new global 2025 target. Access is still poor in much of western and central Africa and Asia and the Pacific (Figure 1.12), and 20 of 48 countries in Europe still lacked systematic provision of PrEP in 2020 (6). Even in countries with widespread PrEP availability, such as the United States, inequalities are apparent in the divergent rates of PrEP uptake along racial, ethnic, socioeconomic, geographic, age and self-identity lines (7).

FIGURE 1.11 | NUMBER OF PEOPLE WHO RECEIVED PRE-EXPOSURE PROPHYLAXIS AT LEAST ONCE DURING THE REPORTING PERIOD, GLOBAL, 2016–2020, AND 2020 TARGET



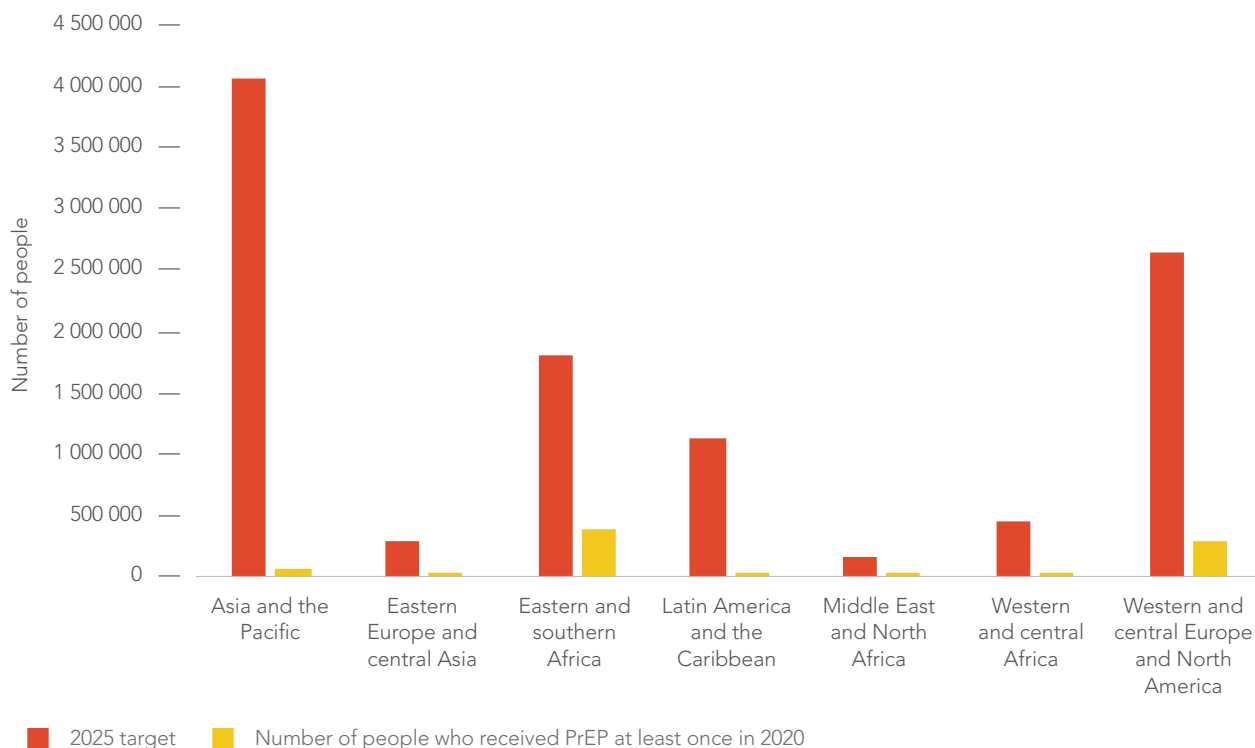
Source: UNAIDS Global AIDS Monitoring, 2017–2021 (<https://aidsinfo.unaids.org/>); Country Updates. In: PrEPWatch [Internet]. AVAC; c2020 (<https://www.prepwatch.org/in-practice/country-updates/>); and country documents and meeting reports (available on request).

Health systems must be PrEP-friendly, providing information and ensuring access to PrEP when people choose it as a prevention method. In addition to clinic settings, it will be important to provide PrEP services outside of health facilities—including by using virtual options for client initiations, refills and check-ins—and by decentralizing the dispensing of PrEP through community delivery and multimonth dispensing as much as possible.

The total number of people using PrEP in 2020 was just 8% of the new global 2025 target.

Policy reporting on PrEP shows that of the 132 countries with available data between 2017 and 2021, 82 have reported that PrEP guidelines have been developed. Of the countries with PrEP guidelines in place, it was indicated that the following cadres have the authority to prescribe PrEP: doctors in 68 countries, clinical officers in 28 countries, nurses in 21 countries and pharmacists in five countries. Of the countries with guidelines in place, PrEP is provided for the following populations: gay men and other men who have sex with men in 67 countries, sex workers in 57 countries, people who inject drugs in 38 countries, transgender people in 48 countries, serodiscordant couples in 64 countries, young women (aged 18–24 years) in 15 countries, adolescent girls (aged 17 years and younger) in 11 countries, prisoners in 12 countries, and people with risk factors other than identifying with any of the above populations in 18 countries. Twenty-seven countries reported to UNAIDS in 2021 that their PrEP guidelines have been updated to include the option of event-driven PrEP for gay men and other men who have sex with men, in line with WHO recommendations.

FIGURE 1.12 | NUMBER OF PEOPLE WHO RECEIVED PRE-EXPOSURE PROPHYLAXIS AT LEAST ONCE DURING THE REPORTING PERIOD, BY REGION, 2020, AND THE 2025 TARGETS



Source: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>); Country Updates. In: PrEPWatch [Internet]. AVAC; c2020 (<https://www.prepwatch.org/in-practice/country-updates/>); and country documents and meeting reports (available on request).

Case study

TAKING SEXUALITY EDUCATION BEYOND CLASSROOMS

As teenagers mature, their lives become more complex—but the information they need to safely navigate society can be hard to find, especially when it pertains to sex and sexuality.

When it's available and accurate, comprehensive sexuality education helps adolescents make informed decisions about their health, sex lives and general well-being. It also equips them with knowledge on preventing and dealing with HIV and other sexually transmitted infections (STIs) (8). Two thirds of countries that reported data in 2016–2019 stated that between 76% and 100% of their primary and secondary schools were providing sexuality education (9).

These findings may depict an overly optimistic picture, however, as coverage data do not address the complex question of curriculum quality and delivery (9). Reliable, high-quality sexuality education is especially difficult to access for adolescents who have been pushed to the margins of society, such as those with disabilities.

Comprehensive sexuality education activities for young people with disabilities in Ethiopia are not a fringe concern: survey data shows that nearly 7.8 million people in Ethiopia are estimated to live with some form of disability, accounting for 9.3 percent of the country's total population. Around 30 percent of all disabled people are children and youth under the age of 25 (11). Misconceptions about their sexual and reproductive health needs, generalized stigma and discrimination, scarce funding and inaccessible services place these young people at a great disadvantage.

Efforts to overcome these challenges are increasing. The Ethiopian Center for Disability and Development is providing comprehensive sexuality education sessions to out-of-school youth with disabilities in the cities of Addis Ababa, Bahir Dar and Hawassa. In each city, 20 social workers and nurses were trained to register out-of-school youth with disabilities; they identified almost 2000 such youth through door-to-door visits. The United Nations Population Fund (UNFPA) also supported training on reproductive health issues for 12 peer facilitators from organizations of persons with disabilities and youth-led groups.

¡DECÍMELO A MÍ!

Derechos sexuales en Lengua de Señas



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COMPREHENSIVE SEXUALITY EDUCATION is a curriculum-based process of teaching and learning about the cognitive, emotional, physical and social aspects of sexuality. It aims to: equip children and young people with knowledge, skills, attitudes and values that will empower them to realize their health, well-being and dignity; develop respectful social and sexual relationships; encourage them to consider how their choices affect their own well-being and that of others; and help them understand and ensure the protection of their rights throughout their lives (10).

OUT-OF-SCHOOL COMPREHENSIVE SEXUALITY EDUCATION is critical to reaching the estimated 263 million children globally who are not attending school. In 2020, UNFPA and its partners published updated technical and programmatic guidance on out-of-school comprehensive sexuality education to ensure that the most vulnerable young people receive information that enables them to develop the knowledge and skills they need to make informed choices about their sexual and reproductive health (11).



Awareness-raising posters on the sexual and reproductive health and rights of hearing-impaired young people in Uruguay.

Credit: Instituto Interamericano sobre Discapacidad y Desarrollo Inclusivo

Facilitators included 37 sign language teachers who had been trained to deliver the iCAN package to the hearing-impaired. The programme recently added components on how young people can stay safe from COVID-19, including the provision of basic hygiene and sanitation items. The iCAN sessions are also now held in smaller groups (10 participants) than originally planned in order to reduce COVID-19 transmission risks.

Uruguay has been a pioneer in the development of sexuality education materials for people with disabilities, starting with materials in braille for the blind in the 1980s. Working with the Movement *Estamos Tod@s en Acción*, UNFPA is supporting efforts to take that work a step further by promoting the sexual and reproductive health rights of young Uruguayans with hearing disabilities, giving particular emphasis to HIV prevention and care. Sexuality education rarely employs sign language, which also lacks some terms related to the body and sex. To bridge that gap, the “Decímelo a mí” (“You tell me”) project brought together 70 hearing-impaired adolescents and young people from the Montevideo area to develop inclusive information material. They used an augmented reality app that combines the use of text, audio and sign language messages, and assisted in the development of two websites, as well as posters and other materials. Youth organizations and associations of persons with disabilities have been popularizing the resources and disseminating the materials (9).

The COVID-19 pandemic delayed the start of the comprehensive sexuality education sessions until late 2020, when more than 200 young people attended 10 initial sessions. Radio programmes on the sexual and reproductive health needs of youth with disabilities were produced and broadcast over a five-week period. Brochures were distributed detailing where young people with disabilities could access sexual and reproductive health services.

In Malawi, an out-of-school comprehensive sexuality education programme reached 6300 young people living with HIV and nearly 1900 young people with disabilities in 2019–2020 through a peer-to-peer approach that involved 86 trained youth facilitators. iCAN, a comprehensive sexuality education package that UNFPA developed specifically for young people living with HIV, was also implemented in six districts.

Case study

GETTING PERSONAL WITH A CHATBOT

The adaptations sparked by COVID-19 restrictions have highlighted the potential of digital technologies to reach young people with comprehensive sexuality education. Take Eli, for example, a chatbot that the United Nations Educational, Scientific and Cultural Organization (UNESCO) created and launched on VKontakte, the most popular Russian-language online social networking service.¹

Eli answers questions about adolescence, relationships, sexuality and HIV prevention, testing and treatment. The chatbot's knowledge base was created by an editorial team working with health workers and psychologists, and it draws on comprehensive sexuality education and HIV materials developed by UNESCO, UNAIDS and other UN agencies.

"Every day, millions of young people search the Internet for answers to questions which they cannot ask in person, either because they feel uncomfortable or there is simply no one around whom they could ask," says Tigran Yepoyan, from UNESCO's Institute for Information Technologies in Education, which developed the chatbot (13).

Eli shares important information with young people. This includes why they may need to be tested for HIV if they are sexually active, what kind of tests are available, where and how tests can be done, and why it is crucial to start antiretroviral therapy immediately if one is diagnosed with HIV.

"We have worked hard to create a chatbot that can give accurate answers promptly and anonymously, examine a problem from various perspectives, and provide assistance free from judgment and stereotypes," Yepoyan says.

Artificial intelligence powers Eli's responses and picks up on clues and other distinctive elements in questions in order to fashion the most accurate and appropriate answers. Eli's language combines expertise and respect for the user, and its speech is free from stigma and as gender-neutral as possible.

The underlying artificial intelligence is constantly learning from the conversations, which are entirely anonymized. "Eli hides user information even from its own developers," explains Ivan Zhuravlev, the development team leader (13).

¹ VKontakte has more than 73 million users, most of whom are young.



Eli is the first Russian-speaking, AI-based chatbot used to promote sex education and psychological well-being among teens and young people.

Credit: UNESCO



In the first week after its launch in October 2020, Eli answered more than 150 000 questions from 10 000 users. By late March 2021, Eli had responded to over 400 000 queries (14).

Young people who've chatted with Eli are full of praise. "Eli learns and shares it with us! Go for it, Bot!," "Well done! A really important and much needed bot," and "I would like to thank the creators of this project for being attentive, [and] not indifferent to teens' problems and fears," are some of the comments posted by Eli's growing community of subscribers (15).

UNESCO and national partners plan to launch versions of Eli in Kazakhstan and Kyrgyzstan in mid-2021.

Case study

A TALE OF TWO RESPONSES TO INJECTING DRUG USE

The neighbouring Baltic states of Estonia and Latvia offer starkly contrasting examples of how different public health approaches affect HIV epidemics among people who inject drugs.

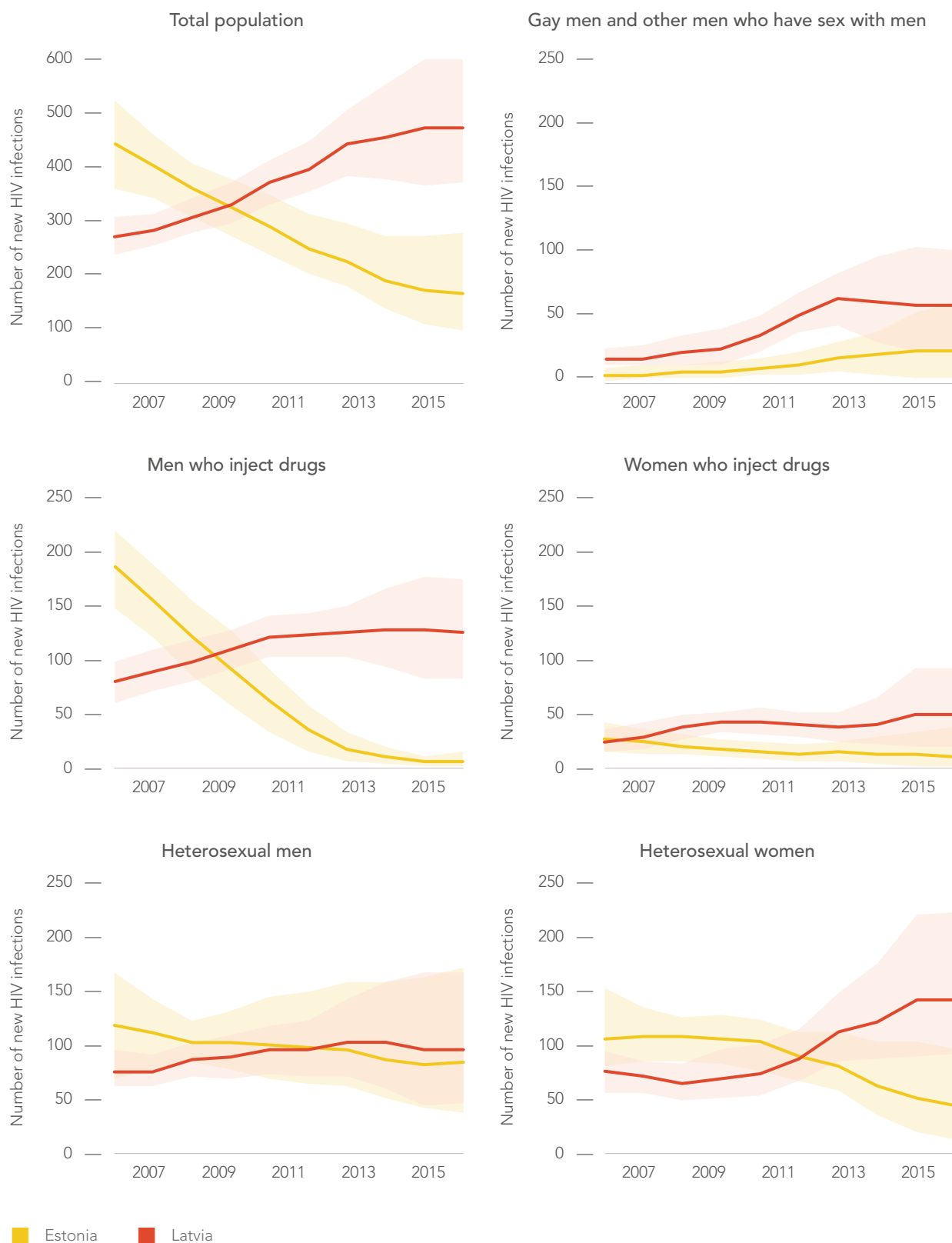
In the early 2000s, the two countries had among the highest rates of HIV diagnosis in Europe (16). As was the case for many European countries at that time, the sharing of non-sterile injecting equipment among drug users was fueling their HIV epidemics.

The two epidemics began to diverge in the mid-2000s, a policy-driven change that has been vividly documented in a new study by the HERMETIC Study Group (17). According to this study, which derived estimates using data on newly diagnosed HIV cases and a back-calculation model, new HIV infections in Estonia declined by 61% countrywide and by 97% among men who inject drugs between 2007 and 2016 (17). Epidemiological estimates derived from programme data suggest that HIV incidence among men and women who inject drugs in Estonia was reduced to almost zero by 2016, and that it decreased by more than half among women in the general population, including women who may be partners of people who inject drugs, between 2007 and 2016 (Figure 1.13).

Elena Antonova experienced this transformation first-hand. A former drug user and prison inmate, she now heads the Estonian Community of People Who Use Psychotropic Substances, also known as LUNEST. "Harm reduction programmes work very well in Estonia," she says. "Needle exchange points are places where people who use drugs can easily and anonymously get a full range of services—from free condoms and syringes to counselling and HIV testing."

Latvia's HIV epidemic followed a different trajectory. The HERMETIC study highlights that, between 2007 and 2016, new HIV infections increased by 72% overall, including a 121% increase among women who inject drugs and a 90% increase among heterosexual women (17). By 2016, overall HIV incidence in Latvia was almost double that in Estonia (35 cases per 100 000 people versus 19 cases per 100 000).

FIGURE 1.13 | ESTIMATED HIV INCIDENCE, ESTONIA AND LATVIA, BY POPULATION GROUP, 2007–2016



Source: Adapted from: Marty L, Lemsalu L, Ķīvīte-Urtāne A, Costagliola D, Kaupe R, Linina I et al. Revealing HIV epidemic dynamics and contrasting responses in two WHO Eastern European countries: insights from modeling and data triangulation. *AIDS*. 2021;35(4):675-80.

Note: Data on the proportion of heterosexual women that are sex partners of current or former people who inject drugs are unavailable.

Both epidemics centred largely on the sharing of injecting equipment by people who inject drugs, and probably on unprotected sex between people who inject drugs and their sex partners. The HERMETIC study concludes that the main difference between the two epidemics lay in the availability of harm reduction services (17).

Needle–syringe programmes had been operating in Latvia since 1997, but on a very limited scale. As late as 2016, Latvia was distributing about 93 needle–syringes per drug user per year; neighbouring Estonia was distributing 230 per user per year. Both countries expanded access to opioid substitution treatment, which is proven to reduce drug injecting and HIV transmission, and it improved HIV testing and antiretroviral therapy

services for people who inject drugs. Although access to opioid substitution treatment remained limited in both countries, it was higher in Estonia than in Latvia.

“The state is responsible for the development, implementation and financing of harm reduction programmes,” explains Ms Antonova. “The Estonian National Institute for Health Development, in cooperation with community organizations, constantly improves and expands programmes, monitors the quality of services by conducting surveys and research, and by maintaining feedback from communities.”

There is a strong focus, Ms Antonova adds, on supporting people who are on opioid substitution



Members and supporters of LUNEST, the Estonian Community of People Who Use Psychotropic Substances. The organization represents and defends the legitimate rights of people who inject drugs. Credit: LUNEST

therapy and/or antiretroviral therapy so they can adhere to treatment and take command of their health and lives: “Everything is aimed at re-socializing people who use drugs.”

The HERMETIC study’s results indicate that by 2016, about half the people who inject drugs in Estonia were taking HIV tests in a 12-month period—and three quarters of those who tested HIV-positive were receiving antiretroviral therapy (17). In Latvia, meanwhile, about 10% of people who inject drugs took an HIV test in any given year between 2007 and 2016, and only 27% of those living with HIV were receiving antiretroviral treatment. Slow adoption of international HIV treatment guidelines contributed to the low treatment coverage in Latvia.

As more people who inject drugs in Estonia used safe injecting equipment and were successfully treated for HIV, the HERMETIC analysis suggests that transmission to their sex partners also might have decreased (17). This could have helped curb the country’s overall HIV epidemic. In Latvia, HIV transmission among people who inject drugs was not curtailed and the epidemic in the entire population, including partners of people who inject drugs, continued to grow.

Both countries are discovering that HIV epidemics are moving targets. In Estonia, the number of new infections through drug injection has fallen dramatically, and most of the infections are now occurring during unprotected sex, including among gay men and other men who have sex with men. Latvia, too, is seeing increasing numbers of new infections among gay men and other men who have sex with men. HIV programmes need to be continually updated to control an epidemic that is constantly evolving.

Case study

GLOBAL PRE-EXPOSURE PROPHYLAXIS ROLL-OUT CONTINUES DESPITE THE COVID-19 PANDEMIC

Evidence continues to emerge of the population-level impact of daily oral PrEP on HIV transmission. Public Health England has credited PrEP as a factor in the steep drop in new HIV diagnoses in the United Kingdom of Great Britain and Northern Ireland, especially among gay men and other men who have sex with men (18). Increased PrEP provision is also contributing to reductions in new HIV infections in Australia, and it has been associated with decreases in HIV diagnoses in the United States of America during 2012–2016 (19, 20).

There is also evidence from sub-Saharan Africa confirming that PrEP can be highly effective for reducing HIV acquisition alongside of universal HIV testing and treatment, as shown by the SEARCH study in 16 rural communities in Kenya and Uganda. SEARCH offered universal access to PrEP with enhanced counselling for persons at elevated HIV risk (based on serodifferent partnerships, a risk score or self-identified risk) during community-wide testing events, followed by rapid PrEP start and flexible, community-based service delivery. There was a 74% reduction in HIV infections in people at higher risk of HIV who started PrEP through SEARCH, compared to the year before PrEP availability (21).

COVID-19 PANDEMIC DISRUPTS PRE-EXPOSURE PROPHYLAXIS STARTS

COVID-19 temporarily disrupted access to PrEP services in some countries. In the United States, for example, disruptions caused by the COVID-19 pandemic led to fewer PrEP prescriptions and new PrEP users than anticipated in March–June 2020 (22). A similar trend was reported in Australia, where the number of people starting PrEP in April–June 2020 declined by 45% compared to the previous three months (23). However, the pandemic's impact there and elsewhere was mitigated through quick adaptations, including multimonth dispensing of PrEP, use of telemedicine and various forms of community-based PrEP delivery. Thailand, for example, extended PrEP prescriptions from three to six months, used telehealth consultations to minimize clinic visits and introduced courier services for PrEP prescriptions, which kept PrEP services running for key populations (24). These kinds of adaptations are largely sustainable and support

the wider use of a differentiated service delivery model for PrEP.

OVERCOMING UPTAKE AND ADHERENCE CHALLENGES

Uptake appears to be a challenge for some populations. In the SEARCH study, for example, uptake was especially low among young and mobile people in Kenya and Uganda (25). Similarly, a systematic review of studies on PrEP use among people who inject drugs found that, even though awareness and willingness to use PrEP was high, actual uptake was very low (0–3%) (26). Other research suggests that awareness about PrEP is still low among potential users, especially those belonging to racial and or ethnic minorities, and among women in key populations (27–30).²

Adherence to daily oral PrEP remains a central challenge (25, 31–34). Among the factors affecting both the uptake of and adherence to PrEP are knowledge of this prevention method, self-perceptions about HIV risk, cost and health insurance issues, the ability to take pills daily, experiences of social stigma (including in health-care settings), and family and peer support (29, 35–40). Compromised decision-making power is also a major obstacle, especially for adolescent girls and young women: objections from male partners and problems attending clinic appointments were the main reasons why women stopped using PrEP, according to a study from Eswatini (41). Conversely, when young women feel able to disclose their PrEP use, they are more likely to keep using it, as research from South Africa shows (42).

Interviews with transgender women and gay men and other men who have sex with men in San Francisco suggest that inclusive PrEP awareness campaigns could help overcome some of those hindrances (43). According to research from South Africa, building awareness about PrEP among parents can also be important to support

adolescent PrEP uptake (44). While social media and websites can be used to boost knowledge and uptake of PrEP (as seen in South Africa), people also need diverse ways to access it (as shown in Thailand) (45). For instance, embedding PrEP services at facilities that provide other HIV services improved uptake among key populations in a study in Nigeria's Cross River States (46). Counselling for couples on PrEP—as part of HIV testing services—could mitigate the discouraging effect that reluctant male partners can have on PrEP uptake and adherence in heterosexual relationships (47).

In South Africa, PrEP services are being linked with youth-friendly services for sexually transmitted infections (STIs) and antenatal and postnatal care. Making access more convenient (such as by ensuring that people do not have to travel long distances to initiate PrEP and fill prescriptions), removing cost barriers, and reducing stigma and discrimination can foster both improved uptake and adherence (37, 39, 48). People-centred services can also reduce attrition, as seen in Lesotho, when services were adapted in line with improvements proposed by PrEP users and providers (49). Services that tap into existing peer networks and build social connections between PrEP users can also help boost uptake and adherence (50).

People's own sense of risk is key. Discontinuing PrEP when people are not at risk (such as during periods when they are not sexually active) is not a problem, but adhering to the recommended dosing schedule during times of risk is critical. A study among almost 5500 current and former PrEP users in Germany, for example, found that the most common reason for stopping PrEP was that individuals felt they had a reduced need for an HIV prevention tool.

2 A 2019 systematic review found that an average 21% of women who inject drugs knew about PrEP (28).

Long-acting pre-exposure prophylaxis options could boost preventive impact

New PrEP products, such as long-acting injectable cabotegravir and the dapivirine vaginal ring, are expected to further broaden PrEP use and boost its preventive impact.

Injectable PrEP has been found to be highly effective in preventing HIV acquisition. In the HPTN 083 study, the risk of HIV acquisition was about two thirds lower in the gay men and other men who have sex with men and transgender women who received injectable PrEP, compared with their peers who took daily oral PrEP. In the HPTN 084 study conducted in seven African countries, women taking injectable cabotegravir had an 89% lower risk of HIV infection than those prescribed daily oral PrEP (32, 51).³

Both daily oral PrEP and long-acting injectable PrEP are highly efficacious for preventing HIV infection, but the injectable version may offer advantages for some individuals. Administered every two months—after a one-month interval between the first two injections—injectable PrEP is more discreet than pills every day, and the trial results suggest that it eases some of the adherence difficulties observed in PrEP studies (32, 51). The safety of injectable cabotegravir during pregnancy and breastfeeding still has to be established, however, and widespread implementation will require training and logistical adjustments in HIV services and health systems, in part because the injections currently require administration by a health-care provider. More sensitive HIV diagnostic algorithms are also needed to identify breakthrough infections promptly and to attempt to avoid the emergence of drug resistance among people taking long-acting PrEP.

Furthermore, the cost of injectable PrEP is still to be determined, but if prices are considerably higher than oral PrEP, uptake may be limited (52).

In January 2021, the World Health Organization (WHO) conditionally recommended provision of the dapivirine vaginal ring as an additional prevention choice for preventing HIV in women who are at substantial risk of infection.⁴ Two Phase 3 randomized controlled trials (the Ring and the ASPIRE studies) found that the vaginal ring reduced the risk of HIV infection in women by between 27% and 35%, and that long-term use was well-tolerated. Extension studies of the trials showed even greater risk reduction—more than 50% (53).

Also in late-stage clinical trials is a monthly PrEP pill, islatravir, and six-monthly injectable PrEP, lenacapavir, as are multipurpose prevention technologies for preventing both HIV infection and pregnancy, such as the dapivirine and levonorgestrel vaginal ring.

3 There were nearly three times as many HIV infections on the daily oral PrEP pills than on injectable PrEP in the HPTN 083 study, and almost nine times as many in the HPTN 084 study. The HPTN 083 study was conducted in Argentina, Brazil, South Africa, Thailand, the United States of America and Viet Nam, while the HPTN 084 study was done in Botswana, Eswatini, Kenya, Malawi, South Africa, Uganda and Zimbabwe.

4 Substantial risk of HIV infection is defined as an HIV incidence greater than 3 per 100 person-years.

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02

TESTING AND TREATMENT

Over the past five years, the world has made strong gains in scaling up HIV testing and treatment services and preventing AIDS-related deaths. More people living with HIV than ever know their HIV status, are accessing antiretroviral therapy and are achieving the viral suppression required to stay healthy and prevent onward transmission of the virus. In 2020, an estimated 27.5 million [26.5 million–27.7 million] people living with HIV globally were accessing antiretroviral therapy.

Eight countries in three regions have fully achieved the 90–90–90 targets among people living with HIV.¹ At the global level, however, these targets were missed, although not by a wide margin: at the end of 2020, 84% [67–>98%] of people living with HIV knew their HIV status, 87% [67–>98%] of people living with HIV who knew their HIV status were accessing antiretroviral therapy, and 90% [70–>98%] of people on treatment were virally suppressed. These seemingly small gaps add up to leave the world about 2.7 million people living with HIV short of the 2020 target. In total, roughly one third of the 37.7 million [30.2 million–45.1 million] people living with HIV globally had unsuppressed viral loads at the end of 2020.

Gaps in testing and treatment tend to be larger among the vulnerable, the marginalized and those who are less likely to access health services. The gaps among children, young people, men and key populations living with HIV are particularly notable. Signatories to the 2021 United Nations Political Declaration on AIDS have committed to achieve the 95–95–95 testing, treatment and viral suppression targets within all demographics, groups and geographic settings by 2025, including children and adolescents. This will require strengthened political will, adequate funding and the use of differentiated approaches to fulfil the diverse testing and treatment needs of populations that have yet to experience the full health benefits of HIV treatment and other health-care services, such as tuberculosis screening, preventive therapy and treatment.

There are lessons to be drawn from the innovative ways in which HIV testing and treatment services have overcome disruptions during the COVID-19 pandemic, often by drawing on community-driven modifications. These approaches are especially relevant for hard-to-reach populations and settings where conventional services are unable to achieve sufficient coverage. Facility-based HIV testing and treatment must be supplemented by community-led approaches that provide services in ways that are convenient for the populations currently being left behind.

¹ The 90–90–90 targets are: 90% of people living with HIV know their HIV status, 90% of people who know their HIV-positive status are accessing treatment and 90% of people on treatment have suppressed viral loads.



2025 TARGETS AND COMMITMENTS in the 2021 Political Declaration on AIDS

- Ensure that 34 million people are on HIV treatment.
- Achieve the 95–95–95 testing, treatment and viral suppression targets within all demographics and groups and geographic settings, including children and adolescents living with HIV.
 - 95% of people living with HIV know their HIV status.
 - 95% of people who know their HIV-positive status are accessing treatment.
 - 95% of people on treatment have suppressed viral loads.
- Ensure that 90% of people living with HIV receive preventive treatment for tuberculosis.
- Reduce tuberculosis-related deaths among people living with HIV by 80% (compared to a 2010 baseline).
- Use differentiated service delivery models for testing and treatment, including digital, community-led and community-based services.

Malohat, a primary school teacher and peer outreach worker in Buchtar, Tajikistan, takes her daily antiretroviral medication.
Credit: UNAIDS

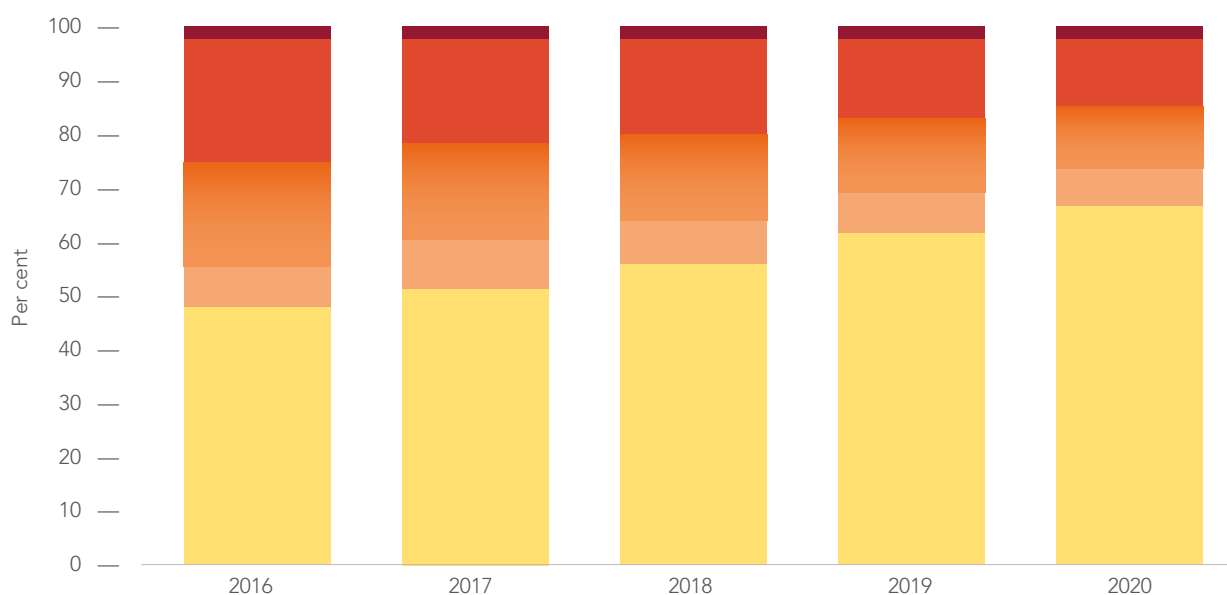
HIV DATA

More people living with HIV than ever know their HIV status, are accessing antiretroviral therapy and are achieving the viral suppression required to stay healthy and prevent onward transmission of the virus.

Gaps narrow across the cascade

Progress across the HIV testing and treatment cascade has included an increase in the proportion of people living with HIV who are virally suppressed, and a narrowing in the proportions of people who are unaware that they are living with HIV and those who know they are living with HIV but have not started treatment or whose treatment was interrupted, suggesting global improvements have been made in HIV testing, linkage to care and retention in care (Figure 2.1). Reductions in the percentages of people newly infected and those on treatment who are not virally suppressed have been more modest.

FIGURE 2.1 | PEOPLE LIVING WITH HIV, PEOPLE NEWLY INFECTED IN THE PAST SIX MONTHS, AND HIV TESTING AND TREATMENT CASCADE, ADULTS (AGED 15+ YEARS), GLOBAL, 2016–2020



- People living with HIV who were infected in the past six months
- People living with HIV who don't know their status and were infected more than six months ago
- People living with HIV who know their status but are not on treatment
- People living with HIV who are on treatment but are not virally suppressed
- People living with HIV who are on treatment and are virally suppressed

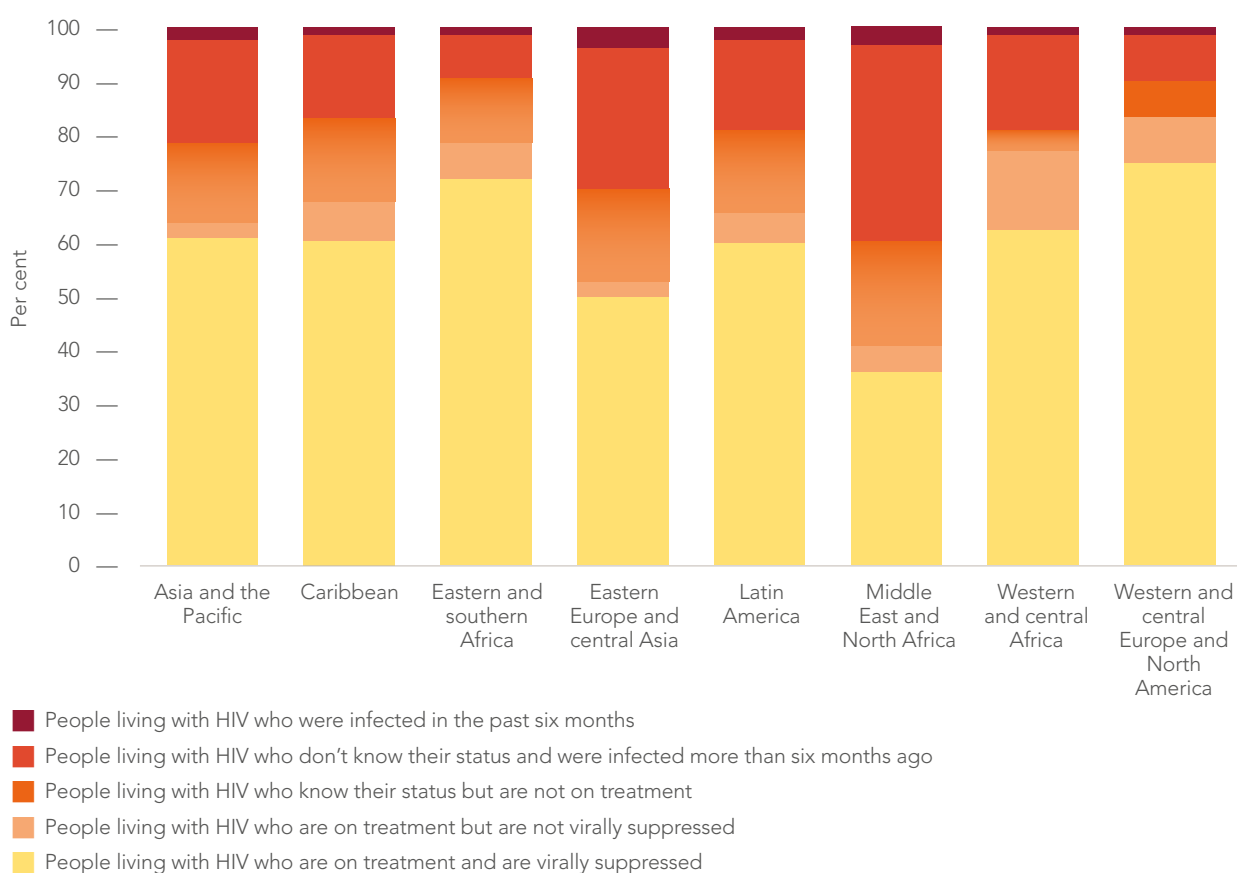
Source: UNAIDS special analysis, 2021.

Progress varies by region

There continue to be large proportions of people who know they are HIV-positive but who are not on antiretroviral therapy in every region except for western and central Africa and western and central Europe and North America (Figure 2.2). Gaps in knowledge of HIV status are especially large in the Middle East and North Africa, where viral suppression and treatment coverage are lower than any other region. Eastern Europe and central Asia also have large percentages of people living with HIV who either do not know their HIV status or who have been diagnosed but are currently not receiving treatment.

Asia and the Pacific, the Caribbean and both regions in sub-Saharan Africa in 2020 had larger percentages of people living with HIV who are virally suppressed than Latin America, which was an early treatment leader. In western and central Africa, there is a particularly large percentage of people on treatment who are not yet virally suppressed, while a relatively smaller percentage of people living with HIV in the region know their HIV-positive status but are not on treatment.

FIGURE 2.2 | PEOPLE LIVING WITH HIV, PEOPLE NEWLY INFECTED IN THE PAST SIX MONTHS, AND HIV TESTING AND TREATMENT CASCADE, ADULTS (AGED 15+ YEARS), BY REGION, 2020



Source: UNAIDS special analysis, 2021.

HIV DATA

A diversity of countries achieve 90–90–90

At least eight countries fully achieved the 90–90–90 targets by the end of 2020, and another 11 reached an equivalent 73% viral load suppression among all people living with HIV (Table 2.1). The diversity of these 19 countries demonstrates that these ambitious targets can be achieved across income levels, epidemic settings and sociocultural norms.

TABLE 2.1 | COUNTRIES REACHING THE HIV TREATMENT CASCADE TARGETS, 2020

	90–90–90 value (all)	90–90–90 value (children aged 0–14 years)	90–90–90 value (women aged 15+ years)	90–90–90 value (men aged 15+ years)	Viral suppression level (all)
Eswatini	>98–>98–95	>98–>98–91	>98–>98–95	94–>98–94	97
Switzerland ^a	93–>98–96				88
Rwanda	93–>98–96	54–>98–89	96–>98–96	93–>98–96	89
Qatar ^a	93–>98–96		>98–>98–81	90–97–>98	86
Botswana	91–95–>98	62–>98–94	94.5–>98–>98	88–87–97	85
Slovenia	90–97–96				85
Uganda	91–>98–90	63–>98–78	96–>98–92	88–97–89	85
Malawi	91–94–94	73–>98–73	94–94.9–95	90–92–94	85
Zimbabwe	93–>98–89	72–>98–72	96–>98–91	92–>98–88	82
Kenya	96–89–94	84–>98–86	>98–92–94	91–83–94	81
Namibia	89.9–98–91	81–92–80	92–>98–93	86–94–89	80
Cambodia	84–>98–97	60–>98–88	82–>98–98	86–>98–97	81
Lesotho	94–87–97	83–>98–92	94.6–92–97	93–79–97	80
Burundi	89–>98–89.7	31–>98–70	>98–>98–91	85–96–89	79
Uruguay					79
Norway					79
Thailand	94–84–97	>98–76–87	92–86–97	96–81–97	77
Zambia	86–95–93	58–>98–84	89–94–94	84–95–93	76
Croatia	84–88–>98		80–92–>98	84–87–>98	73

- Reached the 90–90–90 targets
- Reached only the 73% viral load suppression target
- Not reached the 90–90–90 target
- Data not available

Source: UNAIDS special analysis, 2021.

^aData are not available on testing and treatment coverage for children. However, because children living with HIV represent less than 1% of the total people living with HIV, adult data were used.

Note: In the 2020 Global AIDS Update, *Seizing the moment: tackling entrenched inequalities to end epidemics*, Australia, Namibia and the Netherlands were among the countries reaching the 90–90–90 targets in 2019. Based on the 2020 data, however, Namibia has fallen short of the targets, mainly because of children falling behind. Australia and the Netherlands did not have full estimates on the cascade this year. In the same report, Ireland and Spain were among the countries reaching their viral suppression target at all population levels. This year, however, there was no viral suppression data available for either country.

Note: The UNAIDS models estimated that in the region of western and central Europe and North America, more than 73% of people living with HIV had suppressed viral loads in 2020.

Note: Countries have been assessed as reaching the 90–90–90 targets if coverage is ≥ 90.0 . Thus coverage of 89.9 is not considered as reaching the target. Please see the Annex on Methods for a description of how regional estimates of the testing and treatment targets are calculated.

Note: In Eswatini, viral load suppression among all people living with HIV is estimated to be slightly higher than the proportion virally suppressed among people on treatment due to the uncertainty in the number of people on treatment and the number of people living with HIV.

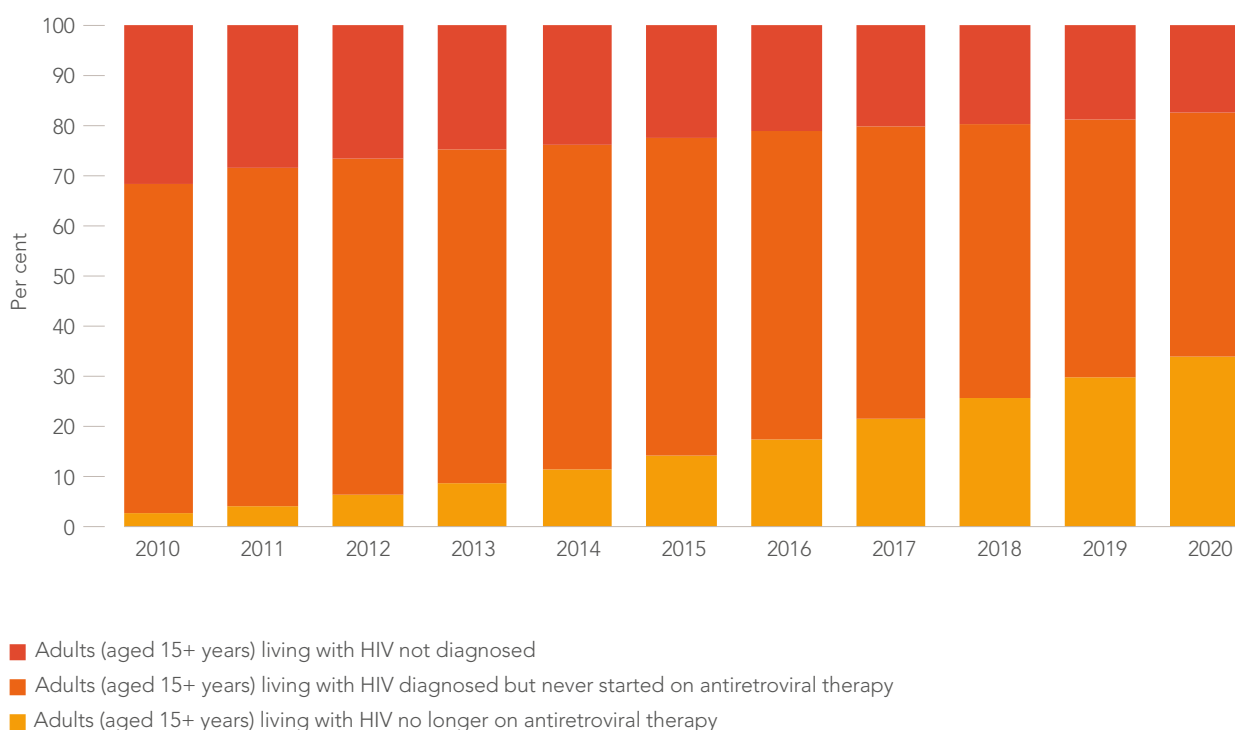
Retention in care a growing concern

Data from South Africa highlight the challenge faced by many treatment programmes when it comes to successfully retaining people in HIV care. The HIV treatment programme in South Africa reaches more people living with HIV than any other in the world, with almost 5.1 million adults (aged 15 years and older) receiving antiretroviral therapy in 2020. Among the 2.5 million adults living with HIV in South Africa who are not on treatment, a steadily increasing percentage are people who had started treatment but are no longer receiving it (Figure 2.3) (1). Efforts to support people on treatment to maintain treatment and achieve durable viral suppression are critical to improving health outcomes, maximizing the preventive benefits of treatment and preventing the emergence of drug-resistant strains of HIV. The World Health Organization (WHO) recently updated its HIV treatment guidelines with a new recommendation to trace people who have disengaged from care and provide support for re-engagement (2).

HIV DATA

Supporting people to maintain treatment and achieve durable viral suppression are critical to improving health outcomes and preventing HIV transmission.

FIGURE 2.3 | PEOPLE LIVING WITH HIV NOT ON ANTIRETROVIRAL THERAPY, ADULTS (AGED 15+ YEARS), SOUTH AFRICA, 2010–2020



Source: Johnson LF, Dorrington RE. Thembisa version 4.4: a model for evaluating the impact of HIV/AIDS in South Africa. 2021 (<https://www.thembisa.org/>); Personal communication with Dr Leigh Johnson, Principal Modeller, Centre for Infectious Disease Epidemiology and Research, School of Public Health and Family Medicine, University of Cape Town, South Africa, 2 June 2021.

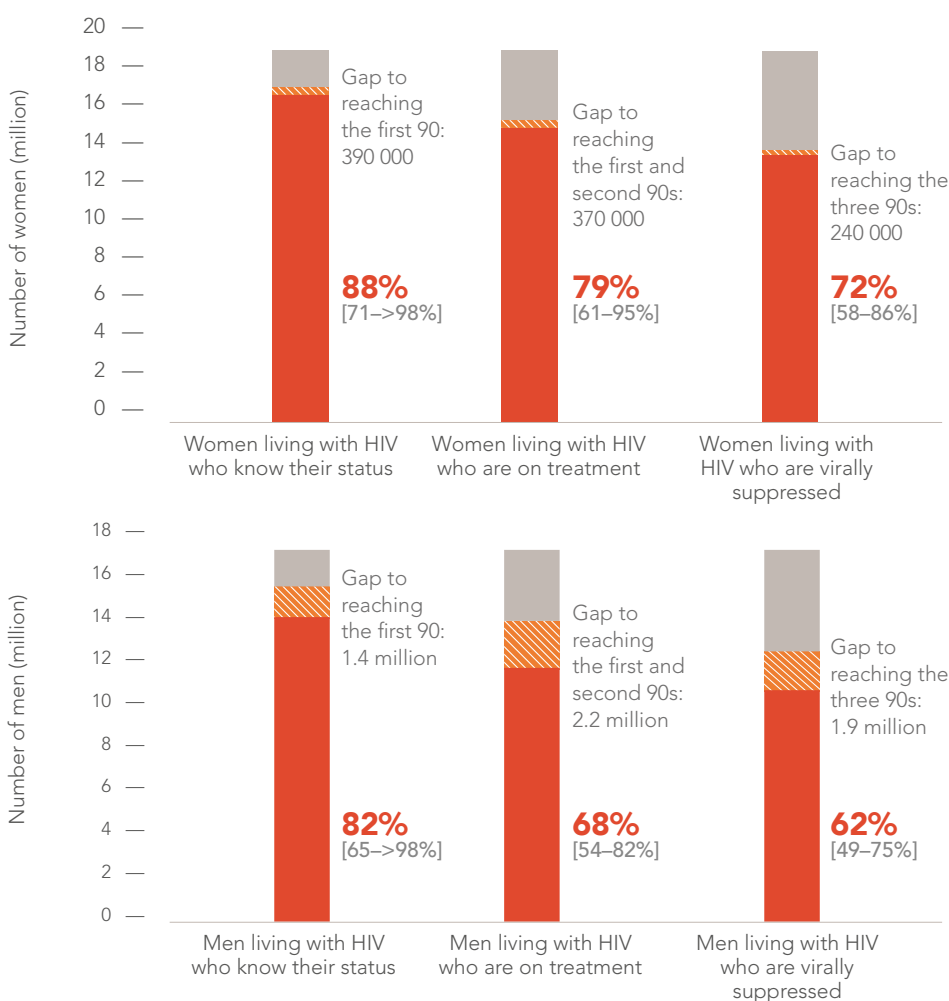
HIV DATA

Missing men living with HIV

Globally, the 90–90–90 targets were almost reached among adult women (15 years and older) living with HIV, and they were achieved in eastern and southern Africa and in western and central Europe and North America. Men living with HIV, however, are consistently faring worse than women across the HIV testing and treatment continuum. Compared to women living with HIV, there are 1 million more men living with HIV who do not know their HIV status, 1.8 million more men who know their status but are not on treatment, and 1.6 million more men who are not virally suppressed (Figure 2.4).

While gender norms that prize male strength and stoicism may partly explain why many men delay seeking care, other factors are also at play (3). Primary health-care services in eastern and southern Africa place a great deal of focus on women of reproductive age, and reproductive, maternal and child health services offer ideal entry points for HIV services; similar entry points for men are not commonplace (4, 5). Interventions to reach and include men more successfully in HIV testing and treatment services are increasing—including through workplace-based interventions and greater use of self-testing approaches, and by providing services at outpatient departments—but a more finely-tuned understanding of why men's use of HIV services continues to lag can help shape additional ways to close this gap (6, 7).

FIGURE 2.4 | HIV TESTING AND TREATMENT CASCADE, WOMEN (AGED 15+ YEARS) COMPARED TO MEN (AGED 15+ YEARS), GLOBAL, 2020



Source: UNAIDS special analysis, 2021.

HIV DATA

Testing and treatment gaps for key populations

Reaching key populations living with HIV with HIV testing and treatment services has been a challenge across regions. Even HIV programmes that generally are performing well—such as in South Africa—can struggle on that front (Figure 2.5). HIV testing and treatment data from three mainly urban South African districts show that female sex workers living with HIV were consistently less likely to know their HIV status than adult women overall. In two of the districts, HIV-positive sex workers were also significantly less likely to be receiving HIV treatment and to be virally suppressed (8, 9).

Gay men and other men who have sex with men living with HIV were similarly much less likely to know their HIV status compared with the overall adult male population living with HIV (Figure 2.6). Strikingly, however, the data from Pretoria and eThekweni districts suggest that, when HIV-positive gay men and other men who have sex with men did know their HIV status, they were more likely than other HIV-positive men to receive antiretroviral therapy and be virally suppressed (8, 9). The variations emphasize the importance of tailoring HIV testing and treatment services at the local level to the challenges and needs of key populations living in the area.

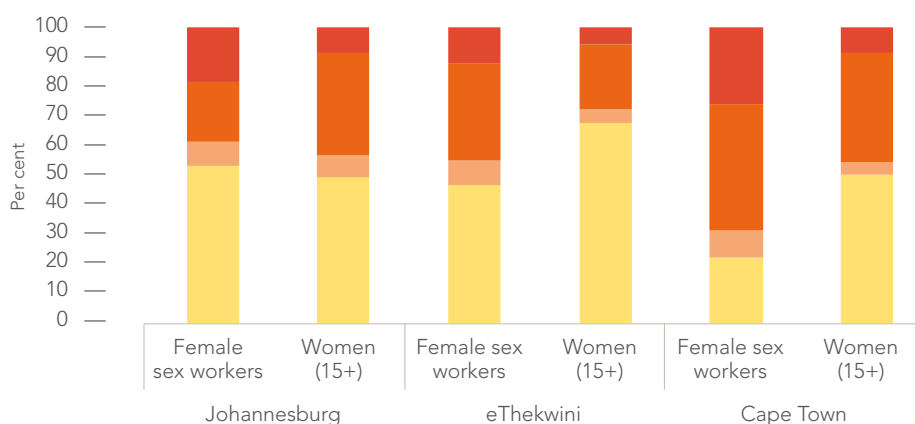


FIGURE 2.5 | KNOWLEDGE OF STATUS, TREATMENT AND VIRAL SUPPRESSION GAPS AMONG ADULT WOMEN AND FEMALE SEX WORKERS IN SOUTH AFRICA, SELECT DISTRICTS, 2018

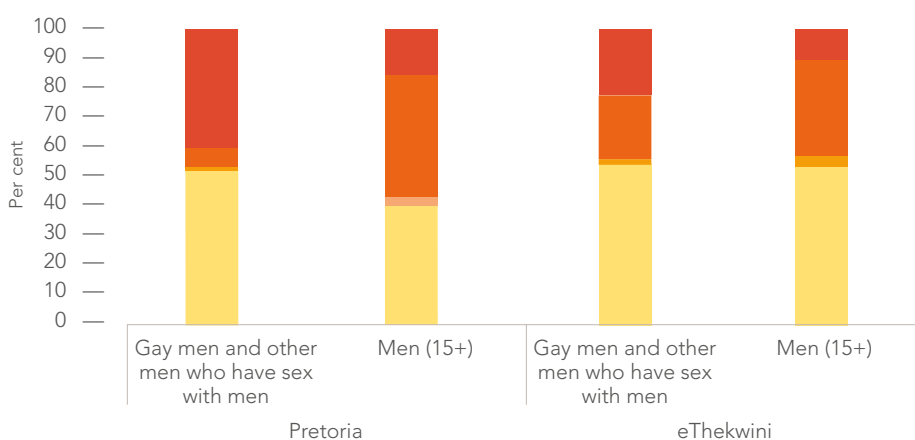


FIGURE 2.6 | KNOWLEDGE OF STATUS, TREATMENT AND VIRAL SUPPRESSION GAPS AMONG GAY MEN AND OTHER MEN WHO HAVE SEX WITH MEN IN SOUTH AFRICA, SELECT DISTRICTS, 2018

- People living with HIV who don't know their status
- People living with HIV who know their status but are not on treatment
- People living with HIV who know their status, are on treatment but are not virally suppressed
- People living with HIV who know their status, are on treatment and are virally suppressed

Source: South African Health Monitoring Survey, 2018; South Africa District HIV Estimates, 2017 (<https://www.hivdata.org.za/>).

HIV DATA

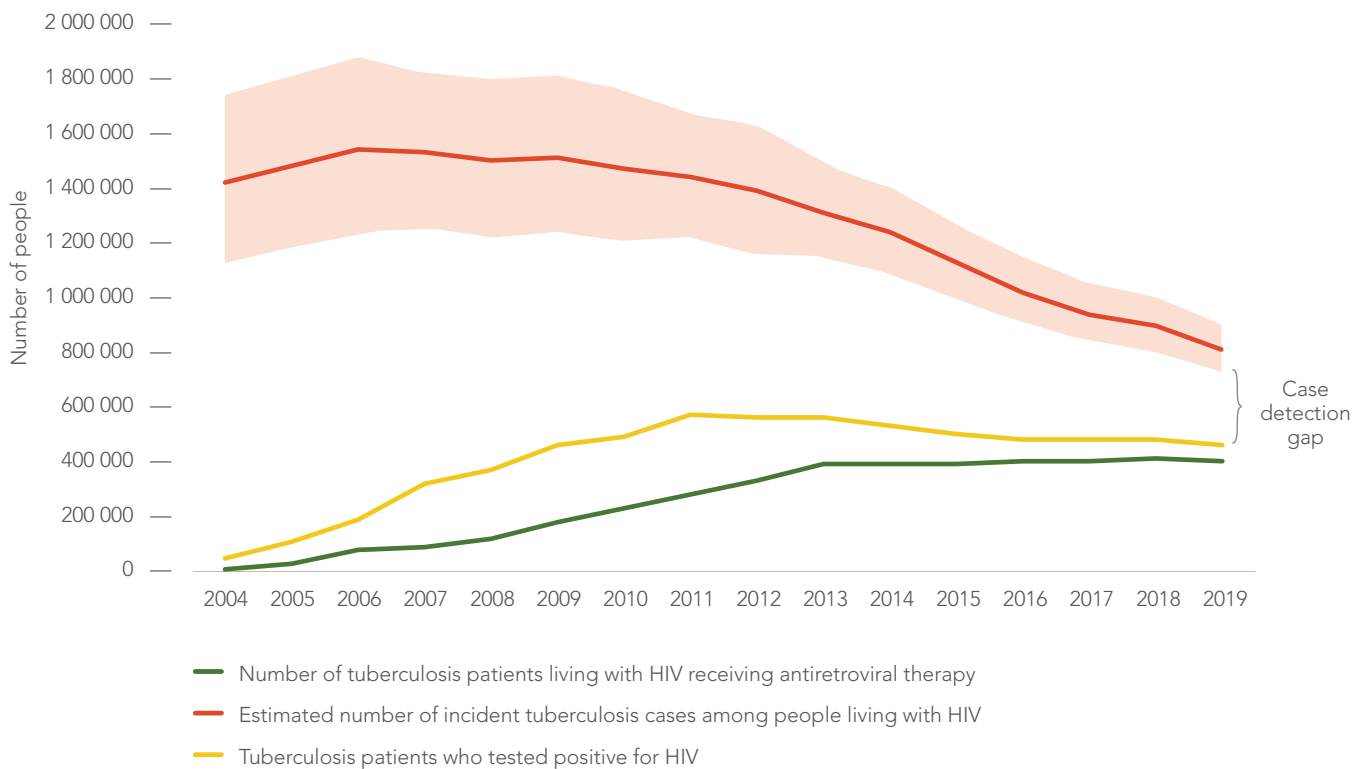
Tuberculosis remains the leading cause of death among people living with HIV.

Reductions in tuberculosis cases among people living with HIV

Tuberculosis is a preventable and treatable disease—yet it continues to claim millions of lives each year and remains the leading cause of death among people living with HIV (10).

Progress has been achieved in recent years. There has been a steady decline in the estimated number of incident tuberculosis cases among people living with HIV, and a gradual increase in the number of tuberculosis patients living with HIV who are on antiretroviral therapy (Figure 2.7). However, just 55% of the estimated 815 000 [729 000–906 000] incident cases of tuberculosis globally among people living with HIV in 2019 were diagnosed and notified. Fully 88% of those people living with HIV with diagnosed and notified tuberculosis cases were linked to antiretroviral therapy (10).

FIGURE 2.7 | NOTIFIED NEW AND RELAPSE TUBERCULOSIS CASES KNOWN TO BE HIV-POSITIVE, NUMBER ON ANTIRETROVIRAL THERAPY AND ESTIMATED NUMBER OF INCIDENT TUBERCULOSIS CASES AMONG PEOPLE LIVING WITH HIV, 2004–2019



Source: UNAIDS Global AIDS Monitoring, 2020 (<https://aidsinfo.unaids.org/>); Global tuberculosis report. Geneva: World Health Organization; 2020.

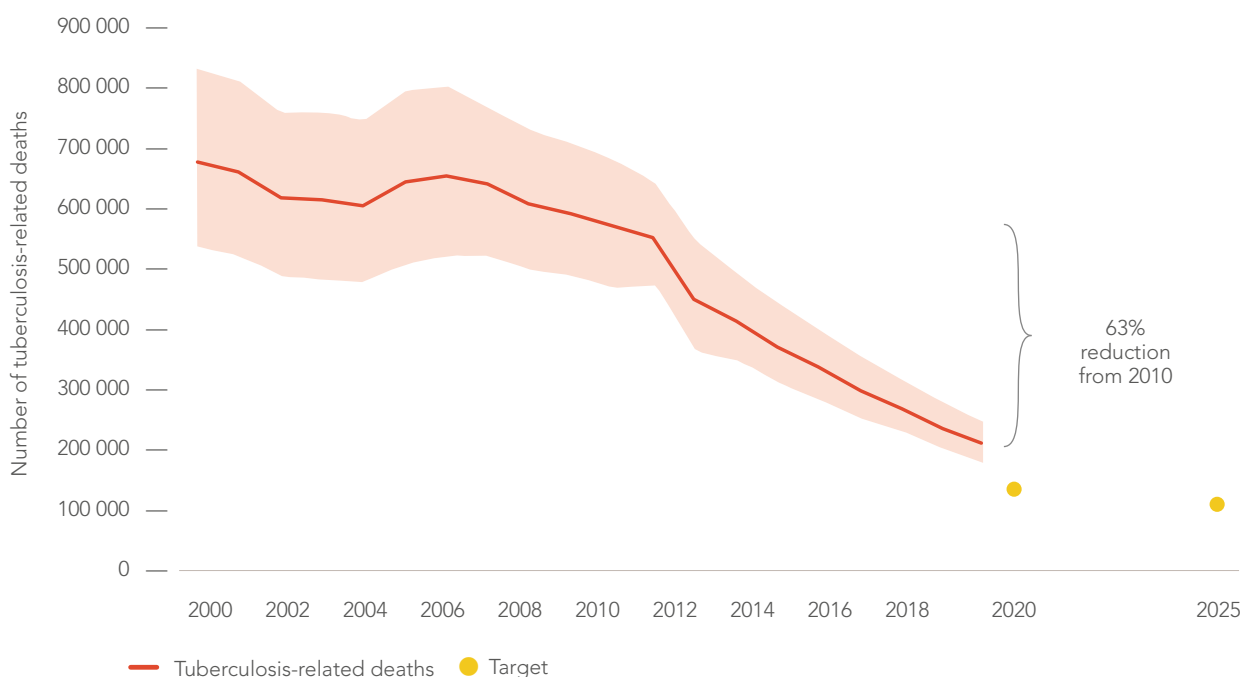
Tuberculosis deaths fall by more than half

There were an estimated 210 000 [177 000–242 000] tuberculosis-related deaths in 2019 among people living with HIV, a 63% reduction since 2010, when tuberculosis claimed the lives of 570 000 [470 000–680 000] people living with HIV (Figure 2.8). The 2021 Political Declaration on AIDS requires an 80% reduction by 2025 (compared to a 2010 baseline).

The biggest reductions in tuberculosis deaths among people living with HIV have been in India (a 83% reduction since 2010), Kenya (a 70% reduction), South Africa (a 77% reduction) and the United Republic of Tanzania (a 71% reduction). Those achievements represent tens of thousands of averted deaths. In South Africa, for example, an estimated 36 000 people living with HIV died of tuberculosis in 2019, compared with almost 160 000 deaths in 2010.

Progress is much slower in Cameroon, the Democratic Republic of the Congo, Uganda and Zambia. They are among the 30 countries that accounted for 88% of all tuberculosis-related deaths among people living with HIV in 2019.

FIGURE 2.8 | NUMBER OF TUBERCULOSIS-RELATED DEATHS AMONG PEOPLE LIVING WITH HIV, GLOBAL, 2000–2019 AND TARGETS FOR 2020 AND 2025



Source: Global tuberculosis report. Geneva: World Health Organization; 2020.

Note: The 2025 target was set by the General Assembly in the 2021 Political Declaration on AIDS.

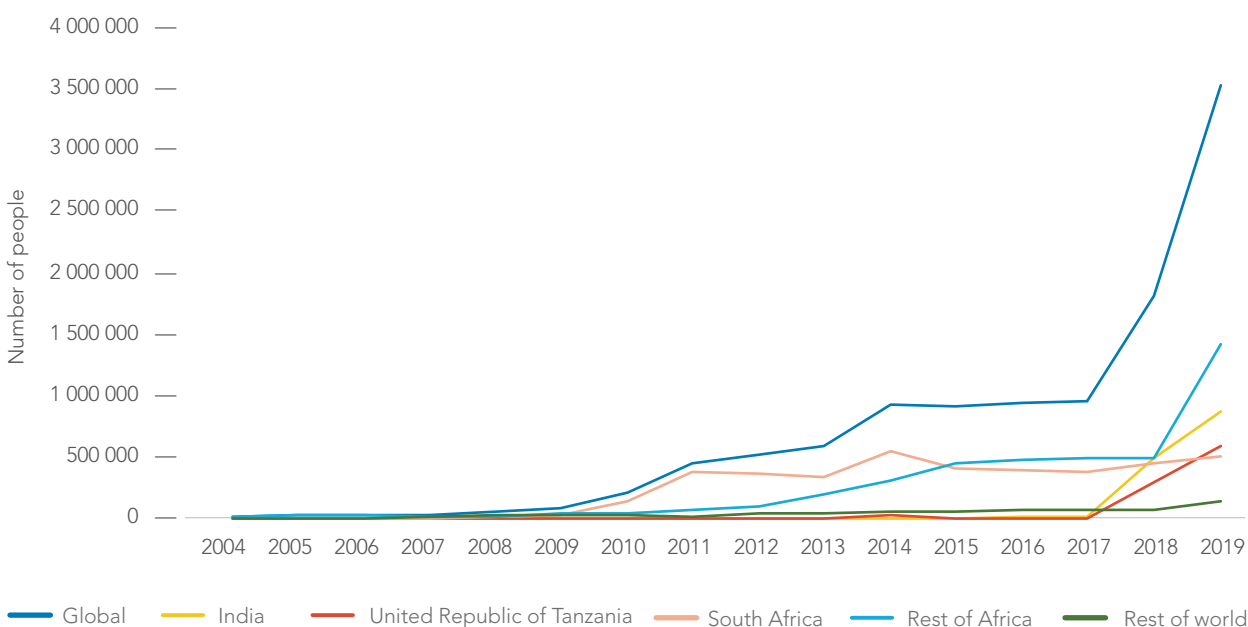
HIV DATA

Sharp increases in preventive treatment for tuberculosis

At the first-ever United Nations (UN) General Assembly High-Level Meeting on Tuberculosis in 2018, Member States committed to providing tuberculosis preventive treatment to at least 30 million people in the five-year period 2018–2022, including 6 million people living with HIV. Substantial progress has been made, with steep increases in India and several sub-Saharan African countries (Figure 2.9). In some countries—notably Kenya, Uganda and Zimbabwe—large percentages of people who had recently started HIV treatment in 2019 were also started on preventive tuberculosis treatment (Figure 2.10).

Data reported by 75 countries show that 3.5 million people receiving HIV treatment were provided with tuberculosis preventive treatment in 2019, more than half of them in three countries (India, South Africa and the United Republic of Tanzania) (Figure 2.11). In 2018 and 2019, an estimated 5.3 million people living with HIV were provided with tuberculosis preventive treatment—88% of the five-year target (10). The target of the 2021 Political Declaration on AIDS is more ambitious, calling for at least 90% of people living with HIV to receive preventive treatment for tuberculosis by 2025. Many of the countries with large tuberculosis and HIV burdens will need to introduce improvements rapidly if they are to reach that milestone.

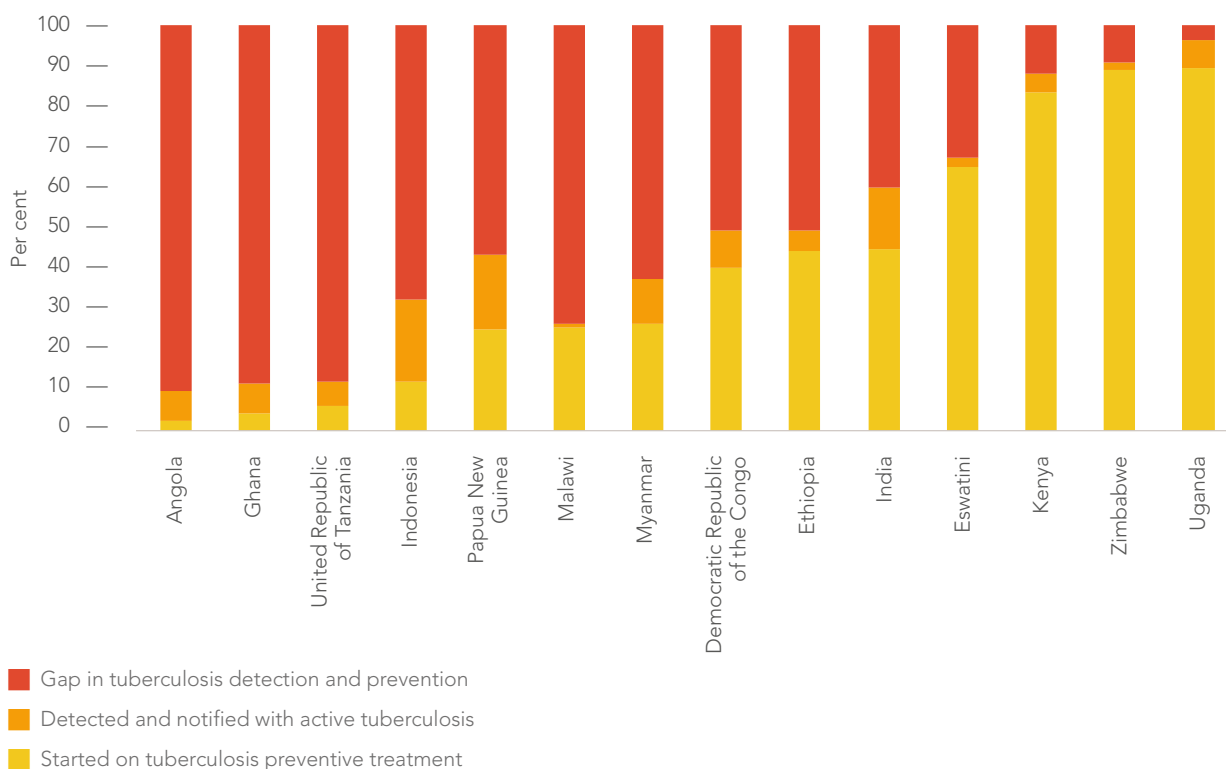
FIGURE 2.9 | PEOPLE LIVING WITH HIV WHO RECEIVED PREVENTIVE TREATMENT FOR TUBERCULOSIS, 2004–2019



Source: UNAIDS Global AIDS Monitoring, 2020 (<https://aidsinfo.unaids.org/>); Global tuberculosis report. Geneva: World Health Organization; 2020.

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.

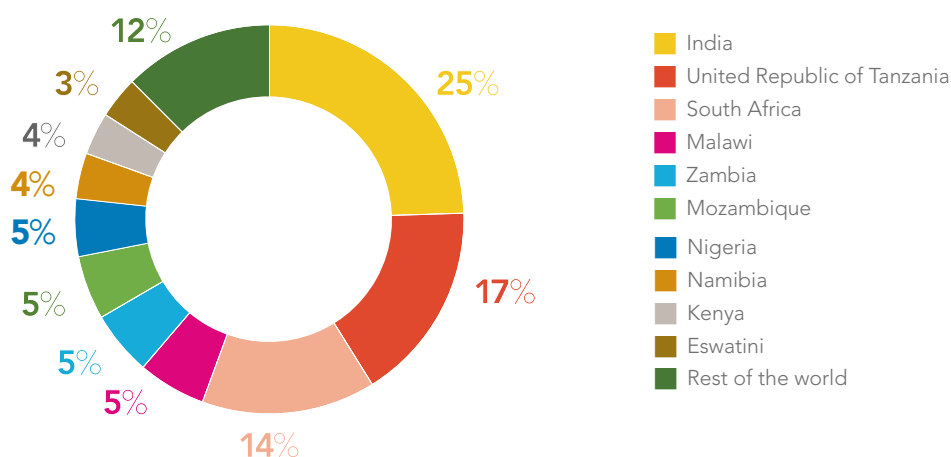
FIGURE 2.10 | PERCENTAGE OF PEOPLE LIVING WITH HIV NEWLY ENROLLED IN HIV TREATMENT WHO WERE DETECTED AND NOTIFIED WITH ACTIVE TUBERCULOSIS OR STARTED ON TUBERCULOSIS PREVENTIVE TREATMENT AND GAP, SELECTED COUNTRIES, 2019



Source: UNAIDS Global AIDS Monitoring, 2020 (<https://aidsinfo.unaids.org/>); Global tuberculosis report. Geneva: World Health Organization; 2020.

Note: Countries included are among the 30 high tuberculosis/HIV burden countries that had available data on the number of people living with HIV newly enrolled in HIV treatment, those who received tuberculosis preventive treatment, and those who were detected and notified to have active tuberculosis during the reporting period. These countries represent an estimated 37% of incident tuberculosis cases among people living with HIV in 2019.

FIGURE 2.11 | DISTRIBUTION OF PEOPLE LIVING WITH HIV WHO RECEIVED PREVENTIVE TREATMENT FOR TUBERCULOSIS, BY COUNTRY, 2004–2019



Source: UNAIDS Global AIDS Monitoring, 2020 (<https://aidsinfo.unaids.org/>); Global tuberculosis report. Geneva: World Health Organization; 2020.

Case study

“HIV IS OUR COLLECTIVE CONCERN”: HOW ESWATINI REACHED THE 95–95–95 TARGETS

HIV prevalence in Eswatini is among the highest in the world: 27% of adults in this small southern African country were living with HIV in 2020. Remarkably, Eswatini has already achieved for the country's total population the 95–95–95 HIV testing and treatment targets that the UN General Assembly recently adopted as a 2025 target for all relevant population groups.

Of the 200 000 people living with HIV in Eswatini in 2020 (62% of them women and girls), more than 98% knew their HIV status, more than 98% of people who knew their HIV-positive status are accessing treatment, and 95% of people on treatment were virally suppressed (11). Performance across the cascade for sub-populations was also high, but gaps were bigger among children and adult men.

Strong political leadership provided the impetus for the success. When King Mswati III declared HIV a national emergency in 1999, he declared that “HIV is our collective concern.” This call to action sparked a national drive to bring the epidemic under control (12). That leadership commitment was reflected in the establishment of the National Emergency Response Council on HIV and AIDS (NERCHA) within the Prime Minister's Office in 2001 and through consistent domestic budget allocations: for the past 10 years, close to 40% of the country's HIV budget has come from domestic sources (Figure 2.12).

Eswatini's antiretroviral therapy programme was piloted in 2004 and taken to scale by the Ministry of Health, with support from private health clinics and some companies. Donors and other development partners—notably UN agencies, the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund), the United States President's Emergency Plan for AIDS Relief (PEPFAR) and the European Union—have provided funding and technical assistance for HIV and related socioeconomic programmes. The testing and treatment components of the national HIV plan take a multisectoral approach that engages government, civil society organizations, community networks and development partners.



Women visiting a maternal and child health clinic run by the Family Life Association of Eswatini.
Credit: UNAIDS

FIGURE 2.12 | SOURCES OF HIV SPENDING IN ESWATINI, 2012/2013 TO 2018/2019



Source: Data provided by the National Emergency Response Council on HIV and AIDS, May 2021.

Note: 1 million Eswatini Lilangeni (SZL) = US\$ 72 817 (UN Operational Rates of Exchange, June 2021; see: <https://treasury.un.org/operationalrates/OperationalRates.php>).

The HIV response is decentralized through regional multisectoral HIV coordinating committees, which also leverage the prominent roles of chiefs and other customary authorities to promote local HIV responses and foster community engagement.

“Changing cultural behaviour is very complex, so we decided to use the aspects of the Swazi culture and the roles of chiefs that could be beneficial,” Eswatini’s Minister of Health, Sibongile Ndlela-Simelane, explained in 2017 (13). Similarly, the Alliance of Mayors Initiative on Community Action at the Local Level is deeply engaged in the HIV response in urban communities.

Chief Jubiphathi Magagula of Nyakatfo in the northern Hhohho, who was diagnosed with HIV in the 1990s, leverages his own experiences when he educates the public about HIV prevention, testing and treatment at community meetings and awareness campaign events.

“I always lead by example by taking a voluntary HIV test together with all members of my family, including the children. As a result, many people have tested for HIV in this community, and we are reaping the benefits of knowing our HIV status,” he says.

Much of the day-to-day work of the treatment programme rests with the Ministry of Health. It decentralized the distribution of antiretrovirals and other medicines, introduced community HIV testing and, most recently, made self-testing available. Services were integrated at health facilities, so people living with HIV were able to receive HIV, tuberculosis, and sexual and reproductive health services in a single visit to a clinic or hospital.

Information campaigns were incorporated in community mobilization efforts, which helped change attitudes about HIV and reduce stigma and discrimination. Also distinctive was the contribution of faith-based organizations, which helped bring



Civil society organizations play a central role in the fight against HIV by reaching large numbers of people through cultural events and awareness campaigns. Credit: NERCHA



"HIV matters during COVID-19" campaign poster. Credit: NERCHA

HIV and other services to remote communities. A shift to nurse-led initiation of treatment led to big increases in the numbers of people starting antiretroviral therapy, as did the adoption of a test and start approach in 2015, implemented by retrained counsellors and clinical staff (14).

To avoid missing marginalized and remote populations, Eswatini adjusted its HIV strategy to prioritize community engagement and rights-based approaches that reach key populations (15).

Differentiated service delivery has proved effective at removing some of the remaining disincentives for testing and treatment, and for reducing overcrowding at health facilities (16). Services have been made more flexible to fit the needs and preferences of diverse populations: youth-friendly services were expanded (along with community adolescent treatment supporter networks, such

as teen clubs), and mobile clinics and outreach services were used to serve key populations (with community-based peer support an important element) (17).

Further adaptations have been added to the testing and treatment programme during the COVID-19 pandemic, with prescriptions now covering 3–6 months of supplies of antiretroviral medication (18). Self-testing was also expanded, with kits provided at pharmacies and community venues and in front of food stores (19).

LINKING HIV AND DEVELOPMENT

Eswatini's testing and treatment programme matured against a backdrop of important strategic shifts, including a move from social welfare to social development. The Eswatini National Development Strategy places the HIV response at the centre of the country's developmental progress. This has led to a greater focus on social protection, systems strengthening and food security, the creation of community-based service points, and an extensive system of support for orphans and other vulnerable children (15).

Funding from PEPFAR and the Global Fund prioritizes resources for areas where gaps have been identified through programme and financial gap analyses. This reduces duplication, increases equity and allows for expanded programme coverage. Sustained financing, meanwhile, has helped Eswatini avoid drug stock-outs, build public trust in the treatment programme and minimize treatment disruptions.

The impact has been immense: AIDS-related deaths were reduced by 53% between 2010 and 2020, with a total of 2400 deaths due to AIDS-related causes in 2020, the lowest total since the mid-1990s. The treatment success has also contributed to a steep drop in new HIV infections, which declined by 64% between 2010 and 2020.

Case study

CHANGING THE WAY WE SPEAK TO MEN

Men in South Africa are less likely than women to use HIV services, including HIV testing and starting and staying on antiretroviral therapy (20). They also have much worse HIV-related health outcomes than women. The blame is commonly laid at the feet of men and so-called tough guy masculinities that encourage them to shun HIV and other health services.

Efforts to appear self-reliant, stoic and resilient no matter the circumstances often mask more vulnerable realities, however, as researchers with the Breaking the Cycle project discovered when they looked for ways to improve the use of life-saving HIV services among men.² They interviewed more than 2000 men about their views and experiences of HIV, and their findings are upending many common assumptions about men and HIV services, while also confirming initial insights from qualitative research carried out in 2019.

They found that seemingly stubborn or indifferent attitudes about HIV among men often mask deep fears (21). South African men tend to associate HIV with abandonment and loss; even treatment is seen as a stigmatizing marker that will leave them ostracized and alone. Mimicking stereotypes of fearlessness and self-sufficiency often carries the price of emotional isolation: few men have someone they can turn to for support in coping with an HIV diagnosis. Many men also expect unpleasant experiences at health clinics, which they see as spaces of judgment rather than sources of advice and support.

² The Breaking the Cycle project is funded by the Bill & Melinda Gates Foundation and implemented by PSI, Ipsos and Matchboxology.



Sibusiso Songca is a coach in the Coach Mpilo project, helping men with HIV live well and healthily.
Credit: PSI South Africa

FROM CASE MANAGERS TO COACHES

The Breaking the Cycle research insights were used to design a new peer support model called Coach Mpilo, a reference to the Zulu word for “health” and “life.” Coach Mpilo connects men with other men who understand what they are experiencing and who can provide meaningful support. The model reframes HIV counsellors or case managers as coaches and mentors who provide guidance and support based on personal experience.

Coach Mpilo links men living with HIV who need treatment adherence support with men who are virally suppressed and who can provide living proof that a man with HIV can live a happy, normal life. The aim is to help men overcome the isolation and despair they often feel after being diagnosed with HIV, foster positive attitudes and confidence about HIV treatment, and improve men’s treatment experiences and outcomes. Coaches are based in their communities and work closely with clinic staff, receiving referrals from nurses, accompanying men to clinic visits as needed, and helping them overcome barriers to retention and adherence.

“I know there is so much light after the diagnosis; I hope to share this light with others,” says one coach working in Ehlanzeni district in Mpumalanga province.

Coach Mpilo was piloted in three South African districts over seven months in 2020. It involved 120 coaches and more than 3800 men, most of them aged between 20 and 50 years.³ It has been highly acceptable and effective: by countering the negative preconceptions many people have about HIV, the project is reducing HIV-related stigma and helping men appreciate the benefits of starting and staying on HIV treatment.

“I called the number on the [Coach Mpilo] poster, and two days later, I met [a] coach,” recounts a young man from the Ugu district in KwaZulu-Natal province. “I couldn’t believe that a guy could live so openly with HIV and look so good.”

Treatment uptake was 94% of newly diagnosed men, and after seven months, 95% of participants were still on HIV treatment. About one in six (16%) participants interrupted treatment at least once but—vitality—more than 80% of those who interrupted antiretroviral therapy were brought back onto treatment by the end of the pilot (22).

Many participants interviewed at the end of the pilot said that family and community attitudes about HIV had changed through their interactions with coaches.

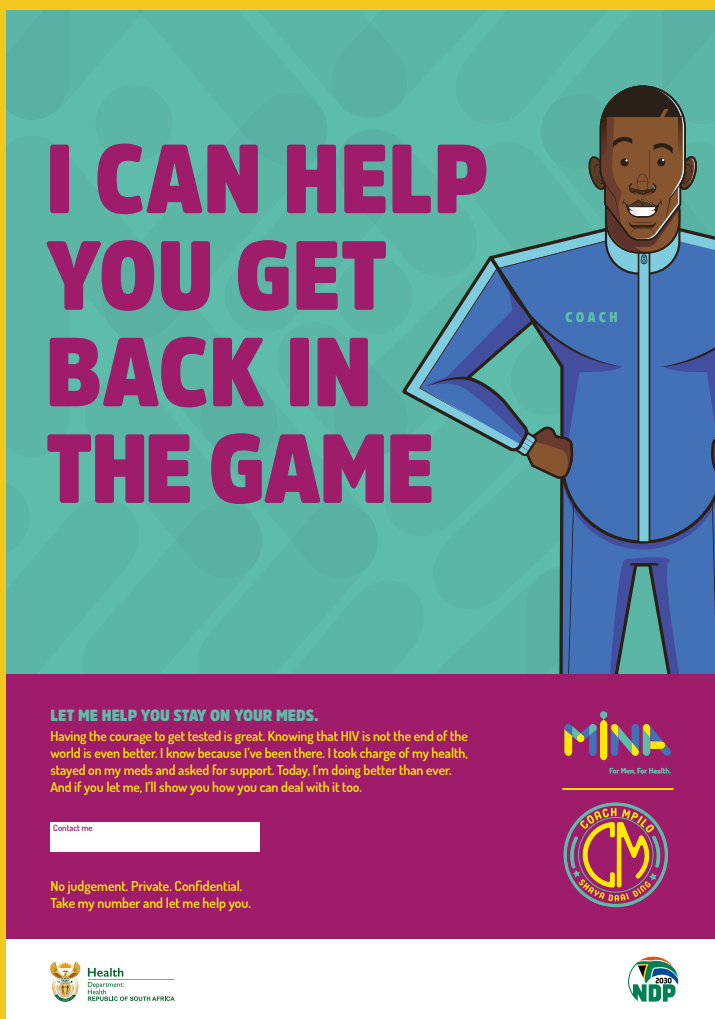
Health-care workers also recognize the value of candour and trust that this kind of approach can evoke. “When I see a coach talking to a man, I know he is saying things to him that it is impossible for us to say,” explains a female nurse, also from Ugu district. “They listen to the coach and respond. . . . Maybe we need to change the way we speak to men.”

Notably, these results were achieved during the COVID-19 pandemic. When face-to-face contact became impossible, coaches stayed in touch with participants through phone calls and WhatsApp chats. They found that linking HIV treatment support with practical, stay-safe guidance during the pandemic offered men more tangible motivation than the abstract goals of “longer lives” or “better health outcomes.” This led them to broaden their focus to cover helping men stay

³ PSI and Matchboxology piloted the model with implementing partners BroadReach Healthcare, Right to Care and South Africa’s National Department of Health.

healthy overall and to assisting with COVID-19 education and screening. Slogans like “Make sure you are taking your Impilo [treatment] to boost your immunity!” struck a chord (23).

