

**EVIDENCE REVIEW:
IMPLEMENTATION OF THE 2016-2021
UNAIDS STRATEGY ON THE FAST-
TRACK TO END AIDS
UNAIDS Strategy beyond 2021**

EVIDENCE REVIEW

Implementation of the 2016–2021
UNAIDS Strategy: on the
Fast-Track to end AIDS

31 July 2020

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Foreword

The 2016–2021 UNAIDS Strategy, which the UNAIDS Programme Coordinating Board adopted in 2015, was a bold call to accelerate the HIV response and reach the people being left behind. It called for frontloading investments in that response so a range of ambitious targets for 2020 could be reached. It was also one of the first United Nations strategies to be aligned with the Sustainable Development Goals and was aimed at guiding and supporting locally tailored responses while fostering new forms of leadership and accountability at the regional, country and community levels.

Since 2015, the global context has changed dramatically. Even before the COVID-19 pandemic, progress in the global AIDS response was not on-track to reach the 2020 HIV targets.

The most recent data (for 2019) show that dramatic rapid progress is necessary—and possible. UNAIDS' 2020 global AIDS update, *Seizing the moment*, highlights the gains made along the HIV testing and treatment cascade: an estimated 81% of people living with HIV knew their HIV status in 2019 and more than two thirds (67%) of all people living with HIV were on antiretroviral therapy. The number of people living with HIV on treatment has tripled since 2010 (1). However, only a small number of countries will reach the 90–90–90 targets by the end of 2020. As a result, in more than a quarter (28%) of countries, less than half of all people living with HIV had suppressed viral loads in 2019.

The barriers and disparities in the global AIDS response are increasingly evident between regions, countries, and populations and communities. Unequal access to health and social services often mirrors, exacerbates and overlaps with other inequalities, including gender inequalities and inequalities resulting from discrimination based on income, race, age, ethnicity, disability, immigration status or sexual orientation. These inequalities shape a global epidemic in which a majority of new HIV infections are among key populations and their partners. The inequalities underpin the HIV epidemics in sub-Saharan Africa, the epicentre of the global pandemic and where girls account for 5 in 6 new HIV infections among adolescents aged 15–19 years.

At the same time, we cannot forget that we have the science, tools and commitment to prevent each new HIV infection and to avoid each AIDS-related death. We must have the courage to ask ourselves why we are failing and what we must do to get back on-track.

This evidence review is one component of the Strategy review process. It asks critical questions as we prepare to develop the next UNAIDS Strategy. What is working and how does it need to be sustained or scaled-up? Where and in what respects are we falling behind, and why? How do we overcome the gaps and obstacles that stand in the way of consistent progress across all communities, countries and regions? How do we highlight the importance of fighting stigma and discrimination, changing harmful laws, supporting access to legal redress and confronting gender inequality in order to achieve the next Strategy's targets among all populations and in every community in a country?

The review highlights approaches that we can build on, especially in areas where the evidence-informed approaches of the current UNAIDS Strategy remain sound but have not been implemented with sufficient speed, quality or scale. The review also provides a sobering analysis of where the global HIV response is falling short. It sets the scene for a deeper discussion about the steps that are needed to support countries and communities as they strive to leave no one behind and end AIDS as a public health threat.

Together with several other inputs, the review will inform the development of the next UNAIDS Strategy and it will guide the future direction of the global HIV response.

In the months ahead, we will continue to consult widely. We will convene a multistakeholder consultation in September 2020 to review the current Strategy and discuss strategic priorities for the next Strategy. We will also agree on an approach for developing the next Strategy. We will

then continue to engage the Programme Coordinating Board and a wide range of stakeholders through focus group discussions, interviews and other consultations.

We count on your continued, active engagement in this process to ensure that the next UNAIDS Strategy remains ambitious, visionary and evidence-informed, and that it gets us back on-track to AIDS by 2030.

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Winnie Byanyima
UNAIDS Executive Director

Key themes and 2016–2020 commitments

At its 45th meeting, the UNAIDS Programme Coordinating Board (PCB) requested the UNAIDS Executive Director to review implementation of the current UNAIDS Strategy, with a focus on implications for strategic priorities beyond 2021. This brief evidence review is one component of an overall Strategy review process that will inform a September 2020 multistakeholder consultation on future strategic priorities.

This review summarizes the results of the evidence review of the current UNAIDS Strategy. Results are presented in seven thematic areas that align to the strategic result areas (SRAs) of the 2016–2021 UNAIDS Strategy and the 10 core commitments of the 2016 Political Declaration on Ending AIDS (Figure 1).

Figure 1. Evidence review of thematic areas, UNAIDS strategy result areas and the 10 core commitments of the United Nations 2016 Political Declaration on ending AIDS



2016 United Nations General Assembly commitments and UNAIDS Strategy Result Areas

Note: The 10 core commitments agreed at the UN General Assembly High Level Meeting on Ending AIDS in 2016 closely match the Strategy Result Areas and the topics within each area, as included in the 2016–2021 strategy.

HLM Commitment 1. Ensure that 30 million people living with HIV have access to treatment through meeting the 90–90–90 targets by 2020.

SDG 3. Ensure healthy lives and promote well-being for all at all ages

	Voluntary HIV testing services accessible for people at risk of HIV infection.
	Early infant diagnostic services accessible to all children exposed to HIV, and all children under 5 years living with HIV on treatment.
<u>Strategy Result Area 1:</u> Children, adolescents and adults living with HIV access testing, know their status and are immediately offered and sustained on affordable quality treatment.	<p>All adults, adolescents and children offered antiretroviral therapy and linked to treatment services upon HIV diagnosis.</p> <p>People on treatment supported and monitored regularly, including scaled-up viral load monitoring, and treatment literacy and nutritional support.</p> <p>Accessibility, affordability and quality of HIV treatment improved, including through community delivery systems.</p> <p>HIV services scaled-up and adapted to local contexts, including in cities, fragile communities and humanitarian emergencies.</p> <p>Adequate investments made in research and development for better diagnostics, antiretroviral medicines, prevention commodities, monitoring tools, vaccines and a cure.</p>

HLM Commitment 2. Eliminate new HIV infections among children by 2020 while ensuring that 1.6 million children have access to HIV treatment by 2018.

SDG 3. Ensure healthy lives and promote well-being for all at all ages

	Immediate treatment accessible to all pregnant women living with HIV (Option B+).
<u>Strategy Result Area 2:</u> New HIV infections among children eliminated and their mother's health and well-being sustained.	<p>HIV, sexual and reproductive health, including family planning, TB and maternal and child health services integrated and accessible for women, especially women living with HIV.</p> <p>HIV prevention services for male partners promoted, including testing and treatment.</p>

HLM Commitment 3. Ensure access to combination prevention options, including pre-exposure prophylaxis, voluntary medical male circumcision, harm reduction and condoms, to at least 90% of people by 2020, especially young women and adolescent girls in high-prevalence countries and key populations—gay men and other men who have sex with men, transgender people, sex workers and their clients, people who inject drugs and prisoners.

SDG 10. Reduce inequality within and among countries

Strategy Result Area 4:

Tailored HIV combination prevention services are accessible to key populations, including sex workers, men who have sex with men, people who inject drugs, transgender people and prisoners, as well as migrants.

Combination prevention services adequately resourced and available, tailored to populations, locations and interventions with maximum impact.

Outreach and new media inform and create demand for use of traditional and new prevention technologies, including condoms and pre-exposure prophylaxis.

Three million people on pre-exposure prophylaxis annually, focused particularly on key populations and people at high risk in high prevalence settings.

People who inject drugs access clean needles and syringes, as well as opioid substitution therapy and other evidence-informed drug dependence treatment.

Migrants, refugees and crisis-affected populations have access to HIV-related services.

People living with HIV and other key populations meaningfully engaged in decision-making and implementation of HIV prevention programmes.

HLM Commitment 5. Ensure that 90% of young people have the skills, knowledge and capacity to protect themselves from HIV and have access to sexual and reproductive health services by 2020, in order to reduce the number of new HIV infections among adolescent girls and young women to below 100 000 per year.

SDG 10. Reduce inequality within and among countries

Strategy Result Area 3:

Young people, especially young women and adolescent girls, access combination prevention services and are empowered to protect themselves from HIV.

Youth-friendly HIV, sexual and reproductive health and harm reduction information and services accessed independently and equally by young women and men.

All people, especially young people, reduce HIV-related risk behaviour and access HIV combination prevention services, including primary prevention and sexual and reproductive health services.

Twenty billion condoms available annually in low- and middle-income countries for people of all ages.

Additional 27 million men in high-prevalence settings voluntarily medically circumcised as part of access to integrated sexual and reproductive health services for men.

Quality comprehensive sexuality education accessed by all adolescent and young people.

	<p>Information accessed, awareness raised and demand created through traditional and new forms of communication and outreach.</p> <p>Young people meaningfully engaged in the response to ensure effectiveness and sustainability.</p>
<p><i>HLM Commitment 4. Eliminate gender inequalities and end all forms of violence and discrimination against women and girls, people living with HIV and key populations by 2020</i></p>	
<p><i>SDG 5. Achieve gender equality and empower all women and girls</i></p>	
<p><u>Strategy Result Area 5:</u> Women and men practice and promote healthy gender norms and work together to end gender-based, sexual and intimate partner violence to mitigate risk and impact of HIV.</p>	<p>Women and girls and men and boys engaged and empowered to prevent gender-based, sexual and intimate partner violence, and promote healthy gender norms and behaviour.</p> <p>Laws, policies and practices enable women and girls to protect themselves from HIV and access HIV-related services, including by upholding their rights and autonomy.</p> <p>Sexual and reproductive health and rights needs fully met to prevent HIV transmission.</p> <p>Young women in high-prevalence settings access economic empowerment initiatives.</p> <p>Women meaningfully engaged in decision-making and implementation of the AIDS response.</p>
<p><i>Commitment 6. Ensure that 75% of people living with, at risk of and affected by HIV benefit from HIV-sensitive social protection by 2020.</i></p>	
<p><i>SDG 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development</i></p>	
<p><u>Strategy Result Area 8:</u> People-centred HIV and health services are integrated in the context of stronger systems for health.</p>	<p>People living with, at risk of and affected by HIV empowered through HIV-sensitive national social protection programmes, including cash transfers.</p>
<p><i>Commitment 9. Empower people living with, at risk of and affected by HIV to know their rights and to access justice and legal services to prevent and challenge violations of human rights.</i></p>	
<p><i>SDG 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels</i></p>	
<p><u>Strategy Result Area 6:</u> Punitive laws, policies, practices, stigma and discrimination that block</p>	<p>Punitive laws, policies and practices removed, including overly broad criminalization of HIV transmission, travel restrictions, mandatory testing and those that block key populations' access to services.</p>

effective responses to HIV are removed.	<p>People living with, at risk of and affected by HIV know their rights and are able to access legal services and challenge violations of human rights.</p> <p>HIV-related stigma and discrimination eliminated among service providers in health-care, workplace and educational settings.</p> <p>Laws, policies and programmes to prevent and address violence against key populations issued and implemented.</p>
<p>Commitment 7. Ensure that at least 30% of all service delivery is community-led by 2020.</p> <p><i>SDG 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development</i></p>	
<p><u>Strategy Result Area 7:</u> AIDS response is fully funded and efficiently implemented based on reliable strategic information.</p>	<p>Investment and support to civil society, including networks of people living with, at risk of and affected by HIV, scaled up to enhance their essential role in the response.</p>
<p>Commitment 8. Ensure that HIV investments increase to US\$ 26 billion by 2020, including a quarter for HIV prevention and 6% for social enablers.</p> <p><i>SDG 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development</i></p>	
<p><u>Strategy Result Area 7:</u> AIDS response is fully funded and efficiently implemented based on reliable strategic information.</p>	<p>Investment of at least US\$ 31.1 billion available for the global AIDS response annually in 2020 in low- and middle-income countries, with one quarter invested in prevention globally.</p> <p>Low-income countries mobilize at least on average 12% of country resource needs, lower-middle-income mobilize 45% and upper-middle-income countries mobilize 95% from domestic sources.</p> <p>International investment for the AIDS response reaches US\$ 12.7 billion.</p> <p>Financial sustainability transition plans and country compacts implemented.</p> <p>Countries use timely, appropriate and reliable strategic information to prioritize resource allocation, evaluate responses and inform accountability processes.</p> <p>Allocative and productive efficiency gains fully exploited and commodity costs reduced in countries of all income levels, including by overcoming restrictive intellectual property and trade barriers.</p> <p>Country capacity built, including through technology transfer arrangements.</p>

Commitment 10. Commit to taking AIDS out of isolation through people-centred systems to improve universal health coverage, including treatment for tuberculosis, cervical cancer and hepatitis B and C

SDG 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

Strategy Result Area 8:
People-centred HIV and health services are integrated in the context of stronger systems for health.

HIV-sensitive universal health coverage schemes implemented

People living with, at risk of and affected by HIV access integrated services, including for HIV, tuberculosis (TB), sexual and reproductive health, maternal, newborn and child health, viral hepatitis, drug dependence, food and nutrition support, noncommunicable diseases and mental health conditions, especially at the community level.

Comprehensive systems for health strengthened through integration of community service delivery with formal health systems.

Human resources for health trained, capacitated and retained to deliver integrated health and HIV services.

Stock-outs prevented through strengthened procurement and supply chain systems.

Cross-cutting issues: inequalities, complexities and the future of the HIV response

This evidence review of progress against the current UNAIDS Strategy presents findings and details in seven thematic areas. In addition, important cross-cutting findings should inform deliberations regarding future strategic directions of the HIV response beyond 2021. HIV remains an epidemic of inequalities. The dramatic differences we observe in the HIV response—with successes and wide gaps often occurring in the same areas or issues—reflect multiple axes of inequality and the actions taken to overcome or eliminate the inequalities. Many of the inequalities that typify HIV and drive epidemics are well documented, such as the role of gender, the specific vulnerabilities of youth, differential impacts among and within regions and countries, and the marginalization of people associated with heightened HIV vulnerability. Other inequalities, however, are less commonly addressed, such as the role that inequalities related to race and ethnicity plays in many epidemics.

Many of the disparities in progress against HIV are unexpected and counterintuitive. For example, the countries with the most resources are not always the ones with the strongest or most sustainable HIV response. Additionally, even as unequal gender norms increase the vulnerability of women and girls to HIV infection, men generally have poorer outcomes than women across the HIV testing and treatment cascade. Women generally are more likely than men to know their HIV status, receive antiretroviral therapy and achieve viral suppression. However, there are some countries, largely outside of sub-Saharan Africa, where women have worse testing and treatment outcomes than men.

The majority of poorly performing HIV responses are in settings where epidemics are heavily concentrated among key populations who are often marginalized by mainstream society and denied easy access to HIV and other health services. These key populations include gay men and other men who have sex with men, people who inject drugs, people in prisons and other closed settings, sex workers and transgender people. Even in regions with encouraging recent gains against the HIV epidemic, such as eastern and southern Africa, there are countries and sub-national settings where the response is still badly off course.

As the global HIV response approaches its fifth decade, the epidemic defies simple explanations and solutions. As an example, Figure 2 shows the variation in the relationship between prevalence of HIV and different levels of wealth in different countries at various stages of the epidemic. In Namibia, HIV prevalence was higher among people with lower incomes, while in Togo HIV prevalence was higher among people with higher incomes, and in Eswatini HIV prevalence was high across all income levels. Only by recognizing and addressing those complexities will it be possible to end the epidemic by 2030.

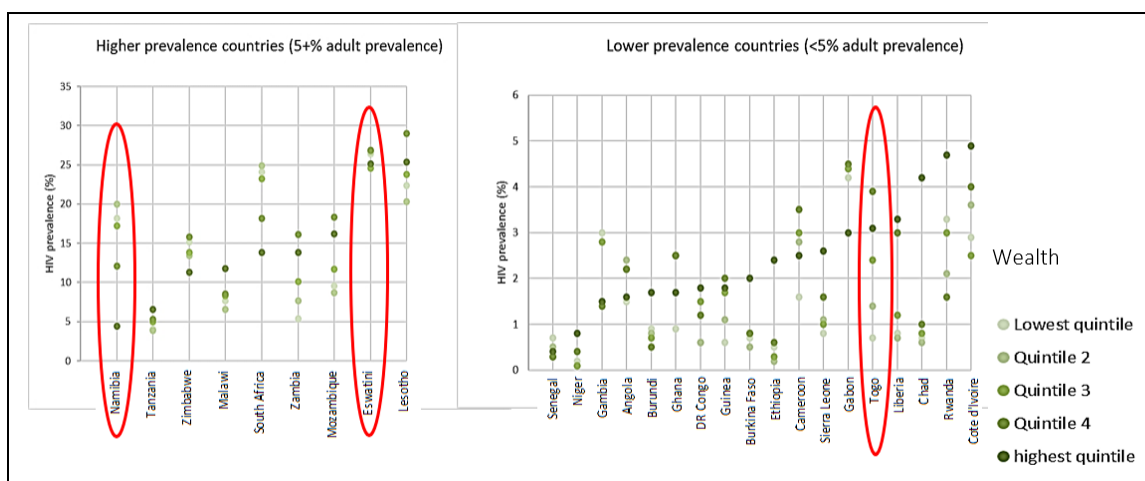
Inequalities and HIV

HIV risk, access to services and HIV outcomes are shaped by myriad, intersecting factors. Some differences and disparities are apparent when comparisons are made at regional and national levels, while others require closer examination at sub-national levels and between different populations.

The dynamics of HIV transmission can be starkly different in high- and low-prevalence settings. In any particular setting, differences in wealth, age, education, location, and social or legal status, and discrimination related to gender, race or migration status all affect people's risk of acquiring HIV, their access to services and the benefits they draw from those services.

The 2030 Agenda for Sustainable Development emphasizes the importance of reaching the most vulnerable first and ensuring that no one is left behind. The Shared United Nations Framework on Equality and Non-Discrimination outlines the elements of a comprehensive and coherent package of policy and programme support areas to combat discrimination and inequalities within and among countries at the country, regional and global levels (2).

Figure 2. Prevalence of HIV and wealth quintile in countries with higher and countries with lower HIV prevalence



Source: Most recent Demographic and Health Survey: Namibia (2013); United Republic of Tanzania (2011–12); Zimbabwe (2015); Malawi (2015–16); South Africa (2016); Zambia (2018); Mozambique (2015); Eswatini (2006–07); Lesotho (2014); Senegal (2017); Niger (2012); Gambia (2013); Angola (2015–16); Burundi (2016–17); Ghana (2014); Democratic Republic of the Congo (2013–14); Guinea (2018); Burkina Faso (2010); Ethiopia (2016); Cameroon (2018); Sierra Leone (2013); Gabon (2012); Togo (2013–14); Liberia (2013); Chad (2014–15); Rwanda (2014–15); Côte d'Ivoire (2011).

Women, men and HIV

Men and women's risks of acquiring HIV, their knowledge of their HIV status, and their access to and use of HIV and other health services differ significantly. As in the case of HIV and wealth, these gender differences vary considerably, often in surprising ways. Men accounted for the majority of new HIV infections outside of sub-Saharan Africa (where most HIV transmission is associated with specific, marginalized populations), while women accounted for 59% of new HIV infections in sub-Saharan Africa in 2019 (where most HIV transmission occurs in the general population).ⁱ

Women generally have better outcomes across the HIV testing and treatment cascade. Globally, for every 100 women who are living with undiagnosed HIV infection, there are 140 men who do not know they are living with HIV. Women are also more likely to start and remain on HIV treatment and to achieve viral suppression, compared to men (Figures 3 and 4).

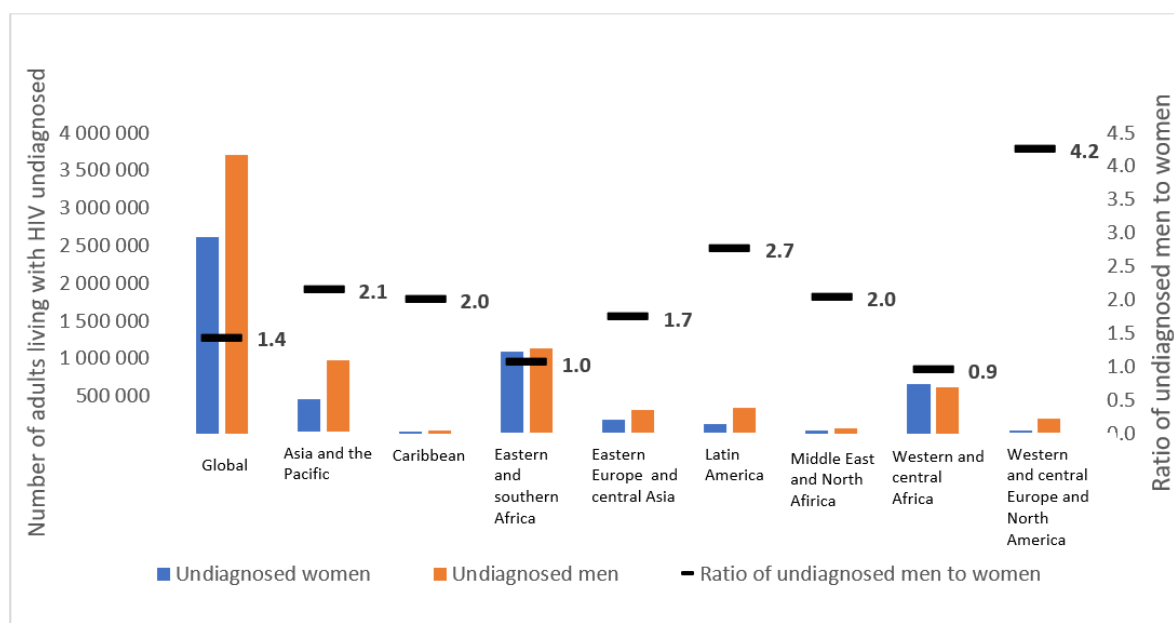
Women's superior testing and treatment outcomes are especially remarkable in concentrated epidemics where men outnumber women among people living with HIV. Despite men's comparatively greater risks of acquiring HIV in these settings, services and responses in many settings are not reaching men, with poor testing and treatment outcomes and higher mortality rates among the consequences.

While these patterns are striking, they are not universal. In western and central Africa, for example, women are more likely to be living with undiagnosed HIV infection than men. Among

ⁱ The data in this review document are primarily from the 2020 epidemiological and financial estimates developed by UNAIDS in collaboration with its partners and the 2020 country reports submitted to UNAIDS through the Global AIDS Monitoring process. Data and analyses within the text that is taken from other sources are explicitly referenced.

64 countries with viral suppression data in 2019, women had lower levels of viral suppression than men in 12 countries.

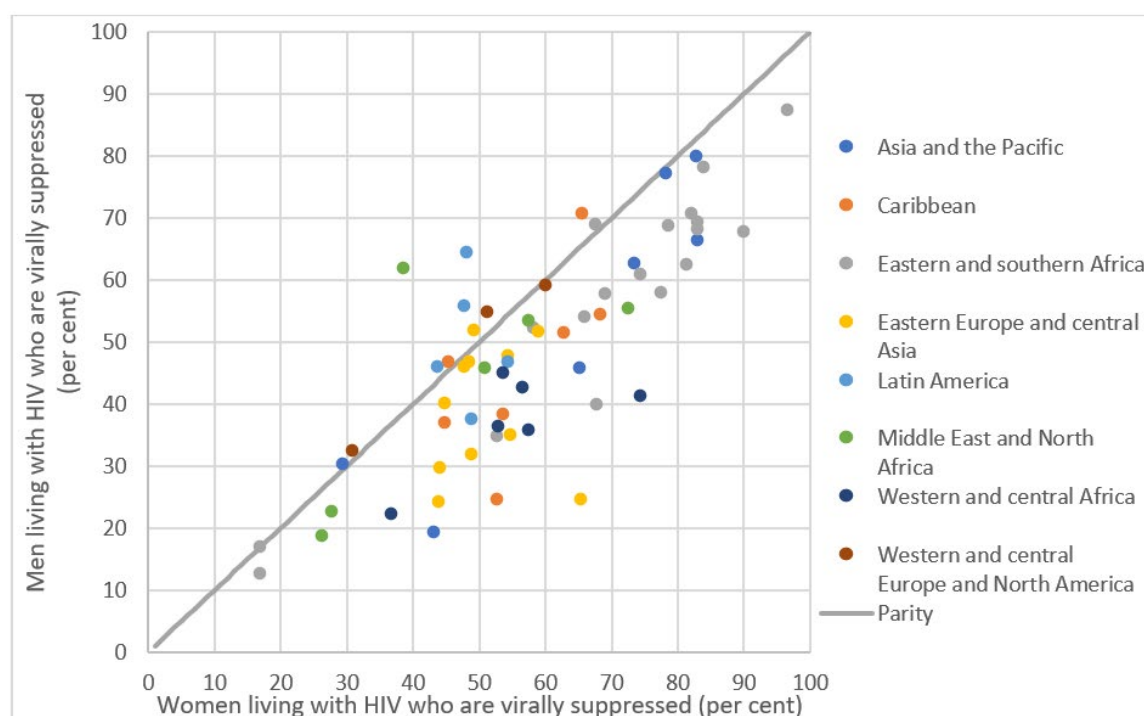
Figure 3. Estimated numbers of people living with HIV who were undiagnosed, by sex, and the ratio of undiagnosed men to women, global, 2019



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

The HIV risk of women and men also varies by age and region. Young women aged 15–24 years make up 10% of the population in sub-Saharan Africa but account for 24% of new HIV infections in that region. Outside sub-Saharan Africa, men aged 25–49 years make up 18% of the population but comprise 48% of new HIV infections.

Figure 4. Adults living with HIV who were virally suppressed, by sex, global in 2019



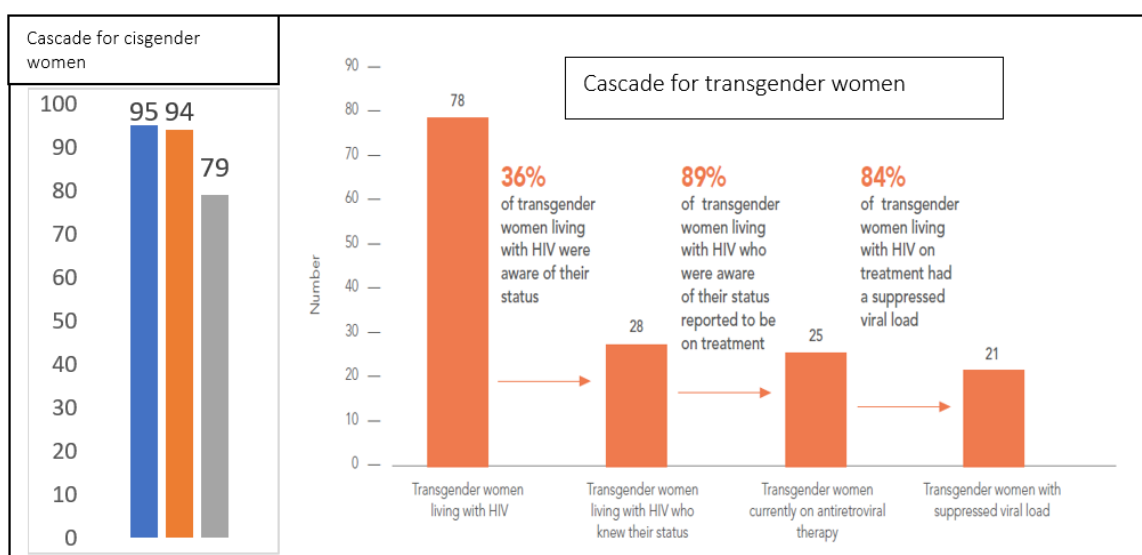
Source: UNAIDS epidemiological estimates, 2020 (see <https://aidsinfo.unaids.org/>).

Social marginalization and HIV

Key populations disproportionately experience stigmatization, social marginalization and criminalization that block access to services which are readily available to other people.

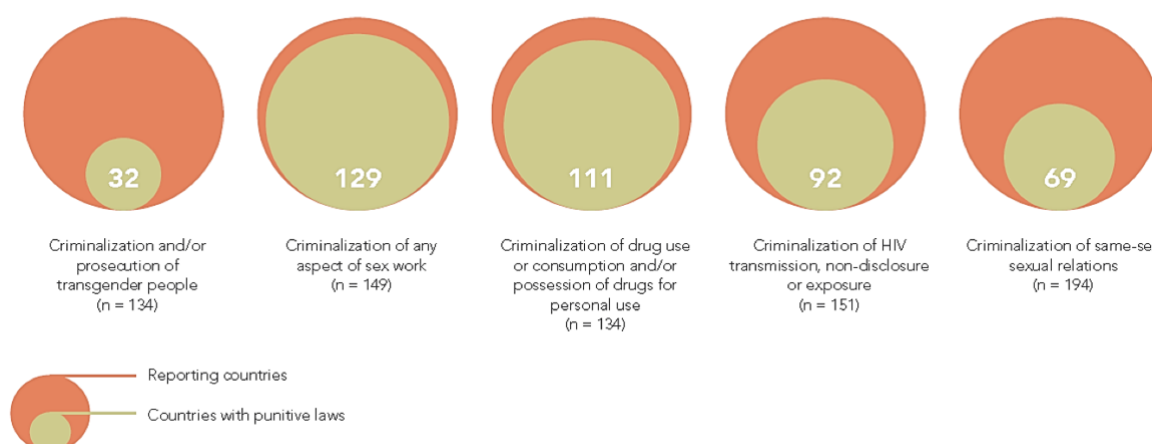
In Zimbabwe, for example, HIV testing and treatment service coverage among women in general is high and health outcomes are good. Transgender women in Zimbabwe, by contrast, are much less likely to obtain HIV treatment and achieve viral suppression, primarily because only 36% of transgender women living with HIV are aware of their HIV-positive status (Figure 5). In many countries, the heightened HIV vulnerability and diminished service access experienced by key populations is directly linked with discriminatory and punitive laws and policies (Figure 6). Persons with disabilities (15% of the world's population) have been shown to have higher HIV risk than people without disabilities (3). In western and central Africa, for example, biobehavioural surveys conducted in six countries found low levels of knowledge compared with the general population; HIV prevalence was on average three times higher among people with disabilities than in the general population (4).

Figure 5. Testing and treatment cascades for cis-gender and transgender women, Zimbabwe, 2019



Source: Harris T, Parmley L, Mapingure M, Mugurungi O, Rogers JH, Apollo T et al. HIV care cascade: men who have sex with men & transgender women/genderqueer, Zimbabwe. Conference on Retrovirology and Opportunistic Infections (CROI), Boston (MA), 8–11 March 2020. Abstract 1097.

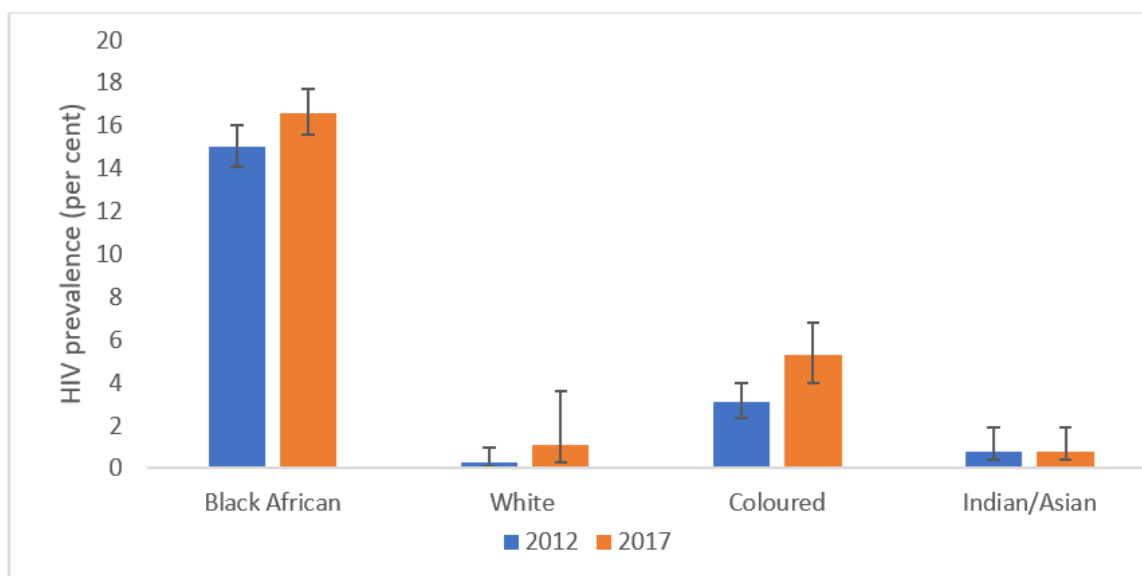
Figure 6. Countries with discriminatory and punitive laws, global 2019



Sources: National Commitment and Policy Instrument, 2017 and 2019; supplemented by additional sources (available on request).

Disparities related to race and ethnicity can contribute to uneven access to quality services and HIV outcomes. Although black Africans account for the vast majority of the population in South Africa and for the large majority of people living with HIV, the public sector services on which black South Africans rely are typically of poorer quality than the private sector services available to white South Africans. In the United States of America, black people account for 13% of the national population but for 43% of new HIV diagnoses and AIDS-related deaths (5).

Figure 7. HIV prevalence by race, all ages, South Africa, 2012 and 2017



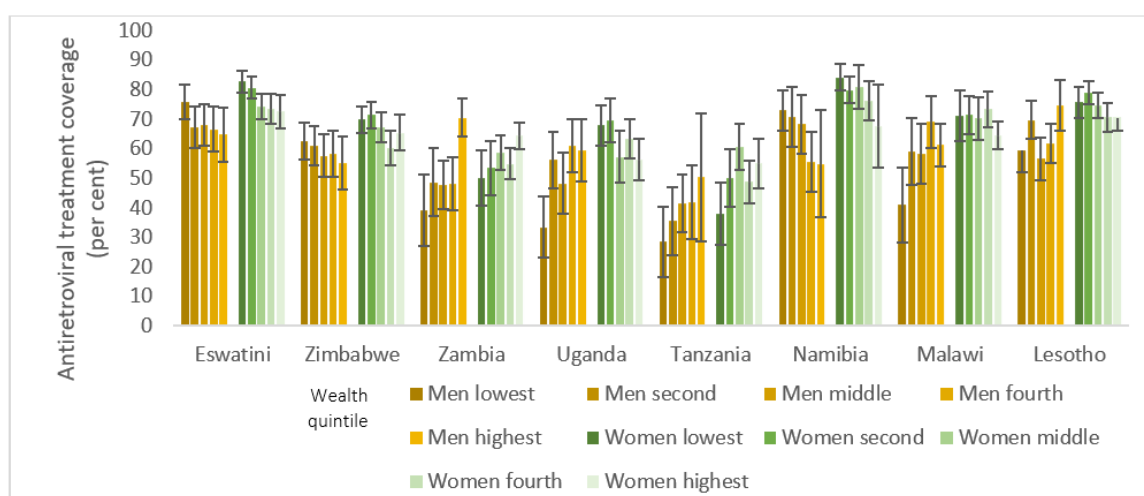
Source: Simbayi LC, Zuma K, Zungu N, Moyo S, Marinda E, Jooste S et al. South African National HIV Prevalence, Incidence, Behaviour and Communication Survey, 2017. Cape Town: HSRC Press; 2019 (<http://www.hsrc.ac.za/uploads/pageContent/10779/SABSSM%20V.pdf>).

Wealth inequalities and HIV

The links between poverty and HIV are complex. In the early years of the epidemic, wealthy individuals were often at higher risk of acquiring HIV. Over time, however, the HIV burden on lower-income households has increased, in part because the wealthy are more likely than the poor to obtain the information and services they need. In sub-Saharan Africa, poorer women are consistently less likely to have accurate and comprehensive HIV knowledge than wealthier women (6). Insufficient access to nutritious food has also been associated with increased HIV risk behaviours among women, lower treatment adherence and higher rates of AIDS-related mortality (7–9).

However, the link between lower income and greater HIV vulnerability does not exist in all settings. For example, while people living in poorer households are less likely to receive HIV treatment in some countries in eastern and southern Africa, this is not the case in other countries such as Eswatini, Namibia and Zimbabwe (Figure 8). Programmes and policies can be designed to specifically serve the most vulnerable and help overcome inequalities.

Figure 8. Antiretroviral treatment coverage by wealth quintile, by sex, selected countries in sub-Saharan Africa 2019

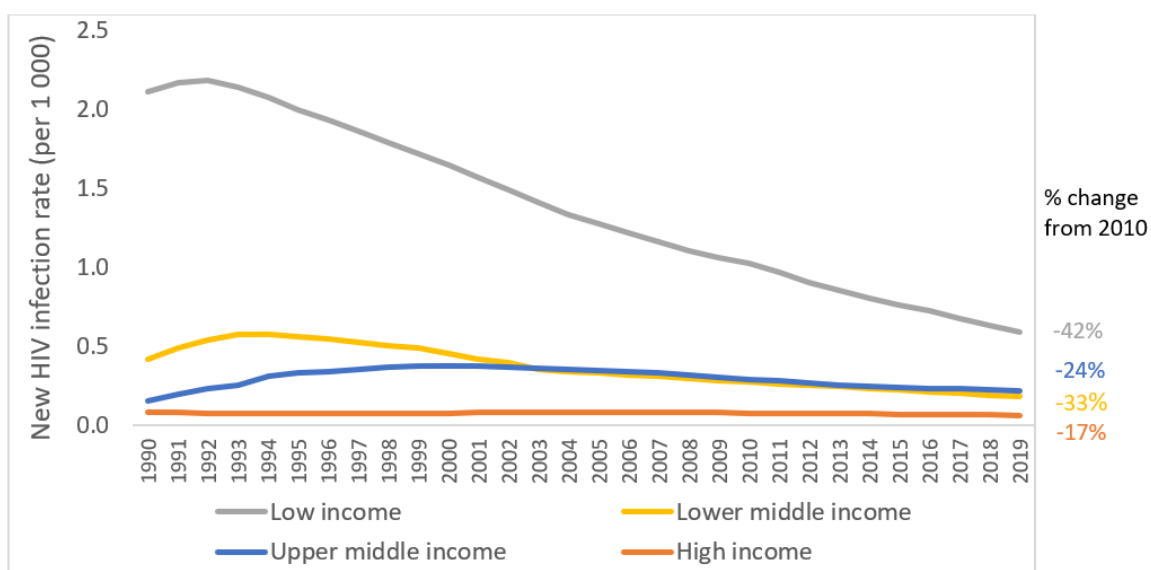


Source: Population-based health impact assessment surveys, 2016–2019 (<https://phia-data.icap.columbia.edu/visualization>).

National resources and HIV responses

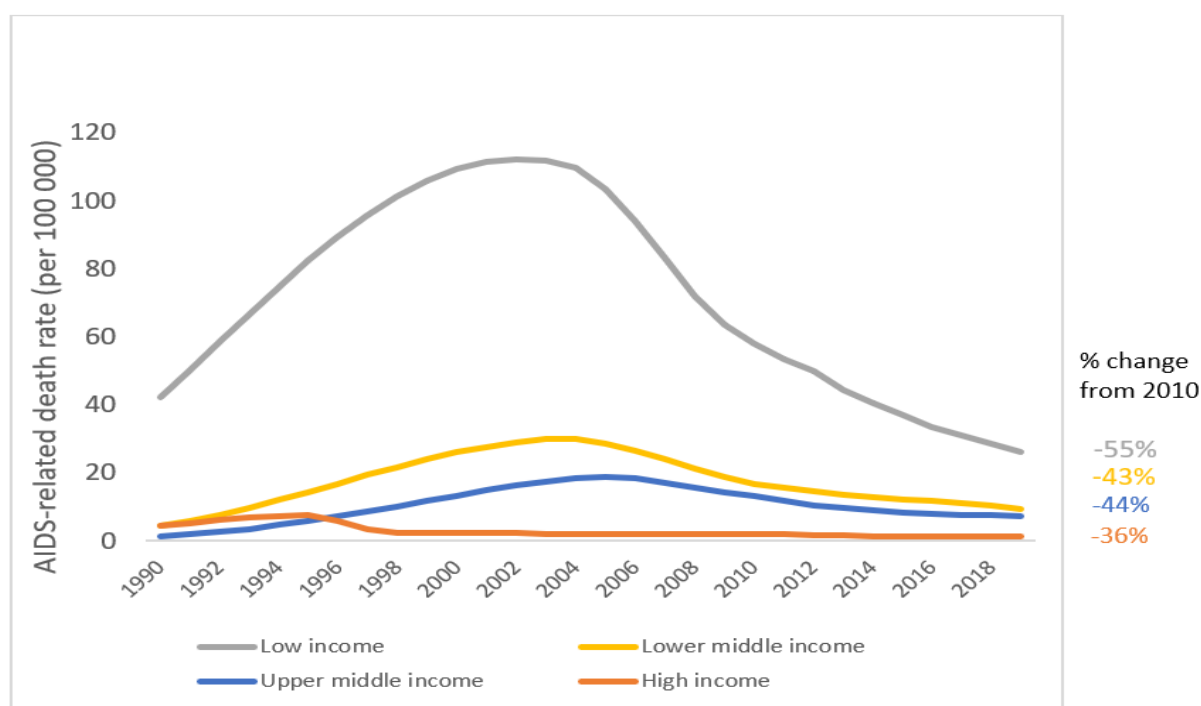
The relationship between income levels and HIV outcomes are also apparent at the macro level. Low-income countries tend to have higher rates of new HIV infections and higher AIDS-related morbidity and mortality than middle-income and high-income countries. However, as coverage of HIV services increased in lower-income countries, this gap narrowed dramatically. Since 2010, the decline in new HIV infections has been notably sharper for low-income countries than for countries in other income groups (Figure 9). A similar pattern is apparent for AIDS-related mortality, with low-income countries experiencing a sharper decline than for wealthier countries. As an example, the AIDS-related mortality rate in Haiti, a low-income country, declined by 52% between 2010 and 2019 and is now lower than that of Jamaica, an upper middle-income country where AIDS related mortality increased by 7% over the same period.

Figure 9. Rate of new HIV infections per 1000 people, by country income level, global, 1990–2019



Source: UNAIDS estimates, 2019; World Bank Country and Lending Groups. In: The World Bank [Internet] (<https://datahelpdesk.worldbank.org/knowledgebase/articles/906519>, accessed on 10/06/2020).

Figure 10. Rate of AIDS-related deaths per 1 000 000 people, by country income level, 1990–2019



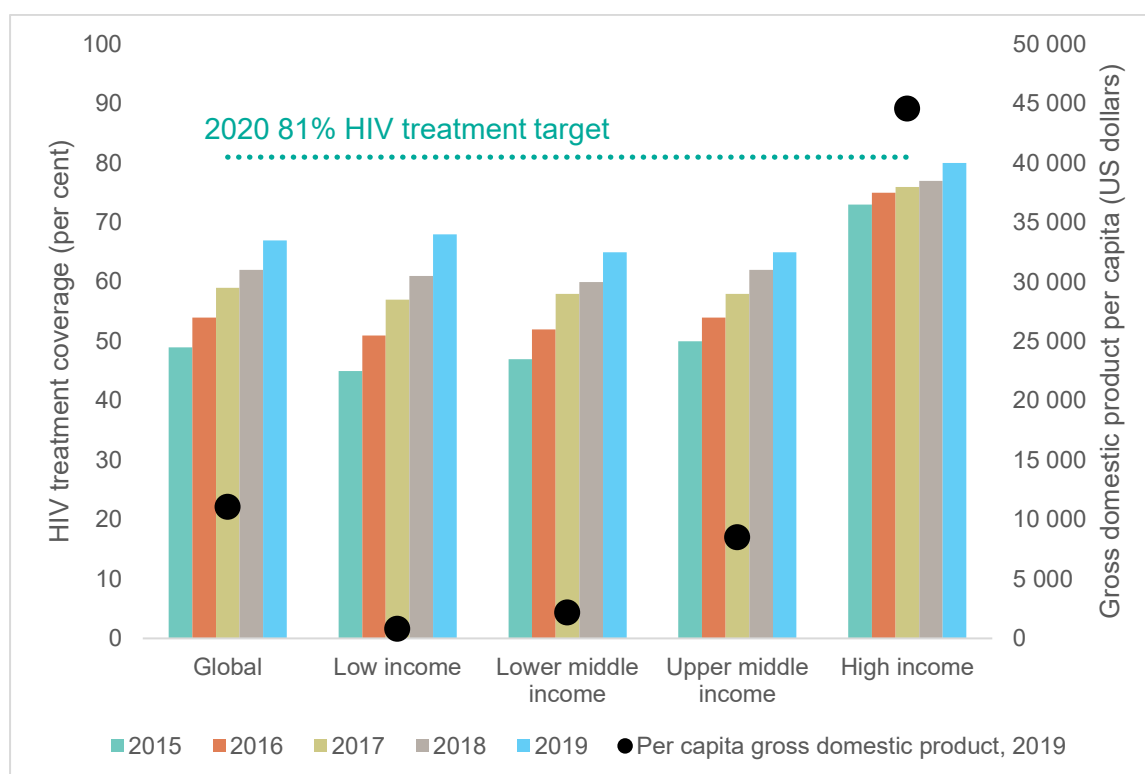
Source: UNAIDS estimates, 2019; World Bank Country and Lending Groups. In: The World Bank [Internet] (<https://datahelpdesk.worldbank.org/knowledgebase/articles/906519>, accessed on 10/06/2020).

Especially in eastern and southern Africa, several low-income countries are outperforming many upper-middle-income and high-income countries in outcomes along the HIV treatment cascade. Overall, treatment coverage has risen more rapidly in low-income than in upper middle-income countries, although the landscape is diverse (Figure 11).

The BRICS countries (Brazil, Russian Federation, India, China and South Africa) remain critically important to the global HIV response. In 2019, these five countries accounted for 33% of all new infections and 35% of all people living with HIV worldwide (Figure 12 and 13)ⁱⁱ. Of note, greater national resources do not always correlate to higher HIV treatment coverage or lower number of new HIV infections. More complete and publicly available data would allow for improved ability to better recognize progress over time.

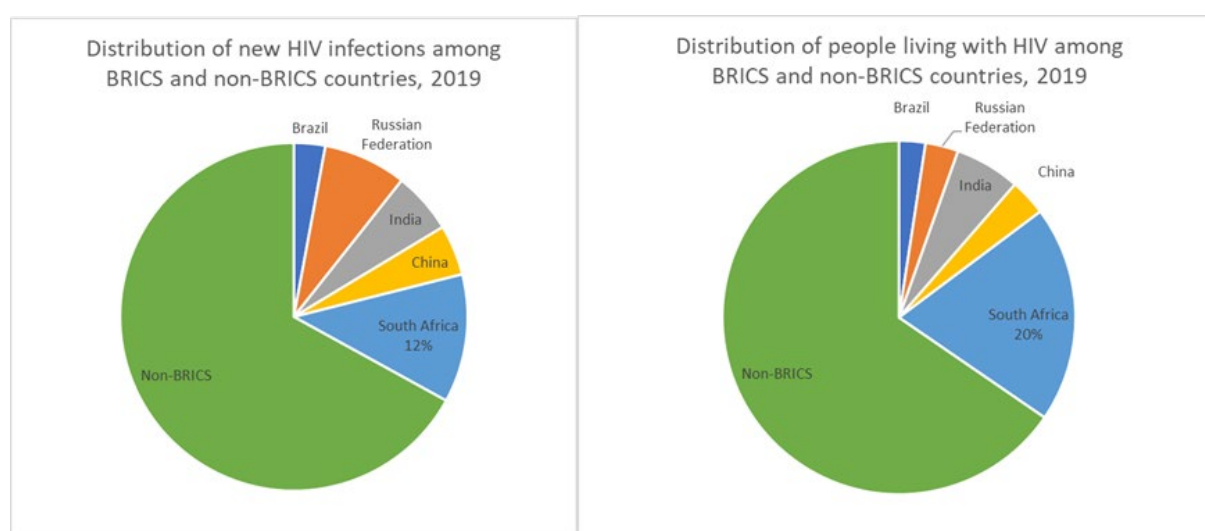
ⁱⁱ These data come from UNAIDS estimates. Interpretations are made on the basis of these estimates. Work is ongoing with the Russian Federation to validate.

Figure 11. HIV treatment coverage levels by World Bank Income Group classification and per capita gross domestic product, 2015-2019



Source: UNAIDS epidemiological estimates, 2020 (see <https://aidsinfo.unaids.org/>). Per capita gross domestic product: World Bank, retrieved from Federal Reserve Bank of St. Louis (FRED) [database]. St. Louis (MO): Federal Reserve Bank of St. Louis (<https://fred.stlouisfed.org>, accessed on 30 July 2020).

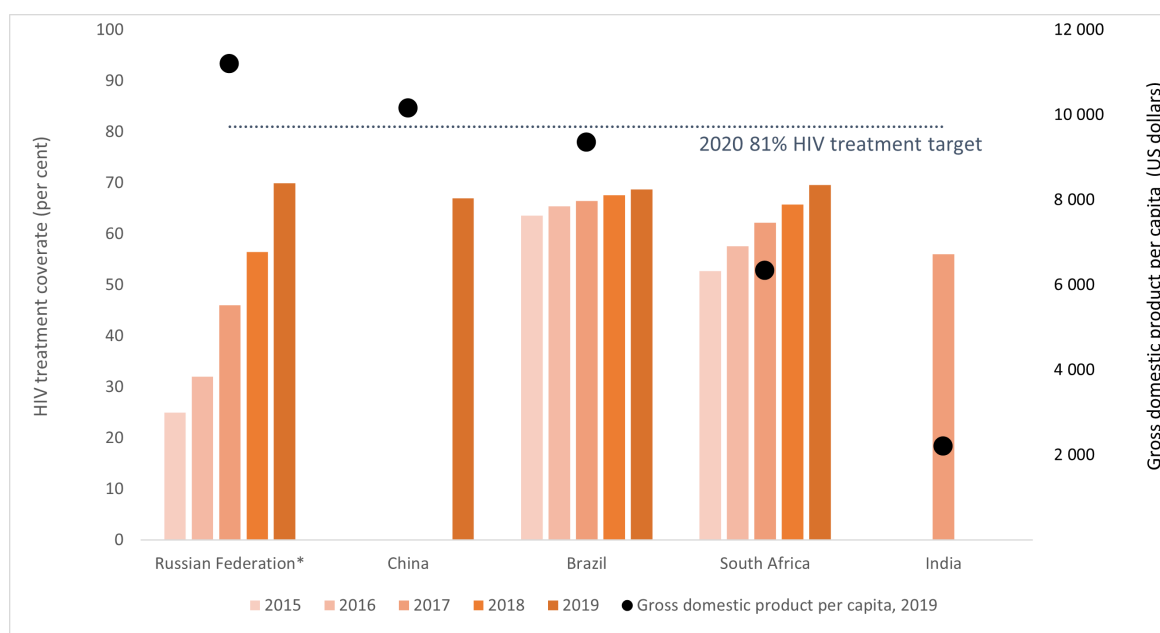
Figure 12. Distribution of new HIV infections and people living with HIV among BRICS and non-BRICS countries, 2019



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

Note: The data in the figure above come from UNAIDS estimates. Interpretations are made on the basis of these estimates. Work is ongoing with the Russian Federation to validate the figures.

Figure 13. HIV treatment coverage levels among the BRICS countries and per capita gross domestic product, 2015–2019



Source: UNAIDS epidemiological estimates, 2020 (Brazil and South Africa); UNAIDS epidemiological estimates, 2018 (the Russian Federation [Data for the Russian Federation is from their Federal Register and might not be comparable with other country results] and India); 2019 China National HIV Estimation Report and Global AIDS Monitoring (for China); World Economic Outlook Database [database], April 2019.

Note: The data in the figure above come from UNAIDS estimates. Interpretations are made on the basis of these estimates. Work is ongoing with the Russian Federation to validate the figures.

Geography and HIV

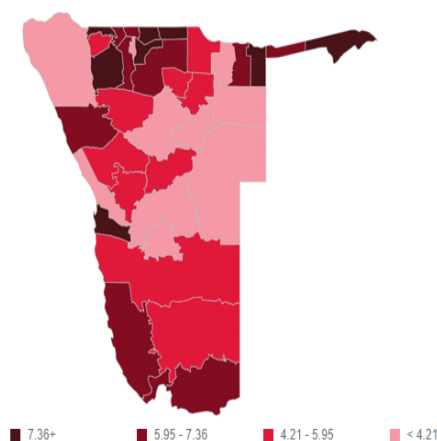
Closer analysis similarly reveals the pitfalls of comparing broad national or regional trends. For example, while HIV incidence has long been higher in sub-Saharan Africa than in other regions, a focus on regional or national trends masks the degree to which HIV burden and trends also vary within countries and regions (Figure 14). This is apparent in Namibia, for example, where there is considerable geographic variation in HIV incidence among young women.

Figure 14. HIV incidence, women (aged 15–24 years), sub-Saharan Africa and Namibia, 2019

HIV incidence among young women 15–24 years, Sub-Saharan Africa 2019



HIV incidence among young women 15–24 years, Namibia, 2019



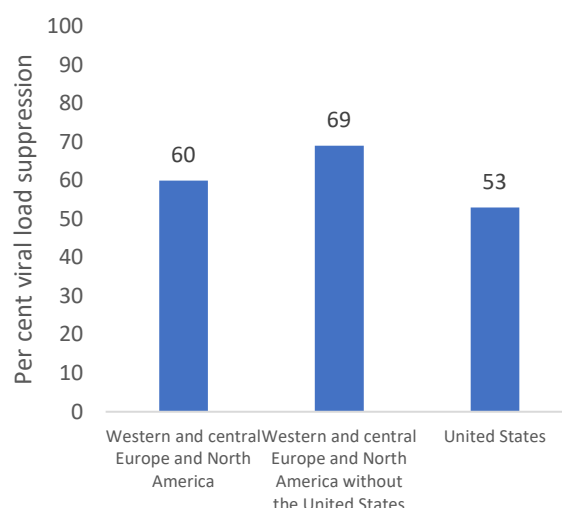
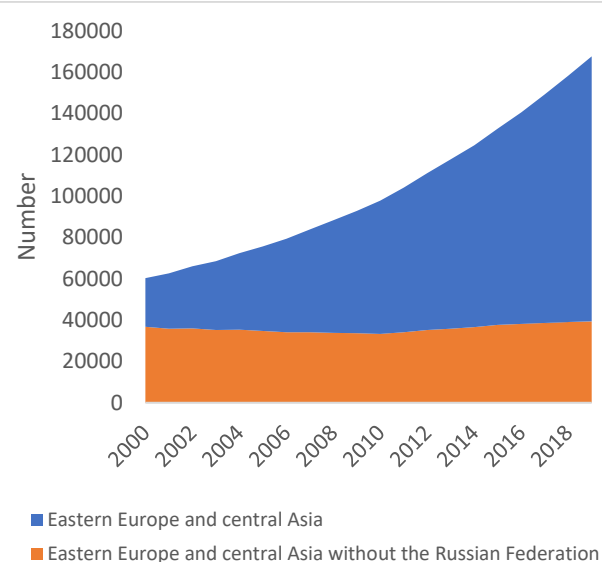
Source: Seizing the moment: tackling entrenched inequalities to end epidemics. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/2020_global-aids-report_en.pdf).

Likewise, comparisons of regional outcomes can obscure results in specific countries. For example, eastern and southern Africa as a whole is steadily approaching the 90–90–90 milestones, resulting in a 49% decline in AIDS-related deaths since 2010. However, scale-up of ART in Mozambique lags well behind the regional trend, and mortality has fallen by only 20%. The outsized influence of one or two large countries can also distort the picture for a region as a whole. For example, in eastern Europe and central Asia, new HIV infections would be stable if not for large increases in the Russian Federation. Likewise, viral load suppression levels in the United States of America were much lower than in the rest of western and central Europe and North America region in 2016, the latest year when data on viral load suppression were available in the United States (Figure 15).

Figure 15. Examples of distortion of regional figures from large epidemics

Trends in the number of new HIV infections in the eastern and central Asian region, 2000–2019

Viral load suppression in the western and central European and North American region 2016



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

Note: The data in the figure above come from UNAIDS estimates. Interpretations are made on the basis of these estimates. Work is ongoing with the Russian Federation to validate the figures.

The COVID-19 pandemic is amplifying the deep inequalities that shape people's health, wellbeing and life prospects. Efforts aimed at controlling the spread of COVID-19 can penalize the most vulnerable in society, and the poor and marginalized are also less likely to have access to services. This new pandemic is reminding the world of the many factors that undermine the HIV response and efforts to fulfil the right to health. Addressing those challenges is critical to global efforts to end AIDS and achieve the Sustainable Development Goals (SDGs) by 2030.

