

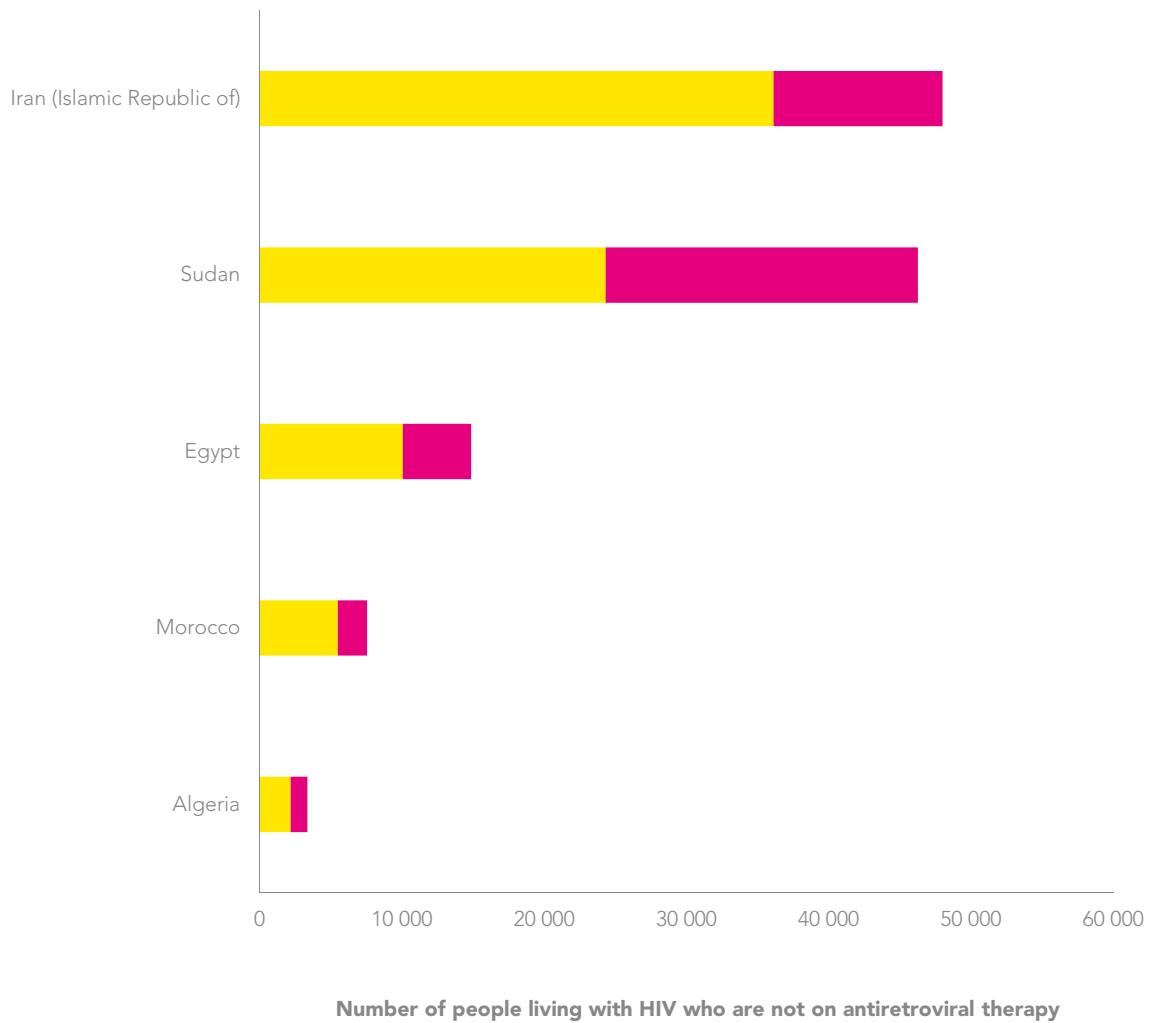
COMMUNITIES AT THE CENTRE

THE RESPONSE TO HIV
IN MIDDLE EAST AND
NORTH AFRICA

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FIGURE 15.1 Number of people living with HIV who are not on antiretroviral therapy (aged 15 years and over), by sex, high-burden countries in Middle East and North Africa, 2018



■ Males
■ Females

Source: UNAIDS 2019 estimates.

MIDDLE EAST AND NORTH AFRICA

AT A GLANCE

The epidemic in the Middle East and North Africa continues to grow, with a 10% increase in new infections and a 9% increase in the annual number of AIDS-related deaths between 2010 and 2018.

Access to HIV testing, treatment and care in the region is well below the global average. Less than half of people living with HIV are aware of their serostatus, and treatment gaps among men are larger than they are among women in many countries.

The increase in annual new infections is a sign that prevention programmes in many countries are not reaching sufficient numbers of people at high risk of HIV infection. Almost all new HIV infections are among key populations and their sexual partners.

While some countries have made progress in generating and using timely strategic information, increased investment is needed to fill large gaps in the generation and use of data to guide policies and programmes.

HIV prevention and treatment programmes in the Middle East and North Africa are not keeping pace with the region's growing epidemic. The annual number of people acquiring HIV continued to rise in 2018, although some countries with relatively higher burdens—including the Islamic Republic of Iran, Morocco and Somalia—are notable exceptions. Most HIV infections occurred among marginalized and vulnerable populations who are poorly served by HIV and other vital services.

Strengthened political commitment is evident in a few countries, such as Algeria and Morocco, but the region's overall HIV response is well off-track and far from reaching the 90–90–90 targets. In the five countries with the highest HIV burden in the region, 80 000 men and 40 000 women (approximately 70% of adults living with HIV in these countries) were not accessing life-saving antiretroviral therapy in 2018 (Figure 15.1).

Humanitarian emergencies pose an additional challenge. The Middle East and North Africa hosts the largest number of refugees and displaced people in the world due to the protracted emergencies in Libya, the Syrian Arab Republic, Yemen and elsewhere. Efforts to provide integrated HIV and other health services for refugees and other displaced persons are being boosted by approval from the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) of a US\$ 36.4 million Middle East Response Grant in December 2018. This grant is focused on addressing HIV, tuberculosis and malaria services in five countries (Iraq, Jordan, Lebanon, the Syrian Arab Republic and Yemen) that are affected by humanitarian crises (1). ■

STATE OF THE EPIDEMIC

FIGURE 15.2 Number of new HIV infections, Middle East and North Africa, 2000–2018

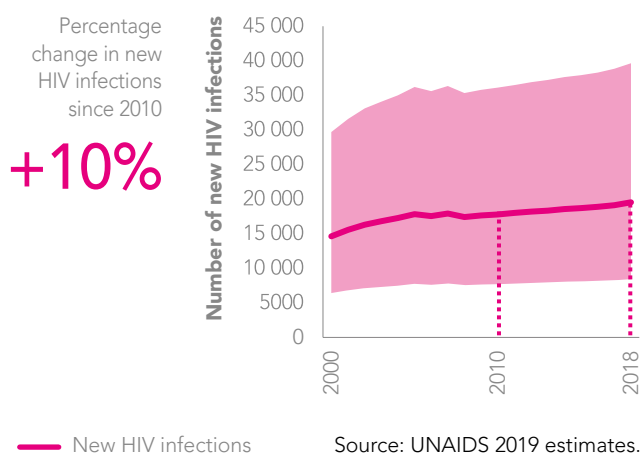


FIGURE 15.3 Number of AIDS-related deaths, Middle East and North Africa, 2000–2018

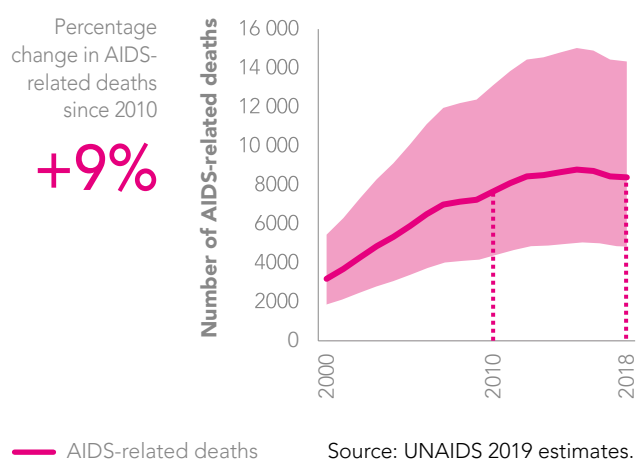
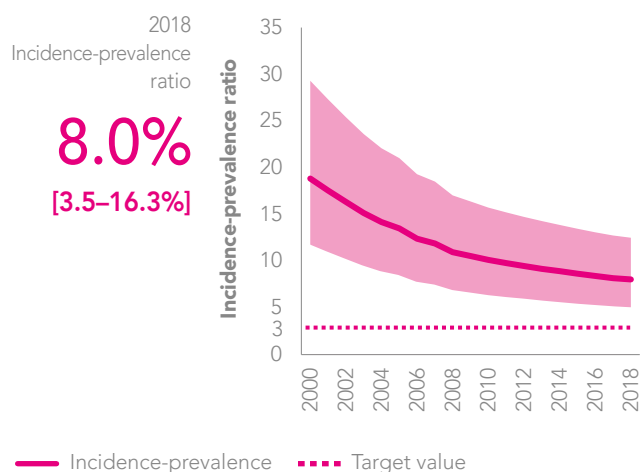


FIGURE 15.4 Incidence-prevalence ratio, Middle East and North Africa, 2000–2018

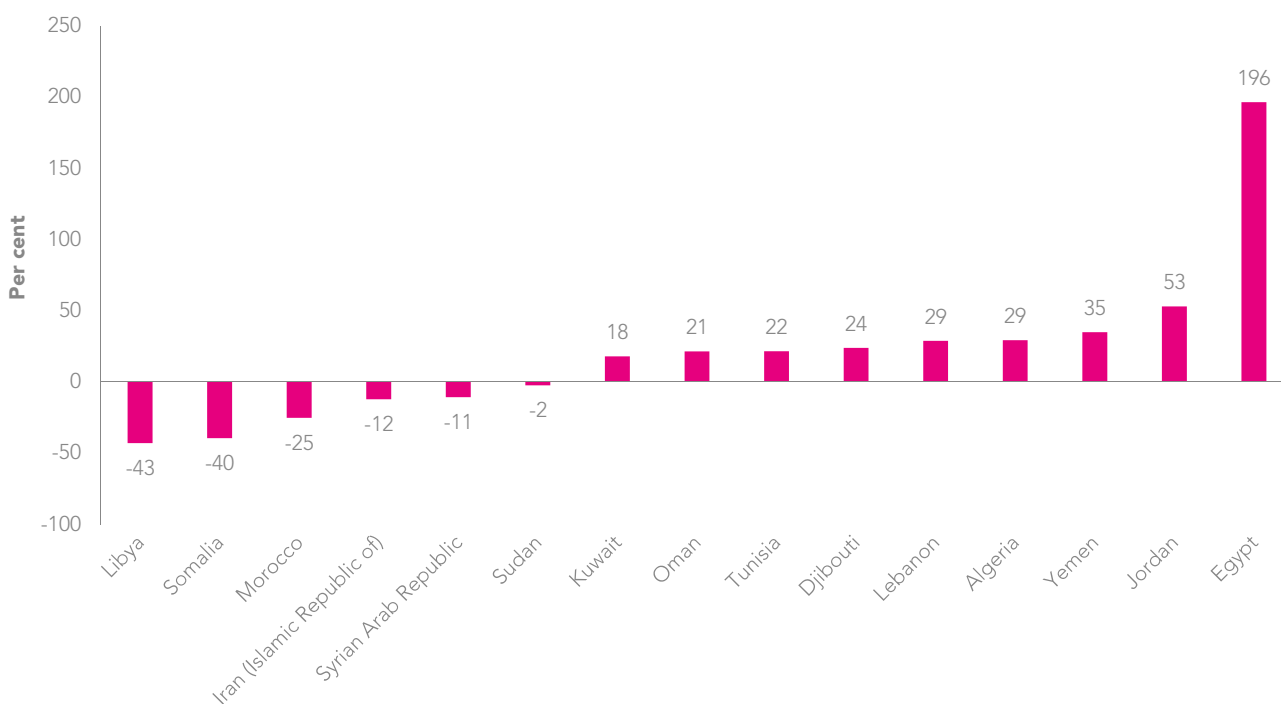


An estimated 20 000 [8 000–40 000] people acquired HIV in the Middle East and North Africa in 2018, a 10% increase compared with 2010 (Figure 15.2). This regional increase hides several successes in the region. Three countries with higher HIV burdens—the Islamic Republic of Iran, Morocco and Somalia—are among the five countries in the region where annual new HIV infections have declined by more than 10% since 2010 (Figure 15.5). In other countries, increases in incidence of more than 20% have occurred, including in Algeria (29%), Yemen (35%), Jordan (53%) and Egypt (196%). More than one third of HIV infections in 2018 were among people who inject drugs, and key populations and their sexual partners accounted for approximately 95% of all new infections in the region (Figure 15.7). HIV services focused on these key populations are scarce, and they often operate in contexts marked by punitive laws and harsh social reproach. HIV prevalence is highest among gay men and other men who have sex with men, among whom it exceeded 5% in half the countries reporting data (Figure 15.6).

Poor access to HIV services for key populations is also reflected in the 9% increase in the annual number of AIDS-related deaths since 2010, which reached an estimated 8000 [5000–14 000] deaths in 2018. The region’s incidence-prevalence ratio was 8.0% [3.5–16.3%] in 2018—less than the 10.1% [4.4–20.6%] estimated for 2010, but far from the 3.0% epidemic transition benchmark.

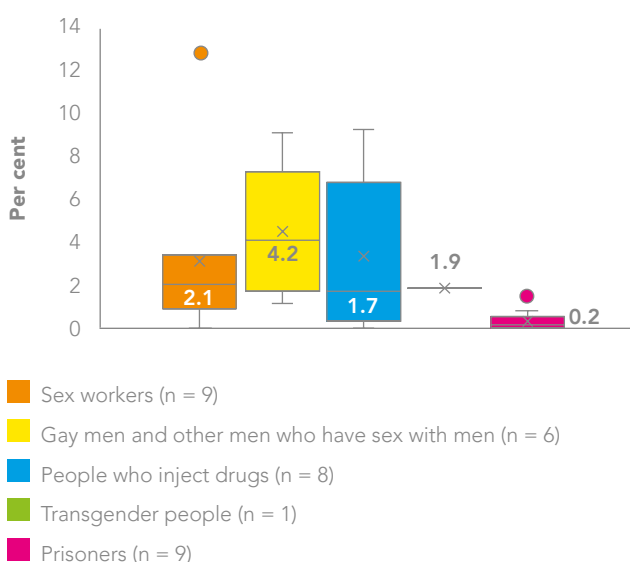
The scant data available on the sizes of key populations reflects the incompleteness of HIV strategic information systems in the Middle East and North Africa. Given that almost all new HIV infections in the region are associated with key populations, this deficiency must be addressed so that more effective and focused HIV programmes can be put into action. ■

FIGURE 15.5 Percentage change in new HIV infections, by country, Middle East and North Africa, 2010–2018



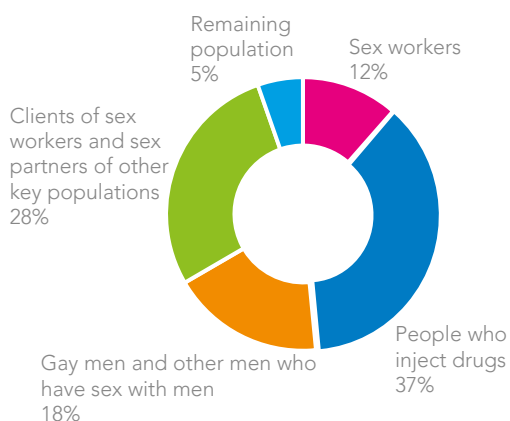
Source: UNAIDS 2019 estimates.

FIGURE 15.6 HIV prevalence among key populations, Middle East and North Africa, 2014–2018



Source: UNAIDS Global AIDS Monitoring, 2014–2018.

FIGURE 15.7 Distribution of new HIV infections (aged 15–49 years), by population group, Middle East and North Africa, 2018



Source: UNAIDS special analysis, 2019.

TABLE 15.1 Estimated size of key populations, Middle East and North Africa, 2018

Country	National adult population (15+)	Sex workers	Sex workers as per cent of adult population (15+)	Gay men and other men who have sex with men	Gay men and other men who have sex with men as per cent of adult population (15+)	People who inject drugs	People who inject drugs as per cent of adult population (15+)	Transgender people	Transgender people as per cent of adult population (15+)	Prisoners	Prisoners as per cent of adult population (15+)
Iran (Islamic Republic of)	62 613 000									210 000	0.34
Kuwait	3 307 000									5200	0.16
Lebanon	4 718 000			17 000	0.35						
Morocco	26 362 000									84 000	0.32
Oman	3 785 000										
Tunisia	8 856 000									22 000	0.25

■ National population size estimate
 ■ Local population size estimate
 ■ Insufficient data
 ■ No data

The regions for which the local population size estimate refers are as follows:

Oman: Samail

Sources: Global AIDS Monitoring, 2018; United Nations, Department of Economic and Social Affairs, Population Division. World population prospects: the 2017 revision. 2018 (custom data acquired via website).



Young men in Algeria review a pamphlet about the HIV epidemic and response in their country.

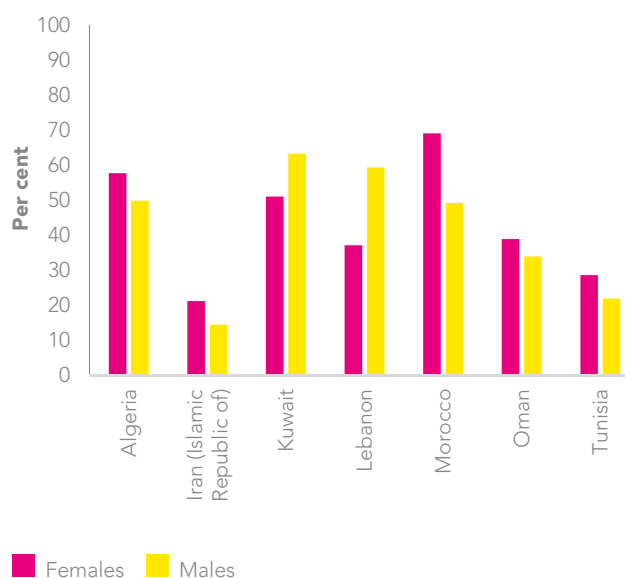
THE CASCADE FROM HIV TESTING TO VIRAL SUPPRESSION

HIV testing, treatment and care programmes in the region are not reaching many people living with HIV, the majority of whom belong to marginalized populations. Less than half (47% [26–80%]) of the estimated 240 000 people living with HIV knew they were HIV-positive, and about one third (32% [18–54%]) of people living with HIV were receiving antiretroviral therapy in 2018, the lowest treatment coverage of any region in the world (Figure 15.9).

A huge gap in the region’s testing and treatment programmes is the first 90: diagnosing people living with HIV. In 2018, the gap to achieving the first 90 was 104 000 people living with HIV. There are some inspiring exceptions: at least 75% of people living with HIV in Algeria, Lebanon and Morocco knew their serostatus (Table 15.2). Focused and user-friendly testing approaches, including community-based testing and self-testing, should be promoted, and key populations and their sexual partners should be made the priority.

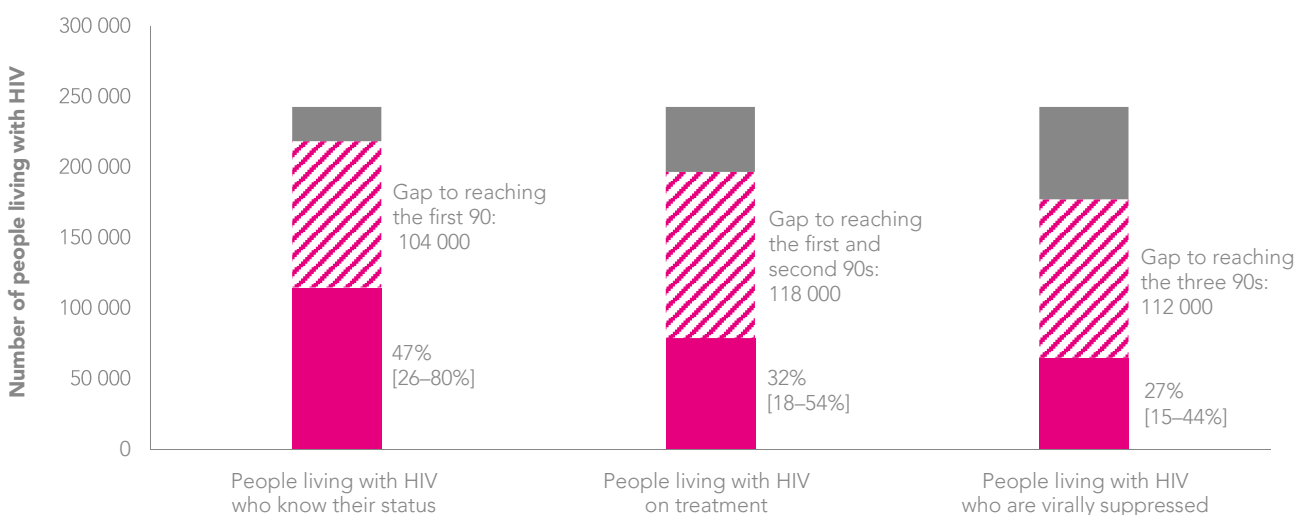
Approximately 79 000 people were accessing antiretroviral therapy in 2018, which meant the gap to the first and second 90s was 118 000 people living with HIV in need of treatment. The estimated 27% [15–44%] of people who had a suppressed viral load in 2018 was an improvement over the 23% [13–38%] estimated for 2017. The fact that more than 80% of people who accessed HIV treatment achieved suppressed viral loads in 2018 is a sign of the kinds of progress that could be made if the gaps in diagnosing people living with HIV and linking them to care are filled. ■

FIGURE 15.8 Viral load suppression among adults (aged 15 years and older) living with HIV, by sex, Middle East and North Africa, 2018



Source: UNAIDS special analysis, 2019.

FIGURE 15.9 HIV testing and treatment cascade, Middle East and North Africa, 2018



Source: UNAIDS special analysis, 2019; see annex on methods for more details.