The Coach Mpilo model is now being implemented more widely by PEPFAR partners in South Africa as part of the “MINA. For Men. For Health” campaign implemented by PEPFAR and South Africa’s National Department of Health.⁴



Awareness-raising poster about the Coach Mpilo peer support project that is displayed at clinics. Credit: PSI South Africa

⁴ MINA operates at over 360 facilities across the country. It includes a media campaign that has reached more than 20 million users on social media and up to 74% of the main target population of men aged 25 to 39 years on radio. An overview of the MINA campaign is available at <https://menstarcoalition.org/lost-to-follow-up/mina-for-men-for-health/>.

Case study

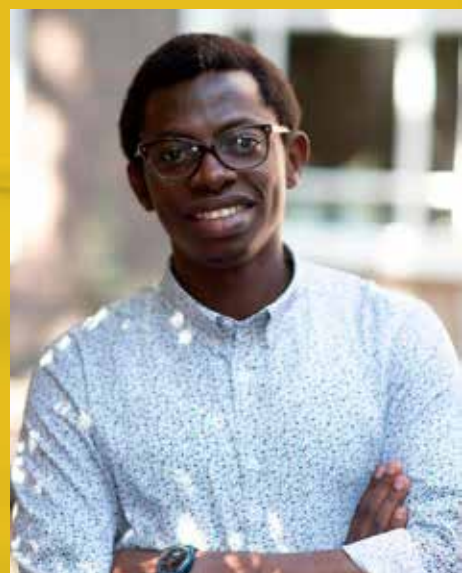
LONG-ACTING INJECTABLES PROVIDE A NEW TREATMENT OPTION

Long-acting injectable medications for use as antiretroviral therapy are an exciting new development that may help make it easier for people living with HIV to maintain viral load suppression and stay healthy. Instead of taking pills orally every day, a person would receive injections every one or two months, depending on the regimen.

The results from multiple clinical studies—ATLAS, FLAIR and ATLAS-2M—indicate that the injectable versions of the antiretrovirals cabotegravir and rilpivirine are effective and have an acceptable safety profile when used as a dual regimen. Results from ATLAS and FLAIR Phase 3 trials showed that the injectable versions (dosed either monthly or every two months) were as effective in maintaining viral load suppression as daily oral three-drug regimens over a 96-week study period, with a very low rate of virologic failure (24, 25).

The Phase 3b trial ATLAS-2M showed that administering injectable cabotegravir and rilpivirine every two months suppresses HIV as well as monthly injections. For both regimens, 94% of study participants continued to have undetectable viral loads after 48 weeks, according to data reported in 2020 (26). Recently reported data from ATLAS-2M suggest that efficacy is maintained over even longer periods: after two years, 90% of participants in the once-monthly group and 91% of those in the every-two-months group maintained viral suppression (27).

The injectable regimens were found to be generally well tolerated, with injection site reactions the most commonly experienced side-effect. The monthly dosing of cabotegravir and rilpivirine has been approved by the United States Food and Drug Administration, and the European Medicines Agency and regulatory authorities in Canada and Australia have approved both the monthly and every-two-month dosing.



Cedric Nininahazwe, Director of Programmes at Y+ Global, Global Network of Young People Living with HIV. Credit: Y+ Global

WHAT DOES THIS MEAN FOR HIV TREATMENT?

Long-acting injectable antiretroviral medicines are an attractive alternative for the large numbers of people living with HIV who struggle to adhere to daily pill-based regimens (28).

“It’s really great to have options to facilitate treatment adherence and therefore suppress one’s viral load. I can imagine not having to think about missing my daily doses: that would be a great relief,” comments Cedric Nininahazwe, Director of Programmes at Y+ Global, a network of young people living with HIV.

This could also have important population-level benefits. A recent modelling analysis explored the potential effects of injectable cabotegravir and rilpivirine in sub-Saharan Africa. It found that introducing the long-acting regimens alongside continued use of dolutegravir-based oral regimens would increase choice and help increase the proportion of people with HIV on treatment, increase viral load suppression and reduce AIDS-related mortality (28). The modelling study found that roll-out of long-acting regimens for persons with high viral loads (>1000 copies per mL) in sub-Saharan Africa would be borderline cost-effective if priced at US\$ 120 per person per year (29). If used more widely, the long-acting injectables are unlikely to be cost-effective unless prices are considerably lower (29).

Both patients and health-care providers show keen interest in long-acting HIV medicines (30, 31). However, there may be some implementation challenges. The regimens will require more frequent visits to health facilities (once every one to two months) compared with oral antiretroviral regimens (where people on stable HIV treatment generally only need to visit a clinician once every three to six months). This can be an issue in settings where patients incur high financial or time costs for transport and being away from work or family, and it increases the number of patients attending health facilities. More frequent visits can also create new privacy and confidentiality challenges.

It is also important to adhere to the dosing schedule (32, 33). Where this is a challenge (for example, for people who travel frequently, those with extensive family care obligations, or when health-care services are disrupted, such as during the COVID-19 pandemic), oral cabotegravir plus oral rilpivirine can be used as a bridge between injection visits for brief periods of up to two injection cycles (34).

Meanwhile, other injectable and implantable antiretroviral drugs are being developed. They include lenacapavir, an experimental HIV capsid inhibitor, which interferes with multiple stages of the HIV life cycle. An early study in which lenacapavir plus oral medications were provided to highly treatment-experienced people with multidrug-resistant virus has shown positive results (35). Future trials may link lenacapavir (which can be given as an injection every six months) with islatravir (for which an implant that lasts 12 months is being developed) (36, 37).

“New and improved treatment options are welcome, but alongside them, we need to invest in finding the vaccine and ensure access [to antiretroviral medicines] for every person living with HIV,” Mr Nininahazwe emphasizes.

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03

ENDING PAEDIATRIC AIDS AND ELIMINATING VERTICAL TRANSMISSION

Efforts to eliminate the vertical transmission of HIV to children in settings with a high burden of HIV have been a standout achievement of the global AIDS response for much of the last decade. However, these successes have overshadowed a heartbreaking tragedy: as HIV testing and treatment programmes expand, children living with HIV are often being left behind.

Gaps in the testing of infants and children exposed to HIV have left more than two-fifths of children living with HIV undiagnosed. Almost half (46%) of the world's 1.7 million [1.2 million–2.2 million] children living with HIV in 2020 were not benefiting from antiretroviral therapy, and the number of children on treatment globally has declined since 2019. Nearly two thirds of these children are aged 5 to 14 years—children who are often unaware of their HIV-positive status until their immune systems weaken and they become ill. Past inequalities in service access are still affecting these older children today. Finding them, linking them to treatment and retaining them in life-long care is a priority for the next five years.

New HIV infections among children declined by more than half (53%) from 2010 to 2020, due mainly to the increased provision of antiretroviral therapy to pregnant and breastfeeding women living with HIV. However, that momentum has slowed considerably, leaving particularly large gaps in western and central Africa, which is home to more than half of pregnant women living with HIV who are not on treatment.

Further progress in just a few countries will have a major impact on the push to eliminate new HIV infections among children. Half of new child infections worldwide are in only seven countries: Nigeria (14% of the global total), Mozambique and South Africa (8% each), the United Republic of Tanzania (7%), the Democratic Republic of the Congo (6%), Zambia (5%) and Uganda (3%). Their vertical transmission programmes, however, are yielding strikingly different results: South Africa and Uganda reduced the annual number of children acquiring HIV by more than 70% in 2010–2020, while Nigeria reduced vertical infections by just 15%.



2025 TARGETS AND COMMITMENTS in the 2021 Political Declaration on AIDS

- Eliminate vertical transmission of HIV infections and end paediatric AIDS.
- Ensure that all children diagnosed with HIV are provided treatment that is optimized to their needs.
- Ensure that 75% of all children living with HIV have suppressed viral loads by 2023 and 86% by 2025, in line with the 95–95–95 HIV treatment targets.
- Ensure that 95% of pregnant women have access to testing for HIV, syphilis, hepatitis B and other sexually transmitted infections.
- Ensure that 95% of pregnant and breastfeeding women in high HIV burden settings have access to re-testing during late pregnancy and in the post-partum period.
- Ensure that all pregnant and breastfeeding women living with HIV are receiving life-long antiretroviral therapy, with 95% achieving and sustaining viral suppression before delivery and during breastfeeding.
- Ensure that all HIV-negative pregnant and breastfeeding women in high HIV burden settings or who have male partners at high risk of HIV in all settings have access to combination prevention, including PREP, and that 90% of their male partners who are living with HIV are continuously receiving antiretroviral therapy.
- Ensure that 95% of HIV-exposed children are tested by two months of age and after the cessation of breastfeeding.

HIV DATA

Fewer children on treatment

The number of children receiving antiretroviral therapy declined in 2020, leaving almost 800 000 children (aged 0–14 years) living with HIV not on life-saving treatment (Figure 3.1). Almost two thirds (63%) of those children were aged 5 years and older (Figure 3.2). Finding undiagnosed older children and adolescents requires an expansion of self-testing, and of rights-based index, family and household testing.

Treatment coverage among children living with HIV (aged 0–14 years) remains far lower than it is among adults (aged 15 years and older): 54% [37–69%] versus 74% [57–90%] in 2020 (Figure 3.3). The health outcomes of children who receive HIV treatment are also worse than those of adults, partly due to suboptimal paediatric HIV medicines and challenges in retaining the children in care. A mere 40% [29–51%] of children living with HIV were virally suppressed in 2020. Children living with HIV require a continuum of treatment, care and social protection that is proven to improve health outcomes as they grow and progress through youth into adulthood.

FIGURE 3.1 | NUMBER OF CHILDREN LIVING WITH HIV AND THOSE RECEIVING ANTIRETROVIRAL THERAPY, GLOBAL, 2010–2020

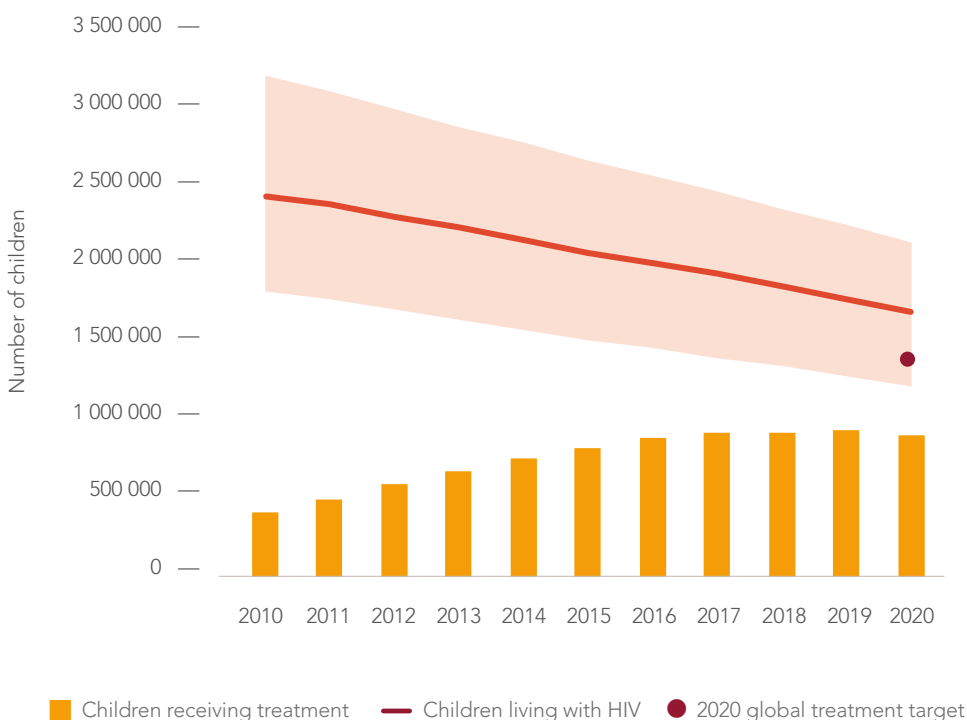
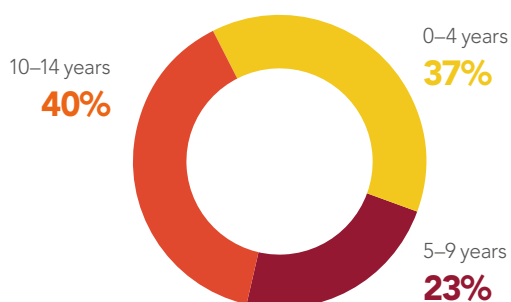


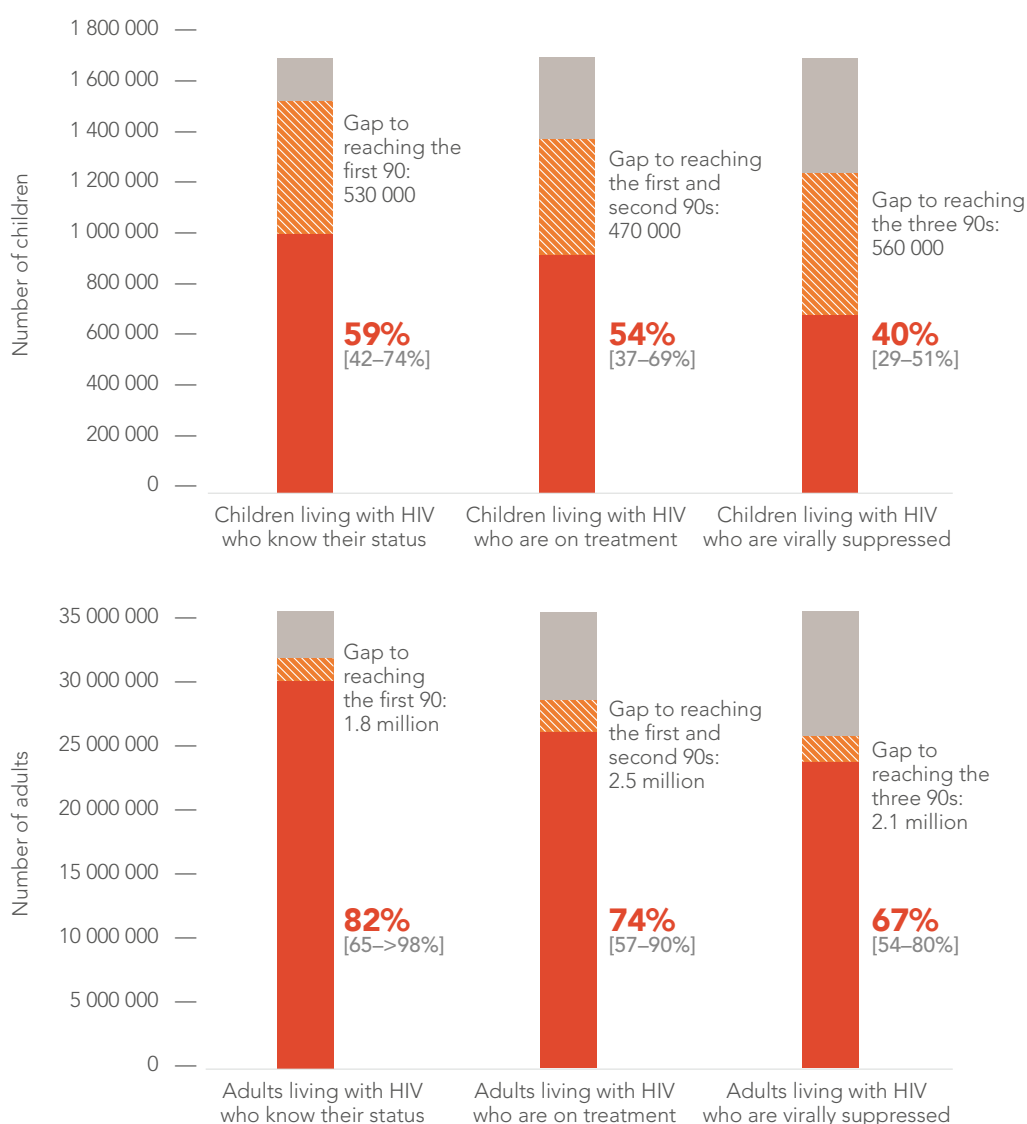
FIGURE 3.2 | CHILDREN LIVING WITH HIV NOT RECEIVING TREATMENT, BY AGE GROUP, 2020



Almost two thirds of children living with HIV not on treatment were aged 5 years or older.

Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

FIGURE 3.3 | HIV TESTING AND TREATMENT CASCADE, CHILDREN (AGED 0-14 YEARS) COMPARED TO ADULTS (AGED 15 YEARS AND OLDER), GLOBAL, 2020



Source: UNAIDS special analysis, 2021.

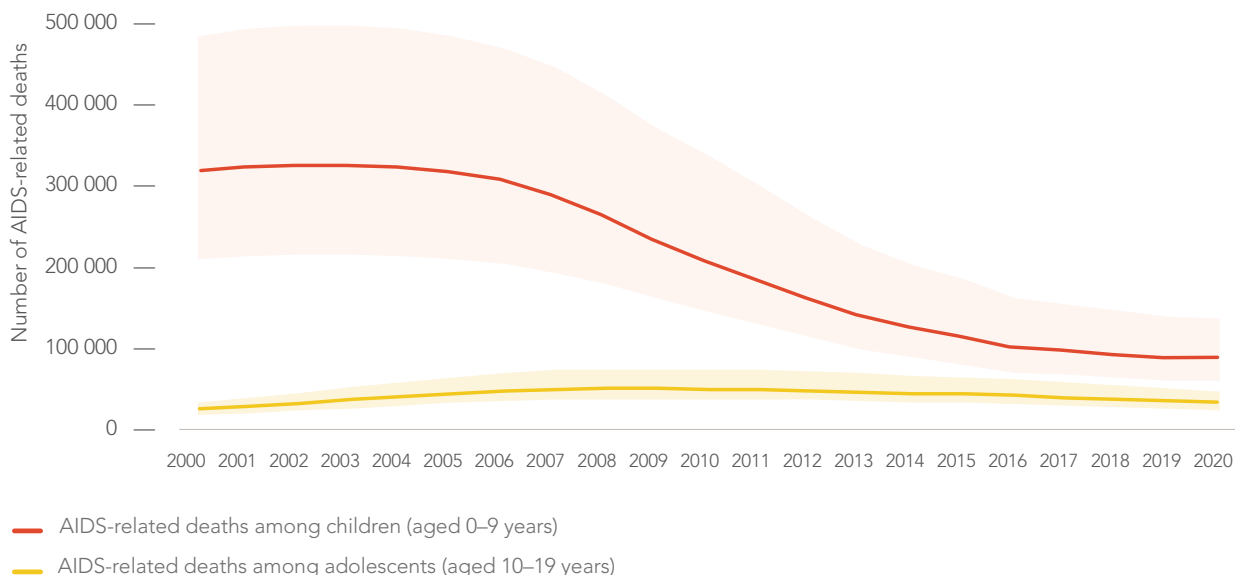
HIV DATA

Slow progress on AIDS-related deaths among adolescents

Large gaps in the coverage of services to prevent vertical transmission and diagnose newborns in past years—and current inequalities in HIV testing and treatment for older children living with HIV—are driving year-on-year trends in AIDS-related mortality. Reductions in AIDS-related deaths among children and adolescents are steepest among children aged 0 to 9 years (a 60% decline since 2010), reflecting both improvement in efforts to prevent new vertical infections and efforts to diagnose and treat children in the months following childbirth and during breastfeeding. Among adolescents (aged 10–19 years), progress is slower, with AIDS-related deaths declining just 37% over the same period.

The single biggest paediatric treatment challenge is to rapidly find children living with HIV who were missed at birth or during breastfeeding and link them to care. Scale-up of rights-based index, family and household testing and self-testing, and integrating HIV screening with other child health services, can help close this gap.

FIGURE 3.4 | AIDS-RELATED DEATHS AMONG CHILDREN (AGED 0–9 YEARS) AND ADOLESCENTS (AGED 10–19 YEARS), GLOBAL, 2000–2020



Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).



*A young girl attends a community HIV event in Khayelitsha, Cape Town, South Africa.
Credit: UNAIDS*

The single biggest paediatric treatment challenge is to rapidly find children living with HIV who were missed at birth or during breastfeeding and link them to care.

HIV DATA

Large gaps in western and central Africa

The reduction in new HIV infections among children continues to be one of the most prominent achievements of the global AIDS response: programmes to eliminate vertical transmission of HIV to children have averted an estimated 2.6 million [1.8 million–4.2 million] HIV infections in children since 2001.

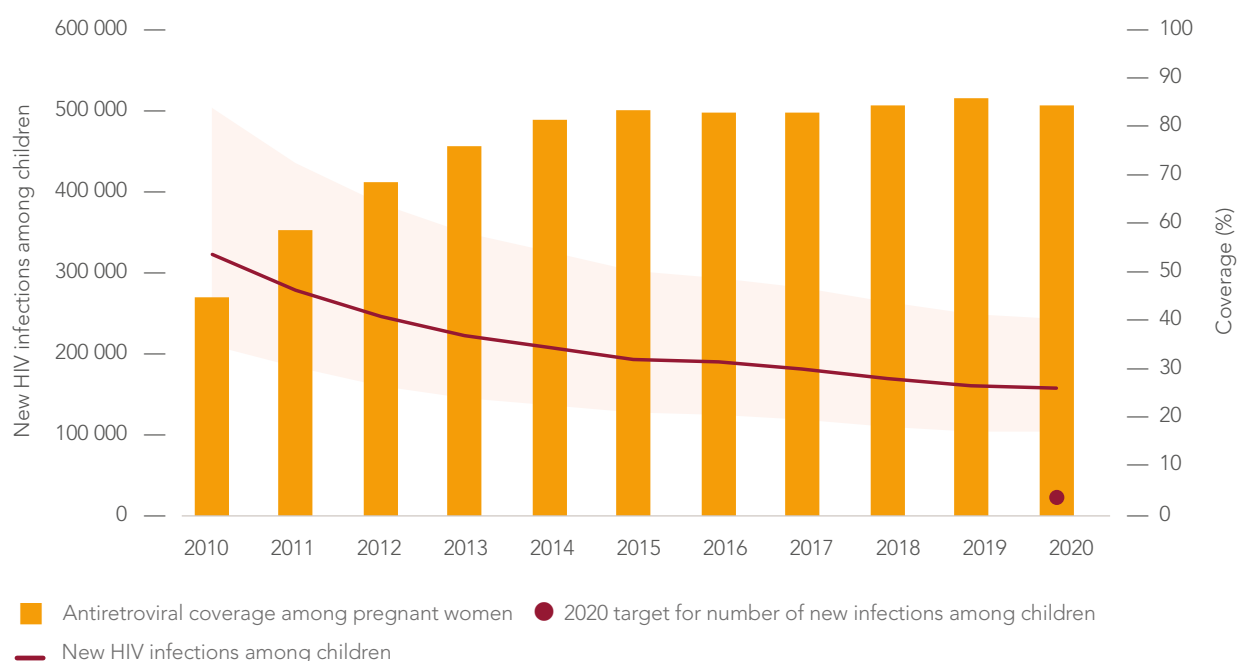
An estimated 85% [63–>98%] of pregnant women living with HIV globally were receiving antiretroviral therapy in 2020 to prevent vertical transmission and guard their own health. There has been little global expansion of these services since 2015 (Figure 3.5), and coverage gaps continue to be large within many countries in western and central Africa. Almost one quarter (24%) of pregnant women with HIV who are not receiving antiretroviral therapy are in one country—Nigeria—and a further 33% live elsewhere in western and central Africa (Figure 3.6).

Substandard public health systems, the ongoing imposition of user fees for basic health services, and persistent stigma and discrimination (including self-stigma), especially towards key populations, are among the main hindrances these women encounter. Immediate priorities include improvements to the legal and policy environment, the removal of user fees, anti-stigma and discrimination training for health-care workers (especially at antenatal care clinics), integration of services for HIV, maternal, neonatal, child and adolescent health, scaling up of digital health solutions and other innovative technologies (such as point-of-care and duo testing for HIV and syphilis), community engagement and differentiated ways of providing services for pregnant women within key populations and other hard-to-reach groups. Rapid improvements in western and central Africa, especially in Nigeria, can have a huge impact on the global push to eliminate vertical transmission of HIV.



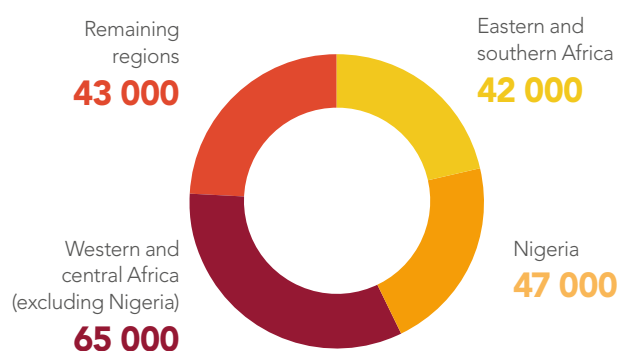
Women are provided with information on vertical transmission of HIV in the Zogbodomey-Bohicon-Zakpota region of Benin.
Credit: UNAIDS

FIGURE 3.5 | **NEW HIV INFECTIONS AMONG CHILDREN AND ANTIRETROVIRAL COVERAGE AMONG PREGNANT WOMEN, GLOBAL, WITH 2020 TARGET, 2010–2020**



Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

FIGURE 3.6 | **DISTRIBUTION OF PREGNANT WOMEN LIVING WITH HIV WHO ARE NOT ON TREATMENT, BY REGION, 2020**



Almost one quarter of pregnant women with HIV who are not on treatment are in Nigeria, and a further 33% live elsewhere in western and central Africa.

HIV DATA


Identifying and addressing service gaps

Eliminating vertical HIV transmission requires improvements in several areas. Integrated antenatal care and HIV services must be affordable, accessible, welcoming and suitable, especially for adolescent girls and women who are stigmatized, marginalized and subjected to discrimination. Across the continuum of efforts to provide women with services as they plan families and go through pregnancy, childbirth and breastfeeding, programmes need to become better at finding women who acquire HIV and quickly providing them with antiretroviral therapy in order for them to achieve viral suppression.

Each of the 150 000 [100 000–240 000] new HIV infections among children in 2020 could have been prevented. A strong start would be to better engage women and girls at significant risk of acquiring HIV infection in integrated antenatal care and HIV services, including HIV prevention and testing, delivered at the local level, and to ensure that those who are HIV-positive receive treatment before pregnancy. Nearly 65 000 child infections occurred in 2020 because women already living with HIV were not diagnosed during pregnancy and did not start treatment.

More than 35 000 additional vertical transmissions occurred among women who acquired HIV during pregnancy and breastfeeding. Women at substantial risk of HIV infection require tailored combination HIV prevention, including pre-exposure prophylaxis (PrEP), more comprehensive counselling, repeat HIV testing and the provision of self-testing kits for partners.

More than 38 000 additional child infections occurred when mothers who started antiretroviral therapy did not continue treatment during pregnancy and breastfeeding, and nearly 14 000 occurred among women who were

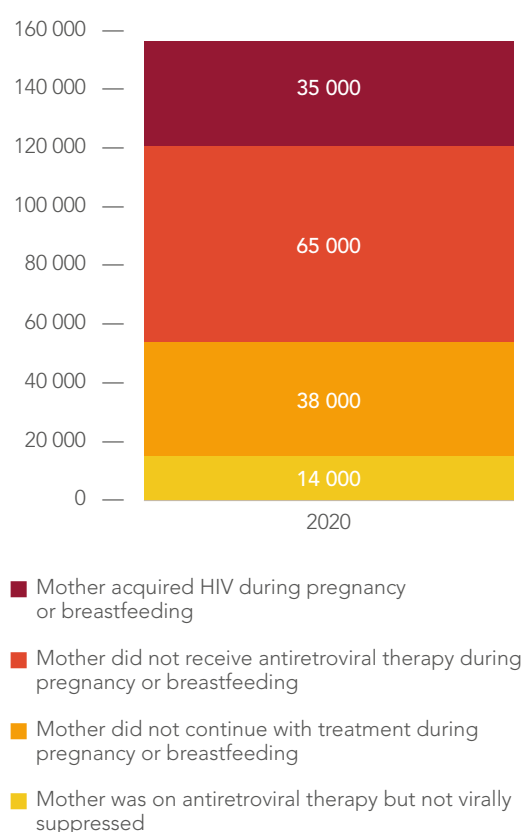


Services to prevent vertical transmission will produce stronger results if they are matched with social protection and other interventions that tackle socioeconomic and structural barriers.

on treatment but not virally suppressed. Improving the quality of treatment and care—including the use of optimized treatment regimens and peer-assisted retention efforts (such as mentor mothers)—can help close these gaps.

These improvements are more likely to produce the desired results if they are matched with social protection and other interventions that tackle the socioeconomic and structural factors that make it difficult for women, especially those within key populations, to access and stay engaged in services. These factors include unequal power dynamics and gender norms, gender-based violence, poverty, user fees, and stigma and discrimination from health-care workers, family members and the community.

FIGURE 3.7 | **NEW VERTICAL HIV INFECTIONS BY CAUSE OF TRANSMISSION, GLOBAL, 2020**



Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

Preventing vertical transmission of HIV in prisons and other closed settings

In prison settings in many countries, limited HIV prevention, diagnosis, treatment and care services, coupled with poor access for women (and their children) to antenatal and postnatal care, labour and delivery services, poses a serious challenge to preventing vertical transmission of HIV (1, 2). This leads to infants born in prisons being at higher risk of acquiring HIV during pregnancy, delivery or breastfeeding.

In 2020, the United Nations Population Fund (UNFPA), United Nations Office on Drugs and Crime (UNODC), United Nations Entity for Gender Equality and the Empowerment of Women (UN Women) and UNAIDS published a technical guide providing a framework of standard operational procedures to ensure implementation of services to prevent vertical transmission in prisons (3). This guide is being used to support countries in providing high-quality HIV and sexual and reproductive health services in prison with the aim of eliminating new HIV, tuberculosis, viral hepatitis and syphilis infections among incarcerated women and their children.

Case study

HOW SRI LANKA ELIMINATED THE VERTICAL TRANSMISSION OF HIV

Sri Lanka is among a small but growing number of countries to have received validation of the dual elimination of mother-to-child transmission (also known as vertical transmission) of HIV and congenital syphilis, a status that it officially earned in late 2019. Sri Lanka is the fourth country in Asia and the Pacific to reach the elimination goal, after Malaysia, the Maldives and Thailand.

According to national data, there were no diagnosed cases of vertical transmission of HIV in children in 2017 and 2018. Congenital syphilis cases have not exceeded 2 per 100 000 live births (much lower than the 50 per 100 000 live births needed for elimination certification) (4).

The elimination validation “is the result of strong political commitment, a successful multisectoral integrated approach built upon the foundations of the public health system, and technical expertise,” explains Anil Jasinghe, Director General of Health Services in Sri Lanka.

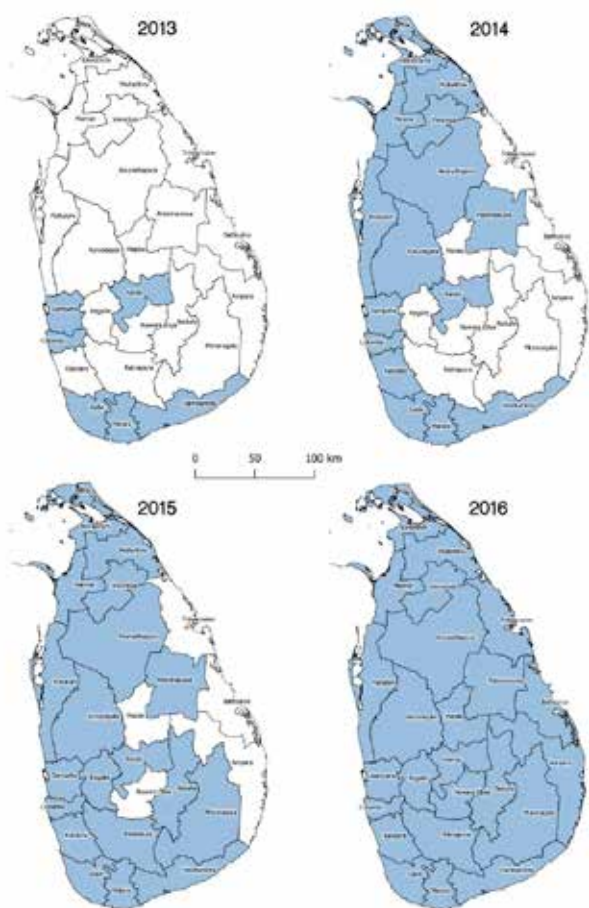
The Government of Sri Lanka provides free health services to all citizens—including maternal and child health, sexual and reproductive health, and family planning services that date back to the early 20th century (5). Sri Lanka launched its first programme for preventing vertical transmission of syphilis in 1954, and it adopted its elimination goal in 2009. The programme to prevent vertical transmission of HIV began in 2002, but it was limited to a few maternity units until 2012 (6).

A big step forward was the 2013 decision to combine the two programmes into a single effort for the dual elimination of HIV and syphilis, and to offer all pregnant women HIV and syphilis testing services, prevention information and, where appropriate, treatment. Advocacy meetings were held in high-burden districts, and protocols and training were adapted to make the combined services integral to the tasks of health-care workers providing sexually transmitted infection screening and care and maternal and child health services. The programme was rolled out in stages until countrywide coverage was reached in 2016.



Information materials for pregnant women are distributed in Sri Lanka. Credit: UNAIDS

FIGURE 3.8 | THE SCALE-UP OF SRI LANKA'S PROGRAMME TO ELIMINATE THE VERTICAL TRANSMISSION OF HIV AND SYPHILIS, 2013–2016



■ District providing services towards the elimination of vertical transmission of HIV and syphilis

Source: Elimination of mother-to-child transmission of HIV and syphilis: national validation report, Sri Lanka 2019. Colombo: Ministry of Health [Sri Lanka]; 2019.

The involvement of organizations of people living with HIV and key populations has helped ensure that services reach remote areas and marginalized communities, such as sex workers. Three organizations of people living with HIV worked closely with the National STD/AIDS Control Programme to facilitate HIV care services, and they also participate as members of the National AIDS Council and the HIV care subcommittee.

Because a great deal of infrastructure, facilities and processes were already in place, only a few improvements had to be added to the existing system. Health-care workers were trained in voluntary counselling and testing approaches, laboratory facilities were adapted to cope with the increased demand for HIV testing—including the procurement of ELISA machines with the support of the United Nations Children’s Fund (UNICEF), the World Health Organization (WHO) and the World Bank—and referral systems were reinforced.

The Ministry of Health made the elimination effort a high priority. It allocated adequate resources, assigned a coordinator, engaged key stakeholders and frequently reviewed programme data to assess progress. Services for key populations and other vulnerable populations were developed, while the overall population had easy access to a range of preventive services. All of these services were provided free of charge by the government. UNICEF supported training and quality improvements, while WHO provided technical support (6).

It took just three years for the elimination programme to move from the pilot phase to national coverage (Figure 3.8). Household survey data indicates that almost all newborns were being delivered in health facilities by 2016, that coverage of screening for syphilis among pregnant women increased from 60% in 2012 to 99%



Information posters line the entrance to the Ratmalana maternal and child health clinic in Colombo District, Sri Lanka.

Credit: UNAIDS

in 2018, and that coverage of HIV testing increased from 5.6% to 96% over the same period (7, 8). The rate of vertical transmission for both diseases was reduced to well below the global elimination targets (Table 3.1).

Sri Lanka's elimination programme has changed numerous lives for the better, including that of Rose (not her real name), a mother living with HIV, and her baby. "I was so frustrated and helpless at the

beginning, and I felt like giving up everything," she recalls. "Then I realized [that the] sexually transmitted diseases clinic and maternal and child health staff are genuinely interested in my well-being as well as my baby's. All the happiness I experience today is because of them. They are like family to me; that is why I call them on all the special occasions, including the birthday of my baby."

TABLE 3.1 | SERVICE COVERAGE AND IMPACT OF SRI LANKA'S PROGRAMME TO ELIMINATE VERTICAL TRANSMISSION OF HIV AND SYPHILIS, 2017 AND 2018

Impact indicators	2017	2018
Rate of vertical HIV transmission	0%	0%
Annual rate of new paediatric HIV infections per 100 000 live births	0	0
Annual rate of congenital syphilis per 100 000 live births	1.5	1.5
Process indicators	2017	2018
Antenatal care coverage	97.5%	96.4%
HIV testing coverage of pregnant women	95.2%	95.9%
Syphilis testing coverage of pregnant women	96.9%	99.3%
Antiretroviral therapy coverage of HIV-positive pregnant women	100%	100%
Treatment coverage of syphilis-positive pregnant women	100%	97.2%

Source: Rajapaksa L, Weerasinghe G, Manathunge A, Elwitigala J, Nilaweera I, Kasturiaratchi K et al. Eliminated mother-to-child transmission (MTCT) of HIV and syphilis in Sri Lanka; WHO confirms. Sri Lanka Journal of Sexual Health and HIV Medicine. 2019;5:5-12.

Case study

ALL IN THE FAMILY: USING INDEX HIV TESTING TO FIND CHILDREN LIVING WITH HIV IN WESTERN AND CENTRAL AFRICA

Treating children living with HIV remains a weak spot in the global HIV response, particularly in western and central Africa. Paediatric HIV treatment coverage in the region is among the lowest in the world—at 56% [42–72%] in 2020—and the gap between adult and paediatric treatment is widening.

A big challenge is that large proportions of children living with HIV in the region are not being diagnosed, even if they have parents who are receiving HIV treatment. A 2017 study found that almost half of HIV-positive people who were receiving care had household members, many of them children and adolescents, who had not yet taken an HIV test (9).

Family-based index HIV testing is an effective way to identify undiagnosed HIV-positive children and link them to treatment (10). A large study in Cameroon found that this method was far more effective at identifying children living with HIV than more conventional entry points, like vertical transmission services, paediatric wards, outpatient facilities, tuberculosis clinics or immunization services (11).¹ In the Democratic Republic of the Congo, systematic family-based index testing led to a fourfold increase in the number of HIV-positive children receiving HIV treatment over a period of six months (12). In Benin, the number of children and adolescents newly diagnosed with HIV more than doubled during six months of family-based index HIV testing (from 60 to 129), and all of the diagnosed children were successfully linked to treatment (13).

E.M. is a woman living with HIV in the city of Parakou, in northern Benin.² She recalls how her midwife asked her to bring her eldest child, who was four years old at the time, for screening after E.M. tested HIV-positive during antenatal care. He tested HIV-positive as well. “We were referred to the paediatrics of the CHUD-Borgou [the community health centre in Parakou] for his care,” she says. “In the past, he regularly became ill and had rashes and spots all over his body. Thanks to the care he received, he is doing very well today.”

¹ The yield of HIV diagnoses through index testing was 22%, compared with 11% through tuberculosis services, 6% through vertical transmission services or paediatric wards, and almost 0% through outpatient or immunization services.

² Not her real initials.

**JOURNÉE
MONDIALE
DU SIDA**
1^{ER} DÉCEMBRE 2019



**“J’accompagne
les gestantes
séropositives à
suivre les conseils de
l’équipe soignante
pour leur santé et
pour que leur enfant
ne soit pas infecté;
j’encourage aussi au
dépistage familial”**

Jeannette **BOSSOU** • Présidente AFEP-ESPOIR

Les communautés *font la différence*



Family-based index testing focuses on the families and household members of persons recently diagnosed with HIV infection or those who are in care and on treatment. It involves the following steps:

- Identify family members of an HIV index case.
- Offer them HIV testing if they do not yet know their HIV status.
- Share the results in an age-appropriate way with the diagnosed family members.
- Link individuals who test HIV-positive to care and treatment, and to any other health and social services that they might need.

*Jeannette Bossou,
President of AFEP-
ESPOIR, promotes HIV
family screening during
World AIDS Day 2019,
Benin.
Credit: UNAIDS*

UNICEF—together with WHO and UNAIDS—has developed operational guidance for national roll-outs of family-based index testing, and it has been providing technical assistance to countries in western and central Africa to implement the strategy. It also has been collecting data on acceptance, testing, diagnoses and treatment status. Those data are fed into a regularly updated dashboard that allows for tracking and comparisons of the implementation, challenges and scale-up in countries across the region.

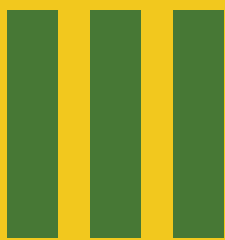
Data compiled on the dashboard show that over a period of six months in 2020, service coverage increased from 62% to 69% in 503 priority districts or areas, with almost 47 000 offers of family testing in the 12 countries reporting these data. Overall, 2283 people living with HIV were newly diagnosed and linked to treatment and care, with a treatment initiation rate of 99% (13).

Family-based index HIV testing “is an effective way to find HIV cases in the community that are outside the health-care system,” says Rachida Mama Seidou, who works with the Borgou section of Benin's Network of Associations of People living with HIV.

Best practices for guiding the scale-up of family-based index testing include the engagement of networks of people living with HIV in Chad, the use of strong community health systems in Ghana, and the implementation of the strategy alongside a strong advocacy plan to gain government ownership of the process in Cameroon. UNICEF will convene South–South learning sessions with other regions in 2021 to share those and other lessons.

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AN INEQUALITIES LENS





04

COMMUNITY LEADERSHIP

For decades, affected communities have been driving the global HIV response forward. People living with HIV, key populations, women, young people and others have worked together to expand the reach, quality and equity of health services by tirelessly campaigning for stronger action, raising the alarm about gaps and injustices, and putting people's needs at the centre of HIV programmes. Their critical role has been reinforced during the COVID-19 pandemic.

Community-led organizations raise awareness of obstructive laws and practices, pinpoint missed opportunities, reach marginalized communities and lead by example. Government HIV programmes are increasingly understanding the advantages of partnering with community organizations to deliver people-centred services to hard-to-reach populations, such as through social contracting. Community-led monitoring systems are a valuable resource, leveraging the knowledge and networks of community organizations to strengthen the performance and accountability of HIV programmes. Community engagement is also increasingly recognized as a core strategy for achieving universal health coverage (1).

Community-led and community-based services have also made a difference during the COVID-19 pandemic, delivering HIV drugs and services directly to the people in greatest need. In Côte d'Ivoire, Indonesia, Kenya and elsewhere, community groups have delivered antiretroviral and tuberculosis medicines to people's homes or local drop-in centres, while their peers in Eswatini and Kenya have delivered condoms, lubricants and HIV self-testing kits to key population-friendly community distribution points (2). Community-led organizations have also added COVID-19 tasks, such as awareness-raising and distributing personal protective equipment, to their activities (3).



*Yana Panfilova, a young woman living with HIV who leads the civil society group Teenergizer, addresses the 2021 UN General Assembly High-Level Meeting on AIDS.
Credit: UN Photo/Loey Felipe*

2025 TARGETS AND COMMITMENTS in the 2021 Political Declaration on AIDS

- Commit to the Greater Involvement of People Living with HIV/AIDS (GIPA) principle and ensure that relevant global, regional, national and subnational networks and other affected communities are included in HIV response decision-making, planning, implementing and monitoring, and are provided with sufficient technical and financial support.
- Ensure that community-generated data is used to tailor HIV responses to protect the rights and meet the needs of people living with, at risk of, and affected by HIV.
- Ensure that community-led organizations deliver 30% of testing and treatment services, with a focus on HIV testing, linkage to treatment, adherence and retention support, and treatment literacy.
- Ensure that community-led organizations deliver 80% of HIV prevention services for populations at high risk of HIV infection, including for women within those populations.
- Ensure that community-led organizations deliver 60% of programmes to support the achievement of societal enablers.

Community-led organizations are playing a critical role during the COVID-19 pandemic, delivering HIV drugs and services directly to the people in greatest need.

The 2021 United Nations Political Declaration on AIDS calls for global, regional, national and subnational community networks to be included in HIV response decision-making, planning, implementing and monitoring, and for these community-led organizations to be provided with sufficient technical and financial support. The Declaration also calls on countries to ensure that by 2025, community-led organizations are delivering 30% of testing and treatment support services, 80% of HIV prevention services for populations at higher risk of HIV infection and 60% of programmes to support the achievement of societal enablers.¹

Much needs to be done to turn those commitments into a reality. For example, the Global HIV Prevention Coalition 2020 Road Map emphasizes social contracting, but in 2020, only 11 of 28 reporting Coalition focus countries had completed the relevant steps required for social contracting to play its role in maximizing the contribution of community-based knowledge, networks and resources in HIV responses (2).

¹ Testing and treatment support services should have a focus on HIV testing, linkage to treatment, adherence and retention support, and treatment literacy.



Members of the Jamaica Network of Seropositives.
Credit: UNAIDS



Civil society activists in Cúcuta, Colombia, light candles during a World AIDS Day commemoration. Credit: UNAIDS

Community-led organizations raise awareness of obstructive laws and practices, pinpoint missed opportunities, reach marginalized communities and lead by example.

Case study

COMMUNITY-LED MONITORING SUPPORTS SERVICE DELIVERY IN NAMIBIA AND NIGERIA

Persistent gaps in HIV programmes have highlighted the need to better understand the experiences of people when they try to use HIV services. Routine monitoring and evaluation can miss issues regarding the availability, accessibility, affordability, quality and reliability of services, as well as their acceptability and suitability for different populations. Community-led monitoring can pinpoint these deficiencies, identify remedies and advocate for improvements.

Community-led monitoring uses a structured platform and rigorously trained peer monitors to systematically and routinely collect and analyse qualitative and quantitative data on HIV service delivery (1). That information is disseminated to partners and decision-makers, specific improvements are advocated for, and implementation of the changes is then monitored (Figure 4.1) (2). As the name suggests, this process is led and implemented by local community-led organizations of people living with HIV, networks of key populations, and other affected groups or community entities.

In Nigeria, the International Treatment Preparedness Coalition (ITPC) West Africa and UNAIDS are supporting an ambitious community-led monitoring process led by the Network of People living with HIV/AIDS in Nigeria (NEPWHAN). The first phase is being implemented in eight states in the South of the country, with a focus on women and girls, key populations (especially female sex workers and gay men and other men who have sex with men) and people living with HIV.

The initiative released its first report in March 2021, based on data collected by NEPWHAN from September to December 2020 in 74 health facility visits, from 100 interviews and/or focus group discussions, and through a review of almost 280 data reports. The National Agency for the Control of AIDS (NACA) supported the process.

The report pinpointed several major barriers to HIV service access in Nigeria. These included long distances to treatment facilities (20% of respondents), high out-of-pocket expenses (11%) and antiretroviral medicine stock-outs at the nearest health facilities (11%) (Figure 4.2) (3). Other impediments included a perceived lack of confidentiality at health facilities, stigma and discrimination,

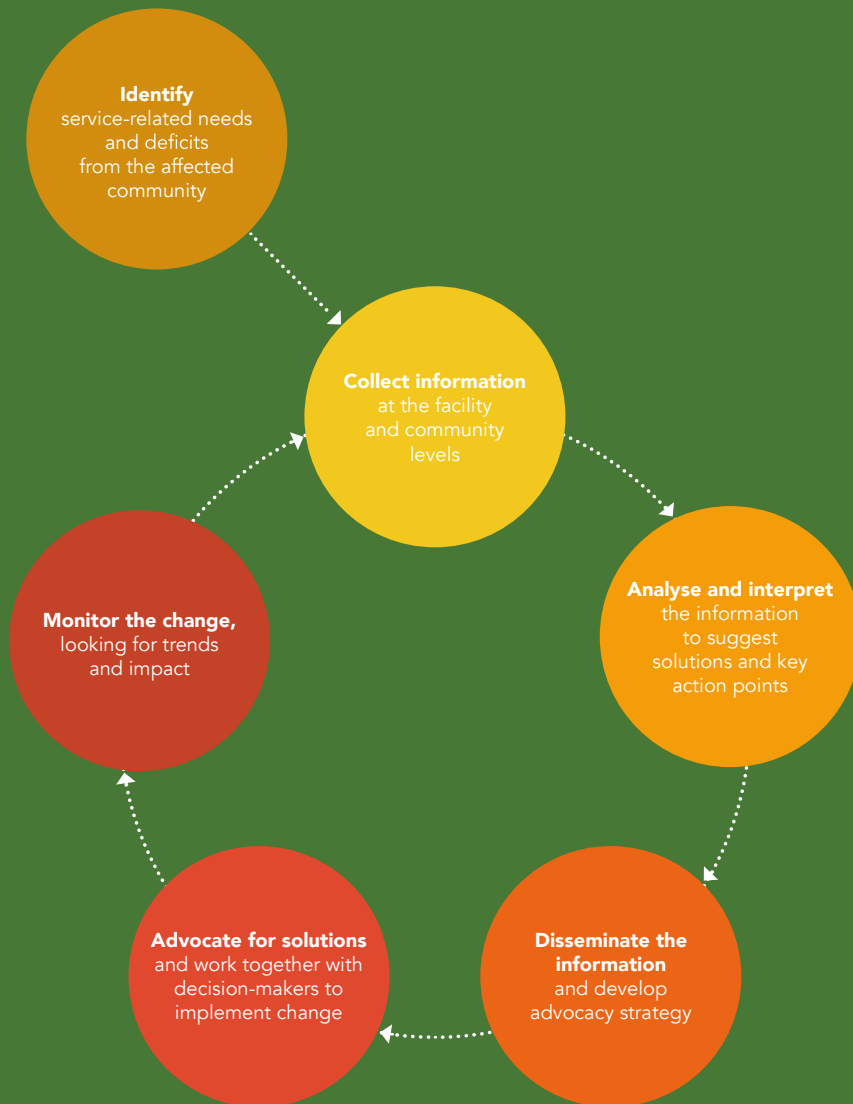


FIGURE 4.1 | INTEGRATION OF COMMUNITY-LED MONITORING INTO SERVICE REVIEW AND IMPROVEMENT

Source: Adapted from: O'Neill Institute, Treatment Action Campaign, Health Gap, ITPC, ICW, Sexual Minorities Uganda (SMUG) et al. Community-led monitoring of health services: building accountability for HIV service quality. 2020 (https://healthgap.org/wp-content/uploads/2020/02/Community-Led-Monitoring-of_Health-Services.pdf).

and treatment side-effects (4). Only one quarter of the surveyed health facilities provided tailored support for key populations, and the COVID-19 pandemic appears to have worsened the situation. Service interruptions due to the pandemic were also cited as hindrances.

Respondents did not sugar-coat their assessments of services. “You need to pay heavily if you need to see the doctor,” noted one respondent. Another said of a health-care worker that “if she can't be friendly, she should be removed from that department.” Other respondents called for “drugs with no side-effects,” and urged that gay men and other men who have sex with men be afforded greater respect and confidentiality.

The monitoring also clarified reasons for poor uptake of HIV testing, with respondents citing a lack of information (22% of respondents), preferring not to know their HIV status (17%), a sense that HIV screening is not a personal priority (15%), and concerns about breaches of confidentiality among health-care providers (10%).

Based on the findings, an advocacy agenda was drawn up, with specific recommendations for each of the main issues that were identified in the monitoring exercise. Follow-up to the recommendations is already taking place. This includes the Ministry of Health’s proposal for procurement of HIV self-test kits for all facilities in Nigeria, and the review by the United States President’s Emergency Plan for AIDS Relief (PEPFAR) and the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) of support to NEPWHAN for expanding community-led monitoring to additional states (5).

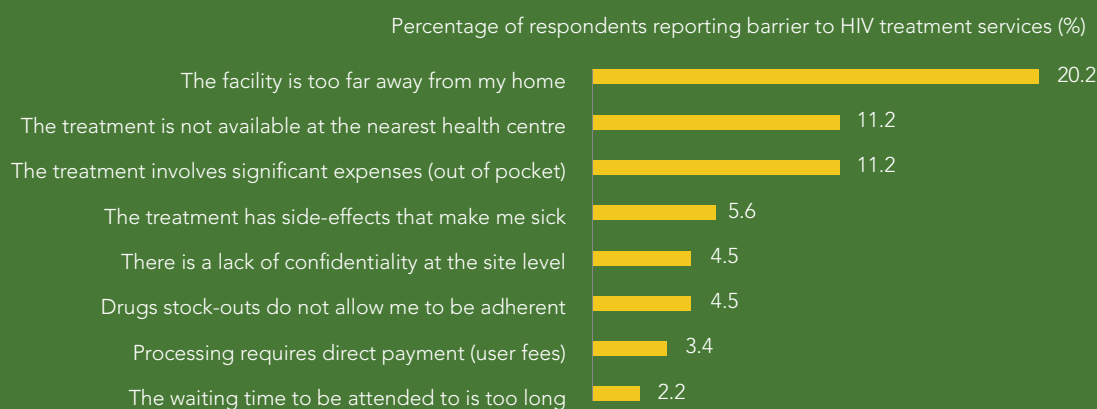
A big lesson from the first phase of Nigeria’s community-led monitoring exercise is the need for continuous capacity-building so that community organizations can fully use this opportunity to improve services and strengthen accountability among policy-makers and duty bearers. The next phase will be implemented in six states in northern Nigeria.

In Namibia, community-led monitoring has progressed rapidly, despite the COVID-19 pandemic. Civil society organizations and the Ministry of Health and Social Services (with technical and other support from UNAIDS, the Global Fund and PEPFAR/the Centers for Disease Control and

Prevention) have developed a community-led monitoring strategy, which the National AIDS Council has approved. Technical support was provided to map and conduct situation analyses of Namibia’s HIV response, run community and stakeholder consultations, and develop a strategy and implementation plan that includes indicators, data management procedures and data collection processes. Monitoring and advocacy trainings were held in December 2020, followed by data collector training in January 2021. The three grassroots organizations leading the programme began collecting data at health facilities in April 2021.

These two community-led monitoring experiences are revealing challenges that similar efforts in other countries can learn from. For example, the indicators required for donor reporting need to be reconciled with those that reflect community priorities. It is also important to select a realistic number of indicators and data sites so that regular data analysis is feasible, and so that enough time and resources are available for subsequent advocacy initiatives. But the biggest lesson thus far is that, when communities are adequately supported, trained and entrusted, they are able to generate information and insights that can help bridge persistent gaps in HIV programmes.

FIGURE 4.2 | BARRIERS TO HIV TREATMENT SERVICES, SELECTED STATES IN NIGERIA, SEPTEMBER–DECEMBER 2020



Source: Community-led monitoring (CLM) initiative on COVID-19 and HIV in Nigeria, first phase report, March 2021. Abuja: Network of People Living with HIV/AIDS in Nigeria (NEPWHAN); 2021.

Note: Number of respondents to survey = 89.

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05

GENDER EQUALITY

Gender inequality and discrimination robs women and girls of their fundamental human rights, including the right to education, health and economic opportunities. The resulting disempowerment also denies women and girls sexual autonomy, decision-making power, dignity and safety.

Gender-based violence is one of the most egregious manifestation of gender inequality. Nearly one in three women worldwide has experienced physical and/or sexual intimate partner violence, nonpartner sexual violence or both in their lifetime (1). Gender-based violence also negatively impacts the health and lives of millions of people within lesbian, gay, bisexual, transgender and intersex (LGBTI) communities around the world (2).

Violence harms the physical and mental health of women and girls; it can also increase their risk of acquiring HIV infection (3). 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 (4). Women and girls are especially affected by the increased violence, loss of income and deepening economic insecurity associated with the COVID-19 pandemic (5, 6). Although some countries are taking additional steps to prevent violence against women and support survivors, 32 countries still lack specific laws against domestic violence (7).

In many countries, girls are less likely to complete secondary education than boys, and the quality of their education suffers due to discrimination in schools. There is evidence that completing secondary education can help protect girls against acquiring HIV infection, in addition to its broader social and economic benefits (8). However, school closures due to the COVID-19 pandemic threaten the education prospects of children, especially those of children in impoverished households (9).

Addressing these issues requires meaningful engagement of women and girls in all their diversity—including women living with HIV and women within key populations—in decision-making, and supporting the leadership roles of women's organizations and feminist movements in the HIV response.



2025 TARGETS AND COMMITMENTS in the 2021 Political Declaration on AIDS

- Eliminate all forms of sexual and gender-based violence, including intimate partner violence, by:
 - Adopting and enforcing laws and strategies.
 - Changing harmful gender stereotypes and negative social norms, perceptions and practices.
 - Providing tailored services that address multiple and intersecting forms of discrimination and violence faced by women living with, at risk of and affected by HIV.
- Reduce to no more than 10% the number of women, girls, people living with, at risk of and affected by HIV who experience gender-based inequalities and sexual and gender-based violence.
- Ensure that 95% of women and girls of reproductive age have their HIV and sexual and reproductive health-care service needs met, including antenatal and maternal care, information and counselling.
- Fulfill the right to education of all girls and young women, and economically empower women.
- Scale up social protection interventions for girls and young women, and engage men and boys in intensified efforts to transform negative social norms and gender stereotypes.

HIV DATA

Gender-based violence remains common

Interventions and services to prevent sexual and gender-based violence—and to support survivors of violence—are urgently needed.

Globally, more than one in 10 (13%) ever-married or partnered women (aged 15 to 49 years) have experienced physical and/or sexual violence by an intimate partner in the previous 12 months (1). Only seven of 43 countries with data available between 2015 and 2020 met the 2025 target of less than 10% (Figure 5.1). Two of those seven countries—the Philippines and Senegal—have conducted multiple surveys over the years that suggest a steady decline in recent intimate partner violence.¹

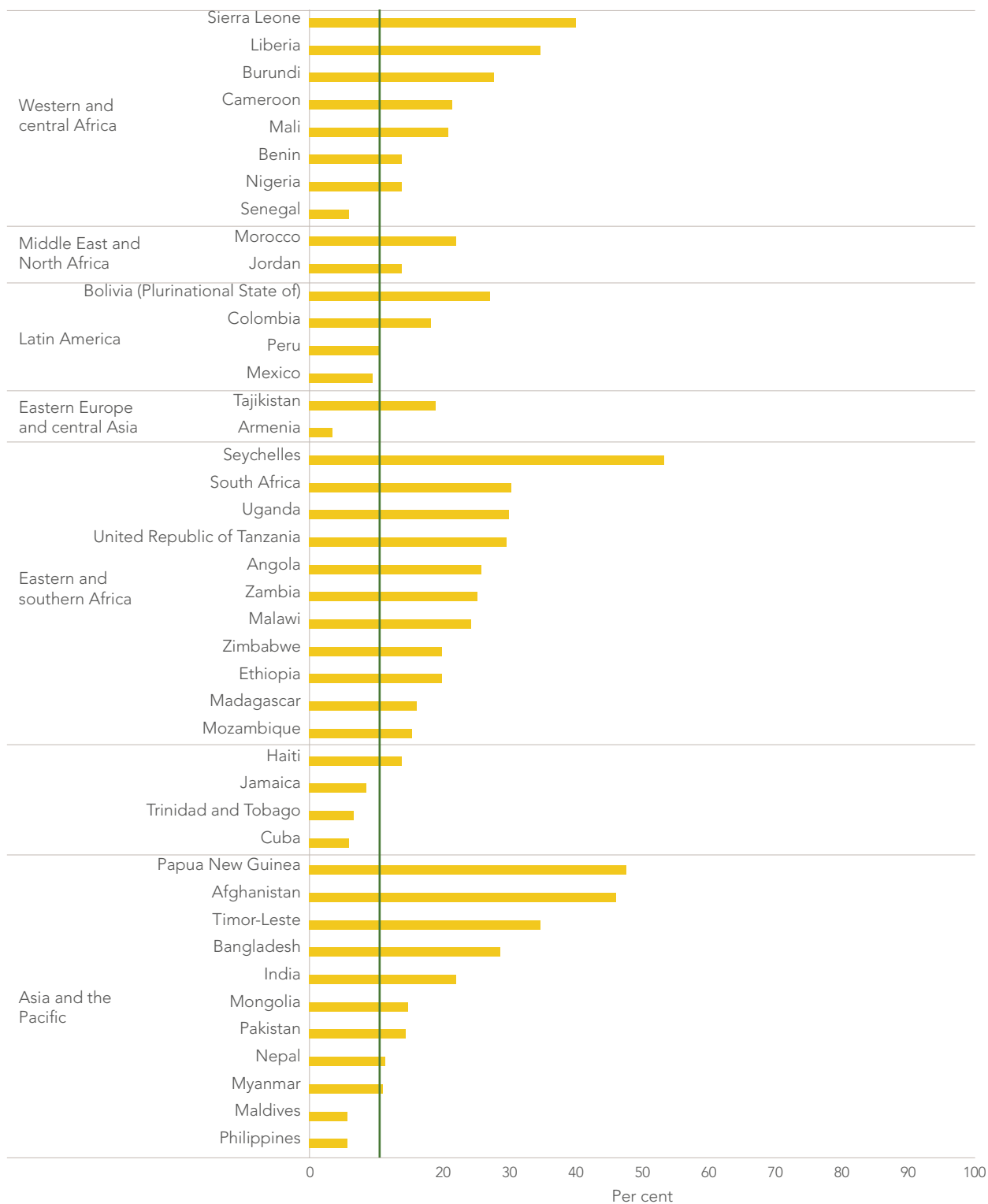
A 2013 World Health Organization (WHO) study on the health burden associated with violence against women found that, in some regions, women who had experienced intimate partner violence were 1.5 times more likely to acquire HIV, compared to women who had not experienced partner violence (10). Similarly, more recent studies from Togo and Uganda—and analysis of population-based survey data in Zambia—have found a higher risk of HIV infection among women reporting various forms of intimate partner violence (11–13). Women who inject drugs face high levels of physical and sexual violence, which contributes to their high risk of HIV, but they are often ignored by harm reduction programmes because the vast majority of people who inject drugs globally are men (14).

Deeply entrenched stigma and prejudice against LGBTI people—and discriminatory laws and regulations that foster a climate where hate speech, violence and discrimination are condoned—perpetuate high levels of violence against LGBTI communities. Acts of violence range from daily exclusion and discrimination to torture and arbitrary killings. There are no comprehensive and systematic data on the number of victims of violence, but a UN-appointed Independent Expert has estimated that there are millions every year (2). In Virginia, in the United States of America, as many as 45% of transgender individuals experience some form of gender-based victimization, including: physical or sexual violence; social, workplace or housing discrimination; or rejection in family, social or media contexts (15–18). These experiences have been associated with depression and anxiety, substance use and suicide risk (19–21).

Intimate partners are an alarmingly common source of violence towards transgender people. A 2020 systematic review of 74 quantitative data sets on intimate partner violence in transgender populations found a median lifetime prevalence of physical intimate partner violence among transgender individuals of 37.5% (22). Lifetime prevalence of sexual intimate partner violence was 25.0%, past-year physical intimate partner violence was 16.7%, and past-year sexual intimate partner violence was 10.8% (22). In Lima, Peru, a cross-sectional study among 576 gay men and other men who have sex with men and transgender women found that 7.9% of gay men and other men who have sex with men and 15.0% of transgender women reported experiences of intimate partner violence with at least one of their last three partners (23).

¹ Data are from population-based surveys: 2008, 2013 and 2017 in the Philippines, and 2017, 2018 and 2019 in Senegal.

| PERCENTAGE OF 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, BY REGION, 2015–2020



— 2025 target

Source: Population-based surveys, 2015–2020.

HIV DATA

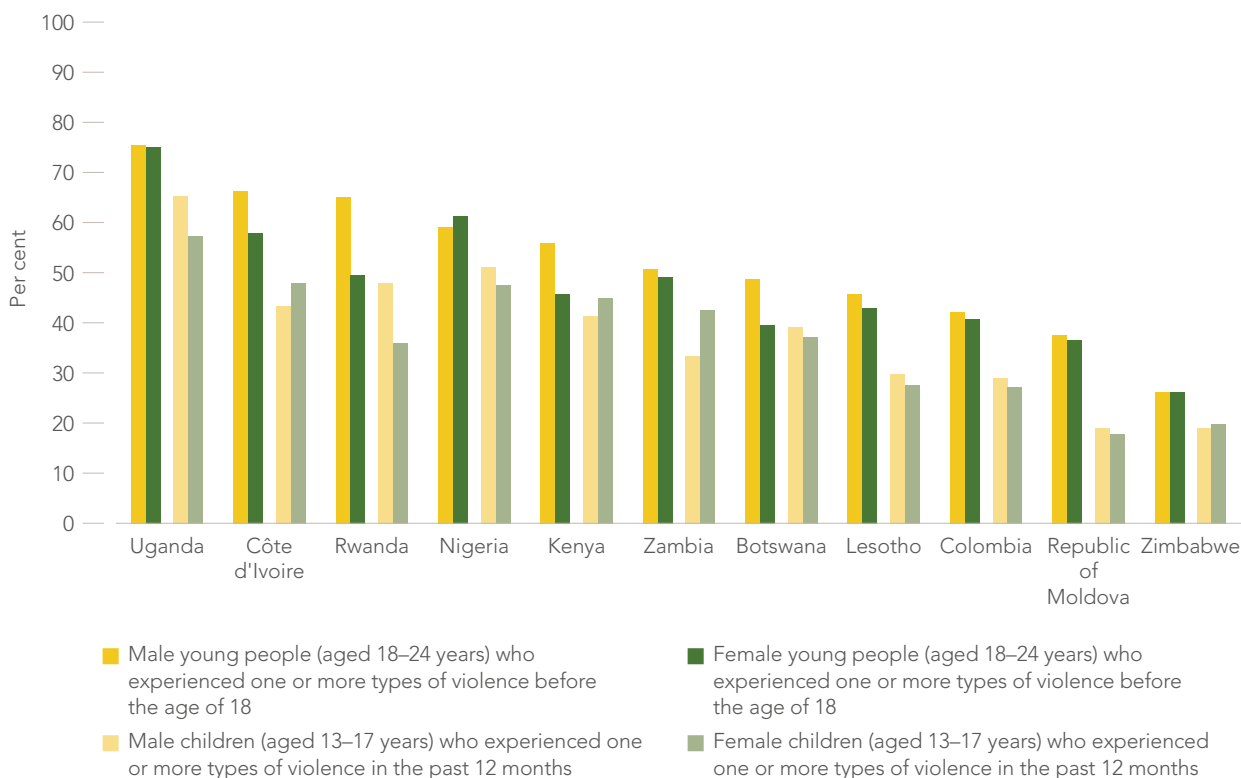
Violence negatively impacts children

Experiences of violence too often occur early in life. Violence in childhood has been linked to increased risks of: HIV and other sexually transmitted infections (STIs); mental health problems; delayed cognitive development; poor school performance and dropout; early pregnancy; reproductive health problems; communicable and noncommunicable diseases; and injury (24).

Among the 11 countries with available data between 2016 and 2020, violence (physical, sexual and/or emotional) experienced within the last 12 months by children (aged 13 to 17 years) ranged from 19.2% in the Republic of Moldova and Zimbabwe to 65.4% in Uganda among males, and from 17.7% in the Republic of Moldova to 57.5% in Uganda among females (Figure 5.2).

The percentage of young people (aged 18 to 24 years) who experienced one or more types of violence during childhood (before the age of 18) is high across all 11 countries with available data between 2016 and 2020, ranging from 26.3% in Zimbabwe to 75.6% in Uganda among males, and from 26.5% in Zimbabwe to 75.3% in Uganda among females.

FIGURE 5.2 | CHILDREN (AGED 13–17 YEARS) AND YOUNG PEOPLE (AGED 18–24 YEARS) WHO EXPERIENCED ONE OR MORE TYPES OF VIOLENCE IN CHILDHOOD, COUNTRIES WITH AVAILABLE DATA, 2016–2020



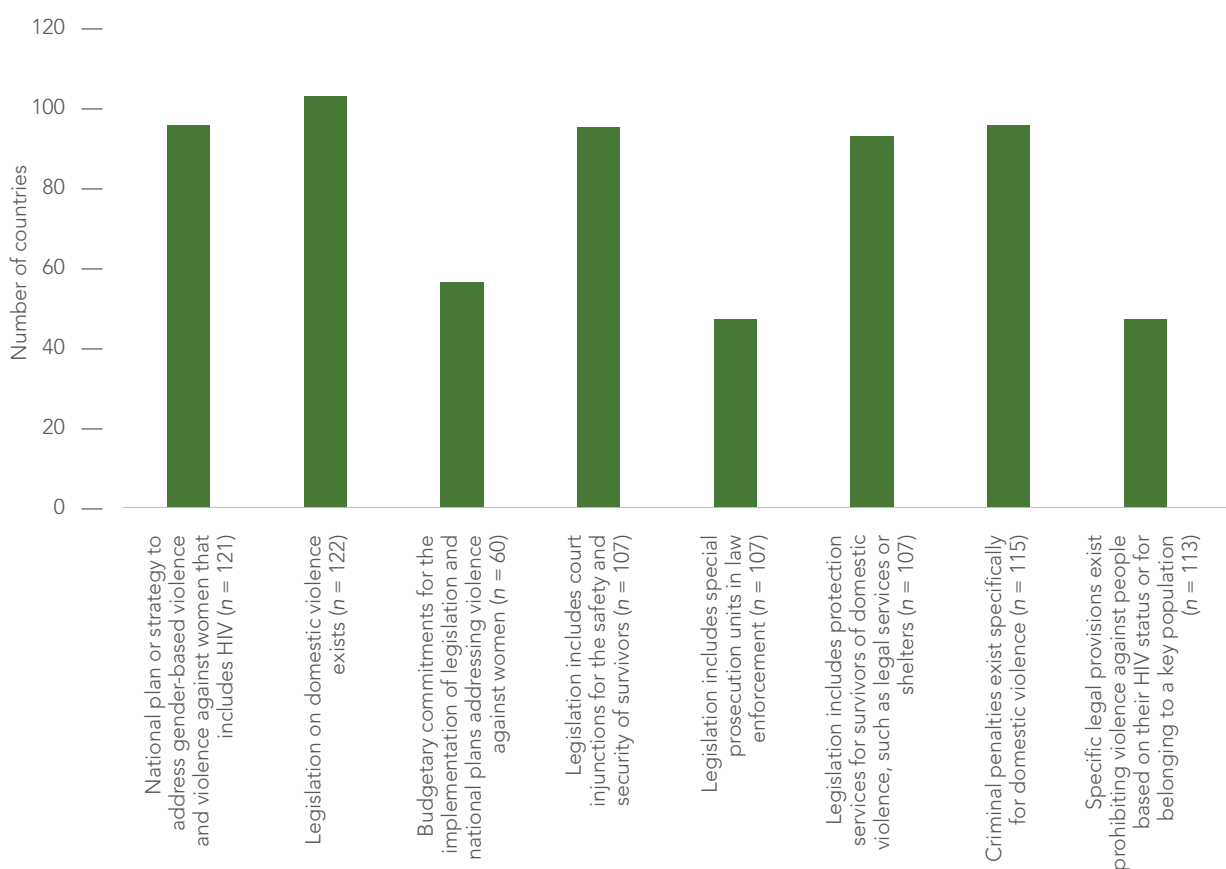
Source: Violence against children surveys, 2015–2020.

Implementation of domestic violence legislation

Laws that sanction violence against women and girls expose them to physical and mental harm, perpetuate gender inequality and undermine HIV responses (25). Laws and policies should protect women and girls against violence. They should also ensure that survivors receive adequate and suitable support, and that they can achieve legal redress against perpetrators of violence.

Among countries that reported information to UNAIDS, 103 said they have domestic violence legislation, with the vast majority also reporting that this legislation includes criminal penalties for perpetrators, and court injunctions and protection services for survivors. Ninety-six countries reported they have a national plan or strategy to address gender-based violence and violence against women that includes HIV, and 47 countries reported having special legal provisions that prohibit violence against people based on their HIV status or their identity as a member of a key population (Figure 5.3). Even where relevant policies and legislation exist, their implementation and quality varies.

FIGURE 5.3 | COUNTRIES WITH PROVISIONS RELATED TO VIOLENCE, COUNTRIES WITH AVAILABLE DATA, 2017–2021



Source: UNAIDS National Commitments and Policy Instrument, 2017–2021.

HIV DATA

Harmful gender norms persist among young people

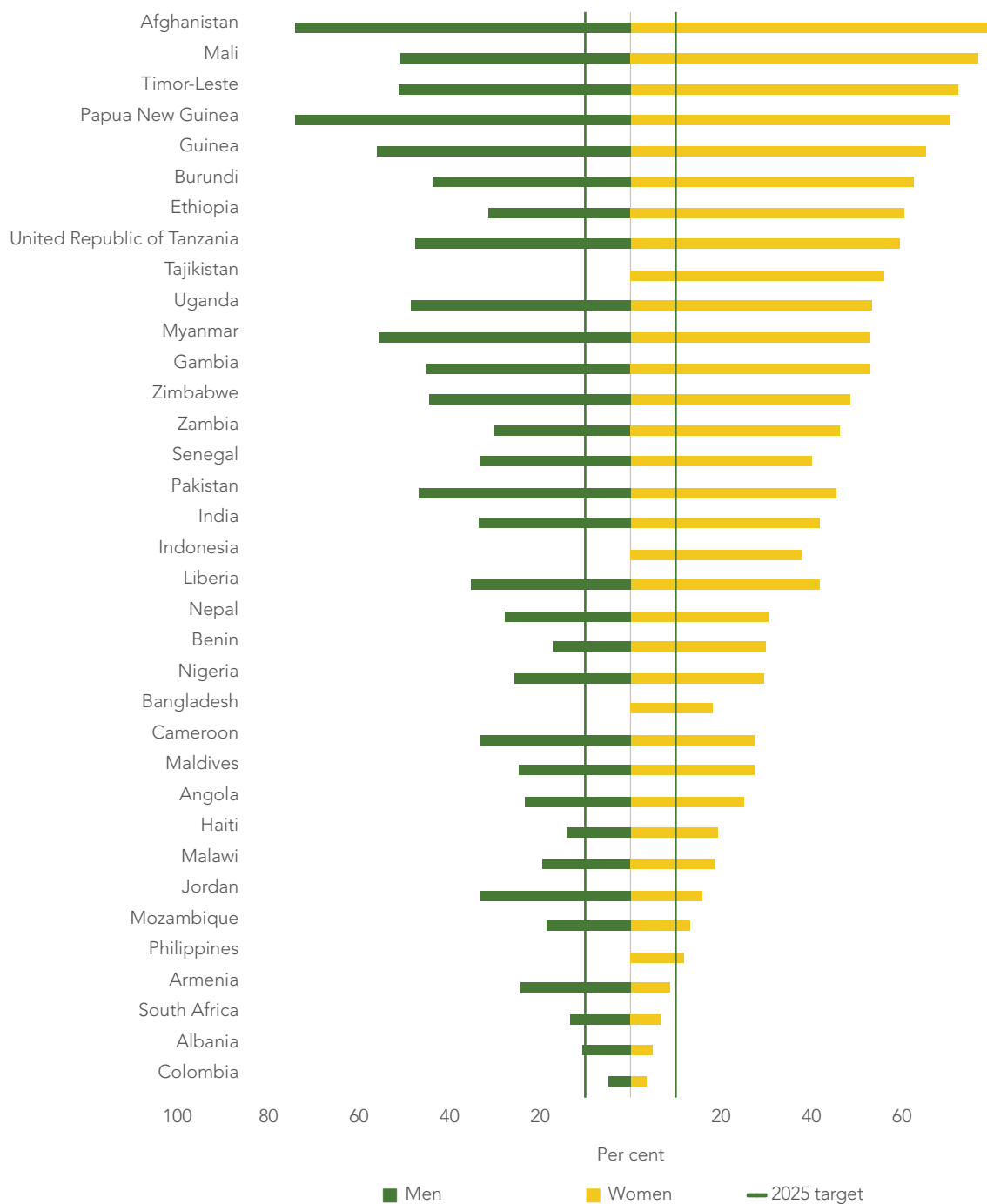
Achieving gender equality requires transforming unequal gender norms, and the Global AIDS Strategy 2021–2026 includes a target of less than 10% of people supporting inequitable gender norms by 2025. Available data, however, indicate that many young women and men continue to justify these norms, such as violence against women by intimate partners. Across 36 countries with available data, the percentage of young women (aged 15 to 24 years) who agreed that a husband is justified to strike or beat his wife for at least one specific reason ranged from 3% in Colombia to 80% in Afghanistan (Figure 5.4). Similar attitudes were held by young men of the same age. This proxy indicator suggests that intensive work will be required in most countries to ensure equitable norms are promoted, to end violence against women, and to prevent and mitigate the impact of HIV.



Many young women and men continue to justify inequitable gender norms, such as violence against women by intimate partners.

Credit: UNAIDS

FIGURE 5.4 | PERCENTAGE OF YOUNG WOMEN AND MEN (AGED 15–24 YEARS) WHO AGREE THAT A HUSBAND IS JUSTIFIED IN HITTING OR BEATING HIS WIFE, COUNTRIES WITH AVAILABLE DATA, 2015–2020



Source: Demographic and Health Surveys, 2015–2020.

HIV DATA

Three dimensions of autonomy

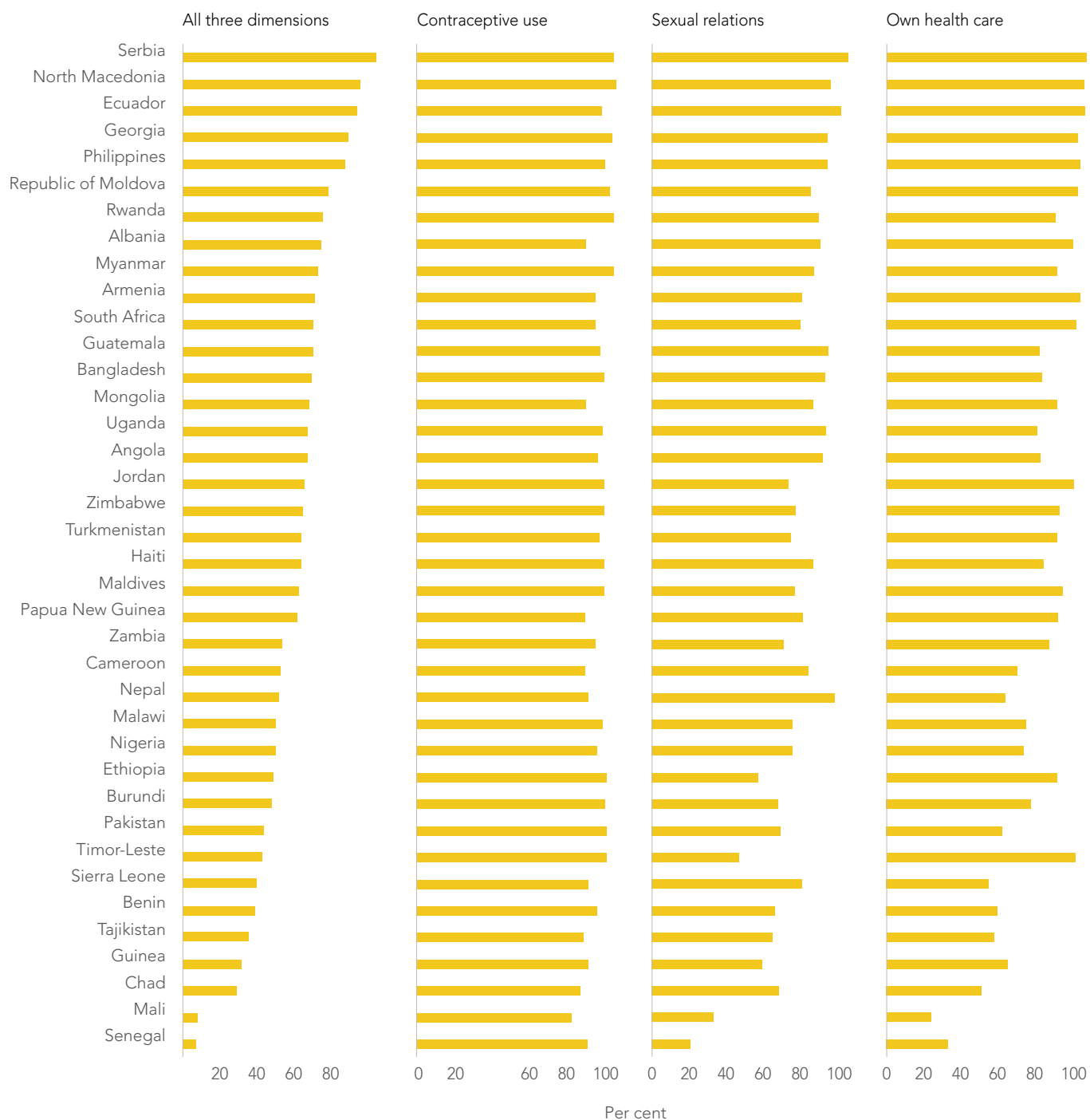
The UN General Assembly has committed to ensuring that 95% of women and girls of reproductive age have their HIV and sexual and reproductive health-care service needs met by 2025, including antenatal and maternal care, information and counselling.

Societal pressures and controlling and coercive behaviours of men still prevent many women from using contraception, refusing unwanted sex and making their own decisions about their health care. In most countries, relatively large proportions of women make their own decisions in one or two of these dimensions of bodily autonomy, but women are much less likely to be able to make independent decisions on all three dimensions (Figure 5.5). In Senegal, for example, 85% of women (married or in union and currently using contraceptives) reported that they were able to make their own decisions about contraceptive use. Only 31% could make their own decision about their health care, and 19% could do so about their sexual relationships. Generally, decision-making power is stronger among older women and women with higher education levels, those who live in urban areas and those whose households are in higher wealth quintiles (26).

A woman receives birth control pills from a mobile clinic set in Nzvimbo, Zimbabwe.
Credit: UNAIDS



FIGURE 5.5 | PERCENTAGE OF WOMEN (AGED 15–49 YEARS) WHO ARE CURRENTLY MARRIED OR IN UNION AND USING CONTRACEPTIVES WHO MAKE THEIR OWN INFORMED DECISIONS REGARDING SEXUAL RELATIONS, CONTRACEPTIVE USE AND OWN HEALTH CARE, COUNTRIES WITH AVAILABLE DATA, 2015–2020



Source: Population-based surveys, 2015–2020.

Case study

WOMEN LIVING WITH HIV IN THE REPUBLIC OF MOLDOVA TAKE BACK THEIR LIVES

Violence against women and girls remains common in eastern Europe, and the COVID-19 pandemic may be placing women, including those living with HIV, in even greater peril.

In a 2019 survey conducted in seven central and eastern European countries, 31% of the 15 000 female respondents said they had experienced some form of physical and/or sexual violence as adults, and 10% said the incidents had occurred in the previous year.² Sixty per cent of women said they had been subjected to psychological violence. Many, though, did not report their ordeals, either because they did not know how to do so or because they distrusted the authorities (27).

Such violence is also common among women living with HIV. In a study done by the Eurasian Women's Network on AIDS, more than half (52%) of women living with HIV in eastern Europe and central Asia said they had suffered physical violence after being diagnosed with HIV (28). Psychological violence was even more common.

A women's mentoring programme in the Republic of Moldova is addressing these issues by helping women living with HIV bring about tangible, positive change in their lives. Launched in 2020 as a joint initiative between the United Nations Entity for Gender Equality and the Empowerment of Women (UN Women) and UNAIDS, the programme links women with peer consultants and mentors who help them understand and safeguard their rights. It also helps them access social and economic services that can improve their lives and protect them against gender-based violence. Fifty women living with or affected by HIV participated in the first year of the programme, which includes online training, life-coaching sessions, round-table discussions and information workshops.

² The surveyed countries were: Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, Republic of Moldova, Serbia and Ukraine.

The initiative adopts a personalized approach, explains Iren Goryachaya, the programme's coordinator. "We do not only deal with the issues of discrimination in a health-care institution or the fight against violence—we see a woman as a person from different perspectives."

"Participants of the first-year mentoring programme are able to recognize unhealthy relationships and abusive behaviours, are more alert to discrimination and potential violence, and are better equipped to access essential services and take precautionary steps to protect their health during the COVID-19 pandemic," emphasizes Nigina Azizov, a programme analyst with UN Women.

"I see myself as a free woman—I do what I want," says Nadejda Kilar, one of the participants. "My children are growing up in a safe environment. I don't worry about my HIV diagnosis. If I decide to have another child, I will give birth in a normal hospital."

COVID-19 CREATES ADDITIONAL CHALLENGES FOR WOMEN LIVING WITH HIV

The COVID-19 pandemic has put women and girls at even greater risk, depriving them of income, aggravating their insecurity and stress, and further exposing them to abuse and violence (29, 30). As a recent study from the Eurasian Women's Network on AIDS has documented, women living with HIV, women belonging to key populations and women in rural areas are especially affected (31).³

The study found that many women from key populations were left without means of subsistence when the lockdown measures were introduced. "People realized once again that they are not protected at all, that when they find themselves in such a situation, they cannot count on the government," explains a respondent from the Republic of Moldova.

As part of the Moldovan mentoring programme, a partnership was formed with "Mamele Pentru Viata" (Mothers for Life), a local nongovernmental organization, and other charity organizations to provide women living with HIV and their families with food packages, disinfectants and other basic household commodities during the COVID lockdown. Women were also offered individual psychological consultations to help relieve stress and rebuild their confidence and motivation.

The mentoring programme continues to operate, and another 50 women have been enrolled for 2021. Participants from the first year of mentoring have stayed in touch with each other and are providing support to this year's group.

³ The survey was conducted in 10 countries: Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, the Republic of Moldova, the Russian Federation, Tajikistan, Ukraine and Uzbekistan.

Case study

SHINING A LIGHT ON VIOLENCE AGAINST WOMEN IN MOZAMBIQUE

The Spotlight Initiative is intensifying efforts to address violence against women in Mozambique.

“The biggest challenge is countering misinformation, cultural myths and rumours,” says Dalva Costa, a counsellor with Coalizão, a civil society partner of the Spotlight Initiative, which promotes sexual and reproductive rights among youth in Mozambique (32).

Mozambique's most recent Demographic and Health Survey found that more than one third (37%) of women had experienced sexual or physical violence at some point in their lives. Only four in 10 survivors of sexual violence have confided in anyone else or asked for help (33).

The Spotlight Initiative's priorities are to strengthen laws and policies, support institutions, mobilize public awareness and action, improve services and data, and strengthen women's organizations. Half of its programme funds globally are allocated to local organizations that work in and with affected communities.

In Mozambique, the Initiative is targeting three provinces: Gaza, Manica and Nampula. It is being implemented jointly by the United Nations Children's Fund (UNICEF), United Nations Population Fund (UNFPA), the United Nations Development Programme (UNDP) and UN Women, under the leadership of Mozambique's Ministry of Gender, Children and Social Action, and in close collaboration with civil society organizations.



*During the COVID-19 pandemic, a service provider collects patient data at a mobile clinic in the district of Chongoene, Gaza Province, in Mozambique.
Credit: UNFPA Mozambique*

In the past two years, the Initiative has supported more than 40 women's organizations in Mozambique to advocate for women's rights and to work towards greater gender equality. Fourteen platforms have been set up at the district and provincial levels, allowing 57 community-based organizations to share information and refer cases of gender-based violence to local authorities (34). Economic empowerment training has enabled more than 1800 women to establish and run their own small businesses (34).