Future strategic directions: key questions for consideration

- ***What are the key characteristics of policies and programmes that help overcome inequalities to improve HIV outcomes?***
- ***How do we overcome generalities, conventional wisdoms, and sometimes out-dated assumptions to help drive specific interventions to overcome current or persistent inequalities driving poor outcomes for HIV?***
- ***What is the potential role of innovation, including artificial intelligence, to promote agility and refinement of programmes to better serve people and continually reach those left behind?***
What are the ethics and protections that need to be in place to ensure new technologies and approaches that include artificial intelligence are applied in a rights-based manner and cannot be misused to further marginalize vulnerable populations?
- ***How can political leadership and financial investments in middle- and high-income countries be better mobilized to accelerate HIV epidemic response?***
How are those current investments targeted to populations who are most at risk and the interventions they need?
- ***How can addressing various inequalities also contribute to progress on the SDGs?***
- ***How do we ensure continued progress on reducing cross-cutting inequalities such as those related to gender, race, income, and access to health and justice?***

Saving lives, preventing transmission: HIV testing and treatment

Maximizing the benefits of ART remains key to hopes for ending the HIV epidemic.

- High-Level Meeting Commitment 1. Ensure that 30 million people living with HIV have access to treatment through meeting the 90–90–90 targets by 2020.
- Strategy Result Area 1. Children, adolescents and adults living with HIV access testing, know their status and are immediately offered and sustained on affordable quality treatment.

Status report

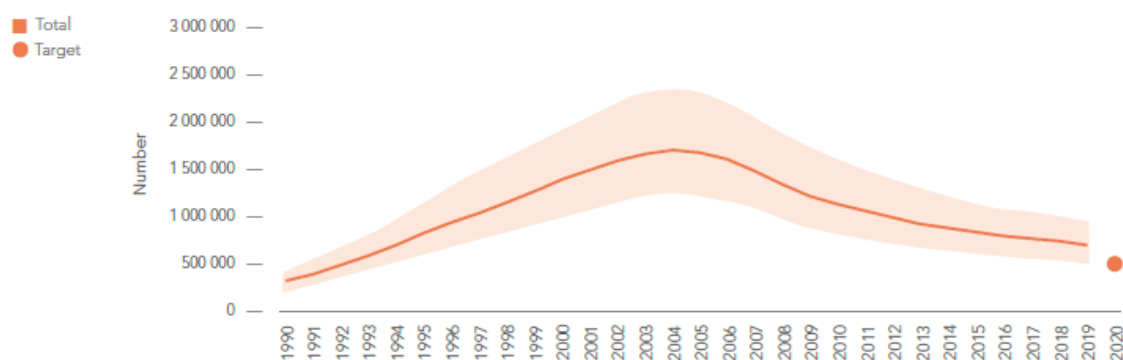
Expanded access to HIV treatment and improved treatment outcomes continue to generate historic health benefits, with AIDS-related deaths declining by 39% from 2010 to 2019. Nearly 700 000 people are still dying from AIDS each year. AIDS-related mortality continues to decline but not at a pace sufficient to achieve the Fast-Track target of reducing deaths to fewer than 500 000 by 2020.

The decline in AIDS-related mortality since 2010 has been notably steeper among women and girls (46%) than among men and boys (32%) (Figure 17). However, AIDS continues to be one of the top causes of mortality among women of reproductive age. The reduction in AIDS-related deaths is more pronounced in eastern and southern Africa (49%) than in other regions; AIDS-related deaths increased by 24% in eastern Europe and central Asia since 2010. These mortality trends largely stem from differences in HIV treatment coverage, which was 72% in eastern and southern Africa in 2019 (an increase from 25% in 2010), compared to 44% coverage in eastern Europe and central Asia.

HIV treatment is also contributing to reductions in new HIV infections. In 2018–2019, results from four large clinical trials found that a universal test-and-treat approach achieved rapid reductions in population-level HIV incidence of 20–30% (10–13).

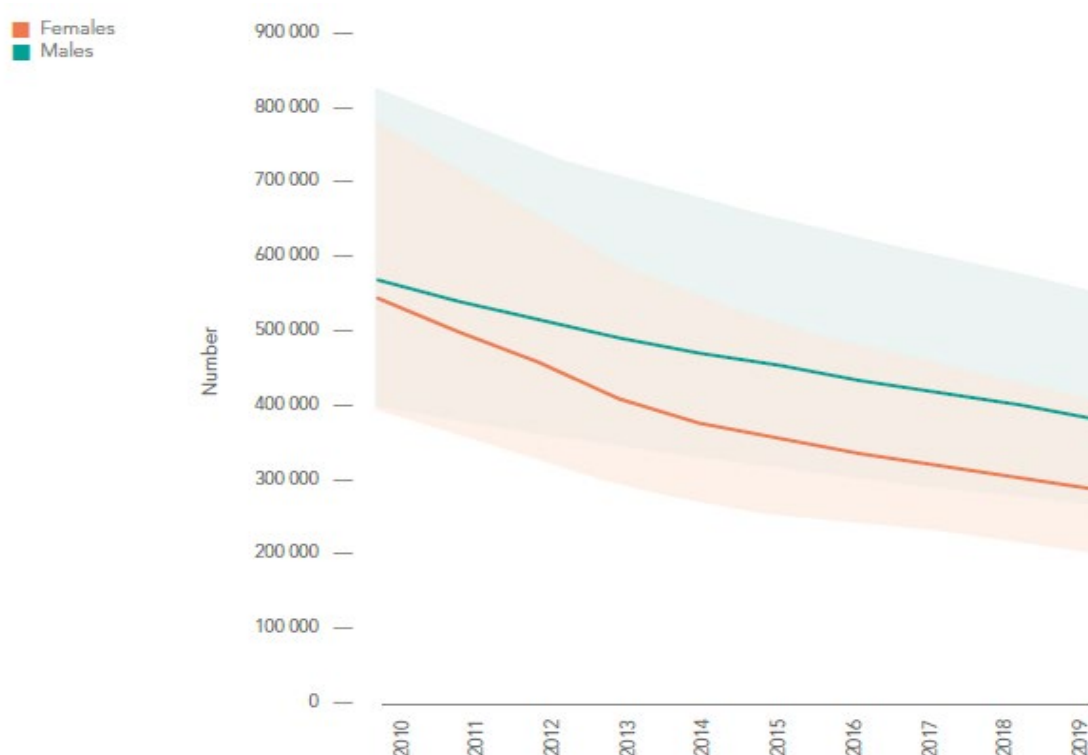
The world continues to make progress towards the 90–90–90 targets. As of December 2019, 81% of people living with HIV knew their HIV status, 82% of people with an HIV diagnosis were receiving ART and 88% of people receiving ART had achieved viral suppression.

Figure 16. Number of AIDS-related deaths, global, 1990–2019



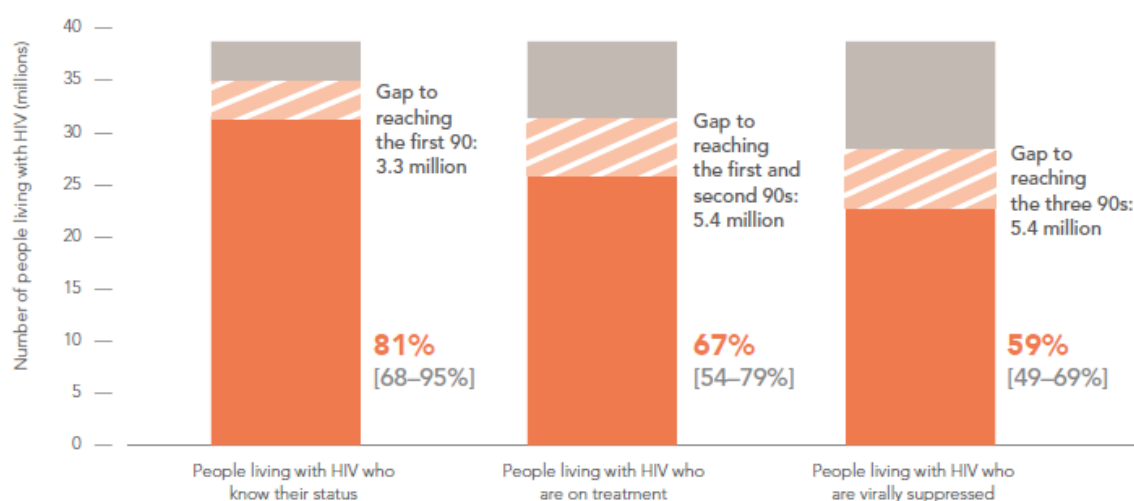
Source: UNAIDS epidemiological estimates, 2020 (see <https://aidsinfo.unaids.org/>).

Figure 17. Number of AIDS-related deaths by sex, global, 2010–2019



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

Figure 18. HIV testing and treatment cascade, global, 2019



Source: UNAIDS special analysis, 2020. For methodology, see: Seizing the moment: tackling entrenched inequalities to end epidemics. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/2020_global-aids-report_en.pdf).

Achieving each of the three 90s would result in a minimum of 73% of people living with HIV having durably suppressed viral loads. Despite major progress, the world is unlikely to achieve the 73% target by December 2020. Among the estimated 38.0 million people living with HIV worldwide at the end of 2019, 67% were on treatment and 59% had suppressed viral loads (Figure 18). The gap to reaching the first 90 was 3.3 million people, the gap to reaching the first and second 90s was 5.4 million people, and the gap to reaching all three 90s was 5.4 million people.

A growing number of countries across regions and income levels represent 90–90–90 success stories. Globally in 2019, 13 countries had by 2019 attained the 73% target for viral suppression. Eswatini has already achieved the 86% viral suppression target for 2030. An additional five countries had achieved at least 68% viral suppression among people living with HIV. However, most countries are not on track to achieve the 90–90–90 targets, including 28 countries where less than half of people living with HIV had suppressed viral loads in 2019.

Table 1. Progress towards 90–90–90 targets, by country, among those with treatment coverage equal to or greater than the annual global average, 2019

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

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

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

Reaching the 2020 viral suppression target of 73% at the end of the testing and treatment cascade indicates strong performance across all pillars of the 90–90–90 targets, and shows that people are fully benefiting from that treatment. In general, high-achieving countries attain excellent outcomes among men as well as women, compared to the global pattern in which women have consistently better outcomes across the HIV testing and treatment cascade than men. Higher treatment coverage among women is in part due to their more regular use of health-care services that include routine testing, such as antenatal care. Collection and reporting of disaggregated data on testing and treatment outcomes will need to become standard practice to achieve more precise monitoring of outcome trends across the HIV treatment cascade by age, sex, key populations and other pertinent variables.

Eswatini's experience offers useful lessons for accelerating gains in HIV outcomes. Eswatini makes intensive efforts to reach and engage men in testing and treatment services, provides free care and treatment for all, strategically uses data to target and adapt testing strategies, and uses innovative treatment delivery strategies, including same-day treatment initiation and differentiated service delivery.

Table 2. Slow progress towards 90–90–90 targets, by country, 2019

	People living with HIV who know their status	People living with HIV who know their status and are on treatment	People on treatment who are virally suppressed		Viral load suppression among people living with HIV
OFF-TRACK (50–69%)	Angola	Albania	Cape Verde	OFF-TRACK (40–50%)	Azerbaijan
	Chad	Barbados	Ghana		Barbados
	Colombia	Bulgaria	Mauritius		Belarus
	Congo	Central African Republic			Benin
	Democratic Republic of the Congo	Dominican Republic			Bolivia
	Equatorial Guinea	Equatorial Guinea			Bulgaria
	Fiji	Gabon			Côte d'Ivoire
	Georgia	Gambia			Dominican Republic
	Ghana	Iran (Islamic Republic of)			Ecuador
	Guatemala	Kazakhstan			Honduras
	Guinea	Kyrgyzstan			Kazakhstan
	Guinea-Bissau	Liberia			Montenegro
	Honduras	Malaysia			Mozambique
	Kyrgyzstan	Nicaragua			Niger
	Liberia	Pakistan			Suriname
	Mauritius	Philippines			
	Montenegro	South Sudan			
	Niger	Sudan			
	Republic of Moldova	Venezuela			
	Sri Lanka				
	Suriname				
	Tajikistan				
	Ukraine				
	Venezuela				
POOR PERFORMING (LESS THAN 50%)	Afghanistan	Afghanistan		POOR PERFORMING (LESS THAN 40%)	Albania
	Gambia	Angola			Fiji
	Iran (Islamic Republic of)	Congo			Ghana
	Madagascar	Lithuania			Iran (Islamic Republic of)
	Mali	Mauritius			Jamaica
	Mongolia				Kyrgyzstan
	Pakistan				Lithuania
	Sierra Leone				Mauritius
	South Sudan				Mongolia
	Sudan				Republic of Moldova
	Tunisia				Somalia
					South Sudan
					Tajikistan

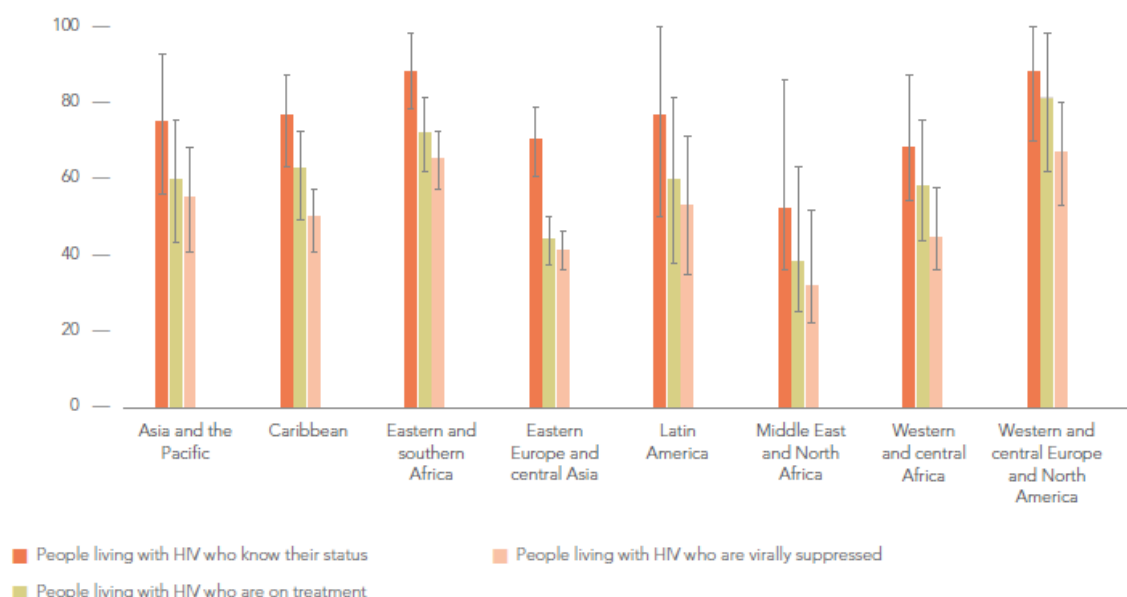
Source: UNAIDS epidemiological estimates, 2020 (see <https://aidsinfo.unaids.org/>).

Progress towards the 90–90–90 targets varies considerably between and within regions (Figure 19). As a whole, eastern and southern Africa, home to more than 54% of all people living with HIV, is close to achieving the 90–90–90 targets, with treatment cascade outcomes comparable to those reported in western and central Europe and north America. Within eastern and southern Africa, seven countries (Botswana, Eswatini, Namibia, Rwanda, Uganda, Zambia and Zimbabwe) have achieved the 90–90–90 targets, and three additional countries (Kenya, Malawi and the United Republic of Tanzania) are on the verge of doing so. Eswatini has already achieved the 2030 target of 95–95–95. However, treatment coverage and rates of viral suppression are markedly lower in some other countries in the region, including Mozambique. Similarly, global aggregate progress obscures a lack of progress in the Middle East and North Africa and in eastern Europe and central Asia.

Across the HIV testing and treatment cascade, the hindrances that restrict rates of viral suppression vary between and within regions. In western and central Africa and the Middle East and North Africa, low knowledge of HIV status represents the biggest barrier to treatment outcomes, while in eastern Europe and central Asia, low rates of treatment initiation are the main barriers. Failure to ensure that people diagnosed with HIV have immediate and unfettered access to HIV treatment initiation leads to health disparities, undermines progress towards ensuring that programmes are human rights-based and client-centred, and increases costs (by requiring repeat testing, outreach and intensive linkage efforts).

Differences in treatment bottlenecks are apparent within regions as well. In eastern and southern Africa, for example, there are substantial gaps in knowledge of HIV status in Madagascar and South Sudan, while in Angola and Mauritius large proportions of people living with HIV know their status but are not accessing treatment services. Across 57 countries reporting on all three prongs of the 90–90–90 target, there is substantial variation with regard to the specific step in the HIV treatment cascade that constitutes the largest gap. Surge strategies may be needed for underperforming countries and regions to rapidly catch-up and aim towards future targets.

Figure 19. HIV testing and treatment cascade, region, 2019



Source: UNAIDS special analysis, 2020. For methodology, see: Seizing the moment: tackling entrenched inequalities to end epidemics. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/2020_global-aids-report_en.pdf).

Tuberculosis (TB) deaths among people living with HIV are declining but not quickly enough. This is primarily due to missed identification and treatment of active TB cases, and to slow expansion of TB preventative therapy. TB claimed the lives of an estimated 250 000 people living with HIV in 2018, approximately one third of all AIDS-related deaths (14). It is the leading cause of death among people living with HIV.

Treatment and prevention efforts saw TB deaths among people living with HIV decline by 52% from 2010 to 2018—an important achievement, but still short of the 75% target for 2020. TB treatment gaps are slowing progress towards global targets and are contributing to substantial preventable mortality among people living with HIV. Among the 135 countries that reported these data in 2019, less than half (48%) of the 862 000 estimated number of people living with HIV who developed TB disease (incident cases) received treatment for both HIV and TB. The TB treatment success rate for people living with HIV was 75% in 2018, compared to global TB treatment success of 85%.

Reasons for comparatively poor outcomes among HIV-positive people on TB treatment include late detection of HIV-associated TB and delays in starting ART or TB treatment or cotrimoxazole prophylaxis. In 2020, only five of 30 countries with the highest TB burden provided the WHO-recommended "one-stop shop" model for integrated HIV and TB services. Access to TB preventive treatment is increasing: globally in 2018, 65 countries reported initiating TB preventive treatment for 1.8 million people living with HIV, up from just under 1 million in 2017.

COVID-19 and HIV testing and treatment

COVID-19 is burdening health systems and lockdowns are limiting people's movement and straining economies. This can lead to life-threatening disruptions to HIV and other health services for people living with HIV and people at higher risk of HIV infection. Those disruptions could reverse some of the progress made towards the 2020 targets.

Recent modelling has estimated that a 6-month complete interruption of ART could lead to more than 500 000 [471 000–673 000] additional deaths from AIDS-related illnesses (including TB) in sub-Saharan Africa in 2020–2021 (15). An interruption of ART for 20% of people living with HIV for six months would result in more than 110 000 additional AIDS-related deaths (16). The emerging logistical challenges associated with ensuring stable supplies of HIV medicines and other essential commodities will require continuous problem-solving and mobilization.

Differentiated service delivery approaches, developed by communities to respond to their specific needs and circumstances, are now being taken up broadly, with the COVID-19 crisis providing an additional impetus for expedited roll-out. Multimonth dispensing of antiretroviral (ARV) medicines is an example. It can prevent disruptions in treatment regimens and reduce the burden on congested health facilities.

In every region but Latin America, a majority of countries in 2019 had policies in place for multimonth dispensing of antiretroviral (ARV) medicines, but few were implementing those policies widely (17). That changed during the first months of the COVID-19 pandemic. By May 2020, 80% of people on HIV treatment in Zimbabwe were receiving 3-month supplies of medicines, reducing clinic visits by 30% and increasing systemic resilience to the impact of COVID-19. In response to COVID-19, Malawi also relaxed its earlier restrictions on eligibility for multimonth prescriptions, and Thailand and Viet Nam accelerated their rollout of multimonth dispensing of ARV medicines (17). Other countries, including Belarus, Dominican Republic, Ethiopia, Mozambique, Papua New Guinea and South Africa, have adopted more liberal prescribing policies for HIV medicines (17).

Multimonth dispensing also empowers communities and people living with HIV, and promotes and supports self-care by placing the power in the hands of the people themselves to continue treatment and care, making continuing treatment and care easier and less burdensome on people, families and communities. At the same time, community service delivery approaches, such as community ARV distribution and peer-led adherence clubs, are bringing HIV treatment services closer to the people who need them and facilitating the tailoring of services to individual and community needs.

What is working and needs to be sustained

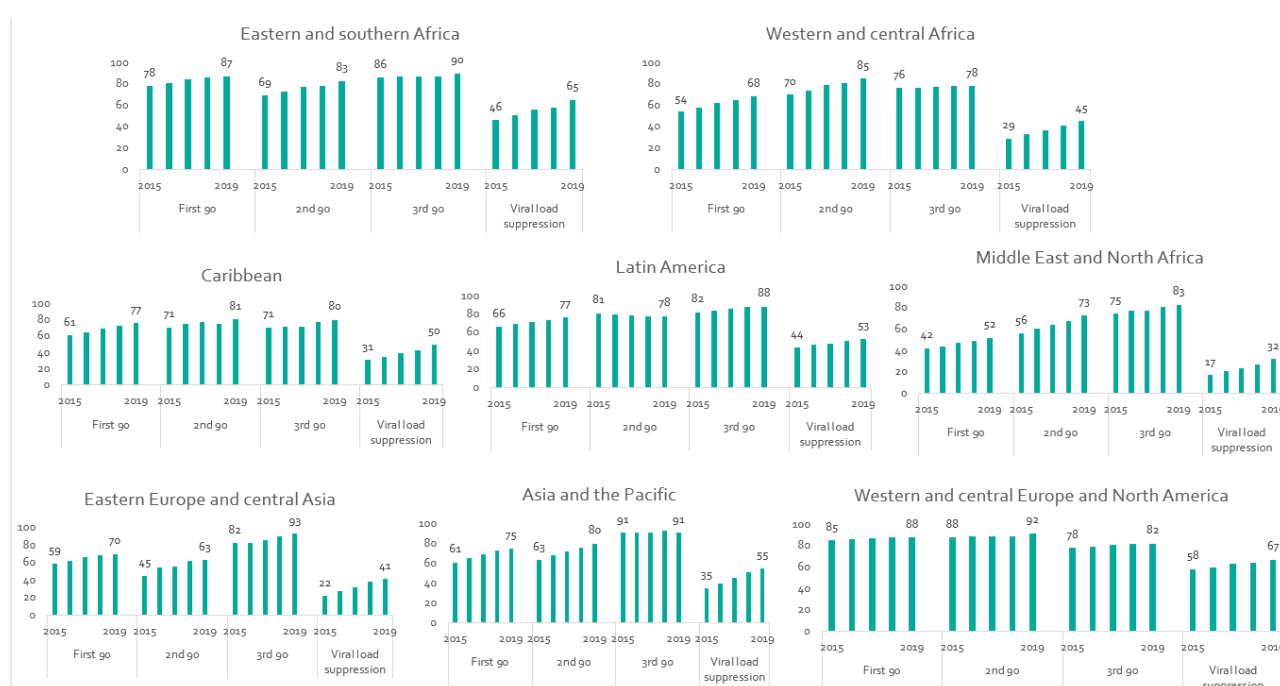
The important momentum towards the 90–90–90 targets in most regions must be sustained. Globally, there have been historic gains in scaling up HIV treatment and improving HIV treatment outcomes (Figure 20). In 2019, 67% of people living with HIV were receiving ART—a marked improvement over 2010 (25% coverage) and 2015 (49%). Similar momentum is apparent in many regions.

Important steps have been taken to optimize HIV testing and treatment approaches. Instead of standardized approaches that expect individuals to adapt themselves to pre-determined service approaches and platforms, the HIV response is increasingly focused on matching service approaches to the needs and circumstances of clients and communities. In place of the longstanding reliance on generalized facility-based testing, there is growing emphasis on the need for differentiated testing models, including diverse facility- and community-based approaches that can be targeted to communities at greatest risk and tailored to individual and community needs.

Differentiated models of care, including community models of care help the local health system manage ever-increasing numbers of patients. Similarly, countries are optimizing HIV treatment regimens and improving HIV outcomes by transitioning to dolutegravir-based regimens for first-line HIV treatment, in line with WHO recommendations. In Malawi, provision of dolutegravir-based regimens in 2019 was associated with increases in rates of viral suppression among both men and women and in children living with HIV (18). As the COVID-19 pandemic unfolds, health systems that are people-centred and that make use of differentiated approaches are proving to be more adaptable and responsive.

Innovations in service delivery are improving the effectiveness and efficiency of treatment services. People-centred and differentiated models of care, including community models of care, make health systems more adaptable and responsive, reduce the strain on standard health facilities, free up resources for other priorities, and enable local health systems to serve increasing numbers of patients. For example, multimonth dispensing does away with the need for frequent, costly and time-consuming clinic visits that are strictly to collect ARV medications and reduces the workload of health-care facilities. HIV self-testing and point-of-care technologies for virological testing and other diagnostics increase access to those services and provide clients with faster results.

Figure 20. Progress towards 90–90–90 and viral load suppression, regions, 2015–2019



Source: UNAIDS special analysis, 2020. For methodology, see: Seizing the moment: tackling entrenched inequalities to end epidemics. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/2020_global-aids-report_en.pdf).

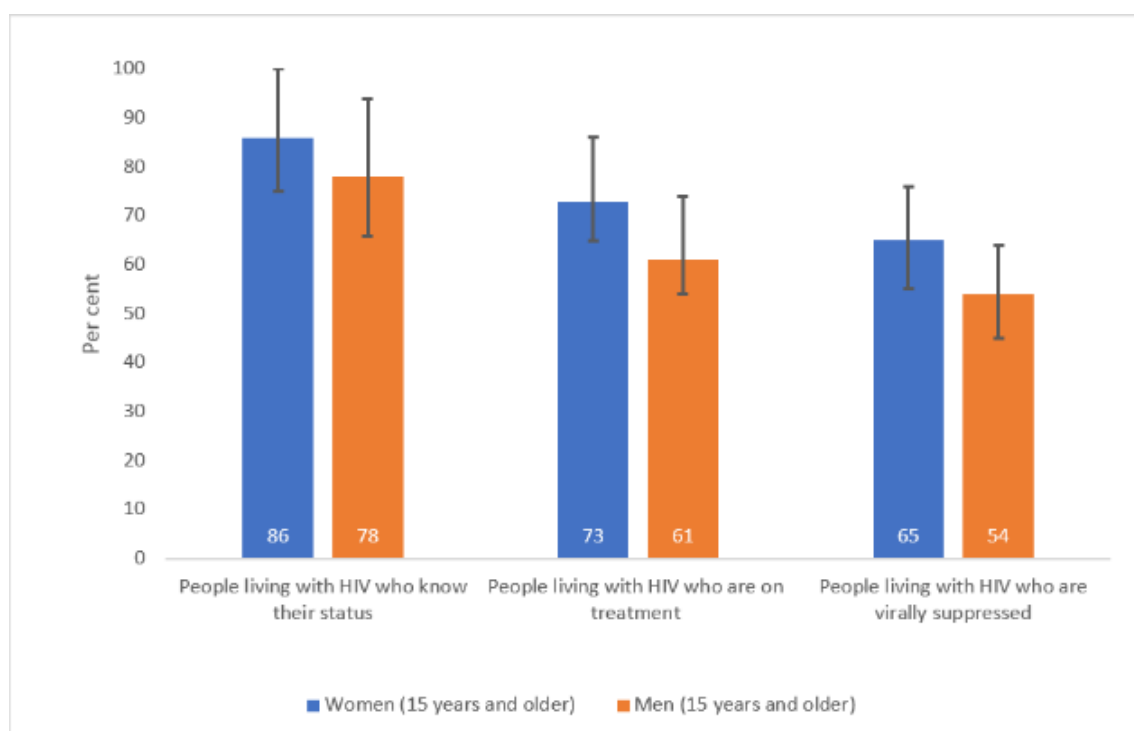
Scientific research continues to generate important biomedical advances. HIV treatment options are continually improving. The recent ATLAS and FLAIR trials demonstrated that monthly or two-monthly injection with the drugs cabotegravir and rilpivirine are as effective as standard daily oral therapy (19, 20). Such long-acting options may make HIV prevention and treatment simpler and more convenient than daily oral dosing. Implementation science is also helping drive progress towards the 90–90–90 targets, with the previously mentioned universal test-and-treat trials identifying innovative strategies for achieving rapid improvements in testing and treatment cascade outcomes and in improving outcomes for men and young people living with HIV. Continued innovation will be needed to generate newer and improved treatment options, especially as the demand for second- and third-line regimens grows over time.

Delivery of integrated TB and HIV services improves outcomes of TB treatment among people living with HIV and reduces the number of TB-related deaths among people living with HIV. TB programmes that use integrated approaches have been particularly successful in ensuring that notified TB patients know their HIV status and that HIV-positive TB patients are receiving ART (14).

Where the response is falling short

Despite progress, testing and treatment programmes are leaving many people behind. Not all people living with HIV are benefiting equally from the overall global progress towards the 90–90–90 targets. Worldwide and across regions, women have notably superior outcomes across the testing and treatment cascade compared to men (Figures 21 and 22). Globally, an estimated 54% of men living with HIV had suppressed viral loads in 2019, compared to 65% of women living with HIV. Young people living with HIV are less likely than older adults to know their HIV status and access treatment (Figure 23). Discriminatory gender norms, gender-based violence and disempowerment pose important barriers to HIV service access for many women, especially for women who belong to key populations.

Figure 21. HIV testing and treatment cascade among adults (aged 15 years and older), by sex, global, 2019



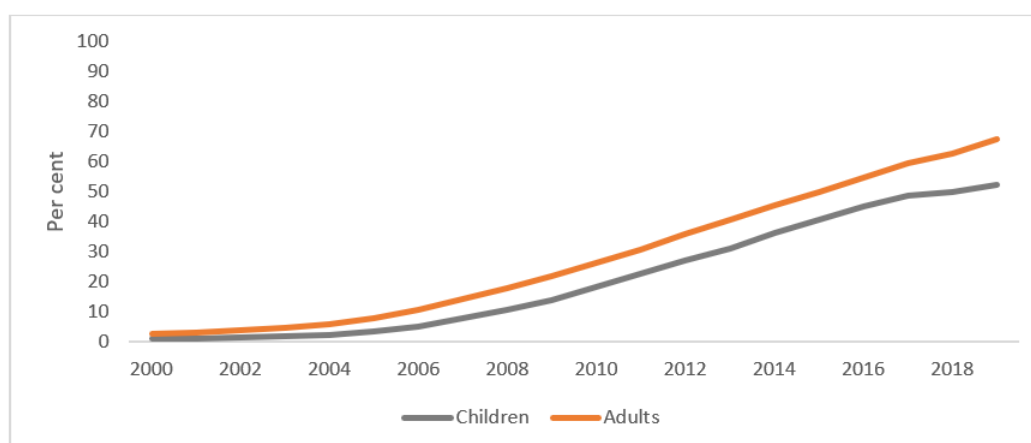
Source: UNAIDS special analysis, 2020. For methodology, see: Seizing the moment: tackling entrenched inequalities to end epidemics. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/2020_global-aids-report_en.pdf).

Figure 22. Coverage of antiretroviral therapy by sex, men and women (aged 15 years and older), regional, 2019



Source: UNAIDS special analysis, 2020. For methodology, see: Seizing the moment: tackling entrenched inequalities to end epidemics. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/2020_global-aids-report_en.pdf).

Figure 23. HIV treatment coverage among adults and children, global, 2000–2018

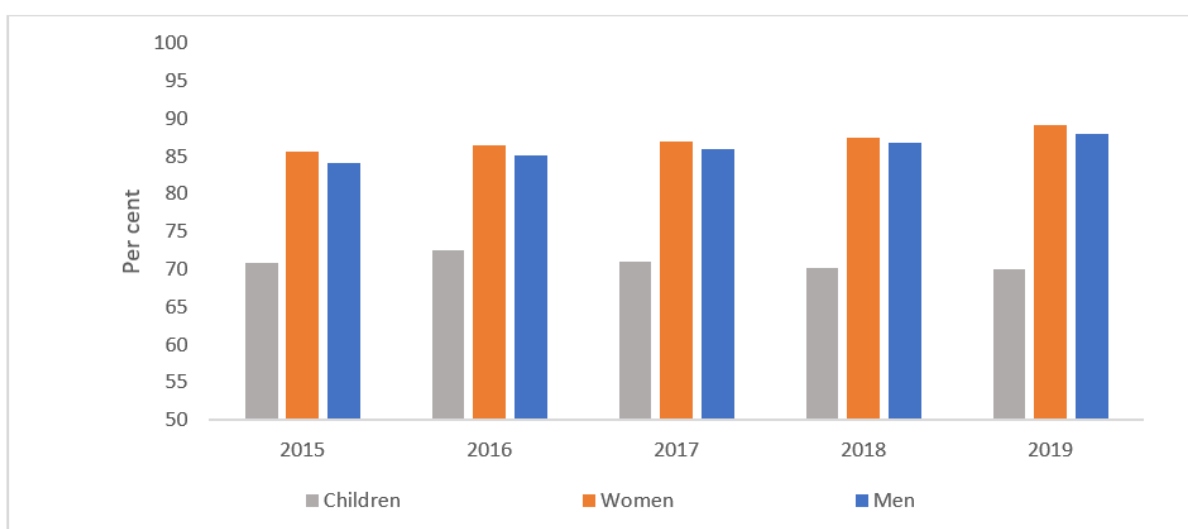


Source: UNAIDS special analysis, 2020. For methodology, see: Seizing the moment: tackling entrenched inequalities to end epidemics. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/2020_global-aids-report_en.pdf).

Children living with HIV are faring even worse. Treatment coverage among children (aged 0–14 years) was 53% in 2019, compared with 68% among adults living with HIV, rates of viral load suppression among children living with HIV having improved very slowly in recent years (Figure 24). The next section of this report examines in more detail the challenges faced by children living with HIV.

Evidence indicates that key populations often struggle to obtain testing and treatment services. In Malawi, for example, only 40% of female sex workers living with HIV were virally suppressed in 2018 (21). Among countries reporting population-specific data in 2016–2019, the average rate of testing with awareness (positive or negative) among key populations ranged from 62% among people who inject drugs to 67% among sex workers (22). Although not directly comparable, the global estimate of awareness of HIV-positive status among people living with HIV was 81% in 2019. Lack of consistently available and robust population size estimates and data on HIV testing and treatment utilization outcomes for key populations hinder efforts to improve service access for these marginalized subpopulations. Populations encountering stigma and discrimination are doubly disadvantaged because concerns for client safety can make it difficult to closely monitor HIV service coverage in those populations.

Figure 24. Proportion of viral load suppression among people on HIV treatment, by age and sex, global, 2015–2019



Source: UNAIDS special analysis, 2020. For methodology, see: Seizing the moment: tackling entrenched inequalities to end epidemics. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/2020_global-aids-report_en.pdf).

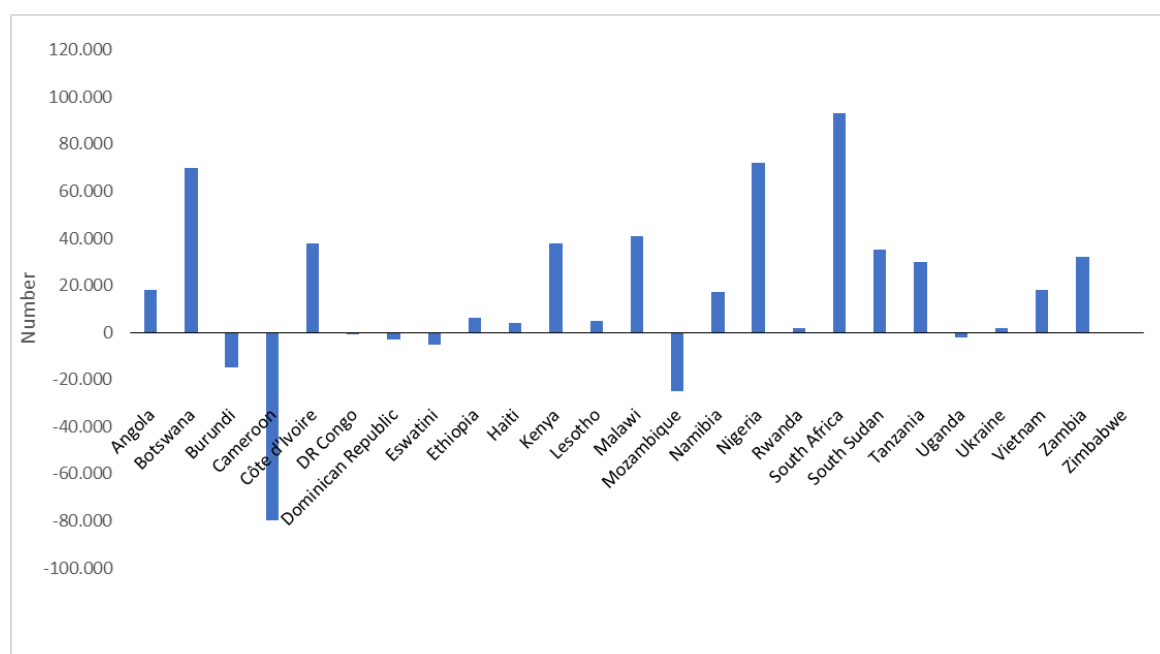
Although these overall gaps are deeply concerning and require immediate action, numerous programmes have shown that it is possible to achieve robust access and equitable results for marginalized groups. Community-centred and multi-disease service models such as SEARCH and PopART have succeeded in rapidly narrowing service gaps among men and young people by using a data-driven approach to identify service gaps and develop remedies (23). In Zimbabwe, a large-scale programme serving female sex workers rapidly increased knowledge of HIV-positive status (from 48% to 78%) and ART coverage (from 29% to 67%) between 2011 and 2016 (24).

Preventing and addressing loss-to-follow-up dramatically improves outcomes for people living with HIV and strengthens progress towards national and subnational goals. While the overwhelming majority of people who remain on ART achieve excellent outcomes, many people living with HIV struggle to remain engaged in care. Low retention on HIV treatment leads to increased mortality and morbidity, as well as increased HIV transmission, and it undermines progress towards the 90–90–90 targets. A meta-analysis of HIV treatment programmes in sub-Saharan Africa found that 22% of patients who were lost to follow-up had died (25).

In some programmes and countries, attrition represents the single-biggest gap along the testing and treatment cascade. Among PEPFAR programmes, loss-to-follow-up as a percentage of HIV treatment clients is especially high in Côte d'Ivoire, Malawi, Nigeria and South Sudan (26). When services are not delivered in ways that meet people's needs for life-long continuation, treatment benefits are lost and programmes become less efficient.

As evidence from low- and high-income countries shows, active adherence and other support, community and provider monitoring of loss-to-follow-up and context-specific and people-centred strategies for re-engagement can reduce programme attrition and accelerate progress towards high levels of viral suppression (27–30). Initiatives to reduce attrition and re-engage people who have dropped out of care must address pertinent social and individual factors, including poverty, poor health, long distances to health facilities, perception of wellness, community HIV literacy, stigmatization, lack of social support, competing work or child care demands, and health system weaknesses that contribute to discontinuity of care.

Figure 25. Absolute number of people lost to treatment, October-December 2019



Source: PEPFAR Presentation 2020 COP meeting

Policy gaps remain. Although dozens of countries have acted to align their testing and treatment programmes with international guidelines, many others have failed to do so, thereby undermining their progress towards the 90–90–90 targets. In early 2020, at least 32 countries had yet to recommend dolutegravir-based regimens as first-line therapy, and 20 countries required ARV prescriptions to be refilled monthly (22, 31). In the first six months of 2020, the number of countries having policies in place for HIV self-testing rose from 77 to 87.

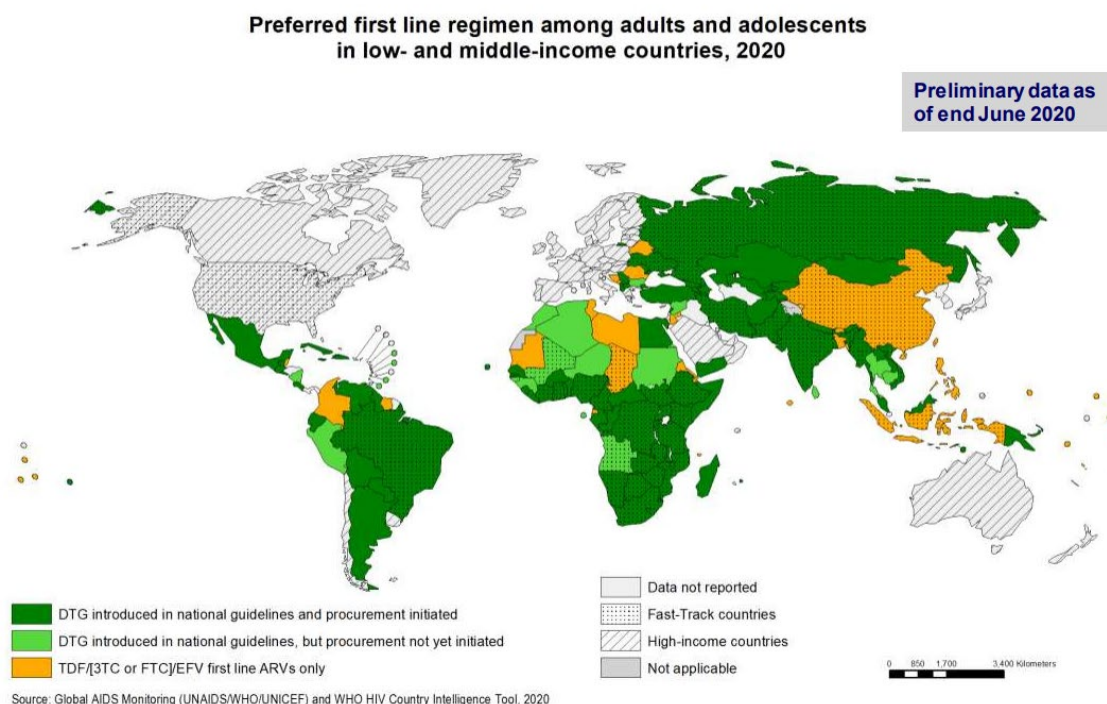
Substantial implementation gaps persist. In many settings, adoption of recommended policies has not led to effective implementation and scale-up of evidence-based approaches. For example, although nearly all (184 of 193) countries have adopted the treat-all approach, only 69 countries have implemented the policy in at least 95% of treatment sites. In mid-2020, 20 countries had endorsed dolutegravir-based regimens in national guidelines but were yet to procure the regimens. While 87 countries in 2020 had formalized policies for HIV self-testing, actual roll-out of self-testing had begun in only 43 countries.

Implementation gaps are especially evident for integrated services for HIV and TB. Less than half of the estimated incident TB cases among people living with HIV are currently diagnosed and treated appropriately (14). Scale-up of the first line molecular diagnostics tests is insufficient, as is the use of the LAM urine assay that is recommended for TB diagnosis in children living with HIV and seriously ill adults living with HIV (22, 32–34).

Countries need to adjust strategies to reach the people who are being left behind. Even high-performing countries appear to have difficulty “going the last mile” towards the 95–95–95 targets. The same strategies that bring countries to the brink of success are often inadequate to reach the people who are most vulnerable or marginalized.

Audits of national treatment programmes in eastern and southern Africa have identified factors that may account for slowdowns in progress, including difficulties in reaching and retaining men and young people, lack of robust uptake of innovative testing and treatment approaches, inadequate treatment initiation, substantial loss-to-follow-up and poor treatment adherence. Countries need to adjust approaches and implement strategies that are tailored to reach the people who are not effectively engaged by mainstream service systems and approaches.

Figure 26. Progress in roll-out of dolutegravir as HIV treatment, 137 low- and middle-income countries, 2020



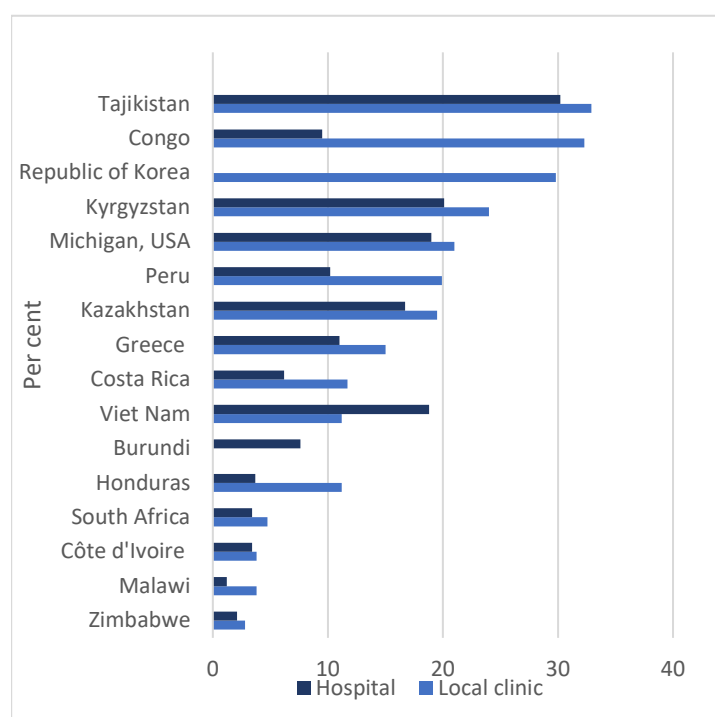
Countries where progress towards the 90–90–90 targets is lagging urgently need to reinvigorate national testing and treatment efforts and adopt lessons learned from high-performing programmes. Notwithstanding the growing number of 90–90–90 “success stories,” most countries are not on-track to achieve those targets. In 13 countries (Albania, Fiji, Ghana, Islamic Republic of Iran, Jamaica, Kyrgyzstan, Lithuania, Mauritius, Mongolia, Republic of Moldova, Somalia, South Sudan and Tajikistan) less than 40% of people living with HIV have achieved viral suppression. Testing gaps are particularly large in Madagascar and South Sudan, while large percentages of people in Angola and Mauritius who know they are HIV-positive are not accessing treatment. It is vital to further disaggregate HIV data by age, population and location in order to guide differentiated testing, treatment care and support strategies to reach the people being left behind. In western and central Africa (45% of people living with HIV virally suppressed in 2019), the Caribbean (50%), eastern Europe and central Asia (41%) and the Middle East and North Africa (32%), levels of viral suppression among people living with HIV are substantially lower than the global average (59%).

While strategic information has improved in some respects, the lack of robust data, especially among key populations, undermines the ability to monitor progress towards the 90–90–90 targets and towards assuring equitable access. A surprising number of countries have yet to report estimates across the testing and treatment cascade, often because they lack the health information systems to do so. While countries in eastern and southern Africa have improved their capacities to monitor viral suppression, data systems in western and central Africa are comparatively weaker. Countries also often lack reliable estimates for national cascade outcomes for key populations. Reliable estimates for undiagnosed children living with HIV are not available in most settings. In addition to national cascade estimates, subnational analyses are needed to identify specific locations where interventions are needed. Disaggregated data (particularly by sex, age, and subpopulation) can help improve the effectiveness of treatment programmes, but those data are too seldom available or used effectively. For example, available information suggests that the largest diagnostic gap is among men aged 35–49 years, an insight that should inform decisions regarding programmatic targeting and resource

allocations (17). Programmes urgently need to invest in strategic information systems that can guide more effective approaches for identifying and reaching specific subpopulations.

Social and structural factors that affect treatment uptake and outcomes are insufficiently addressed. HIV remains highly stigmatizing. Negative attitudes of health-care providers, including overt acts of discrimination, deter many people living with HIV from seeking testing and treatment services. According to results from People Living with HIV Stigma Index surveys, substantial percentages of people living with HIV (more than 30% in Congo and Tajikistan, for example) report avoiding health services due to their HIV status.

Figure 27. Percentage of people living with HIV who avoided going to a local clinic or hospital when they needed it in the last 12 months because of their HIV status, countries with available data, 2013–2018



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

There is increasing evidence that appropriate strategies can reduce stigma and discrimination in health-care settings (35). For example, programmes that complement knowledge transfer with opportunities to meet and hear from people living with HIV appear to be more effective in changing health-care workers' attitudes and cultural competence than trainings alone (36).

Disparities in treatment access and outcomes also stem from laws and policies that violate international human rights and conflict with gender equality norms. Robust treatment scale-up and optimal HIV outcomes are incompatible with laws and policies that criminalize people who are at high risk of HIV infection, such as sex workers, people who inject drugs and gay men and other men who have sex with men. Unequal gender norms, stigma, discrimination and punitive laws prevent or deter many people living with HIV from seeking the testing and treatment services they

need. Some countries have acted in recent years to remove discriminatory and scientifically unsound laws and policies towards people living with HIV and key populations (see section on stigma, discrimination and justice).

The negative impact of punitive laws and policies on efforts to maximize access to HIV testing and treatment is especially apparent with respect to people who inject drugs. In Uganda, for example, mandatory drug testing protocols deter people from accessing ART, while in Kazakhstan and Kyrgyzstan registration requirements for people using narcotic drugs discourages many of them from seeking health services (37). Similarly, in Nigeria and South Africa, TB treatment programmes' emphasis on abstinence from using narcotics discourage uptake (38, 39).

Future strategic directions: key questions for consideration

- **How do we build robust and sustained political support and take specific strategic actions to close testing and treatment gaps for:**

- Men?
- Members of key populations
 - Gay men and other men who have sex with men?
 - Transgender people?
 - Sex workers?
 - People who inject drugs?
 - People who live in prisons or other closed settings?
- Adolescents and young people?
- People with TB?
- Persons with disabilities?
- Migrants?

What is needed to drive political will to specifically address/intensify actions for those left behind (not one-size-fits-all)?

- **Where many people with an HIV diagnosis are not receiving HIV treatment, what strategies should be rapidly adopted to close the gap?**

How would those strategies differ from the ones that are needed to optimize rapid treatment initiation for people newly diagnosed with HIV?

- **What strategies and investments are needed to sharply reduce loss-to-follow-up and service discontinuation?**

What are the costs of not acting immediately to reduce these losses?

- **In settings and among populations where knowledge of HIV-positive status is a major barrier, what strategies are needed?**

How should programmes invest in different mixes of testing approaches based on which populations are disproportionately undiagnosed? What should be the role of universal test-and-connect strategies?

- **How do we build political commitment and catalyze meaningful action to remove the financial, social and structural factors that impede service access and optimal outcomes for testing and treatment services?**

- **How do we ensure that strategic data are collected, disaggregated, analysed and effectively used to reach testing and treatment goals?**

What technical support approaches are needed to help countries?

- develop and effectively use testing and treatment cascades?
- develop disaggregated cascades that focus on outcomes for key populations?
- achieve more detailed understandings of treatment cascades and develop targeted interventions?
- develop and effectively use disaggregated and population-specific treatment cascades to inform population-specific efforts to close cascade gaps?

What are the political barriers to differentiated services (i.e. modified or intensified service packages for people who are not being reached effectively) and how do we overcome them?

- ***What strategic actions are needed to prioritize and widely use innovations and biomedical advances?***

How can national testing and treatment programmes and programme implementers be made sufficiently agile to expedite uptake of biomedical and service delivery innovations?

What investments, incentives or actions are required to ensure a robust research-and-development pipeline for new HIV treatment options, including long-acting regimens?

What is the role of community HIV literacy in ensuring preparedness for future HIV vaccines?

Eliminating vertical HIV transmission and ensuring effective HIV treatment of children

The world is unlikely to achieve the Fast-Track target of eliminating new HIV infections among children in 2020. It has to work harder to deliver on its commitments to address the HIV-related needs of children and young people:

- **HLM Target 2:** Eliminate new HIV infections among children by 2020, while ensuring that 1.6 million children have access to HIV treatment by 2018.
- **Strategy Result Area 1:** Children, adolescents and adults living with HIV access testing, know their status and are immediately offered and sustained on affordable quality treatment.
- **Strategy Result Area 2:** New HIV infections among children eliminated and their mother's health and well-being is sustained.

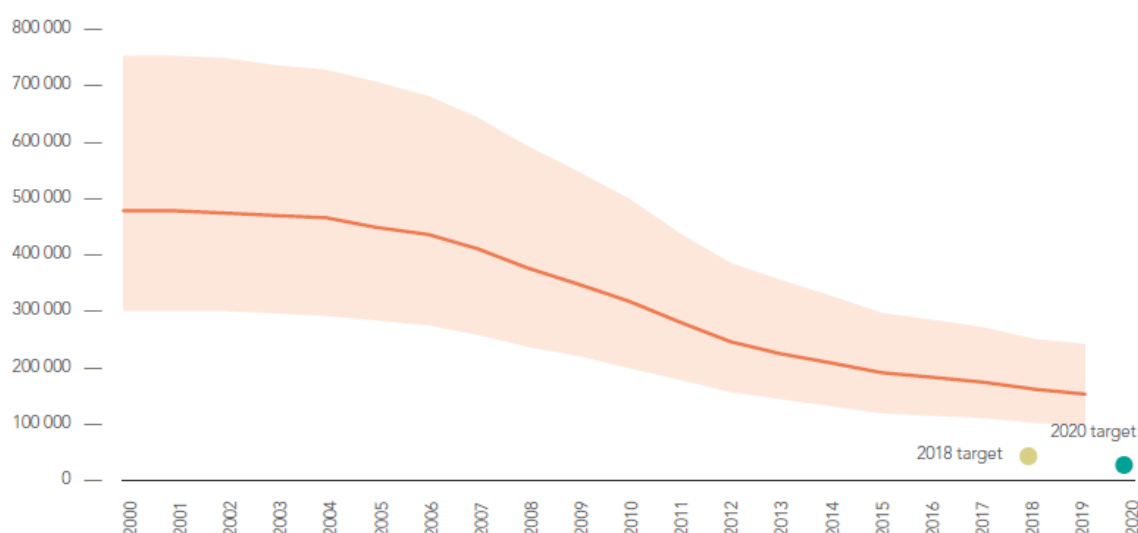
Preventing vertical transmission

Status report

New HIV infections among children decreased by more than half from 2010 to 2019, but progress in preventing children from becoming infected has slowed since 2016 (Figure 28). Three countries (Mozambique, Nigeria and South Africa) accounted for one third of the 150 000 children who acquired HIV in 2019. Considerable gains have been made in preventing new infections among children in Mozambique and South Africa. But in Nigeria the number of newly infected children has increased since 2016, primarily because of a decrease in the proportion of women living with HIV who receive ART.

Outside of sub-Saharan Africa, there are less reliable data about vertical transmission. Available data suggest that the proportion of pregnant women living with HIV who are members of key populations or partners of key populations is larger than in sub-Saharan Africa.

Figure 28. Number of new HIV infections in children, global, 2000–2019



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

Since 2002, the UN and partners have called for stepped-up action in four areas, which were highlighted again in the *Global plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive*, and they remain essential to reach the elimination target:

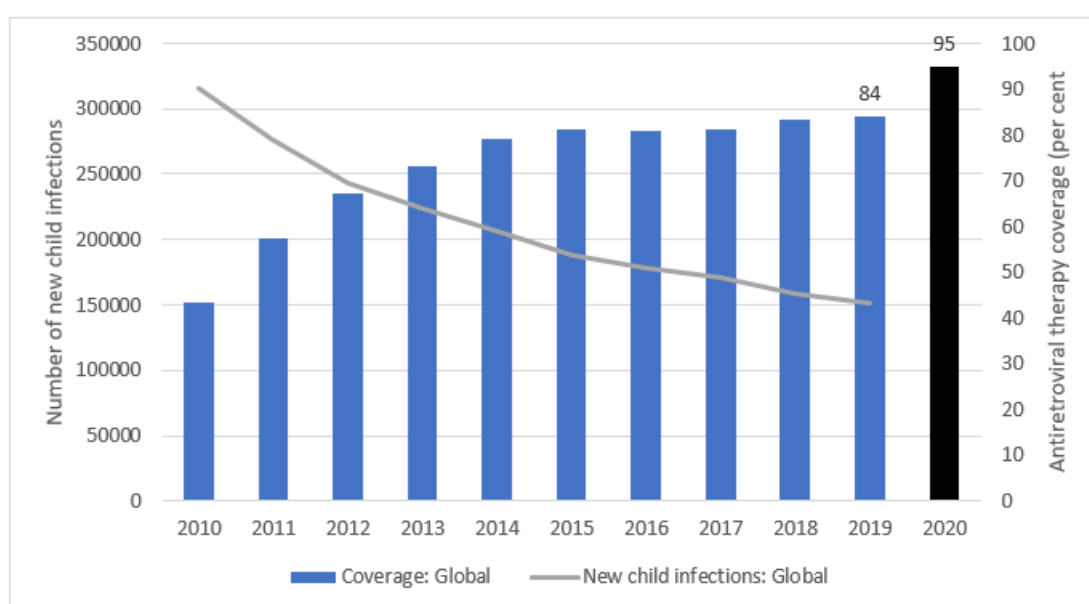
1. Prevent HIV among women of reproductive age;
2. Provide appropriate counselling and support, and contraceptives, to women living with HIV to meet their unmet needs for family planning and spacing of births, and to optimize health outcomes for these women and their children;
3. For pregnant women living with HIV, ensure HIV testing and counselling and access to the ARV drugs needed to prevent HIV infection from being passed on to their babies during pregnancy, delivery and breastfeeding; and
4. Provide HIV care, treatment and support for women, children living with HIV and their families (40).

