

# COMMUNITIES AT THE CENTRE

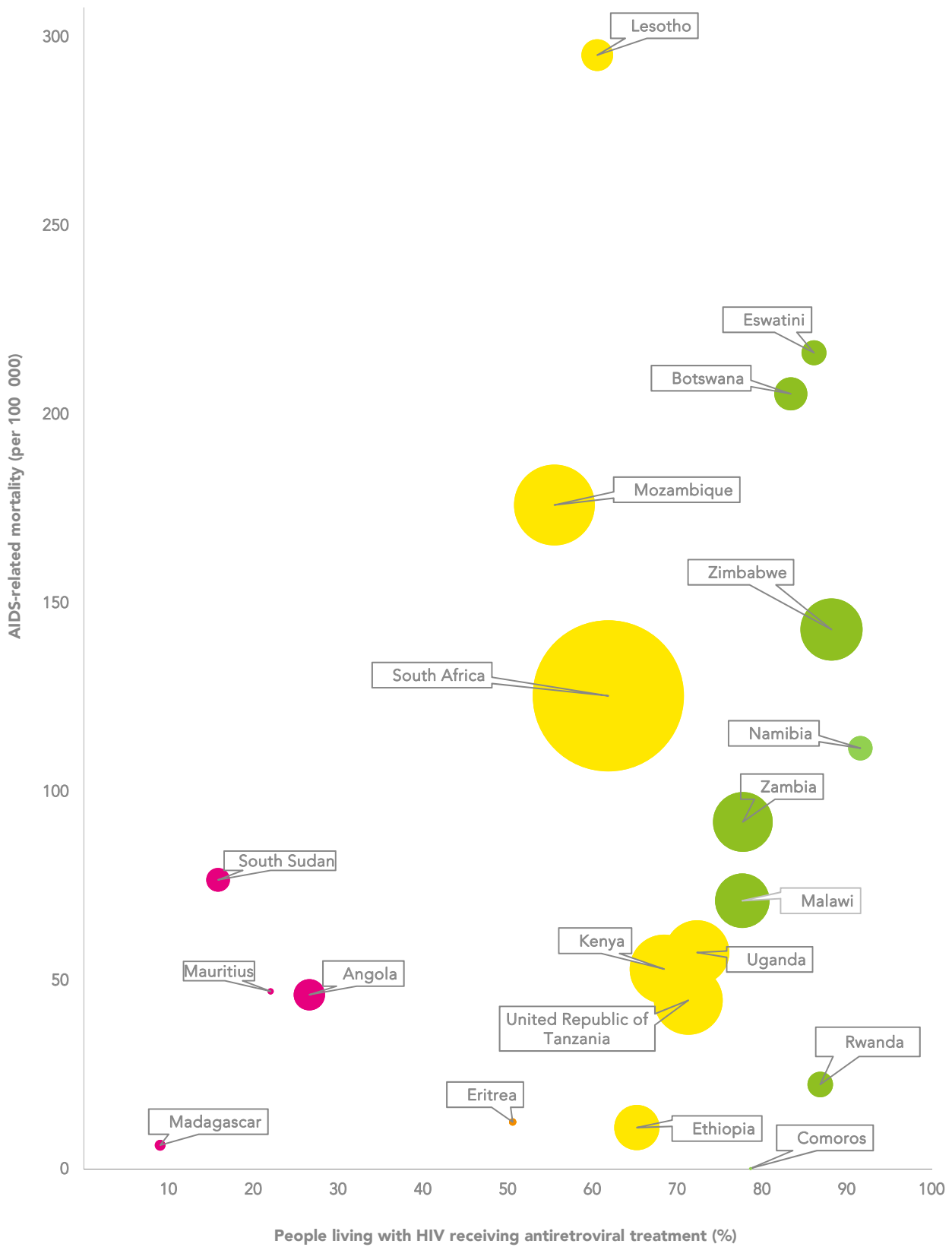
THE RESPONSE TO HIV  
IN EASTERN AND  
SOUTHERN AFRICA



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**FIGURE 10.1** Antiretroviral therapy coverage and AIDS-related mortality among people living with HIV, eastern and southern Africa



Antiretroviral therapy coverage: ■ 75% and above ■ 55-74% ■ 30-54% ■ Less than 30%

Note: Size of bubble is proportional to size of population of people living with HIV.

Source: UNAIDS 2019 estimates.

# EASTERN AND SOUTHERN AFRICA

## AT A GLANCE

The region has seen rapid declines in new HIV infections and AIDS-related deaths in recent years. However, progress is fragile, and it varies considerably within the region.

Linkage to care is the biggest gap to achieving the 90–90–90 targets, but retention on treatment of people living with HIV is an increasing challenge.

Gender inequalities, gender-based violence and other harmful sociocultural practices continue to make adolescent girls and young women more vulnerable to HIV.

In addition to a persistent lack of data on key populations, punitive laws that target those populations are hampering efforts to leave no one behind.

Innovations in service delivery—and efforts to address structural factors that impede access to services—are needed for health and HIV services to reach more men and boys.

While eastern and southern Africa as a whole has made strong progress in the expansion of antiretroviral therapy, coverage varies dramatically among countries, from 9% in Madagascar to 92% in Namibia. The impact of treatment on AIDS-related mortality has been strongest in the countries with higher coverage (Figure 10.1). Countries with comparatively low coverage—including Angola, Madagascar, Mauritius and the South Sudan—need to accelerate their HIV testing and treatment programmes.

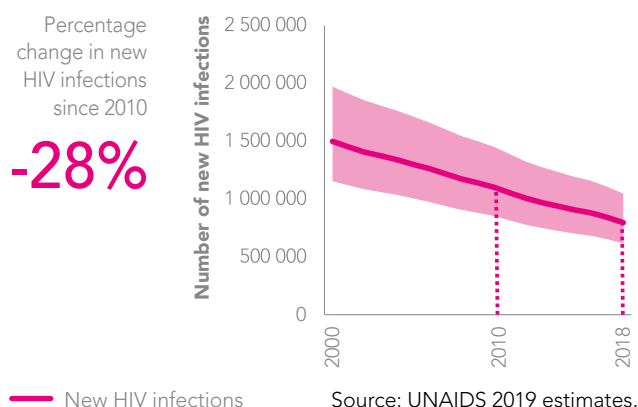
There are challenges to retaining people living with HIV in treatment adherence, with an unacceptable

number lost to follow-up after initiating treatment. Investments are being made into strengthening health systems and delivering universal health coverage. In order to achieve success in the delivery of HIV services and broader health care to achieve the health-related Sustainable Development Goals, these efforts must be well-coordinated.

While the region has had some success in reducing new HIV infections among adolescent girls and young women, large disparities still exist between young women and men of the same age. HIV prevalence remains extremely high among all key populations. ■

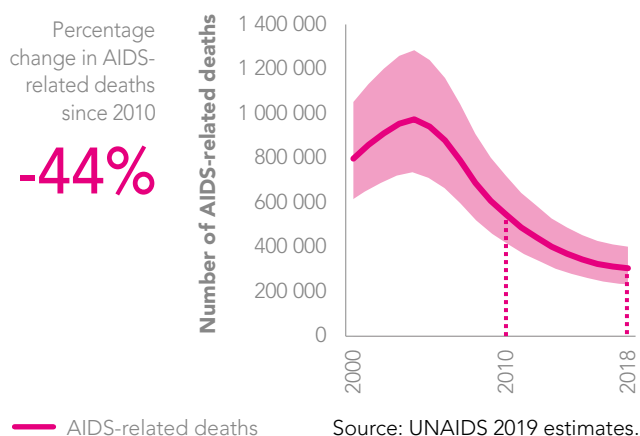
## STATE OF THE EPIDEMIC

**FIGURE 10.2** Number of new HIV infections, eastern and southern Africa, 2000–2018



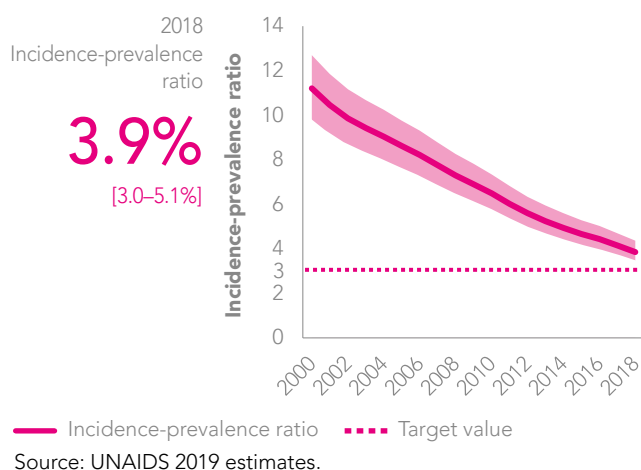
An estimated 800 000 [620 000–1 000 000] people acquired HIV in eastern and southern Africa in 2018, a decrease of 28% from the number of new HIV infections in 2010 (Figure 10.2). Young women (aged 15–24 years) accounted for 26% of new HIV infections in the region, and an estimated one quarter (25%) of new infections were among key populations and their sexual partners (Figure 10.7). A number of countries showed strong declines in new infections between 2010 and 2018, such as Comoros, Rwanda, South Africa and Uganda, but new infections increased in other countries, such as Angola, Madagascar and the South Sudan (Figure 10.5).

**FIGURE 10.3** Number of AIDS-related deaths, eastern and southern Africa, 2000–2018



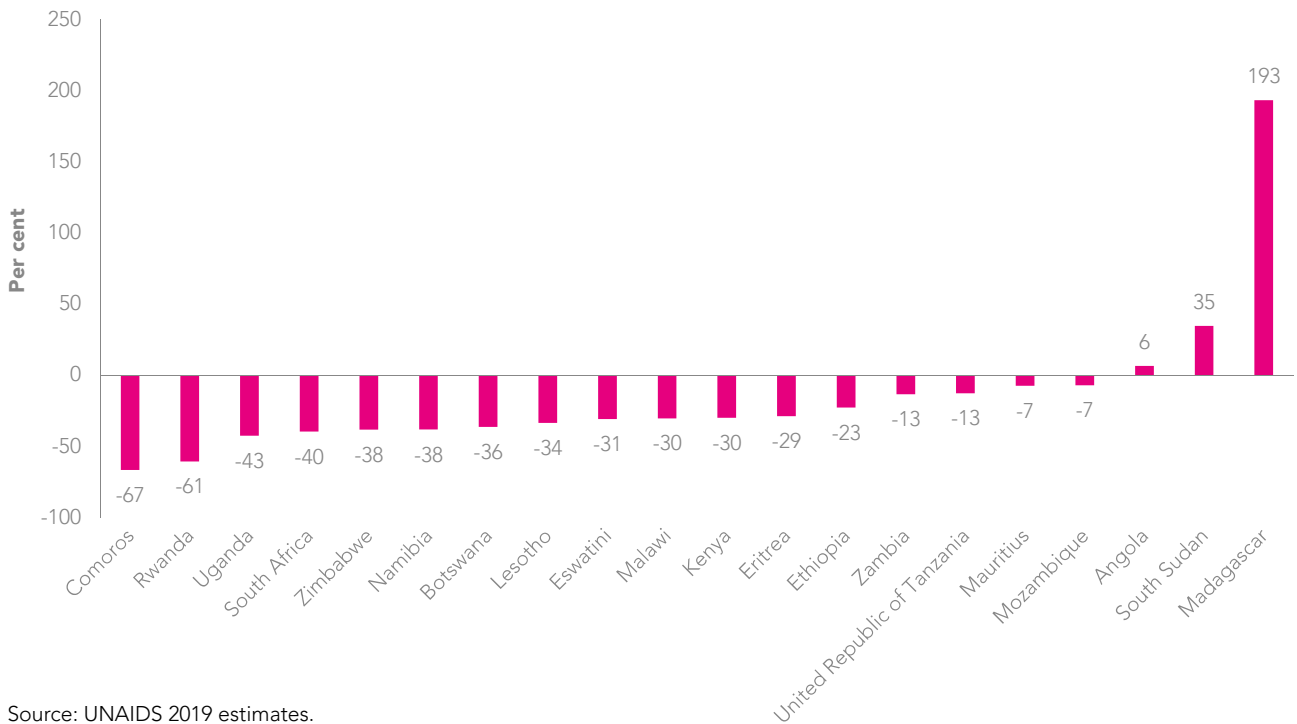
In 2018, there were 310 000 [230 000–400 000] AIDS related deaths in the region, a 44% decrease since 2010 (Figure 10.3). Five countries had a decline in AIDS-related deaths of greater than 50% during the eight-year period: Kenya, Malawi, South Africa, Uganda and Zimbabwe. The region's incidence-prevalence ratio was 3.9% [3.0–5.1%] in 2018, a considerable decline from 6.5% [5.0–8.5%] in 2010 (Figure 10.4).

**FIGURE 10.4** Incidence-prevalence ratio, eastern and southern Africa, 2000–2018



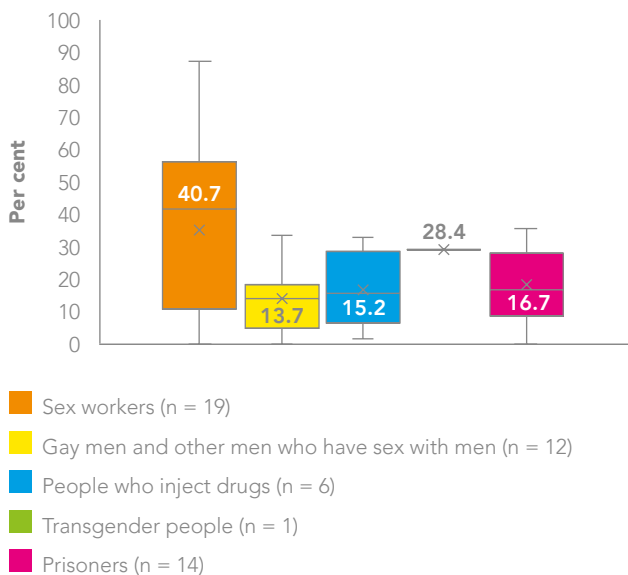
Ten of the 19 countries with data reported since 2014 had an HIV prevalence in excess of 40% among sex workers, including an alarming 85% prevalence in Uganda. The most recent data on HIV prevalence among people who inject drugs exceeded 20% in half of the six reporting countries. Among gay men and other men who have sex with men, HIV prevalence was more than 30% in two of 12 countries with data since 2014, and more than 12% in another five countries. Among 14 countries that reported data, median HIV prevalence among prisoners was 16.7%, and among transgender people in Mauritius—the only country in the region to report epidemiological data on this key population—HIV prevalence was 28.4% in 2017. ■

**FIGURE 10.5** Percentage change in new HIV infections, by country, eastern and southern Africa, 2010–2018



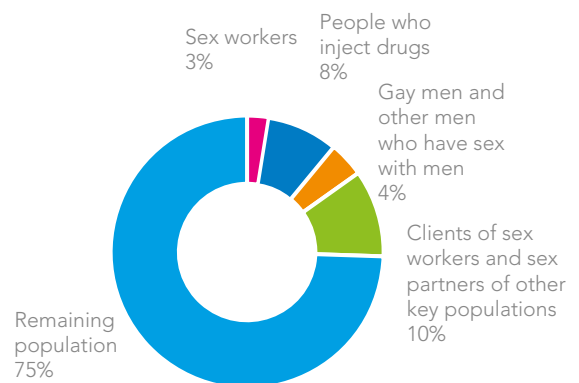
Source: UNAIDS 2019 estimates.

**FIGURE 10.6** HIV prevalence among key populations, eastern and southern Africa, 2014–2018



Source: Global AIDS Monitoring, 2014–2018.

**FIGURE 10.7** Distribution of new HIV infections (aged 15–49 years), by population group, eastern and southern Africa, 2018



Source: UNAIDS special analysis, 2019.

**TABLE 10.1** Estimated size of key populations, eastern and southern 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+)
Kenya	30 540 000										
Lesotho	1 464 000										
Madagascar	15 584 000										
Malawi	10 782 000									15 000	0.14
Seychelles	75 000										
South Africa	40 879 000										
Uganda	23 286 000										

■ 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:

Lesotho: Butha Buthe, Mafeteng, Maseru and Leribe.

South Africa: Cape Town Metro, Durban Metro and Johannesburg Metro.

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).



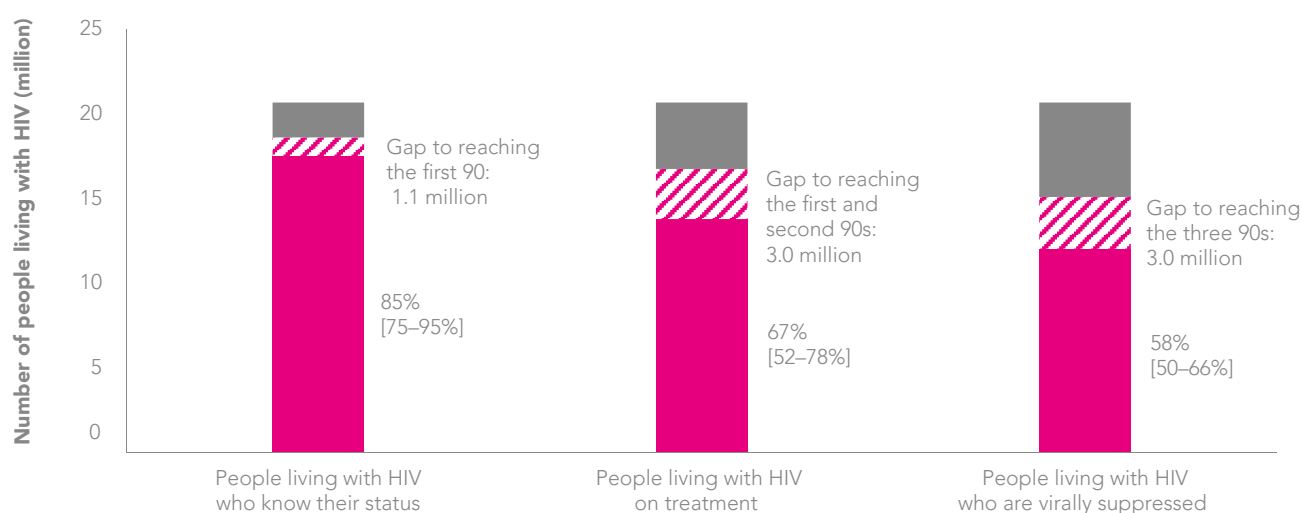
Babongile Luhlongwane, a community health agent, walks to deliver HIV information and services to rural residents in Eshowe, South Africa.

Credit: Gred Lomas/Médecins Sans Frontières



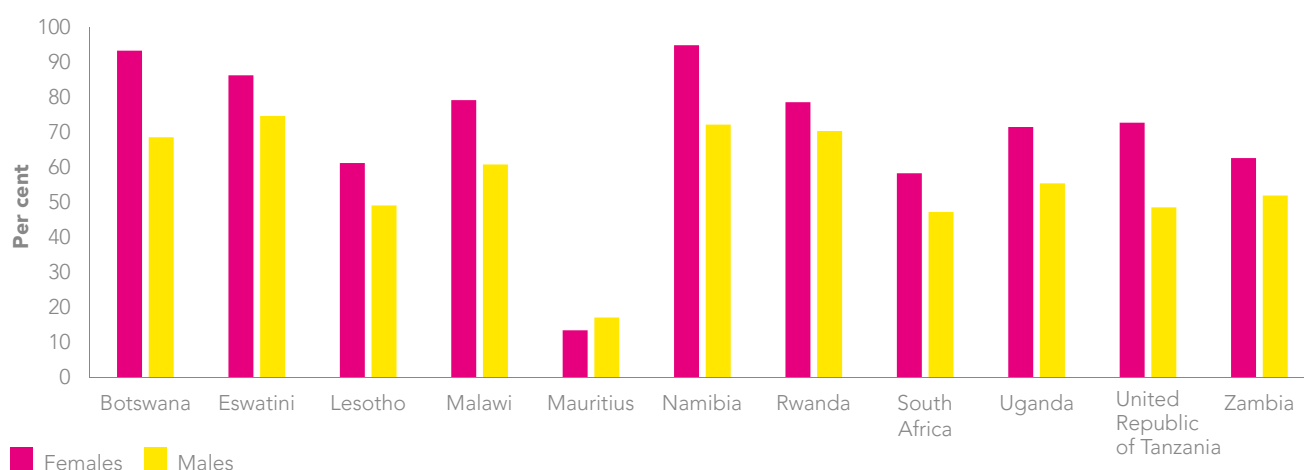
## THE CASCADE FROM HIV TESTING TO VIRAL SUPPRESSION

**FIGURE 10.8** HIV testing and treatment cascade, eastern and southern Africa, 2018



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

**FIGURE 10.9** Viral load suppression among adults (aged 15 years and older) living with HIV, by sex, eastern and southern Africa, 2018



Source: UNAIDS special analysis, 2019.

Of the region’s estimated 20.6 million [18.2 million–23.2 million] people living with HIV, the proportion who knew their status increased from 77% [68–87%] in 2015 to 85% [75–95%] in 2018. An estimated 67% [52–78%] of people living with HIV were on treatment (up from 53% [41–61%] in 2015), while 58% [50–66%] were virally suppressed (up from 43% [37–50%] in 2015). The gap to reaching the first 90 stood at 1.1 million, while an

additional 3 million people needed to access treatment in order to reach the first and second 90s. An additional 3 million people living with HIV needed to achieve viral suppression to reach all three 90s (Figure 10.8). Linkage to care represents the single greatest challenge to achieving the 90–90–90 targets, but efforts to achieve viral suppression among people on treatment is growing in importance.