In a country where an estimated 46% of girls (aged 15–19 years) are either pregnant or already raising a child—and where so many women are survivors of violence—women and girls can struggle to obtain accurate information about sexual and reproductive health and rights (32).

Coalizão communicates with women and girls using SMS Biz, a free platform that almost 300 000 adolescents across Mozambique use for information on topics such as teenage pregnancies, sexual and reproductive health, violence, child marriage, HIV, COVID-19 and more (32). The counsellors trained by Coalizão have answered almost 2 million questions from adolescents. Spotlight is supporting the expansion of SMS Biz to increase Coalizão's response capacity (32).

Other Spotlight partners have set up social media groups to help keep students connected and remain watchful for girls and young women who are at risk of violence. Student focal points refer cases to civil society organizations and response services (32).



*Maria Bragança, Denardina Mussa and Shamita Martins are activists from Ophenta, a grass-roots women's organization, who work in neighbourhoods around Nampula City, in the North of Mozambique.
Credit: UNICEF/Ricardo Franco*

Despite constraints related to COVID-19 in 2020, 1 million young people joined in and out-of-school programmes, more than 650 000 women and girls were provided with gender-based violence services, 65 million people were reached through 80 locally tailored behaviour change multimedia campaigns, and US\$ 146 million was allocated to civil society organizations (35).

STRENGTHENING THE LEGAL FRAMEWORK AGAINST VIOLENCE

The Spotlight Initiative has also supported the development or strengthening of 84 laws and policies, and there has been a 32% increase in the national budget to prevent violence against women and girls.

In late 2019, for example, the Mozambican Parliament approved a new law criminalizing marriage with minors (under 18 years of age) after years of campaigning (34). Parliament has also approved a set of laws to protect women and girls from violence. Spotlight partners are publicizing the laws through community outreach and radio programmes.

Reliable data are vital to inform the development of protective laws and policies, and for ensuring that survivors can receive integrated services, care and access to justice (33). As part of the Spotlight Initiative, Mozambique's Ministry of the Interior is scaling-up a digital platform, InfoViolencia, that registers and tracks the management of gender-based violence cases. With support from the Spotlight Initiative, the Government is also training service providers and strengthening systems to ensure that reported cases of gender-based violence are followed up, survivors are protected and perpetrators are brought to justice.

More than 1000 public officials have been trained to help ensure the law is understood and enforced (34). In 2020, police school curricula were improved to include gender-based violence prevention, HIV and human rights as part of cadet training. Gender-based violence service points for survivors have been set up and equipped, mobile clinics are being deployed, and improvements are being made to the legal and forensic medicine sector. The Supreme Court, the Attorney General's Office and the Criminal Investigation Service have also established specific gender units (34).

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06

REMOVING PUNITIVE LAWS AND POLICIES

Key populations continue to be marginalized and criminalized for their gender identities and expression, sexual orientation, lifestyles and livelihoods—or for simply living with HIV.¹ But there are encouraging changes underway, as lawmakers in some countries heed evidence showing that laws that criminalize gender diversity, same-sex sexual relations, drug use, sex work and HIV transmission are counterproductive, discriminatory and ultimately harmful (1–6).

An ecological analysis led by Georgetown University's O'Neill Institute for National and Global Health has reinforced smaller-scale studies showing that the criminalization of key populations has a negative effect on HIV outcomes. Where same-sex sexual relationships, sex work and drug use were criminalized, levels of HIV status knowledge and viral suppression among people living with HIV were significantly lower than in countries that opted not to criminalize them. Conversely, there was a positive correlation between the adoption of laws that advance nondiscrimination, the existence of human rights institutions and responses to gender-based violence and those same HIV outcomes (7). That lends further support to the Global Commission on HIV and the Law's recommendation for countries to apply public health principles and remove or reform laws and policies that stop people from accessing and using the health services they need (8). Twelve United Nations (UN) entities have formally called upon countries and all stakeholders to end discrimination in health-care settings (9).

¹ Key populations are groups of people who are more likely to be exposed to HIV or are living with HIV. Their engagement is critical to a successful HIV response. In all epidemic settings, key populations at higher risk of HIV infection include gay men and other men who have sex with men, transgender people, people who inject drugs, sex workers and their clients, and people in prisons and other closed settings.

The 2021 UN Political Declaration on AIDS commits countries to undertake law reform such that by 2025, less than 10% of countries will have restrictive legal and policy frameworks that lead to the denial or limitation of access to services. The Global AIDS Strategy 2021–2026 elaborates on this commitment with the following 2025 targets:

- Less than 10% of countries criminalize sex work, possession of small amounts of drugs, same-sex sexual behaviour, and HIV transmission, exposure or non-disclosure.
- Less than 10% of countries lack mechanisms for people living with HIV and key populations to report abuse and discrimination and seek redress.
- Less than 10% of people living with HIV and key populations lack access to legal services.



2025 TARGETS AND COMMITMENTS in the 2021 Political Declaration on AIDS

- Create an enabling legal environment by reviewing and reforming, as needed, restrictive legal and policy frameworks, including discriminatory laws and practices that create barriers or reinforce stigma and discrimination such as age of consent laws and laws related to HIV non-disclosure, exposure and transmission, those that impose HIV-related travel restrictions and mandatory testing and laws.
- Ensure that less than 10% of countries have restrictive legal and policy frameworks that unfairly target people living with, at risk of and affected by HIV and lead to the denial or limitation of access to services by 2025.
- Adopt and enforce legislation, policies and practices that prevent violence and other rights violations against people living with, at risk of, and affected by HIV and protect their right to the highest attainable standard of physical and mental health, right to education and right to adequate standard of living, including adequate food, housing, employment, and social protection, and that prevent the use of laws that discriminate against them.
- End impunity for human rights violations against people living with, at risk of and affected by HIV by meaningfully engaging and securing access to justice for them through the establishment of legal literacy programmes, increasing their access to legal support and representation and expanding sensitization training for judges, law enforcement, health-care workers, social workers and other duty bearers.

HIV DATA

Criminalization of key populations remains common despite recent gains

The 2025 target of less than 10% of countries with restrictive legal and policy frameworks that lead to the denial or limitation of access to services equates to 20 or less of the 193 countries that are UN Member States. Far more countries currently criminalize same-sex sexual relations, sex work, drug possession and use, and HIV-exposure, non-disclosure and transmission (Figure 6.1). Every country that reported data to UNAIDS criminalized one or more of those behaviours.

More positively, about 23% of all countries had nondiscrimination protections for sexual orientation, gender identity and/or HIV status (7). Fewer countries now criminalize consensual same-sex relations than a decade ago, although some countries have introduced or reinforced homophobic laws (10). Among the countries that have recently ended criminalization of same-sex sexual relations are Angola, Bhutan, Botswana, Gabon and India (10).



Credit: UNAIDS

We would not put a law on the books today that will criminalize . . . people who know they're spreading COVID but refused to test and refuse to wear a mask.

— Illinois State Representative Carol Ammons, speaking before the state legislature decriminalized HIV transmission (16).

Legal and other protections for transgender people are also becoming more common. Pakistan’s 2018 Transgender Persons Act enabled transgender people to have their records changed to reflect their gender, and to apply for a driver’s license and passport. Pakistan’s Ministry of Human Rights is providing training for health-care workers to reduce stigma and discrimination against transgender persons, and a transgender protection centre in Islamabad is running sensitization sessions with the Islamabad and Rawalpindi Police (11). Belgium, Chile, France, Greece, Iceland, Luxembourg, Portugal and Uruguay are among the countries that have opened legal avenues for changing gender markers and names without the requirement of undergoing gender-reassignment surgery (12).

There is also a move away from criminalizing HIV transmission or non-disclosure of HIV-positive status in some countries. In the Philippines, a decade-long campaign led to the adoption of a new HIV law in late 2018 that does away with the specific criminalization of HIV transmission and ensures protection of the basic human rights of people living with HIV, including affordable access to health services without fear of discrimination (13). Colombia and Mexico have repealed HIV criminalization laws, and Malawi opted not to include criminal provisions in its new HIV law. In April 2021, the legislature of the state of Illinois in the United States of America voted to decriminalize HIV transmission (14). Poland, however, has moved in the opposite direction, amending its Criminal Code in ways that allow for harsher sentences in cases of HIV exposure (15).

FIGURE 6.1 | COUNTRIES WITH DISCRIMINATORY AND PUNITIVE LAWS, GLOBAL, 2021



Sources: UNAIDS National Commitments and Policy Instrument, 2017–2021 (<http://lawsandpolicies.unaids.org/>); supplemented by additional sources (see references in Annex).

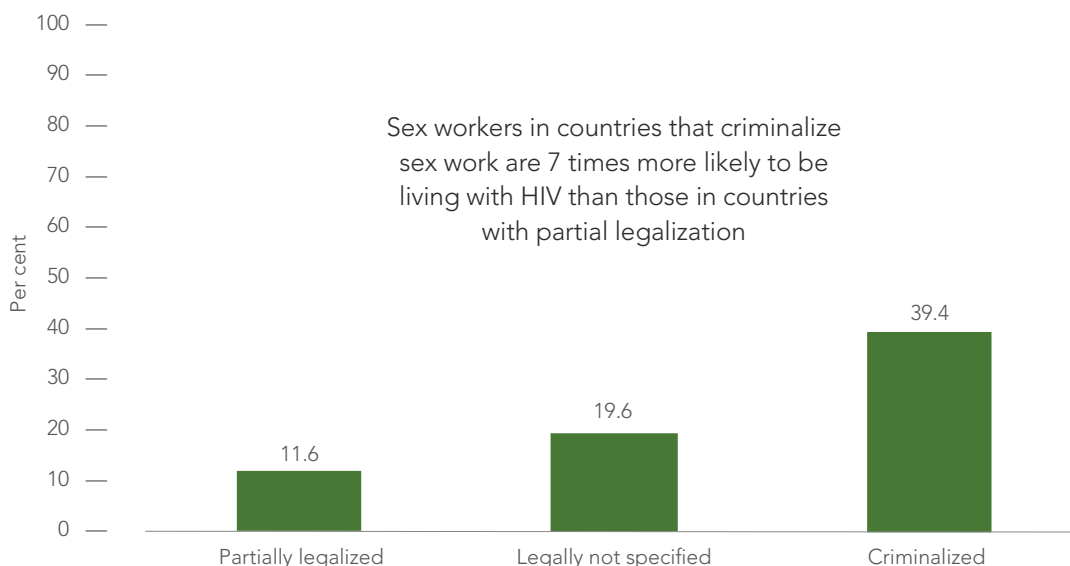
HIV DATA

Criminalization of sex work increases HIV risk

Researchers, including those from sex worker-led organizations, have built up a strong body of evidence that demonstrates how criminal laws relating to sex work, including laws forbidding the purchase of sex, increase the risk of violence and HIV acquisition and decrease access to prevention, testing and treatment services (17). This body of evidence continues to grow. A recent study from sub-Saharan Africa found that HIV prevalence among sex workers was 39% in countries that criminalized sex work compared with 12% in countries where sex work was partially legalized ((i.e., where at least one aspect was not criminalized) (Figure 6.2) (4).

Harsh enforcement of punitive laws aggravates the situation: according to a meta-analysis of studies, sex workers who had been exposed to any type of repressive policing were considerably more likely to engage in condomless sex and to acquire HIV or other sexually transmitted infections (STIs)—and three times more likely to be physically or sexually assaulted—than sex workers who were not exposed to such practices (18). These findings are in line with a 2014 review that estimated that decriminalization of sex work would avert 33–46% of HIV infections among sex workers and their clients over a decade (3).

FIGURE 6.2 | HIV PREVALENCE AMONG FEMALE SEX WORKERS, BY COUNTRY-LEVEL LEGAL STATUS OF SEX WORK, 10 SUB-SAHARAN AFRICAN COUNTRIES, 2011–2018



Source: Lyons CE, Schwartz SR, Murray SM, Shannon K, Diouf D, Mothopeng T et al. The role of sex work laws and stigmas in increasing HIV risks among female sex workers, 2020. *Nat Commun.* 2020;11:773.

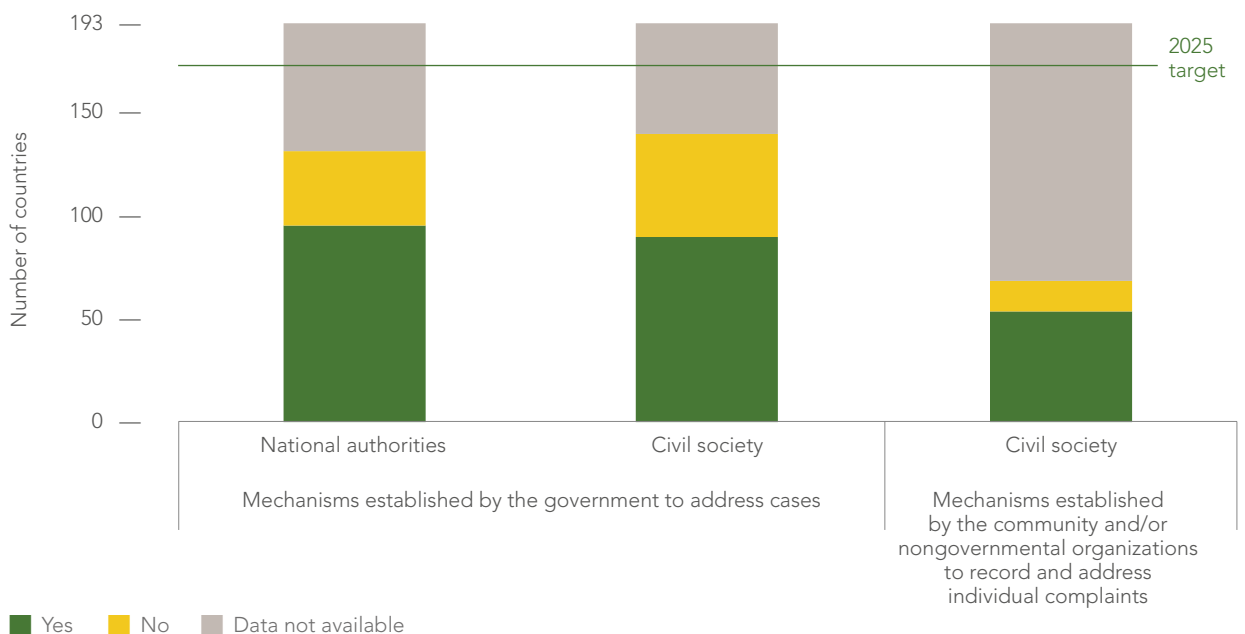
Note: Legal status of sex work for countries in this study is defined and categorized based on the legal approach. "Legally not specified" includes countries where there is not an explicit law legalizing or criminalizing the selling of sex. "Partially legalized" includes countries that have legalized an aspect or a mechanism of sex work under specific circumstances—including making it legal to sell or legal to solicit—while leaving other aspects criminalized. "Criminalized" includes countries where it is illegal to sell sex, solicit sex and organize commercial sex under any circumstance, and which have stipulated punishment under the law.

A commitment to protect rights and prevent violence

In addition to removing or deprioritizing the enforcement of laws that punish people living with HIV and key populations, it is vital to increase meaningful access to justice and accountability when they experience discrimination and other rights violations. In countries with independent human rights institutions, for example, people living with HIV are more likely to know their HIV status and to be virally suppressed (7).

The 2021 Political Declaration on AIDS includes a commitment by UN Member States to adopt and enforce legislation, policies and practices that prevent violence and other rights violations against people living with, at risk of and affected by HIV, and to protect their rights to health, education and an adequate standard of living. The new Global AIDS Strategy 2021–2026 calls for at least 90% of countries to have mechanisms through which people living with HIV and key populations can report abuse and discrimination and seek redress. In 2021, 95 of 131 reporting countries stated that such government-established formal mechanisms were in place (Figure 6.3). Civil society monitoring plays a critical role in ensuring accountability and redress. In 53 countries, civil society reported that communities and/or nongovernmental organizations had established mechanisms to record and address individual complaints. Overall, 116 (60%) countries reported that a formal and/or informal mechanism existed to address cases or individual complaints of HIV-related discrimination.

FIGURE 6.3 | COUNTRIES REPORTING HAVING MECHANISMS IN PLACE TO ADDRESS CASES OR INDIVIDUAL COMPLAINTS OF HIV-RELATED DISCRIMINATION (BASED ON PERCEIVED HIV STATUS AND/OR BELONGING TO A KEY POPULATION), COUNTRIES WITH AVAILABLE DATA, 2021



Source: National Commitments and Policy Instrument, 2017–2021.

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 nongovernmental partners engaged in the national response.

HIV DATA

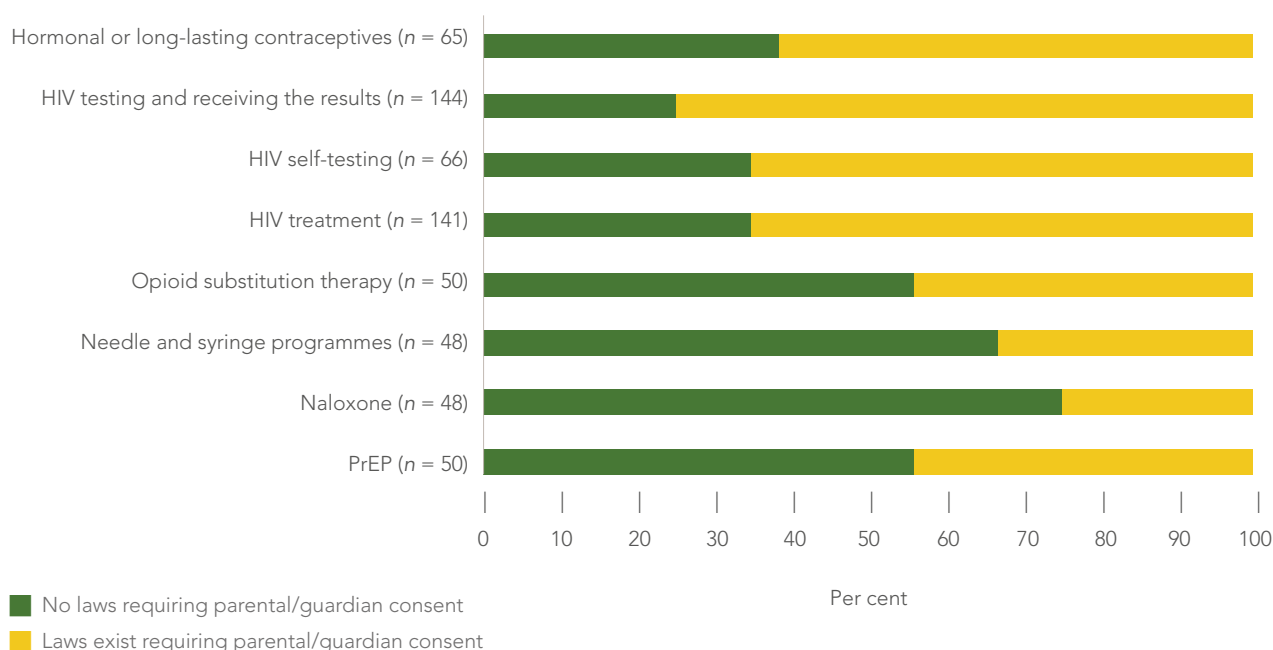
Parental consent laws leave adolescents vulnerable to HIV

Sexual activity often starts during adolescence. Many countries have age of consent laws in relation to sexual activity that are inconsistent with minimum age laws for accessing sexual and reproductive health information and services without parental permission. This means that adolescents may legally have sex before they can legally access any information or services relating to safer sex practices or contraception, leaving them at greater risk of HIV, other STIs and unwanted pregnancy (19).

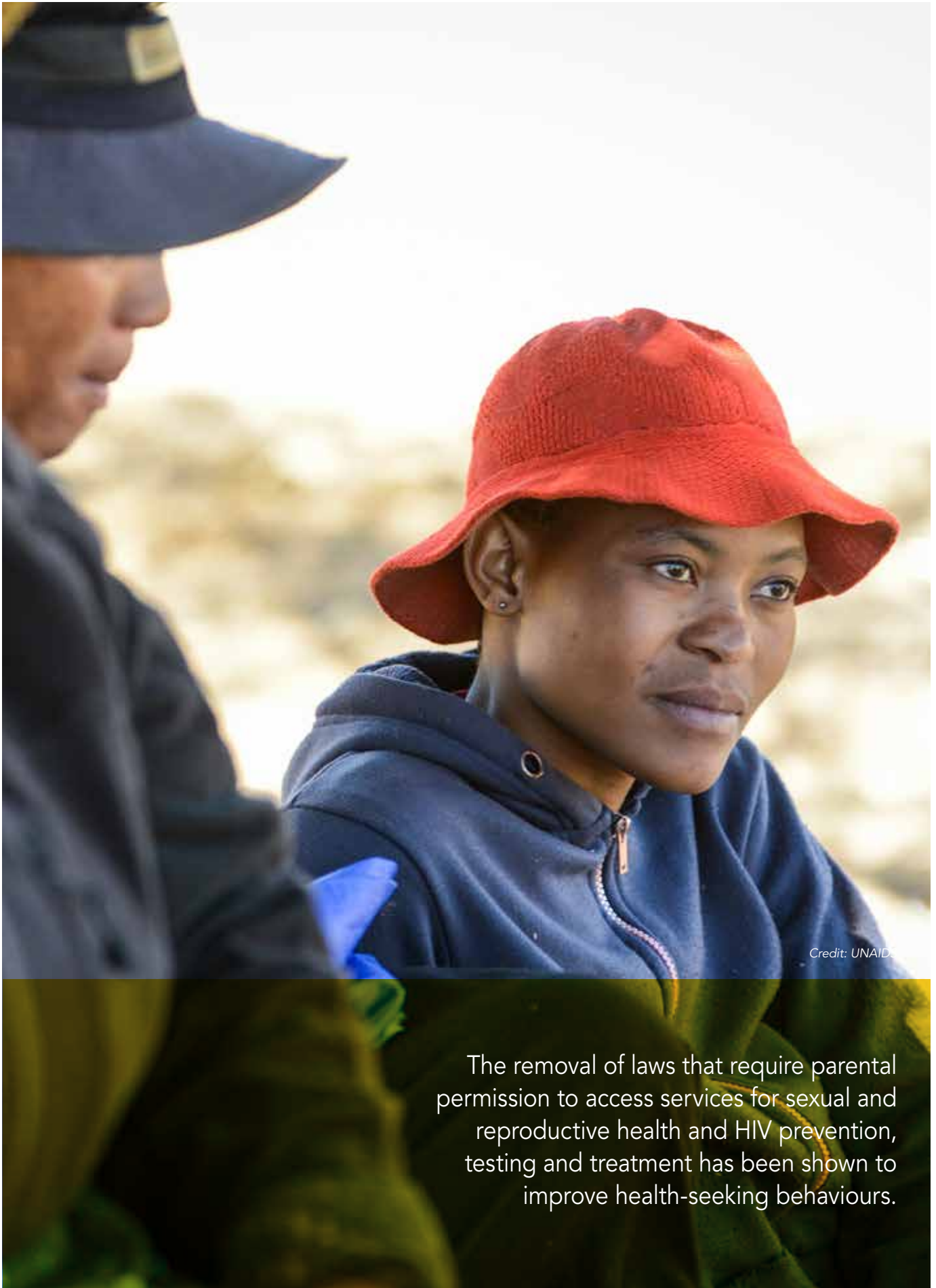
The removal of laws that require parental permission to access services for sexual and reproductive health and HIV prevention, testing and treatment has been shown to improve health-seeking behaviours (20). That effect is even stronger when schools can provide age-appropriate comprehensive sexuality education to young people so they can protect themselves from HIV, STIs, unwanted pregnancy, and gender-based and sexual violence.

Forty countries reported to UNAIDS in 2021 that they have laws requiring parental/guardian consent for adolescents to access hormonal or long-lasting contraceptives, 108 reported that this consent is required for an HIV test, 43 for HIV self-testing, 92 for HIV treatment and 22 for PrEP (Figure 6.4). Among these countries, some provide exceptions based on demonstrated maturity: 10 for hormonal or long-lasting contraceptives, 15 for HIV testing, eight for self-testing and nine for HIV treatment. The age cut-off of parental consent laws varied by service. The majority of countries that reported having requirements for parental/guardian consent had an age cut-off of 18 years, with exceptions in a few countries where adolescents as young as 14 years could access a service without parental/guardian consent, which varied by service.

FIGURE 6.4 | COUNTRIES WITH REQUIREMENTS FOR PARENTAL/GUARDIAN CONSENT FOR ADOLESCENTS (UNDER AGE 18) TO ACCESS SERVICES, GLOBAL, 2021



Source: UNAIDS National Commitments and Policy Instrument, 2017–2021.



Credit: UNAIDS

The removal of laws that require parental permission to access services for sexual and reproductive health and HIV prevention, testing and treatment has been shown to improve health-seeking behaviours.

Case study

SEX WORKERS IN EUROPE FACE FURTHER HARDSHIP DURING THE COVID-19 PANDEMIC

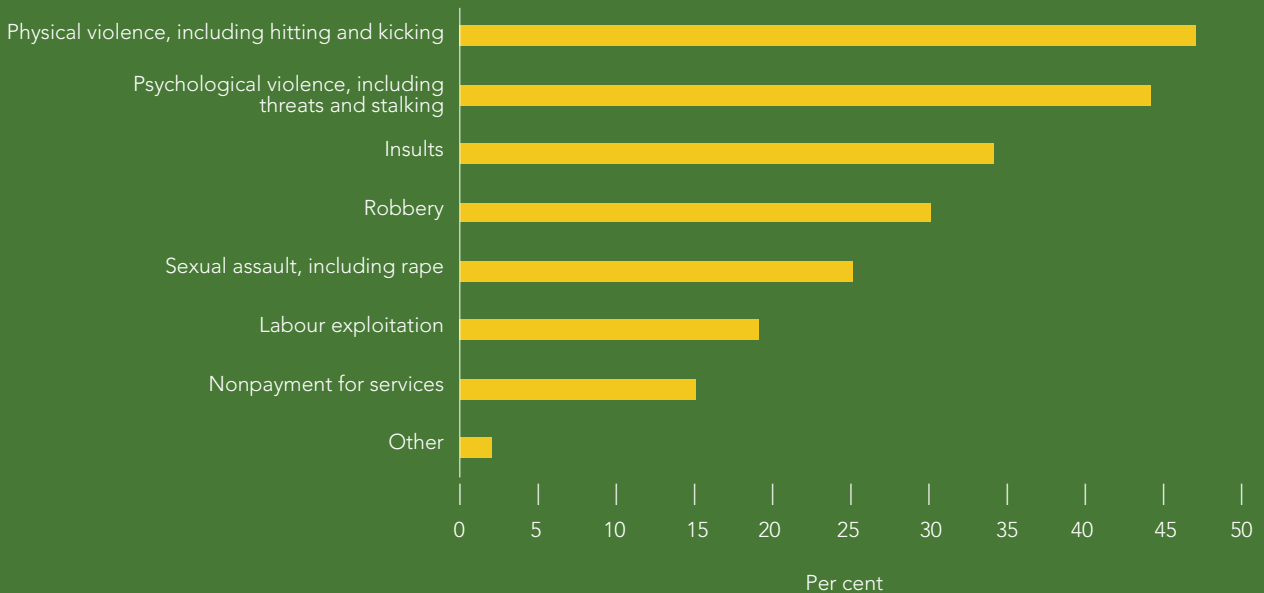
Continued criminalization of sex work in most of the world's countries denies sex workers the societal safety nets used in times of crisis. Lockdowns, curfews and other social restrictions during the COVID-19 pandemic have exposed sex workers to even greater hardship and harm.

A study conducted in Nordic countries found that drop-in services and outreach work for sex workers were reduced by COVID-related restrictions, and that many emergency shelters were shuttered (21). A recent report by the International Committee on the Rights of Sex Workers in Europe (ICRSE) suggests that sex workers are among the populations most disproportionately impacted by COVID-19 in western Europe due to their social and economic exclusion, their work in a sector that is criminalized in much of the region, and because many sex workers in western Europe are undocumented migrants (22). ICRSE interviews with its member organizations determined that national lockdowns caused a huge decline in sex workers' number of clients and incomes, and that the majority of sex workers could not access governmental support schemes (22).

Migrant sex workers—estimated to comprise the majority of the sex worker population in western Europe—appear to have been especially affected in most countries as they were not entitled to receive social support (22, 23). Migrant sex workers in Europe already face high levels of discrimination and violence. ICRSE interviews with dozens of migrant sex workers across 10 countries from June to December 2019 found that more than 40% of respondents said they had been physically attacked and/or psychologically aggressed, 30% had been robbed and 25% had been sexually assaulted. More than one third of the migrant sex workers who had been assaulted had not reported the incidents to police (23).

There is solid evidence supporting the decriminalization of sex work as a way to improve sex worker health and safety, including reductions in HIV risk (3, 24). New Zealand was the first country to fully decriminalize sex work, doing so in 2003 after successful campaigning by the New Zealand Prostitutes Collective (25). During the COVID-19 pandemic, sex workers in New Zealand have

FIGURE 6.5 | **PERCENTAGE OF MIGRANT SEX WORKERS WHO REPORTED EXPERIENCING NEGATIVE INCIDENTS, 10 COUNTRIES, WESTERN AND CENTRAL EUROPE, JUNE TO DECEMBER 2019**



Source: Undeserving victims? A community report on migrant sex worker victims of crime in Europe. Amsterdam: International Committee on the Rights of Sex Workers in Europe; 2020.

Note: Interviews were conducted with 47 sex workers in Austria, Belgium, France, Greece, Hungary, Ireland, Italy, the Netherlands, Romania and the United Kingdom of Great Britain and Northern Ireland.

successfully applied for emergency wage subsidies that are available to all workers whose earnings have fallen by at least 30% due to the coronavirus (26). As of March 2020, sex work had also been legalized or decriminalized in Aruba, parts of Australia, Austria, Bonaire, Ecuador, Germany, Greece, the Netherlands, Nevada (in the United States of America), Niue, Peru, the Plurinational State of Bolivia, Saint Maarten, Switzerland, Taiwan, Turkey and Uruguay, according to research conducted by the Global Network of Sex Work Projects (27).

Canada, France, Iceland, Norway and Sweden are among the countries that criminalize clients of sex workers, an approach sometimes called the “end-demand” model. Despite a shift in focus to clients, there is strong evidence that the negative outcomes for sex workers are similar to those under full criminalization of sex work, including ongoing exposure to violence and police harassment, greater insecurity, reduced ability to negotiate safer sex or carry condoms, and reduced access to health services and community-led services, which increases the risk of HIV and other infections (4, 28).

Beyond national legislative changes, creative local-level strategies can have a big impact. In the Netherlands, municipalities introduced a “free in, free out” policy that allows migrants with irregular immigration status to report a crime and be guaranteed to leave a police station freely without being arrested or detained. The policy has been adopted across the country, although it is not yet codified in national legislation (29). In June 2021, UNAIDS released a short fact sheet on human rights, HIV and sex work outlining international rights, norms and recommendations relating to sex work and HIV.

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07

ENDING STIGMA AND DISCRIMINATION

Fear, ignorance and misinformation about HIV continue to circulate, despite four decades of advocacy and education. People living with HIV and other key populations still regularly face multiple and intersecting forms of stigma and discrimination based on their HIV status and other health conditions, race, gender, sexual orientation, economic background, drug use, involvement in sex work and age that undermine their health, safety and dignity—and impede efforts to end AIDS.

Ending this stigma and discrimination is an essential component of a human rights-based response to HIV. Communities, including those particularly affected by HIV and by discrimination and other human rights abuses, have a key role to play in challenging stigma, ending inequalities and protecting rights more broadly. Ensuring their meaningful involvement is both a fundamental human rights principle and a practical necessity.

The 2021 United Nations Political Declaration on AIDS recommits countries to eliminate all forms of HIV-related stigma and discrimination, setting a target of less than 10% of people living with, at risk of and affected by HIV having experienced stigma and discrimination by 2025. The Global AIDS Strategy 2021–2026 includes the following additional targets for 2025:

- Less than 10% of people living with HIV report internalized stigma, and less than 10% report experiencing stigma and discrimination in health-care and community settings.
- Less than 10% of health workers report negative attitudes towards people living with HIV.
- Less than 10% of law enforcement officers and health workers report negative attitudes towards key populations.¹

¹ Multiple indicators are used to measure progress against these targets. It is assumed that the 10% threshold should be reached within each of these indicators.



2025 TARGETS AND COMMITMENTS in the 2021 Political Declaration on AIDS

- Eliminate HIV-related stigma and discrimination, and respect, protect and fulfil the human rights of people living with, at risk of and affected by HIV.
- Ensure that less than 10% of countries have restrictive legal and policy frameworks that unfairly target people living with, at risk of and affected by HIV and lead to the denial or limitation of access to services by 2025.
- Adopt and enforce legislation, policies and practices that prevent violence and other rights violations against people living with, at risk of, and affected by HIV, and protect their right to the highest attainable standard of physical and mental health, right to education and right to adequate standard of living, including adequate food, housing, employment, and social protection, and that prevent the use of laws that discriminate against them.
- End impunity for human rights violations against people living with, at risk of and affected by HIV by meaningfully engaging and securing access to justice for them through the establishment of legal literacy programmes, increasing their access to legal support and representation and expanding sensitization training for judges, law enforcement, health-care workers, social workers and other duty bearers.
- Ensure that less than 10% of people living with, at risk of and affected by HIV experience stigma and discrimination by 2025, including by leveraging the potential of U = U (Undetectable = Untransmittable).

In 52 of 58 countries with recent population-based survey data, more than 25% of people aged 15 to 49 years reported holding discriminatory attitudes towards people living with HIV, and more than 50% held discriminatory attitudes in 36 of 58 countries.

The Global Partnership for Action to Eliminate All Forms of HIV-related Stigma and Discrimination was set up in 2018 to ensure that commitments lead to tangible actions. As of July 2021, 25 countries had joined the Partnership, committing to evidence-informed interventions to end stigma and discrimination in six settings (health care, households and communities, justice, workplaces, education, and emergency/humanitarian) over five years.² UNAIDS has produced guidance for implementing and monitoring and evaluating interventions that can reduce stigma and discrimination, and it also brokers technical assistance. Countries are using People Living with HIV Stigma Index data, legal environment assessments, gender assessment tool results and findings from community-led monitoring activities to design and refine their interventions. Resources mobilized through the Partnership are being used by the Global Network of People Living with HIV (GNP+) to mobilize communities to lead in the design, implementation and monitoring of actions within the initiative, and to convene and collaborate with diverse civil society groups. A global social media campaign, #MoreThan, was launched in March 2021 to publicize country achievements, including policy and legal reforms, and new mechanisms for addressing human rights violations.

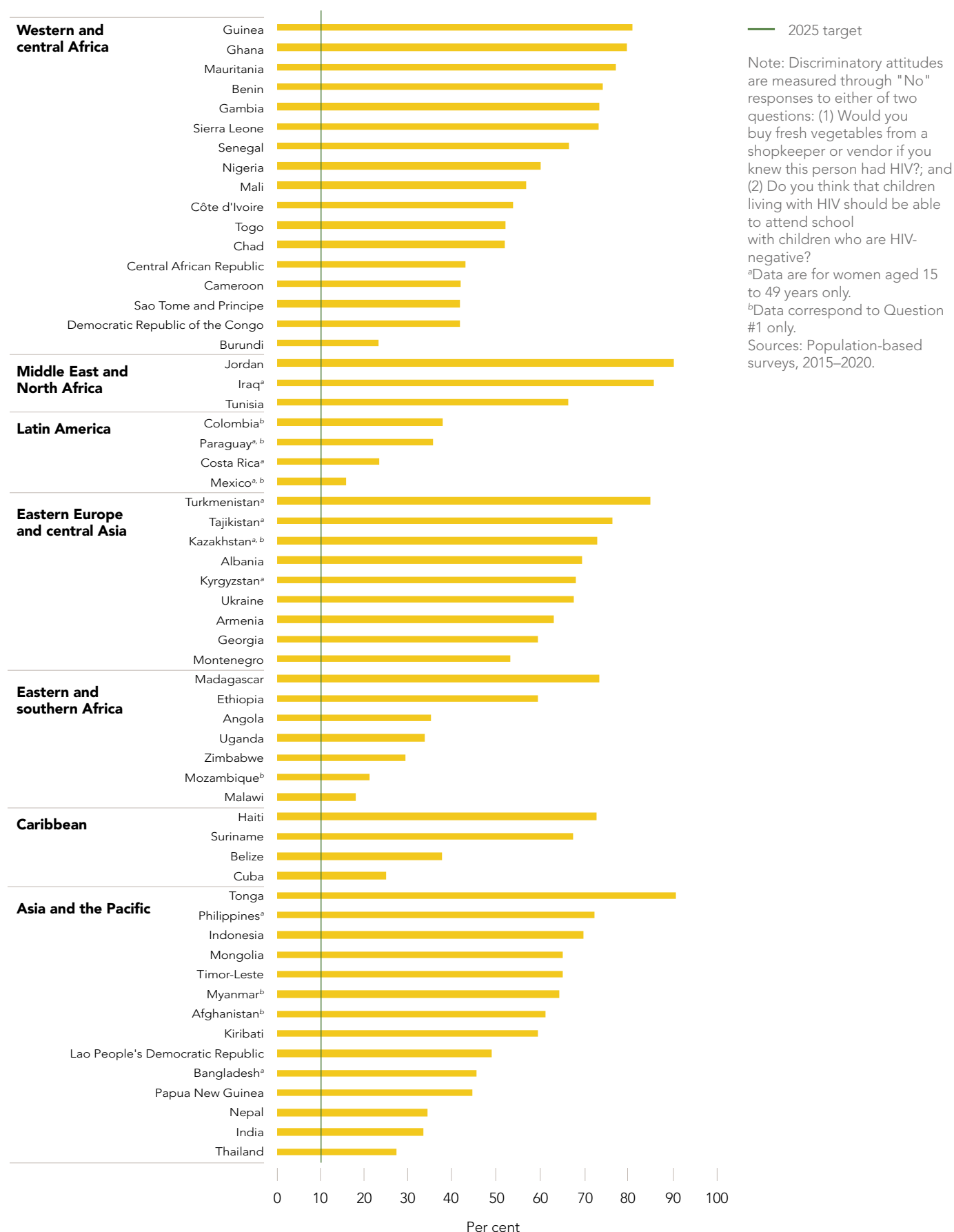
HIV DATA

Discriminatory attitudes remain common

The prevalence of discriminatory attitudes towards people living with HIV varies widely. Across nearly all regions, there are countries where large proportions of adults continue to hold discriminatory attitudes towards people living with HIV. In 52 of 58 countries with recent population-based survey data, more than 25% of people aged 15 to 49 years reported holding discriminatory attitudes towards people living with HIV, and more than 50% held discriminatory attitudes in 36 of 58 countries (Figure 7.1).

² The 25 countries are: Angola, Argentina, the Central African Republic, Costa Rica, Côte d'Ivoire, the Democratic Republic of the Congo, the Gambia, Guinea, Guyana, the Islamic Republic of Iran, Jamaica, Kazakhstan, Kyrgyzstan, Lesotho, the Lao People's Democratic Republic, Liberia, the Republic of Moldova, Mozambique, Nepal, Papua New Guinea, Senegal, South Africa, Thailand, Uganda and Ukraine.

FIGURE 7.1 | PERCENTAGE OF PEOPLE AGED 15–49 YEARS WHO REPORT HAVING DISCRIMINATORY ATTITUDES TOWARDS PEOPLE LIVING WITH HIV, COUNTRIES WITH AVAILABLE DATA, 2015–2020



HIV DATA

More than 100 Stigma Index surveys have interviewed more than 100 000 people living with HIV, providing vital insights into the experiences of people living with HIV around the world.

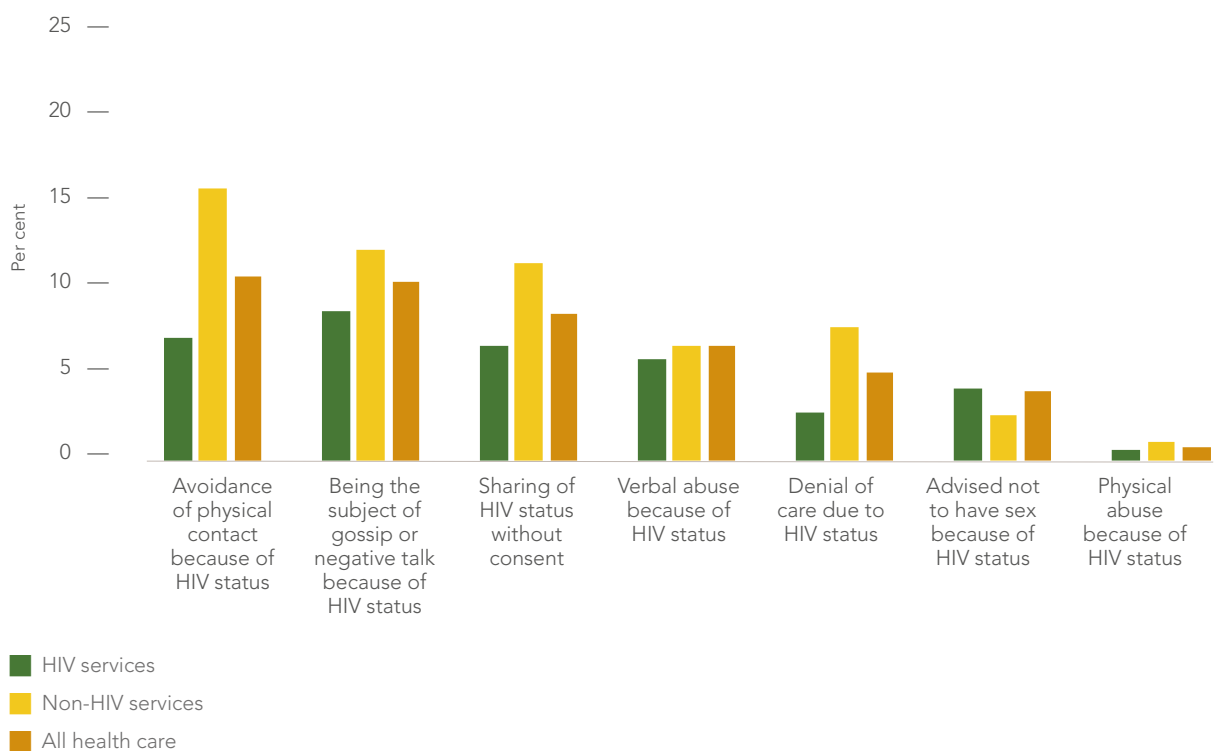
Stigma Index 2.0 tracks lived experiences

The People Living with HIV Stigma Index is a community-led research initiative that gathers data on the various forms of stigma and discrimination experienced by people living with HIV. The surveys provide reliable evidence that guides advocacy and other actions to remove those impediments. The Stigma Index is managed by the PLHIV International Partnership (a coalition led by GNP+), the International Community of Women living with HIV and UNAIDS, with support from Johns Hopkins University.

The Stigma Index initiative was launched in 2008. Since then, more than 100 surveys have interviewed more than 100 000 people living with HIV, providing vital insights into the experiences of people living with HIV around the world. In 2020, an updated methodology, the Stigma Index 2.0, was developed and launched with support from the United States President's Emergency Plan for AIDS Relief (PEPFAR). The 2.0 research methodology was strengthened to create a standardized sampling approach for collecting data that is comparable across countries and across time within countries. The capacity of communities of people living with HIV to undertake community-led research and advocacy has also been strengthened.

Among the rights violations tracked by the Stigma Index are experiences of stigma and discrimination in health-care settings. These abuses take many forms—from judgmental or biased attitudes to breaches of confidentiality, poor support and delay or denial of treatment. They discourage people from seeking health care when they need it, degrade the quality of care that people receive, and undercut both trust in health services and adherence to medical advice and treatment, resulting in poor physical and mental health outcomes for people living with HIV (1–3). These experiences continue to be common in many countries, with members of key populations who are living with HIV especially likely to be stigmatized or discriminated against when seeking health care (4, 5). In Ukraine, one in six respondents (17%) to a 2020 Stigma Index 2.0 survey reported having experienced stigma and discrimination in HIV health-care settings in the previous 12 months, with avoidance of physical contact and gossip or negative comments being particularly common (Figure 7.2).

FIGURE 7.2 | PERCENTAGE OF PEOPLE LIVING WITH HIV WHO REPORT EXPERIENCING STIGMA AND DISCRIMINATION IN HEALTH-CARE SETTINGS, UKRAINE, 2020



Source: Ukraine People Living with HIV Stigma Index, 2020.

Nadezhda Kilar works as a peer consultant and mentor in the Republic of Moldova to help women living with HIV to understand and identify their problems, learn about their rights and get support in the fight against violence and discrimination. Credit: Alena Shpak

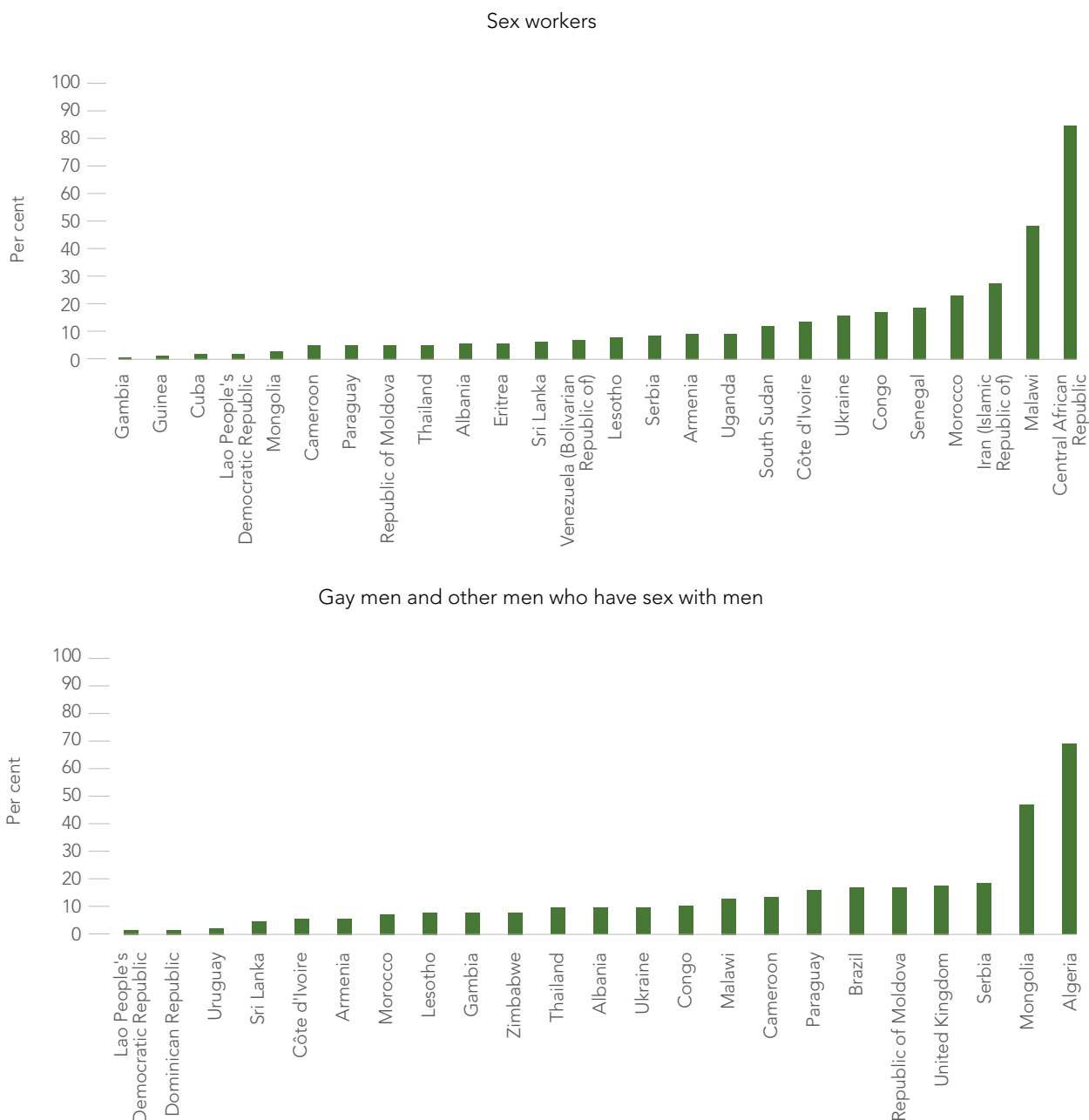


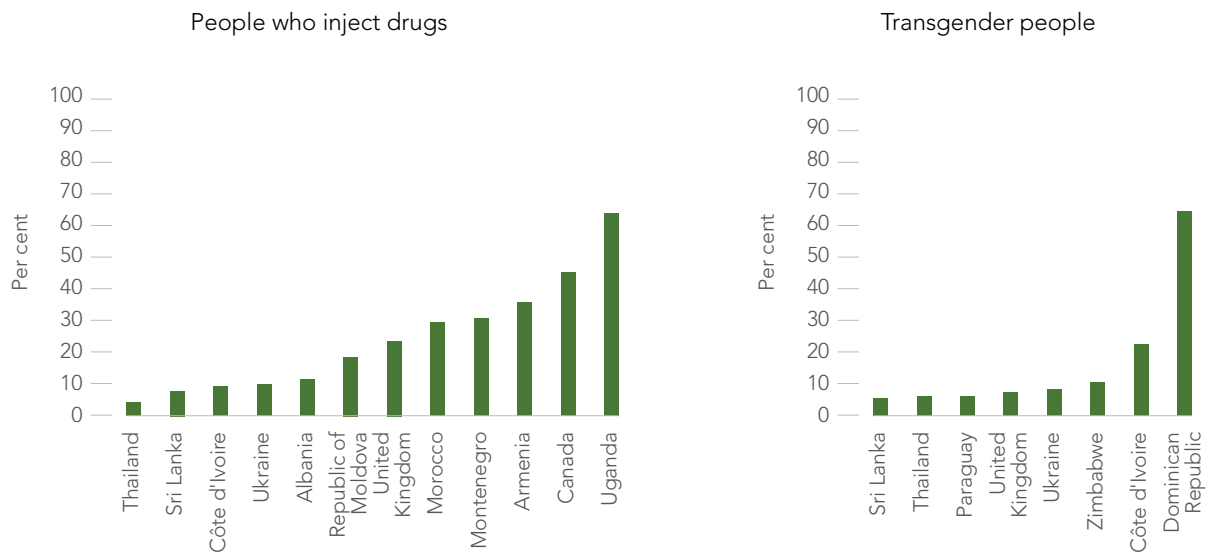
HIV DATA

Many key populations avoid health services

Stigma and discrimination are among the many barriers separating key populations from the quality health-care services they need. This undermines both their health and their ability to manage illnesses and health emergencies successfully. Discriminatory experiences within health-care settings can be especially common and pernicious (5–9). Country data reported to UNAIDS show that the proportions of people belonging to key populations who avoid health-care services due to stigma and/or discrimination remain disconcertingly high (Figure 7.3). Across all key populations, at least one in three reporting countries stated that more than 10% of respondents avoided health care, including three in four countries for people who inject drugs.

FIGURE 7.3 | AVOIDANCE OF HEALTH CARE, BY POPULATION GROUP, REPORTING COUNTRIES, 2017–2020





Source: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>).

Note: The majority of data shown come from surveys, which are typically conducted in areas that have services available, and thus may be not fully nationally representative.

Across all key populations, at least one in three reporting countries stated that more than 10% of respondents avoided health care, including three in four countries for people who inject drugs.

Credit: UNAIDS

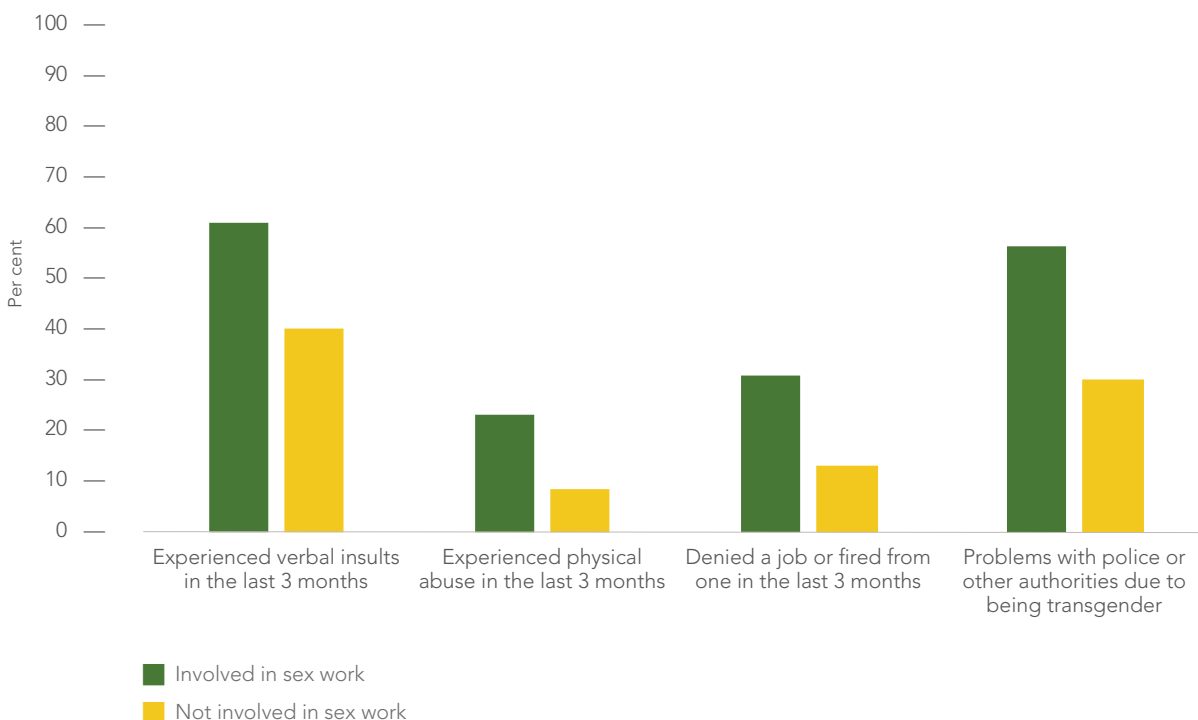


HIV DATA

Transgender sex workers face frequent abuse

Discrimination, abuse, harassment and violence are distressingly common experiences for transgender persons (10). Transgender women who also are involved in sex work are even more likely to be subjected to such treatment, as shown in a study from the Dominican Republic (Figure 7.4). Other research from the Caribbean shows that, for transgender people, such discrimination and abuse frequently also result in violence, while a systematic review of 41 studies has highlighted the relationship between transgender women's experiences of stigma and discrimination and their HIV vulnerability (11, 12).

FIGURE 7.4 | **STIGMA AND DISCRIMINATION AMONG TRANSGENDER WOMEN, BY INVOLVEMENT IN SEX WORK, DOMINICAN REPUBLIC, 2015**



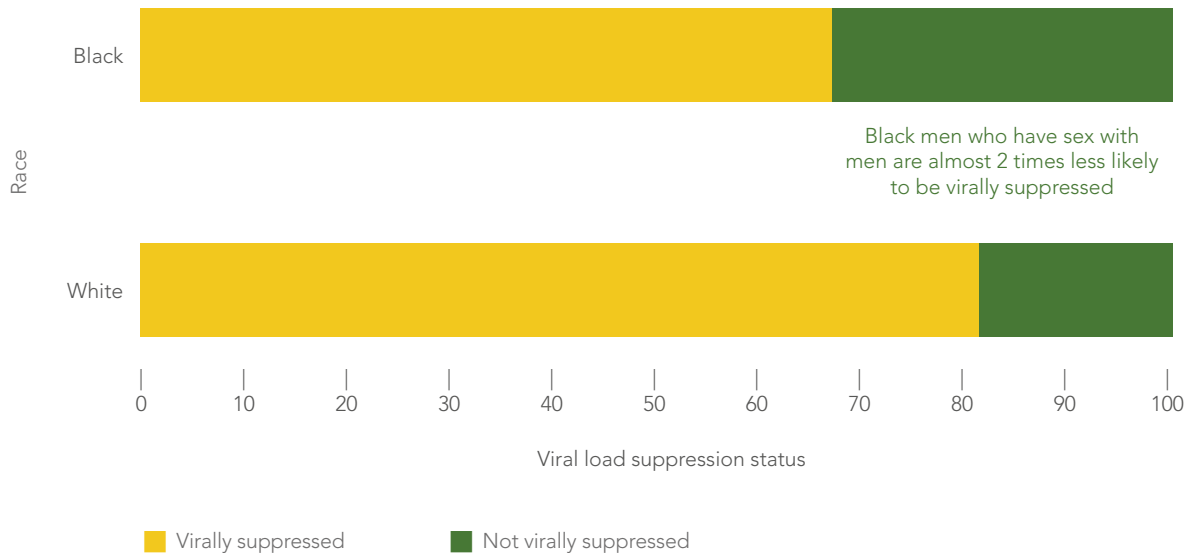
Source: Milner AN, Hearld KR, Abreau N, Budhwani H, Rodriguez-Lauzurique RM, Paulino-Ramirez R. Sex work, social support and stigma: experiences of transgender women in the Dominican Republic. *Int J Transgend.* 2019;20(4):403-12.

Racial discrimination causes poorer health outcomes

HIV DATA

Black people in the United States of America account for a disproportionately large percentage of new HIV infections: 41% in 2019, though they represent only about 13% of the country's total population (13–18). The vast majority (76%) of HIV infections among black Americans in 2019 were among men, most of which (82%) were among gay men and other men who have sex with men (14). Studies also report significant racial disparities in HIV treatment outcomes, with delayed initiation of treatment and care, lower adherence to antiretroviral therapy, stigma and discrimination, mistrust of or lack of access to health-care providers, and inadequate access to health insurance among the contributing factors (19–22). A recent study from the city of Atlanta, United States of America, reported significantly lower levels of viral suppression among HIV-positive black American gay men and other men who have sex with men, compared with their white counterparts (Figure 7.5). The study attributes the disparities primarily to a lack of equitable access to medical care and stable housing, predicaments that are rooted in broader social discrimination and injustices (23).

FIGURE 7.5 | **VIRAL LOAD SUPPRESSION AMONG GAY MEN AND OTHER MEN WHO HAVE SEX WITH MEN, BY RACE, ATLANTA, UNITED STATES, 2016–2017**



Source: Sullivan PS, Knox J, Jones J, Taussig J, Graves MV, Millet G et al. Understanding disparities in viral suppression among Black MSM living with HIV in Atlanta Georgia. *J Int AIDS Soc.* 2021 (April);24(4):e25689.

HIV DATA

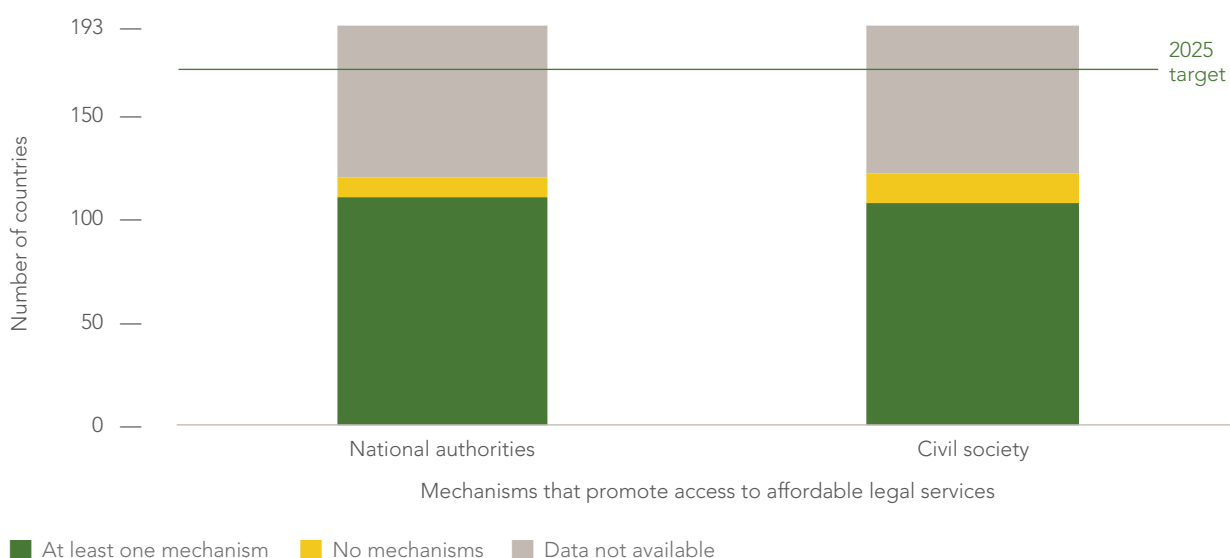
Legal services enable action against stigma and discrimination

Protection against discrimination and the ability to seek effective legal redress for discrimination and other rights violations empower people to realize their rights, and they can also enhance their access to HIV services. The 2021 Political Declaration on AIDS commits countries to end impunity for human rights violations against people living with, at risk of and affected by HIV by establishing legal literacy programmes, increasing access to legal support for affected individuals, and expanding sensitization training for judges, law enforcement officials, health-care workers and other duty-bearers.

The Global AIDS Strategy 2021–2026 sets several specific targets for countries. It requires that by 2025, less than 10% of countries lack mechanisms for people living with HIV and key populations to report abuse and discrimination and redress, and that less than 10% of those populations lack access to legal services. The Strategy also sets a target for more than 90% of people living with HIV who experienced rights abuses to have sought redress by 2025.

Both national authorities and civil society in a majority of reporting countries state that at least one mechanism for accessing affordable legal services currently exists (Figure 7.6). The types of mechanisms that are most commonly available across countries are legal aid systems applicable to HIV case work, community paralegals and pro bono legal services provided by private law firms.

FIGURE 7.6 | COUNTRIES WITH MECHANISMS IN PLACE TO PROMOTE ACCESS TO AFFORDABLE LEGAL SERVICES, 2017–2021



Source: National Commitments and Policy Instrument, 2017–2021.

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 nongovernmental partners engaged in the national response.

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08

SOCIAL PROTECTION

Sustainable Development Goal 1.3 calls for substantial coverage of the poor and vulnerable by national social protection systems (1). National governments have a responsibility to guarantee at least a basic level of social security—a social protection floor—for everyone as part of their social protection systems (2, 3). In the past two decades, social protection mechanisms have proliferated in many low- and middle-income countries.

By addressing inequalities at the root of marginalization and vulnerability, social protection facilitates people's ability to meet their essential needs and mitigate the risks they face in times of crisis. There is a strong and established body of evidence that social protection interventions can help improve people's health, access to schooling, well-being, savings, and economic autonomy and self-sufficiency (4). These measures can also enable women to participate more fully in the economy, which advances social and economic development (5).

HIV-sensitive social protection increases the use of HIV prevention, treatment and care services by reducing some of the financial burdens and other hindrances that people face in accessing HIV services. The 2021 United Nations Political Declaration on AIDS requires that by 2025, 45% of people living with, at risk of and affected by HIV have access to social protection benefits in accordance with national legislation. However, few countries are currently ensuring ready access to that social protection.

The COVID-19 pandemic has highlighted the vital need for robust social protection systems. Countries have started or broadened thousands of social assistance and labour market interventions as part of their COVID-19 responses, and national expenditure levels for social protection have risen. However, the bulk of additional spending has occurred in high- and upper-middle-income countries (6). It is also estimated that fewer than 20% of social protection interventions related to COVID-19 are gender-sensitive and focus on improving women's economic security and/or addressing unpaid care work needs (5).



*A woman whose husband is living with HIV arranges produce at her market stall in Dodoma, United Republic of Tanzania.
Credit: UNAIDS*

2025 TARGETS AND COMMITMENTS in the 2021 Political Declaration on AIDS

- Provide all children and adolescents living with HIV with a continuum of developmentally appropriate care and social protection proven to improve health and psychosocial outcomes as they grow and progress through youth and into adulthood.
- Scale up social protection interventions for girls and young women.
- Adopt and enforce legislation, policies and practices that protect the rights of people living with, at risk of and affected by HIV to an adequate standard of living, including adequate food, housing, employment and social protection.
- Ensure that 45% of people living with, at risk of and affected by HIV and AIDS have access to social protection benefits in accordance with national legislation.

HIV-sensitive social protection increases the use of HIV prevention, treatment and care services by reducing financial burdens and other hindrances to these services.

Several efforts are underway to include people living with HIV and key populations in short-term measures to mitigate the impact of the COVID-19 pandemic. In the Dominican Republic, 15 002 people living with HIV, key populations and their relatives were included in the national system established to support people in the informal sector who were facing income loss due to COVID-19 (7). In Peru, the World Food Programme (WFP) and the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) supported efforts to provide cash transfers to 836 families of people living with HIV, key populations, tuberculosis patients, migrants and refugees in order to pay for food, medicines and accommodation (7). A similar Global Fund- and WFP-supported effort in Eswatini provided cash transfers to the households of 2507 people living with HIV and 3567 orphans and vulnerable children (7).



UNAIDS, WFP and the nongovernmental organization APEVIHS deliver food and nutritional support to women living with HIV in Coatepeque and Retalhulehu, Guatemala.
Credit: UNAIDS

Many countries currently fall short of the 2025 target

It is estimated that only about 45% of the global population are effectively covered by at least one social protection benefit, with the remaining 55%—as many as 4 billion people—left unprotected as of 2019 (8). People living with HIV and other key populations are among those often left behind. The 2025 target for 45% of people living with, at risk of and affected by HIV to have access to social protection benefits aims to erase this disparity.

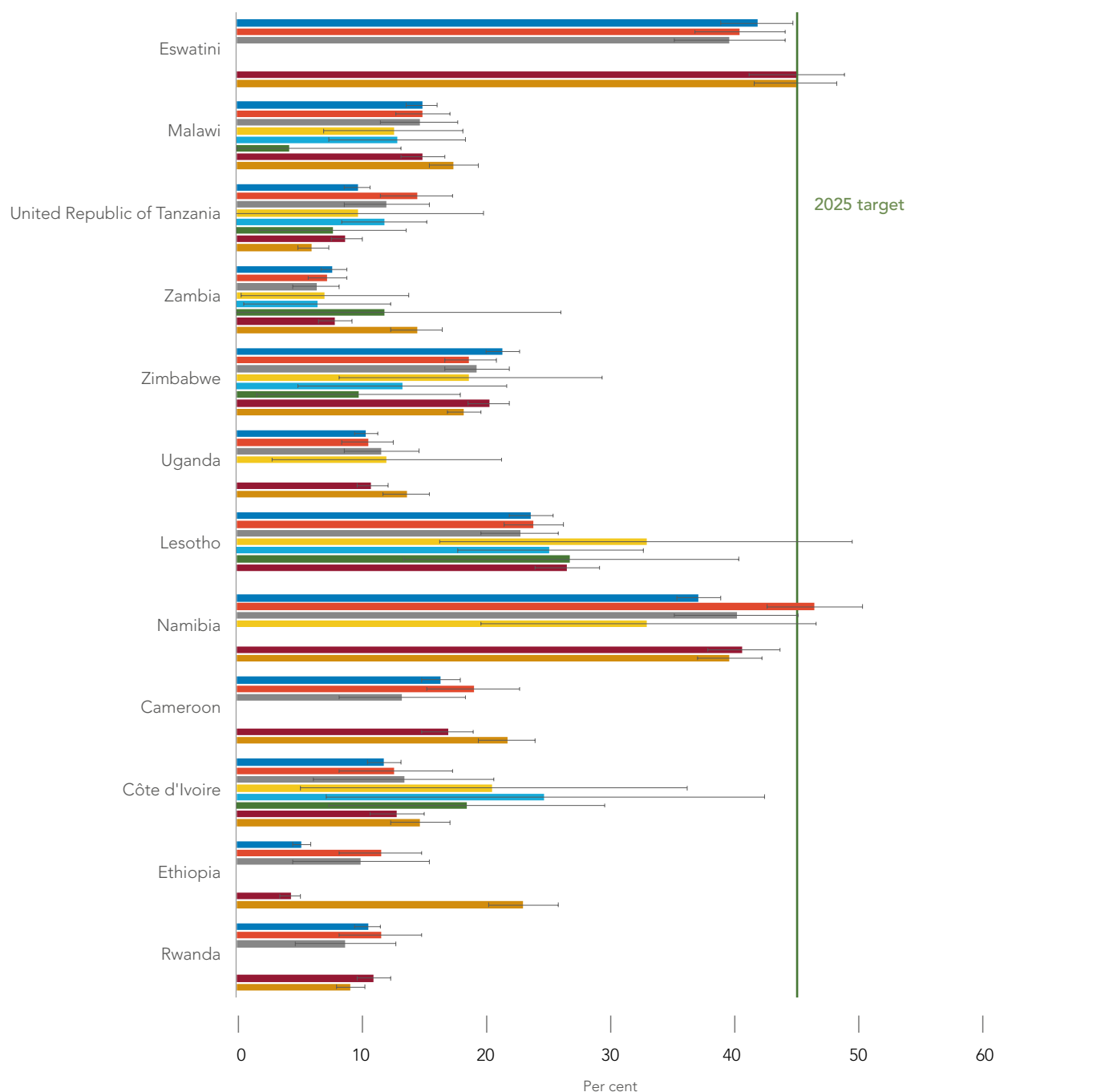
The most comprehensive picture of social protection access for people living with, at risk and affected by HIV is provided by Population-based HIV Impact Assessments (PHIAs) that have so far been conducted in 14 sub-Saharan African countries and Haiti.¹ Among countries with available PHIA data (Figure 8.1), the estimated proportion of the total population (at the household level) covered by at least one social protection benefit ranged from 5.2% in Ethiopia to 42% in Eswatini. It ranged from 7.3% in Zambia to 46% in Namibia among women living with HIV, and from 6.4% in Zambia to 40% in Namibia among men living with HIV. Social protection coverage among adolescent girls and young women was 20% or less in seven of the countries, and it exceeded 40% in Namibia and Eswatini. Coverage for female sex workers was uniformly low. Women living with HIV in Namibia, and orphans and vulnerable children and adolescent girls and young women in Eswatini, have an estimated level of social protection coverage that meets the 2025 target. These examples demonstrate that the 2025 target is achievable.

¹ Other population-based surveys that measure social protection coverage may not ask about HIV status or identification as a member of a key population. Surveys that assess outcomes among key populations, such as the Integrated Biobehavioural Surveillance Surveys, do not currently include questions on social protection. There were no relevant data for people who inject drugs or transgender people in any of the countries with available social protection data.

HIV DATA

As many as 4 billion people were denied social protection benefits in 2019. People living with HIV and other key populations were among those often left behind.

FIGURE 8.1 | ESTIMATED HOUSEHOLD PREVALENCE OF ANY EXTERNAL ECONOMIC SUPPORT IN THE LAST 12 MONTHS, BY COUNTRY AND POPULATION GROUP, 2015–2018^a



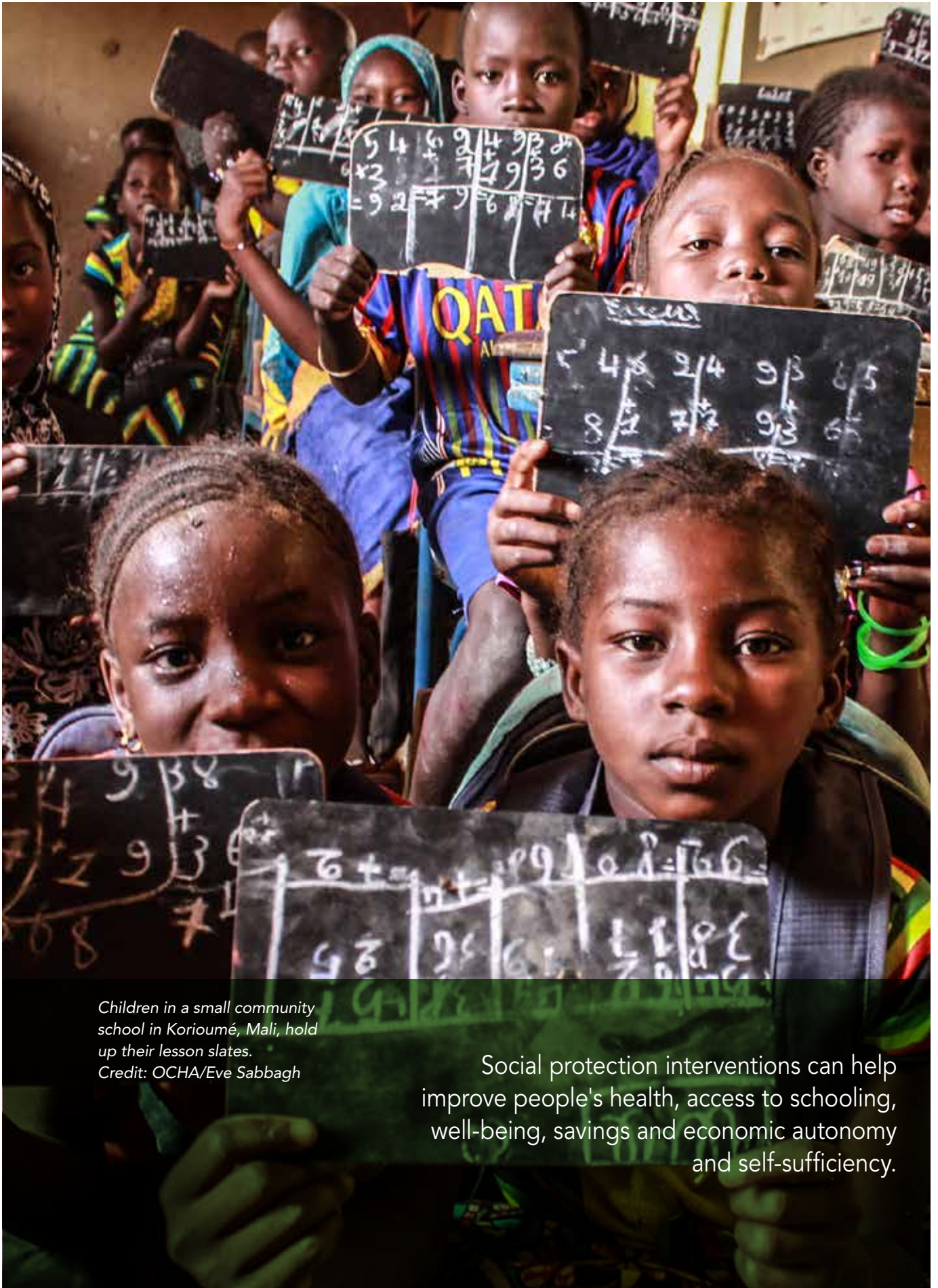
■ Total population ■ People living with HIV (women) ■ People living with HIV (men) ■ Gay men and other men who have sex with men
 ■ Sex workers (women) ■ Sex workers (men) ■ Adolescent girls and young women ■ Orphans and vulnerable children^b

^aCombined external economic support to the household in the last 12 months includes: social pension; material or financial support for shelter; food assistance provided at the household or external institution; income-generation support in cash or kind (e.g., agricultural inputs); material support for education (e.g., uniforms, school books, education, tuition support and bursaries); assistance for school fees; cash transfer (e.g., pension, disability grants and child grant); and other supports. Denominator: All interviewed adults ≥ 15 years included in key population group definitions. Numerator: Those who indicated social protection coverage.

^bCombined school, social, material, emotional and medical support. Denominator: Children < 18 years, conditional on if the child, natural mother and/or natural father has been very sick for at least three months during the past 12 months (too sick to work or do normal activities). Numerator: Those who indicated receipt of child support in the last 12 months.

Note: Data for Eswatini, Namibia and Rwanda refer to the last three months; no 12-month variable was included in the data sets. Estimates for male sex workers for Malawi, Zambia and Zimbabwe, and for gay men and other men who have sex with men for Côte d'Ivoire, are based on persons aged 25 to 49 years, and thus should be interpreted with caution.

Source: Population-Based HIV Impact Assessment (PHIA) surveys, 2015–2018.



Children in a small community school in Korioumé, Mali, hold up their lesson slates.
Credit: OCHA/Eve Sabbagh

Social protection interventions can help improve people's health, access to schooling, well-being, savings and economic autonomy and self-sufficiency.

Case study

BUSINESS COACHING BRINGS A NEW SPIRIT TO TRANSGENDER PEOPLE IN INDONESIA

Over the years, Lenny Sugiharto has tried—and failed—several times to realize her dream of running a successful small business of her own. What she didn't do was give up.

Like other transgender people in Jakarta, Indonesia, Ms Sugiharto experiences extreme social discrimination, not least in the job market or when trying to build skills through training. As a result, many in the transgender community live precarious lives that threaten their health and physical security, placing them at greater risk of HIV infection. Survey data suggest that almost 12% of the estimated 35 000 transgender persons in Indonesia are living with HIV (9, 10).

The COVID-19 pandemic has left the transgender community in Indonesia even more economically insecure. This prompted the International Labour Organization (ILO) to step up its efforts to support sustainable enterprises through business coaching for transgender persons.

The ILO worked with two business coaching organizations—Action Coach and Business and Export Development Organization—to design and implement the course. Operating in three Indonesian cities (Bandung, Jakarta and Yogyakarta), the coaching scheme provides transgender-run start-ups with the basic skills and knowledge they need to boost their businesses and link up with existing small- and medium-sized enterprises (11). It also helps aspiring small business operators draw up a business plan, select potential venues, assess start-up and operating costs, and set prices.

Ms Sugiharto was one of 12 candidates selected in 2020 for two months of intensive coaching. Local transgender organizations helped set the eligibility criteria and guided the selection of participants. For eight weeks, she and the other participants attended a series of online workshops and received weekly individual coaching. Topics ranged from developing business plans, product promotion and online marketing to bookkeeping, doing costing estimates and learning confidence-building techniques.

Ms Sugiharto settled on consolidating her small restaurant in Jakarta, where she would serve home-cooked meals to her customers. She drafted a business plan, crafted her menu and calculated operating costs, which she then used to obtain financial support from the Srikandi Sejati Foundation.



Participants in business coaching courses designed and implemented by Action Coach and Business and Export Development Organization in Yogyakarta, Indonesia. Credit: ILO Indonesia

In February 2021, three months after completing her course, she was welcoming customers to her new restaurant, Warung Makcik, in the Matraman section of East Jakarta. Within a few weeks, her menu of local dishes was attracting business worth US\$ 20–50 (between 200 000 and 500 000 Indonesian rupiah) per day.

“I feel a new spirit after having the intensive business coaching—more confident on starting the business and motivated to learn from the business,” Ms Sugiharto says. Using techniques shared during the coaching, she has been testing and adding new menu items, which are also available via an online take-out ordering app.

Forty-five other transgender people received similar coaching in 2020. Among them was Balqis Callista Maharani, who has shifted from selling products part-time to her social media contacts to running her own virtual store, A&L Shop, in an online marketplace. Instead of selling only a few items a day, she's had to hire two assistants to manage and ship the orders coming in from customers around the country.

Arumce Mariska, a 36-year-old transgender entrepreneur from Yogyakarta, previously focused her business on shibori tie-dye, producing ready-to-wear fashion and scarfs. Due to the pandemic, her sales drastically declined. “I started to lose my income and started using my savings for my daily expenses,” she said.

After taking the coaching course, she learned to transform her creations into premium products by using a natural, organic colouring instead of synthetic coloring. She also started bookkeeping, improved her customer service and joined the digital market. “Learning new things from practitioners [. . .] was a wonderful experience to enrich my skills” she says.

The business coaching has also enabled participants to build new links with other local entrepreneurs, an important step towards creating a more supportive and respectful environment for the transgender community, and for breaking down the many barriers it faces.

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IV

ACCELERATING ACTION ON PANDEMICS AND GLOBAL HEALTH





09

INVESTMENTS TO END AIDS

Ending AIDS will not be possible without substantial financing through increased domestic investments, reinvigorated international commitments and more efficient allocation of available resources.

Under-investment in the HIV responses of low- and middle-income countries was a major reason why global targets for 2020 were missed: financial resource availability in 2020 was 29% less than the US\$ 26 billion (in constant 2016 US dollars) that United Nations (UN) Member States committed to mobilize annually by 2020.^{1,2} The US\$ 21.5 billion (2019 US dollars) in resources available in low- and middle-income countries in 2020 was also well short of the US\$ 29 billion investment target for 2025 that was set in the 2021 United Nations Political Declaration on AIDS.

Resource allocations varied by region and programme area. In eastern and southern Africa and Latin America, HIV resources available in 2020 matched or even surpassed the total resource needs of those regions. However, a considerable proportion of these resources were not allocated to the programme areas or populations facing the biggest gaps, which limited impact. UNAIDS resource needs estimates assume an efficient allocation of resources, reductions in the unit costs of commodities and service delivery, and the defunding of services that do not have proven impact in reducing HIV infections or AIDS-related deaths.

Resource gaps were particularly large in eastern Europe and central Asia (which is contending with a rapidly growing HIV epidemic), the Middle East and North Africa (which has yet to bring its epidemic under control) and Asia and the Pacific (where new HIV infections are decreasing at a very slow pace).

A common resource gap across nearly all regions is funding for HIV prevention among key populations at higher risk of HIV infection. Investing in combination HIV prevention for adolescent girls and young women is crucially important in areas of sub-Saharan Africa where the incidence of HIV is particularly high within the general population. The Global AIDS Strategy 2021–2026 calls for total investments in primary prevention services in low- and middle-income countries to nearly double from the US\$ 5.3 billion in estimated expenditures in 2019 to about US\$ 9.5 billion in 2025.

The 2021 Political Declaration on AIDS also calls for greater investments in societal enablers, including removing punitive laws and policies, eliminating stigma and discrimination, providing access to justice and coercion on relevant Sustainable Development Goals, and ensuring gender equality. These investments must increase to US\$ 3.1 billion in low- and middle-income countries by 2025.

¹ The group of low- and middle-income countries included in the resource availability and needs estimates of this chapter follow the World Bank's country income-level classification for 2020, which includes countries formerly classified as high income.

² The percentage shortfall compared to the 2020 target uses a 2020 resource availability estimate (US\$ 18.5 billion) measured in constant 2016 US dollars to match the resource targets in the 2016 Political Declaration on Ending AIDS. The other resource availability and needs estimates in this chapter are measured in constant 2019 US dollars, consistent with the resource targets in the 2021 Political Declaration on AIDS.



2025 TARGETS AND COMMITMENTS in the 2021 Political Declaration on AIDS

- Increase and fully fund the HIV response by mobilizing finance from all sources, including innovative financing, and enhancing global solidarity and increasing annual HIV investments in low- and middle-income countries to US\$ 29 billion by 2025.
- Mobilize additional sustainable domestic resources for HIV responses through a wide range of strategies and approaches, including: public–private partnerships; debt financing, debt relief, debt restructuring and sound debt management; progressive taxation; tackling corruption and ending illicit financial flows; and identifying, freezing and recovering stolen assets and returning them to their countries of origin.
- Ensure progressive integration of financing for HIV responses within domestic financing for health, social protection, emergency responses and pandemic responses.
- Complement domestic resources through greater North–South, South–South and triangular cooperation to fund remaining resource needs, especially for HIV responses in countries with limited fiscal ability, and those whose economies have been severely affected by the COVID-19 pandemic.
- Fulfil official development assistance commitments and increase the percentage of official development assistance for the HIV response.
- Fully mobilize the resource needs of the Global Fund to Fight AIDS, Tuberculosis and Malaria through its replenishment conferences.
- Invest in societal enablers—including protection of human rights, reduction of stigma and discrimination and law reform, where appropriate—in low- and middle-income countries to US\$ 3.1 billion by 2025.

HIV DATA

Domestic funding is plateauing

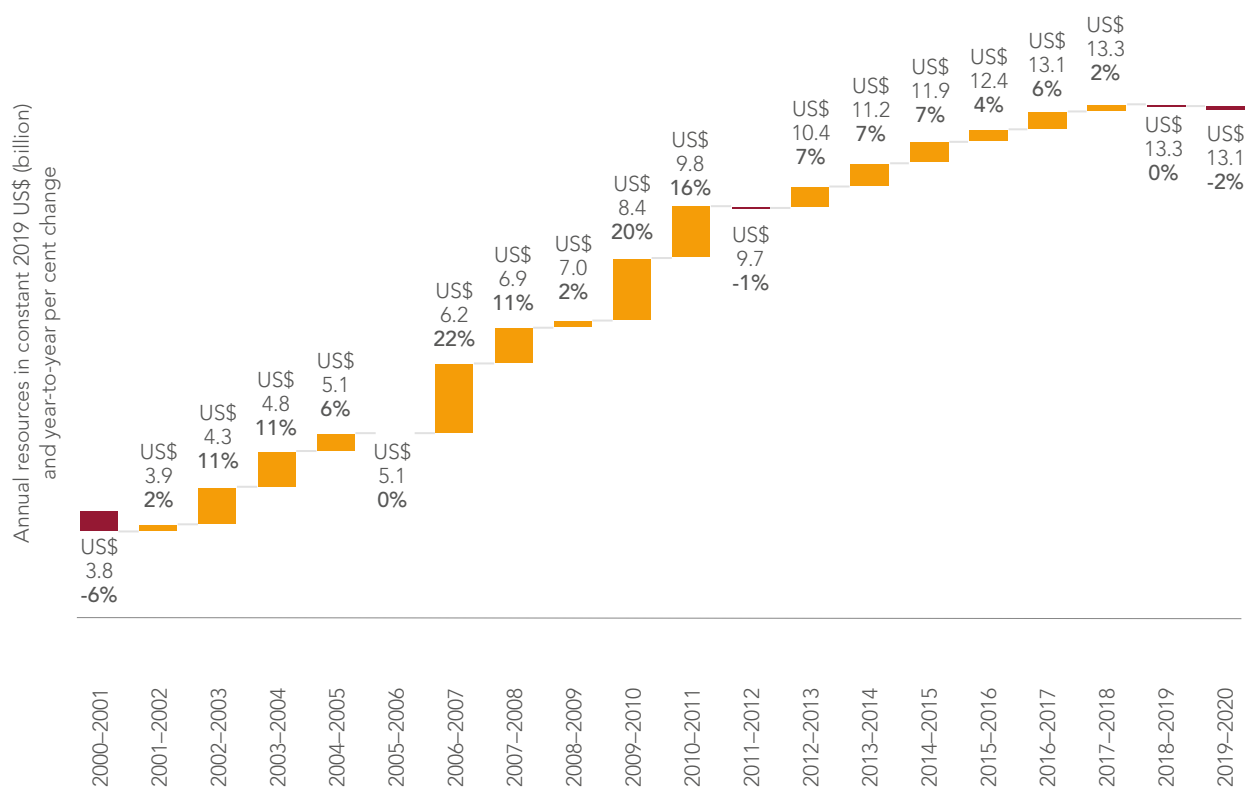
The total resources available for HIV responses in low- and middle-income countries peaked in 2017, well short of the 2020 target. They then declined slightly from 2018 to 2020. Domestic funding (public and private), which had been the main source of growth in resources available for HIV responses in low- and middle-income countries over the last decade, has since stabilized and may have started to decline (Figure 9.1).

