Start Free Stay Free AIDS Free

2019 report

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Every child deserves an HIV-free beginning.

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When children have an HIV-free start, they must be supported to stay that way as they enter adolescence and progress into adulthood.

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Everyone who is living with HIV should have access to antiretroviral therapy to stay AIDS free and reduce the risk of onward transmission to an uninfected person.

START FREE STAY FREE AIDS FREE

The Joint United Nations Programme on HIV/AIDS (UNAIDS) and the United States President's Emergency Plan for AIDS Relief (PEPFAR) launched the Start Free Stay Free AIDS Free framework in 2016 to build on the achievements of the Global Plan towards the Elimination of New HIV Infections among Children by 2015 and Keeping their Mothers Alive (1), which ended in 2014.

The Start Free Stay Free AIDS Free framework promotes a set of human rights-based interventions to end AIDS as a public health threat among children and adolescents. It focuses on enhancing actions in 23 countries with high numbers of children, adolescents and young women living with HIV.

In 2018 these focus countries together accounted for, globally, 86% of pregnant women living with HIV; 80% of children aged 0–14 years acquiring HIV; 85% of adolescent girls and young women aged 10–24 years acquiring HIV; and 85% of children and adolescents aged 0–19 years living with HIV.[1]

The framework uses a lifecycle approach, with its three main components supporting each other:

- Start Free aims to end new HIV infections among children by, among other actions, reaching 95% of pregnant women living with HIV and sustaining them on lifelong antiretroviral therapy by 2018.
- Stay Free focuses on reducing the number of adolescent girls and young women aged 10-24 years acquiring HIV to fewer than 100 000 annually by 2020.
- AIDS Free seeks to ensure that 95% of all children and adolescents aged 10-19 years living with HIV receive antiretroviral therapy by 2020.

[1] Angola, Botswana, Burundi, Cameroon, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Eswatini, Ethiopia, Ghana, India, Indonesia, Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, South Africa, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe.

OVERVIEW

This progress report reviews recent gains, new developments and remaining challenges as countries approach the 2020 targets of the Start Free Stay Free AIDS Free framework. It summarizes country progress at the end of 2018, based on country-reported data and country-developed models using Spectrum software that were reported to the Joint United Nations Programme on HIV/AIDS (UNAIDS) in 2019. Further descriptions of the methods are available at the UNAIDS website (www.unaids.org) or in the annex of the UNAIDS report *Global AIDS Update 2019: Communities at the Centre (2)*. At the time of publication 22 of the 23 countries had data available for this publication. Data from India are included in the data when they are aggregated for the 23 priority countries but are not presented separately.

The results reflect numerous collaborations between a wide variety of international, government, civil society, faith-based and community actors. There is strong political commitment at the global and national levels to build on the progress made and to ensure accountability. The results reported here are a key measure of that accountability.

MISSING THE TARGETS: THE GLOBAL PICTURE

The Start Free Stay Free AIDS Free framework challenges countries to implement high-priority interrelated evidence-informed actions to reach ambitious targets for 2018 and 2020. The 2018 global data show that progress is occurring—but far too slowly.

START FREE

- *Target for 2018:* reduce the annual number of children newly infected with HIV to fewer than 40 000 (and to fewer than 20 000 by 2020).
  - *Status in 2018:* 160 000 [110 000–260 000].
- *Target for 2018:* reach 95% of pregnant women living with HIV and sustain them on lifelong antiretroviral therapy.
  - *Status in 2018:* 82% [62% to >95%].

STAY FREE

- *Target for 2020:* reduce the annual number of adolescent girls and young women aged 10–24 years acquiring HIV to fewer than 100 000.
  - *Status in 2018:* 310 000 [190 000–460 000]. This is 6000 per week, down from 8000 per week in 2010 and 7000 per week in 2015.
- *Target for 2020:* Between 2015 and 2020 provide voluntary medical circumcision to 25 million additional adolescent boys and men, with a focus on young men.
  - *Status in 2018:* 11 million (cumulative) voluntary medical male circumcisions have been performed among all age groups since 2015..

AIDS FREE

- Target *for 2018:* provide 1.6 million (approximately 95%) children aged 0–14 years living with HIV and 1.2 million adolescents aged 15–19 years living with HIV with antiretroviral therapy.
  - *Status in 2018:* 937 000 [824 000–974 000] (54% [37–73%]) children aged 0–14 years were receiving antiretroviral therapy. Many countries are not currently reporting the number of adolescents aged 15–19 years receiving antiretroviral therapy. In 2018 only 55 countries reported these data through the Global AIDS Monitoring tool *(3)*.

EXECUTIVE SUMMARY

The *Start Free Stay Free AIDS Free* report reveals a mixed story. The global targets set for 2018 have been missed by a wide margin in some subregions and countries. Some countries, however, have shown impressive progress and achieved success across all the target areas. These country examples demonstrate that success is possible and highlight the need for a paradigm shift in action across all focus countries to reach the targets by 2020.

Fewer children newly infected with HIV and improved health for mothers living with HIV stand out as achievements of the global AIDS response in recent years.

Within in the 23 focus countries, programmes for elimination of mother-to-child transmission of HIV have averted an estimated 1.5 million [982 000–2.4 million] new HIV infections in children aged 0–14 years since 2010. This has been done by dramatically increasing the proportion of pregnant women living with HIV receiving antiretroviral medicines from 43% [32–54%] in 2010 to 85% [63% to >95%] in 2018. This was a significant achievement, but the 2018 target of 95% coverage was missed in all but 5 focus countries (Botswana, Malawi, Mozambique, Namibia, Zambia). Furthermore, in 2018 51% of pregnant women living with HIV were receiving antiretroviral medicines before conception, compared with only 7% in 2010.

The progress underscores the potential to end AIDS as a public health threat among children in the near future, but much work still lies ahead. The number of new HIV infections among adolescent girls and young women, many of whom become mothers, remains too high. Access to antiretroviral therapy for pregnant women living with HIV to improve their own health and that of their babies has stagnated recently, for several reasons:

- A sixth of pregnant women living with HIV in the focus countries are not diagnosed or offered antiretroviral therapy during pregnancy.
- Retention on antiretroviral therapy for pregnant and breastfeeding women is too low, with 20% of women in sub-Saharan Africa who start antiretroviral therapy dropping out of care before delivering their babies.
- About 140 000 women acquired HIV infection while pregnant or breastfeeding in 2018 in the 21 sub-Saharan African focus countries. Many of these women are not diagnosed or treated, emphasizing the myriad missed opportunities for testing, retesting, prevention, treatment and care.

As a result, an estimated 130 000 [87 000–210 000] children acquired HIV in utero, at birth or while breastfeeding in 2018 in the 23 focus countries. This is substantially fewer than the approximately 240 000 [160 000–380 000] children newly infected in 2010, but it is well short of the 2018 target of fewer than 40 000 children per year *(4)*. Countries such as Botswana, Malawi and Namibia have seen over 70% declines in the number of new child infections in the same time period.

Although new HIV infections are falling among adolescent girls and young women aged 10–24 years, the number of new HIV infections in this age group is still three times higher

(310 0000 [190 000–460 000]) than the 2020 target of below 100 000, and the rate of decline is intolerably slow. More than 6000 adolescent girls and young women acquired HIV each week in 2018. One of the reasons for this is low coverage of voluntary medical male circumcision (only 11 million performed since 2015). Approximately 13 million more medical circumcisions need to be performed from the end of 2018 to the end of 2020 to meet the target. However, there were about 4.1 million voluntary medical male circumcisions performed for HIV prevention in 14 high-priority countries in eastern and southern Africa in 2018.

Knowledge of HIV and condom use among young people aged 15–24 years, especially among young women, are low. Overcoming the social and structural barriers to deliver universal access to integrated sexual and reproductive health and rights and combination HIV prevention services that empower adolescent girls and young women to make informed choices about contraception and HIV prevention is essential.