**TABLE 10.2 90–90–90 country scorecard, eastern and southern 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)
<b>Eastern and southern Africa</b>	<b>85</b>	<b>88</b>	<b>82</b>	<b>79</b>	<b>82</b>	<b>72</b>	<b>87</b>	<b>89</b>	<b>86</b>	<b>58</b>	<b>64</b>	<b>50</b>
Angola	42	47	44	63	59	69						
Botswana	91	>95	89	92	>95	80	>95	>95	>95	>95	93	69
Comoros	86	78	>95	91	80	>95	86			68		
Eritrea	82	85	87	62	62	57	77			39		
Eswatini	92	93	93	93	>95	85	94	95	94	81	86	75
Ethiopia	79	79	81	83	82	82						
Kenya	89	94	88	77	80	67						
Lesotho	86	89	82	71	73	66	93	95	91	57	61	49
Madagascar	11	21	7	84	75	>95						
Malawi	90	94	89	87	92	76	89	92	89	69	79	61
Mauritius	22	19	23	>95	>95	>95	73	70	74	16	13	17
Mozambique	72	80	61	77	79	69						
Namibia	91	95	87	>95	>95	88	95	>95	94	87	>95	72
Rwanda	94	>95	95	93	95	88	85	87	84	74	79	70
Seychelles				72			91					
South Africa	90	93	88	68	71	63	87	89	85	54	58	47
South Sudan	24	28	22	66	67	62						
Uganda	84	85	84	87	93	75	88	90	88	64	72	55
United Republic of Tanzania	78	82	73	92	>95	77	87	89	86	62	73	49
Zambia	87	88	87	89	95	79	75	75	75	59	63	52
Zimbabwe	90	94	86	>95	>95	>95						

**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.

Progress varies significantly among countries in the region. Botswana, Eswatini and Namibia have achieved the three 90s, while Rwanda has achieved the first two 90s and is closing in on the third (Table 10.2). Despite this, progress is alarmingly slow. Knowledge

of status was below 25% in three countries, and in eight countries, no data were available on viral suppression. Viral load suppression varies across the countries in the region that have available data, and it was generally higher among women than among men (Figure 10.9). ■

## A COMBINATION APPROACH TO PREVENTION

Higher risk sex among adolescents and young people—alongside laws requiring parental consent for adolescents to access sexual and reproductive health services—continues to impact the region’s epidemic. Approximately eight in 10 sexually active adolescent boys and young men (and three in 10 sexually active adolescent girls and young women) reported having sex with a nonmarital, noncohabiting partner in the last year. In most countries, too few young people reported using condoms during such higher risk sex, and in all countries but Lesotho, a lower proportion of young women than young men reported doing so. A higher proportion of young men than young women reported having sex before the age of 15.

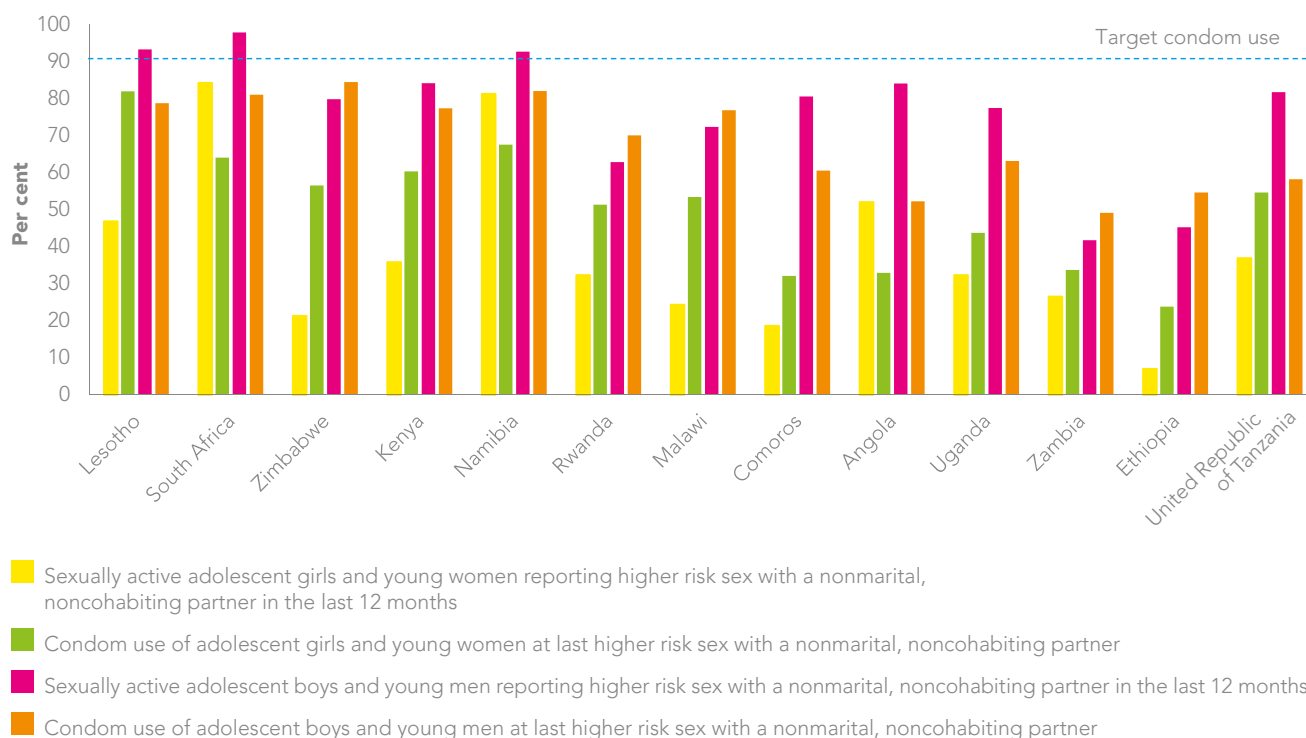
The prevalence of male circumcision is high in the countries and provinces prioritized for voluntary medical male circumcision (VMMC). Over 70% of adult men (aged 15–49 years) are circumcised in

the Gambela region of Ethiopia, Lesotho, the Nyanza province of Kenya and the United Republic of Tanzania (Figure 10.12). In Zimbabwe, fewer than one in four adult men (aged 15–49 years) was circumcised. In 2018, more than 4.1 million VMMCs were performed in the region.

An estimated 84 000 people in the region took pre-exposure prophylaxis (PrEP) at least once in 2018; 37% of them resided in Kenya.<sup>1</sup> Effective expansion of PrEP provision requires attracting people at high risk of HIV infection, supporting correct use and adherence, and strengthening other aspects of sexual and primary health care.

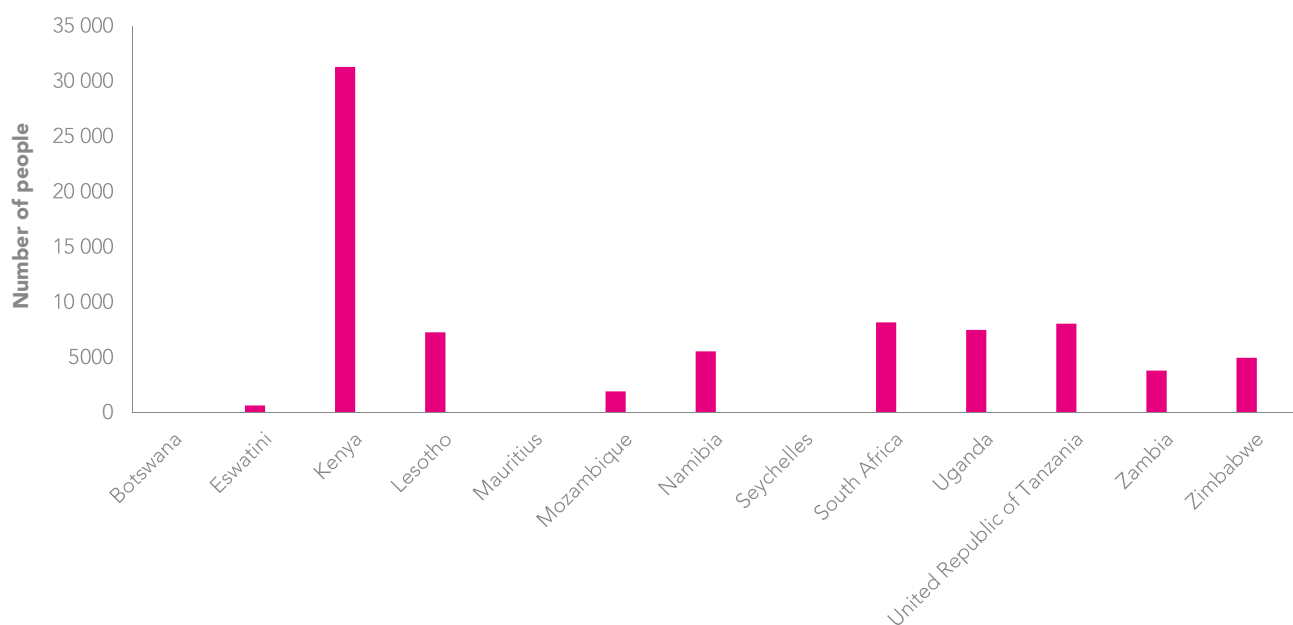
Very few data are available on the coverage of prevention services for members of key populations. ■

**FIGURE 10.10** Condom use at last higher risk sex with a nonmarital, noncohabiting partner by young people aged 15–24 years, 2012–2018



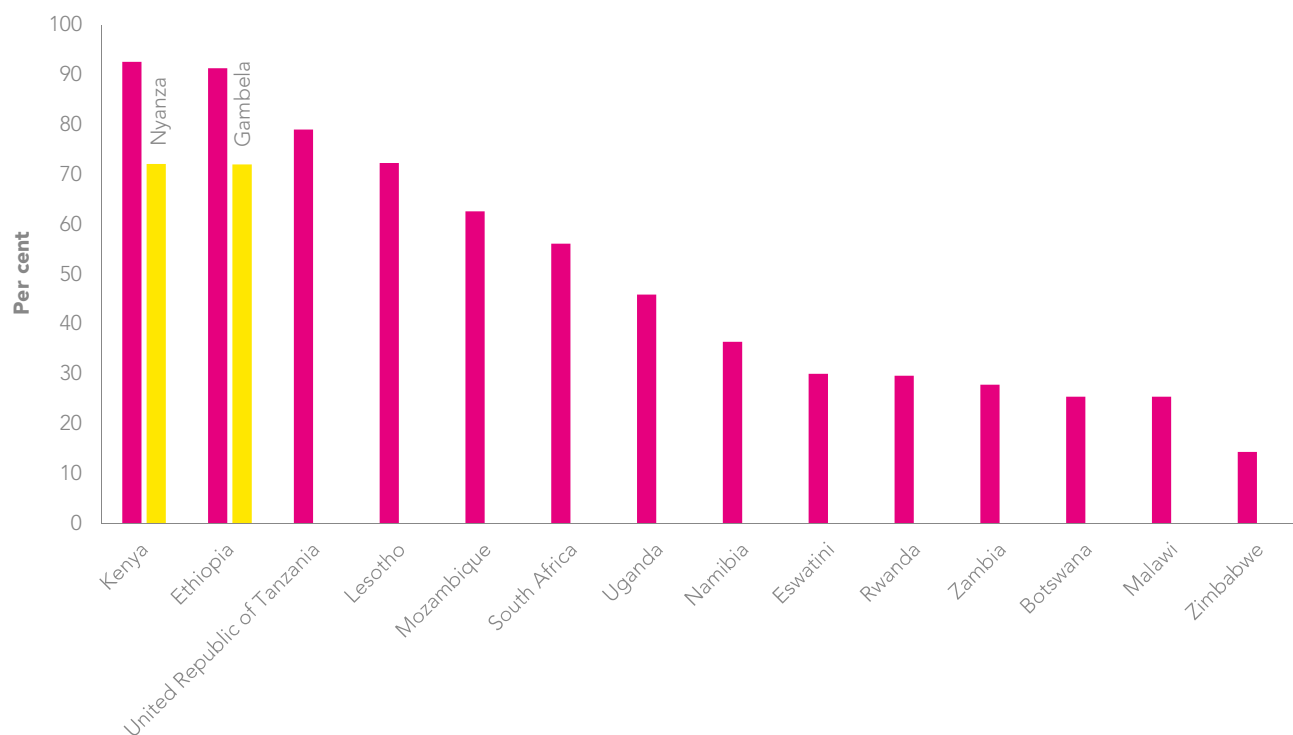
1 This figure does not include people who obtained PrEP by private means, including through online purchasing.

**FIGURE 10.11** Number of people taking PrEP at least once during 2018, eastern and southern Africa, 2018



Source: 2019 Global AIDS Monitoring; and PEPFAR Monitoring, Evaluation, and Reporting Database. In: amfAR.org [Internet]. amfAR; c2019 ([https://mer.amfar.org/?\\_ga=2.96796184.623148132.1561384951-1316132509.1561384951](https://mer.amfar.org/?_ga=2.96796184.623148132.1561384951-1316132509.1561384951), accessed 20 June 2019).

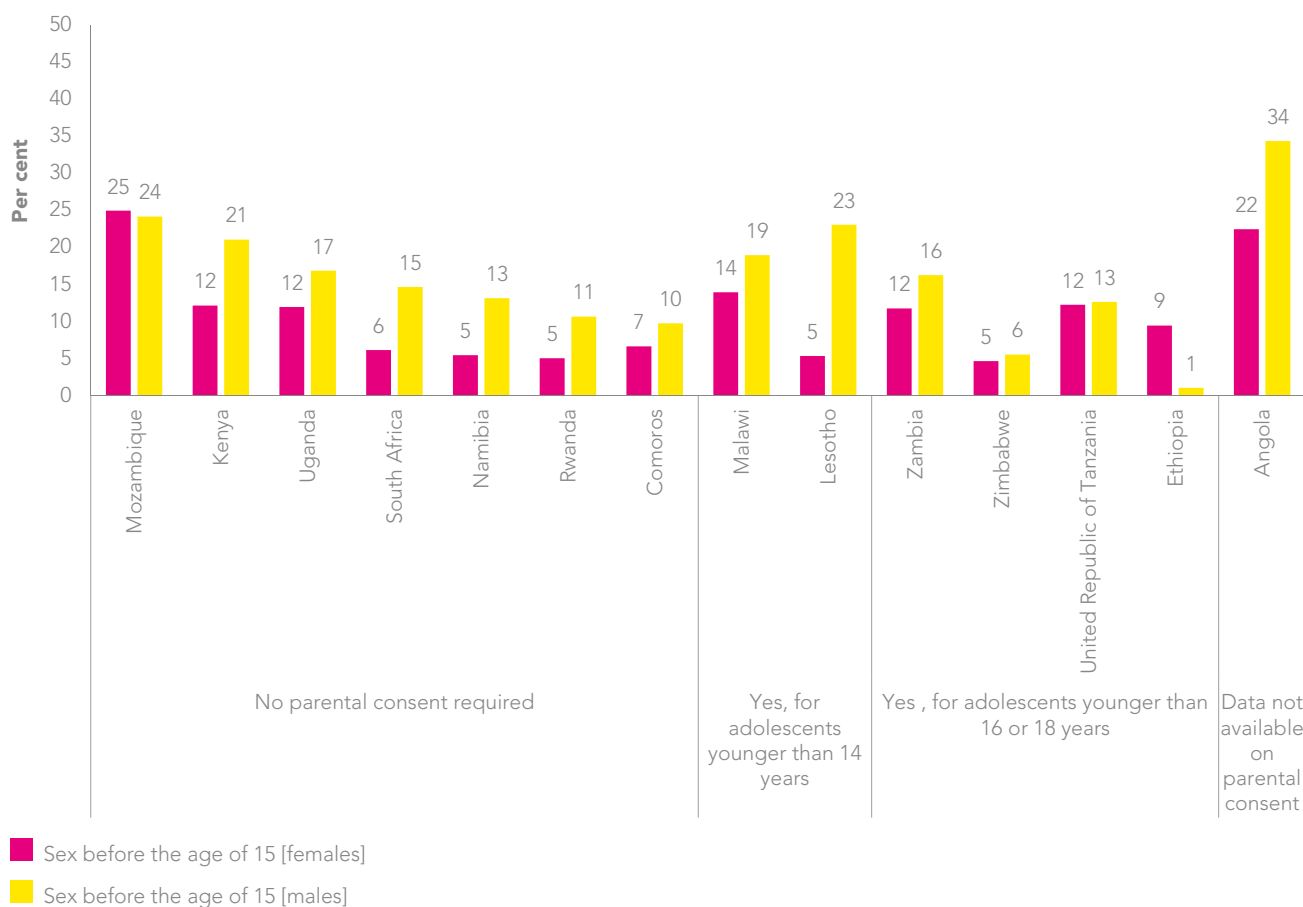
**FIGURE 10.12** Prevalence of male circumcision (aged 15–49 years), by country (province), eastern and southern Africa, 2013–2017



Note: Surveys included are: Kenya (2014), Nyanza (Kenya) (2014), Ethiopia (2016), Gambela (Ethiopia) (2016), the United Republic of Tanzania (2017), Lesotho (2014), Mozambique (2015), South Africa (2017), Uganda (2016), Namibia (2017), Eswatini (2016), Rwanda (2014), Zambia (2016), Botswana (2013), Malawi (2016) and Zimbabwe (2016).

Source: Population-based surveys, 2013–2017.

**FIGURE 10.13** Proportion of young people reporting sex before the age of 15 years and corresponding parental consent policies regarding young people’s access to sexual and reproductive health services, eastern and southern Africa, 2012–2016



Source: Population-based surveys, 2012–2016.

**FIGURE 10.14** Percentage of key populations who reported receiving at least two prevention services in the past three months, eastern and southern Africa, 2016–2018

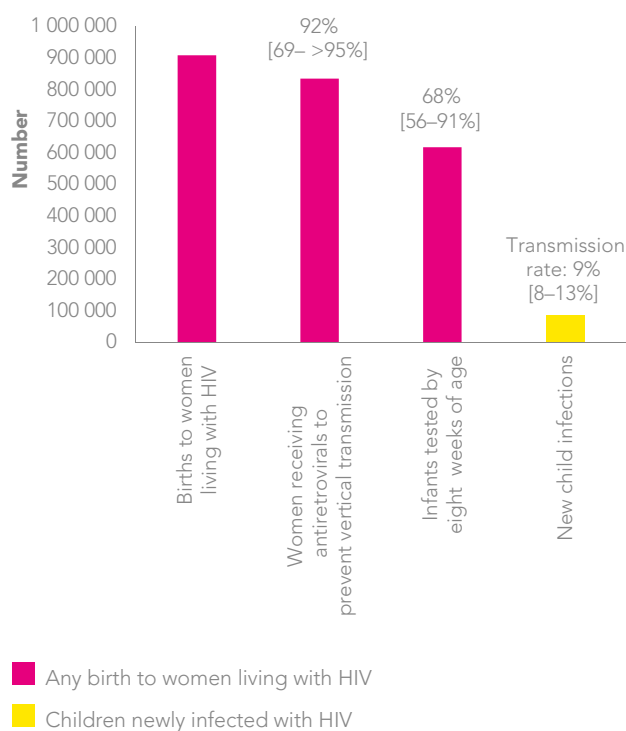


Source: Global AIDS Monitoring, 2016–2018.

## ELIMINATING MOTHER-TO-CHILD TRANSMISSION

A total of 92% [69–>95%] of pregnant women living with HIV received antiretroviral medicines to prevent mother-to-child transmission of HIV and to protect their own health in 2018 (Figure 10.15). This is compared to 49% [37–59%] in 2010. The rate of mother-to-child transmission decreased from 18% [15–25%] in 2010 to 9% [8–13%] in 2018. Coverage of early infant diagnosis was 68% [56–91%] in 2018. Progress could be bolstered by the further expansion of point-of-care early infant diagnostics. ■

**FIGURE 10.15** Cascade of services for preventing vertical transmission, numbers of new HIV infections and transmission rate, eastern and southern Africa, 2018



Source: UNAIDS 2019 estimates; 2019 Global AIDS Monitoring.

### WOMEN LIVING WITH HIV HAVING THEIR SAY ON DUAL ELIMINATION

Community engagement is critical to ensuring that efforts to eliminate mother-to-child transmission of HIV and syphilis are achieved in a manner that protects and respects the human rights of women, particularly women living with HIV and/or syphilis. The International Community of Women Living with HIV and AIDS Eastern Africa (ICWEA) has been active in validation efforts in Uganda.

ICWEA held focus group discussions with 264 women living with HIV from six regions of Uganda to assess whether services to prevent vertical transmission were implemented in a manner consistent with international, regional and national human rights standards. The assessment determined that Uganda has progressive laws and policies that have facilitated reductions of mother-to-child transmission in the country (1). The Patients' Charter, the Constitution of the Republic of Uganda and the HIV Prevention and AIDS Control Act guarantee equality and nondiscrimination in health-care settings for all persons.

The ICWEA assessment also expressed serious concern about laws that criminalize HIV and syphilis transmission, and about health-care guidelines that aggressively promote HIV testing and disclosure of HIV status. Women living with HIV who participated in focus group discussions said that health workers do not always seek informed consent from pregnant women when offering an HIV test, nor do they always communicate the option to refuse such a test. Participants also suggested that some women living with HIV are taking contraceptives against their will (1).

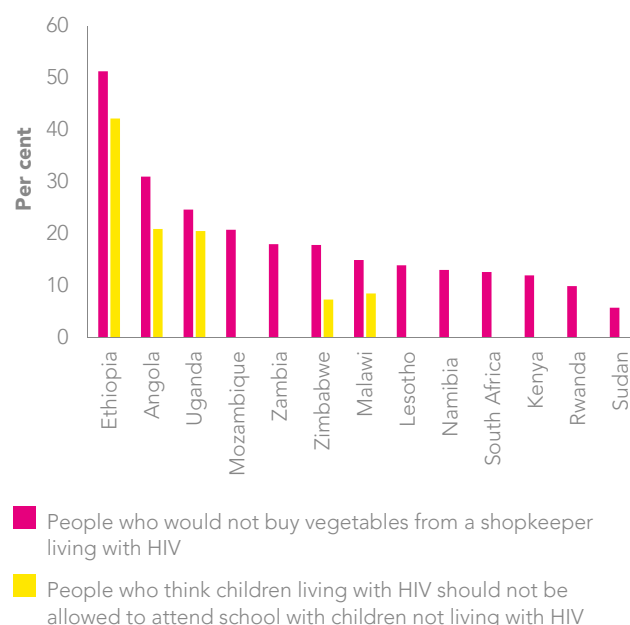
## CONFRONTING STIGMA AND DISCRIMINATION

Many people across the region still lack basic knowledge about HIV. Levels of stigma towards people living with HIV remain high: more than half of people surveyed in Ethiopia said they would avoid buying vegetables from a vendor living with HIV, and 42% believed that children living with HIV should not be allowed to attend school with other children. In other countries, such stigmatizing attitudes were reported by between 6% and 31% of survey participants (Figure 10.16).

Some progress has been made to strike down laws that criminalize and discriminate against key populations. In June 2019, Botswana joined the growing list of countries globally that have decriminalized same-sex sexual relations (2). However, there also have been setbacks, with Kenya recently deciding to uphold such a law (3).