International resources for HIV responses in low- and middle-income countries rose steadily between the UN General Assembly's first special session on the pandemic in 2001 and the 2007–2008 financial crisis. Total international contributions then declined and recovered slightly after the crisis, the start of a series of fluctuations that amounted to no overall growth over 10 years (Figure 9.2). Within total donor contributions, disbursements related to the United States President's Emergency Plan for AIDS Relief (PEPFAR) increased, resources from the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) remained relatively stable, and disbursements from other international donors have decreased by about half since 2010.

Domestic funding has been the main source of growth in resources available for HIV responses in low- and middle-income countries over the last decade. However, it recently stabilized and may have started to decline.

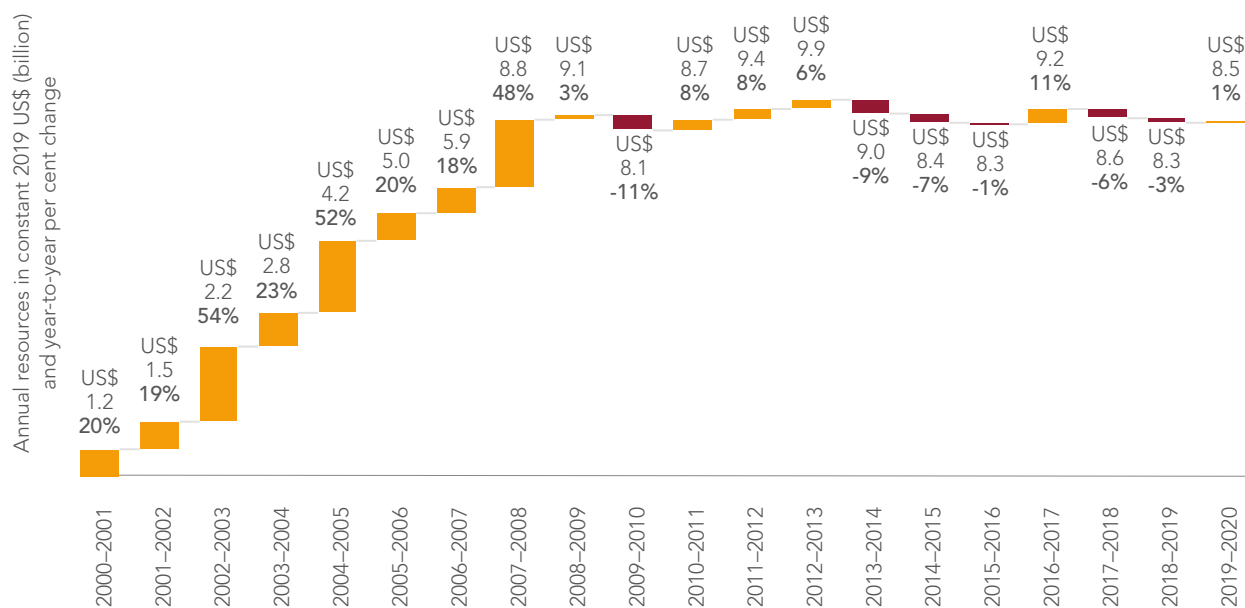


FIGURE 9.1 | **YEAR-TO-YEAR CHANGE IN RESOURCE AVAILABILITY FOR HIV FROM DOMESTIC SOURCES, LOW- AND MIDDLE-INCOME COUNTRIES, 2000–2001 TO 2019–2020**



Source: UNAIDS financial estimates, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).

FIGURE 9.2 | **YEAR-TO-YEAR CHANGE IN RESOURCE AVAILABILITY FOR HIV FROM INTERNATIONAL SOURCES, LOW- AND MIDDLE-INCOME COUNTRIES, 2000–2001 TO 2019–2020**



Source: UNAIDS financial estimates, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).

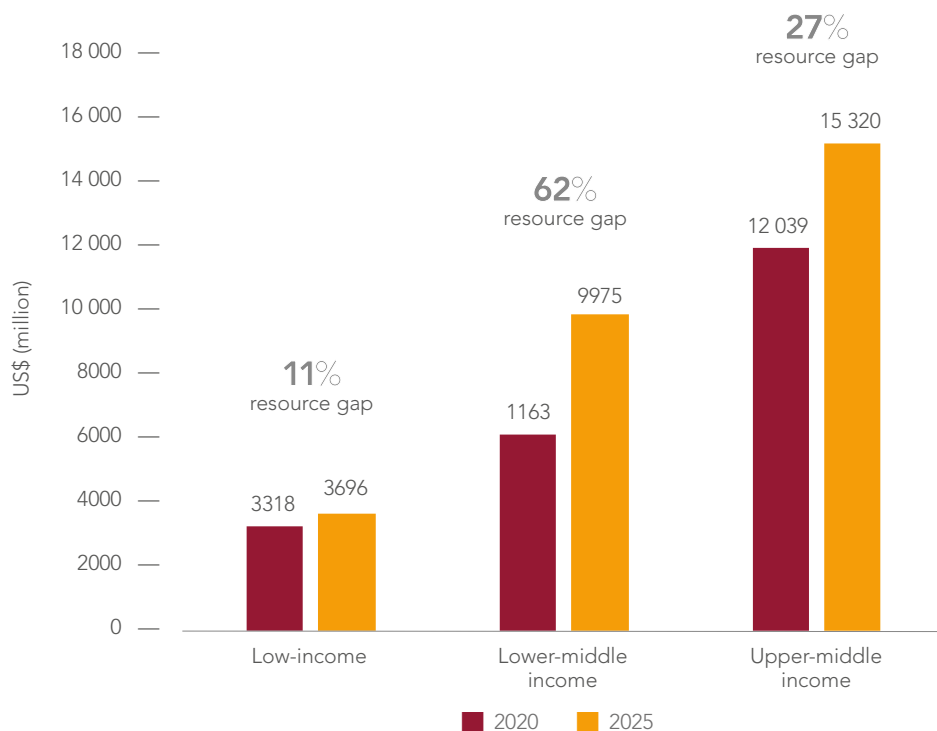
HIV DATA

Resource gaps are larger in lower-middle-income and upper-middle-income countries

Upper-middle-income countries account for about 53% of total HIV resources needs in 2025 for low- and middle-income countries. That share reflects higher unit costs (e.g., for human resources, antiretroviral medicines and other HIV commodities) and larger population sizes in need of prevention within that income group. A little over half (51%) of the total HIV resource needs in low- and middle-income countries for 2025 is concentrated in nine countries, seven of which are among the 10 most populous countries in the world. Six of those nine countries are upper-middle-income: Brazil, China, Indonesia, Mexico, the Russian Federation and South Africa.

The gap between the resources available for HIV responses in 2020 and the resources needed in 2025 is primarily among lower-middle-income and upper-middle-income countries (Figure 9.3). In low-income countries that rely heavily on donor support, the resources available for HIV responses in 2020 were 90% of the estimated resources needed in 2025.

FIGURE 9.3 | **CURRENT RESOURCES, 2020, AND ESTIMATED RESOURCE NEEDS, 2025, BY COUNTRY INCOME CLASSIFICATION**



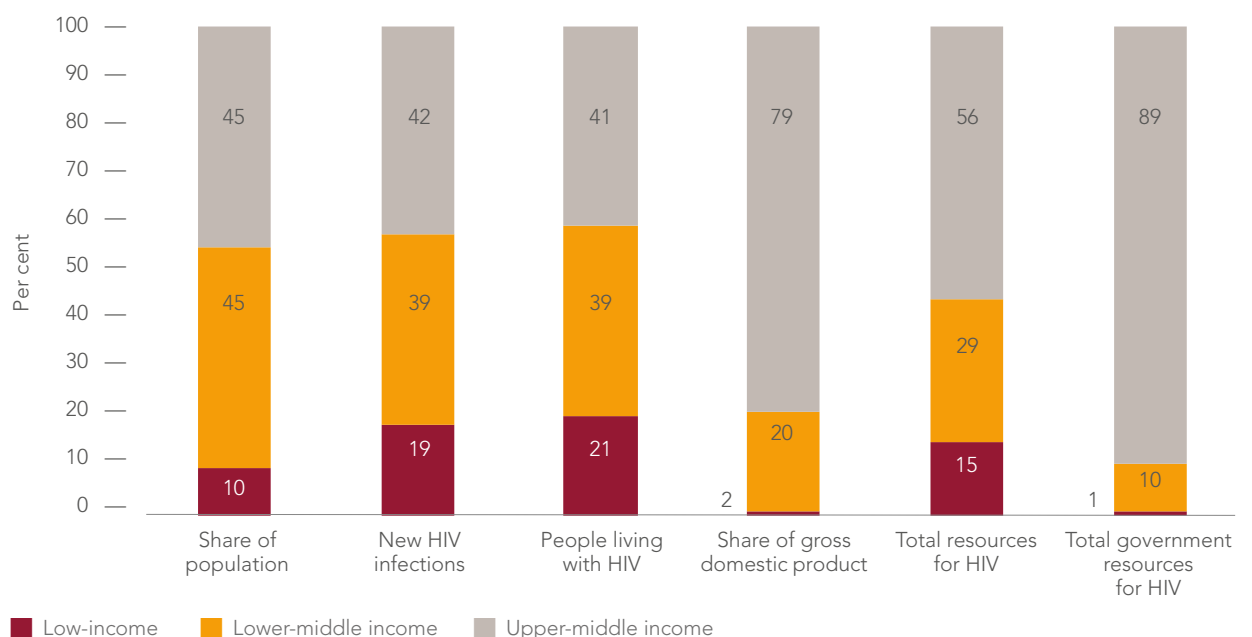
Source: UNAIDS financial estimates and projections, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).

Note: The resource estimates are presented in constant 2019 US dollars. The countries included are those that were classified by the World Bank in 2020 as being low- and middle-income.

The HIV resources available to countries within different income groups do not always match their HIV burdens and economic output. Low-income countries generate only about 2% of the total economic output of low- and middle-income countries, but they provide only 1% of the domestic public resources for HIV of all low- and middle-income countries (Figure 9.4). These countries rely heavily on external donor support to fund their HIV programmes. Lower-middle-income countries produce 20% of the total economic output of low- and middle-income countries, but they provide 10% of the domestic public resources for HIV of all low- and middle-income countries. Upper-middle-income countries are responsible for almost 80% of the total gross domestic product, have about 41% of the HIV burden and account for 89% of the domestic HIV resources available in low- and middle-income countries. Comparatively high unit costs may be contributing to this group's currently larger share of HIV resources. These data suggest that low-income and lower-middle-income countries have the scope to further increase the amount of domestic resources they are allocating to HIV responses, even if modestly but within their ability, while upper-middle-income countries could and should increase their funding to meet their HIV resource needs.

The gap between the resources available for HIV responses in 2020 and the resources needed in 2025 is primarily among lower-middle-income and upper-middle-income countries.

FIGURE 9.4 | DISTRIBUTION OF POPULATION, HIV-RELATED DISEASE BURDEN, ECONOMIC OUTPUT AND FINANCIAL RESOURCES, BY INCOME CLASSIFICATION OF LOW- AND MIDDLE-INCOME COUNTRIES, 2020



Source: Analysis based on UNAIDS epidemiologic financial estimates, 2021; World economic outlook. Washington (DC): International Monetary Fund; 2021 (<https://www.imf.org/en/Publications/WEO/Issues/2021/03/23/world-economic-outlook-april-2021>).
 Note: Data are presented for all low- and middle-income countries.

HIV DATA

Resource availability varies across regions

The availability of HIV resources varies widely by region, with high proportions of international funding occurring in sub-Saharan Africa and the Caribbean (Figure 9.5). Countries in eastern and southern Africa have maintained comparatively high levels of HIV spending through a mixture of domestic and international resources, which has helped drive and sustain a steady decline in new HIV infections and AIDS-related mortality. The HIV responses of western and central Africa and the Caribbean are heavily reliant on international resources, and overall resource availability in both regions has declined in recent years. In western and central Africa, continued reliance on out-of-pocket expenditures (such as user fees for health services) also continues to be a major barrier to equitable HIV service access (1–3).

HIV responses in other regions receive much smaller proportions of donor support. For example, most countries in Latin America have successfully mobilized large amounts of domestic resources for their HIV responses and reduced HIV infections and deaths to relatively low levels, but a flattening in HIV infections and slow reductions in AIDS-related mortality in recent years suggest that much better use of available resources is required to achieve additional progress. Regional trends can also be shaped by spending in a few influential countries.

Both eastern Europe and central Asia and the Middle East and North Africa still massively underspend on their HIV responses. Asia and the Pacific also needs to increase its investments in the HIV response if it is to reach the 2025 targets. All three of these regions generate the majority of their HIV resources from domestic sources.



Credit: UNAIDS

In regions with annual resource availability that already meets or exceeds their 2025 investment targets, more efficient resource allocation is required to meet their 2025 service coverage and impact targets.

FIGURE 9.5 | RESOURCE AVAILABILITY FOR HIV, 2010–2020, AND ESTIMATED RESOURCE NEEDS FOR HIV BY 2025, BY REGION



HIV DATA

In regions with large populations and relatively low national HIV prevalence, the large numbers of people in need of HIV prevention services drive HIV resource needs.

Expenditures should match programming needs

The HIV expenditure patterns of countries should reflect the scale and characteristics of their HIV epidemics. For example, in regions with populous countries and relatively low national HIV prevalence, such as Asia and the Pacific, the large numbers of people in need of HIV prevention services drive HIV resource needs. By contrast, in regions with a higher burden of disease, such as eastern and southern Africa, testing and treatment services represent a larger share of 2020 HIV programme expenditures and 2025 resource needs (Figure 9.6).

FIGURE 9.6 | DISTRIBUTION OF ESTIMATED EXPENDITURES FOR HIV, 2019, AND RESOURCE NEEDS FOR HIV, 2025, BY PROGRAMME AREA AND REGION



Source: UNAIDS financial estimates, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).

Note: Prevention of HIV vertical transmission does not include antiretroviral treatment.



Credit: UNAIDS

Further price reductions for antiretroviral medicines and other key HIV commodities can be achieved through the strategic use of flexibilities under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), and by rearranging procurement and supply management systems to take advantage of economies of scale.

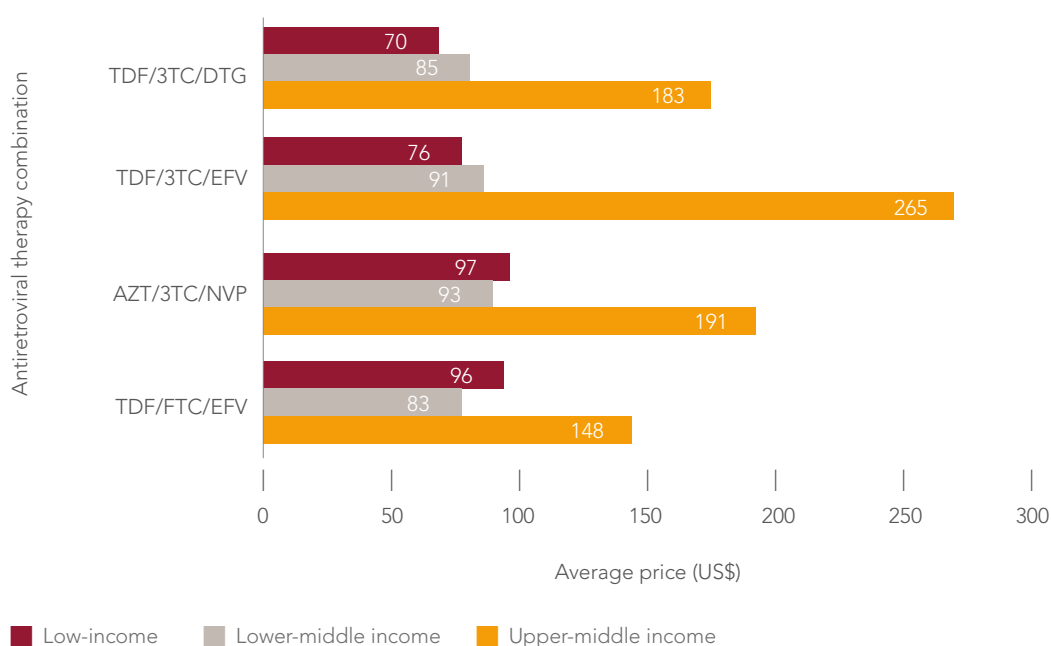
HIV DATA

Upper-middle-income countries pay more for HIV medicines

The cost of antiretroviral medicines has a major effect on resource needs for HIV responses. Currently, the average prices for first- and second-line antiretroviral therapy are broadly similar in low- and lower-middle-income countries, but they are substantially higher in upper-middle-income countries (Figure 9.7). For example, countries in eastern Europe and central Asia and in Latin America tend to pay considerably higher prices for antiretroviral medicines compared with countries in other regions (Figure 9.8). Further price reductions for antiretroviral medicines and other key HIV commodities can be achieved through the strategic use of flexibilities under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), and by rearranging procurement and supply management systems to take advantage of economies of scale. If these and other cost-savings are made, a 14% increase in resources for HIV testing and treatment can result in a 35% increase in the number of people receiving treatment by 2025—enough to reach the 95–95–95 testing and treatment targets.



FIGURE 9.7 | **AVERAGE PRICE (US\$) PER PERSON-YEAR FOR FIRST- AND SECOND-LINE ANTIRETROVIRAL THERAPY, BY COUNTRY INCOME GROUP, 2020**

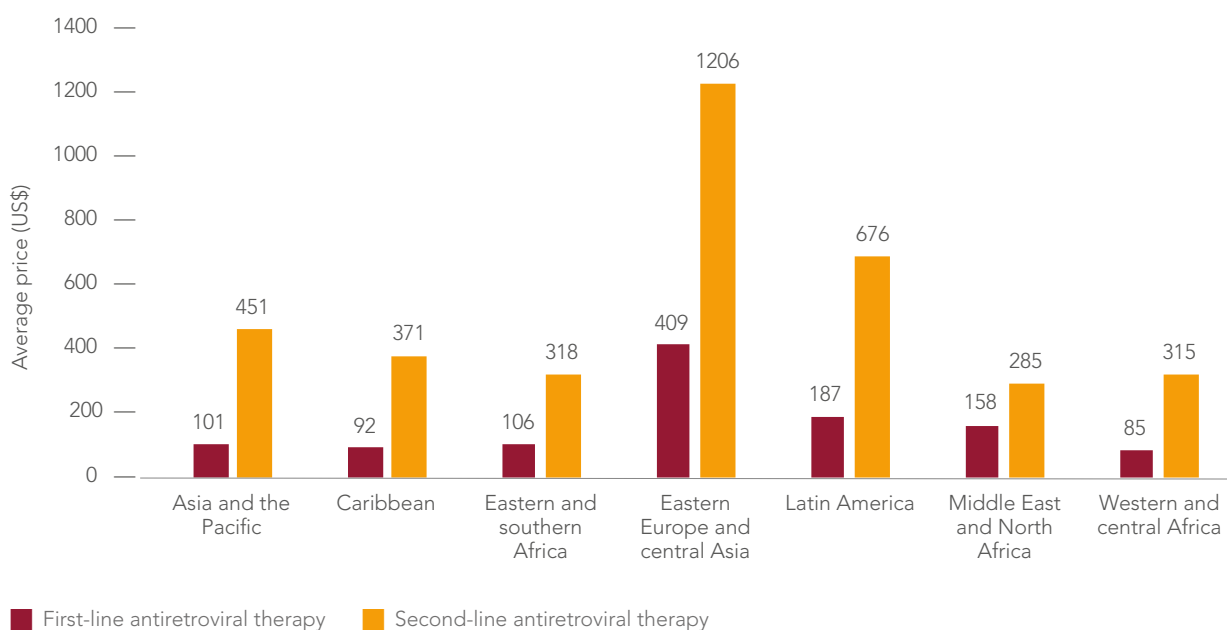


Source: UNAIDS financial estimates, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>); UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>).

Note: Data are for 89 countries that reported to UNAIDS Global AIDS Monitoring 2021.

Note: TDF = tenofovir disoproxil fumarate; 3TC = lamivudine; DTG = dolutegravir; EFV = efavirenz; AZT = azidothymidine; NVP = nevirapine; and FTC = emtricitabine.

FIGURE 9.8 | **AVERAGE PRICE PER PERSON-YEAR FOR FIRST- AND SECOND-LINE ANTIRETROVIRAL THERAPY, BY REGION, 2020**



Source: UNAIDS financial estimates, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>); UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>).

Note: Data are for 89 countries that reported to UNAIDS Global AIDS Monitoring 2021.

Case study

ZIMBABWE'S AIDS LEVY: A RESILIENT WAY TO FINANCE A NATIONAL HIV RESPONSE

As countries seek ways to fund their HIV programmes sustainably, Zimbabwe's AIDS Levy still stands out as one of the most successful—and resilient—domestic HIV funding tools in use by a low-income or lower-middle-income country.

Established by national legislation in 1999, the AIDS Levy is the oldest HIV trust fund in Africa. This homegrown solution has reduced dependence on donor funding and strengthened country ownership of the national HIV programme. Zimbabwe has also been able to use the Levy to leverage other international funding for its public health system (4).

The AIDS Levy is a 3% surcharge on corporate and personal income tax (the mining industry was excluded until 2015). Zimbabwe's National AIDS Council administers the funds collected through the AIDS Levy, guided by an annual workplan and budget approved by the Minister of Health and Child Welfare (4).

Revenues rose gradually in the early years, despite economic instability and hyperinflation, and they have continued to rise over the past decade. On average, the AIDS Levy has raised approximately US\$ 35 million annually throughout the past decade, contributing up to 15% of the costs of the national HIV response (5).

Revenues have primarily been used to fund HIV treatment: 50% of the funds go to Zimbabwe's antiretroviral therapy programme, 10% to prevention, 6% to monitoring, evaluation and

coordination, and 5% to the creation of an enabling environment (Figure 9.9) (5).

ADAPTABLE AND RESILIENT

Economic setbacks saw the amounts raised through the AIDS Levy dip slightly in the mid-2010s. The trust fund encountered further difficulties when it was converted to the local currency, with currency devaluation cutting into purchasing power for imported commodities (such as antiretroviral medicines, which have to be paid for in foreign currency). Adaptation, however, has made the Levy a resilient funding mechanism, and it has been strategically repositioned to support increased investments in combination HIV prevention and social contracting (6).

Zimbabwe's latest National HIV/AIDS Strategic Plan IV 2021–2025 commits the Government to promote private–public partnerships in health, such as social contracting with civil society organizations, using revenues from the AIDS Levy (7). A so-called swap is also being negotiated with donors: this would see an even larger proportion of the funds raised through the Levy invested in prevention programmes, with a focus on adolescent girls and young women and key populations (8). External funders (such as the Global Fund) would be asked to take on an increasing share of HIV treatment financing (6).

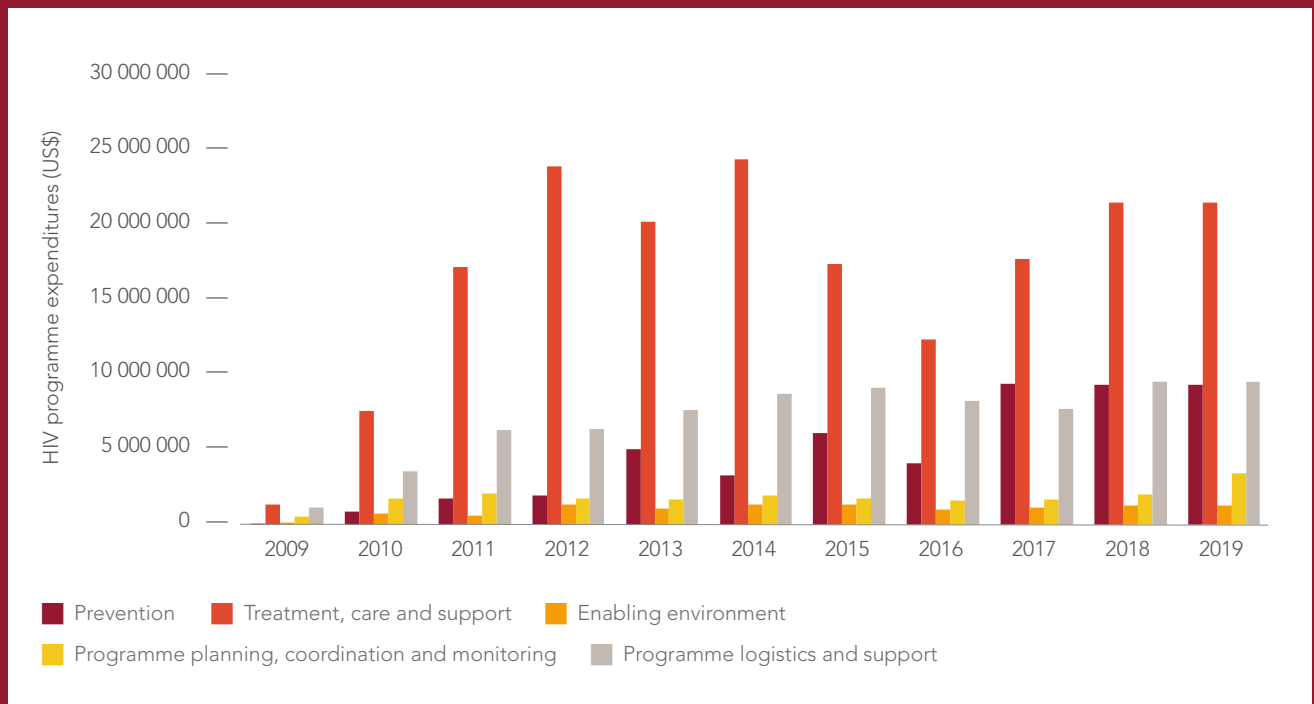
The AIDS Levy holds lessons for countries considering similar financing options. Its status and longevity stems from the fact that it was legally established by an Act of Parliament. Despite the fiscal constraints created by the COVID-19 pandemic and other challenges, the Government has also remained committed to funding the HIV response domestically. Since the Levy is integrated into the national tax system, it entails minimal additional administrative costs: disbursement decisions are informed by a bottom-up process that involves local AIDS networks, with the final decisions taken at the national level.

The Levy has helped protect essential HIV services against volatile funding trends, and it has bypassed political obstacles in the public budgeting process.

It also avoids mismatches between the time frames of budget allocation decisions and funding cycles, and it allows for unused funds to be carried over to the next fiscal year (4).

Crucially, it provides transparency and accountability on the use of HIV resources. The accounts are independently audited and available publicly on the National AIDS Council website. Audited accounts have consistently confirmed that the Levy funds are used for the intended purposes (4). "The AIDS Levy is probably the only tax on labour for which the taxed workers can identify with the outcome," says Zimbabwean economist Reneth Mano (9).

FIGURE 9.9 | HIV PROGRAMME EXPENDITURES FUNDED BY ZIMBABWE'S AIDS LEVY, BY PROGRAMME AREA, 2009–2019



Source: National AIDS Trust Fund Income and Expenditure Statements. Harare: National AIDS Council of Zimbabwe; 2021.

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10

COVID-19 AND HIV

The COVID-19 pandemic has highlighted the fault lines of a deeply unequal world and exposed the inadequacy of investments in public health. People living with HIV appear to be at elevated risk of COVID-related illness and death, and in mid-2021, most did not have access to COVID-19 vaccines (1, 2).

The societal disruptions caused by COVID-19 have accelerated the adoption of HIV service delivery innovations, including community-led services and other forms of differentiated service delivery, self-testing, multimonth dispensing of medicines, and the use of telehealth and virtual platforms for information and support—many of which hold benefits and lessons for other health programmes.

COVID-19 lockdowns and other restrictions badly disrupted HIV testing, and in many countries, they led to steep drops in HIV diagnoses, referrals to care services and HIV treatment initiations. Health facilities (including HIV-focused clinics) were repurposed to handle the influx of COVID-19 patients, face-to-face services were suspended, and many people either avoided or were unable to access health care. The Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) reported that, according to data collected at 502 health facilities in 32 African and Asian countries, HIV testing declined by 41% and referrals for diagnosis and treatment declined by 37% during the first COVID-19 lockdowns in 2020, compared with the same period in 2019 (3).

HIV prevention services were also cut back, especially those involving face-to-face contact. Programmes to prevent vertical transmission of HIV were curtailed in many African countries, and some voluntary medical male circumcision (VMMC) programmes were suspended for much of 2020. The latter precautions saw the number of medical male circumcisions decline by more than 30% in the 15 priority countries in eastern and southern Africa (see Chapter 01). The provision of pre-exposure prophylaxis (PrEP) was also disrupted, including in the United States of America, where there were 16% fewer PrEP prescriptions and 31% fewer new PrEP users in March–June 2020 than anticipated (based on trends in 2017–2020) (4). In South Africa, new PrEP initiations were 40% lower in March–April 2020 compared to the preceding months, and in Brazil, PrEP dispensing fell by 53% in April 2020 (5, 6).



2025 TARGETS AND COMMITMENTS in the 2021 Political Declaration on AIDS

- Ensure that 95% of people living with, at risk of and affected by HIV are protected against pandemics, including COVID-19.
- Use of differentiated service delivery models for testing and treatment, including digital, community-led and community-based services that overcome challenges such as those created by the COVID-19 pandemic by delivering treatment and related support services to the people in greatest need where they are.
- Ensure the systematic engagement of HIV responses in pandemic response infrastructure and arrangements, leveraging national HIV strategic plans to guide key elements of pandemic preparedness planning.
- Build back better in a more equitable and inclusive manner from the COVID-19 pandemic and its impact on the AIDS pandemic response, and build resilience against future pandemics and other global health and development challenges.

COVID-19 has placed unprecedented stresses on food supply chains, with the resulting increases in food insecurity threatening the most vulnerable, including people living with HIV (7, 8). The COVID-19 pandemic has also resulted in unprecedented losses of jobs and income, with people working in the informal economy particularly threatened (9). Surveys suggest that people living with HIV face high levels of discrimination in employment and have high rates of unemployment, with a significant percentage engaged in the informal economy. Action is required to protect all workers in vulnerable situations, and these measures must include people living with HIV (10).

Creative fixes

A combination of resilience and quick adaptations—including expanded use of differentiated and community-led services—enabled many HIV programmes to rebound rapidly after the initial COVID-19 lockdowns in early and mid-2020 (11).

Multimonth dispensing of antiretrovirals and other essential medicines, an approach that the World Health Organization (WHO) and UNAIDS have recommended since 2016, was adopted more widely and successfully, often alongside other forms of differentiated service delivery (see Latin America and the Caribbean case study) (12). Namibia, for example, rapidly distributed four to six months of supplies of antiretroviral medications to 97% of the 172 000 people on antiretroviral therapy in that country (13). Medicine supplies among patients were sustained by setting up community pick-up sites, using mobile vans and home delivery services, and reinforcing community adherence groups. In Kampala, Uganda, more than half of 191 000 people receiving antiretroviral therapy in the city missed their scheduled visits at the beginning of the country's first lockdown. From April 2020 onwards, service providers adopted multimonth refills and made alternative antiretroviral pick-up arrangements, including home deliveries by peers and collection at community sites. As a result, almost everyone needing antiretroviral refills during April–June 2020 received them (14).

These kinds of adaptations have made a huge difference. HIV testing and treatment services at more than 1000 health facilities funded by the United States President's Emergency Plan for AIDS Relief (PEPFAR) in 11 countries in sub-Saharan Africa recovered substantially by June 2020. Significantly, the trends appeared to be similar for women and men (15). In the second half of 2020, some 80% of people on HIV treatment at those facilities were receiving at least three months of medication at a time, compared with 51% at the end of 2019 (15).¹

¹ Two thirds of the facilities were in three countries: Côte d'Ivoire, the Democratic Republic of the Congo and Zambia. The other countries in the study were Angola, Burundi, Cameroon, Eswatini, Ethiopia, Kenya, Mozambique and South Sudan.

Telehealth measures

Telehealth and online consultations are being used to sustain access to HIV services. In Uganda, toll-free hotlines were set up to advise people where and how they could access their HIV medications (16). Kenyan community-based organizations working with gay men and other men who have sex with men shifted to virtual peer support using social media platforms, while maintaining some in-person services. Testing coverage within this key population in Kenya dipped only slightly during the first lockdown and then kept rising through July

2020 (17). In the Philippines, telemedicine, mobile clinics and home deliveries of antiretroviral medicines were introduced, while multimonth dispensing and online consultations helped retain people in care in Myanmar and Thailand (18, 19).

However, telehealth measures have limited impact in areas with low access to Internet connectivity, smartphones or airtime, as seen in impoverished communities in Cape Town, South Africa (20). Similarly, one in three participants in a survey among people living with HIV in Buenos Aires, Argentina, had problems using telehealth or Internet-based medical services (21). In Florida, in the United States, researchers found that people with the most to gain from telehealth approaches were least likely to have broadband access or be able to afford the necessary technology (22).

Countries have an opportunity to reinforce and build on the adaptations that have helped keep HIV services performing during the COVID-19 pandemic. The 2021 United Nations Political Declaration on AIDS requires that countries systematically engage HIV responses in pandemic response infrastructure and arrangements, leverage national HIV strategic plans to guide pandemic preparedness planning, and ensure that 95% of people living with, at risk of and affected by HIV are protected against pandemics, including COVID-19. It also calls for countries to build on the resilience and innovation shown by community-based health systems during the COVID-19 pandemic in reaching affected communities with essential HIV and other health-care services.

COVID-19 disruptions in HIV services are being mitigated by multimonth dispensing of antiretroviral medicines and differentiated service delivery that includes community-led options and telehealth measures.



Credit: ICW

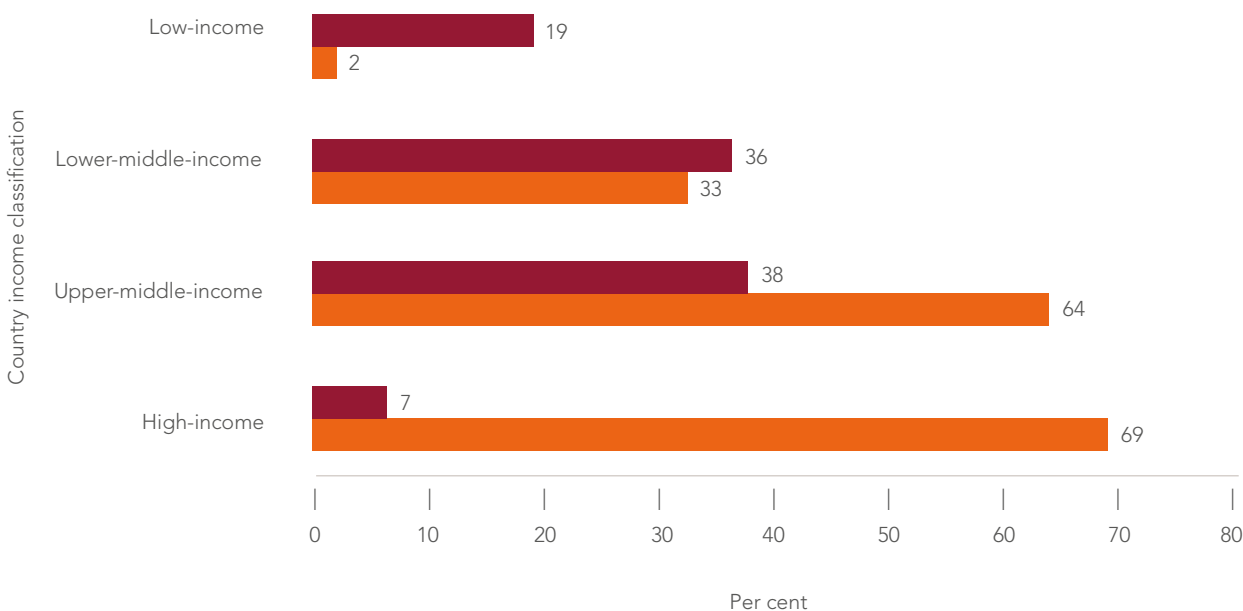
HIV DATA

People living with HIV at higher risk of COVID-19 illness

An increasing body of evidence indicates that people living with HIV who acquire SARS-CoV-2 infection are at heightened risk of requiring hospitalization and having poor clinical outcomes (1, 2). Data from the United States show that people living with HIV who acquired SARS-CoV-2 infection were much more likely to require hospitalization and suffer severe illness than people who were HIV-negative, while studies from England and South Africa have found that the risk of dying from COVID-19 among people with HIV was double that of the general population (23–26). Advanced HIV disease and/or the presence of chronic comorbidities—which tend to be common in people living with HIV—appear to be strongly associated with poor COVID-19 outcomes in people living with HIV (27–33).

Meanwhile, access to COVID-19 vaccines around the world remains exceedingly unequal and unjust. In mid-2021, vaccines were still scarcely available in the low-income and lower-middle-income countries that are home to more than half (55%) of people living with HIV globally (Figure 10.1).

FIGURE 10.1 | DISTRIBUTION OF THE POPULATION COVERED BY AT LEAST ONE DOSE OF A COVID-19 VACCINE (AS OF 29 JUNE 2021), COMPARED TO THE DISTRIBUTION OF PEOPLE LIVING WITH HIV (ALL AGES), BY COUNTRY INCOME CLASSIFICATION, 2020



- Percentage of the global population of people living with HIV (all ages)
- Percentage of people who received at least one dose of a COVID-19 vaccine

Sources: Coronavirus (COVID-19) Vaccinations. In: Our World in Data [Internet]. 29 June 2021 (<https://ourworldindata.org/covid-vaccinations>); UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

Notes: 2020–20210 country classifications by income level, calculated by the World Bank. The vaccine coverage indicated may not equal the share that are fully vaccinated if the vaccine requires two doses.

COVID-19 slows HIV diagnoses and treatment starts

HIV testing and referrals to antiretroviral therapy were badly affected by COVID-19 during 2020. In South Africa's KwaZulu-Natal province, for example, data from 65 primary care clinics show a 48% drop in HIV testing after the first national lockdown was imposed in April 2020, and there also were fewer new HIV diagnoses and a marked drop in treatment initiation (34). This occurred as 28 000 HIV community health-care workers were shifted from HIV testing to COVID-19 symptom screening.

Similar trends were seen around the world. Reduced testing uptake was reported in Myanmar, while in Manila, Philippines, 61% fewer HIV tests were done in 2020 than in 2019, and enrolment in HIV care declined by 28% (18, 35). In Brazil, 29% fewer people started treatment in April 2020 compared with a year earlier (5). In India, data from 16 cities show that the number of both people who inject drugs and gay men and other men who have sex with men who used integrated care services in May–July 2020 was 25–35% below usual levels (36). Testing for HIV and other sexually transmitted infections (STIs) declined by almost 90% in the first month of India's first lockdown, and it recovered only slightly in the subsequent months. Access to services was lowest for people who inject drugs (36).

Data collected by UNAIDS show that those trends were widespread (Figure 10.2). Each of the 22 countries with available data experienced a decline in the number of people starting antiretroviral therapy in March or April 2020. Kenya, Lesotho, South Africa and Zimbabwe are among the countries where the number of people starting HIV treatment remained below January 2020 levels for most of the year. By contrast, reductions were short lived in Cameroon and Nigeria, followed by dramatic increases in treatment initiations in mid-2020. This pattern was also seen to a lesser degree in the Dominican Republic, Rwanda and Togo.

HIV DATA

Country data reported to UNAIDS show that HIV testing and referrals to treatment were badly affected by COVID-19 during 2020.



Credit: UNAIDS

FIGURE 10.2 | CHANGE IN THE NUMBER OF PEOPLE NEWLY INITIATING ANTIRETROVIRAL TREATMENT PER MONTH, COMPARED TO BASELINE, SELECTED COUNTRIES, 2020



■ Mar. ■ Apr. ■ May ■ Jun. ■ Jul. ■ Aug. ■ Sep. ■ Oct. ■ Nov. ■ Dec.

Source: UNAIDS/WHO/UNICEF HIV services tracking tool, June 2021.

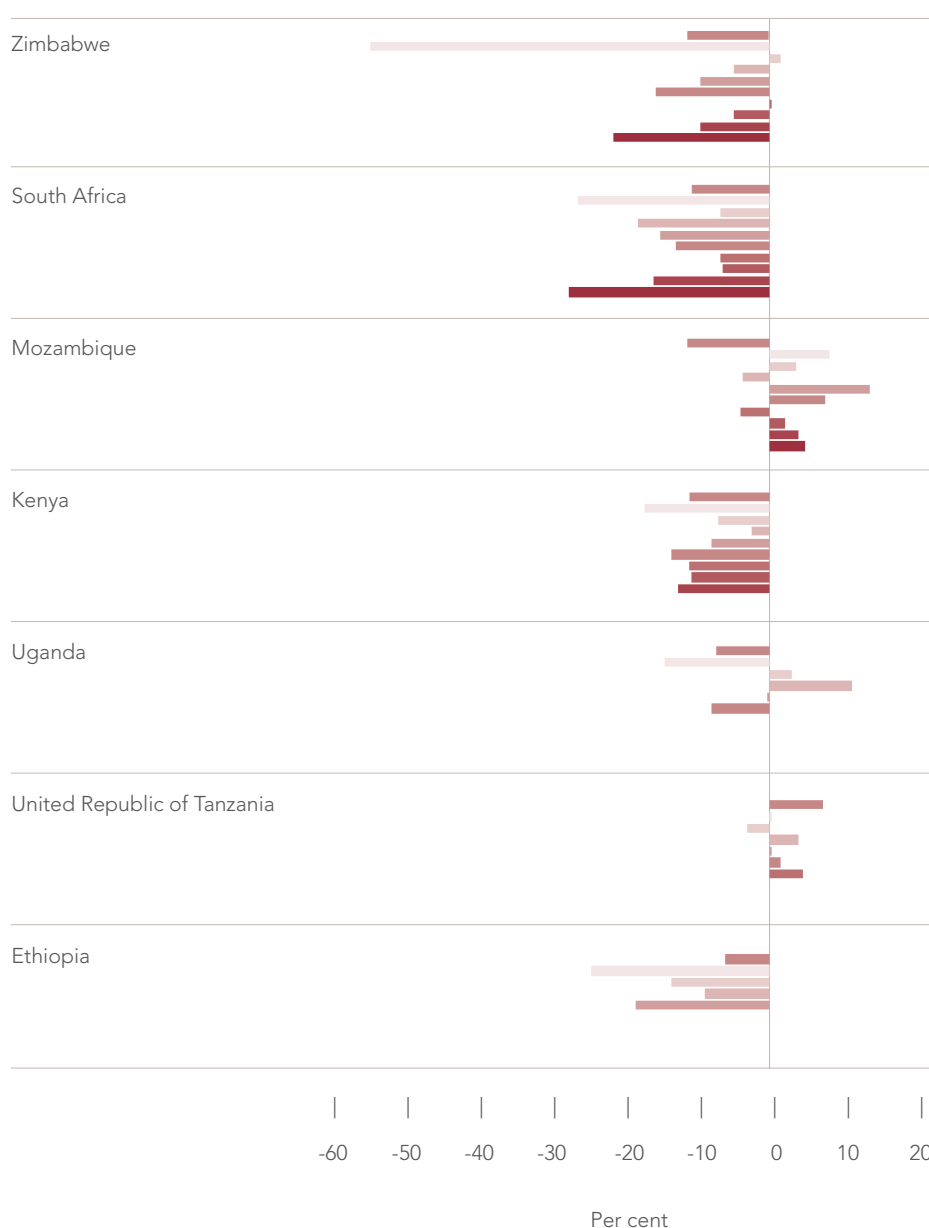
Note: The baseline is the average of the January and February 2020 reports. Inclusion criteria: at least six months of consecutive data since January 2020, at least 50% of facilities reporting, and at least 50 individuals newly initiated on antiretroviral therapy in January 2020.

HIV DATA

HIV testing of pregnant women rebounds quickly

Antenatal care services were disrupted by the COVID-19 pandemic, but they proved to be strikingly resilient. Data from several countries in eastern and southern Africa show the number of pregnant women tested for HIV declined by at least 15% between January and March 2020, but by August 2020, testing levels had recovered in all but one of the countries (Figure 10.3).

FIGURE 10.3 | **CHANGE IN THE NUMBER OF PREGNANT WOMEN TESTED FOR HIV AT ANTENATAL CARE, PER MONTH COMPARED TO BASELINE, SELECTED COUNTRIES WITH HIGH HIV BURDENS, 2020**



■ Mar. ■ Apr. ■ May ■ Jun. ■ Jul. ■ Aug. ■ Sep. ■ Oct. ■ Nov. ■ Dec.

Source: UNAIDS/WHO/UNICEF HIV services tracking tool, June 2021.

Note: The baseline is the average of the January and February 2020 reports.

HIV DATA

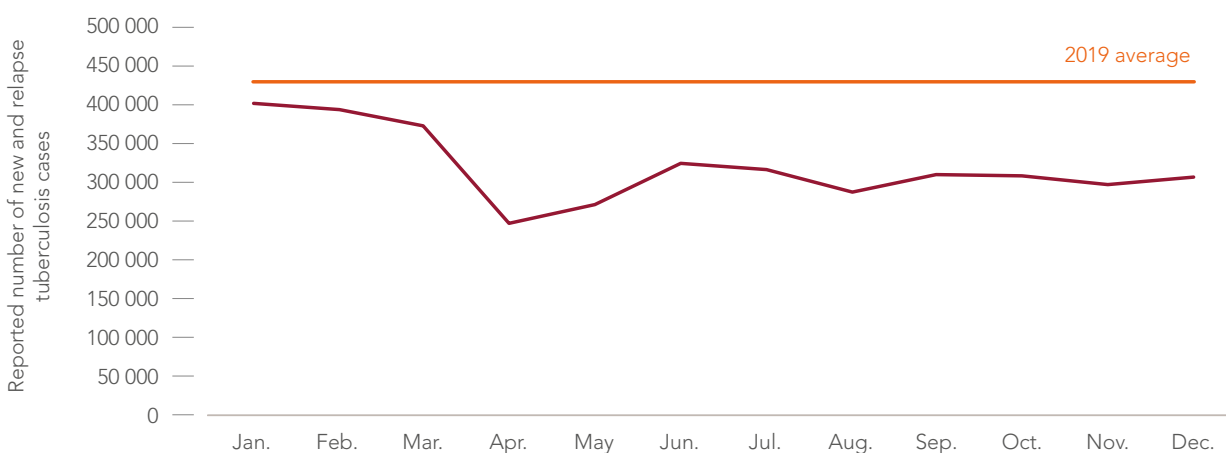
Tuberculosis service disruptions threaten a decade of progress

Policies widely adopted to control the COVID-19 pandemic had a severe impact on essential tuberculosis services in 2020, threatening to erase a decade of progress against tuberculosis-related mortality. Provisional data compiled by WHO from 84 countries indicate that an estimated 1.4 million fewer people received care for tuberculosis in 2020 than in 2019—a reduction of 21% (Figure 10.4).² The shortfalls were even larger in countries with high tuberculosis burdens: 42% in Indonesia, 37% in the Philippines and 25% in India. The shortfall was 41% in South Africa, the country with the world's highest burden of tuberculosis–HIV coinfection (Figure 10.5). The number of people receiving care for tuberculosis in South Africa recovered in the second half of 2020 before declining steeply when COVID-19-related movement restrictions were reimposed at the end of 2020 (Figure 10.6) (37).

WHO estimates that COVID-19-related disruptions could cause an additional 500 000 tuberculosis deaths, dragging the world back to the level of tuberculosis mortality reported in 2010. Such an outcome can be averted if effective infection prevention and control measures are applied, and if the health and safety of health workers, staff and patients are protected. Simultaneous testing for tuberculosis and COVID-19 that is based on exposure or presence of risk factors should be scaled up, and people-centered prevention and care services need to be made the norm. Stronger community engagement and concerted steps to reduce stigma and discrimination will help close the gaps in care (37).

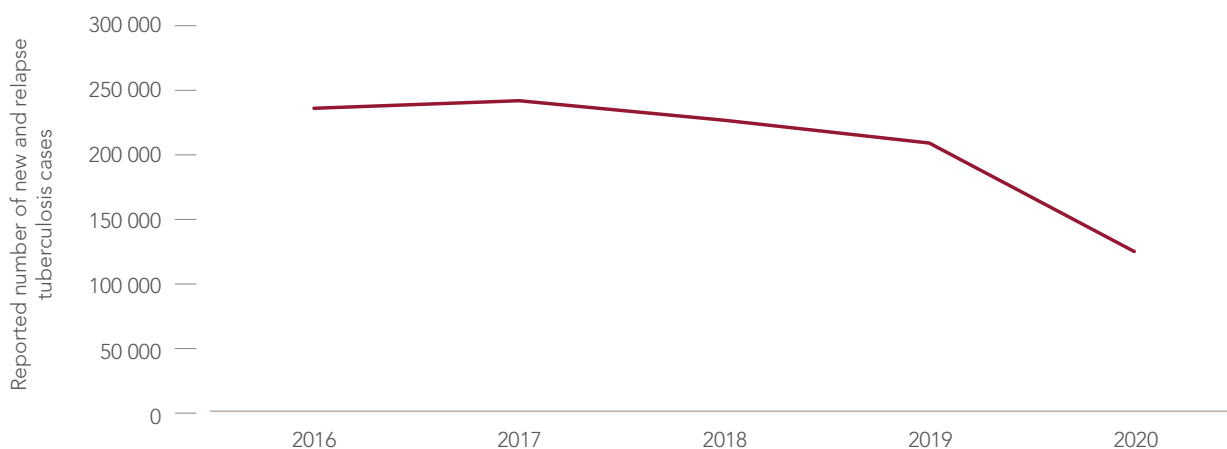
² Those 84 countries accounted for 84% of the estimated global tuberculosis incidence in 2019.

FIGURE 10.4 | PROVISIONAL REPORTED NUMBER OF NEW AND RELAPSE TUBERCULOSIS CASES PER MONTH, REPORTING COUNTRIES, 2020, AND 2019 AVERAGE



Source: WHO June 2021 data (available from https://worldhealthorg.shinyapps.io/tb_pronto/).

FIGURE 10.5 | REPORTED NUMBER OF NEW AND RELAPSE TUBERCULOSIS CASES PER YEAR, SOUTH AFRICA, 2016–2020



Source: WHO June 2021 data (available from https://worldhealthorg.shinyapps.io/tb_pronto/).

FIGURE 10.6 | PROVISIONAL REPORTED NUMBER OF NEW AND RELAPSE TUBERCULOSIS CASES PER MONTH, SOUTH AFRICA, 2020, AND 2019 AVERAGE



Source: WHO June 2021 data (available from https://worldhealthorg.shinyapps.io/tb_pronto/).



Case study

MAINTAINING HIV TREATMENT AND CARE DURING THE COVID-19 PANDEMIC IN LATIN AMERICA AND THE CARIBBEAN

Lockdowns, curfews, economic restrictions and social isolation associated with the COVID-19 pandemic are having a disproportionate negative effect on vulnerable populations, including the 2.4 million people living with HIV in Latin America and the Caribbean.

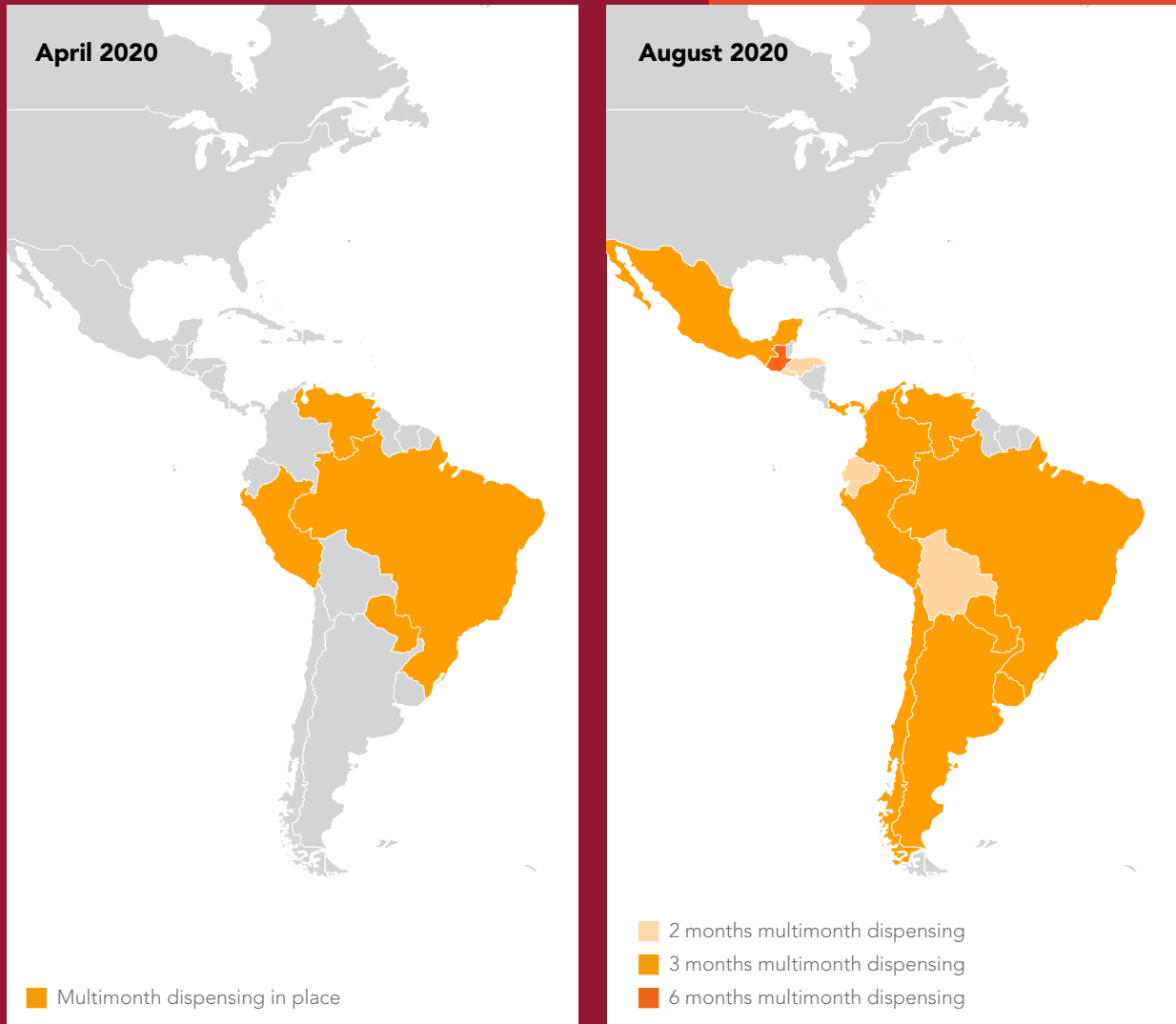
As the COVID-19 pandemic took hold in early 2020, evidence emerged that HIV testing and treatment services were being disrupted in Latin America and the Caribbean. An online survey on service disruption showed nearly half of people receiving HIV treatment had difficulties obtaining antiretroviral medicines (38).³ Other research showed that HIV testing was also affected (39).

To minimize treatment interruptions, UNAIDS, the Pan-American Health Organization (PAHO) and WHO aggressively promoted multimonth dispensing and distribution of antiretroviral medicines, in line with existing recommendations on differentiated service delivery.

WHO guidelines call for less frequent clinical visits (every three to six months) for stable patients on antiretroviral therapy and multimonth dispensing (40). This reduces possible exposure to COVID-19 while individuals are in HIV care and relieves strain on health systems (40). Studies have shown that dispensing six months of antiretroviral medicines is as reliable and effective for HIV care as shorter dispensing intervals, and that it can save costs for both health-care providers and patients (41, 42).

³ In total, 2300 surveys were fully completed, with responses received from 28 countries.

FIGURE 10.7 | SCALE UP OF MULTIMONTH DISPENSING OF ANTIRETROVIRAL THERAPY, LATIN AMERICA AND THE CARIBBEAN, APRIL AND AUGUST 2020



Source: An analysis of multi-month dispensing of antiretroviral treatment, community distribution and pre-exposure prophylaxis in Latin America and the Caribbean during COVID-19 pandemic. UNAIDS Regional Office for Latin America and the Caribbean; 2020.

Advocacy and technical assistance provided by UNAIDS and PAHO, including guidelines published in July 2020, facilitated a rapid shift in dispensing policies in the region (43). In March 2020, only eight countries in Latin America and the Caribbean allowed up to three months of antiretroviral medicines to be dispensed to individuals. Five months later, 13 additional countries were providing two-to-six-month prescriptions of antiretroviral medicines (Figure 10.7) (44).^{4,5} Data collected by UNAIDS indicated that the proportion of people in the region with more than two months of antiretroviral medicines doubled from three in 10 to six in 10 between April and August 2020.

Community distribution of antiretroviral medicines was also expanded. While only seven countries had policies in place for community distribution, three additional countries enlisted community-based organizations to provide home deliveries of antiretroviral medicines, including the Dominican Republic and the Plurinational State of Bolivia (in some rural areas). Community pick-up points were set up in two states in Brazil.

Stock-outs of antiretroviral medications posed a risk in some countries. In the first months of the COVID-19 pandemic, PAHO/WHO research found that more than one third of the 19 countries surveyed were at risk of stock-outs of first-line antiretrovirals for adults; two thirds risked stock-outs of second-line antiretrovirals for adults (13 countries had one to six months of stock) (45). Fourteen countries had limited stock, and 10 had experienced complete stock-outs of paediatric antiretroviral medications (45).

The most frequent threats to the supply chain were the closure of pharmaceutical laboratories, suspended imports and exports, cancellations of commercial flights and other transport, and overall inflated transportation costs.

The PAHO Strategic Fund, a regional technical mechanism for pooled procurement of essential medicines and strategic health supplies, monitored regional inventories, identified which countries and medications were at risk of stock-outs, brokered intercountry access to stocks and recommended alternative regimens.

International solidarity also played an important role: six of the seven countries facing imminent risk of antiretroviral stock-out (the Plurinational State of Bolivia, the Dominican Republic, El Salvador, Guatemala, Jamaica and Panama) received loans or exchanges of supplies. Over the course of 2020, PAHO negotiated long-term agreements with suppliers to support the acquisition of antiretrovirals in 21 countries in the region.

By August 2020, antiretroviral supplies were more secure than they had been before the pandemic. No country experienced stock-outs at the national level, and only three of 14 surveyed countries had four or fewer months of antiretroviral stocks in-hand (Figure 10.8).

Additionally, few countries in the region reduced their HIV care services during the COVID-19 pandemic: of 19 countries surveyed, 14 kept all of their care facilities operating, only five reduced services by 25% or more, and no country reported actual disruptions in supplies of antiretrovirals (46).

4 The Dominican Republic and Guatemala authorized multimonth dispensing for up to six months, while the other countries allowed it for up to three months.

5 The UNAIDS study examined the situations in 24 countries: Argentina, Belize, the Bolivarian Republic of Venezuela, Brazil, Chile, Colombia, Costa Rica, Cuba, the Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, the Plurinational State of Bolivia, Suriname and Uruguay. Data were gathered from: UNAIDS surveys; the HIV Services Tracking website (<https://hivservicestracking.unaids.org>); the Antiretroviral Inventory compiled by PAHO/WHO and UNAIDS; the PAHO Strategic Fund; and interviews with UNAIDS country offices and regional organizations (SE-COMISCA and Horizontal Technical Cooperation Group).

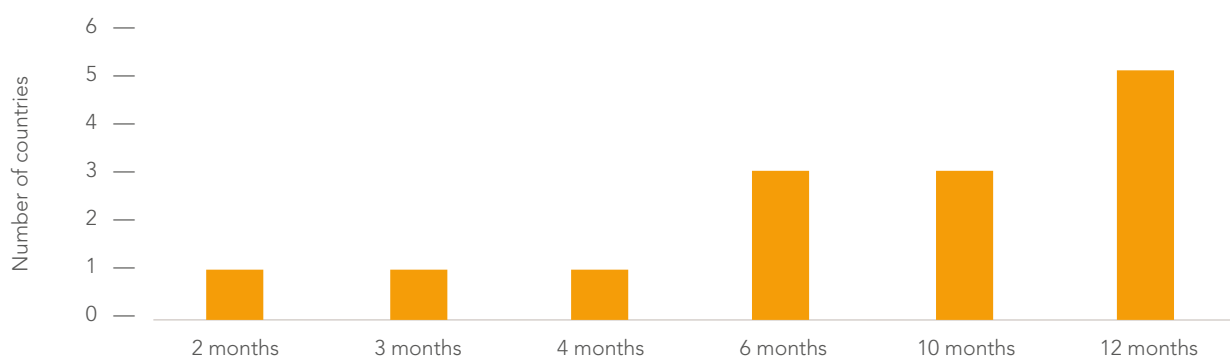
TABLE 10.1 | **PROGRESS TOWARDS MULTIMONTH DISPENSING AND COMMUNITY DISTRIBUTION OF ANTIRETROVIRALS IN LATIN AMERICA AND THE CARIBBEAN**

Country	1. Does it have a MMD policy?	2. Dispensing frequency according to MMD policy	3. Is the MMD policy a consequence of COVID-19?	4. Is the strategy widely implemented?	5. Are there regulations for the community distribution of ARVs?	6. Are regulations for community ARV distribution implemented at the national level?
Argentina	Yes	3 months	Yes	No	No	No
Belize	Yes	2 months	Yes	No	No data	No data
Bolivia (Plurinational State of)	Yes	2 months	Yes	Yes	No	No
Brazil	Yes	3 months	No	Yes	No	No
Chile	Yes	3 months	Yes	Yes	No	No
Colombia	Yes	3 months	Yes	No data	No	No
Costa Rica	No	1 month	No data	No data	No data	No data
Cuba	Yes	2 months	No	Yes	Yes	Yes
Dominican Republic	Yes	6 months	Yes	Yes	Yes	No
Ecuador	Yes	2 months	Yes	Yes	No	No
El Salvador	Yes	2 months	Yes	Yes	Yes	No
Guatemala	Yes	3–6 months	Yes	Yes	Yes	Partly
Guyana	Yes	2 months	No	No	No	No
Haiti	Yes	3 months	No	Yes	Yes	Yes
Honduras	Yes	2 months	Yes	No	No	No
Jamaica	No	1 month	No data	No	No	No
Mexico	Yes	3 months	Yes	No	No	No
Nicaragua	No	1 month	No data	No data	No data	No data
Panama	Yes	3 months	Yes	Yes	No	No
Paraguay	Yes	3 months	No	Yes	Yes	No
Peru	Yes	3 months	No	Yes	No	No
Suriname	Yes	2 months	No	No	No	No
Uruguay	Yes	3 months	Yes	Yes	No	No
Venezuela (Bolivarian Republic of)	Yes	3 months	No	No	No	No

Source: Data from UNAIDS and PAHO/WHO (Status of HIV/STI services in the Context of COVID-19 survey).

Note: MMD = multimonth dispensing; ARV = antiretroviral medications.

FIGURE 10.8 | **MONTHS OF ANTIRETROVIRAL STOCKS AVAILABLE AT THE NATIONAL LEVEL, 14 COUNTRIES IN LATIN AMERICA AND THE CARIBBEAN, AUGUST 2020**



Source: Data from the PAHO/WHO Services Survey, conducted in August 2020.

Note: Out of the 24 countries included in the study, 14 provided data on months of stock available.

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11

INTEGRATION AND UNIVERSAL HEALTH COVERAGE

The HIV response does not exist in isolation. People living with, at risk of and affected by HIV have broader needs: they require health services, education, sustainable livelihoods and social safety nets.

The 2021 United Nations Political Declaration on AIDS recognizes that the AIDS pandemic response is interconnected with efforts to improve global health, respond to COVID-19, prepare for future pandemics and achieve most of the Sustainable Development Goals. The Declaration commits countries to speed up the integration of HIV services with services for preventing and tackling coinfections and comorbidities, such as tuberculosis, viral hepatitis, sexually transmitted infections (STIs), non-communicable diseases and mental health conditions. It also calls on all countries to ensure that science- and evidence-informed and differentiated HIV services for people living with, at risk of and affected by HIV are included within service packages for universal health coverage, to include HIV responses within strong and resilient systems for health and social protection, and to build back better from the devastation caused by COVID-19 in a more equitable and inclusive manner that enhances preparedness for future pandemics. There are specific commitments to reduce the high rates of HIV coinfection with tuberculosis, viral hepatitis and STIs, including the human papillomavirus (HPV).

Equity, quality and access are among the building blocks of universal health coverage. Delivering a broad range of health services to people living with, affected by and at risk of HIV and other priority populations throughout their lives requires attention to stigma and discrimination and other impediments to services. These include gender inequalities, sexual and gender-based violence, poverty, inadequate living conditions and insufficient investments in social protection and education. Key health system functions—including governance, service delivery, health information, procurement and supply chain management, human resources and financing—should be strengthened to support the effective delivery of HIV and integrated services, including access to quality medicines and other health commodities, technologies and innovations.

Integration is progressing well in some areas. For example, linkages between HIV treatment and tuberculosis screening, diagnosis, treatment and prevention have been strengthened (see Chapter 02). In other areas, however, progress is much too slow. For instance, the coverage of cervical cancer screening, treatment and care for women living with HIV remains far too low in most countries and settings with a high HIV burden.



2025 TARGETS AND COMMITMENTS in the 2021 Political Declaration on AIDS

- Ensure progressive integration of financing for HIV responses within domestic financing for health, social protection, emergency responses and pandemic responses.
- Accelerate integration of HIV services into universal health coverage and strong and resilient health and social protection systems.
- Invest in robust, resilient, equitable and publicly funded systems for health and social protection systems that provide 90% of people living with, at risk of and affected by HIV with people-centred and context-specific integrated services for HIV and other communicable diseases, non-communicable diseases, sexual and reproductive health care and gender-based violence, mental health, palliative care, treatment of alcohol dependence and drug use, legal services and other services they need for their overall health and well-being.

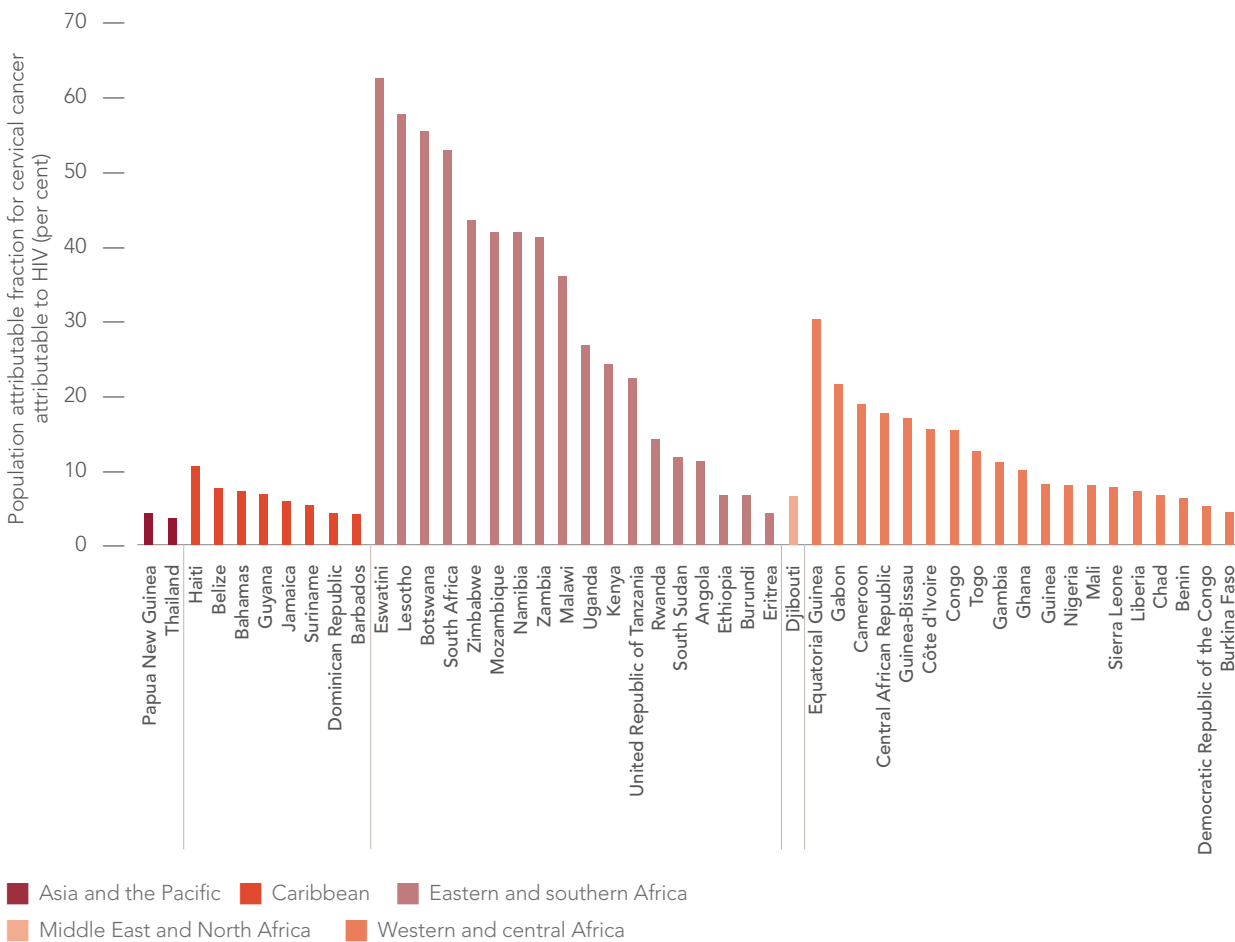
*A woman living with HIV gets a health check at a district health centre in Hanoi, Viet Nam.
Credit: UNAIDS*

HIV DATA

High cervical cancer burden in sub-Saharan Africa

Cervical cancer is the third most common cancer among women globally, with more than 600 000 new cases estimated in 2020 (1). Cervical cancer is an AIDS-defining illness and is the most common cancer among women living with HIV (2). It is often caused by infection with high-risk sub-types of HPV, a common but preventable infection that women with compromised immune systems struggle to clear. HPV infection may also increase the risk of HIV transmission (3). Women living with HIV are at high risk of persistent HPV infection: they have a sixfold higher risk of developing invasive cervical cancer, which develops twice as fast for women with untreated HIV infection, and they are more likely than women without HIV to die of cervical cancer, even when receiving antiretroviral therapy for HIV (4).

FIGURE 11.1 | ESTIMATED POPULATION ATTRIBUTABLE FRACTION OF CERVICAL CANCER ATTRIBUTABLE TO HIV, 50 HIGHEST RANKED COUNTRIES, 2018



Source: Adapted from: Stelzle D, Tanaka LF, Lee KK, Khalil AI, Baussano I, Shah ASV et al. Estimates of the global burden of cervical cancer associated with HIV. Lancet Glob Health. 2021;9(2):E161-E169.

Note: The figure shows data for 48 countries. Data for Turkmenistan (5–9.99%) and Trinidad and Tobago (<5%) are not shown because HIV estimates are not published by UNAIDS.

HIV DATA

An estimated 85% of women with cervical cancer live in sub-Saharan Africa. HPV vaccination and cervical cancer screening, followed by adequate management of precancerous lesions, are highly cost effective solutions.

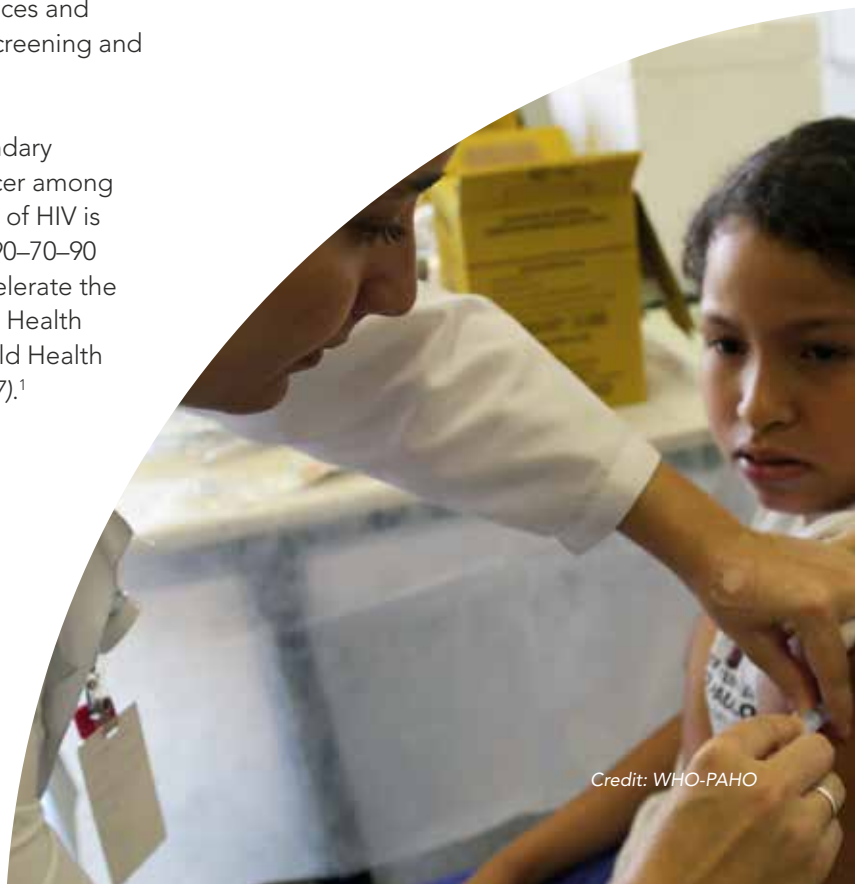
HPV vaccination and cervical cancer screening, followed by adequate management of precancerous lesions, are highly cost effective and recommended by WHO as “best buys” for noncommunicable disease prevention (5, 6). These interventions should be major priorities in countries and settings where a substantial HIV-attributable cervical cancer burden has added to the existing cervical cancer burden. An estimated 85% of women with cervical cancer live in sub-Saharan Africa, where the proportion of women living with HIV among people with cervical cancer exceeded 40% in nine countries, underscoring the link between HIV and cervical cancer burden in the region (Figure 11.1). Malawi, Mozambique, South Africa, Uganda, the United Republic of Tanzania and Zimbabwe accounted for about half of all women living with HIV who developed cervical cancer in 2018 (4).

The Global AIDS Strategy 2021–2026 includes population-specific targets to be reached by 2025. These targets include:

- 90% of women living with HIV have access to integrated or linked services for HIV treatment and cervical cancer.
- 90% of school-aged young girls (aged 9 to 14 years) in priority countries have access to HPV vaccination.
- 90% of adolescent girls and young women (aged 15 to 24 years) have access to sexual and reproductive health services that integrate HIV services and include HPV, cervical cancer and STI screening and treatment, among other services.

Ensuring access to the primary and secondary prevention and treatment of cervical cancer among women living with, affected by and at risk of HIV is critical to the achievement of the global 90–70–90 targets within the Global Strategy to Accelerate the Elimination of Cervical Cancer as a Public Health Problem, which was launched by the World Health Organization (WHO) in November 2020 (7).¹

¹ The 90–70–90 targets are as follows: 90% of girls fully vaccinated with HPV vaccine by 15 years of age; 70% of women screened using a high-performance test by age 35, and again by age 45; and 90% of women identified with pre-invasive and invasive cervical cancer properly managed.



Case study

GOING FURTHER AGAINST CERVICAL CANCER IN MALAWI

The Go Further partnership is working in 12 countries in sub-Saharan Africa to reduce new cervical cancer cases among the estimated 7.1 million women living with HIV by 95%.² Go Further—an innovative public–private partnership between the United States President’s Emergency Plan for AIDS Relief (PEPFAR), the George W. Bush Institute, UNAIDS and Merck—aims to screen all women living with HIV aged 25 to 49 years who are on HIV treatment in partner countries every two years, and to provide same day treatment for women with pre-invasive cervical cancer lesions.³

Go Further focuses on integrating and scaling up cervical cancer screening and treatment services within existing platforms for HIV treatment and women’s health. The partnership also engages communities in creating awareness and demand for the services, enhancing referral systems and strengthening care. Since its launch in May 2018, Go Further has provided screening for cervical cancer to more than 1.5 million women living with HIV—1.3 million of whom were screened for the first time—and more than 60 000 women with precancerous lesions have received same day treatment.

One of the Go Further priority countries is Malawi, where the incidence of cervical cancer is among the highest in the world.⁴ Since 2019, almost 120 000 women living with HIV in Malawi have been screened for cervical cancer, and 68% of those with precancerous lesions have received treatment. Health-care staff and peer supporters at HIV treatment facilities, known as “expert clients,” explain the importance of cervical cancer screening to women living with HIV and link them to those services.

Working closely with the Ministry of Health in Malawi and technical partners, the Go Further partnership has introduced the loop electrosurgical excision procedure (LEEP), an outpatient method for removing large precancerous cervical lesions, at all of Malawi’s district hospitals. PEPFAR’s implementing partners are strengthening referral networks for women living with HIV who require access to the procedure, and they are also improving specialized care for women with suspected invasive cervical cancer who cannot yet access the recommended preventive services.

The joint cervical cancer and HIV programme in Malawi is aiming to fully integrate cervical cancer and HIV services at all 750 HIV treatment sites in the country. By late 2020, 311 of those sites were offering both cervical cancer and HIV services, up from 81 in 2017.

² Go Further partner countries are: Botswana, Eswatini, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Namibia, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe.

³ For more information, see: <https://www.state.gov/partnership-to-end-aids-and-cervical-cancer/>

⁴ The estimated age-standardized incidence rate was 67.9 cervical cancer cases per 100 000 women in 2020, according to the Global Cancer Observatory (8).

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12

MOBILE POPULATIONS

As the COVID-19 pandemic unfolded in early 2020, an estimated 79.5 million people were forcibly displaced due to natural or climate-based disasters, as well as persecution, conflict, violence, human rights violations or events seriously disturbing public order (1, 2). There were also an estimated 281 million international migrants in 2020 (3). The COVID-19 pandemic created even greater challenges in providing mobile populations with equitable access to essential health services, including HIV treatment and support.

Effective guidance and tools exist for addressing HIV in crisis settings, in part due to efforts by the UNAIDS Joint Programme and collaborating partners that integrate HIV into key interventions for mobile populations and facilitate their inclusion into national health and protection systems. Among 42 refugee-hosting countries (all but two in sub-Saharan Africa) that were surveyed by the Office of the United Nations High Commissioner for Refugees (UNHCR) in 2019, 88% reported that refugees could access HIV treatment through national systems, and 100% reported free tuberculosis treatment was available (4).

The 2021 United Nations (UN) Political Declaration on AIDS requires that by 2025, 90% of people in humanitarian settings have access to integrated HIV services and 95% of people in humanitarian settings at risk of HIV use appropriate combination prevention options.

Migrants are identified as a vulnerable population in the Declaration, and the 2021–2026 Global AIDS Strategy calls for 90% of migrants and other people on the move to have access to people-centred, tailored and integrated services for HIV, other communicable diseases, and sexual and gender-based violence.

Although migration on its own is not a risk factor for HIV, it can complicate HIV service access. Studies show that migrants' access to HIV testing and treatment services is often inferior to that of non-migrants (5–9). National laws and regulations typically restrict access to services for irregular migrants, while fear of deportation deters many from accessing essential services. Stigma and discrimination further undermine their access to essential services, with migrants who belong to key populations likely to experience especially harsh discrimination in many countries (10, 11). The exclusion of noncitizens from national health and social protection systems has left migrants and other mobile populations especially vulnerable during the COVID-19 pandemic, highlighting the importance of truly inclusive social protection and health systems (12).



A Venezuelan migrant crosses a bridge at the border between Colombia and the Bolivarian Republic of Venezuela, Cúcuta, Colombia.
Credit: UNAIDS/Ramón Lepage

2025 TARGETS AND COMMITMENTS in the 2021 Political Declaration on AIDS

- Ensure that 90% of people in humanitarian settings have access to integrated HIV services.
- Ensure that 95% of people in humanitarian settings at risk of HIV use appropriate, prioritized, people-centred and effective combination prevention options.
- Build back better in a more equitable and inclusive manner from COVID-19 and humanitarian situations, and strengthen public health and enhance future pandemic responses and preparedness.

Although migration on its own is not a risk factor for HIV, it can complicate HIV service access. Studies show that migrants' access to HIV testing and treatment services is often inferior to that of non-migrants.

Case study

ALL TOGETHER: PROVIDING HIV SERVICE TO VENEZUELAN REFUGEES AND MIGRANTS IN COLOMBIA

In recent years, millions of Venezuelans have left their country to escape an extended political and economic crisis. Many do not have the official documentation that would grant them access to essential public services, such as health care, in their host countries.

The predicament of many refugees and migrants has worsened during the COVID-19 pandemic. More than three quarters (77%) of respondents to an October–November 2020 survey of 1810 Venezuelan refugees and migrants reported that COVID-19 had aggravated their economic situation, including an accumulation of debts, and exposed them to a higher risk of eviction. Nearly 70% of survey respondents did not receive any type of assistance that would allow them to prevent or have some protection against eviction, according to the study by UN agencies and the Inter-American Commission on Human Rights (13).

In Colombia, more than half of the 1.7 million Venezuelan refugees and migrants lack formal residency status, which has limited their access to essential services, protection and support (14, 15). For people requiring ongoing treatment and care for HIV or other health conditions, this is a major risk. According to a survey done by CARE between 2019 and early 2020, one third of migrants known to have HIV or other sexually transmitted infections (STIs) in Colombia, Ecuador and Peru had not received treatment for those conditions for at least two years (16).

Migrants observe social distancing as a COVID-19 preventive measure before entering the Norwegian Refugee Council Community Center in July 2020 in San Antonio del Táchira, Bolivarian Republic of Venezuela.
Credit: OCHA/Gema Cortes



In mid-2020, Senderos Asociación Mutual, a Colombian nongovernmental organization, stepped in to help fill that gap. The organization focuses on providing health care to workers in the popular or informal economy and migrants facing difficulties accessing health services in Cali, Colombia. In August 2020, it launched a project to facilitate access to HIV and other STI care for refugees and migrants of Venezuelan origin. The services were publicized by handing out flyers in communities with large migrant populations, through social media platforms and at public activities.

Senderos partnered with other nongovernmental organizations (including AID for AIDS and AmeriCare) to provide HIV testing to 503 irregular migrants. Twenty-six tested positive for HIV and were referred to antiretroviral therapy. Forty others were referred to sexual and reproductive health services.

Christopher Grisales, a young Venezuelan, is one of the migrants reached by Senderos. “I found a place where they have supported my health, with excellent professionals,” he says.

Mr Grisales now also has the prospect of accessing Colombia's public health system, after the Government of Colombia announced a scheme in early February 2021 that would provide 10-year temporary protected status to Venezuelans in the country. This status grants access to basic services—including the national health system, COVID-19 vaccination and schooling—and makes it easier for refugees and migrants to work and seek permanent residency (14, 15). The United Nations High Commissioner for Refugees, Filippo Grandi, has called the move “the most important humanitarian gesture in the region in decades” (17).



Thousands of refugees and migrants return to the Bolivarian Republic of Venezuela in July 2020 from Colombia through the Simón Bolívar International Bridge in San Antonio del Táchira, Bolivarian Republic of Venezuela. Credit: OCHA/Gema Cortes



Newly-arrived Venezuelan refugees and migrants in July 2020 in San Antonio del Táchira, Bolivarian Republic of Venezuela. As neighboring countries hosting Venezuelan migrants implement COVID-19 containment measures, thousands are returning home to avoid economic and social hardship.

Credit: OCHA/Gema Cortes



Newly arrived returnees going through administrative procedures in San Antonio del Táchira, Bolivarian Republic of Venezuela. Amid mounting challenges, the novel coronavirus pandemic is exacerbating humanitarian needs, prompting aid agencies to scale up their response.

Credit: OCHA/Gema Cortes

Case study

RESTORING HEALTH AND DIGNITY THROUGH NUTRITION IN SOMALIA

Since 2012, Hafsa (a pseudonym), a 46-year-old woman from Baidoa in the South West State of Somalia, and her family have been living in Shabele camp, in Bosaso, where they resettled due to the civil war. "In 2019, I fell sick and became very weak. I decided to visit Bosaso General Hospital for treatment, where the nurse told me I was HIV-positive. I almost fainted, I was so shocked."

As soon as Hafsa's husband heard the news, he abandoned her and their eight children. "I lost all the support I had been getting from my husband, and life became very difficult," she explains. "At that time, two of my children were studying in primary school, but I could not manage to pay school fees, so they dropped out." In her second visit to the hospital, Hafsa was prescribed antiretroviral therapy and found out that she was eligible to be enrolled on a food by prescription programme.

"After six months, my health improved," she says. "I was discharged, and the nurse referred me to another programme, through which I could receive food vouchers. Peer educators always encouraged me to collect my food and continue taking medication. Since then, my life has changed for the better. I feel well, and my dignity has been restored. My children are also now enrolled in a new school, where they receive free breakfast and lunch."

Lack of proper nutrition is a common reason why people living with HIV interrupt or stop taking the antiretroviral medicines that can save their lives. In Somalia, the World Food Programme (WFP) has been working with the Ministry of Health to assist malnourished people on antiretroviral therapy and tuberculosis treatment with specialized nutritional support at 34 health centres across the country.

WFP deploys networks of trained outreach workers to identify potentially malnourished patients, using a standard protocol of active case-finding, referrals and tracing of people who interrupt treatment. After that, nutrition screenings and assessments are conducted, and counselling and specialized nutrition are provided by health-care workers who have been trained in nutrition assessment counselling and support (18).