What is working and needs to be sustained

Some countries have achieved relatively high coverage of ART among pregnant women living with HIV. In 2019, 84% of pregnant women living with HIV accessed ART—less than the global target of 95% but nevertheless an important accomplishment (Figure 29). In eastern and southern Africa, 60% of women living with HIV were already on HIV treatment when they became pregnant. As a result of such high coverage, 2.2 million HIV infections among children were prevented globally between 2000 and 2019.

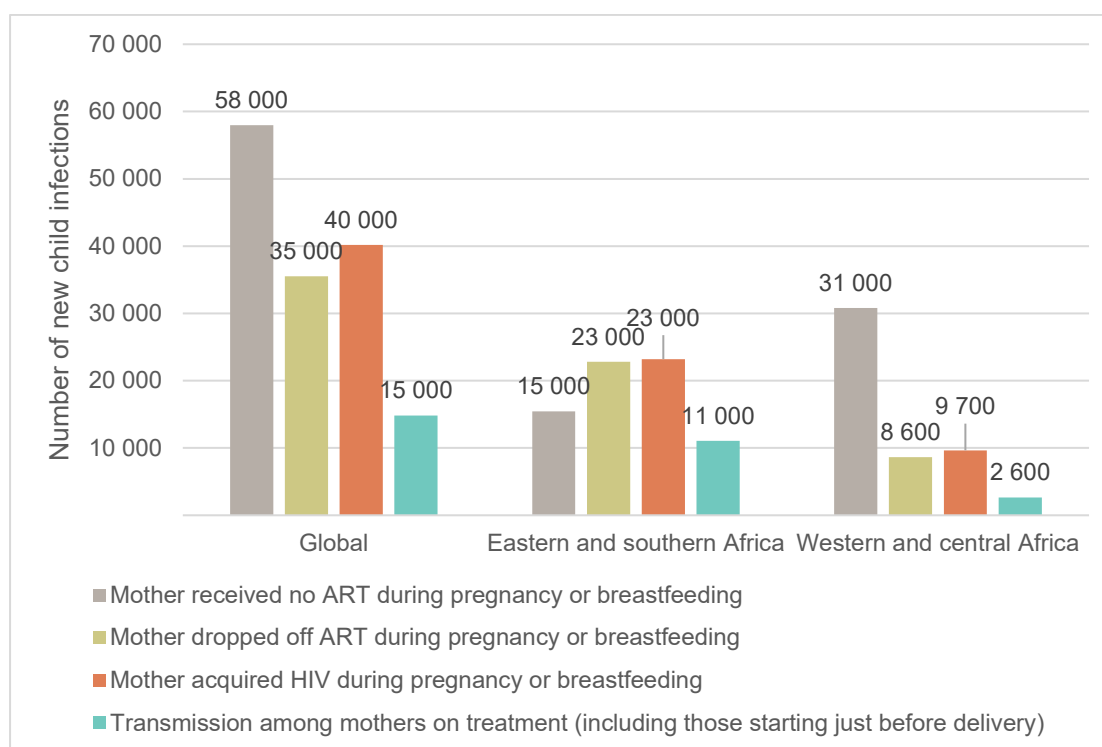
Unfortunately, HIV treatment coverage among pregnant women living with HIV has increased only slightly since 2015. Although scaled-up HIV treatment among pregnant women is central to hopes for eliminating new HIV infections among children, high coverage is insufficient on its own, as substantial numbers of children continue to acquire HIV. This is primarily due to a failure to retain women living with HIV in treatment throughout pregnancy and breastfeeding, as well as substantial new acquisition of HIV by women during pregnancy or breastfeeding (Figure 30).

Figure 29. Coverage of pregnant women reached with antiretroviral therapy (and 2020 global target) and new child HIV infections, global, 2010–2019



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

Figure 30. Estimated new HIV infections in children, by missed opportunity for preventing vertical transmission, global and sub-Saharan Africa, 2019



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

Global attention to the elimination agenda has continued, although dividends seem to have diminished. In 2016, UNAIDS, PEPFAR and other partners launched the Start Free Stay Free AIDS Free framework, which identified a series of Super Fast-Track targets to accelerate progress towards the elimination goal (41). The Organization of African First Ladies Against HIV/AIDS's Free to Shine campaign to end AIDS among children, adolescents and young people brought additional attention to efforts to eliminate new infections among children.

The process of Global Validation of Elimination of Mother-to-Child Transmission celebrates prevention success stories and encourages accelerated progress. Launched by WHO in 2012, the process has validated elimination in eight countries and five territories (Cuba, Thailand, Belarus, Armenia, Anguilla, Antigua & Barbuda, Bermuda, Cayman Islands, Montserrat, St Kitts & Nevis, Malaysia, Maldives and Sri Lanka). Those countries account for a small fraction of new infections among children globally (0.2% in 2014), but the validation process is ground-breaking and includes requirements on human rights, gender equality and community engagement (42). In many countries, the validation process has helped keep HIV on the agenda, which has benefited other aspects of the response, including attention to the needs of key populations. Validation as defined by the process is not feasible for countries with HIV prevalence of 5% or more, as they would need to ensure universal treatment initiation prior to conception in order to achieve the elimination target of fewer than 50 transmissions per 100 000 births. An alternative pathway to elimination has been developed to celebrate countries as they achieve key milestones in preventing new HIV infections among children.

Where the response is falling short

Even as global coverage remains relatively high, many pregnant and breastfeeding women are not receiving ART. Ninety-five per cent of pregnant women living with HIV in eastern and southern Africa received ART in 2019. High coverage was reached in countries such as Malawi, Namibia and South Africa, where HIV has been integrated in antenatal care and progress has

been made in reducing HIV-related stigma. By contrast, treatment coverage among pregnant women was only 58% in western and central Africa, with very low coverage in the Democratic Republic of the Congo and Nigeria, due in part to low coverage of antenatal care generally. Where pregnant and breastfeeding women are not accessing HIV treatment, recommended HIV testing approaches for women (such as family or index testing) have not been brought to scale and effectively integrated with other health screening initiatives (e.g., HIV, TB, COVID-19, malaria, family planning) in hotspots.

Evidence points towards a range of effective ways to improve ART uptake among pregnant women—including male involvement, more convenient service hours and enhanced case-finding strategies—but these have not been scaled up sufficiently in areas with low coverage. In some settings, enrolment in antenatal care services occurs late in pregnancy, at the time of delivery or after home birth. Many women face considerable hindrances when accessing antenatal care, including user fees, transport costs, loss of income, lack of childcare, stigma, discrimination and unpleasant attitudes of some health-care workers. Women from key populations and young mothers are especially affected.

Women who test HIV-negative at their first antenatal visit should be counselled on remaining HIV-negative and provided access to appropriate combination HIV prevention interventions, including encouraging partner testing. Pre-exposure prophylaxis (PrEP) should be considered for women at high risk of HIV infection. HIV-negative women should also be offered repeat HIV testing throughout pregnancy and breastfeeding and commence ART as soon after seroconversion as possible. Specific challenges exist in low-prevalence countries. Women from key populations or who are partners of key population members are seldom explicitly engaged in antenatal settings, HIV testing is not routinely offered and screening methods are not available to identify pregnant women who need of HIV testing and treatment services.

Table 3. Estimated retention on antiretroviral therapy among breastfeeding women living with HIV (adjusted to other clinics), combined with sub-Saharan Africa, Latin America and the Caribbean regions, 2014–2019

Period	Delivery	1–6 months	7–12 months	13–24 months
Retention (% , 95% CI)	80% (72–87%)	81% (75–87%)	83% (75–90%)	70% (57–83%)

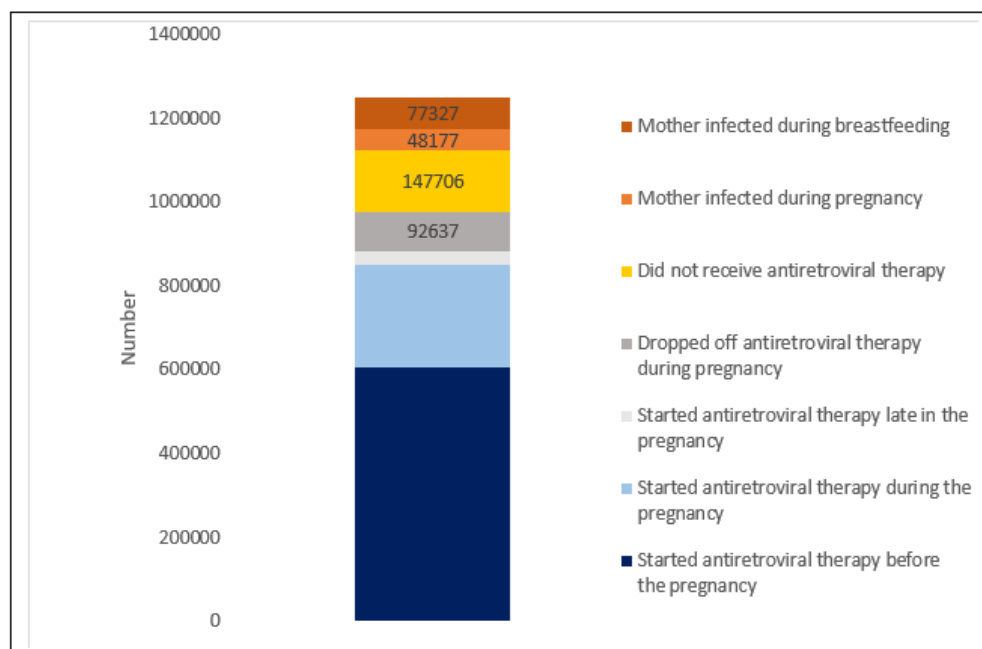
Source: Dugdale C. Maternal engagement in care during pregnancy and breastfeeding in the era of lifelong ART. Presentation at UNAIDS Reference Group on Child HIV estimates, Montreux, Switzerland, October 2019. Methodology from: Doi SAR, Barendregt JJ, Khan S, Thalib L, Williams GM. Advances in the meta-analysis of heterogeneous clinical trials II: the quality effects model. *Contemp Clin Trials*. 2015;45(Pt A):123-9; MetaXL, Version 5.3. In: epigear.com [Internet]. EpiGear International; c2016 (http://www.epigear.com/index_files/metaxl.html),

Note: Postpartum retention reported for those women who were in care at delivery.

Too many women are not retained on treatment and their viral load is not monitored throughout pregnancy and breastfeeding. Retention of pregnant women in HIV treatment services varies, with high retention reported in Kenya and Rwanda but much lower retention reported in Uganda, for example (43). Evidence indicates that peer mentoring (including mother-to-mother mentoring) and partner involvement promote retention of pregnant women living with HIV, but these approaches have not been scaled up in all settings (44), (45). Obstacles preventing robust retention include inadequate integration of HIV testing into sexual and reproductive health and rights services. Implementation barriers include inconvenient and time-consuming arrangements at clinics, such as requiring mothers to attend separate facilities for their new-borns or other children. These challenges especially affect mothers who are breadwinners in their households. It is unclear whether more frequent viral load testing is warranted during pregnancy and breastfeeding. Currently, there is no specific guidance on this matter. Inadequate HIV treatment and low HIV literacy among mothers and women of childbearing age generally can also hamper retention. Gender-related barriers—including unpaid care work responsibilities, economic

dependency on partner or household, gender-based stigma and discrimination—limit women and girls' access to and retention in vertical transmission services.

Figure 31. Numbers of pregnant women living with HIV and the gaps in prevention of vertical transmission, 21 focus countries, 2019



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

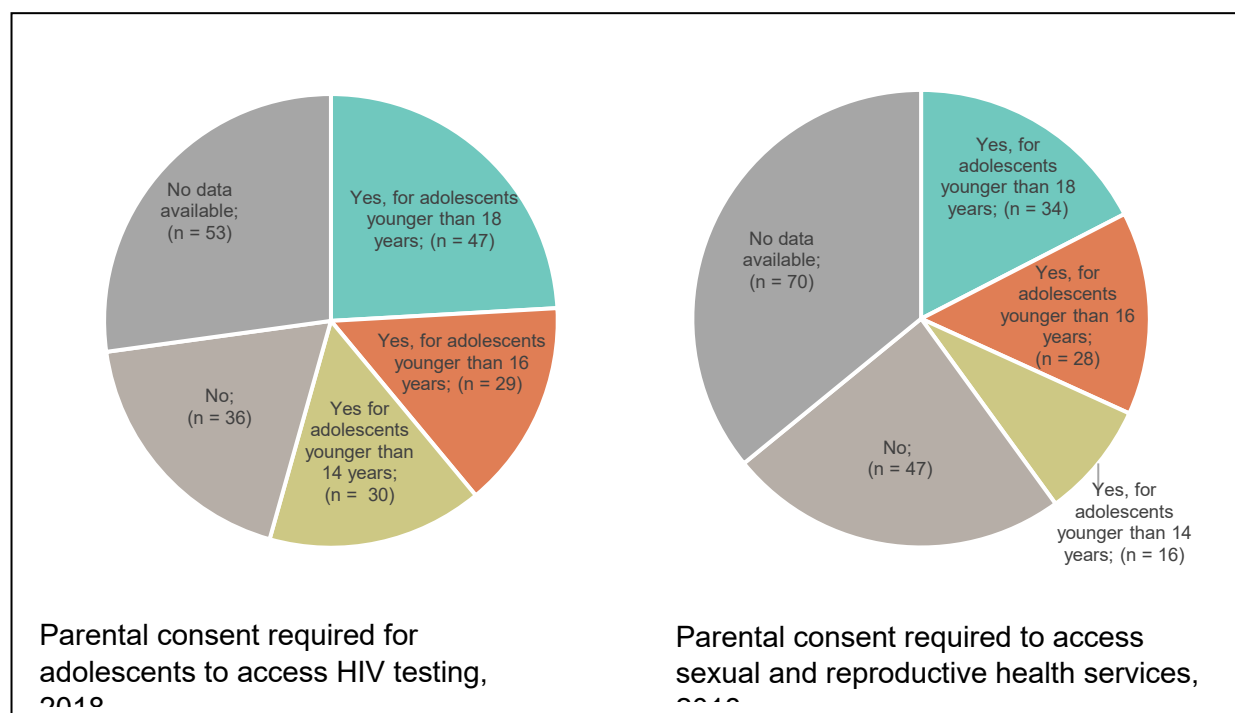
Note: The 21 focus countries Angola, Botswana, Burundi, Cameroon, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Eswatini, Ethiopia, Ghana, Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, South Africa, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe.

Continued high HIV incidence among pregnant and breastfeeding women is contributing to new HIV infections among children. The substantial number of new HIV infections among pregnant and breastfeeding women underscores the need to understand which pregnant women are at higher risk of infection and to intensify prevention services as part of antenatal care and post-natal care (Figure 31). Of the seroconversions that occurred among pregnant and breastfeeding women in the 21 focus countries in 2019, 43% were among young women aged 15–24 years. Those incident infections among young women resulted in an estimated 30 000 new infections among children. Most new HIV infections in children that stem from the mothers' seroconverting during pregnancy and breastfeeding occur in eastern and southern Africa.

It is essential to improve young women's access to combination HIV prevention to protect them from HIV infection and reduce the number of new infections among children (see section on Combination HIV Prevention: special focus on adolescent girls and young women, youth, and key populations). To reduce young women's risk of HIV acquisition during pregnancy or breastfeeding, Kenya is rolling out PrEP services for this population. Other prevention strategies with proven effectiveness for young women include combination prevention services that target high-risk women and high-incidence settings. HIV self-testing is potentially useful for increasing timely HIV diagnosis among young women during pregnancy or breastfeeding.

Unequal gender power relations can increase the risk of HIV acquisition among women and especially young women. As well as specifically focusing on reducing HIV risks among young pregnant and breastfeeding women, intensified efforts are needed more broadly to increase access to combination prevention and reduce gender inequality for all women of reproductive age. Age-of-consent laws that impede young women's access to HIV testing and sexual and reproductive health services should be reformed (Figure 32).

Figure 32. Countries with laws requiring parental consent for adolescents to access sexual and reproductive health services, among 197 countries, 2018



Source: UNAIDS Global AIDS Monitoring, 2019 (see <https://aidsinfo.unaids.org/>).
Note: n = number of countries giving this reply.

Future strategic directions: key questions for consideration

- **What is needed to overcome barriers to women living with HIV accessing HIV treatment during pregnancy and breast-feeding?**

In settings where antenatal care service uptake is low or declining, what service models can be more effective for reaching women? What services or interventions are needed to ensure that women who are members of key populations are welcome and supported in these services?

- **What strategic actions are needed to increase coverage of ART among pregnant women in settings where coverage is low?**

What specific actions are needed to rapidly increase coverage in the Democratic Republic of the Congo, Nigeria and other parts of western and central Africa where coverage is low? What specific actions are needed to ensure that antenatal care settings in low-prevalence settings are using behavioural screening and HIV testing protocols to identify and address the needs of pregnant women who belong to key populations or are the partners of key population members?

- **What strategic actions are needed to support pregnant and breastfeeding women to remain engaged in HIV treatment services throughout and beyond those time periods?**
- **What strategic actions are needed to reduce new HIV infections among women during pregnancy and breastfeeding?**
- **How can we best translate expressions of political commitment on the elimination agenda into the effective actions and investments that are needed to prevent vertical transmission?**

- ***How can we ensure access for women who belong to key populations to the comprehensive services and support they need to prevent vertical transmission and protect their own health?***

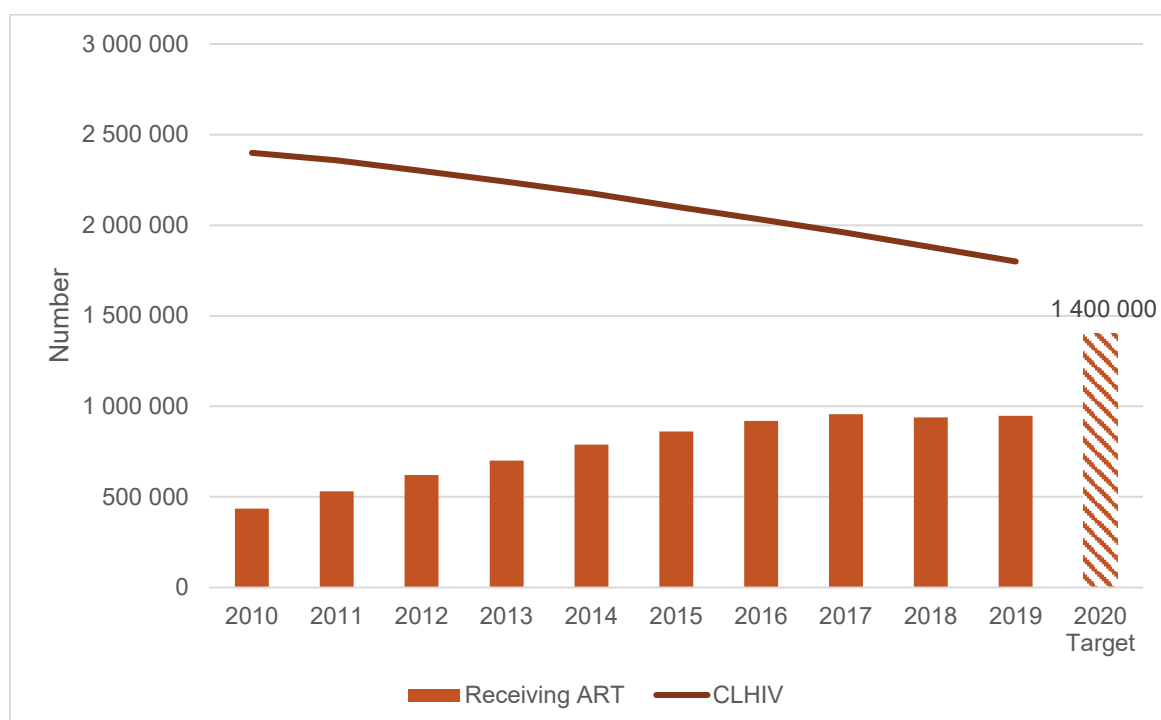
Paediatric treatment

Status report

HIV treatment coverage among children living with HIV (53% in 2019) has plateaued at a level well below coverage for adults (68%). The 950 000 children who were accessing ART in 2019 was well below the 1.4 million Fast-Track target for 2020 (Figure 33). An estimated 850 000 children living with HIV were not receiving ART in 2019. The five countries that account for the largest number of children living with HIV who are not receiving ART are (in order of magnitude) South Africa, Nigeria, Mozambique, the Democratic Republic of the Congo and Kenya.

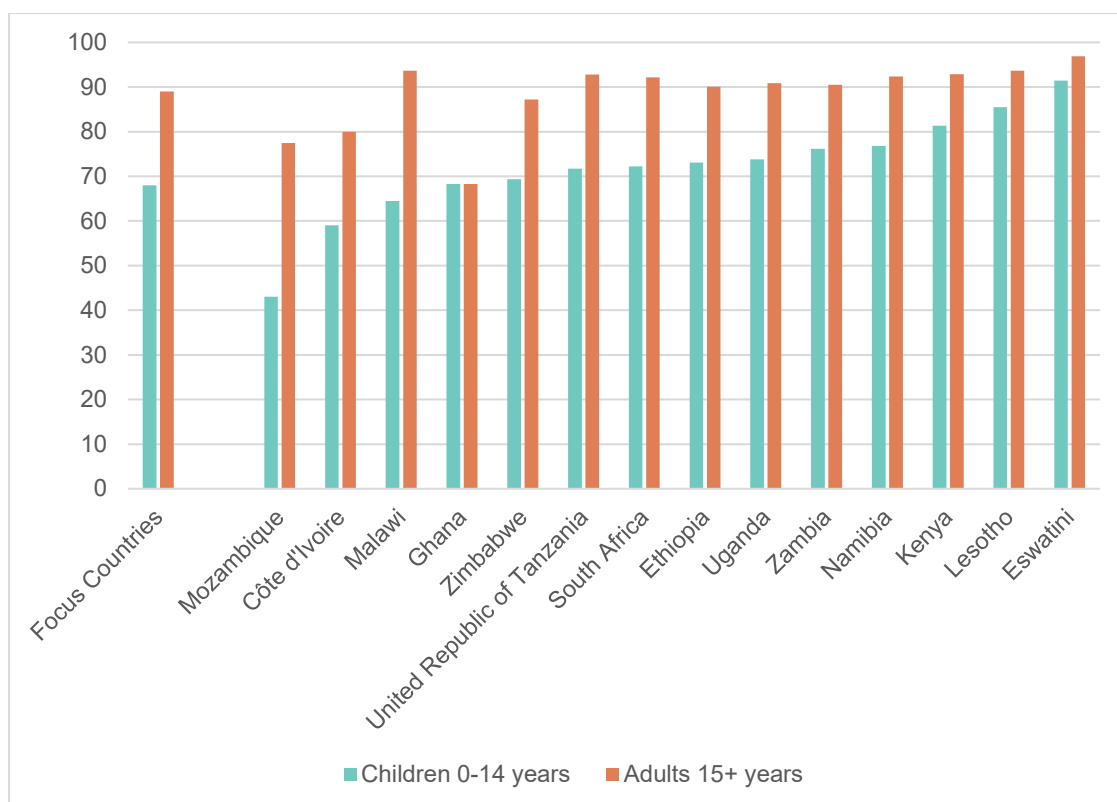
Current testing approaches miss many children, including those who acquire HIV during breastfeeding. Among children who do receive HIV treatment, outcomes are frequently worse compared to adults in the same country (Figure 34). Although children accounted for 5% of people living with HIV in 2019, they represented 14% of all AIDS-related deaths, with most of those deaths occurring in the first four years of life. Consequently, more than two-thirds (69%) of children living with HIV who were not receiving treatment are aged 5–14 years (Figure 35).

Figure 33. Number of children (0–14 years) living with HIV (CLHIV) and receiving antiretroviral therapy (and 2020 target), global, 2010–2019



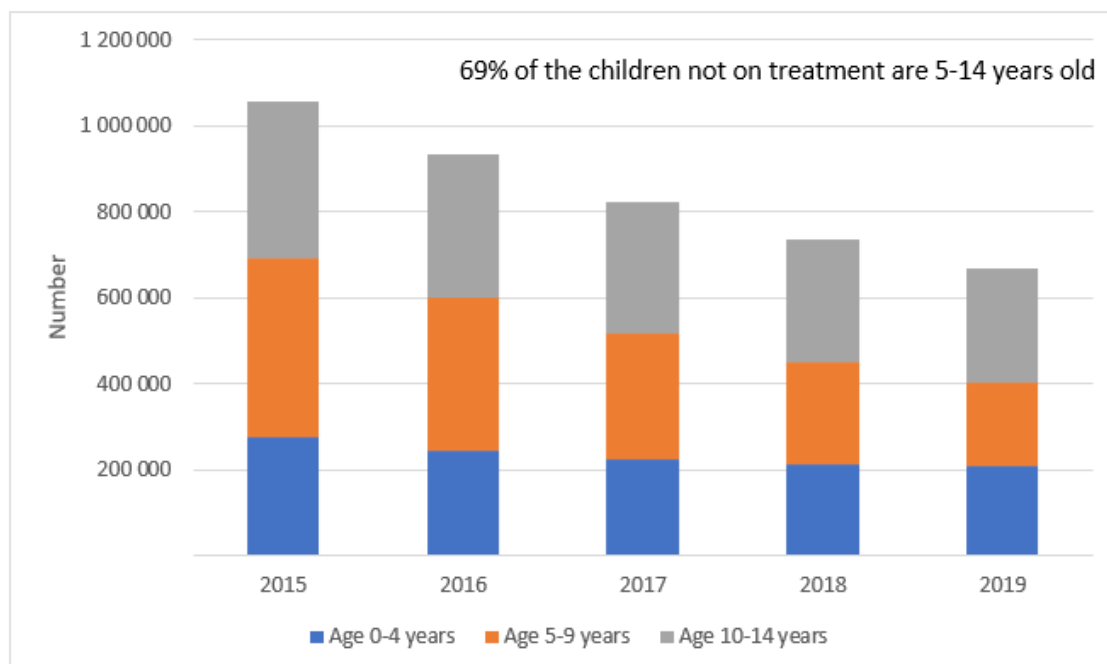
Source: UNAIDS epidemiological estimates, 2020 (see <https://aidsinfo.unaids.org/>).

Figure 34. Viral load suppression among adults (15 years and older), and children (aged 0–14 years), selected focus countries, 2019



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

Figure 35. Number of children (aged 0–14 years) living with HIV not on antiretroviral therapy, 21 focus countries, 2015–2019



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

What is working and needs to be sustained

The paediatric treatment agenda has attracted political attention. The Vatican hosted a series of meetings among key stakeholders, including clinicians, drug companies and humanitarian agencies, to strategize actions that can close the paediatric treatment gap. The third leg of the Start Free Stay Free AIDS Free initiative set an ambitious target of reaching 1.6 million children living with HIV with treatment by 2018. While these initiatives succeeded in raising the political profile of the paediatric HIV treatment agenda, they have not led to the transformative actions that are needed to close the treatment gap for children.

The evidence base for paediatric HIV testing has strengthened. It is now clear that family testing is a highly effective means of identifying children who are living with HIV but not receiving HIV treatment (46). Among PEPFAR-supported programmes, a modest increase (from 9% to 12%) in the proportion of family testing among children's HIV tests overall in 2018–2019 generated a marked increase in the proportion of newly diagnosed HIV testing identified through index testing (from 17% to 28%), underscoring the potential of family testing to close gaps in knowledge of HIV status among children (47). UNICEF and UNAIDS have developed guidance on family testing scale-up in western and central Africa.

There has been some progress towards optimizing paediatric regimens. Under the umbrella of the Paediatric Antiretroviral Drug Optimization group, WHO has convened diverse stakeholders to strategize ways to expand the array of child-appropriate ARV formulations and to improve the effectiveness and durability of paediatric regimens. Tailored “four-in-one” regimens have been made available for children, and dolutegravir was recently approved for infants and children above four weeks of age and weighing more than 3 kg (48).

Where the response is falling short

Current testing approaches miss many children living with HIV. The excessive number of children living with HIV but not receiving treatment stems primarily from two testing gaps: (1) low coverage of early infant diagnostic (EID) services; and (2) the lack of testing options for older children who are missed by EID efforts, especially children who acquire HIV during breastfeeding. Had EID been available at scale in 2019, an additional 75 000 children (or roughly 10% of those who are living with HIV but not receiving treatment) would have been diagnosed (49). In Namibia, which prioritized early roll-out of EID, treatment coverage among children is similar to coverage among adults.

Immediate steps are needed to ensure universal access to EID services. As experience with point-of-care EID in eight countries in sub-Saharan Africa has shown, these platforms can reduce turnaround time for testing results from a median of 55 days (for traditional EID) to less than one day (50). Swifter scale-up of point-of-care EID is needed. In 2020, five high-burden countries (Botswana, Burundi, Namibia, Nigeria and South Africa) had no policy in place for point-of-care EID.

Family testing strategies need to be used more extensively to identify older children living with HIV. At the moment, the approach is being used most widely in Mozambique, the United Republic of Tanzania and Zambia. Countries with large treatment gaps among children, such as the Democratic Republic of the Congo and Nigeria, should use these strategies.

Sub-optimal treatment options for children contribute to poor paediatric HIV outcomes. Many countries have yet to prioritize the transition to optimized treatment regimens and continue to use nevirapine-based regimens which are associated with high rates of loss-to-follow-up among paediatric HIV patients. Rapid introduction and scale-up of newly approved dolutegravir-based regimens is urgent. Among children infected during breastfeeding, missed by EID and subsequently diagnosed with HIV, retention in care is poor, due in part to continued reliance in many settings on sub-optimal lopinavir-based regimens (51).

Stigma, discrimination and challenges faced by caregivers undermine high uptake of paediatric HIV treatment and strong retention in care. Caregivers and families require enhanced

psychosocial and practical support, as well as adequate knowledge about paediatric treatment. Children living with HIV must navigate multiple transitions, including the transition from paediatric to adolescent care and then from adolescent to adult services. There is a need for innovations and child-centred support to facilitate smooth transitions, ensure continuity of care and tailor support as children grow older and develop.

Table 4. Policies for paediatric treatment, focus countries, 2019

Country	Dolutegravir first-line for children ≥20 kg	Lopinavir first-line for children <20 kg	Multimonth dispensing, 3 or 6 months	Point-of-care early infant diagnosis policy	Virological testing at nine months
Angola	✓	✓	✓	✓	✓
Botswana	✓	✓	^a	x	Partial
Burundi	✓	^a	✓	x	^a
Cameroon	✓	✓	>2 years	✓	✓
Chad	✓	✓	^a	✓	Partial
Côte d'Ivoire	✓	✓	✓	✓	Partial
Democratic Republic of the Congo	✓	✓	✓	✓	✓
Eswatini	✓	✓	>2 years	✓	✓
Ethiopia	✓	✓	✓	✓	✓
Ghana	✓	✓	^a	✓	✓
Kenya	✓	✓	✓	✓	✓
Lesotho	✓	✓	✓	✓	✓
Malawi	✓	✓	✓	✓	✓
Mozambique	✓	✓	>2 years	✓	✓
Namibia	✓	✓	✓	x	✓
Nigeria	✓	✓	^a	x	✓
South Africa	✓	✓	>5 years	x	✓
United Republic of Tanzania	✓	✓	>5 years	✓	✓
Uganda	✓	✓	^a	✓	✓
Zambia	✓	✓	>2 years	✓	✓
Zimbabwe	✓	✓	✓	✓	✓

^a not available

Source: UNAIDS National Commitments and Policy Instrument, 2020 (see <http://lawsandpolicies.unaids.org/>) and supplemented with data submitted to the World Health Organization.

Many obstacles separate adolescents (10–19 years) living with HIV from quality HIV treatment access and good HIV outcomes. Quantifying treatment coverage and gaps for adolescents living with HIV is challenging due to the lack of data for this age group. However, given the evidence that both children (aged 0–14 years) and young people (aged 15–24 years) have lower HIV treatment coverage than adults, it is clear that more must be done to ensure that

adolescents living with HIV (including those with perinatally acquired HIV and young people who acquire HIV during youth) have robust, equitable access to HIV treatment and support services. Testing and treatment barriers experienced by adolescents living with HIV include the comparatively lower health-seeking behaviours associated with youth, lack of awareness of HIV risk and fear of disclosure. For adolescents who are receiving treatment services, the shortage of youth-friendly treatment services, as well as life transitions during youth, can reduce retention in care and worsen health outcomes. Peer support groups and the routine inclusion of adolescents and young people living with HIV in decision-making on community-led service delivery can improve retention, adherence and viral suppression, but these approaches are not been used widely enough (52).

Political will remains inadequate. Efforts to spotlight the paediatric HIV agenda are losing momentum, in part due to the mistaken assumption that gains in preventing vertical transmission would automatically also lead to gains in meeting children's HIV-related needs. Given the enormity of the paediatric HIV treatment gap and the need for urgent action to close this gap, re-building and sustaining political commitment to address the needs of children living with HIV is a critical priority.

Future strategic directions: Key questions for consideration

- **What strategic actions are needed to sharply elevate paediatric HIV treatment on the political agenda?**

Despite leadership by African First Ladies and major international organizations to generate stronger action from decision-makers, we are seeing insufficient results. Who else can help unblock political commitment on paediatric HIV treatment? What arguments—humanitarian, economic, health, development—would be most persuasive to draw greater attention to paediatric HIV treatment, and what data and advocacy approaches will be needed to make these arguments compelling?

- **What strategic actions are needed to close the paediatric HIV testing gap?**

How can the scale-up of point-of-care EID be accelerated? In settings where point-of-care EID is unavailable, how can turnaround time of centralized EID be improved to ensure that results are returned to the mother and baby pair for action within days rather than weeks or months? What actions are needed to catalyze rapid scale-up of family testing, especially in settings with large treatment gaps such as the Democratic Republic of the Congo and Nigeria?

- **What strategic actions are needed to expand the transition to better child-appropriate regimens and formulations and to optimize children's HIV treatment options?**

How can rapid roll-out of dolutegravir-based regimens be achieved? What actions are needed to incentivize investments for the development of improved regimens and formulations for children living with HIV?

- **What strategic actions are needed to ensure that caregivers and families receive the psychosocial support and treatment literacy they need to support the best-possible HIV outcomes for children?**
- **What strategic actions are needed to increase HIV treatment coverage and ensure good treatment outcomes for adolescents living with HIV?**

Combination HIV prevention: special focus on adolescent girls and young women, youth and key populations

Combining and strategically layering different prevention approaches will avert more new HIV infections and enable programmes to tailor approaches to the needs of individuals and communities. A failure to use effective prevention approaches on a wide-enough scale has left the world off-track to achieve the prevention targets for 2020 and is holding back progress towards ending the AIDS epidemic.

- HLM Target 2: Ensure access to combination prevention options, including PrEP, voluntary medical male circumcision, harm reduction and condoms to at least 90% of people by 2020, especially young women and adolescent girls in high-prevalence countries and key populations—gay men and other men who have sex with men, transgender people, sex workers and their clients, people who inject drugs and prisoners.
- Strategic Result Area 3: Young people, especially young women and adolescent girls, access combination prevention services and are empowered to protect themselves from HIV.
- Strategic Result Area 4: Tailored HIV combination prevention services are accessible to key populations, including sex workers, men who have sex with men, people who inject drugs, transgender people and prisoners, as well as migrants.

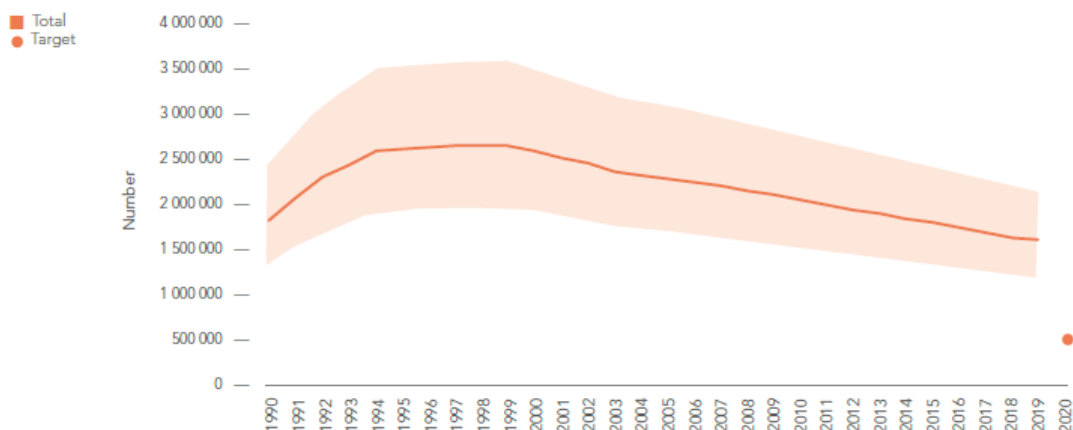
Status report

An estimated 1.7 million [1.2 million – 2.2 million] people were newly infected with HIV in 2019—a 23% decline compared to 2010, but more than three times higher than the global target of less than 500 000 new infections in 2020 (Figure 36).

Progress in preventing new infections varies by region. The number of new infections decreased by 38% in eastern and southern Africa from 2010 to 2019 but by 25% in western and central Africa, and by 29% in the Caribbean, 12% in Asia and the Pacific, and 15% in western and central Europe and North America. Elsewhere, new infections have increased since 2010: by 72% in eastern Europe and central Asia, 22% in the Middle East and North Africa and 21% in Latin America.

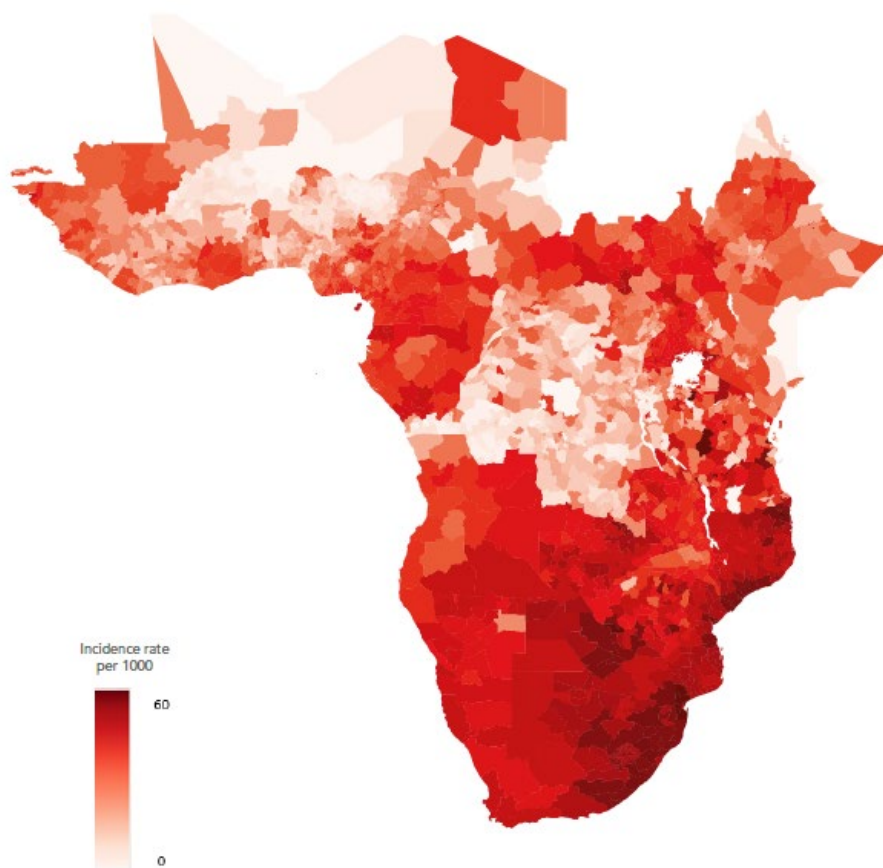
Women and girls accounted for 48% of new HIV infections globally in 2019 and for 59% of new infections in sub-Saharan Africa. The number of new HIV infections among women fell by 23% globally from 2010 to 2019 and by 30% in sub-Saharan Africa.

Figure 36. Number of new HIV infections, global, 1990–2019



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

Figure 37. HIV incidence among adolescent girls and young women (15–24 years), subnational levels, sub-Saharan Africa, 2019



Source: UNAIDS epidemiological estimates, 2020 (see <https://aidsinfo.unaids.org/>). For methodology, see: Seizing the moment: tackling entrenched inequalities to end epidemics. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/2020_global-aids-report_en.pdf).

Note: HIV incidence estimated as new HIV infections per 1000 person-years at risk.

Countries: For selected countries in sub-Saharan Africa that had the data required to produce subnational HIV estimates.

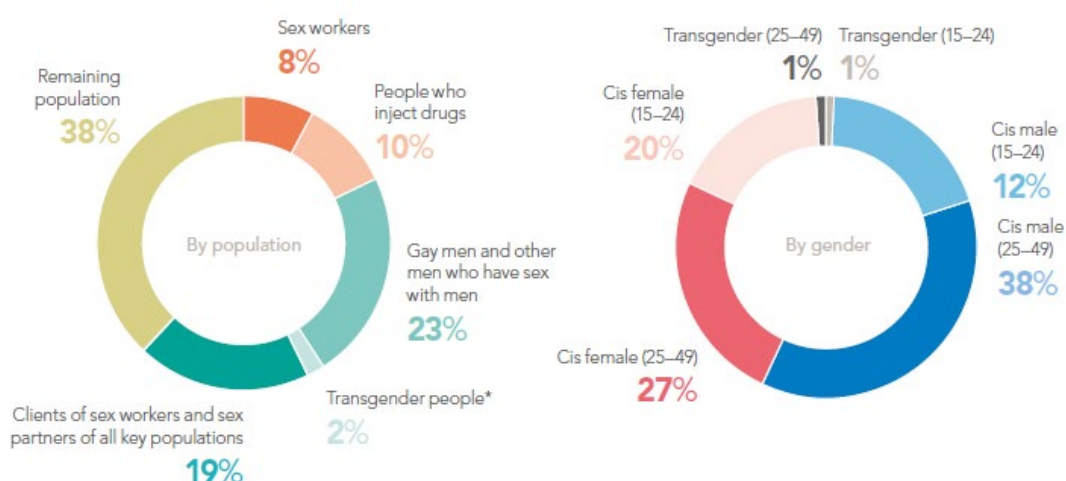
The estimated 280 000 young women (15–24 years) who newly acquired HIV in 2019 marked a 34% decline since 2010, but that number was almost three times larger than the 2020 target of fewer than 100 000 per year by 2020. Across sub-Saharan Africa, HIV incidence rates tend to be highest among young women aged 20–24 years. In some settings, particularly those with

extremely high HIV incidence, adolescent girls aged 15–19 years already experience very high incidence, and HIV incidence remains high among women aged 25–29 years, as well (Figure 37). Adolescent girls and young women up to the age of 29 have to be prioritized in HIV prevention programmes within those epidemic settings.

The epidemic's disproportionate burden among key populations (including gay men and other men who have sex with men, people who inject drugs, sex workers, transgender people and prisoners) continues to grow (Figure 38). In 2019, these populations and their sex partners accounted for an estimated 62% of new HIV infections globally. Compared to the general population, the risk of acquiring HIV is on average about 26 times higher for gay men and other men who have sex with men, 29 times higher for people who inject drugs, 30 times higher for sex workers and 13 times higher for transgender people than for adults in the general public.

Globally, HIV incidence among people who inject drugs, sex workers and transgender people since 2010 has remained high but relatively stable since 2010. New infections are on the rise among gay men and other men who have sex with men, who comprised 23% of new infections globally in 2019, including more than 40% of new infections in Asia and the Pacific and Latin America, and nearly two thirds (64%) of new infections in western and central Europe and North America. Marked increases in new infections among gay men and other men who have sex with men were reported in Brazil, Mexico, Pakistan and Philippines.

Figure 38. Distribution of new HIV infections by gender and population, global, 2019

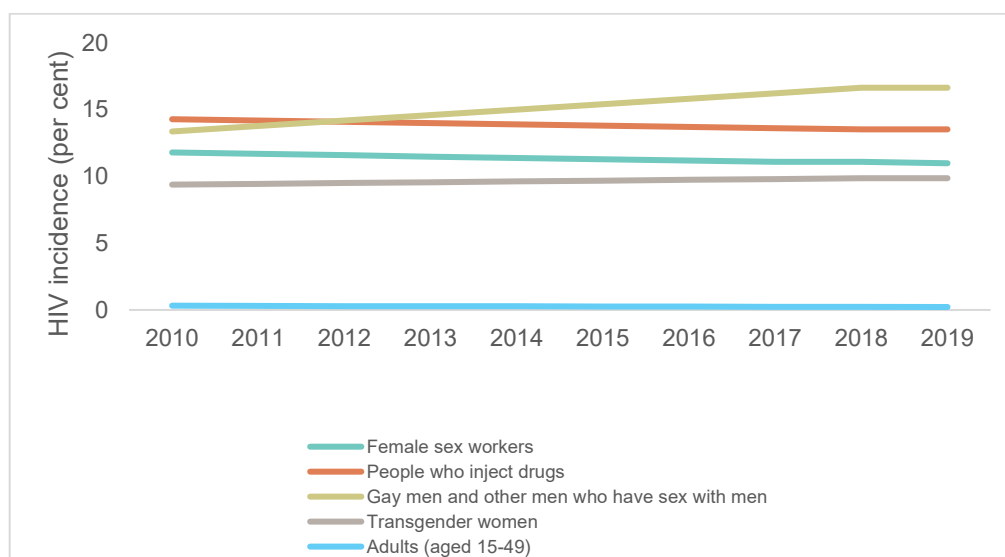


*Data only included from Asia and the Pacific, the Caribbean, eastern Europe and central Asia, Latin America, and western and central Europe and North America.

Source: UNAIDS epidemiological estimates, 2020 (see <https://aidsinfo.unaids.org/>); UNAIDS special analysis, 2020. For methodology, see: Seizing the moment: tackling entrenched inequalities to end epidemics. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/2020_global-aids-report_en.pdf).

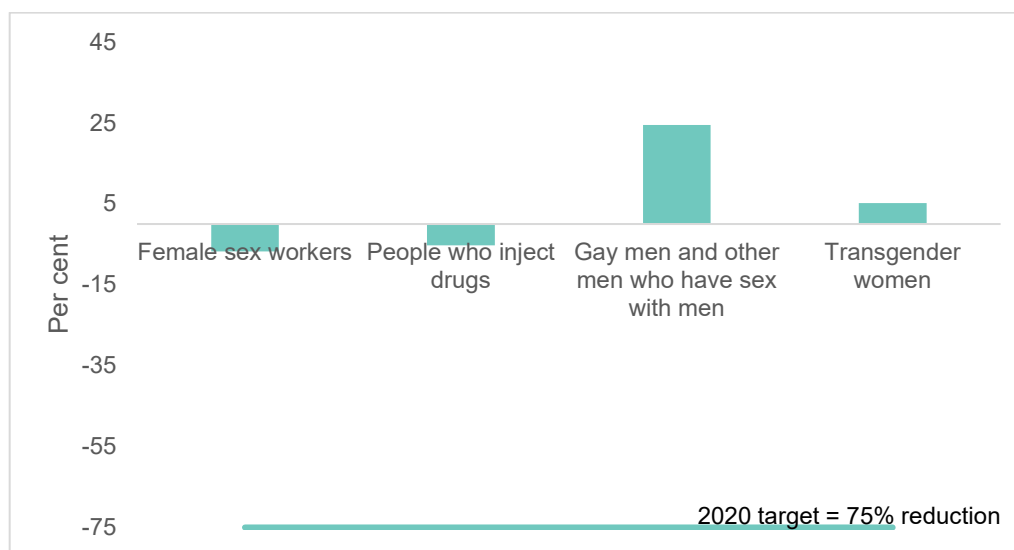
Note: Epidemiologic data from transgender populations are available primarily from the Asia and the Pacific, Caribbean and Latin America regions. Fewer data are available from the western and central Europe and North America region. Limited programme data are available from western and central Africa and eastern and southern Africa. Furthermore, data are primarily for transwomen and tend to be for transwomen who sell sex. Only a few data points were available from transmen.

Figure 39. HIV incidence among key populations, global, 2010–2019



Source: UNAIDS epidemiological estimates, 2020 (see <https://aidsinfo.unaids.org/>); UNAIDS special analysis, 2020.

Figure 40. Changes in HIV incidence among key populations 2010–2019



Source: UNAIDS epidemiological estimates, 2020 (see <https://aidsinfo.unaids.org/>); UNAIDS special analysis, 2020.

COVID-19 and HIV prevention

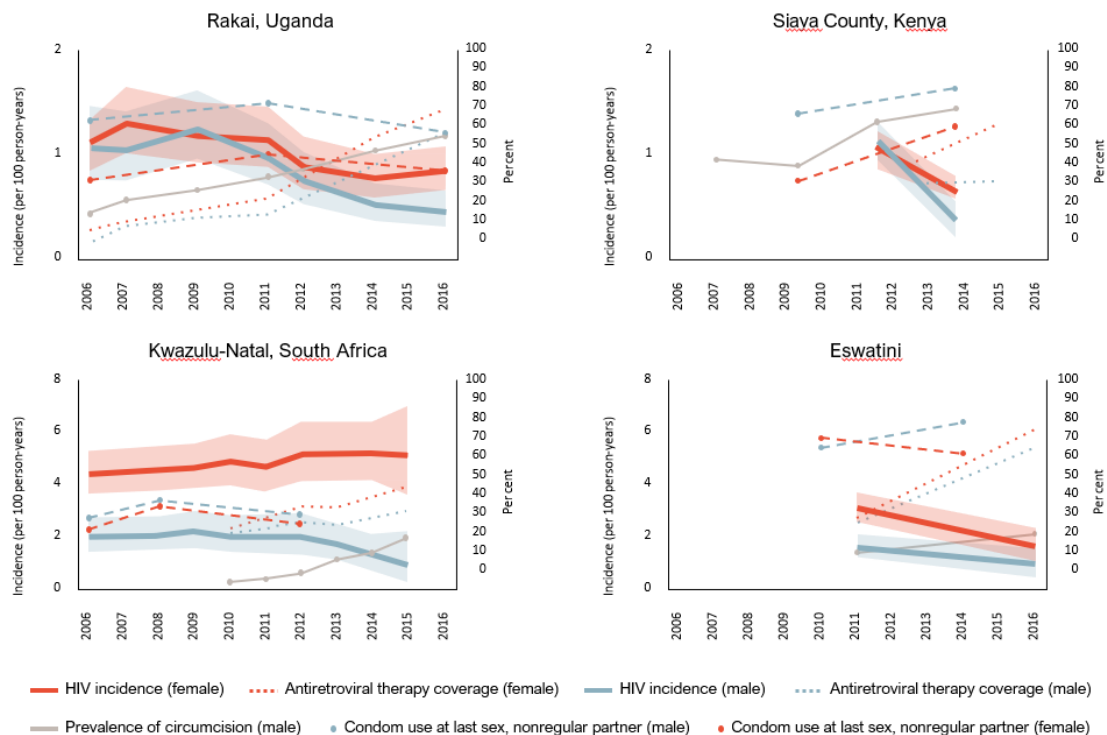
The unprecedented disruptions caused by COVID-19 are affecting multiple HIV prevention services, including voluntary medical male circumcision, condom production and distribution, and access to PrEP and HIV treatment. Lockdowns and physical distancing requirements have also forced a shift from in-person peer outreach activities to virtual ones. Countries in sub-Saharan Africa, Asia and the Pacific, and the Caribbean are increasing their use of social media and messenger apps to deliver combination HIV prevention information and services.

What is working and needs to be sustained

We have the tools to sharply reduce the number of new HIV infections, since evidence clearly demonstrates that combination prevention works. Evidence from both clinical trials and real-world implementation of combination prevention shows the effectiveness of diverse, layered HIV prevention strategies and approaches. Case studies of high-burden countries that have sharply lowered HIV incidence underscore the importance of changing sexual risk behaviours and the added prevention benefits of increased coverage of ART. Studies in Kenya and South Africa indicate that prevention and treatment work best when brought to scale simultaneously (Figure 41) (53–56).

Modelling exercises have quantified the number of infections averted for key prevention interventions. It is estimated that voluntary medical male circumcision averted about 250 000 new HIV infections by 2018 and could avert 1.6 million new infections by 2030, along with preventing other sexually transmitted infections, as well (57). It is estimated that condom use has averted nearly 50 million HIV infections since the beginning of the HIV response (58).

Figure 41. Coverage of HIV services and HIV incidence, by sex, four locations in eastern and southern Africa, 2006–2017



Sources: Grabowski MK, Serwadda DM, Gray RH, Nakigozi G, Kigozi G, Kagaayi J et al. HIV prevention efforts and incidence of HIV in Uganda. *N Engl J Med*, 2017;377:2154-66; Uganda Demographic and Health Surveys, 2006, 2011, 2016; Vandormael A, Akullian AN, Dobra A, de Oliveira T, Tanser F. Sharp decline in male HIV incidence in a rural South African population (2004–2015). Abstract 46. Conference on Retroviruses and Opportunistic Infections (CROI), Boston (MA), 4–7 March 2018; Personal communication with A. Vandormael, May 2018; South African National HIV Prevalence, HIV Incidence, Behaviour and Communication Survey, 2005, 2008; South African National HIV Prevalence, Incidence and Behaviour Survey, 2012; Nkambule R, Nuwagaba-Biribonwoha H, Mnisi Z, Ao TT, Ginindza C, Duong YT et al. Substantial progress in confronting the HIV epidemic in Swaziland: first evidence of national impact. International AIDS Society Conference, Paris, 23–26 July 2017. Abstract MOAX0204LB; Swaziland HIV Incidence Measurement Survey, descriptive data tables, 2014; Justman J, Reed JB, Bicego G, Donnell D, Li K, Bock N et al. Swaziland HIV Incidence Measurement Survey (SHIMS): a prospective national cohort study. *Lancet HIV*. 2017 Feb;4(2):e83-92; Swaziland HIV Incidence Measurement Surveys, 2016, preliminary findings; Multiple Indicator Cluster Survey, 2010, 2014; Borgdorff MW, Kwaro D, Obor D, Otieno G, Kamire V, Odongo F et al. HIV incidence in western Kenya during scale-up of antiretroviral therapy and voluntary medical male circumcision: a population-based cohort analysis. *Lancet HIV*. 2018;5(5):e241-9; Kenya Demographic and Health Survey, 2008–2009 and 2014; National AIDS Control Council, Kenya HIV country profiles, 2016; Spectrum 2018.

Combination HIV prevention entails an expanding array of biomedical, behavioural and structural interventions. Studies have found that several interventions—including ART, PrEP, condoms and sterile injecting equipment—have a very high level of effectiveness (80–100%) if consistently used. Evidence also shows that voluntary medical male circumcision is an effective one-time procedure which reduces men's risk of acquiring HIV from female partners by 38–66% (59). Opioid substitution therapy can reduce the risk of acquiring HIV by up to 54% for people who inject drugs and has a range of additional health and social benefits (60).

Comprehensive sexuality education has been shown to improve HIV-related knowledge and encourage safer sexual behaviours. It is also relatively inexpensive: one multicountry evaluation found that comprehensive sexuality education need avert only 4% of projected HIV infections to be cost-saving (61). Other behavioural interventions also have positive outcomes in specific contexts. Short-term HIV prevention campaigns in schools have been found to be effective in reducing sexual relations with older higher-risk partners, as well as teenage pregnancies (62). Combined behavioural and structural interventions using gender-transformative HIV prevention approaches are effective in changing sexual behaviours and in preventing HIV in some settings (63, 64).

Two studies have found that the dapivirine vaginal ring reduced women's risk of acquiring HIV by more than a quarter (65, 66). The European Medicines Agency issued a positive opinion on the ring and the International Partnership on Microbicides will seek regulatory approval in sub-Saharan Africa, where women are disproportionately at risk of HIV infection. Recent trial results have shown injectable cabotegravir to be superior to oral PrEP among men and transgender women who have sex with men, findings which might spark greater PrEP uptake (67). Findings from a similar study involving African cis-gender women are pending.