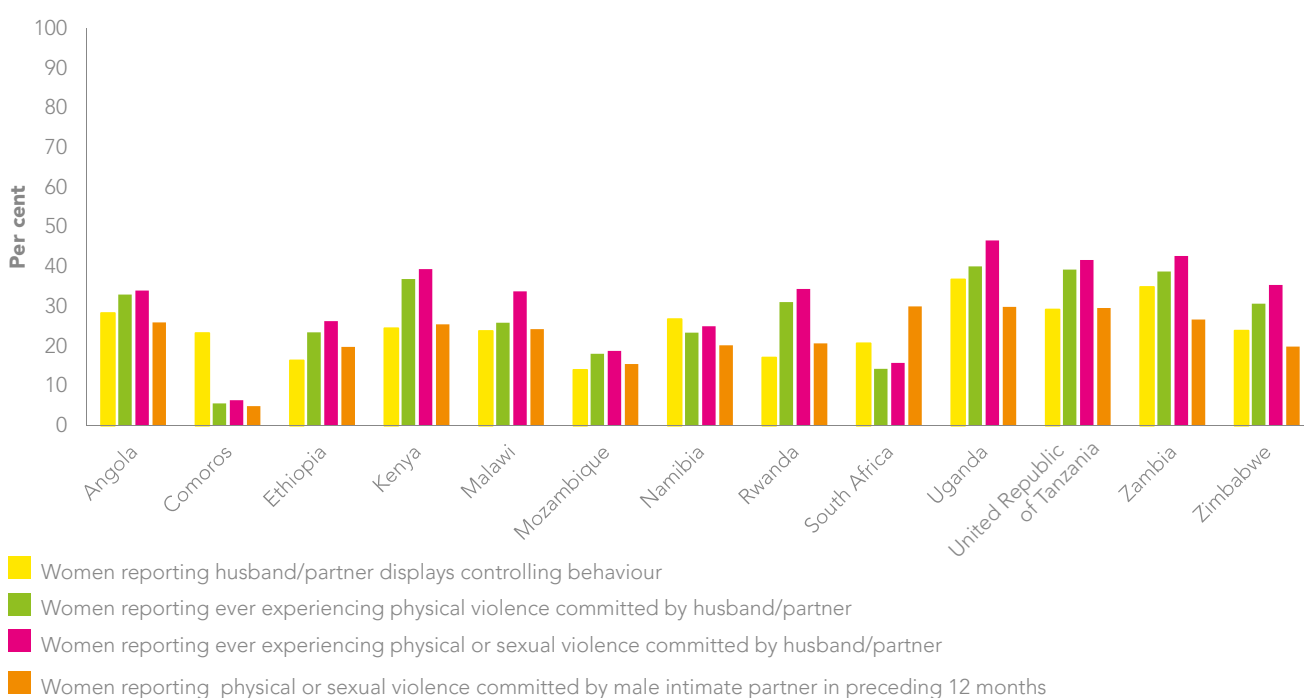
Unacceptable levels of intimate partner violence persist. According to surveys, physical and/or sexual violence by an intimate partner in the past 12 months was reported by around 30% of women in South Africa, Uganda and the United Republic of Tanzania; by more than 25% in Angola, Kenya and Zambia; and by 20% or more in Ethiopia, Malawi, Namibia, Rwanda and Zimbabwe. ■

**FIGURE 10.16** Percentage of men and women aged 15–49 years with discriminatory attitudes towards people living with HIV, eastern and southern Africa, 2013–2017



Source: Population-based surveys, 2013–2017, countries with available data.

**FIGURE 10.17** Proportion of women aged 15–49 years who reported ever experiencing physical and/or sexual violence committed by partner/husband or controlling behaviour, 2012–2016



Source: Population-based surveys, 2012–2016.

## INVESTING TO END AN EPIDEMIC

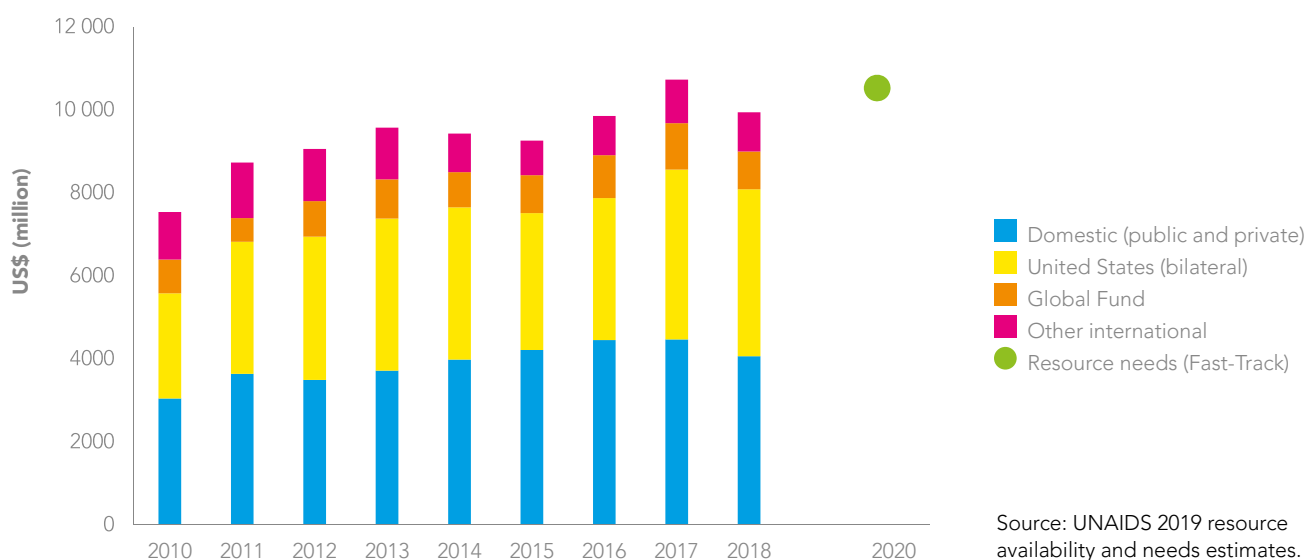
Domestic and international resources for HIV responses in the region increased steadily from 2010 to 2018, growing by 34% and 31%, respectively (in constant 2016 US dollars).<sup>2</sup> Available resources in 2018 approach the 2020 Fast-Track Targets, with 59% of these resources still provided by donors. The Government of the United States increased its bilateral funding by 59% and the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) increased its funding by 12% between 2010 and 2018, while financial resources provided through all other international donor channels decreased by 18%.

Compared to the previous year, the total amount of resources for HIV responses in the region in 2018 decreased by 7% (after adjusting for inflation): domestic funds decreased by 9%, United States bilateral funding decreased by 2%, Global Fund funding decreased by 29% and funding from all other international channels decreased by 10%.<sup>3</sup>

South Africa increased its domestic public spending for HIV by about US\$ 650 million between 2010 and 2018, and now 78% of the total HIV resources in the country are domestic. Other countries in the region with a high burden of disease have also increased their domestic resources since 2010: they have increased by more than 70% in Zambia and Zimbabwe and by more than 30% in Kenya and Malawi.

Excluding South Africa, countries in eastern and southern Africa had a 10% annual decline in resource availability in 2018, mainly due to domestic resources decreasing by 27% and all international resources decreasing by 4%. These countries finance only 20% of their responses domestically, and they will need to mobilize almost US\$ 800 million in additional resources by 2020 to achieve their resource needs estimates, while also improving their efficiency in using both existing and future resources. ■

**FIGURE 10.18** HIV resource availability, by source, eastern and southern Africa, 2010–2018, and projected resource needs by 2020



<sup>2</sup> 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.

<sup>3</sup> 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.



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## EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	26 000 [21 000–32 000]	27 000 [21 000–34 000]	28 000 [21 000–36 000]
New HIV infections (0–14)	6800 [5400–8600]	6500 [4800–8400]	7000 [5000–9500]
New HIV infections (women, 15+)	14 000 [11 000–16 000]	14 000 [11 000–18 000]	14 000 [11 000–19 000]
New HIV infections (men, 15+)	6200 [4800–8100]	6500 [4800–8400]	6700 [4700–8900]
HIV incidence per 1000 population	1.21 [0.96–1.47]	1.06 [0.83–1.32]	1.01 [0.75–1.29]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	10 000 [7300–13 000]	10 000 [7200–13 000]	14 000 [9500–18 000]
AIDS-related deaths (0–14)	4100 [3200–5200]	4400 [3400–5600]	4900 [3700–6400]
AIDS-related deaths (women, 15+)	4200 [2900–5800]	3500 [2300–4900]	6100 [4100–8300]
AIDS-related deaths (men, 15+)	1800 [1200–2700]	2200 [1500–3100]	2500 [1700–3500]
<b>People living with HIV</b>			
People living with HIV (all ages)	220 000 [180 000–250 000]	290 000 [250 000–340 000]	330 000 [290 000–390 000]
People living with HIV (0–14)	28 000 [23 000–34 000]	34 000 [27 000–42 000]	38 000 [30 000–47 000]
People living with HIV (women, 15+)	130 000 [110 000–150 000]	180 000 [150 000–210 000]	200 000 [180 000–240 000]
People living with HIV (men, 15+)	59 000 [50 000–72 000]	80 000 [68 000–96 000]	92 000 [78 000–110 000]
HIV prevalence (15–49)	1.7 [1.5–2]	1.9 [1.7–2.2]	2 [1.7–2.3]

## 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	Both criminalized and 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 and men aged 15–49 years who report discriminatory attitudes towards people living with HIV	<b>2016</b> 34.6
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	

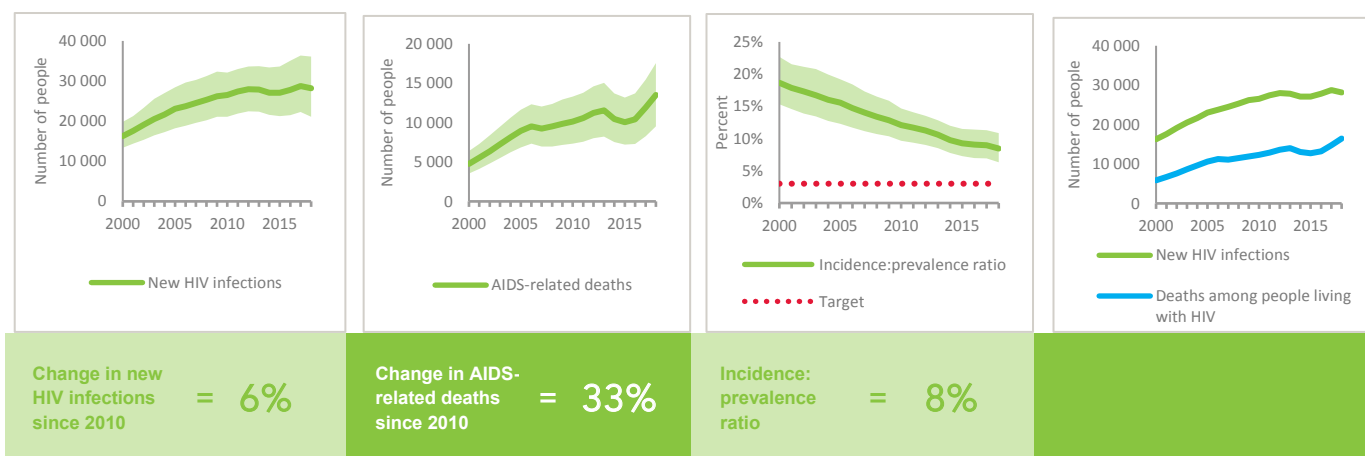
## VIOLENCE

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	<b>2016</b> 25.9
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## EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2017	...	\$3 292 607	\$14 632 684	\$2 195 073	...	\$20 120 364

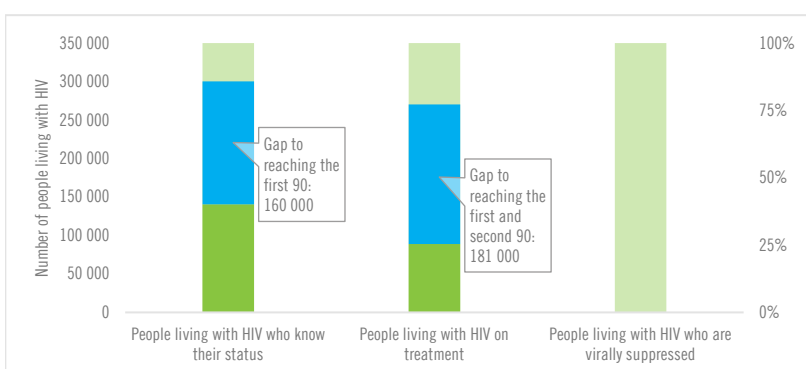
## EPIDEMIC TRANSITION METRICS



## 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	8.0%	2.0%	...	...	15.9%
Know their HIV status	26.8%	44.8%	...	...	...
Antiretroviral therapy coverage	42.0%	...	...	...	100%
Condom use	71.7%	59.1%	...	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (2017)	\$567 162	\$303 598	\$0	...	...

## HIV TESTING AND TREATMENT CASCADE



	42% [36–50%]	27% [23–31%] 88 700	...% [...–...%]
All ages			
Children (0–14)	13% [10–16%]	13% [10–16%] 4800	...% [...–...%]
Women (15+)	47% [40–55%]	27% [24–32%] 56 100	...% [...–...%]
Men (15+)	44% [37–52%]	30% [26–36%] 27 800	...% [...–...%]

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	18% [14–23%]	38% [29–48%]
Early infant diagnosis	2.4% [1.9–3.1%]	1.4% [1.1–1.8%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	18 000 [9000 –30 000]
People living with HIV who started TB preventive therapy (2017)	12.8%
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 (2015)	
— Women	32.5%
— Men	31.6%
Condom use at last sex with a non-marital, non-cohabiting partner (2016)	
— Women	32.1%
— Men	63.3%
Women aged 15–49 years who have their demand for family planning satisfied by modern methods (2016)	29.8%
Men aged 15–49 years who are circumcised (2016)	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

EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	13 000 [12 000–14 000]	10 000 [9000–11 000]	8500 [7000–10 000]
New HIV infections (0–14)	2100 [1400–2600]	1100 [530–1500]	<500 [<500–630]
New HIV infections (women, 15+)	6200 [5500–6700]	5000 [4300–5600]	4500 [3700–5400]
New HIV infections (men, 15+)	5100 [4500–5700]	4200 [3600–4800]	3700 [3000–4400]
HIV incidence per 1000 population	7.98 [7.28–8.66]	5.61 [4.88–6.17]	4.36 [3.6–5.19]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	7300 [6500–8000]	5000 [4300–5800]	4800 [4100–5700]
AIDS-related deaths (0–14)	1500 [1100–1800]	710 [<500–990]	520 [<500–780]
AIDS-related deaths (women, 15+)	3100 [2700–3500]	2100 [1800–2500]	2100 [1800–2600]
AIDS-related deaths (men, 15+)	2600 [2300–2900]	2200 [1800–2500]	2200 [1900–2600]
<b>People living with HIV</b>			
People living with HIV (all ages)	340 000 [300 000–360 000]	360 000 [320 000–390 000]	370 000 [330 000–400 000]
People living with HIV (0–14)	25 000 [22 000–29 000]	19 000 [15 000–22 000]	14 000 [10 000–17 000]
People living with HIV (women, 15+)	180 000 [160 000–190 000]	190 000 [170 000–210 000]	200 000 [180 000–220 000]
People living with HIV (men, 15+)	140 000 [120 000–150 000]	150 000 [130 000–160 000]	150 000 [140 000–170 000]
HIV prevalence (15–49)	23.2 [20.9–24.8]	21.6 [18.9–23.1]	20.3 [17.3–21.8]

LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Yes
Criminalization of sex work among consenting adults	Any criminalization or punitive regulation of sex work
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	Possession of drugs for personal use or drug use and/or consumption are specified as 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 16 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 **2013**  
3

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent **2013**  
2

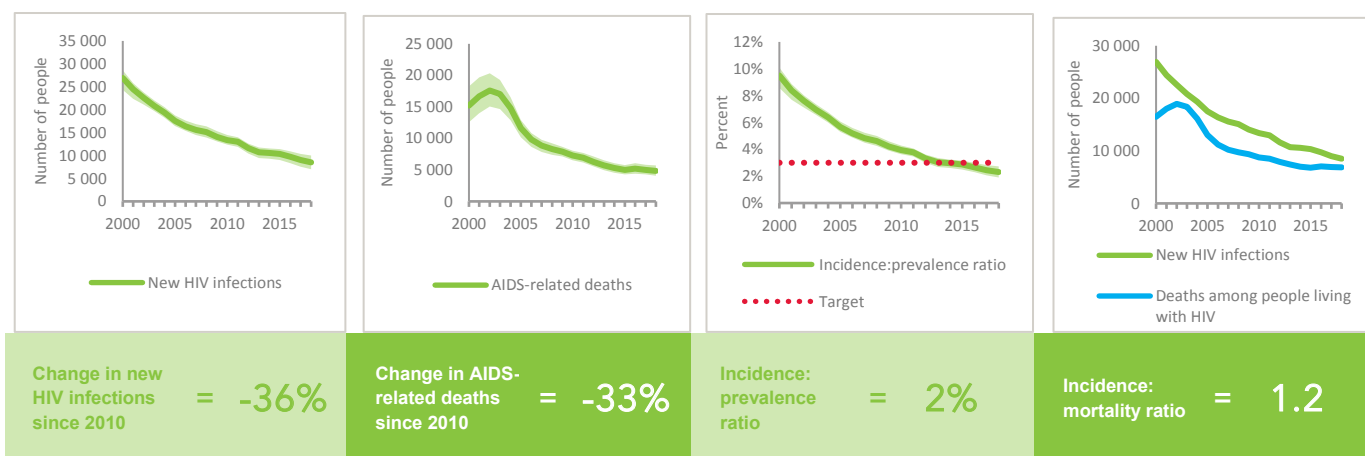
VIOLENCE

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	\$0	\$100 590 814	\$47 684 258	\$10 716 702	\$0	\$158 991 773

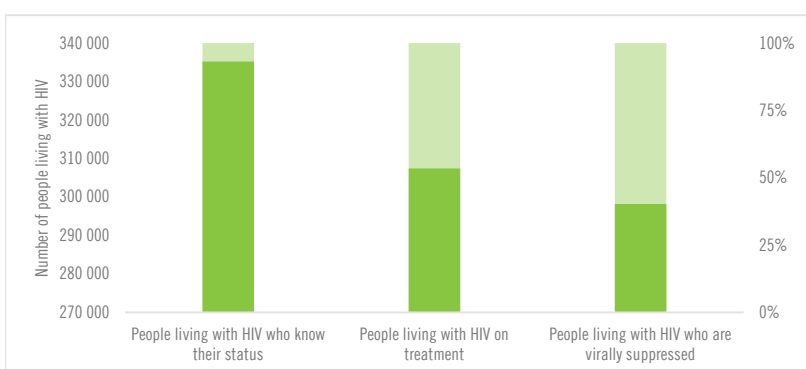
## EPIDEMIC TRANSITION METRICS



## 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	42.2%	14.8%	...	...	...
Know their HIV status	...	...	...	...	...
Antiretroviral therapy coverage	87.6%	73.5%	...	...	...
Condom use	75.7%	77.5%	...	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (0)	...	...	...	...	...

## HIV TESTING AND TREATMENT CASCADE



	91% [82– >95%]	83% [75–90%] 307 000	81% [73–88%]
All ages			
Children (0–14)	44% [32–53%]	38% [28–46%] 5400	34% [25–42%]
Women (15+)	>95% [86– >95%]	>95% [86– >95%] 194 000	93% [84– >95%]
Men (15+)	89% [80– >95%]	71% [64–78%] 108 000	69% [62–75%]

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	68% [57–77%]	>95% [77– >95%]
Early infant diagnosis	42.4% [37.4–50.5%]	76.5% [67.7– >95%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	3300 [2100–4700]
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)	29.9%
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	3.7%
Knowledge of HIV prevention among young people aged 15–24 years (2016)	
— Women	47.4%
— Men	47.1%
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	...
Voluntary medical male circumcisions performed according to national standards (2018)	24 207
People who received PrEP at least once during the reporting period (2018)	38
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

## EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
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 [<0.01–0.03]	0.01 [<0.01–0.02]	<0.01 [<0.01–0.01]
<b>AIDS-related deaths</b>			
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]
<b>People living with HIV</b>			
People living with HIV (all ages)	<200 [<100– <500]	<200 [<100– <500]	<200 [<100– <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+)	<100 [<100– <200]	<100 [<100– <200]	<100 [<100– <200]
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	No specific legislation
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	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	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	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

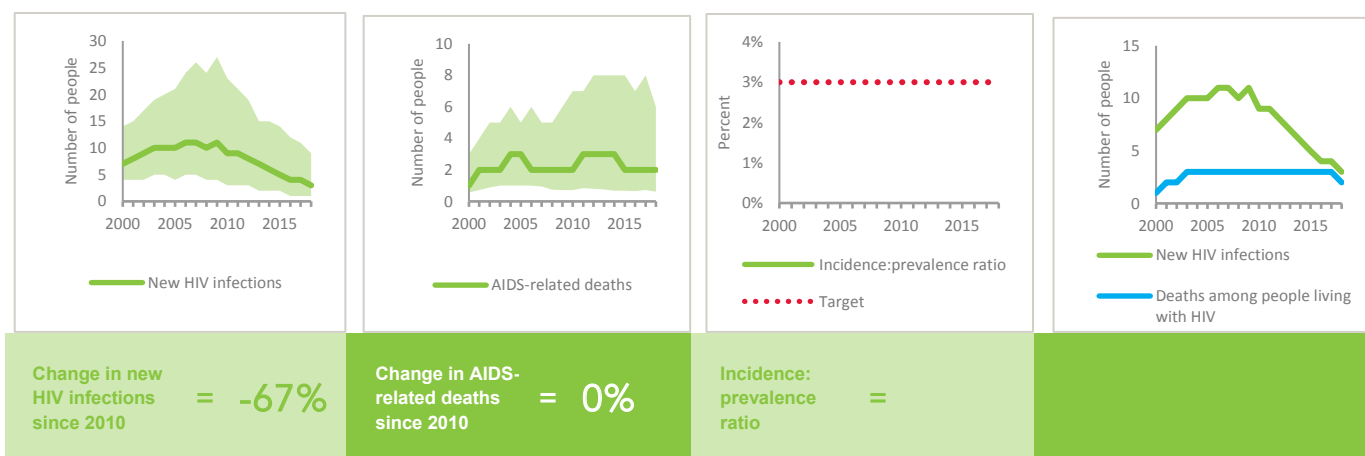
## VIOLENCE

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: 2018	...	\$160 037	...	\$1 062 108	\$20 932	\$1 243 077

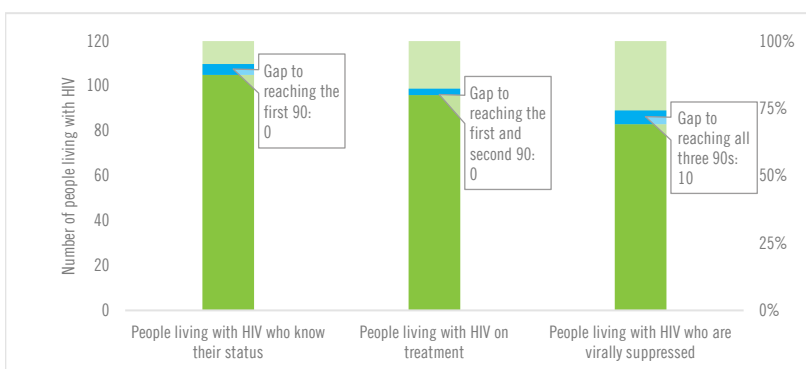
## EPIDEMIC TRANSITION METRICS



## 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	0.3%	0.0%	1.8%	...	...
Know their HIV status	...	...	...	...	...
Antiretroviral therapy coverage	...	...	...	...	...
Condom use	26.0%	56.2%	43.8%	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (2017)	\$0	\$0	\$0	...	...