*Hafsa, a 46-year-old woman living with HIV, is a volunteer at a antiretroviral therapy centre, where she encourages other people living with HIV to keep taking their medicines and access nutrition support.
Credit: WFP*

In 2020, the interventions reached more than 7200 malnourished people who were receiving antiretroviral therapy or tuberculosis treatment, a 40% increase over 2019. The results were significant: 87% percent of the people recovered from acute malnutrition and they all remained on treatment.

Hafsa now serves as a volunteer at one of the health centres, where she encourages other people living with HIV to adhere to their HIV treatment, access adequate nutrition support and achieve sustained viral load suppression.

WFP is also using a cash transfer programme to include people living with HIV and their families in the national social safety net, and to help address some of the poverty-related drivers of the epidemic. WFP organized sensitization sessions on HIV-sensitive social protection for government officials and networks of people living with HIV in Puntland State, in the northeast of the country. This led to the development of action plans to include people living with HIV in existing social welfare programmes and to publicize social protection policies, guidelines and programmes for people living with HIV so they understand their entitlements and can benefit from the existing social protection system.

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REGIONAL PROFILES



EASTERN AND SOUTHERN AFRICA



Eastern and southern Africa remains the region most heavily affected by HIV, accounting for approximately 55% of all people—and two thirds of all children—living with HIV. It is also the region that has made the strongest progress against the HIV epidemic since 2010: new HIV infections declined by 43% overall from 2010 to 2020, and by 64% among children (aged 0 to 14 years), the sharpest reductions in any region.

As a whole, the region came very close to achieving 2020 targets for testing and treatment—a remarkable achievement given the high burden of HIV in the region. Countries such as Eswatini, Namibia and Zambia have shown tremendous leadership in advancing towards the 90–90–90 targets, with Eswatini already reaching the 95–95–95 targets. Overall, there were 50% fewer deaths due to AIDS-related causes in 2020 compared with a decade earlier.

Such is the scale of the region's epidemic, however, that it still claimed 310 000 [220 000–470 000] lives in 2020, and 670 000 [470 000–930 000] people acquired HIV in the same period. An estimated 58% of those infections were among women and girls, against a background of entrenched gender inequalities and prevalent gender-based violence. Key populations and their sexual partners accounted for 32% of new infections in 2020.

Testing and treatment coverage for men continues to be significantly lower than for women, a trend that jeopardizes the health and lives of men and their partners. Children have experienced much slower progress across the testing and treatment cascade than adults.

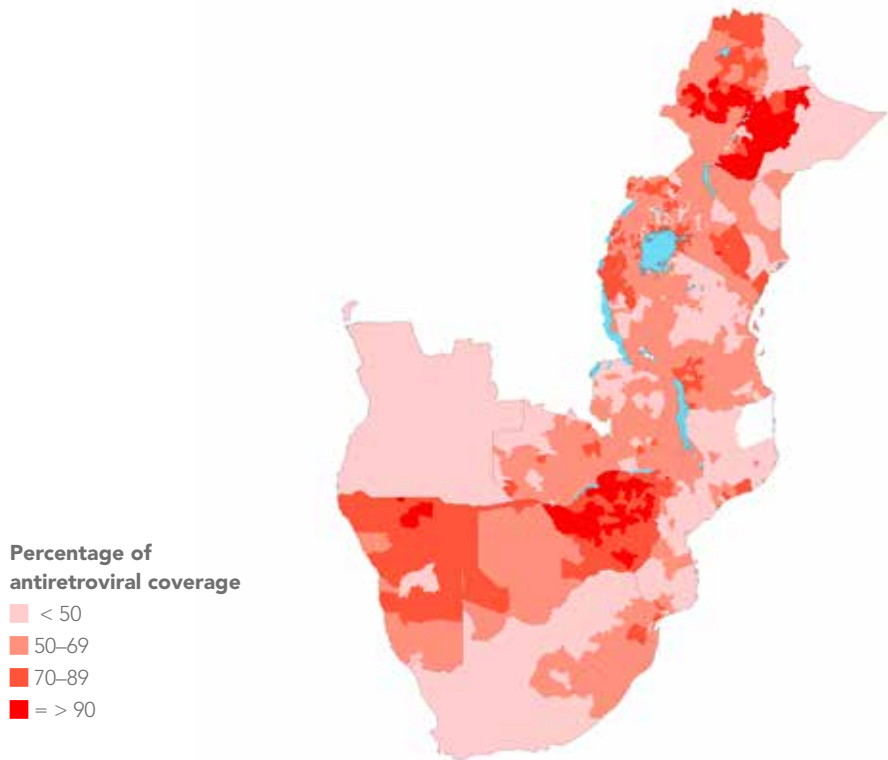
Political commitment remains strong across the region: most countries have adopted ambitious targets for programme expansion and increased domestic funding for their HIV responses. The extensive involvement of community-led organizations and networks in HIV activities is a hallmark of the regional response. Their efforts helped limit disruptions and delays to HIV services caused by the COVID-19 pandemic.

Efforts to improve sexual and reproductive health and rights—including the expansion of comprehensive sexuality education and programmes to reduce gender-based violence, gender inequality, harmful practices and child marriage—are also gathering pace in many countries.

PRIORITY ACTIONS FOR ENDING AIDS

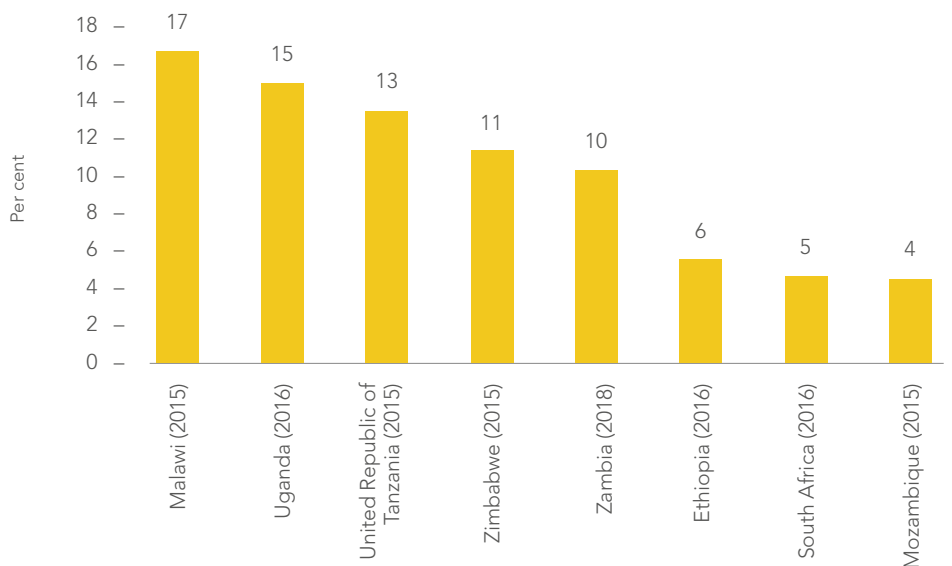
- Expand high-impact combination HIV prevention for key populations, adolescent girls and young women, and young men in all their diversity.
- Preserve gains in testing, treatment and care during the COVID-19 pandemic, and address geographic- and population-specific service coverage gaps that are particularly affecting priority subpopulations.
- Ensure the sustainability of the HIV response, including through greater domestic funding and service integration.
- Address social and structural barriers, including harmful gender and social norms and gender-based violence.
- Empower communities and place them at the centre of national and subnational HIV responses. Strive to tailor HIV and sexual and reproductive health and rights services to the needs of young people in all their diversity, thus ensuring higher service uptake.

FIGURE 13.1 | **ANTIRETROVIRAL TREATMENT COVERAGE AMONG MEN (AGED 20–24 YEARS), SUBNATIONAL LEVEL, EASTERN AND SOUTHERN AFRICA, 2020**



Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

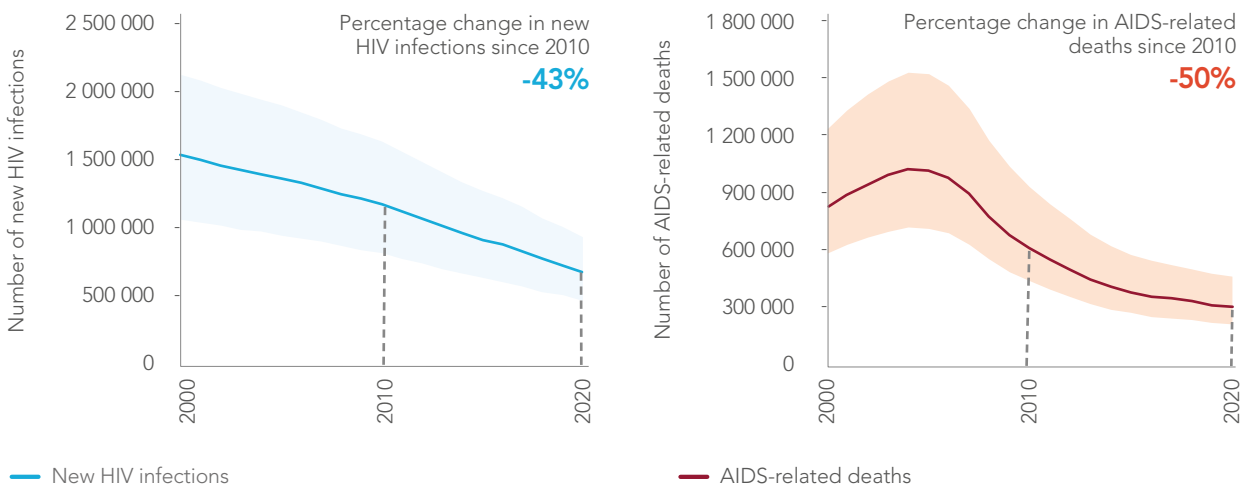
FIGURE 13.2 | **PERCENTAGE OF YOUNG WOMEN (AGED 15–24) WHO REPORT HAVING EXPERIENCED SEXUAL VIOLENCE, SELECTED COUNTRIES, EASTERN AND SOUTHERN AFRICA, 2015–2018**



Source: Demographic and Health Surveys, 2015–2018.

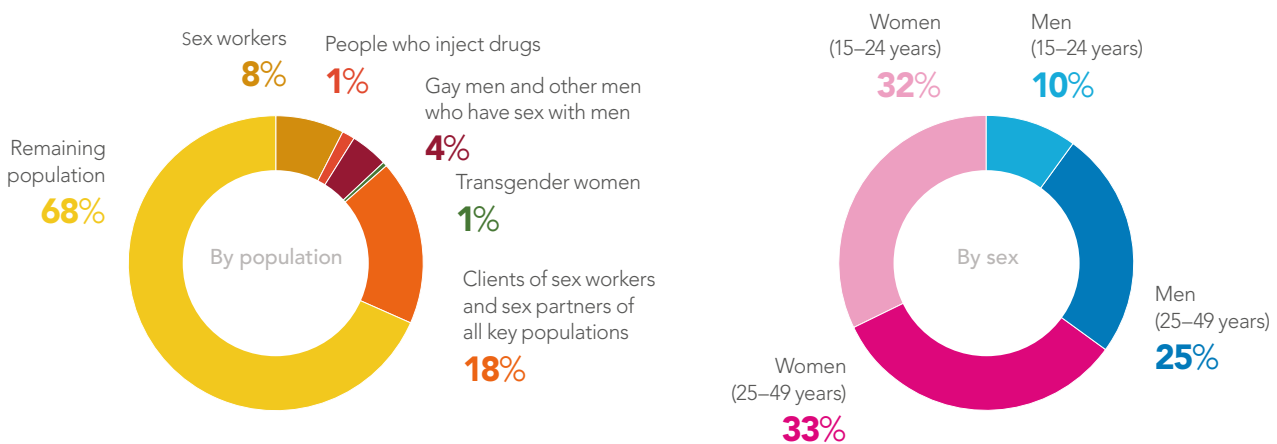
STATE OF THE PANDEMIC

FIGURE 13.3 | NUMBER OF NEW HIV INFECTIONS AND AIDS-RELATED DEATHS, EASTERN AND SOUTHERN AFRICA, 2000–2020



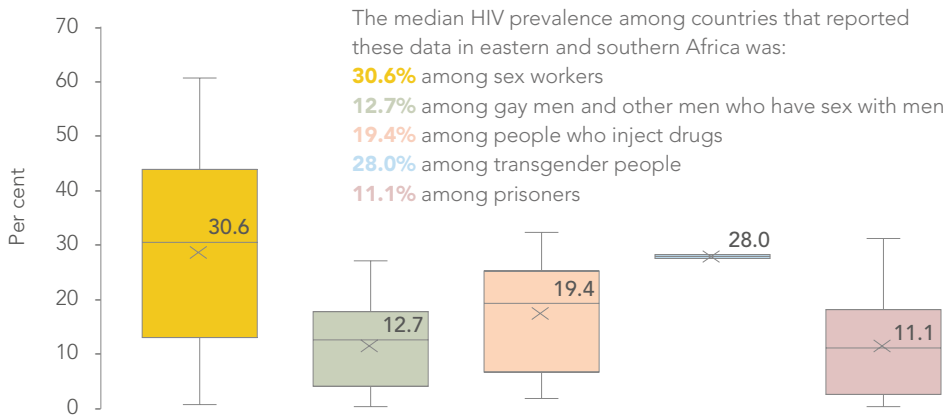
Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

FIGURE 13.4 | DISTRIBUTION OF NEW HIV INFECTIONS BY POPULATION GROUP AND SEX (AGED 15–49 YEARS), EASTERN AND SOUTHERN AFRICA, 2020



Sources: UNAIDS special analysis, 2021 (see methods annex).

FIGURE 13.5 | HIV PREVALENCE AMONG KEY POPULATIONS, REPORTING COUNTRIES IN EASTERN AND SOUTHERN AFRICA, 2016–2020



- Sex workers (n = 14)
- Gay men and other men who have sex with men (n = 11)
- People who inject drugs (n = 6)
- Transgender people (n = 6)
- Prisoners (n = 9)

Source: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>).
 Note: (n = number of countries). Total number of reporting countries = 21.

How to read this chart

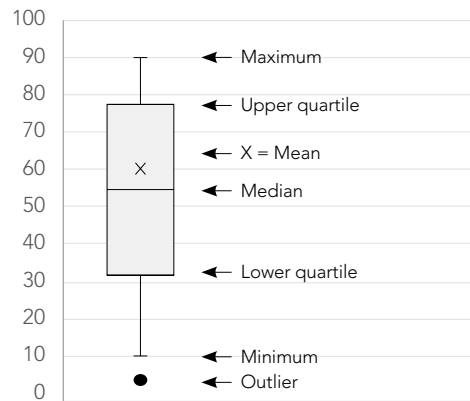


TABLE 13.1 | REPORTED ESTIMATED SIZE OF KEY POPULATIONS, EASTERN AND SOUTHERN AFRICA, 2018–2020

	National adult population (aged 15–49 years) in 2020 or relevant year	Sex workers	Sex workers as per cent of adult population (aged 15–49 years)	Gay men and other men who have sex with men	Gay men and other men who have sex with men as per cent of adult population (aged 15–49 years)	People who inject drugs	People who inject drugs as per cent of adult population (aged 15–49 years)	Transgender people	Transgender people as per cent of adult population (aged 15–49 years)	Prisoners	Prisoners as per cent of adult population (aged 15–49 years)
Comoros	430 000										
Eswatini	608 000									46 800	7.70%
Kenya	25 000 000										
Lesotho	1 150 000	7500		6100							
Madagascar	13 600 000										
Malawi	9 277 000	36 100	0.39%							14 200	
Namibia	1 311 000										
Rwanda	6 448 000	13 700	0.21%	5900							
Seychelles	47 000									300	0.64%
South Africa	31 700 000	24 000		310 000	0.98%					166 000	0.53%
South Sudan	5 395 000	8400									
Uganda	21 364 000										
United Republic of Tanzania	28 264 000										
Zambia	8 901 000									20 800	0.23%
Zimbabwe	8 000 000			23 300						20 900	0.26%
Estimated regional median proportion as per cent of adult population (aged 15–49 years) ^{a, b} :			0.29%		0.73%		0.30%		0.16%		-

■ National population size estimate

■ Insufficient data

■ Local population size estimate

■ No data

Sources: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>); Spectrum Demproj module, 2021; 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).

^a Quick Start Guide for Spectrum, 2020. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/QuickStartGuide_Spectrum_en.pdf).

^b Technical brief: recommended population size estimates of men who have sex with men. Geneva: WHO, UNAIDS; 2020.

Note 1: Estimates shown are government-provided estimates reported for 2018–2020. 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 estimate are as follows:

Lesotho: Butha Buthe, Leribè, Mafeteng and Maseru.

Malawi: Blantyre, Chikwawa, Chitipa, Dedza, Karonga, Kasungu, Lilongwe, Mangochi, Mulanje, Mzimba, Mzuzu, Nkhata Bay, Nkhatakota, Ntcheu, Ntchisi, Nsanje, Rumphu, Thyolo and Zomba.

Rwanda: Kigali.

South Africa: Cape Town Metro, Durban Metro and Johannesburg Metro.

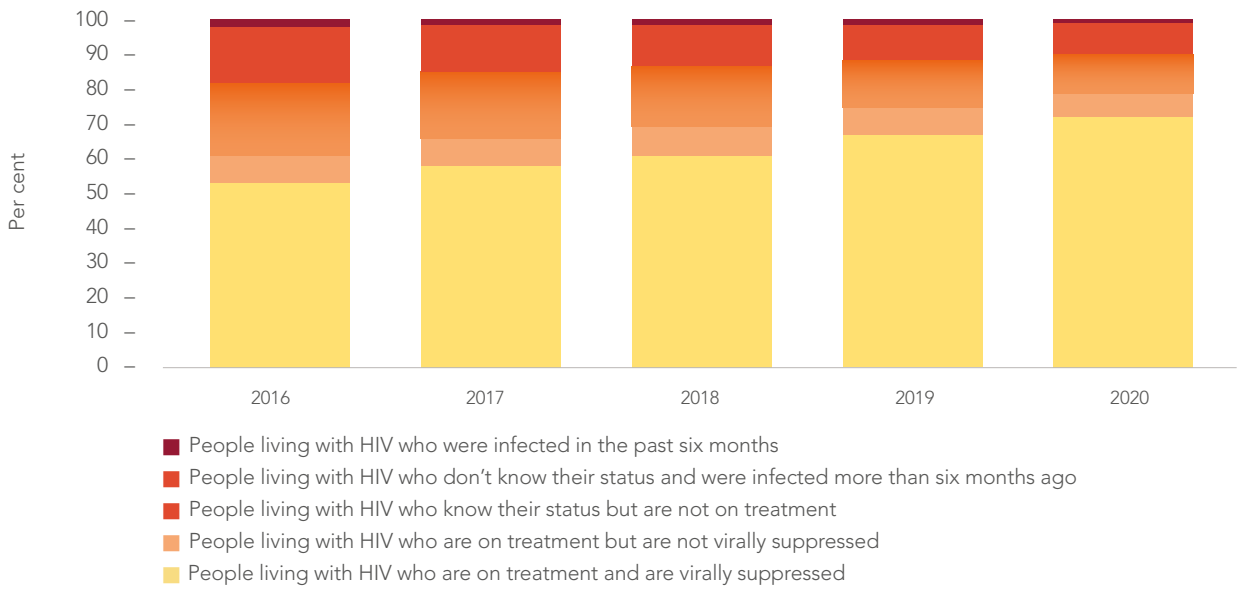
South Sudan: Wau and Yambio.

Zimbabwe: Bulawayo and Harare.

Note 3: The reported values for gay men and other men who have sex with men are presented as a per cent of the adult population (aged 15–49 years) for consistency across key populations. The percentage of this population out of the adult male population (aged 15–49 years) will be approximately twice the values shown.

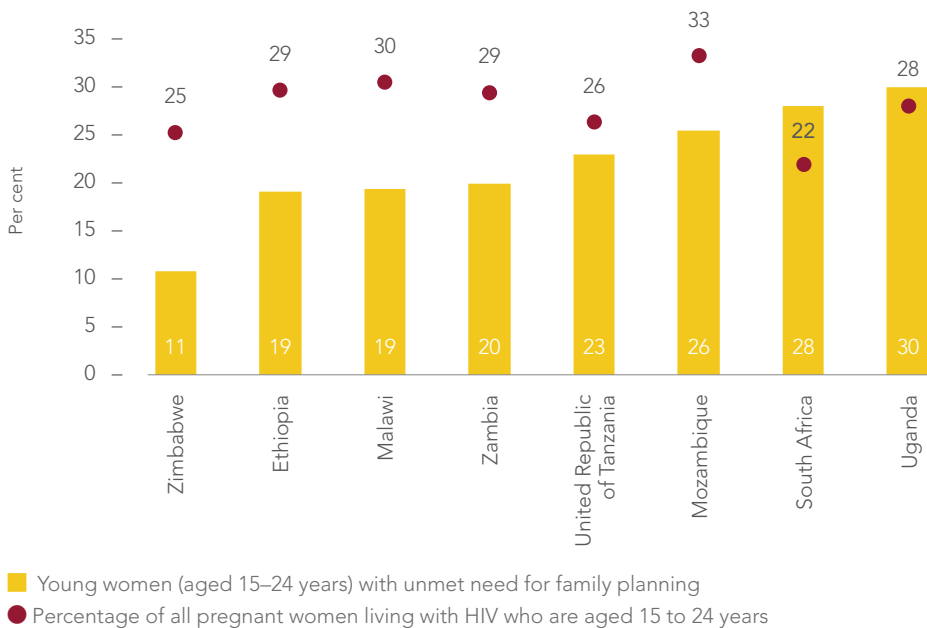
HIV SERVICES

FIGURE 13.6 | PEOPLE LIVING WITH HIV, PEOPLE NEWLY INFECTED IN THE PAST SIX MONTHS, AND HIV TESTING AND TREATMENT CASCADE, ADULTS (AGED 15+ YEARS), EASTERN AND SOUTHERN AFRICA, 2016–2020



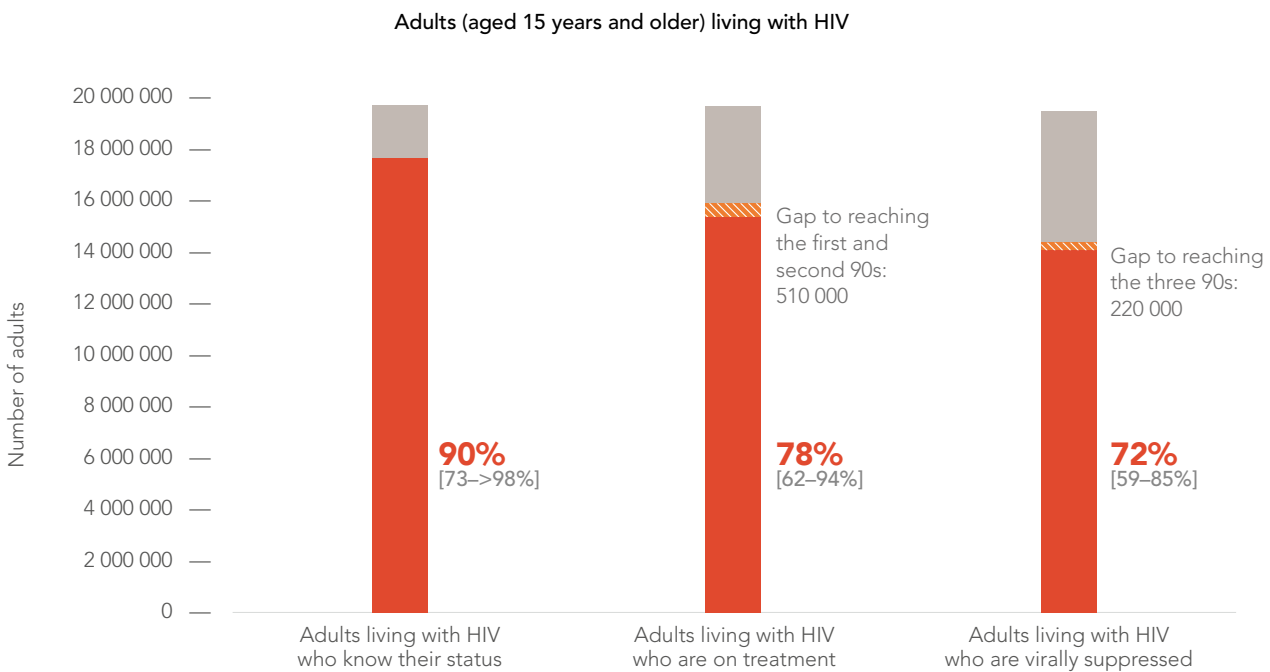
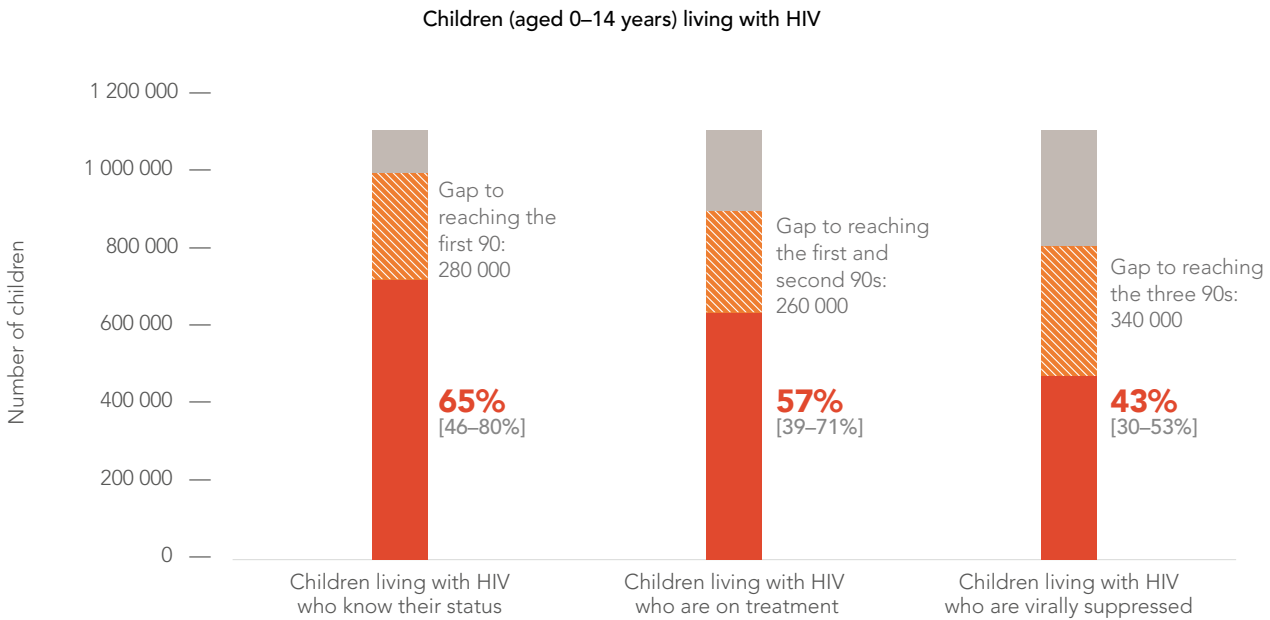
Source: UNAIDS special analysis, 2021.

FIGURE 13.7 | PERCENTAGE OF YOUNG WOMEN (AGED 15–24 YEARS) WITH UNMET NEED FOR FAMILY PLANNING AND ALL PREGNANT WOMEN LIVING WITH HIV WHO ARE AGED 15 TO 24 YEARS, SELECTED COUNTRIES, EASTERN AND SOUTHERN AFRICA, 2015–2018



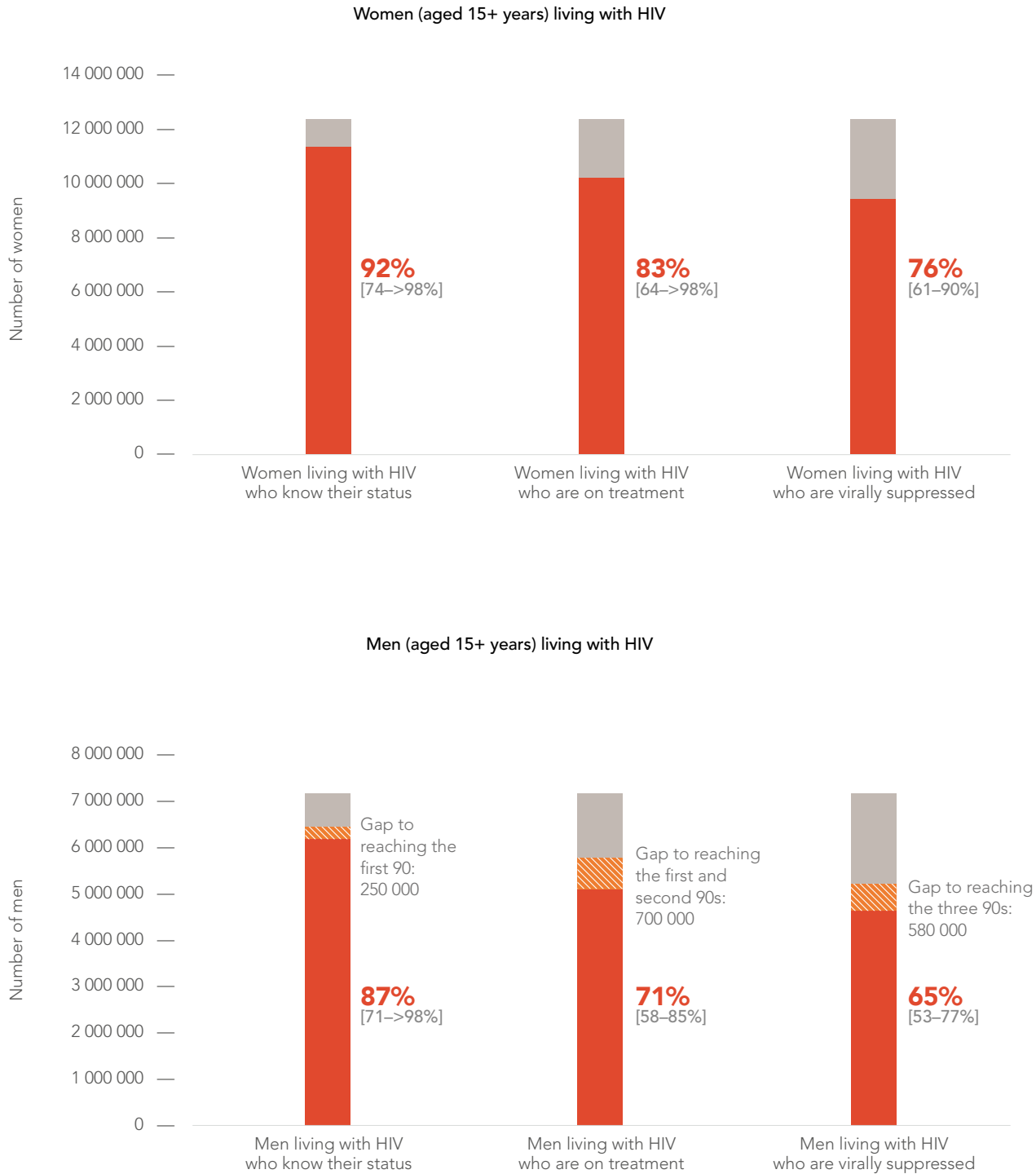
Source: Demographic and Health Surveys, 2015–2018; UNAIDS epidemiological estimates, 2021.

FIGURE 13.8 | HIV TESTING AND TREATMENT CASCADE, CHILDREN (AGED 0–14 YEARS) COMPARED TO ADULTS (AGED 15 YEARS AND OLDER), EASTERN AND SOUTHERN AFRICA, 2020



Source: UNAIDS special analysis, 2021.

FIGURE 13.9 | HIV TESTING AND TREATMENT CASCADE, WOMEN (AGED 15+ YEARS) COMPARED TO MEN (AGED 15+ YEARS), EASTERN AND SOUTHERN AFRICA, 2020



Source: UNAIDS special analysis, 2021.

LAWS AND POLICIES

TABLE 13.2 | PUNITIVE AND DISCRIMINATORY LAWS, EASTERN AND SOUTHERN AFRICA, 2021

	Criminalization of transgender people	Criminalization of sex work	Criminalization of same-sex sexual acts	Law allows for possession of a certain limited amount of drugs for personal use	Parental consent for adolescents to access HIV testing	Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Laws or policies restricting the entry, stay and residence of people living with HIV	Mandatory HIV testing for marriage, work or residence permits or for certain groups
Angola	2	4	1	1	16	23		2
Botswana	2	1	1	1	1	1		2
Comoros	1	1	10	1	1	1		1
Eritrea		5	11			24		1
Eswatini	2	6	2	1	17	1		1
Ethiopia	3	7	1	1	18	1		1
Kenya	1	1	12	1	1	1		1
Lesotho	2	1	1		19	2		2
Madagascar	1	1	1	1	1	1		1
Malawi	1	1	1	1	2	2		1
Mauritius	2	1	13	1	1	2		2
Mozambique	2	2	2		20	2		2
Namibia	2	8	2		21	1		1
Rwanda	3	9	11		22	3		2
Seychelles	2	2	2		2	2		2
South Africa	1	1	1	1	1	1		1
South Sudan	2	2	2		2	2		2
Uganda	1	1	14	1	1	1		1
United Republic of Tanzania	1	1	1	1	1	1		1
Zambia	1	1	1	1	1	1		1
Zimbabwe	1	1	15	1	1	1		1

Criminalization of transgender people

- Criminalized and prosecuted
- Neither criminalized nor prosecuted
- Data not available

Criminalization of sex work

- 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

Criminalization of same-sex sexual acts

- Death penalty
- Imprisonment (14 years–life, up to 14 years) or no penalty specified
- Laws penalizing same-sex sexual acts have been decriminalized or never existed, or no specific legislation
- Data not available

Law allows for possession of a certain limited amount of drugs for personal use

- No
- Yes
- Data not available

Parental consent for adolescents to access HIV testing

- Yes, for adolescents younger than 18
- Yes, for adolescents younger than 14 or 16
- Yes, for adolescents younger than 12
- No
- Data not available

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission

- Yes
- No, but prosecutions exist based on general criminal laws
- No
- Data not available

Laws or policies restricting the entry, stay and residence of people living with HIV

- 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
- Require HIV testing or disclosure for some permits
- No restrictions
- Data not available

Mandatory HIV testing for marriage, work or residence permits or for certain groups

- Yes
- No
- Data not available

Sources:

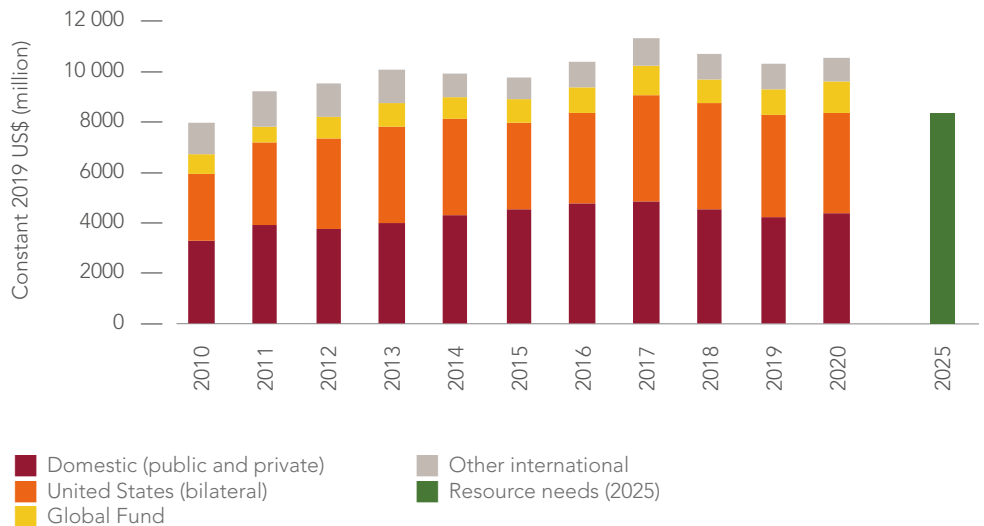
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Note: A country is considered to have criminalized transgender persons if it uses the law to punish transgender individuals. Such a law may, for example, explicitly criminalize impersonation of the other gender, including cross-dressing. A country is considered to have any criminalization or punitive regulation of sex work if selling and/or buying sexual services is criminalized, ancillary activities associated with selling and/or buying sexual services are criminalized, profiting from organizing and/or managing sexual services is criminalized, and/or there are other punitive and/or administrative regulations of sex work.

INVESTING TO END AIDS

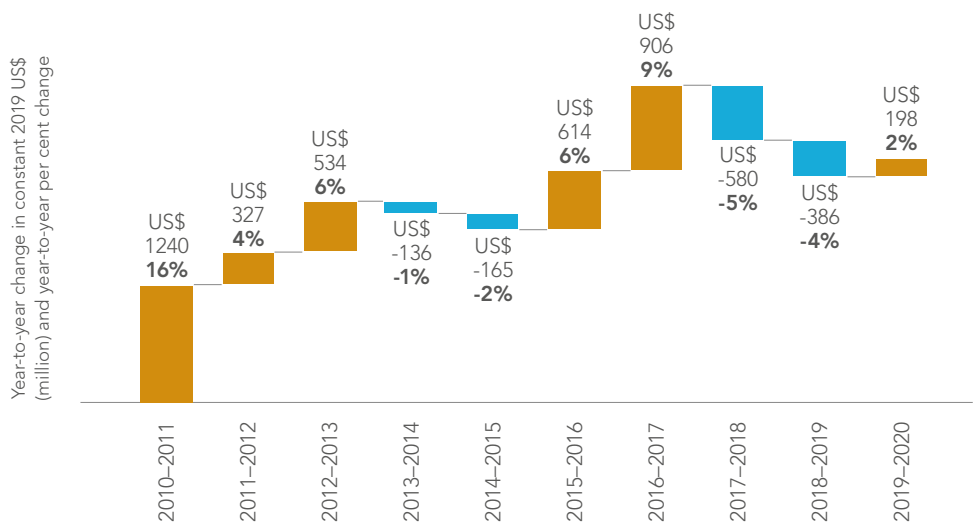
Eastern and southern Africa has successfully mobilized resources for the region’s AIDS responses during the last decade. Both domestic and international resources increased by 33% between 2010 and 2020. Most of this increase occurred during the 2010–2017 period; the last few years have seen resource availability flatten. In 2020, the United States President’s Emergency Plan for AIDS Relief (PEPFAR) and the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) contributed 38% and 11% of regional resources, respectively. A further 41% of resources was mobilized from domestic sources. The amount of resources available in 2020 was similar to the amount needed in 2025. However, a considerable proportion of 2020 resources were not allocated to the programme areas or populations facing the biggest gaps, limiting their impact. It will be vital for the region to emphasize and implement allocative and technical efficiency processes in its programmes in order to use the available resources more efficiently.

FIGURE 13.10 | **RESOURCE AVAILABILITY FOR HIV, EASTERN AND SOUTHERN AFRICA, 2010–2020, AND ESTIMATED RESOURCE NEEDS FOR HIV BY 2025**



Source: UNAIDS financial estimates and projections, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).
 Note: The resource estimates are presented in constant 2019 US dollars.

FIGURE 13.11 | **YEAR-TO-YEAR CHANGE IN RESOURCE AVAILABILITY FOR HIV, EASTERN AND SOUTHERN AFRICA, 2010–2011 TO 2019–2020**



Source: UNAIDS financial estimates, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).

Case study

REPRODUCTIVE HEALTH AND RIGHTS AND HIV INTEGRATION: MALAWI'S TEEN CLUBS AND MENTOR MOTHERS

Malawi has made significant strides in improving health outcomes, including in the area of HIV and sexual and reproductive health and rights (SRHR) and HIV. COVID-19, however, has threatened to reverse these gains by disrupting the provision of services at both the community and facility levels. Special efforts were made in 2020 to overcome COVID-related challenges and improve access to SRHR services in Malawi, including maternal and newborn health and HIV services for adolescents, young people and women.

The four participating United Nations agencies in the 2gether 4 SRHR programme—the United Nations Children's Fund (UNICEF), United Nations Population Fund (UNFPA), World Health Organization (WHO) and UNAIDS—engaged policy-makers to develop guidelines to ensure the continuity and sustainability of maternal and newborn health services. Due to restrictions on gatherings, community outreach through mentor mothers—women living with HIV from the local community who can draw on their direct personal experiences to serve their peers—became even more essential.

In Malawi's Mulanje District—which had an HIV prevalence of 19.8% for women (aged 15 to 64) in 2020 and a teenage pregnancy rate of

34.8%—75 mentor mothers were identified to assist in the provision of integrated services to peers (1). On average, community-based mentor mothers see four to five clients per day, and facility-based mentor mothers see seven to nine clients per day. In addition to the mentor mothers, 198 Area Development Committee members were trained to educate communities on COVID-19 prevention, case identification and referral to health facilities. The orientation also included information on service continuity amid pandemic-related restrictions.

Committee members and mentor mothers have organized civic engagement for COVID-19, reaching 6810 adolescent girls and boys and conducting 420 group sessions on SRHR, HIV and gender-based violence. The mentors helped 5173 pregnant adolescents and young mothers attend the recommended four antenatal visits and two postnatal care services in a 12-month period. In the spirit of involving male partners, 1342 males joined their female partners for SRHR services in the target facilities. The mentor mothers helped 100% of the clients who missed initial appointments at the antenatal clinic be traced and supported, 100% of infants born to women living with HIV be tested for HIV within two months, and for those who tested positive to be put on treatment immediately (2).

A BRIGHTER TOMORROW: TEEN CLUBS AND ONE-STOP CENTRES

Violence against women and girls is of increasing concern in Malawi. The percentage of women who have experienced physical violence since the age of 15 increased from 28% in 2004 and 2010 to 34% in 2015–16 (1).

In collaboration with its partners, UNICEF set up teen clubs in Malawi to help adolescents living with HIV work through the challenges associated with HIV with support from trained health and social workers. Under the 2gether 4 SRHR programme, UNICEF is also integrating sexual and gender-based violence services into the teen clubs programme (3).

“The training has taught me more about family planning and abuse,” says Caroline, a teen club member. “The group also helps those who are being subjected to abuse. Now I am able to explain to people what abuse is about and what to do.”

In addition, the Baylor Foundation Malawi—with support from UNICEF—has been helping to coordinate the management of sexual and gender-based violence cases in the district, especially

those involving adolescents and minors. It has been conducting regular meetings between the District Health Officers and hospital staff, the judiciary, the police, the Ministry of Health, and the Ministry of Gender, Children, Disability and Social Welfare. A One-Stop Centre has also been built on the grounds of Mulanje District Hospital for victims of sexual and gender-based violence.

“The benefit of the One-Stop-Centre for survivors of gender-based violence is that they are able to access all services—from social, to medical and police—in one place,” says Dr Morris Chalus, a clinical officer at the Mulanje District Hospital. “Before the One-Stop Centre, cases of sexual violence could take over two years to go to court. But now it takes less than one month.”

The expansion and implementation of safe and nurturing environments for adolescents—like those of teen clubs—aims to produce supportive relationships and increase the self-esteem of teenagers and their courage to live positively, with or without HIV.



Sixteen-year-old Prisca (yellow T-shirt), a youth group leader, and 19-year-old Meria (white t-shirt), an adolescent champion, enjoy a game together during a teen club meeting in Mulanje, Malawi. Credit: UNICEF Malawi/Schermbrucker

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WESTERN AND CENTRAL AFRICA



The HIV response across western and central Africa is improving, but not fast enough to end AIDS as a public health threat by 2030. Over the past year, the COVID-19 pandemic has disrupted HIV and other health services, and it has highlighted the vulnerability of people in the region to public health, climatic, socioeconomic and security shocks, along with the pressing need for inclusive social protection systems.

There were 37% fewer new HIV infections in the region in 2020 compared with 2010—steady progress, but far short of the 75% reduction agreed by the United Nations (UN) General Assembly. The region also accounted for more than one third of new HIV infections among children globally in 2020, reflecting ongoing gaps in efforts to prevent vertical transmission, including low coverage of maternal and newborn health services. Overall, 44% of pregnant women living with HIV in western and central Africa were not receiving antiretroviral therapy in 2020.

Key populations and their sexual partners accounted for 72% of new adult HIV infections, and women and girls (aged 15 to 49 years) represented 65%. Adolescent girls and young women continue to be heavily affected by HIV, with a relatively high prevalence of violence against women and girls a contributing risk factor.

Coverage of HIV testing and antiretroviral therapy has grown at a quicker pace in recent years, with nearly three quarters (73%) of people living with HIV receiving antiretroviral therapy in 2020 and 59% virally suppressed. However, just 24% of children (aged 0 to 14 years) living with HIV were virally suppressed in the same year, with poor case finding and linkage to treatment the major gaps.

Stronger political leadership and effective multisectoral partnerships are essential for making health systems more resilient, mobilizing increased domestic resources for high-impact interventions, allocating those resources for programmes focusing on key populations, and removing the user fees and other legal and policy barriers that deter the uptake of life-saving services.

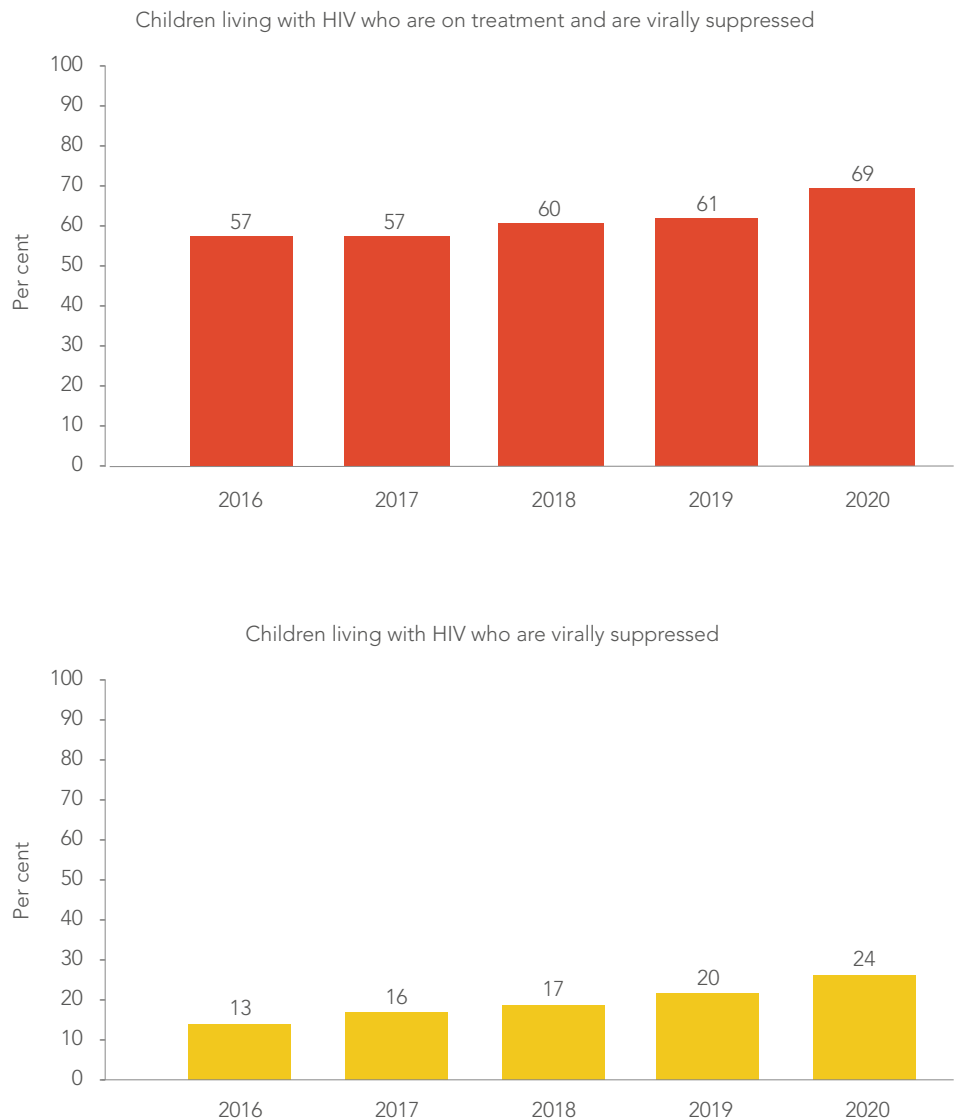
Reaching HIV service targets for 2025 requires addressing human rights and gender barriers, including HIV-related stigma and discrimination, criminalization of key populations and other punitive laws, and the traditional gender roles that condone violence and disempower women and girls. There is also a need to continue the transformation of health systems by promoting people-centered service modalities.

Community-based and other civil society organizations (such as faith-based organizations) are playing stronger roles in the regional response. These organizations are crucial to reaching key and other neglected populations with suitable services, including scaling up access to pre-exposure prophylaxis (PrEP). The West and Central Africa Civil Society Institute is expected to help expand such activities, with the objective of expanding community-led services in the region.

PRIORITY ACTIONS FOR ENDING AIDS

- Reduce stigma and discrimination and gender-based violence by transforming harmful gender and other discriminatory social norms, and by creating an enabling environment for health.
- Ensure preparedness for comprehensive HIV service delivery during humanitarian emergencies and pandemics.
- Scale up high-impact combination HIV prevention for key populations and adolescent girls and young people.
- Strengthen people-centred health systems, including community systems, to deliver results for the most vulnerable.
- Close gaps in service availability and the uptake of paediatric HIV treatment to prevent vertical transmission.
- Promote an accountable, inclusive and sustainable HIV response through multisectoral partnerships, including for issues beyond HIV.
- Establish health situation rooms, improve resource tracking and develop new analytics for epidemiological estimates, including analysis of the contributions of key populations to specific epidemics.

FIGURE 14.1 | PROPORTION OF CHILDREN (AGED 0–14 YEARS) LIVING WITH HIV WITH SUPPRESSED VIRAL LOAD, WESTERN AND CENTRAL AFRICA, 2016–2020

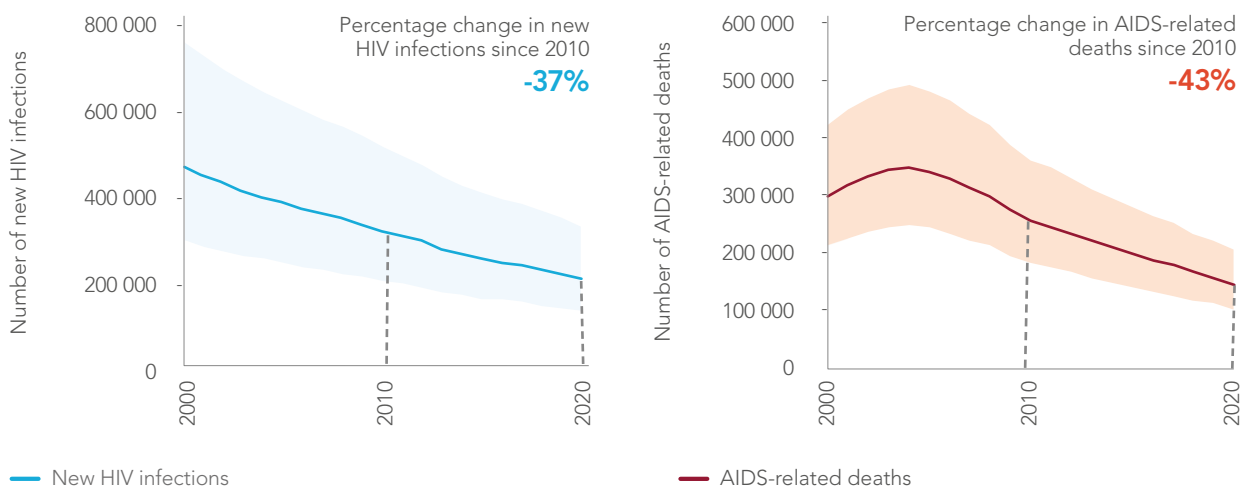


Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

The single biggest paediatric treatment challenge in western and central Africa is to rapidly find children who are living with HIV and link them to care. Just 24% of children living with HIV in the region had suppressed viral loads in 2020 (Figure 14.1). Family-based index testing and integrating HIV screening with other child health services are critical to closing this gap. Data show that once children are diagnosed and linked to care, the majority do well, with seven in 10 on treatment having suppressed viral loads.

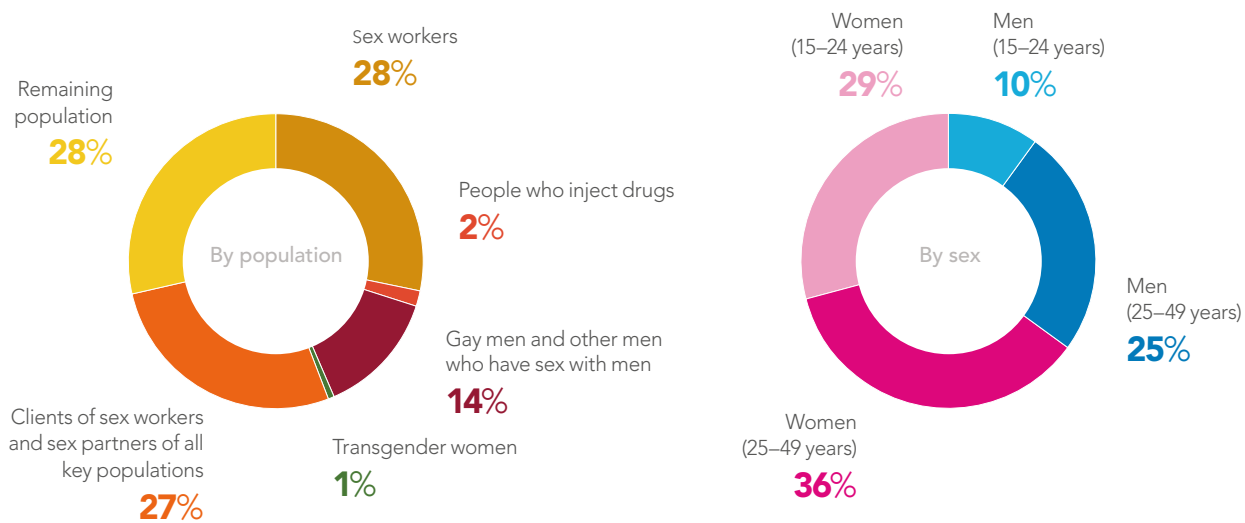
STATE OF THE PANDEMIC

FIGURE 14.2 | NUMBER OF NEW HIV INFECTIONS AND AIDS-RELATED DEATHS, WESTERN AND CENTRAL AFRICA, 2000–2020



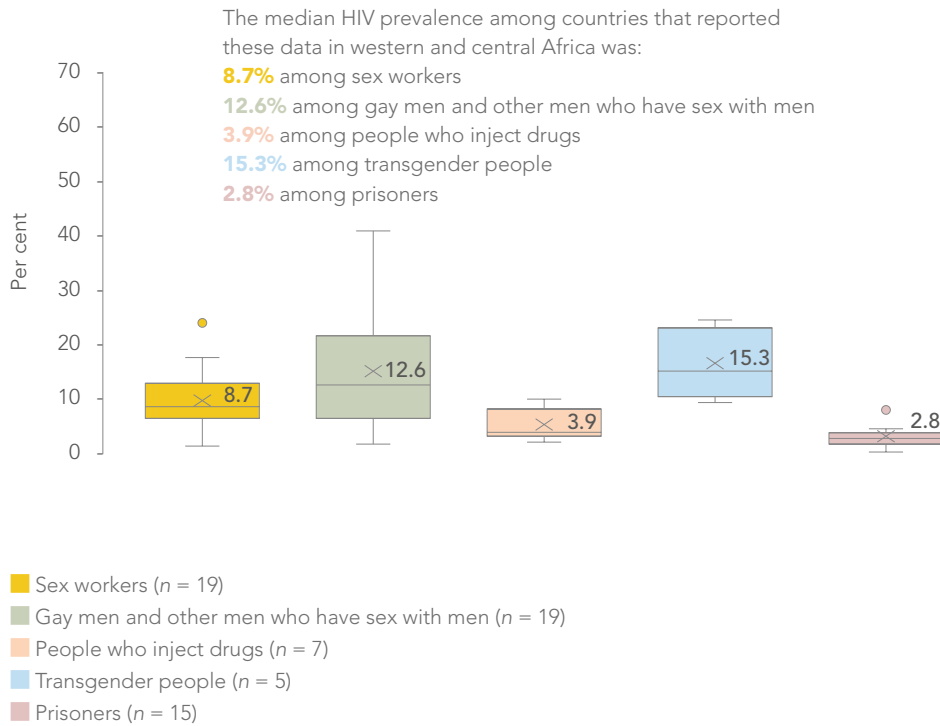
Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

FIGURE 14.3 | DISTRIBUTION OF NEW HIV INFECTIONS BY POPULATION GROUP AND SEX (AGED 15–49 YEARS), WESTERN AND CENTRAL AFRICA, 2020



Source: UNAIDS special analysis, 2021 (see methods annex).

FIGURE 14.4 | HIV PREVALENCE AMONG KEY POPULATIONS, REPORTING COUNTRIES IN WESTERN AND CENTRAL AFRICA, 2016–2020



Source: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>).

Note: (n = number of countries). Total number of reporting countries = 25.

How to read this chart

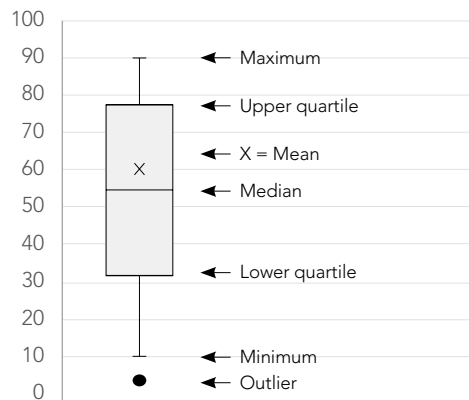


TABLE 14.1 | REPORTED ESTIMATED SIZE OF KEY POPULATIONS, WESTERN AND CENTRAL AFRICA, 2018–2020

	National adult population (aged 15–49 years) in 2020 or relevant year	Sex workers	Sex workers as per cent of adult population (aged 15–49 years)	Gay men and other men who have sex with men	Gay men and other men who have sex with men as per cent of adult population (aged 15–49 years)	People who inject drugs	People who inject drugs as per cent of adult population (aged 15–49 years)	Transgender people	Transgender people as per cent of adult population (aged 15–49 years)	Prisoners	Prisoners as per cent of adult population (aged 15–49 years)
Cameroon	12 900 000										
Central African Republic	2 300 000	3900		3000							
Chad	7 500 000	19 500		2100		700					
Côte d'Ivoire	12 900 000			56 000		3000		700		42 400	0.33%
Democratic Republic of the Congo	49 300 000	350 000	0.76%			156 000	0.34%			36 700	0.07%
Gambia	1 100 000			1700						700	0.06%
Mali	9 000 000	18 100		4100							
Mauritania	2 100 000	8500		7600							
Nigeria	103 000 000					326 000	0.32%				
Niger	10 100 000			53 700	0.53%						
Senegal	7 900 000			52 500	0.66%	900	0.01%			11 000	0.14%
Togo	4 000 000									5000	0.13%
Estimated regional median proportion as per cent of adult population (aged 15–49 years) ^{a, b} :			0.60%		0.64%		0.05%		-		-

■ National population size estimate

■ Insufficient data

■ Local population size estimate

■ No data

Sources: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>); Spectrum Demproj module, 2021.

^a Quick Start Guide for Spectrum, 2020. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/QuickStartGuide_Spectrum_en.pdf).

^b Technical brief: recommended population size estimates of men who have sex with men. Geneva: WHO, UNAIDS; 2020.

Note 1: Estimates shown are government-provided estimates reported for 2018–2020. 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 estimate are as follows:

Central African Republic: Capitale (Bangui), prefectures (Berbérati and Bouar), subprefectures (Boali and Carnot).

Chad: Eleven cities in the country.

Côte d'Ivoire: Abengourou, Abidjan, Bouaké, Divo, Gagnoa, Issia, Korhogo, Man, Ouangolodougou, San-Pédro and Yakro (gay men and other men who have sex with men); Bouaké, San-Pédro and Yamoussoukro (people who inject drugs); Abidjan (transgender people).

Gambia: Banjul.

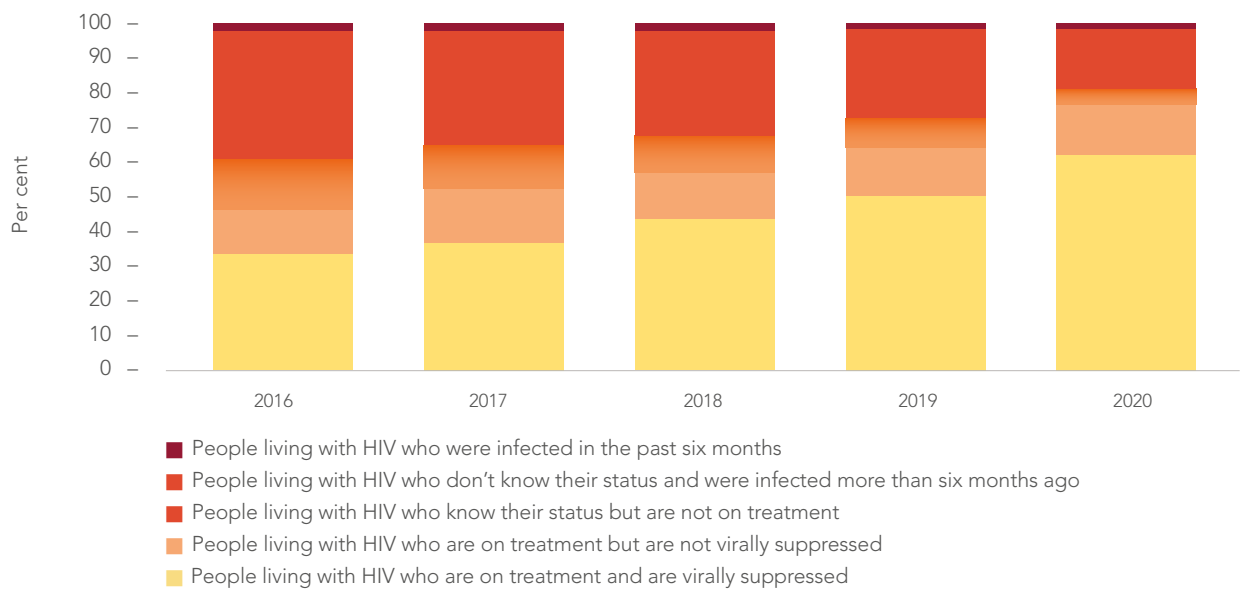
Mali: Bamako, Kayes, Koulikoro, Mopti, Ségou and Sikasso (sex workers); Bamako, Gao, Kayes, Koulikoro, Mopti, Ségou and Sikasso (gay men and other men who have sex with men).

Mauritania: The six biggest cities in the country.

Note 3: The reported values for gay men and other men who have sex with men are presented as a per cent of the adult population (aged 15–49 years) for consistency across key populations. The percentage of this population out of the adult male population (aged 15–49 years) will be approximately twice the values shown.

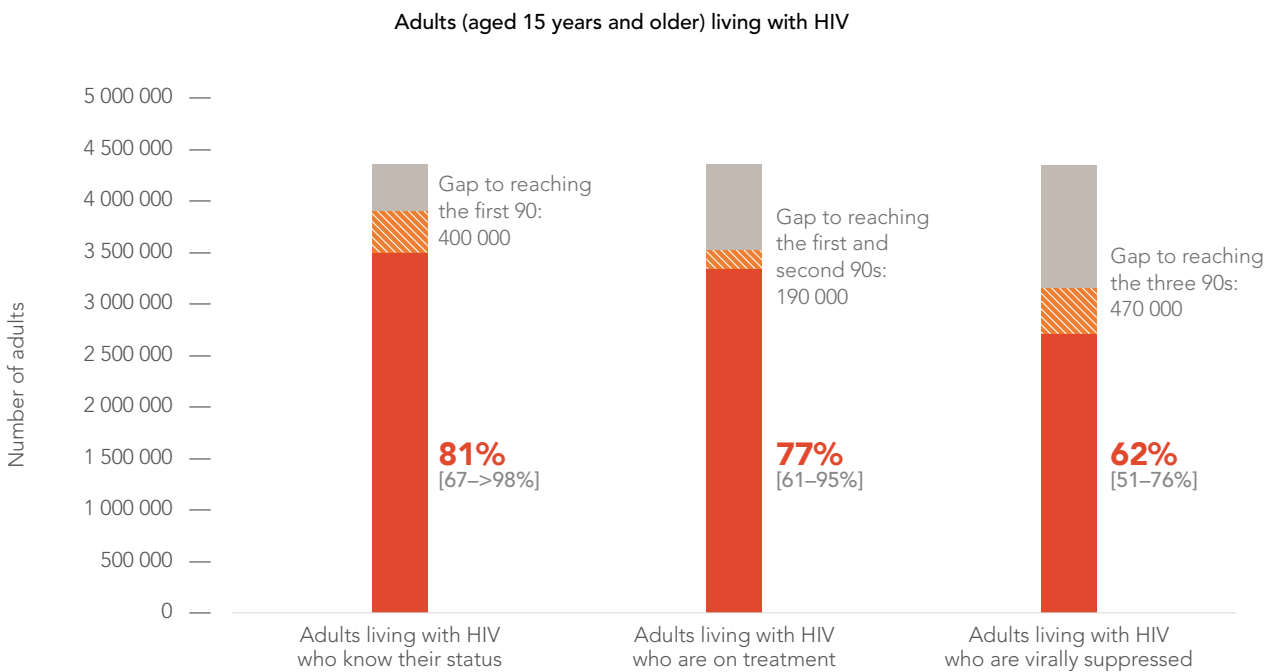
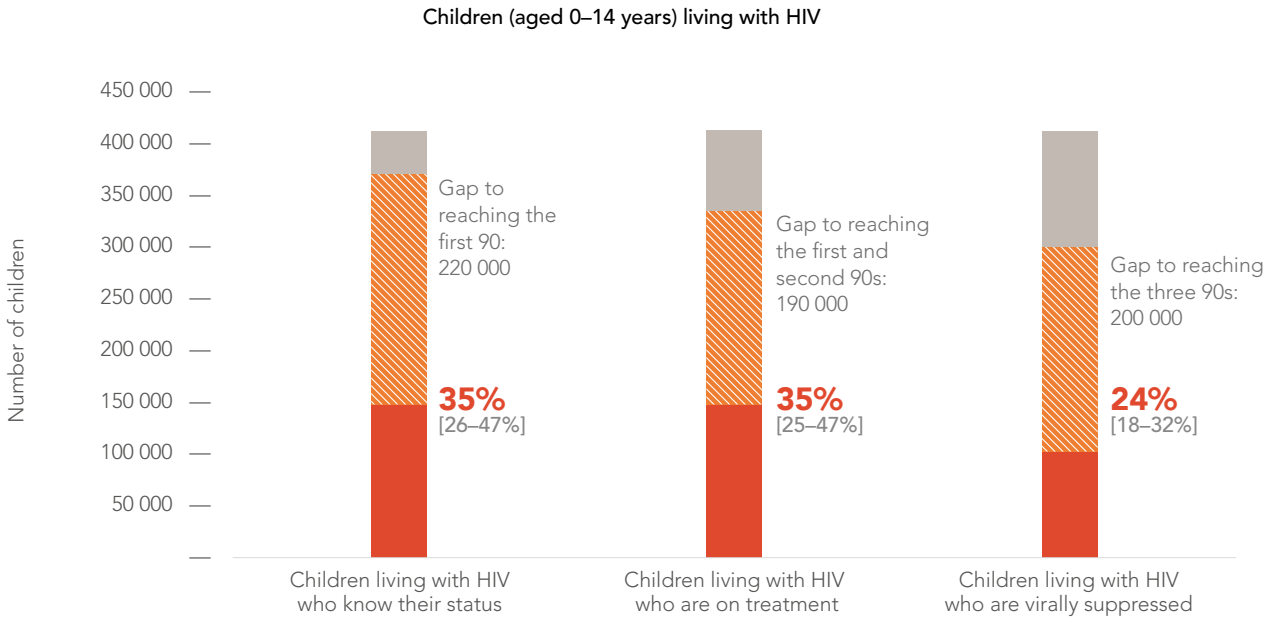
HIV SERVICES

FIGURE 14.5 | PEOPLE LIVING WITH HIV, PEOPLE NEWLY INFECTED IN THE PAST SIX MONTHS, AND HIV TESTING AND TREATMENT CASCADE, ADULTS (AGED 15+ YEARS), WESTERN AND CENTRAL AFRICA, 2016–2020



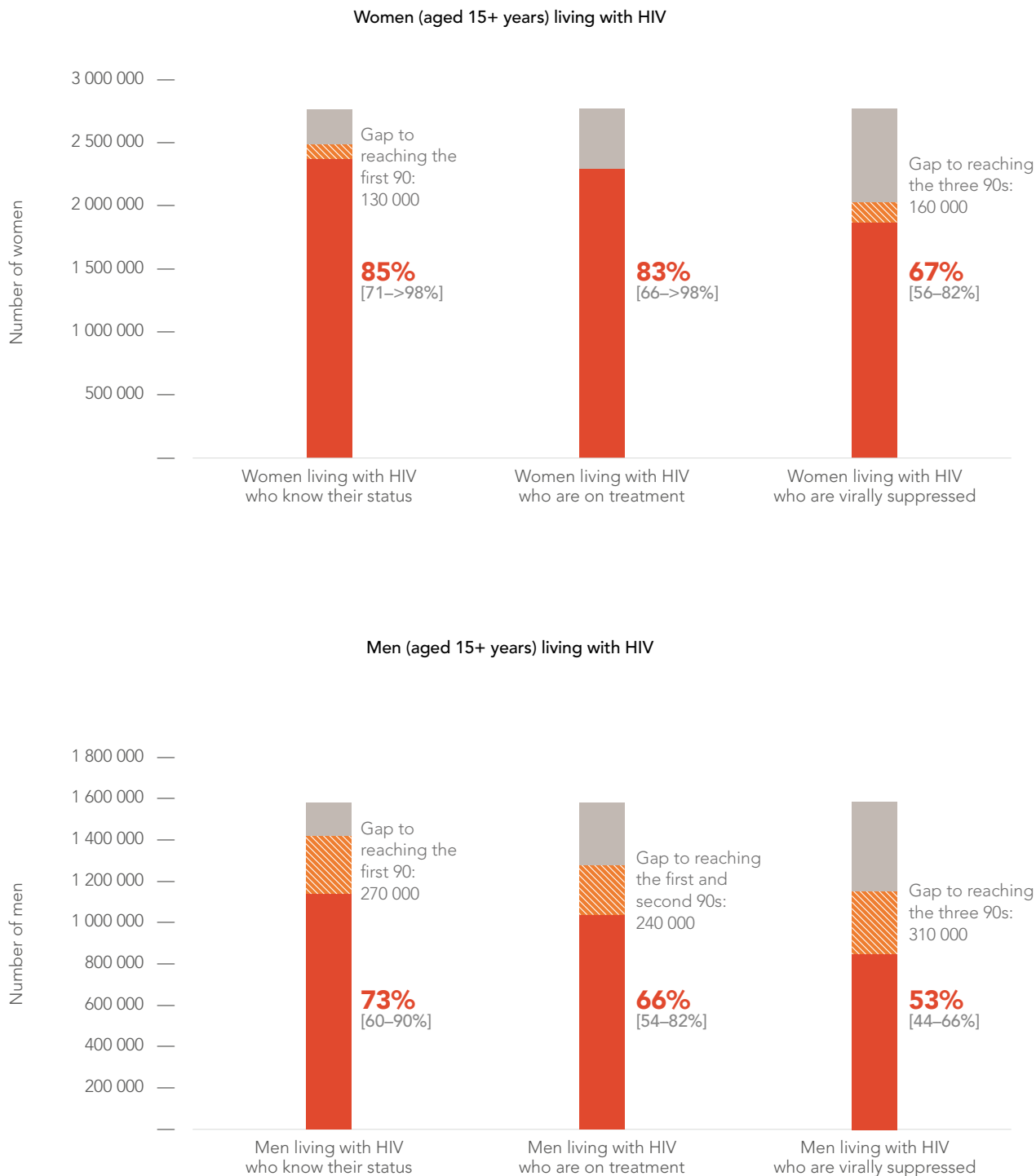
Source: UNAIDS special analysis, 2021.

FIGURE 14.6 | HIV TESTING AND TREATMENT CASCADE, CHILDREN (AGED 0–14 YEARS) COMPARED TO ADULTS (AGED 15 YEARS AND OLDER), WESTERN AND CENTRAL AFRICA, 2020



Source: UNAIDS special analysis, 2021.

FIGURE 14.7 | HIV TESTING AND TREATMENT CASCADE, WOMEN (AGED 15+ YEARS) COMPARED TO MEN (AGED 15+ YEARS), WESTERN AND CENTRAL AFRICA, 2020



Source: UNAIDS special analysis, 2021.

LAWS AND POLICIES

TABLE 14.2 | PUNITIVE AND DISCRIMINATORY LAWS, WESTERN AND CENTRAL AFRICA, 2021

	Criminalization of transgender people	Criminalization of sex work	Criminalization of same-sex sexual acts	Law allows for possession of a certain limited amount of drugs for personal use	Parental consent for adolescents to access HIV testing	Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Laws or policies restricting the entry, stay and residence of people living with HIV	Mandatory HIV testing for marriage, work or residence permits or for certain groups
Benin	1	4	1	1	2	1		1
Burkina Faso	1	5	1	1	1	1		1
Burundi	3	6	14		17	23		17
Cabo Verde		7	14			23		
Cameroon	1	1	1	1	1	23		1
Central African Republic	1	1	1	1	1	1		1
Chad	1	1	1	1	18	24		1
Congo	2	2	2		2	2		2
Côte d'Ivoire	1	8	1	1		1		1
Democratic Republic of the Congo	2	2	2		19	23		2
Equatorial Guinea	1	9	1		20	1		1
Gabon	2	10	14		2	2		1
Gambia		11	14		2	23		1
Ghana	2	1	1	1	1	2		2
Guinea	2	12	15	1	1	1		1
Guinea-Bissau	2	2	2	28	21	23		2
Liberia	2	2	2		2	2		2
Mali	1	1	1	1	22	1		1
Mauritania	1	1	1	1	1	1		1
Niger	1	1	1	1	1	1		1
Nigeria	1	1	1	1	1	1		1
Sao Tome and Principe	2	2	2		2	2		2
Senegal	1	1	16	1	1	1		1
Sierra Leone	1	13	1	1	1	25		1
Togo	1	1	1	1	1	1		1

Criminalization of transgender people

- Criminalized and/or prosecuted
- Neither criminalized nor prosecuted
- Data not available

Criminalization of sex work

- 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

Criminalization of same-sex sexual acts

- Death penalty
- Imprisonment (14 years–life, up to 14 years) or no penalty specified
- Laws penalizing same-sex sexual acts have been decriminalized or never existed, or no specific legislation
- Data not available

Law allows for possession of a certain limited amount of drugs for personal use

- No
- Yes
- Data not available

Parental consent for adolescents to access HIV testing

- Yes, for adolescents younger than 18
- Yes, for adolescents younger than 14 or 16
- Yes, for adolescents younger than 12
- No
- Data not available

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission

- Yes
- No, but prosecutions exist based on general criminal laws
- No
- Data not available

Laws or policies restricting the entry, stay and residence of people living with HIV

- 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
- Require HIV testing or disclosure for some permits
- No restrictions
- Data not available

Mandatory HIV testing for marriage, work or residence permits or for certain groups

- Yes
- No
- Data not available

Sources:

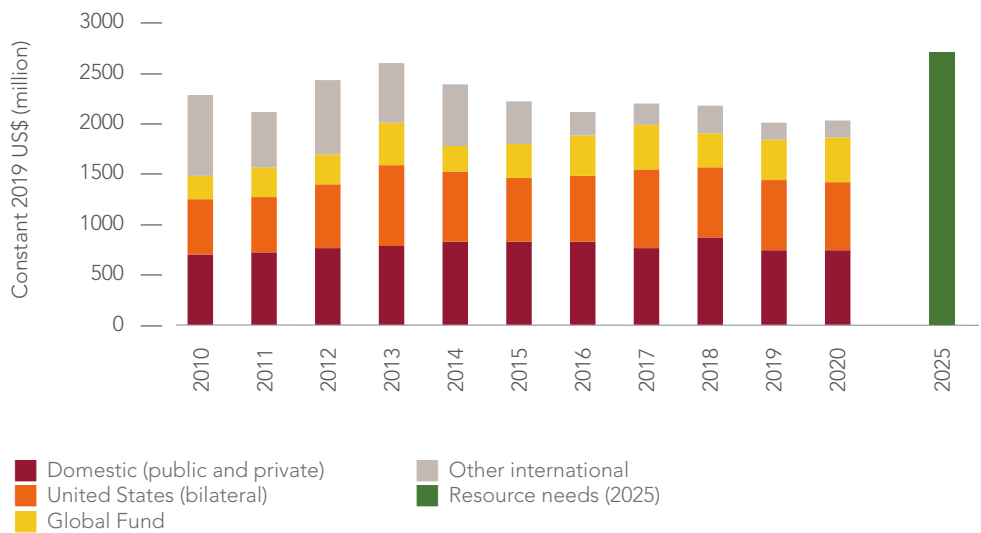
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Note: A country is considered to have criminalized transgender persons if it uses the law to punish transgender individuals. Such a law may, for example, explicitly criminalize impersonation of the other gender, including cross-dressing. A country is considered to have any criminalization or punitive regulation of sex work if selling and/or buying sexual services is criminalized, ancillary activities associated with selling and/or buying sexual services are criminalized, profiting from organizing and/or managing sexual services is criminalized, and/or there are other punitive and/or administrative regulations of sex work.

INVESTING TO END AIDS

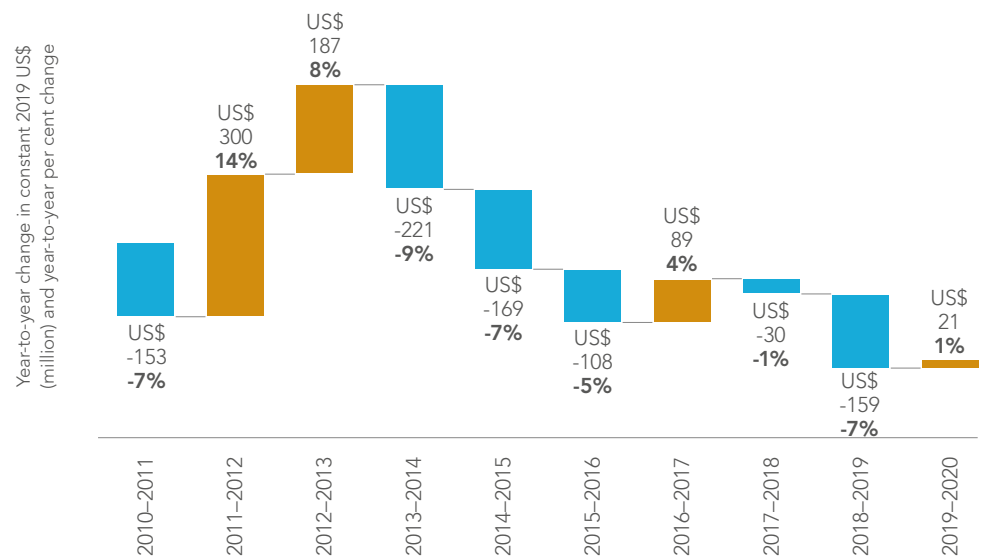
There is a substantial funding gap in western and central Africa. The resources available for HIV responses in the region in 2020 were approximately three quarters the amount needed in 2025. Total HIV resources in the region declined by 11% between 2010 and 2020. Domestic resources have increased by 6% during the last decade, peaking in 2018 before declining by 15% over the next two years. The sources of international funding have changed significantly in the region. The United States President's Emergency Plan for AIDS Relief (PEPFAR) and the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) increased their contributions to the region by 23% and 85%, respectively, between 2010 and 2020, while all other international resources have reduced their contributions by 79%. Both external and domestic resources need to grow in order to meet the 2025 targets. Resource availability per person living with HIV will have to be increased from the current US\$ 398 in 2020 to US\$ 539 by 2025.

FIGURE 14.8 | **RESOURCE AVAILABILITY FOR HIV, WESTERN AND CENTRAL AFRICA, 2010–2020, AND ESTIMATED RESOURCE NEEDS FOR HIV BY 2025**



Source: UNAIDS financial estimates and projections, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).
 Note: The resource estimates are presented in constant 2019 US dollars.

FIGURE 14.9 | **YEAR-TO-YEAR CHANGE IN RESOURCE AVAILABILITY FOR HIV, WESTERN AND CENTRAL AFRICA, 2010–2011 TO 2019–2020**



Source: UNAIDS financial estimates, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).

Case study

GETTING UNCONDITIONAL CASH TO MARGINALIZED HOUSEHOLDS DURING COVID-19

COVID-19 has underscored the crucial need for pandemic responses to include social protection measures that reach and benefit marginalized populations.

As the pandemic swept across western and central Africa in early 2020, the region was already grappling with socioeconomic distress and humanitarian crises. Social restrictions imposed to contain the pandemic exacerbated those challenges. Impoverished and vulnerable populations, including people living with HIV and key populations, were hit hard.

Surveys conducted in 17 countries in the region on the situation and needs of people living with HIV—with support from UNAIDS, in partnership with the Network of African People Living with HIV West Africa (NAP+WA), between June and August 2020—revealed that up to 80% of people living with HIV in the region were experiencing livelihood losses, and more than 50% of them needed financial and/or food assistance (1).

These findings convinced UNAIDS and the World Food Programme (WFP) to launch a pilot project on unrestricted cash transfers in July 2020 to help people living with HIV and key populations cope with the impact of HIV and COVID-19. The pilot selected four priority countries: Burkina Faso, Cameroon, Côte d'Ivoire and Niger. The initiative was designed to capitalize on WFP's existing arrangements with service providers, and on UNAIDS' community engagement and relationships with civil society networks in the four priority countries.

Cash transfers are increasingly recognized as an effective form of social protection, with positive social and economic effects. They provide income support and help households avoid selling off assets or removing children from school, and they have multiplier effects on local economies. They constituted approximately 40% of global social safety net expenditures in 2018, but less than 20% in western and central Africa.

In the wake of the COVID-19 pandemic, many governments considered direct cash transfers to protect vulnerable households (2). As the pandemic spread across western and central Africa, only a few countries (Côte d'Ivoire and

Senegal among them) allocated additional support for vulnerable households in the form of cash transfers or social grants.

In addition, no national COVID-19 response programmes specifically focused on populations that are marginalized and subject to stigma and discrimination, such as key populations and people living with HIV. Existing programmes also tend to be fragmented and geographically limited in western and central Africa, and they do not always cover the poorest and most vulnerable sections of societies (3).

The immediate objective was to reach about 5000 households with one-off, unconditional cash transfers. The size of these transfers ranged from US\$ 88 per beneficiary (in Côte d'Ivoire) to US\$ 136 (in Cameroon).

Civil society organizations and financial service providers were engaged during the planning of the pilot. Eligibility for the transfers was decided based on a variety of vulnerability criteria, and beneficiaries were identified with the support of community-led organizations. Additional steps involved sensitizing beneficiaries, distributing the cash transfers and monitoring the process.

Almost 4000 beneficiaries were reached, and it is estimated that a further 19 000 household members also benefited from the cash transfers, most of which went towards food, health care, education and housing expenses, or for income-generating activities (Table 14.3) (4). The country experiences varied in terms of the depth of their collaboration with community partners and the extent to which government actors were involved.



Sensitization on HIV and COVID-19 and the distribution of food support and hygiene kits in Côte d'Ivoire. Credit: UNAIDS

TABLE 14.3 | PERFORMANCE OF THE UNAIDS/WORLD FOOD PROGRAMME CASH TRANSFER PILOT INITIATIVE, FOUR PRIORITY COUNTRIES, WESTERN AND CENTRAL AFRICA, 2020

	Burkina Faso	Cameroon
Beneficiaries (number reached/ number targeted)	1000/1000	952/1395
Estimated number of secondary beneficiaries	5000	4000–5000
Geographical focus	All regions of the country	All regions of the country
Focus populations	<ul style="list-style-type: none"> ■ People living with HIV. ■ Gay men and other men who have sex with men. ■ Sex workers. 	<ul style="list-style-type: none"> ■ People living with HIV. ■ Young people living with HIV. ■ Gay men and other men who have sex with men. ■ Sex workers. ■ Transgender people. ■ Vulnerable young women.
Cash transfer amount	FCFA 76 000 (US\$ 133)	FCFA 76 000 (US\$ 136)
Method of distribution	Cash via mobile money distributor	Cash via financial institution
Key outcomes	<ul style="list-style-type: none"> ■ 1000 households reached: <ul style="list-style-type: none"> – 641 people living with HIV. – 319 sex workers. – 40 gay men and other men who have sex with men. ■ 57% of beneficiaries are women. ■ 62% of the funds went to purchase food. <ul style="list-style-type: none"> – Other key uses were for debts, rent, health care and savings. 	<ul style="list-style-type: none"> ■ 952 households were reached, including: <ul style="list-style-type: none"> – 493 adults living with HIV. – 85 young people living with HIV. – 160 adolescent girls and young women. – 121 transgender people and gay men and other men who have sex with men. – 91 sex workers. ■ Extremely close collaboration with civil society organizations, who took a proactive role in not only identifying beneficiaries, but also facilitating the process for them to receive their cash transfer. ■ Recipients have reported using their cash transfer for food and income-generating activities.

	Côte d'Ivoire	Niger
Beneficiaries (number reached/ number targeted)	1328/1328	607/1087
Estimated number of secondary beneficiaries	7700	3100
Geographical focus	Greater Abidjan	All regions except Niamey
Focus populations	<ul style="list-style-type: none"> ■ People living with HIV. ■ Gay men and other men who have sex with men. ■ Sex workers. 	<ul style="list-style-type: none"> ■ People living with HIV. ■ Gay men and other men who have sex with men. ■ Sex workers.
Cash transfer amount	FCFA 50 000 (US\$ 88)	FCFA 65 000 (US\$ 112)
Method of distribution	Cash via mobile money distributor	Cash via financial institution
Key outcomes	<ul style="list-style-type: none"> ■ 1328 households of people living with HIV reached, including 437 members of key populations. ■ Robust information and sensitization process with stakeholders/partners; vulnerability assessment; and identification process based on learnings from initial cash transfer exercise. ■ Collaboration with the Ministry of Health and Public Hygiene, and PEPFAR partners gave the exercise greater visibility. It also paved the way for increased sustainability and potential integration of beneficiaries into national systems. ■ Recipients reported using the funds in the following ways: <ul style="list-style-type: none"> – 35% for food. – 18% for income-generating activities. – 15% for school fees. – 11% for health. – 12% for utilities. – 8% for other costs, including reimbursement of debts. 	<ul style="list-style-type: none"> ■ 607 households were reached, more than the planned 585. This includes: <ul style="list-style-type: none"> – 443 people living with HIV. – 49 members of key populations living with HIV. – 115 sex workers and gay men and other men who have sex with men. ■ The initiative helped improve a database of vulnerable people living with HIV. This supports better follow-up and care. ■ Strong and proactive collaborative effort between UNAIDS and civil society organization networks. ■ 54% of funds were used to purchase food. Other expenditures included income-generating activities, donations, health care and school fees.