The effectiveness of various structural approaches is also evident, including reforms to laws that criminalize drug use. Criminalization has been shown to undermine HIV prevention and treatment (68). It is estimated that decriminalization of sex work would reduce 33–46% of new HIV infections over a decade (69). Cash transfers have proven effective in some contexts in reducing HIV risks among young women (70, 71).

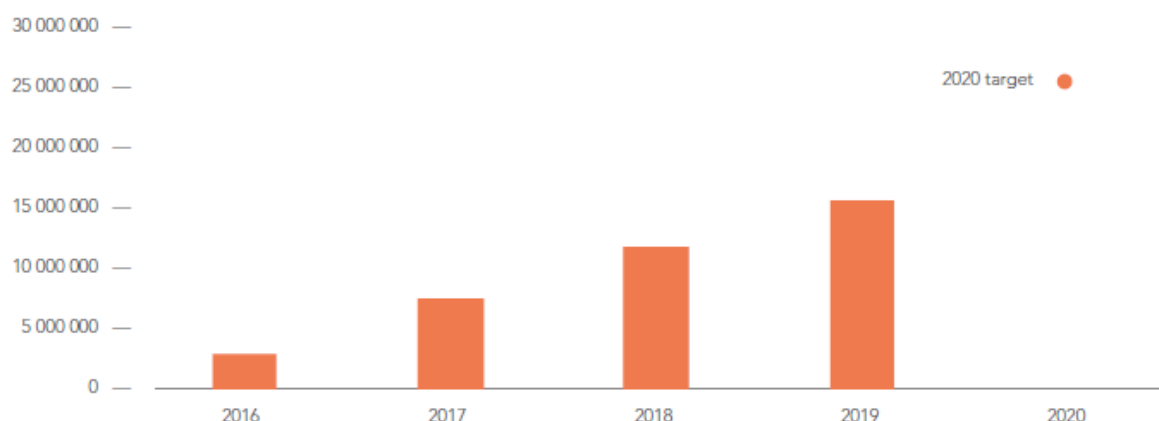
Prevention programmes are being expanded and there is increasing uptake of several highly effective prevention approaches. The number of people reported to have received PrEP at least once in the previous year rose from fewer than 2000 in 2016 to more than 590 000 in 2019. In places where PrEP has been scaled up—e.g. Australia, and many countries in western and central Europe and North America—HIV incidence among gay men and men who have sex with men has declined. New data from the SEARCH trial indicates that scale-up of PrEP alongside intensified health services reduced HIV infections in 16 communities in Kenya and Uganda by 74% (72).

Similarly, implementation of effective harm reduction has improved prevention outcomes in Ukraine, where participants of peer-led community outreach are now more likely to use sterile injecting equipment, condoms and opioid substitution therapy and are achieving better outcomes on all stages of the HIV treatment cascade (73).

Strong demand persists for voluntary medical male circumcision, with more than 15 million men and boys in 15 priority countries having undergone this procedure since the beginning of 2016 (Figure 42).

In Zimbabwe, roll-out of the national Sisters programme, which offers clinical services and community engagement, has been associated with reductions in new HIV infections among female sex workers, although not in all age groups (74).

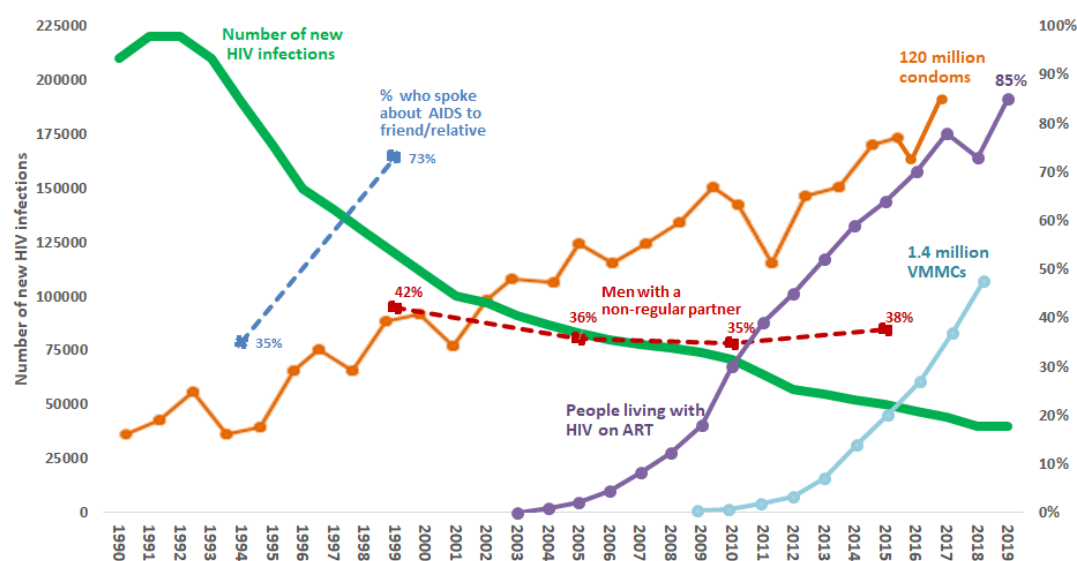
Figure 42. Cumulative number of males voluntarily medically circumcised, 15 priority countries, 2016–2019



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

Note: The 15 priority countries are: Botswana, Eswatini, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, South Africa, South Sudan, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe.

Figure 43. Cumulative effect of scale-up of combination HIV prevention, Zimbabwe, 1990–2019



Interpersonal	Peer education programs, school-based HIV education				National behavior change program	DREAMS
Media	TV, radio	Call-in programs, songs		Prime time soap	Campaigns on behaviors/ demand	
HTS	Low coverage			Scale up of voluntary and provider-initiated testing		+Self-testing
ARV-based			Low coverage	Initial scale up	Rapid scale up	+DSD, +PrEP
Condoms	Public sector distribution		Public sector distribution + scale up of social marketing			
VMMC					Policy	Scale up
Key pop's	Sex worker peer education projects			National SW program		+ Other KPs

Source: UNAIDS epidemiological estimates, 2020 (see <https://aidsinfo.unaids.org/>); UNAIDS Global AIDS Monitoring, 2020 (see <https://aidsinfo.unaids.org/>); UNAIDS National Commitments and Policy Instrument, 2019–2020 (see <http://lawsandpolicies.unaids.org/>); Voluntary medical male circumcision. Progress brief. Geneva: UNAIDS, WHO; 2019; STATcompiler [database]. The DHS Program (www.statcompiler.com, accessed 29 July 2020); Halperin DT, Mugurungi O, Hallett TB, Muchini B, Campbell B, Magure T et al. A surprising prevention success: why did the HIV epidemic decline in Zimbabwe? PLoS Med. 2011;8(2):e1000414.

There is encouraging progress in the provision of comprehensive sexuality education, with 80% of countries surveyed reporting the existence of supportive policies or strategies. Most countries in Asia and the Pacific (21 of 25) have national HIV strategies that refer to the role of education,

while most countries in western and central Asia have formal policies on life skills-based HIV sexuality education. Health ministers in Latin America and the Caribbean have committed to nationwide school-based sexuality and HIV education (75). Although policies on comprehensive sexuality education are increasingly aligned with national norms, the translation of these policies into actual programmes lags in many settings, which adds to young people's vulnerability to HIV.

A number of countries have had striking success in reducing HIV incidence through the support of scaled-up combination prevention programmes. In Cambodia, a combination of strong political leadership, outreach to key populations, robust condom programming and high levels of viral load suppression led to a 95% reduction in new HIV infections over two decades (76). Likewise, the scale-up of combination prevention in Zimbabwe was associated with a reduction in new HIV infections of at least 80% over 25 years (Figure 43) (77). In South Africa, where new HIV infections have decreased by 53% since 2010, reductions in HIV incidence between 2000 and 2008 were partially attributed to increased condom use (78). Since 2010, South Africa has achieved one of the steepest declines in HIV incidence in the region, a feat that is attributed to the country's simultaneous expansion of ART and voluntary medical male circumcision (79).

There is new momentum towards strengthening HIV prevention efforts. The launch of the Global HIV Prevention Coalition in 2017 focused renewed attention and efforts on achieving global prevention targets. Although the Coalition has yet to catalyze the sea change in prevention access that is urgently needed, all 28 focus countries have developed national prevention targets in line with the Coalition's Road Map, and they have acted to revitalize their HIV prevention and leadership structures. Focus countries report that the Coalition has strengthened accountability through the use of prevention scorecards, regular reporting and annual joint reviews among stakeholders.

Where the response is falling short

Political will on HIV prevention is still lacking. Despite the momentum which the Global HIV Prevention Coalition has brought to HIV prevention, political commitment for stepped-up action remains inadequate. This is especially true with respect to combination prevention and harm reduction programming for key populations, which remains heavily dependent on external financial and technical support. Many countries remain reluctant to support or implement proven prevention strategies for key populations, such as opioid substitution therapy and other components of harm reduction for people who inject drugs. In 14 countries that reported relevant data from 2015–2019, coverage of opioid substitution therapy was below 40% in every country except among men in Mauritius and Malaysia. In 10 countries, coverage was below 20% for both men and women.

Insufficient political commitment has also resulted in chronic under-funding of prevention efforts. International development assistance support for HIV prevention decreased by 44% between 2012 and 2017 (80). Domestic investment in HIV prevention, in particular for key populations, remains insufficient. While attention to HIV prevention increased in proposals to the Global Fund in the first half of 2020, many countries face competing priorities and Global Fund allocations on their own will remain insufficient to close coverage gaps, which suggests that a combination of increasing domestic investment, prioritization and efficiency will be required.

Essential prevention strategies have yet to be brought to scale. Although the expanding access to certain prevention interventions is encouraging, access to essential components of combination prevention varies considerably across settings. Key components of combination prevention have yet to be scaled up and there are signs that access to some prevention options is decreasing in some countries. These gaps likely reflect challenges on the supply (i.e. funding and implementation support for specific interventions) and demand (i.e. community demand for specific prevention services) sides. Prevention access gaps undermine combination prevention, which is most effective when multiple prevention and treatment efforts are simultaneously brought to scale and made accessible.

Table 5. Major gaps towards HIV prevention coverage targets (28 Global Prevention Coalition countries, unless otherwise indicated), 2018–2019

Pillar	Indicator (date of assessment)	Latest coverage	2020 target
HIV prevention among adolescent girls and young women	% of high-incidence locations covered (2018)	31%	90%
Key populations	% of key populations <i>who reported receiving at least two prevention services in the past three months</i> (2018)	SW: 47% MSM: 33% PWID: 32%	90%
Condoms	% of condom distribution need met (2018)	55%	90%
VMMC	% of VMMC target achieved (2018)	15 million VMMCs	25 million VMMCs
PrEP	Number of people on PrEP (global data) (2019)	590,000	3 million

Source: Global HIV Prevention Coalition special analysis of Global AIDS Monitoring 2019 and 2020 (see <https://aidsinfo.unaids.org/>).

The defunding of condom social marketing programmes has led to a drop in sales and use of male condoms in sub-Saharan Africa. In several high-burden countries, reported condom use at last sex has declined, leaving the world far short of the Fast-Track target of 90% condom use target. Although PrEP use is increasing, current uptake (590 000 in 2019) is far less than the global target of 3 million people receiving PrEP by the end of 2020. Similarly, current uptake trends indicate that the world will not meet its target of providing voluntary medical male circumcision to 25 million people by 2020.

Prevention coverage is notably limited for key populations. In six of 13 countries that have conducted surveys since 2016 and reported those data to UNAIDS, less than half of transgender women stated that they were able to access at least two HIV prevention services in the previous three months, as did similar proportions of female sex workers (in 16 of 30 countries), gay men and other men who have sex with men (in 26 of 38 countries) and men who inject drugs (in 10 of 14 countries).

Countries often do not make sufficient use of data to expand prevention programmes and ensure programme quality. Countries are not achieving the desired uptake of effective prevention interventions. Many national HIV programmes are not agile enough to identify and respond to emerging epidemic dynamics, such as the growing burden of infections among key populations or the uneven declines in HIV incidence among men and women in parts of southern Africa following scale-up of combination prevention programmes. Although the importance of targeting specific locations is increasingly recognized, programming is often not sufficiently differentiated by setting. For example, where HIV and viral hepatitis transmission through injecting drug use is primarily concentrated in one or two settings, it might be appropriate to prioritize harm reduction services there rather than nationally. In light of UNAIDS estimate that 20% of districts in sub-Saharan Africa account for about two-thirds of new HIV infections among adolescent girls and young women, accurate targeting is essential to maximize prevention impact and programme efficiency. Innovation has served as an especially critical driver for improved uptake and outcomes for treatment services, but the same commitment to use data to drive innovative problem-solving and gap-closing is not always apparent for prevention programming.

Table 6. New HIV infections among young women (15–24 years), by location, 39 countries in sub-Saharan Africa, 2019

	Population (15-24 years)	Number of new HIV infections	% of new HIV infections
Extremely high-incidence districts (>2.0%)	646 826	16 142	7%
Very high-incidence districts (1.0-2.0%)	5 830 753	73 356	30%
High-incidence districts (0.3-1.0%)	13 723 551	72 700	30%
Medium-incidence districts (0.1-0.3%)	34 542 472	57 597	24%
Low-incidence districts (<0.1%)	45 183 607	20 747	9%

Source: UNAIDS epidemiological estimates, 2020 (see <https://aidsinfo.unaids.org/>); UNAIDS special analysis. For methodology, see: Seizing the moment: tackling entrenched inequalities to end epidemics. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/2020_global-aids-report_en.pdf).

Countries participating in the Global Prevention Coalition have made good progress against the ten 2020 Prevention Roadmap commitments, but some gaps remain, particularly in relation to key population programming and social contracting (Table 7).

For several priority populations there are limited data to guide effective action, and serious gaps exist for key populations. Effective implementation—including quality assurance and improvement, the capacity for rapid shifts in response to emerging needs, granular location and population targeting and a commitment to innovation—requires the reliable collection of detailed data, along with adequate analytic capacity to interpret and use the data. However, data systems relevant to prevention programming are often weak and/or inadequately used. Many countries lack robust size estimations or HIV prevalence estimates for key populations. Even when estimates are available, methodologies can be unreliable. National laws and policies that criminalize key populations often make it difficult and sometimes impossible to collect accurate data to guide prevention programming. While service cascade analyses have been important for increasing uptake of and improving outcomes for HIV treatment and prevention of vertical transmission, they are used less frequently to guide and catalyze implementation of primary prevention services.

Countries urgently need to intensify efforts to eliminate stigma and discrimination, which continue to undermine HIV prevention efforts. This is true generally and but especially salient for key populations. Recent systematic reviews and meta-analyses found that African countries with oppressive anti-LGBT laws have low levels of HIV testing and awareness among gay men and other men who have sex with men, and their size estimates for those populations are either absent or unrealistically low (81, 82). Gay men and other men who have sex with men who live in countries that criminalize same-sex relations are more than twice as likely to acquire HIV as their peers living in countries without such criminal penalties (Figure 44). Those living in countries with severe criminalization are almost five times as likely to acquire HIV as those living in countries without such criminal penalties (83).

Table 7. Progress against the 10 Roadmap actions in 28 Global Prevention Coalition, 2017–2019 countries, 2017–2019

10-point Roadmap 2020 Actions	Timeline	Angola	Botswana	Brazil	Cameroon	China	Cote d'Ivoire	D.R. Congo	Eswatini	Ethiopia	Ghana	India	Indonesia	Iran	Kenya	Lesotho	Malawi	Mexico	Mozambique	Myanmar	Namibia	Nigeria	Pakistan	South Africa	Uganda	Ukraine	Tanzania	Zambia	Zimbabwe
1. Needs assessment	2017																												
2. Prevention targets																													
3. Prevention strategy																													
4. Policy reform																													
5a. KP size estimates																													
5b. Defined KP package																													
5c. AGYW size estimates																													
5d. AGYW package																													
6. Capacity & TA plan																													
7. Social contracting																													
8. Financial gap analysis																													
9. Strengthen monitoring																													
10. Performance review																													
1. Needs assessment	2018																												
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8. Financial gap analysis																													
9. Strengthen monitoring																													
10. Performance review																													
1. Needs assessment	2019																												
2. Prevention targets																													
3. Prevention strategy																													
4. Policy reform																													
5a. KP size estimates																													
5b. Defined KP package*																													
5c. AGYW size estimates																													
5d. AGYW package																													
6. Capacity & TA plan																													
7. Social contracting																													
8. Financial gap analysis																													
9. Strengthen monitoring																													
10. Performance review																													

Done

In progress

Not done

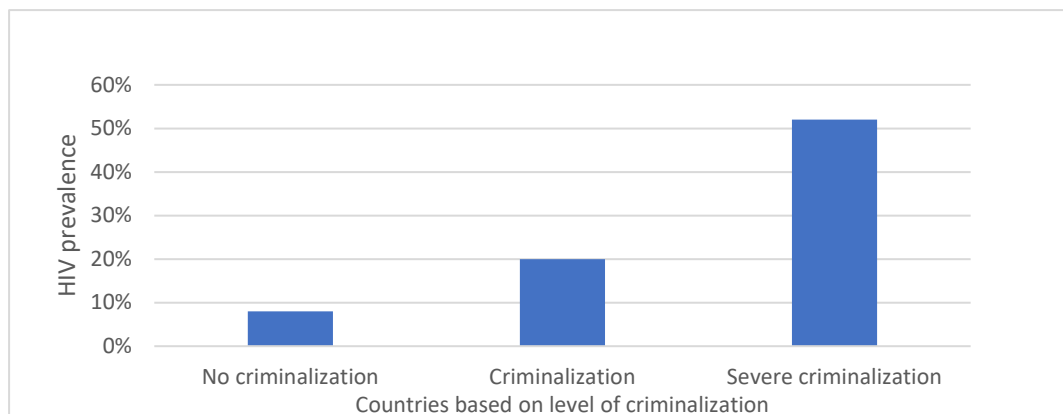
Not applicable

Progress not submitted

* For defined key population packages: countries with packages for all 5 KPs groups were scored as done, 3-4 KP packages were scored as in progress and upto 2 KP packages as not done

Source: Global HIV Prevention Coalition special analysis.

Figure 44. HIV prevalence among gay men and other men who have sex with men and level of criminalization of same-sex relations in 10 countries in sub-Saharan Africa, 2011–2018



Source: Lyons C. Utilizing individual level data to assess the relationship between prevalent HIV infection and punitive same sex policies and legal barriers across 10 countries in sub-Saharan Africa. 23rd International AIDS Conference, 6–10 July 2020. Abstract OAF0403.

Note: The 10 countries are Burkina Faso, Cameroon, Côte d'Ivoire, Gambia, Guinea-Bissau, Nigeria, Senegal, Eswatini, Rwanda and Togo.

HIV prevention efforts need to link with other sectors. To address the many factors that contribute to HIV vulnerability, combination prevention programmes should be integrated, multisectoral and intersectional in their approach. A much stronger evidence base is needed to guide coordinated efforts across the biomedical, behavioural, social and structural domains that affect risk and vulnerability. The multipartner, PEPFAR-led DREAMS initiative uses a multisectoral approach to prevent new infections among adolescent girls and young women. Despite promising results, this approach has yet to be brought to scale in most priority settings. Depending on the setting, greater attention for prevention efforts is needed with respect to such issues as poverty, race, ethnicity and indigenous communities. In light of the flattening of HIV financing, finding ways to encourage other sectors to make needed investments in structural approaches will be needed.

Future strategic directions: key questions for consideration

- **How can much stronger political commitment to HIV prevention be built and sustained?**

How can the momentum towards greater political support for HIV prevention be translated into meaningful action at the country level, including through increased domestic allocations for the pillars of combination prevention, the dismantling of legal and policy barriers and the implementation of evidence- and rights-based programming for key populations?

- **What strategic actions are needed to overcome specific gaps in availability, access and demand for:**
 - Condom programming?
 - PrEP (including roll-out of injectable PrEP)?
 - Voluntary medical male circumcision?
 - Harm reduction?
 - Combination prevention programming for sex workers? Gay men and other men who have sex with men? People who inject drugs? Transgender people? Prisoners?
 - Combination prevention programming for adolescent girls and young women (including young adult women aged 20–34 years)?
- **What strategic actions must we take to address pertinent social and structural issues?**

What strategic actions are needed to strengthen the evidence base to inform and guide social/structural actions? How can sectors other than health be persuaded to make necessary social/structural investments (such as in girls' education)?

- **What strategic actions are needed to build the capacity of communities to lead HIV prevention and drive demand for services and innovation?**

What financial and technical support is needed to build community capacity to deliver essential prevention services? Especially in the case of marginalized communities, what actions are needed to prevent their work from being hindered by government authorities (e.g. law enforcement) or by negative social attitudes? How best can communities contribute to building demand for prevention services?

- **What strategic actions are needed to ensure that countries collect and effectively use data to drive implementation and improve the quality of prevention programming?**

Should national AIDS structures be revived or strengthened in order to oversee and drive accelerated implementation of combination prevention? How can we bring the same commitment to focus, quality, scale and innovation seen in testing and treatment programming to the prevention arena? How can we close key data gaps? What actions are needed to build analytic and programmatic capacity at the national and subnational levels to target resources more effectively and improve the performance and impact of prevention efforts?

Gender equality

Ensuring that HIV responses work for women and girls is crucial for their health and wellbeing, and for ending the AIDS epidemic.

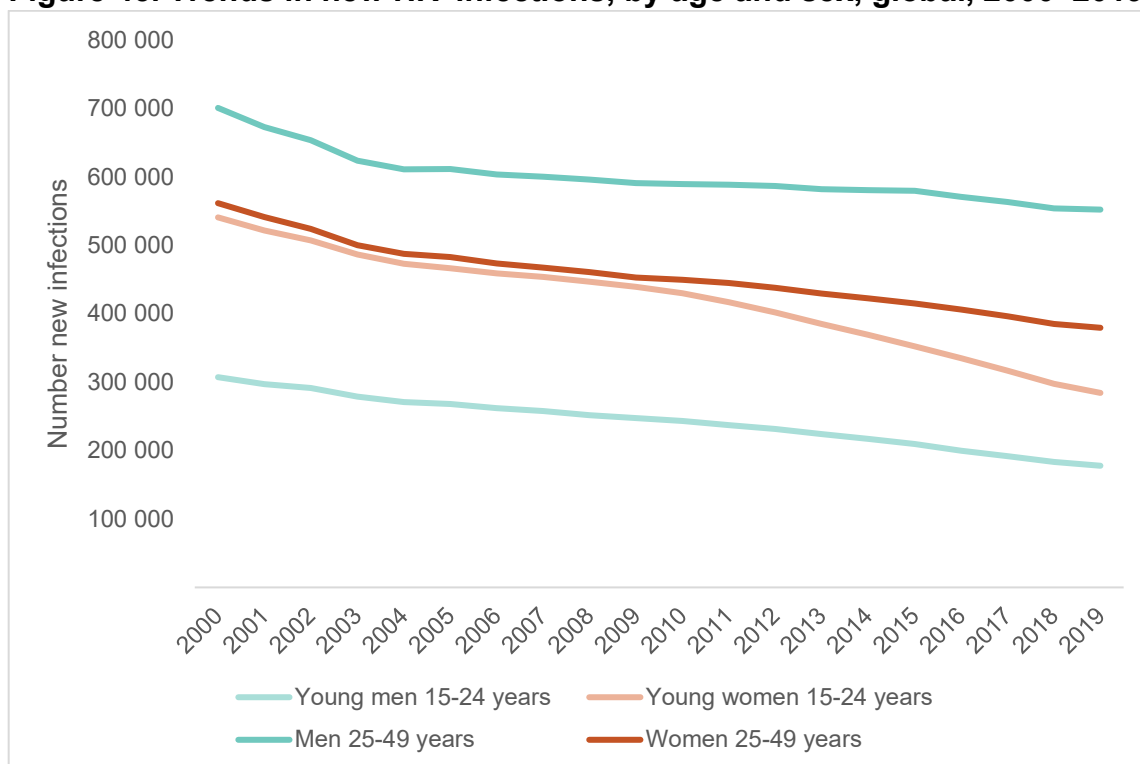
- **HLM Target 4:** Eliminate gender inequalities and end all forms of violence and discrimination against women and girls, people living with HIV and key populations by 2020.
- **Strategy Results Area 5:** Women and men practice and promote healthy gender norms and work together to end gender-based, sexual and intimate partner violence to mitigate the risk and impact of HIV.

Status report

The epidemic continues to have a severe impact on women and girls, who in 2019 accounted for 48% of new HIV infections worldwide and 59% of new infections in sub-Saharan Africa. Although important gains have been made in linking women with HIV treatment services, AIDS remains a leading cause of death among women of reproductive age (84).

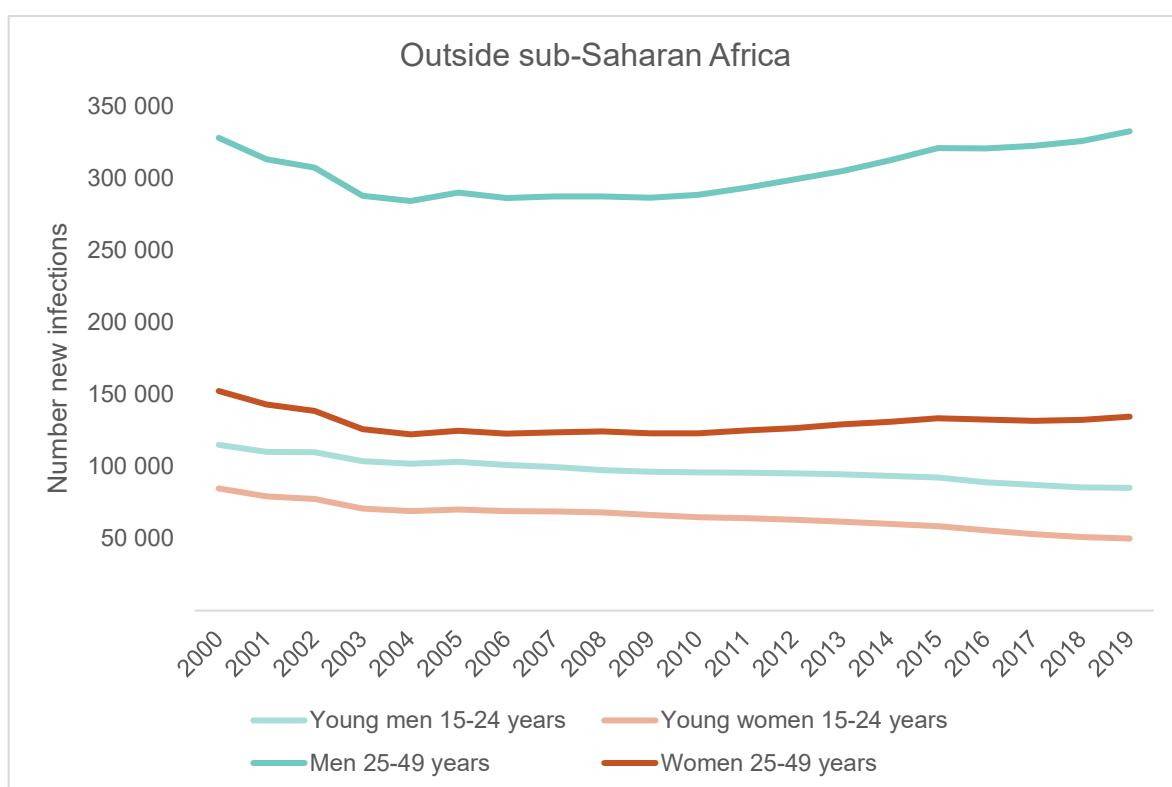
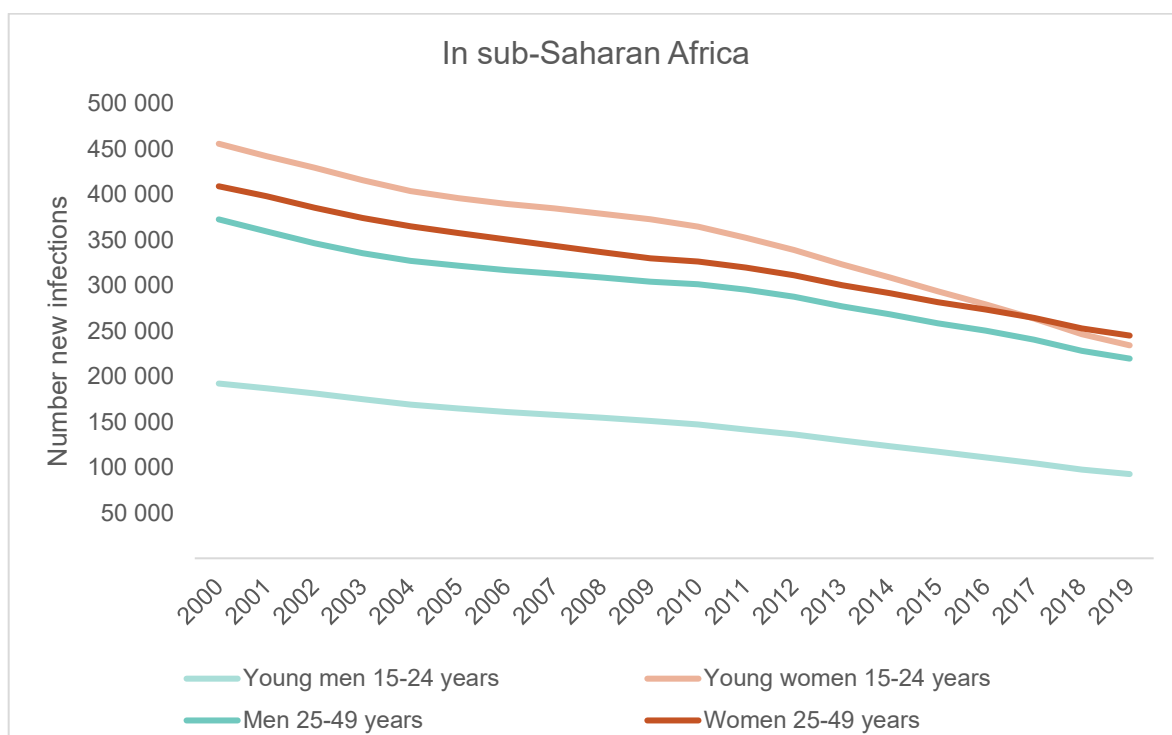
HIV risks are especially pronounced for adolescent girls and young women (15-24 years) in sub-Saharan Africa. Although young women account for only 10% of the population of sub-Saharan Africa, they comprise 24% of people in the region who were newly infected in 2019. The number of adolescent girls and young women who acquired HIV in 2019 (280 000) was nearly three times higher than the global target of less than the 2020 target of no more than 100 000 new infections. Adolescent girls (15–19 years) in sub-Saharan Africa are 4.5 times more likely to acquire HIV than their male counterparts (Figures 45, 46).

Figure 45. Trends in new HIV infections, by age and sex, global, 2000–2019



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

Figure 46. Trends in new infections by age and sex, in and outside sub-Saharan Africa, 2000–2019



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

Women who belong to key populations, and women who are partners of members of key populations, are also at very high risk of HIV infection and have insufficient access to services. Female sex workers are 30 times more likely to acquire HIV than women in the general population. In some settings, up to 40% of transgender women are living with HIV. Women who inject drugs often have higher rates of HIV than males who inject drugs because of the dual risk from unsafe injection practices and unprotected sex (85).

Women and girls can face multiple, intersecting forms of stigma, discrimination and criminalization. Unequal gender power dynamics, harmful gender norms and masculinities, and violence against women and girls increase their risk of acquiring HIV and diminish their ability to access services and to take decisions that safeguard their health and wellbeing. Harmful masculinities also negatively affect men's health-seeking and risk-taking behaviours, exacerbating risks for both men and women.

COVID-19 and gender equality

The COVID-19 pandemic is threatening many of the gains made in expanding service access for women and girls. Extended confinement measures and restrictions on movement, compounded by economic and social stress brought on by the pandemic, have coincided with reports of increased numbers of women and girls facing abuse in many countries. Experiences during the Ebola crisis showed that school closures can lead to increases in gender-based violence, teenage pregnancies, child marriage, exploitation and other forms of abuse against adolescent girls. Lockdowns associated with COVID-19 are also adding to the disproportionate caregiving burdens borne by women and girls.

What is working and needs to be sustained

There have been Important gains in increasing women and girls' access to HIV prevention and treatment. From 2010 to 2019, the number of new HIV infections among women globally declined by 23%, including a 13% decline since 2015. The declines have been steepest among young women. However, new HIV infections among women are increasing in eastern Europe and central Asia, the Middle East and North Africa and Latin America. Women's access to HIV treatment has improved, with 73% of women living with HIV receiving ART in 2019. The decline in AIDS-related mortality since 2010 has been greater for women than for men.

A broad array of proven strategies is available for empowering women and girls and addressing their HIV-related needs. There is growing momentum towards a comprehensive, multisectoral approach that reaches beyond the health sector, is gender-transformative and rights-based, and can address the social, economic and structural drivers that increase HIV risk and vulnerability for women and girls. Effective combination prevention for women and girls includes enabling girls to stay in school longer, incentives to delay sexual activity and pregnancy, comprehensive services that integrate HIV and sexual and reproductive health, prevention of gender-based violence, enhancing women's economic participation and fair remuneration for work, engaging both men and women in addressing harmful gender norms, and improving the range of HIV prevention options available, including by expanding access to PrEP. The multipartner, PEPFAR-led DREAMS initiative, which aims to reduce new HIV infections among adolescent girls and young women in high-incidence areas of sub-Saharan Africa, uses a multisectoral approach that includes youth-friendly sexual and reproductive health services, education subsidies, social protection, parenting programmes and HIV services.

The evidence base for multisectoral approaches for women and girls is robust and expanding. Several studies—including the Sitakhela Likusasa study in Eswatini, which documented declines in HIV infection of up to 25% among participants—have found that cash transfers can be an effective method for enabling young people, particularly girls, to stay in school, improving their academic results, increasing their use of health services, delaying their sexual debut, reducing early marriage and teen pregnancy and promoting safer sexual behaviours (71, 86). In Botswana, each additional year of secondary schooling led to an 8.1% reduction in cumulative risk of HIV infection and an 11.6% reduction in HIV risk among young women (87). Several programmes—including SASA!, Stepping Stones, Program H and One Man Can—have found that community-wide interventions engaging both men and women can change harmful social

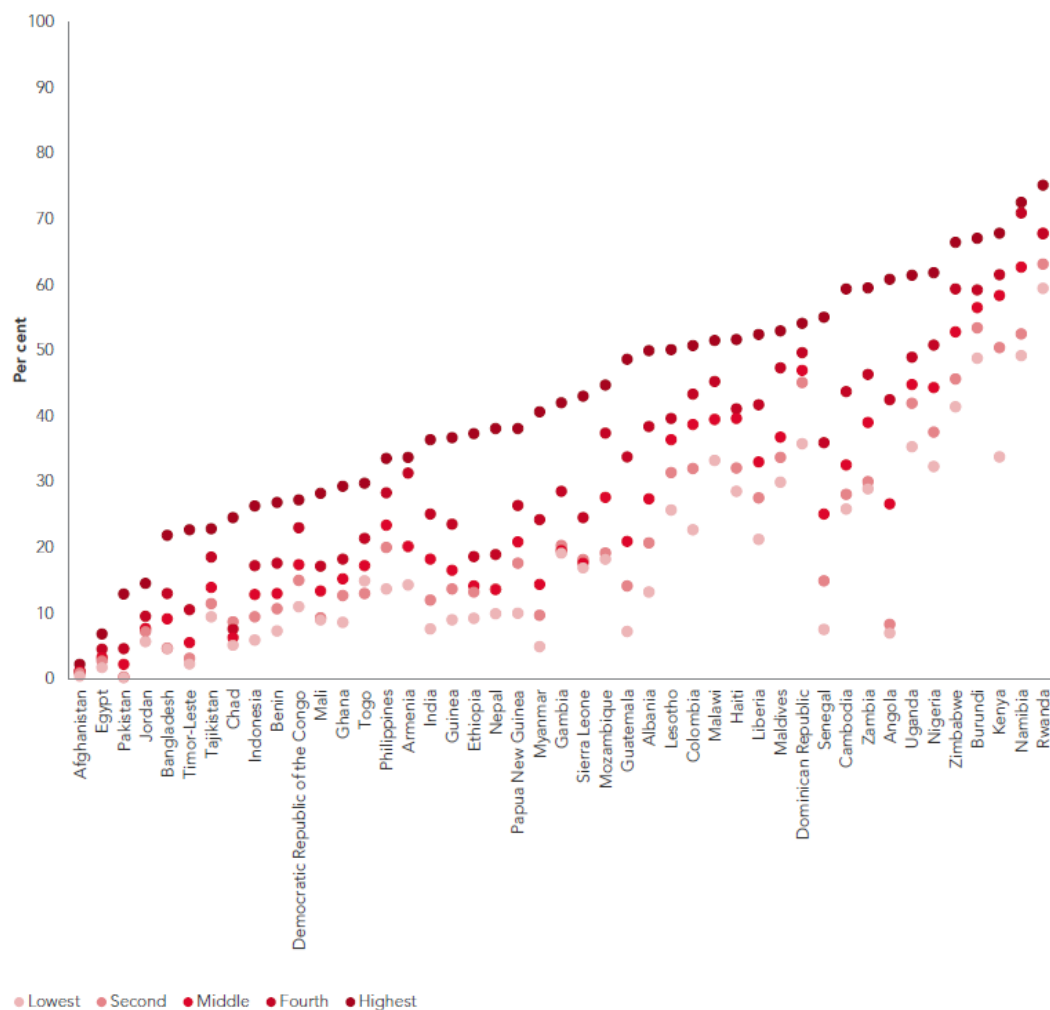
norms, reduce gender-based violence and prevent HIV. Studies in Botswana, Cameroon, Kenya, Malawi, South Africa, United Republic of Tanzania, Uganda and the United States of America showed that integrated HIV and sexual and reproductive health services are associated with increased uptake of HIV testing and other services (88). In South Africa, incorporation of PrEP in routine family planning services has achieved PrEP retention rates of 92% among women (89). The engagement of faith leaders in gender-transformative approaches in the Democratic Republic of the Congo and of men in reproductive and maternal health in Rwanda have been associated with reduced sexual violence, improved contraceptive use, enhanced women's antenatal health and more equitable divisions of labour in households (45, 90).

Important, though still inadequate, investments have been made to empower, mobilize and build leadership capacity among women and girls. Notable among these are the contributions of PEPFAR and the Global Fund, as well as efforts by UN Women to support the meaningful engagement of women living with HIV and adolescent girls and young women in the design, implementation and monitoring of national HIV responses (91). In the Middle East and North Africa, evidence of the links between gender-based violence and HIV has encouraged greater emphasis on the involvement and empowerment of women in all their diversity in national programmes. A number of policy and legal reforms have been introduced in the past decade to uphold women's human rights in line with the Beijing Platform for Action and the Convention on the Elimination of all Forms of Discrimination Against Women. One hundred and fifty-five countries have strengthened legislation to combat violence against women and girls, and more countries have integrated HIV into their national action plans on preventing violence against women (84). However, support for grassroots responses remain inadequate, with feminist organizations, key leaders in catalysing gender-responsive approaches, receiving only a very small share of donor funds.

Where the response is falling short

Stronger political will is needed to address the human rights and needs of women and girls. The epidemic's continuing burden on women and girls and the persistence of unequal gender norms and practices reflect a disturbing absence of political commitment to responding to the needs of women and girls. Only 57 of the 97 countries with a national strategy or policy guiding their AIDS responses in 2019 reported that the policy included interventions for achieving gender equality, and only 37 countries had a dedicated budget for those activities (92). Notwithstanding the pledges made in the Beijing Platform for Action for transformative progress to advance women's rights, progress against key indicators has lagged. In the past 20 years, progress on women's access to paid work has slowed, with less than two thirds of women between the ages of 25 and 54 years active in the labour market. Women continue to shoulder the bulk of unpaid care and domestic work. Men still occupy about three-quarters of parliamentary seats. Twice as many girls as boys aged 15-19 years are out of school or out of work. Globally, about 132 million girls were out of school prior to the COVID-19 pandemic, including 34.3 million girls of primary school age, 30 million of lower-secondary school age, and 67.4 million of upper-secondary school age (93). COVID-19 has worsened those trends.

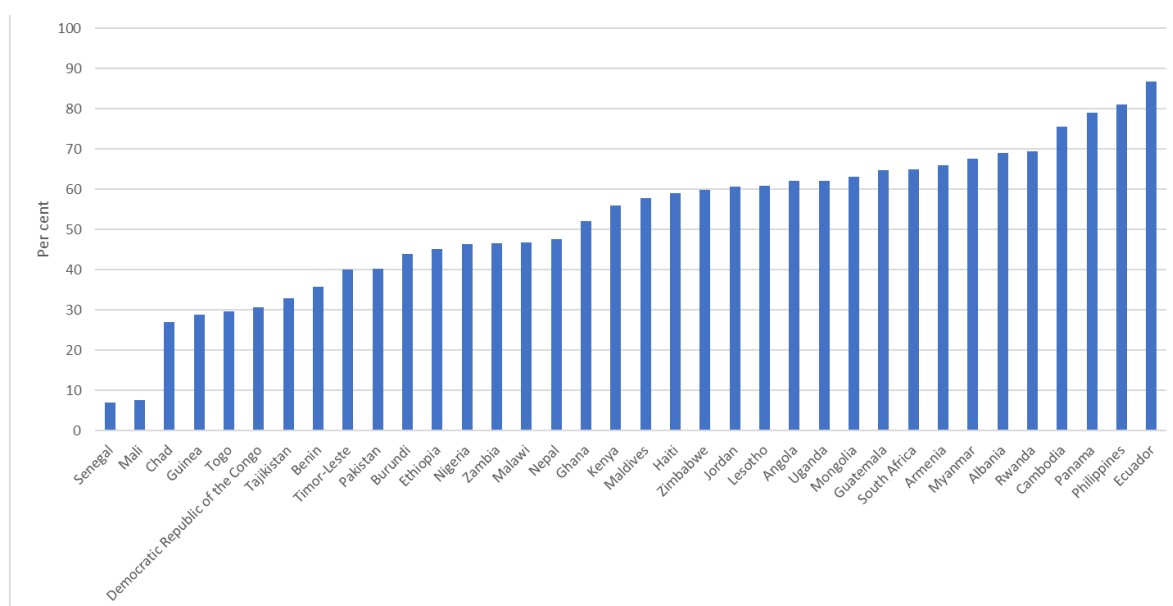
Figure 47. Percentage of women (aged 15–49 years) with comprehensive correct knowledge of HIV, by wealth quintile, countries with available data, 2013–2018



Source: Demographic and Health Surveys, 2013–2018.

Although a handful of countries have conducted gender analysis to understand the root causes of the HIV epidemic among women and girls, the analysis is seldom translated into appropriate actions and budgetary allocations. A review of 18 national HIV strategic plans in sub-Saharan Africa showed limited sex-disaggregated targets and an overriding focus on the prevention of gender-based violence and women's access to family planning. By contrast, strategies to integrate sexual and reproductive health and HIV programmes, improve rights or access to resources for women and girls and increase school access and attendance by adolescent girls and young women were identified in fewer than 6 of the 18 strategic plans that were analysed (92). Data on costing and financing gender-transformative interventions in national HIV responses remain scarce. Further work is needed to integrate gender-responsive actions and indicators in national HIV programmes, strategies and plans and ensure that these actions are costed and adequately resourced. Additionally, in order to ensure adequate expenditure and effective gender related outcomes, meaningful engagement of women living with HIV and adolescent girls and young women in all their diversity must be institutionalized in design, implementation and monitoring of the HIV response.

Figure 48. Percentage of women aged 15–49 years who are currently married or in union who are currently using contraceptives and who make their own informed decisions regarding sexual relations, contraceptive use and own health care, countries with available data, 2014–2018



Source: Population-based surveys, 2014–2018.

Knowledge about HIV prevention among young women is alarmingly low, with only about one-third of young women in sub-Saharan Africa having comprehensive knowledge about HIV (94). Between 2000–2004 and 2014–2018, several countries made encouraging progress in improving young women's HIV knowledge, with accurate and comprehensive knowledge increasing in Uganda (from 28.5% to 45.7%), Rwanda (23.4% to 42.6%), Nigeria (14.5% to 42.6%), Kenya (33.8% to 54.2%), Cameroon (27.4% to 40.6%) and Armenia (9.3% to 20.2%) (94).

Studies indicate that comprehensive sexuality education which emphasizes gender relations and women's rights can reduce the rates of sexually transmitted infections and unintended pregnancy, as well as gender-based and intimate partner violence. It can also support young women's self-efficacy and confidence, and help young people develop stronger, healthier relationships. In Estonia, where a mandatory programme of comprehensive sexuality education has been implemented, it was found that the programme would need to avert only 4% of new infections to be cost-saving (61).

Sexual and reproductive health and rights are not upheld. Sexual and reproductive health and rights are central to empowering women and adolescent girls, fulfilling their human rights, ensuring their health and wellbeing, creating gender-equal societies and economies, and preventing HIV infections. In 57 countries, only 55% of married or in-union women (aged 15–49 years) currently using contraception are able to make their own decisions regarding their sexual and reproductive health including to refuse unwanted sex (95). Moreover, there is little sign of improvements in women's agency (Figure 48) (96).

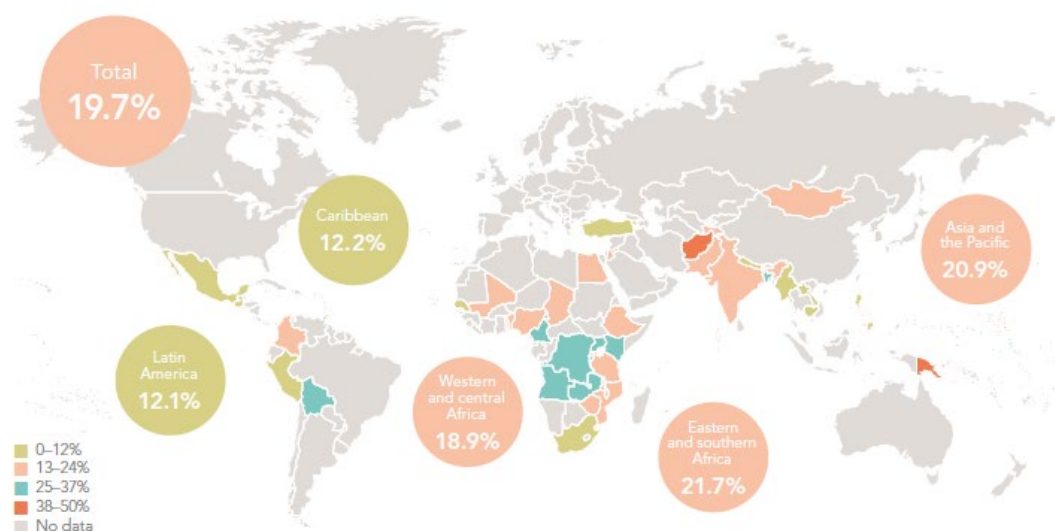
Women's lack of freedom and agency to make decisions regarding their sexual and reproductive health results in inadequate uptake of essential interventions and tools. More than half of the estimated 38 million sexually active adolescent girls (aged 15–19 years) in developing regions in 2016 who needed contraceptives because they were married or were unmarried and sexually active and did not want a child for at least two years, were not using modern contraceptives. Each year, 21 million adolescent girls become pregnant and approximately 12 million adolescent girls give birth, including 777 000 girls under the age of 15 (97, 98). One in three women living with HIV in 19 countries report experiencing at least one form of discrimination related to their sexual and reproductive health in a health-care setting in

the previous 12 months (e.g. being advised not to have children, being offered ART on condition they use certain forms of contraception, or being denied sexual and reproductive health services) (99).

Policy barriers undermine HIV responses for adolescent girls. Laws and policies prevent many adolescent girls from making decisions about their own sexual and reproductive health or accessing essential health services, including for contraception and HIV-related services. In 2019, 105 of 142 countries with available data required that adolescents have parental or guardian consent to access HIV testing. In 86 of 138 reporting countries, they needed similar consent to access HIV treatment and care. A recent multicountry review in sub-Saharan Africa found that laws allowing young people younger than 16 years to access HIV testing without parental consent were associated with a 74% increased likelihood of HIV testing utilization among adolescents (100). Discriminatory criminalization laws linked to HIV can disproportionately affect women, as women are more likely than men to know their HIV status as a result of routine HIV screening in antenatal care.

Violence against women and girls increases their vulnerability to HIV and impedes an effective HIV response. Nearly 1 in 3 women worldwide have experienced physical and/or sexual violence by an intimate partner, nonpartner sexual violence, or both in their lifetime (Figure 49) (101). Reports indicate that COVID-19 lockdowns may be increasing women's risks of domestic violence. Globally, one in every five girls is married, or in union, before reaching age 18 (102).

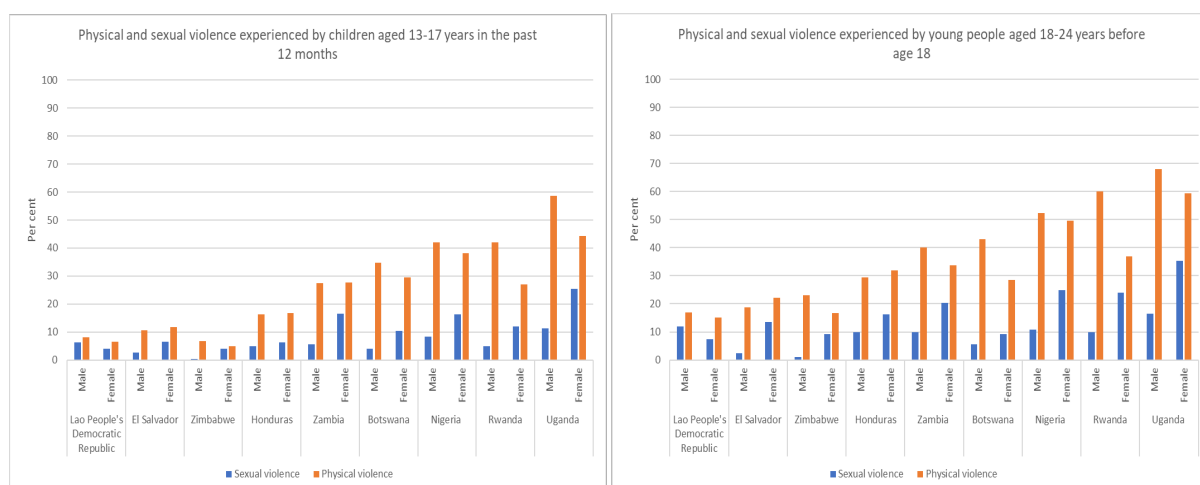
Figure 49. Percentage of ever-married or partnered women (aged 15–49 years) who experienced physical and/or sexual violence by an intimate partner in the previous 12 months, countries with available data and regional aggregates, 2014–2018



Source: Population-based surveys, 2014–2018.

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

Figure 50. 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, 2014–2017



Source: Violence against children surveys, 2014–2017.

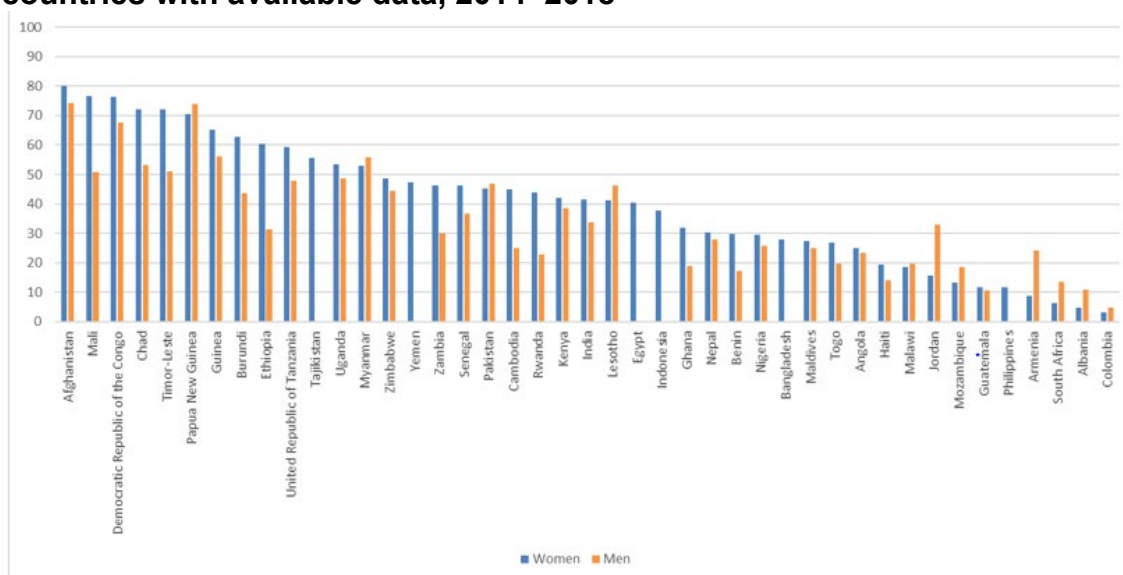
Women and girls who are on the move, including refugees, the internally displaced and those affected by conflict and other humanitarian crises, are particularly at risk of violence, and they are often less able to access appropriate services (103). Although the prevalence of violence among women is intolerably high, some countries have managed to reduce the prevalence of intimate partner violence, including Uganda (from 43% in 2006 to 30% in 2016), Zambia (42% in 2007 to 25% in 2018), Mozambique (28% in 2011 to 16% in 2015) and the Democratic Republic of the Congo (59% in 2007 to 37% in 2013–2014) (104).

For many women and girls, the experience of violence begins at an early age. In nine countries, substantial proportions of young women and men (aged 18–24 years) reported having experienced physical, sexual and/or emotional violence during childhood (Figure 50) (105). About 120 million girls are estimated to have suffered some form of forced sexual contact before age 20 years (106). Violence in schools is also a grave concern. Early experience of violence increases the odds that women will experience violence later in their lives. For men, it also increases the odds that they themselves will perpetrate violence (45).

In addition to affecting the physical and mental health of survivors, violence is closely linked with HIV vulnerability. The experience of intimate partner violence in high-prevalence settings increases women's risk of acquiring HIV (101). Violence against women living with HIV is associated with reduced access and adherence to treatment, lower CD4 counts and higher viral load (107).

The cycle of violence against women and girls is rooted in unequal gender power dynamics and norms. For women and girls living with HIV, their HIV status can also be a trigger for physical and/or emotional violence—including from partners, in the community and even in health facilities. Involuntary and coerced sterilization and forced abortion among women living with HIV has been reported in at least 14 countries worldwide (108). In the majority of 43 countries with recent data from population-based surveys, more than 40% of young women said that a husband is justified in hitting or beating his wife (Figure 51) (109). Gender-transformative approaches that address the causes of gender-based power imbalances and that work to transform harmful gender norms and relations have been shown to reduce violence and improve a range of health- and gender-related behavioural outcomes (110). However, investments in gender-transformative approaches are limited, with a recent review finding that only 8% of programmes engaging men and boys in sexual and reproductive health and rights included gender-transformative components (111).

Figure 51. Percentage of women and men aged 15–24 years who agree that a husband is justified in hitting or beating his wife for at least one specific reason, countries with available data, 2014–2018



Source: Demographic and Health Surveys, 2014–2018.

Women who belong to key populations are at particular risk of experiencing violence. Women who use drugs are up to five times more likely to experience violence than non-drug-using women. It is estimated that 45–75% of female sex workers are assaulted or abused at least once in their lifetime, although mechanisms for reporting abuse or accessing survivor services are often blocked due to the criminalization of sex work (112). Women belonging to ethnic and other minorities, transgender women and women with disabilities face higher risks of violence (103).

Future strategic directions: key questions for consideration

- ***Notwithstanding repeated high-level pledges, political commitment to uphold the human rights and meet the needs of women and girls in the context of HIV is not yet strong enough. What strategic actions are required to build and sustain powerful national actions to cost, finance, implement and monitor gender-transformative approaches that tackle gender discrimination and benefit women and girls in all their diversity?***

How can we build robust multisectoral collaborations and coalitions to drive changes in gender norms and practices, at the scale needed? How we can substantially increase financing for the networks of women living with HIV and organizations of adolescent girls and young women to sustain their advocacy work and community-level response?