Children living with HIV are being left behind in HIV treatment scale-up and are not being diagnosed and treated early enough to prevent HIV-related morbidity and mortality. For optimal outcomes, children living with HIV must access diagnosis and effective treatment and achieve viral load suppression as soon as possible after infection. In 2018 only 63% [47–78%] of the 1.1 million infants exposed to HIV were tested by the age of two months in the focus countries, although countries such as Malawi and South Africa tested more than 85% of infants exposed to HIV within the first two months after birth. Furthermore, only 56% [38–76%] of the estimated 1.5 million [1.1 million–1.9 million] children aged 0–14 years living with HIV in 2018 were receiving lifesaving antiretroviral medicines. Children living with HIV are less likely to be receiving treatment compared with adults living with HIV (63% [48–76%]), and this disparity is widening, especially in countries in western and central Africa. Strong efforts in Eswatini, Namibia, Zambia and Zimbabwe have led to paediatric treatment levels of over 75%.

In 2018 only 55 countries reported disaggregated numbers of adolescents on treatment through the Global AIDS Monitoring tool. Among eight focus countries reporting treatment coverage data by age group (Botswana, Cameroon, Eswatini, Indonesia, Namibia, Nigeria, United Republic of Tanzania, Zimbabwe), four reported over 75% antiretroviral therapy coverage in people aged 10–14 years, while none of the eight countries reported coverage over 40% in people aged 15–19 years. Among the four countries with available data from population-based HIV impact assessment surveys, treatment coverage for respondents aged 15–24 years was 32% in Zambia, 34% in the United Republic of Tanzania, 42% in Malawi and 54% in Eswatini.

As a result, the AIDS epidemic is claiming the lives of too many children aged 0–14 years. Children in this age group comprised 5% of the people living with HIV in the focus countries but accounted for 15% of the people dying from AIDS-related causes in 2018. AIDS-related deaths have declined by only 16% among older adolescents aged 15–19 years, but they have declined by 35% among people aged 20 years and over.

START FREE STAY FREE AIDS FREE PARTNERSHIPS IN ACTION

Since the 2017 progress report *(5)*, multistakeholder action has led to decisive global and national policy change and action. A few select examples of many collaborations are detailed below.

In May 2017 a ministerial meeting in Geneva[2] was convened to review progress towards meeting the 2018 targets. Participants identified high-priority gaps, including access to early infant diagnosis and treatment for children; improved paediatric antiretroviral formulations; more effective HIV prevention for adolescents; removal of barriers to testing; greater engagement of men; and abolition of user fees for antenatal services *(6)*.

HIV treatment for children received a major boost in November 2017 in the Vatican, when major pharmaceutical companies, regulatory authorities, United Nations agencies, donors and other stakeholders adopted the Rome Action Plan, with commitments including an undertaking from some pharmaceutical manufacturers to make antiretroviral formulations for children available in low-income countries at the cost of production until generic medicines become available, and to speed up the development of certain long-anticipated formulations *(7,8)*.

The Free to Shine campaign was created in early 2018 by the Organisation of African First Ladies Against HIV/AIDS and the African Union with various partners to take forward this ambitious agenda.[3] This campaign has recommitted African health ministries and community partners to strengthen their public health systems and improve access to treatment for mothers and children living with HIV.

A follow-up high-level meeting on the Rome Action Plan was held in December 2018 to devise ways to quicken the development and introduction of diagnostics for children and to deal with issues affecting the development and uptake of paediatric antiretroviral therapy formulations. Stakeholders agreed on an additional set of commitments on diagnostics, case-finding and treatment.

These Start Free Stay Free AIDS Free collaborative partnerships—among many others at the global, regional and national levels—renewed advocacy. The availability of clear global technical guidelines and normative advice has prompted countries to step up Start Free Stay Free AIDS Free activities—but a paradigm shift in commitment will be needed at all levels to accelerate towards the 2020 targets.

[2] Attended by health ministers and representatives from Cameroon, the Democratic Republic of the Congo, Eswatini, Kenya, Lesotho, Malawi, Mali, Namibia, Nigeria, Togo and Zimbabwe.

[3] Partners include Abbott, Accountability International, EGPAF, UNAIDS, the United Nations Children's Fund, and the United Nations Development Programme.

START FREE:

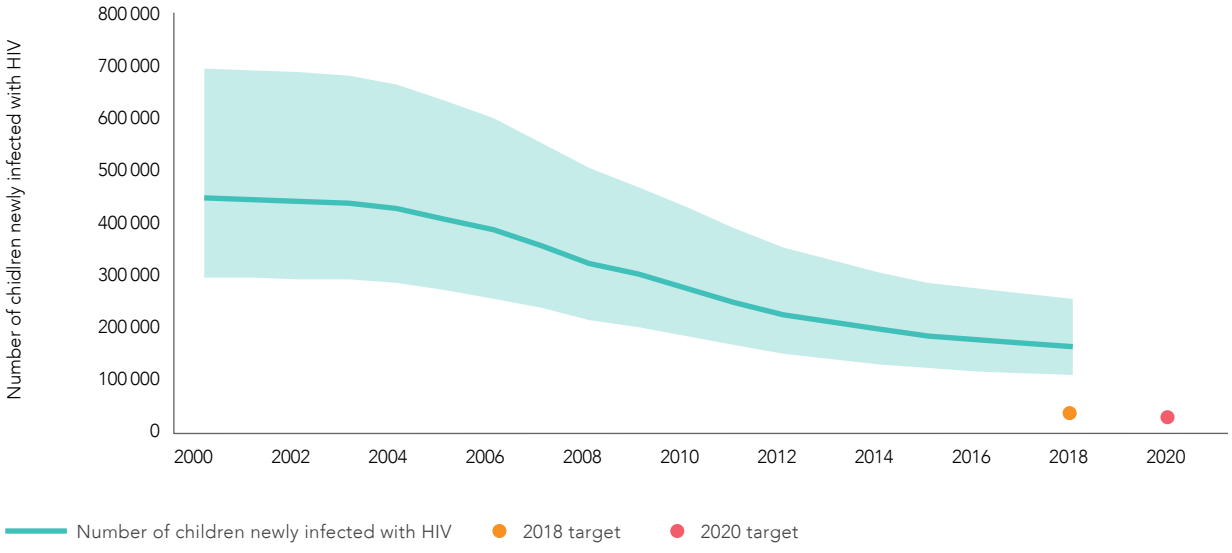
THE NUMBER OF CHILDREN AGED 0–14 YEARS ACQUIRING HIV HAS DECREASED BETWEEN 2010 AND 2018, BUT NOT RAPIDLY ENOUGH

Targets

- Eliminate new HIV infections among children aged 0–14 years by reducing the number of children newly infected to fewer than 40 000 annually by 2018 and fewer than 20 000 by 2020.
- Reach 95% of pregnant women living with HIV and sustain them on lifelong HIV treatment by 2018.

Figure 1. The number of children acquiring HIV is decreasing, but not rapidly enough, and the 2018 target was missed

Children aged 0–14 years newly infected with HIV in 23 focus countries, 2000–2018 and 2018 and 2020 targets



Source: UNAIDS 2019 estimates.