Source: Based on data and information from: Synthesis report: WFP/UNAIDS cash transfer pilot initiative in west and central Africa (draft). Geneva: UNAIDS; April 2020.

Note: Exchange rates vary depending on the date of disbursement.

LESSONS FOR THE FUTURE

The experience documented in the pilot programme showed that delivering rapid cash transfers to marginalized people living with HIV and key populations in very difficult circumstances is possible, and that it provides valuable emergency support (4).

Critical lessons learned include the need for inclusive and flexible approaches, working in ways that are clear and transparent to community partners, and systematically involving community partners throughout the process. Defining clear and unbiased eligibility criteria, applying them consistently, and sensitizing beneficiaries and communities are also vital.

Capacity-building and other support (including funding) for community partners is another critical element. Community-level organizations, trusted counsellors and peer educators were essential for establishing trust, identifying and reaching

the intended beneficiaries, minimizing stigma and assessing the impact of the cash transfers. Engaging with government structures from the beginning helps to create the potential for long-lasting improvements.

One-off cash transfers of this kind can help households withstand short-term shocks, but they do not do away with the need to fully integrate vulnerable and marginalized populations into crisis responses and comprehensive social protection systems. There is a need across Africa to move towards inclusive, multipurpose social protection that is accessible and sustainable. Enhancing the people-centredness of cash transfers and slotting them in with other forms of social provisioning and support that are not necessarily cash-based—such as free or subsidized primary health-care, education, water and energy—is part of this process (6, 7).



Eligibility for the transfers was decided based on a variety of vulnerability criteria with the support of community-led organizations in Côte d'Ivoire.

Credit: UNAIDS

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ASIA AND THE PACIFIC



Progress against HIV in Asia and the Pacific continues to be uneven. Several countries have achieved wide and effective coverage of testing and treatment services, and Thailand and Viet Nam have reduced new HIV infections by at least 50% since 2010. Some countries are focusing on sustaining and integrating their HIV programmes in their overall health system and as part of efforts to achieve universal health coverage.

Contrary trends in other countries, however, saw new HIV infections in the region decline by only 21% overall between 2010 and 2020. Rapidly growing HIV epidemics are underway among key populations in countries such as Indonesia, Pakistan and the Philippines, with gay men and other men who have sex with men especially affected. Across the region, over 94% of new HIV infections are among key populations and their sexual partners, and more than one quarter of new infections are among young people (aged 15 to 24 years).

The centrality of community-led services became even more evident during the COVID-19 pandemic. Across the region, community-led organizations ensured the continuity of vital HIV services and commodities, including pre-exposure prophylaxis (PrEP) and antiretroviral therapy. These organizations operate in less-than-ideal conditions, however: despite positive legislative changes in some countries, hostile legal environments and policing practices—and stigma and discrimination—hinder the provision and use of HIV services for populations that need them the most.

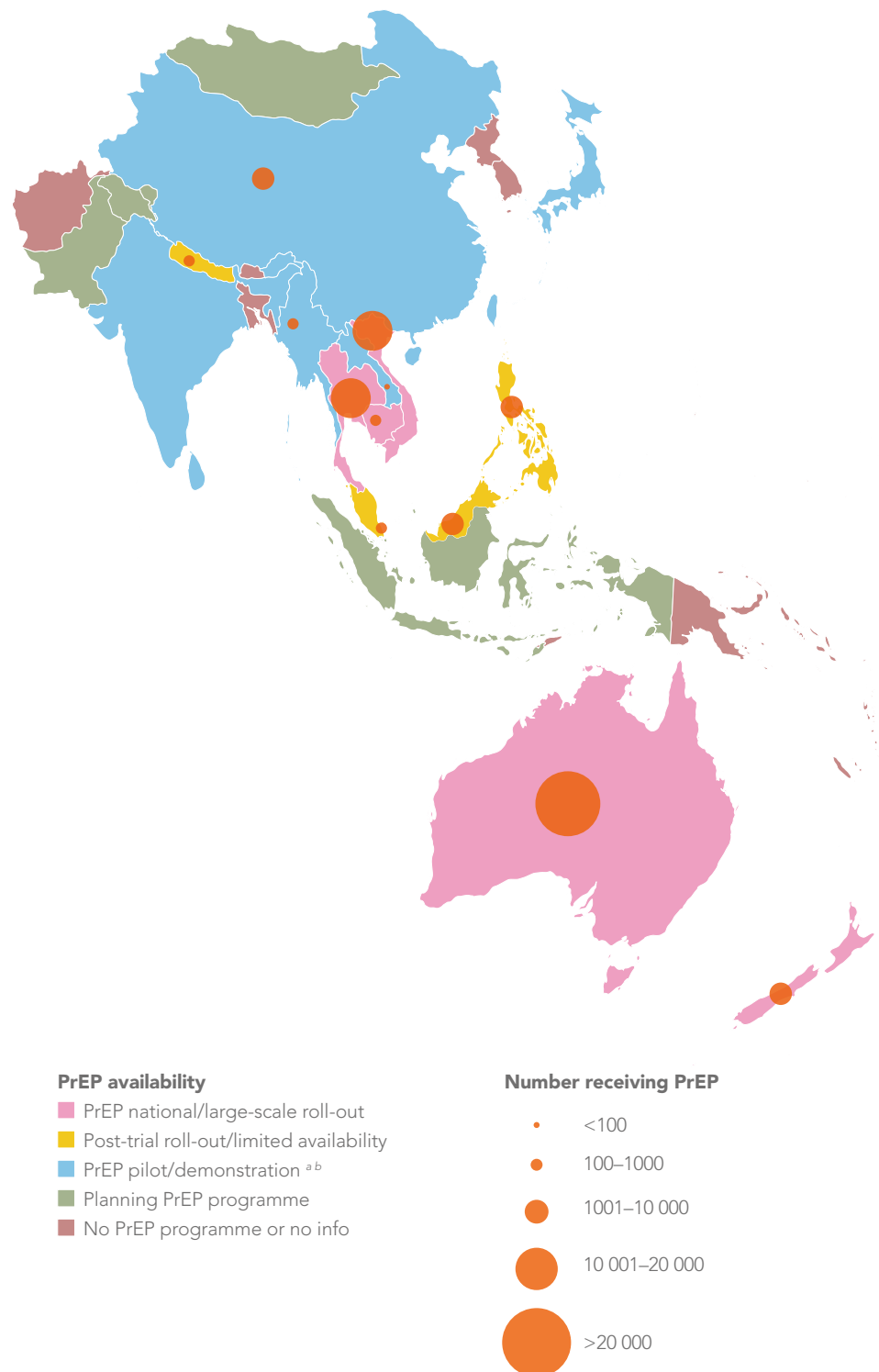
The transition from a reliance on external funding to domestic financing of essential services for HIV, sexually transmitted infections (STIs) and viral hepatitis is proving to be a challenge for several countries, especially in the context of economic setbacks caused by the COVID-19 pandemic.

Moving forward, service delivery for combination HIV prevention and treatment needs to be modernized and diversified using innovative approaches, with improved investments in better programme management, coordination and capacity.

PRIORITY ACTIONS FOR ENDING AIDS

- Emphasize rights-based approaches in policies and programmes, and tackle harmful social norms.
- Modernize differentiated service delivery, including scale-up of combination HIV prevention (particularly PrEP and harm reduction interventions), self-testing, multimonth dispensing, and maximizing the benefits of U = U (Undetectable = Untransmittable).
- Eliminate stigma and discrimination and other barriers to equitable service coverage.
- Mobilize sustainable domestic financing for prevention and treatment.
- Ensure inclusive and gender-responsive approaches, especially for young key populations.
- Reframe country responses to address inequalities through civil society and community engagement.

FIGURE 15.1 | STATUS OF PRE-EXPOSURE PROPHYLAXIS (PREP) AVAILABILITY AND NUMBER OF PREP USERS, ASIA AND THE PACIFIC, 2020



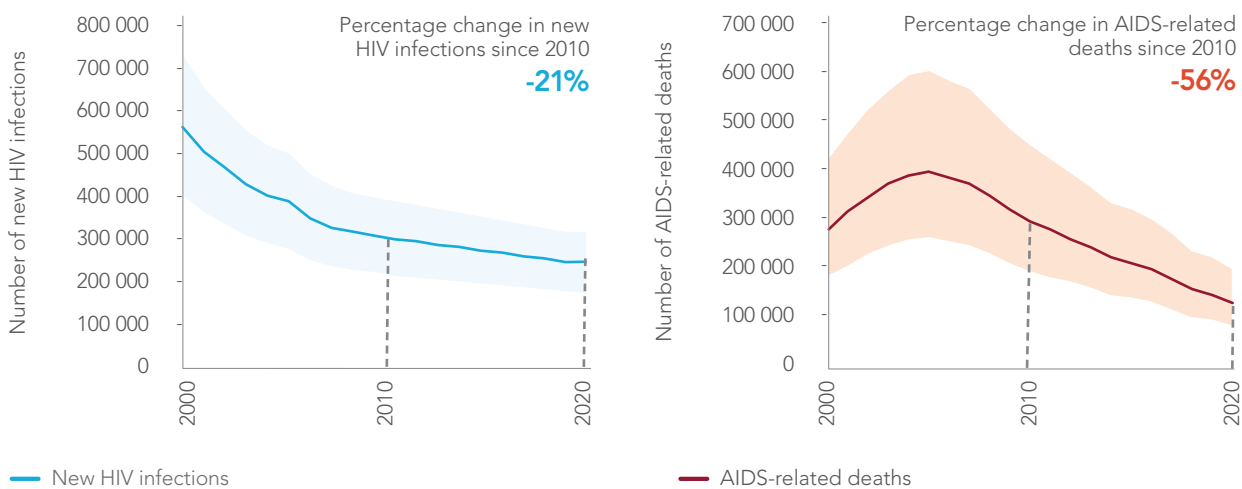
Source: Global AIDS Monitoring, 2021; National Commitments and Policy Instrument and information from national programmes; Monitoring HIV pre-exposure prophylaxis uptake in Australia. Issue number 3. Sydney: University of New South Wales and the Kirby Institute; 2020.

^a Data on people receiving PrEP not available for India.

^b PrEP pilot/demonstration in Lao People's Democratic Republic was launched in January 2021.

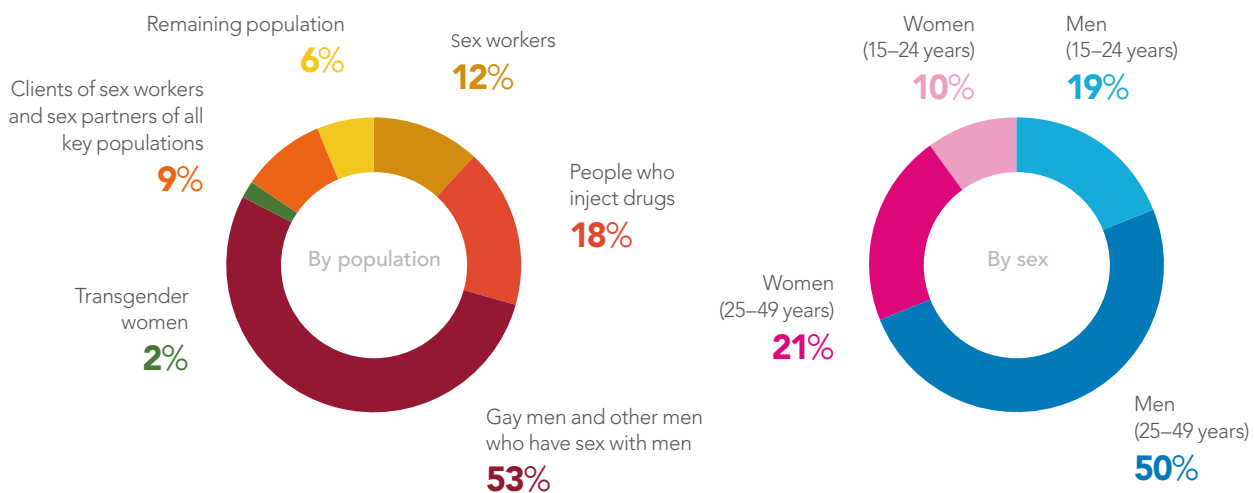
STATE OF THE PANDEMIC

FIGURE 15.2 | NUMBER OF NEW HIV INFECTIONS AND AIDS-RELATED DEATHS, ASIA AND THE PACIFIC, 2000–2020



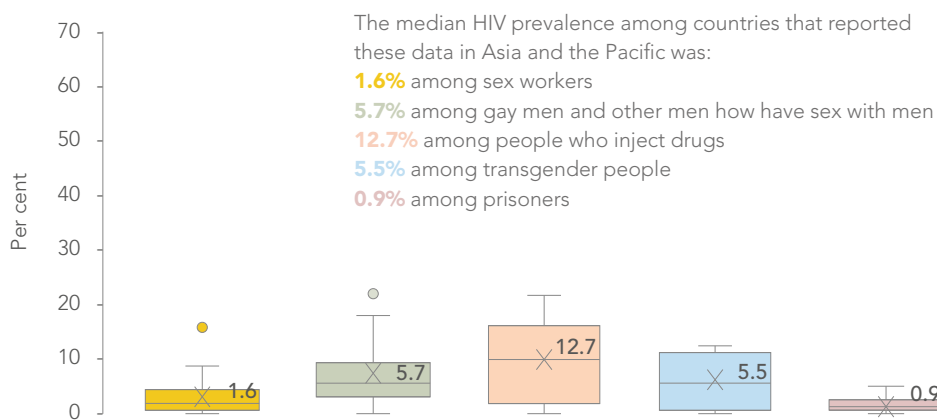
Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

FIGURE 15.3 | DISTRIBUTION OF NEW HIV INFECTIONS BY POPULATION GROUP AND SEX (AGED 15–49 YEARS), ASIA AND THE PACIFIC, 2020



Source: UNAIDS special analysis, 2021 (see methods annex).

FIGURE 15.4 | HIV PREVALENCE AMONG KEY POPULATIONS, REPORTING COUNTRIES IN ASIA AND THE PACIFIC, 2016–2020



- Sex workers (n = 19)
- Gay men and other men who have sex with men (n = 18)
- People who inject drugs (n = 13)
- Transgender people (n = 11)
- Prisoners (n = 10)

Source: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>).

Note: (n = number of countries). Total number of reporting countries = 41.

How to read this chart

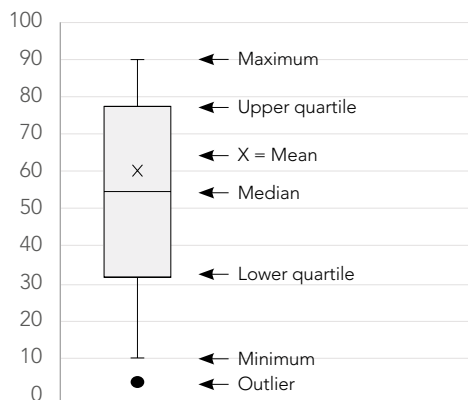


TABLE 15.1 | REPORTED ESTIMATED SIZE OF KEY POPULATIONS, ASIA AND THE PACIFIC, 2018–2020

	National adult population (aged 15–49 years) in 2020 or relevant year	Sex workers	Sex workers as per cent of adult population (aged 15–49 years)	Gay men and other men who have sex with men	Gay men and other men who have sex with men as per cent of adult population (aged 15–49 years)	People who inject drugs	People who inject drugs as per cent of adult population (aged 15–49 years)	Transgender people	Transgender people as per cent of adult population (aged 15–49 years)	Prisoners	Prisoners as per cent of adult population (aged 15–49 years)
Afghanistan	18 800 000			10 100		25 700					
Bhutan	440 000	600	0.14%					380	0.09%		
Cambodia	9 200 000										
India	752 000 000										
Indonesia	144 000 000	278 000	0.19%			34 500	0.02%	34 700	0.02%	268 000	0.19%
Lao People's Democratic Republic	3 800 000										
Malaysia	18 200 000	37 000	0.20%			75 000	0.41%				
Mongolia	1 700 000	6000		6500							
Nepal	15 000 000									22 000	0.15%
New Zealand	2 200 000									10 000	0.46%
Papua New Guinea	4 600 000	48 000	1.05%	36 000	0.78%						
Philippines	58 200 000	228 000	0.39%	681 000	1.17%	10 800	0.02%	204 000	0.35%		
Singapore	1 800 000									11 900	0.66%
Sri Lanka	10 300 000	30 000	0.29%	74 000	0.72%	2700	0.03%	2200	0.02%		
Thailand	34 200 000									358 000	1.05%
Viet Nam	51 600 000			256 000	0.50%						
Estimated regional median proportion as per cent of adult population (aged 15–49 years) ^{a, b} :			0.18%		0.82%		0.03%		0.01%		-

■ National population size estimate

■ Insufficient data

■ Local population size estimate

■ No data

Sources: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>); Spectrum Demproj module, 2021.

^a Quick Start Guide for Spectrum, 2020. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/QuickStartGuide_Spectrum_en.pdf).

^b Technical brief: recommended population size estimates of men who have sex with men. Geneva: WHO, UNAIDS; 2020.

Note 1: Estimates shown are government-provided estimates reported for 2018–2020. 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:

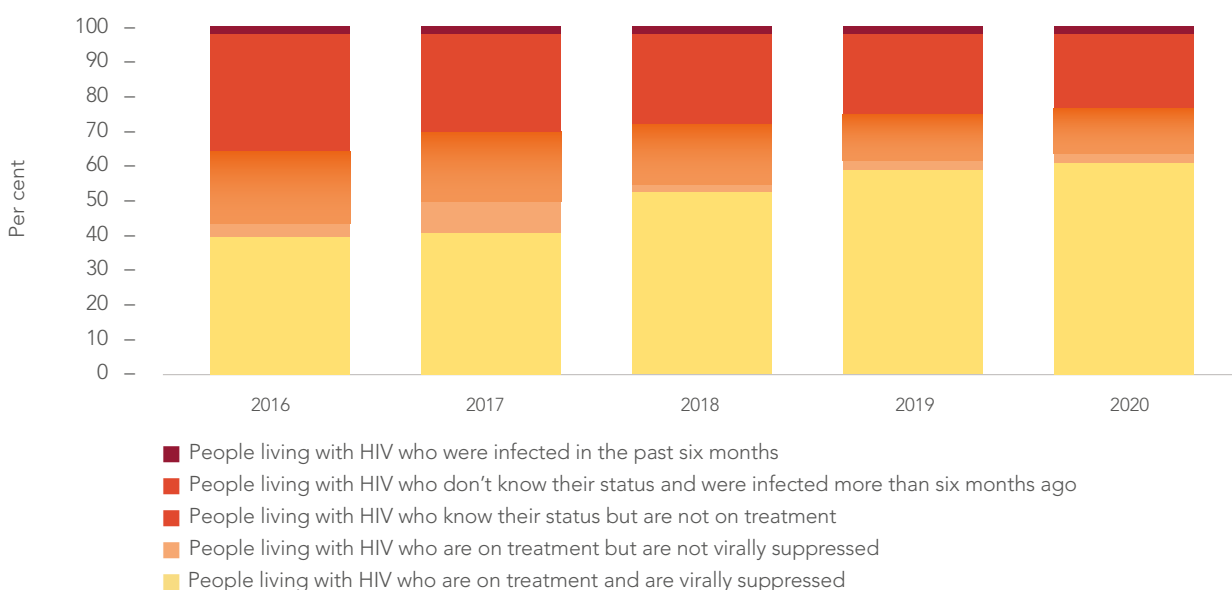
Afghanistan: Herat, Jalalabad, Kabul, Kandahar, Kunduz and Mazar (gay men and other men who have sex with men); Faizabad, Herat, Jalalabad, Kabul, Kandahar, Kunduz, Mazar and Zaranj (people who inject drugs).

Mongolia: Darkhan, Dornod, Khövsgöl and Ulaanbaatar (sex workers); Darkhan, Dornod, Orkhon and Ulaanbaatar (gay men and other men who have sex with men).

Note 3: The reported values for gay men and other men who have sex with men are presented as a per cent of the adult population (aged 15–49 years) for consistency across key populations. The percentage of this population out of the adult male population (aged 15–49 years) will be approximately twice the values shown.

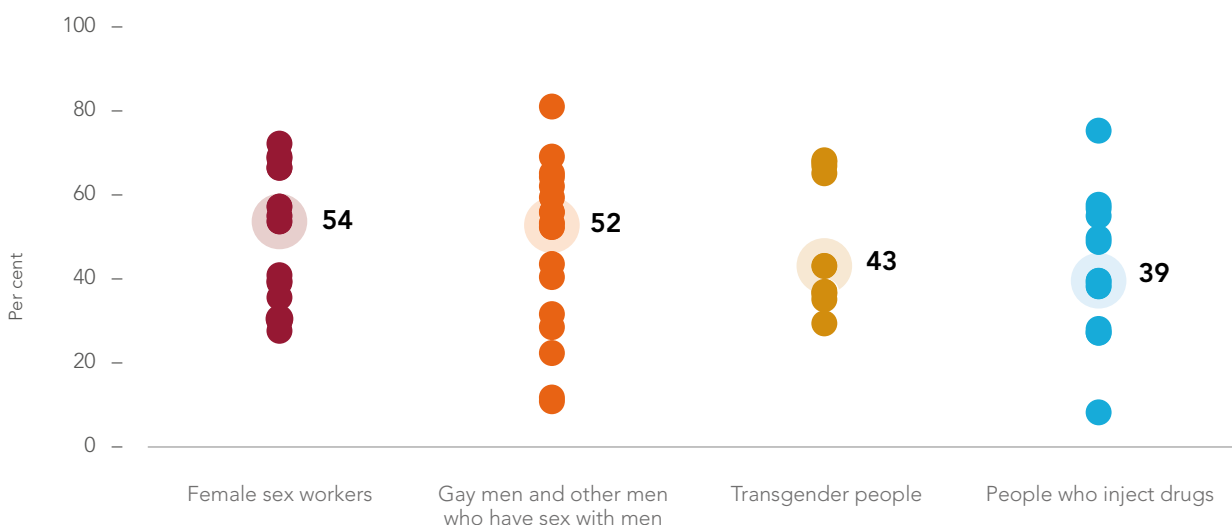
HIV SERVICES

FIGURE 15.5 | PEOPLE LIVING WITH HIV, PEOPLE NEWLY INFECTED IN THE PAST SIX MONTHS, AND HIV TESTING AND TREATMENT CASCADE, ADULTS (AGED 15+ YEARS), ASIA AND THE PACIFIC, 2016–2020



Source: UNAIDS special analysis, 2021.

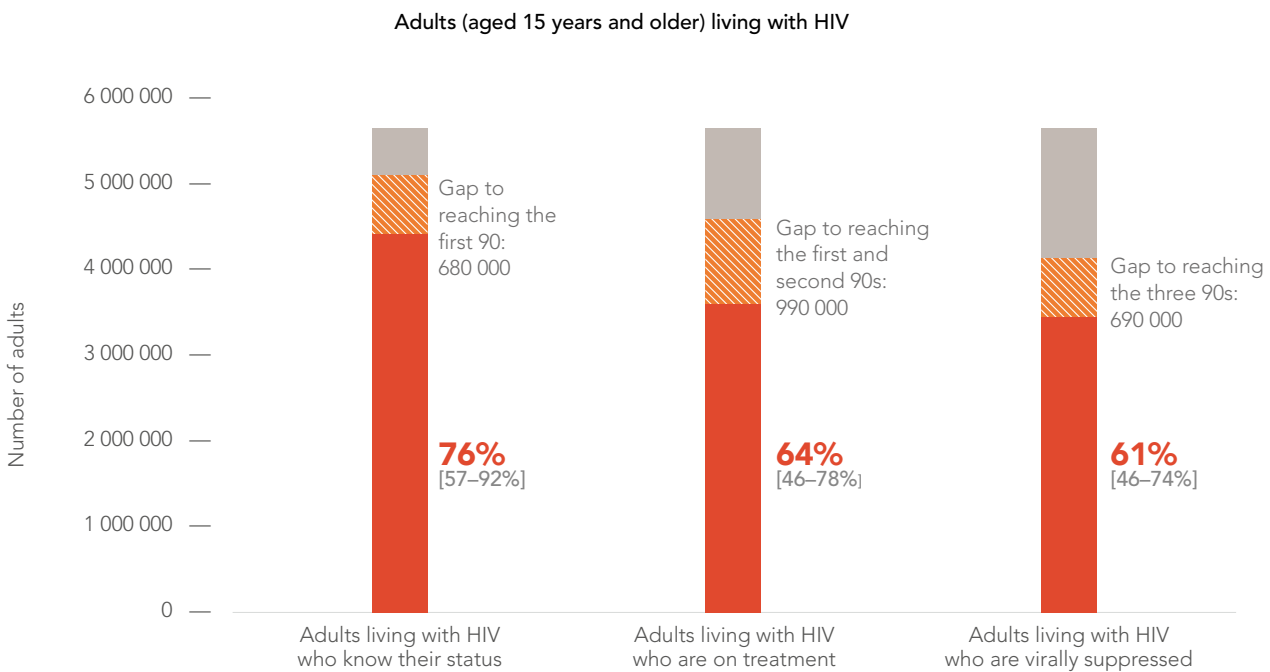
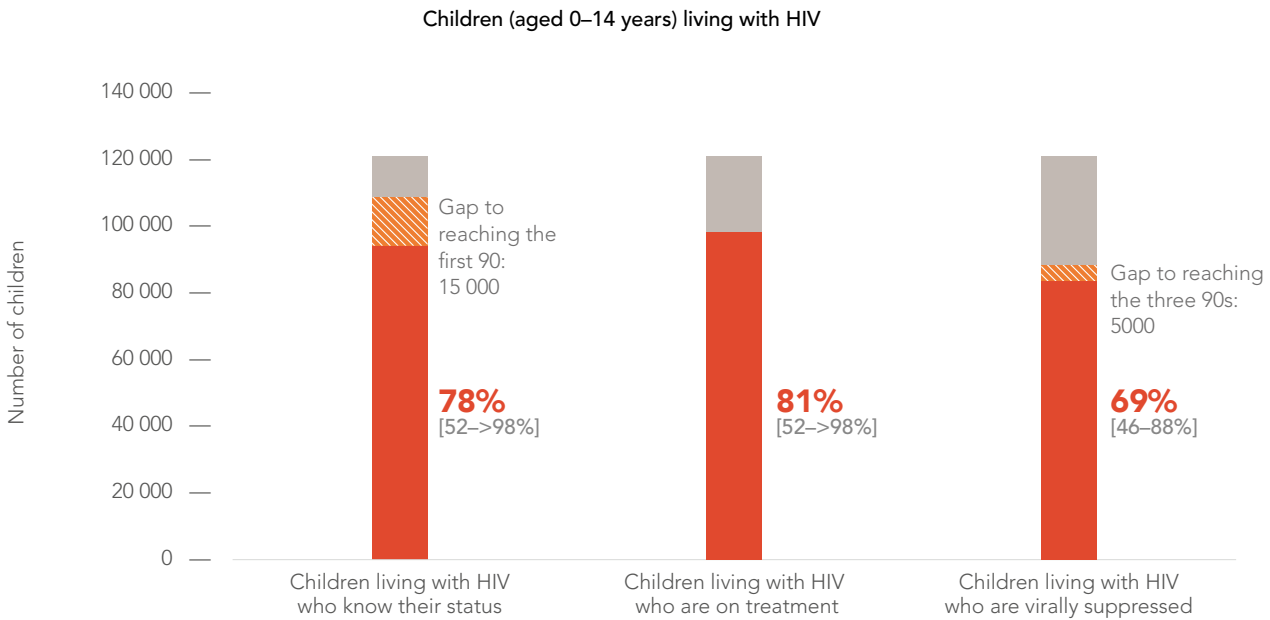
FIGURE 15.6 | HIV TESTING COVERAGE AMONG KEY POPULATIONS, ASIA AND THE PACIFIC, 2016–2020



Source: Integrated biological and behavioral surveys, 2016–2020.

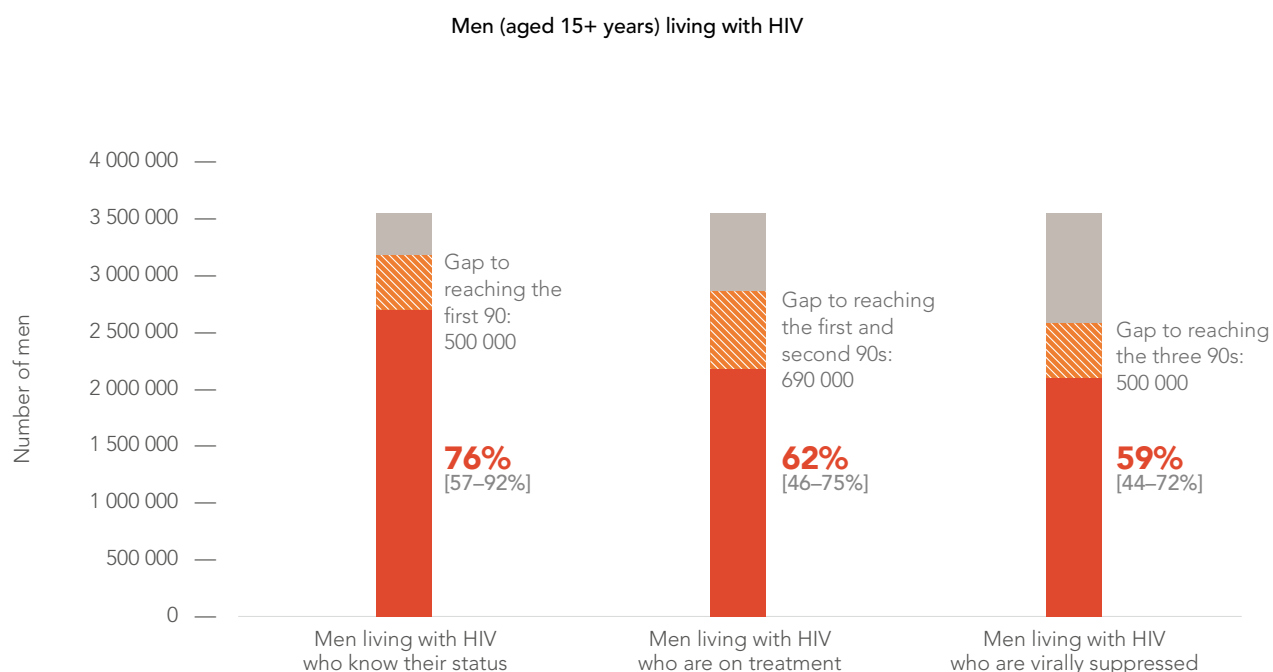
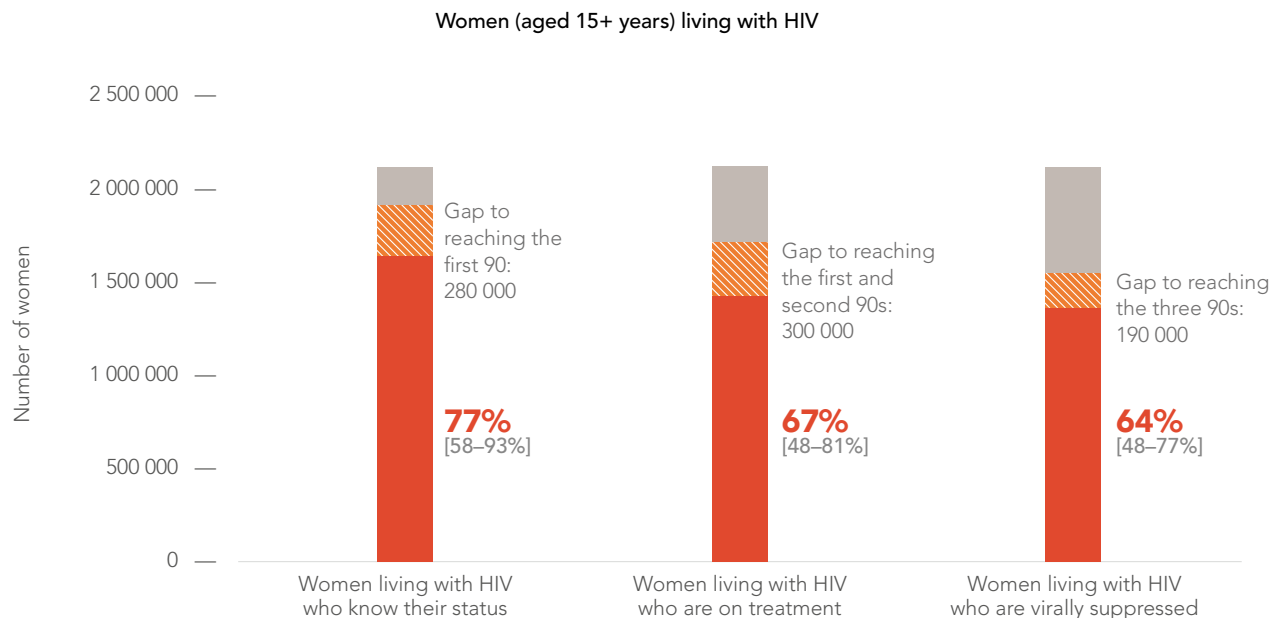
Note: Data were calculated based on 15 reporting countries for female sex workers and gay men and other men who have sex with men, nine reporting countries for transgender people, and 13 reporting countries for people who inject drugs.

FIGURE 15.7 | HIV TESTING AND TREATMENT CASCADE, CHILDREN (AGED 0–14 YEARS) COMPARED TO ADULTS (AGED 15 YEARS AND OLDER), ASIA AND THE PACIFIC, 2020



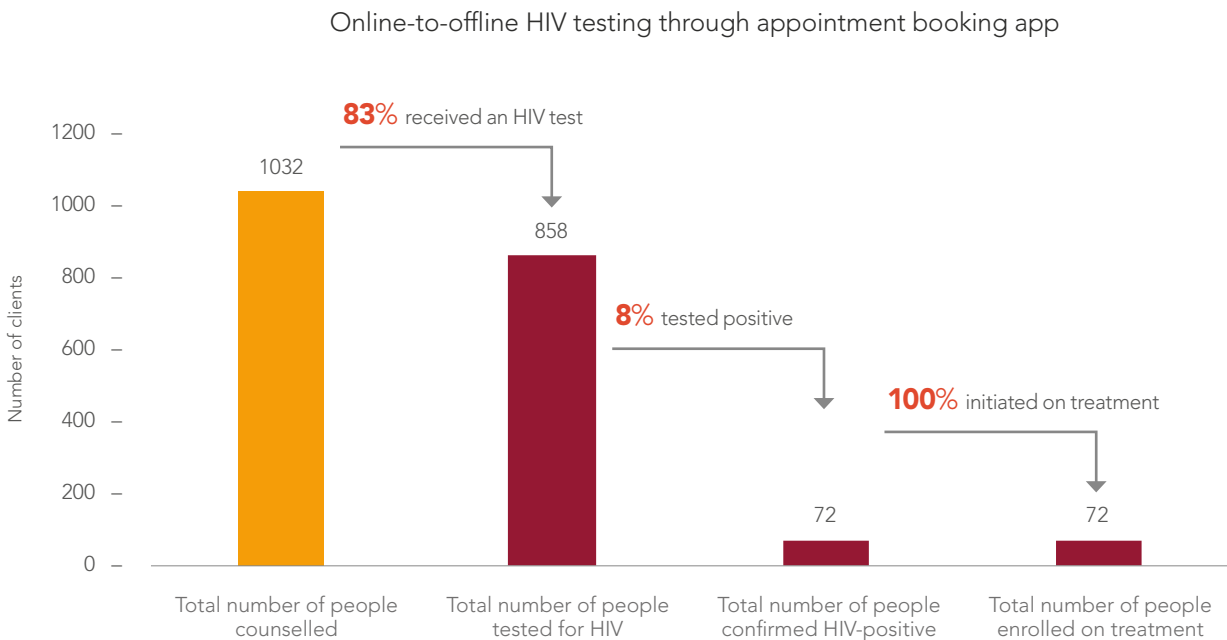
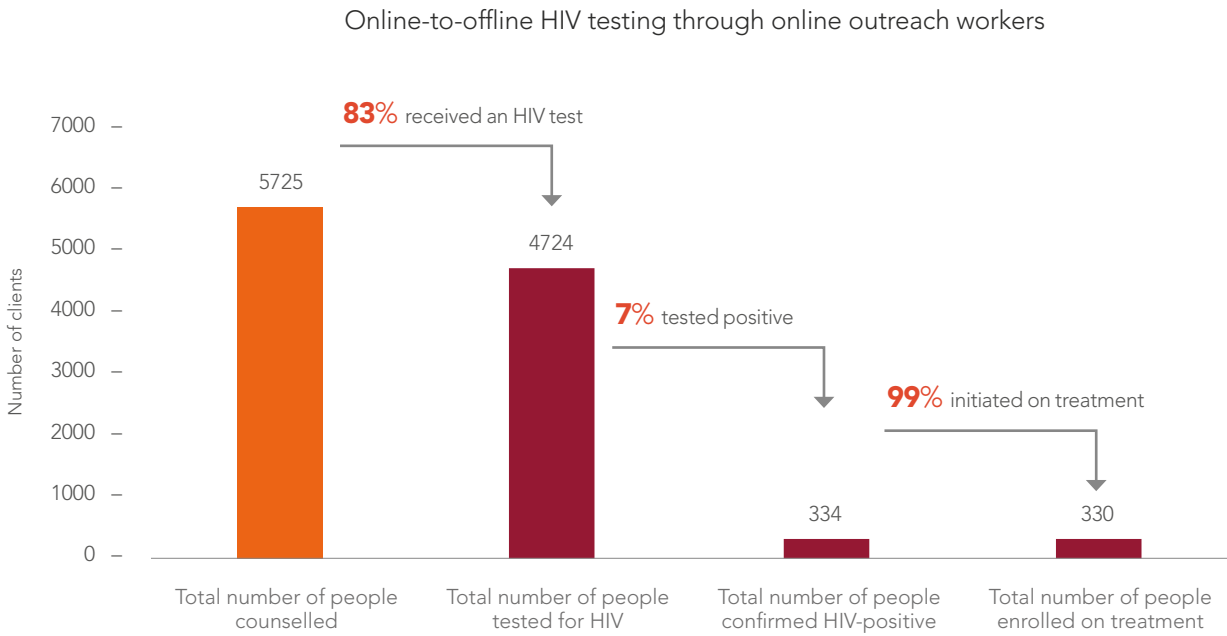
Source: UNAIDS special analysis, 2021.

FIGURE 15.8 | HIV TESTING AND TREATMENT CASCADE, WOMEN (AGED 15+ YEARS) COMPARED TO MEN (AGED 15+ YEARS), ASIA AND THE PACIFIC, 2020



Source: UNAIDS special analysis, 2021.

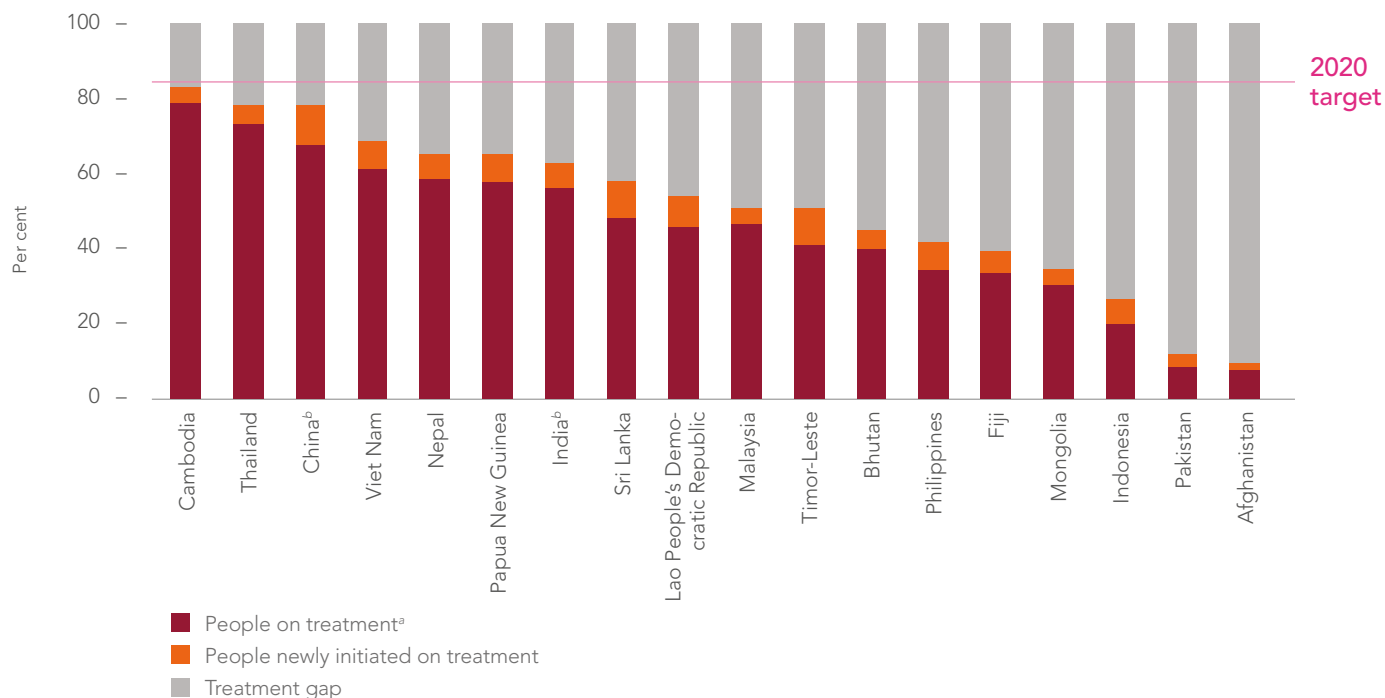
FIGURE 15.9 | **INNOVATIVE ONLINE-TO-OFFLINE MODEL TO IMPROVE THE HIV TESTING SERVICE CASCADE, BY SELECTED POPULATION GROUP, VIET NAM, OCTOBER 2018 TO MARCH 2021**



Source: USAID/PATH Healthy Markets Program data.

Note: Data are for transgender people and gay men and other men who have sex with men.

FIGURE 15.10 | PROPORTION OF NEW ANTIRETROVIRAL THERAPY INITIATIONS, PEOPLE ON ANTIRETROVIRAL THERAPY AND TREATMENT GAP AMONG PEOPLE LIVING WITH HIV, ASIA AND THE PACIFIC, 2020

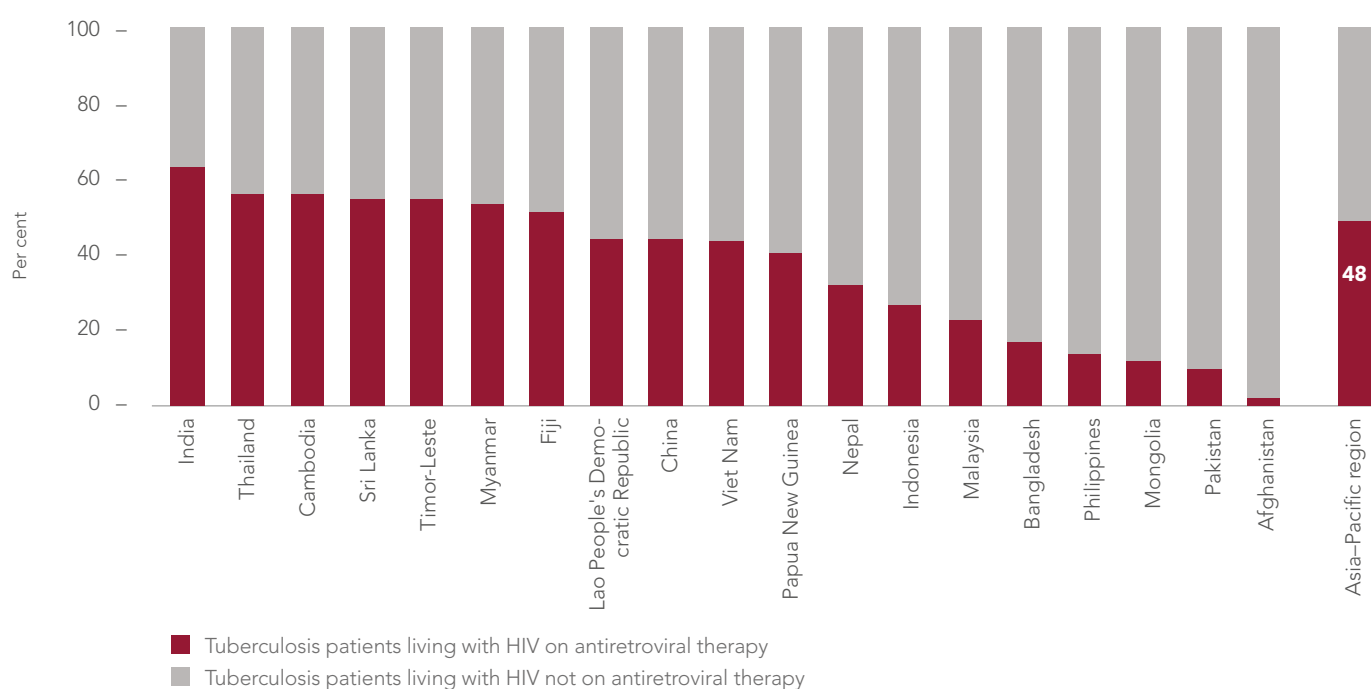


Source: UNAIDS epidemiological estimates, 2021; UNAIDS Global AIDS Monitoring, 2021; and Sankalak: Status of National AIDS Response. Second ed. New Delhi: NACO, Ministry of Health and Family Welfare [India]; 2020.

^a Excluding new antiretroviral therapy initiation.

^b Country published estimates.

FIGURE 15.11 | PROPORTION OF TUBERCULOSIS PATIENTS LIVING WITH HIV WHO ARE ON ANTIRETROVIRAL THERAPY, ASIA AND THE PACIFIC, 2019



Source: Global tuberculosis report 2020. Geneva: WHO; 2020.

LAWS AND POLICIES

TABLE 15.2 | PUNITIVE AND DISCRIMINATORY LAWS, ASIA AND THE PACIFIC, 2021

	Criminalization of transgender people	Criminalization of sex work	Criminalization of same-sex sexual acts	Law allows for possession of a certain limited amount of drugs for personal use	Parental consent for adolescents to access HIV testing	Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Laws or policies restricting the entry, stay and residence of people living with HIV	Mandatory HIV testing for marriage, work or residence permits or for certain groups
Afghanistan	1	1	1	1	1	1		1
Australia	4	6	20			26		
Bangladesh	2	1	21		2	No1		2
Bhutan	1	1	1			26		1
Brunei Darussalam	4	7	20		2	26		2
Cambodia	1	1	1	1	1	1		1
China	1	1	1	1	1	1		1
Cook Islands						26		
Democratic People's Republic of Korea		8	20					
Fiji	3	1	1	1	1	27		
India	2	2	2	2	2	2		2
Indonesia	1	1	33	1	1	1		1
Japan		9	20					1
Kiribati	2	1	20	1	1	2		2
Lao People's Democratic Republic	1	1	1	1	1	1		1
Malaysia	5	1	1	1	2	28		1
Maldives	4	10	20			26		
Marshall Islands	3	11	20		3	29		3
Micronesia (Federated States of)	3	12	20		3	3		3
Mongolia	1	32	2		2	2		2
Myanmar	2	2	22		2	2		2
Nauru	3	13	20		3	3		3
Nepal	1	1	1	1	1	1		1
New Zealand	2	2	2		2			2
Niue	3				3			3
Pakistan	4	1	1	1	1	1		1
Palau	3	14	20		3	3		31
Papua New Guinea	1	1	23	1	1	1		1
Philippines	1	1	1	1	1	1		1
Republic of Korea	2	2	34		2	2		2
Samoa	3	15	20		25	2		25
Singapore	2	1	1	1	1	2		2
Solomon Islands		16	20					2
Sri Lanka	1	1	24	1	1	1		1
Thailand	1	1	1	1	1	1		1
Timor-Leste			20					
Tonga	3	17	20		3	3		3
Tuvalu	3	18	20		3	3		3
Vanuatu	3	19	20		3	3		3
Viet Nam	2	2	2		2	30		3

Criminalization of transgender people

- Criminalized and/or prosecuted
- Neither criminalized nor prosecuted
- Data not available

Criminalization of sex work

- 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

Criminalization of same-sex sexual acts

- Death penalty
- Imprisonment (14 years–life, up to 14 years) or no penalty specified
- Laws penalizing same-sex sexual acts have been decriminalized or never existed, or no specific legislation
- Data not available

Law allows for possession of a certain limited amount of drugs for personal use

- No
- Yes
- Data not available

Parental consent for adolescents to access HIV testing

- Yes, for adolescents younger than 18
- Yes, for adolescents younger than 14 or 16
- Yes, for adolescents younger than 12
- No
- Data not available

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission

- Yes
- No, but prosecutions exist based on general criminal laws
- No
- Data not available

Laws or policies restricting the entry, stay and residence of people living with HIV

- 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
- Require HIV testing or disclosure for some permits
- No restrictions
- Data not available

Mandatory HIV testing for marriage, work or residence permits or for certain groups

- Yes
- No
- Data not available

Sources:

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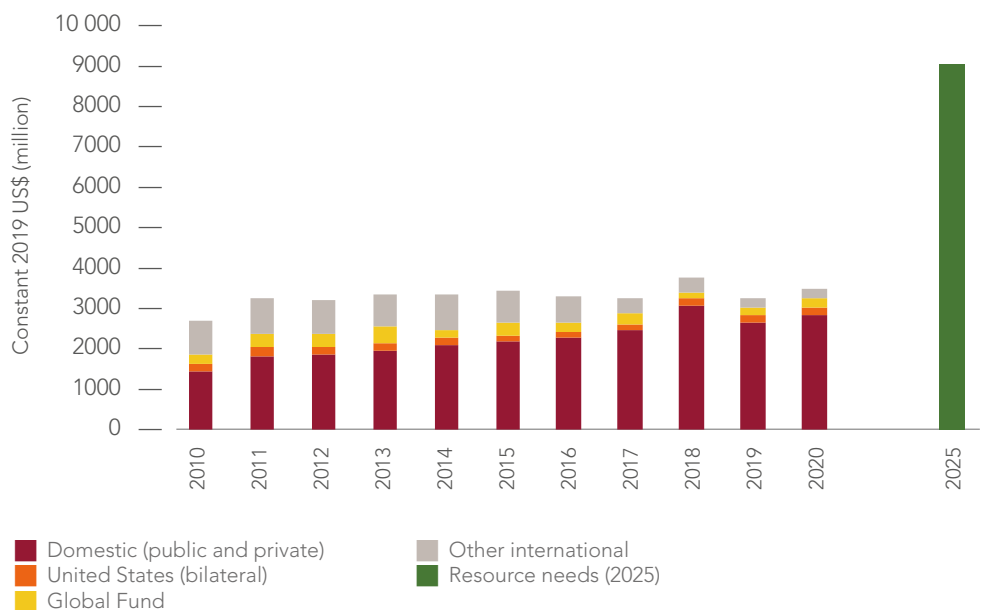
Note: A country is considered to have criminalized transgender persons if it uses the law to punish transgender individuals. Such a law may, for example, explicitly criminalize impersonation of the other gender, including cross-dressing. A country is considered to have any criminalization or punitive regulation of sex work if selling and/or buying sexual services is criminalized, ancillary activities associated with selling and/or buying sexual services are criminalized, profiting from organizing and/or managing sexual services is criminalized, and/or there are other punitive and/or administrative regulations of sex work.

INVESTING TO END AIDS

Despite a steady increase in domestic investments, the total amount of resources available for HIV responses in Asia and the Pacific has remained stable over the last five years. HIV resources from domestic sources have doubled since 2010, but this has been offset by a 50% decline from international sources during the same period. Investments from the United States Government’s bilateral contributions, the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) and other international sources have declined by 12%, 10% and 72%, respectively, since 2010.

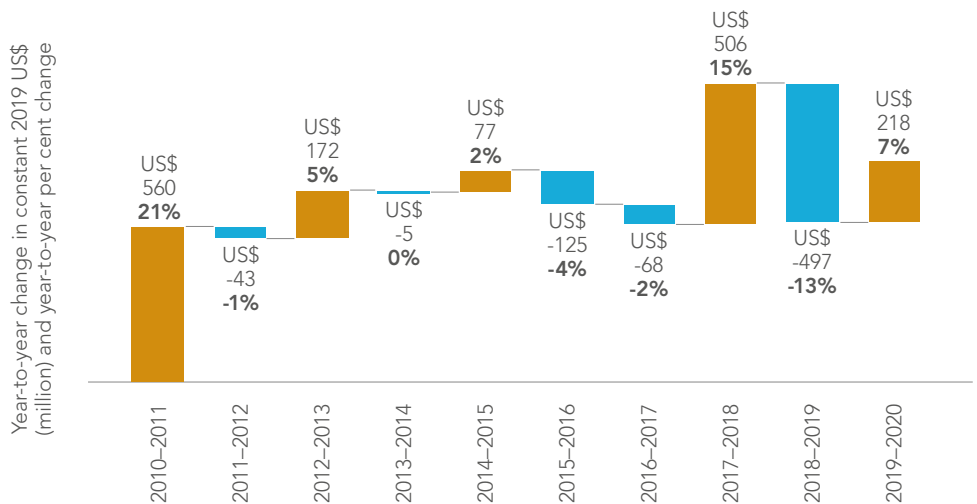
In 2020, US\$ 3.5 billion was available for the HIV response in the region, 82% of which came from domestic funding. The Global Fund contributed 7% of the overall resources in 2020, and bilateral contributions from the United States Government represented 5%. There is a US\$ 5.7 billion gap between the resources available and the US\$ 9.2 billion needed to reach the region’s annual resource needs in 2025.

FIGURE 15.12 | RESOURCE AVAILABILITY FOR HIV, ASIA AND THE PACIFIC, 2010–2020, AND ESTIMATED RESOURCE NEEDS FOR HIV BY 2025



Source: UNAIDS financial estimates and projections, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).
 Note: The resource estimates are presented in constant 2019 US dollars.

FIGURE 15.13 | YEAR-TO-YEAR CHANGE IN RESOURCE AVAILABILITY FOR HIV, ASIA AND THE PACIFIC, 2010–2011 TO 2019–2020



Source: UNAIDS financial estimates, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).

Case study

MOTORCYCLES ACCELERATE THE FIGHT AGAINST TUBERCULOSIS AND HIV IN THE PHILIPPINES

The Philippines has a high burden of both tuberculosis and multidrug-resistant tuberculosis (MDR-TB). In 2019, the prevalence of tuberculosis in the country was 554 per 100 000 population, accounting for 6% of the global burden (1). MDR-TB and rifampicin-resistant tuberculosis are estimated to account for 2.6% of new tuberculosis cases and 28% of previously treated tuberculosis cases in the Philippines (2). Poor access to tuberculosis testing, however, has contributed to low notification rates for people with tuberculosis.¹

Since July 2018, the Global Fund and Philippine Business for Social Progress (PBSP) have supported the Department of Health by deploying Sputum Transport Riders, known as “STRiders.” These STRiders transport sputum specimens by motorcycle from peripheral health facilities to laboratories for testing using GeneXpert platforms.² This system ensures that patients do not have to travel long distances and spend time away from school and work. It also helps to shorten turnaround times for laboratory results.

The PBSP-contracted STRiders are provided with insulated backpacks and trained on the proper handling and transport of specimens. They visit each referring facility up to three times a week (depending on the distance), transport specimens to the nearest GeneXpert site and return results to the peripheral health facility.

¹ Tuberculosis notification is the process of reporting diagnosed tuberculosis cases to relevant health authorities, who in turn report them to the World Health Organization (WHO) through national tuberculosis programmes (NTPs) or their equivalent (3).

² GeneXpert platforms are used to diagnose tuberculosis and rifampicin resistance (as recommended by WHO), hepatitis C and seasonal influenza, and for HIV viral load testing and early infant diagnosis of HIV infection.

In 2018–2019, regions with STRiders showed a 77% increase in the number of specimens tested with GeneXpert (compared to a 65% increase in regions without STRiders). They also had a 56% increase in the number of specimens that tested bacteriologically positive with point-of-care tests (compared to 49% in regions without STRiders) (4).

The use of STRiders has been expanded to cover the whole country over the past couple of years. This has proved very useful during the COVID-19 epidemic, which saw severe movement restrictions imposed across the Philippines. These restrictions resulted in the disruption of essential tuberculosis and HIV services, threatening the ability of people living with tuberculosis and HIV to access diagnostics and medicines. During the pandemic, the role of the STRiders was expanded to cover the delivery of antiretroviral medicines from HIV treatment facilities to rural health units for local pick-up by clients. In addition, they have been delivering HIV prevention packs containing condoms, lubricants, HIV information and HIV self-testing kits to people who have registered online. Packs are carefully anonymized and delivered in such a way as to ensure confidentiality. This is one of many ways that the Philippines has introduced innovative and differentiated ways of delivering HIV services, especially to those most in need.



STRiders (Sputum Transport Riders) in the Philippines facilitate timely tuberculosis diagnosis by shuttling specimens to testing laboratories. They have also delivered life-saving medicines to people living with HIV during the COVID-19 pandemic.

References

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LATIN AMERICA



Progress against HIV in Latin America has waned in recent years. The region fell short of the 90–90–90 targets, with late diagnoses common among people living with HIV. Of the estimated 100 000 [66 000–150 000] new HIV infections in 2020, 92% were among key populations and their sexual partners, with gay men and other men who have sex with men the most affected—a sign that HIV programmes are not closing the remaining gaps among populations at highest risk. AIDS-related mortality declined by 21% between 2010 and 2020, with approximately 31 000 [20 000–46 000] adults and children dying of AIDS-related causes in 2020.

These shortcomings reflect that key populations have inadequate access to suitable HIV services, and that they continue to experience stigma and discrimination, physical and sexual harassment, violence and other human rights violations. These barriers are undermining the impact of HIV prevention and treatment.

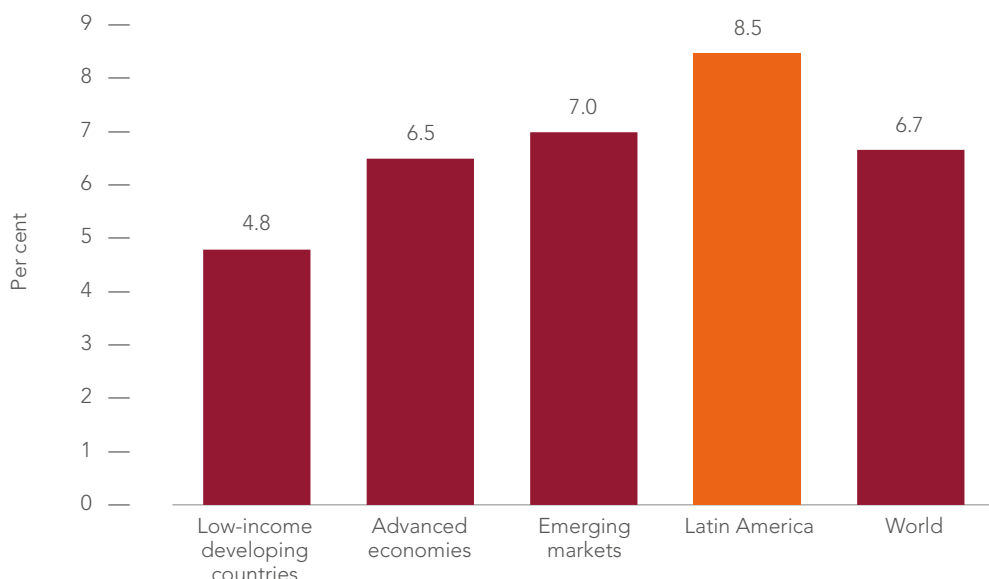
There is a dearth of detailed strategic information available on key populations in many countries, and HIV services for key populations continue to be significantly underfunded in nearly all countries in the region, despite generally strong resource availability. Countries need to reallocate HIV resources to high-impact programmes that reach and benefit key populations, including expanded provision of pre-exposure prophylaxis (PrEP). In 2020, only six of 17 countries in the region reported that that PrEP was provided within the national health system, and only one reported offering self-testing.

COVID-19 has damaged economies in the region, placing health systems under additional strain and driving millions of people into financial peril. Quick and creative responses, however—such as implementing multimonth dispensing and sharing antiretroviral medicine stocks among countries in the region—managed to limit disruptions to HIV services in most countries. Close to 90% of countries in Latin America are implementing social protection strategies or policies, although only a few of those programmes are explicitly benefitting people living with HIV and key populations.

PRIORITY ACTIONS FOR ENDING AIDS

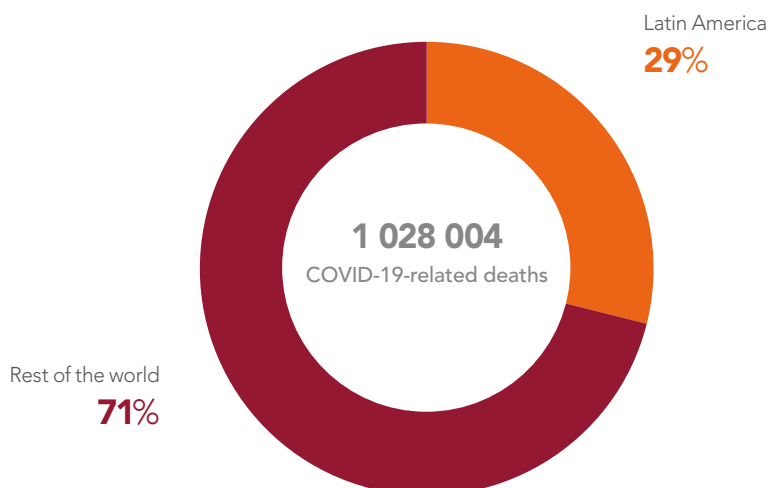
- Promote equitable access to effective and innovative combination HIV prevention within the frameworks of the Sustainable Development Goals and universal health coverage.
- Enact protective legislation, including antidiscrimination and gender identity laws.
- Empower and fully resource gender-sensitive and innovative community-led responses.
- Implement evidence-informed and human rights-based national responses, with efficient allocation of domestic resources and sustainable financing.
- Expand multimonth dispensing and transition to dolutegravir-based first-line regimens.
- Guarantee access to comprehensive HIV services for migrants and asylum seekers.

FIGURE 16.1 | SHARE OF GROSS DOMESTIC PRODUCT LOST AS A RESULT OF THE COVID-19 PANDEMIC, SELECTED COUNTRY GROUPINGS, 2020



Source: Szmigiera M. GDP loss due to COVID-19, by economy, 2020. In: statista.com [Internet]. 1 June 2021 (<https://www.statista.com/statistics/1240594/gdp-loss-covid-19-economy/>).

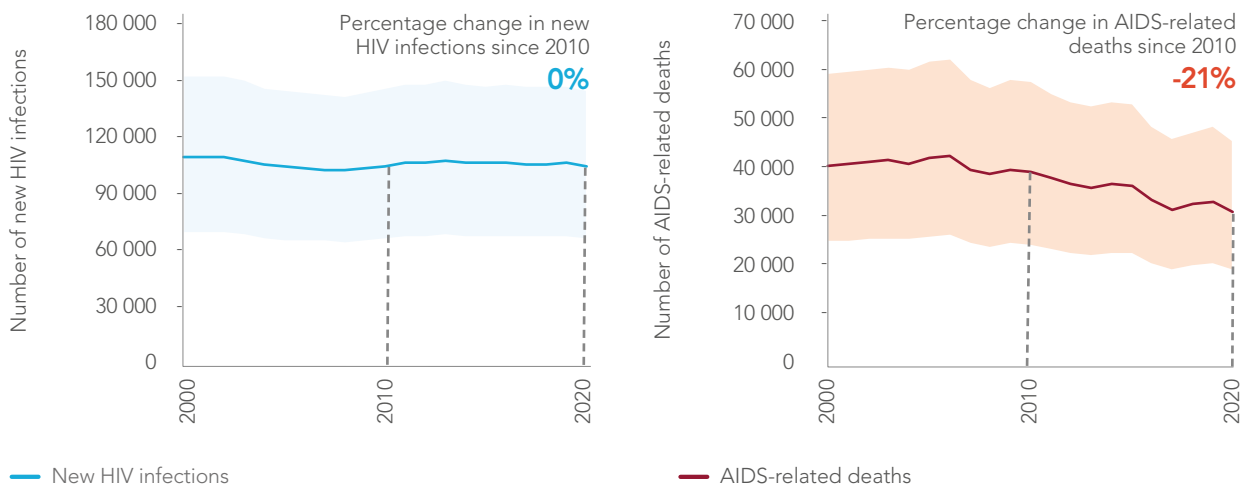
FIGURE 16.2 | DISTRIBUTION OF COVID-19-RELATED DEATHS, GLOBAL, THROUGH MAY 2021



Source: Elflein J. COVID-19 deaths worldwide as of May 31, 2021, by country. In: statista.com [Internet]. 31 May 2021 (<https://www.statista.com/statistics/1101643/latin-america-caribbean-coronavirus-cases/>).

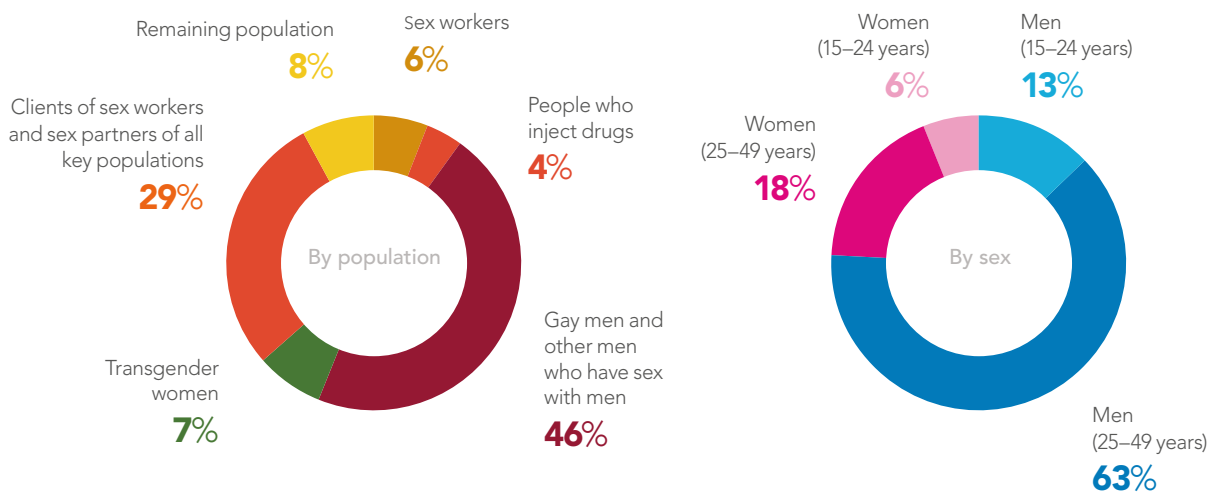
STATE OF THE PANDEMIC

FIGURE 16.3 | NUMBER OF NEW HIV INFECTIONS AND AIDS-RELATED DEATHS, LATIN AMERICA, 2000–2020



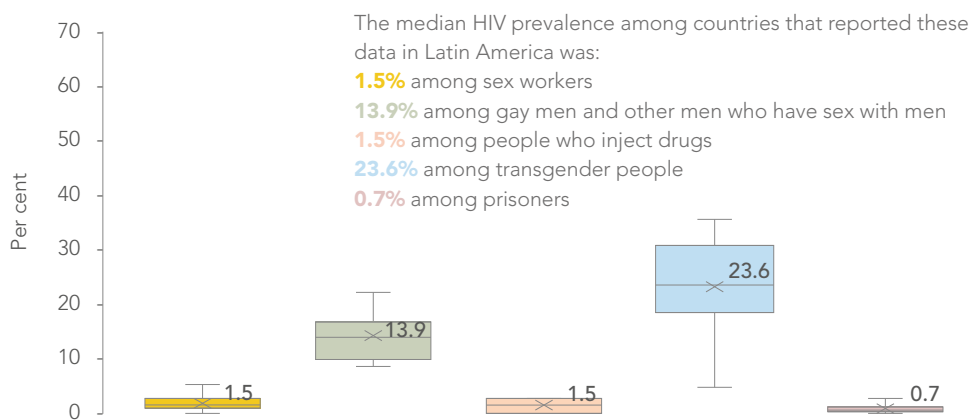
Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

FIGURE 16.4 | DISTRIBUTION OF NEW HIV INFECTIONS BY POPULATION GROUP AND SEX (AGED 15–49 YEARS), LATIN AMERICA, 2020



Source: UNAIDS special analysis, 2021 (see methods annex).

FIGURE 16.5 | HIV PREVALENCE AMONG KEY POPULATIONS, REPORTING COUNTRIES IN LATIN AMERICA, 2016–2020



- Sex workers (n = 14)
- Gay men and other men who have sex with men (n = 15)
- People who inject drugs (n = 2)
- Transgender people (n = 14)
- Prisoners (n = 11)

Source: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>).
 Note: (n = number of countries). Total number of reporting countries = 17.

How to read this chart

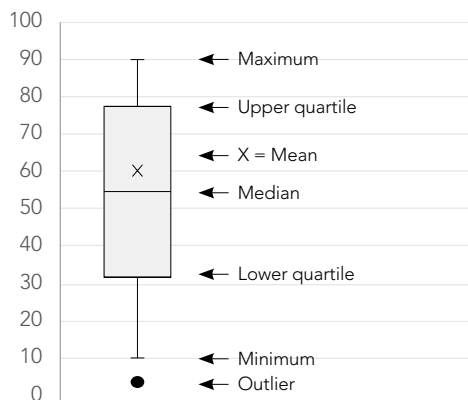


TABLE 16.1 | REPORTED ESTIMATED SIZE OF KEY POPULATIONS, LATIN AMERICA, 2018–2020

	National adult population (aged 15–49 years) in 2020 or relevant year	Sex workers	Sex workers as per cent of adult population (aged 15–49 years)	Gay men and other men who have sex with men	Gay men and other men who have sex with men as per cent of adult population (aged 15–49 years)	People who inject drugs	People who inject drugs as per cent of adult population (aged 15–49 years)	Transgender people	Transgender people as per cent of adult population (aged 15–49 years)	Prisoners	Prisoners as per cent of adult population (aged 15–49 years)
Bolivia (Plurinational State of)	6 100 000										
Brazil	114 000 000									702 000	0.62%
Chile	9 800 000									38 400	0.03%
Colombia	27 400 000			300 000						120 000	0.45%
Costa Rica	2 600 000							400		15 800	0.61%
Guatemala	9 200 000			116 000	1.27%			4300	0.05%	25 200	0.27%
Mexico	66 100 000	244 000	0.37%	1 226 000	1.85%			123 000	0.19%	202 000	0.31%
Nicaragua	3 600 000									19 700	0.55%
Panama	2 200 000	8600		30 000				2000			
Paraguay	3 900 000	9000		32 200				1200			
Peru	17 100 000			260 000	1.52%						
Uruguay	1 700 000			28 600	1.68%			1600	0.09%		
Venezuela (Bolivarian Republic of)	14 600 000							15 000	0.10%		
Estimated regional median proportion as per cent of adult population (aged 15–49 years) ^{a, b} :			0.25%		1.69%		-		0.06%		-

■ National population size estimate

■ Insufficient data

■ Local population size estimate

■ No data

Sources: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>); Spectrum Demproj module, 2021.

^a Quick Start Guide for Spectrum, 2020. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/QuickStartGuide_Spectrum_en.pdf).

^b Technical brief: recommended population size estimates of men who have sex with men. Geneva: WHO, UNAIDS; 2020.

Note 1: Estimates shown are government-provided estimates reported for 2018–2020. 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 estimate are as follows:

Colombia: Bogotá, Cali and Medellín.

Costa Rica: Gran Área Metropolitana.

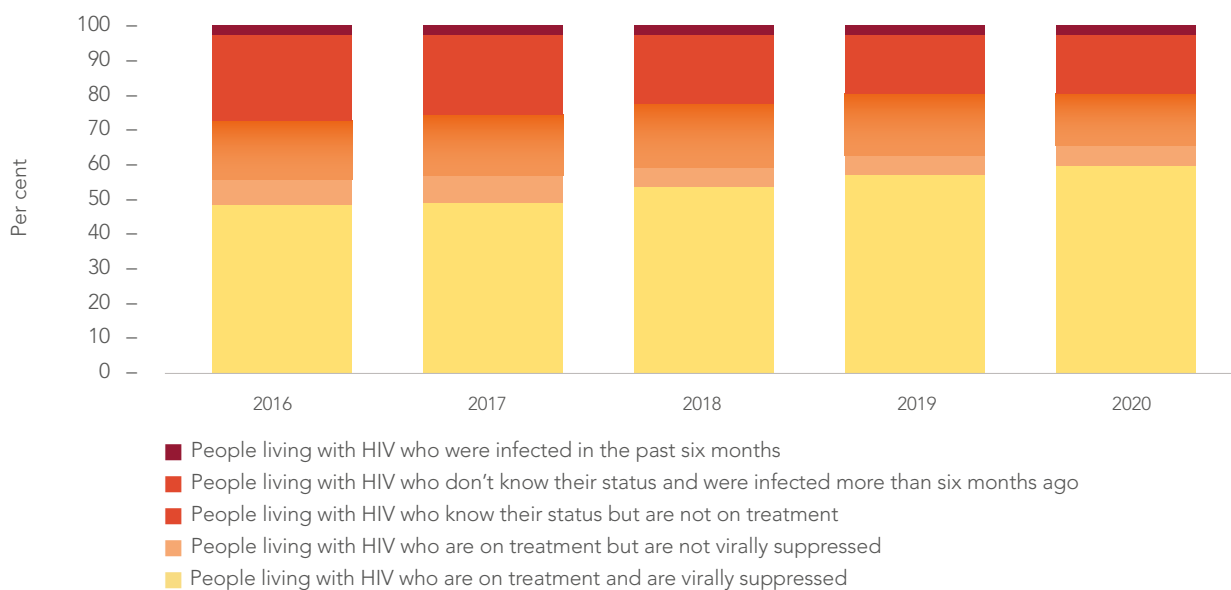
Panama: Azuero, Bocas del Toro, Chiriquí, Coclé, Comarca Ngäbe-Buglé, Panamá Centro, Panamá Este, Panamá Norte, Panamá Oeste and Veraguas.

Paraguay: Alto Paraná, Amambay, Área Metropolitana (Asunción and Central) and Caaguazú (sex workers); Alto Paraná, Asunción, Caaguazú and Central (gay men and other men who have sex with men); Amambay, Asunción and Central (transgender people).

Note 3: The reported values for gay men and other men who have sex with men are presented as a per cent of the adult population (aged 15–49 years) for consistency across key populations. The percentage of this population out of the adult male population (aged 15–49 years) will be approximately twice the values shown.

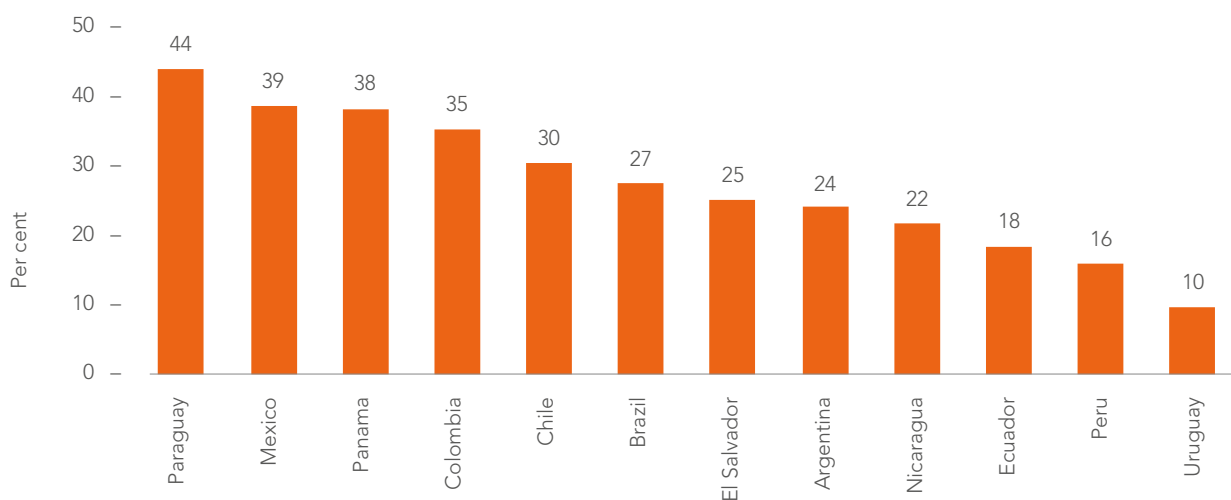
HIV SERVICES

FIGURE 16.6 | PEOPLE LIVING WITH HIV, PEOPLE NEWLY INFECTED IN THE PAST SIX MONTHS, AND HIV TESTING AND TREATMENT CASCADE, ADULTS (AGED 15+ YEARS), LATIN AMERICA, 2016–2020



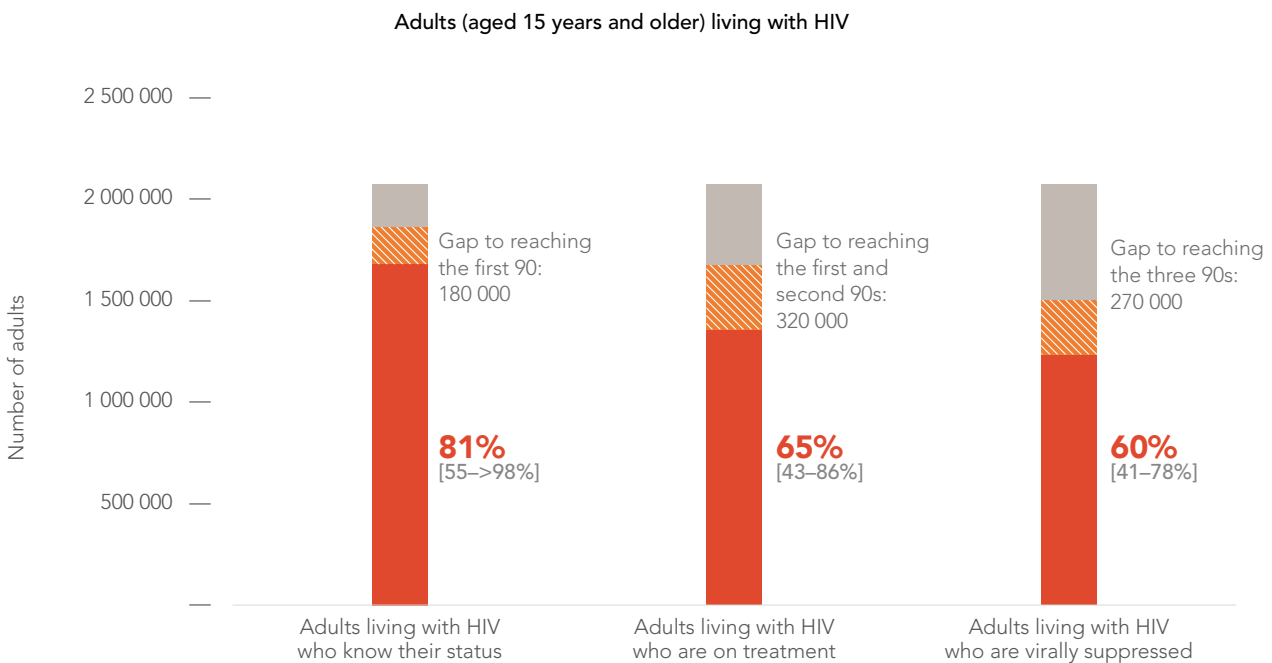
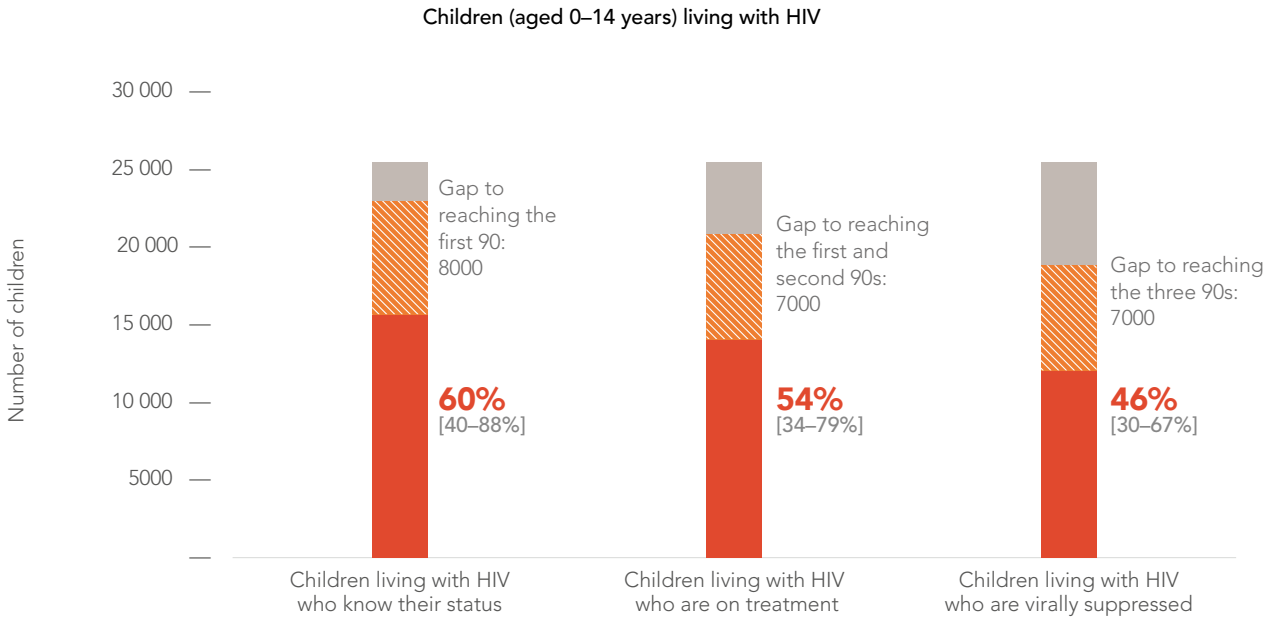
Source: UNAIDS special analysis, 2021.

FIGURE 16.7 | PERCENTAGE OF PEOPLE LIVING WITH HIV WITH A CD4 CELL COUNT <200 CELLS/MM3 AT DIAGNOSIS, SELECTED COUNTRIES IN LATIN AMERICA, 2020



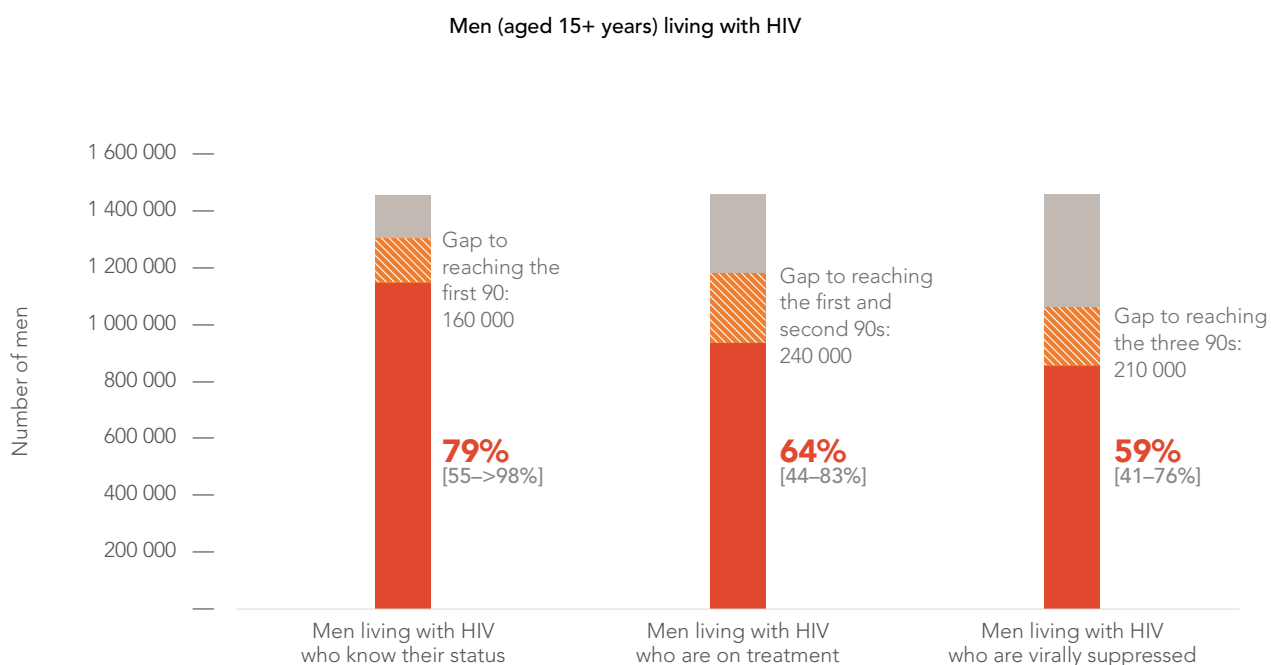
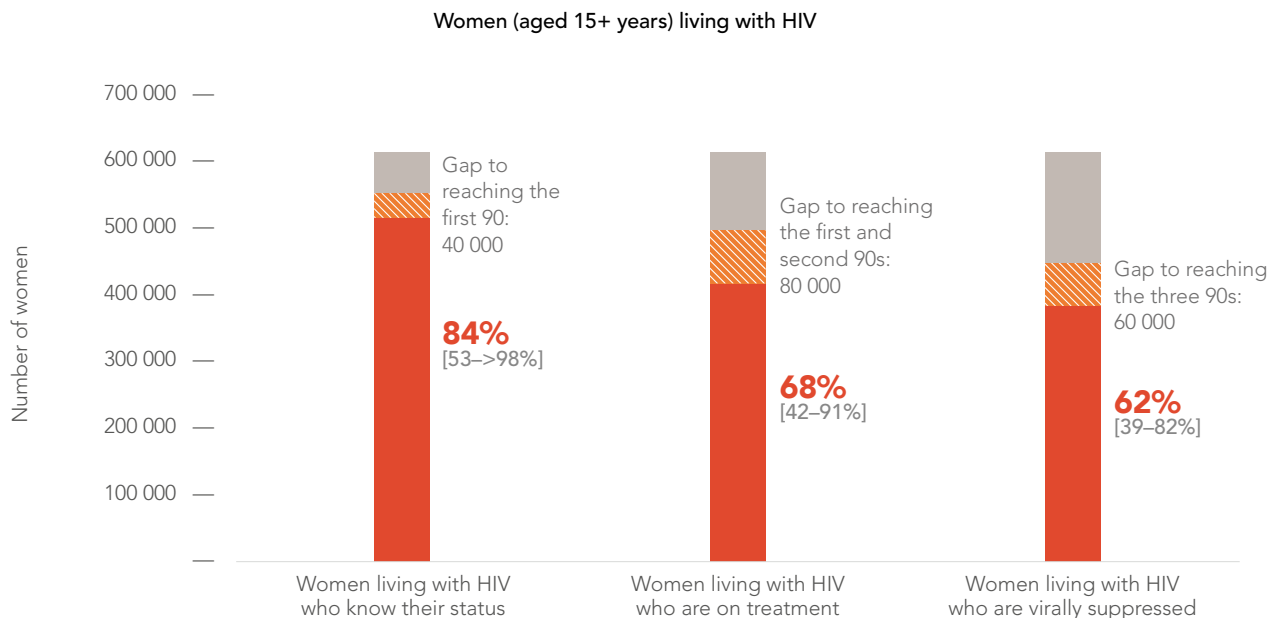
Source: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>).