- ***What strategic actions are needed to address the vulnerabilities and needs of marginalized women and girls?***

How can we effectively adopt and implement an intersectional approach, with measurable metrics, to address the needs of those who are left behind? How can women most in need of comprehensive packages be prioritized and reached? What arguments, analyses, advocacy approaches are required to uphold women's rights, including to roll back punitive laws targeting women who belong to key populations or who are partners of members of key populations? How do we replicate successes in eliminating age of consent laws and barriers in more countries? What is needed to ensure that marginalized women and girls have safe spaces where they can seek and provide mutual support and obtain needed services?

- ***How can we systematically engage, empower and address the needs of diverse gender identities/expression, sexual orientations and thereby also address gender-based violence directed against LGBTI people?***
- ***What strategic actions are needed to drive programmatic progress in addressing the needs of women and girls?***

How can we further strengthen gender expertise in national AIDS coordinating bodies to conduct gender analysis and develop gender-responsive HIV strategies, plans and programmes? How do we galvanize genuine large-scale integration of holistic, multisectoral approaches to address the linked challenges of HIV, sexual and reproductive health and rights and gender-based violence? How do we identify and effectively use lessons from settings where the prevalence of gender-based violence or teenage pregnancy has declined or where HIV knowledge among young women has increased? What steps are needed to avoid regressing in the COVID-19 era with respect to women and girls? What steps are needed to use the experiences of women and community-led HIV responses that have been effective in transforming harmful gender norms and practices and improving HIV services for women and girls? How do we accelerate the repealing of discriminatory laws and practices that affect women and girls' abilities to prevent HIV or to live dignified lives with HIV?

- ***What strategic actions are required to catalyze the involvement, empowerment and leadership of women in all their diversity—specifically in national HIV responses but also in broader efforts to improve health, wellbeing, equity and justice for women and girls?***
- ***What strategic actions are needed to expand gender-transformative approaches that engage men and boys in confronting harmful masculinities and becoming agents of change, and that shift the burden of responsibility away from women for contraception, HIV testing and treatment?***

How can we ensure a life course approach to sexual and reproductive health and rights that includes men in childbirth and care, family health and support and that addresses harmful masculinities and femininities? What steps are needed to recognize and respond to the gender inequalities and dynamics within LGBTI communities?

- ***What strategic actions are needed to improve the data for effective strategies for women and girls?***

What strategic actions are needed to improve the capacity to perform gender analysis and use it to guide actions, measurement metrics and budgetary allocations?

- ***How do we do a better job of mainstreaming key elements of promoting gender equality and ending gender-based violence across other strategic directions of the next UNAIDS Strategy to increase accountability of the HIV response to gender equality and the empowerment of all women and girls?***

How do we improve the measurement of progress across the UNAIDS Strategy vis-à-vis promoting gender equality and ending gender-based violence? How do we enhance accountability for gender-responsive financial monitoring of allocations and expenditures on gender equality and ending gender-based violence in the next UNAIDS Strategy?

Stigma, discrimination, and punitive laws: towards enabling social and legal environments

Since its early days, the HIV epidemic has been accompanied by a "social epidemic" of stigma, discrimination and social exclusion, which is often anchored in harmful, punitive, counterproductive and scientifically baseless laws and policies. Ending AIDS will require progress in the biomedical arena and towards eliminating the many forms of stigma and discrimination that deny people their rights and dignity, and that undermine HIV responses and national social and child protection systems.

- HLM Commitment 9: Empower people living with, at risk of and affected by HIV to know their rights and to access justice and legal services to prevent and challenge violations of human rights.
- HLM Commitment 6: Ensure that 75% of people living with, at risk of and affected by HIV benefit from HIV-sensitive social protection by 2020.
- Strategy Result Area 6: Punitive laws, policies, practices, stigma and discrimination that block effective responses to HIV are removed.
- Strategy Result Area 8: People-centred HIV and health services are integrated in the context of stronger systems for health.

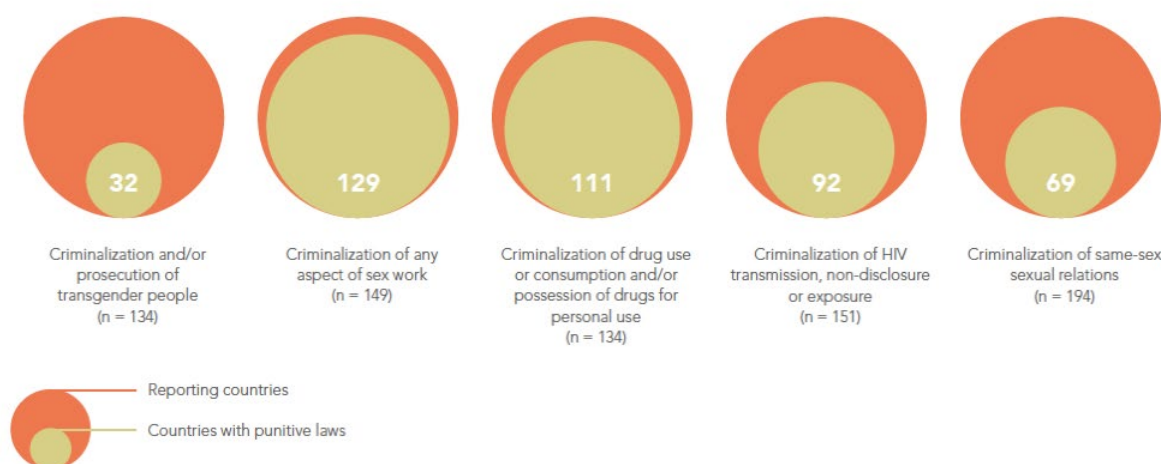
Status report

Although HIV-related stigma, as measured by population-based surveys, appears to have declined in some countries, it persists at extremely high levels in many others. In 25 of 36 countries with recent survey data on a composite index of discriminatory attitudes, more than 50% of people aged 15-49 years displayed discriminatory attitudes towards people living with HIV (104). HIV-related discrimination continues to occur in health-care settings. Among the 13 countries reporting these data, up to 21% of surveyed people living with HIV in Peru and Tajikistan said they had been denied health services at least once in the previous 12 months (113).

Punitive laws remain commonplace. Nearly all countries criminalize or otherwise punish some aspect of sex work, and all but a handful of countries criminalize or otherwise punish drug use or possession (Figure 52). A majority of the 92 countries reporting these data to UNAIDS criminalize HIV transmission, non-disclosure or exposure. Sixty-nine countries criminalize same-sex relations, and at least 32 countries either formally criminalize or have prosecuted transgender people because of their gender identity and/or expression.

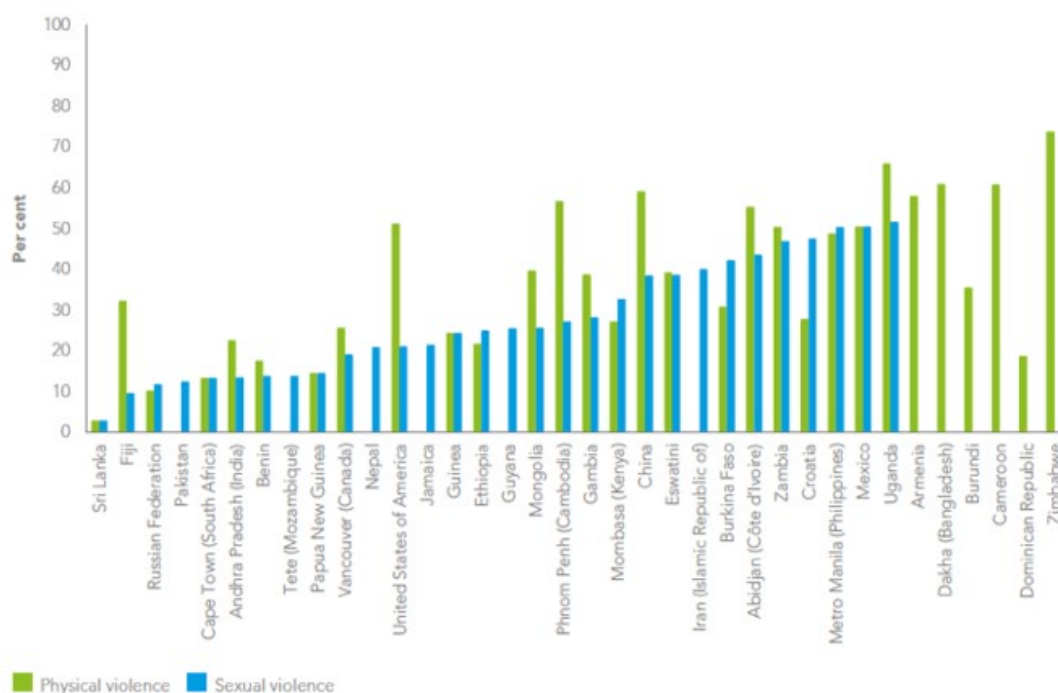
Key populations face stigmatizing attitudes and violence. In 8 of 36 countries with recently available data, at least half of sex workers reported that they had experienced physical violence (Figure 53). Similarly, in 4 of the 17 countries providing these data, more than 20% of gay men and other men who have sex with men reported experiencing sexual violence. High rates of violence against transgender people and people who inject drugs have also been reported in the limited number of countries with relevant data (114).

Figure 52. Countries with discriminatory and punitive laws, global, 2019



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

Figure 53. Percentage of sex workers who reported experiencing physical and sexual violence, selected countries, 2014–2018



Source: Literature review by UNAIDS and the Key Populations Program of the Center for Public Health and Human Rights, Johns Hopkins University. Full list of references available on request.

Punitive laws undermine HIV responses and increase the vulnerability of marginalized populations. Gay men and other men who have sex with men who live in countries that criminalize same-sex relations are 2.2 times more likely to acquire HIV than their counterparts in countries without such legal restrictions. Severe criminal penalties for same-sex relations are associated with a 4.7 times higher risk of HIV infection, compared with settings lacking such penalties (83). According to an analysis of 75 countries, the existence of anti-LGBT laws is also associated with substantially lower uptake of HIV testing services (81). Evidence-based modelling indicates that decriminalization of all aspects of sex work could avert 33–46% of new HIV infections among sex workers and their clients over 10 years (69). Another meta-analysis

found that repressive policing of sex work increased the prevalence of HIV and other sexually transmitted infections by 87% and increased the risk of sexual or physical violence nearly three-fold (115). A 2020 study examining 10 countries in sub-Saharan Africa linked increasingly repressive laws regarding sex work with increased prevalence of HIV infection (116). According to a 2017 systematic review, more than 80% of pertinent studies have correlated criminalization of drug use with an increased risk of HIV (68), while a separate analysis found that repressive policing of drug use is associated with HIV infection, needle sharing and avoidance of harm reduction programmes (117). In some countries in eastern Europe and central Asia, laws require individuals seeking harm reduction services to register with authorities, a step that in turn makes the individual ineligible for a driver's license. Although study evidence of the HIV-related impact of punitive laws on transgender people is scarce, the harm associated with repressive policing of transgender people is well-documented. Approximately 40% of transgender correctional inmates have experienced sexual violence in the previous 12 months, compared to 4% of the general prison population (118).

Access to justice remains restricted for many people living with HIV and members of key populations. Most countries (69 of 90) have reported the existence of legal aid systems that are capable of handling HIV-related case work (Figure 54). However, accessible legal services (in the form of legal clinics or pro bono services from private law firms) are much less common. Most countries report having in place training or capacity-building initiatives to assist people living with HIV and key populations to understand and exercise their rights in the context of HIV, although these are operating at a small scale in many settings. Most countries report that they do not have HIV-related legal rights training in place for key actors in the judicial system including law enforcement officers, the judiciary and legislators.

Figure 54. Countries with mechanisms in place to promote access to affordable legal services, 2019



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

Note: Data correspond to reporting by national authorities from 90 countries and by civil society representatives from 89 countries. The National Commitments and Policy Instrument consists of two parts, the first completed by national authorities and the second by civil society and other nongovernmental partners engaged in the national response.

Table 8. Effective coverage of social protection benefits and HIV-sensitivity of social protection strategies, policies or frameworks in Fast-Track countries, 2019 and 2020

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

■ Yes
■ No
■ Data not available

Source: UNAIDS National Commitments and Policy Instrument, 2019 and 2020 (see <http://lawsandpolicies.unaids.org/>); SDG Indicators Global Database [Internet]. New York: United Nations Statistics Division; c2020 (<https://unstats.un.org/sdgs/indicators/database/>, accessed 17 April 2020).

*Social protection strategy is not being implemented.

Women's access to property and inheritance rights can be vital for preventing HIV infection or mitigating its impact. Yet, customary laws and practices continue to inhibit women's access to land in 90 countries, daughters do not have the same inheritance rights as sons in 34 countries, and widows lack inheritance rights in 36 countries (119). Women living with and affected by HIV often do not have the economic means to access legal aid and receive adequate justice.

Only two countries (the Islamic Republic of Iran and Mozambique) reported that all HIV-sensitive elements are reflected in a national social protection strategy that is currently being implemented (120). Across 25 reporting countries with high HIV burdens, the proportion of the population covered by at least one social protection benefit ranged from 1.6% in Myanmar to 90% in the Russian Federation, with a median of 15%. Less than half of the population was covered by at least one social protection benefit in 19 of the 25 countries with available data (121).

COVID-19 and social and legal barriers and enablers

In some contexts, efforts aimed at controlling the spread of the coronavirus have penalized the most vulnerable in society, including women, the homeless, those living in poverty, or people who are already marginalized, stigmatized or criminalized. There have been alarming reports of police harassing, harming or arresting vulnerable and criminalized groups, such as sex workers, people who use drugs, people living with HIV and LGBTI people. Sex workers have reported increased discrimination and harassment, including punitive crackdowns resulting in raids on homes, compulsory COVID-19 testing, and arrests and threatened deportation of migrant sex workers.

The COVID-19 pandemic has also reinforced the absolute importance of strong and comprehensive social protection, as well as how many people currently live without it. During COVID-19 people living with, at risk of, and affected by HIV, including key populations, young people, women, and girls, those living with disabilities, refugees, asylum seekers and migrants are especially vulnerable to economic, spatial and social inequalities and the disruptions in the provision of, and adequate access to, essential services and social assistance. Many are living in a state of food insecurity and malnourishment. Loss of income has also meant in some cases loss of their homes, while lack of health insurance or access to health care has created barriers to receiving COVID-19-related care.

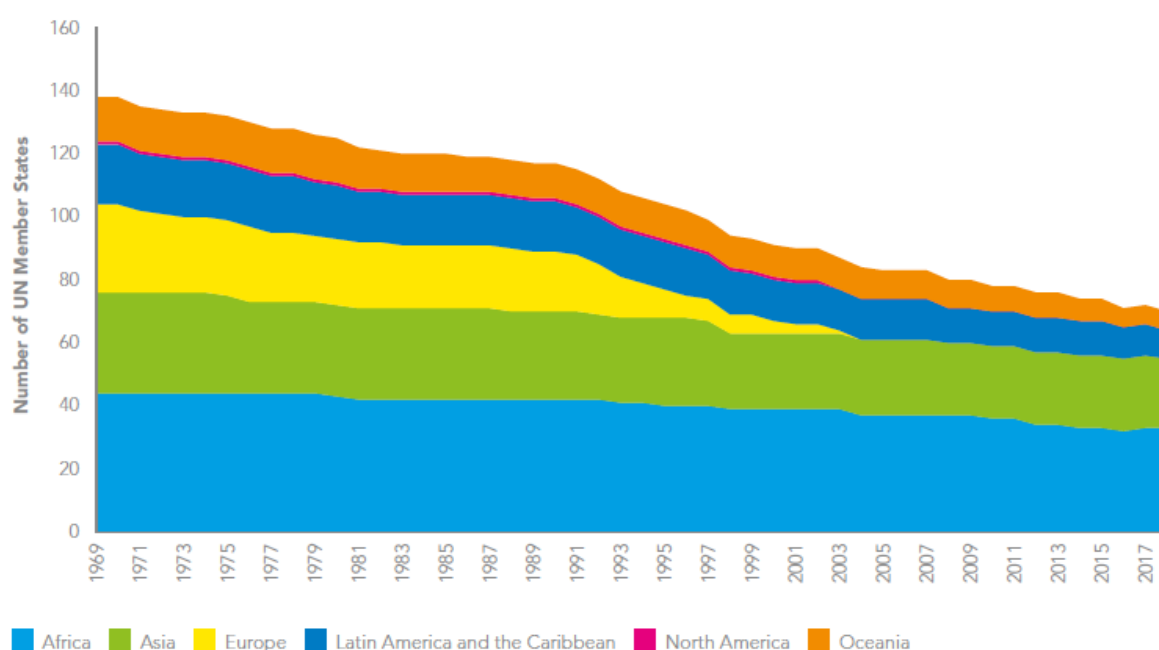
What is working and needs to be sustained

Discriminatory attitudes towards people living with HIV have declined in some countries. In 19 countries where people were surveyed about their attitudes about people living with HIV, stigmatizing attitudes have declined since the early 2000s (96). There has been striking progress in reducing stigmatizing attitudes in eastern and southern Africa. However, stigma and discrimination remain powerful barriers to HIV services. In high-burden countries, people who perceive comparatively higher levels of HIV-related stigma are twice as likely to present late with HIV infection than individuals who perceive low stigma (122).

There are encouraging examples of countries that have rolled back punitive laws and policies. Since 2016, Chile, Pakistan and Uruguay have shown leadership by formally recognizing gender identity and by introducing legal protections for transgender people. The Caribbean Court of Justice invalidated a law banning cross-dressing in public, and several countries (e.g. Belgium, Chile, France, Greece, Iceland, Luxembourg, Portugal and Uruguay) established avenues for legal changes to gender markers and names, although some still require surgery before allowing people to change their gender markers. Globally, the number of countries and territories that have HIV-related restrictions in place for entry, stay or residence has decreased to 48 in 2019 (123). Since 2016, the Constitutional Court of Colombia has removed some restrictions on the personal consumption of drugs; courts in South Africa and Mexico held that laws criminalizing possession or cultivation of marijuana were unconstitutional; legislative bodies in Antigua and Barbuda, Belize and some states in the USA decriminalized possession of marijuana. A number of countries have removed the death penalty as either a mandatory or discretionary option for certain (but not all) drug offences (including the Islamic Republic of Iran, Malaysia, Thailand, Singapore and Viet Nam). In Malawi, the High Court found that laws which

criminalize profiting from sex work were not intended to target sex workers. The number of countries criminalizing same-sex relations has continued to decline in recent years (Figure 55), with Botswana and India removing longstanding prohibitions. Since 2016, Colombia and Mexico removed their HIV criminalization laws, while Belarus, Canada and the Democratic Republic of the Congo narrowed the situations in which people living with HIV may be prosecuted or convicted, and Malawi opted not to include criminalization provisions in its new HIV laws.

Figure 55. Number of countries that criminalize consensual same-sex sexual relations, global, 1969–2018



Source: Yang D. Global trends on the decriminalisation of consensual same-sex sexual acts (1969–2019). In: Mendos LR. State-sponsored homophobia 2019. Geneva: ILGA; March 2019.

Those examples are heartening evidence that punitive and counterproductive laws and policies can be changed or removed. However, punitive and discriminatory legal and policy frameworks remain the norm in much of the world, and they are holding back HIV responses.

The evidence base for removing punitive laws and policies has expanded. Numerous studies and meta-analyses on the impact of punitive laws on HIV responses (summarized in the status report above) provide evidence that bolsters the efforts of advocates and public health experts to remove such counterproductive laws. The publication of a consensus statement on the science of HIV in the context of criminal law has strengthened litigants' and advocates' arguments that HIV criminalization laws are not grounded in science (124). The 2018 release of a supplement to the previous report of the Global Commission on HIV and the Law underscored the consensus of public health experts that punitive laws undermine HIV responses, cause needless suffering and should be removed (125).

Encouraging initiatives have increased support for human rights programming. The Global Fund's Breaking Down Barriers Initiative allocated more than US\$ 78 million in 2017–2019 to support efforts in 20 countries to reduce human rights barriers to HIV, TB and malaria services (126). Those countries have completed baseline human rights assessments, and 8 of them have adopted (as of June 2020) strategic national plans to reduce human rights barriers to services.

UNAIDS, UN Women, UNDP and the Global Network of People Living with HIV (GNP+) are co-convening the Global Partnership for Action to Eliminate All Forms of HIV-related Stigma and Discrimination to accelerate achievement of the Zero Discrimination agenda. Sixteen countries

have joined the partnership, committing to address HIV-related stigma across six domains: health care, education, workplace, justice, individuals and communities and emergency and humanitarian settings.

UNAIDS and partners have mobilized stronger political support for HIV-sensitive social protection in the past five years. The Joint Programme's advocacy and data on social protection and HIV, such as the impact of cash transfers, has been especially important, reflecting the work of the UNAIDS Interagency Task Team on HIV and Social Protection, hosted by UNAIDS, co-led by UNICEF and the World Bank, and including ILO, UNDP, WHO and WFP. The Task Team led the generation of evidence and publicized the impact of social protection (including cash transfers) on HIV prevention, treatment, care and support. The Task Team includes governments, civil society and academics working on HIV, TB and social protection.

Social protection assessments led by governments in 16 countries have provided a platform for building and strengthening linkages between governments, donors and communities of people living with HIV. These linkages have promoted the inclusion of people living with HIV in existing social protection programmes. The assessments are informing the development of a new social protection policy in the United Republic of Tanzania and the inclusion of social protection elements in Global Fund proposals in Liberia, Namibia, Sierra Leone and Zambia.

UNICEF, WFP, UNAIDS, the World Bank and partners have collaborated on cash-based transfer programmes, including the "Cash Plus" approach for adolescents in eastern and southern African countries, and the Village Saving Loan Association in Cameroon (which reaches nearly 1000 people living with HIV). UN Women reached over 30 000 HIV-vulnerable women and 6500 women living with HIV with income generation support in 14 countries. UNDP supported 38 countries in HIV-sensitive social protection. Following a UNDP-supported study in Sudan, technical support to government and civil society increased social protection measures to reach more than 4000 people living with HIV with health insurance cards.

Where the response is falling short

While discriminatory attitudes have declined in some settings, they remain common and continue to constitute a major barrier to an effective response. Regionally, the prevalence of stigmatizing attitudes towards people living with HIV ranges from 32% in eastern and southern Africa to 66% in the Middle East and north Africa (127). In 34 of 36 reporting countries, over 25% of people (aged 15–49 years) reported discriminatory attitudes and those attitudes are becoming more common in some countries.

Notwithstanding progress in some countries, punitive laws and policies remain commonplace, and the legal and policy environment has deteriorated recently in some settings. Punitive, scientifically unsound and harmful laws and policies remain the norm globally with respect to most key populations. The ability of people living with HIV to travel remains limited or foreclosed altogether in 48 countries and territories. While a few countries have moved towards decriminalizing personal drug use/possession, the changes apply mainly to marijuana use only. For sex work the trend has been increased criminalization. Since 2016, the legal situation for key populations has worsened in several respects. A number of countries, including France and Iceland, have introduced end-demand or end-user criminal laws for sex work.

While the judicial invalidation of India's law criminalizing same-sex relations reduced the proportion of the world's population covered by such laws, at least 69 countries retain laws that criminalize same-sex sexual relations. At least two countries, Chad and Gabon, recently criminalized same-sex consensual relations, though Gabon removed the law in 2020, and high-level efforts were initiated in Brunei and Liberia to do the same. Some countries, including in Eastern Europe, have introduced, or attempted to introduce, "anti-propaganda" laws that stifle LGBTI communities and their organizations, and in some cases, prevent the distribution of information on sexual and reproductive health rights and HIV transmission under the pretext of

“protecting minors”. Poland in 2020 introduced stronger penalties for HIV exposure and transmission, while Hungary enacted legislation that would prevent transgender people from being able to legally change their gender markers, while Oman intensified penalties for “cross-dressing.”

Data gaps undermine our ability to understand, assess and effectively respond to the human rights situations. Greater efforts are needed to collect and make full use of additional and new data, e.g. by including stigma, shame and harassment modules in biobehavioural surveys, collecting data on human rights issues (which the Global Fund now requires), and supporting community-led HIV monitoring. Much stronger data on the experiences of key populations are needed, and pertinent data should be disaggregated by age, race and gender. Information on discrimination in health-care settings needs to be captured systematically. Existing data systems provide little information on harassment. The impact of punitive laws on transgender people should be investigated more methodically.

Linking important women’s rights monitoring mechanisms, such as CEDAW, to the HIV response is vital for monitoring, identifying and addressing specific human rights violations against women living with and affected by HIV. At the same time, new digital technologies for surveillance and service delivery may pose human rights risks for stigmatized and criminalized populations.

The pace, scale and investments in efforts to address HIV-related stigma and discrimination remain insufficient. Although the inclusion of the zero-discrimination goal in the UNAIDS Strategy drew attention to the persistent barriers associated with stigma and discrimination, the necessary resources and programmatic efforts for tackling social and legal barriers have not yet materialized. Stronger efforts are required to address the root causes and consequences of stigma, discrimination, gender inequality, violence against women, and other social and structural dynamics.

Fifty-five per cent of the world’s population lacks social protection. In many countries, social protection programmes do not explicitly include people living with HIV and some countries exclude sex workers or people who use drugs from social protection programmes. Only two countries report that all HIV-sensitive elements are reflected in their social protection strategies.

Future strategic directions: key questions for consideration

- **Given the limited success to date in “moving the needle” on reforming or removing punitive and discriminatory laws and creating enabling legal environments, what are the key elements of a new strategy to accelerate human rights progress in the HIV response?**

For example, do we need different targets? How do we use international mechanisms and actors to drive change? What types of investments and incentives would help?

- **How do we better share lessons and strategies across countries to bring about desired changes in policies and laws?**

Is it possible to distil and effectively use lessons from successful efforts to accelerate social change? Is a deeper dive warranted to identify lessons from successful law or policy changes (e.g. the longitudinal studies in Argentina and Portugal on the process for changing laws on gender and drug policy, respectively)?

- **Recognizing that decriminalization is a key outcome of a process of social change, does the next UNAIDS Strategy need a broader set of targets with respect to stigma, discrimination and punitive laws?**

Are additional targets needed to track important precursors to law and policy change? Should steps be taken to improve synergies between human rights and critical enabler targets?

- **How do we use the available evidence to drive change? What strategic actions are needed to close the remaining data gaps in the human rights response to HIV?**

How do we make use of important data developments and surveillance mechanisms (e.g. biobehavioural surveys, Global Fund mandates for reporting, community-led monitoring) to collect the evidence that can help drive action on stigma, discrimination and punitive laws? How do we support countries and communities to own their data collection processes and become better at capturing the experiences of key populations and women and girls, documenting health-care discrimination, monitoring police harassment, enhancing data disaggregation within populations and effectively documenting the impact of punitive policies (including on transgender people)? How can we engage more researchers from the global South in key population research?

- **Recognizing that evidence alone is insufficient to persuade decision-makers to remove punitive laws, what changes in advocacy approaches are needed to accelerate progress?**

Should we focus more on principles of human rights, equality and non-discrimination rather than love and affection when advocating for the removal of punitive laws that target sexual minorities? Is it possible to take advantage of important societal changes (e.g. growing concern regarding police brutality) to drive changes in law enforcement practices and legal/policy frameworks?

- **What strategic actions are needed to optimally leverage the Global Partnership for Action to eliminate all forms of HIV-related stigma and discrimination to promote stronger action against stigma, discrimination and punitive laws?**

How do we effectively engage and persuade key actors (e.g. police, judiciary, education sector, workplace) to advance progress on human rights issues? How can we contribute further to sensitizing health-care providers? Should we expand our focus on stigma and discrimination into areas besides HIV? How do we build the political for strong action in countries that have joined the Partnership? How do we use other processes, such as Fast-Track Cities, to bypass national barriers or the lack of progress with local policies and programmes? How can we institutionalize human rights funding as a core part of HIV and health work, capitalizing on the Global Funds investments while also moving to a diversity of

human rights funders at the international and national levels? How can we effectively address stigma and discrimination in the Partnership's six core settings? How do new digital technologies fit in to this?

- ***How can the global HIV response help strengthen the basic functioning of social protection programmes to better respond to the needs of people living with, at-risk of and affected by HIV?***

How do we effectively work with countries to link and layer their programmes? How do we make sure adolescent girls and young women are able to access the full benefits of social protection schemes to achieve gender equality and reduce HIV infection rates? How can the global HIV response strengthen civil society organizations' active engagement on HIV and social protection to reach populations who are being left behind? How can the HIV response prioritize countries, geographic areas and populations for interventions that can enhance access to HIV and social protection benefits?

Communities and the HIV response

Communities are the conscience and the engine of the HIV response.

- HLM Target 7: Ensure that at least 30% of all service delivery is community-led by 2020.
- Strategy Result Area 7: AIDS response is fully funded and efficiently implemented based on reliable strategic information.

Status report

Responses led by communities living with and affected by HIV have been the backbone of the HIV response since the beginning of the epidemic. Since 2016, communities have expanded their activities and partnerships to become essential actors in HIV responses and health systems in many parts of the world. Although the evidence of the central and growing role of communities in the HIV response is overwhelming, measuring the evolution of community-led responses has proved challenging, due partly to the lack of agreed metrics in the current UNAIDS Strategy. To address this issue, civil society and governments are working within the UNAIDS PCB to produce recommendations on the use of definitions for community-led responses to HIV.

COVID-19, communities and the HIV response

In 2020, as the COVID-19 pandemic disrupted primary health-care access across the world, the importance of community-led service delivery became more apparent than ever, with community systems providing lifelines for vulnerable people. Communities have stepped up to lead local COVID-19 responses, challenge misinformation and stigmatization, deliver essential services and organize local support systems. But those community-led efforts are also threatened by the pandemic. They face grave funding uncertainty, while lockdowns and other restrictions on movement and social interaction make it difficult for them to reach and serve their communities. According to a recent survey of 160 civil society organizations by the Civil Society Institute for HIV & Health West and Central Africa, almost three-quarters of (72%) HIV-focused organizations are already working to raise COVID-19 awareness in the general population, even though little or no funding has been made available for that work (128). Meanwhile, another recent assessment showed that formal participation of civil society in national COVID-response governance has been largely absent (129).

What is working and needs to be sustained

Communities have increased the rigor, depth and breadth of data collected for the HIV response as well as for TB, gender-based violence and access to sexual and reproductive health services. An updated People Living with HIV Stigma Index questionnaire (Stigma Index 2.0) was launched in January 2018. Twelve countries have completed the Stigma Index 2.0 process and 35 others are currently implementing the survey. A more rigorous methodology, designed to collect comparable data across countries, is being piloted in 2020. Like its predecessor, the Stigma Index 2.0 is implemented by national networks of people living with HIV, with the support of the International PLHIV Stigma Index partnership (consisting of GNP+, the International Community of Women Living with HIV, and UNAIDS). Systematic community-led monitoring of HIV responses has been implemented in diverse regions. The International Treatment Preparedness Coalition established a regional community treatment observatory for the 90–90–90 targets in 11 countries in western and central Africa. It is documenting service access

(including barriers) and quality for pregnant women, young people, gay men and other men who have sex with men, people who inject drugs and sex workers (130). The Ritshidze Project, developed by people living with HIV and their activist partners, aims to hold PEPFAR and the South African Government accountable for improving HIV and TB services through routine monitoring of more than 400 high-burden clinics in South Africa (131). The community monitoring approach developed by REAct, the first-ever system to monitor, record and assist in responses to human rights issues faced by key populations, has been used by community-based organizations in more than 22 countries in Asia and the Pacific, sub-Saharan Africa and the Middle East and North Africa (132). AVAC, the ATHENA Network, and Salamander Trust have documented gender-related barriers and facilitators for women's access to treatment and adherence, using guidance from a global reference group of women living with HIV from 11 countries. The results were published in the *Health and Human Rights Journal* (133).

Key decision-makers have increased their use of strategic data generated through community-led monitoring. Community monitoring has influenced the development of PEPFAR's Country Operational Plans, including in Côte d'Ivoire (where communities provided data on the extent and impact of out-of-pocket spending on health services) and South Africa (where community monitoring documented the need for scale-up of community-led outreach and services to address service barriers). The Global Fund now includes questions from the People Living with HIV Stigma Index among its core list of HIV indicators. Heeding the call of civil society and UN organizations, the UNAIDS PCB reviewed available evidence on the effects of discrimination in health-care settings. That led to the launch of the Global Partnership for Action to eliminate all forms of HIV-related stigma and discrimination. The involvement of women living with HIV in the design of Zimbabwe's funding requests to the Global Fund for 2018–2020 and 2021–2023 led to the prioritization of and budgeting for programming to address the needs of adolescent girls and young women, including support for community-led monitoring by adolescent girls and young women of service provision in four priority districts.

As a result of community leadership, the depth and breadth of information available on key gaps in the response have increased. *The Global State of Harm Reduction*, published since 2006, is the only independent, civil society-led project monitoring global responses to HIV and hepatitis C epidemics among people who inject drugs. Its 2018 edition reflected the work of more than 100 harm reduction practitioners, academics, advocates and activists across the world and has served as an authoritative reference on the availability and accessibility of harm reduction services (37). Presentation of results from the Kazakhstan People Living with HIV Stigma Index in 2015–2016 led to the adoption of a national plan against stigma and discrimination and to community monitoring of its implementation. #uproot, an audit and accountability tool developed by PACT, a coalition of more than 80 youth organizations, uses scorecards to collect and summarize quantitative and qualitative information on key aspects of responses for young people, including global commitments on HIV (134). Across Asia and the Pacific, youth-led scorecards have galvanized action plans and strategic activities across the region.

Community-led monitoring and advocacy in norm-setting spaces, such as with UN Treaty Bodies, has also driven human rights-based changes. An alternative CEDAW report by women living with HIV in Kazakhstan led to community participation in the second national plan for CEDAW implementation, which prioritizes steps to end stigma and discrimination against women living with HIV and enhance their access to sexual and reproductive health and services (135). A similar shadow CEDAW report in Ukraine summarized results from a survey of 4000 women living with HIV and led to formal calls to accelerate HIV prevention among women and girls and improve access to services for gender-based violence (136). In 2017, Eurasian Harm Reduction Association and Estonian network of people who use drugs (LUNEST) submitted a shadow report to the UN Committee on Economic, Social and Cultural Rights, based on the results of a community-led study of rights violations against women who use drugs in Estonia. The report prompted the UN Committee to recommend actions that can reduce social stigma against people who use drugs and to investigate and act on cases of police abuse and harassment, as well as deprivation of parental rights of people who use drugs .

Community influence on health governance and decision-making has expanded in some settings. In addition to bringing to decision-making fora the perspectives of people living with and affected by HIV, community engagement in national AIDS commissions, country coordinating mechanisms and multilateral governing bodies also identifies important issues and gaps which might be ignored otherwise (137). In 2018–2019, 10 000 women living with HIV in 30 countries strengthened their leadership and advocacy skills, increased their participation in HIV-related decision-making spaces and improved access to HIV services, with support from UN Women. The South African National AIDS Council facilitated the participation of women living with HIV via its dedicated women's sector, while the Ukrainian National Council on Combating AIDS and Tuberculosis reserved a seat for a woman living with HIV. In Uganda, a community-led mentorship programme for adolescent girls and young women living with HIV is strengthening the leadership capacity of a new generation of women living with HIV. EANASSO, a regional network of national networks of civil society organizations and community-based organizations in seven eastern African countries, has enabled community organizations and networks to access technical assistance for Global Fund grants. Women living with HIV have influenced the International AIDS Conferences, catalyzing the creation of Women's Networking Zones, which encourage cross-community exchanges among community members, researchers, donors and policy makers.

Communities have expanded the reach, scale, quality and innovation of health services. The 2018 Astana Declaration reaffirmed the 1978 Alma-Ata Declaration, noting the critical importance of the involvement of individuals, families, community and civil society in the development and implementation of health-related policies and plans (138).

Community-led clinics and outreach programmes have accelerated uptake of HIV prevention, treatment and adherence support as well as integration of HIV, TB and sexual and reproductive health services. Community-led organizations have translated their lived expertise into more effective programming that responds to the needs of communities on their terms, such as in the case of HOYMAS, a clinic by and for sex workers in Kenya, or the emergence of the community-generated "U=U" and "You Can't Pass It On" campaigns. In 2017, networks of women living with HIV worked with WHO to develop the first consolidated guidelines on the sexual and reproductive health and rights of women living with HIV, which promote a woman-centred approach that is grounded in human rights and gender equality (139).

Community-led responses have proved to be vital for ensuring the preservation and continuity of HIV services in conflict, humanitarian or other difficult conditions. In the Central African Republic, the network of people living with HIV delivers ART in conflict-affected areas, while SOS Sida has delivered care services for people affected by gender-based violence in the Democratic Republic of the Congo. COVID-19-related lockdowns have led to wider use of multimonth dispensing and community service delivery. In countries in Asia and other regions, people living with HIV have benefited from community delivery of medicines (140). In eastern Europe and central Asia, 330 people living with HIV maintained access to antiretroviral therapy due to the joint efforts of three community-led initiatives (141).

Community partnerships with health systems and biomedical researchers have achieved transformative results. In Kyrgyzstan, peer consultants work as integral members of multidisciplinary care teams, helping people living with HIV remain engaged in care and adhere to prescribed regimens. In Burkina Faso, Cameroon, Mali and Togo, the involvement of communities in operational PrEP-related research is helping ensure that projects respect research ethics while promoting PrEP uptake.

Communities have demonstrated expertise and had success in addressing human rights violations and structural drivers of HIV, and in increasing social justice and equity. Community-led organizations are often the first to become aware of violations and have played crucial roles in expanding human rights protections for the most vulnerable. In partnership with human rights organizations, communities have markedly increased legal literacy and galvanized substantially stronger efforts to roll back criminalization, including through training and placement of street paralegals and know-your-rights clinics and assembling broad-based coalitions for

decriminalization and strategic litigation. "Support. Don't Punish", a global grassroots-centred initiative promoting harm reduction and drug policies that prioritize public health and human rights, mobilized in at least 200 cities in 86 countries in 2020, even during the COVID-19 pandemic (142). Innovative regional coalitions have been created to share skills and information and coordinate activities and funding. They include the Civil Society Institute for HIV and Health in western and central Africa (which brings together 80 organizations and countries), the Eurasian Network for Women for AIDS (which involves women living with HIV and women from key populations in 12 countries in eastern Europe and central Asia), MENA Rosa (the first regional network dedicated to women affected by HIV in the Middle East and north Africa) and the key population-led MENA H Coalition (which incorporates eight thematic regional networks).

In December 2017, in response to the call of the PCB NGO delegation and UN organizations, the Global Partnership for action to eliminate all forms of HIV-related stigma and discrimination was formed by GNP+, the PCB NGO Delegation, UNAIDS, UN Women and UNDP. Throughout 2019, GNP+ and the PCB NGO delegation organized global and national community planning meetings, forming joint UN-civil society technical working groups and facilitating the engagement of HIV communities in those processes. In 2020, the Global Partnership started country implementation, partnering with governments and communities at national level to take evidence-based action against stigma and discrimination in key settings.

Communities are collaborating to ensure that responses are inclusive and people-centred. As organizations governed explicitly by and for people who are living with and affected by HIV and/or TB, GNP+ and TBpeople have joined forces to establish a more collaborative and formalized relationship to promote stronger and more unified global and regional TB and HIV community-led advocacy responses (143). The #StaySafe campaign's Teenergizer team is focusing on psychological support for adolescents in eastern Europe and central Asia during the COVID-19 crisis (144). UNAIDS, UNDP and the Global Fund are supporting consultative processes on social contracting in HIV, TB and malaria responses, and will conduct analyses and document best practice examples of sustained community systems and responses.

Faith-based organizations have also increased their engagement in the HIV response. Fifty organizations gathered in a workshop at the 2019 International Conference on AIDS and STIs in Africa to strengthen their collaboration around HIV and migration. Faith-based groups also came together for a satellite event to explore ways that faith-based groups could support the delivery of HIV testing services for vulnerable populations. In diverse regions, faith-based organizations continue to play a key role in combatting HIV-related stigma (145).

Where the response is falling short

Funding for community-led responses needs to be rapidly increased. Although reliable and up-to-date data on funding for community-led organizations is lacking, there are indications that funding for community-led responses is insufficient. Funders continue to allocate the bulk of HIV funding to governments and international NGOs, with limited "trickle-down" to community groups. Funding shortfalls are especially acute for key population-led networks and organizations, particularly those that focus on women and young people from key populations. In numerous instances, declines in funding have prompted community organizations to shut down or retrench staff. For example, ECOM, the only regional network of gay men and other men who have sex with men and transgender people in eastern Europe and central Asia, reduced its staff by half in 2020 due to a sharp decline in financial support. The Global Fund's decision to terminate funding for regional projects in western and central Africa, including for community-led monitoring, has had a severe effect on the viability of community-led responses in that region. Funding gaps for community-led responses are occurring at the same time as overall HIV funding has flattened and as programmes for key populations remain badly under-prioritized in the broader response (with programming for key populations accounting for only 12% of overall philanthropic HIV spending in 2018) (146). The impact of the COVID-19 crisis on donor funding and government budgetary priorities is likely to diminish funding for community-led responses even further.

Even when funding is available for community-led responses, funding mechanisms are often complex and difficult for community organizations to access. This is a longstanding problem despite the advocacy efforts to simplify and streamline funding processes for civil society. Community-led organizations often do not have access to core funding, with most grants focusing on project implementation rather than organizational strengthening.ⁱⁱⁱ Structural biases deeply rooted in gender inequality mean that funding for women's organizations is especially scarce. Community organizations and individual workers in organizations are often expected to volunteer or to work for scant remuneration. Advocacy work, which is essential for creating enabling environments, is often unpaid. These practices are unfair and disrespectful, and they impede community-led responses.

Social contracting, whereby governments procure services from civil society, is a potentially powerful option for supporting and sustaining community responses. However, while support for community-led services is essential, it is equally important to ensure that community organizations preserve their ability to function as independent advocates and accountability "watchdogs". The shift away from advocacy to service delivery could undermine that function, with important consequences for activities related to key populations.

Efforts to address funding gaps for community-led responses are undermined by a lack of reliable, up-to-date data on funding, coverage and demand for community-led responses. Methodological challenges complicate efforts to obtain robust size estimates for key populations and impede efforts to assess and promote the demand for services among key populations.

Data collected by communities need to be routinely integrated in HIV response planning. Data collected by communities through community-led monitoring and participatory research are rarely included in national or local data systems, which deprives decisionmakers of important information. When community-led monitoring data is available to decision-makers, significant progress often follows. For example, in the PEPFAR 2019 Country Operational Plan in Cote d'Ivoire, when community-led monitoring data highlighted how out-of-pocket expenses blocked uptake of HIV services, the Government committed to remove user fees for health services (147).

Community-led responses should be integrated into local and national health systems more effectively. Given the pivotal role that community-led organizations and their staff play in HIV service delivery, especially during the COVID-19 crisis, community-led organizations should be considered integral components of modern systems for health, and they should receive funding and be included in coordination planning. In some cases, this requires reviewing national policies or regulations that prevent communities from providing certain health and outreach services—such as for differentiated service delivery for prevention, testing, provision of ART and other medicines, and nutritional, social and adherence support. For some activities, national accreditation, training and funding processes are needed.

The space for civil society is shrinking in many countries and needs to be protected. In the transition from donor-led to domestic financing for HIV underway in many countries, communities of people living with or affected by HIV are losing their presence and influence in HIV governance and resource allocation platforms. Global Fund Country Coordinating Mechanisms have served as a vital platform to enable communities to influence HIV responses. However, the withdrawal of Global Fund support in several countries has reduced the institutional opportunities for communities to shape and guide national HIV efforts (148). In Mexico, the withdrawal of Global Fund support initially led to the government implementing social contracting approaches that served as a lifeline for civil society organizations. However, a later government decision to end such funding disrupted community-led responses and highlighted the heavy reliance of community responses on external support (149).

In many countries, the ability of communities to be fully engaged in HIV responses is also being undermined by growing conservatism, restrictions on freedom of speech and organizing, and

ⁱⁱⁱ Notable exceptions are grants provided through the Robert Carr Fund and a few private donors.

laws and policies that restrict the ability of community groups to accept external support (in some countries limiting the amount of foreign funding an NGO can accept, or limiting the operations or imposing additional administrative requirements on organisations that receive foreign support). Laws and procedures in many countries make it difficult for community-led organizations and other civil society groups to register, access government funding, perform key services (especially biomedical interventions) and remain competitive with the private sector. The COVID-19 pandemic has aggravated those trends. Emergency decrees (e.g. restrictions on gatherings in Indonesia or the closure of bars where key services were delivered in Philippines) have restricted the ability of civil society organizations to operate.

The criminalization of key populations greatly hinders the work and survival of organizations of key populations, and the persistent under-prioritization of youth engagement and involvement undermines the right of young people to participate in HIV-related decision-making. The lack of universal metrics to measure the meaningful engagement of people living with HIV highlights the need for improved data collection and monitoring tools for community-led responses.

Social, legal and policy reforms are needed to reduce the stigma, discrimination, criminalization and violence that impede community-led responses. In 2020, for example, in western and central Africa, LGBTI people have been arrested in Mauritania, community-based violence has targeted an LGBTI network providing HIV prevention services in Burkina Faso, police raided an LGBTI network providing HIV services in Cameroon, and sex workers in the Democratic Republic of the Congo have confronted police abuse. Countries also often ignore the social and economic rights of communities living with or affected by HIV, including rights to employment, proper nutrition and access to social protection.

Emerging challenges require well-resourced, well-planned community responses. As the number of people affected by humanitarian crises continues to rise, communities of migrants, refugees and other displaced peoples increasingly include people living with HIV and key populations. In the context of the COVID-19 pandemic and the ongoing climate crisis, those trends are likely to intensify. Communities will need increased funding and support to develop creative, adaptable strategies to provide care and services to people on the move. At present, funding and support for emergency planning for communities to respond to these humanitarian situations is inadequate. One successful example of cross-movement coordination and coalition building is the work of UNDP and WHO with the Stanley Foundation and Wellcome Trust to convene youth leaders and representatives from civil society working on HIV, environment and climate to strengthen coherent efforts and joint advocacy for investments.

Future strategic directions: key questions for consideration

- ***Should the next UNAIDS Strategy include a pillar for community-led responses? How can we ensure that community-led approaches and activism are prioritized across all pillars of the new strategy?***
- ***What strategic actions are needed to ensure that communities and community-led responses are adequately resourced?***

How can data on funding for community-led responses be improved to inform and guide decision-making on the financing of community-led activities? What actions are needed to diversify funding for community-led responses and avoid having funding dictate the structure and focus of community-led responses?

- ***What strategic actions are needed to preserve and strengthen community systems and activism that the HIV response has galvanized?***

What steps are needed to prevent the weakening of community-led responses (especially with respect to key populations) as responses transition from donor to domestic financing? More broadly, what actions are needed to prevent the achievements and momentum of the

HIV response from being lost in an increasingly crowded and complicated global health and development agenda?

- ***What are the responsibilities of governments, donors, the UN and other actors to ensure that communities have the means contribute fully to ending the AIDS epidemic?***

What frameworks, capacities and skills do key actors and stakeholders need to better support communities and community-led responses?

- ***How can the deterioration in the human rights climate and the shrinking of space for civil society be reversed, and what role can the HIV response play?***
- ***How can national governments and health systems be encouraged to include community-led responses as integral partners in the HIV and broader health responses, while maintaining their necessary autonomy?***

Financing, efficiencies and integration

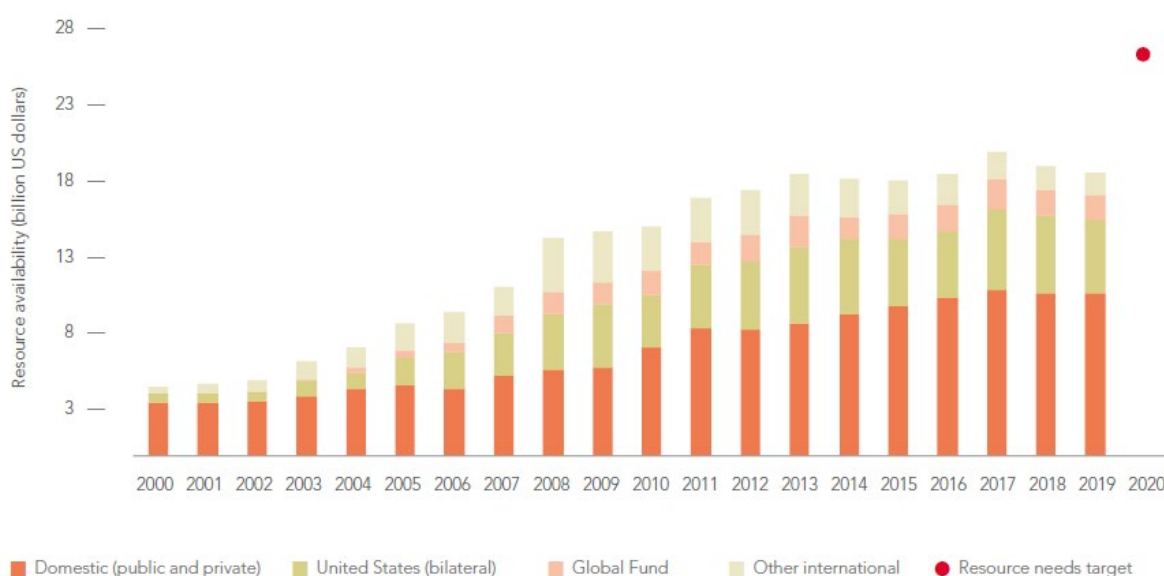
Under the Millennium Development Goals, the global HIV response benefited from a major surge on health funding. Substantial additional financing resources will be required to end the AIDS epidemic:

- **HLM Target 8:** Ensure that HIV investments increase to US\$ 26 billion by 2020, including a quarter for HIV prevention and 6% for social enablers.
- **HLM Target 10:** Commit to taking AIDS out of isolation through people-centred systems to improve universal health coverage, including treatment for TB, cervical cancer and hepatitis B and C.
- **Strategy Result Area 7:** AIDS response is fully funded and efficiently implemented, based on reliable strategic information.
- **Strategy Result Area 8:** People-centred HIV and health services are integrated in the context of stronger systems for health and HIV-sensitive universal health coverage schemes implemented.

Status report

UNAIDS financial estimates show that financing for HIV responses in low- and middle-income countries is well short of the amounts needed to Fast-Track the response. Funding gaps for the HIV response were increasing even before the COVID-19 pandemic.

Figure 56. Resource availability and key funding sources for HIV in low- and middle-income countries, 2000–2019, with 2020 target resource needs

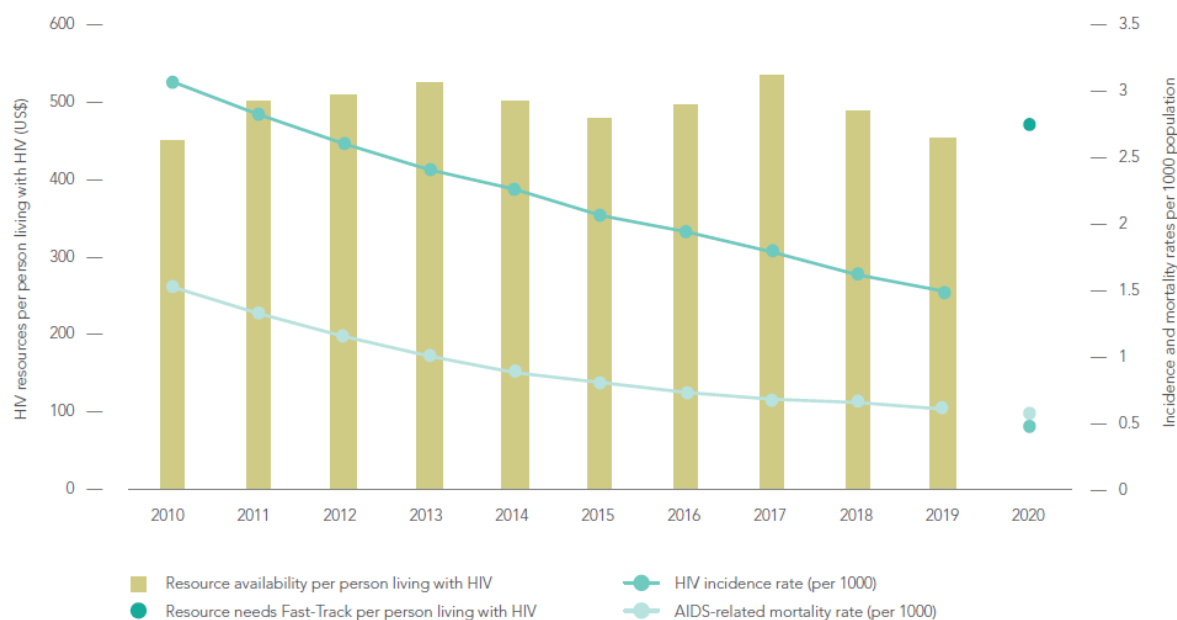


Source: UNAIDS financial estimates, July 2020 (see <http://hivfinancial.unaids.org/hivfinancialdashboards.html>).
Note: Constant 2016 US dollars.

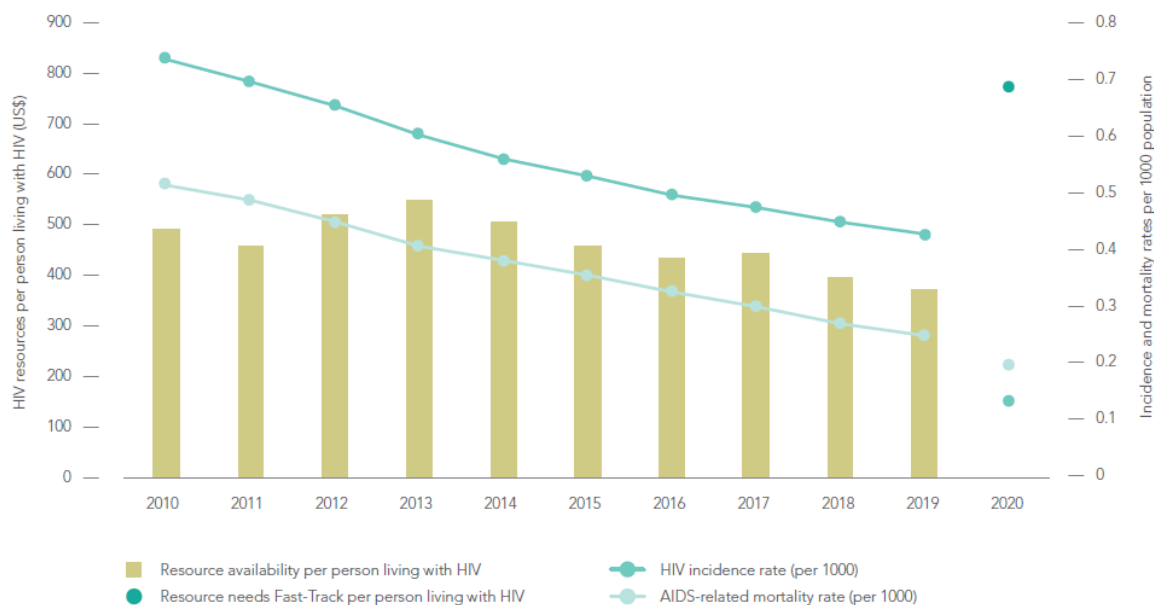
Total HIV resources increased by 20% from 2010 to 2015, but only by 3% from 2015 to 2019. Substantial gaps are evident in western and central Africa and in several regions with concentrated epidemics (e.g. Asia and the Pacific, eastern Europe and central Asia, the Caribbean and the Middle East and North Africa). Resources gaps are much smaller in eastern and southern Africa and in Latin America.