TABLE 15.2 90–90–90 country scorecard, Middle East and North Africa, 2018

	First 90: percentage of people living with HIV who know their HIV status			Second 90: percentage of people living with HIV who know their status and who are on treatment			Third 90: percentage of people living with HIV on treatment who have suppressed viral loads			Viral load suppression: percentage of people living with HIV who are virally suppressed		
	All ages	Women (15 years and older)	Men (15 years and older)	All ages	Women (15 years and older)	Men (15 years and older)	All ages	Women (15 years and older)	Men (15 years and older)	All ages	Women (15 years and older)	Men (15 years and older)
Middle East and North Africa	47	49	47	69	73	65	82	82	83	27	29	25
Algeria	86	91	81	93	91	91	68	69	68	55	58	50
Bahrain												
Djibouti												
Egypt												
Iran (Islamic Republic of)	36	34	35	57	79	49	82	79	83	17	21	15
Iraq												
Jordan												
Kuwait	67	58	70	92	90	92	>95	>95	>95	60	51	63
Lebanon	91	77	95	66	49	69	92	>95	92	56	37	59
Libya												
Morocco	76	90	64	86	84	84	91	91	91	59	69	49
Occupied Palestinian Territories												
Oman	48	51	47	84	87	83	87	88	87	35	39	34
Qatar				>95	>95	>95	73	77	72			
Saudi Arabia				94	95	95	94	>95	93			
Somalia												
Sudan	27	28	28	56	54	54						
Syrian Arab Republic												
Tunisia							62	58	67	24	29	22
United Arab Emirates												
Yemen												

90–90–90: ■ 90% and above ■ 85–89% ■ 70–84% ■ 50–69% ■ Less than 50%

Viral load suppression: ■ 73% and above ■ 65–72% ■ 40–64% ■ 25–39% ■ Less than 25%

Source: UNAIDS special analysis, 2019.

A COMBINATION APPROACH TO PREVENTION

Levels of viral suppression among people living with HIV are generally too low in the Middle East and North Africa to contribute significantly to the prevention of HIV transmission. Other proven prevention methods, such as consistent condom use during high-risk sex and needle–syringe programmes, should be priorities. However, the low number of countries reporting basic data on prevention services for key populations suggests that the requisite political commitment and urgency is still lacking across much of the region. Fewer than five out of 21 countries reported on most Global AIDS Monitoring prevention indicators for key populations in the past three reporting rounds (Table 15.3).

In a region where more than one third of new HIV infections are associated with injecting drug use,

harm reduction services are essential to prevent HIV transmission. A few countries (i.e., the Islamic Republic of Iran, Lebanon and Morocco) have incorporated harm reduction strategies into their national HIV frameworks, but access to such services remains scant across the region. Civil society organizations provide most of the services that are available, and funding cuts and/or restrictive policies in recent years have led to the closure of services in Egypt and Jordan (2).

Pre-exposure prophylaxis (PrEP) can serve as an additional component of combination prevention strategies in the Middle East and North Africa. Morocco has taken a step in that direction, with between 100 and 300 people using PrEP as part of a programme launched in mid-2017 (3). ■

TABLE 15.3 Number of countries reporting on key population indicators, 2016–2018

Key population prevention indicator	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
HIV testing among key populations	5	4	5	0	N/A
Coverage of HIV prevention programmes among key populations	2	1	1	0	N/A
Antiretroviral therapy coverage among people living with HIV in key populations	0	0	1	0	2
Needles–syringes distributed per person who injects drugs	N/A	N/A	3	N/A	N/A
Coverage of opioid substitution therapy	N/A	N/A	2	N/A	2

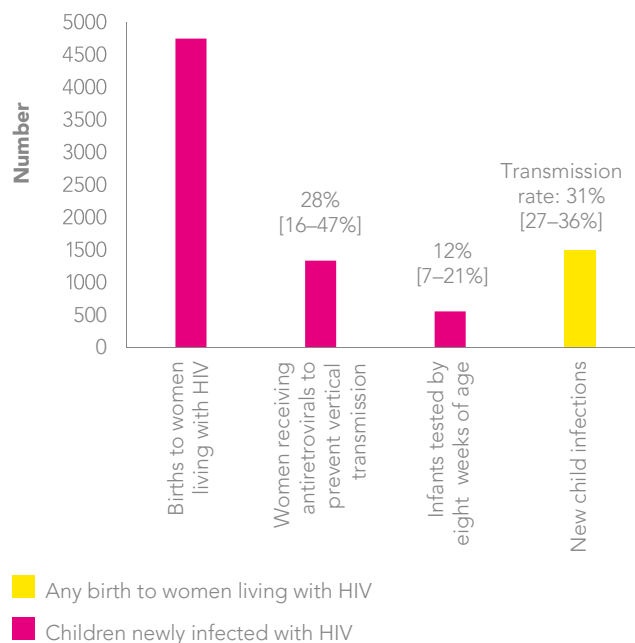
Note: There are a total number of 21 countries in the Middle East and North Africa region.

Source: Global AIDS Monitoring, 2016–2018.

ELIMINATING MOTHER-TO-CHILD TRANSMISSION

Coverage of services for preventing mother-to-child transmission of HIV in the Middle East and North Africa is among the lowest in the world, with only 28% [16–47%] of women living with HIV in the region accessing those services in 2018. Yet service coverage is strikingly higher in countries such as Algeria (74% [69–78%]) and the Islamic Republic of Iran (81% [41–>95%]), where integration of maternal and child health and HIV services is a greater priority. Deeper integration of HIV services in sexual and reproductive health services, maternal and child health services, and gender-based violence programmes is needed, especially for marginalized and vulnerable women. ■

FIGURE 15.10 Cascade of services for preventing vertical transmission, numbers of new HIV infections and transmission rate, Middle East and North Africa, 2018



Source: UNAIDS 2019 estimates; 2019 Global AIDS Monitoring.

A woman in the Islamic Republic of Iran takes a dose of methadone for her opioid substitution therapy.

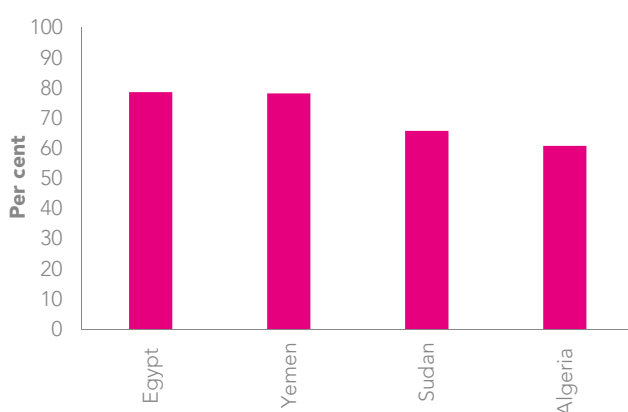


CONFRONTING STIGMA AND DISCRIMINATION

Stigmatizing attitudes and incorrect knowledge about HIV are pervasive in the region. When surveyed, close to 80% of people in Egypt and Yemen, for example, said they would not purchase vegetables from a vendor living with HIV. Stigma and discrimination in health-care settings adds to the difficulties that people face when trying to access services for preventing or managing HIV: it is not uncommon in some countries for people to

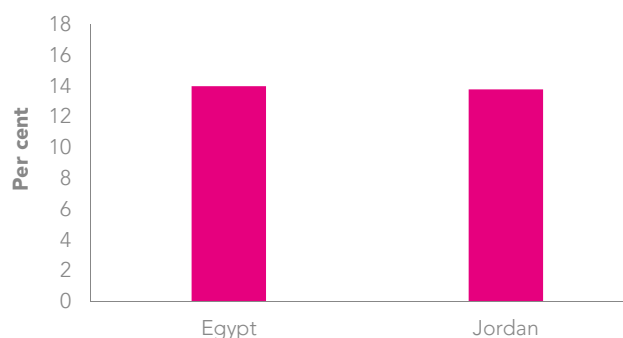
be denied health services due to their HIV status, and breaches of confidentiality are a widespread concern (4, 5). Groups such as MENA-Rosa (a regional network of women living with HIV that provides peer-led support in Algeria, Egypt, Lebanon, Morocco, Tunisia and elsewhere) are working to overcome stigma, improve access to HIV services for women living with and affected by HIV, and protect human rights. ■

FIGURE 15.11 Percentage of men and women aged 15–49 years who would not buy vegetables from a shopkeeper living with HIV, Middle East and North Africa, 2013–2014



Source: Population-based surveys, 2013–2016, countries with available data.

FIGURE 15.12 Percentage of ever-married or partnered women aged 15–49 years who experienced physical and/or sexual violence by an intimate partner in the past 12 months, Middle East and North Africa, most recent data, 2014–2018



Source: Population-based surveys, 2014–2018.

ADDRESSING VIOLENCE AGAINST WOMEN LIVING WITH HIV

Social isolation and violence are near certainties for women living with HIV in the Middle East and North Africa, according to a community-led study in one of the few regions of the world where HIV infections and deaths from AIDS-related illness continue to rise. Led by MENA-Rosa, a regional network of women living with or affected by HIV, the LEARN MENA study conducted community dialogues in seven countries across the region in 2018. Designed and led by women, these dialogues enabled women to share their experiences and explore the underlying causes of violence and HIV in their communities. The women came from all walks of life: more than half were living with HIV (53%), and almost all had experienced violence at some point in their lifetime (6).

The dialogues catalogued numerous examples of women and girls being discriminated against on the basis of their gender—experiences that included early forced marriage, genital mutilation, sexual subjugation and violence. Ninety-five per cent of the women who participated reported that they had been subjected to violence at least once in their lifetime, and 73% had experienced violence in the previous 12 months (6). The personal testimonies of women also revealed extraordinary resilience and mutual support. Community organizations and peer groups are providing a lifeline to women and girls, and findings from the project are helping women advocate for stronger actions that can reduce violence against women.

INVESTING TO END AN EPIDEMIC

Between 2010 and 2018, the total resources available for HIV responses in the Middle East and North Africa remained stable at between US\$ 150 million and US\$ 200 million (in 2016 constant US dollars) (Figure 15.13).¹ Resources available in 2018, however, were just one third of what is needed in the region for reaching the 2020 Fast-Track Targets.

A 4% total increase in resource availability over the eight-year period included a 67% increase in domestic resources, while all international resources decreased. Bilateral resources from the Government of the United States of America decreased by 76%, Global Fund resources decreased by 58%, and funding from all other international channels decreased by 23%. The share of the total HIV resources from domestic resources increased from 48% in 2010 to 77% in 2018.

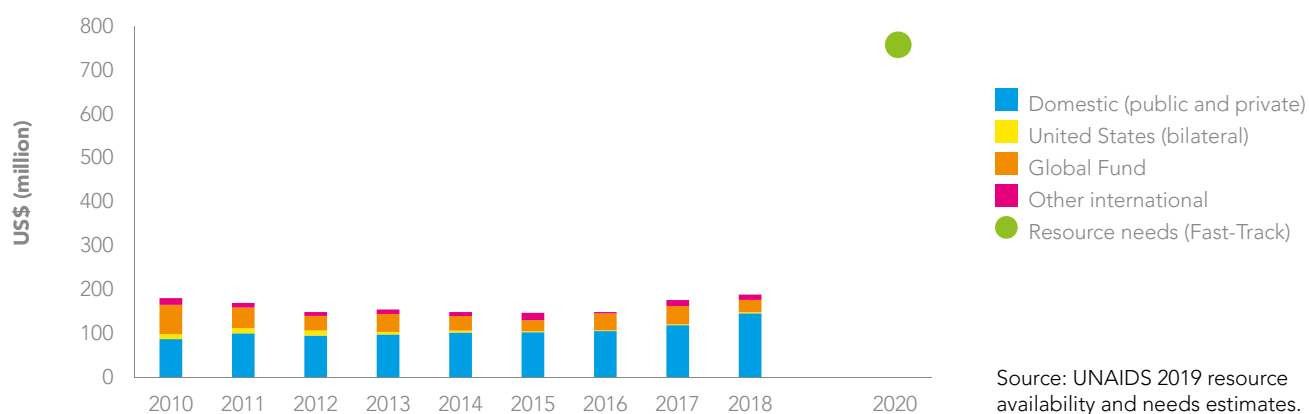
Resource availability increased by 7% between 2017 and 2018 (in 2016 constant US dollars), with domestic

resources increasing by 23% and United States bilateral resources increasing by 15%. However, disbursements from the Global Fund and all other international sources decreased 32% and 10%, respectively, over one year.²

The mix of sources of investment in the national HIV responses in the region varies. Algeria, the Islamic Republic of Iran and Gulf Cooperation Council countries rely mainly on domestic resources.³ Lower income countries—like Djibouti, Somalia, the Sudan and Yemen—depend on external financing from sources such as the Global Fund.

While the Global Fund remains the main supporter of regional networks and civil society organizations in the region, diminishing external resource availability threatens community-led programmes. There is a need for innovative financing modalities—such as social contracting—to ensure the sustainability of prevention programmes that are focused on key populations in the region. ■

FIGURE 15.13 HIV resource availability, by source, Middle East and North Africa, 2010–2018, and projected resource needs by 2020



1 Details on the revised UNAIDS estimates for resource availability in low- and middle-income countries can be found in the Investing to End an Epidemic chapter.

2 The Global Fund disbursements to countries decreased by 20% in 2018 because most funding grants ended in 2017, hence the changes in the level of disbursements.

3 The Gulf Cooperation Council countries are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

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EPIDEMIC ESTIMATES

	2010	2015	2018
New HIV infections			
New HIV infections (all ages)	990 [930–1100]	1400 [1300–1500]	1300 [1200–1400]
New HIV infections (0–14)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
New HIV infections (women, 15+)	<500 [<500– <500]	600 [560–650]	520 [<500–570]
New HIV infections (men, 15+)	<500 [<500–550]	670 [590–760]	700 [610–800]
HIV incidence per 1000 population	0.03 [0.03–0.03]	0.03 [0.03–0.04]	0.03 [0.03–0.03]
AIDS-related deaths			
AIDS-related deaths (all ages)	<200 [<100– <200]	<200 [<200– <200]	<200 [<200– <200]
AIDS-related deaths (0–14)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
AIDS-related deaths (women, 15+)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
AIDS-related deaths (men, 15+)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <200]
People living with HIV			
People living with HIV (all ages)	7100 [6600–7600]	12 000 [12 000–13 000]	16 000 [15 000–17 000]
People living with HIV (0–14)	<200 [<200– <200]	<500 [<500– <500]	<500 [<500–520]
People living with HIV (women, 15+)	2900 [2700–3100]	5400 [5100–5800]	7000 [6500–7400]
People living with HIV (men, 15+)	4000 [3600–4400]	6600 [5900–7300]	8300 [7500–9200]
HIV prevalence (15–49)	<0.1 [<0.1– <0.1]	<0.1 [<0.1– <0.1]	<0.1 [<0.1– <0.1]

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	...
Criminalization of sex work among consenting adults	...
Criminalization of same-sex sexual acts	Yes, imprisonment (up to 14 years)
Drug use or possession for personal use is an offence	...
Criminalization of transgender people	...
Laws or policies restricting the entry, stay and residence of people living with HIV	No
Parental consent for adolescents to access HIV testing	...
Spousal consent for married women to access sexual and reproductive health services	...
Mandatory HIV testing for marriage, work or residence permits or for certain groups	...

STIGMA AND DISCRIMINATION

Percentage of women aged 15–49 years who report discriminatory attitudes towards people living with HIV	2013 61
Percentage of people living with HIV denied health services because of their HIV status in the last 12 months	2015 53.3
Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent	2015 3.7

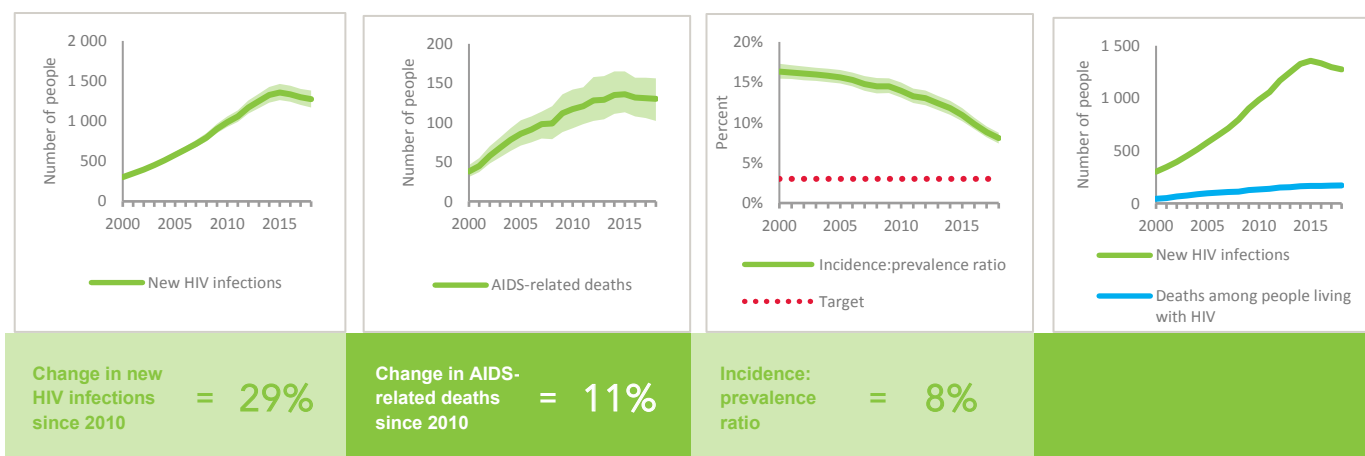
VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2017	\$5 965 415	\$25 360 944	...	\$297 370	\$275 743	\$31 899 471

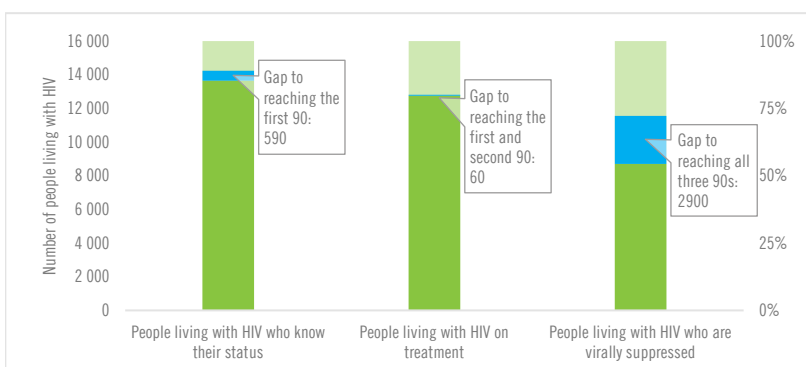
EPIDEMIC TRANSITION METRICS



KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population	...	...	...	...	...
HIV prevalence	3.5%	2.4%	0.9%	...	...
Know their HIV status	27.7%	98.9%	63.2%	...	...
Antiretroviral therapy coverage	...	...	...	...	...
Condom use	65.3%	53.4%	...	...	...
Coverage of HIV prevention programmes	9.9%	14.3%	...	...	...
Avoidance of health care because of stigma and discrimination	...	68.9%	...	...	...
Expenditures (2017)	\$117 145	\$58 573	\$36 045		

HIV TESTING AND TREATMENT CASCADE



	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	62% [56-68%]	74% [69-78%]
Early infant diagnosis	...% [...-...%]	46.7% [44.5-50.2%]

ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	62% [56-68%]	74% [69-78%]
Early infant diagnosis	...% [...-...%]	46.7% [44.5-50.2%]

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	180 [93-290]
People living with HIV who started TB preventive therapy (2017)	...
Women who tested positive for HIV among those screened for cervical cancer (programme data) (2018)	72.2%
People coinfectd with HIV and hepatitis B virus receiving combined treatment (2018)	100%
People coinfectd with HIV and hepatitis C virus starting hepatitis C treatment (2018)	100%

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	<0.1%
Knowledge of HIV prevention among young people aged 15-24 years	
— Women	...
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	
— Women	...
— Men	...
Women aged 15-49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15-49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	
— Use of sterile injecting equipment at last injection	...
— Needles and syringes distributed per person who injects	...
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	...
— Safe injection rooms available (2019)	...

EPIDEMIC ESTIMATES

	2010	2015	2018
New HIV infections			
New HIV infections (all ages)	<500 [<500–580]	520 [<500–750]	540 [<500–790]
New HIV infections (0–14)	<200 [<100– <200]	<100 [<100– <200]	<100 [<100– <200]
New HIV infections (women, 15+)	<200 [<200– <500]	<500 [<200– <500]	<500 [<200– <500]
New HIV infections (men, 15+)	<200 [<100– <200]	<200 [<200– <500]	<200 [<200– <500]
HIV incidence per 1000 population	0.53 [0.37–0.7]	0.58 [0.4–0.84]	0.57 [0.35–0.84]
AIDS-related deaths			
AIDS-related deaths (all ages)	630 [500–780]	540 [<500–670]	<500 [<500–550]
AIDS-related deaths (0–14)	<200 [<100– <200]	<100 [<100– <100]	<100 [<100– <100]
AIDS-related deaths (women, 15+)	<500 [<500– <500]	<500 [<200– <500]	<200 [<200– <500]
AIDS-related deaths (men, 15+)	<500 [<200– <500]	<500 [<200– <500]	<200 [<200– <500]
People living with HIV			
People living with HIV (all ages)	9400 [7700–11 000]	8700 [7100–11 000]	8800 [7100–11 000]
People living with HIV (0–14)	1200 [1000–1500]	980 [780–1200]	810 [640–1000]
People living with HIV (women, 15+)	4700 [3700–5700]	4400 [3600–5400]	4600 [3700–5800]
People living with HIV (men, 15+)	3500 [2800–4400]	3300 [2700–4000]	3400 [2700–4300]
HIV prevalence (15–49)	1.6 [1.2–1.9]	1.3 [1–1.6]	1.2 [1–1.5]

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Yes
Criminalization of sex work among consenting adults	...
Criminalization of same-sex sexual acts	Laws penalizing same-sex sexual acts have been decriminalized or never existed
Drug use or possession for personal use is an offence	...
Criminalization of transgender people	...
Laws or policies restricting the entry, stay and residence of people living with HIV	No
Parental consent for adolescents to access HIV testing	...
Spousal consent for married women to access sexual and reproductive health services	...
Mandatory HIV testing for marriage, work or residence permits or for certain groups	...

STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

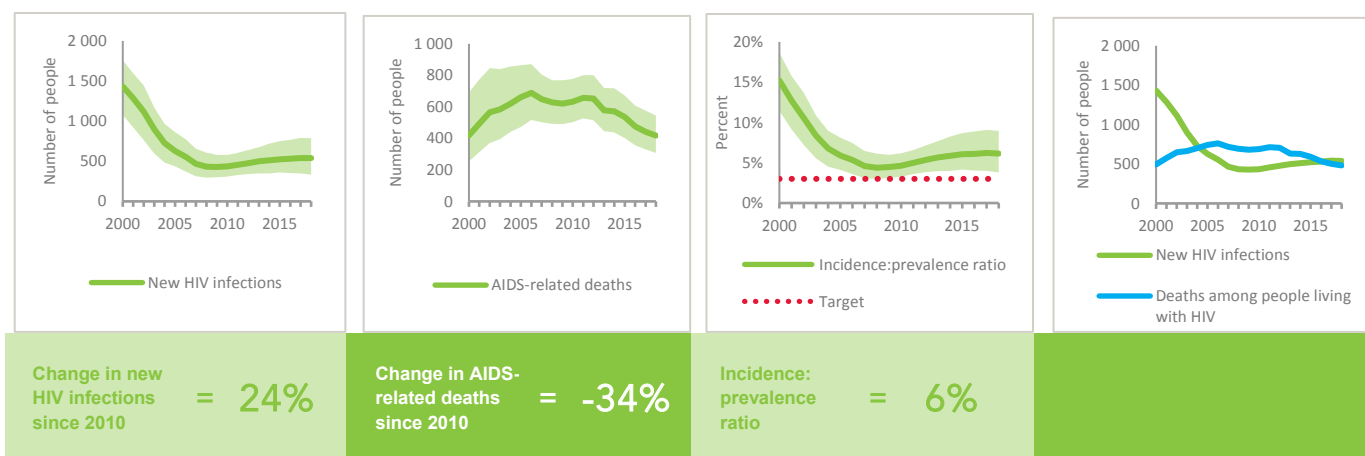
VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2014	...	\$274 426	...	\$1 563 399	\$1 045 940	\$2 883 765

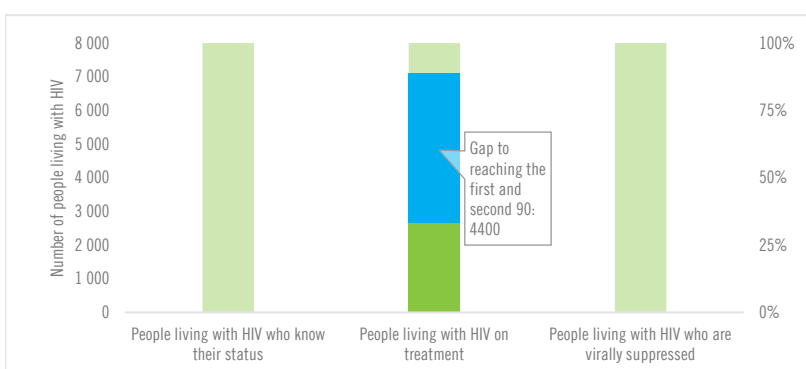
EPIDEMIC TRANSITION METRICS



KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population	...	...	...	...	...
HIV prevalence	12.9%	...	...	...	...
Know their HIV status	...	...	...	...	...
Antiretroviral therapy coverage	...	...	...	...	...
Condom use	66.4%	...	...	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (0)	...	...	...	...	...

HIV TESTING AND TREATMENT CASCADE



	...	30% [25–38%] 2700	...
All ages	...% [...–...%]	30% [25–38%] 2700	...% [...–...%]
Children (0–14)	28% [22–36%]	10% [8–13%] 80	...% [...–...%]
Women (15+)	...% [...–...%]	34% [28–43%] 1600	...% [...–...%]
Men (15+)	...% [...–...%]	30% [24–38%] 1000	...% [...–...%]

ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	12% [9–16%]	30% [22–39%]
Early infant diagnosis	...% [...–...%]	3.4% [2.6–4.5%]

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	120 [94–160]
People living with HIV who started TB preventive therapy (2017)	...
Cervical cancer screening of women living with HIV	...
People coinfecting with HIV and hepatitis B virus receiving combined treatment	...
People coinfecting with HIV and hepatitis C virus starting hepatitis C treatment	...

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	...
Knowledge of HIV prevention among young people aged 15–24 years	...
— Women	...
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	...
— Women	...
— Men	...
Women aged 15–49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15–49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	...
— Use of sterile injecting equipment at last injection	...
— Needles and syringes distributed per person who injects	...
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	...
— Safe injection rooms available (2019)	...

EPIDEMIC ESTIMATES

	2010	2015	2018
New HIV infections			
New HIV infections (all ages)	1200 [1100–1300]	2400 [2200–2600]	3600 [3300–3900]
New HIV infections (0–14)	<100 [<100– <100]	<100 [<100– <200]	<200 [<200– <200]
New HIV infections (women, 15+)	<500 [<500– <500]	670 [610–740]	1000 [910–1100]
New HIV infections (men, 15+)	820 [730–920]	1600 [1400–1800]	2400 [2100–2800]
HIV incidence per 1000 population	0.01 [0.01–0.02]	0.03 [0.02–0.03]	0.04 [0.03–0.04]
AIDS-related deaths			
AIDS-related deaths (all ages)	<200 [<200– <500]	<500 [<500– <500]	<500 [<500–500]
AIDS-related deaths (0–14)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
AIDS-related deaths (women, 15+)	<100 [<100– <100]	<100 [<100– <200]	<200 [<100– <200]
AIDS-related deaths (men, 15+)	<200 [<100– <200]	<200 [<200– <500]	<500 [<200– <500]
People living with HIV			
People living with HIV (all ages)	6800 [6100–7400]	14 000 [13 000–15 000]	22 000 [20 000–24 000]
People living with HIV (0–14)	<200 [<200– <200]	<500 [<500– <500]	<500 [<500– <500]
People living with HIV (women, 15+)	1900 [1800–2100]	4100 [3800–4500]	6400 [5900–7000]
People living with HIV (men, 15+)	4700 [4200–5300]	9800 [8600–11 000]	15 000 [13 000–17 000]
HIV prevalence (15–49)	<0.1 [<0.1– <0.1]	<0.1 [<0.1– <0.1]	<0.1 [<0.1– <0.1]

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	No, but prosecutions exist based on general criminal laws
Criminalization of sex work among consenting adults	Any criminalization or punitive regulation of sex work
Criminalization of same-sex sexual acts	No specific legislation
Drug use or possession for personal use is an offence	...
Criminalization of transgender people	Neither criminalized nor prosecuted
Laws or policies restricting the entry, stay and residence of people living with HIV	Yes
Parental consent for adolescents to access HIV testing	Yes, for adolescents younger than 18 years
Spousal consent for married women to access sexual and reproductive health services	No
Mandatory HIV testing for marriage, work or residence permits or for certain groups	No

STIGMA AND DISCRIMINATION

Percentage of women aged 15–49 years who report discriminatory attitudes towards people living with HIV	2005	2014
	87.2	78.8

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

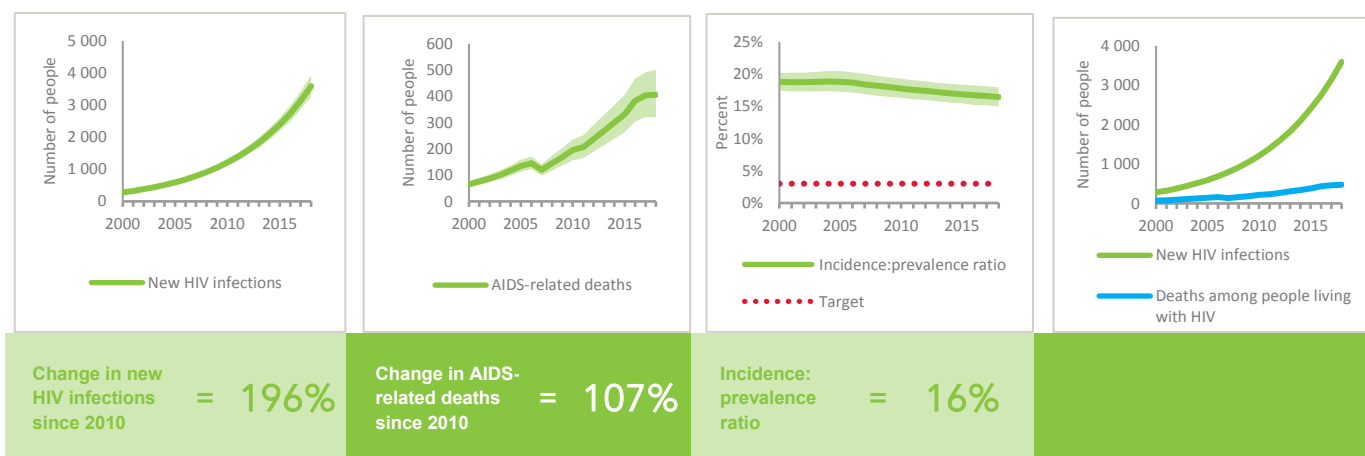
VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months	2014
	14

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2008	\$113 715	\$3 793 463	...	\$1 338 706	\$1 432 081	\$7 652 152

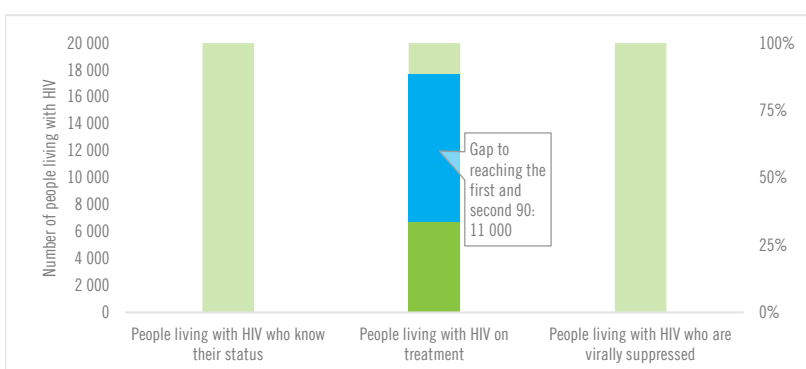
EPIDEMIC TRANSITION METRICS



KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population	...	...	...	...	...
HIV prevalence	2.8%	6.7%	2.5%	...	...
Know their HIV status	...	96.7%	95.4%	...	...
Antiretroviral therapy coverage	...	...	...	...	...
Condom use	13.9%	38.8%	2.3%	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (0)	...	...	...	...	...

HIV TESTING AND TREATMENT CASCADE



Category	Percentage	Number of people
All ages	...	...
Children (0–14)	39% [36–42%]	180
Women (15+)	25% [23–28%]	1600
Men (15+)	33% [29–37%]	4900

ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	9% [8–10%]	16% [15–18%]
Early infant diagnosis	5.9% [5.2–6.6%]	12.7% [11.5–14.3%]

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	53 [34–76]
People living with HIV who started TB preventive therapy (2017)	...
Cervical cancer screening of women living with HIV	...
People coinfecting with HIV and hepatitis B virus receiving combined treatment	...
People coinfecting with HIV and hepatitis C virus starting hepatitis C treatment	...

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	...
Knowledge of HIV prevention among young people aged 15–24 years (2015)	...
— Women	4.1%
— Men	6.6%
Condom use at last sex with a non-marital, non-cohabiting partner	...
— Women	...
— Men	...
Women aged 15–49 years who have their demand for family planning satisfied by modern methods (2014)	80%
Men aged 15–49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	...
— Use of sterile injecting equipment at last injection (2015)	31.5%
— Needles and syringes distributed per person who injects	...
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	No
— Safe injection rooms available (2019)	No

EPIDEMIC ESTIMATES

	2010	2015	2018
New HIV infections			
New HIV infections (all ages)	5000 [2800–8400]	4600 [1300–11 000]	4400 [1100–12 000]
New HIV infections (0–14)	<200 [<200– <500]	<200 [<100– <500]	<100 [<100– <500]
New HIV infections (women, 15+)	1000 [600–1900]	1000 [<500–2800]	1000 [<500–3000]
New HIV infections (men, 15+)	3800 [2000–6300]	3400 [1000–8400]	3200 [810–8600]
HIV incidence per 1000 population	0.07 [0.04–0.11]	0.06 [0.02–0.14]	0.05 [0.01–0.15]
AIDS-related deaths			
AIDS-related deaths (all ages)	2400 [1700–3500]	2700 [1800–4200]	2600 [1400–5100]
AIDS-related deaths (0–14)	<100 [<100– <200]	<100 [<100– <200]	<100 [<100– <200]
AIDS-related deaths (women, 15+)	<500 [<500–820]	<500 [<500–810]	<500 [<500–990]
AIDS-related deaths (men, 15+)	1800 [1200–2600]	2100 [1400–3200]	2100 [1100–3900]
People living with HIV			
People living with HIV (all ages)	50 000 [37 000–70 000]	57 000 [36 000–98 000]	61 000 [34 000–120 000]
People living with HIV (0–14)	830 [630–1400]	900 [670–1400]	880 [580–1600]
People living with HIV (women, 15+)	11 000 [8500–16 000]	13 000 [8900–24 000]	15 000 [8900–30 000]
People living with HIV (men, 15+)	38 000 [28 000–53 000]	43 000 [26 000–74 000]	45 000 [24 000–86 000]
HIV prevalence (15–49)	0.1 [<0.1–0.1]	0.1 [<0.1–0.2]	0.1 [<0.1–0.2]

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	No
Criminalization of sex work among consenting adults	Any criminalization or punitive regulation of sex work
Criminalization of same-sex sexual acts	Yes, death penalty
Drug use or possession for personal use is an offence	Possession of drugs for personal use or drug use and/or consumption are specified as non-criminal offences
Criminalization of transgender people	Neither criminalized nor prosecuted
Laws or policies restricting the entry, stay and residence of people living with HIV	No
Parental consent for adolescents to access HIV testing	Yes, for adolescents younger than 14 years
Spousal consent for married women to access sexual and reproductive health services	No
Mandatory HIV testing for marriage, work or residence permits or for certain groups	Yes

STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

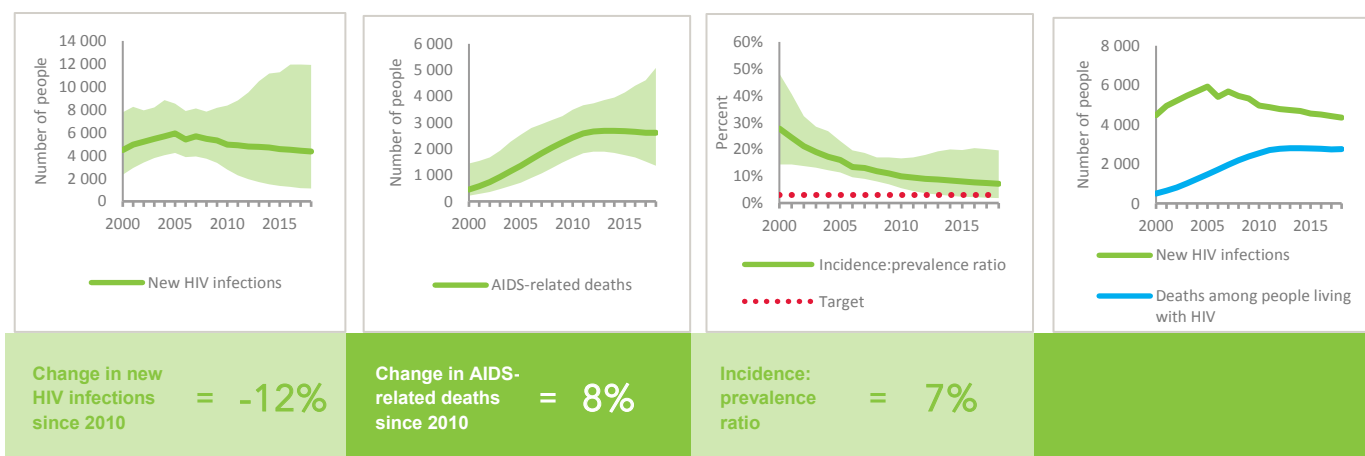
VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2012	\$2 093 938	\$69 420 049	...	...	...	\$74 486 120

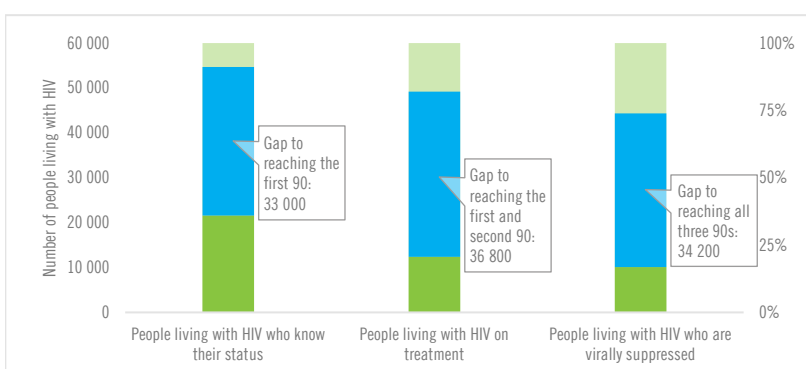
EPIDEMIC TRANSITION METRICS



KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population	...	...	...	...	211 000
HIV prevalence	2.1%	...	9.3%	1.9%	0.8%
Know their HIV status	70.6%	...	...	...	...
Antiretroviral therapy coverage	...	...	16.7%	...	66.1%
Condom use	59.1%	...	41.8%	42.5%	...
Coverage of HIV prevention programmes	...	...	30.8%	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (0)	...	...	...	...	...

HIV TESTING AND TREATMENT CASCADE



	2010	2018
All ages	36% [20–69%] 12 400	20% [11–39%] 12 400
Children (0–14)	70% [46– >95%] 510	58% [39– >95%] 510
Women (15+)	34% [20–67%] 4100	27% [16–53%] 4100
Men (15+)	35% [19–68%] 7800	17% [9–33%] 7800

ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	15% [12–23%]	81% [41– >95%]
Early infant diagnosis	14.3% [9.4–18.2%]	39.8% [18.1–78.8%]

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	300 [200–430]
People living with HIV who started TB preventive therapy (2017)	10.3%
Women who tested positive for HIV among those screened for cervical cancer (programme data) (2018)	5.9%
People coinfectd with HIV and hepatitis B virus receiving combined treatment (2017)	100%
People coinfectd with HIV and hepatitis C virus starting hepatitis C treatment	...

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	<0.1%
Knowledge of HIV prevention among young people aged 15–24 years	...
— Women	...
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	...
— Women	...
— Men	...
Women aged 15–49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15–49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	...
— Use of sterile injecting equipment at last injection (2014)	81.6%
— Needles and syringes distributed per person who injects (2018)	48
— Coverage of opioid substitution therapy (2018)	11.7%
— Naloxone available (2019)	Yes
— Safe injection rooms available (2019)	No

EPIDEMIC ESTIMATES

	2010	2015	2018
New HIV infections			
New HIV infections (all ages)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
New HIV infections (0–14)	... [...-...]	... [...-...]	... [...-...]
New HIV infections (women, 15+)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
New HIV infections (men, 15+)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
HIV incidence per 1000 population	<0.01 [<0.01- <0.01]	<0.01 [<0.01- <0.01]	<0.01 [<0.01- <0.01]
AIDS-related deaths			
AIDS-related deaths (all ages)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
AIDS-related deaths (0–14)	... [...-...]	... [...-...]	... [...-...]
AIDS-related deaths (women, 15+)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
AIDS-related deaths (men, 15+)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
People living with HIV			
People living with HIV (all ages)	<200 [<200- <500]	<500 [<500- <500]	<500 [<500- <500]
People living with HIV (0–14)	... [...-...]	... [...-...]	... [...-...]
People living with HIV (women, 15+)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
People living with HIV (men, 15+)	<200 [<200- <200]	<500 [<500- <500]	<500 [<500- <500]
HIV prevalence (15–49)	<0.1 [<0.1- <0.1]	<0.1 [<0.1- <0.1]	<0.1 [<0.1- <0.1]

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	...
Criminalization of sex work among consenting adults	...
Criminalization of same-sex sexual acts	Laws penalizing same-sex sexual acts have been decriminalized or never existed
Drug use or possession for personal use is an offence	...
Criminalization of transgender people	...
Laws or policies restricting the entry, stay and residence of people living with HIV	Yes
Parental consent for adolescents to access HIV testing	...
Spousal consent for married women to access sexual and reproductive health services	...
Mandatory HIV testing for marriage, work or residence permits or for certain groups	...

STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

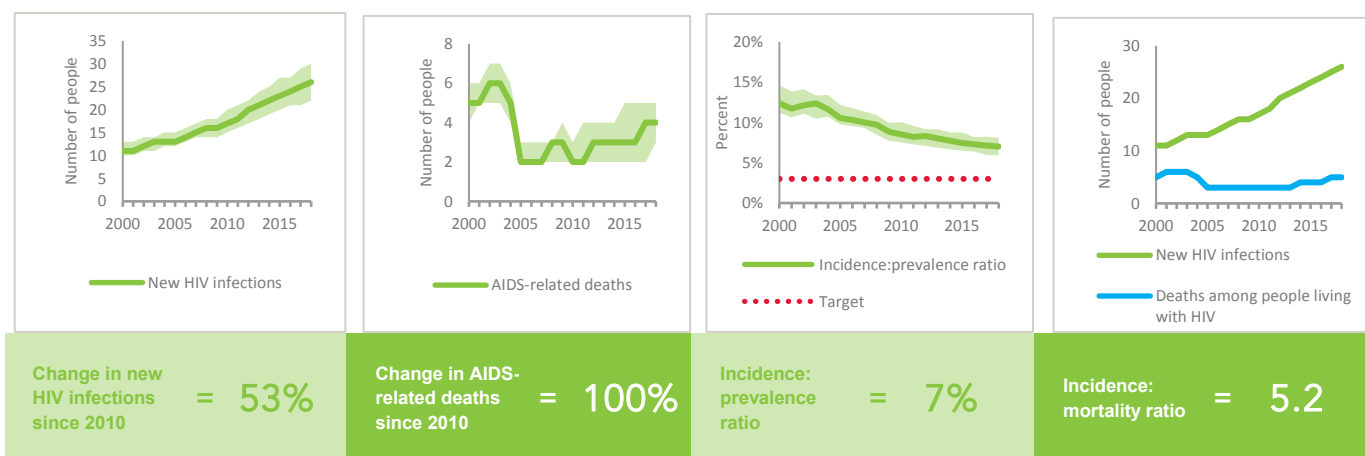
VIOLENCE

	2012	2018
Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months	14.1	13.8

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2013	...	\$1 000 000	...	\$79 616	...	\$1 079 616

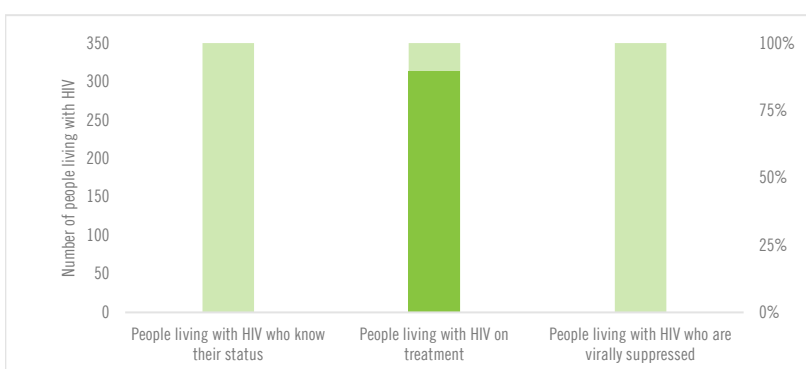
EPIDEMIC TRANSITION METRICS



KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population
HIV prevalence	0.0%
Know their HIV status
Antiretroviral therapy coverage
Condom use
Coverage of HIV prevention programmes
Avoidance of health care because of stigma and discrimination
Expenditures (0)

HIV TESTING AND TREATMENT CASCADE



	2010	2018
All ages	...% [...-...%] 310	84% [76-95%] 310
Children (0-14)	...% [...-...%]% [...-...%] ...
Women (15+)	...% [...-...%] 50	75% [68-85%] 50
Men (15+)	...% [...-...%] 270	87% [78- >95%] 270

ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	...% [...-...%]	...% [...-...%]
Early infant diagnosis	...% [...-...%]	...% [...-...%]

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	0 [0-0]
People living with HIV who started TB preventive therapy (2017)	...
Cervical cancer screening of women living with HIV	...
People coinfecting with HIV and hepatitis B virus receiving combined treatment	...
People coinfecting with HIV and hepatitis C virus starting hepatitis C treatment (2017)	0%

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	...
Knowledge of HIV prevention among young people aged 15-24 years (2017)	
— Women	6.6%
— Men	8.1%
Condom use at last sex with a non-marital, non-cohabiting partner	
— Women	...
— Men	...
Women aged 15-49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15-49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	
— Use of sterile injecting equipment at last injection	...
— Needles and syringes distributed per person who injects	...
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	...
— Safe injection rooms available (2019)	...