## HIV TESTING AND TREATMENT CASCADE



	86% [43- >95%]	79% [39- >95%] 100	68% [34- >95%]
All ages			
Children (0-14)	...% [...-...%]	...% [...-...%] ...	...% [...-...%]
Women (15+)	78% [42- >95%]	63% [33- >95%] 30	...% [...-...%]
Men (15+)	>95% [50- >95%]	>95% [50- >95%] 60	...% [...-...%]

## 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 [6-13]
People living with HIV who started TB preventive therapy (2017)	10%
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	<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)	No
— Safe injection rooms available (2019)	No

## EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	810 [510–1200]	640 [<500–1100]	580 [<500–1000]
New HIV infections (0–14)	<500 [<200– <500]	<200 [<100– <500]	<200 [<100– <500]
New HIV infections (women, 15+)	<500 [<500–540]	<500 [<200–530]	<500 [<200–500]
New HIV infections (men, 15+)	<500 [<200– <500]	<200 [<200– <500]	<200 [<100– <500]
HIV incidence per 1000 population	0.28 [0.18–0.42]	0.18 [0.1–0.32]	0.15 [0.08–0.28]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	620 [<500–980]	<500 [<500–830]	<500 [<500–890]
AIDS-related deaths (0–14)	<200 [<200– <500]	<200 [<100– <200]	<200 [<100– <200]
AIDS-related deaths (women, 15+)	<500 [<200– <500]	<500 [<200– <500]	<500 [<200– <500]
AIDS-related deaths (men, 15+)	<200 [<200– <500]	<200 [<100– <500]	<200 [<100– <500]
<b>People living with HIV</b>			
People living with HIV (all ages)	17 000 [13 000–22 000]	18 000 [13 000–23 000]	18 000 [13 000–24 000]
People living with HIV (0–14)	1800 [1300–2400]	1500 [1000–2200]	1300 [930–2000]
People living with HIV (women, 15+)	9300 [7000–12 000]	9800 [7500–13 000]	9800 [7400–13 000]
People living with HIV (men, 15+)	6000 [4500–7900]	6300 [4800–8500]	6400 [4800–8700]
HIV prevalence (15–49)	0.9 [0.7–1.2]	0.8 [0.6–1.1]	0.7 [0.5–0.9]

## 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 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

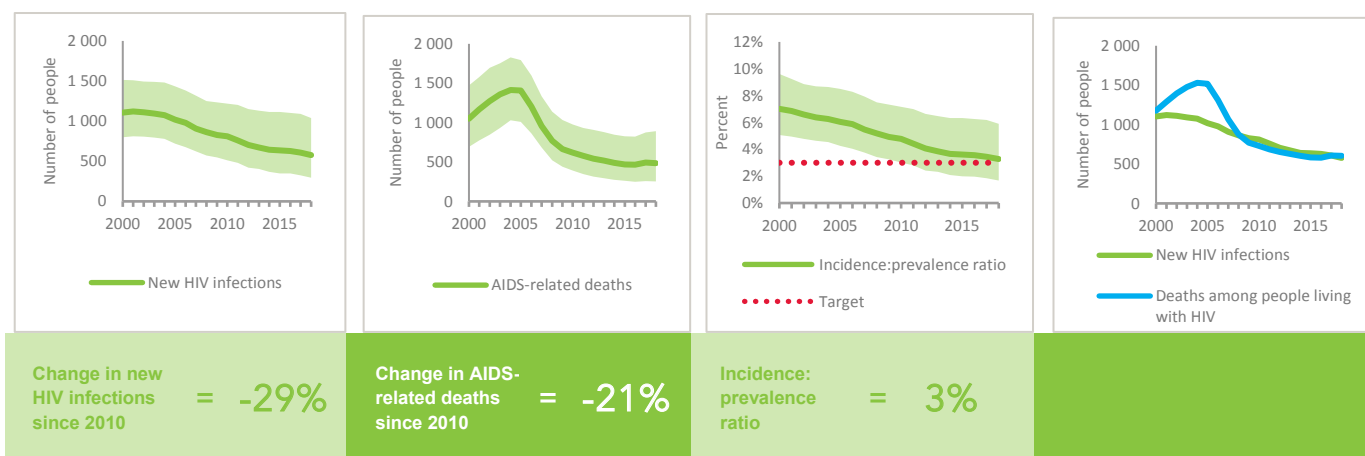
Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

## EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2018	...	...	...	\$4 631 024	...	\$4 631 024



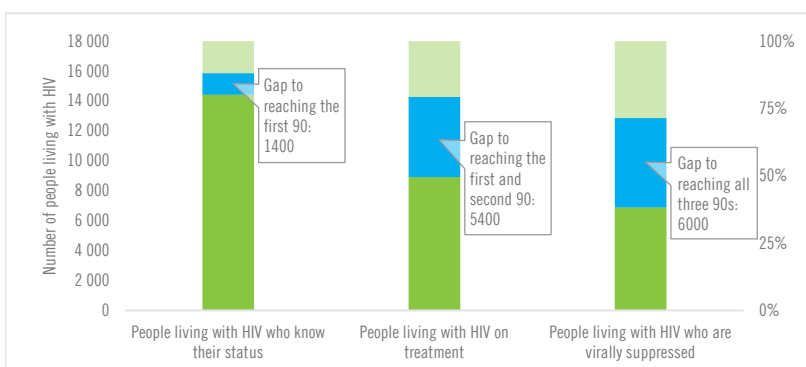
## EPIDEMIC TRANSITION METRICS



## 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	10.4%	...	...	...	1.3%
Know their HIV status	...	...	...	...	...
Antiretroviral therapy coverage	...	...	...	...	...
Condom use	94.5%	...	...	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (0)	...	...	...	...	...

## HIV TESTING AND TREATMENT CASCADE



	82% [61– >95%]	51% [38–68%] 8900	39% [29–53%]
All ages			
Children (0–14)	37% [26–55%]	37% [26–55%] 500	...% [...–...%]
Women (15+)	85% [64– >95%]	53% [40–72%] 5200	...% [...–...%]
Men (15+)	87% [64– >95%]	50% [37–67%] 3200	...% [...–...%]

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	21% [15–29%]	48% [34–69%]
Early infant diagnosis	...% [...–...%]	20.2% [14.1–28.6%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	150 [95–210]
People living with HIV who started TB preventive therapy (2017)	37.7%
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)	...

## EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	11 000 [11 000–12 000]	9800 [9000–11 000]	7800 [6900–8900]
New HIV infections (0–14)	1300 [1000–1700]	850 [710–1200]	850 [510–1200]
New HIV infections (women, 15+)	5900 [5400–6400]	5300 [4800–5900]	4100 [3600–4700]
New HIV infections (men, 15+)	4000 [3700–4500]	3700 [3400–4200]	2800 [2500–3300]
HIV incidence per 1000 population	14.41 [13.56–15.38]	11.48 [10.62–12.69]	8.62 [7.64–9.97]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	3800 [3400–4200]	2600 [2300–3000]	2400 [2000–2900]
AIDS-related deaths (0–14)	1100 [900–1400]	<500 [<500–720]	<500 [<500– <500]
AIDS-related deaths (women, 15+)	1500 [1300–1700]	1300 [1100–1500]	1300 [1000–1500]
AIDS-related deaths (men, 15+)	1200 [1000–1300]	890 [770–1000]	830 [670–990]
<b>People living with HIV</b>			
People living with HIV (all ages)	160 000 [150 000–170 000]	190 000 [180 000–210 000]	210 000 [190 000–220 000]
People living with HIV (0–14)	13 000 [11 000–14 000]	12 000 [11 000–14 000]	11 000 [9400–13 000]
People living with HIV (women, 15+)	93 000 [86 000–100 000]	110 000 [110 000–120 000]	120 000 [110 000–130 000]
People living with HIV (men, 15+)	54 000 [50 000–60 000]	67 000 [62 000–74 000]	72 000 [66 000–80 000]
HIV prevalence (15–49)	27.4 [25.2–29.3]	28.1 [26–29.9]	27.3 [25.1–29]

## 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	Possession of drugs for personal use or drug use and/or consumption are specified as 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 18 years
Spousal consent for married women to access sexual and reproductive health services	Yes
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	2010	2014
	12.5	5.7

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

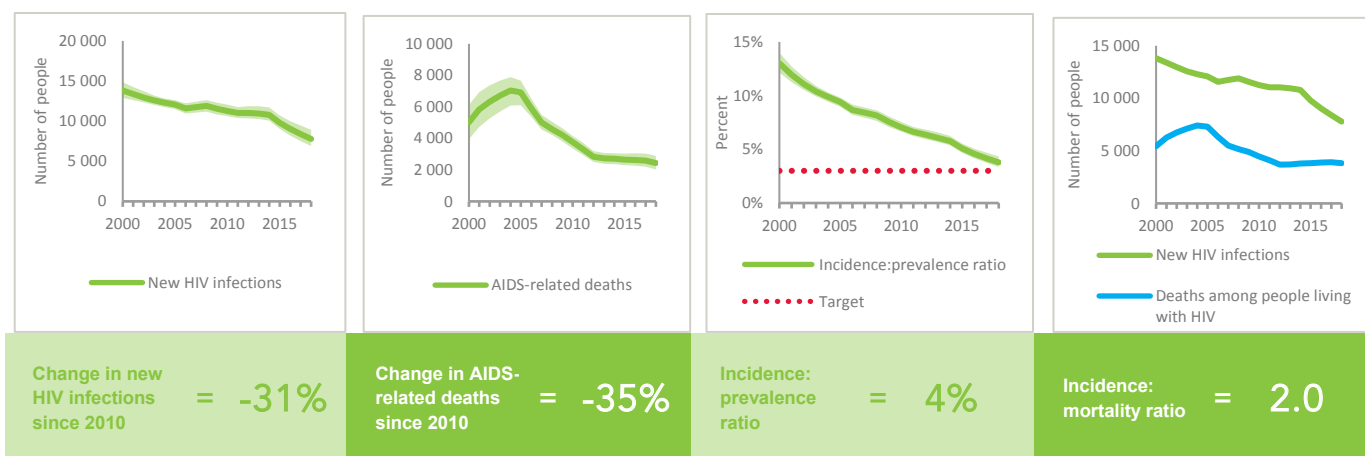
## VIOLENCE

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	...	\$33 155 127	...	...	\$63 776 395	\$96 931 522

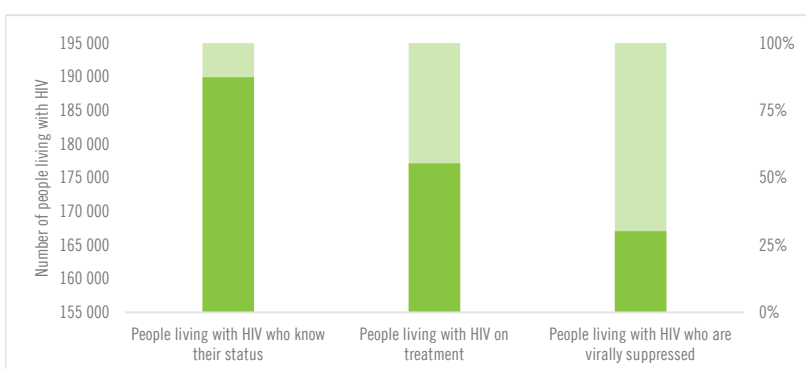
## EPIDEMIC TRANSITION METRICS



## 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	60.5%	12.6%	...	...	34.9%
Know their HIV status	...	...	...	...	...
Antiretroviral therapy coverage	...	...	...	...	...
Condom use	82.9%	57.6%	...	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (0)	...	...	...	...	...

## HIV TESTING AND TREATMENT CASCADE



	92% [86– >95%]	86% [80–94%] 177 000	81% [76–89%]
All ages			
Children (0–14)	78% [65–91%]	76% [63–88%] 8600	67% [56–78%]
Women (15+)	93% [87– >95%]	91% [85– >95%] 111 000	86% [80–93%]
Men (15+)	93% [86– >95%]	79% [73–87%] 57 100	75% [69–82%]

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	73% [61–81%]	79% [66–89%]
Early infant diagnosis	43.0% [38.5–51.3%]	78.0% [69.6–93.9%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	2900 [1900–4200]
People living with HIV who started TB preventive therapy (2017)	1%
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	5%
Knowledge of HIV prevention among young people aged 15–24 years (2014)	
— Women	49.1%
— Men	50.9%
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	...
Voluntary medical male circumcisions performed according to national standards (2018)	14 316
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

## EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	29 000 [18 000–52 000]	24 000 [14 000–42 000]	23 000 [14 000–40 000]
New HIV infections (0–14)	6200 [3600–13 000]	3300 [1900–6900]	2700 [1600–5600]
New HIV infections (women, 15+)	14 000 [8600–26 000]	13 000 [7500–22 000]	12 000 [7300–22 000]
New HIV infections (men, 15+)	8600 [5100–15 000]	7800 [4600–14 000]	7600 [4500–13 000]
HIV incidence per 1000 population	0.39 [0.24–0.69]	0.27 [0.17–0.49]	0.24 [0.14–0.43]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	20 000 [12 000–35 000]	13 000 [7800–22 000]	11 000 [6800–19 000]
AIDS-related deaths (0–14)	5400 [2600–11 000]	2400 [1200–5000]	1800 [870–3800]
AIDS-related deaths (women, 15+)	8600 [5100–15 000]	6400 [3800–11 000]	5500 [3300–9900]
AIDS-related deaths (men, 15+)	5900 [3900–10 000]	3900 [2600–6700]	3700 [2500–6300]
<b>People living with HIV</b>			
People living with HIV (all ages)	630 000 [480 000–830 000]	670 000 [510 000–870 000]	690 000 [530 000–900 000]
People living with HIV (0–14)	58 000 [37 000–87 000]	42 000 [27 000–64 000]	36 000 [23 000–55 000]
People living with HIV (women, 15+)	360 000 [280 000–470 000]	390 000 [300 000–510 000]	410 000 [320 000–540 000]
People living with HIV (men, 15+)	210 000 [160 000–270 000]	230 000 [180 000–300 000]	240 000 [180 000–310 000]
HIV prevalence (15–49)	1.3 [1–1.8]	1.1 [0.8–1.5]	1 [0.7–1.4]

## LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Yes
Criminalization of sex work among consenting adults	Any criminalization or punitive regulation of sex work
Criminalization of same-sex sexual acts	Yes, penalty not specified
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	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

	2011	2016
Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV	59.9	58.5

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

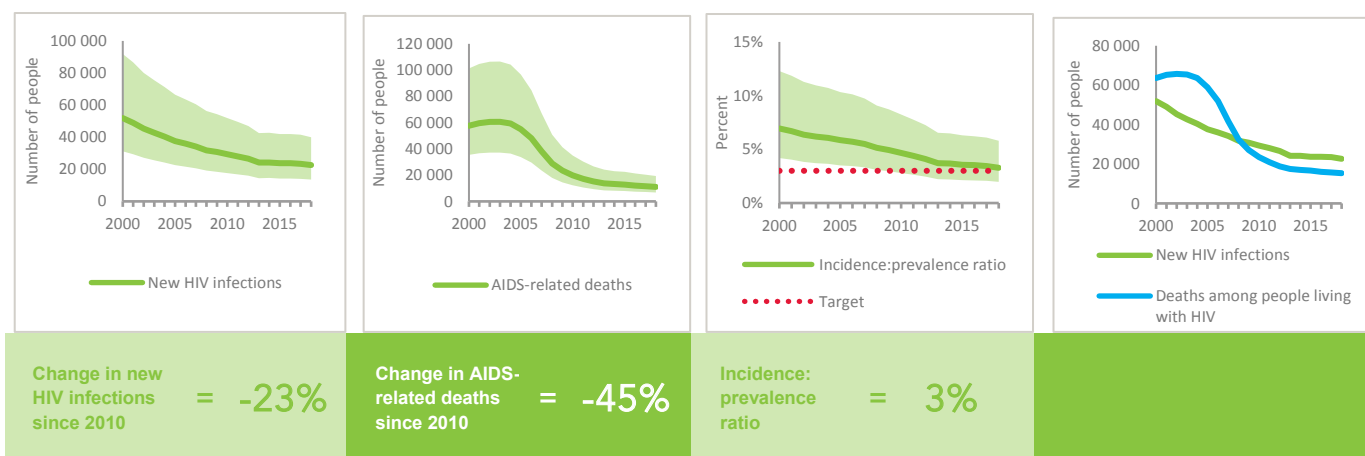
## VIOLENCE

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	19.8
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## EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2016	...	\$54 369 431	\$200 243 640	\$59 670 093	\$37 300 707	\$351 583 871

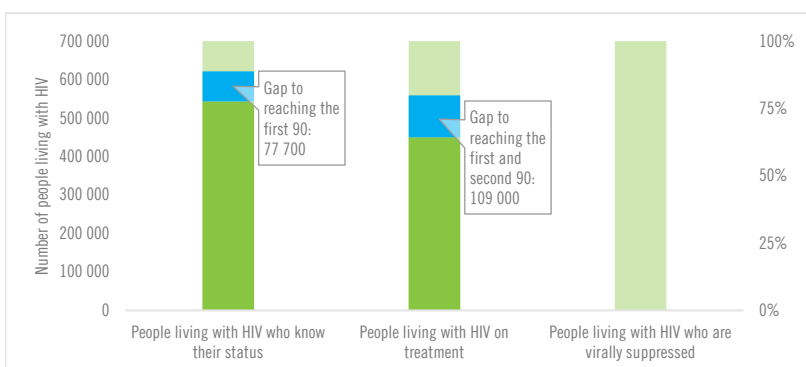
## EPIDEMIC TRANSITION METRICS



## 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	24.3%	...	...	...	...
Know their HIV status	...	...	...	...	...
Antiretroviral therapy coverage	...	...	...	...	...
Condom use	...	...	...	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (2016)	\$35 492	\$0	\$0		

## HIV TESTING AND TREATMENT CASCADE



	79% [60– >95%]	65% [50–85%] 450 000	...% [...–...%]
All ages			
Children (0–14)	59% [38–90%]	59% [38–90%] 21 500	...% [...–...%]
Women (15+)	79% [61– >95%]	65% [50–85%] 269 000	...% [...–...%]
Men (15+)	81% [62– >95%]	66% [51–86%] 160 000	...% [...–...%]

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	28% [19–38%]	92% [63– >95%]
Early infant diagnosis	52.5% [37.7–76.7%]	60.8% [43.7–88.8%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	12 000 [8600 –17 000]
People living with HIV who started TB preventive therapy (2017)	45.5%
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 (2016)	
— Women	24.3%
— Men	39.1%
Condom use at last sex with a non-marital, non-cohabiting partner (2016)	
— Women	21.3%
— Men	54%
Women aged 15–49 years who have their demand for family planning satisfied by modern methods (2016)	61.4%
Men aged 15–49 years who are circumcised (2016)	91%
Voluntary medical male circumcisions performed according to national standards (2018)	23 009
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

## EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	66 000 [38 000–110 000]	51 000 [30 000–88 000]	46 000 [27 000–78 000]
New HIV infections (0–14)	18 000 [10 000–30 000]	9 100 [5 200–15 000]	7 600 [4 400–13 000]
New HIV infections (women, 15+)	30 000 [17 000–52 000]	26 000 [15 000–46 000]	24 000 [14 000–41 000]
New HIV infections (men, 15+)	18 000 [10 000–33 000]	16 000 [9 000–29 000]	14 000 [8 200–26 000]
HIV incidence per 1000 population	1.83 [1.07–3.13]	1.24 [0.73–2.12]	1.02 [0.6–1.75]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	56 000 [41 000–86 000]	38 000 [27 000–57 000]	25 000 [18 000–38 000]
AIDS-related deaths (0–14)	16 000 [8 900–26 000]	8 300 [4 700–14 000]	5 200 [3 000–8 800]
AIDS-related deaths (women, 15+)	25 000 [18 000–39 000]	13 000 [9 400–20 000]	9 100 [6 700–14 000]
AIDS-related deaths (men, 15+)	15 000 [11 000–24 000]	16 000 [12 000–25 000]	11 000 [7 700–17 000]
<b>People living with HIV</b>			
People living with HIV (all ages)	1 500 000 [1 200 000–1 800 000]	1 500 000 [1 300 000–1 800 000]	1 600 000 [1 300 000–1 900 000]
People living with HIV (0–14)	210 000 [160 000–270 000]	150 000 [120 000–190 000]	120 000 [95 000–160 000]
People living with HIV (women, 15+)	780 000 [660 000–930 000]	860 000 [730 000–1 000 000]	910 000 [770 000–1 100 000]
People living with HIV (men, 15+)	490 000 [410 000–590 000]	520 000 [440 000–620 000]	530 000 [450 000–640 000]
HIV prevalence (15–49)	6 [5.1–7.1]	5.2 [4.4–6.2]	4.7 [4–5.7]

## LAWS AND POLICIES

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

	2009	2014
Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV	27.9	11.9

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

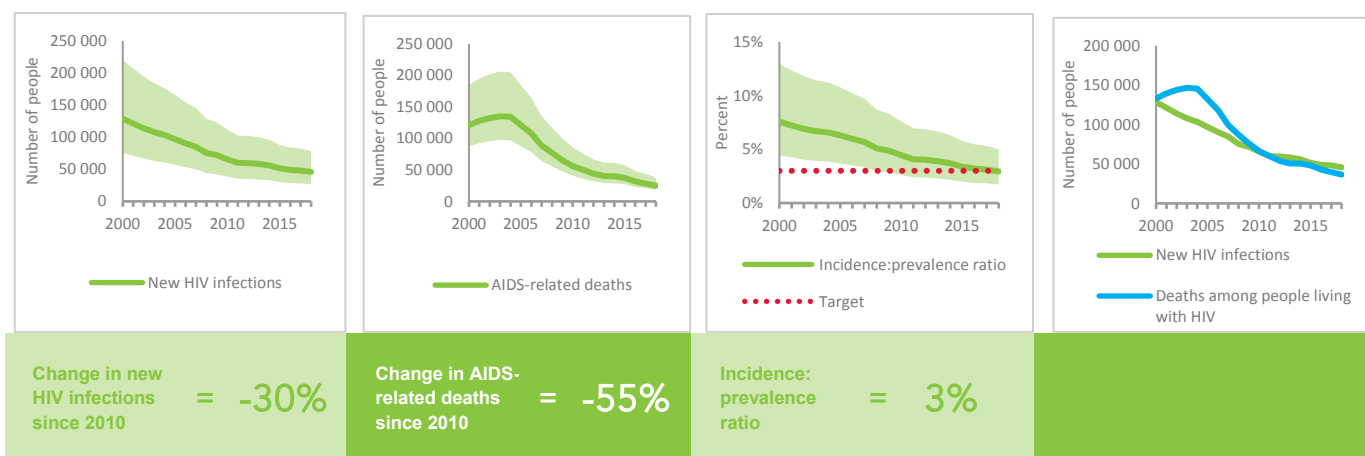
## VIOLENCE

	2009	2014
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	31.7	25.5

## EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2017	\$91 422 168	\$342 351 186	\$615 277 224	\$121 902 916	\$3 931 091	\$1 174 884 586