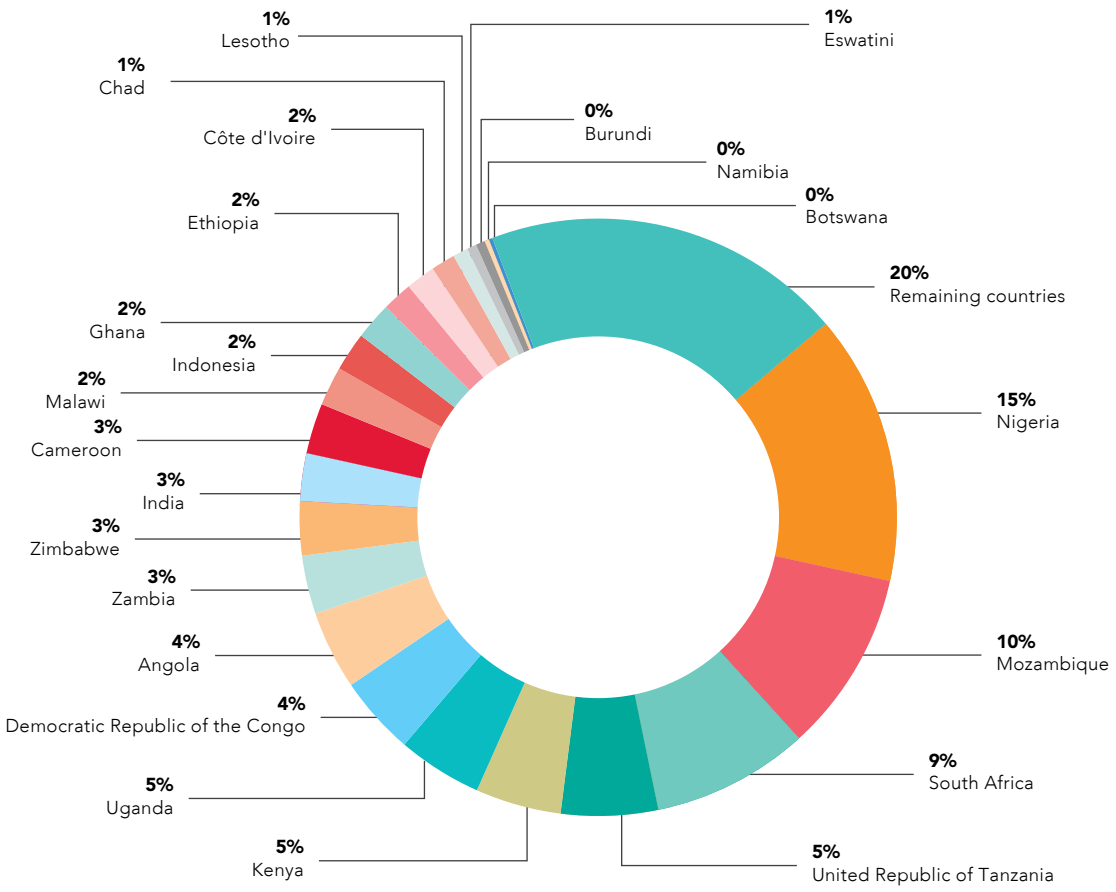
2018 data

The 2018 target for reducing the number of children newly infected with HIV was not reached

In the focus countries, the number of children newly infected with HIV has halved, from 240 000 [160 000–380 000] in 2010 to 130 000 [87 000–210 000] in 2018, but the rate of decline has slowed. Although this progress is substantial, it remains far from the 2018 target of fewer than 40 000 new infections (Figure 1). Without a paradigm shift in programme implementation and innovation, it is highly unlikely that the 2020 target of fewer than 20 000 children newly infected annually with HIV will be reached.

Figure 2. A few countries account for most of the children acquiring HIV

Distribution of children acquiring HIV through vertical transmission in 23 focus countries, 2018



Source: UNAIDS 2019 estimates.

The geographical distribution of children acquiring HIV is so concentrated that improvements in only a few countries (and in some countries focused action in high-prevalence locations) could massively influence the global trend. Almost half the children acquiring HIV in 2018 were in 6 countries (Kenya, Mozambique, Nigeria, South Africa, Uganda and the United Republic of Tanzania), and nearly two-thirds of the children newly infected were in 11 countries (adding Angola, the Democratic Republic of the Congo, India, Zambia and Zimbabwe) (Figure 2). Eight of these countries are in eastern and southern Africa—a reminder that, despite excellent progress, there are still major challenges to be overcome in this region, which includes 14 of the 23 focus countries.

10 of the 22 countries with available data have had declines of 50% or more in the number of new infections in children between 2010 and 2018

Some countries have made considerable progress in reducing the number of children acquiring HIV since 2010, including Botswana, Malawi and Namibia (Figure 3). Ten countries have achieved a decline of more than 50% between 2010 and 2018. Reductions in the numbers of children acquiring HIV in Chad, Nigeria and the United Republic of Tanzania have been disappointing, and the numbers of new infections in children have risen in Angola and Indonesia.

Figure 3. Most of the focus countries have made considerable progress in reducing the number of children acquiring HIV

Percentage change in number of children aged 0–14 years acquiring HIV from 2010 to 2018 in 22 focus countries[a]

Increase	0–29% decrease	30–49% decrease	50–69% decrease	70%+ decrease
Angola	Chad	Cameroon	Burundi	Botswana
Indonesia	Nigeria	Democratic Republic of the Congo	Côte d'Ivoire	Malawi
	United Republic of Tanzania	Eswatini	Ethiopia	Namibia
		Ghana	Kenya	
		Lesotho	South Africa	
		Mozambique	Uganda	
		Zambia	Zimbabwe	

a Data for India are not available.
Source: UNAIDS 2019 estimates.

The rate of mother-to-child transmission remains unacceptably high

The 6-week mother-to-child transmission rate is marginally better among the 23 focus countries (6.3% [4.9–9.1%]) than the global rate (6.8% [5.4–9.5%]). The mother-to-child transmission rate at the end of breastfeeding is 11.8% [9.8–15.2%] in the focus countries, compared with 12.7% [10.6–16.0%] globally. Botswana, Namibia and South Africa have achieved mother-to-child transmission rates close to or below 5%, but in some countries (including Angola, the Democratic Republic of the Congo and Nigeria) almost one in four children born to mothers living with HIV are newly infected with HIV by the end of breastfeeding.

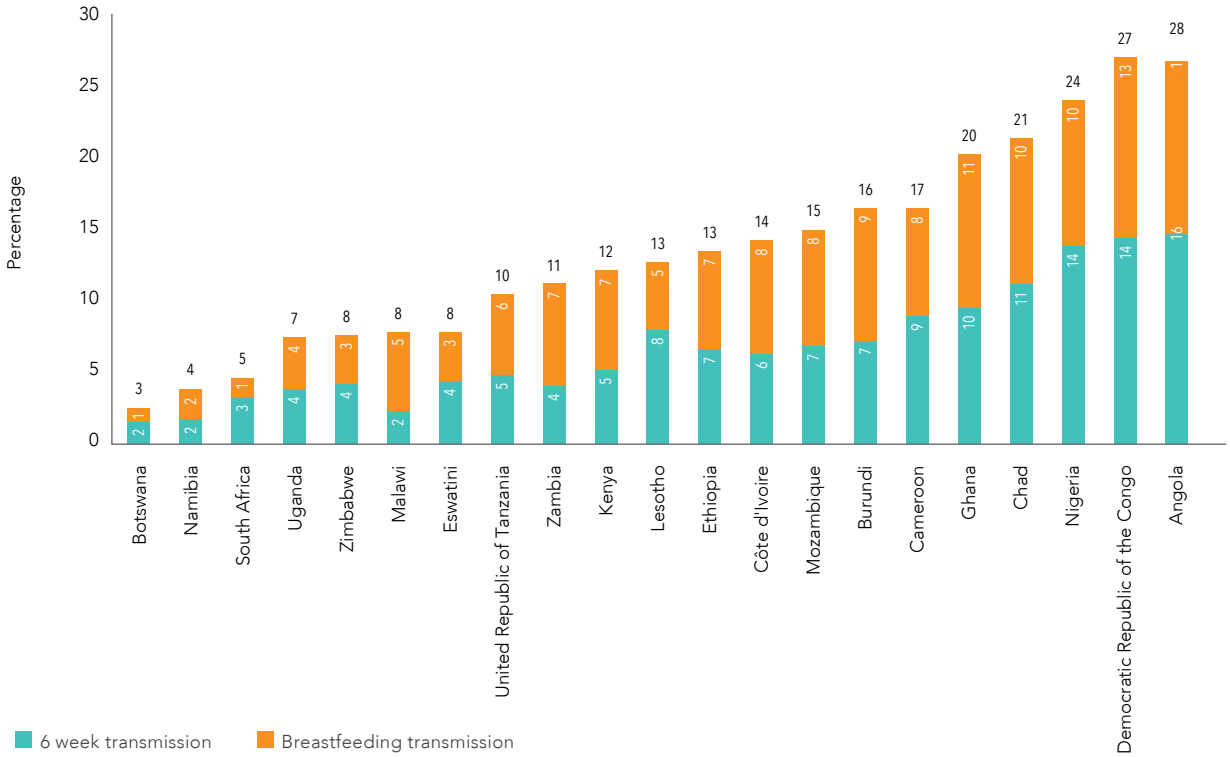
In general, countries in eastern and southern Africa are performing better than those in other regions in terms of reducing the rate of vertical transmission (Figure 4). This is offset by the relatively high prevalence of HIV among pregnant women compared with other regions, which leads to low transmission rates but high absolute numbers of new HIV infections among children.