EPIDEMIC ESTIMATES

	2010	2015	2018
New HIV infections			
New HIV infections (all ages)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
New HIV infections (0–14)	... [...-...]	... [...-...]	... [...-...]
New HIV infections (women, 15+)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
New HIV infections (men, 15+)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
HIV incidence per 1000 population	0.03 [0.03–0.04]	0.04 [0.03–0.04]	0.04 [0.03–0.04]
AIDS-related deaths			
AIDS-related deaths (all ages)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
AIDS-related deaths (0–14)	... [...-...]	... [...-...]	... [...-...]
AIDS-related deaths (women, 15+)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
AIDS-related deaths (men, 15+)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
People living with HIV			
People living with HIV (all ages)	<500 [<500- <500]	540 [<500–580]	640 [580–700]
People living with HIV (0–14)	... [...-...]	... [...-...]	... [...-...]
People living with HIV (women, 15+)	<200 [<100- <200]	<200 [<200- <200]	<200 [<200- <500]
People living with HIV (men, 15+)	<500 [<500- <500]	<500 [<500- <500]	<500 [<500- <500]
HIV prevalence (15–49)	<0.1 [<0.1- <0.1]	<0.1 [<0.1- <0.1]	<0.1 [<0.1- <0.1]

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	...
Criminalization of sex work among consenting adults	...
Criminalization of same-sex sexual acts	Yes, imprisonment (up to 14 years)
Drug use or possession for personal use is an offence	...
Criminalization of transgender people	...
Laws or policies restricting the entry, stay and residence of people living with HIV	Yes
Parental consent for adolescents to access HIV testing	...
Spousal consent for married women to access sexual and reproductive health services	...
Mandatory HIV testing for marriage, work or residence permits or for certain groups	...

STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

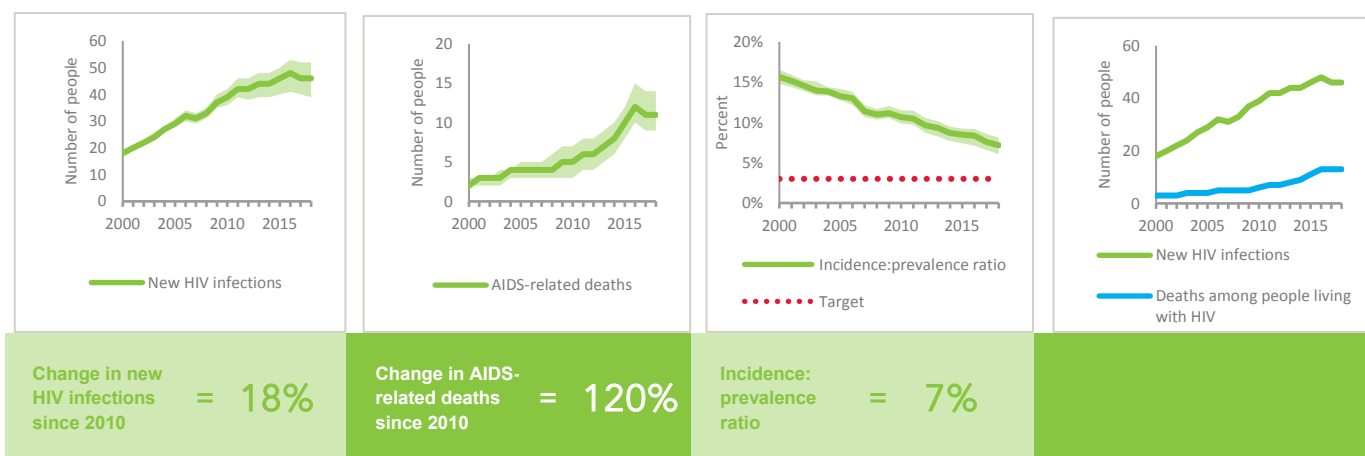
VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2016	...	\$32 383 674	...	...	...	\$32 383 674

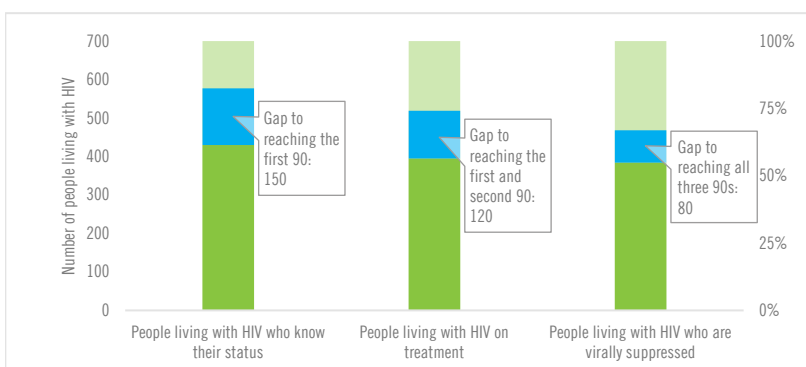
EPIDEMIC TRANSITION METRICS



KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population	5200
HIV prevalence	0.1%	...	0.1%
Know their HIV status	100%	...	...
Antiretroviral therapy coverage
Condom use
Coverage of HIV prevention programmes
Avoidance of health care because of stigma and discrimination
Expenditures (2016)	\$0	\$0	\$0	...	...

HIV TESTING AND TREATMENT CASCADE



	67% [60–73%]	62% [55–67%] 400	60% [54–65%]
All ages			
Children (0–14)	...% [...–...%]	...% [...–...%]% [...–...%]
Women (15+)	58% [52–64%]	52% [47–57%] 100	51% [46–56%]
Men (15+)	70% [63–76%]	65% [59–71%] 300	63% [57–69%]

ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	...% [...–...%]	...% [...–...%]
Early infant diagnosis	...% [...–...%]	...% [...–...%]

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	5 [3–7]
People living with HIV who started TB preventive therapy (2017)	9.3%
Women who tested positive for HIV among those screened for cervical cancer (programme data) (2017)	65.5%
People coinfecting with HIV and hepatitis B virus receiving combined treatment (2018)	100%
People coinfecting with HIV and hepatitis C virus starting hepatitis C treatment (2018)	0%

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	<0.1%
Knowledge of HIV prevention among young people aged 15–24 years	
— Women	...
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	
— Women	...
— Men	...
Women aged 15–49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15–49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period (2018)	41
Harm reduction	
— Use of sterile injecting equipment at last injection	...
— Needles and syringes distributed per person who injects	...
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	...
— Safe injection rooms available (2019)	...

EPIDEMIC ESTIMATES

	2010	2015	2018
New HIV infections			
New HIV infections (all ages)	<200 [<100– <200]	<200 [<200– <200]	<200 [<200– <200]
New HIV infections (0–14)	... [...–...]	... [...–...]	... [...–...]
New HIV infections (women, 15+)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
New HIV infections (men, 15+)	<100 [<100– <200]	<200 [<100– <200]	<200 [<200– <200]
HIV incidence per 1000 population	0.03 [0.02–0.03]	0.02 [0.02–0.03]	0.02 [0.02–0.03]
AIDS-related deaths			
AIDS-related deaths (all ages)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
AIDS-related deaths (0–14)	... [...–...]	... [...–...]	... [...–...]
AIDS-related deaths (women, 15+)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
AIDS-related deaths (men, 15+)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
People living with HIV			
People living with HIV (all ages)	1600 [1400–1800]	2300 [2000–2500]	2500 [2200–2800]
People living with HIV (0–14)	... [...–...]	... [...–...]	... [...–...]
People living with HIV (women, 15+)	<500 [<500– <500]	<500 [<500– <500]	<500 [<500– <500]
People living with HIV (men, 15+)	1200 [1100–1400]	1800 [1600–2100]	2100 [1800–2300]
HIV prevalence (15–49)	<0.1 [<0.1– <0.1]	<0.1 [<0.1– <0.1]	<0.1 [<0.1– <0.1]

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	...
Criminalization of sex work among consenting adults	...
Criminalization of same-sex sexual acts	Yes, imprisonment (up to 14 years)
Drug use or possession for personal use is an offence	...
Criminalization of transgender people	...
Laws or policies restricting the entry, stay and residence of people living with HIV	Yes
Parental consent for adolescents to access HIV testing	...
Spousal consent for married women to access sexual and reproductive health services	...
Mandatory HIV testing for marriage, work or residence permits or for certain groups	...

STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

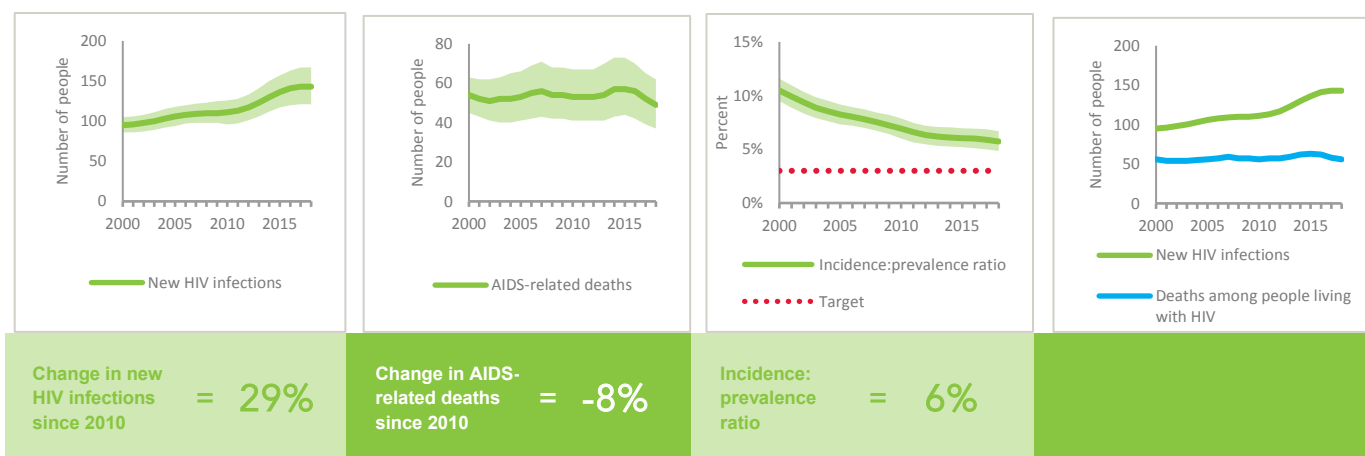
VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2017	\$510 000	\$269 241	\$779 241

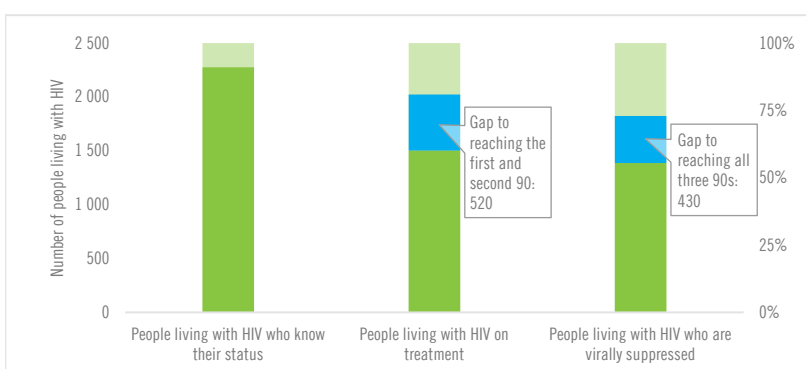
EPIDEMIC TRANSITION METRICS



KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population	...	17 000	...	...	...
HIV prevalence	0.0%	12%	0.9%	...	0.1%
Know their HIV status	...	92.3%	...	...	...
Antiretroviral therapy coverage	...	...	...	...	...
Condom use	79.2%	44.9%	...	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (2017)	\$0	\$0	\$0	...	...

HIV TESTING AND TREATMENT CASCADE



	91% [80– >95%]	60% [53–67%] 1500	56% [49–62%]
All ages			
Children (0–14)	...% [...–...%]	...% [...–...%]% [...–...%]
Women (15+)	77% [69–85%]	37% [33–41%] 150	37% [33–41%]
Men (15+)	95% [83– >95%]	65% [57–73%] 1400	59% [52–67%]

ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	...% [...–...%]	...% [...–...%]
Early infant diagnosis	...% [...–...%]	...% [...–...%]

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	5 [4–6]
People living with HIV who started TB preventive therapy (2017)	0.5%
Cervical cancer screening of women living with HIV	...
People coinfecting with HIV and hepatitis B virus receiving combined treatment	...
People coinfecting with HIV and hepatitis C virus starting hepatitis C treatment (2017)	100%

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	<0.1%
Knowledge of HIV prevention among young people aged 15–24 years	...
— Women	...
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	...
— Women	...
— Men	...
Women aged 15–49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15–49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	
— Use of sterile injecting equipment at last injection (2014)	98.5%
— Needles and syringes distributed per person who injects	...
— Coverage of opioid substitution therapy (2015)	49.7%
— Naloxone available (2019)	...
— Safe injection rooms available (2019)	...

EPIDEMIC ESTIMATES

	2010	2015	2018
New HIV infections			
New HIV infections (all ages)	790 [740–850]	610 [560–670]	<500 [<500–500]
New HIV infections (0–14)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
New HIV infections (women, 15+)	<500 [<200– <500]	<200 [<200– <200]	<200 [<200– <200]
New HIV infections (men, 15+)	540 [<500–590]	<500 [<500– <500]	<500 [<500– <500]
HIV incidence per 1000 population	0.13 [0.12–0.14]	0.1 [0.09–0.11]	0.07 [0.06–0.08]
AIDS-related deaths			
AIDS-related deaths (all ages)	<100 [<100– <200]	<200 [<100– <200]	<200 [<200– <200]
AIDS-related deaths (0–14)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
AIDS-related deaths (women, 15+)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
AIDS-related deaths (men, 15+)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <200]
People living with HIV			
People living with HIV (all ages)	6100 [5600–6500]	8200 [7400–9000]	9200 [8300–10 000]
People living with HIV (0–14)	<200 [<200– <200]	<500 [<500– <500]	<500 [<500– <500]
People living with HIV (women, 15+)	1700 [1600–1800]	2300 [2100–2500]	2700 [2400–2900]
People living with HIV (men, 15+)	4200 [3900–4600]	5600 [5000–6300]	6300 [5600–7000]
HIV prevalence (15–49)	0.2 [0.1–0.2]	0.2 [0.2–0.2]	0.2 [0.2–0.2]

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	...
Criminalization of sex work among consenting adults	Any criminalization or punitive regulation of sex work
Criminalization of same-sex sexual acts	Yes, imprisonment (up to 14 years)
Drug use or possession for personal use is an offence	The law allows possession of a certain amount of drugs
Criminalization of transgender people	Both criminalized and prosecuted
Laws or policies restricting the entry, stay and residence of people living with HIV	No
Parental consent for adolescents to access HIV testing	No
Spousal consent for married women to access sexual and reproductive health services	...
Mandatory HIV testing for marriage, work or residence permits or for certain groups	Yes

STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

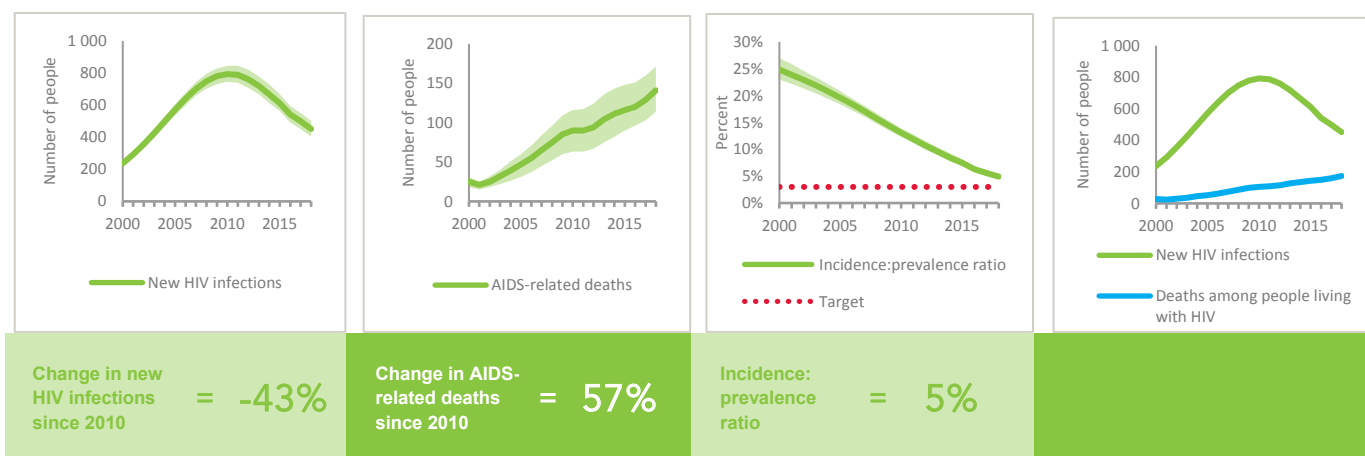
VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report:

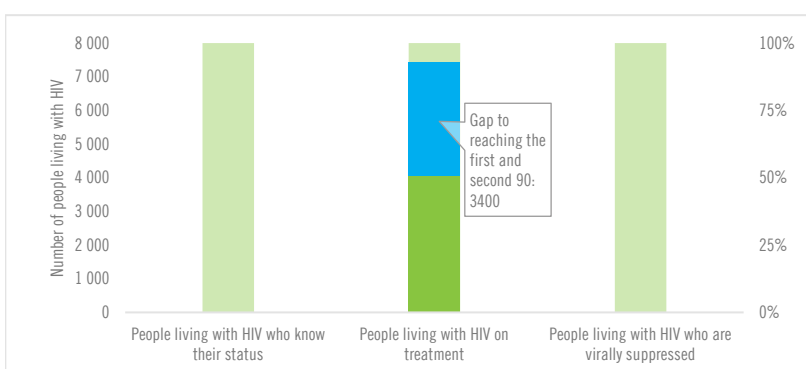
EPIDEMIC TRANSITION METRICS



KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population
HIV prevalence
Know their HIV status
Antiretroviral therapy coverage
Condom use
Coverage of HIV prevention programmes
Avoidance of health care because of stigma and discrimination
Expenditures (0)

HIV TESTING AND TREATMENT CASCADE



	...% [...-...%]	44% [40-49%] 4100	...% [...-...%]
All ages	...	44% [40-49%] 4100	...% [...-...%]
Children (0-14)	...	33% [30-35%] 80	...% [...-...%]
Women (15+)	...	47% [43-52%] 1300	...% [...-...%]
Men (15+)	...	43% [38-48%] 2700	...% [...-...%]

ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	0% [0-0%]	63% [56-69%]
Early infant diagnosis	...% [...-...%]	45.1% [41.1-50.5%]

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	65 [41-96]
People living with HIV who started TB preventive therapy (2017)	...
Cervical cancer screening of women living with HIV	...
People coinfectd with HIV and hepatitis B virus receiving combined treatment (2017)	100%
People coinfectd with HIV and hepatitis C virus starting hepatitis C treatment (2017)	100%

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	...
Knowledge of HIV prevention among young people aged 15-24 years	...
— Women	...
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	...
— Women	...
— Men	...
Women aged 15-49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15-49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	...
— Use of sterile injecting equipment at last injection	...
— Needles and syringes distributed per person who injects	...
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	...
— Safe injection rooms available (2019)	...