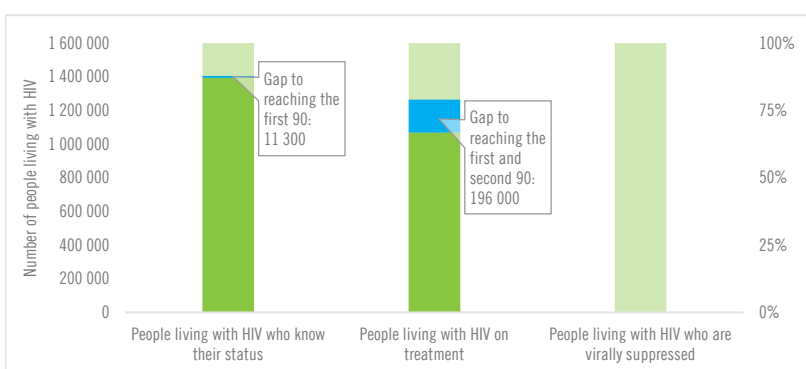
## EPIDEMIC TRANSITION METRICS



## 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	95.5%	...	94.0%	...	...
Antiretroviral therapy coverage	73.0%	62.8%	67.6%	...	...
Condom use	92.0%	...	75.9%	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (2017)	\$4 559 192	\$2 609 663	\$5 231 623		

## HIV TESTING AND TREATMENT CASCADE



	89% [76– >95%]	68% [58–82%] 1 068 000	...% [...–...%]
All ages			
Children (0–14)	61% [47–78%]	61% [47–78%] 74 300	54% [42–70%]
Women (15+)	94% [79– >95%]	75% [64–90%] 681 000	...% [...–...%]
Men (15+)	88% [75– >95%]	59% [50–71%] 313 000	...% [...–...%]

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	50% [39–63%]	91% [70– >95%]
Early infant diagnosis	67.1% [53.1–87.2%]	67.3% [53.3–87.4%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	45 000 [27 000–68 000]
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 (2014)	
— Women	56.6%
— Men	63.7%
Condom use at last sex with a non-marital, non-cohabiting partner (2014)	
— Women	40%
— Men	44.5%
Women aged 15–49 years who have their demand for family planning satisfied by modern methods (2014)	70.8%
Men aged 15–49 years who are circumcised (2014)	92.6%
Voluntary medical male circumcisions performed according to national standards (2018)	286 899
People who received PrEP at least once during the reporting period (2018)	31 313
Harm reduction	
— Use of sterile injecting equipment at last injection (2017)	88.4%
— Needles and syringes distributed per person who injects (2018)	137
— Coverage of opioid substitution therapy (2018)	26.4%
— Naloxone available (2019)	No
— Safe injection rooms available (2019)	Yes

## EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	20 000 [18 000–21 000]	17 000 [15 000–18 000]	13 000 [11 000–15 000]
New HIV infections (0–14)	2100 [1600–2500]	1300 [900–1800]	1300 [780–1800]
New HIV infections (women, 15+)	10 000 [8700–11 000]	8600 [7300–9700]	6600 [5500–7800]
New HIV infections (men, 15+)	7600 [6700–8800]	6700 [5700–7900]	5200 [4200–6300]
HIV incidence per 1000 population	12.36 [10.93–13.48]	10.07 [8.77–11.3]	7.8 [6.69–9.15]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	7200 [5600–10 000]	8200 [6600–11 000]	6100 [5000–7600]
AIDS-related deaths (0–14)	1200 [850–1400]	990 [690–1300]	620 [<500–870]
AIDS-related deaths (women, 15+)	3100 [2300–4300]	3300 [2500–4400]	2600 [2100–3200]
AIDS-related deaths (men, 15+)	2900 [2300–4700]	4000 [3200–6100]	2800 [2300–3900]
<b>People living with HIV</b>			
People living with HIV (all ages)	300 000 [280 000–320 000]	330 000 [310 000–350 000]	340 000 [320 000–360 000]
People living with HIV (0–14)	15 000 [13 000–17 000]	13 000 [11 000–15 000]	12 000 [9500–14 000]
People living with HIV (women, 15+)	170 000 [160 000–180 000]	190 000 [180 000–200 000]	190 000 [180 000–210 000]
People living with HIV (men, 15+)	120 000 [110 000–130 000]	130 000 [120 000–140 000]	130 000 [120 000–150 000]
HIV prevalence (15–49)	24.1 [22.7–24.9]	24.5 [22.3–25.5]	23.6 [21.2–24.7]

## LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Yes
Criminalization of sex work among consenting adults	Sex work is not subject to punitive regulations or is not criminalized
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	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	No

## STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV	<b>2009</b>	<b>2014</b>
	22.8	13.9
Percentage of people living with HIV denied health services because of their HIV status in the last 12 months		<b>2013</b>
		4
Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent		<b>2013</b>
		3.7

## VIOLENCE

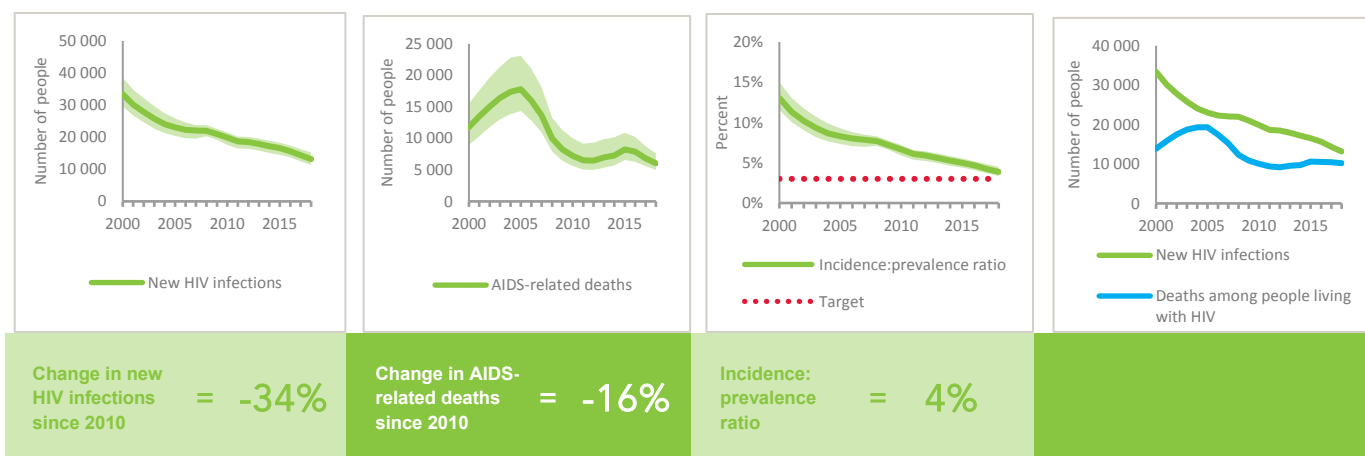
Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

## EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2017	...	\$20 847 761	\$63 885 192	\$25 882 601	\$3 995 002	\$114 610 556



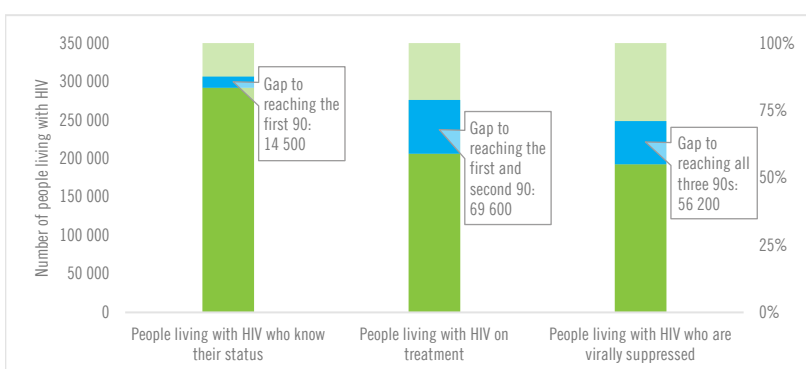
## EPIDEMIC TRANSITION METRICS



## 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	71.9%	32.9%	...	...	31.4%
Know their HIV status	63.8%	82.2%	...	...	...
Antiretroviral therapy coverage	...	...	...	...	80.1%
Condom use	62.3%	46.4%	...	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	8.0%	8.0%	...	...	...
Expenditures (2014)	\$0	\$0	\$0	...	...

## HIV TESTING AND TREATMENT CASCADE



	86% [80–92%]	61% [57–65%] 206 000	57% [53–60%]
All ages			
Children (0–14)	82% [64–95%]	70% [55–81%] 8500	62% [48–71%]
Women (15+)	89% [83–95%]	65% [61–69%] 125 000	61% [57–65%]
Men (15+)	82% [75–89%]	54% [49–59%] 72 400	49% [45–54%]

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	68% [55–79%]	77% [59–89%]
Early infant diagnosis	92.5% [79.8–>95%]	69.5% [60.0–90.4%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	11 000 [6700 –15 000]
People living with HIV who started TB preventive therapy (2017)	...
Cervical cancer screening of women living with HIV (survey data) (2014)	29%
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	10.3%
Knowledge of HIV prevention among young people aged 15–24 years (2014)	
— Women	37.6%
— Men	30.9%
Condom use at last sex with a non-marital, non-cohabiting partner (2014)	
— Women	76%
— Men	76.6%
Women aged 15–49 years who have their demand for family planning satisfied by modern methods (2014)	78.9%
Men aged 15–49 years who are circumcised (2014)	72.3%
Voluntary medical male circumcisions performed according to national standards (2018)	26 448
People who received PrEP at least once during the reporting period (2018)	7279
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

## EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	2100 [1700–2600]	4000 [2900–5600]	6100 [3800–11 000]
New HIV infections (0–14)	<500 [<500– <500]	<500 [<500– <500]	<500 [<500–730]
New HIV infections (women, 15+)	540 [<500–690]	1100 [770–1600]	1700 [1000–3100]
New HIV infections (men, 15+)	1300 [1000–1600]	2600 [1900–3700]	4000 [2500–7200]
HIV incidence per 1000 population	0.1 [0.08–0.12]	0.17 [0.12–0.24]	0.24 [0.15–0.43]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	1400 [1000–1700]	1600 [1200–2000]	1700 [1200–2300]
AIDS-related deaths (0–14)	<200 [<200– <500]	<500 [<200– <500]	<500 [<500– <500]
AIDS-related deaths (women, 15+)	<500 [<500– <500]	<500 [<500– <500]	<500 [<500–510]
AIDS-related deaths (men, 15+)	850 [650–1100]	980 [750–1200]	1000 [760–1500]
<b>People living with HIV</b>			
People living with HIV (all ages)	21 000 [18 000–24 000]	28 000 [23 000–35 000]	39 000 [30 000–55 000]
People living with HIV (0–14)	1400 [1200–1700]	1700 [1400–2000]	1900 [1600–2500]
People living with HIV (women, 15+)	5900 [5100–7000]	8300 [6900–10 000]	12 000 [9000–16 000]
People living with HIV (men, 15+)	14 000 [12 000–16 000]	18 000 [15 000–23 000]	25 000 [19 000–37 000]
HIV prevalence (15–49)	0.2 [0.2–0.2]	0.2 [0.2–0.3]	0.3 [0.2–0.4]

## LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Yes
Criminalization of sex work among consenting adults	Any criminalization or punitive regulation of sex work
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	Possession of drugs for personal use or drug use and/or consumption are specified as 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 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

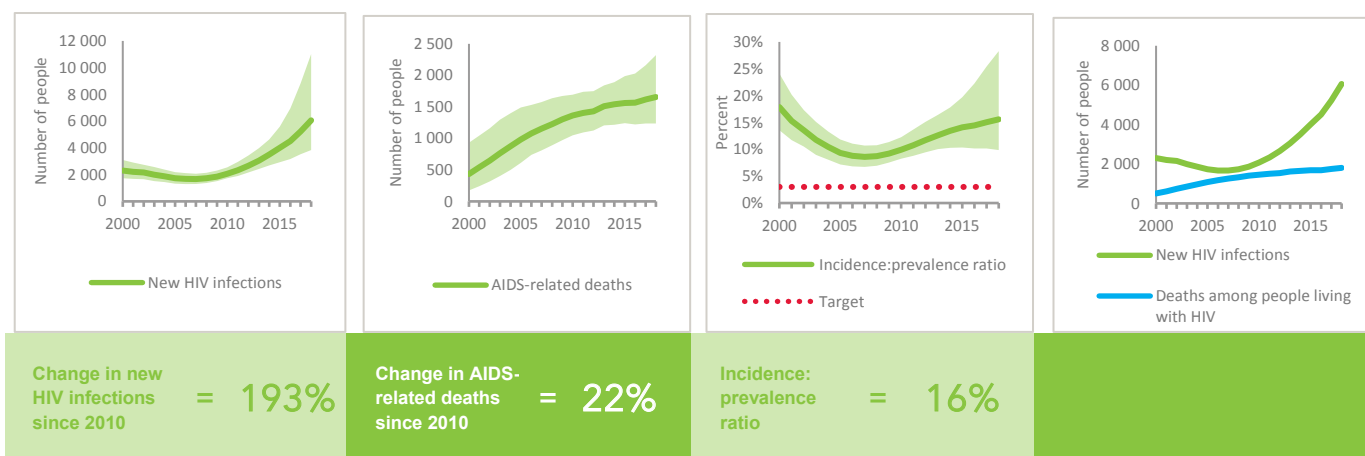
## VIOLENCE

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: 2017	\$2901	\$289 872	...	\$4 405 954	\$1 067 746	\$11 981 599

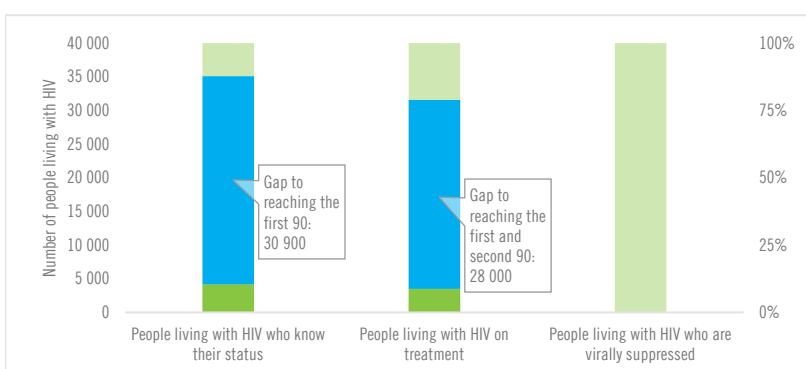
## EPIDEMIC TRANSITION METRICS



## 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	5.5%	14.9%	8.5%	...	0.3%
Know their HIV status	40.6%	19.3%	20.6%	...	...
Antiretroviral therapy coverage	...	...	...	...	...
Condom use	62.8%	57.2%	41.8%	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (2017)	\$198 919	\$105 376	\$14 599	...	...

## HIV TESTING AND TREATMENT CASCADE



	11% [8–15%]	9% [7–13%] 3500	...% [...–...%]
All ages			
Children (0–14)	5% [4–6%]	5% [4–6%] 90	...% [...–...%]
Women (15+)	21% [16–30%]	16% [12–22%] 1800	...% [...–...%]
Men (15+)	7% [5–9%]	6% [5–9%] 1600	...% [...–...%]

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	3% [2–3%]	25% [19–36%]
Early infant diagnosis	...% [...–...%]	...% [...–...%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	1500 [690–2700]
People living with HIV who started TB preventive therapy (2017)	8.9%
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	22.9%
— Men	25.5%
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 (2016)	68.4%
— Needles and syringes distributed per person who injects (2017)	8
— Coverage of opioid substitution therapy	...
— Naloxone available (2019)	No
— Safe injection rooms available (2019)	No

## EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	55 000 [51 000–59 000]	44 000 [40 000–48 000]	38 000 [33 000–45 000]
New HIV infections (0–14)	15 000 [11 000–18 000]	6 400 [3 800–8 600]	3 500 [2 900–5 100]
New HIV infections (women, 15+)	23 000 [21 000–25 000]	21 000 [19 000–24 000]	20 000 [17 000–23 000]
New HIV infections (men, 15+)	18 000 [16 000–20 000]	16 000 [15 000–19 000]	15 000 [13 000–18 000]
HIV incidence per 1000 population	4.26 [3.94–4.59]	2.89 [2.63–3.19]	2.28 [1.97–2.68]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	29 000 [25 000–33 000]	14 000 [12 000–18 000]	13 000 [11 000–16 000]
AIDS-related deaths (0–14)	11 000 [8 100–13 000]	4 300 [2 800–5 700]	2 600 [1 800–3 500]
AIDS-related deaths (women, 15+)	9 800 [8 000–12 000]	4 700 [3 800–5 800]	5 000 [4 100–6 000]
AIDS-related deaths (men, 15+)	8 700 [7 300–10 000]	5 500 [4 400–6 800]	5 500 [4 500–6 700]
<b>People living with HIV</b>			
People living with HIV (all ages)	870 000 [770 000–960 000]	990 000 [870 000–1 100 000]	1 000 000 [940 000–1 100 000]
People living with HIV (0–14)	110 000 [90 000–120 000]	90 000 [69 000–100 000]	74 000 [57 000–89 000]
People living with HIV (women, 15+)	450 000 [400 000–500 000]	540 000 [480 000–580 000]	580 000 [520 000–620 000]
People living with HIV (men, 15+)	310 000 [270 000–340 000]	360 000 [320 000–390 000]	390 000 [350 000–430 000]
HIV prevalence (15–49)	10.6 [9.3–11.7]	9.8 [8.7–10.7]	9.2 [8–10]

## 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	Sex work is not subject to punitive regulations or is not criminalized
Criminalization of same-sex sexual acts	Yes, imprisonment (14 years - life)
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	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	<b>2010</b>	<b>2016</b>
	16.5	17.6
Percentage of people living with HIV denied health services because of their HIV status in the last 12 months	<b>2016</b>	
		1.7
Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent	<b>2016</b>	
		6.1

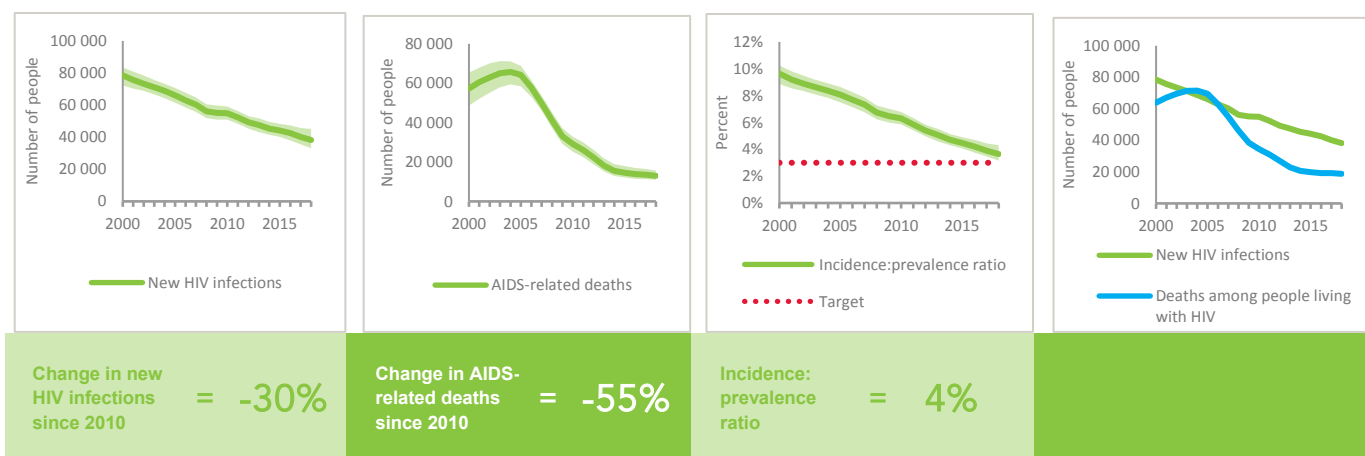
## VIOLENCE

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	<b>2010</b>	<b>2016</b>
	22.1	24.3

## EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2017	...	\$5 594 173	\$114 934 352	\$89 842 549	\$8 070 474	\$218 441 548

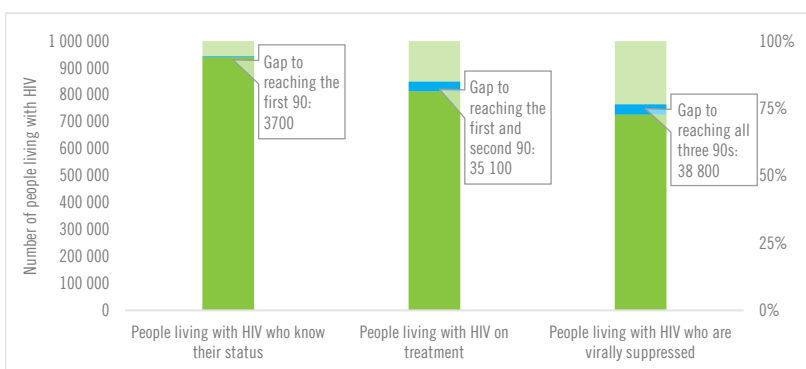
## EPIDEMIC TRANSITION METRICS



## 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	...	...	...	...	15 000
HIV prevalence	55.0%	7.0%	...	...	16.0%
Know their HIV status	67.3%	64.0%	...	36.0%	...
Antiretroviral therapy coverage	91.0%	...	...	...	100%
Condom use	65.0%	44.0%	...	...	...
Coverage of HIV prevention programmes	68.0%	65.0%	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (2017)	\$1 351 953	\$875 449	\$0	...	...