Prevention of mother-to-child transmission service coverage among pregnant women living with HIV has stagnated

In 2018, 85% [63% to >95%] of pregnant women living with HIV were receiving antiretroviral medicines to prevent vertical transmission in the 23 focus countries.

Figure 4. Mother-to-child transmission rates are lowest in eastern and southern Africa

Mother-to-child transmission rates at 6 weeks and at end of breastfeeding in 21 focus countries, 2018[a]



a Data for India and Indonesia are not available.
Source: UNAIDS 2019 estimates

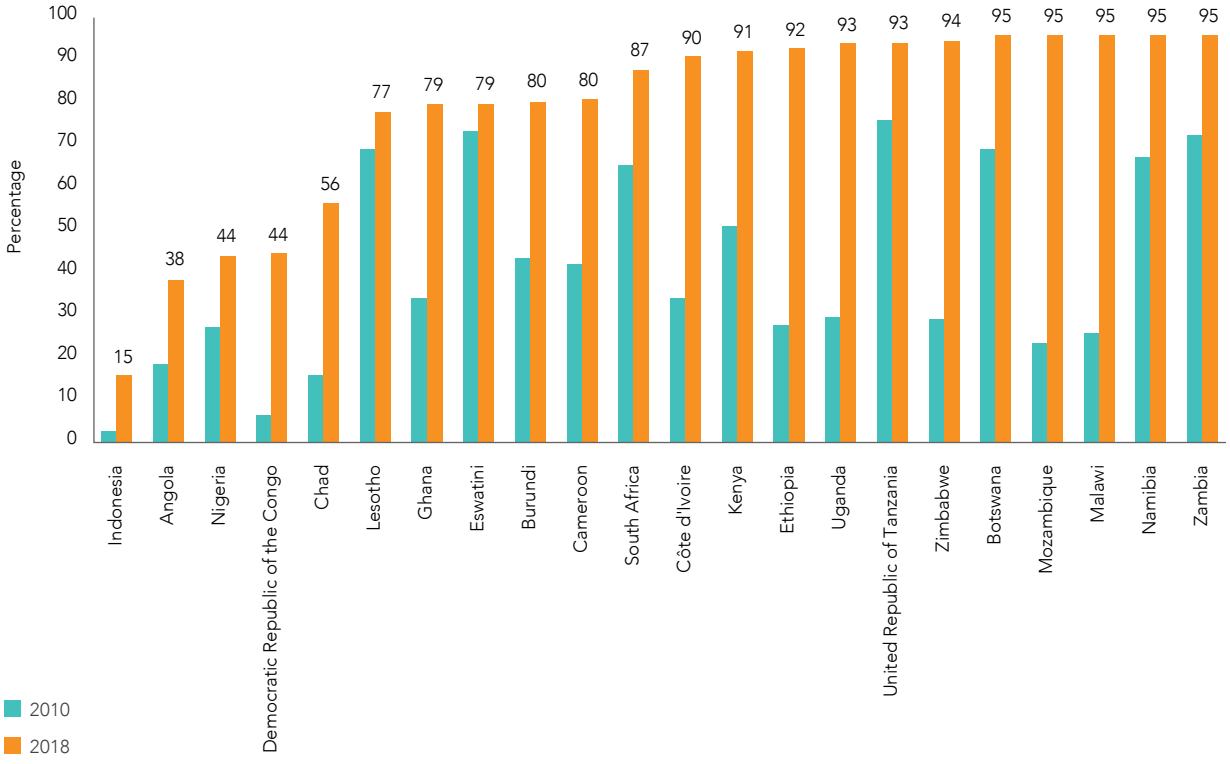
There has been considerable progress among focus countries in eastern and southern Africa, with coverage of pregnant women with antiretroviral medicines to prevent vertical transmission at 92% (69% to>95%) in 2018. More than 90% of pregnant women received antiretroviral medicines in Ethiopia, Kenya, Uganda, the United Republic of Tanzania and Zimbabwe, and 95% or more in Botswana, Malawi, Mozambique, Namibia and Zambia (Figure 5).

Elsewhere, the picture is less uplifting. Fewer than two in three pregnant women living with HIV in 2018 were receiving antiretroviral medicines in Angola, Chad, the Democratic Republic of the Congo and Nigeria, and scarcely one in six in Indonesia.

Progress across western and central Africa has stalled, with a marginal decline in antiretroviral therapy coverage from 60% [43–80%] to 59% [42–78%] between 2015 and 2018 (figure 6). The high number of pregnant women living with HIV but not on treatment in Nigeria is the main driver of this regional trend (see box, "Nigeria case") (9). In the other focus countries in western and central Africa, treatment coverage for prevention of mother-to-child transmission was as low as 44% in the Democratic Republic of the Congo and as high as 90% in Côte d'Ivoire (Figure 5).

Figure 5. Countries in eastern and southern Africa are leading the way on treatment coverage for pregnant women living with HIV

Pregnant women living with HIV receiving antiretroviral medicines to prevent vertical transmission of HIV in 22 focus countries, 2018



Note: India: Not available.
Source: UNAIDS 2019 estimates.

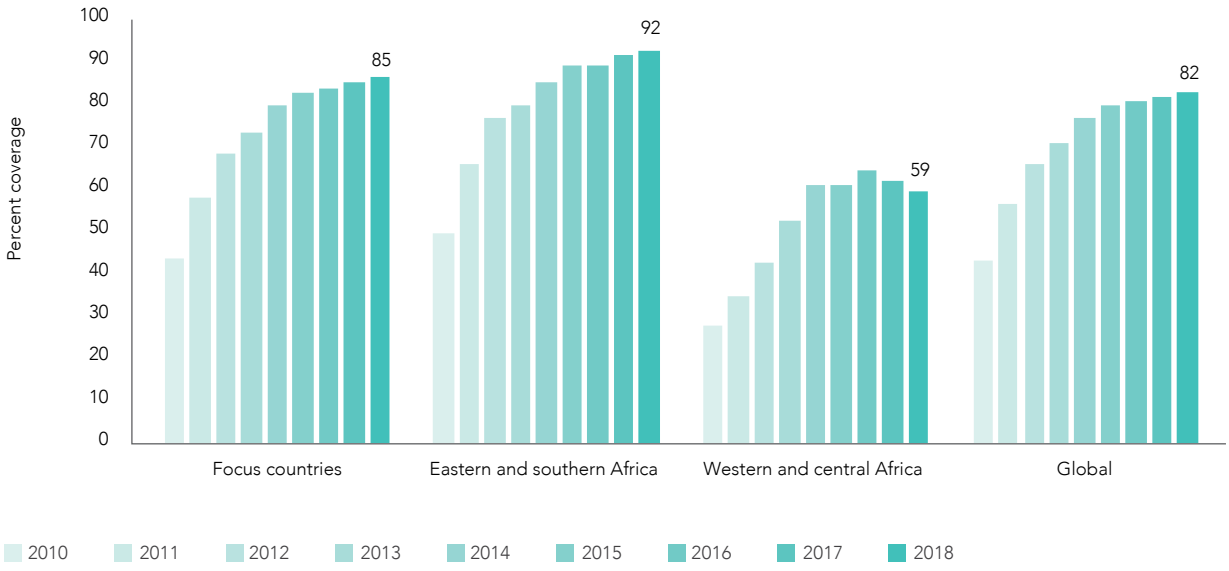
User fees for attending antenatal clinics or using health services are a major deterrent to women and children accessing treatment. Among the countries that applied user fees in 2018 (Cameroon, Central African Republic, the Democratic Republic of the Congo, Mali and Nigeria), the percent of pregnant women receiving antiretroviral medicines was 49% compared to 74% in central African countries that did not charge user fees.[3]