EPIDEMIC ESTIMATES

	2010	2015	2018
New HIV infections			
New HIV infections (all ages)	1200 [850–1800]	1000 [710–1600]	900 [620–1400]
New HIV infections (0–14)	<100 [<100– <200]	<100 [<100– <200]	<100 [<100– <100]
New HIV infections (women, 15+)	<500 [<500–650]	<500 [<500–550]	<500 [<500– <500]
New HIV infections (men, 15+)	700 [<500–1000]	590 [<500–910]	530 [<500–810]
HIV incidence per 1000 population	0.04 [0.03–0.06]	0.03 [0.02–0.05]	0.03 [0.02–0.04]
AIDS-related deaths			
AIDS-related deaths (all ages)	550 [<500–840]	<500 [<500–670]	<500 [<500–600]
AIDS-related deaths (0–14)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
AIDS-related deaths (women, 15+)	<200 [<200– <500]	<100 [<100– <200]	<100 [<100– <200]
AIDS-related deaths (men, 15+)	<500 [<500–510]	<500 [<200– <500]	<500 [<200– <500]
People living with HIV			
People living with HIV (all ages)	17 000 [13 000–22 000]	20 000 [16 000–26 000]	21 000 [17 000–28 000]
People living with HIV (0–14)	<500 [<500–580]	510 [<500–710]	560 [<500–770]
People living with HIV (women, 15+)	6500 [5300–8500]	7800 [6300–10 000]	8500 [6900–11 000]
People living with HIV (men, 15+)	9800 [7700–13 000]	11 000 [8800–15 000]	12 000 [9400–16 000]
HIV prevalence (15–49)	<0.1 [<0.1–0.1]	<0.1 [<0.1–0.1]	<0.1 [<0.1–0.1]

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	No
Criminalization of sex work among consenting adults	Any criminalization or punitive regulation of sex work
Criminalization of same-sex sexual acts	Yes, imprisonment (up to 14 years)
Drug use or possession for personal use is an offence	Possession of drugs for personal use or drug use and/or consumption are specified as criminal offences
Criminalization of transgender people	Both criminalized and prosecuted
Laws or policies restricting the entry, stay and residence of people living with HIV	No
Parental consent for adolescents to access HIV testing	Yes, for adolescents younger than 18 years
Spousal consent for married women to access sexual and reproductive health services	No
Mandatory HIV testing for marriage, work or residence permits or for certain groups	Yes

STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

2017
41.2

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

2017
15.5

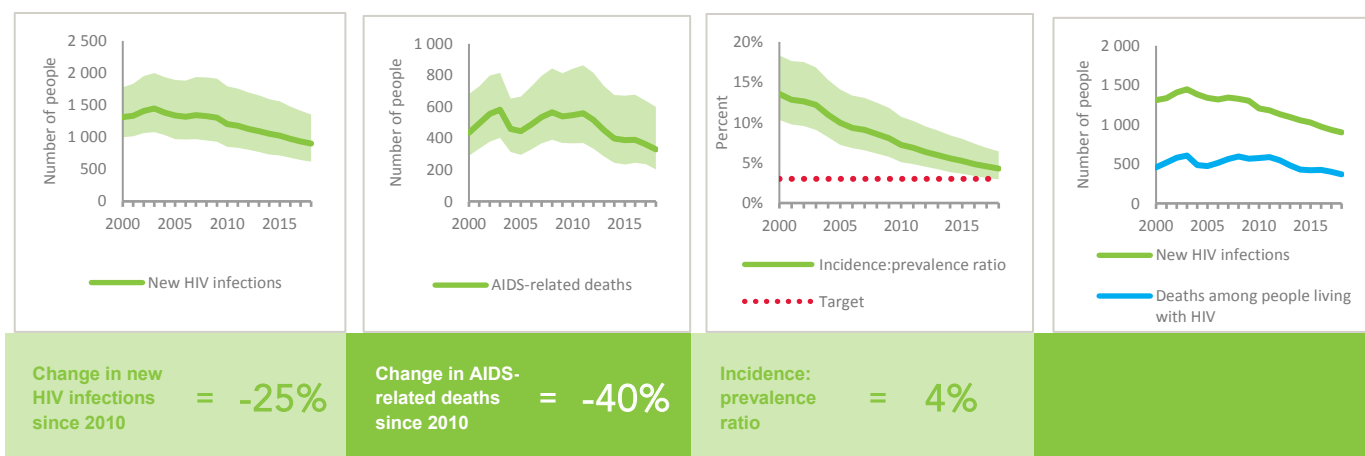
VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2017	\$1 493 732	\$18 244 377	...	...	...	\$39 062 783

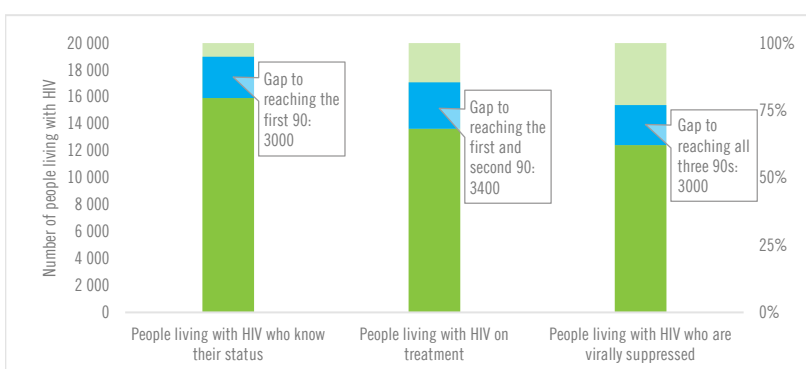
EPIDEMIC TRANSITION METRICS



KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population	...	...	...	...	84 000
HIV prevalence	1.3%	5.9%	7.1%	...	0.3%
Know their HIV status	40.1%	58.1%	36.1%	...	...
Antiretroviral therapy coverage	...	...	...	...	...
Condom use	52.3%	51.8%	44.6%	...	...
Coverage of HIV prevention programmes	62.7%	48.6%	45.4%	...	...
Avoidance of health care because of stigma and discrimination	...	7.9%	29.9%	...	...
Expenditures (2017)	\$0	\$0	\$0	...	...

HIV TESTING AND TREATMENT CASCADE



	76% [60– >95%]	65% [52–86%] 13 600	59% [47–78%]
All ages			
Children (0–14)	>95% [72– >95%]	>95% [88– >95%] 670	>95% [80– >95%]
Women (15+)	90% [73– >95%]	76% [62– >95%] 6500	69% [56–91%]
Men (15+)	64% [50–86%]	54% [42–72%] 6500	49% [39–66%]

ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	39% [30–53%]	61% [50–78%]
Early infant diagnosis	17.4% [12.8–22.7%]	...% [...–...%]

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	380 [240–540]
People living with HIV who started TB preventive therapy (2017)	...
Cervical cancer screening of women living with HIV	...
People coinfectd with HIV and hepatitis B virus receiving combined treatment	...
People coinfectd with HIV and hepatitis C virus starting hepatitis C treatment	...

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	<0.1%
Knowledge of HIV prevention among young people aged 15–24 years	
— Women	...
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	
— Women	...
— Men	...
Women aged 15–49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15–49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period (2018)	119
Harm reduction	
— Use of sterile injecting equipment at last injection (2017)	92.1%
— Needles and syringes distributed per person who injects (2018)	109
— Coverage of opioid substitution therapy (2018)	42.3%
— Naloxone available (2019)	Yes
— Safe injection rooms available (2019)	No

EPIDEMIC ESTIMATES

	2010	2015	2018
New HIV infections			
New HIV infections (all ages)	<200 [<200– <200]	<500 [<200– <500]	<500 [<200– <500]
New HIV infections (0–14)	... [...–...]	... [...–...]	... [...–...]
New HIV infections (women, 15+)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
New HIV infections (men, 15+)	<200 [<200– <200]	<200 [<200– <200]	<200 [<200– <200]
HIV incidence per 1000 population	0.07 [0.07–0.08]	0.07 [0.07–0.08]	0.07 [0.07–0.08]
AIDS-related deaths			
AIDS-related deaths (all ages)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
AIDS-related deaths (0–14)	... [...–...]	... [...–...]	... [...–...]
AIDS-related deaths (women, 15+)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
AIDS-related deaths (men, 15+)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
People living with HIV			
People living with HIV (all ages)	2200 [2000–2500]	2800 [2600–3100]	3200 [2900–3600]
People living with HIV (0–14)	... [...–...]	... [...–...]	... [...–...]
People living with HIV (women, 15+)	630 [570–690]	830 [760–900]	960 [880–1100]
People living with HIV (men, 15+)	1500 [1400–1700]	2000 [1700–2200]	2200 [2000–2500]
HIV prevalence (15–49)	0.1 [0.1–0.1]	0.2 [0.1–0.2]	0.2 [0.1–0.2]

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	No, but prosecutions exist based on general criminal laws
Criminalization of sex work among consenting adults	Any criminalization or punitive regulation of sex work
Criminalization of same-sex sexual acts	Yes, imprisonment (up to 14 years)
Drug use or possession for personal use is an offence	The law allows possession of a certain amount of drugs
Criminalization of transgender people	Criminalized
Laws or policies restricting the entry, stay and residence of people living with HIV	Yes
Parental consent for adolescents to access HIV testing	No
Spousal consent for married women to access sexual and reproductive health services	No
Mandatory HIV testing for marriage, work or residence permits or for certain groups	Yes

STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

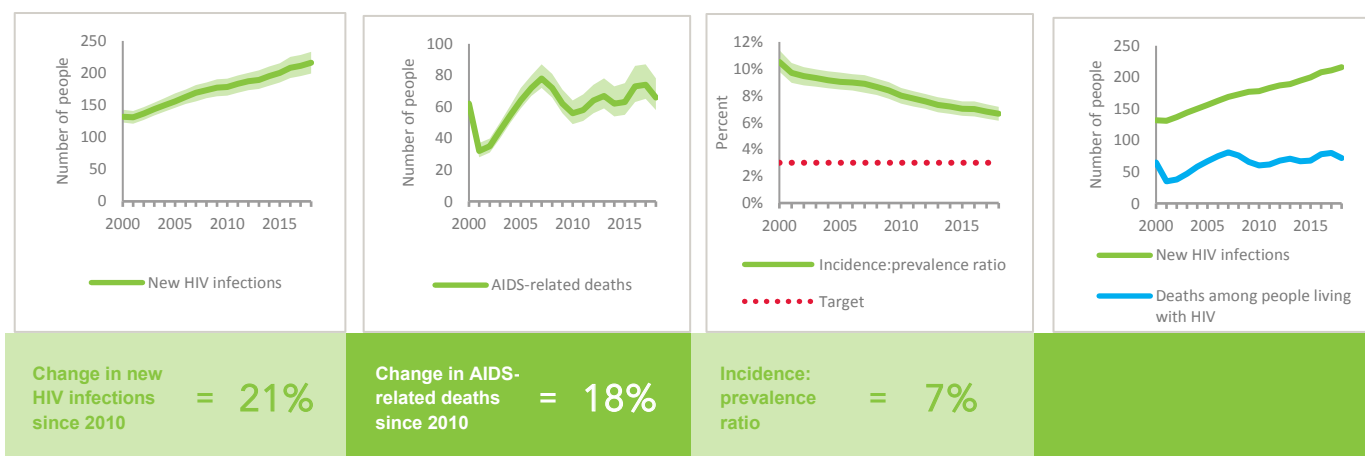
VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2014	...	\$4 313 471	...	...	\$11 390	\$4 324 861

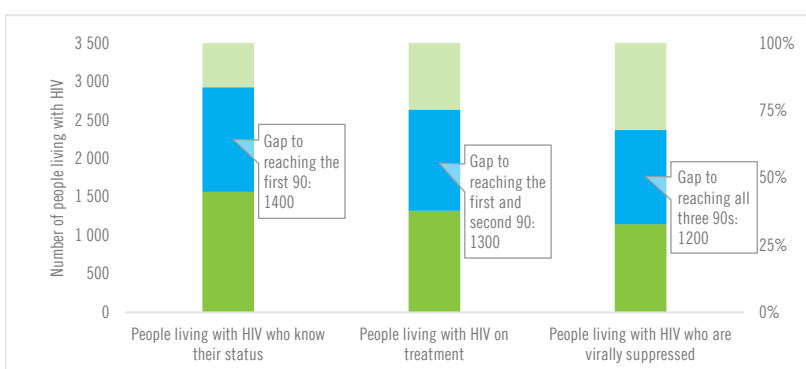
EPIDEMIC TRANSITION METRICS



KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population
HIV prevalence	0.2%
Know their HIV status
Antiretroviral therapy coverage
Condom use
Coverage of HIV prevention programmes
Avoidance of health care because of stigma and discrimination
Expenditures (0)

HIV TESTING AND TREATMENT CASCADE



	2010	2018
All ages	48% [44–53%]	41% [37–45%] 1300
Children (0–14)	...% [...–...%]	...% [...–...%] ...
Women (15+)	51% [46–56%]	44% [40–48%] 430
Men (15+)	47% [41–52%]	39% [34–43%] 870

ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	...% [...–...%]	...% [...–...%]
Early infant diagnosis	...% [...–...%]	...% [...–...%]

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	4 [2–5]
People living with HIV who started TB preventive therapy (2017)	...
Cervical cancer screening of women living with HIV	...
People coinfecting with HIV and hepatitis B virus receiving combined treatment (2018)	100%
People coinfecting with HIV and hepatitis C virus starting hepatitis C treatment (2018)	0%

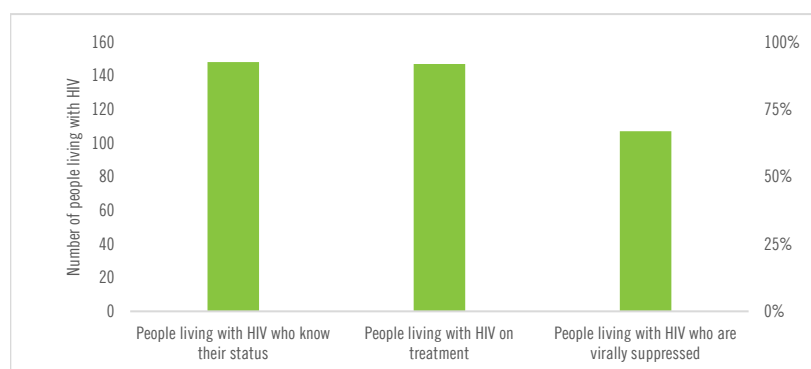
HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	<0.1%
Knowledge of HIV prevention among young people aged 15–24 years (2014)	
— Women	9.8%
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	
— Women	...
— Men	...
Women aged 15–49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15–49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	
— Use of sterile injecting equipment at last injection	...
— Needles and syringes distributed per person who injects	...
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	No
— Safe injection rooms available (2019)	No

KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population
HIV prevalence
Know their HIV status
Antiretroviral therapy coverage
Condom use
Coverage of HIV prevention programmes
Avoidance of health care because of stigma and discrimination
Expenditures (0)

HIV TESTING AND TREATMENT CASCADE



	...% [...-...%]	...% [...-...%]	...% [...-...%]
All ages	...% [...-...%]	...% [...-...%] 150	...% [...-...%]
Children (0–14)	...% [...-...%]	...% [...-...%] 0	...% [...-...%]
Women (15+)	...% [...-...%]	...% [...-...%] 40	...% [...-...%]
Men (15+)	...% [...-...%]	...% [...-...%] 100	...% [...-...%]

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report:

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	1 [1–1]
People living with HIV who started TB preventive therapy (2017)	0%
Cervical cancer screening of women living with HIV	...
People coinfecting with HIV and hepatitis B virus receiving combined treatment (2018)	100%
People coinfecting with HIV and hepatitis C virus starting hepatitis C treatment (2018)	100%

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	...
Knowledge of HIV prevention among young people aged 15–24 years	...
— Women	...
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	...
— Women	...
— Men	...
Women aged 15–49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15–49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	...
— Use of sterile injecting equipment at last injection	...
— Needles and syringes distributed per person who injects	...
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	...
— Safe injection rooms available (2019)	...

Note: HIV epidemiological estimates were not available at the time of publication.

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	...
Criminalization of sex work among consenting adults	Any criminalization or punitive regulation of sex work
Criminalization of same-sex sexual acts	Yes, death penalty
Drug use or possession for personal use is an offence	Possession of drugs for personal use or drug use and/or consumption are specified as criminal offences
Criminalization of transgender people	...
Laws or policies restricting the entry, stay and residence of people living with HIV	Yes
Parental consent for adolescents to access HIV testing	...
Spousal consent for married women to access sexual and reproductive health services	...
Mandatory HIV testing for marriage, work or residence permits or for certain groups	Yes

STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

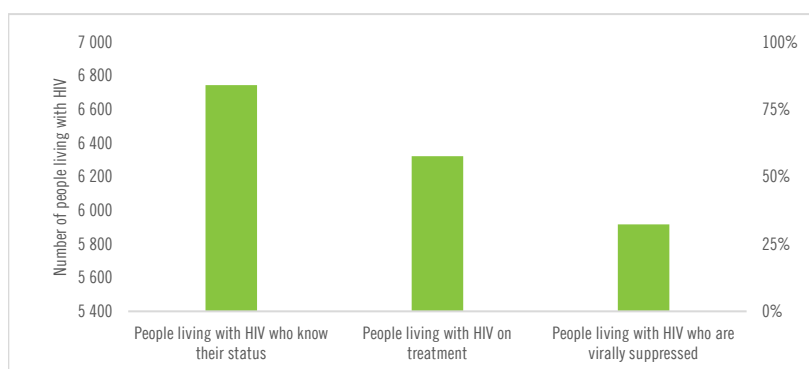
VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population
HIV prevalence	0.0%	...	0.2%
Know their HIV status	100%	...	...
Antiretroviral therapy coverage	91.7%
Condom use
Coverage of HIV prevention programmes
Avoidance of health care because of stigma and discrimination
Expenditures (0)

HIV TESTING AND TREATMENT CASCADE



	...% [...-...%]	...% [...-...%]	...% [...-...%]
All ages	...% [...-...%]	6300	...% [...-...%]
Children (0–14)	...% [...-...%]	120	...% [...-...%]
Women (15+)	...% [...-...%]	1200	...% [...-...%]
Men (15+)	...% [...-...%]	5000	...% [...-...%]

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2009	...	\$19 331 648	...	...	...	\$19 389 141

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	120 [100–140]
People living with HIV who started TB preventive therapy (2017)	2.1%
Cervical cancer screening of women living with HIV	...
People coinfecting with HIV and hepatitis B virus receiving combined treatment (2018)	100%
People coinfecting with HIV and hepatitis C virus starting hepatitis C treatment (2018)	100%

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	...
Knowledge of HIV prevention among young people aged 15–24 years	...
— Women	...
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	...
— Women	...
— Men	...
Women aged 15–49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15–49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	...
— Use of sterile injecting equipment at last injection	...
— Needles and syringes distributed per person who injects	...
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	No
— Safe injection rooms available (2019)	No

Note: HIV epidemiological estimates were not available at the time of publication.

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission ...

Criminalization of sex work among consenting adults	Any criminalization or punitive regulation of sex work
Criminalization of same-sex sexual acts	Yes, death penalty
Drug use or possession for personal use is an offence	Possession of drugs for personal use or drug use and/or consumption are specified as criminal offences
Criminalization of transgender people	Criminalized
Laws or policies restricting the entry, stay and residence of people living with HIV	Yes
Parental consent for adolescents to access HIV testing	No
Spousal consent for married women to access sexual and reproductive health services	No
Mandatory HIV testing for marriage, work or residence permits or for certain groups	Yes

STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

EPIDEMIC ESTIMATES

	2010	2015	2018
New HIV infections			
New HIV infections (all ages)	650 [<500–970]	<500 [<500–740]	<500 [<500–770]
New HIV infections (0–14)	<500 [<500– <500]	<200 [<200– <500]	<200 [<200– <500]
New HIV infections (women, 15+)	<500 [<200– <500]	<200 [<100– <500]	<200 [<100– <500]
New HIV infections (men, 15+)	<200 [<100– <500]	<100 [<100– <100]	<100 [<100– <100]
HIV incidence per 1000 population	0.06 [0.04–0.08]	0.03 [0.02–0.06]	0.03 [0.01–0.05]
AIDS-related deaths			
AIDS-related deaths (all ages)	1400 [1200–1700]	1000 [860–1300]	710 [530–1000]
AIDS-related deaths (0–14)	<500 [<500– <500]	<200 [<200– <500]	<200 [<100– <200]
AIDS-related deaths (women, 15+)	560 [<500–680]	<500 [<500–520]	<500 [<500– <500]
AIDS-related deaths (men, 15+)	580 [<500–690]	<500 [<500–540]	<500 [<500– <500]
People living with HIV			
People living with HIV (all ages)	17 000 [15 000–20 000]	13 000 [10 000–16 000]	11 000 [8400–15 000]
People living with HIV (0–14)	2000 [1800–2300]	1600 [1400–2000]	1300 [1100–1800]
People living with HIV (women, 15+)	7600 [6500–9000]	6100 [4700–8300]	5600 [4200–8100]
People living with HIV (men, 15+)	7300 [6100–8700]	4800 [3700–6000]	3900 [3100–5100]
HIV prevalence (15–49)	0.3 [0.2–0.3]	0.2 [0.1–0.2]	0.1 [<0.1–0.2]

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Yes
Criminalization of sex work among consenting adults	...
Criminalization of same-sex sexual acts	Yes, death penalty
Drug use or possession for personal use is an offence	...
Criminalization of transgender people	...
Laws or policies restricting the entry, stay and residence of people living with HIV	No
Parental consent for adolescents to access HIV testing	...
Spousal consent for married women to access sexual and reproductive health services	...
Mandatory HIV testing for marriage, work or residence permits or for certain groups	...

STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

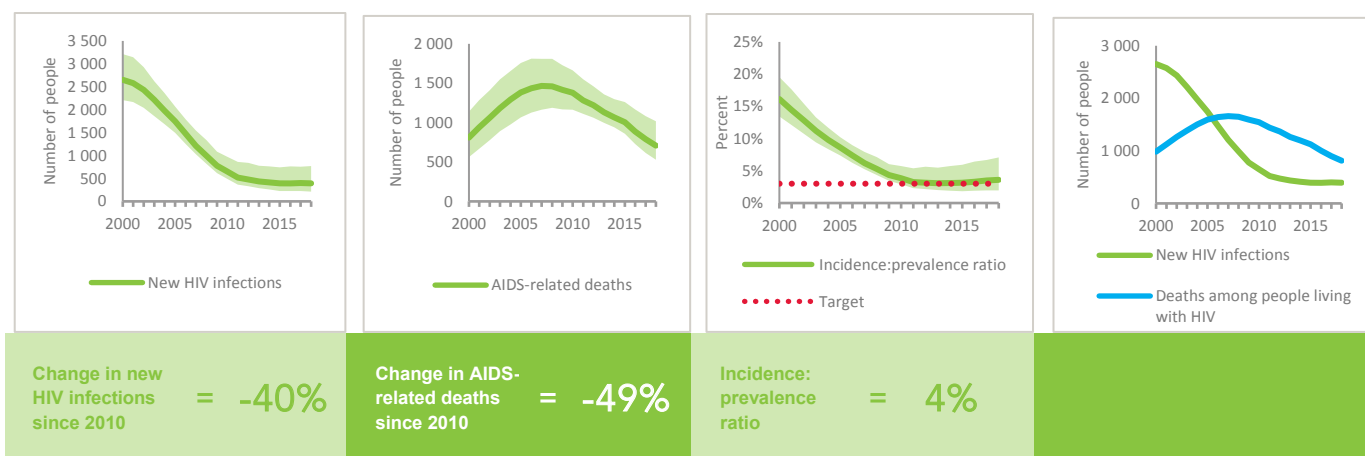
VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2018	\$5 959 474	...	\$5 959 474

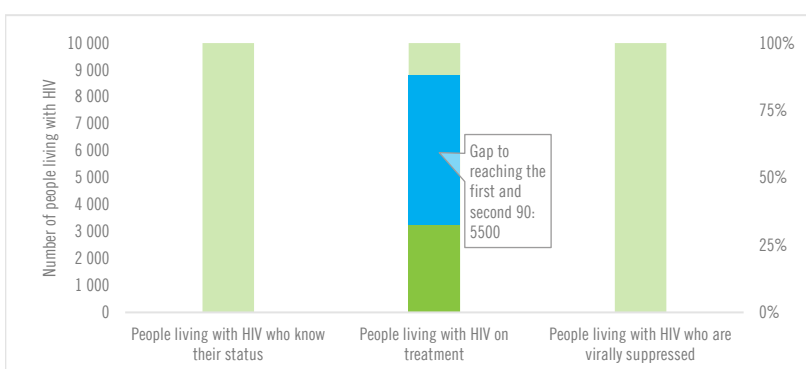
EPIDEMIC TRANSITION METRICS



KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population	...	...	...	...	...
HIV prevalence	3.4%	...	...	...	...
Know their HIV status	...	...	...	...	...
Antiretroviral therapy coverage	...	...	...	...	...
Condom use	41.5%	...	...	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (0)	...	...	...	...	...