FIGURE 16.8 | HIV TESTING AND TREATMENT CASCADE, CHILDREN (AGED 0–14 YEARS) COMPARED TO ADULTS (AGED 15 YEARS AND OLDER), LATIN AMERICA, 2020



Source: UNAIDS special analysis, 2021.

FIGURE 16.9 | HIV TESTING AND TREATMENT CASCADE, WOMEN (AGED 15+ YEARS) COMPARED TO MEN (AGED 15+ YEARS), LATIN AMERICA, 2020



Source: UNAIDS special analysis, 2021.

LAWS AND POLICIES

TABLE 16.2 | PUNITIVE AND DISCRIMINATORY LAWS SCORECARD, LATIN AMERICA, 2021

	Criminalization of transgender people	Criminalization of sex work	Criminalization of same-sex sexual acts	Law allows for possession of a certain limited amount of drugs for personal use	Parental consent for adolescents to access HIV testing	Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Laws or policies restricting the entry, stay and residence of people living with HIV	Mandatory HIV testing for marriage, work or residence permits or for certain groups
Argentina	1	1	1	1	1	1		1
Bolivia (Plurinational State of)	2	2	2		2	2		2
Brazil	1	1	1	1	1	1		1
Chile	1	1	5	1	1	1		1
Colombia	2	1	1	1	1	2		2
Costa Rica	1	1	1	1	1	1		1
Ecuador	2	1	2	1	2	9		2
El Salvador	1	3	1	1	1	10		1
Guatemala	1	1	1	1	1	1		1
Honduras	1	1	1	1	8	1		1
Mexico	2	1	1	1	1	1		1
Nicaragua	1	4	1	1	1	1		1
Panama	1	1	1	1	1	11		1
Paraguay	1	1	1	1	2	1		1
Peru	1		6		2	2		1
Uruguay	2	2	2		2	2		1
Venezuela (Bolivarian Republic of)	1	1	1	7	1	1		1

Criminalization of transgender people

- Criminalized and/or prosecuted
- Neither criminalized nor prosecuted
- Data not available

Criminalization of sex work

- 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

Criminalization of same-sex sexual acts

- Death penalty
- Imprisonment (14 years–life, up to 14 years) or no penalty specified
- Laws penalizing same-sex sexual acts have been decriminalized or never existed, or no specific legislation
- Data not available

Law allows for possession of a certain limited amount of drugs for personal use

- No
- Yes
- Data not available

Parental consent for adolescents to access HIV testing

- Yes, for adolescents younger than 18
- Yes, for adolescents younger than 14 or 16
- Yes, for adolescents younger than 12
- No
- Data not available

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission

- Yes
- No, but prosecutions exist based on general criminal laws
- No
- Data not available

Laws or policies restricting the entry, stay and residence of people living with HIV

- 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
- Require HIV testing or disclosure for some permits
- No restrictions
- Data not available

Mandatory HIV testing for marriage, work or residence permits or for certain groups

- Yes
- No
- Data not available

Sources:

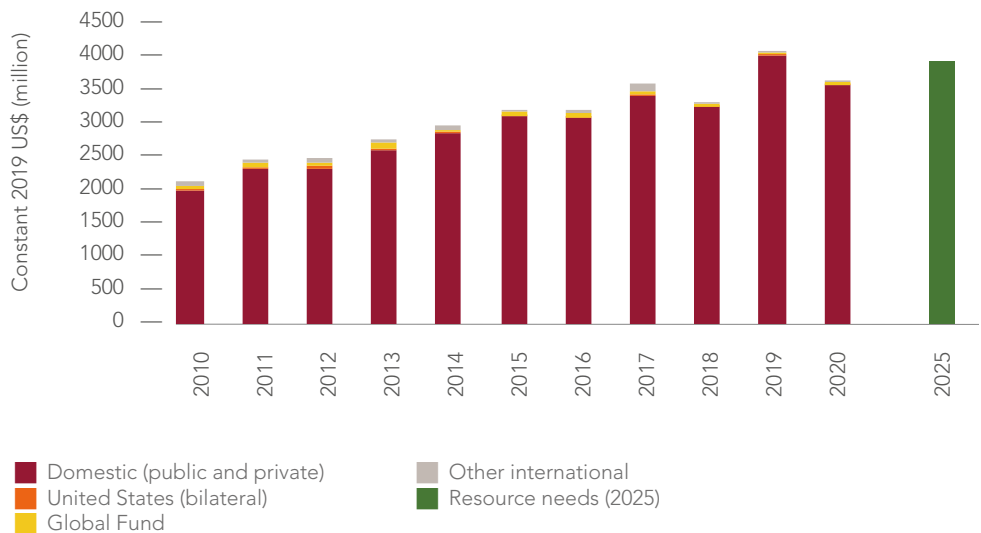
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12. Still not welcome: HIV-related travel restrictions. Geneva: UNAIDS, UNDP; 2019 (https://www.unaids.org/sites/default/files/media_asset/hiv-related-travel-restrictions-explainer_en.pdf).

Note: A country is considered to have criminalized transgender persons if it uses the law to punish transgender individuals. Such a law may, for example, explicitly criminalize impersonation of the other gender, including cross-dressing. A country is considered to have any criminalization or punitive regulation of sex work if selling and/or buying sexual services is criminalized, ancillary activities associated with selling and/or buying sexual services are criminalized, profiting from organizing and/or managing sexual services is criminalized, and/or there are other punitive and/or administrative regulations of sex work.

INVESTING TO END AIDS

Most countries in Latin America have successfully mobilized large amounts of domestic resources for their HIV responses. There is just an 8% gap between the resources available in the region in 2020 and the amount needed in 2025. However, a stabilization in HIV infections and slow reductions in AIDS-related mortality suggests that much better use of available resources is required. Domestic resources increased by 79% from 2010 to 2020, accounting for 98% of all HIV resources in 2020. Resources from international sources decreased by 55% over the same period. In aggregate, the resources for HIV in the region increased by 70% during the last decade. There is a need to bring down the unit prices of antiretroviral medicines and to increase spending on HIV prevention programmes that are focused on key populations at higher risk of HIV infection.

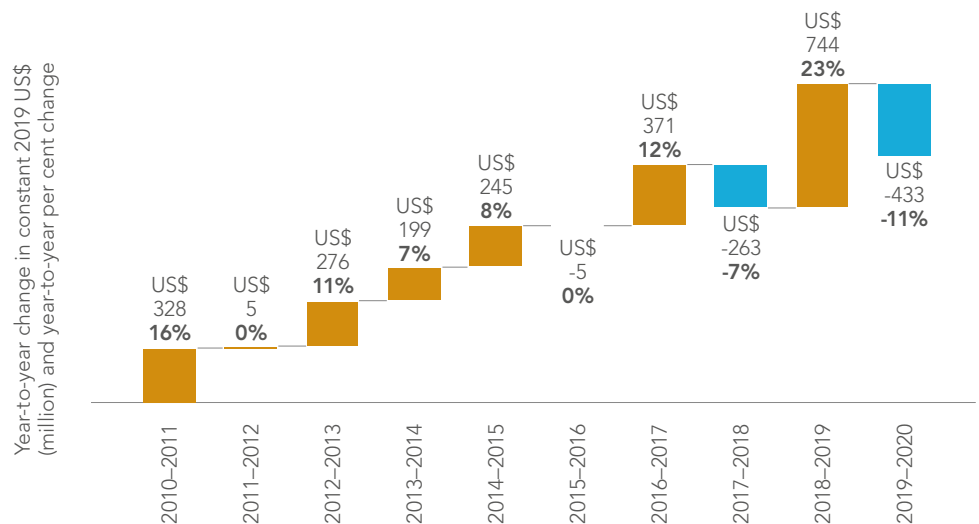
FIGURE 16.10 | **RESOURCE AVAILABILITY FOR HIV, LATIN AMERICA, 2010–2020, AND ESTIMATED RESOURCE NEEDS FOR HIV BY 2025**



Source: UNAIDS financial estimates and projections, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).

Note: The resource estimates are presented in constant 2019 US dollars.

FIGURE 16.11 | **YEAR-TO-YEAR CHANGE IN RESOURCE AVAILABILITY FOR HIV, LATIN AMERICA, 2010–2011 TO 2019–2020**



Source: UNAIDS financial estimates, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).



*Richard Guimaraes, a 14-year-old teenager on his way to school in San Rafael Shipibo community, in Ucayali, Peru.
Credit: UNICEF Peru/Pereira Garcia*



Case study

REMOVING PARENTAL CONSENT HURDLES IN PERU

Adolescents in many countries around the world face age-of-consent restrictions when trying to access sexual and reproductive health and HIV services. In Peru, two specific legal barriers were overcome in 2020 after years of dogged campaigning by activists.

Two hurdles to accessing sexual and reproductive health services for adolescents were the Civil Code and the General Health Law. The Civil Code stipulates that adolescents aged 14 to 16 years are legally incompetent to make decisions around their sexual and reproductive health, requiring parental consent to access these services, including contraception and HIV testing. Those aged 17 and 18 years also require parental consent, except in the case of marriage or emancipation. The General Health Law reinforces the requirement for adolescents to obtain parental or legal guardian consent to seek any health service.

The lack of control that Peruvian adolescent girls have over their sexual and reproductive lives is reflected in national survey data, which show that more than 13% of adolescent girls (aged 15–19 years) in Peru—and 24% of those in the poorest wealth quintile—are either pregnant or parenting. Two in three adolescent girls who have ever been pregnant reported that their pregnancies had been unintended (1).

Over the past four years, sustained campaigning by Peruvian nongovernmental organizations, supported by legal and technical support from UN agencies, has gradually dismantled the restrictions in a process that can serve as a best practice to guide similar endeavours elsewhere.

The first breakthrough came in 2016, in the form of an update to the Family Planning Standard, which redefined contraceptives as prevention supplies rather than as medical care products. The Peruvian Ministry of Health adopted that policy. This allowed adolescents aged 14 years and older to access contraception and other sexual and reproductive health services without requiring the consent of their parents or legal guardians.

DETERMINATION, ALLIANCES AND SMART TACTICS

Emphasis then shifted to enabling adolescents 14 years and older to legally take an HIV test without parental consent. Efforts focused on the Ministry of Health, where alliances were built between the HIV Department and other departments, especially those responsible for setting care standards for adolescents. The public health benefits of legalizing access to HIV testing for adolescents were widely debated. The Roundtable for the Fight Against Poverty, a venerable campaigning forum for social justice and equality, was an important ally. Also key were community groups of adolescents that publicized the issue among teenagers, with support from the United Nations Children’s Fund (UNICEF).

The next breakthrough was in 2019, when the Ministry of Health declared that HIV screening for adolescents should be considered part of the basic sexual and reproductive health care package. This paved the way for a participatory process to develop a new technical health standard to regulate care for children and adolescents living with HIV. Alliances were built with other ministries and the Ombudsman’s Office to emphasize the

wide-ranging relevance of a new standard and to pre-emptively shield it against attacks from conservative groups.

Adolescents, health-care providers, parents and civil society organizations participated in the 10-month consultation process, which culminated in the Ministry of Health accepting the principal recommendations. The new stipulation, which allows adolescents aged 14 years and older access to HIV testing without parental consent, is aligned with the age of sexual consent as set out in the Penal Code.

Now that the legal barriers have been removed, the next step is to establish clinical protocols for HIV testing in adolescents without parental consent, including dealing with mental health considerations.

This success story shows the value of a step-by-step approach that combines sustained civil society campaigning with alliance-building, and that uses technical and advocacy support from UN agencies to promote regulatory changes.



The Huancavelica campaign—Stand Up and Raise your Hand for Adolescent Boys and Girls: #Reimagine a Better Peru—was developed with Peruvian teenagers from across the country. Credit: UNICEF Peru/T Torres

References

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CARIBBEAN



The Caribbean has made steady progress against AIDS, especially in providing life-saving testing and treatment to people living with HIV. AIDS-related deaths have been cut in half since 2010, although the region fell short of the 2020 testing and treatment targets: 82% [70–96%] of people living with HIV knew their HIV status, 82% [68–97%] who knew their HIV-positive status were receiving treatment and 89% [74–>98%] of people on treatment were virally suppressed.

Community-led organizations in the region have shown that, if they are adequately supported, they can play a major role in addressing inequalities in HIV service access through more efficient case finding and strengthened linkage to treatment and care, and by ensuring confidential and consistent psychosocial support along the continuum of care. These organizations are especially adept at reaching key populations who, along with their sexual partners, accounted for 68% of new HIV infections in the region in 2020.

The COVID-19 pandemic and natural disasters have disrupted health systems, exacerbating financial, technical and human resource gaps in health services. Overcoming these disruptions and continuing HIV service expansion towards the 2025 targets requires the full implementation of best practices in combination prevention, testing and treatment. This includes self-testing, rights-based index testing, multimonth dispensing and transition to more effective first-line treatment regimens.

The pandemic has also fueled gender-based violence, which—along with gender inequalities and stigma and discrimination—continue to impede the region's HIV response. Despite some policy progress towards eliminating gender- and sex-based discrimination, unequal gender relations remain the norm, and sexual minorities are exposed to harsh social stigma and discrimination. An integrated approach to HIV, sexual and reproductive health, and gender-based violence services would help reach adolescent girls and young women and neglected key populations.

PRIORITY ACTIONS FOR ENDING AIDS

- Strengthen regional and national ownership and governance of HIV responses.
- Implement policies that remove structural barriers to HIV services.
- Repeal laws and policies that criminalize people living with and at risk of HIV.
- Strengthen strategic HIV and sexually transmitted infection (STI) programme planning, monitoring and evaluation, and accountability.
- Improve data quality and strengthen surveillance for monitoring the HIV response and providing evidence for strategic decision-making.
- Eliminate vertical transmission in additional countries and ensure the re-validation of countries that have already been validated.

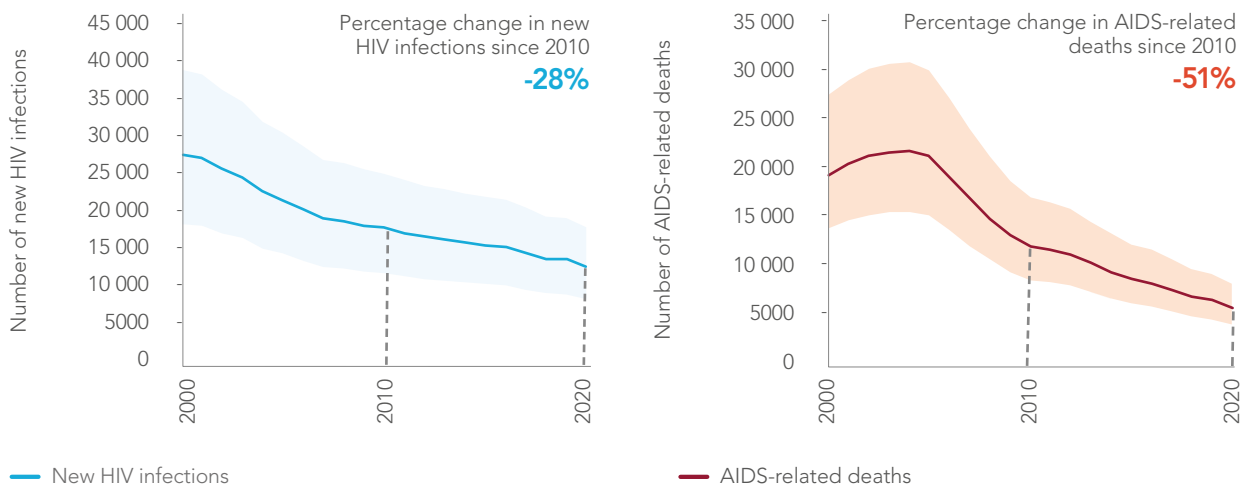


Brandy Rodriguez of the Trinidad and Tobago Transgender Coalition. On International Transgender Day of Visibility (31 March 2021), the United Caribbean Trans Network launched the results of a study that features feedback from transgender and other gender-diverse respondents from 11 countries in the region, garnered from surveys, individual interviews and focus group sessions. Respondents identified the inability to change their gender marker, employment discrimination and discrimination in health services as the top challenges facing the community. Except for Cuba, no Caribbean country allows transgender people to modify their gender on official identification.

Credit: Trinidad and Tobago Newsday/Ayanna Kinsale

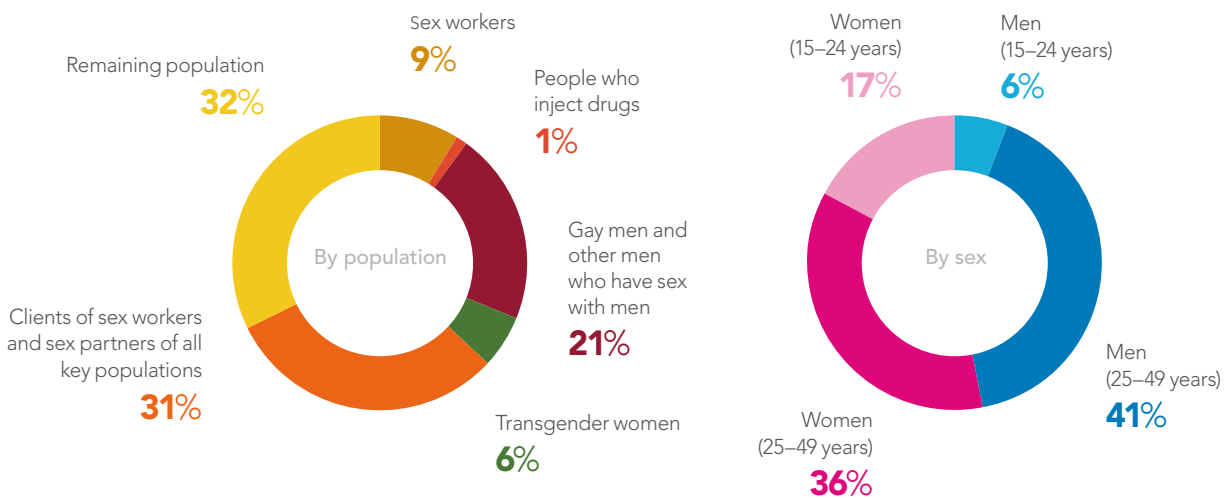
STATE OF THE PANDEMIC

FIGURE 17.1 | NUMBER OF NEW HIV INFECTIONS AND AIDS-RELATED DEATHS, CARIBBEAN, 2000–2020



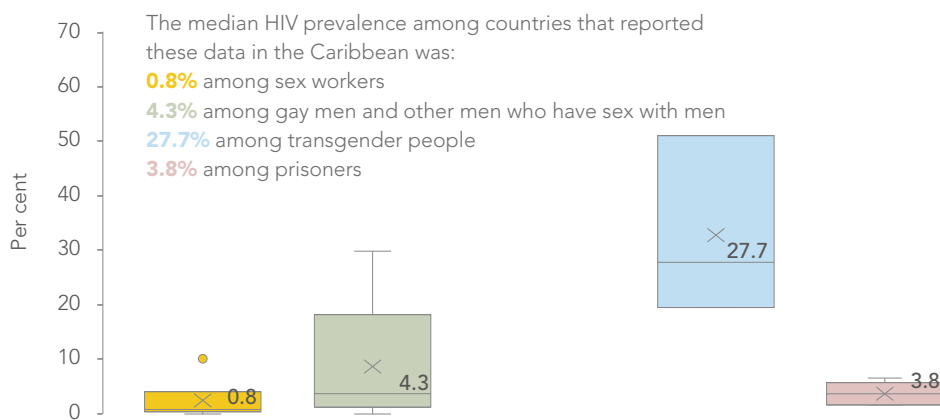
Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

FIGURE 17.2 | DISTRIBUTION OF NEW HIV INFECTIONS BY POPULATION GROUP AND SEX (AGED 15–49 YEARS), CARIBBEAN, 2020



Source: UNAIDS special analysis, 2021 (see methods annex).

FIGURE 17.3 | HIV PREVALENCE AMONG KEY POPULATIONS, REPORTING COUNTRIES IN THE CARIBBEAN, 2016–2020



- Sex workers (n = 9)
- Gay men and other men who have sex with men (n = 8)
- People who inject drugs (n = 0)
- Transgender people (n = 3)
- Prisoners (n = 7)

Source: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>).
 Note: (n = number of countries). Total number of reporting countries = 17.

How to read this chart

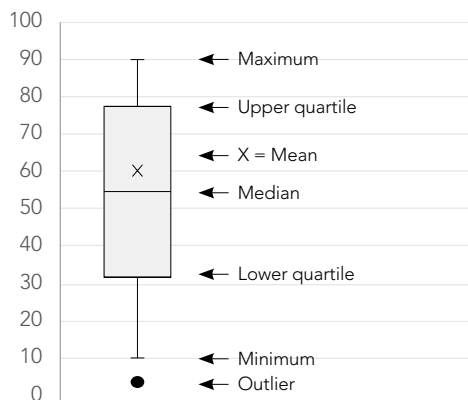


TABLE 17.1 | REPORTED ESTIMATED SIZE OF KEY POPULATIONS, CARIBBEAN, 2018–2020

	National adult population (aged 15–49 years) in 2020 or relevant year	Sex workers	Sex workers as per cent of adult population (aged 15–49 years)	Gay men and other men who have sex with men	Gay men and other men who have sex with men as per cent of adult population (aged 15–49 years)	People who inject drugs	People who inject drugs as per cent of adult population (aged 15–49 years)	Transgender people	Transgender people as per cent of adult population (aged 15–49 years)	Prisoners	Prisoners as per cent of adult population (aged 15–49 years)
Bahamas	210 000									2300	1.11%
Dominican Republic	5 800 000									29 000	0.50%
Haiti	6 100 000									12 000	0.19%
Jamaica	1 600 000			42 000	2.65%			3800	0.24%		
Saint Lucia	101 000			3000	2.97%					500	0.51%
Saint Vincent and the Grenadines	56 000										
Suriname	300 000										
Estimated regional median proportion as per cent of adult population (aged 15–49 years) ^{a, b} :			-		1.35%		-		0.19%		-

■ National population size estimate

■ Insufficient data

■ Local population size estimate

■ No data

Sources: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>); Spectrum Demproj module, 2021; 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).

^a Quick Start Guide for Spectrum, 2020. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/QuickStartGuide_Spectrum_en.pdf).

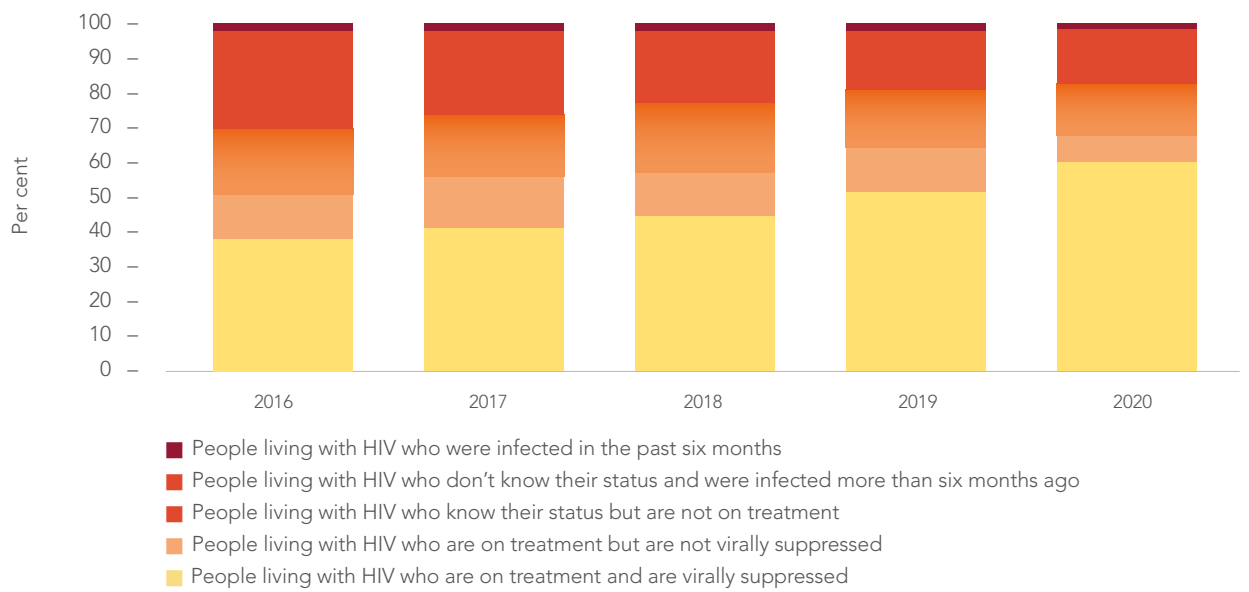
^b Technical brief: recommended population size estimates of men who have sex with men. Geneva: WHO, UNAIDS; 2020.

Note 1: Estimates shown are government-provided estimates reported for 2018–2020. 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 reported values for gay men and other men who have sex with men are presented as a per cent of the adult population (aged 15–49 years) for consistency across key populations. The percentage of this population out of the adult male population (aged 15–49 years) will be approximately twice the values shown.

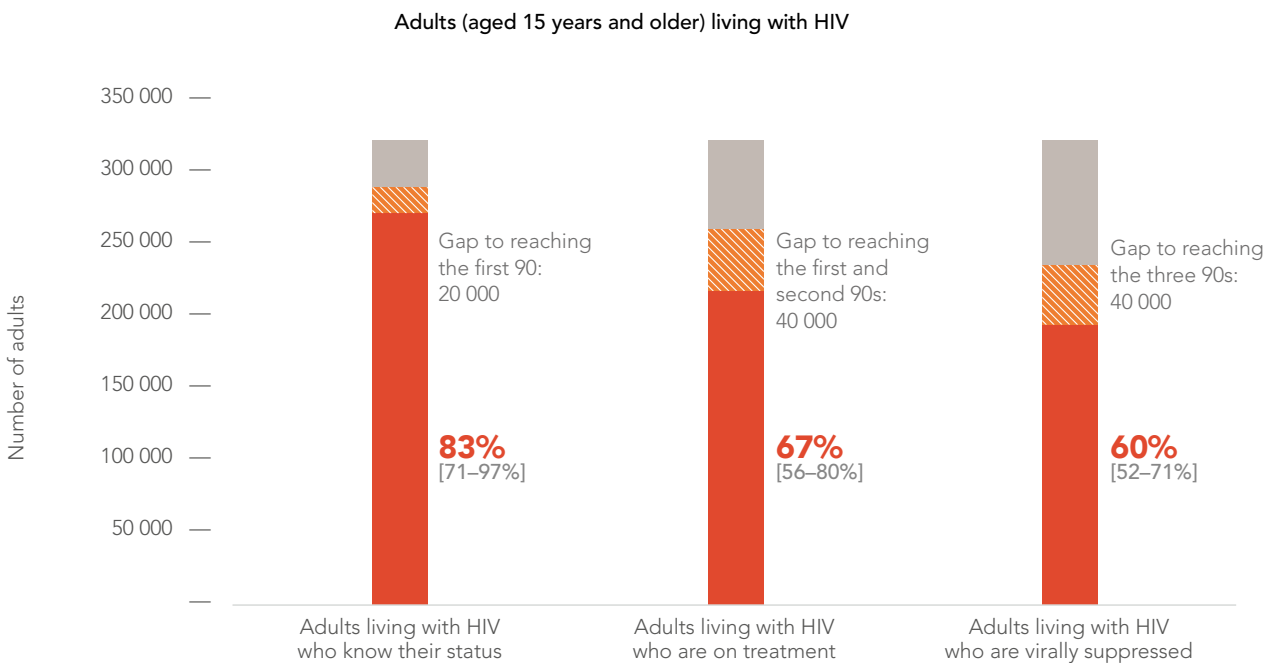
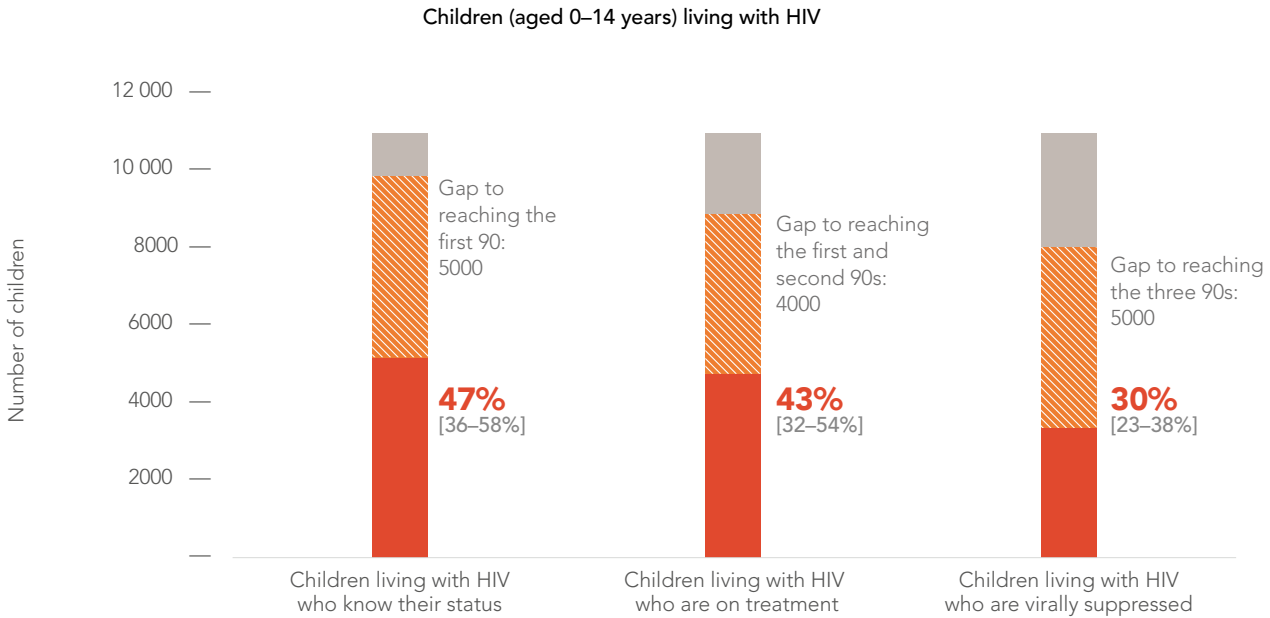
HIV SERVICES

FIGURE 17.4 | PEOPLE LIVING WITH HIV, PEOPLE NEWLY INFECTED IN THE PAST SIX MONTHS, AND HIV TESTING AND TREATMENT CASCADE, ADULTS (AGED 15+ YEARS), CARIBBEAN, 2016–2020



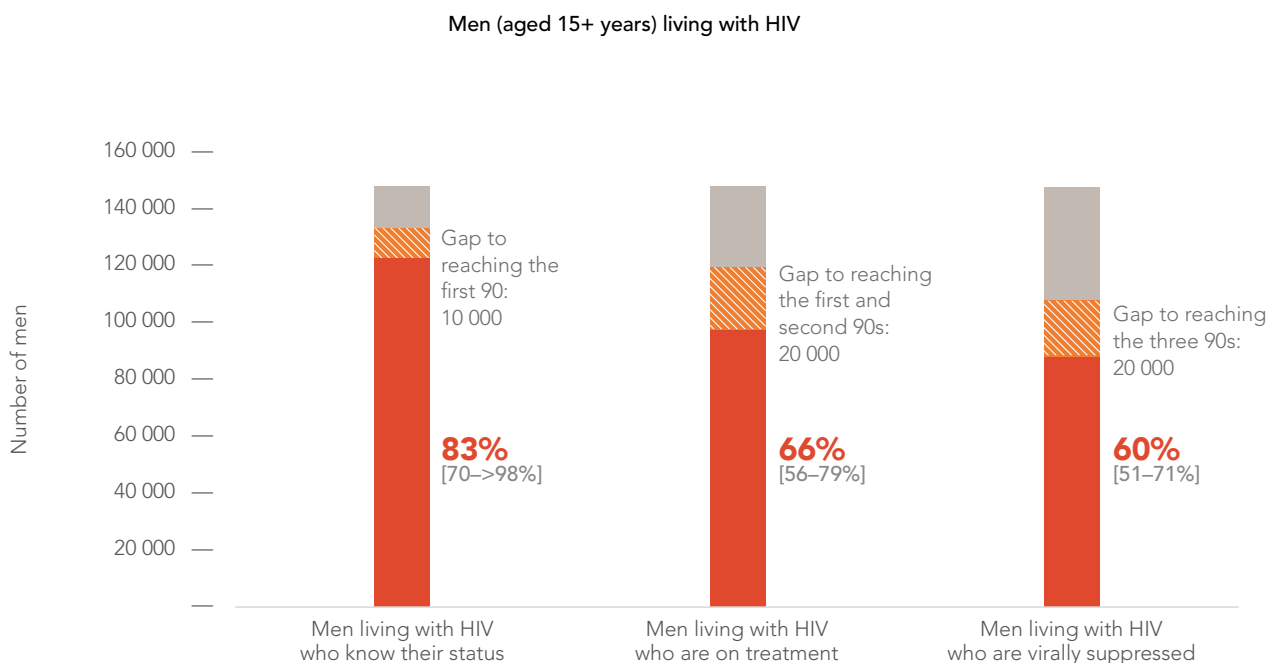
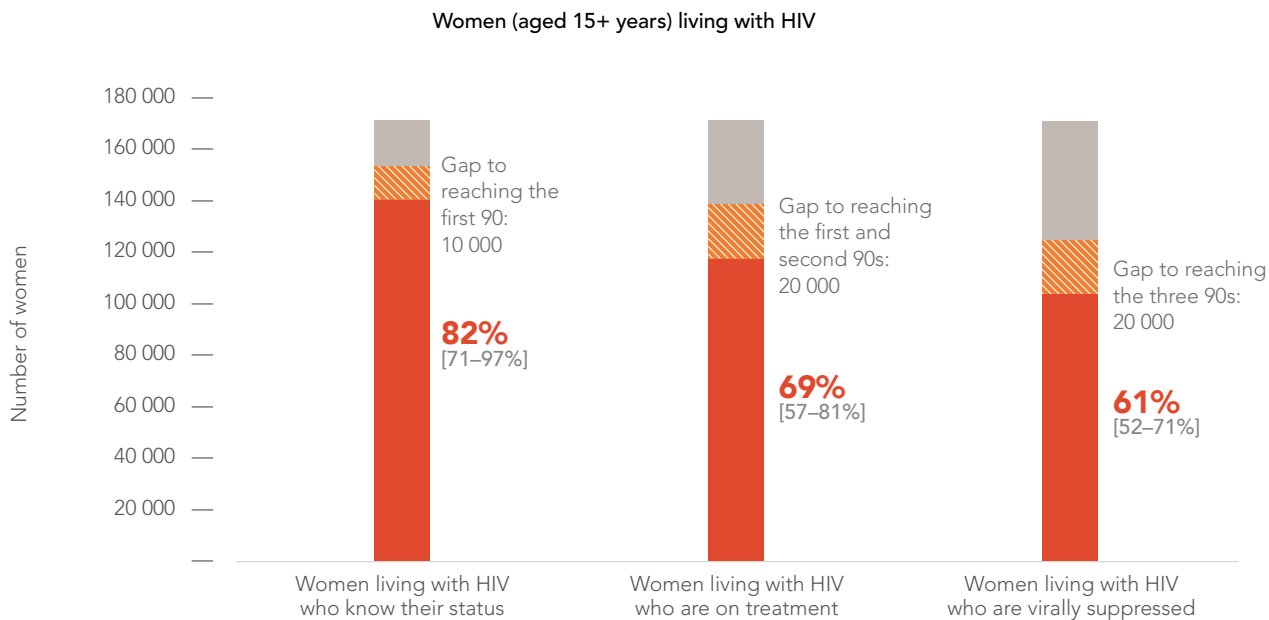
Source: UNAIDS special analysis, 2021.

FIGURE 17.5 | HIV TESTING AND TREATMENT CASCADE, CHILDREN (AGED 0–14 YEARS) COMPARED TO ADULTS (AGED 15 YEARS AND OLDER), CARIBBEAN, 2020



Source: UNAIDS special analysis, 2021.

FIGURE 17.6 | HIV TESTING AND TREATMENT CASCADE, WOMEN (AGED 15+ YEARS) COMPARED TO MEN (AGED 15+ YEARS), CARIBBEAN, 2020



Source: UNAIDS special analysis, 2021.

LAWS AND POLICIES

TABLE 17.2 | PUNITIVE AND DISCRIMINATORY LAWS SCORECARD, CARIBBEAN, 2021

	Criminalization of transgender people	Criminalization of sex work	Criminalization of same-sex sexual acts	Law allows for possession of a certain limited amount of drugs for personal use	Parental consent for adolescents to access HIV testing	Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Laws or policies restricting the entry, stay and residence of people living with HIV	Mandatory HIV testing for marriage, work or residence permits or for certain groups
Antigua and Barbuda	2	2	7		2	2		2
Bahamas	1	1	1		1	1		1
Barbados	1	1	8		2			1
Belize	4		9		12	15		
Cuba	2	5	9		2	2		2
Dominica	3		9		3	3		3
Dominican Republic	1	1	1	1	1	1		1
Grenada		6	9					
Guyana	2	1	2	1	12	2		2
Haiti	1	1	1	1	1	2		1
Jamaica	2	2	2	2	2	2		2
Saint Kitts and Nevis	1	1	1	1	1	1		1
Saint Lucia	2	1	10	1	1	2		2
Saint Vincent and the Grenadines		2	9			2		2
Suriname	3		9		13	3		13
Trinidad and Tobago	1	1	17, 18	1	14	1		1

Criminalization of transgender people

- Criminalized and prosecuted
- Neither criminalized nor prosecuted
- Data not available

Criminalization of sex work

- 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

Criminalization of same-sex sexual acts

- Death penalty
- Imprisonment (14 years–life, up to 14 years) or no penalty specified
- Laws penalizing same-sex sexual acts have been decriminalized or never existed, or no specific legislation
- Data not available

Law allows for possession of a certain limited amount of drugs for personal use

- No
- Yes
- Data not available

Parental consent for adolescents to access HIV testing

- Yes, for adolescents younger than 18
- Yes, for adolescents younger than 14 or 16
- Yes, for adolescents younger than 12
- No
- Data not available

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission

- Yes
- No, but prosecutions exist based on general criminal laws
- No
- Data not available

Laws or policies restricting the entry, stay and residence of people living with HIV

- 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
- Require HIV testing or disclosure for some permits
- No restrictions
- Data not available

Mandatory HIV testing for marriage, work or residence permits or for certain groups

- Yes
- No
- Data not available

Sources:

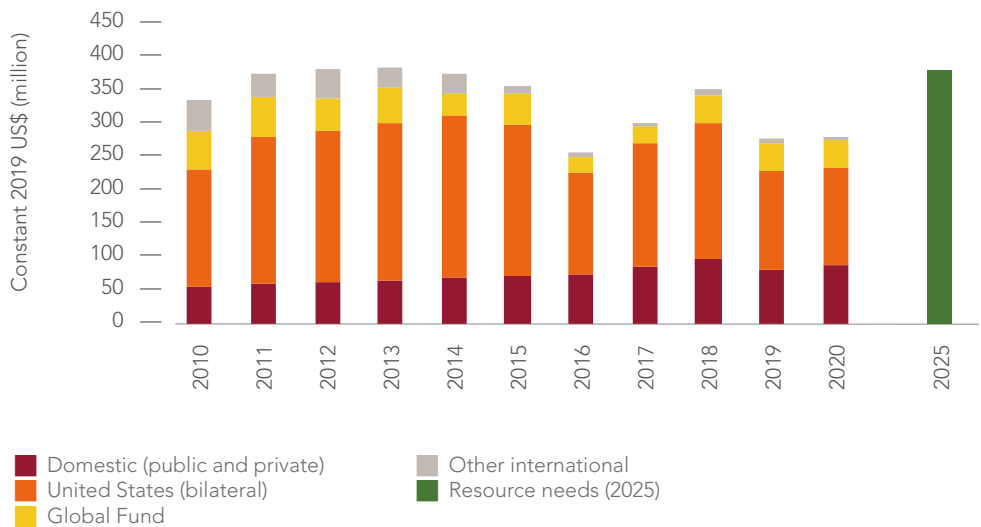
1. UNAIDS National Commitments and Policy Instrument, 2021 (see <http://lawsandpolicies.unaids.org/>).
2. UNAIDS National Commitments and Policy Instrument, 2019 (see <http://lawsandpolicies.unaids.org/>).
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18. Republic of Trinidad and Tobago. Claim No. CV2017-00720, 20 September 2018 (http://webopac.ttlawcourts.org/LibraryJud/Judgments/HC/rampersad/2017/cv_17_00720DD20sep2018.pdf).

Note: A country is considered to have criminalized transgender persons if it uses the law to punish transgender individuals. Such a law may, for example, explicitly criminalize impersonation of the other gender, including cross-dressing. A country is considered to have any criminalization or punitive regulation of sex work if selling and/or buying sexual services is criminalized, ancillary activities associated with selling and/or buying sexual services are criminalized, profiting from organizing and/or managing sexual services is criminalized, and/or there are other punitive and/or administrative regulations of sex work.

INVESTING TO END AIDS

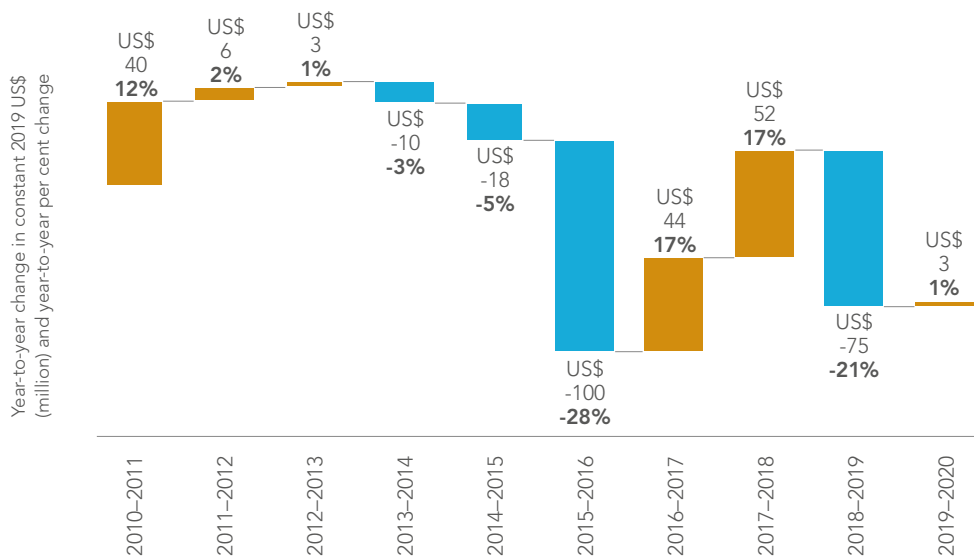
The resources available for HIV responses in the Caribbean in 2020 were 74% of the region’s resource targets for 2025. Relatively large investments per person living with HIV—including a large proportion of donor support—have coincided with steady reductions in the rates of infections and deaths. Resource availability has fluctuated in recent years, rising by 15% between 2017 and 2018, followed by a 13% decrease between 2018 and 2019. It then rose again, increasing 7% between 2019 and 2020.

FIGURE 17.7 | RESOURCE AVAILABILITY FOR HIV, CARIBBEAN, 2010–2020, AND ESTIMATED RESOURCE NEEDS FOR HIV BY 2025



Source: UNAIDS financial estimates and projections, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).
 Note: The resource estimates are presented in constant 2019 US dollars.

FIGURE 17.8 | YEAR-TO-YEAR CHANGE IN RESOURCE AVAILABILITY FOR HIV, CARIBBEAN, 2010–2011 TO 2019–2020



Source: UNAIDS financial estimates, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).

Case study

USING STRATEGIC LITIGATION TO REMOVE DISCRIMINATORY LAWS IN THE CARIBBEAN

Community-led groups are becoming increasingly adept at using strategic litigation to overturn laws that sanction rights violations against lesbian, gay, bisexual, transgender and intersex (LGBTI) communities and put their health and lives at risk.

Using the courts to get rid of discriminatory laws takes steely resolve, a lot of patience and trusting collaboration between campaigning organizations and legal professionals. But it often pays off: in recent years, judicial challenges have been successful in many countries around the world, setting vital new legal precedents. Many of these initiatives are also defending people against discrimination, harassment and violence by increasing legal literacy, training and deploying street paralegals, and setting up know-your-rights clinics.

The use of litigation follows appeals to elected public officials to bring about parliamentary reforms—efforts that have been largely unsuccessful for changing laws that harm LGBTI communities in the Caribbean.

In Guyana, for example, it took a marathon of court battles before the Caribbean's final appellate court ruled a discriminatory and punitive law that dated back to the colonial era was unconstitutional (1).

The Guyana campaign stemmed from the 2009 arrest and conviction of seven transgender

people in Georgetown for cross-dressing. Supported by the University of the West Indies Rights Advocacy Project (U-RAP), four of the transwomen challenged the constitutionality of the 19th century “vagrancy law” under which they had been prosecuted (2, 3).¹

Guyana Trans United, a trans organization formed by one of the litigants, Gulliver McEwan, supported the litigation, as did the Society Against Sexual Orientation Discrimination, a nongovernmental organization founded in 2003 to end discrimination in Guyana based on sexuality and gender.² UNAIDS and a group of nongovernmental organizations helped publicize the case and promote public dialogue about the need for legal reforms and greater social justice.

On appeal, the Guyana High Court in September 2013 found that the appellants' right to liberty had been violated, but nevertheless held that the law used against them was not unconstitutional, vague or discriminatory. A further setback occurred four years later, when the Guyana Court of Appeal went further and ruled that the appellants' right to liberty had not been breached (4).

This left only one final recourse: an appeal before the Caribbean Court of Justice, which added more years of campaigning and legal work. In late 2018, justice prevailed when the Court ruled that the law violated the Constitution of Guyana and was therefore void (5).

¹ The prosecution used the Summary Jurisdiction (Offences) Act of 1893, specifically Section 153(1)(xlvii), which deals with “Offences Against Religion, Morality and Public Convenience.”

² For more on Guyana Trans United, see: <https://www.facebook.com/Guyana-Trans-United-GTU-148525782006659/>. For more on the Society Against Sexual Orientation Discrimination, see: <http://www.sasod.org.gy>.

“No one should have his or her dignity trampled on, or human rights denied, merely on account of a difference,” declared the President of the Caribbean Court of Justice, Adrian Saunders.

The court battles were a test of the protections Guyana’s Constitution offers to transgender and gender nonconforming people and other marginalized populations.

“It was very important for us to be heard and get justice,” said Ms McEwan.

Protection against rights violations is crucial in a country where HIV prevalence among transgender women is more than 8% (compared with 1.7% in the overall adult population). The combination of discriminatory laws and stigma and discrimination places them and other key populations at increased risk for HIV infection.

The tactic also paid off in Belize, which in 2016 became only the second independent Commonwealth Caribbean country to decriminalize consensual sex between men. That decision

followed successful litigation, also supported by U-RAP, challenging a law that had made sex between men punishable by up to 10 years imprisonment.

Two years later, Trinidad and Tobago’s High Court found that sexual relations between consenting adults should not be criminalized. Soon after, this ruling was cited in a landmark 2018 Indian Supreme Court decision decriminalizing gay sex.

Caleb Orozco, from the United Belize Advocacy Movement, believes these victories are having an impact: “It forces institutions to think about their administrative practices and the discrimination they justified based on that law” (5).

Moving forward, more can be done to establish positive protections, such as hate crime legislation, holding law enforcement officials to account when they abuse their powers and working to change social attitudes. In Belize, for example, a national dialogue has been under way on a proposed Equal Opportunities Bill (6).



U-RAP members supporting transgender women and their rights at Guyana’s Caribbean Court of Justice. Credit: Mickel Guaranfranco Alexander

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MIDDLE EAST AND NORTH AFRICA



The Middle East and North Africa has a long road ahead in fully addressing its AIDS epidemic. New HIV infections rose by 7% between 2010 and 2020—making it one of only two regions in the world where new HIV infections are still on the rise. 95% percent of new adult infections in 2020 occurred among key populations and their sexual partners. AIDS-related deaths have declined by 17% since 2010, but that fall is much faster among women (24%) than men (12%).

Recent years have seen significant advances in the region's HIV response, including the emergence of community-led networks representing people living with HIV and key populations, and legal reforms in a number of countries. Several countries, among them Algeria and Morocco, have made notable progress in expanding access to HIV services, while others—including Somalia and Sudan—have encountered significant challenges.

As a whole, the region is lagging in attaining the 2020 Fast-Track Targets: only 61% of people living with HIV were aware of their HIV status in 2020, 43% of people living with HIV were on treatment and 37% of people living with HIV were virally suppressed. Coverage of services to prevent vertical transmission is also off-track, and only 47% of children (aged 0 to 14 years) with HIV were on treatment in 2020. The Middle East and North Africa is also far behind in fully integrating HIV counselling and testing with sexual and reproductive health services.

The current gaps in HIV services across the Middle East and North Africa reflect long-standing challenges, including restrictive sociocultural norms that are mirrored in proscriptive laws and policies, and widespread stigma and discrimination. Modest political leadership on HIV is reflected in the low financial investment in the AIDS response. Matters are not helped by widespread humanitarian crises, including protracted conflicts and other forms of political instability, that make the Middle East and North Africa home to the world's largest migrant, refugee and internally displaced populations.

Progress towards the 2030 goals will depend on opening space for civil society and community-led organizations, and on linking the HIV response to efforts to achieve universal health coverage, expand social protection systems and enhance access to sexual and reproductive health and rights. None of this will be possible without stronger commitment from governments, including greater domestic funding and social contracting, and without a wider recognition of the connections between HIV and the other Sustainable Development Goals to which countries are committed.

PRIORITY ACTIONS FOR ENDING AIDS

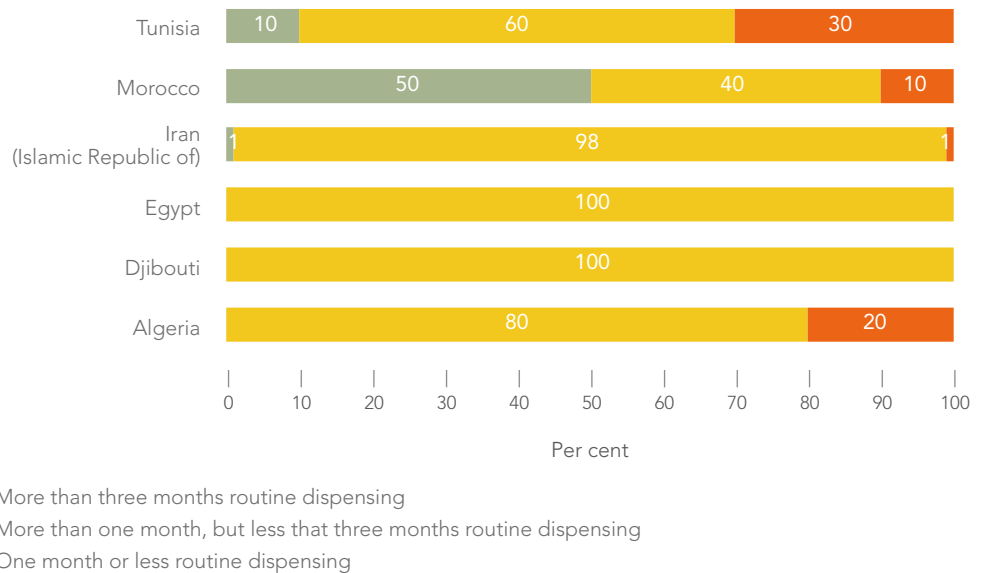
- Scale up access to high-quality, combination HIV prevention, testing and treatment, with a focus on key populations and other priority groups.
- Collect and employ timely, accurate and disaggregated data to achieve transformative results.
- Strengthen, empower and resource communities, including people living with HIV and key populations, to lead the HIV response.
- Ground the response in human rights and gender equality.
- Ensure preparedness for comprehensive and integrated HIV service delivery during humanitarian emergencies and pandemics.

FIGURE 18.1 | NUMBER OF PEOPLE TESTED FOR HIV, BY POPULATION GROUP, SELECTED COUNTRIES, MIDDLE EAST AND NORTH AFRICA, 2018 AND 2020



Source: HIV case reporting in eastern Mediterranean region (EMR), 2019. Tehran: HIV/STI Surveillance Research Center, and WHO Collaborating Center for HIV Surveillance. Data for 2020 provided by WHO EMR office.

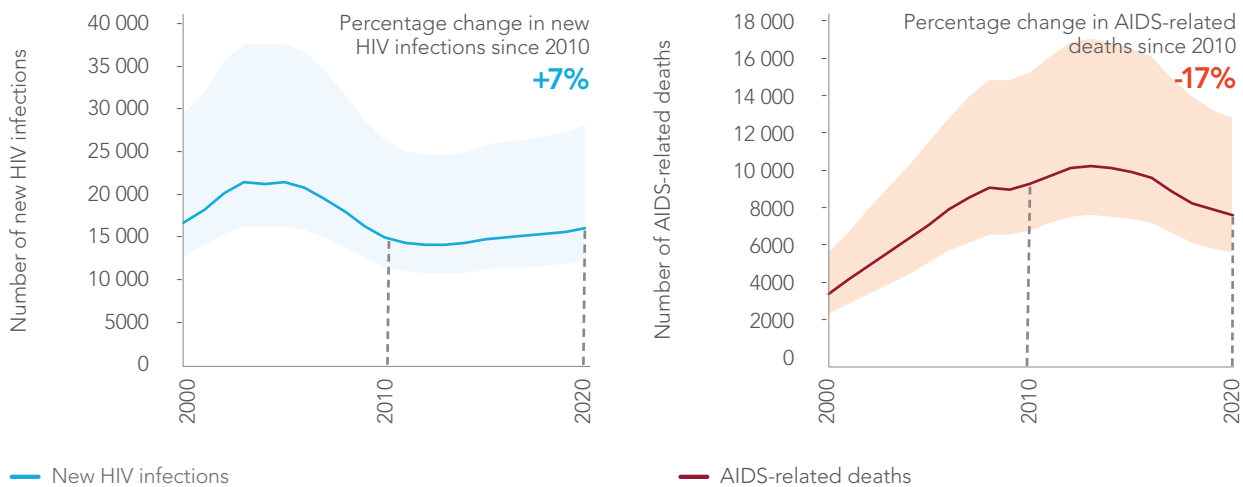
FIGURE 18.2 | PERCENTAGE OF PEOPLE LIVING WITH HIV RECEIVING MULTIMONTH DISPENSING OF ANTIRETROVIRAL THERAPY, SIX COUNTRIES IN THE MIDDLE EAST AND NORTH AFRICA, 2020



Source: UNAIDS special policy analysis, 2021.

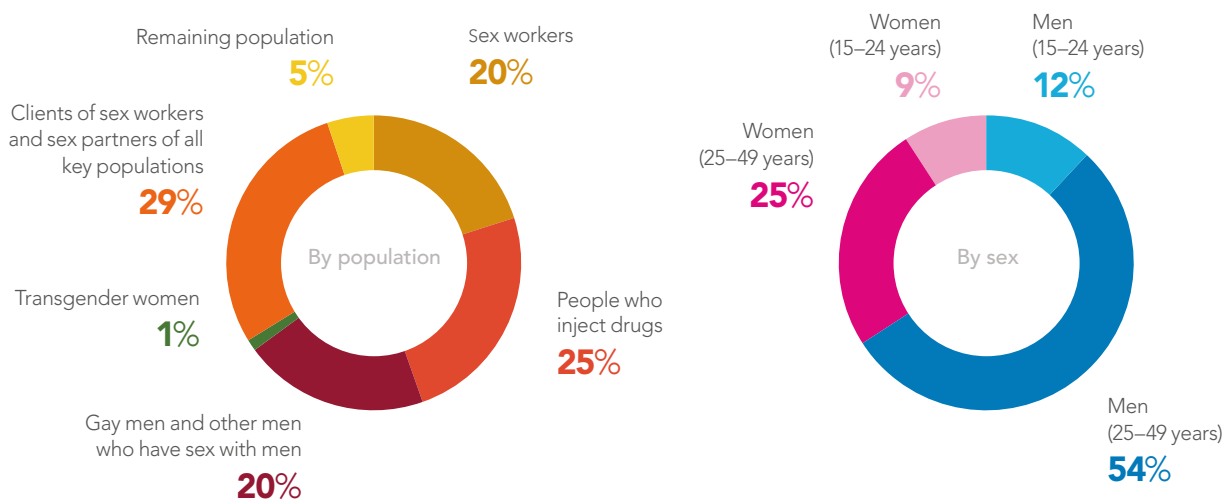
STATE OF THE PANDEMIC

FIGURE 18.3 | NUMBER OF NEW HIV INFECTIONS AND AIDS-RELATED DEATHS, MIDDLE EAST AND NORTH AFRICA, 2000–2020



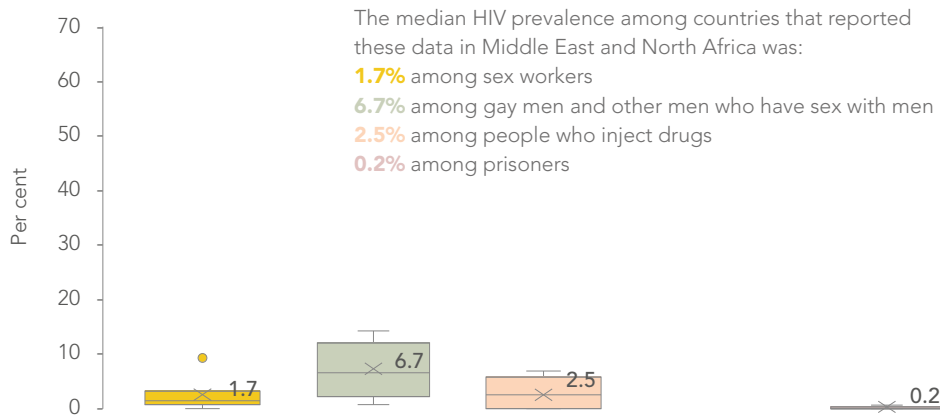
Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

FIGURE 18.4 | DISTRIBUTION OF NEW HIV INFECTIONS BY POPULATION GROUP AND SEX (AGED 15–49 YEARS), MIDDLE EAST AND NORTH AFRICA, 2020



Source: UNAIDS special analysis, 2021 (see methods annex).

FIGURE 18.5 | HIV PREVALENCE AMONG KEY POPULATIONS, REPORTING COUNTRIES IN MIDDLE EAST AND NORTH AFRICA, 2016–2020



- Sex workers (n = 8)
- Gay men and other men who have sex with men (n = 7)
- People who inject drugs (n = 7)
- Transgender people (n = 0)
- Prisoners (n = 8)

Source: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>).

Note: (n = number of countries). Total number of reporting countries = 21.

How to read this chart

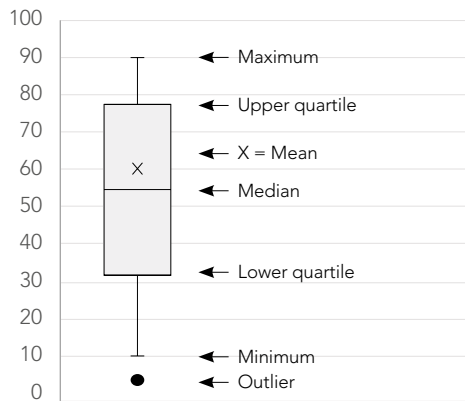


TABLE 18.1 | REPORTED ESTIMATED SIZE OF KEY POPULATIONS, MIDDLE EAST AND NORTH AFRICA, 2018–2020

	National adult population (aged 15–49 years) in 2020 or relevant year	Sex workers	Sex workers as per cent of adult population (aged 15–49 years)	Gay men and other men who have sex with men	Gay men and other men who have sex with men as per cent of adult population (aged 15–49 years)	People who inject drugs	People who inject drugs as per cent of adult population (aged 15–49 years)	Transgender people	Transgender people as per cent of adult population (aged 15–49 years)	Prisoners	Prisoners as per cent of adult population (aged 15–49 years)
Iran (Islamic Republic of)	46 200 000	138 000	0.30%			90 000	0.20%			148 000	0.32%
Kuwait	700 000									5100	0.74%
Lebanon	3 300 000			17 000	0.50%						
Morocco	19 000 000									85 000	0.45%
Oman	1 400 000										
Tunisia	6 100 000									22 000	0.36%
Estimated regional median proportion as per cent of adult population (aged 15–49 years) ^{a, b} :			0.59%		0.51%		0.03%		-		-

■ National population size estimate

■ Insufficient data

■ Local population size estimate

■ No data

Sources: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>); Spectrum Demproj module, 2021.

^a Quick Start Guide for Spectrum, 2020. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/QuickStartGuide_Spectrum_en.pdf).

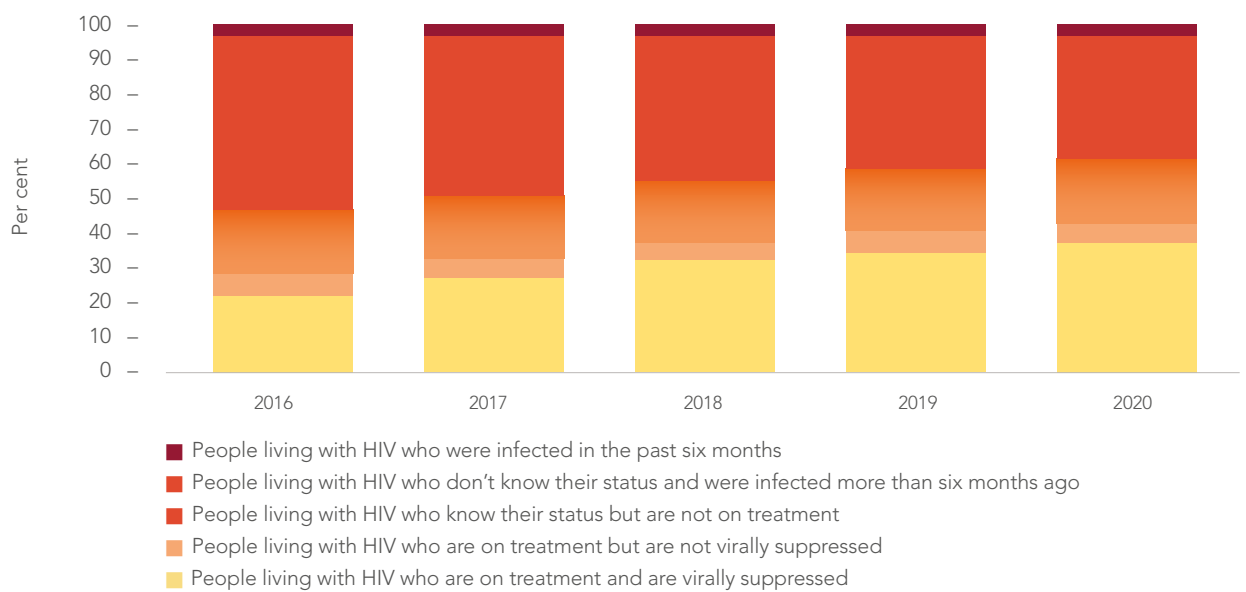
^b Technical brief: recommended population size estimates of men who have sex with men. Geneva: WHO, UNAIDS; 2020.

Note 1: Estimates shown are government-provided estimates reported for 2018–2020. 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 reported values for gay men and other men who have sex with men are presented as a per cent of the adult population (aged 15–49 years) for consistency across key populations. The percentage of this population out of the adult male population (aged 15–49 years) will be approximately twice the values shown.

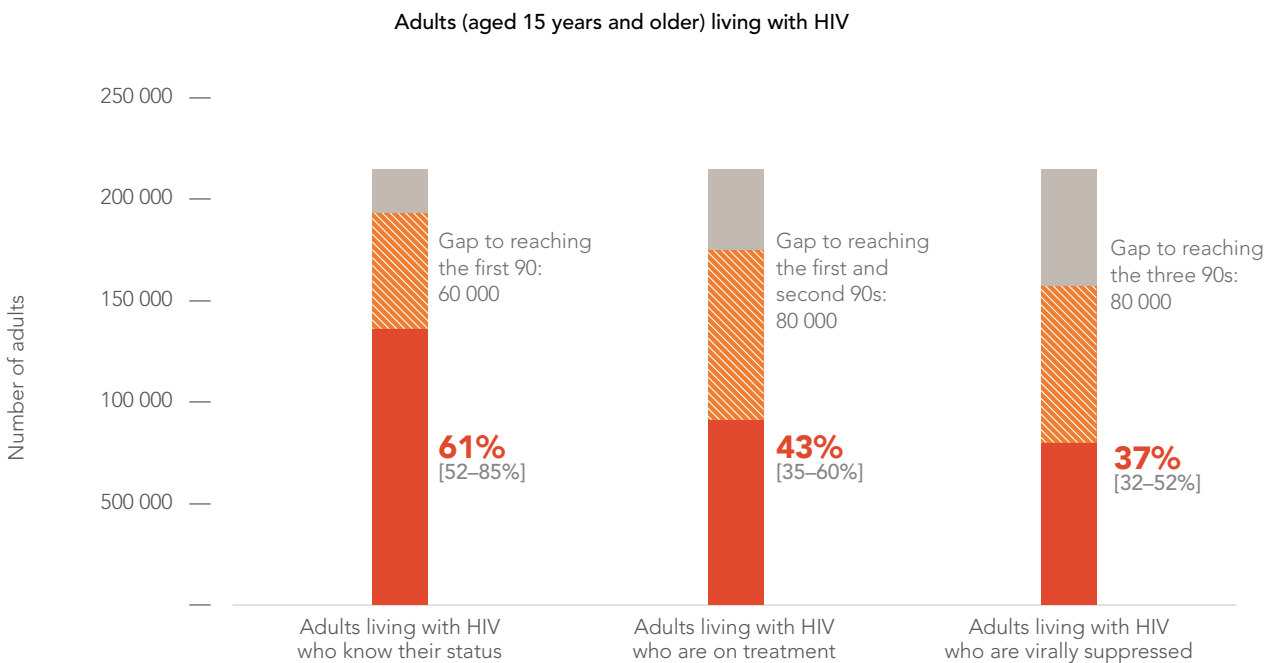
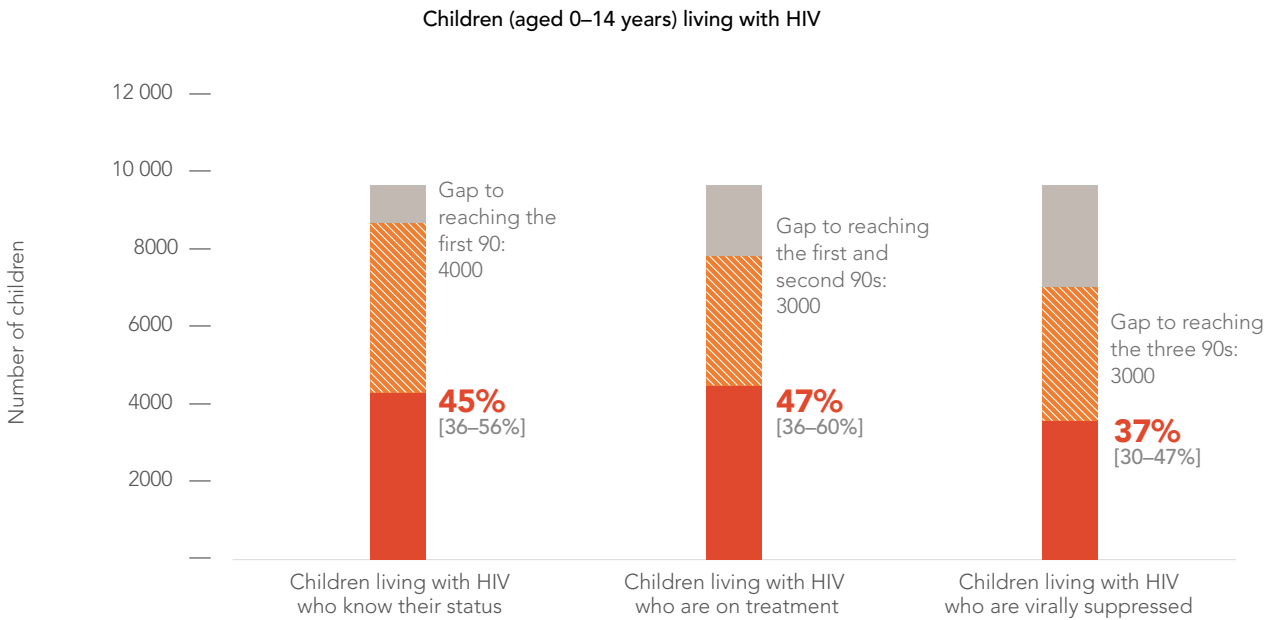
HIV SERVICES

FIGURE 18.6 | PEOPLE LIVING WITH HIV, PEOPLE NEWLY INFECTED IN THE PAST SIX MONTHS, AND HIV TESTING AND TREATMENT CASCADE, ADULTS (AGED 15+ YEARS), MIDDLE EAST AND NORTH AFRICA, 2016–2020



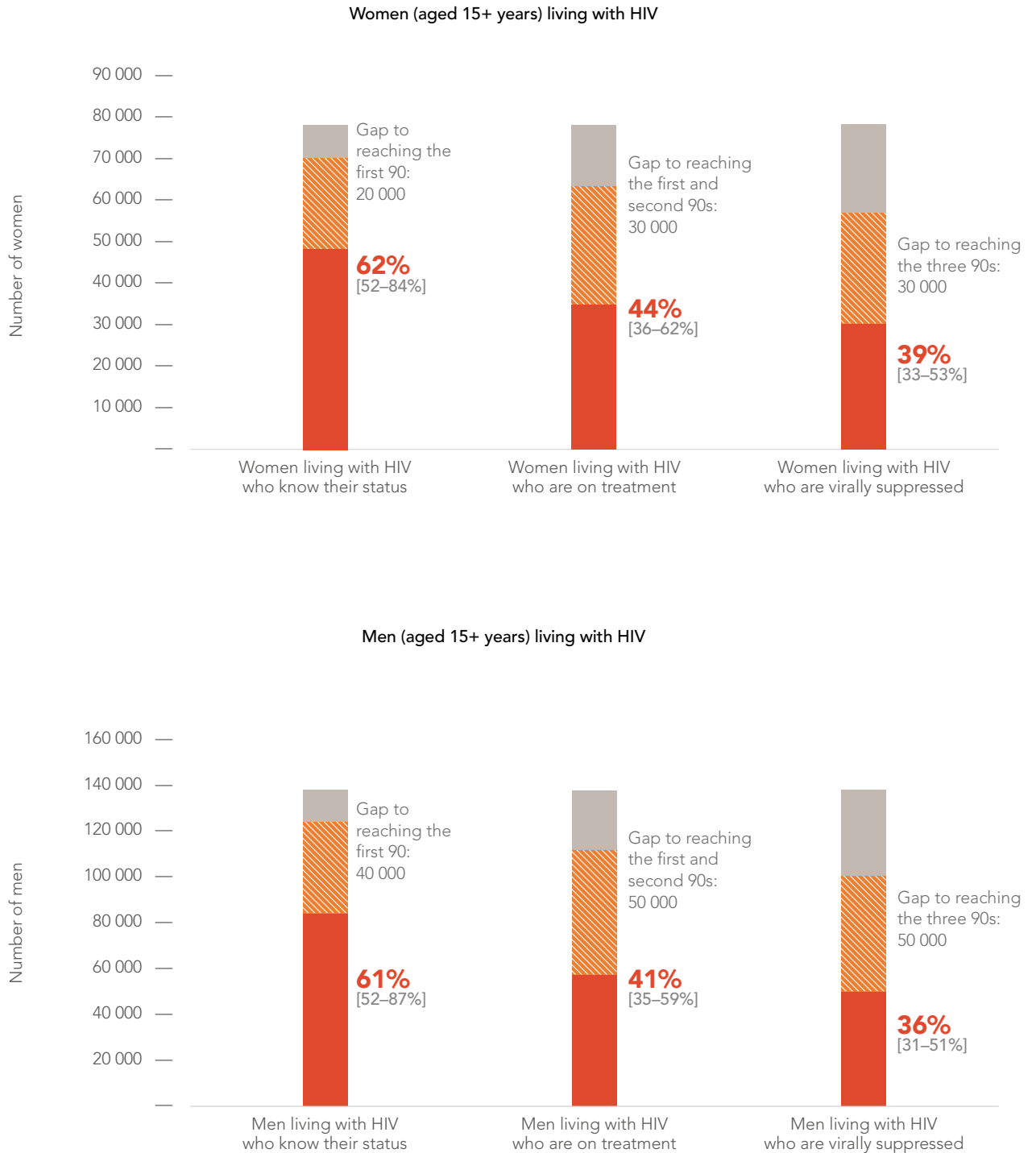
Source: UNAIDS special analysis, 2021.

FIGURE 18.7 | HIV TESTING AND TREATMENT CASCADE, CHILDREN (AGED 0–14 YEARS) COMPARED TO ADULTS (AGED 15 YEARS AND OLDER), MIDDLE EAST AND NORTH AFRICA, 2020



Source: UNAIDS special analysis, 2021.

FIGURE 18.8 | HIV TESTING AND TREATMENT CASCADE, WOMEN (AGED 15+ YEARS) COMPARED TO MEN (AGED 15+ YEARS), MIDDLE EAST AND NORTH AFRICA, 2020



Source: UNAIDS special analysis, 2021.

LAWS AND POLICIES

TABLE 18.2 | PUNITIVE AND DISCRIMINATORY LAWS, MIDDLE EAST AND NORTH AFRICA, 2021

	Criminalization of transgender people	Criminalization of sex work	Criminalization of same-sex sexual acts	Law allows for possession of a certain limited amount of drugs for personal use	Parental consent for adolescents to access HIV testing	Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Laws or policies restricting the entry, stay and residence of people living with HIV	Mandatory HIV testing for marriage, work or residence permits or for certain groups
Algeria	3	4	10		11	3		11
Bahrain		5	10			13		17
Djibouti		6	10		12	14		
Egypt	2	2	2		2	2		1
Iran (Islamic Republic of)	1	1	1	1	1	1		1
Iraq		7	10			14		
Jordan		1	1	1	1			18
Kuwait	3	8	10		11	3		11
Lebanon		19	10	20				
Libya	1	1	1	1	1	1		1
Morocco	1	1	21	1	1	1		1
Oman	2	1	1	1	2	2		2
Qatar		2	10			15		2
Saudi Arabia	2	2	10		2	3		2
Somalia		1	1	1	1	14		
Sudan		9	10		3	3		3
Syrian Arab Republic	3	3	10		3	2		3
Tunisia	2	2	2		2	2		2
United Arab Emirates	3		10			3		3
Yemen			10					

Criminalization of transgender people

- Criminalized and/or prosecuted
- Neither criminalized nor prosecuted
- Data not available

Criminalization of sex work

- 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

Criminalization of same-sex sexual acts

- Death penalty
- Imprisonment (14 years–life, up to 14 years) or no penalty specified
- Laws penalizing same-sex sexual acts have been decriminalized or never existed, or no specific legislation
- Data not available

Law allows for possession of a certain limited amount of drugs for personal use

- No
- Yes
- Data not available

Parental consent for adolescents to access HIV testing

- Yes, for adolescents younger than 18
- Yes, for adolescents younger than 14 or 16
- Yes, for adolescents younger than 12
- No
- Data not available

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission

- Yes
- No, but prosecutions exist based on general criminal laws
- No
- Data not available

Laws or policies restricting the entry, stay and residence of people living with HIV

- 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
- Require HIV testing or disclosure for some permits
- No restrictions
- Data not available

Mandatory HIV testing for marriage, work or residence permits or for certain groups

- Yes
- No
- Data not available

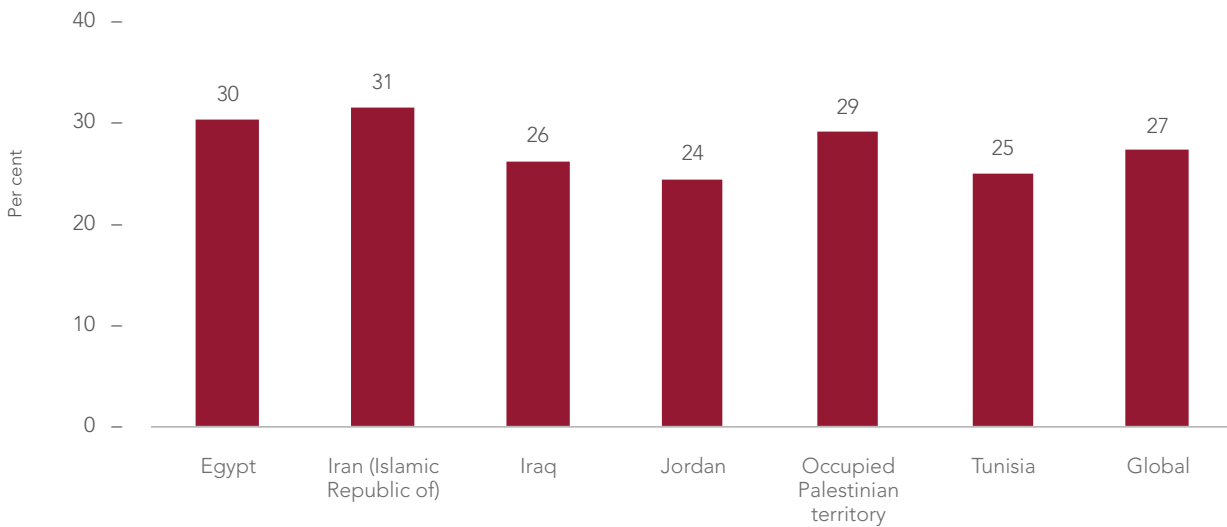
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Notes: A country is considered to have criminalized transgender persons if it uses the law to punish transgender individuals. Such a law may, for example, explicitly criminalize impersonation of the other gender, including cross-dressing. A country is considered to have any criminalization or punitive regulation of sex work if selling and/or buying sexual services is criminalized, ancillary activities associated with selling and/or buying sexual services are criminalized, profiting from organizing and/or managing sexual services is criminalized, and/or there are other punitive and/or administrative regulations of sex work.

SOCIETAL ENABLERS

FIGURE 18.9 | **EVER-MARRIED OR PARTNERED WOMEN (AGED 15–49 YEARS) WHO EXPERIENCED PHYSICAL AND/OR SEXUAL VIOLENCE BY AN INTIMATE PARTNER IN THEIR LIFETIME, COUNTRIES WITH AVAILABLE DATA, MIDDLE EAST AND NORTH AFRICA, 2018**



Source: Violence against women prevalence estimates, 2018: global, regional and national prevalence estimates for intimate partner violence against women and global and regional prevalence estimates for non-partner sexual violence against women. Geneva: World Health Organization; 2021.

The COVID-19 pandemic and extended lockdowns have disrupted HIV services across the Middle East and North Africa, especially in settings affected by humanitarian emergencies and particularly for key populations (Figure 18.1). That being said, COVID-19 has also spurred innovations in service delivery. Multimonth dispensing of antiretroviral medicines in the Middle East and North Africa, once a rarity, has risen significantly in a number of countries across the region, thanks in large part to the efforts of civil society organizations, which have helped fill gaps in public and private health care provision caused by the COVID-19 pandemic (Figure 18.2).

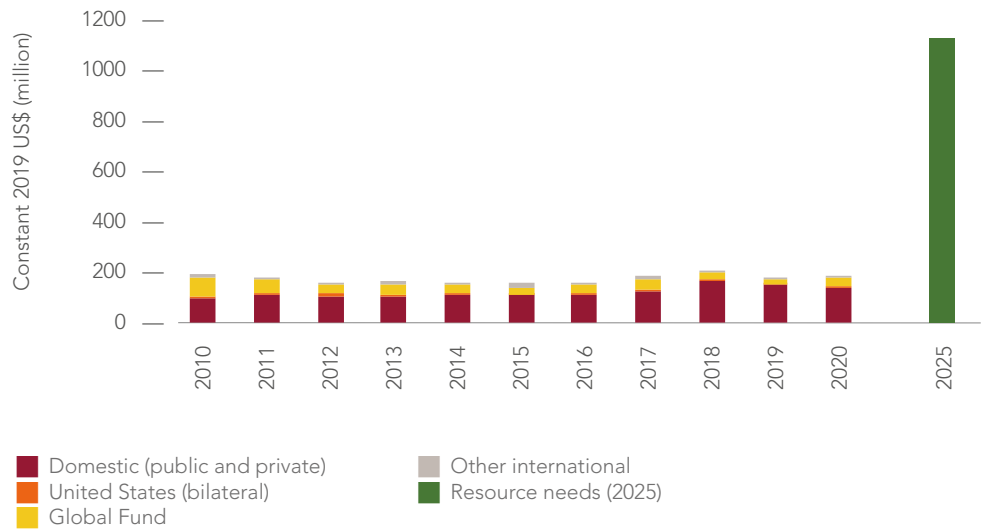
COVID-19 has also shone a bright light on gender inequalities across the region. Gender-based violence, already a growing problem across the region, has been exacerbated by lockdowns and other pandemic-related drivers (1). The pandemic has increased the burden of unpaid care on women and girls, further undermined their prospects of employment (which were already modest in many countries), put their educational gains at risk and heightened the prevalence of harmful practices such as child marriage and female genital mutilation. All of these risks are intertwined and are part of the complex fabric of vulnerabilities to HIV experienced by women and girls.

INVESTING TO END AIDS

Resource availability from both domestic and external sources in the Middle East and North Africa has fluctuated over the past decade. One constant feature has been the large gap between what is available and what is needed: the resources available in 2020 were less than 20% of what is required to scale up HIV programmes and achieve the 2025 targets.

The COVID-19 pandemic and the accompanying economic downturn is making a difficult funding environment even more challenging. Increasing domestic investments in HIV responses will require formulating well-prioritized and fully costed national strategic plans and investment cases. It will also necessitate positioning HIV within broader efforts to reach the Sustainable Development Goals, including integration of HIV into social protection schemes and universal health coverage. A regional HIV response with community-led action at its heart will also benefit from forging partnerships with new regional donors, the private sector and philanthropic foundations, as well as innovative financing models, such as social contracting.

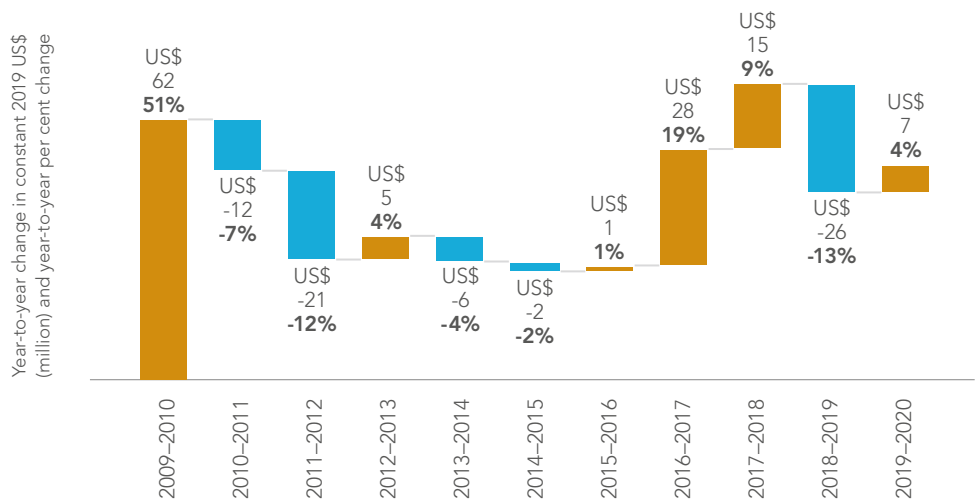
FIGURE 18.10 | RESOURCE AVAILABILITY FOR HIV, MIDDLE EAST AND NORTH AFRICA, 2010–2020, AND ESTIMATED RESOURCE NEEDS FOR HIV BY 2025



Source: UNAIDS financial estimates and projections, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).

Note: The resource estimates are presented in constant 2019 US dollars.

FIGURE 18.11 | YEAR-TO-YEAR CHANGE IN RESOURCE AVAILABILITY FOR HIV, MIDDLE EAST AND NORTH AFRICA, 2009–2010 TO 2019–2020



Source: UNAIDS financial estimates, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).