Figure 57. Total HIV resource availability per person living with HIV, HIV incidence and AIDS-related mortality rates in low- and middle-income countries, by region, 2010–2019 and 2020 target

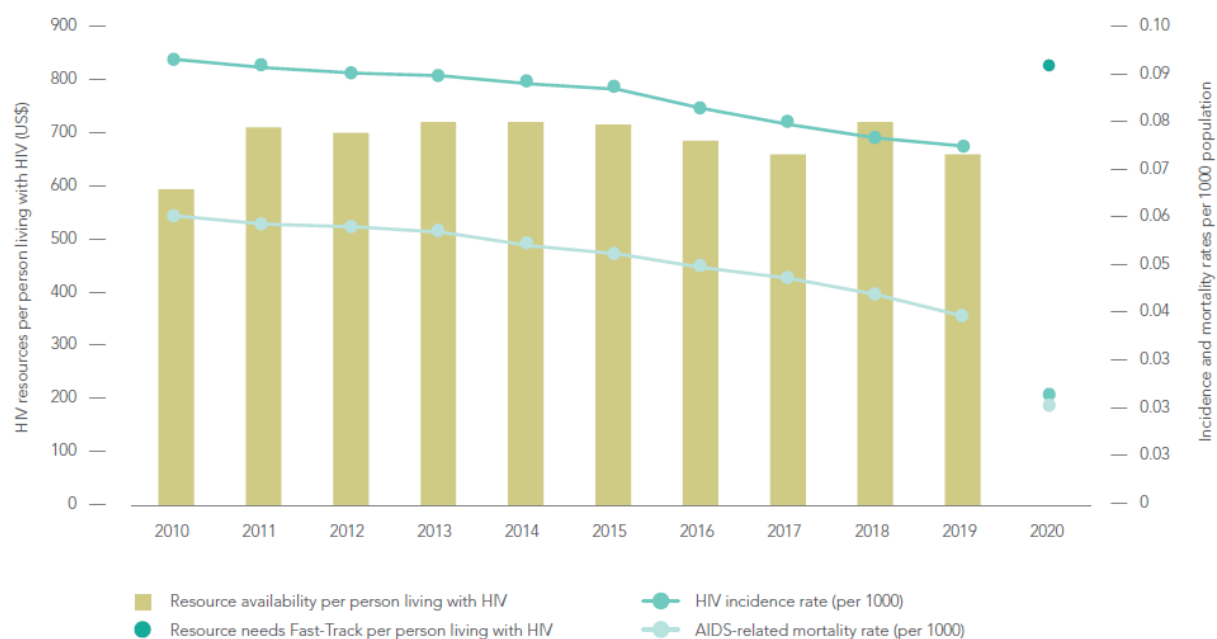
Eastern and southern Africa



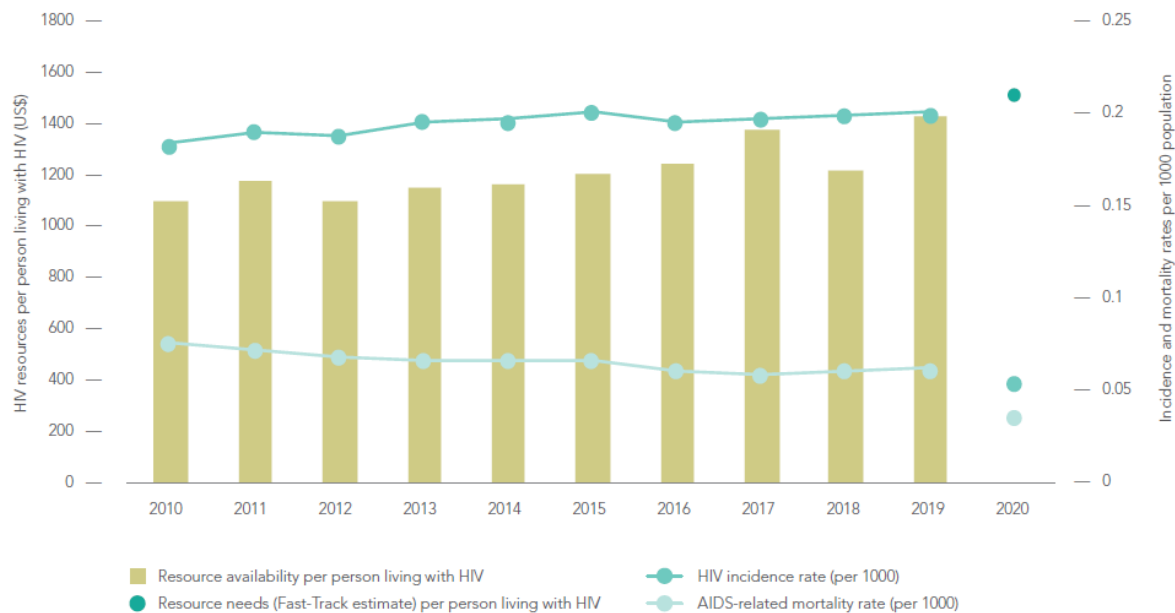
Western and central Africa



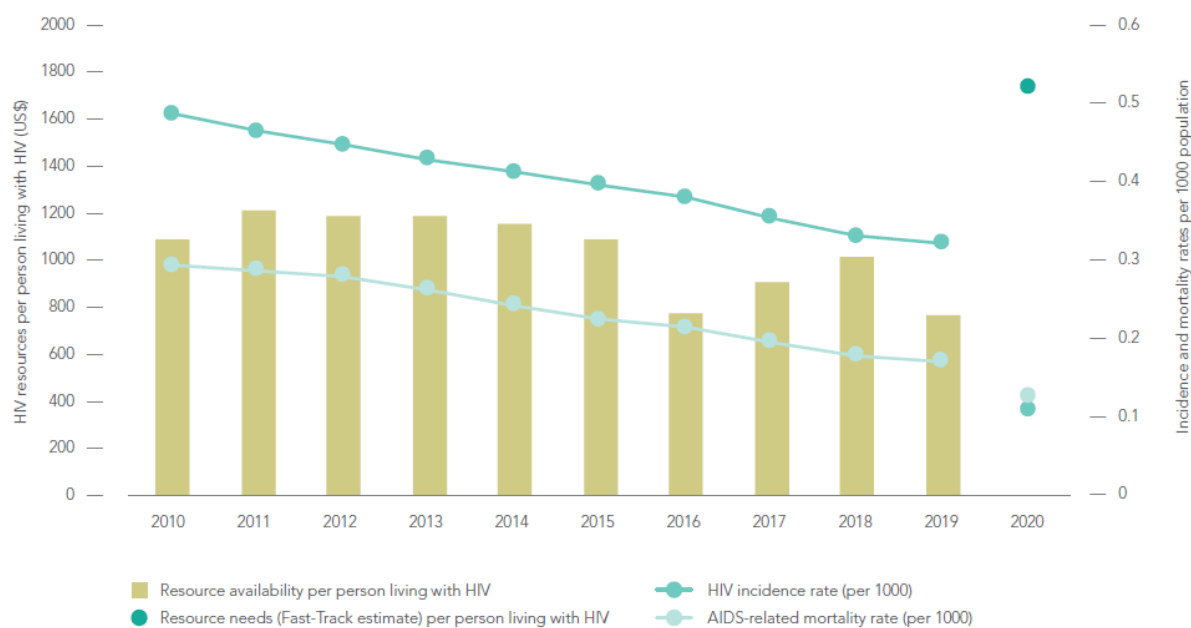
Asia and the Pacific



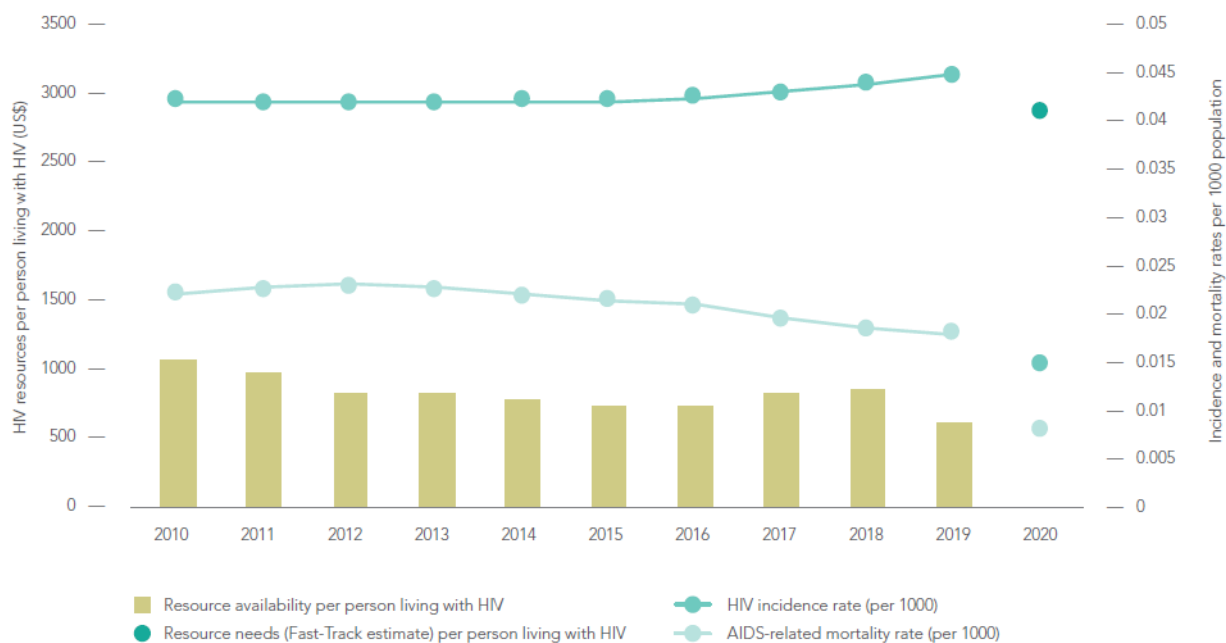
Latin America



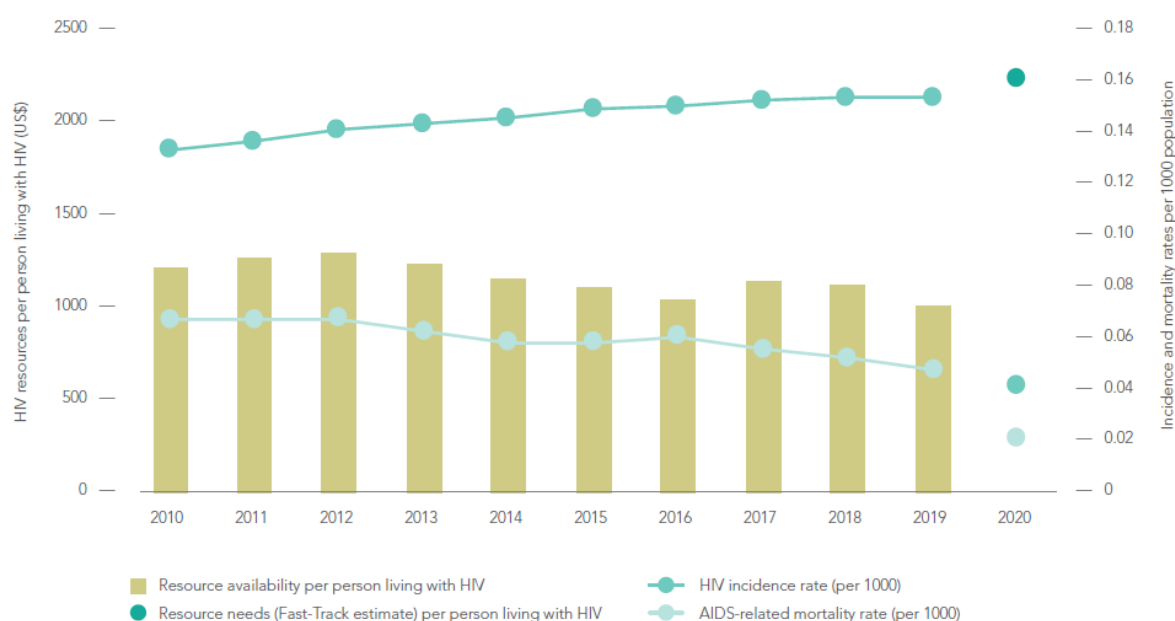
Caribbean



Middle East and North Africa



Eastern Europe and central Asia



Source UNAIDS financial estimates, 2020 (see <http://hivfinancial.unaids.org/hivfinancialdashboards.html>).
 Source UNAIDS financial estimates, 2020 (see <http://hivfinancial.unaids.org/hivfinancialdashboards.html>).
 Note: Resource availability per person living with HIV and resource needs are in constant 2016 US dollars.

Funding shortfalls are having demonstrable, negative effects on HIV responses. This is especially notable in western and central Africa, where acute gaps between available resources and actual needs are associated with modest declines in HIV incidence and AIDS-related mortality. By contrast, more fully funded responses in eastern and southern Africa have generated steady improvements in key HIV indicators in recent years. Preliminary analysis also indicates that the cost of HIV commodities in western and central Africa is higher than in eastern and southern Africa, indicating the potential to reduce the unit costs of service.

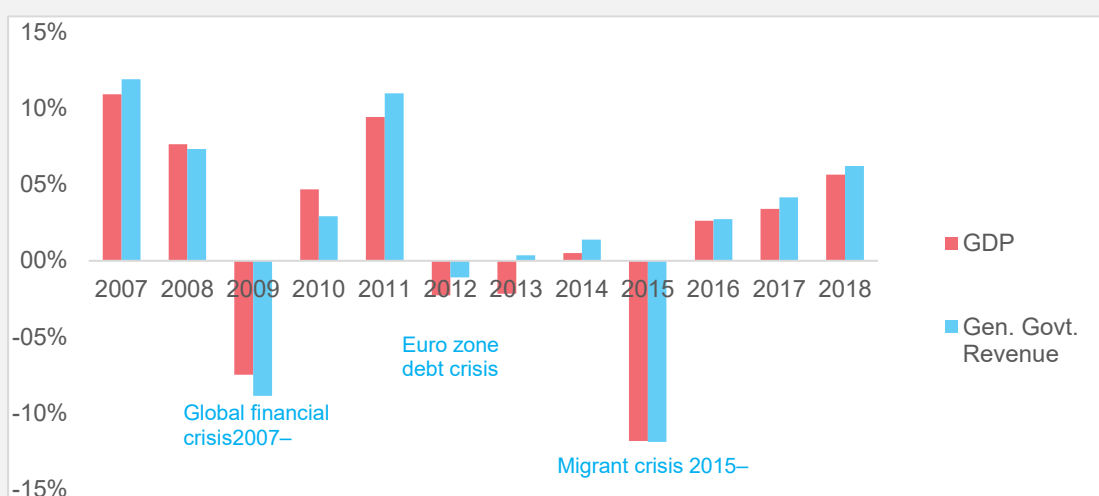
Regional expenditure trends are often heavily influenced by one or two countries. For example, in Latin America, Brazil's comparatively large investments in HIV programmes mask under-investment in some other countries in the region. At the same time, Brazil's experience also illustrates that greater investments do not always translate into optimal health outcomes. New HIV infections in Brazil have increased since 2010, from an estimated 41 000 [19 000–60 000] to 48 000 [23 000–71 000] in 2019. While there has been progress toward the testing and treatment targets, more efforts are needed to reduce new HIV infections. Continued reliance on out-of-pocket expenditures, e.g. via user fees for health services, is a major barrier to equitable HIV service access, especially in western and central Africa (150–153).

Efforts to integrate HIV more closely with other health and development programmes present a mixed picture. As described in greater detail below, a number of countries have taken steps to enhance the technical and allocative efficiency of their HIV response, although these approaches have yet to be comprehensively mainstreamed in all countries.

COVID-19 and the future of HIV financing

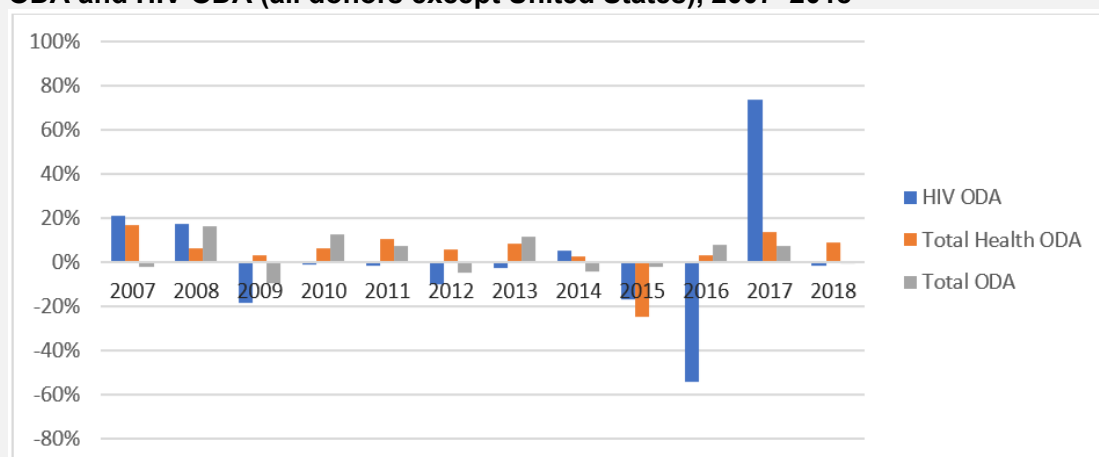
Although it is too soon to accurately quantify the total effect of the COVID-19 pandemic on HIV financing, it is likely to be considerable. The multifaceted shocks associated with the COVID-19 pandemic can be expected to have negative effects on HIV resource mobilization, especially as previous global crises (e.g. the 2007–2009 global financial crisis, the 2012–2013 Euro zone debt crisis and the 2013–2014 migration response in Europe) led to reductions in HIV financing in many countries (Figures 58, 59) (154). The pandemic is likely to have a range of effects on funding availability for HIV in the coming years.

Figure 58. Percent change in gross domestic product (GDP) and general government revenue (all donors except United States), 2007–2018



Source: World economic outlook: the great lockdown. Washington (DC): IMF; 2020.

Figure 59. Percent change in total official development assistance (ODA), total health ODA and HIV ODA (all donors except United States), 2007–2018



Source: UNAIDS financial estimates 2020 (see <http://hivfinancial.unaids.org/hivfinancialdashboards.html>); OECD Creditor Reporting System [database]. OECD; c2020 (<https://stats.oecd.org/Index.aspx?DataSetCode=crs1>, last accessed June 2020).

A recent analysis indicated that the decline in economic growth associated with the COVID-19 pandemic in countries belonging to the Southern African Development Community (SADC) is likely to be comparable to the decline caused by the 2007–2009 financial crisis (155). For most low- and middle-income countries, health and HIV domestic expenditures are expected to decrease significantly, and contributions from donor countries are also

expected to diminish. However, the severity and duration of the shock will likely vary across countries. While some countries may be able to return to more robust domestic financing within one 1 to 5 years, responses in low-income countries with a high HIV burden and a heavy dependence on donor financing could be set back by 5 to 10 years, as HIV resources are reallocated to cover other health and social development needs. In a worst-case scenario, COVID-19 could result in a permanent, structural readjustment in fiscal revenue and expenditure allocations, to the long-term detriment of the HIV response and of health and social spending generally.

In countries with the potential to return to pre-COVID spending levels in 1 to 5 years, the Joint Programme and other partners will need to work with governments to increase the proportion of government spending that is devoted to health, in order to shorten the recovery period. In countries where recovery within 5 years cannot reasonably be expected, UNAIDS will need to work with governments to focus on protecting health and HIV spending as part of a more structural fiscal rebalancing effort and on promoting equity in access to HIV services in HIV outcomes.

All countries are likely to experience severe economic and budgetary disruptions due to the COVID-19 pandemic. UNAIDS should prioritize efforts to ensure that poorer households receive unconditional cash support to enable them to cover indirect service access costs. UNAIDS and other global entities should advocate against efforts to offload health and HIV service costs on to households as a counterproductive budget-balancing measure. It should intensify its advocacy to increase the share of domestic budgets dedicated to health and HIV, coupled with an aggressive reform programme to maximize the efficiency and effectiveness of health and HIV spending. At the global level, the international community should work to maintain official development assistance for health and HIV at the highest possible level and ensure that assistance is targeted towards countries that are least able to absorb the fiscal shocks associated with COVID-19.

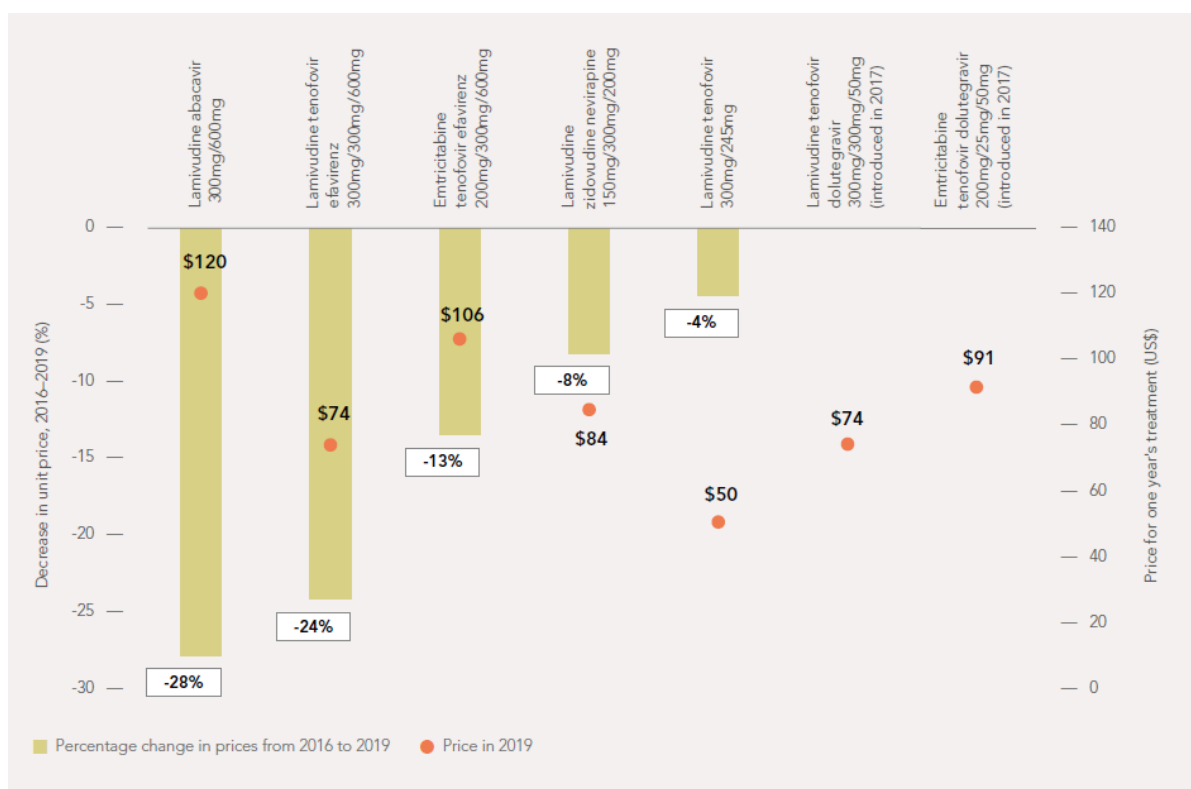
What is working and needs to be sustained

Some countries have increased domestic HIV investments, although earlier increases in domestic HIV financing earlier have not been sustained in recent years. In 2015–2019, a number of countries increased domestic HIV investments, with domestic public expenditure as a share of total HIV investments rising by 231% in India, 225% in Philippines, 127% in South Sudan, 34% in both Colombia and Indonesia, 32% in Costa Rica and 25% in Nigeria. At the same time, several countries reduced their domestic public investments in HIV, with expenditures falling by 88% in Uzbekistan, 78% in Malawi, 72% in Cambodia, 53% in Malaysia, 27% in both Burkina Faso and Kenya, and 16% in Brazil. Regionally, domestic investments have declined in recent years in both eastern and southern Africa and western and central Africa, but domestic financing overall has increased in Asia and the Pacific and Latin America.

Nigeria, home to 6.2% of all people newly infected with HIV in 2019, increased domestic expenditures from US\$ 79.5 million in 2016 to US\$ 91.5 million in 2018. The domestic funding share increased from 15% to 17% during this period. The national government has implemented a national initiative to raise revenue for HIV and other health services, with the support of 16 state governments, and Lagos State committed to assume counterpart funding for a Global Fund grant, enabling an additional 50 000 people to start HIV treatment.

In several countries, social contracting has emerged as a means of preserving, sustaining and strengthening effective community-led service delivery. For example, in four provinces in Viet Nam, community-based services supported through social contracting averting nearly twice the number of disability-adjusted life years compared to facility-based services (156).

Figure 60. Change in prices of key antiretroviral medicines, 2016–2019



Source: UNAIDS special analysis (details available on request).

The major pillars of international HIV financing have shown encouraging resilience. Investments in PEPFAR remain robust, with PEPFAR-related disbursements rising from US\$ 3.7 billion in 2010 to US\$ 5.0 billion in 2015 and US\$ 5.7 billion in 2019 (157). The successful replenishment of the Global Fund in 2019 also reflects promising, continued investment in this key source of HIV financing.

UNAIDS has provided important support to optimize the impact of donor investments. Supporting the Global Fund partnership, UNAIDS provided technical support to more than 40 countries to develop technically sound funding requests and it served as Principal Recipient in at least 20 countries during the review period. In Malawi, for example, UNAIDS provided comprehensive assistance to put Global Fund investments to work and ensure attention to key issues, including community systems strengthening and scale-up of differentiated service delivery (158, 159). In such countries as Kenya, Uganda and the United Republic of Tanzania, UNAIDS has supported PEPFAR investments by convening community partners.

The evidence base for capturing efficiencies has increased, and a number of countries have taken important steps to enhance technical and allocative efficiencies. Since 2015, at least 54 countries have conducted HIV investment cases to identify ways to maximize the efficiency of their national responses and the returns on their HIV investments. At least 20 of those countries have conducted more than one round of investment cases. In terms of impact, a desk review of 13 investment frameworks in eastern and southern Africa concluded that the optimization and broad stakeholder consensus processes informed national HIV strategic plans, the preparation of Global Fund Concept Notes which provide the basis for country funding requests, and PEPFAR's Country Operational Plans (160). In Belarus, an HIV allocative efficiency analysis led to improved allocations of resources for HIV prevention in 2016–2020. Guyana has acted to enhance efficiency by funding civil society organizations to reach key populations with prevention and testing services and by reducing the costs of ARV medicines through the use of pooled international procurement mechanisms. Informed by an investment case analysis, Botswana rapidly lowered ARV medicine prices by shifting to generic drugs, which paved the way for a successful transition to dolutegravir-based regimens and adoption of a national policy

providing treatment access to non-citizens. In Uganda, the "One Dollar" initiative is engaging the private sector to mobilize additional HIV investments.

Several trends have helped improve the efficiency of national responses. The shift to dolutegravir-based regimens and the increased use of optimized procurement strategies in many countries have lowered drug costs per person living with HIV. At the same time, many countries have moved to implement differentiated service delivery, with the transition complete in most PEPFAR-supported countries. Especially in PEPFAR programmes, improved targeting of testing programmes has increased diagnostic yield and possibly enhanced programmatic efficiencies, although evidence on the impact on total testing costs is lacking. Substantial efficiency gains are likely to have resulted from improved targeting of key interventions (e.g. community mobilization, condom promotion, voluntary medical male circumcision, PrEP, programmes for young people), especially in PEPFAR-supported programmes.

Some countries have taken steps to improve the reach, impact and efficiency of HIV spending through enhanced service integration. In Zimbabwe, efforts to integrate HIV and sexual and reproductive health services reduced service delivery costs, increased uptake of HIV and sexual and reproductive health services and achieved higher levels of client satisfaction while maintaining service quality (161).

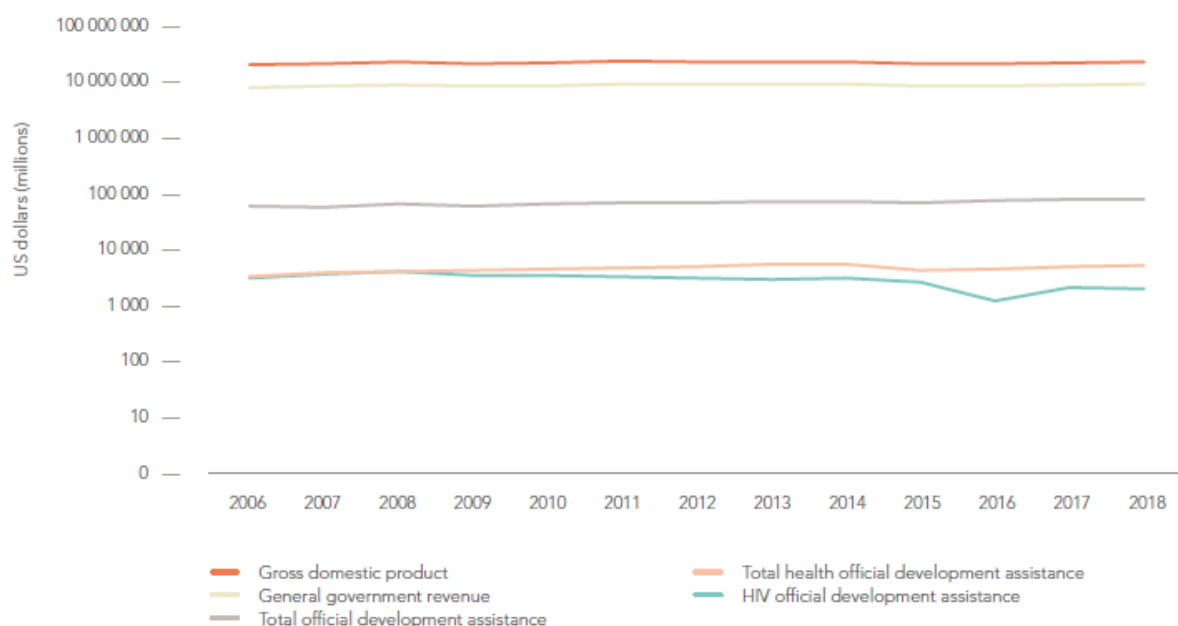
Efforts have focused on building the evidence base for cofinancing of HIV-sensitive social and structural approaches. In 2018–2019, UNDP and the London School of Hygiene and Tropical Medicine-supported STRIVE Research Consortium supported four countries to model, cost and plan cross-sectoral cofinancing approaches for HIV and the SDGs. South Africa included its modelling to expand cash plus care for adolescent girls in KwaZulu-Natal in its Global Fund HIV request.

Where the response is falling short

Concerted efforts are needed to sustain or increase domestic financing in the face of multiple challenges. Prospects for generating increased domestic investments for HIV are uncertain. In addition to the anticipated impact of the COVID-19 pandemic, rising public debt in many low- and middle-income countries (especially among the so-called “risky middle”) is likely to limit the capacity of countries to allocate additional domestic financing for HIV activities. Insufficient domestic investments increase dependence on external donors. In Lesotho and Zimbabwe, for example, interventions for key populations and for adolescent girls and young women are almost wholly donor-financed.

Donor HIV disbursements declined in 2019 and remain heavily reliant on continued investments by the United States. Although the Fast-Track strategy envisaged a 30% increase in donor financing for HIV, donor support has levelled again after a one-year increase in 2017. The United States remains the pillar of international HIV financing, supplying nearly 73% of all donor government's official assistance for HIV in 2019. Especially since 2014–2015, many European donors have reduced HIV-related official development assistance (even though they have maintained or, in some cases, increased overall total official development assistance and health funding) (Figure 61). The COVID-19 pandemic is likely to restrict the fiscal space in many donor countries, potentially encouraging further reductions in HIV assistance. In 2010–2019, significant reallocations of funding to regions with the highest needs and lowest income per capita resulted in reductions in HIV assistance from both the United States' bilateral channel and the Global Fund in several regions, especially those with concentrated HIV epidemics.

Figure 61. Change in official development assistance and macroeconomic variables of donor countries (excluding the United States), 2006–2018



Source: OECD Creditor Reporting System [database]. OECD; c2020 (<https://stats.oecd.org/Index.aspx?DataSetCode=crs1>, accessed May 2020); World economic outlook: the great lockdown. Washington (DC): IMF; 2020; World Bank Open Data [database]. Washington (DC): World Bank; c2020 (data.worldbank.org); UNAIDS financial estimates, 2020 (see <http://hivfinancial.unaids.org/hivfinancialdashboards.html>).

Note: The graph shows official development assistance from all donors, excluding the United States of America. The Y axis uses a logarithmic scale, which allows large differences to be shown on the same graph. Between two points on the y axis, there is a tenfold difference: the difference between the first two points on the y axis is US\$ 9, between the next two points it is US\$ 90, and between the top two points it is US\$ 90 million.

Countries must address persistent inefficiencies that diminish the return on HIV investments.

Although uptake of efficiency-enhancing interventions and service delivery innovations is encouraging, major efficiency gaps remain. Many settings have yet to shift to optimal dolutegravir-based regimens or fully implement differentiated service delivery strategies (see the section on testing and treatment). Undifferentiated, poorly targeted approaches to HIV testing persist in many countries. While some countries have reduced commodity costs through smarter procurement, parallel systems for procurement and supply management continue in many settings. Prices for ARV medicines remain high in many countries, especially in eastern Europe and central Asia, Latin America and the Caribbean. In Mexico, discontinuation of social contracting mechanisms has undermined efforts to sustain essential community-based services and maximize the efficiency of HIV spending. Changes to procurement practices for ARVs also heightened the risk of stock-outs in Mexico, which previously minimized such complications (149).

Many countries have failed to realize key allocative efficiencies. Primary prevention programmes are chronically underfunded, and finite prevention funding is often allocated to prevention approaches that are less cost-effective than the five prevention pillars identified in the 2020 Prevention Road Map (162). For example, Zimbabwe spends a substantial portion of its HIV budget on comparatively less cost-effective approaches such as mass media campaigns. Important efficiency-promoting interventions, such as opioid substitution therapy and cash transfers, have yet to be brought to scale.

Inadequate strategic data undermine our ability to monitor and influence financing flows and expenditure allocations. Countries are conducting National AIDS Spending Assessments less frequently than they before, and many use methodologies which involve “short cuts” that compromise the monitoring of investments. This undermines the systematic production of inputs for efficiency, sustainability and other monitoring functions. Existing health systems tools and

frameworks have been unable to offer alternative methods for adequately monitoring HIV expenditures, identify strategies for sustainable financing, or monitor programmatic efficiencies. A lack of reliable data on unit costs makes it difficult to assess efficiency gains for services for key populations. Efforts to include and cost gender-responsive interventions in efficiency models should be further strengthened and expanded.

Fragmented service delivery is reducing the impact and efficiency of health spending, with poorly functioning health systems causing an estimated 8.6 million avoidable deaths, including 300 000 among people living with HIV (163). Although service integration is common for HIV and maternal and child health, other potential efficiencies through service integration have not been realized effectively. Only 4 of 35 countries with relevant data have fully integrated HIV and cervical cancer screening; 10% of programmes in low- and middle-income countries have fully integrated HIV services and human papilloma virus vaccination); 2 of 14 countries have met integration targets for HIV and harm reduction; and coverage of harm reduction services in prison settings remains extremely low.

Future strategic directions: key questions for consideration

- **What strategic actions would increase the efficiency of HIV spending?**

What actions are needed to ensure actual implementation of efficiency-enhancing measures that are identified in HIV investment cases? How can countries be persuaded or encouraged to increase spending on the five pillars of combination prevention, use the best-possible procurement approaches, or align national programmes with WHO guidelines for optimized regimens and differentiated service delivery? What strategic actions are needed to incentivize countries and programme implementers to integrate services where integration is appropriate? What steps are needed to increase the evidence base for decision-making on when and how service integration is appropriate and efficiency-promoting? How can we enhance collaboration with other components of health systems to encourage integration?

- **How do we generate political support for national and subnational governments to increase domestic investments in HIV, health and social enablers?**

How can we build (or in some cases, rebuild) stronger political support for HIV investments? How can we strengthen domestic resource mobilization for social enablers? What is the future of the HIV investment case approach? Can we make a stronger case (including to finance ministries) for the fiscal, economic, development and health benefits of HIV spending? Is it possible to navigate the political economy of HIV financing more effectively (effectively managing and balancing political/advocacy and technical support)? Are there potential sources of influence at national and subnational levels that have not been tapped effectively to encourage increased domestic investments? How can we use lessons learned from countries that have increased domestic investments (e.g. India, Nigeria, South Sudan) to encourage similar action in other countries? What is a fair share for domestic investment in the response to HIV? How can we fully fund the HIV responses in resource-scarce settings where multiple competing needs have to be met? How can we ensure fully-funded human rights and other services for key populations in volatile political environments? What strategies are available to address the fiscal space limitations associated with national debt loads?

- **What macroeconomic actions or reforms are needed to expand domestic fiscal space in different country contexts?**

What policies would support revenue generation for increased investments in health, HIV and social enablers?

- **How do we build the political will and take the strategic actions that are needed to minimize disruptions to HIV financing associated with the COVID-19 pandemic and avert worst-case scenarios of a permanent reduction in HIV investments?**

How can UNAIDS work proactively with governments to encourage focused investments in health and HIV to shorten the recovery period? How can UNAIDS help ensure that cash transfers are provided to help poorer households can protect their wellbeing and health? What steps are needed to prevent or minimize the impact on vulnerable households by the potential substitution of out-of-pocket spending for domestic public sector investments? Should the Global Fund be encouraged to allocate additional resources towards livelihood support in response to economic dislocations associated with COVID-19?

- **How do we revive and sustain donor investments in the HIV response?**

Is it possible to increase the evidence base for advocacy to sustain official development assistance for health and HIV at current levels? What opportunities exist to re-engage donor governments which have reduced HIV investments while increasing investments in health? How do we manage and overcome the political changes that may lead to the defunding of HIV programmes while increasing investments for other areas? What would constitute a "fair share" of support from donor governments to countries for HIV and other priorities, health or otherwise? What steps are needed to diversify donors to the HIV response? How might UNAIDS further strengthen its support to PEPFAR and Global Fund to "make the money work"?

- **What role does innovative financing methods have in closing the HIV resource gap?**

What actions are needed to translate the work that UNAIDS and partners have been doing in developing innovative financing mechanisms into concrete progress? Is it possible to tap the growing market for social impact investments? What is the potential for national or regional AIDS bonds to help close the HIV resource gap? Is it possible (and advisable) to mobilize substantial resources for health and HIV through private equity funds? What steps are needed to strengthen social contracting to support community-led responses? What mechanisms are needed to assess the potential and equity impact of taxes on health-harming products as an additional funding source for HIV and other health programmes?

- **What steps are needed to strengthen strategic information to monitor HIV expenditure an to guide investment decisions?**

Agreed and coordinated technical support needs to deploy the right tools for the right policy questions. What is the right tool for each programmatic policy question and for the harmonious operation within the health system or other social development sectors? How detailed should the monitoring of programmatic implementation be? How to institutionalize the application of the regular resource tracking assessments? How can innovations in finance data management and other logistics and management information systems be used to generate data for action? What data should be produced routinely to inform the development of efficiency analyses? Which programmatic financing data are needed for National Strategic Plans or sustainability plans?

- **How can UNAIDS and the broader HIV response be best-positioned to leverage progress towards Universal Health Coverage to include HIV services?**

Which are the HIV services that need to be integrated with other health services? Which principles and guidelines should guide the selection of optimal packages of integrated services? Which practices are best suited for planning and financing the integration of HIV services in the broader health system? How can non-health components be included most effectively as part of the broad HIV response? How can we ensure that the system, service and social enablers are properly addressed to optimize effectiveness? How do we ensure that the critical components of the health service package are included in the health insurance benefit package, including appropriate services for key populations and community-led

responses? Are we missing opportunities for enhancing the sustainability and efficiency of HIV responses?

- ***How can social enablers (including improvements in the legal environment and access to social justice, elimination of stigma and discrimination and gender equality) be strengthened even though cost-effectiveness analyses may not necessarily be applicable to those activities?***

Which are the best ways to achieve joint and coordinated actions with other social components of the SDGs (e.g. inequality, poverty, education, housing and nutrition)? How can we coordinate the response with other programmes and actors which take the lead in implementing social actions, but without losing relevance in the HIV arena and in each one of the other priorities?

- ***What would a sustainable HIV response in 2030 look like in: (i) a lower-income country with high HIV prevalence; (ii) a lower-income country with lower HIV prevalence; (iii) a middle-income country with high HIV prevalence; and (iv) a middle-income country with lower HIV prevalence?***

References

1. Seizing the moment: tackling entrenched inequalities to end epidemics. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/2020_global-aids-report_en.pdf).
2. United Nations System Chief Executives Board for Coordination. Leaving no one behind: equality and non-discrimination at the heart of sustainable development: a shared United Nations System framework for action. New York: United Nations; 2017.
3. WHO, World Bank. World report on disability. Geneva: WHO; 2011.
4. Global Fund to Fight AIDS, Tuberculosis and Malaria; Humanity & Inclusion; West Africa Federation of Persons with Disabilities. Une population oubliée: résultats des études bio comportementales [A forgotten population: results from the bio-behavioural studies]. Presentation. 2019.
5. HIV among African Americans. Atlanta: United States Centers for Disease Control and Prevention; 2019 (<https://www.cdc.gov/nchhstp/newsroom/docs/factsheets/cdc-hiv-aa-508.pdf>, accessed on 28 July 2020).
6. UNAIDS analysis of data from population-based surveys.
7. Byron E, Gillespie SR, Hamazakaza P. Local perceptions of risk and HIV prevention in southern Zambia. RENEWAL working paper. International Food Policy Research Institute; 2016.
8. Chop E, Duggaraju A, Malley A, Burke V, Caldas S, Yeh PT et al. Food insecurity, sexual risk behavior, and adherence to antiretroviral therapy among women living with HIV: a systematic review. *Health Care Women Int.* 2017;38(9):927-44.
9. Probst C, Parry CD, Rehm J. Socio-economic differences in HIV/AIDS mortality in South Africa. *Trop Med Int Health.* 2016;21(7):846-55.
10. Havlir D, Balzer LB, Charlebois ED, Clark TD, Kwarisiima D, Ayieko J et al. HIV testing and treatment with the use of a community health approach in rural Africa. *New Eng J Med.* 2019;381:219-29.
11. Hayes R, Donnell D, Floyd S, Mandla N, Bwalya J, Sabapathy K et al. Effect of universal testing and treatment on HIV incidence — HPTN 071 (PopART). *New Eng J Med.* 2019;381:207-18.
12. Iwuji C, Orne-Gliemann J, Larmarange J, Balestre E, Theibaut R, Tanser F et al. Universal test and treat and the HIV epidemic in rural South Africa: a phase 4, community cluster randomized trial. *Lancet HIV.* 2018;5:e116-e125.
13. Makhema J, Wirth KE, Pretorius Holme M, Gaolathe T, Mmalane M, Kadima E et al. Universal testing, expanded treatment, and incidence of HIV infection in Botswana. *New Eng J Med.* 2019;381:230-42.
14. Global tuberculosis report 2019. Geneva: WHO; 2019 (<https://apps.who.int/iris/bitstream/handle/10665/329368/9789241565714-eng.pdf?ua=1>).
15. Jewell B, Mudimu E, Stover J, Kelly SL, Phillips A, Smith JA et al. for the HIV Modelling Consortium. Potential effects of disruption to HIV programmes in sub-Saharan Africa caused by COVID-19: results from multiple models. Manuscript before publication (<https://doi.org/10.6084/m9.figshare.12279914.v1>).
16. Projection produced by: Britta L Jewell (Department of Infectious Disease Epidemiology, Imperial College London), Edinah Mudimu (Department of Decision Sciences, University of South Africa), John Stover (Avenir Health), Debra ten Brink (Burnet Institute), Andrew N Phillips (Institute for Global Health, University College London), 25 June 2020.
17. Internal UNAIDS data, 2020.
18. Personal communication with Ms Tadala Hamisi, Pharmacist, Department for HIV and AIDS, Ministry of Health, Malawi, 23 June 2020.
19. Swindells S, Andrade-Villanueva JF, Richmond GJ, Rizzardini G, Baumgarten A, Mar Masiá et al. Long-acting cabotegravir and rilpivirine for maintenance of HIV-1 suppression. *N Engl J Med.* 2020;382(12):1112-23.
20. Orkin C, Arasteh K, Górgolas Hernández-Mora M, Pokrovsky V, Overton ET, Girard P-M et al. Long-acting cabotegravir and rilpivirine after oral induction for HIV-1 infection. *New Eng J Med.* 2020;382:1124-35.
21. PLACE Report: Malawi. 2018 (<https://www.fhi360.org/sites/default/files/media/documents/resource-linkages-malawi-place-report.pdf>).
22. Global AIDS Monitoring, 2020 (see <https://aidsinfo.unaids.org/>).
23. Havlir D, Lockman S, Ayles H, Larmarange J, Chamie G, Gaolathe T et al. What do the Universal Test and Treat trials tell us about the path to HIV epidemic control? *J Int AIDS Soc.* 2020;23(2):e25455.
24. Cowan FM, Chabata ST, Musemburi S, Fearon E, Davey C, Ndori-Mharadze T et al. Strengthening the scale-up and uptake of effective interventions for sex workers for population impact in Zimbabwe. *J Int AIDS Soc.* 2019;22(Suppl. 4):e25320.
25. Chammartin F, Zürcher K, Keiser O, Weigel R, Chu K, Kiragga AN et al. Outcomes of patients with HIV lost to follow-up in sub-Saharan Africa. *Clin Infect Dis.* 2018;67:1634-52.
26. PEPFAR programme data, 2020.
27. Fox MP, Rosen S. Patient retention in antiretroviral therapy programs up to three years on treatment in sub-Saharan Africa, 2007–2009: systematic review. *Trop Med Int Health.* 2010;15(Suppl. 1):1-5.
28. Zürcher K, Mooser A, Anderegg N, Tymejczyk O, Couvillon MJ, Nash D et al. Outcomes of HIV-positive patients lost to follow up in African treatment programmes. *Trop Med Int Health.* 2017;22:375-87.

29. Fuente-Soro L, López-Varela E, Augusto O, Bernardo EL, Sacoar C, Nhacolo A et al. Loss to follow-up and opportunities for reengagement in HIV care in rural Mozambique: a prospective cohort study. *Medicine*. 2020;99:e20236.
30. Hickety MD, Omollo D, Salmen CR, Mattah B, Blat C, Ouma GB et al. Movement between facilities for HIV care among a mobile population in Kenya: transfer, loss to follow-up, and re-engagement. *AIDS Care*. 2016;28:1386-93.
31. WHO HIV country intelligence tool, 2020.
32. WHO 2015 policy update on use of LF-LAM for diagnosis and screening of active TB in people living with HIV adopted, Global, Most recent data. In: lawsandpolicies.unaids.org [Internet]. Geneva: UNAIDS; c2018 (<http://lawsandpolicies.unaids.org/topicresult?i=846>).
33. Integration status of HIV/TB services: WHO-recommended rapid molecular diagnostics, Global, Most recent data. In: lawsandpolicies.unaids.org [Internet]. Geneva: UNAIDS; c2018 (<http://lawsandpolicies.unaids.org/topicresult?i=857>).
34. Lateral flow urine lipoarabinomannan assay (LF-LAM) for the diagnosis of active tuberculosis in people living with HIV. Policy update 2019. Geneva: WHO; 2019 (<https://apps.who.int/iris/bitstream/handle/10665/329479/9789241550604-eng.pdf?sequence=1&isAllowed=y&ua=1>).
35. Evidence for eliminating HIV-related stigma and discrimination. Geneva: UNAIDS; 2020.
36. Yiu JW, Mak WWS, Ho WS, Chui YY. Effectiveness of a knowledge-contact program in improving nursing students' attitudes and emotional competence in serving people living with HIV/AIDS. *Soc Sci Med*. 2010;71:38-44.
37. Stone K, Shirley-Beavan S. The global state of harm reduction, 2018. Harm Reduction International; 2018 (<https://www.hri.global/files/2019/02/05/global-state-harm-reduction-2018.pdf>).
38. Scheibe A, Shelly-Beavan S, MacDonnell J. Global state of harm reduction, 2018 survey response.
39. Ogunrombi A. Global state of harm reduction, 2018 survey response.
40. Global plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive. Geneva: UNAIDS; 2011 (https://www.unaids.org/sites/default/files/media_asset/20110609_JC2137_Global-Plan-Elimination-HIV-Children_en_1.pdf).
41. Start Free Stay Free AIDS Free: a Super-Fast-Track framework for ending AIDS among children, adolescents and young women by 2020. Geneva: UNAIDS, PEPFAR, UNICEF, WHO, EGPAF; 2016 (<https://www.childrenandaids.org/sites/default/files/2017-05/ThreeFrees.pdf>).
42. Guidance on global processes and criteria for validation of elimination of mother-to-child transmission of HIV and syphilis. Geneva: WHO; 2017.
43. Dugdale C. Maternal engagement in care during pregnancy and breastfeeding in the era of lifelong ART. Presentation at UNAIDS Reference Group on Child HIV estimates, Montreux, Switzerland, October 2019.
44. Igumbor JO, Ouma J, Otworld K, Musenge E, Anyanwu FC, Basera T et al. Effect of a Mentor Mother Programme on retention of mother–baby pairs in HIV care: a secondary analysis of programme data in Uganda. *PLoS One*. 2019;14(10):e0223332.
45. Doyle K, Levov RG, Barker G, Bastian GG, Bingenheimer JB, Kazimbaya S et al. Gender-transformative Bandedehoho couples' intervention to promote male engagement in reproductive and maternal health and violence prevention in Rwanda: findings from a randomized controlled trial. *PLoS ONE*. 2018;13(4):e0192756.
46. Essajee S, Putta N, Brusamento S, Penazzato, M, Kean S, Mark D. Family-based index case testing to identify children living with HIV. Geneva: WHO; 2018 (<https://apps.who.int/iris/bitstream/handle/10665/327145/WHO-CDS-HIV-19.24-eng.pdf?ua=1>).
47. Wolf HT. Improving pediatric index testing: data from 12 PEPFAR-supported countries in sub-Saharan Africa. 23rd International AIDS Conference (virtual), July 6–10 2020. Abstract AB0703.
48. FDA Approves Drug to Treat Infants and Children with HIV. In: U.S. Food & Drug Administration [Internet]. 12 June 2020. FDA; c2020 (<https://www.fda.gov/news-events/press-announcements/fda-approves-drug-treat-infants-and-children-hiv>, accessed 18 August 2020).
49. UNAIDS epidemiological estimates, 2020 (see <https://aidsinfo.unaids.org/>).
50. Bianchi F, Cohn J, Sacks E, Bailey R, Lemaire JF, Machekano R et al. Evaluation of a routine point-of-care intervention for early infant diagnosis of HIV: an observational study in eight African countries. *Lancet HIV*. 2019;6(6):e373-81.
51. Birx D. HIV targets and beyond: an assessment of progress towards global commitments. 23rd International AIDS Conference, 9 July 2020. Plenary presentation.

52. AIDS-free Generation Z: a call to action for improving youth-focused programming. Washington (DC): Elizabeth Glaser Pediatric AIDS Foundation; 2020 (https://www.pedaids.org/wp-content/uploads/2020/07/2020YouthReport_0706.pdf).
53. Borgdorff MW, Kwaro D, Obor D, Otieno G, Kamire V, Odongo F et al. HIV incidence in western Kenya during scale-up of antiretroviral therapy and voluntary medical male circumcision: a population based cohort analysis. *Lancet HIV*. 2018;5(5):e241-9.
54. Kenya Demographic and Health Survey, 2008–2009 and 2014.
55. Kenya HIV country profiles 2016. Nairobi: National AIDS and STI Control Programme (Kenya); 2016.
56. Spectrum 2018.
57. Avenir Health. HIV infections averted by VMMC programs in priority countries from 2008 to 2018. June 2019.
58. Stover J, Teng Y. The impact of condom use on the HIV epidemic. 2019. Manuscript ahead of publication.
59. Siegfried N, Muller M, Deeks JJ, Volmink J. Male circumcision for prevention of heterosexual acquisition of HIV in men. *Cochrane Database Syst Rev*. 2009;2:CD003362.
60. MacArthur GJ, Minozzi S, Martin N, Vickerman P, Deren S, Bruneau J et al. Opiate substitution treatment and HIV transmission in people who inject drugs: systematic review and meta-analysis. *BMJ*. 2012;345:e5945.
61. School-based sexuality education: a cost and cost-effectiveness study in six countries. Paris: UNESCO; 2011 (<http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/pdf/CostingStudy.pdf>).
62. Angrist N, Mogomotsi SM, Gabaitiri L, Anabwani G. Revealing a safer sex option to reduce HIV risk: a cluster-randomized trial in Botswana. *BMC Public Health*. 2019;19:610.
63. Abramsky T, Devries K, Kiss L, Nakuti J, Kyegombe N, Starmann E et al. Findings from the SASA! Study: a cluster randomized controlled trial to assess the impact of a community mobilization intervention to prevent violence against women and reduce HIV risk in Kampala, Uganda. *BMC Med*. 2014;12:122.
64. Wagman JA, Gray RH, Campbell JC, Thoma M, Ndyababo A, Ssekasanvu J et al. Effectiveness of an integrated intimate partner violence and HIV prevention intervention in Rakai, Uganda: analysis of an intervention in an existing cluster randomised cohort. *Lancet Glob Health*. 2015;3(1):e23-e33.
65. Nel A, van Niekerk N, Kapiga S, Bekker L-G, Gama C, Gill K et al. Safety and efficacy of a dapivirine vaginal ring for HIV prevention in women. *N Engl J Med*. 2016;375(22):2133-43.
66. Baeten JM, Palanee-Phillips T, Brown ER, Schwartz K, Soto-Torres LE, Govender V et al. Use of a vaginal ring containing dapivirine for HIV-1 prevention in women. *N Engl J Med*. 2016;375(22):2121-32.
67. Landovitz RJ et al. HPTN083 interim results: pre-exposure prophylaxis (PrEP) containing long-acting injectable cabotegravir (CAB-LA) is safe and highly effective for cisgender men and transgender women who have sex with men. 23rd International AIDS Conference, 6–10 July 2020. Abstract OAXLB0101.
68. DeBeck K, Cheng T, Montaner JS, Beyrer C, Elliot R, Sherman S et al. HIV and the criminalization of drug use among people who inject drugs: a systematic review. *Lancet HIV*. 2017;4:e357-e374.
69. Shannon K, Strathdee SA, Goldenberg SM, Duff P, Mwangi P, Rusakova M et al. Global epidemiology of HIV among female sex workers: influence of structural determinants. *Lancet*. 2015;385:55-71.
70. Cluver L, Boyes M, Orkin M, Pantelic M, Molwena T, Sherr L. Child-focused state cash transfer and adolescent risk of HIV infection in South Africa: a propensity score-matched case-control study. *Lancet Glob Health*. 2013;1(6):e362-e370.
71. Gorgens M, Mabuza K, de Walque D. Sitakhela Likusasa impact evaluation: results of a cluster randomized control trial (cRCT) of financial incentives for HIV prevention among adolescent girls and young women (AGYW) in Eswatini. 10th IAS Conference on HIV Science, Mexico City, 21–24 July 2019. Abstract TUAC0205LB.
72. Koss C. Lower than expected HIV incidence among men and women at elevated HIV risk in a population-based PrEP study in rural Kenya and Uganda: interim results from the SEARCH study. 23rd International AIDS Conference, 6–10 July 2020. Abstract 875.
73. Trickey A. Are harm reduction projects for people who inject drugs in the Ukraine improving HIV prevention and treatment outcomes? 23rd International AIDS Conference, 6–10 July 2020. Abstract AOC0304.
74. Busza J, Chiyaka T, Musemburi S, Fearon E, Davey C, Chabata S et al. Enhancing national prevention and treatment services for sex workers in Zimbabwe: a process evaluation of the SAPPH-IRe trial. *Health Policy Plan*. 2019;34(5):337-45.
75. UNESCO country reporting. Paris: UNESCO; 2020 (unpublished).
76. Vun MC, Fujita M, Rathavy T, Eang MT, Sopheap S, Sovannarith S et al. Achieving universal access and moving towards elimination of new HIV infections in Cambodia. *J Int AIDS Soc*. 2014;17:18905.