HIV TESTING AND TREATMENT CASCADE



	...	30% [23–41%] 3300	...
All ages	...	30% [23–41%] 3300	...
Children (0–14)	...	14% [12–19%] 190	...
Women (15+)	...	32% [24–46%] 1800	...
Men (15+)	...	32% [25–42%] 1300	...

ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	0% [0–0%]	19% [14–31%]
Early infant diagnosis	...% [...–...%]	...% [...–...%]

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	420 [270–610]
People living with HIV who started TB preventive therapy (2017)	69.3%
Cervical cancer screening of women living with HIV	...
People coinfecting with HIV and hepatitis B virus receiving combined treatment	...
People coinfecting with HIV and hepatitis C virus starting hepatitis C treatment	...

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	...
Knowledge of HIV prevention among young people aged 15–24 years	...
— Women	...
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	...
— Women	...
— Men	...
Women aged 15–49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15–49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	...
— Use of sterile injecting equipment at last injection	...
— Needles and syringes distributed per person who injects	...
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	...
— Safe injection rooms available (2019)	...

EPIDEMIC ESTIMATES

	2010	2015	2018
New HIV infections			
New HIV infections (all ages)	5300 [2900–8400]	5100 [1600–10 000]	5200 [1100–12 000]
New HIV infections (0–14)	710 [510–950]	750 [<500–1300]	760 [<500–1500]
New HIV infections (women, 15+)	2200 [1100–3500]	2000 [590–4200]	2100 [<500–4900]
New HIV infections (men, 15+)	2400 [1200–4000]	2300 [700–4800]	2300 [<500–5600]
HIV incidence per 1000 population	0.16 [0.09–0.25]	0.14 [0.04–0.28]	0.13 [0.03–0.3]
AIDS-related deaths			
AIDS-related deaths (all ages)	1900 [1300–2600]	3000 [2100–4500]	2900 [1400–5200]
AIDS-related deaths (0–14)	<500 [<500–510]	<500 [<500–770]	510 [<500–950]
AIDS-related deaths (women, 15+)	730 [<500–1000]	1200 [850–1700]	1100 [570–2000]
AIDS-related deaths (men, 15+)	760 [<500–1200]	1300 [890–2000]	1300 [600–2400]
People living with HIV			
People living with HIV (all ages)	43 000 [36 000–51 000]	53 000 [31 000–86 000]	59 000 [26 000–110 000]
People living with HIV (0–14)	2900 [2300–3700]	3800 [2800–5200]	4200 [2400–6800]
People living with HIV (women, 15+)	19 000 [16 000–23 000]	23 000 [14 000–37 000]	26 000 [11 000–49 000]
People living with HIV (men, 15+)	21 000 [17 000–26 000]	26 000 [15 000–44 000]	29 000 [12 000–56 000]
HIV prevalence (15–49)	0.2 [0.2–0.3]	0.2 [0.1–0.4]	0.2 [0.1–0.5]

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	...
Criminalization of sex work among consenting adults	...
Criminalization of same-sex sexual acts	Yes, death penalty
Drug use or possession for personal use is an offence	...
Criminalization of transgender people	...
Laws or policies restricting the entry, stay and residence of people living with HIV	Yes
Parental consent for adolescents to access HIV testing	...
Spousal consent for married women to access sexual and reproductive health services	...
Mandatory HIV testing for marriage, work or residence permits or for certain groups	...

STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV	2010	2014
(2014 refers to women only)	65.9	66

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

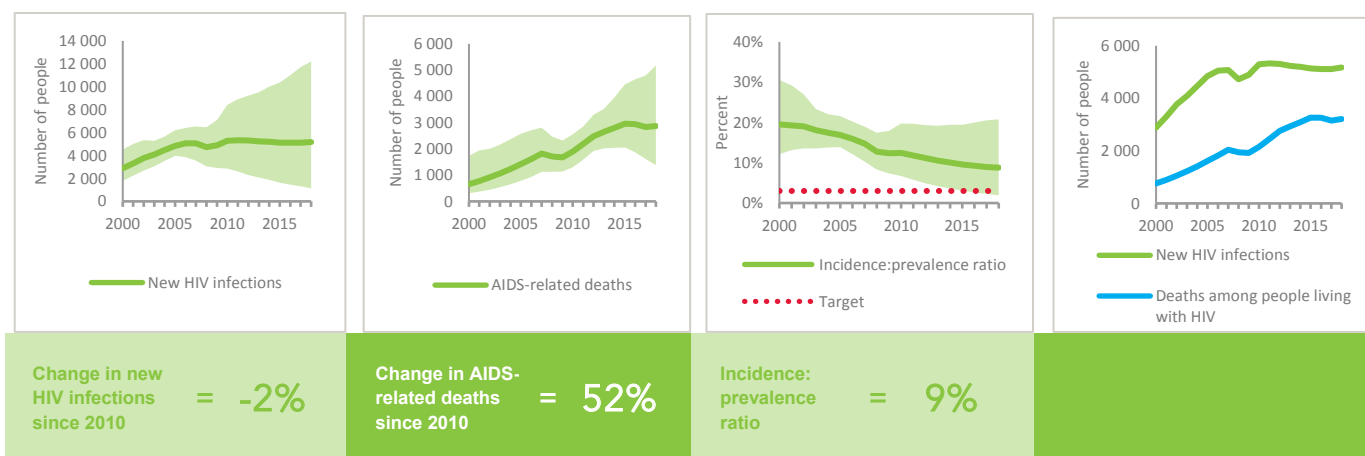
VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2013	\$1 070 800	\$3 717 832	...	\$8 170 054	\$42 553	\$13 840 875

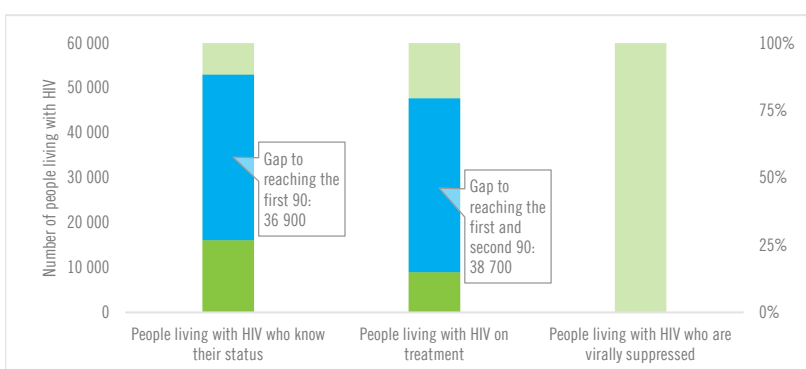
EPIDEMIC TRANSITION METRICS



KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population	...	...	...	...	...
HIV prevalence	0.7%	1.2%	...	...	...
Know their HIV status	84.2%	...	...	...	...
Antiretroviral therapy coverage	...	...	...	...	...
Condom use	34.9%	26.9%	...	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (0)	...	...	...	...	...

HIV TESTING AND TREATMENT CASCADE



	27% [12–51%]	15% [7–28%] 9000	...% [...–...%]
All ages			
Children (0–14)	15% [8–23%]	15% [8–23%] 620	...% [...–...%]
Women (15+)	28% [12–53%]	15% [7–29%] 3900	...% [...–...%]
Men (15+)	28% [12–55%]	15% [7–30%] 4400	...% [...–...%]

ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	5% [4–7%]	5% [2–9%]
Early infant diagnosis	...% [...–...%]	...% [...–...%]

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	710 [460–1000]
People living with HIV who started TB preventive therapy (2017)	...
Cervical cancer screening of women living with HIV	...
People coinfectd with HIV and hepatitis B virus receiving combined treatment	...
People coinfectd with HIV and hepatitis C virus starting hepatitis C treatment	...

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	...
Knowledge of HIV prevention among young people aged 15–24 years (2014)	
— Women	8.5%
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	
— Women	...
— Men	...
Women aged 15–49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15–49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	
— Use of sterile injecting equipment at last injection	...
— Needles and syringes distributed per person who injects	...
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	...
— Safe injection rooms available (2019)	...

EPIDEMIC ESTIMATES

	2010	2015	2018
New HIV infections			
New HIV infections (all ages)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
New HIV infections (0–14)	... [...-...]	... [...-...]	... [...-...]
New HIV infections (women, 15+)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
New HIV infections (men, 15+)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
HIV incidence per 1000 population	<0.01 [<0.01- <0.01]	<0.01 [<0.01- <0.01]	<0.01 [<0.01- <0.01]
AIDS-related deaths			
AIDS-related deaths (all ages)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
AIDS-related deaths (0–14)	... [...-...]	... [...-...]	... [...-...]
AIDS-related deaths (women, 15+)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
AIDS-related deaths (men, 15+)	<100 [<100- <100]	<100 [<100- <100]	<100 [<100- <100]
People living with HIV			
People living with HIV (all ages)	570 [510–630]	570 [520–630]	660 [590–720]
People living with HIV (0–14)	... [...-...]	... [...-...]	... [...-...]
People living with HIV (women, 15+)	<200 [<200- <200]	<200 [<200- <200]	<200 [<200- <500]
People living with HIV (men, 15+)	<500 [<500- <500]	<500 [<500- <500]	<500 [<500- <500]
HIV prevalence (15–49)	<0.1 [<0.1- <0.1]	<0.1 [<0.1- <0.1]	<0.1 [<0.1- <0.1]

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	...
Criminalization of sex work among consenting adults	...
Criminalization of same-sex sexual acts	Yes, imprisonment (up to 14 years)
Drug use or possession for personal use is an offence	...
Criminalization of transgender people	...
Laws or policies restricting the entry, stay and residence of people living with HIV	Yes
Parental consent for adolescents to access HIV testing	...
Spousal consent for married women to access sexual and reproductive health services	...
Mandatory HIV testing for marriage, work or residence permits or for certain groups	...

STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

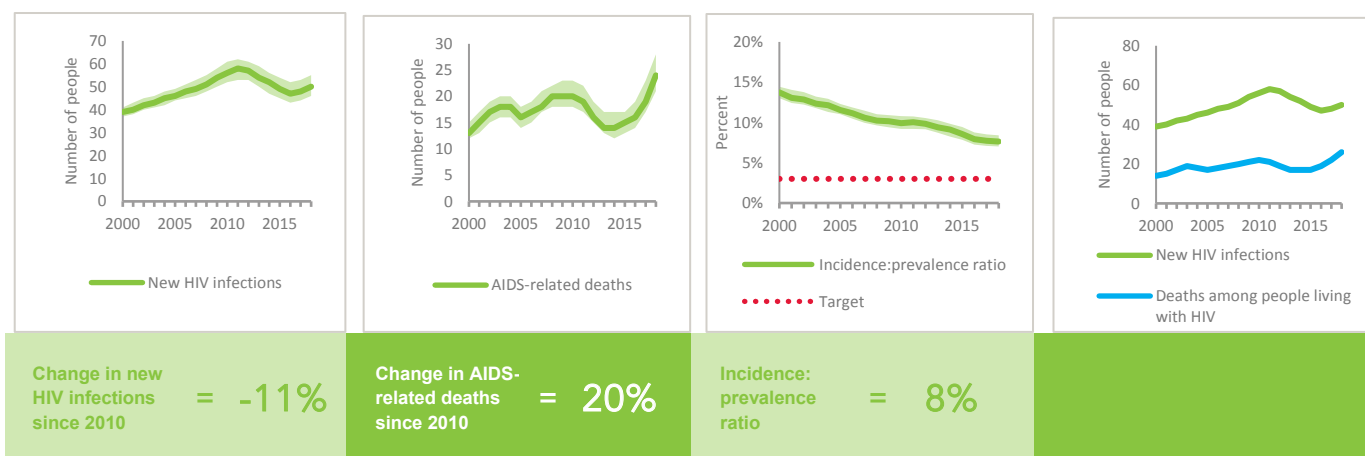
VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2011	...	\$620 000	...	...	...	\$809 850

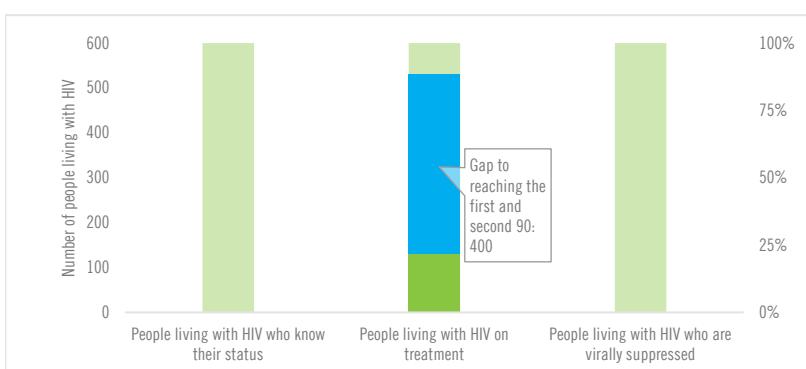
EPIDEMIC TRANSITION METRICS



KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population
HIV prevalence	0.0%
Know their HIV status
Antiretroviral therapy coverage
Condom use
Coverage of HIV prevention programmes
Avoidance of health care because of stigma and discrimination
Expenditures (0)

HIV TESTING AND TREATMENT CASCADE



	...	20% [18–22%] 130	...
All ages	...% [...-...%]	20% [18–22%] 130	...% [...-...%]
Children (0–14)	...% [...-...%]	...% [...-...%]	...% [...-...%]
Women (15+)	...% [...-...%]	20% [18–22%] 40	...% [...-...%]
Men (15+)	...% [...-...%]	20% [18–22%] 90	...% [...-...%]

ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	...% [...-...%]	...% [...-...%]
Early infant diagnosis	...% [...-...%]	...% [...-...%]

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	9 [4–14]
People living with HIV who started TB preventive therapy (2017)	...
Cervical cancer screening of women living with HIV	...
People coinfecting with HIV and hepatitis B virus receiving combined treatment	...
People coinfecting with HIV and hepatitis C virus starting hepatitis C treatment	...

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	...
Knowledge of HIV prevention among young people aged 15–24 years	...
— Women	...
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	...
— Women	...
— Men	...
Women aged 15–49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15–49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	...
— Use of sterile injecting equipment at last injection	...
— Needles and syringes distributed per person who injects	...
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	...
— Safe injection rooms available (2019)	...

EPIDEMIC ESTIMATES

	2010	2015	2018
New HIV infections			
New HIV infections (all ages)	<500 [<200– <500]	<500 [<200– <500]	<500 [<200–520]
New HIV infections (0–14)	... [...–...]	... [...–...]	... [...–...]
New HIV infections (women, 15+)	<100 [<100– <200]	<100 [<100– <200]	<100 [<100– <200]
New HIV infections (men, 15+)	<200 [<100– <500]	<200 [<100– <500]	<200 [<100– <500]
HIV incidence per 1000 population	0.02 [0.01–0.03]	0.02 [0.01–0.04]	0.02 [<0.01–0.04]
AIDS-related deaths			
AIDS-related deaths (all ages)	<100 [<100– <100]	<100 [<100– <200]	<100 [<100– <200]
AIDS-related deaths (0–14)	... [...–...]	... [...–...]	... [...–...]
AIDS-related deaths (women, 15+)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
AIDS-related deaths (men, 15+)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <200]
People living with HIV			
People living with HIV (all ages)	1400 [980–2200]	2300 [1500–3400]	2800 [1700–4400]
People living with HIV (0–14)	... [...–...]	... [...–...]	... [...–...]
People living with HIV (women, 15+)	<500 [<500–640]	720 [<500–1000]	890 [580–1300]
People living with HIV (men, 15+)	970 [650–1500]	1600 [1000–2400]	1900 [1100–2900]
HIV prevalence (15–49)	<0.1 [<0.1– <0.1]	<0.1 [<0.1– <0.1]	<0.1 [<0.1– <0.1]

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	No
Criminalization of sex work among consenting adults	Any criminalization or punitive regulation of sex work
Criminalization of same-sex sexual acts	Yes, imprisonment (up to 14 years)
Drug use or possession for personal use is an offence	Possession of drugs for personal use or drug use and/or consumption are specified as criminal offences
Criminalization of transgender people	Criminalized
Laws or policies restricting the entry, stay and residence of people living with HIV	Yes
Parental consent for adolescents to access HIV testing	Yes, for adolescents younger than 18 years
Spousal consent for married women to access sexual and reproductive health services	No
Mandatory HIV testing for marriage, work or residence permits or for certain groups	No

STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

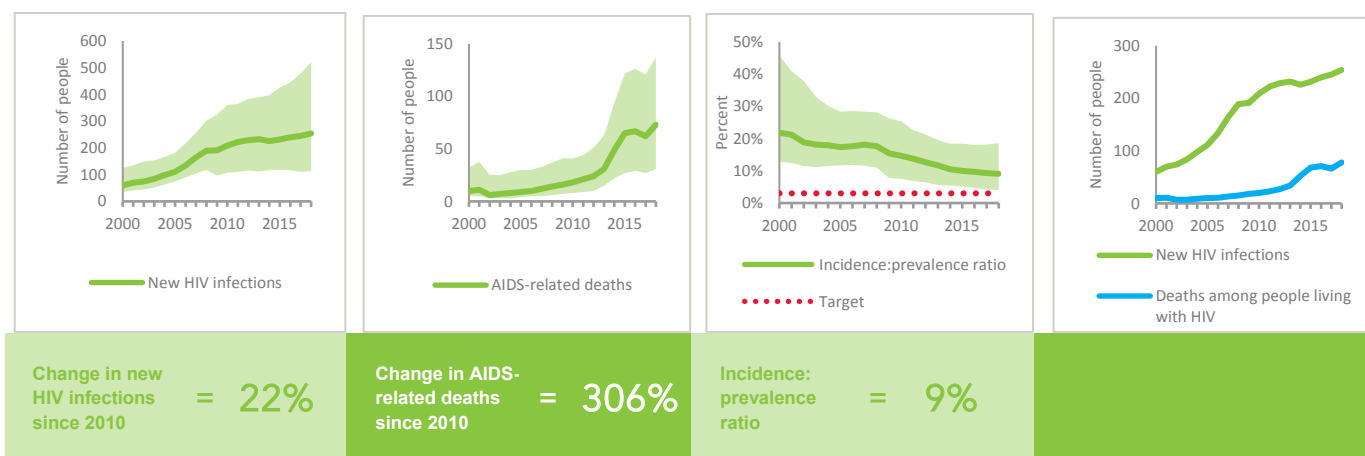
VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2011	...	\$117 400	...	\$2 615 149	\$10 000	\$2 742 549

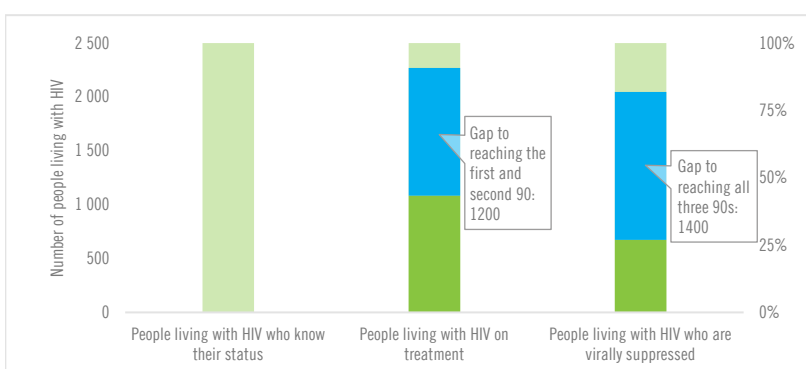
EPIDEMIC TRANSITION METRICS



KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population	...	...	...	...	22 000
HIV prevalence	1.2%	9.1%	6.0%	...	...
Know their HIV status	7.7%	...	28.6%	...	...
Antiretroviral therapy coverage	...	...	...	...	...
Condom use	58.3%	50.0%	46.7%	...	...
Coverage of HIV prevention programmes	7.9%	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (2016)	\$0	\$0	\$0	...	...