## HIV TESTING AND TREATMENT CASCADE



	90% [80- >95%]	78% [70-84%] 814 000	69% [62-75%]
All ages			
Children (0-14)	61% [47-73%]	61% [47-73%] 45 100	35% [27-42%]
Women (15+)	94% [84- >95%]	86% [78-92%] 502 000	79% [71-85%]
Men (15+)	89% [79- >95%]	68% [61-74%] 267 000	61% [54-66%]

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	26% [20-30%]	>95% [80- >95%]
Early infant diagnosis	...% [...-...%]	>95% [84.1- >95%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	12 000 [7800 -17 000]
People living with HIV who started TB preventive therapy (2017)	...
Cervical cancer screening of women living with HIV (survey data) (2016)	18.7%
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	2.7%
Knowledge of HIV prevention among young people aged 15-24 years (2016)	
— Women	41.1%
— Men	44.3%
Condom use at last sex with a non-marital, non-cohabiting partner (2016)	
— Women	49.9%
— Men	76.3%
Women aged 15-49 years who have their demand for family planning satisfied by modern methods (2016)	73.9%
Men aged 15-49 years who are circumcised (2016)	27.8%
Voluntary medical male circumcisions performed according to national standards (2018)	199 399
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

## EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	980 [720–1200]	850 [540–1200]	910 [560–1300]
New HIV infections (0–14)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
New HIV infections (women, 15+)	<500 [<500– <500]	<500 [<200– <500]	<500 [<200– <500]
New HIV infections (men, 15+)	680 [<500–890]	590 [<500–830]	630 [<500–940]
HIV incidence per 1000 population	0.78 [0.58–0.99]	0.66 [0.42–0.91]	0.7 [0.43–1.01]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	<500 [<500–680]	<500 [<500–570]	610 [<500–820]
AIDS-related deaths (0–14)	<100 [<100– <100]	<100 [<100– <100]	<100 [<100– <100]
AIDS-related deaths (women, 15+)	<200 [<200– <500]	<200 [<200– <500]	<200 [<200– <500]
AIDS-related deaths (men, 15+)	<500 [<500– <500]	<500 [<200– <500]	<500 [<500–570]
<b>People living with HIV</b>			
People living with HIV (all ages)	11 000 [9500–12 000]	12 000 [10 000–14 000]	13 000 [10 000–15 000]
People living with HIV (0–14)	<200 [<100– <200]	<200 [<100– <200]	<100 [<100– <200]
People living with HIV (women, 15+)	3200 [2800–3600]	3600 [3100–4100]	3800 [3100–4500]
People living with HIV (men, 15+)	7200 [6300–8400]	8200 [7000–9700]	8600 [7000–11 000]
HIV prevalence (15–49)	1.3 [1.2–1.4]	1.3 [1.2–1.4]	1.3 [1.1–1.5]

## 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, penalty not specified
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	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	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 **2013**  
28.9

Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent **2013**  
27.9

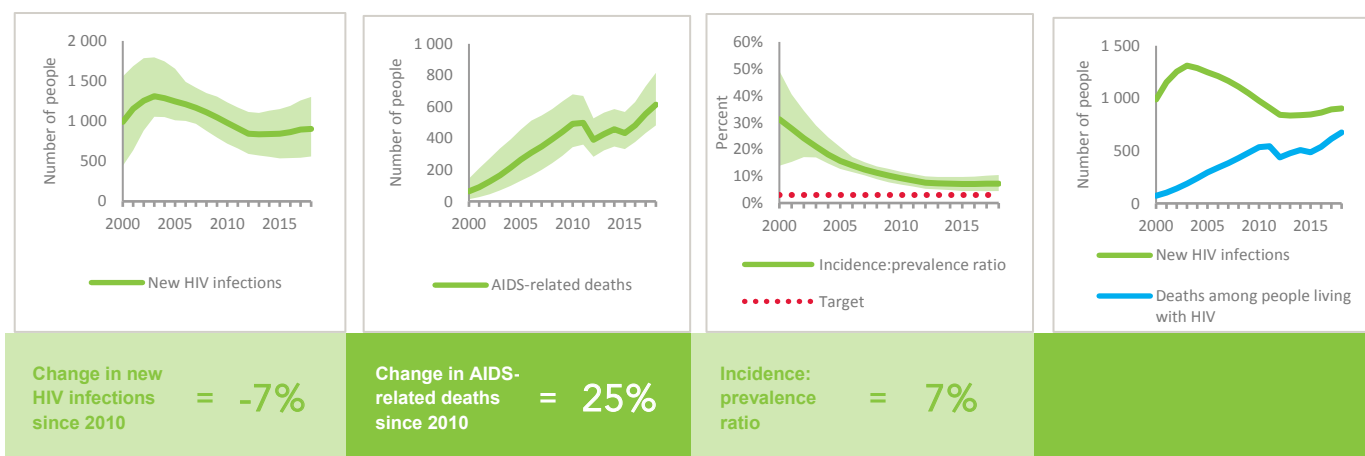
## VIOLENCE

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	...	\$5 628 025	...	\$1 921 622	...	\$7 549 647

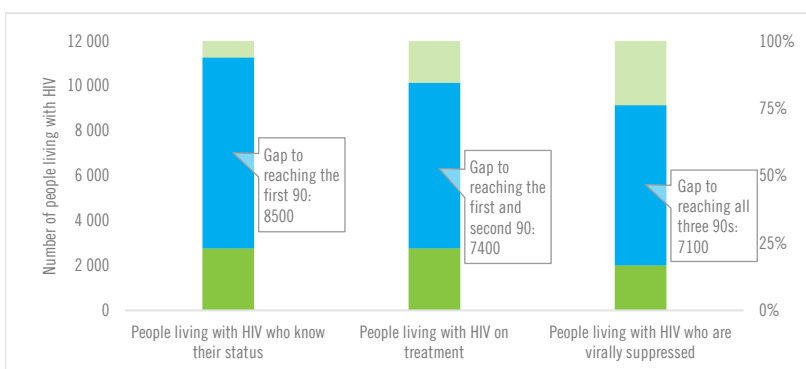
## EPIDEMIC TRANSITION METRICS



## 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	15.0%	17.2%	32.3%	28.4%	17.3%
Know their HIV status	78.9%	86.6%	71.1%	...	...
Antiretroviral therapy coverage	...	...	51.7%	...	79.1%
Condom use	67.2%	53.1%	45.4%	45.4%	...
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	22% [18–26%]	22% [18–26%] 2800
Children (0–14)	45% [40–50%]	45% [40–50%] 40
Women (15+)	19% [16–23%]	19% [16–23%] 720
Men (15+)	23% [19–28%]	23% [19–28%] 2000

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	69% [60–79%]	>95% [>95–>95%]
Early infant diagnosis	...% [...–...%]	75.3% [60.4–>95%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	27 [18–39]
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)	4%

## HIV PREVENTION

Adults aged 15+ years with unsuppressed viral load	1%
Knowledge of HIV prevention among young people aged 15–24 years (2014)	
— Women	4.4%
— Men	30%
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)	3
Harm reduction	
— Use of sterile injecting equipment at last injection (2017)	92.2%
— Needles and syringes distributed per person who injects (2018)	89
— Coverage of opioid substitution therapy (2018)	53.6%
— Naloxone available (2019)	No
— Safe injection rooms available (2019)	No



### EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	160 000 [97 000–240 000]	150 000 [93 000–230 000]	150 000 [90 000–220 000]
New HIV infections (0–14)	28 000 [17 000–47 000]	17 000 [11 000–29 000]	16 000 [10 000–27 000]
New HIV infections (women, 15+)	75 000 [47 000–120 000]	76 000 [48 000–120 000]	73 000 [46 000–110 000]
New HIV infections (men, 15+)	53 000 [32 000–84 000]	57 000 [34 000–89 000]	55 000 [34 000–87 000]
HIV incidence per 1000 population	7.01 [4.26–11.09]	5.91 [3.59–9.34]	5.25 [3.2–8.32]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	64 000 [46 000–87 000]	59 000 [42 000–80 000]	54 000 [39 000–73 000]
AIDS-related deaths (0–14)	16 000 [9600–26 000]	9800 [6000–16 000]	8700 [5300–14 000]
AIDS-related deaths (women, 15+)	28 000 [19 000–39 000]	25 000 [17 000–35 000]	21 000 [14 000–30 000]
AIDS-related deaths (men, 15+)	21 000 [15 000–28 000]	24 000 [18 000–33 000]	24 000 [18 000–32 000]
<b>People living with HIV</b>			
People living with HIV (all ages)	1 600 000 [1 300 000–1 900 000]	2 000 000 [1 600 000–2 400 000]	2 200 000 [1 700 000–2 700 000]
People living with HIV (0–14)	130 000 [100 000–180 000]	140 000 [110 000–190 000]	140 000 [110 000–190 000]
People living with HIV (women, 15+)	880 000 [710 000–1 100 000]	1 100 000 [890 000–1 300 000]	1 200 000 [1 000 000–1 500 000]
People living with HIV (men, 15+)	570 000 [450 000–710 000]	710 000 [560 000–890 000]	800 000 [630 000–1 000 000]
HIV prevalence (15–49)	12 [9.5–14.9]	12.5 [9.9–15.5]	12.6 [10–15.7]

### LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Yes
Criminalization of sex work among consenting adults	Sex work is not subject to punitive regulations or is not criminalized
Criminalization of same-sex sexual acts	No specific legislation
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	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	No

### STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV	2011	2015
	28	20.7

Percentage of people living with HIV denied health services because of their HIV status in the last 12 months	2013
	3.4

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

### VIOLENCE

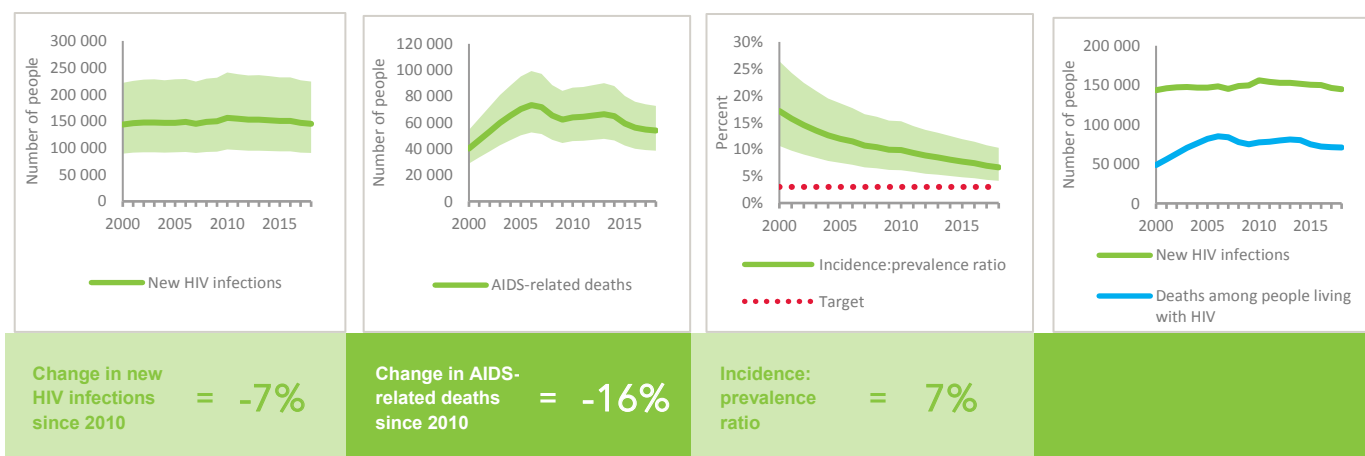
Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months	2011	2015
	27.7	15.5

### EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2016	...	\$8 501 812	\$206 158 981	\$84 130 028	\$30 730 657	\$329 521 478



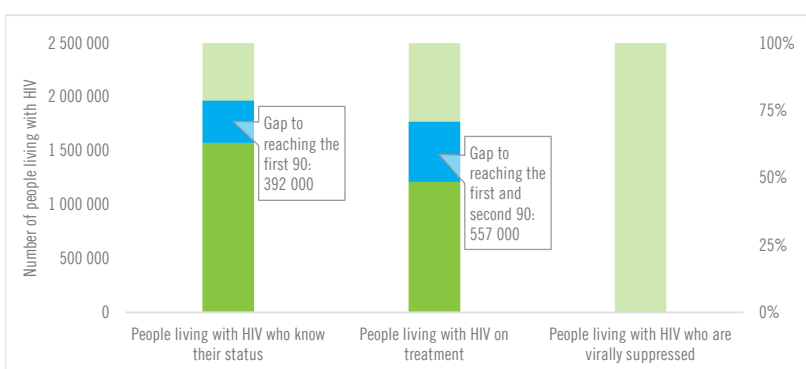
## EPIDEMIC TRANSITION METRICS



## 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	...	...	...	...	24.0%
Know their HIV status	...	...	...	...	...
Antiretroviral therapy coverage	...	...	...	...	...
Condom use	...	...	...	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (2016)	\$3 244 170	\$479 004	\$17 746		

## HIV TESTING AND TREATMENT CASCADE



	72% [58–89%]	56% [44–68%] 1 213 000	...% [...–...%]
All ages			
Children (0–14)	60% [45–81%]	60% [45–81%] 86 900	...% [...–...%]
Women (15+)	80% [65–>95%]	64% [51–77%] 791 000	...% [...–...%]
Men (15+)	61% [48–77%]	42% [33–53%] 334 000	...% [...–...%]

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	23% [17–31%]	>95% [73–>95%]
Early infant diagnosis	36.1% [27.3–50.2%]	66.4% [50.2–92.3%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	66 000 [42 000–95 000]
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	30.8%
— Men	30.2%
Condom use at last sex with a non-marital, non-cohabiting partner (2015)	
— Women	42%
— Men	46.5%
Women aged 15–49 years who have their demand for family planning satisfied by modern methods (2015)	55.5%
Men aged 15–49 years who are circumcised	...
Voluntary medical male circumcisions performed according to national standards (2018)	311 891
People who received PrEP at least once during the reporting period (2018)	1934
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)	Yes
— Safe injection rooms available (2019)	No

### EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	9900 [8700–11 000]	7600 [6600–8600]	6100 [5200–7000]
New HIV infections (0–14)	1400 [900–1700]	1100 [630–1400]	<500 [<500–610]
New HIV infections (women, 15+)	4900 [4200–5400]	3800 [3200–4300]	3300 [2700–3800]
New HIV infections (men, 15+)	3600 [3000–4300]	2800 [2300–3300]	2500 [2000–3000]
HIV incidence per 1000 population	5.42 [4.72–5.92]	3.77 [3.2–4.31]	2.82 [2.34–3.27]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	3500 [3000–3900]	2500 [2200–3000]	2700 [2300–3200]
AIDS-related deaths (0–14)	770 [540–990]	520 [<500–780]	<500 [<200– <500]
AIDS-related deaths (women, 15+)	1500 [1300–1800]	1100 [900–1200]	1400 [1100–1700]
AIDS-related deaths (men, 15+)	1200 [980–1400]	930 [780–1100]	990 [830–1200]
<b>People living with HIV</b>			
People living with HIV (all ages)	170 000 [160 000–180 000]	190 000 [180 000–210 000]	200 000 [190 000–220 000]
People living with HIV (0–14)	13 000 [11 000–15 000]	13 000 [10 000–15 000]	11 000 [8700–13 000]
People living with HIV (women, 15+)	96 000 [87 000–100 000]	110 000 [100 000–120 000]	110 000 [110 000–120 000]
People living with HIV (men, 15+)	63 000 [57 000–68 000]	72 000 [66 000–77 000]	76 000 [69 000–82 000]
HIV prevalence (15–49)	13.4 [12.2–14.2]	12.6 [11.4–13.3]	11.8 [10.6–12.7]

### 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	...
Criminalization of same-sex sexual acts	Yes, penalty not specified
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	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	No

### STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV	2007	2013
	23.1	13

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

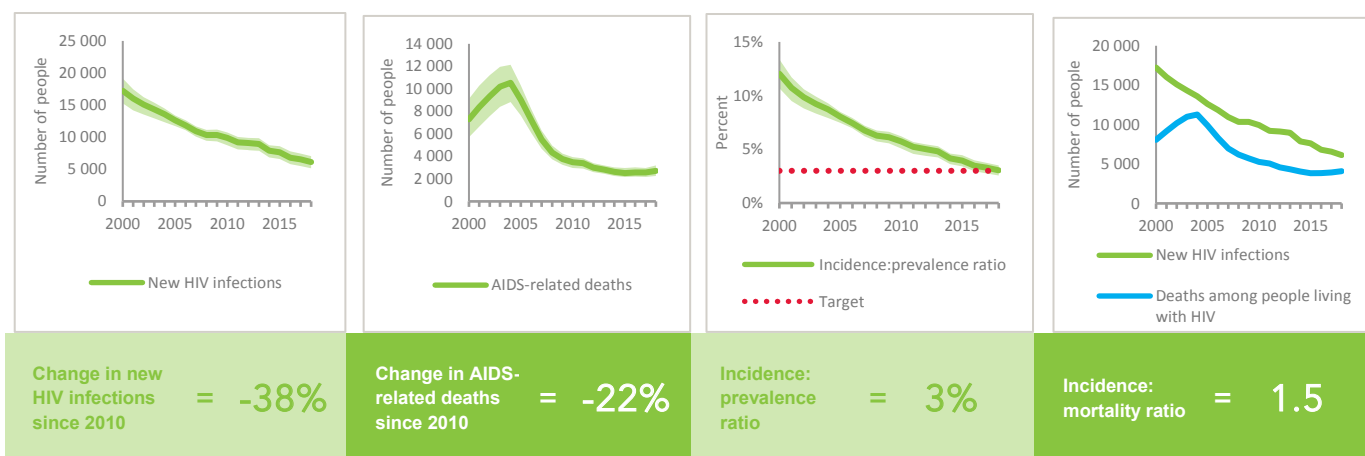
### VIOLENCE

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	20.2
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### EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2017	\$74 920 120	\$124 497 810	\$61 448 180	\$20 839 710	\$1 122 120	\$282 827 940

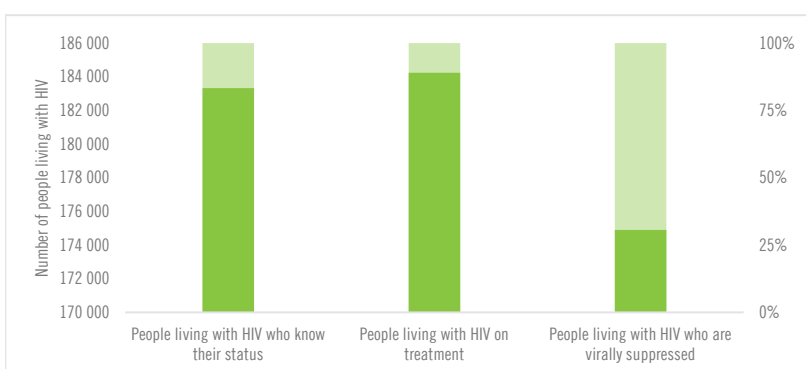
## EPIDEMIC TRANSITION METRICS



## 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	40.7%	...	...	...	...
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



Category	Percentage	Number of people
All ages	91% [84- >95%]	184 000
Children (0-14)	78% [61-89%]	8 600
Women (15+)	95% [88- >95%]	117 000
Men (15+)	87% [80-95%]	58 200

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	67% [55-77%]	>95% [92- >95%]
Early infant diagnosis	43.0% [37.4-52.2%]	...% [...-...%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	3900 [2500-5500]
People living with HIV who started TB preventive therapy (2017)	14.8%
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	1.5%
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	...
Voluntary medical male circumcisions performed according to national standards (2018)	34 942
People who received PrEP at least once during the reporting period (2017)	190
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

## EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	9000 [7600–10 000]	5000 [3700–6300]	3600 [2400–4800]
New HIV infections (0–14)	2200 [1400–2700]	510 [<500–840]	<500 [<500–700]
New HIV infections (women, 15+)	4000 [3200–4600]	2600 [1900–3300]	1900 [1300–2500]
New HIV infections (men, 15+)	2800 [2300–3600]	1800 [1400–2500]	1300 [910–1800]
HIV incidence per 1000 population	0.91 [0.76–1.04]	0.43 [0.33–0.55]	0.29 [0.2–0.39]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	5700 [4700–7100]	3400 [2700–4200]	2900 [2400–3500]
AIDS-related deaths (0–14)	1500 [1100–1900]	560 [<500–830]	<500 [<200–540]
AIDS-related deaths (women, 15+)	2200 [1700–2800]	1500 [1200–1800]	1300 [1100–1700]
AIDS-related deaths (men, 15+)	2100 [1700–2700]	1400 [1100–1800]	1200 [1000–1500]
<b>People living with HIV</b>			
People living with HIV (all ages)	220 000 [200 000–250 000]	220 000 [200 000–250 000]	220 000 [200 000–250 000]
People living with HIV (0–14)	21 000 [18 000–24 000]	15 000 [12 000–19 000]	12 000 [8900–15 000]
People living with HIV (women, 15+)	120 000 [110 000–140 000]	130 000 [110 000–140 000]	130 000 [120 000–150 000]
People living with HIV (men, 15+)	78 000 [68 000–89 000]	81 000 [70 000–91 000]	81 000 [70 000–90 000]
HIV prevalence (15–49)	3.3 [2.8–3.7]	2.9 [2.4–3.2]	2.5 [2.1–2.8]

## 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	No

## STIGMA AND DISCRIMINATION

	2010	2015
Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV	14.4	9.9

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

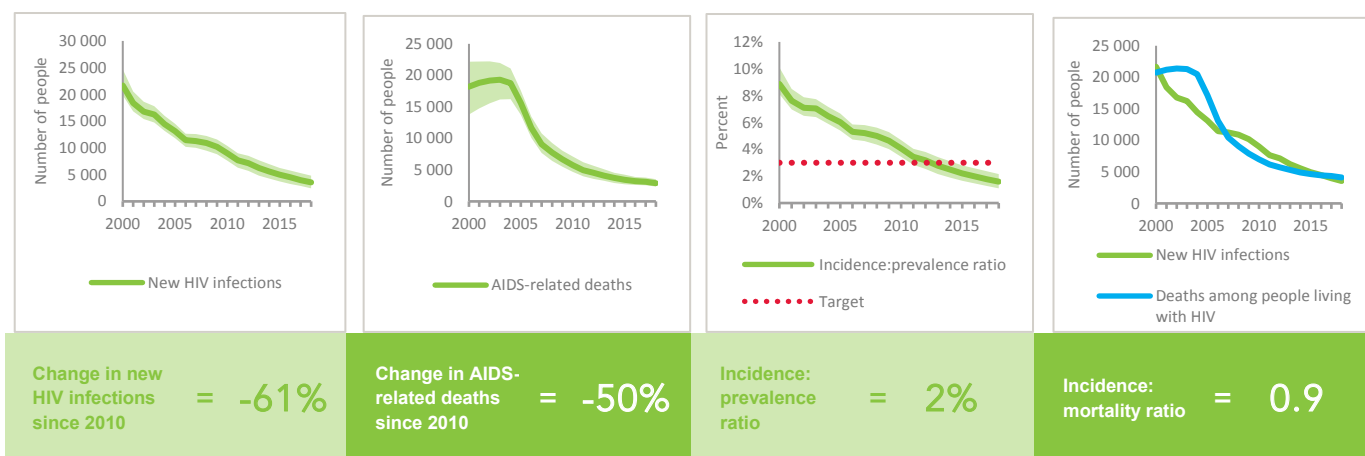
## VIOLENCE

	2010	2015
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	44.3	20.7

## EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2015	...	\$19 877 495	\$97 029 539	\$95 605 601	\$5 077 320	\$217 589 955