IMPACT OF NEW HIV SURVEY IN NIGERIA

In 2018 Nigeria conducted a household survey with a large sample size and quality control to estimate a more accurate measure of HIV prevalence than previous surveys. The data from this survey were included in the new spectrum models for Nigeria, which estimated 40% fewer pregnant women living with HIV than previous estimates. Despite the more optimistic estimates of HIV prevalence among pregnant women, in 2018 only 44 000 (44%) pregnant women living with HIV were reported as having been provided with antiretroviral medicines to prevent vertical transmission, a notable decline from previous records, which reported almost 60 000 women reached. Increased efforts to reach pregnant women with HIV testing and treatment services are urgently needed.

Figure 6. Antiretroviral coverage for pregnant women has stalled and is falling in western and central Africa

Percentage of pregnant women living with HIV receiving antiretroviral medicines in 23 focus countries, in eastern and southern Africa, in western and central Africa, and globally, 2010–2018



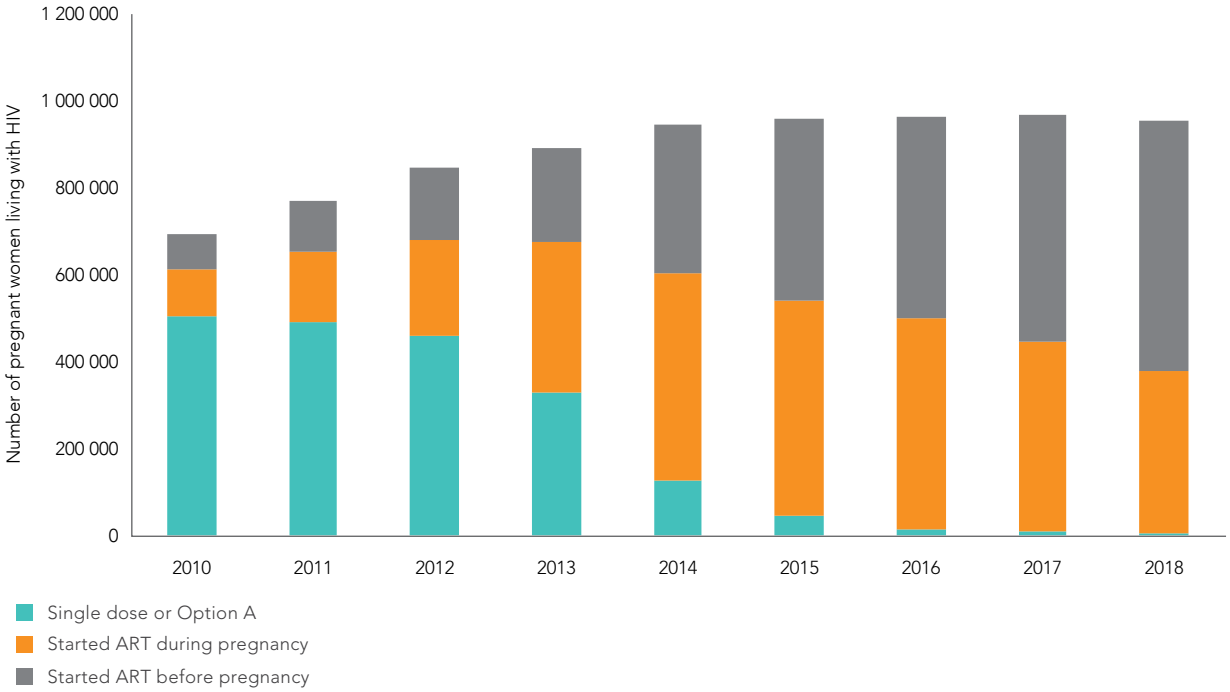
Source: UNAIDS 2019 estimates.

[4] Countries' ministry of health data reported information on user fees to UNAIDS. UNAIDS calculations of percent of pregnant women receiving antiretroviral medicines.

Figure 7 shows that the number of women receiving antiretroviral medicines to prevent vertical transmission has risen only slightly since 2014 across the 23 focus countries, although women are receiving more effective regimens. Women living with HIV increasingly receive antiretroviral therapy before becoming pregnant. In 2010 within the focus countries, an estimated 7% of pregnant women living with HIV were receiving antiretroviral therapy at time of conception compared to 51% in 2018.

Figure 7. By 2018 most pregnant women living with HIV in the focus countries were already receiving antiretroviral medicines before pregnancy

Numbers of pregnant women living with HIV by regimen and timing of start of antiretroviral medicines in 23 focus countries, 2018



Source: UNAIDS 2019 estimates.

WHERE AND WHEN ARE THE NEW INFECTIONS OCCURRING—AND WHY?

Figure 8 presents the estimated numbers of children who acquired HIV in 2018 in the African focus countries, by region. The stacked-bar analysis identifies where HIV prevention, diagnosis and treatment services for pregnant and breastfeeding women have failed and resulted in new child infections.

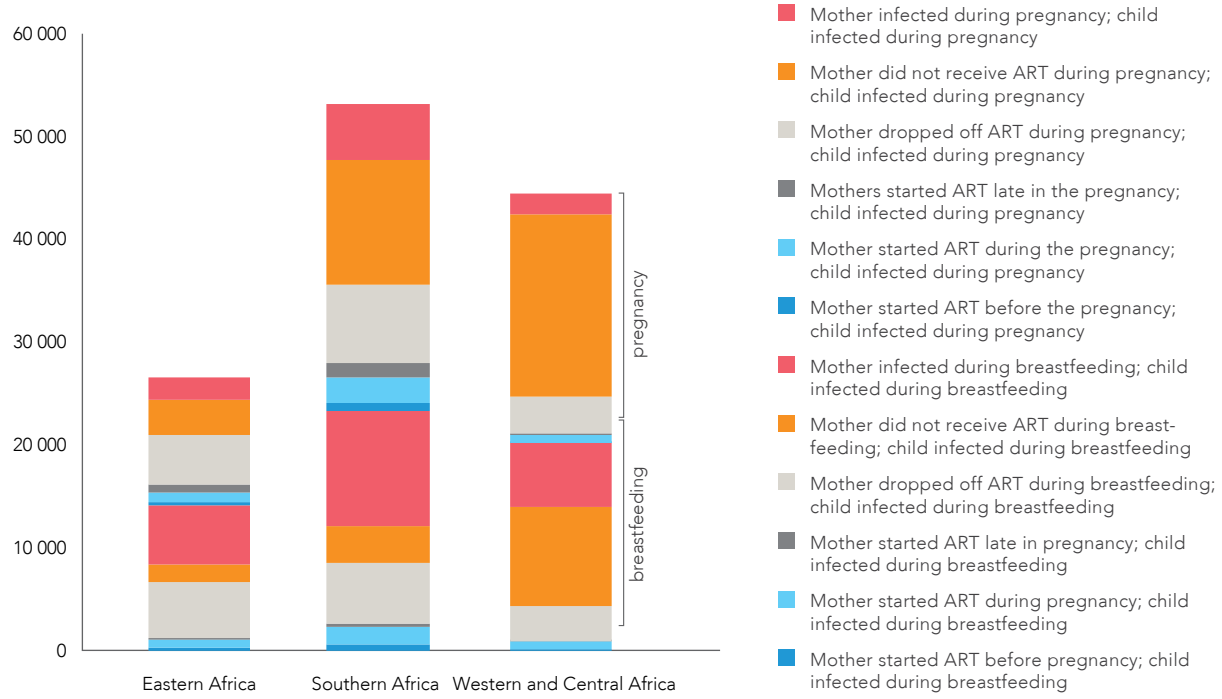
In eastern Africa, 10 000 of the 26 000 new infections in children were the result of women not being retained on treatment throughout pregnancy and breastfeeding. This service gap resulted in two in five infections in children in the four high-priority countries in this region in 2018.