HIV TESTING AND TREATMENT CASCADE



	...	39% [24–61%] 1100	24% [15–38%]
All ages	...% [...–...%]		
Children (0–14)	...% [...–...%]	...	...
Women (15+)	...% [...–...%]	49% [32–74%] 440	29% [19–43%]
Men (15+)	...% [...–...%]	33% [20–52%] 610	22% [14–34%]

ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	...% [...–...%]	...% [...–...%]
Early infant diagnosis	...% [...–...%]	...% [...–...%]

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	18 [14–23]
People living with HIV who started TB preventive therapy (2017)	62%
Cervical cancer screening of women living with HIV	...
People coinfecting with HIV and hepatitis B virus receiving combined treatment (2018)	100%
People coinfecting with HIV and hepatitis C virus starting hepatitis C treatment (2018)	100%

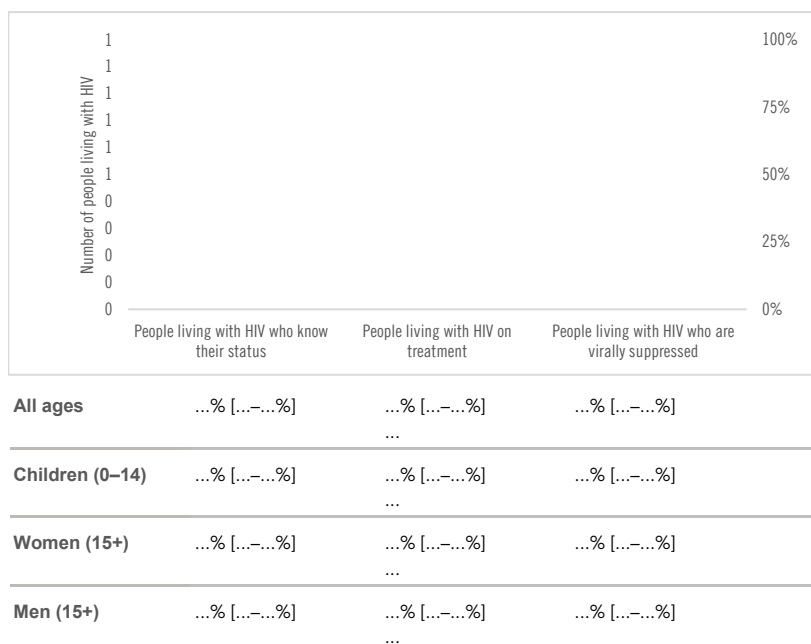
HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	<0.1%
Knowledge of HIV prevention among young people aged 15–24 years	...
— Women	...
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	...
— Women	...
— Men	...
Women aged 15–49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15–49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	
— Use of sterile injecting equipment at last injection (2017)	90.9%
— Needles and syringes distributed per person who injects (2017)	41
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	No
— Safe injection rooms available (2019)	No

KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population
HIV prevalence
Know their HIV status
Antiretroviral therapy coverage
Condom use
Coverage of HIV prevention programmes
Avoidance of health care because of stigma and discrimination
Expenditures (0)

HIV TESTING AND TREATMENT CASCADE



HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	100 [88-120]
People living with HIV who started TB preventive therapy (2017)	...
Cervical cancer screening of women living with HIV	...
People coinfecting with HIV and hepatitis B virus receiving combined treatment	...
People coinfecting with HIV and hepatitis C virus starting hepatitis C treatment	...

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	...
Knowledge of HIV prevention among young people aged 15-24 years	...
— Women	...
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	...
— Women	...
— Men	...
Women aged 15-49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15-49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	...
— Use of sterile injecting equipment at last injection	...
— Needles and syringes distributed per person who injects	...
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	...
— Safe injection rooms available (2019)	...

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2012	...	\$12 291 905	...	...	...	\$12 291 905

Note: HIV epidemiological estimates were not available at the time of publication.

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission ...

Criminalization of sex work among consenting adults ...

Criminalization of same-sex sexual acts Laws penalizing same-sex sexual acts have been decriminalized or never existed

Drug use or possession for personal use is an offence ...

Criminalization of transgender people ...

Laws or policies restricting the entry, stay and residence of people living with HIV No

Parental consent for adolescents to access HIV testing ...

Spousal consent for married women to access sexual and reproductive health services ...

Mandatory HIV testing for marriage, work or residence permits or for certain groups ...

STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population
HIV prevalence	1.5%
Know their HIV status
Antiretroviral therapy coverage
Condom use
Coverage of HIV prevention programmes
Avoidance of health care because of stigma and discrimination
Expenditures (2017)	\$0	\$0	\$0	...	...

HIV TESTING AND TREATMENT CASCADE



Category	People living with HIV who know their status	People living with HIV on treatment	People living with HIV who are virally suppressed
All ages	...% [...-...%]	...% [...-...%]	...% [...-...%]
Children (0–14)	...% [...-...%]	...% [...-...%]	...% [...-...%]
Women (15+)	...% [...-...%]	...% [...-...%]	...% [...-...%]
Men (15+)	...% [...-...%]	...% [...-...%]	...% [...-...%]

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2017	...	\$34 579 274	...	...	...	\$34 579 274

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	7 [6–8]
People living with HIV who started TB preventive therapy (2017)	11.4%
Cervical cancer screening of women living with HIV	...
People coinfecting with HIV and hepatitis B virus receiving combined treatment (2018)	83.3%
People coinfecting with HIV and hepatitis C virus starting hepatitis C treatment (2018)	100%

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	...
Knowledge of HIV prevention among young people aged 15–24 years	...
— Women	...
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	...
— Women	...
— Men	...
Women aged 15–49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15–49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	...
— Use of sterile injecting equipment at last injection	...
— Needles and syringes distributed per person who injects	...
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	...
— Safe injection rooms available (2019)	...

Note: HIV epidemiological estimates were not available at the time of publication.

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission ...

Criminalization of sex work among consenting adults ...

Criminalization of same-sex sexual acts Yes, death penalty

Drug use or possession for personal use is an offence ...

Criminalization of transgender people ...

Laws or policies restricting the entry, stay and residence of people living with HIV Yes

Parental consent for adolescents to access HIV testing ...

Spousal consent for married women to access sexual and reproductive health services ...

Mandatory HIV testing for marriage, work or residence permits or for certain groups ...

STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent

VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

EPIDEMIC ESTIMATES

	2010	2015	2018
New HIV infections			
New HIV infections (all ages)	790 [530–1200]	1000 [<500–1800]	1100 [<500–2200]
New HIV infections (0–14)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <200]
New HIV infections (women, 15+)	<200 [<200– <500]	<200 [<100– <500]	<200 [<100– <500]
New HIV infections (men, 15+)	580 [<500–860]	790 [<500–1400]	840 [<500–1700]
HIV incidence per 1000 population	0.03 [0.02–0.05]	0.04 [0.02–0.07]	0.04 [0.01–0.08]
AIDS-related deaths			
AIDS-related deaths (all ages)	<200 [<100– <500]	<500 [<200– <500]	<500 [<200–520]
AIDS-related deaths (0–14)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
AIDS-related deaths (women, 15+)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
AIDS-related deaths (men, 15+)	<100 [<100– <200]	<200 [<100– <500]	<500 [<200– <500]
People living with HIV			
People living with HIV (all ages)	5100 [3500–7400]	8700 [5700–13 000]	11 000 [6500–18 000]
People living with HIV (0–14)	<500 [<200– <500]	<500 [<500– <500]	<500 [<500–580]
People living with HIV (women, 15+)	1400 [980–2100]	2000 [1400–2900]	2400 [1500–3700]
People living with HIV (men, 15+)	3400 [2400–5100]	6400 [4000–9800]	8100 [4700–14 000]
HIV prevalence (15–49)	<0.1 [<0.1– <0.1]	<0.1 [<0.1– <0.1]	<0.1 [<0.1–0.1]

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	...
Criminalization of sex work among consenting adults	...
Criminalization of same-sex sexual acts	Yes, death penalty
Drug use or possession for personal use is an offence	...
Criminalization of transgender people	...
Laws or policies restricting the entry, stay and residence of people living with HIV	Yes
Parental consent for adolescents to access HIV testing	...
Spousal consent for married women to access sexual and reproductive health services	...
Mandatory HIV testing for marriage, work or residence permits or for certain groups	...

STIGMA AND DISCRIMINATION

Percentage of women aged 15–49 years who report discriminatory attitudes towards people living with HIV	2013 78.4
Percentage of people living with HIV denied health services because of their HIV status in the last 12 months	
Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent	2017 33.1

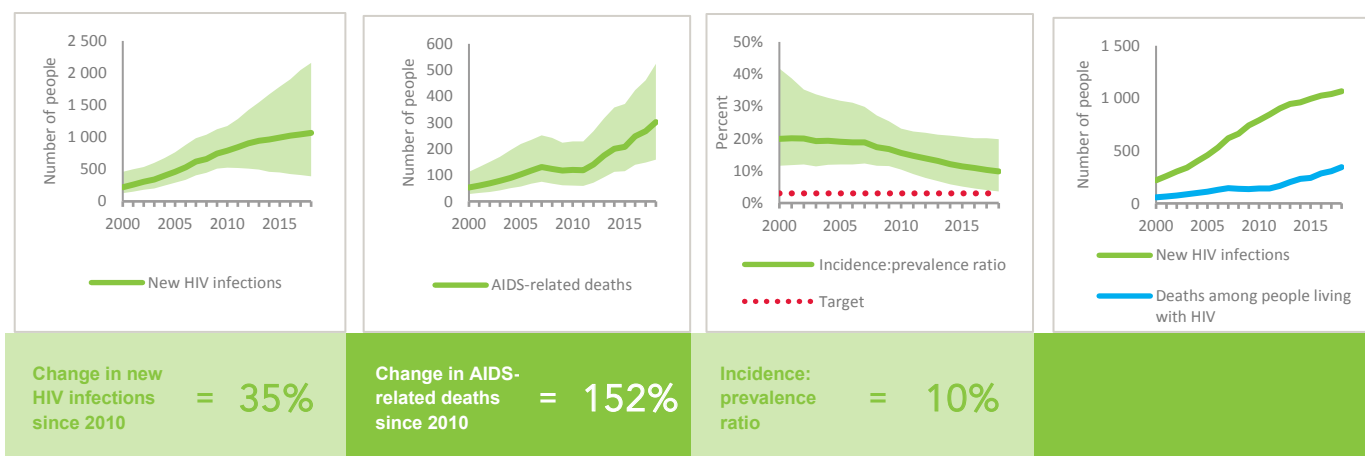
VIOLENCE

Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2011	...	\$467 395	...	\$351 385	\$333 504	\$1 613 920

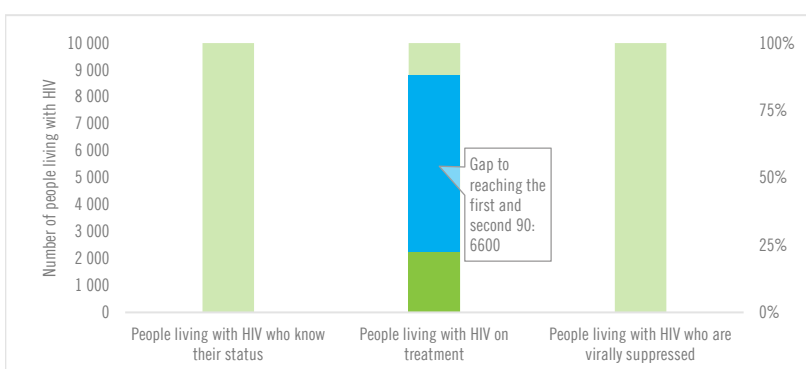
EPIDEMIC TRANSITION METRICS



KEY POPULATIONS

	Sex workers	Gay men and other men who have sex with men	People who inject drugs	Transgender people	Prisoners
Estimated size of population
HIV prevalence
Know their HIV status
Antiretroviral therapy coverage
Condom use
Coverage of HIV prevention programmes
Avoidance of health care because of stigma and discrimination
Expenditures (0)

HIV TESTING AND TREATMENT CASCADE



	...	2010	2018
All ages	...% [...-...%]	21% [12-35%] 2200	...
Children (0-14)	...% [...-...%]	33% [24-50%] 130	...
Women (15+)	...% [...-...%]	35% [22-55%] 820	...
Men (15+)	...% [...-...%]	16% [9-27%] 1300	...

ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	20% [14-31%]	13% [8-20%]
Early infant diagnosis	5.4% [3.5-7.9%]	...% [...-...%]

HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	95 [33-190]
People living with HIV who started TB preventive therapy (2017)	...
Cervical cancer screening of women living with HIV	...
People coinfectd with HIV and hepatitis B virus receiving combined treatment	...
People coinfectd with HIV and hepatitis C virus starting hepatitis C treatment	...

HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	...
Knowledge of HIV prevention among young people aged 15-24 years	...
— Women	...
— Men	...
Condom use at last sex with a non-marital, non-cohabiting partner	...
— Women	...
— Men	...
Women aged 15-49 years who have their demand for family planning satisfied by modern methods	...
Men aged 15-49 years who are circumcised	Not applicable
Voluntary medical male circumcisions performed according to national standards	Not applicable
People who received PrEP at least once during the reporting period	...
Harm reduction	...
— Use of sterile injecting equipment at last injection	...
— Needles and syringes distributed per person who injects	...
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	...
— Safe injection rooms available (2019)	...



ANNEX ON METHODS



METHODS FOR DERIVING UNAIDS HIV ESTIMATES

INTRODUCTION

UNAIDS annually provides revised global, regional and country-specific modelled estimates using the best available epidemiological and programmatic data to track the HIV epidemic. Modelled estimates are required because it is impossible to count the exact number of people living with HIV, people who are newly infected with HIV or people who have died from

AIDS-related causes in any country: doing so would require regularly testing every person for HIV and investigating all deaths, which is logistically impossible and ethically problematic. Modelled estimates—and the lower and upper bounds around these estimates—provide a scientifically appropriate way of describing HIV epidemic levels and trends.

PARTNERSHIPS IN DEVELOPING METHODS FOR UNAIDS ESTIMATES

Country teams use UNAIDS-supported software to develop estimates annually. The country teams are primarily comprised of demographers, epidemiologists, monitoring and evaluation specialists, and technical partners.

The software used to produce the estimates is Spectrum, which is developed by Avenir Health, and the Estimates and Projections Package, which is developed by the East–West Center.¹ The UNAIDS Reference Group on Estimates, Modelling and Projections provides technical guidance on the development of the HIV component of the software.²

1 More information on Avenir Health can be found at www.avenirhealth.org. The East–West Center website can be found at www.eastwestcenter.org.

2 For more on the UNAIDS Reference Group on Estimates, Modelling and Projections, please visit www.epidem.org.

A BRIEF DESCRIPTION OF METHODS USED BY UNAIDS TO CREATE ESTIMATES³

For countries where HIV transmission is high enough to sustain an epidemic in the general population, available epidemiological data typically consist of HIV prevalence results from pregnant women attending antenatal clinics and from nationally representative population-based surveys. Many countries have historically conducted HIV sentinel surveillance among women attending antenatal clinics, which requires collecting data from a selection of clinics for a few months every few years. More recently, a number of countries have stopped conducting sentinel surveillance among pregnant women and are now using the data from the routine HIV tests conducted when pregnant women attend antenatal clinics and are tested for HIV. These data avoid the need to conduct a separate surveillance effort, and they provide a complete set of data from all clinics across the country instead of samples from specific sites.

The trends from pregnant women at antenatal clinics, whether done through surveillance or routine data, can be used to inform estimates of national prevalence trends, whereas data from population-based surveys—which are conducted less frequently but have broader geographical coverage and also include men—are more useful for informing estimates of national HIV prevalence levels. Data from these surveys also contribute to estimating age- and sex-specific HIV prevalence and incidence levels and trends. For a few countries in sub-Saharan Africa that have not conducted population-based surveys, HIV prevalence levels are adjusted based on comparisons of antenatal clinic surveillance and population-based survey data from other countries in the region. HIV prevalence trends and numbers of people on antiretroviral therapy are then used to derive an estimate of HIV incidence trends.

Historically, countries with high HIV transmission have produced separate HIV prevalence and incidence trends for rural and urban areas when there are well-established geographical differences in prevalence. To better describe and account for further geographical heterogeneity, an increasing number of countries have produced subnational estimates (e.g., at the level of the province or state) that, in some cases, also account for rural and urban differences. These subnational or

rural–urban estimates and trends are then aggregated to obtain national estimates.

In the remaining countries, where HIV transmission occurs largely among key populations at higher risk of HIV and the epidemic can be described as low-level, the estimates are derived from either surveillance among key populations and the general, low-risk population, or from HIV case reporting data, depending on which data are most reliable in a particular country. In countries with high-quality HIV surveillance data among the key populations, the data from repeated HIV prevalence studies that are focused on key populations are used to derive national estimates and trends. Estimates of the size of key populations are increasingly derived empirically in each country; when studies are not available, they are derived based on regional values and consensus among experts. Other data sources—including HIV case reporting data, population-based surveys and surveillance among pregnant women—are used to estimate the HIV prevalence in the general, low-risk population. The HIV prevalence curves and numbers of people on antiretroviral therapy are then used to derive national HIV incidence trends.

For most countries in western and central Europe and North America—and many countries in Latin America, the Caribbean, and the Middle East and North Africa that have insufficient HIV surveillance or survey data, but that have robust disease reporting systems—HIV case reporting and AIDS-related mortality data from vital registration systems are directly used to inform trends and levels in national HIV prevalence and incidence. These methods also allow countries to take into account evidence of underreporting or reporting delays in HIV case report data, as well as the misclassification of deaths from AIDS-related causes.

In all countries where UNAIDS supports the development of estimates, assumptions about the effectiveness of HIV programme scale-up and patterns of HIV transmission and disease progression are used to obtain the following age- and sex-specific estimates of people living with HIV, people newly infected with HIV, people dying from AIDS-related illness and other important indicators (including treatment programme coverage statistics). These assumptions are based on

³ A full description of the methods used for the 2019 estimates is available in the July 2019 supplement of the journal AIDS.

systematic literature reviews and analyses of raw study data by scientific experts. Demographic population data, including fertility estimates, are derived from the United Nations Population Division's World Population Prospects 2017 data files.

Selected inputs into the model—including the number of people on antiretroviral therapy and the number of women accessing services for the prevention of mother-to-child transmission of HIV by type of regimen—are reviewed and validated in partnership with the United Nations Children's Fund (UNICEF), the World Health Organization (WHO), the Government of the United States of America, the Global Fund to Fight AIDS, Tuberculosis and Malaria, and other partners.

Final country-submitted files containing the modelled outputs are reviewed at UNAIDS to ensure that the results are comparable across regions and countries and over time.

In 2019, sub-national estimates were created and used by more than 25 countries for internal planning purposes. The methods for producing robust sub-national estimates varies by country and depends primarily on the availability of sub-national data. Four methods were used (Mathematical modelling, Model-based geo-statistics, small area estimation and direct estimates from prevalence surveys) to derive the sub-national estimates. The methods to generate robust sub-national estimates are still being refined.

UNCERTAINTY BOUNDS AROUND UNAIDS ESTIMATES

The estimation software calculates uncertainty bounds around each estimate. These bounds define the range within which the true value lies (if it can be measured). Narrow bounds indicate that an estimate is precise, while wide bounds indicate greater uncertainty regarding the estimate.

In countries using HIV surveillance data, the quantity and source of the data available partly determine the precision of the estimates: countries with more HIV surveillance data have smaller ranges than countries with less surveillance data or smaller sample sizes. Countries in which a national population-based survey has been conducted generally have smaller ranges around estimates than countries where such surveys have not been conducted. Countries producing subnational estimates at the provincial level have wider ranges. In countries using HIV case reporting and AIDS-related mortality data, the number of years of data and the magnitude of the cases reported or AIDS-related

deaths observed will contribute to determining the precision of the estimate.

The assumptions required to arrive at the estimate also contribute to the extent of the ranges around the estimates: in brief, the more assumptions, the wider the uncertainty range, since each assumption introduces additional uncertainties. For example, the ranges around the estimates of adult HIV prevalence are smaller than those around the estimates of HIV incidence among children, which require additional data on prevalence among pregnant women and the probability of mother-to-child HIV transmission that have their own additional uncertainty.

UNAIDS is confident that the actual numbers of people living with HIV, people who are newly infected with HIV or people who have died from AIDS-related causes lie within the reported ranges. Over time, more and better data from countries will steadily reduce uncertainty.

IMPROVEMENTS INCLUDED IN THE 2019 UNAIDS ESTIMATES MODEL

Country teams create new Spectrum files every year. The files may differ from one year to the next for two reasons. First, new surveillance and programme data are entered into the model; this can change HIV prevalence and incidence trends over time or antiretroviral therapy coverage rates, including for past years. Second, improvements are incorporated into the model based on the latest available science and statistical methods, which leads to the creation of more accurate trends in

HIV incidence. Due to these improvements to the model and the addition of new data to create the estimates, the results from previous years cannot be compared with the results from this year. A full historical set of estimates are created each year, however, enabling a description of trends over time.

Between the 2018 estimates and the 2019 estimates, the following changes were applied to the model

under the guidance of the UNAIDS Reference Group on Estimates, Modelling and Projections and based on the latest scientific evidence.

New incidence estimation model for generalized epidemics

In 2019, a new model (R-hybrid) was introduced that uses an improved function to estimate the rate of HIV infection during different phases of the HIV epidemic. For estimating infections early in the epidemic, when data were relatively sparse, the new model has a simple structure that follows the consistent pattern across countries of exponential growth, peak and decline. For more recent years the model has more flexibility to follow the increased amount of data to shape the trends in new infections. This new model improves the fit to existing prevalence data, especially for recent routine testing data from antenatal clinics.

The previous incidence estimation model used in generalized epidemics assumed HIV prevalence stabilized at the last observed value. The impact of adopting the R-hybrid model will be minimal in countries with substantial historical surveillance data and recent surveys, but in countries with few data points early in the epidemic or in recent years, the R-hybrid model should improve the fit to available data.

Mortality among people not receiving treatment

Assumptions of the risk of mortality among people not receiving treatment were reduced based on high quality vital registration data where fewer AIDS-related deaths among the untreated HIV positive adults were recorded than predicted by Spectrum.

The impact of this change is lower mortality rates among people not receiving treatment and fewer AIDS-related deaths overall.

Mortality among people receiving antiretroviral therapy

Previously, the model assumed that mortality rates following antiretroviral therapy initiation are constant over time, conditional on age, sex, baseline CD4 count and duration on treatment. However, recent studies have shown that these rates have declined over time,

even after controlling for temporal changes in baseline CD4 count and treatment duration. A temporal reduction in mortality was included in the model as estimated from the leDEA cohort data.

leDEA data were also reanalysed for Latin America, North America, and Asia and the Pacific with improved assumptions about mortality among those lost to follow-up. This resulted in substantially lower mortality rates than previously estimated. In countries with high-quality mortality data, on- and off-treatment mortality were adjusted to match AIDS-related deaths. An option to specify allocation of treatment disproportionately to either those with low CD4 counts or according to eligibility criteria was introduced to better match the low number of AIDS-related mortality data observed in western and central Europe.

Fertility among women living with HIV

The 2019 Spectrum model included updated parameters about the fertility of women living with HIV who were not receiving antiretroviral therapy. The new parameters led to higher fertility among women living with HIV early in the epidemic, before treatment was provided to HIV-positive pregnant women. This adjustment increased historical estimates of children living with HIV.

In the 2019 model, HIV prevalence data from routine testing among pregnant women at antenatal clinics were used to calibrate the estimated births to women living with HIV. This increased the estimates in some countries and decreased the values in others. There is still some work to be done to ensure the country programme data used for this calibration are robust.

Breastfeeding among women living with HIV

New analysis of survey data done in early 2019 found that women who were living with HIV before widespread HIV testing and treatment had shorter breastfeeding duration. The model previously assumed that women who did not know their HIV status had similar breastfeeding patterns as women who were HIV-negative.