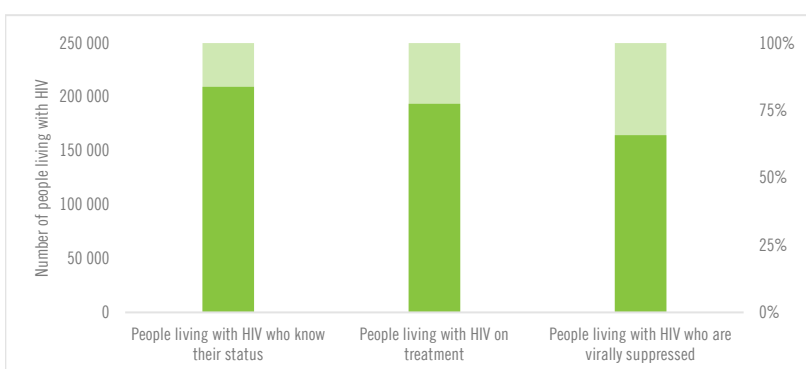
## EPIDEMIC TRANSITION METRICS



## 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	45.8%	4.0%	...	...	...
Know their HIV status	95.1%	83.0%	...	...	...
Antiretroviral therapy coverage	36.3%	...	...	...	...
Condom use	84.3%	71.4%	...	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (2015)	\$218 310	\$240 246	\$0		

## HIV TESTING AND TREATMENT CASCADE



<b>All ages</b>	94% [83- >95%]	87% [76- >95%] 194 000	74% [65-82%]
<b>Children (0-14)</b>	63% [47-80%]	63% [47-80%] 7500	43% [32-55%]
<b>Women (15+)</b>	>95% [85- >95%]	91% [80- >95%] 119 000	79% [70-88%]
<b>Men (15+)</b>	>95% [83- >95%]	84% [73-94%] 67 600	70% [62-79%]

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	58% [44-69%]	>95% [79- >95%]
Early infant diagnosis	60.3% [50.7-79.4%]	82.5% [71.0- >95%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	1500 [980-2200]
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	0.7%
Knowledge of HIV prevention among young people aged 15-24 years (2015)	
— Women	64.6%
— Men	64.3%
Condom use at last sex with a non-marital, non-cohabiting partner (2015)	
— Women	47.5%
— Men	65.9%
Women aged 15-49 years who have their demand for family planning satisfied by modern methods (2015)	63.9%
Men aged 15-49 years who are circumcised (2015)	29.6%
Voluntary medical male circumcisions performed according to national standards (2018)	327 904
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
<b>New HIV infections</b>			
New HIV infections (all ages)	390 000 [370 000–430 000]	300 000 [270 000–330 000]	240 000 [210 000–270 000]
New HIV infections (0–14)	28 000 [21 000–46 000]	15 000 [12 000–26 000]	14 000 [11 000–35 000]
New HIV infections (women, 15+)	220 000 [200 000–240 000]	170 000 [150 000–190 000]	140 000 [120 000–160 000]
New HIV infections (men, 15+)	150 000 [130 000–180 000]	110 000 [99 000–130 000]	86 000 [75 000–100 000]
HIV incidence per 1000 population	9.08 [8.55–9.81]	6.4 [5.9–7.09]	4.94 [4.43–5.51]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	140 000 [110 000–170 000]	75 000 [58 000–96 000]	71 000 [52 000–91 000]
AIDS-related deaths (0–14)	18 000 [11 000–28 000]	7 100 [4 900–10 000]	4 400 [1 900–15 000]
AIDS-related deaths (women, 15+)	69 000 [53 000–84 000]	37 000 [27 000–48 000]	33 000 [23 000–45 000]
AIDS-related deaths (men, 15+)	56 000 [45 000–75 000]	31 000 [24 000–44 000]	33 000 [26 000–46 000]
<b>People living with HIV</b>			
People living with HIV (all ages)	6 100 000 [5 500 000–6 600 000]	7 200 000 [6 600 000–7 700 000]	7 700 000 [7 100 000–8 300 000]
People living with HIV (0–14)	320 000 [250 000–370 000]	290 000 [220 000–370 000]	260 000 [200 000–360 000]
People living with HIV (women, 15+)	3 600 000 [3 200 000–3 900 000]	4 300 000 [4 000 000–4 600 000]	4 700 000 [4 300 000–5 000 000]
People living with HIV (men, 15+)	2 200 000 [2 000 000–2 500 000]	2 600 000 [2 400 000–2 900 000]	2 800 000 [2 500 000–3 100 000]
HIV prevalence (15–49)	18.9 [16.8–20.7]	20.3 [17.6–22.3]	20.4 [17.4–22.5]

## 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	Laws penalizing same-sex sexual acts have been decriminalized or never existed
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	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	No

## STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV	<b>2017</b>
	12.6
Percentage of people living with HIV denied health services because of their HIV status in the last 12 months	<b>2014</b>
	3.2
Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent	

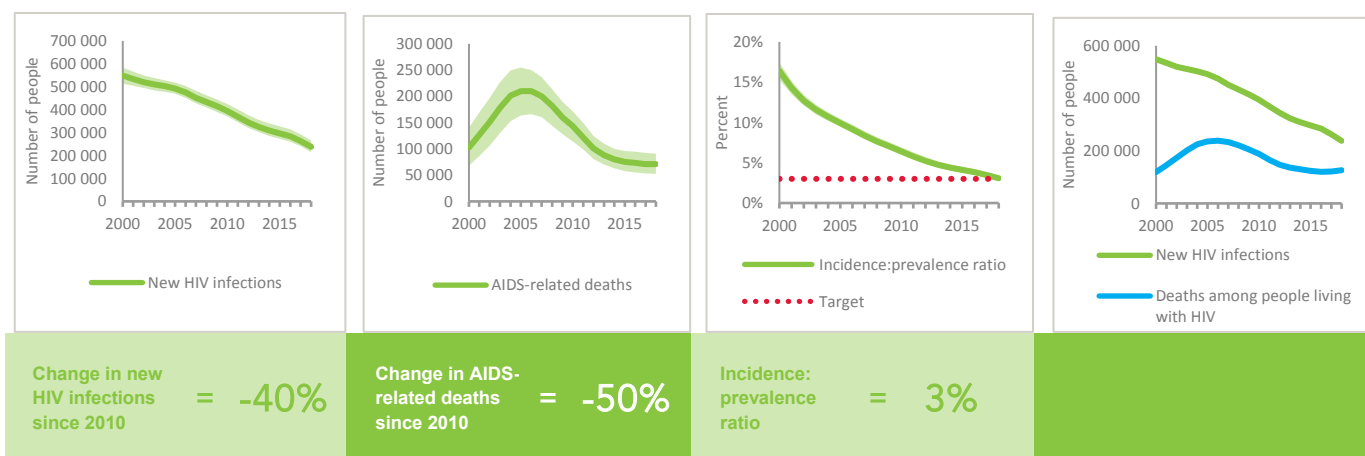
## VIOLENCE

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	<b>2012</b>	<b>2017</b>
	5.1	30.3

## EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2017	\$0	\$1 545 826 721	\$472 582 374	\$54 863 457	\$10 070 103	\$2 021 895 609

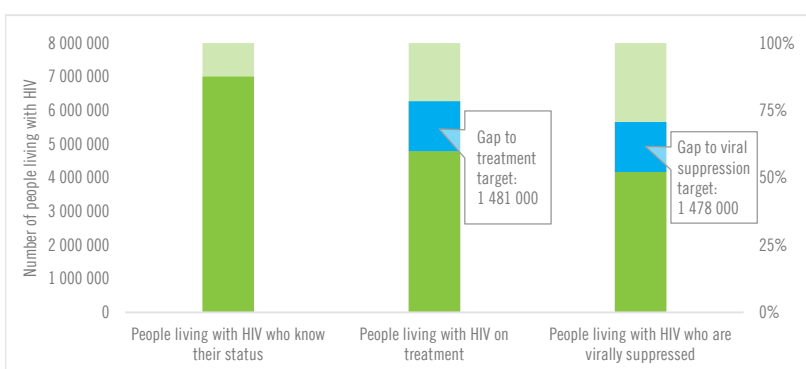
## EPIDEMIC TRANSITION METRICS



## 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	57.7%	18.1%	21.8%	...	8.9%
Know their HIV status	...	...	...	...	...
Antiretroviral therapy coverage	23.6%	28.1%	...	...	98.8%
Condom use	86.1%	97.9%	...	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (2017)	\$10 491 195	\$2 093 180	\$4 796 756		

## HIV TESTING AND TREATMENT CASCADE



	90% [83– >95%]	62% [57–66%] 4 788 000	54% [49–58%]
All ages			
Children (0–14)	76% [59– >95%]	63% [49–87%] 163 000	46% [36–64%]
Women (15+)	93% [86– >95%]	65% [60–70%] 3 057 000	58% [54–62%]
Men (15+)	88% [79– >95%]	56% [50–60%] 1 568 000	47% [42–51%]

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	65% [48–79%]	87% [63– >95%]
Early infant diagnosis	65.7% [54.2–88.1%]	88.7% [73.3– >95%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	193 000 [137 000–258 000]
People living with HIV who started TB preventive therapy (2017)	52.9%
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	8.5%
Knowledge of HIV prevention among young people aged 15–24 years (2016)	
— Women	46.1%
— Men	45.6%
Condom use at last sex with a non-marital, non-cohabiting partner (2016)	
— Women	61.4%
— Men	73.1%
Women aged 15–49 years who have their demand for family planning satisfied by modern methods (2016)	79.7%
Men aged 15–49 years who are circumcised	...
Voluntary medical male circumcisions performed according to national standards (2018)	572 442
People who received PrEP at least once during the reporting period (2018)	8184
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
<b>New HIV infections</b>			
New HIV infections (all ages)	14 000 [11 000–18 000]	17 000 [12 000–22 000]	19 000 [13 000–27 000]
New HIV infections (0–14)	2900 [2100–3800]	2600 [1700–3600]	2700 [1600–3900]
New HIV infections (women, 15+)	6600 [4800–8100]	8200 [5600–11 000]	9500 [6200–13 000]
New HIV infections (men, 15+)	4900 [3600–6200]	6100 [4100–8200]	7100 [4700–10 000]
HIV incidence per 1000 population	1.51 [1.13–1.89]	1.49 [1.01–1.96]	1.56 [1.03–2.18]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	9800 [7300–13 000]	9800 [7200–12 000]	9900 [6900–13 000]
AIDS-related deaths (0–14)	2000 [1600–2600]	2000 [1400–2600]	1900 [1200–2600]
AIDS-related deaths (women, 15+)	4500 [3200–5900]	4200 [3000–5400]	4400 [3000–5700]
AIDS-related deaths (men, 15+)	3300 [2400–4400]	3700 [2700–4800]	3500 [2500–4700]
<b>People living with HIV</b>			
People living with HIV (all ages)	140 000 [110 000–170 000]	170 000 [130 000–210 000]	190 000 [140 000–240 000]
People living with HIV (0–14)	15 000 [11 000–19 000]	16 000 [12 000–21 000]	16 000 [12 000–21 000]
People living with HIV (women, 15+)	73 000 [58 000–89 000]	90 000 [69 000–110 000]	100 000 [77 000–130 000]
People living with HIV (men, 15+)	53 000 [40 000–64 000]	64 000 [47 000–78 000]	73 000 [52 000–92 000]
HIV prevalence (15–49)	2.4 [1.9–3]	2.4 [1.8–3]	2.5 [1.9–3.1]

## LAWS AND POLICIES

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

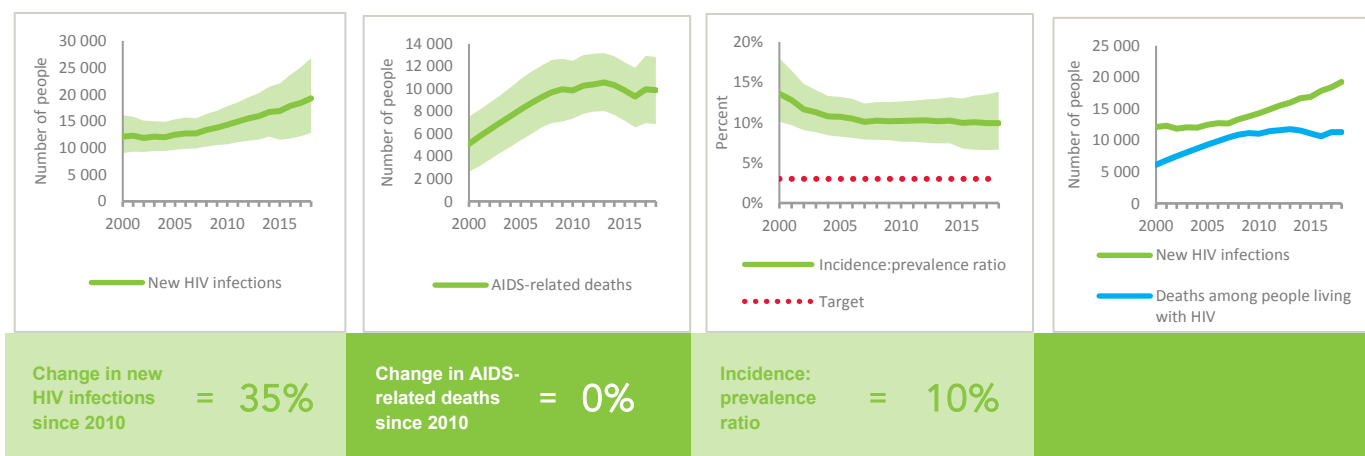
Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months

## EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2012	...	\$2 302 076	\$12 287 166	\$3 746 098	\$2 473 180	\$24 154 614



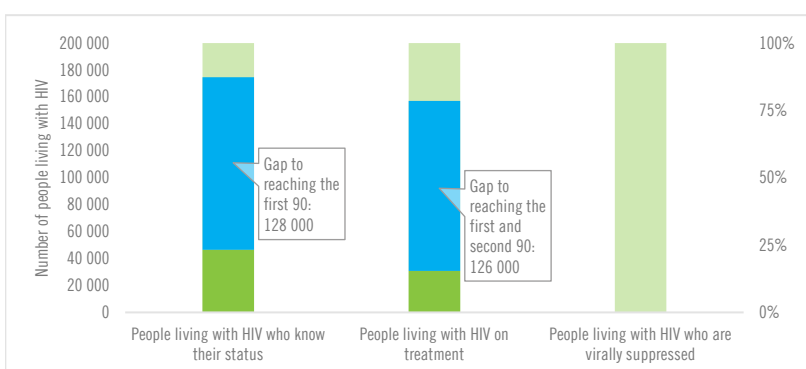
## EPIDEMIC TRANSITION METRICS



## 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	39.8%	...	...	...	...
Know their HIV status	57.1%	...	...	...	...
Antiretroviral therapy coverage	75.3%	...	...	...	...
Condom use	60.1%	...	...	...	...
Coverage of HIV prevention programmes	16.3%	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (0)	...	...	...	...	...

## HIV TESTING AND TREATMENT CASCADE



	2010	2018
All ages	24% [18–30%]	16% [12–20%] 30 700
Children (0–14)	9% [7–12%]	9% [7–12%] 1500
Women (15+)	28% [21–35%]	19% [14–23%] 19 500
Men (15+)	22% [16–27%]	13% [10–17%] 9800

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	9% [6–11%]	56% [41–74%]
Early infant diagnosis	...% [...–...%]	5.7% [4.3–7.8%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	2300 [1400–3300]
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	...
Voluntary medical male circumcisions performed according to national standards (2018)	1147
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

## EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	92 000 [82 000–110 000]	65 000 [56 000–80 000]	53 000 [44 000–67 000]
New HIV infections (0–14)	22 000 [18 000–25 000]	10 000 [8600–11 000]	7500 [5100–11 000]
New HIV infections (women, 15+)	41 000 [35 000–48 000]	31 000 [27 000–39 000]	26 000 [21 000–34 000]
New HIV infections (men, 15+)	30 000 [26 000–37 000]	23 000 [20 000–31 000]	19 000 [16 000–27 000]
HIV incidence per 1000 population	3.21 [2.82–3.76]	1.9 [1.63–2.34]	1.4 [1.15–1.82]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	56 000 [48 000–66 000]	30 000 [25 000–38 000]	23 000 [19 000–31 000]
AIDS-related deaths (0–14)	16 000 [13 000–18 000]	8300 [6800–9700]	5500 [4100–7300]
AIDS-related deaths (women, 15+)	24 000 [20 000–29 000]	8600 [6300–12 000]	7000 [5700–9800]
AIDS-related deaths (men, 15+)	16 000 [13 000–20 000]	13 000 [11 000–18 000]	11 000 [8300–15 000]
<b>People living with HIV</b>			
People living with HIV (all ages)	1 200 000 [1 100 000–1 300 000]	1 300 000 [1 200 000–1 400 000]	1 400 000 [1 300 000–1 500 000]
People living with HIV (0–14)	140 000 [120 000–150 000]	120 000 [100 000–130 000]	100 000 [88 000–110 000]
People living with HIV (women, 15+)	620 000 [590 000–670 000]	720 000 [680 000–780 000]	770 000 [720 000–840 000]
People living with HIV (men, 15+)	430 000 [400 000–480 000]	490 000 [450 000–540 000]	510 000 [470 000–570 000]
HIV prevalence (15–49)	6.8 [6.5–7.1]	6.2 [5.9–6.5]	5.7 [5.4–6.1]

## LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Yes
Criminalization of sex work among consenting adults	Any criminalization or punitive regulation of sex work
Criminalization of same-sex sexual acts	Yes, penalty not specified
Drug use or possession for personal use is an offence	...
Criminalization of transgender people	Criminalized
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	No

## STIGMA AND DISCRIMINATION

Percentage of women and men aged 15–49 years who report discriminatory attitudes towards people living with HIV	<b>2011</b>	<b>2016</b>
	26.2	33.2
Percentage of people living with HIV denied health services because of their HIV status in the last 12 months		<b>2013</b>
		4.2
Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent		<b>2013</b>
		7

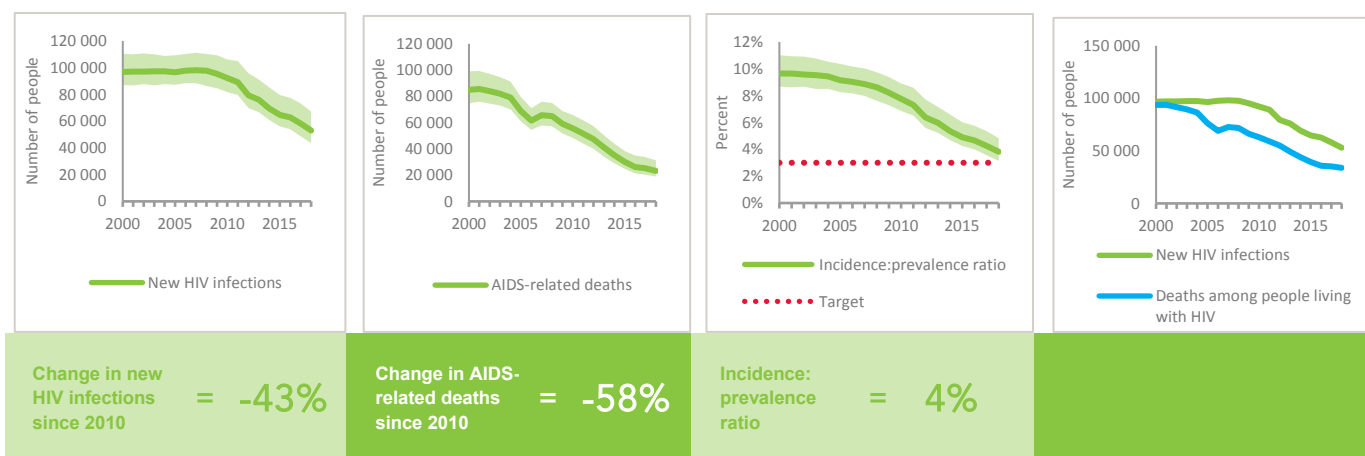
## VIOLENCE

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	<b>2011</b>	<b>2016</b>
	33.3	29.9

## EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2008	...	\$38 693 159	...	\$2 295 076	\$246 205 640	\$296 649 946

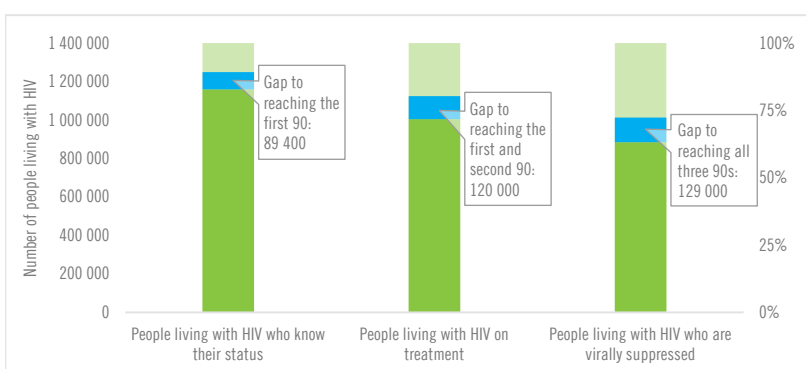
## EPIDEMIC TRANSITION METRICS



## 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	85.0%	...	26.7%	...	15.0%
Know their HIV status	100%	85.0%	100%	84.0%	...
Antiretroviral therapy coverage	...	66.0%	78.0%	13.0%	49.0%
Condom use	69.4%	...	4.0%	...	...
Coverage of HIV prevention programmes	...	...	8.0%	...	...
Avoidance of health care because of stigma and discrimination	...	...	64.0%	...	...
Expenditures (0)	...	...	...	...	...