In southern Africa, 17 000 of the 53 000 new infections in children were the result of women being infected during pregnancy or breastfeeding. Furthermore, 16 000 new infections could have been averted by retaining mothers on treatment.

In western and central Africa, almost 27 000 of the 44 000 new infections in children could have been averted if their mothers had received antiretroviral therapy.

Figure 8. Gaps in prevention and treatment services for women explain the causes of new HIV infections in children, by region

Distribution of new HIV infections in children by service for preventing vertical transmission of HIV by region in 21 African focus countries, 2018



Eastern Africa: Ethiopia, Kenya, Uganda, United Republic of Tanzania.
Southern Africa: Angola, Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia, Zimbabwe.
Western and central Africa: Burundi, Cameroon, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Ghana, Nigeria.

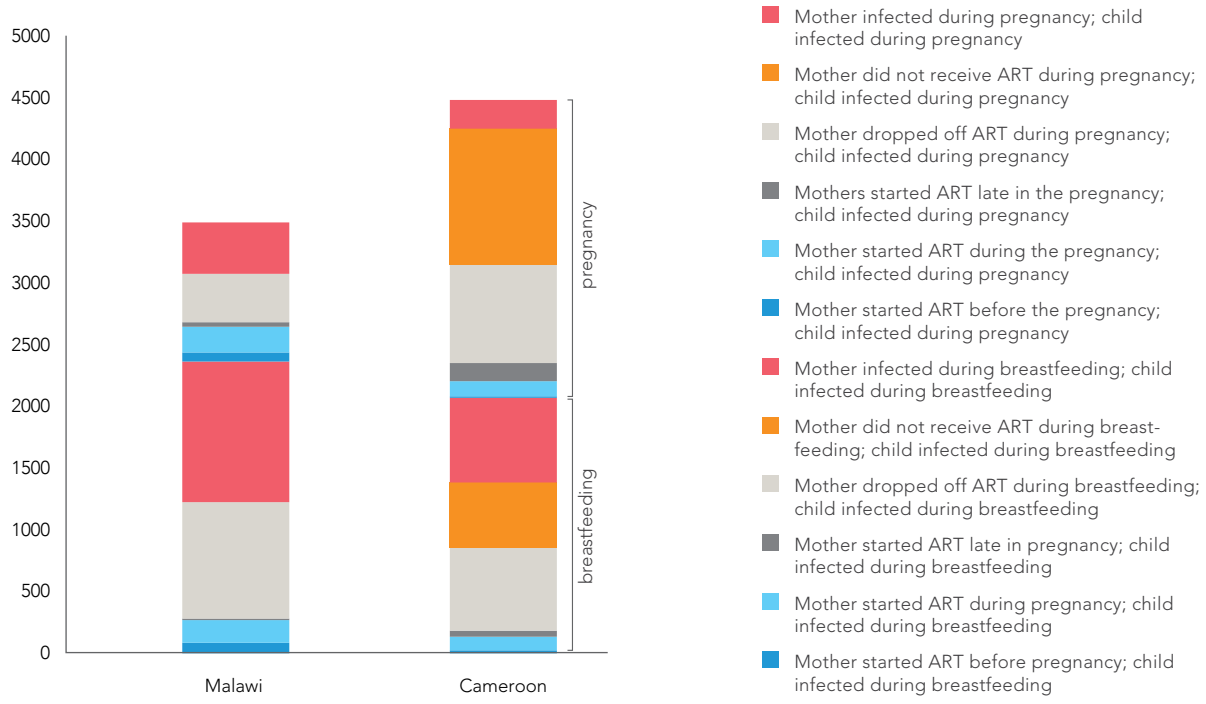
Source: UNAIDS 2019 estimates.

Figure 8 illustrates the importance of starting and retaining women on antiretroviral treatment throughout pregnancy and breastfeeding. Moreover, it quantifies the need for HIV prevention.

Country-level analysis of when vertical transmission occurs can provide vital information to shape a national response. For example, Figure 9 illustrates the differences between transmission in Cameroon and Malawi. In Malawi the biggest service gap occurs when women are not retained on treatment throughout pregnancy and the long breastfeeding period. In Cameroon, however, the proportion of women not receiving antiretroviral treatment during pregnancy, in addition to poor retention during pregnancy, is driving high levels of transmission.

Figure 9. Comparison between Cameroon and Malawi highlights the differences in the provision of prevention and treatment services for women and can assist programmes to focus on the gaps

Distribution of new HIV infections in children, by service for preventing vertical transmission of HIV in Cameroon and Malawi, 2018



Source: UNAIDS 2019 estimates.

This analysis can further quantify the number of pregnant women who need to be reached by HIV prevention, testing and treatment services to prevent the infections in children identified in Figure 9. Figure 10 shows the number of pregnant women, while Figure 9 shows the number of new infections in children. Figure 10 emphasizes that many women are already on treatment before they become

pregnant and thus have a very low (but not zero) chance of transmitting HIV to their children. However, many women did not receive any antiretroviral medicines during pregnancy, and about 20% were not retained on treatment throughout pregnancy.

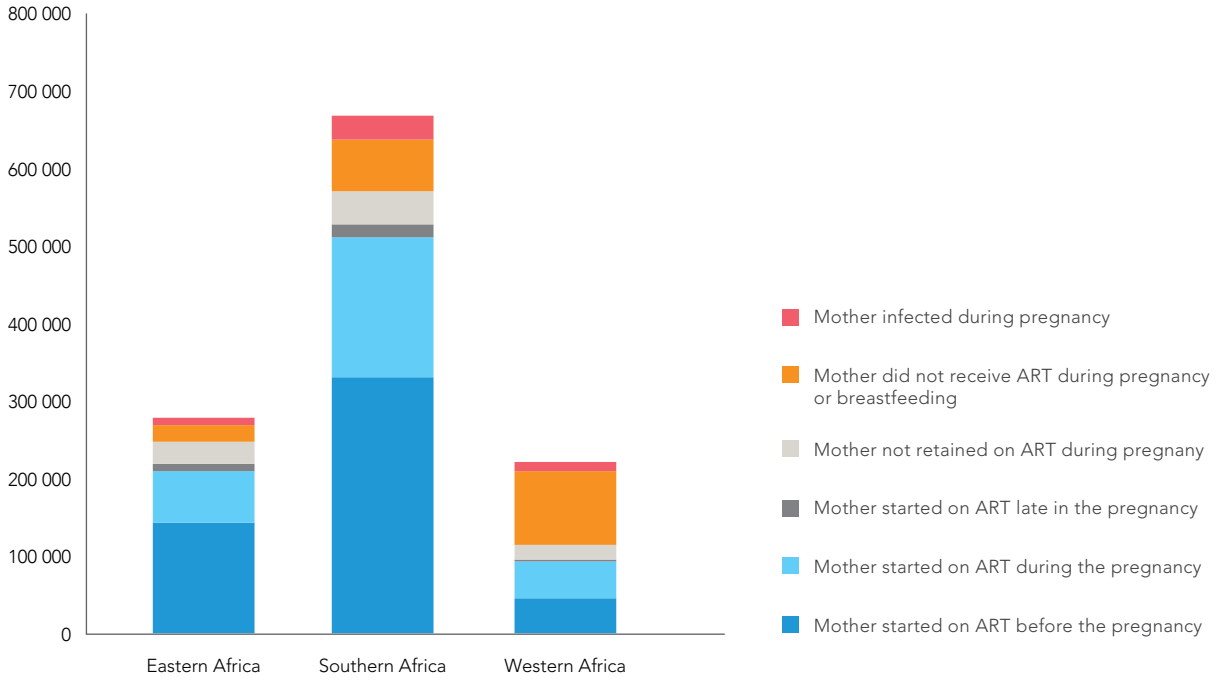
Among the four focus countries in eastern Africa, new infections in children could have been avoided if 30 000 of the 280 000 pregnant women living with HIV had been retained on treatment. A further reduction in new infections in children could have been achieved if 11 000 pregnant women had been protected from acquiring HIV.