In 2019, eight high-burden countries in eastern southern Africa with household surveys from the early 2000s adjusted the breastfeeding duration among

undiagnosed women living with HIV to reflect the new analysis. The impact of this change is reduced mother-to-child transmission during breastfeeding.

Probability of mother-to-child transmission

Analysis conducted for the UNAIDS Reference Group on Estimates, Modelling and Projections found minor updated transmission probabilities based on the latest published literature about the impact of different antiretroviral regimens on mother-to-child transmission. This had minimal impact on the child HIV estimates.

Updated age at initiation of antiretroviral therapy for children

The average age of children starting antiretroviral therapy has changed over the years as children are diagnosed earlier. Data from the IeDEA and CIPHER networks provide data on the average age of children starting antiretroviral therapy in multiple regions around the world. These data are available for each calendar year from 2002 through 2016. The most recent update of these data suggested an increase in the proportion of children under two years of age starting on treatment and a small reduction to the proportion of children older than 10 years of age starting on treatment. This has a small impact on both the number of children living with HIV and on AIDS-related deaths among children.

Retention on treatment of pregnant women

Many countries do not have robust data available on the retention of women on treatment during pregnancy. An analysis conducted for the UNAIDS Reference Group on Estimates, Modelling and Projections suggested that at the time of delivery, only 80% of women were retained on treatment. This estimate was used as a default value for women already on treatment before the pregnancy and for those women who started treatment during the pregnancy. Most of the high-burden countries in eastern and southern Africa updated this assumption to reflect available data. Previously, the default assumption was that 75% of women were retained on treatment at delivery before the pregnancy.

Changes to case surveillance and vital registration model

The age range of requested model inputs of new diagnoses, CD4 count at diagnosis and AIDS-related mortality was changed from all ages to 15 years and older. It was recommended that AIDS-related death estimates (adjusted for incomplete reporting and misclassification) rather than raw AIDS-related deaths from the vital registration system be used in the fitting process. A new function was added to estimate new diagnosis based on age, sex and year. Also, a new r-logistic fitting approach was added. Complementing this new model is another function that provides the user with the ability to determine which model best fits the inputs.

Surveillance data entered into the model

In 2018, Nigeria conducted a large household survey to improve the precision of the estimate of HIV prevalence in the country. The Nigeria AIDS Indicator and Impact Survey (NAIIS) found lower HIV prevalence than previous household surveys. The new survey estimates were included in the Nigeria Spectrum models and previous survey data were removed, resulting in a shift in HIV prevalence to a lower level over the full history of the epidemic. This change also shifted the estimated prevalence in western and central Africa to slightly lower levels.

At the global level, trends in new HIV infections, AIDS-related deaths and people living with HIV are similar to previous estimates, although there are shifts within regions. The number of AIDS-related deaths has shifted downward in all regions due to changes in the models. New HIV infections are slightly flatter than estimated in 2018 in Asia and the Pacific and in eastern Europe and central Asia. Lower estimates of people living with HIV in western and central Africa were offset by higher estimates in Asia and the Pacific.

More detailed information on revisions to the 2019 model and Spectrum generally can be found at www.epidem.org.

PUBLICATION OF COUNTRY-SPECIFIC ESTIMATES

UNAIDS aims to publish estimates for all countries with populations of 250 000 or more (according to the United Nations Population Division 2017 World Population Prospects). For the countries with populations of 250 000 or more that did not submit estimates, UNAIDS developed estimates using the Spectrum software based on published or otherwise available information. These estimates contributed to regional and global totals but were not published as country-specific estimates.

In countries with low-level epidemics, the number of pregnant women living with HIV is difficult to estimate. Many women living with HIV in these countries are sex workers or people who use drugs—or they are the sexual partners of people who use drugs or gay men and other men who have sex with men—making them likely to have different fertility levels than the general population. UNAIDS does not present estimates of mother-to-child HIV transmission, including estimates related to children in some countries that have concentrated epidemics, unless adequate data are available to validate these estimates. UNAIDS also does not publish estimates related to children for countries where the estimated number of pregnant women living with HIV is less than 50.

With regard to reporting incidence trends, if there are not enough historical data to state with confidence whether a decline in incidence has occurred, UNAIDS will only publish data for the most recent year. This is done to prevent users from making inaccurate inferences about trends. Specifically, incidence trends are not published if there are fewer than four data points for the key population or if there have been no data for the past four years for countries using repeated survey or routine testing data. Trends prior to 2000 are not published for countries using case surveillance models if there are no early case surveillance or mortality data available.

Finally, UNAIDS does not publish country estimates when further data or analyses are needed to produce justifiable estimates. More information on the UNAIDS estimates and the individual Spectrum files for most countries can be found in the UNAIDS website. Data from the estimates can be found in the AIDSinfo section of the UNAIDS website (<http://aidsinfo.unaids.org>). ■

METHODS FOR DERIVING THE 90–90–90 TARGETS

INTRODUCTION

Since 2015, UNAIDS has reported estimates of global, regional and country-specific progress against the 90–90–90 targets. Progress toward these targets is monitored using three basic indicators:

- ▶ Indicator 1 (the first 90): The percentage of people living with HIV who know their HIV status.
- ▶ Indicator 2 (the second 90): The percentage of people living with HIV who know their status and are accessing treatment.

- ▶ Indicator 3 (the third 90): The percentage of people living with HIV on treatment who have suppressed viral loads.

Indicators 2 and 3 can also be expressed as a percentage of all people living with HIV. When numbers or coverage of the treatment target are expressed relative to the total number of people living with HIV, this is called “the HIV testing and treatment cascade.”—therapy Annual estimates of antiretroviral therapy coverage among people living with HIV are available from the time when treatment was first introduced in countries.

DATA SOURCES FOR CONSTRUCTING COUNTRY MEASURES

Country-level progress against the 90–90–90 targets was constructed using reported data from Spectrum, the Global AIDS Monitoring tool and (for selected countries in western and central Europe) the Dublin Declaration monitoring process. Estimates are published for all people and separately, by sex, for children (0 to 14 years) and for adults (15 years and older). Upper and lower ranges of uncertainty for country-level estimates were calculated from the range of estimated numbers of people living with HIV. This range may not fully capture uncertainty in the reported estimates.

A description of the target-related indicators that countries report against is provided in the UNAIDS 2019 Global AIDS Monitoring guidelines (1). Data sources are also briefly described. A summary of the number of countries that are publicly reporting on each measure is provided in Table 18.1, organized by region.

The final set of country measures of progress against the 90–90–90 targets for 2015 through 2018 are available at <http://aidsinfo.unaids.org>. Not all countries were able to report against all three prongs of the 90–90–90 targets: complete treatment cascades are published for 60 countries in 2018, up from 23 in 2015.

Estimates of people living with HIV

All progress measures in this report are based on UNAIDS global, regional and country-specific modelled estimates from Spectrum of the numbers of people living with HIV. Estimates of people living with HIV in 2018 were available for 170 of 193 countries and territories and published for 137. Estimates of people living with HIV are developed for all countries with populations above 250 000.

More details about how UNAIDS derives estimates and uncertainty bounds around the number of people living with HIV can be found in Part 1 of this annex. Published country estimates of people living with HIV (available <http://aidsinfo.unaids.org>) represent 79% of the total global estimated number of people living with HIV in 2018.

Knowledge of HIV status among people living with HIV

Estimates of the number of people living with HIV who know their status were derived using the most recent HIV surveillance, programme data and nationally representative population-based survey data, and from modelled 2018 estimates for 102 countries. Where data were available separately for children (aged 0–14 years) and adults (aged 15 years and older, by sex), the age- and sex-specific measures were first calculated and then aggregated to produce a national measure.

For 74 countries in 2018—primarily outside of eastern and southern Africa and western and central Africa—the number of people living with HIV who knew their HIV status is based on HIV surveillance case notification data, programme registers or modelled estimates derived from case surveillance data. If the estimate from these sources was lower than the number of people accessing antiretroviral therapy, the reported value was excluded. For countries using HIV surveillance or programme data, a country should have included this measure only if the HIV surveillance system had been functioning since at least 2013 and people who have died, emigrated or who otherwise have been lost to follow-up are removed.

Although HIV surveillance systems, including those based on programme registers, can be a reasonably robust source of data to estimate the number of people living with HIV who know their status, biases in the reported numbers may still exist. For example, a country's measure of the knowledge of status may be underestimated if not all people diagnosed are reported to the surveillance system in a timely manner;

the measure also may be overestimated if people are reported to the system or included on a register more than once and these duplicates are not detected. Similarly, if people die or emigrate but are not removed from the system, the number of people living with HIV who are reported to know their HIV status also will be overstated.

For 28 countries in eastern and southern Africa and western and central Africa, estimates of the numbers of people living with HIV who knew their status were derived using a new UNAIDS-supported mathematical model called the First 90 model. This model uses population-based survey and HIV testing service program data—together with country-specific HIV epidemic parameters from the standard UNAIDS Spectrum model—to produce outputs of knowledge of HIV status for adults, by sex. More details on the modelling approach are available in a forthcoming article (currently in press) (2).

Knowledge of HIV status from the First 90 model for eastern and southern Africa and western and central Africa has a number of strengths compared with UNAIDS' previously recommended approach to estimating knowledge of status relying on population survey data and programme treatment coverage data. Most importantly, the new model differentiates in the population survey data those who are aware of their HIV status and those who likely seroconverted after their last HIV-negative test based on national incidence trends. This approach constrains the upper bound of the proportion of people living with HIV ever tested in the survey who likely knew their HIV status at the time of the survey, thus producing a more accurate estimate of the first 90. Results of the proportion of people who know their HIV status from the model are also available by sex, assuming male-to-female testing ratios have remained relatively constant over time. Estimates of knowledge of status by sex for adults are also available since 2010.

An important model limitation, similar to the previously recommended approach, is that caution should be used in interpreting results when the last population-based survey was conducted more than five years ago or if there are concerns about the accuracy of self-reported testing history in the survey. Model results also are only for those aged 15 years and older. UNAIDS continues to recommend that countries conservatively estimate knowledge of status among children as the proportion of children living with HIV on treatment (unless other information from case surveillance data are available). Additional strengths and limitations of the model are described in the forthcoming article referenced earlier in this section.

People accessing antiretroviral therapy

Global and regional measures of antiretroviral therapy numbers are abstracted from country-reported programme data through the UNAIDS-supported Spectrum software, the Global AIDS Monitoring reporting tool, and the Dublin Declaration reporting process. In 2018, 143 countries had publicly available estimates of the number of people on treatment, representing 85% of all people on treatment. For the small number of countries where reported numbers of people on treatment are not available in selected years—primarily in western and central Europe and North America, and in China, India and the Russian Federation—estimates of the number of people on treatment are developed either in consultation with the public health agency responsible for monitoring the national treatment programme or based on published sources.

In partnership with UNICEF, WHO, the Government of the United States, the Global Fund and other partners that support treatment service delivery in countries, UNAIDS annually reviews and validates treatment numbers reported by countries through Global AIDS Monitoring and Spectrum. UNAIDS staff also provide technical assistance and training to country public health and clinical officers to ensure the quality of the treatment data reported. Nevertheless, this measure may overestimate the number of people on treatment if people who transfer from one facility to another are reported by both facilities. Similarly, coverage may be overestimated if people who have died, disengaged from care or emigrated are not identified and removed from treatment registries. Treatment numbers also may be underestimated if not all clinics report the numbers on treatment completely or in a timely manner.

In 2016, UNAIDS completed a triangulation of data to verify the UNAIDS global estimate of people accessing antiretroviral therapy at the end of 2015. Since early 2017, UNAIDS and other international partners have supported more than 15 countries, primarily in sub-Saharan Africa, to verify that the number of people reported to be currently on treatment is accurate. For more details about how confident UNAIDS is in reported treatment numbers, please see *How many people living with HIV access treatment?*⁴

People who have achieved viral suppression

Progress towards the viral suppression target among people on treatment and as a proportion of all people living with HIV was derived from data reported in Spectrum and through the online Global AIDS Monitoring reporting tool and the Dublin Declaration reporting process. For the purposes of reporting, the threshold for suppression is a viral load of less than 1000 copies per ml, although some countries may set lower thresholds or require persons to achieve an undetectable viral load. This guidance also specifies only a person's last test result from the reporting year be submitted, so the reported number suppressed among those tested should represent people and not tests performed.

UNAIDS 2019 Global AIDS Monitoring guidelines were revised from those of 2018 to clarify that countries should report viral load suppression outcomes, regardless of testing coverage. However, viral load testing results will only be published in countries where access to testing is for all or nearly all (>90%) people on treatment or nationally representative (typically 50–90% testing coverage). Table 1 shows the increase in the number of countries able to report on viral load suppression compared to previous years. In 2015, only 26 countries had reliable estimates; in 2018, there were 76 countries with reported data.

For countries with nationally representative but not universally accessible access to treatment, the estimate of viral suppression among those tested (i.e., the third 90) was multiplied by the number of people on treatment to obtain overall viral suppression levels in the country. Countries where testing coverage was 90% or higher reported only the number suppressed among all people on treatment.

A number of challenges exist in using country-reported data to monitor the viral load suppression target. First, routine viral load testing may not be offered at all treatment facilities, and those facilities that do offer it may not be representative of the care available at facilities without viral load testing. By assuming that the percentage of people suppressed among those accessing viral load testing is representative of all people on treatment countries that do not have complete access to testing, the measure may be overestimated or underestimated (depending on the characteristics of the reporting clinics).

4 The document is available at <http://www.unaids.org/en/resources/documents/2016/how-many-people-living-with-HIV-access-treatment>.

TABLE 1 Data availability for constructing UNAIDS measures of progress against the 90–90–90 treatment targets

		Asia and the Pacific	Caribbean	Eastern Europe and central Asia	Eastern and southern Africa	Latin America	Middle East and North Africa	Western and central Africa	Western and central Europe and North America	Global
Number of countries		38	16	16	21	17	20	25	40	193
Number of countries in UNAIDS global estimates		28	10	16	20	17	19	24	36	170
Number of countries with publicly available data on estimates of people living with HIV	2015	20	9	12	20	16	15	24	23	139
	2016	20	9	12	20	16	15	24	24	140
	2017	20	9	12	20	16	15	24	23	139
	2018	20	9	12	20	16	15	24	21	137
Number of countries with publicly available data on knowledge of HIV status	2015	8	6	7	20	6	6	18	9	80
	2016	9	6	8	20	8	6	18	18	93
	2017	12	7	9	20	8	6	18	18	98
	2018	15	6	12	20	9	9	18	13	102
Number of countries with publicly available data on treatment	2015	20	9	13	20	16	15	24	21	138
	2016	20	9	13	20	16	15	24	23	140
	2017	21	9	13	20	16	15	24	24	142
	2018	22	9	14	20	16	17	24	21	143
Number of countries with publicly available data on people with suppressed viral load	2015	5	0	5	3	4	4	1	4	26
	2016	5	2	5	8	7	4	1	13	45
	2017	7	4	8	7	8	6	3	12	55
	2018	9	7	11	13	11	9	6	10	76

Source: UNAIDS special analysis, 2019.

Another challenge in measuring the accuracy of viral load suppression estimates is that UNAIDS guidance requests routine (i.e., annual) viral load testing results only for people who are on treatment and eligible for testing. If people newly initiated on treatment achieve viral suppression but have not yet been offered viral load testing, they will be incorrectly counted as not suppressed, and the resulting viral suppression estimate will be understated. UNAIDS also requests countries to only report results from routine viral load testing: if countries report test results primarily

performed because of suspected treatment failure, the number of people virally suppressed in these countries will be underestimated. UNAIDS validates country submissions for quality, but it is not always possible to identify cases where both routine and other types of testing are occurring. Finally, UNAIDS guidance recommends reporting viral load test results only for people on antiretroviral therapy; persons who are not on treatment and naturally suppress the virus will not be included in this measure.

METHODS FOR CONSTRUCTION THE 90–90–90 TREATMENT TARGET AT THE REGIONAL AND GLOBAL LEVELS

All programme data submitted to UNAIDS were validated by UNAIDS and its partners prior to publication. Country-submitted data that did not meet the required validation checks for quality either at the indicator level or across the treatment cascade were not included in the composite regional or global measures.

To estimate regional and global progress against the 90–90–90 targets, UNAIDS imputed missing country data for the first and third 90 targets using a Bayesian hierarchical model with uncertainty based on regional trends, sex differences and country-specific data for those countries reporting data for some but not all years. Additional details on the modelling approach are available in a forthcoming article (4). The proportion of data on knowledge of status and viral load suppression that was imputed by region from 2015 to 2018 are shown in Table 18.2.

Due to large differences in the proportion of people virally suppressed in western and central Europe and the United States for the years in which data were available, sub-regional estimates for North America and western and central Europe were separately calculated and then combined to estimate the western and central Europe and North America regional results at large. Upper and lower ranges of uncertainty around the global and regional estimates of the HIV testing and treatment cascade are provided that reflect uncertainty in the number of people living with HIV and uncertainty (from missing country data) in the number of people who know their HIV status and the number of people who are virally suppressed. Based on reports from data quality reviews prior to 2017, uncertainty from possible overreporting or underreporting of treatment numbers of 0.88 and 1.04 for the lower and upper bounds, respectively, was added to the bounds of treatment

coverage among people living with HIV and the second and third 90s. Upper and lower ranges of uncertainty for the 90s do not capture uncertainty in the reported or missing programme data on the numbers of people who know their HIV status or the number of people on treatment who are virally suppressed.

As in previous years, results of global and regional progress towards the 90–90–90 treatment target presented in this report supersede all previously published estimates. The new approach to modelling the global and regional estimates of the first and third 90s builds on the previous UNAIDS approach, which was to calculate missing -data for countries using the ratio of knowledge of status and treatment for the first 90 and the ratio of the number of people suppressed among those on treatment in the region for countries where data were available. One of the benefits of the new approach is that it can use reported data when they are available to estimate trends in and across the region. Also, it is now possible to measure progress separately among adults by sex.

As with the previous approach, one primary drawback to the model is that it is difficult to quantify the extent to which progress in countries that reported data to UNAIDS is similar to that of countries without data in the region. This is particularly true for viral load suppression estimates, where reported data in some regions—especially in 2015 and 2016—are limited. For example, no countries in the Caribbean in 2015 were able to meet the threshold coverage of 50% testing coverage for reporting estimates of viral load suppression. In Asia and the Pacific, national-level estimates of viral load suppression are not available in any year for India and prior to 2018 for China. As access to viral load testing improves over time, the accuracy of the estimates of the third 90 will improve. ■

TABLE 2 Proportion of imputed data used to estimate the regional and global measures of the percentage of people living with HIV who know their HIV status and the percentage of people living with HIV on treatment who are virally suppressed

	Estimates of people living with HIV where knowledge of status is imputed (%)				People living with HIV on treatment where viral suppression is imputed (%)			
	2015	2016	2017	2018	2015	2016	2017	2018
Asia and the Pacific	12	8	10	51	83	84	85	56
Caribbean	7	5	5	18	100	96	63	51
Eastern Europe and central Asia	65	69	68	5	77	76	75	4
Eastern and southern Africa	0	0	0	0	58	33	46	21
Latin America	24	21	20	22	33	29	28	28
Middle East and North Africa	21	25	19	28	63	63	46	37
Western and central Africa	2	2	0	2	99	99	98	47
Western and central Europe and North America	29	4	82	95	33	6	87	98
Global	8	6	10	15	62	46	60	35

Source: UNAIDS special analysis, 2019.

DATA ON KEY POPULATIONS

DISTRIBUTION OF NEW HIV INFECTIONS BY SUBPOPULATION

The distribution of new HIV infections among subpopulations globally and by region was estimated based on data for 177 countries using five data sources.

For countries that model their HIV epidemic based on data from subpopulations, including key populations, the numbers of new infections were extracted from Spectrum 2019 files. This source provided data for sex workers from 59 countries, for people who inject drugs from 37 countries, for gay men and other men who have sex with men from 61 countries, and for transgender people from 19 countries (all of which were located in Latin America, the Caribbean and Asia and the Pacific). Additionally, 22 countries (mostly from Asia and the Pacific) had data from clients of sex workers.

The second source was mode of transmission studies conducted in countries between 2006 and 2012. The proportions of new infections estimated for each subpopulation, calculated by modes of transmission analyses, were multiplied by the number of total new gender-specific adult infections (among those aged 15–49 years) to derive an estimated number of new infections by subpopulation. This source provided data for sex workers from 18 countries, for people who inject drugs from 25 countries, and for gay men and other men who have sex with men from 22 countries.

New HIV infections for European countries with neither of the aforementioned data sources were derived from the European Centre for Disease Prevention and

Control (ECDC) and WHO Regional Office for Europe HIV/AIDS surveillance in Europe 2017–2018 data (4). The proportions of new diagnoses for each region in Europe (western, central and eastern) were applied to UNAIDS estimates of new infections in each country for people who inject drugs, gay men and other men who have sex with men, and transgender people. Data for sex workers were not available from the ECDC report. New HIV infections in China, India, the Russian Federation and the United States were taken from the most recent available national reports of new diagnoses.

New HIV infections among countries without a direct data source were calculated from regional benchmarks. The benchmarks were set by the median proportion of new infections in the specific subpopulation in all available countries in the same region. The majority of these countries were located in sub-Saharan Africa. There were 112 countries that used benchmark values for the sex work estimate, 92 countries for the people who inject drugs estimate, 69 countries for the gay men and other men who have sex with men estimate, and 82 countries for the transgender people estimate.

The calculated proportions of infections for each key population include the sex partners of members of key populations. New infections among sex partners of key populations were estimated using the number of sex partners and transmission probabilities from the literature.

QUALITY OF POPULATION SIZE ESTIMATES

The regional sections of this report include tables on the estimated size of key populations. These data are based on values reported through Global AIDS Monitoring in 2018. A comprehensive review of the data was conducted during this reporting round and therefore estimates should not be compared with data presented in previous UNAIDS' reports. As a result of this process, the estimates reported can be categorized as follows:

- ▶ “National population size estimate” refers to estimates that are empirically derived using one of the following methods: multiplier, capture-recapture, mapping/enumeration, network scale up method (NSUM) or population-based survey, or respondent driven sampling–successive sampling (RDS-SS). Estimates had to be national or a combination of multiple sites with a clear approach to extrapolating to a national estimate.
- ▶ “Local population size estimate” refers to estimates that are empirically derived using one of the before mentioned methods but only for a subnational group of sites that are insufficient for national extrapolation.
- ▶ “Insufficient data” refers either to estimates derived from: expert opinions, Delphi, wisdom of crowds, programmatic results or registry, regional benchmarks or unknown methods or estimates derived prior to 2010. Estimates may or may not be national. ■

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