Case study

BRINGING PEOPLE BACK INTO HIV CARE DURING THE COVID-19 PANDEMIC IN SUDAN

The HIV epidemic is one of many challenges faced by Sudan, which only recently emerged from a long civil war. Health infrastructure was badly damaged during the conflict, and the country is struggling to meet its HIV commitments and reach its HIV targets.

According to national data reported to UNAIDS, only 37% of the estimated 49 000 people living with HIV in Sudan knew their HIV status in 2020, and linkages to treatment and care have been inconsistent. About 67% of people diagnosed with HIV were receiving antiretroviral therapy in 2020, but only two thirds of people who enrolled in treatment in 2019 were retained in care one year later.

The COVID-19 pandemic brought additional difficulties—but it also provided the impetus to introduce some much needed changes, including the adoption of differentiated service delivery methods. For instance, multimonth dispensing of antiretroviral prescriptions was introduced in 2020 to limit treatment interruptions.

The Government of Sudan—with support from the World Health Organization (WHO) and UNAIDS—also launched the Search and Rescue campaign in 2020. This campaign unites data verification, proactive tracing and personalized efforts to find people who had interrupted their treatment and to bring them back into consistent care. It is based out of Khartoum's

Omdurman Teaching Hospital, the country's largest HIV care facility, which serves more than 3200 people living with HIV, about one third of those receiving antiretroviral therapy in Sudan. The campaign's implementation began in December 2020 and lasted until March 2021, and expansion to other centres is planned.

The first phase of the campaign involved nurses and data clerks reviewing and updating treatment data. People who were at least eight weeks overdue for their clinic appointment or to pick up their antiretroviral medicines were classified as lost to follow-up. The next step was to trace and contact these individuals, determine whether they had indeed stopped treatment and why, and then re-engage them in services.

Four teams were formed, each with a counsellor and adherence supporter from the local community of people living with HIV. They started by tracing, through telephone calls, the people who had exited care in 2020. They then moved backwards through lists for the previous years, working their way to 2000.

People living with HIV were involved throughout the campaign, from planning to implementation. Saif (not his real name) participated in both phases. An information technology graduate who was born with HIV at Omdurman Teaching Hospital, he knew from experience how important it is to remain on HIV treatment.



*The Search and Rescue team at work at the Omdurman Teaching Hospital in Khartoum, Sudan.
Credit: WHO*

“During my last year of university, I was overwhelmed with classes and very stressed out and stopped medication,” Saif recalls. “My health deteriorated badly and I was about to die. I was admitted to the hospital, and they had to switch me to second-line [treatment]. I do not want this to happen to anyone from my community.”

The first phase of the campaign identified 2143 people who were classified as lost to follow-up. This represents 47% of the 4561 people who had ever started treatment at the Omdurman Teaching Hospital. About one third of these patients could not be reached, due to incorrect, out-of-date or missing contact information. The campaign team traced 1411 (66%) individuals within three months. A majority of them—891 people—were found to be unrecorded deaths, while another 332 patients had either transferred to another clinic or were still on treatment at Omdurman Teaching Hospital, but were not linked to their earlier patient records.

Another 190 (9%) patients had indeed been lost to follow-up. These individuals cited several reasons for halting their treatment, including side effects, financial troubles, COVID-19 lockdowns and, most commonly, health improvements—the latter a sign that patient education and counselling also need to improve.

In less than four months, the Search and Rescue campaign succeeded in returning 177 (94%) of the patients who were lost to follow-up to treatment. More are expected to return to care through the tracking system put in place by the campaign. Women were slightly more likely than men to re-engage in care. The campaign also updated treatment records going back 20 years.

Search and Rescue identified issues which, if resolved, can improve the effectiveness of HIV treatment in Sudan. For instance, there is an opportunity to improve record-keeping and establish an appointment confirmation and tracking system that can quickly identify and counsel people who drop out of care. Improved treatment literacy and adherence counselling—and the provision of support pamphlets and other materials—are other priorities.

The experience and solidarity of people living well with HIV can also be used more effectively to bring about improvements, such as by enlisting them as treatment adherence supporters. Continued development of differentiated service delivery methods would also strengthen retention in care.

References

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EASTERN EUROPE AND CENTRAL ASIA



Eastern Europe and central Asia is failing to control its HIV epidemic, with new HIV infections and AIDS-related deaths both continuing to rise. The annual number of new HIV infections increased by an estimated 43% from 2010 to 2020, making this the fastest growing HIV epidemic in the world. Key populations and their sex partners account for virtually all new infections in the region, with an estimated 43% of new adult HIV infections occurring among people who inject drugs. Criminal laws are still being applied too broadly, including unintentional HIV transmission, non-disclosure of HIV status or exposure to HIV where HIV was not actually transmitted.

AIDS-related deaths rose by 32% between 2010 and 2020 in the context of poorly performing testing and treatment programmes in most countries in the region. Overall, 70% of people living with HIV knew their HIV status, 53% were receiving antiretroviral therapy, and 50% were virally suppressed. Diagnosing people living with HIV and linking them to treatment and care are the biggest gaps in the region's treatment efforts. Bridging those gaps will be exceedingly difficult as long as key populations are subject to punitive laws, aggressive policing and social stigma.

The withdrawal or reduction of external donor financing for HIV programmes in the region has challenged efforts to preserve and expand access to essential HIV services. Services provided by civil society organizations are key to enhancing the region's HIV response, but in several countries, these organizations operate in restrictive environments, limiting their contributions to the HIV response. Administrative and financial barriers, including restrictions on foreign funding and complicated registration procedures, are among the impediments they face.

After being hard-hit by the COVID-19 pandemic, a combination of resilient health-care systems, multimonth dispensing of antiretroviral medicines, the use of Internet-based and social media platforms, and the exceptional work of nongovernmental organizations have ensured that many people living with HIV continued to receive treatment and care.

PRIORITY ACTIONS FOR ENDING AIDS

- Urgently expand access to combination HIV prevention, including pre-exposure prophylaxis (PrEP) and harm reduction.
- Close gaps in the testing and treatment cascade by fully rolling out a treat all approach, including improving testing strategies and expanding access to affordable and quality-assured antiretroviral medicines.
- Institutionalize community-led services within national health-care and HIV prevention systems.
- Build human rights-based responses by transforming harmful gender norms, reducing gender-based violence, and removing discriminatory and punitive laws, policies, and other structural and social barriers.

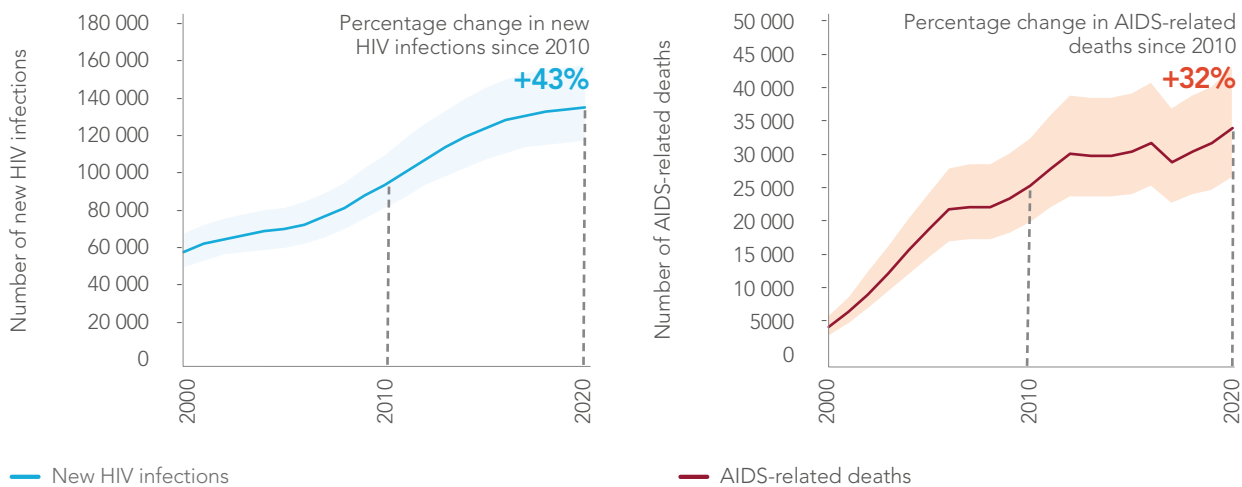


An HIV community centre in Moscow, Russian Federation, receives donations of hand sanitizer during the COVID-19 pandemic.

Credit: Center-Plus

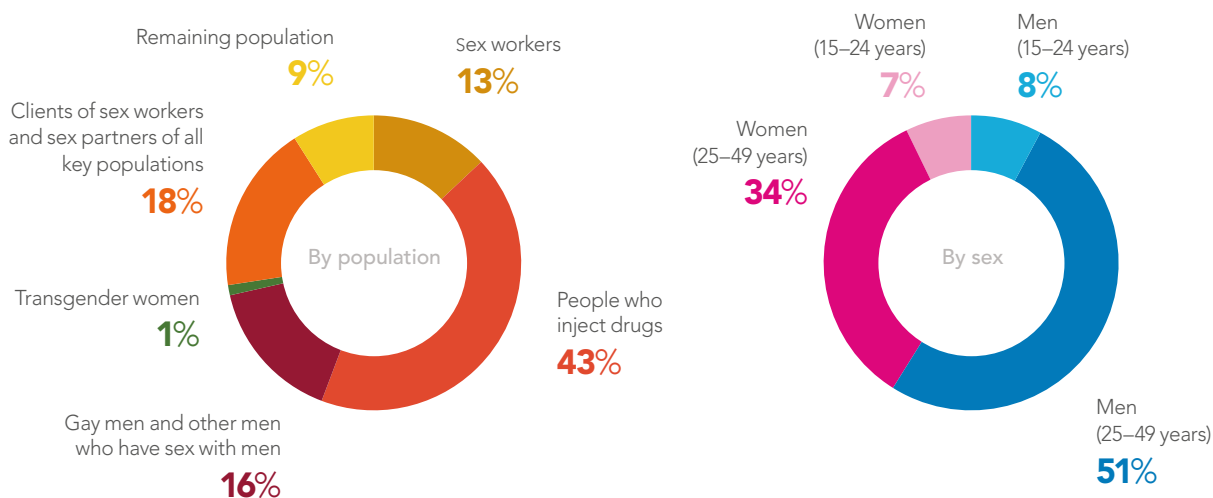
STATE OF THE PANDEMIC

FIGURE 19.1 | NUMBER OF NEW HIV INFECTIONS AND AIDS-RELATED DEATHS, EASTERN EUROPE AND CENTRAL ASIA, 2000–2020



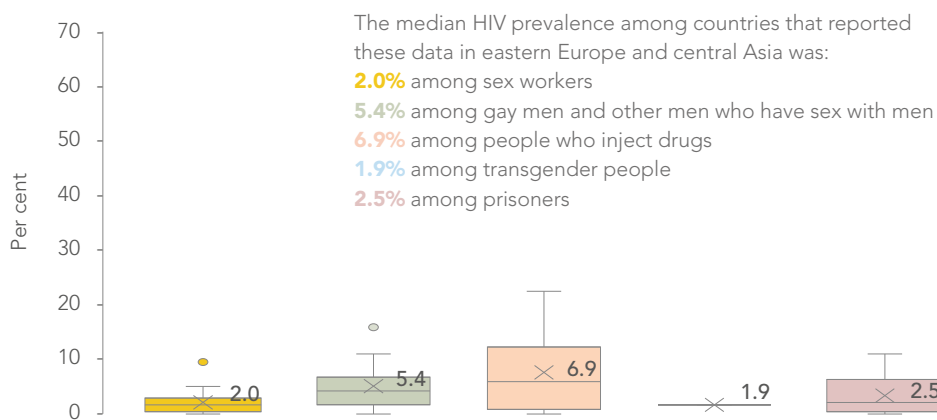
Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

FIGURE 19.2 | DISTRIBUTION OF NEW HIV INFECTIONS BY POPULATION GROUP AND SEX (AGED 15–49 YEARS), EASTERN EUROPE AND CENTRAL ASIA, 2020



Source: UNAIDS special analysis, 2021 (see methods annex).

FIGURE 19.3 | HIV PREVALENCE AMONG KEY POPULATIONS, REPORTING COUNTRIES IN EASTERN EUROPE AND CENTRAL ASIA, 2016–2020



- Sex workers (n = 13)
- Gay men and other men who have sex with men (n = 13)
- People who inject drugs (n = 15)
- Transgender people (n = 2)
- Prisoners (n = 12)

Source: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>).

Note: (n = number of countries). Total number of reporting countries = 16.

How to read this chart

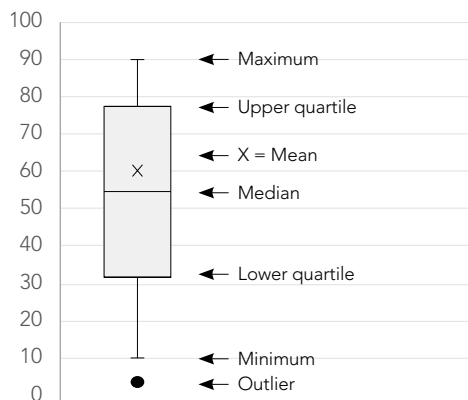


TABLE 19.1 | REPORTED ESTIMATED SIZE OF KEY POPULATIONS, EASTERN EUROPE AND CENTRAL ASIA, 2018–2020

	National adult population (aged 15–49 years) in 2020 or relevant year	Sex workers	Sex workers as per cent of adult population (aged 15–49 years)	Gay men and other men who have sex with men	Gay men and other men who have sex with men as per cent of adult population (aged 15–49 years)	People who inject drugs	People who inject drugs as per cent of adult population (aged 15–49 years)	Transgender people	Transgender people as per cent of adult population (aged 15–49 years)	Prisoners	Prisoners as per cent of adult population (aged 15–49 years)
Albania	1 400 000									2300	0.16%
Armenia	1 500 000	4600	0.31%	16 000	1.07%	9000	0.60%				
Azerbaijan	5 500 000	32 000	0.58%			60 000	1.10%				
Belarus	4 400 000	18 600	0.42%	32 000	0.73%	80 000	1.82%				
Georgia	1 800 000			19 000	0.97%					9100	0.01%
Kazakhstan	9 200 000	21 000	0.22%			94 600	1.03%				
North Macedonia	1 100 000					6800	0.61%			2300	0.20%
Republic of Moldova	1 300 000	15 800	1.22%	14 600	1.12%	27 500	2.12%				
Tajikistan	4 800 000	18 000	0.36%								
Ukraine	20 700 000	87 000	0.41%	180 000	0.85%	350 000	1.66%	8200	0.04%	48 700	0.24%
Estimated regional median proportion as per cent of adult population (aged 15–49 years) ^{a, b} :			0.34%		1.06%		1.09%		-		-

■ National population size estimate

■ Insufficient data

■ Local population size estimate

■ No data

Sources: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>); Spectrum Demproj module, 2021.

^a Quick Start Guide for Spectrum, 2020. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/QuickStartGuide_Spectrum_en.pdf).

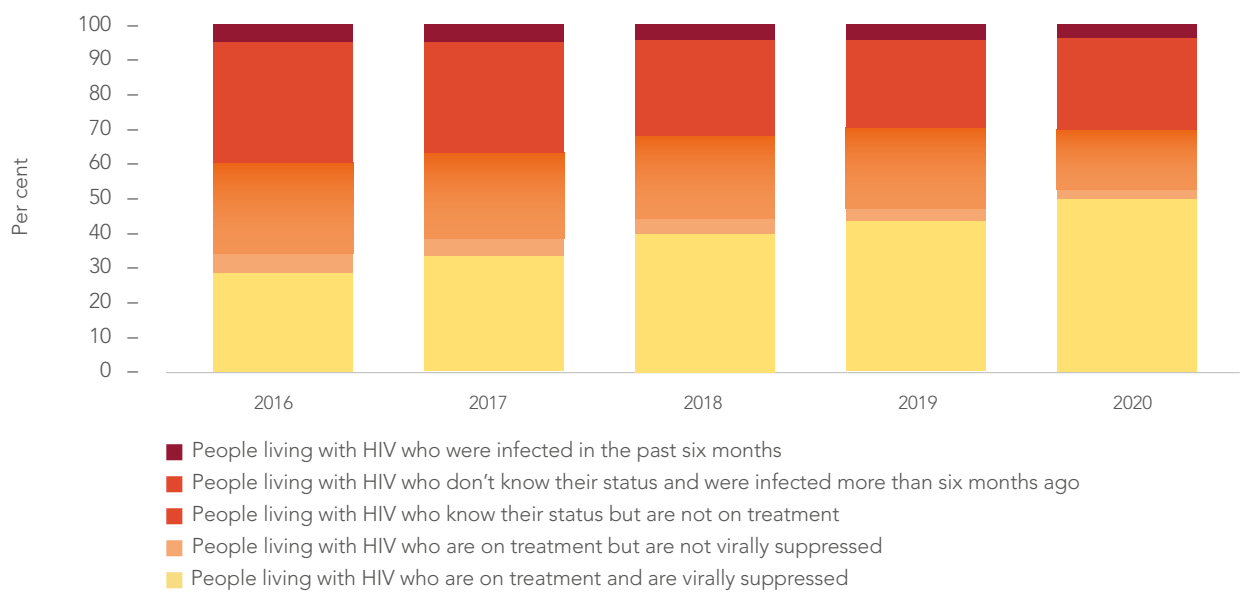
^b Technical brief: recommended population size estimates of men who have sex with men. Geneva: WHO, UNAIDS; 2020.

Note 1: Estimates shown are government-provided estimates reported for 2018–2020. 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 reported values for gay men and other men who have sex with men are presented as a per cent of the adult population (aged 15–49 years) for consistency across key populations. The percentage of this population out of the adult male population (aged 15–49 years) will be approximately twice the values shown.

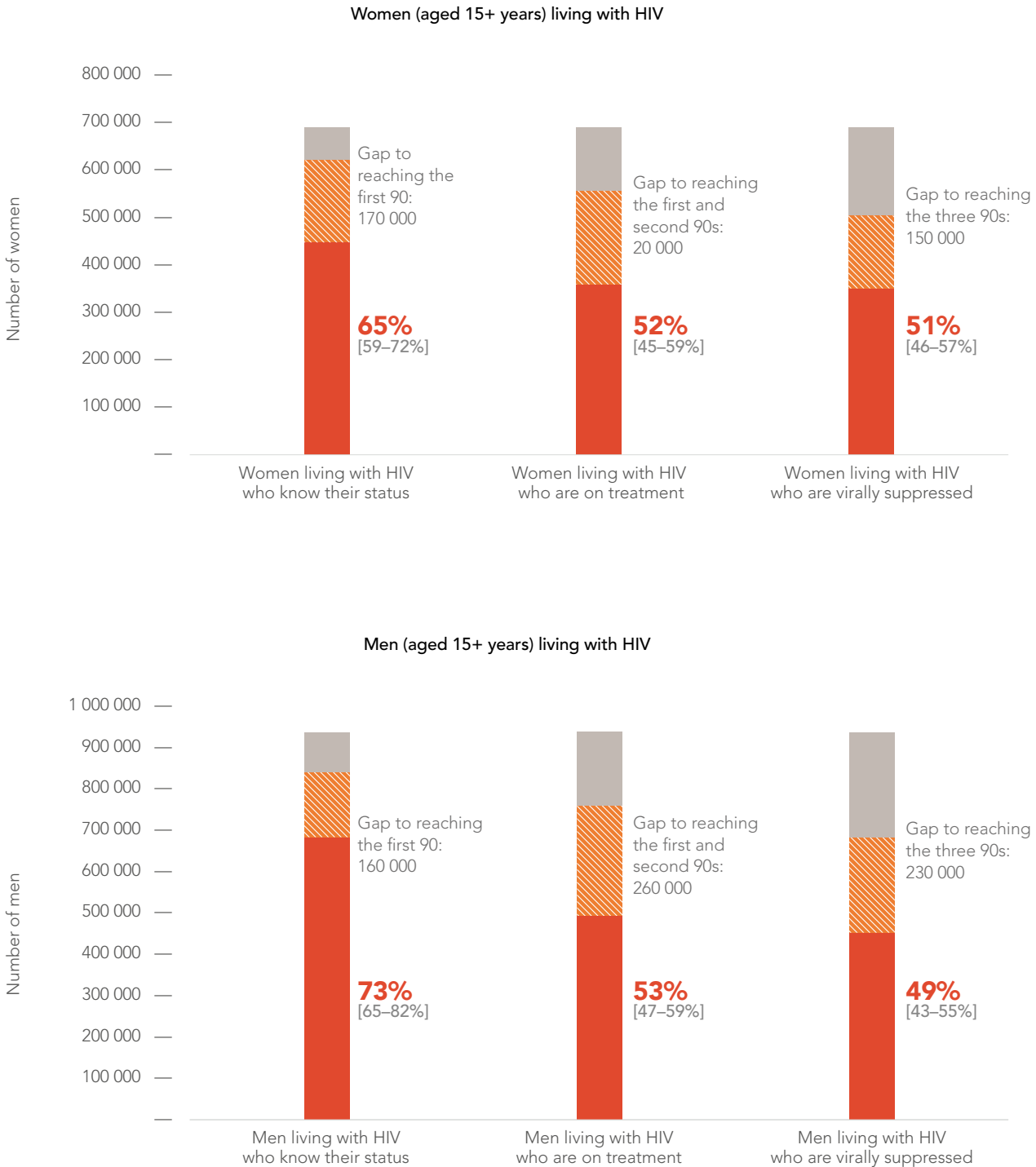
HIV SERVICES

FIGURE 19.4 | PEOPLE LIVING WITH HIV, PEOPLE NEWLY INFECTED IN THE PAST SIX MONTHS, AND HIV TESTING AND TREATMENT CASCADE, ADULTS (AGED 15+ YEARS), EASTERN EUROPE AND CENTRAL ASIA, 2016–2020



Source: UNAIDS special analysis, 2021.

FIGURE 19.5 | HIV TESTING AND TREATMENT CASCADE, WOMEN (AGED 15+ YEARS) COMPARED TO MEN (AGED 15+ YEARS), EASTERN EUROPE AND CENTRAL ASIA, 2020

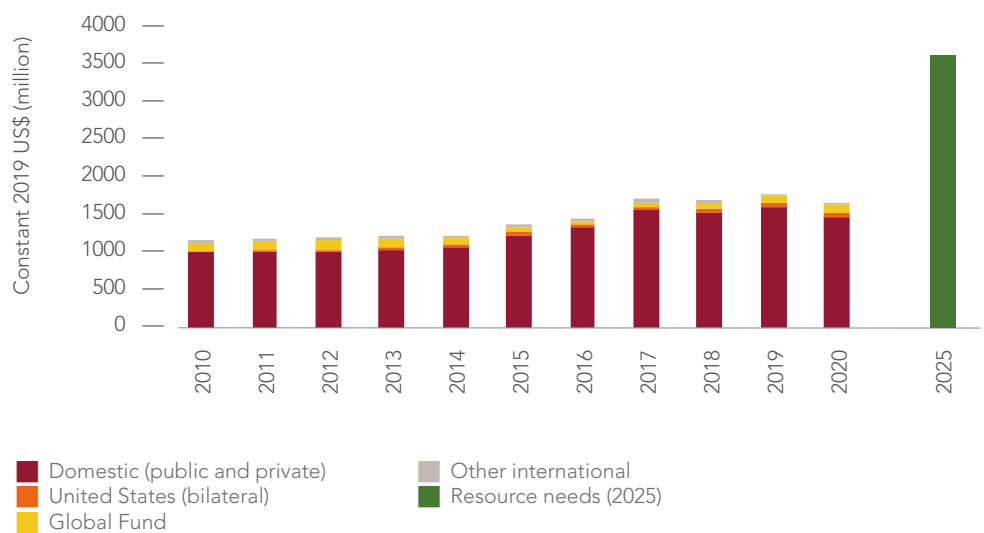


Source: UNAIDS special analysis, 2021.

INVESTING TO END AIDS

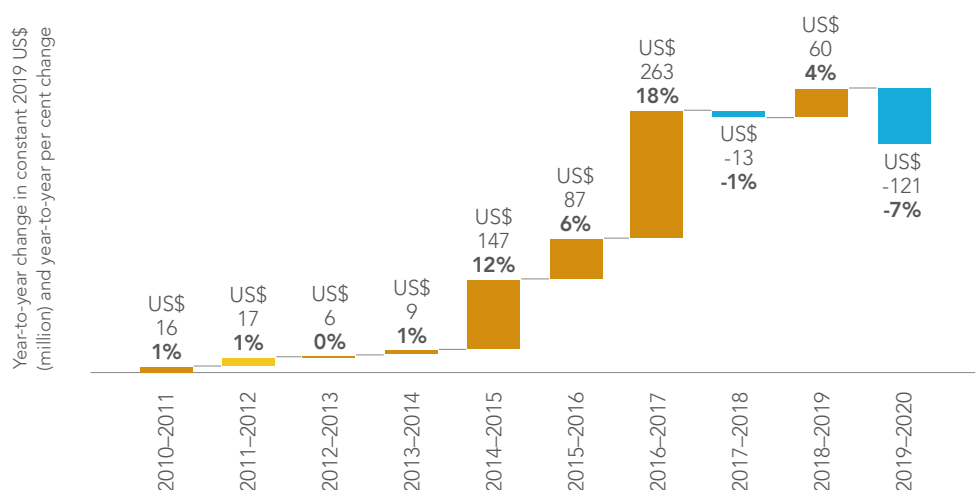
The resources available for HIV responses in the region in 2020 were less than half (45%) of what is required to reach the region’s resource targets for 2025. An average of US\$ 976 per person living with HIV was estimated to be available in 2020. A 2.2-fold increase in annual resources by 2025 is needed to expand HIV services sustainably and get on track to ending AIDS by 2030. The increase in needed resources is steeper in some countries in the region, which have lagged behind in specific areas of the response. In 2020, 90% of the total HIV resources were from domestic sources. There was a 46% growth in domestic resources between 2010 and 2020, with most of that growth happening between 2013 and 2018. It has since been followed by a flattening of HIV resources over the last few years. Given the current high HIV incidence rates (compared to 2025 targets), there is a need to bring down the unit prices of antiretroviral medicines and to strengthen spending on prevention programmes that are focused on key populations at higher risk of HIV infection.

FIGURE 19.6 | RESOURCE AVAILABILITY FOR HIV, EASTERN EUROPE AND CENTRAL ASIA, 2010–2020, AND ESTIMATED RESOURCE NEEDS FOR HIV BY 2025



Source: UNAIDS financial estimates and projections, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).
 Note: The resource estimates are presented in constant 2019 US dollars.

FIGURE 19.7 | YEAR-TO-YEAR CHANGE IN RESOURCE AVAILABILITY FOR HIV, EASTERN EUROPE AND CENTRAL ASIA, 2010–2011 TO 2019–2020



Source: UNAIDS financial estimates, 2021 (<http://hivfinancial.unaids.org/hivfinancialdashboards.html>).

LAWS AND POLICIES

TABLE 19.2 | PUNITIVE AND DISCRIMINATORY LAWS, EASTERN EUROPE AND CENTRAL ASIA, 2021

	Criminalization of transgender people	Criminalization of sex work	Criminalization of same-sex sexual acts	Law allows for possession of a certain limited amount of drugs for personal use	Parental consent for adolescents to access HIV testing	Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Laws or policies restricting the entry, stay and residence of people living with HIV	Mandatory HIV testing for marriage, work or residence permits or for certain groups
Albania	1	1	1	1	1	1		1
Armenia	1	1	1	1	2	1		1
Azerbaijan	2	4	2	2	1	1		1
Belarus	1	1	1	1	1	1		1
Bosnia and Herzegovina		5	9			10		
Georgia	1	1	1	1	1	1		1
Kazakhstan	1	6	1	1	1	1		1
Kyrgyzstan	1	1	1	1	1	1		1
Montenegro	2	2	2	2	2	10		2
Republic of Moldova	1	1	1	1	1	1		1
Russian Federation	2	7	9		2	10		2
Tajikistan	1	1	1	1	1	1		1
North Macedonia		8	9			10		
Turkmenistan	3		9			10		
Ukraine	1	1	1		1	1		1
Uzbekistan	2	2	9		1	1		1

Criminalization of transgender people

- Orange: Criminalized and/or prosecuted
- Green: Neither criminalized nor prosecuted
- Grey: Data not available

Criminalization of sex work

- Orange: Any criminalization or punitive regulation of sex work
- Green: Sex work is not subject to punitive regulations or is not criminalized
- Blue: Issue is determined/differs at the subnational level
- Grey: Data not available

Criminalization of same-sex sexual acts

- Red: Death penalty
- Orange: Imprisonment (14 years–life, up to 14 years) or no penalty specified
- Green: Laws penalizing same-sex sexual acts have been decriminalized or never existed, or no specific legislation
- Grey: Data not available

Law allows for possession of a certain limited amount of drugs for personal use

- Blue: No
- Green: Yes
- Grey: Data not available

Parental consent for adolescents to access HIV testing

- Orange: Yes, for adolescents younger than 18
- Yellow: Yes, for adolescents younger than 14 or 16
- Light Yellow: Yes, for adolescents younger than 12
- Blue: No
- Grey: Data not available

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission

- Orange: Yes
- Yellow: No, but prosecutions exist based on general criminal laws
- Green: No
- Grey: Data not available

Laws or policies restricting the entry, stay and residence of people living with HIV

- Orange: Deport, prohibit short and/or long stay and require HIV testing or disclosure for some permits
- Yellow: Prohibit short and/or long stay and require HIV testing or disclosure for some permits
- Light Yellow: Require HIV testing or disclosure for some permits
- Blue: No restrictions
- Grey: Data not available

Mandatory HIV testing for marriage, work or residence permits or for certain groups

- Orange: Yes
- Green: No
- Grey: Data not available

Sources:

1. UNAIDS National Commitments and Policy Instrument, 2021 (see <http://lawsandpolicies.unaids.org/>).
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Notes: A country is considered to have criminalized transgender persons if it uses the law to punish transgender individuals. Such a law may, for example, explicitly criminalize impersonation of the other gender, including cross-dressing. A country is considered to have any criminalization or punitive regulation of sex work if selling and/or buying sexual services is criminalized, ancillary activities associated with selling and/or buying sexual services are criminalized, profiting from organizing and/or managing sexual services is criminalized, and/or there are other punitive and/or administrative regulations of sex work.

Case study

LOCAL ORGANIZATIONS WORK MIRACLES FOR PEOPLE WHO INJECT DRUGS IN UKRAINE

The transition from donor to government funding of HIV responses in middle-income countries could threaten the future of services provided by nongovernmental organizations. The importance of HIV and other harm reduction services provided by these organizations to people who inject drugs in Ukraine has been revealed in a new study of survey data.

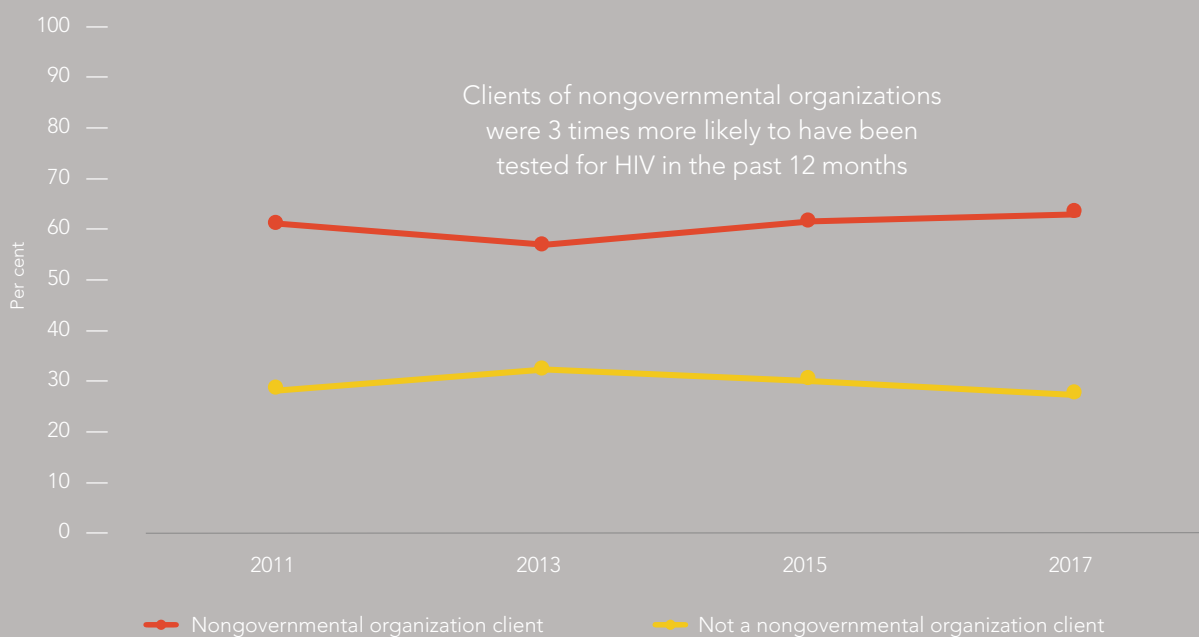
Nongovernmental organizations have been the main providers of sterile injecting equipment, condoms, and HIV and hepatitis C testing to people who inject drugs in Ukraine since the early 2000s, while the government provides most of the antiretroviral therapy and opioid substitution therapy.

According to an analysis of biobehavioural survey data from 2009 to 2017, people accessing services provided by nongovernmental organizations were three times more likely to have been tested for HIV (Figure 19.8), and 1.5 times more likely to use condoms and sterile injecting equipment. Those living with HIV were also more likely to know their HIV status, to have signed up with an AIDS Centre for HIV care and to be receiving antiretroviral therapy (1).¹

The analysis shows that nongovernmental organization-provided services make a big difference in a country with the second-largest HIV epidemic in eastern Europe and central Asia (and the third largest for hepatitis C), and where about one half of HIV infections and more than three quarters of hepatitis C infections stem from unsafe injecting drug use.

¹ More than 42 000 people who inject drugs took part in biobehavioural surveys in 31 cities across Ukraine in 2009, 2011, 2013, 2015 and 2017. About one third of the respondents used services from nongovernmental organizations.

FIGURE 19.8 | HIV TESTING IN THE PAST 12 MONTHS AMONG PEOPLE WHO INJECT DRUGS, BY NONGOVERNMENTAL ORGANIZATION CLIENT STATUS, UKRAINE, 2011–2017



Source: Trickey A, Semchuk N, Saliuk T, Sazonova Y, Varetska O, Walker JG et al. Has resourcing of nongovernmental harm-reduction organizations in Ukraine improved HIV prevention and treatment outcomes for people who inject drugs? Findings from multiple bio-behavioural surveys. *J Int AIDS Soc.* 2020;23(8):e25608.

“Today I am proud to say that the harm reduction programme implemented by Alliance for Public Health saved my life,” says Anton Basenko, one of the first opioid substitution therapy patients in Ukraine. “This programme is like a miracle. It’s just so simple to give a person [a] clean syringe or HIV rapid test without judging his/her life, but [while respecting] human rights and dignity of people who use drugs. Such crucial support helped people like me to not give up when you realize you are HIV-positive or hepatitis C-positive.”

Medical, social and psychological support services are mostly provided by local nongovernmental organizations, and thousands of calls a month go

through the National Hotline for Drug Use, run by operators who have experiences of past drug use. Guaranteed anonymity and confidentiality of nongovernmental organization-based services ensure the commitment and adherence of clients to these vital services. Clients do not provide identification documents; instead, they receive services based on a unique personal code.

Almost 15 700 people who use drugs were receiving opioid substitution treatment as of May 2021 in Ukraine, the largest number in the region (2). Among them there are 2490 women, and 12 were able to successfully give birth while on the programme (3).

References

1. Trickey A, Semchuk N, Saliuk T, Sazonova Y, Varetska O, Walker JG et al. Has resourcing of non-governmental harm-reduction organizations in Ukraine improved HIV prevention and treatment outcomes for people who inject drugs? Findings from multiple bio-behavioural surveys. *J Int AIDS Soc.* 2020;23(8):e25608.
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WESTERN AND CENTRAL EUROPE AND NORTH AMERICA

As a region, western and central Europe and North America has achieved the 90–90–90 targets, and continuing declines in annual HIV infections and deaths suggest that most of the epidemics of the region are being controlled. However, these regional averages obscure differences, both among and within countries. In the United States of America, for example, 34.5% of people living with diagnosed HIV infection (aged 13 years and older) were not virally suppressed (1).

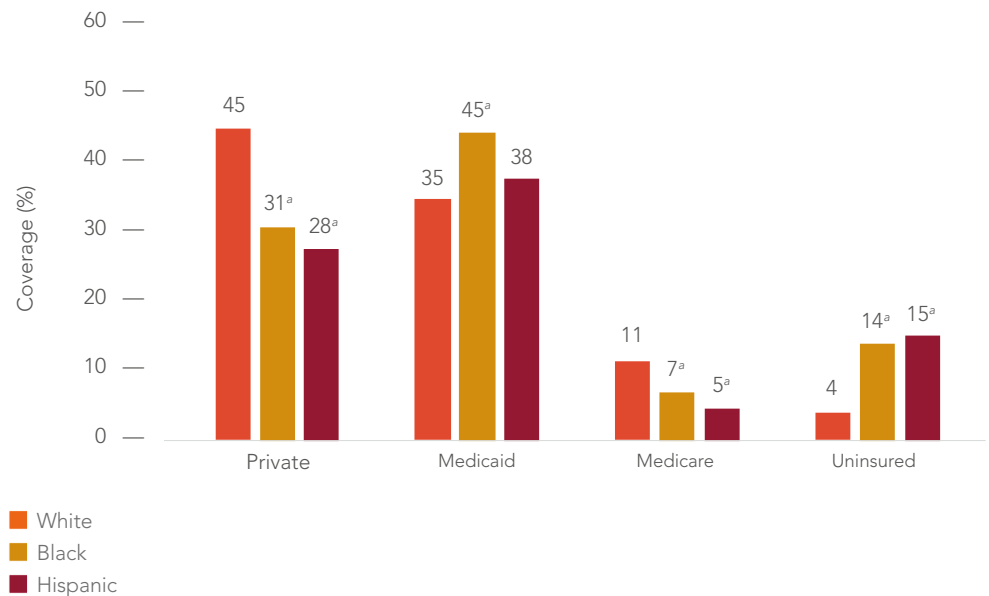
Service access in western and central Europe and North America tends to be lower among migrant populations and racial and ethnic minority groups. These disparities are linked to structural discrimination, administrative and linguistic barriers to accessing health insurance and services, and stigma at the community level. In the United States, for example, health insurance coverage is lower among people living with HIV in black and Hispanic communities (Figure 10.1), and people living with HIV who do not have health insurance are less likely to be virally suppressed than those with private or government-provided health insurance (Figure 20.2) (2). People living with HIV who do not have health insurance in the United States, however, can access affordable HIV treatment through the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act.

The increased provision of pre-exposure prophylaxis (PrEP) is contributing to reductions in the incidence of HIV infections in the United Kingdom of Great Britain and Northern Ireland and parts of the United States. Other proven prevention methods, such as harm reduction services, continue to hold the HIV epidemics in check in countries such as Italy, the Netherlands, Portugal, Spain and Switzerland, and they should be implemented more widely in countries where injecting drug use is a major driver of HIV and viral hepatitis infections.

PRIORITY ACTIONS FOR ENDING AIDS

- Improve testing strategies, including for viral load.
- Overcome stigma and discrimination in health-care settings, and integrate care for co-infections and comorbidities.
- Ensure that key populations, migrants and people in closed settings have access to HIV services, regardless of their legal or insurance status.
- Remove laws and policies that punish and discriminate against LGBTI communities, sex workers, people who use drugs, people living with HIV and migrants.
- Increase investments in HIV research, with particular attention to long-acting antiretrovirals, HIV vaccines and a cure.

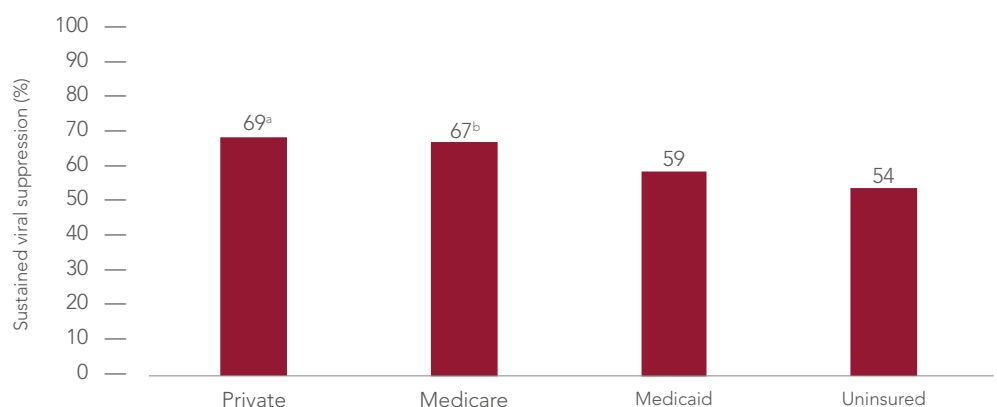
FIGURE 20.1 | **INSURANCE COVERAGE AMONG ADULTS LIVING WITH HIV, BY RACE/ETHNICITY, UNITED STATES OF AMERICA, 2018**



Source: Dawson L, Kates J. Insurance coverage and viral suppression among people with HIV, 2018. In: KFF.org [Internet]. 24 September 2020. San Francisco (CA): Kaiser Family Foundation; c2021 (<https://www.kff.org/hiv/aids/issue-brief/insurance-coverage-and-viral-suppression-among-people-with-hiv-2018/>).

^a Coverage significantly different ($p < .001$) reference group is white. The remaining percentage is other public coverage.

FIGURE 20.2 | **SUSTAINED VIRAL SUPPRESSION AMONG ADULTS WITH HIV, BY INSURANCE COVERAGE MODALITY, UNITED STATES OF AMERICA, 2018**



Source: Dawson L, Kates J. Insurance coverage and viral suppression among people with HIV, 2018. In: KFF.org [Internet]. 24 September 2020. San Francisco (CA): Kaiser Family Foundation; c2021 (<https://www.kff.org/hiv/aids/issue-brief/insurance-coverage-and-viral-suppression-among-people-with-hiv-2018/>).

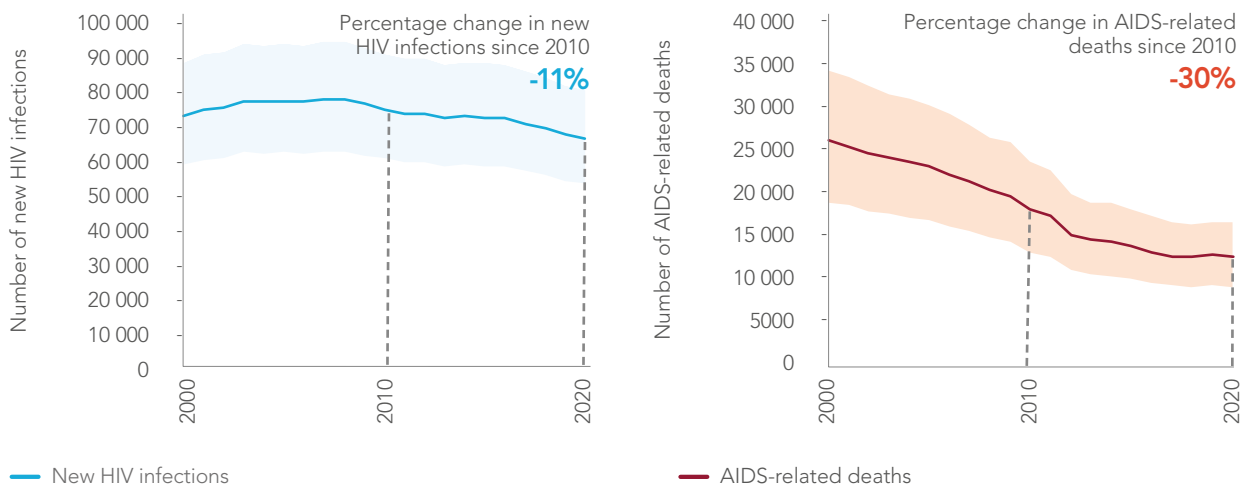
Note: Sustained viral suppression is defined as having an undetectable viral load over all tests in the preceding 12 months. Medicaid includes those covered by both Medicaid and Medicare.

^a Viral suppression rate greater than that of the uninsured $p < .001$.

^b Viral suppression rate greater than that of the uninsured $p < .05$.

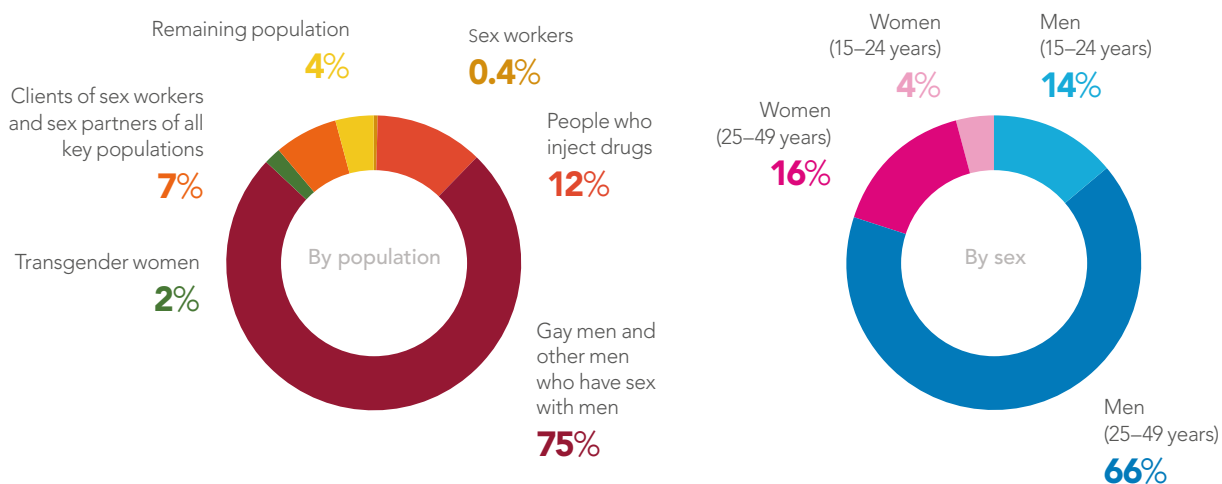
STATE OF THE PANDEMIC

FIGURE 20.3 | NUMBER OF NEW HIV INFECTIONS AND AIDS-RELATED DEATHS, WESTERN AND CENTRAL EUROPE AND NORTH AMERICA, 2000–2020



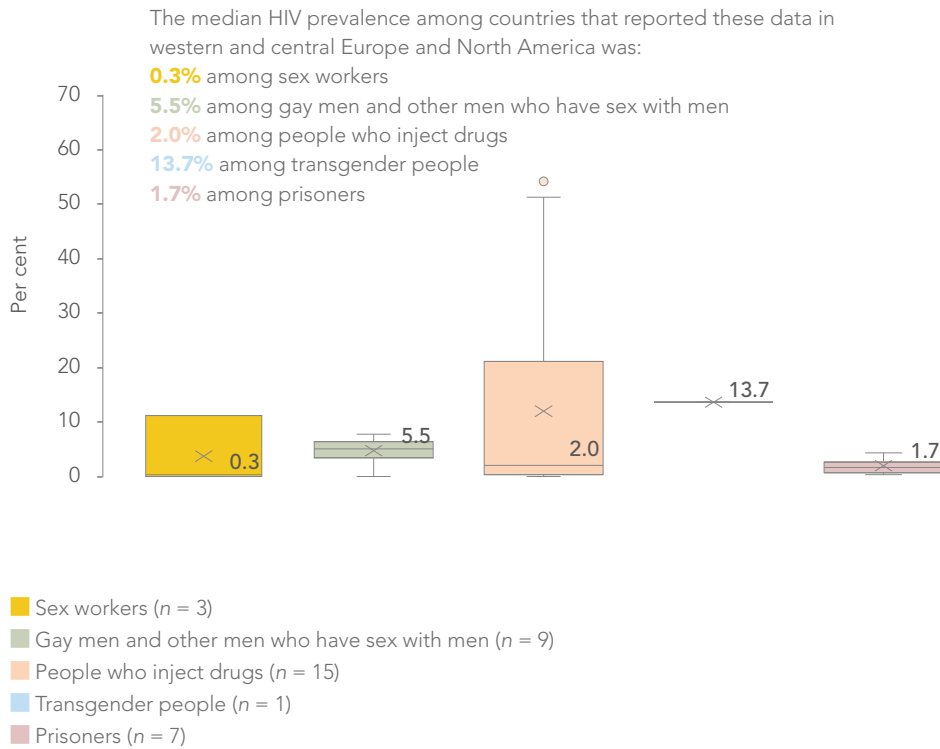
Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

FIGURE 20.4 | DISTRIBUTION OF NEW HIV INFECTIONS BY POPULATION GROUP AND SEX (AGED 15–49 YEARS), WESTERN AND CENTRAL EUROPE AND NORTH AMERICA, 2020



Source: UNAIDS special analysis, 2021 (see methods annex).

FIGURE 20.5 | HIV PREVALENCE AMONG KEY POPULATIONS, REPORTING COUNTRIES IN WESTERN AND CENTRAL EUROPE AND NORTH AMERICA, 2016–2020



Source: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>).
 Note: (n = number of countries). Total number of reporting countries = 40.

How to read this chart

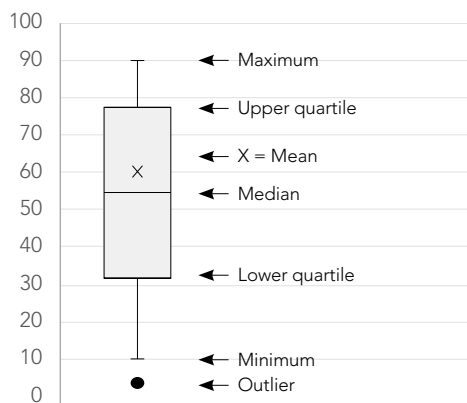


TABLE 20.1 | REPORTED ESTIMATED SIZE OF KEY POPULATIONS, WESTERN AND CENTRAL EUROPE AND NORTH AMERICA, 2018–2020

	National adult population (aged 15–49 years) in 2020 or relevant year	Sex workers	Sex workers as per cent of adult population (aged 15–49 years)	Gay men and other men who have sex with men	Gay men and other men who have sex with men as per cent of adult population (aged 15–49 years)	People who inject drugs	People who inject drugs as per cent of adult population (aged 15–49 years)	Transgender people	Transgender people as per cent of adult population (aged 15–49 years)	Prisoners	Prisoners as per cent of adult population (aged 15–49 years)
Canada	16 500 000							75 000	0.45%	14 000	0.09%
Czechia	4 800 000					40 800	0.85%			21 600	0.45%
Estonia	560 000									2300	0.42%
Germany	35 800 000									57 600	0.16%
Israel	4 100 000										
Serbia	4 000 000										
United States of America	148 000 000							1 000 000	0.68%		
Estimated global median proportion as per cent of adult population (aged 15–49 years) ^{a, b} :			0.34%		0.82%		0.06%		0.06%		-

■ National population size estimate ■ Insufficient data
 ■ Local population size estimate ■ No data

Sources: UNAIDS Global AIDS Monitoring, 2021 (<https://aidsinfo.unaids.org/>); Spectrum Demproj module, 2021.

^a Quick Start Guide for Spectrum, 2020. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/QuickStartGuide_Spectrum_en.pdf).

^b Technical brief: recommended population size estimates of men who have sex with men. Geneva: WHO, UNAIDS; 2020.

Note 1: Estimates shown are government-provided estimates reported for 2018–2020. 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 reported values for gay men and other men who have sex with men are presented as a per cent of the adult population (aged 15–49 years) for consistency across key populations. The percentage of this population out of the adult male population (aged 15–49 years) will be approximately twice the values shown.

TABLE 20.2 | CHANGE IN NEW HIV INFECTIONS BETWEEN 2010 AND 2020, WESTERN AND CENTRAL EUROPEAN COUNTRIES

	Estimates approved by country	Estimates not finalized by the time of publication
Countries with declines in new HIV infections of greater than 20%	Denmark Estonia Italy Netherlands Norway Portugal	Austria Belgium Switzerland United Kingdom of Great Britain and Northern Ireland
Countries with declines in HIV infections of 0% to less than 20%	Greece Spain	Finland Israel Lithuania
Countries with increasing new HIV infections	Ireland Serbia	Bulgaria Cyprus Czechia Hungary Latvia Poland Slovakia Sweden Turkey

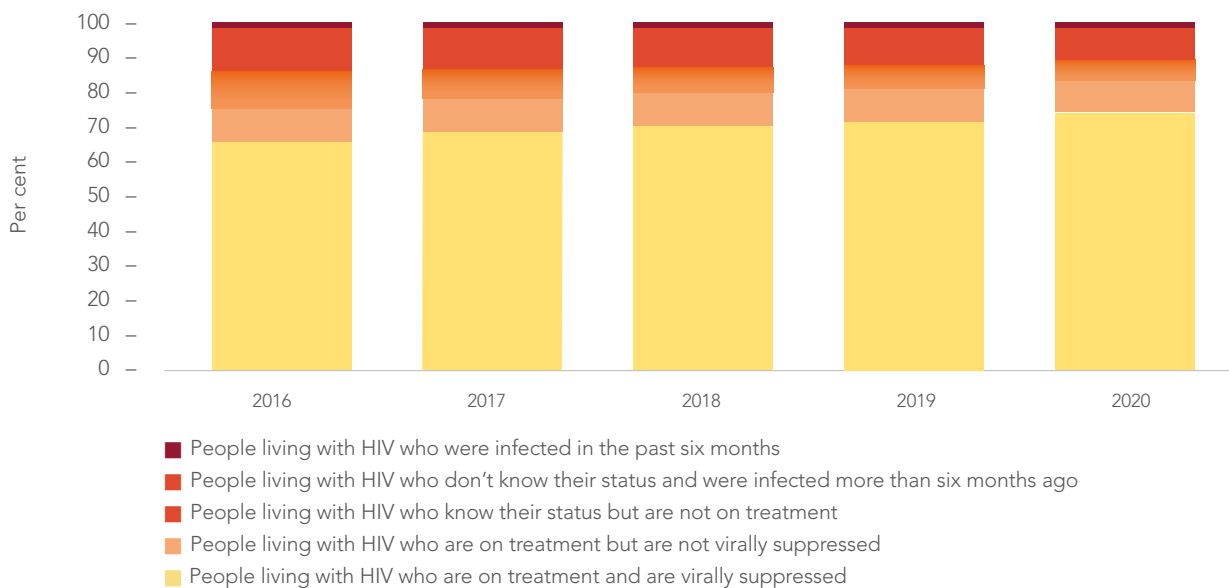
Source: UNAIDS epidemiological estimates 2021; European Centre for Disease Prevention and Control, WHO Regional Office for Europe. HIV/AIDS Surveillance in Europe 2020: 2019 data. Copenhagen: WHO Regional Office for Europe; 2020.

Notes: Countries were omitted if there was a discrepancy between the estimated number of new infections for 2010–2020 and new diagnoses for 2010–2019 (Croatia, France, Germany, and Romania). Countries with <50 new HIV infections were omitted.

In western and central Europe, 11 countries have seen HIV infections decline by more than 20% since 2010, and 16 countries experienced increases or had limited declines in new HIV infections (Figure 20.10). HIV responses in several countries within central Europe are being held back by limited political commitment, harassment and other rights violations against lesbian, gay, bisexual, transgender and intersex (LGBTI) people and other key populations, and by insufficient steps to reach key populations with evidence-informed combinations of HIV prevention, testing and treatment services.

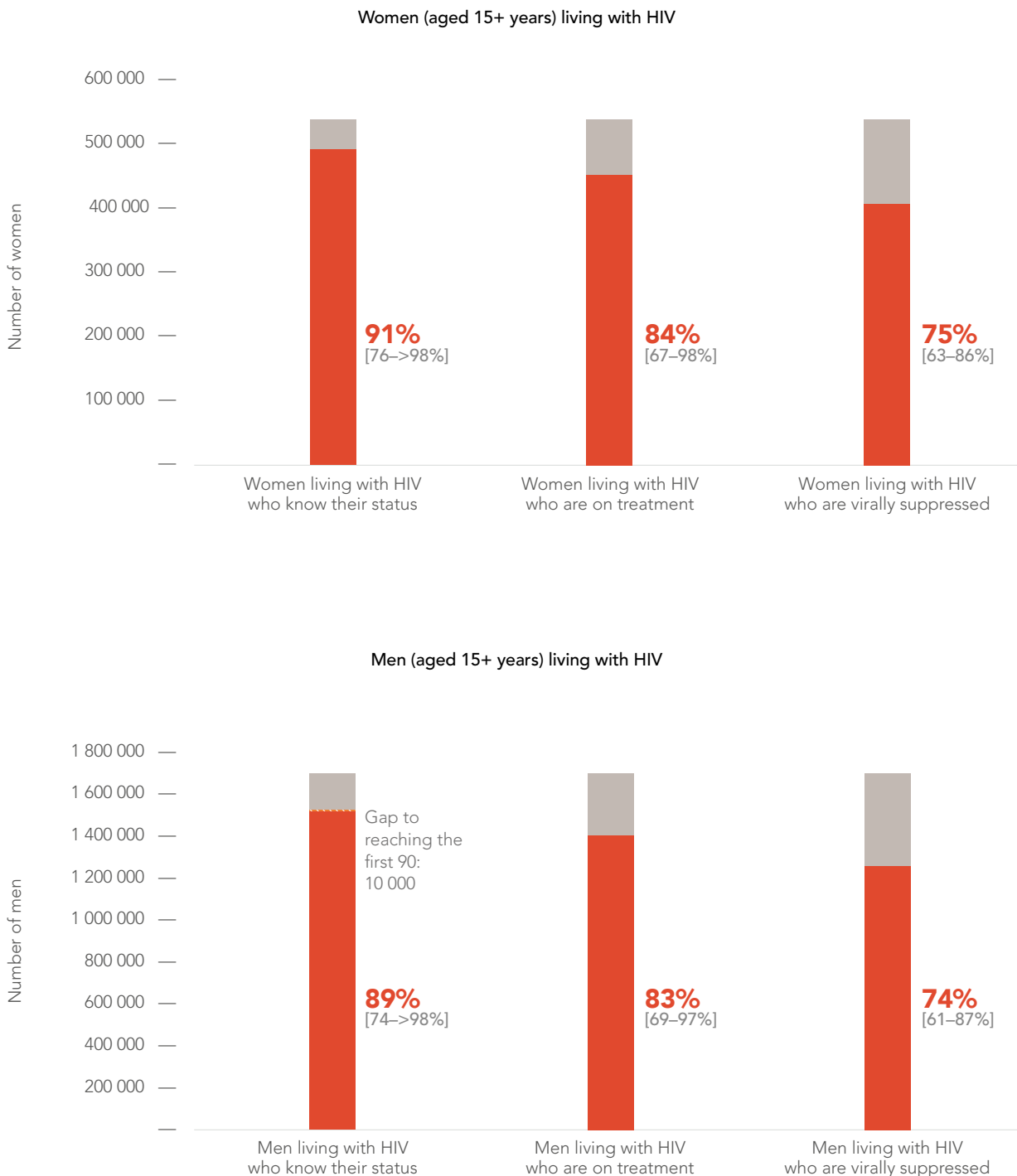
HIV SERVICES

FIGURE 20.6 | PEOPLE LIVING WITH HIV, PEOPLE NEWLY INFECTED IN THE PAST SIX MONTHS, AND HIV TESTING AND TREATMENT CASCADE, ADULTS (AGED 15+ YEARS), WESTERN AND CENTRAL EUROPE AND NORTH AMERICA, 2016–2020



Source: UNAIDS special analysis, 2021.

FIGURE 20.7 | HIV TESTING AND TREATMENT CASCADE, WOMEN (AGED 15+ YEARS) COMPARED TO MEN (AGED 15+ YEARS), WESTERN AND CENTRAL EUROPE AND NORTH AMERICA, 2020



Source: UNAIDS special analysis, 2021.

Case study

OVERCOMING FEAR AND HIV IN AFRICAN MIGRANT COMMUNITIES IN BELGIUM

Studies show that HIV epidemics in western and central Europe disproportionately affect migrant populations, with HIV prevalence typically highest among migrants from sub-Saharan Africa (3). In Belgium, migrants of sub-Saharan African origin comprise only 0.8% of the country's population, but they accounted for 30% of newly-reported HIV cases in 2019 (4).¹ In the city of Antwerp, for example, HIV prevalence is almost 6% among migrant women and over 4% among migrant men from sub-Saharan Africa, compared to national HIV prevalence of 0.17% (5, 6).

Migration itself is not a risk factor for HIV, although it may place people in situations that increase their vulnerability and make it more difficult to access HIV prevention, testing and treatment services. Instead, substantial proportions of migrants living with HIV in Europe acquired HIV after migrating. A study conducted between 2013 and 2015 in nine European countries, including Belgium, estimated that 45% of people living with HIV from sub-Saharan Africa had acquired HIV post-migration (7). Migrant access to HIV services tends to be poor. The reasons include a low sense of HIV risk, cultural and language barriers, a lack of migrant-inclusive health policies, and HIV-related stigma and discrimination (8). This is similar to the situation elsewhere in Europe, where one

review found that a range of hindrances left many undocumented migrants with access only to emergency care, even in countries where they were fully entitled to health care (9). As a result, HIV diagnoses in these communities can be late and treatment outcomes can be poor (10, 11).

The HIV-SAM Project, coordinated by the Institute of Tropical Medicine Antwerp, is working to overcome these hurdles in Belgium's Flemish region. It uses a participatory approach to reach communities of sub-Saharan African origin with core HIV information and prevention and testing services. An example is its "I Don't Fear People Living with HIV—and You?" HIV stigma reduction campaign that began in 2019.

This campaign—which brought together the resources of 18 social and cultural organizations, church groups, an HIV peer support group and individual volunteers—emerged from research showing high levels of HIV stigma in communities of African origin, who often were also experiencing discrimination at health-care facilities (12). Community members assisted in crafting of appropriate messaging, posters and videos. Their advice led to an emphasis on the themes of empathy and compassion, showing how stigma harms people's health, and highlighting the rewards of successful antiretroviral therapy.

¹ Where the nationality of the person was known.

After being piloted with communities, the selected messages were deployed on posters and flyers, in videos and in social media posts. Workshops and training were held to raise community awareness and disseminate the information, which was adapted over time to reflect people's diverse views and health priorities. Volunteers from community organizations also distributed free condoms at festivals and other community events.

Community groups ran a stigma reduction campaign, starting in December 2019, that had reached almost 10 000 people through face-to-face encounters, posters in popular social venues and social media before the COVID-19 pandemic interrupted the work.

The outreach campaign even enlightened volunteers. "Nobody [among the volunteers] knew that HIV medication is so effective and prevents HIV transmission to partners," recalled one. "This was something useful to understand."

The importance of established community networks in pandemic outbreaks is well-established (13). For the HIV-SAM Project, the work has paid off for the HIV response and beyond. During the COVID-19 crisis, these existing community networks were used to spread crucial and tailored information about the pandemic, debunk misconceptions, lessen vaccine hesitancy and help overcome social isolation. Prevention information and resources were also publicized through online community networks.

WE ARE NOT AFRAID OF PEOPLE LIVING WITH HIV ANYMORE. AND YOU?

JE N'AI PLUS PEUR DES PERSONNES VIVANT AVEC LE VIH. ET VOUS?

LET'S STOP STIGMATISING
People living with HIV

CESSONS DE STIGMATISER
les personnes vivant avec le VIH

« La personne vivant avec le VIH qui suit correctement son traitement ne transmet pas le VIH par voie sexuelle. »

INSTITUTE OF TROPICAL MEDICINE ANTWERP **HIV SAM** **Vlaanderen is zorg** **INSTITUTE OF TROPICAL MEDICINE ANTWERP** **HIV SAM** **Vlaanderen is zorg**

This project was made possible with the financial support of ViV Healthcare Belgium
MORE INFORMATIONS ON WWW.HIVSAM.BE

Le projet a été rendu possible grâce au soutien financier de ViV Healthcare Belgium
PLUS D'INFORMATIONS SUR LE PROJET SONT DISPONIBLES SUR WWW.HIVSAM.BE

Examples of print materials produced as part of the HIV-SAM stigma reduction campaign in Flanders, Belgium.
Credit: Institute of Tropical Medicine Antwerp

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VI

ANNEX ON METHODS



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 estimates³

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.

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>. A supplement on the latest methods will be released in 2021 from the *Journal of the International AIDS Society*.

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.

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 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 under-reporting 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 United States President's Emergency Plan for AIDS Relief (PEPFAR) and its agencies, 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 2021, 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 2021 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 2020 and 2021 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.

Antiretroviral therapy data and COVID-19 disruptions

In the 2021 software, teams chose whether to enter antiretroviral therapy data for 2020 by year or by month. Entering data by month captures disruptions due to COVID-19 mitigation efforts. Countries were encouraged to enter "Loss to follow-up" data (that is, people living with HIV who are alive and who had been previously enrolled on antiretroviral therapy, but who were no longer retained in care) in order to avoid underestimating the disruption effects if numbers on antiretroviral therapy decrease but retention on treatment is assumed to be perfect.

Effect: Increased estimates of AIDS-related deaths due to antiretroviral therapy interruptions.

Adult natural history model

Using Population-based HIV Impact Assessment (PHIA) survey data on untreated people living with HIV, the UNAIDS Reference Group determined that Spectrum was overestimating CD4 cell counts among persons off of antiretroviral therapy. To adjust for this, several inputs were updated to better fit the PHIA data:

- The estimated distribution of CD4 cell counts at initial infection with HIV.
- Disease progression rates among people not on treatment.
- AIDS-related mortality rates off antiretroviral therapy.
- The relative weight that the model places on allocating antiretroviral therapy to people with lower CD4 cell counts or to anyone eligible for treatment, regardless of their CD4 count.

As a result of these changes, people living with HIV who were not receiving antiretroviral therapy reach low CD4 cell counts sooner but survive longer at low CD4 cell counts.

Effect: Increased estimates of AIDS-related deaths globally.

Sex ratio of incidence

Spectrum uses an incidence rate ratio to disaggregate adult incidence by sex. Most countries with generalized epidemics use a default pattern to describe the trend in this ratio, with higher incidence in women than men, and which is set at a fixed value from about 20 years into the epidemic onward.

A review of mechanistic HIV transmission models suggested that antiretroviral therapy and voluntary medical male circumcision (VMMC) scale-up may reduce incidence in men more than in women. To account for this, Spectrum now increases the female-to-male incidence ratio by 0.05 per year during 2010–2020.

Effect: This directly increases new infections among females (about 10%) and indirectly raises new infections and AIDS-related deaths overall (~1%) via more mother-to-child transmission and shifts in adult antiretroviral therapy coverage.

Reduction in transmission on antiretroviral therapy

Spectrum previously assumed that antiretroviral therapy reduces HIV incidence by 0.7% per percentage point increase in treatment coverage. This parameter value is now increased from 0.7% to 0.8% based on a review of recent HIV epidemic calibrations of mechanistic HIV transmission models and evidence from Universal Test and Treat trials.

Effect: HIV incidence will be lower as antiretroviral therapy coverage increases. The effect of this change may be larger in countries—and in years—without strong HIV prevalence data.

Treatment interruption

Previously in the model, people who interrupted antiretroviral therapy returned to their baseline CD4 count category when they dropped off treatment. Based on a review of treatment interruption literature, Spectrum now assumes that people are one CD4 category higher after treatment interruption than their pre-treatment category. This only applies to patients who were on antiretroviral therapy for more than 12 months before interruption.

Effect: The impact of this change will depend on whether the country team has entered loss to follow-up information. Countries that assume 100% annual retention will see no change. Countries that reported lower retention may see fewer deaths with this change compared to their 2020 estimates.

Paediatric mortality on antiretroviral therapy

Assumptions about mortality rates among children on antiretroviral therapy are based on data from the leDEA network of treatment sites. A recent review of their data on mortality among children on treatment has provided updated data for sub-Saharan Africa, Latin America, the Caribbean and Asia and the Pacific. The analysis considers age, CD4 at initiation, duration on treatment and region. The updated analysis suggests that among children on antiretroviral therapy, mortality has decreased over time: a child on antiretroviral therapy in 2010 was more likely to die than a child on treatment in 2018. Mortality rates for a given CD4 count and duration of time on antiretroviral therapy are lower than in previous versions of Spectrum, but these lower rates are offset by higher relative mortality in earlier years compared to the 2020 Spectrum inputs.

Effect: Little change in paediatric HIV deaths.

Fertility among women living with HIV

Assumptions about how HIV impacts fertility have been updated. These updates reflect changes in the estimated CD4 levels of all women, based on the changes in the adult natural history model (discussed above). In addition to revised natural history assumptions, HIV-related fertility effect estimates have been updated to include new household survey data that have become available since the last analysis in 2018.

Effect: New child infections may increase, especially in countries without routine antenatal care testing data that are used to adjust HIV prevalence among pregnant women.

Breastfeeding practices

Spectrum's model of breastfeeding duration in sub-Saharan Africa has been updated with the addition of three new surveys. In addition, data from all PHIA surveys were removed, except for the 2015 surveys from Malawi, Zambia and Zimbabwe. The PHIA surveys conducted after these first three surveys underestimated breastfeeding duration due to a change in the questionnaire.

Effect: Small changes in new child infections overall, but some countries in eastern Africa may see estimates of new child infections increase by 10–15%.

Changes for countries that use case surveillance data in their models

There were two methodological changes in the Case Surveillance and Vital Registration model. The likelihood specification for the distribution of the number of new HIV infections and AIDS-related deaths was changed from an inverse gaussian to a gamma distribution.

Effect: Narrower uncertainty bounds.

The incidence rate ratios fitter has been adjusted to allow time-varying sex and age ratios. The incidence and the rate ratios are now estimated simultaneously.

Effect: The model will be more flexible, but fitting procedures will be slower when incidence rate ratio fitting is enabled.



Credit: UNAIDS

AIDS Epidemic Model

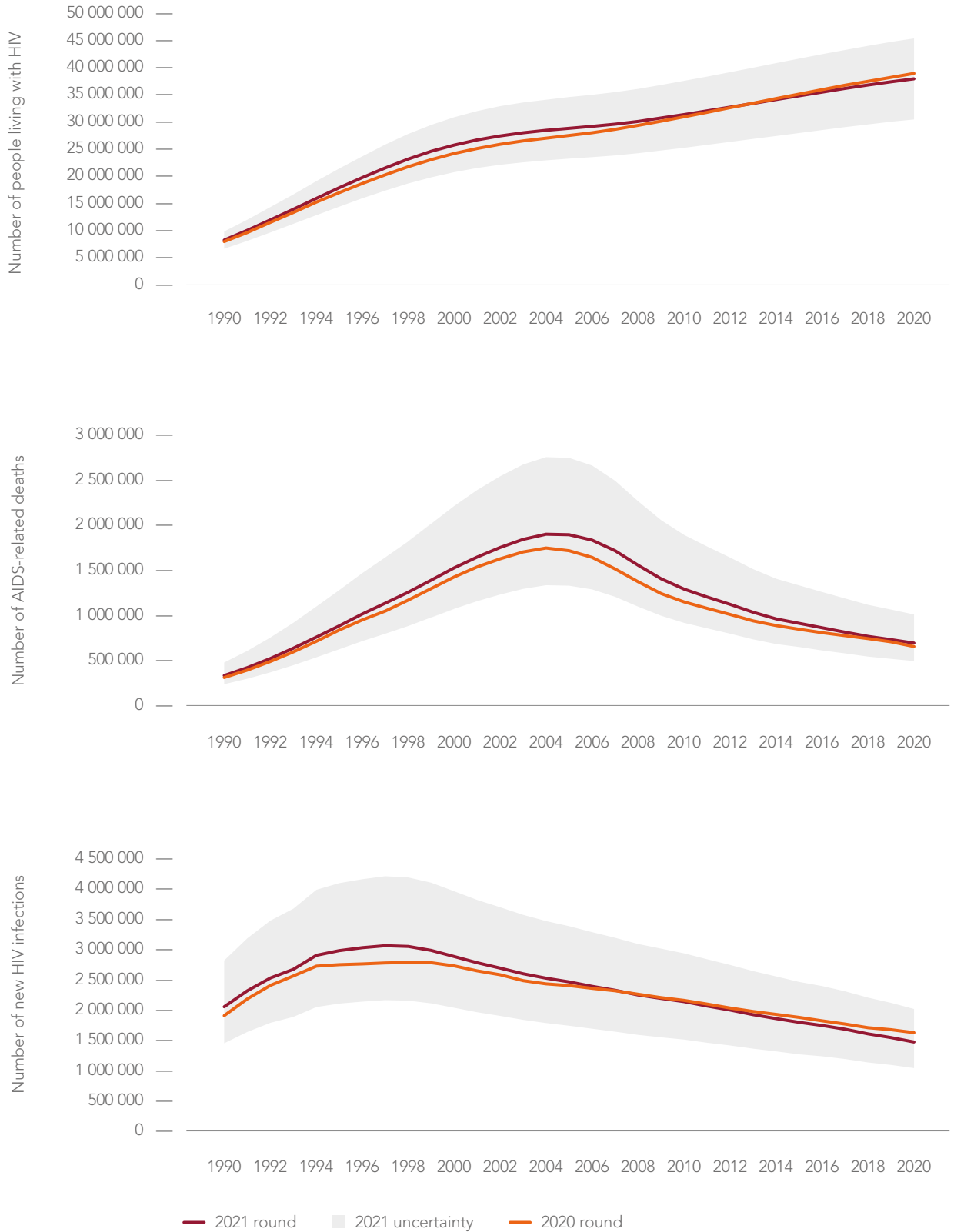
The AIDS Epidemic Model (AEM) is, among other things, a model that estimates trends in incidence in countries with high-quality data on key populations. While it has been used to calculate adult incidence that is subsequently used in Spectrum, it was not capturing some of the complex calculations (e.g., by age, sex and CD4 count stratum) taking place in Spectrum, resulting in inconsistencies. To bring the two models in line, seven important updates have been made to AEM:

- Built in time-varying age, sex and CD4 mortality, progression and distribution by CD4 of new infections in order to align with Spectrum assumptions.
- Used the background all-cause mortality generated by Spectrum in AEM.
- Added other Spectrum changes in mortality to AEM code.
- Declining off-antiretroviral therapy mortality as antiretroviral therapy coverage increases.
- On-antiretroviral therapy mortality multipliers were added that reflect changes in the effectiveness of antiretroviral therapy over time.
- Antiretroviral therapy is allocated to people based on a weighted probability of death and eligibility for treatment.
- Refined AEM to do all mortality calculations by sex.

Effect: These modifications will eliminate the need to modify the assumptions and data in the Spectrum files to match AEM results.

Figure 21.01 (below) presents the impact of all of the above changes on the estimates. At the global level, trends in new HIV infections, AIDS-related deaths and people living with HIV are similar to the 2020 round, although there are shifts within regions.

FIGURE 21.01 | **COMPARISON OF 2020 TO 2021 UNAIDS ESTIMATES: NEW HIV INFECTIONS, AIDS-RELATED DEATHS AND PEOPLE LIVING WITH HIV, GLOBAL, 2000–2019**



Source: UNAIDS epidemiological estimates, 2020 and 2021.

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 or sex workers—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>).

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 and the Global AIDS Monitoring tool. 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 2021 Global AIDS Monitoring guidelines (1). Data sources are also briefly described. A summary of the number of countries that are publicly reporting on each measure is provided in Table 21.1, organized by region.

TABLE 21.1 | DATA AVAILABILITY FOR CONSTRUCTING UNAIDS MEASURES OF PROGRESS AGAINST THE 90–90–90 TARGETS, 2015–2020

Number		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
Countries	2020	38	16	21	16	17	20	25	39	193
Countries in UNAIDS global estimates	2020	28	10	20	16	17	20	25	36	172
Countries with publicly available data on estimates of people living with HIV	2020	21	9	20	12	17	16	25	15	133
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	90
	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
	2020	18	8	20	12	13	14	25	6	116
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
	2020	26	10	20	15	17	20	25	16	150
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
	2020	11	8	15	11	10	5	7	6	73

Source: UNAIDS epidemiological estimates, 2016–2021.

The final set of country measures of progress against the 90–90–90 targets for 2015 through 2020 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 2020 were available for 172 of 194 countries and territories, and they were published for 133. Published country estimates of people living with HIV (available at <http://aidsinfo.unaids.org>) represent 88% of the total global estimated number of people living with HIV in 2020.

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 to 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 2015 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 Shiny90, a UNAIDS-supported mathematical model. 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 (2).

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



Credit: UNAIDS

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 (3). 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 and the Global AIDS Monitoring reporting tool. In the 2021 round, 148 countries publicly reported treatment numbers, and between 2015 and 2020, 150 countries had at least one publicly available estimate of the number of people on treatment (representing 95% 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 Japan and the Republic of Korea—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, PEPFAR and its agencies, 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.

Since early 2017, UNAIDS and other international partners have supported countries, primarily in sub-Saharan Africa, to verify that the number of people reported to be currently on treatment is accurate. This activity, however, has not been conducted during the COVID-19 pandemic.

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. 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.⁴

The UNAIDS Global AIDS Monitoring guidelines were revised in 2019 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 assessed to be nationally representative of all people on treatment (typically 50% or higher testing coverage). Table 21.1 shows the number of countries able to report on viral load suppression compared to previous years. For 2015, only 29 countries had reliable estimates; 107 countries were able to report data for 2020. Some

countries had lower viral load testing coverage for 2020 compared to 2019, presumably due to the COVID-19 pandemic and the related mitigation effects. In some countries, there is a longer than usual reporting delay on viral suppression tests.

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 suppression in the untested population with certainty, 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 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

⁴ The 2020 UNAIDS guidance *Global AIDS Monitoring 2021: indicators for monitoring the 2016 Political Declaration on Ending AIDS* is available at https://www.unaids.org/sites/default/files/media_asset/global-aids-monitoring_en.pdf

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 based on regional trends (or when regional trends are sparse, global trends), sex differences and country-specific data for those countries reporting data for some but not all years. The Bayesian model also provides uncertainty bounds. Estimates are available by sex for adults 15 years and older from 2015 to 2020. 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 (4).

The proportion of estimates of knowledge of status and viral load suppression imputed by region from 2015 to 2020 in order to account for countries with missing data are shown in Table 21.2 (below). Due to large differences in the proportion of virally suppressed people in western and central Europe and the United States of America for the years in which data were available, subregional estimates were separately calculated for North America and western and central Europe, and then were 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 over-reporting or under-reporting 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.

In this year's report, UNAIDS has used a new way of presenting the situation across the cascade in stacked bars. Out of the 100% of adult people living with HIV, the proportions under each of the following categories had been added in stacked bars:

- The lowest part are those who are virally suppressed on treatment.
- The next part are those who are not virally suppressed but are on treatment, calculated as the product of the number of people living with HIV and the difference between the proportion virally suppressed and proportion on treatment.
- The next part are those who know their status but are not on treatment, calculated as the product of the total number of people living with HIV and the difference between proportion knowing their status and those on treatment.
- At the top are those people living with HIV who have acquired the infection in the past six months, calculated as the number of new HIV infections among adults divided by two.
- The proportion immediately under it are those who have been infected for more than six months age and still not aware of their status. This proportion is calculated as the difference between people living with HIV who know their status, the product of the number of people living with HIV and one minus proportion knowing their status, and the number infected in the past six months.

TABLE 21.2 | 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, 2015–2020

		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
	2020	11	5	0	3	59	17	0	98	11

Source: UNAIDS epidemiological estimates, 2016–2021.

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.

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 175 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 51 countries, for people who inject drugs from 36 countries, for gay men and other men who have sex with men from 64 countries, and for transgender people from 25 countries (all of which were located in Latin America, the Caribbean, western and central Europe and North America, and Asia and the Pacific).

Incidence Pattern Model reports were available for 15 countries (Botswana, Cameroon, Eswatini, Ethiopia, Ghana, Haiti, Kenya, Lesotho, Malawi, Mozambique, Namibia, the United Republic of Tanzania, Uganda, Zambia and Zimbabwe) and provided information on distributions of new infections for their respective regions.

New HIV infections for western and central European countries were derived from the European Centre for Disease Prevention and Control (ECDC) and the WHO Regional Office for Europe *HIV/AIDS surveillance in Europe 2020 (2019 data)* report (5). 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 56 countries that used benchmark values for the sex worker estimate, 85 countries for the people who inject drugs estimate, 56 countries for the gay men and other men who have sex with men estimate, and 144 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 spouses/steady sex partners of clients.

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, 2020 and 2021. A comprehensive review of the data was conducted during these reporting rounds, 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 from 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 2016. Estimates may or may not be national.

SUBNATIONAL HIV ESTIMATES FOR SUB-SAHARAN AFRICA

Subnational HIV estimates were generated for 38 countries in sub-Saharan Africa and Haiti in the Caribbean using the Naomi model (Table 21.3). The indicator displayed in Figure 1.3 is HIV incidence among females aged 15 to 24 years by subnational level.

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 (2020), 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 midpoint 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 PHIA). Since the survey sample size in each subnational area 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 subnational area, 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 for subnational areas 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 subnational area. The prior assumption is that the large majority of people living with HIV will access antiretroviral therapy in their area of residence, but this probability can vary based on subnational area 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 level. 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 2020. 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 2020 from service provision data.

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 2020 / (population of females aged 15 to 24 years – HIV-positive females aged 15 to 24 years) in 2020 * 1000

TABLE 21.3 | **COUNTRIES USING THE NAOMI MODEL TO GENERATE SUBNATIONAL ESTIMATES**

No	Country
1	Angola
2	Benin
3	Botswana
4	Burkina Faso
5	Burundi
6	Cameroon
7	Central African Republic
8	Chad
9	Congo
10	Côte d'Ivoire
11	Democratic Republic of the Congo
12	Equatorial Guinea
13	Eswatini
14	Ethiopia
15	Gabon
16	Gambia
17	Ghana
18	Guinea
19	Guinea-Bissau
20	Haiti
21	Kenya
22	Lesotho
23	Liberia
24	Malawi
25	Mali
26	Mozambique
27	Namibia
28	Niger
29	Nigeria
30	Rwanda
31	Sao Tome and Principe
32	Senegal
33	Sierra Leone
34	South Africa
35	United Republic of Tanzania
36	Togo
37	Uganda
38	Zambia
39	Zimbabwe

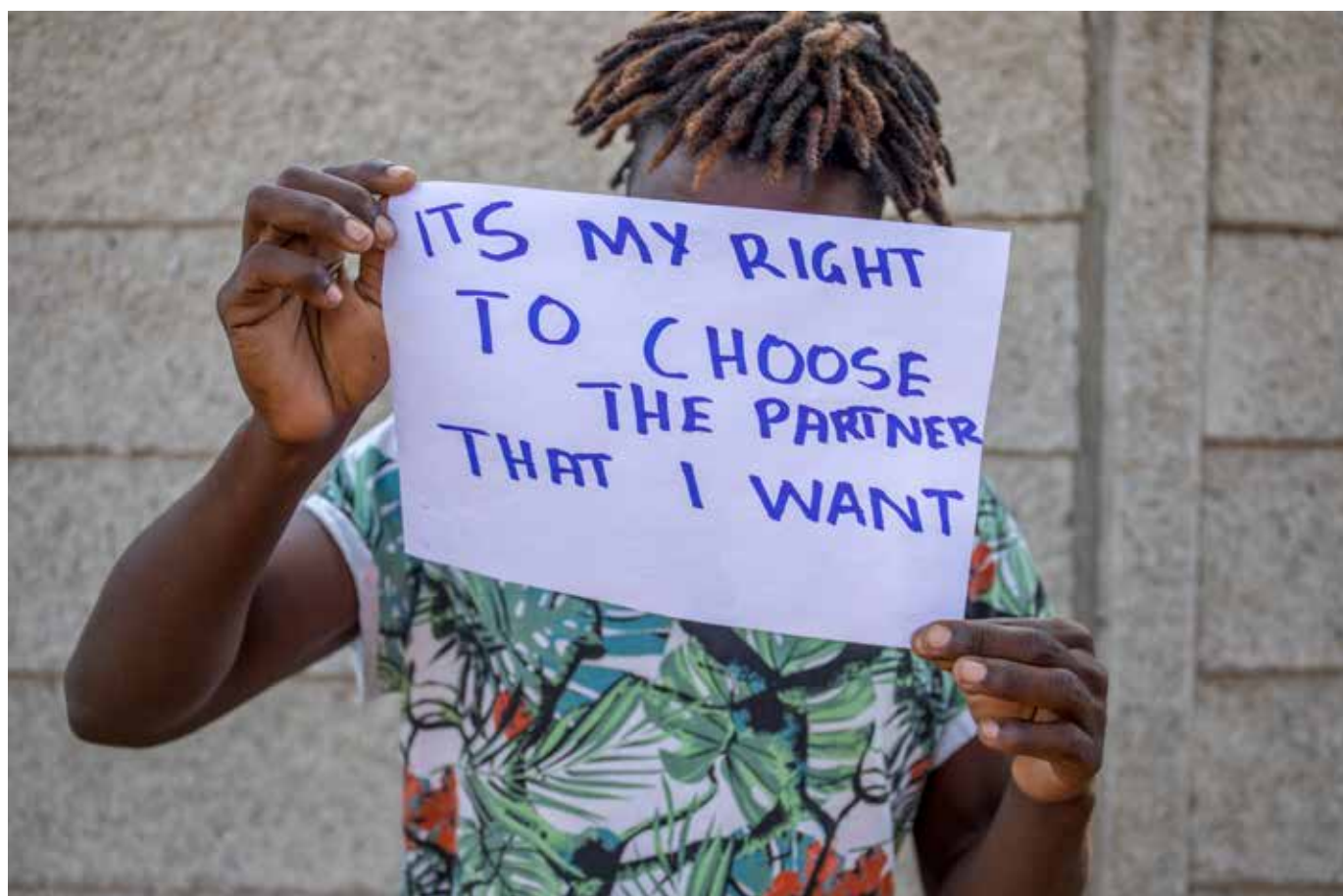
LAWS AND POLICIES SCORECARDS

The regional laws and policies scorecards were constructed based on data reported by countries through the 2017, 2018, 2019, 2020 and 2021 National Commitments and Policy Instrument, a component of Global AIDS Monitoring (1).

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.



Credit: UNAIDS

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