Among the 670 000 pregnant women living with HIV in 10 southern Africa focus countries, infections in children could have been averted if the 200 000 women who started antiretroviral therapy during pregnancy had been on treatment before conception.

Among the seven western and central Africa focus countries, 95 000 (42%) of the 220 000 pregnant women living with HIV did not receive treatment in 2018.

Figure 10. Pregnant women living with HIV receive different levels of service coverage in different regions

Distribution of antiretroviral therapy status among pregnant women in 21 African focus countries,



Eastern Africa: Ethiopia, Kenya, Uganda, United Republic of Tanzania
Southern Africa: Angola, Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia, Zimbabwe
Western and central Africa: Burundi, Cameroon, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Ghana, Nigeria

Source: UNAIDS 2019 estimates.

PATHWAY TO ELIMINATION AT THE END OF 2018

The World Health Organization (WHO) and partners have championed a process to identify countries that eliminate new HIV infections and congenital syphilis in children, while observing human rights commitments. To be validated for elimination, countries need to reduce the number of new HIV infections and cases of congenital syphilis among children to fewer than 50 per 100 000 births, while also documenting the protection of human rights, promotion of gender equality, and assurance of involvement of communities and women living with HIV. By the end of 2018 the elimination of mother-to-child transmission of HIV and syphilis had been validated in Antigua and Barbuda, Armenia, Belarus, Cuba, Malaysia, Saint Kitts and Nevis, and Thailand, and in four territories within countries.

The elimination of mother-to-child transmission validation process has led several countries to strengthen their monitoring systems and to document and scale up efforts to uphold human rights commitments. At least 28 countries (18 in sub-Saharan Africa) have added the elimination of syphilis (and also hepatitis B virus in some cases) to their elimination of mother-to-child transmission strategies.

The achievement of the elimination targets is much more challenging for countries with generalized high-burden HIV epidemics. In countries with HIV prevalence over 2% among pregnant women, all women living with HIV would need to be receiving antiretroviral therapy before conception to reach the elimination target of fewer than 50 new infections per 100 000 births. For higher-burden countries, such as many sub-Saharan African countries, meeting this target will not be feasible for many years. A separate track within the elimination efforts has been developed to recognize countries that have made significant progress on the path towards eliminating new HIV infections among children. At the end of 2018 this process had been started in Botswana, Eswatini, Uganda and Zimbabwe.

Evidence-informed actions for impact

Expand access to effective HIV diagnosis, treatment and care services

Improve access to differentiated HIV testing and treatment services for pregnant and breastfeeding women, their children and their partners

Differentiated HIV testing services using multiple entry points, such as antenatal care, nutrition, inpatient, tuberculosis (TB), outpatient, prevention of mother-to-child transmission, sexual and reproductive health, men's health and immunization services, can be optimized to reach, diagnose and treat all people living with HIV, including pregnant women, their sexual partners, infants and children, and achieve sustained viral load suppression. Index case-finding, family and household testing, voluntary assisted partner notification, and self-testing can increase the uptake of HIV testing in individuals and couples *(10–15)*.

WHO advises that in locations with a high rate of HIV incidence, women who initially test negative for HIV should be retested later in pregnancy and during breastfeeding *(16)*. Reminder notices and counselling on the increased risk of HIV infection during

pregnancy and breastfeeding, and the importance of early and regular antenatal and postnatal care, including HIV retesting during pregnancy and breastfeeding, are beneficial *(17)*. Offering pregnant women HIV retesting immediately before rather than after antenatal consultations increased uptake by 36% in a 2018 South African study *(18)*.

People living with HIV should be diagnosed and start treatment as soon as possible after acquiring the virus. In the focus countries, 70% [54–84%] of adult women living with HIV received antiretroviral therapy in 2018, and 85% [63–95%] of pregnant women living with HIV were receiving treatment *(9)*. The integration of HIV testing with antenatal care is crucial for diagnosing women living with HIV and linking them to treatment and care services.

Engaging men is important across the Start Free Stay Free AIDS Free framework and is addressed in the text box "Engaging men to break the cycle of HIV transmission in Lesotho" (page 37) and the section "Crosscutting issues" (page 51).

Provide enhanced care and support services for pregnant and breastfeeding women living with HIV to improve outcomes of HIV prevention, treatment and care

A recent review found that one in five women starting treatment during pregnancy stopped within 12 months, and one in four who were on treatment before pregnancy were no longer taking the medicines nine months later *(19)*. Reasons for women dropping out of care include the need for multiple clinic visits, formal and informal user fees, transport costs, long waiting times, stockouts of medicines and diagnostics, stigma and inconsiderate behaviour of health-care providers, insufficient counselling, poor support from families or partners, and side-effects of antiretroviral medicines *(20–22)*.

Experiences from Botswana and Malawi emphasize the importance of training, support and supervision of health-care workers to enhance support for antiretroviral adherence and retention in care and to sustain viral load suppression for pregnant and breastfeeding women living with HIV, especially adolescent girls and young women. Viral load suppression is essential to keep mothers healthy and to prevent their children and HIV-negative sexual partners from acquiring HIV *(16)*.

Successful strategies should be tailored to individual needs and should empower girls and women living with HIV to understand HIV and make choices about their treatment and care. Effective tools include intensifying the provision of pre-test information, post-test counselling, mobile technology that ensures confidentiality, differentiated service delivery, providing joint partner counselling, mentoring schemes and other forms of peer-led community support, ensuring that health-care settings are stigma-free, offering family-based antiretroviral therapy services, community dispensing, and dispensing three to six months' worth of antiretroviral and other medicines to reduce the number of clinic visits *(23–28)*. Mentor mother models can be highly effective for helping women and their children living with HIV to access testing, adhere to treatment, and remain in care, even in difficult circumstances, improving health outcomes for mothers and their children *(29)*.

Community health workers can provide valuable support to retain mother–infant pairs along the cascade of testing, treatment, prevention and care services, particularly if they ensure confidentiality and address stigma in communities *(24,30)*.

Delivering comprehensive combination HIV prevention in antenatal clinic settings

Reduce the incidence of HIV infection in pregnant and breastfeeding women by providing comprehensive combination prevention to mothers at risk of acquiring HIV

incident HIV infection acquired during pregnancy and breastfeeding is increasingly being recognized as an important driver of ongoing vertical transmission. Many of these new infections are undiagnosed, leading to missed opportunities to treat women and prevent new infections in children *(16)*. The relative contribution of maternal infection to overall vertical transmission varies from country to country (see Figures 9 and 10). In some settings, as many as 30% of all new infections in children can be attributed to their mothers acquiring HIV during pregnancy and breastfeeding. In all settings, pregnant and breastfeeding women from key populations are at increased risk of acquiring HIV.