## HIV TESTING AND TREATMENT CASCADE



Group	Know their status	On treatment	Virally suppressed
All ages	84% [78–90%]	72% [68–78%]	64% [60–69%]
Children (0–14)	66% [57–74%]	66% [57–74%]	46% [39–51%]
Women (15+)	85% [80–92%]	79% [74–86%]	72% [67–77%]
Men (15+)	84% [77–95%]	63% [58–71%]	55% [51–62%]

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	29% [24–33%]	93% [73– >95%]
Early infant diagnosis	10.1% [8.8–12.0%]	44.8% [39.4–56.6%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	34 000 [22 000–49 000]
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	2.1%
Knowledge of HIV prevention among young people aged 15–24 years (2016)	
— Women	45.7%
— Men	44.8%
Condom use at last sex with a non-marital, non-cohabiting partner (2016)	
— Women	38.3%
— Men	62.4%
Women aged 15–49 years who have their demand for family planning satisfied by modern methods (2016)	53.8%
Men aged 15–49 years who are circumcised	...
Voluntary medical male circumcisions performed according to national standards (2018)	619 082
People who received PrEP at least once during the reporting period (2018)	7526
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

## EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	83 000 [77 000–90 000]	81 000 [72 000–90 000]	72 000 [61 000–83 000]
New HIV infections (0–14)	9 800 [8 200–12 000]	12 000 [8 800–17 000]	8 600 [6 500–13 000]
New HIV infections (women, 15+)	42 000 [38 000–46 000]	39 000 [35 000–44 000]	36 000 [31 000–42 000]
New HIV infections (men, 15+)	31 000 [28 000–36 000]	30 000 [26 000–35 000]	27 000 [23 000–33 000]
HIV incidence per 1000 population	2.08 [1.93–2.26]	1.74 [1.53–1.93]	1.41 [1.19–1.61]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	48 000 [42 000–53 000]	29 000 [25 000–34 000]	24 000 [20 000–29 000]
AIDS-related deaths (0–14)	11 000 [8 900–13 000]	7 100 [5 000–9 600]	5 400 [3 200–8 900]
AIDS-related deaths (women, 15+)	21 000 [18 000–23 000]	9 100 [7 600–11 000]	7 600 [6 300–9 100]
AIDS-related deaths (men, 15+)	16 000 [13 000–19 000]	13 000 [11 000–16 000]	11 000 [9 300–14 000]
<b>People living with HIV</b>			
People living with HIV (all ages)	1 300 000 [1 100 000–1 400 000]	1 400 000 [1 300 000–1 600 000]	1 600 000 [1 400 000–1 700 000]
People living with HIV (0–14)	120 000 [97 000–130 000]	98 000 [80 000–120 000]	92 000 [72 000–110 000]
People living with HIV (women, 15+)	670 000 [580 000–750 000]	800 000 [720 000–880 000]	880 000 [800 000–970 000]
People living with HIV (men, 15+)	470 000 [410 000–530 000]	540 000 [470 000–600 000]	580 000 [520 000–640 000]
HIV prevalence (15–49)	5 [4.3–5.7]	4.8 [4.2–5.3]	4.6 [4–5.1]

## LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Yes
Criminalization of sex work among consenting adults	Any criminalization or punitive regulation of sex work
Criminalization of same-sex sexual acts	Yes, imprisonment (14 years - life)
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	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 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 **2013**  
8.7

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

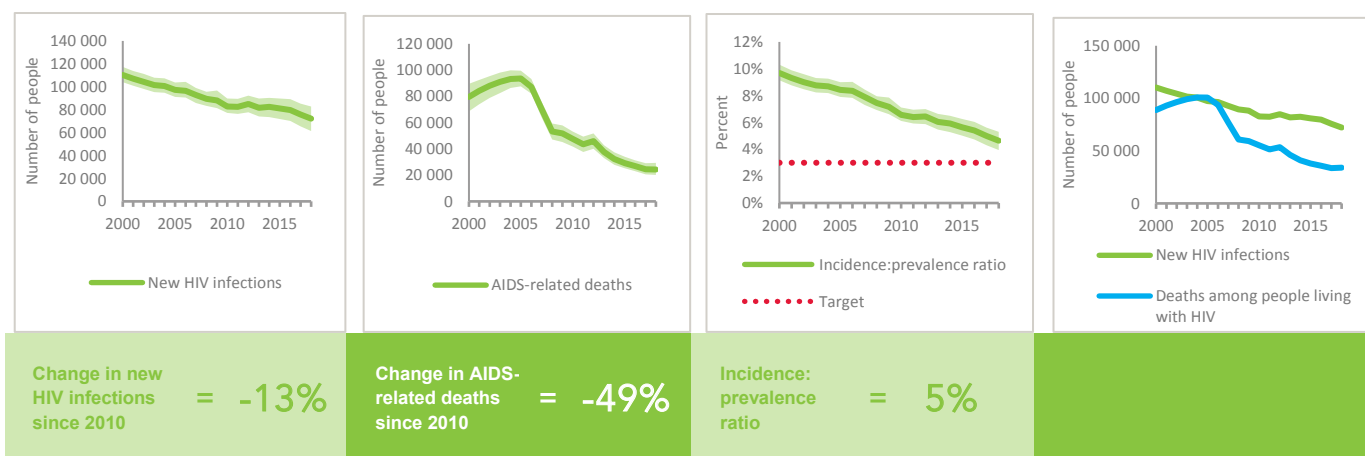
## VIOLENCE

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 **2010** **2016**  
35.3 29.6

## EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2005	\$12 417 597	\$108 120 344	...	\$37 752 100	\$108 081 035	\$266 371 077

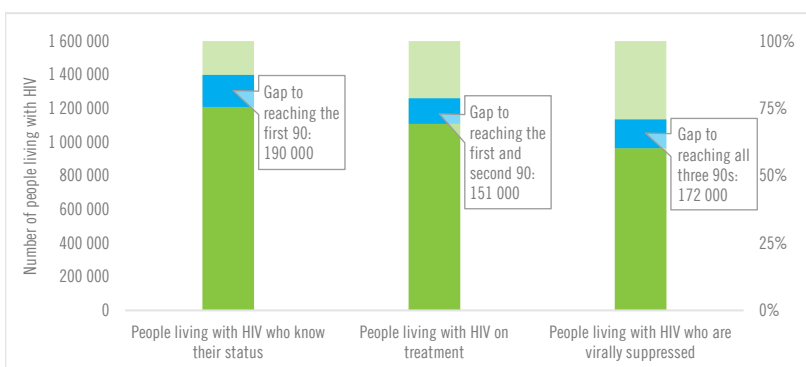
## EPIDEMIC TRANSITION METRICS



## 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	15.4%	8.4%	...	...	6.7%
Know their HIV status	...	...	...	...	...
Antiretroviral therapy coverage	...	...	...	...	...
Condom use	70.0%	13.9%	...	...	...
Coverage of HIV prevention programmes	20.0%	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (0)	...	...	...	...	...

## HIV TESTING AND TREATMENT CASCADE



	2010	2018
All ages	78% [70–85%]	71% [64–78%] 1 109 000
Children (0–14)	65% [51–80%]	65% [51–80%] 59 600
Women (15+)	82% [74–90%]	82% [74–89%] 721 000
Men (15+)	73% [65–81%]	57% [50–63%] 328 000

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	75% [59–90%]	93% [70– >95%]
Early infant diagnosis	28.6% [23.9–36.7%]	46.9% [39.3–62.2%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	48 000 [31 000 –69 000]
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	1.8%
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 (2017)	...
— Women	30.3%
— Men	46.5%
Women aged 15–49 years who have their demand for family planning satisfied by modern methods (2016)	55.1%
Men aged 15–49 years who are circumcised (2016)	80.3%
Voluntary medical male circumcisions performed according to national standards (2018)	885 599
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 (2017)	15
— Coverage of opioid substitution therapy (2018)	20.8%
— Naloxone available (2019)	No
— Safe injection rooms available (2019)	No

## EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	56 000 [40 000–79 000]	50 000 [36 000–71 000]	48 000 [34 000–69 000]
New HIV infections (0–14)	8800 [6300–12 000]	6300 [4600–8900]	5400 [3900–7600]
New HIV infections (women, 15+)	27 000 [19 000–38 000]	25 000 [18 000–36 000]	25 000 [17 000–35 000]
New HIV infections (men, 15+)	20 000 [14 000–30 000]	19 000 [13 000–28 000]	18 000 [13 000–27 000]
HIV incidence per 1000 population	4.55 [3.2–6.63]	3.42 [2.4–4.99]	2.97 [2.09–4.33]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	26 000 [21 000–35 000]	18 000 [15 000–24 000]	17 000 [13 000–22 000]
AIDS-related deaths (0–14)	5900 [3900–8400]	3800 [2500–5400]	3000 [2000–4200]
AIDS-related deaths (women, 15+)	10 000 [8100–13 000]	8100 [6400–11 000]	7000 [5600–9200]
AIDS-related deaths (men, 15+)	10 000 [8200–14 000]	6400 [5100–8600]	6600 [5200–8900]
<b>People living with HIV</b>			
People living with HIV (all ages)	1 000 000 [900 000–1 100 000]	1 200 000 [1 000 000–1 300 000]	1 200 000 [1 100 000–1 400 000]
People living with HIV (0–14)	77 000 [64 000–91 000]	69 000 [57 000–81 000]	62 000 [52 000–74 000]
People living with HIV (women, 15+)	540 000 [490 000–610 000]	640 000 [570 000–720 000]	700 000 [630 000–790 000]
People living with HIV (men, 15+)	380 000 [340 000–440 000]	440 000 [390 000–510 000]	480 000 [420 000–550 000]
HIV prevalence (15–49)	13 [11.5–14.5]	12.1 [10.7–13.5]	11.3 [10–12.6]

## 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	Possession of drugs for personal use or drug use and/or consumption are specified as 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 16 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	2007	2014
	30	18

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

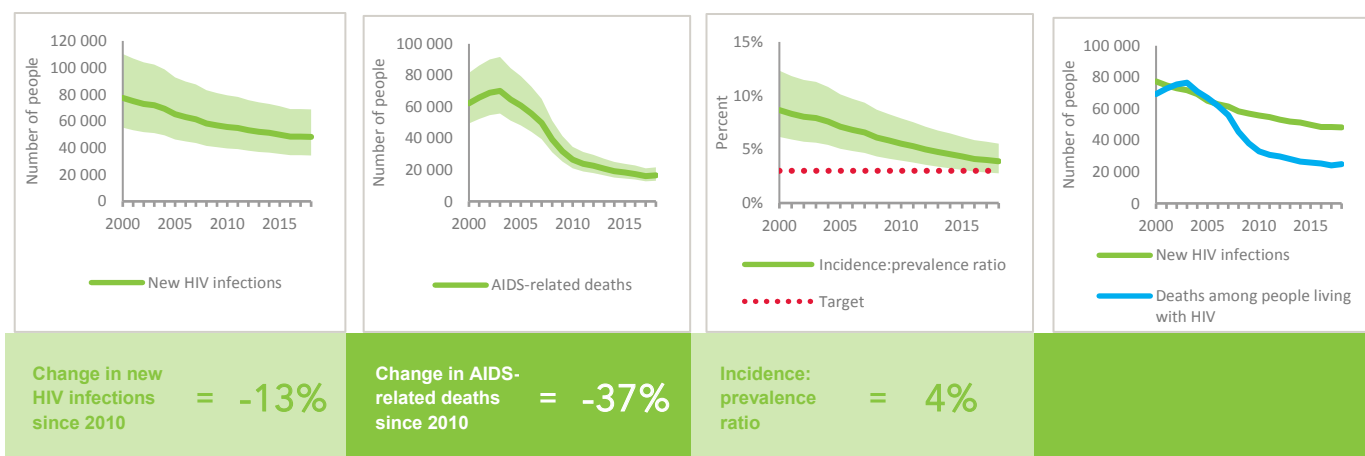
## VIOLENCE

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	2007	2014
	42	26.7

## EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2017	\$1 179 334	\$36 689 849	\$251 767 599	\$35 622 801	\$114 530 358	\$439 789 941

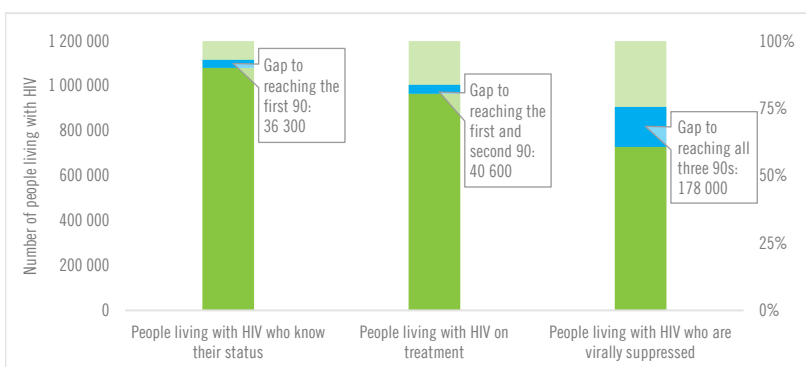
## EPIDEMIC TRANSITION METRICS



## 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	48.8%	...	...	...	27.4%
Know their HIV status	...	...	...	...	...
Antiretroviral therapy coverage	...	...	...	...	...
Condom use	78.5%	...	...	...	...
Coverage of HIV prevention programmes	...	...	...	...	...
Avoidance of health care because of stigma and discrimination	...	...	...	...	...
Expenditures (0)	...	...	...	...	...

## HIV TESTING AND TREATMENT CASCADE



	87% [78– >95%]	78% [69–88%] 965 000	59% [52–66%]
All ages			
Children (0–14)	79% [65–93%]	79% [65–93%] 49 100	65% [54–77%]
Women (15+)	88% [78– >95%]	83% [75–94%] 584 000	63% [56–71%]
Men (15+)	87% [77– >95%]	69% [61–80%] 332 000	52% [46–60%]

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	71% [56–84%]	>95% [94– >95%]
Early infant diagnosis	33.5% [28.3–42.0%]	71.4% [60.4–89.6%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	36 000 [23 000–52 000]
People living with HIV who started TB preventive therapy (2017)	18.3%
Cervical cancer screening of women living with HIV (survey data) (2016)	27.3%
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	5%
Knowledge of HIV prevention among young people aged 15–24 years (2014)	
— Women	41.5%
— Men	46.7%
Condom use at last sex with a non-marital, non-cohabiting partner (2014)	
— Women	41.2%
— Men	55.5%
Women aged 15–49 years who have their demand for family planning satisfied by modern methods (2014)	62.6%
Men aged 15–49 years who are circumcised (2014)	21.9%
Voluntary medical male circumcisions performed according to national standards (2018)	482 183
People who received PrEP at least once during the reporting period (2018)	3823
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

## EPIDEMIC ESTIMATES

	2010	2015	2018
<b>New HIV infections</b>			
New HIV infections (all ages)	62 000 [45 000–83 000]	44 000 [32 000–59 000]	38 000 [28 000–51 000]
New HIV infections (0–14)	15 000 [10 000–25 000]	6 700 [4 400–11 000]	4 800 [3 100–7 900]
New HIV infections (women, 15+)	27 000 [19 000–36 000]	21 000 [15 000–29 000]	19 000 [14 000–26 000]
New HIV infections (men, 15+)	20 000 [14 000–27 000]	16 000 [11 000–21 000]	14 000 [10 000–19 000]
HIV incidence per 1000 population	5.65 [4.08–7.67]	3.46 [2.5–4.7]	2.79 [2.01–3.78]
<b>AIDS-related deaths</b>			
AIDS-related deaths (all ages)	54 000 [43 000–68 000]	24 000 [19 000–30 000]	22 000 [17 000–27 000]
AIDS-related deaths (0–14)	12 000 [7 600–18 000]	4 900 [3 100–7 500]	3 300 [2 100–5 000]
AIDS-related deaths (women, 15+)	23 000 [18 000–29 000]	10 000 [7 900–13 000]	9 700 [7 600–12 000]
AIDS-related deaths (men, 15+)	19 000 [15 000–23 000]	8 900 [7 000–11 000]	9 000 [7 100–11 000]
<b>People living with HIV</b>			
People living with HIV (all ages)	1 200 000 [1 100 000–1 400 000]	1 300 000 [1 100 000–1 500 000]	1 300 000 [1 100 000–1 500 000]
People living with HIV (0–14)	130 000 [99 000–160 000]	99 000 [77 000–120 000]	84 000 [65 000–100 000]
People living with HIV (women, 15+)	650 000 [560 000–740 000]	700 000 [610 000–790 000]	730 000 [630 000–830 000]
People living with HIV (men, 15+)	450 000 [390 000–520 000]	480 000 [410 000–550 000]	490 000 [420 000–560 000]
HIV prevalence (15–49)	15.4 [13.1–17.5]	13.8 [11.7–15.6]	12.7 [10.8–14.5]

## LAWS AND POLICIES

Laws criminalizing the transmission of, non-disclosure of or exposure to HIV transmission	Yes
Criminalization of sex work among consenting adults	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	...
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 16 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	<b>2011</b>	<b>2015</b>
	20.3	20.9
Percentage of people living with HIV denied health services because of their HIV status in the last 12 months	<b>2014</b>	
	6.3	
Percentage of people living with HIV who reported a health-care professional told others about their HIV status without their consent	<b>2014</b>	
	4.3	

## VIOLENCE

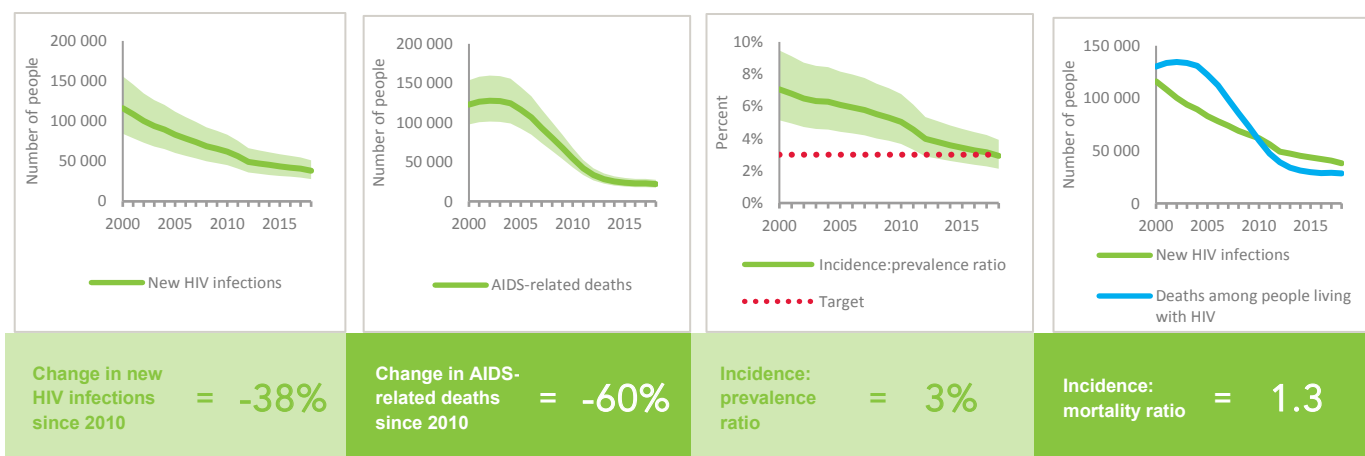
Proportion of ever-married or partnered women aged 15–49 years who experienced physical or sexual violence from a male intimate partner in the past 12 months	<b>2011</b>	<b>2015</b>
	27.2	19.9

## EXPENDITURES

	Financing sources					Total
	Domestic private	Domestic public	International: PEPFAR	International: Global Fund	International: all others	
Last available report: 2017	\$78 163 197	\$49 632 062	\$53 659 112	\$109 347 420	\$127 169 812	\$417 971 603



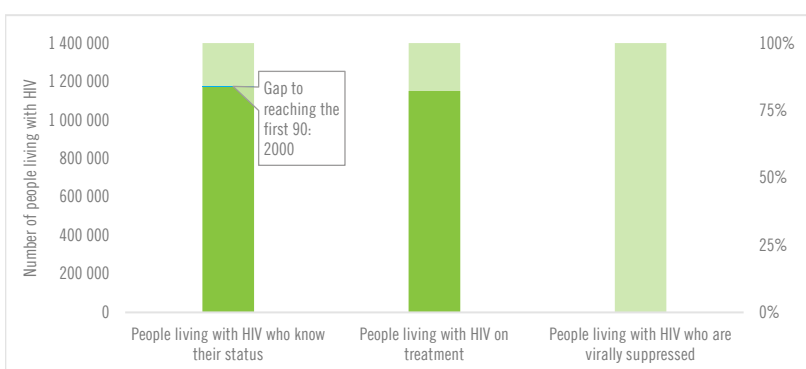
## EPIDEMIC TRANSITION METRICS



## 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	41.4%	31.0%	...	...	28.0%
Know their HIV status	93.6%	50.0%	...	...	...
Antiretroviral therapy coverage	71.9%	77.0%	...	...	...
Condom use	96.1%	...	...	...	...
Coverage of HIV prevention programmes	44.0%	71.1%	...	...	...
Avoidance of health care because of stigma and discrimination	39.3%	...	...	...	...
Expenditures (0)	...	...	...	...	...

## HIV TESTING AND TREATMENT CASCADE



	90% [78- >95%]	88% [77- >95%]	...% [...-...%]
All ages	90% [78- >95%]	88% [77- >95%] 1 151 000	...% [...-...%]
Children (0-14)	76% [59-93%]	76% [59-93%] 63 900	...% [...-...%]
Women (15+)	94% [81- >95%]	93% [81- >95%] 680 000	...% [...-...%]
Men (15+)	86% [75- >95%]	83% [72- >95%] 407 000	...% [...-...%]

## ELIMINATION OF MOTHER-TO-CHILD TRANSMISSION

	2010	2018
Percentage of pregnant women living with HIV accessing antiretroviral medicines	29% [22-34%]	94% [71- >95%]
Early infant diagnosis	8.8% [7.4-11.7%]	63.0% [52.8-83.2%]

## HIV COMORBIDITIES

Estimated number of incident tuberculosis cases among people living with HIV (2017)	23 000 [15 000 -33 000]
People living with HIV who started TB preventive therapy (2017)	10.7%
Cervical cancer screening of women living with HIV (survey data) (2015)	26%
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 (2015)	
— Women	46.3%
— Men	46.6%
Condom use at last sex with a non-marital, non-cohabiting partner (2015)	
— Women	66.7%
— Men	85.4%
Women aged 15-49 years who have their demand for family planning satisfied by modern methods (2015)	84.8%
Men aged 15-49 years who are circumcised (2015)	14.3%
Voluntary medical male circumcisions performed according to national standards (2018)	326 012
People who received PrEP at least once during the reporting period (2018)	4982
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



# ANNEX ON METHODS



# METHODS FOR DERIVING UNAIDS HIV ESTIMATES

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## 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.<sup>1</sup> The UNAIDS Reference Group on Estimates, Modelling and Projections provides technical guidance on the development of the HIV component of the software.<sup>2</sup>

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1 More information on Avenir Health can be found at [www.avenirhealth.org](http://www.avenirhealth.org). The East–West Center website can be found at [www.eastwestcenter.org](http://www.eastwestcenter.org).

2 For more on the UNAIDS Reference Group on Estimates, Modelling and Projections, please visit [www.epidem.org](http://www.epidem.org).

## A BRIEF DESCRIPTION OF METHODS USED BY UNAIDS TO CREATE ESTIMATES<sup>3</sup>

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

<sup>3</sup> 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](http://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?*<sup>4</sup>

## 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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