77. Halperin DT, Mugurungi O, Hallett TB, Muchini B, Campbell B, Magure T et al. A surprising prevention success: why did the HIV epidemic decline in Zimbabwe? *PLoS Med.* 2011;8(2):e1000414.
78. Johnson LF, Hallett TB, Rehle TM, Dorrington RE. The effect of changes in condom usage and antiretroviral treatment coverage on human immunodeficiency virus incidence in South Africa: a model-based analysis. *J R Soc Interface.* 2012;9(72):1544-54.
79. Vandormael A, Akullian A, Siedner M, de Oliveira T, Bärnighausen T, Tanswer F. Declines in HIV incidence among men and women in a South African population-based cohort. *Nat Commun.* 2019;10:5482.
80. Jones C, Miller NN, Mann C, Smith B, Gesuale S. Report #2: donor funding landscape for condom programming. *Mann Global Health*; 2019 (https://hivpreventioncoalition.unaids.org/wp-content/uploads/2019/06/MGH-Rpt-2-Donor-Trends_Condom-Landscape-Analysis_Final.pdf).
81. Stannah J, Dale E, Elmes J, Staunton R, Beyrer C, Mitchell KM et al. HIV testing and engagement with the HIV treatment cascade among men who have sex with men in Africa: a systematic review and meta-analysis. *Lancet HIV.* 2019;6:e769-e787.
82. Davis SLM, Goedel WC, Emerson J, Skartvedt Guven B. Punitive laws, key population size estimates, and the Global AIDS Response Progress Reports: an ecological study of 154 countries. *J Int AIDS Soc.* 2017;20:21386.
83. Lyons C. Utilizing individual level data to assess the relationship between prevalent HIV infection and punitive same sex policies and legal barriers across 10 countries in sub-Saharan Africa. 23rd International AIDS Conference, 6–10 July 2020. Abstract OAF0403.
84. We've got the power: women, adolescent girls and the HIV epidemic. Geneva: UNAIDS; 2020 (https://www.unaids.org/sites/default/files/media_asset/2020_women-adolescent-girls-and-hiv_en.pdf, accessed on 28 July 2020).
85. Azim T, Bontell I, Strathdee SA. Women, drugs and HIV. *Int J Drug Policy.* 2015;26 Suppl 1(0 1):S16-S21.
86. Pettifor A, Wamoyi J, Balvanz P, Gichane MW, Maman S. Cash plus: exploring the mechanisms through which a cash transfer plus financial education programme in Tanzania reduced HIV risk for adolescent girls and young women. *J Int AIDS Soc.* 2019;22(S4):e25316.
87. De Neve J, Fink G, Subramanian SV, Moyo S, Bor J. Length of secondary school and risk of HIV infection in Botswana: evidence from a natural experiment. *Lancet.* 2015;3:e470-e477.
88. Kangudie DM, Guidigbi H, Mensah S, Bala AA, Delate R. Effective integration of sexual reproductive health and HIV prevention, treatment, and care services across sub-Saharan Africa: where is the evidence for program implementation? *Reprod Health.* 2019;16(Suppl 1):56.
89. Mansoor LE, Yende-Zuma N, Baxter C, Mngadi KT, Dawood H, Gengiah TN et al. Integrated provision of topical pre-exposure prophylaxis in routine family planning services in South Africa: a non-inferiority randomized controlled trial. *J Int AIDS Soc.* 2019;22:e25381.
90. Jewkes R, Stern E, Ramsoomar L. Preventing violence against women and girls: community activism approaches to shift harmful gender attitudes, roles and social norms. Evidence review. WhatWorks; 2019 (<https://www.whatworks.co.za/documents/publications/357-social-norms-briefweb-28092019/file>).
91. Championing gender equality and women's leadership in the HIV response: the experience of five programme countries. New York: UN Women; 2015 (<https://www.unwomen.org/en/digital-library/publications/2015/4/championing-gender-equality-in-the-hiv-response-the-experiences-of-five-programme-countries#view>).
92. Sherwood J, Sharp A, Cooper B, Roose-Snyder B, Blumenthal S. HIV/AIDS national strategic plans of sub-Saharan African countries: an analysis for gender equality and sex-disaggregated HIV targets. *Health Policy Plan.* 2017;32:1361-7.
93. Girls' education: gender equality in education benefits every child. New York: UNICEF; 2019 (<https://www.unicef.org/education/girls-education#:~:text=Around%20the%20world%2C%20132%20million,of%20upper%2Dsecondary%20school%20age>).
94. Data from Demographic and Health Surveys.
95. Ensure universal access to sexual and reproductive health and reproductive rights: measuring SDG target 5.6. New York: UNFPA; 2020 (<https://www.unfpa.org/sites/default/files/pub-pdf/UNFPA-SDG561562Combined-v4.15.pdf>). Based on population-based survey data from 2007–2018.
96. Data from population-based surveys.
97. Darroch J, Woog V, Bankole A, Ashford LS. Adding it up: costs and benefits of meeting the contraceptive needs of adolescents. New York: Guttmacher Institute; 2016.
98. Girlhood, not motherhood: preventing adolescent pregnancy. New York: UNFPA; 2015.
99. People Living with HIV Stigma Index surveys.

100. McKinnon B, Vandermorris A. National age-of-consent laws and adolescent HIV testing in sub-Saharan Africa: a propensity-score matched study. *Bull World Health Organ*. 2018;97:42-50.
101. WHO, London School of Hygiene and Tropical Medicine, South African Medical Research Council. Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence. Geneva: WHO; 2013.
102. State of the world population 2020. New York: United Nations Population Fund; 2020.
103. RESPECT women: preventing violence against women. Geneva: WHO; 2019 (<https://apps.who.int/iris/bitstream/handle/10665/312261/WHO-RHR-18.19-eng.pdf?ua=1>).
104. Population-based surveys, 2000–2019.
105. Violence against children surveys, 2013–2017.
106. Hidden in plain sight: a statistical analysis of violence against children. New York: UNICEF; 2014.
107. Hatcher AM, Smout EM, Turan JM, Christofides N, Stöckl H. Intimate partner violence and engagement in HIV care and treatment among women: a systematic review and meta-analysis. *AIDS*. 2015;29(16):2183-94.
108. The gap report. Geneva: UNAIDS; 2014.
109. Data from Demographic and Health Surveys, 2014–2018.
110. Kaufman MR, Pulerwitz J. When sex is power: gender roles in sex and their consequences. In: Agnew CR, editor. *Power in close relationships*. Cambridge (UK): Cambridge University Press; 2019. pp. 173-91.
111. INSPIRE: seven strategies for ending violence against children. Geneva: WHO; 2016 (<https://www.who.int/publications/i/item/inspire-seven-strategies-for-ending-violence-against-children>).
112. Deering KN, Amin A, Shoveller J, Nesbit A, Garcia-Moreno C, Duff P et al. A systematic review of the correlates of violence against sex workers. *Am J Public Health*. 2014;104(5):e42-54.
113. People Living with HIV Stigma Index surveys, 2013–2018.
114. Literature review by UNAIDS and the Key Populations Program of the Center for Public Health and Human Rights, Johns Hopkins University.
115. Platt L, Grenfell P, Meiksin R, Elmes J, Sherman SG, Sanders T et al. Associations between sex work laws and sex workers' health: a systematic review and meta-analysis of quantitative and qualitative studies. *PLoS Med*. 2018;15:e1002680.
116. 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 sex workers. *Nat Commun*. 2020;11:773.
117. Baker P, Beletsky L. Policing practices and HIV risk among people who inject drugs — a systematic literature review. *Lancet*. 2019 (pre-print) (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3401985).
118. Bacak V, Bright K, Wilson L. Gender-affirmative housing in jails and prisons. *Lancet Pub Health*. 2020;5:e373.
119. Making the law work for women and girls in the context of HIV. New York: UNDP; 2020.
120. National Commitments and Policy Instrument, 2019–2020.
121. SDG Indicators [database]. New York: United Nations Statistics Division; c2020 (<https://unstats.un.org/sdgs/indicators/database/>, accessed 17 April 2020).
122. Gesesew HA, Gebremedhin AT, Demissie TD, Woldie Kerie M, Sudhakar M, Mwanri L. Significant association between perceived HIV related stigma and late presentation for HIV/AIDS care in low and middle-income countries: a systematic review and meta-analysis. *PLoS One*. 2017;12:e0173928.
123. Still not welcome. Geneva: UNAIDS; 2019 (https://www.unaids.org/sites/default/files/infographic_hiv-related-travel-restrictions_en.pdf).
124. Barré-Sinoussi F, Abdool Karim SA, Albert J, Bekker L-G, Beyrer C, Cahn P et al. Expert consensus statement on the science of HIV in the context of criminal law. *J Int AIDS Soc*. 2018;21:e25161.
125. Global Commission on HIV and the Law. Risks, rights & health. Supplement. New York: UNDP; 2018 (https://hivlawcommission.org/wp-content/uploads/2020/06/Hiv-and-the-Law-supplement_EN_2020.pdf).
126. Questions & answers. Breaking down barriers to access: scaling up programs to remove human rights-related barriers to health services in 20 countries and beyond. Geneva: Global Fund to Fight AIDS, Tuberculosis and Malaria; [updated 8 June 2020] (https://www.theglobalfund.org/media/1213/crg_breakingdownbarriers_qa_en.pdf, accessed on 26 July 2020).
127. Population-based surveys, 2014–2019.
128. Results available from the Civil Society Institute for Health in West and Central Africa, April 2020.
129. Rajan D, Koch K, Rohrer K, Bajnoczki C, Socha A, Voss M et al. Governance of the Covid-19 response: a call for more inclusive and transparent decision-making. *BMJ Glob Health*. 2020;5:e002655.

130. Community treatment observatories. In: ITPCglobal.org [Internet]. ITPC; c2020 (<https://itpcglobal.org/monitoring/ctos/>, accessed on 27 July 2020).
131. A new initiative—the Ritshidze Project will monitor the quality of HIV services in 400 clinics across South Africa. In: Health Gap Global Access Project [Internet]. 2 December 2019. New York: Health Global Access; c2020 (<https://healthgap.org/press/a-new-initiative-the-ritshidze-project/>, accessed on 27 July 2020).
132. Rights — Evidence — Action (REACT). In: Frontline AIDS [Internet]. Hove (UK): Frontline AIDS; c2020 (<https://frontlineaids.org/our-work-includes/react/>, accessed on 27 July 2020).
133. Orza L, Bass E, Bell E, Crone ET, Damji N, Dilmitis S et al. In women's eyes: key barriers to women's access to HIV treatment and a rights-based approach to their sustained well-being. *Health Hum Rights*. 2017;19:155-68.
134. #uproot. In: The PACT [Internet]. The Pact; c2018 (<https://www.theyouthpact.org/uproot.html>, accessed on 27 July 2020).
135. Kazakhstan Union of People Living with HIV; Public Foundation for Women Living with HIV in Kazakhstan; Answer [Public Foundation]; My Home [Public Association]; Amelia [Public Association] et al. Shadow report of civil society organizations on discrimination and violence against women who use drugs, women living with HIV, sex workers and women in prison in Kazakhstan. 2018 (https://www.ecoi.net/en/file/local/1439277/1930_1532610624_int-cedaw-ico-kaz-31511-e.pdf, accessed on 27 July 2020).
136. Human rights of women living with HIV in Ukraine: findings of community-based research through the lens of CEDAW. Kyiv: UN Women; 2017 (<http://www.un.org.ua/images/documents/4484/HIV%20through%20CEDAW%20lensengcompressed.pdf> (accessed on 27 July 2020)).
137. Putting the last mile first: position statement on universal health coverage. Amsterdam: GNP+; 2019 (<https://www.gnpplus.net/assets/GNP-UHC-Position-Paper-April-2019.pdf>, accessed on 27 July 2020).
138. Declaration of Astana. In: Global Conference on Primary Health Care. 25–26 October 2018 (<https://www.who.int/docs/default-source/primary-health/declaration/gcphc-declaration.pdf?ua=1>, accessed on 27 July 2020).
139. Consolidated guideline on sexual and reproductive health and rights of women living with HIV. Geneva: WHO; 2017 (<https://apps.who.int/iris/bitstream/handle/10665/254885/9789241549998-eng.pdf?sequence=1>, accessed on 27 July 2020).
140. Information provided by USAID/PEPFAR LINKAGES Indonesia project, led by FHI 360, May 2020.
141. Personal communication, International Treatment Preparedness Campaign Russia, 29 April 2020.
142. Support. Don't Punish [Internet]. International Drugs Policy Consortium; c2018 (<https://supportdontpunish.org/about/campaign/>, accessed 27 July 2020).
143. Press Release: March 24th, World TB Day 2019. It's Time: GNP+ and TBpeople Join Forces to End TB and TB/HIV. In: tbpeople.org [Internet]. 24 March 2019 (<https://www.tbpeople.org.uk/gnp-and-tbpeople>).
144. Teenergizer! [Internet]. Kyiv: Teenergizer; c2014–2020 (<https://teenergizer.org>, accessed on 27 July 2020).
145. A common vision: faith-based partnerships to sustain progress against HIV. Geneva: UNAIDS; 2019.
146. Philanthropic support to address HIV/AIDS in 2018. Washington (DC): Funders Concerned About AIDS; 2020 (<https://www.fcaids.org/wp-content/uploads/2020/03/ULTIMATE-2018-FCAA-RT-Report.pdf>, accessed on 28 July 2020).
147. Côte d'Ivoire signals renewed will to tackle issue of user fees for HIV services. In: UNAIDS.org [Internet]. 16 April 2019. Geneva: UNAIDS; c2020 (https://www.unaids.org/en/resources/presscentre/featurestories/2019/april/20190416_cotedivoire#:~:text=c%20harged%20for%20acc-,%20The%20Government%20of%20C%20C3%B4te%20d'Ivoire%20has%20signalled%20its%20commitment,asked%20to%20pay%20user%20fees).
148. Lessons learned in the field—health financing and governance: a report on the country coordinating mechanism model. Geneva: Global Fund to Fight AIDS, Tuberculosis and Malaria (https://www.theglobalfund.org/media/5488/ccm_lessonslearnedinthefieldhealthfinancingandgovernance_report_en.pdf?u=637278311810000000, accessed on 27 July 2020).
149. The Mexican experience: investing in social contracting for strengthening the HIV response. Greater Georgetown (GY): PANCAP; 2019 (<https://pancap.org/pancap-documents/the-mexican-experience-investing-in-social-contracting-for-strengthening-the-hiv-response-2/>, accessed on 27 July 2020).
150. Phillips M. Financial barriers to access health and HIV care. Presentation to International AIDS Society, Paris, 2017.
151. Why it makes sense to get rid of user fees. Geneva: UNAIDS; 2020.
152. User fees and access to HIV/AIDS services in Cameroon. Geneva: UNAIDS; 2020.

153. Out of focus: how millions of people in West and Central Africa are being left out of the global HIV response. Geneva: Médecins Sans Frontières; 2016.
154. UNAIDS financial monitoring data and analyses.
155. A changed health and economic environment: implications of Covid-19 for sustainable HIV and health financing and progression towards universal health coverage across SADC Member States. Gaborone (BW): Southern African Development Community; 2020.
156. Thai HP. Social contracting with civil society organizations: an effective approach for sustainable HIV/AIDS response, 23rd International AIDS Conference (virtual), 6–10 July 2020. Abstract PEE1370 (poster).
157. Kates J, Wexler A, Lief E. Donor government funding for HIV in low- and middle-income countries in 2019. Washington (DC): Henry J Kaiser Family Foundation, UNAIDS; 2019 (<http://files.kff.org/attachment/Donor-Government-Funding-for-HIV-in-Low-and-Middle-Income-Countries-in-2019.pdf>, accessed on 27 July 2020).
158. Independent evaluation of the partnership between UNAIDS and the Global Fund. Geneva: UNAIDS; 2017.
159. UNAIDS in Malawi: shaping a Fast-Track agenda to end AIDS. Lilongwe (MW): UNAIDS; 2017.
160. Effective and sustainable HIV responses: analysis of selected investment cases in East and southern Africa region. Johannesburg: UNAIDS; 2017.
161. Estimating the efficiency gains made through the integration of HIV and sexual reproductive health services in Zimbabwe. Washington (DC): World Bank; 2018.
162. Annual progress report on HIV prevention 2020. UNAIDS/PCB (45)/19.26 rev. 1. Geneva: UNAIDS; 2019 (https://www.unaids.org/sites/default/files/media_asset/25112019_UNAIDS_PCB45_Annual-progress-report-on-prevention_EN.pdf).
163. Kruk ME, Gage AD, Joseph NT, Danaei G, García-Saisó S, Salomon JA. Mortality due to low-quality health systems in the universal health coverage era: a systematic analysis of amenable deaths. *Lancet*. 2018;392:2203-12.

ANNEX

2020

COMMITMENTS

DATA POINTS

4 IN 5

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

ONLY 53% OF CHILDREN

LIVING WITH HIV ARE ON TREATMENT

IN 6 OF 13 REPORTING COUNTRIES, LESS THAN HALF OF TRANSGENDER WOMEN ARE ABLE

TO ACCESS AT LEAST 2 HIV PREVENTION SERVICES

4.2 MILLION MEN AND BOYS

ACROSS 15 PRIORITY COUNTRIES HAD BEEN VOLUNTARILY AND MEDICALLY CIRCUMCISED IN 2019

FUNDING FOR HIV RESPONSES IN LOW- AND MIDDLE-INCOME COUNTRIES

DECREASED BY 7%

BETWEEN 2017 AND 2019

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

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

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



FAST-TRACK COMMITMENT

1

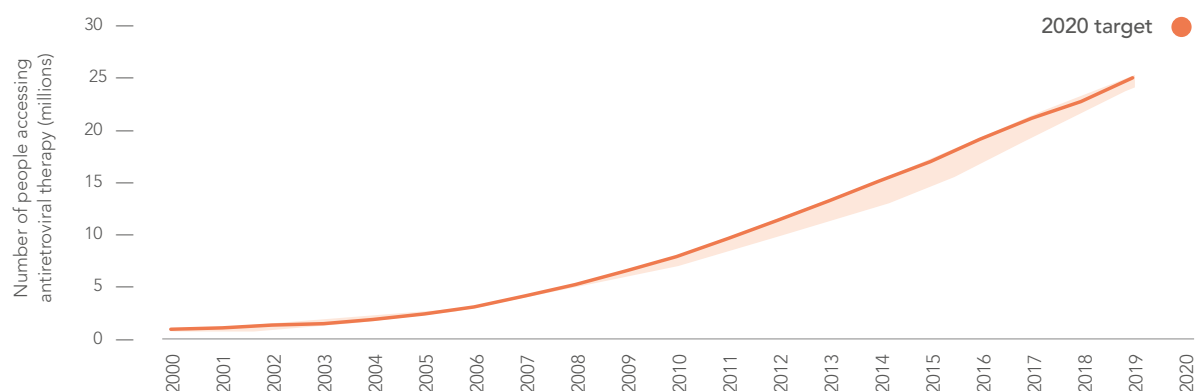
90-90-90



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

FIGURE 2.1

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



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

Gains in HIV testing and treatment

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

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

When all three 90s are achieved, 73% of all people living with HIV have suppressed viral loads. An estimated 25.4 million [24.5 million–25.6 million] of the 38.0 million [31.6 million–44.5 million] people living with HIV worldwide were on antiretroviral

therapy in 2019, a number that has more than tripled since 2010 (Figure 2.1). In spite of this impressive increase, the world may not achieve its target of 30 million on treatment by the end of 2020.

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

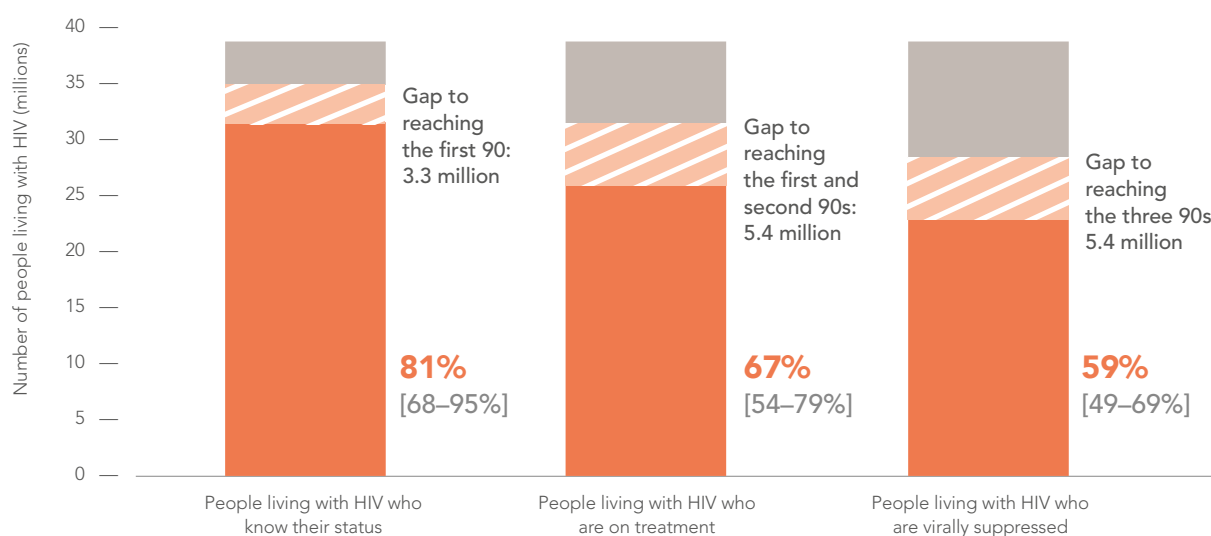
Once people living with HIV start treatment, most are able to stay on treatment and achieve viral suppression, reflecting improvements in both

antiretroviral medicines and differentiated care. Progress towards the third 90 within the 90–90–90 targets—the percentage of people on treatment who have durable viral suppression—stood at 88% [71–100%] in 2019 (Figure 2.4). Progress has also been made towards the second 90, with 82%

[66–97%] of people who know their HIV status on treatment. However, gaps across the testing and treatment cascade add up to 15.7 million people living with HIV globally who have an unsuppressed viral load, which endangers their health and facilitates the further spread of HIV.

FIGURE 2.2

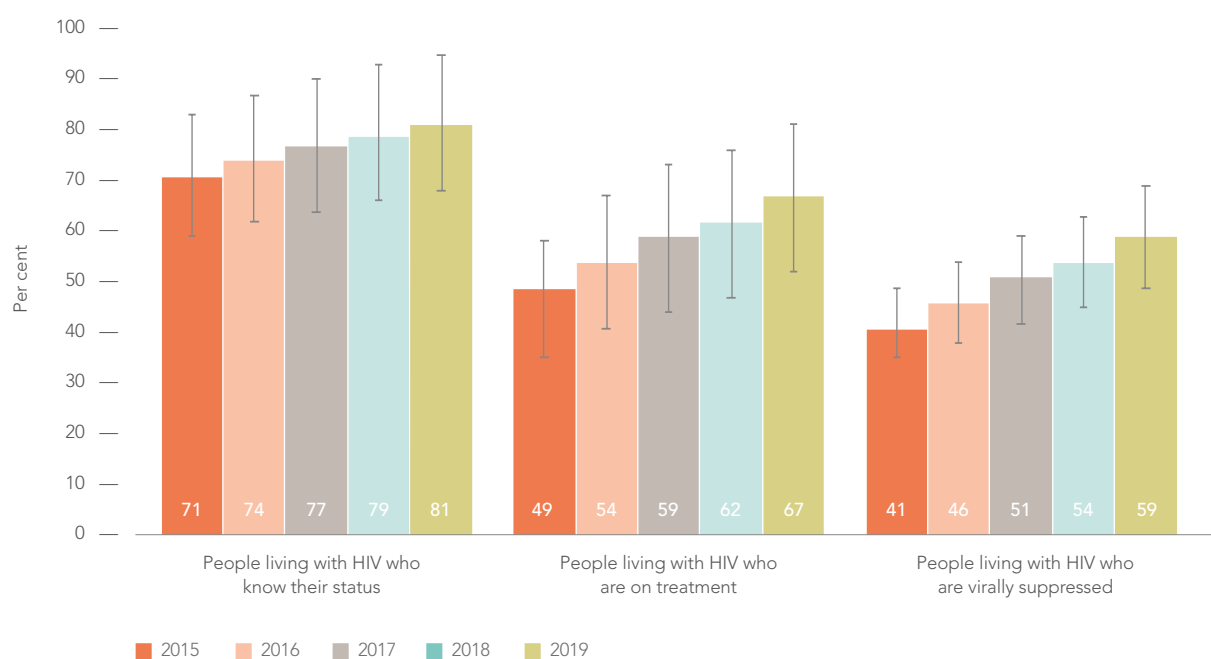
HIV testing and treatment cascade, global, 2019



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

FIGURE 2.3

HIV testing and treatment cascade, global, 2015–2019



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

FIGURE 2.4

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

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

Globally, and in nearly all regions, greater percentages of women are accessing antiretroviral therapy than men. In 2019, treatment coverage globally was 12 percentage points lower among men living with HIV than women living with HIV. This gap was largest in western and central Africa

(67% treatment coverage among women and 49% treatment coverage among men), while treatment coverage among both sexes in western and central Europe and North America was equal at 81% (Figure 2.5).

FIGURE 2.5

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

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

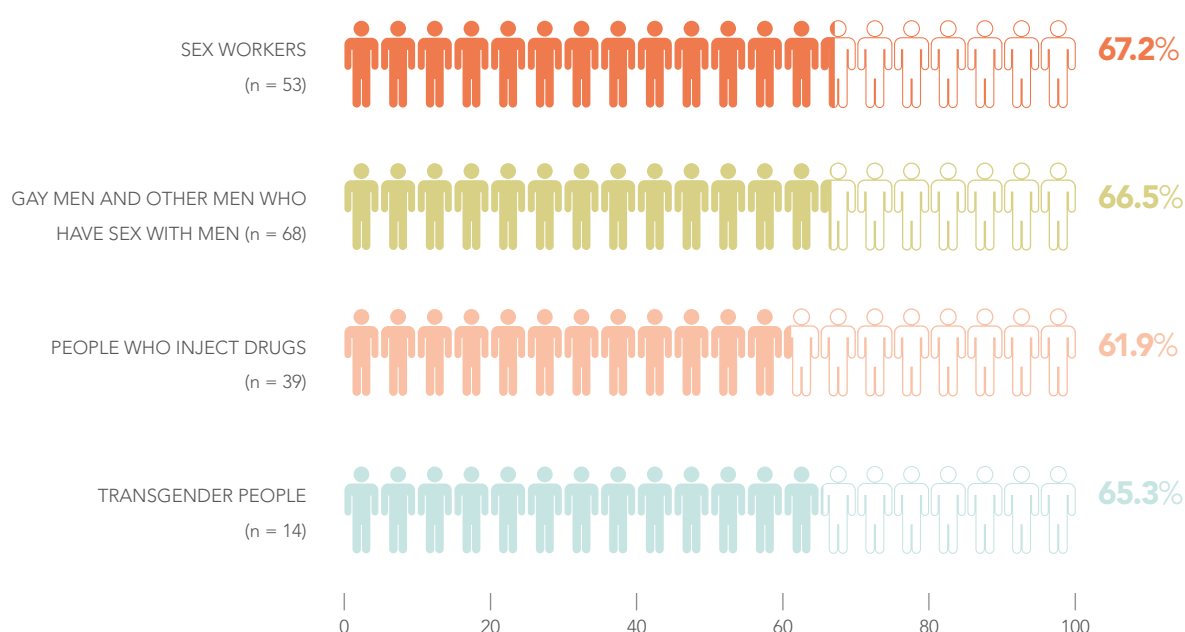
HIV testing and status awareness among key populations

There are significant gaps in HIV testing among key populations at higher risk of HIV infection. Analysis of data from special surveys show that, on average, about two thirds of sex workers and gay men and other men who have sex with men globally either had taken an HIV test and received the results

within the past 12 months or had previously tested positive for HIV—meaning that about one third did not know their HIV status.¹ This testing gap was even larger for people who inject drugs (Figure 2.6).

FIGURE 2.6

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



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

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

Region and country progress

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

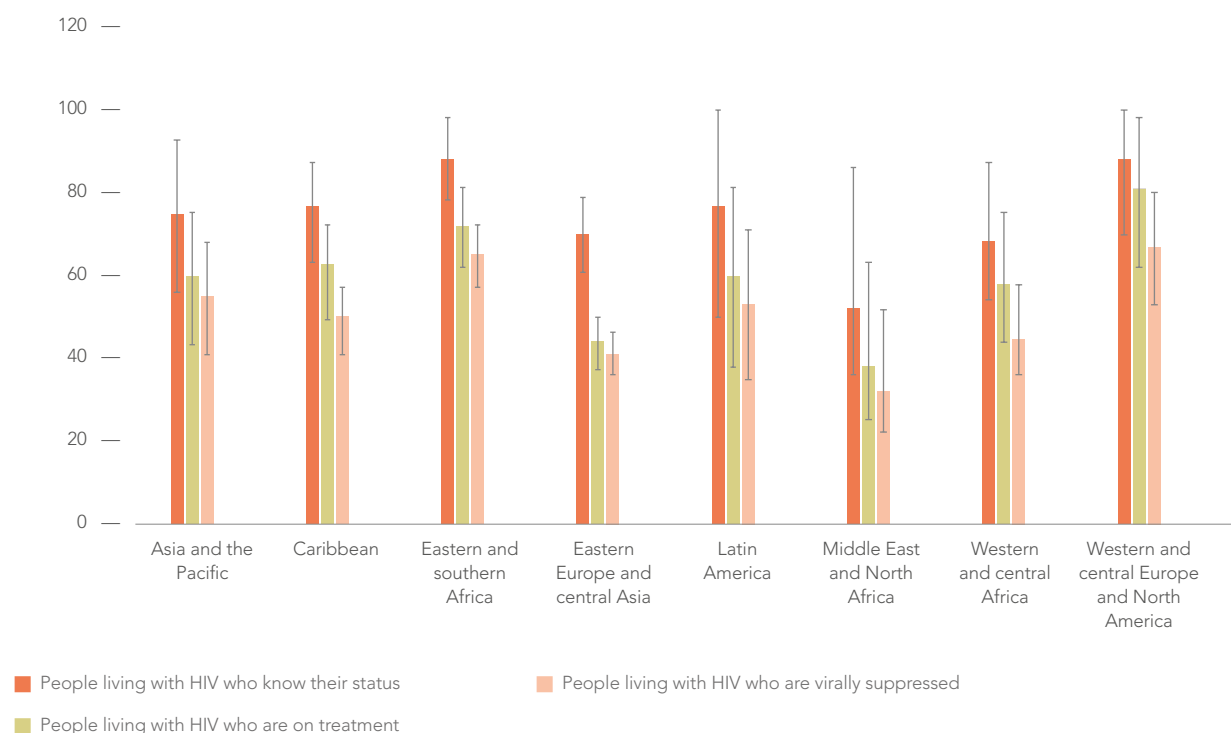
Achieving each of the three 90s results in a minimum of 73% of people living with HIV having durably suppressed viral loads. At the end of 2019, 14 countries across three regions had achieved the 73% target—Australia, Botswana, Cambodia,

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



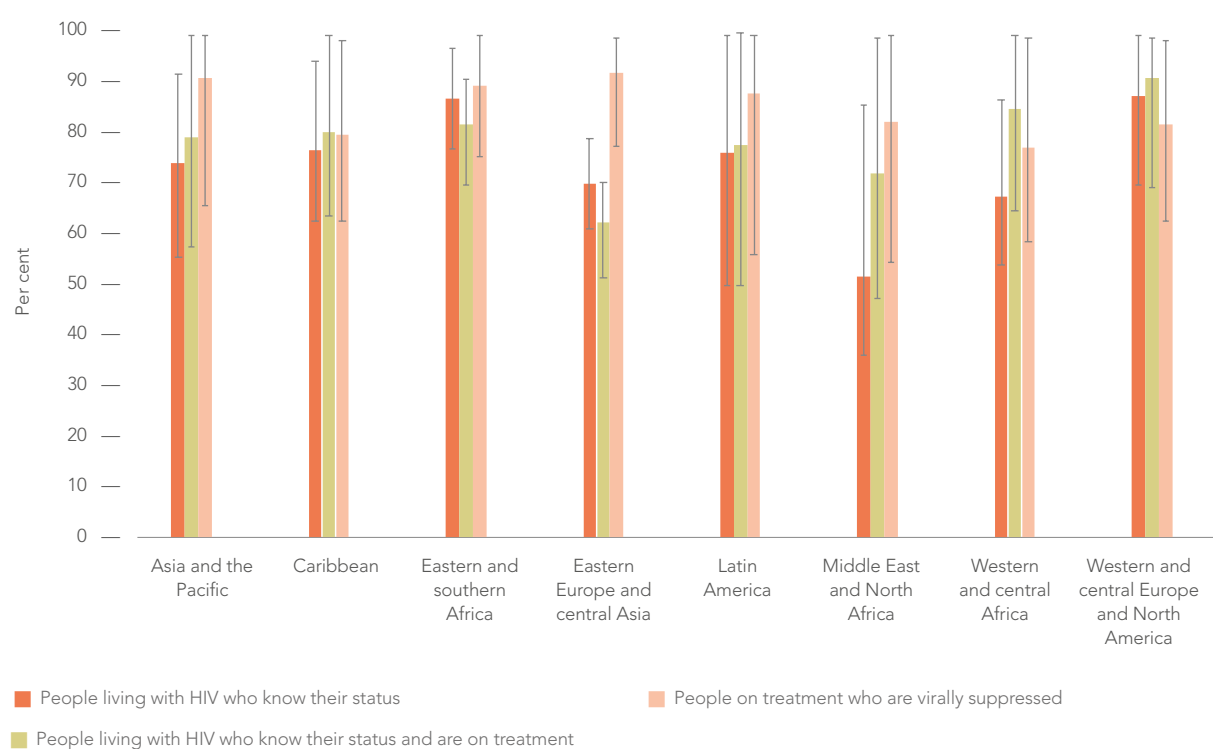
Credit: UNAIDS

FIGURE 2.7

HIV testing and treatment cascade, by region, 2019

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

FIGURE 2.8

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

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

TABLE 2.1

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

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

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

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

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

FAST-TRACK COMMITMENT

2



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

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

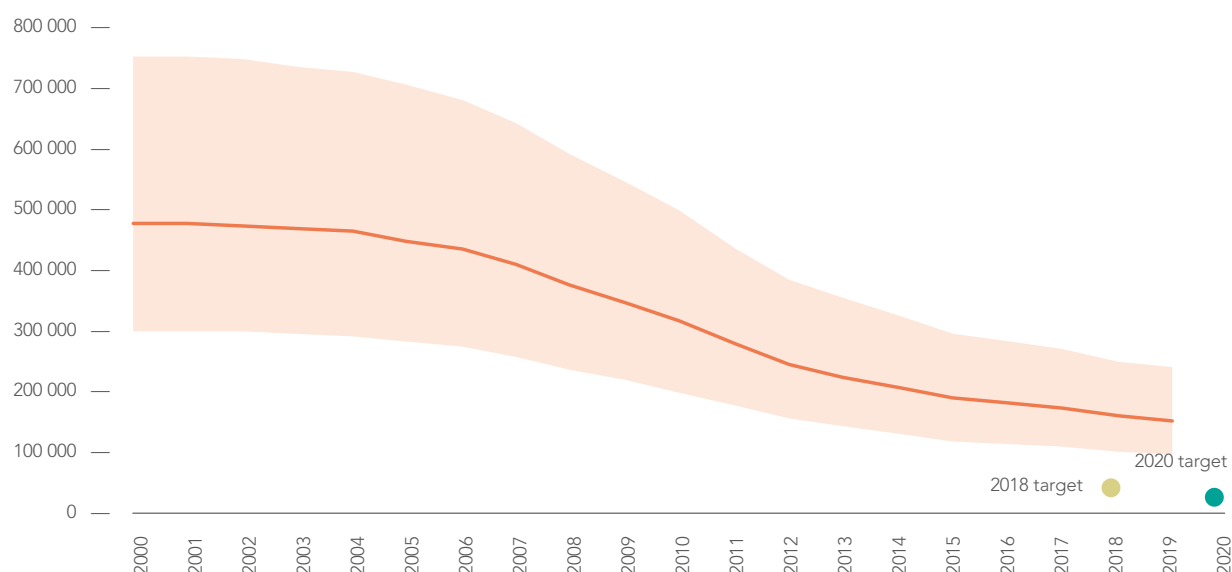
Gaps in services to prevent vertical transmission—including uneven treatment coverage, women exposed to HIV during pregnancy and breastfeeding, and mothers living with HIV losing access to their antiretroviral

therapy during breastfeeding—undermine further progress towards the target of eliminating new HIV infections among children.

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

FIGURE 2.9

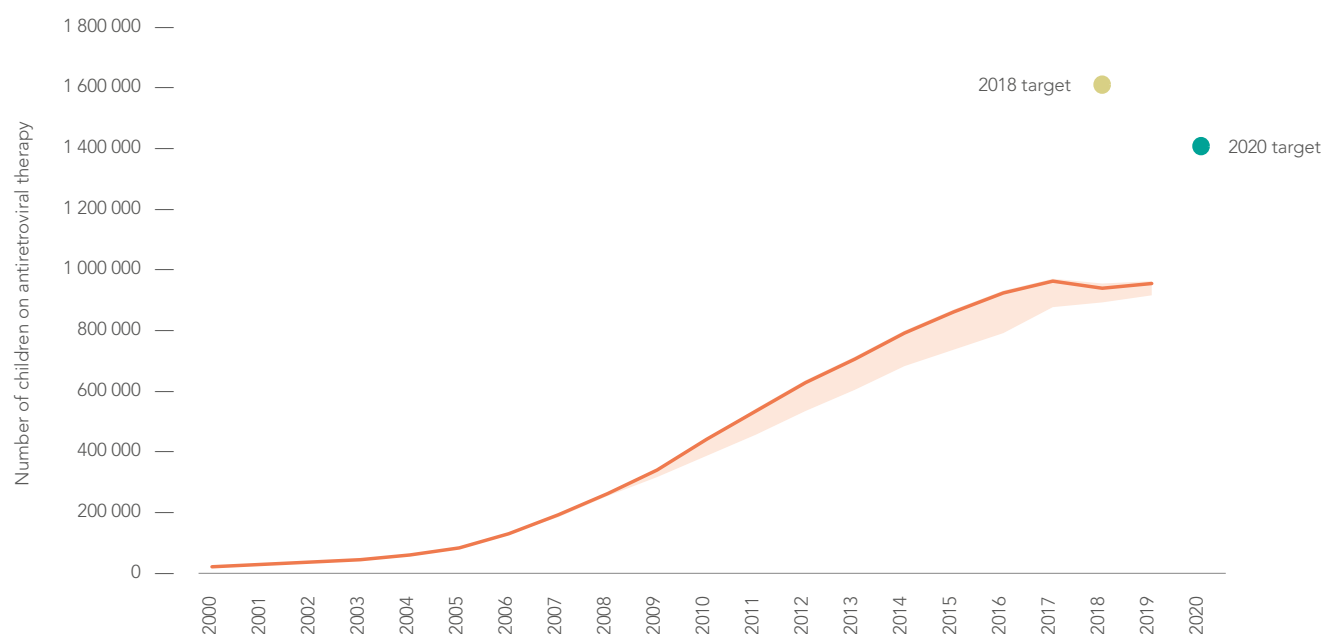
Number of new child infections, global, 2000–2019



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

FIGURE 2.10

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



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



Credit: UNAIDS

FAST-TRACK COMMITMENT

3



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

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

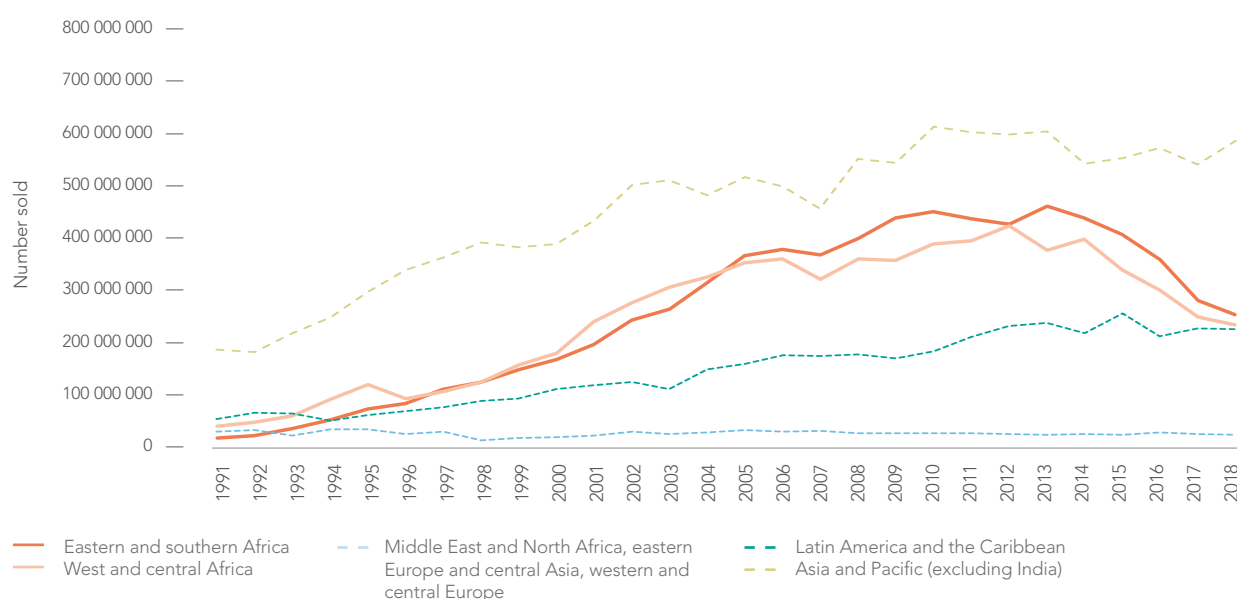
Declines in condom use among young women

The defunding of condom social marketing programmes and decline in sales of socially marketed condoms in sub-Saharan Africa (Figure

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

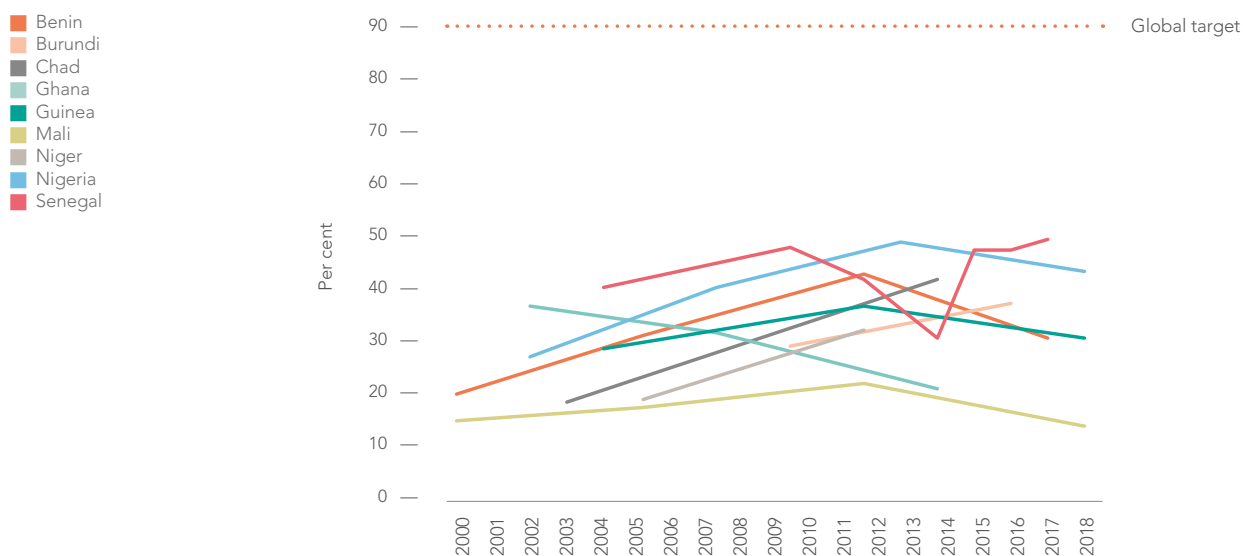
FIGURE 2.11

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



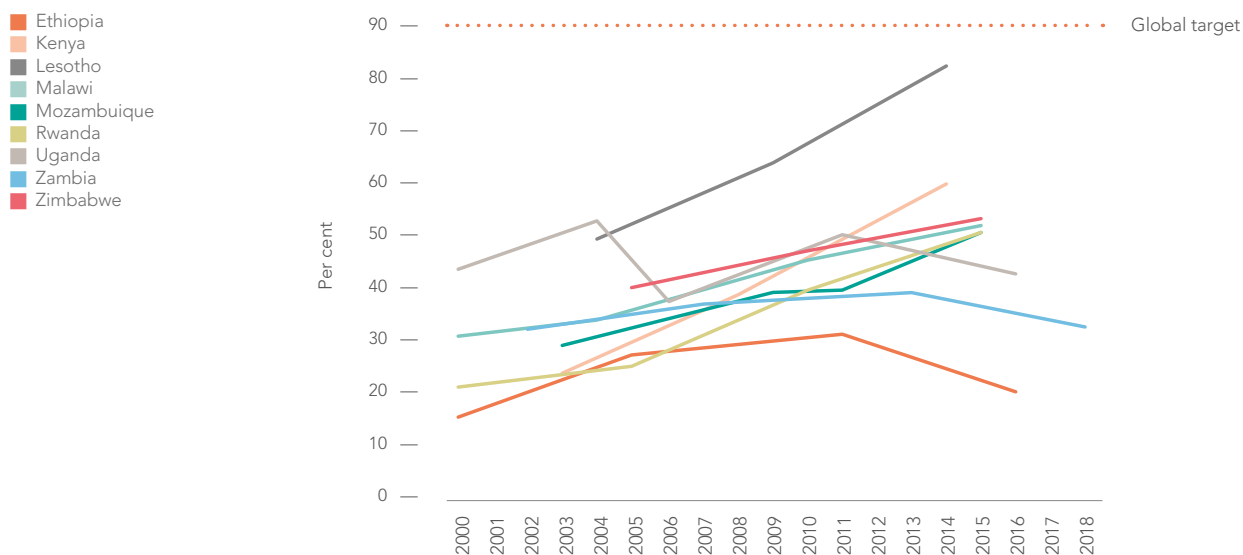
Source: Contraceptive social marketing statistics, 1991–Present. In: DKT International [Internet]. Washington (DC): DKT International; c2020 (<https://www.dktinternational.org/contraceptive-social-marketing-statistics/>, accessed 2 May 2020).

FIGURE 2.12

Condom use at last higher risk sex, women (aged 15–24 years), by region, 2000–2018**Western and central Africa**

Source: Population-based surveys, 2000–2018.

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

Eastern and southern Africa

Source: Population-based surveys, 2000–2018.

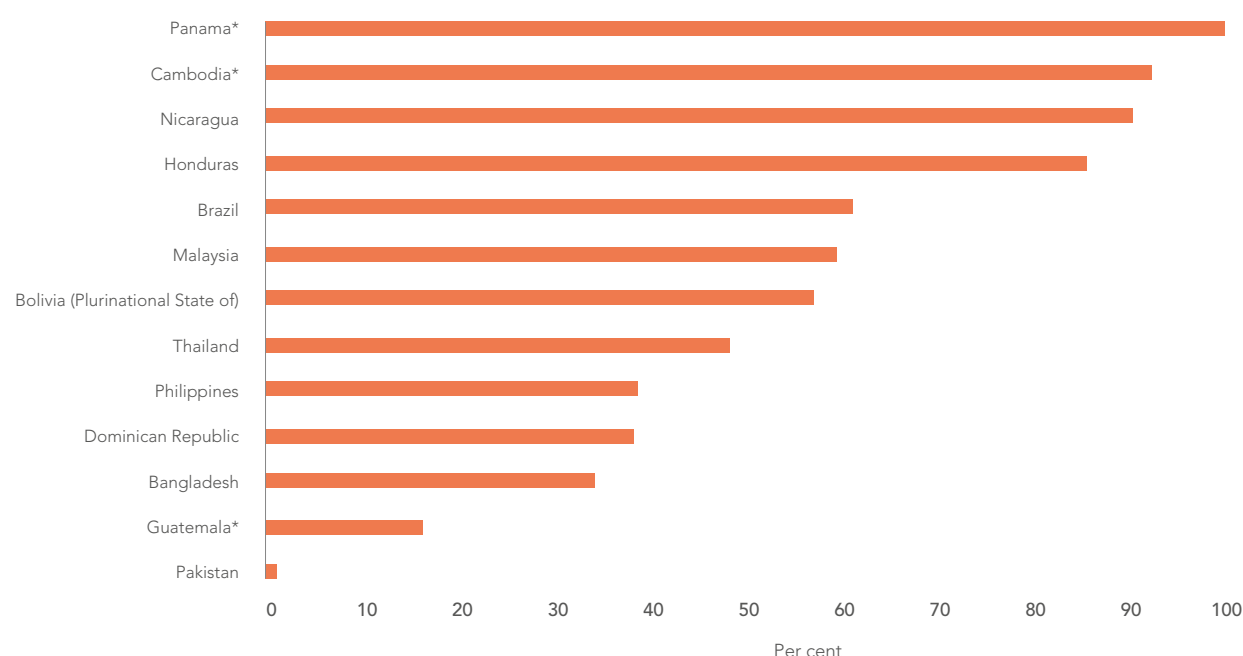
Combination prevention for key populations

Key population access to combination HIV prevention options varies greatly among countries, and it remains insufficient globally. In six of 13 countries that have conducted surveys since 2016 and reported those data to UNAIDS, less than half of transgender women stated that they were able

to access at least two HIV prevention services in the past three months (Figure 2.13). The same is true for female sex workers in 16 of 30 reporting countries (Figure 2.14), for gay men and other men who have sex with men in 26 of 38 reporting countries (Figure 2.15) and for men who inject drugs in 10 of 14 reporting countries (Figure 2.16).

FIGURE 2.13

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

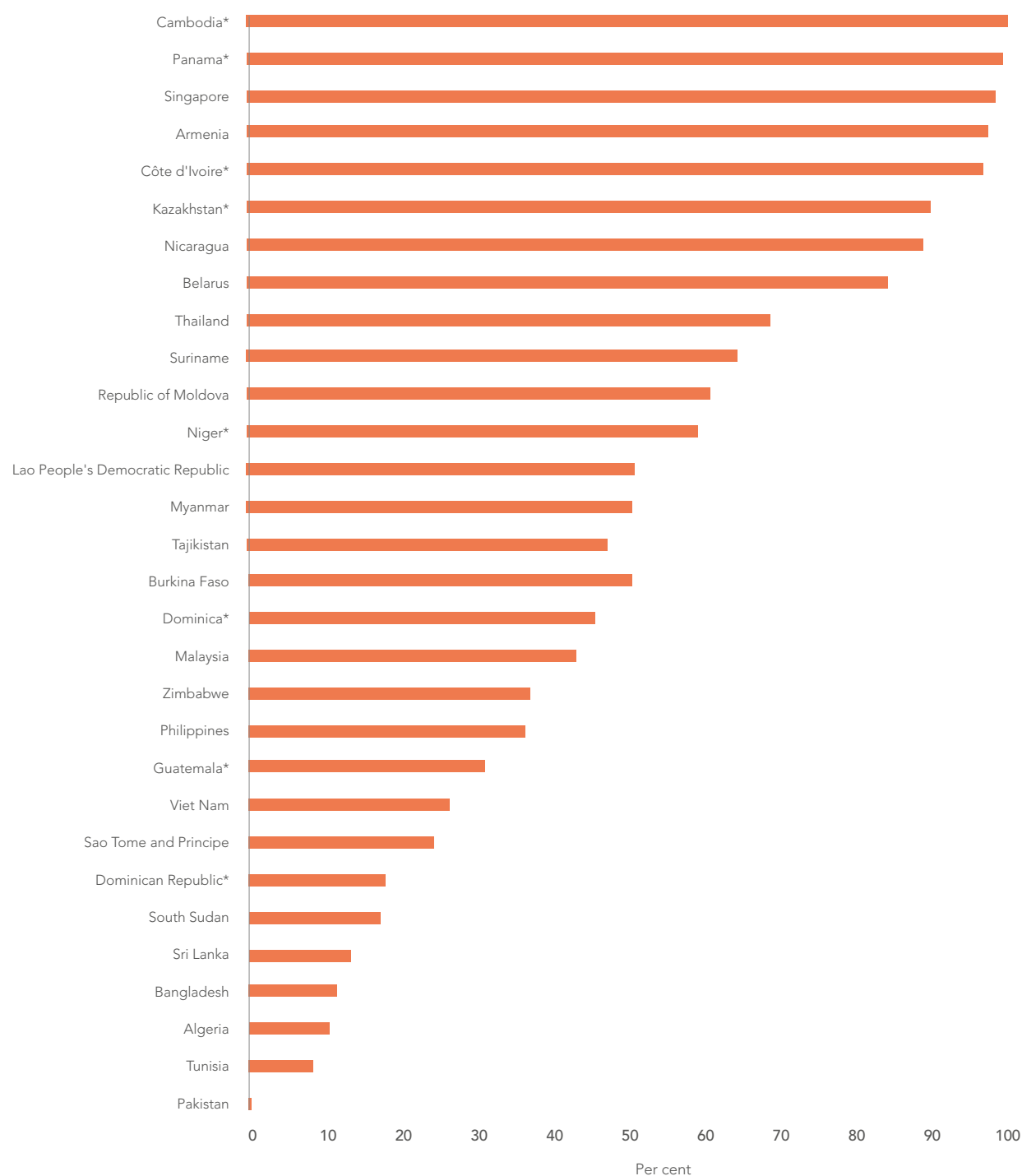


Source: UNAIDS Global AIDS Monitoring, 2020 (see <https://aidsinfo.unaids.org/>).

Note: The use of an asterisk (*) indicates that data for marked countries come from programme data (which tend to show higher values) and not from a survey. Possible prevention services received: condoms and lubricant, counselling on condom use and safe sex, and testing for sexually transmitted infections.

FIGURE 2.14

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

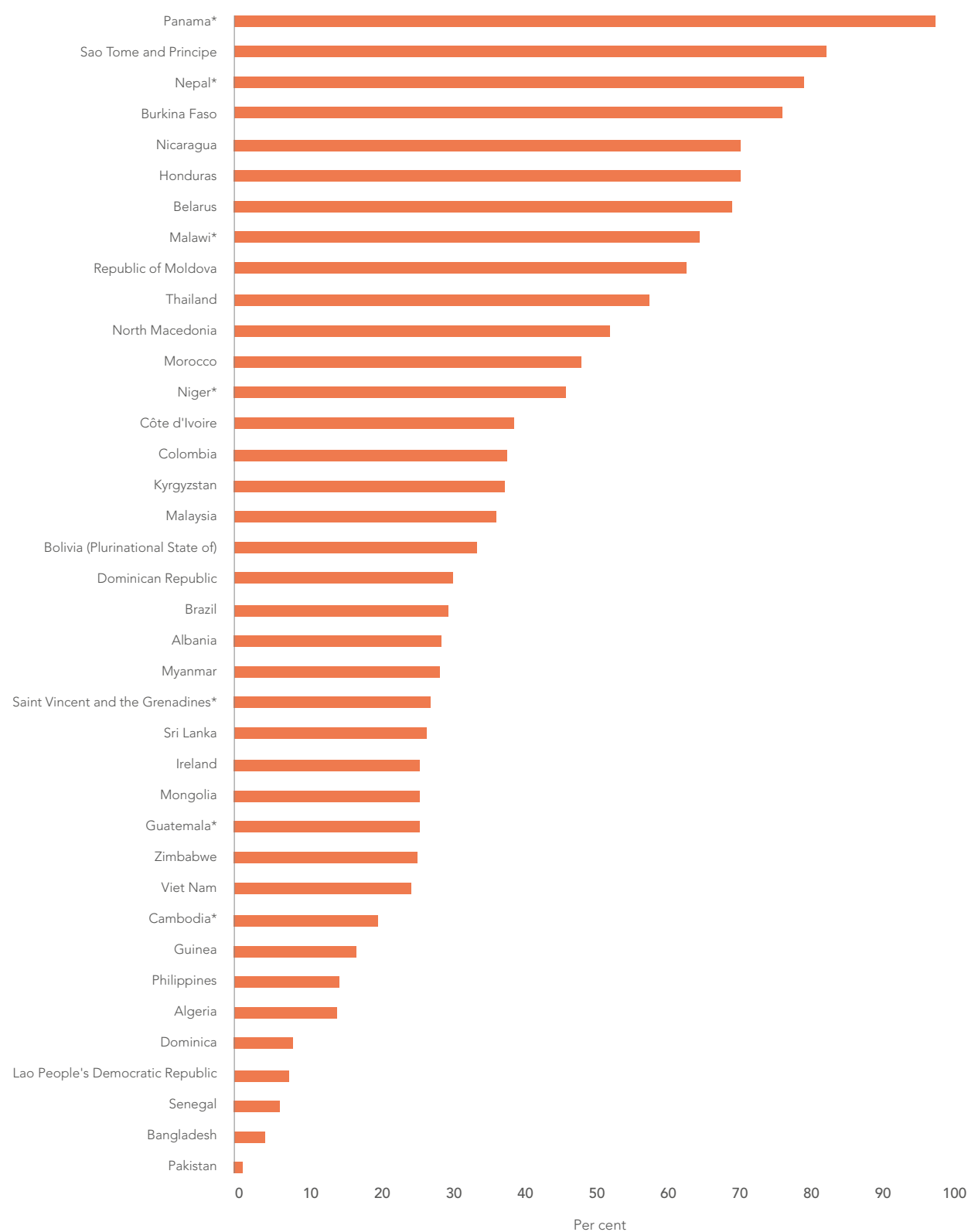


Source: UNAIDS Global AIDS Monitoring, 2020 (see <https://aidsinfo.unaids.org/>).

Note: The use of an asterisk (*) indicates that data for marked countries come from programme data (which tend to show higher values) and not from a survey. Possible prevention services received: condoms and lubricant, counselling on condom use and safe sex, and testing for sexually transmitted infections.

FIGURE 2.15

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

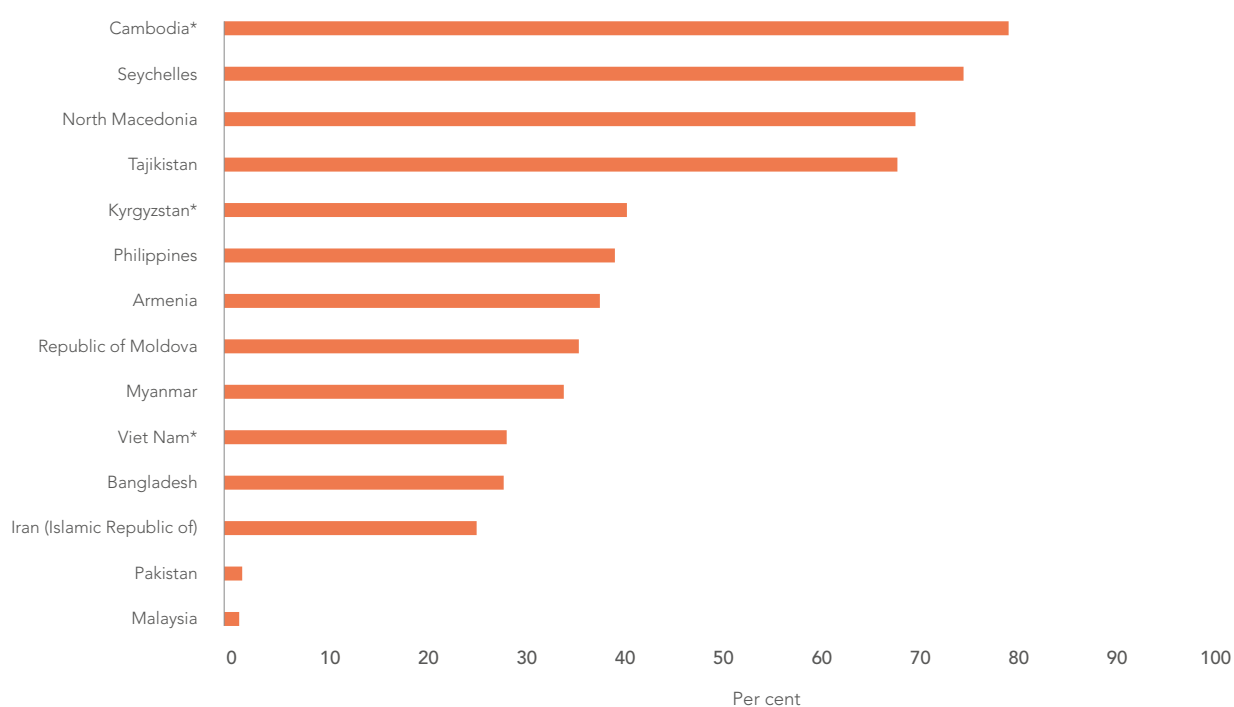


Source: UNAIDS Global AIDS Monitoring, 2020 (see <https://aidsinfo.unaids.org/>).

Note: The use of an asterisk (*) indicates that data for marked countries come from programme data (which tend to show higher values) and not from a survey. Possible prevention services received: condoms and lubricant, counselling on condom use and safe sex, and testing for sexually transmitted infections.

FIGURE 2.16

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



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

Note: The use of an asterisk (*) indicates that data for marked countries come from programme data (which tend to show higher values) and not from a survey. Possible prevention services received: condoms and lubricant, counselling on condom use and safe sex, and sterile injecting equipment.



Credit: UNAIDS

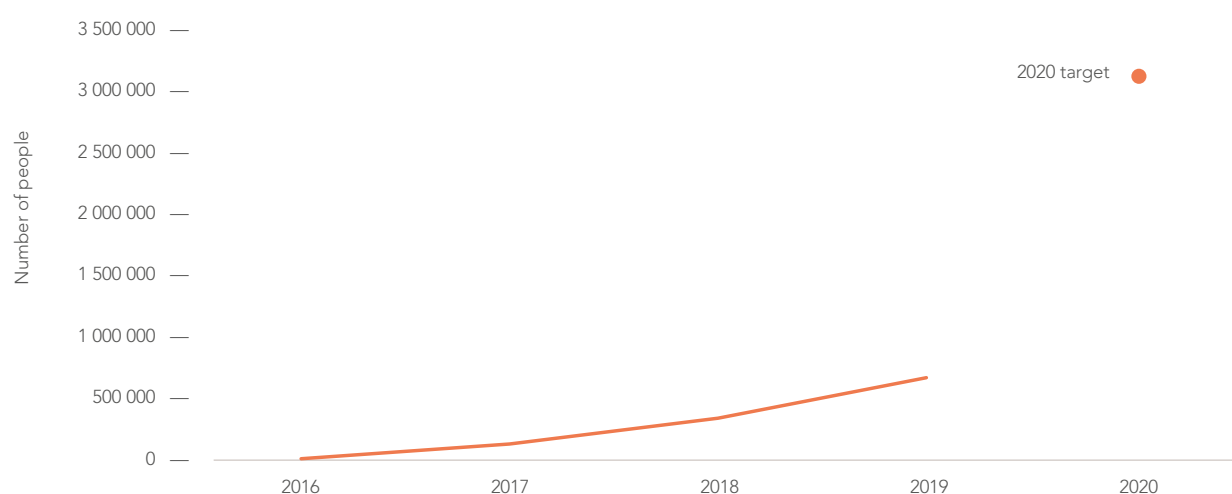
Pre-exposure prophylaxis

The number of people reported to have received PrEP at least once in the previous year has increased dramatically in recent years, from fewer than 2000 in 2016 to more than 590 000 in 2019 (Figure 2.17). In several cities in North America, Europe and Australia where PrEP is widely

available, this relatively new prevention tool has contributed to steep reductions in HIV infections among gay men and other men who have sex with men. Global coverage, however, is still far short of the 2020 target of 3 million receiving PrEP (see Chapter 5 for additional analysis).

FIGURE 2.17

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



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

Voluntary medical male circumcision

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

By the end of 2019, more than 15 million men and boys across 15 priority countries had been voluntarily and medically circumcised since the

beginning of 2016, 4.2 million of them in 2019 alone (Figure 2.18). Among 12 priority countries that reported age-disaggregated data, about 40% of those who underwent VMMC were between the ages of 10 and 14.

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

FIGURE 2.18

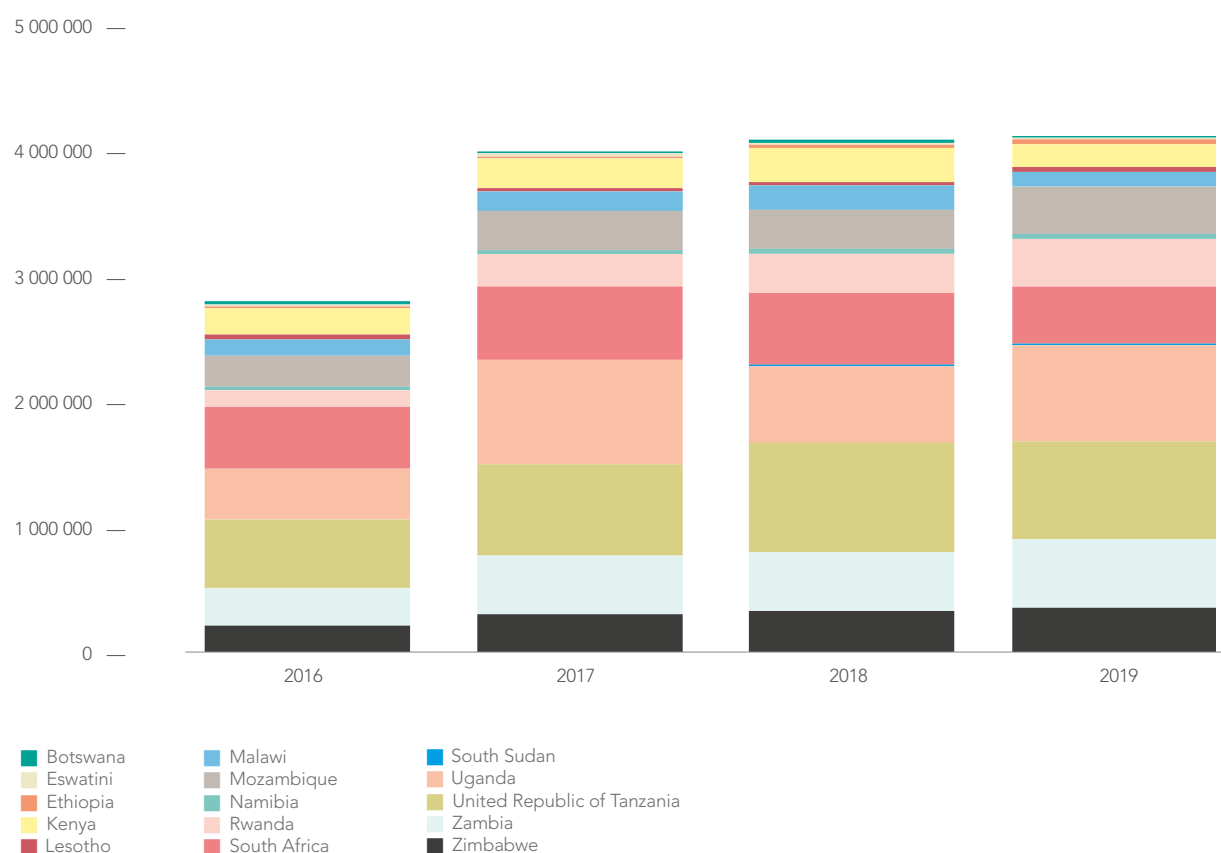
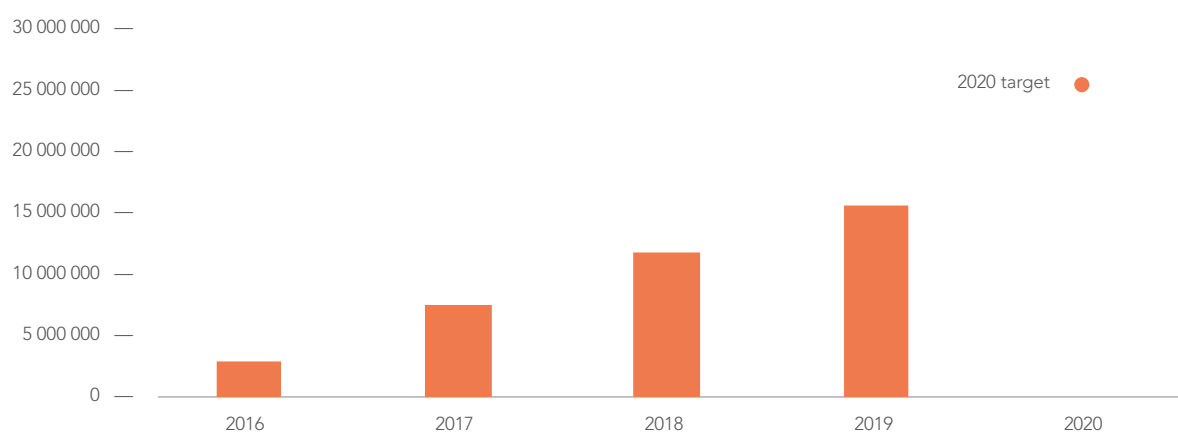
Annual number of males voluntarily circumcised in 15 priority countries, 2016–2019

FIGURE 2.19

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

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

Note: The 15 priority countries are: Botswana, Eswatini, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, South Africa, South Sudan, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe.

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



FAST-TRACK COMMITMENT

4



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

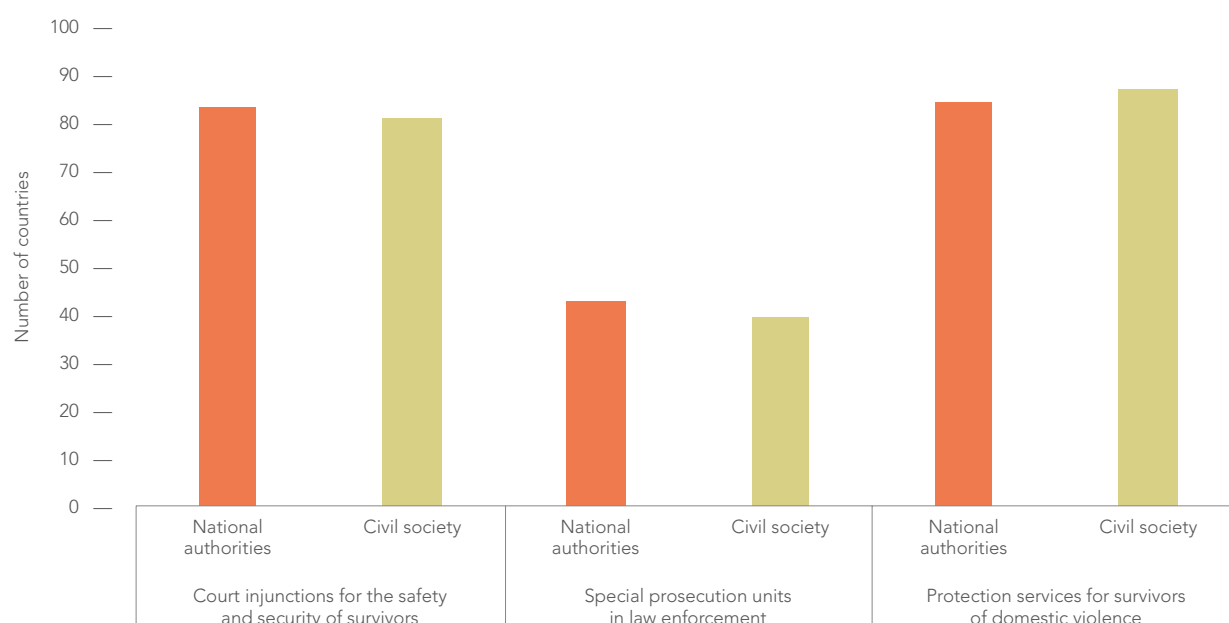
Gender inequality, stigma and discrimination, and violence continue to impact the lives of women and girls, people living with HIV and key populations in myriad negative ways (see Chapter 1 and Chapter 4 for more details).

National authorities and civil society representatives in dozens of countries reported to UNAIDS in 2019 that various provisions and services were in place to protect the health, safety and security of survivors of domestic and sexual violence (Figure 2.20). However, the degree to which policies and legislation are implemented and enforced—including their coverage and

quality—varies widely. Prevention efforts are also lagging significantly, as evidenced by the high levels of intimate partner violence reported in surveys conducted around the world (Figure 2.22). Surveys conducted in 46 countries between 2014 and 2018 show that 19.7% of ever-married or partnered women and adolescent girls (aged 15 to 49 years) experienced physical and/or sexual violence by an intimate partner in the past 12 months. National prevalence of recent intimate partner violence ranged from 3.5% of respondents in Armenia to 47.6% in Papua New Guinea (Figure 2.22).

FIGURE 2.20

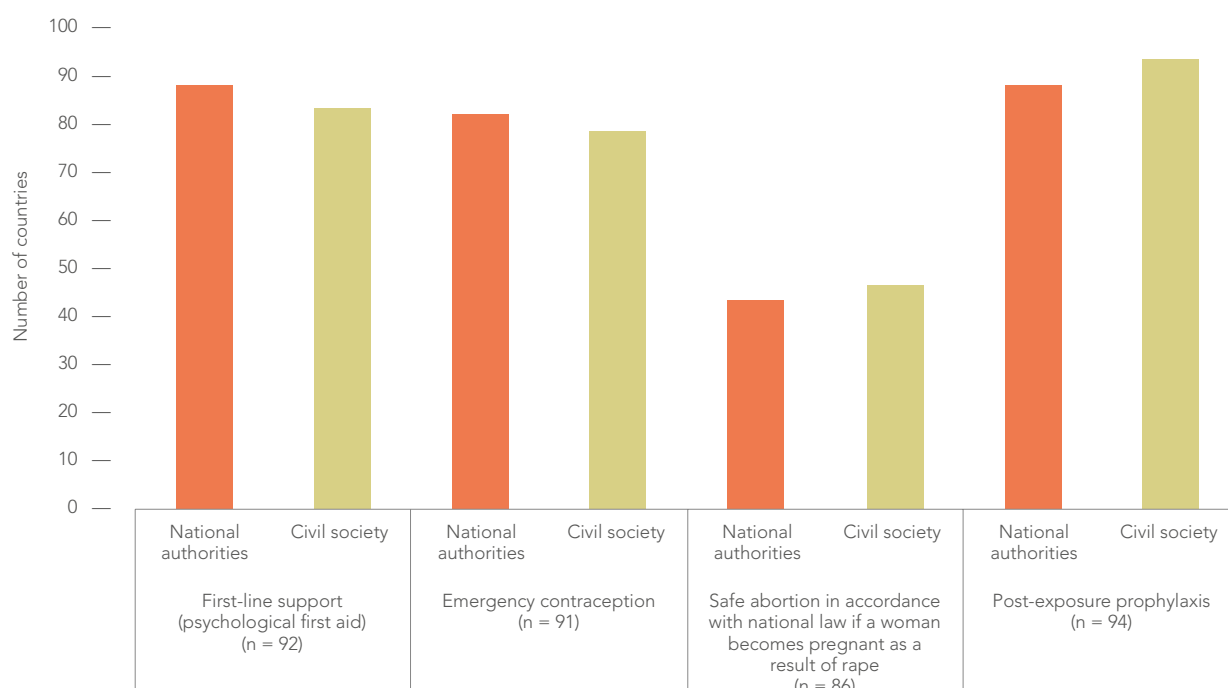
Countries with provisions related to domestic violence, countries with available data, 2019



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

FIGURE 2.21

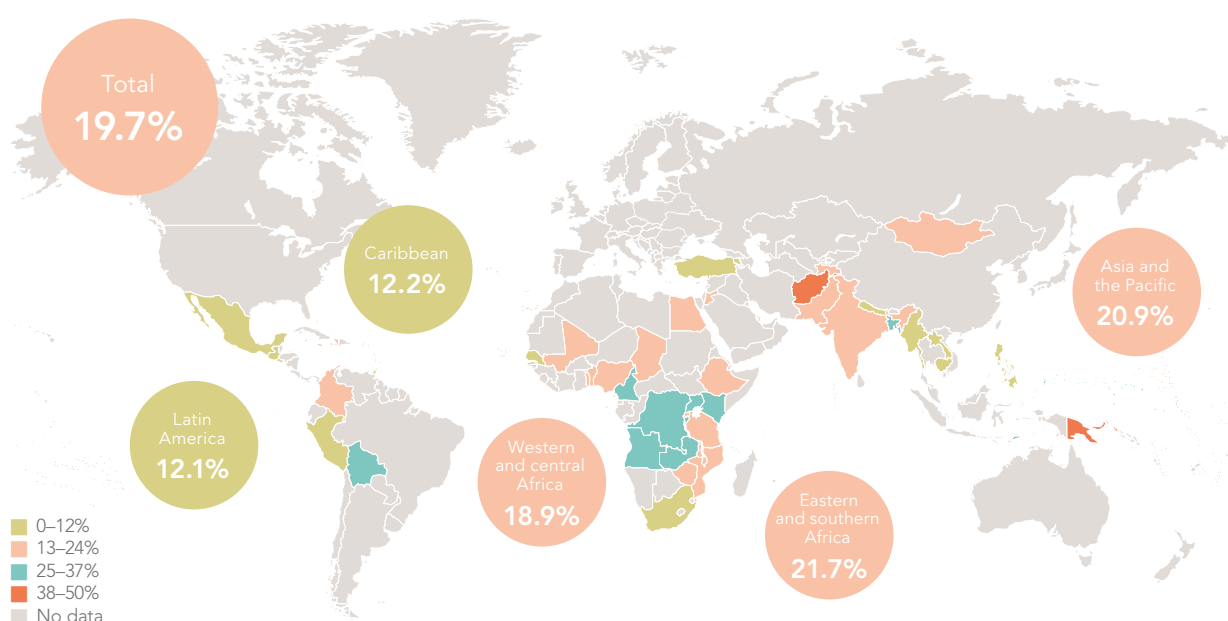
Countries with service delivery points providing appropriate medical and psychological care and support for women and men who have experienced sexual violence, countries with available data, 2019



Source: 2019 National Commitments and Policy Instrument.

FIGURE 2.22

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



Source: Population-based surveys, 2014–2018.

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

FAST-TRACK COMMITMENT

5



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

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

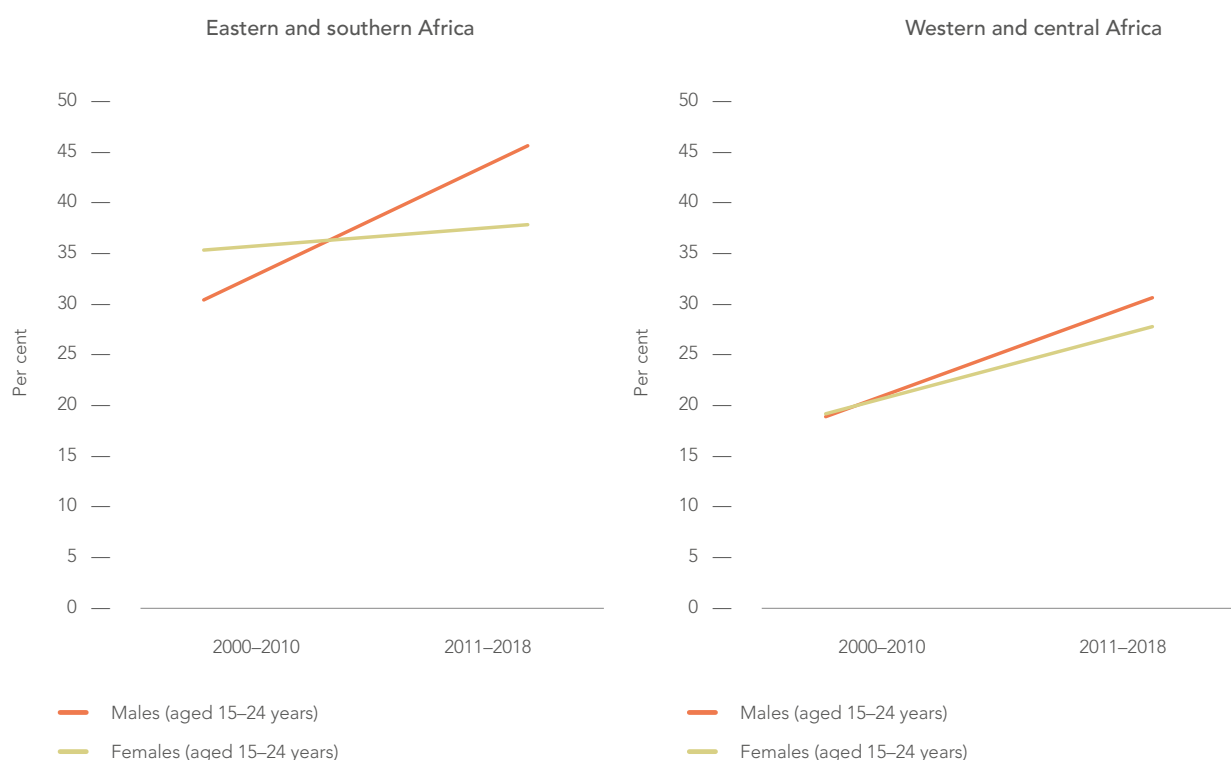
An analysis of population-based surveys conducted since 2000 suggests that comprehensive knowledge of HIV among young women and men in western and central Africa—and men in eastern and southern Africa—has steadily risen. However, there has been little progress in efforts to increase

comprehensive knowledge of HIV among young women in eastern and southern Africa (Figure 2.23).

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

FIGURE 2.23

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



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

FAST-TRACK COMMITMENT

6



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

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

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

at higher risk of HIV infection as key beneficiaries. Only two countries (the Islamic Republic of Iran and Mozambique) reported that all HIV-sensitive elements are reflected within a social protection strategy that is being implemented.

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

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

TABLE 2.2

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

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

■ Yes

■ No

■ Data not available

Source: UNAIDS National Commitments and Policy Instrument, 2019 and 2020 (see <http://lawsandpolicies.unaids.org/>); SDG Indicators Global Database [Internet]. New York: United Nations Statistics Division; c2020 (<https://unstats.un.org/sdgs/indicators/database/>, accessed 17 April 2020).

*Social protection strategy is not being implemented.



Credit: UNAIDS

FAST-TRACK COMMITMENT

7



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

Communities play a critical role in HIV responses, serving as leaders, advocates, service providers and monitors. UN Member States recognized the role that community organizations play by making a commitment on community-led service delivery. However, progress on that commitment has proved difficult to measure, in part because community-led

service delivery was not well-defined. To address this issue, civil society and governments are working together within the UNAIDS Programme Coordinating Board to produce recommendations on the use of definitions for community-led responses to HIV.

FAST-TRACK COMMITMENT

8



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

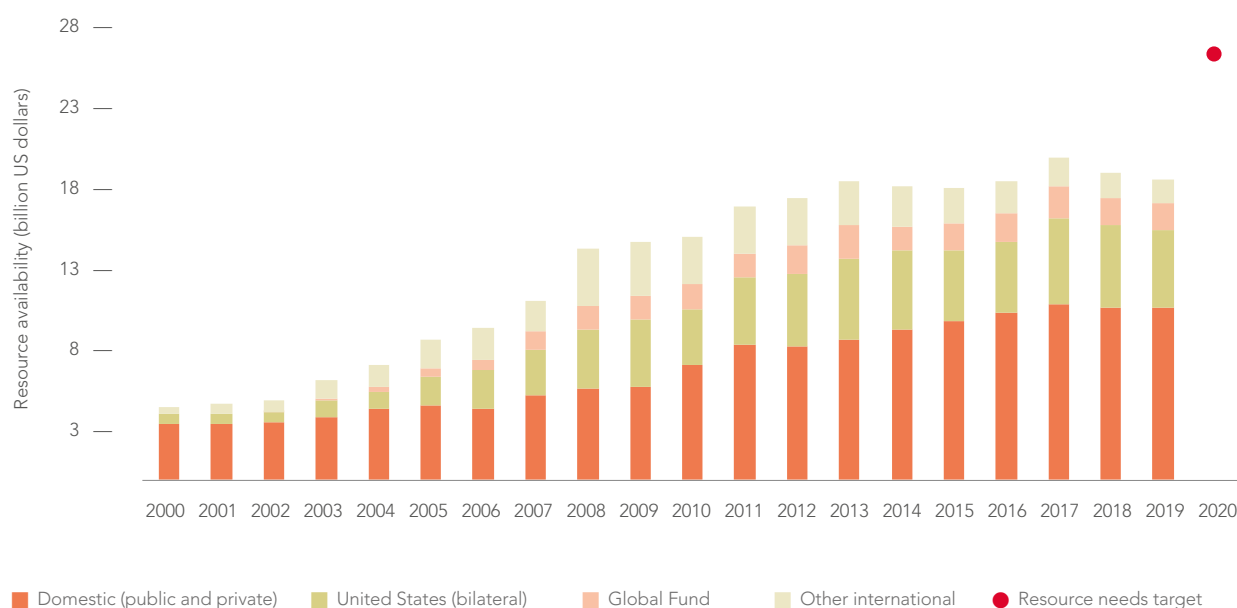
The funding gap for HIV responses is widening. Momentum established following global agreement on the Millennium Development Goals (MDGs) in 2000 has been lost in the SDG era. Increases in resources for HIV responses in low- and middle-income countries halted in 2017, with funding decreasing by 7% between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

Domestic investments in HIV responses in low- and middle-income countries have grown by 50%

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

FIGURE 02.24

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



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

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

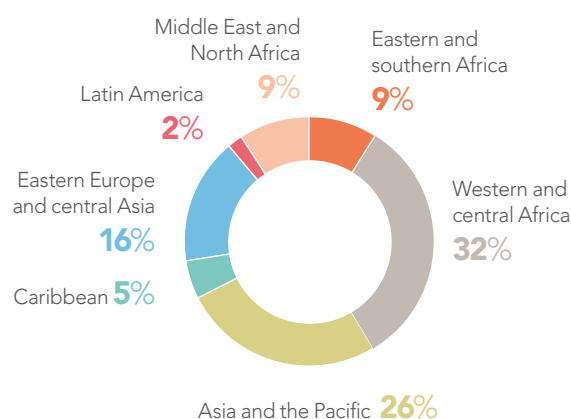
years, leaving a 38% total increase since 2010 (in constant 2016 US dollars). Contributions from other international sources have declined by 50% between 2010 and 2019. These trends reflect the fact that most bilateral donors have substantially reduced their contributions to the global HIV response in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

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

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

FIGURE 02.25

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

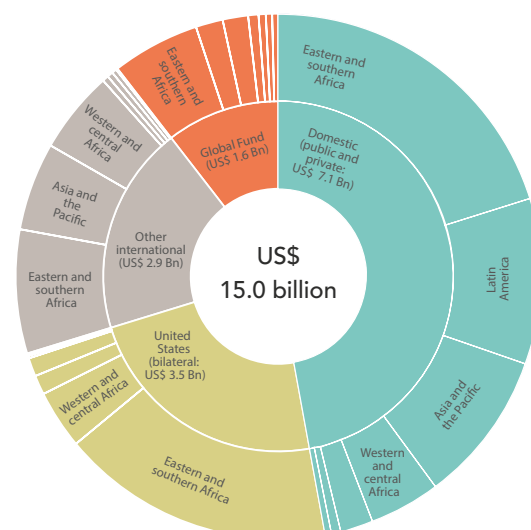


Source: UNAIDS financial estimates, July 2020 (see <http://hivfinancial.unaids.org/hivfinancialdashboards.html>).

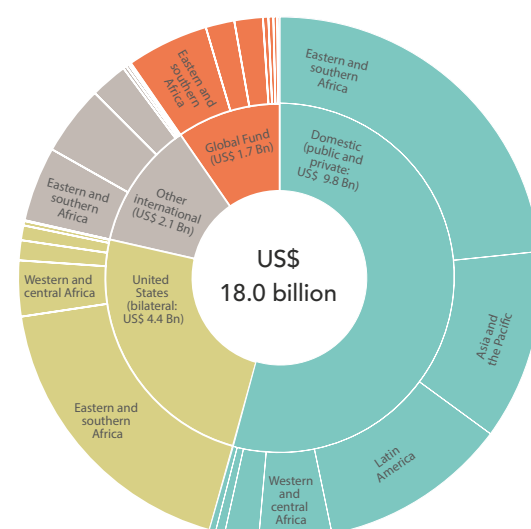
FIGURE 2.26

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

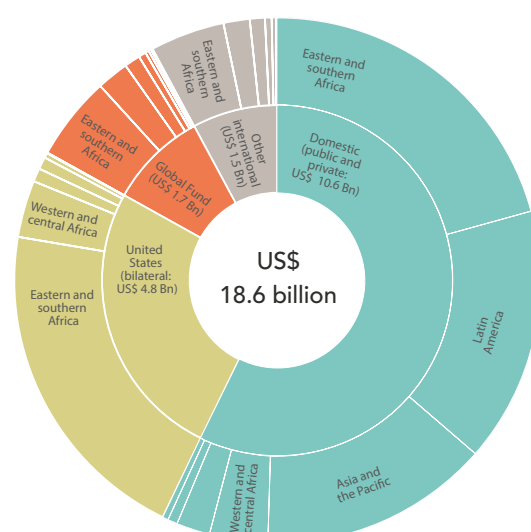
2010



2015



2019



Note: All units in constant 2016 US dollars.

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

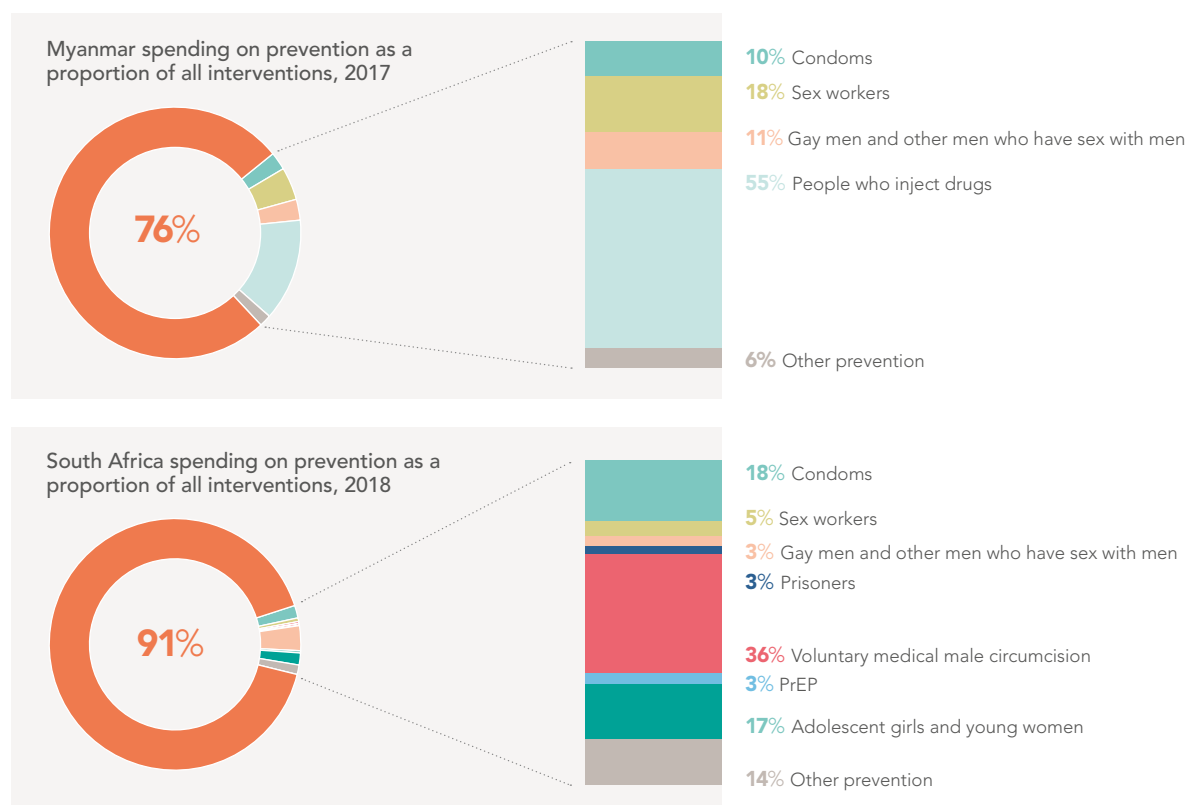
In Latin America, where HIV responses are predominantly funded by domestic resources, total resource availability increased by 38% between 2015 and 2019. Total HIV resources available in western and central Africa, by contrast, decreased by 14% in 2015–2019, reflecting both a steep drop (59%) in funding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

Large shares of HIV response spending in low- and middle-income countries go to HIV testing

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

FIGURE 2.27

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



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

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

FAST-TRACK COMMITMENT

9



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

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

National authorities from 90 countries reported to UNAIDS in 2019 on whether various rights protection mechanisms were in place. Most (69) reported the existence of legal aid systems

applicable to HIV casework, while half (45) reported the availability of community paralegals. Much less commonly reported were pro bono legal services provided by private law firms (35) and legal services provided by legal clinics (30). Civil society representatives were less likely to report the existence of legal aid systems applicable to HIV casework, but they were more likely to report the existence of pro bono legal services and legal services provided by legal clinics (Figure 2.28).



Credit: UNAIDS

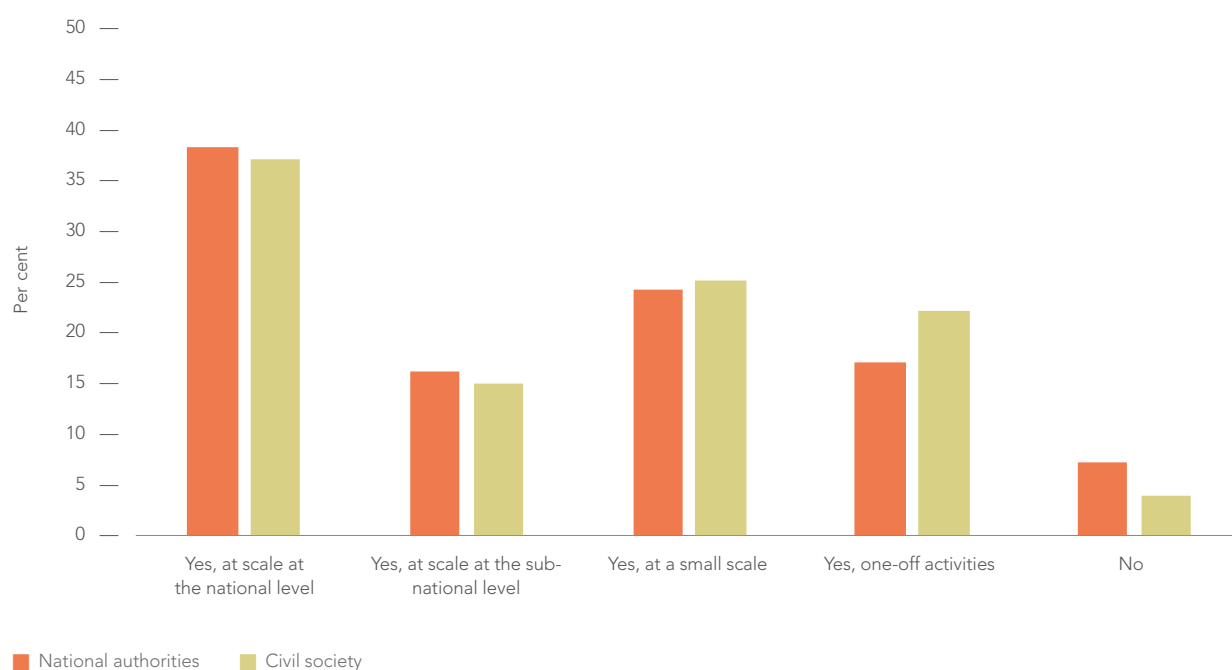
FIGURE 2.28

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

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

Note: Data correspond to reporting by national authorities from 90 countries and by civil society representatives from 89 countries. The National Commitments and Policy Instrument consists of two parts, the first completed by national authorities and the second by civil society and other nongovernmental partners engaged in the national response.

FIGURE 2.29

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

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

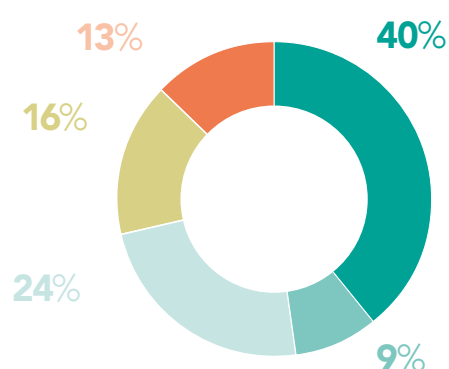
Reports from national authorities and civil society representatives were similar regarding whether training programmes for people living with HIV and key populations on their rights in the context of HIV were available in 2019, and at what level and scale (Figure 2.29). Country reporting to UNAIDS in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

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

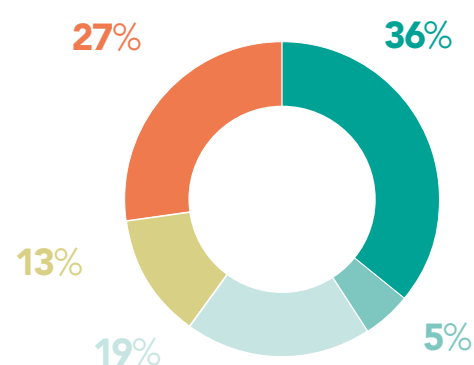
FIGURE 2.30

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

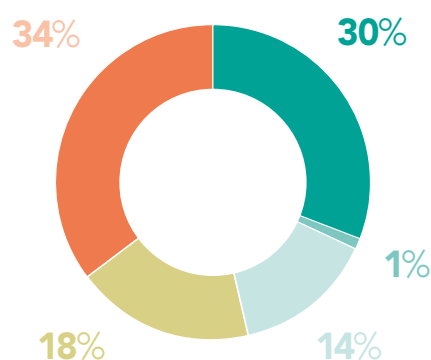
Police and other law enforcement personnel (n = 102)



Members of the judiciary (n = 100)



Elected officials (lawmakers/parliamentarians) (n = 97)



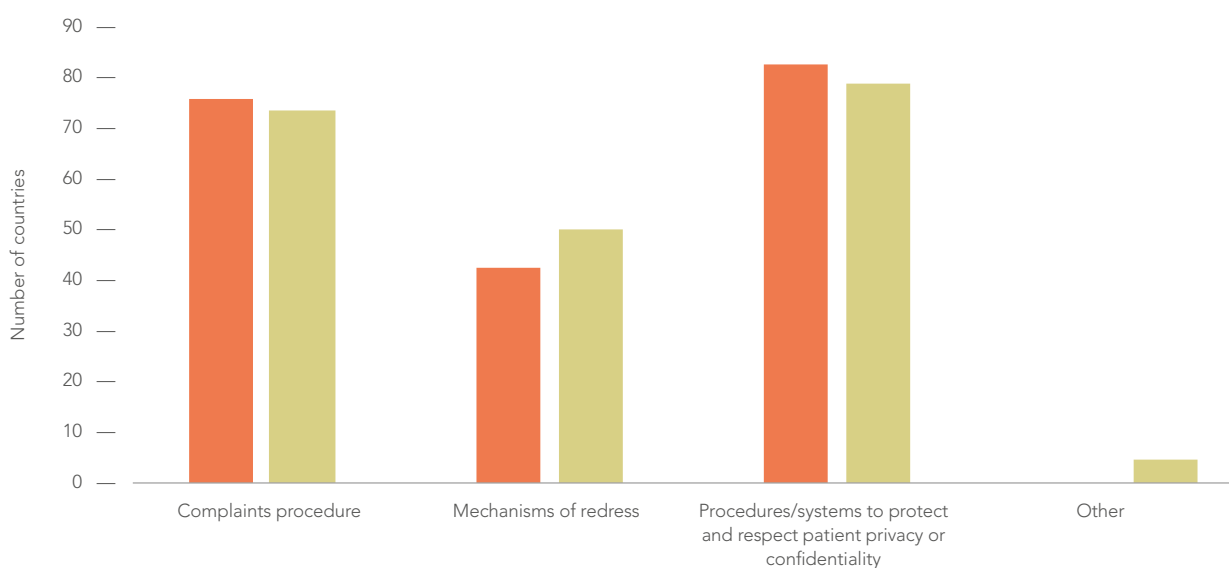
- Yes, at scale at the national level
- Yes, at scale at the subnational level
- Yes, at a small scale
- Yes, one-off activities
- No

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

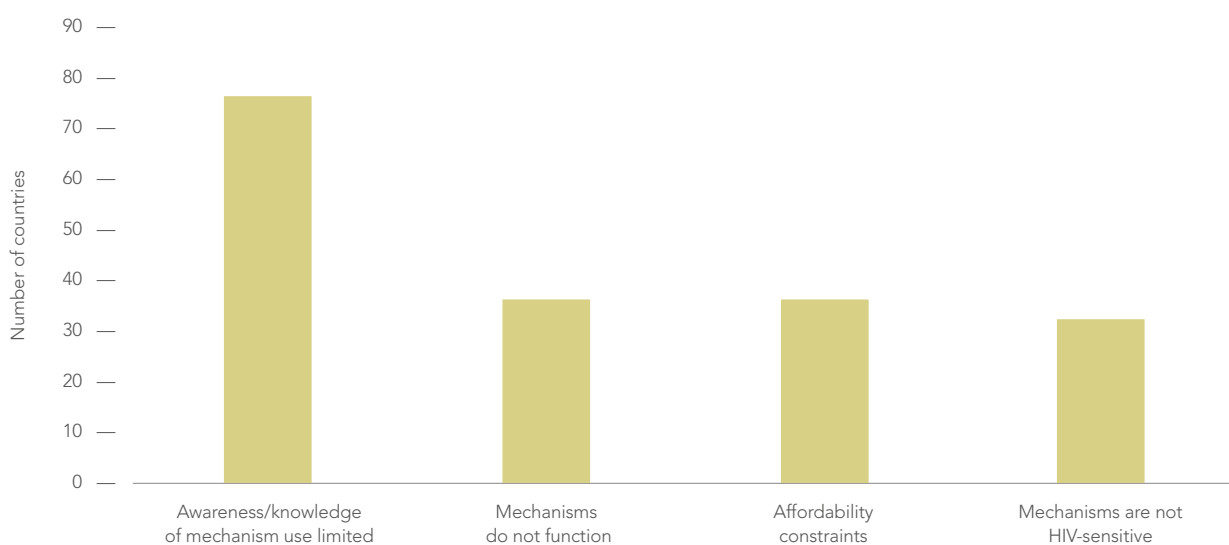
FIGURE 2.31

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

Accountability mechanisms



Barriers to access



■ National authorities

■ Civil society

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

Note: The National Commitments and Policy Instrument consists of two parts, the first completed by national authorities and the second by civil society and other non-governmental partners engaged in the national response.

FAST-TRACK COMMITMENT

10



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

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

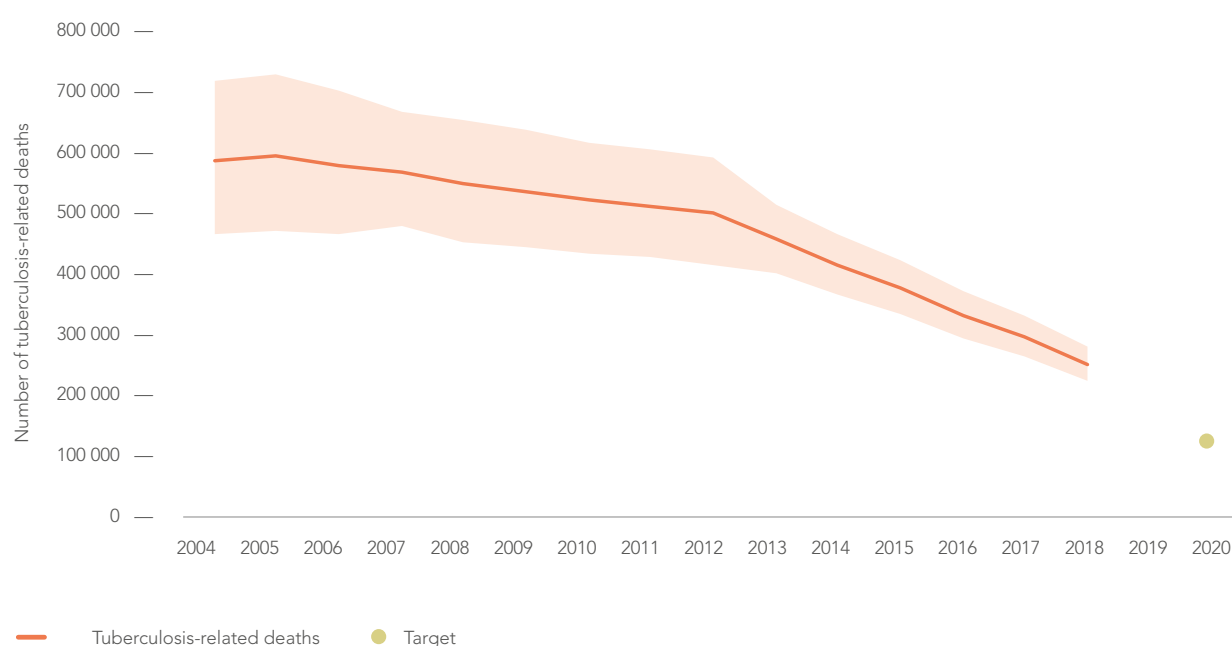
Scale-up of antiretroviral therapy and improvements in the integrated delivery of HIV and tuberculosis services has reduced tuberculosis-related deaths among people living with HIV by 58% globally, from a 2005 peak of 590 000 [470 000–730 000] to 250 000 [220 000–280 000] in 2018 (Figure 2.32). Among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

estimated 862 000 [776 000–952 000] people living with HIV who developed tuberculosis (incident cases) received treatment for both HIV and tuberculosis.

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

FIGURE 2.32

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



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

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

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

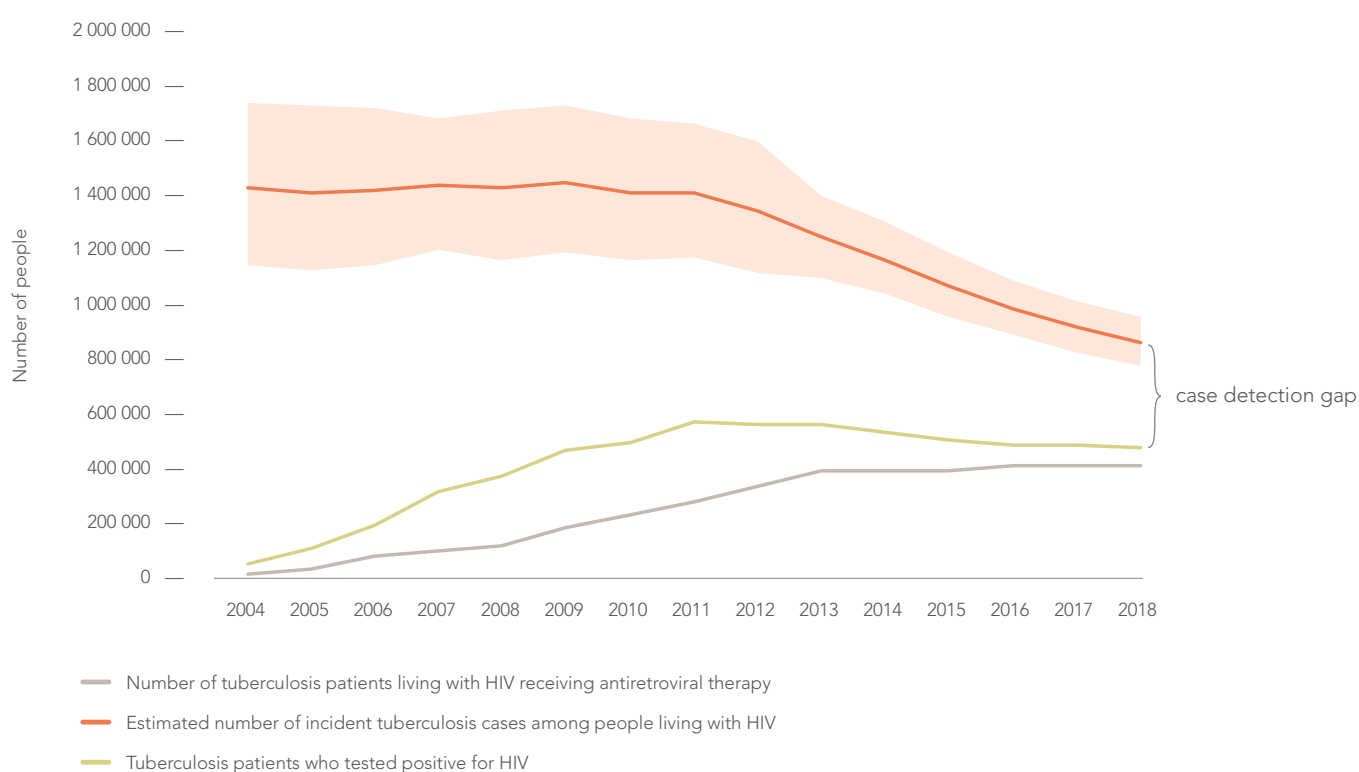
Hepatitis C coinfection with HIV is reported across all key populations at higher risk of HIV, especially among people who inject drugs. This is due to the ease with which both viruses are spread through the sharing of non-sterile drug preparation and injecting equipment (Figure 2.34). Additional information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

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

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

FIGURE 2.33

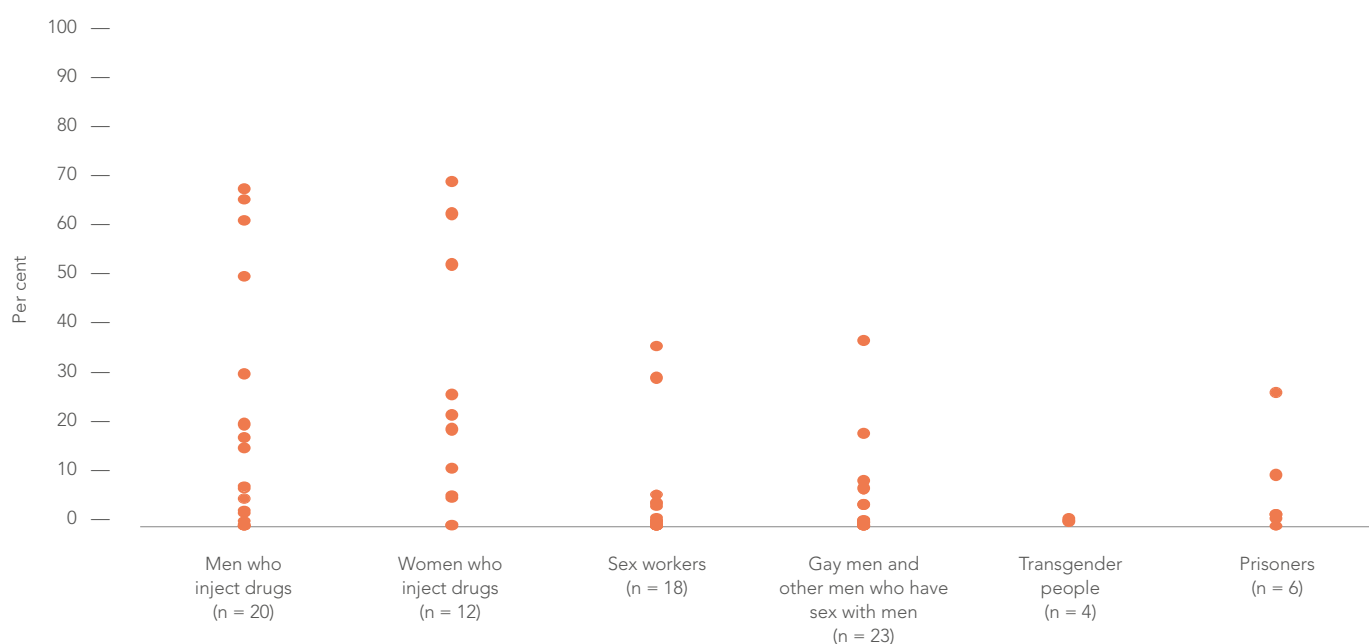
Number of notified new and relapse tuberculosis cases known to be HIV-positive, number of HIV-positive tuberculosis patients receiving antiretroviral therapy, and estimated number of incident tuberculosis cases among people living with HIV, 2004–2018



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

FIGURE 2.34

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



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

TABLE 2.3

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

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

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

¹ Visual inspection with acetic acid.

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

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

References

1. Galarraga O, Wamai RG, Sosa-Rubí SG, Mugo MG, Contreras-Loya D, Bautista-Arrodondo S et al. HIV prevention costs and their predictors: evidence from the ORPHEA Project in Kenya. *Health Policy Plan.* 2017;32(10):1407-16.
2. Kahn JG, Marseille E, Auvert B. Cost-effectiveness of male circumcision for HIV prevention in a South African setting. *PLoS Med.* 2006;3(12):e517.
3. Borgdorff MW, Kwaro D, Obor D, Otieno G, Kamire V, Odongo F et al. HIV incidence in western Kenya during scale-up of antiretroviral therapy and voluntary medical male circumcision: a population-based cohort analysis. *Lancet HIV.* 2018;5(5):e241-e249.
4. World social protection report 2017–19: universal social protection to achieve the Sustainable Development Goals. Geneva: ILO; 2017.
5. SDG Indicators Global Database [Internet]. New York: United Nations Statistics Division; c2020 (<https://unstats.un.org/sdgs/indicators/database/>, accessed 17 April 2020).
6. Global tuberculosis report. Geneva: World Health Organization; 2019.
7. Denslow SA, Rositch AF, Firnhaber C, Ting J, Smith JS. Incidence and progression of cervical lesions in women with HIV: a systematic global review. *Int J STD AIDS.* 2014;25:163-77.
8. Liu G, Sharma M, Tan N, Barnabas R. HIV-positive women have higher risk of HPV infection, precancerous lesions, and cervical cancer: a systematic review and meta-analysis. *AIDS.* 2018 Mar 27;32(6):795-808.

UNAIDS

20 Avenue Appia
CH-1211 Geneva 27
Switzerland

+41 22 791 3666

unaids.org