In response, many countries have begun to pilot strategies in which explicit counselling about this heightened risk is needed. Voluntary assisted partner notification and couples testing can help to identify pregnant women who are HIV-negative but are in serodiscordant relationships and in need of additional support to prevent transmission. Screening for risk of pregnant women who are especially likely to acquire HIV can help to identify those who may benefit from pre-exposure prophylaxis during pregnancy. Pre-exposure prophylaxis is a well-established biomedical HIV prevention strategy and is already recommended by WHO to reduce the risk of HIV during periconception, pregnancy and breastfeeding *(31,32)*. In a 2018 review of national-level guidance on the use of pre-exposure prophylaxis, pregnancy is recognized as a period with increased HIV vulnerability and pre-exposure prophylaxis specifically during pregnancy is recommended by many sources *(33)*. Pre-exposure prophylaxis is not contraindicated as a periconception HIV prevention strategy in any country, but only three countries have specific guidance for periconception HIV prevention. Expanding the use of pre-exposure prophylaxis in this population would be important to generate additional data and could prove valuable in minimizing this source of new paediatric infections and protecting young women from acquiring HIV.

Peer mentoring support is especially effective for enabling pregnant and breastfeeding women to remain HIV-negative with combination HIV prevention *(29)*.

Further details on combination HIV prevention are included in the following section.

STAY FREE:

PROGRAMMES THAT WORK FOR ADOLESCENTS AND YOUNG PEOPLE WILL PREVENT NEW HIV INFECTIONS

Targets

- Reduce the annual number of new HIV infections among adolescent girls and young women aged 10–24 years to fewer than 100 000 by 2020.
- Provide voluntary medical circumcision for HIV prevention to 25 million additional men by 2020, with a focus on boys and young men aged 10–29 years.

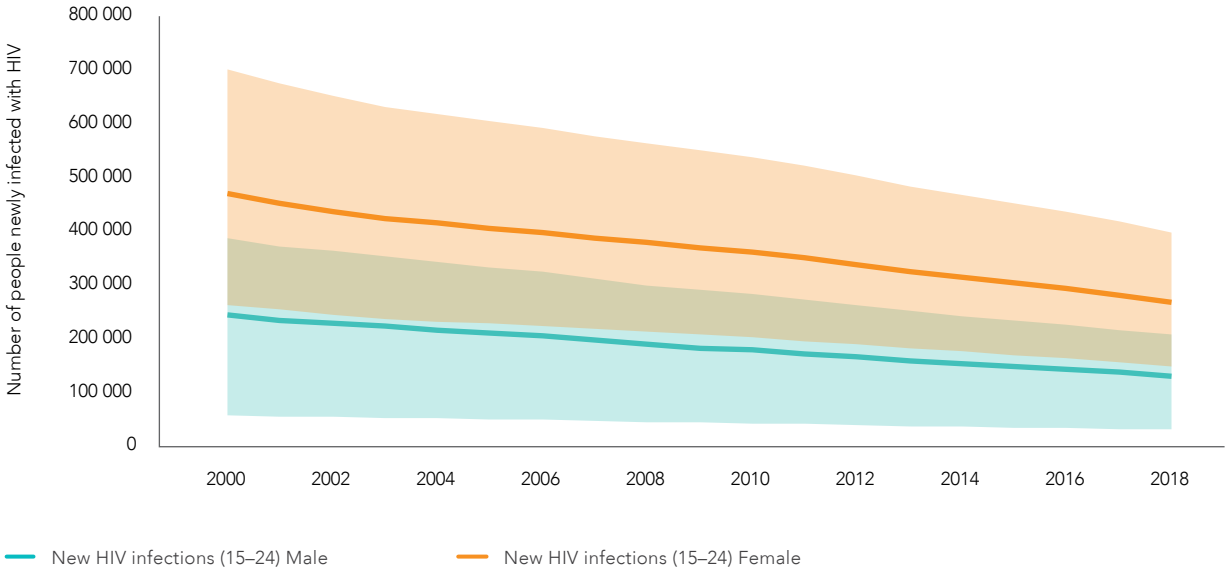
2018 data

There were 270 000 [150 000–400 000] new HIV infections among adolescent girls and young women in 2018 in the 23 focus countries

This is three times higher than the 2020 target of fewer than 100 000 globally—the rate of decline is intolerably slow. Since 2010 the number of new HIV infections among young people has declined by 26%. Although this is better than the 18% decline among adults aged 25 years and older, this decline is still not fast enough to meet the 2020 targets. Among young people, 67% of new HIV infections are among young women (33% in young men); in some settings, young women have a five-fold higher incidence than their male counterparts (Figure 11). Lack of focus on primary HIV prevention services for adolescent girls and young women is a major shortfall in the global AIDS response *(2)*.

Figure 11. The number of young people acquiring HIV is declining, but slowly

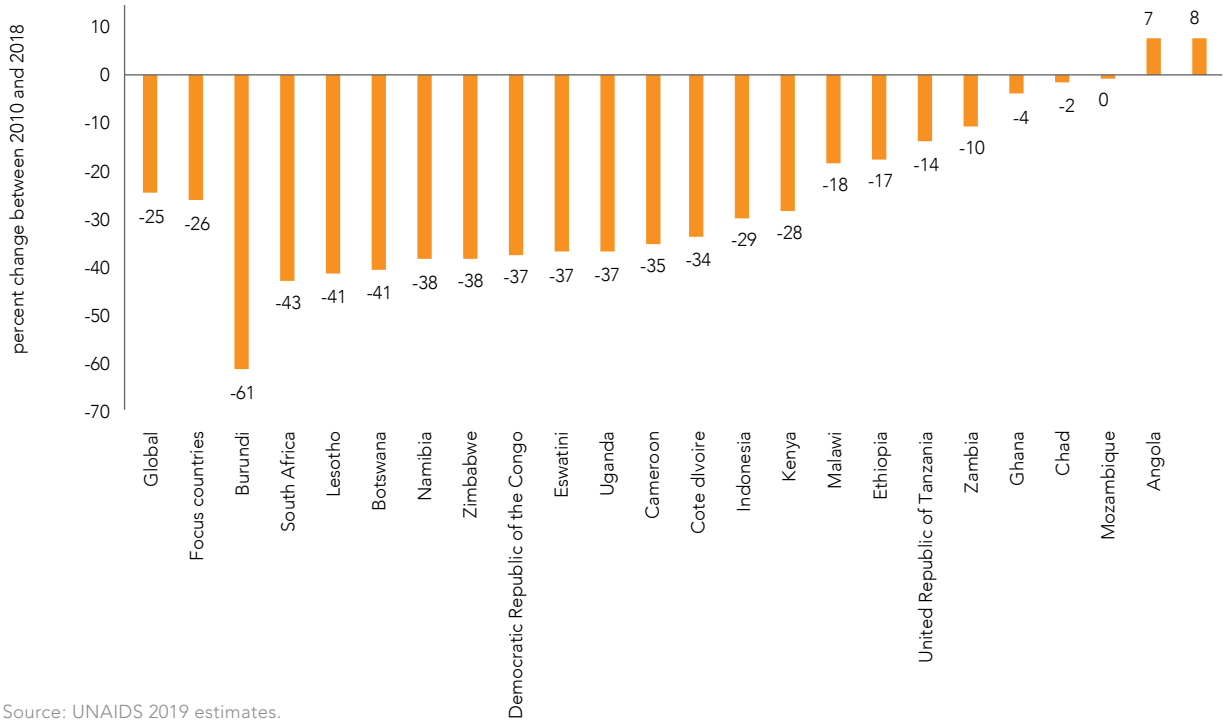
New HIV infections among young men and women aged 15–24 years in 23 focus countries, 2010–2018



Source: UNAIDS 2019 estimates.

Figure 12. Programme efforts are resulting in important reductions in new HIV infections among young women, but these changes vary by country

Percentage changes in numbers of new HIV infections between 2010 and 2018 among young women aged 15–24 years in 22 focus countries and globally



Source: UNAIDS 2019 estimates.

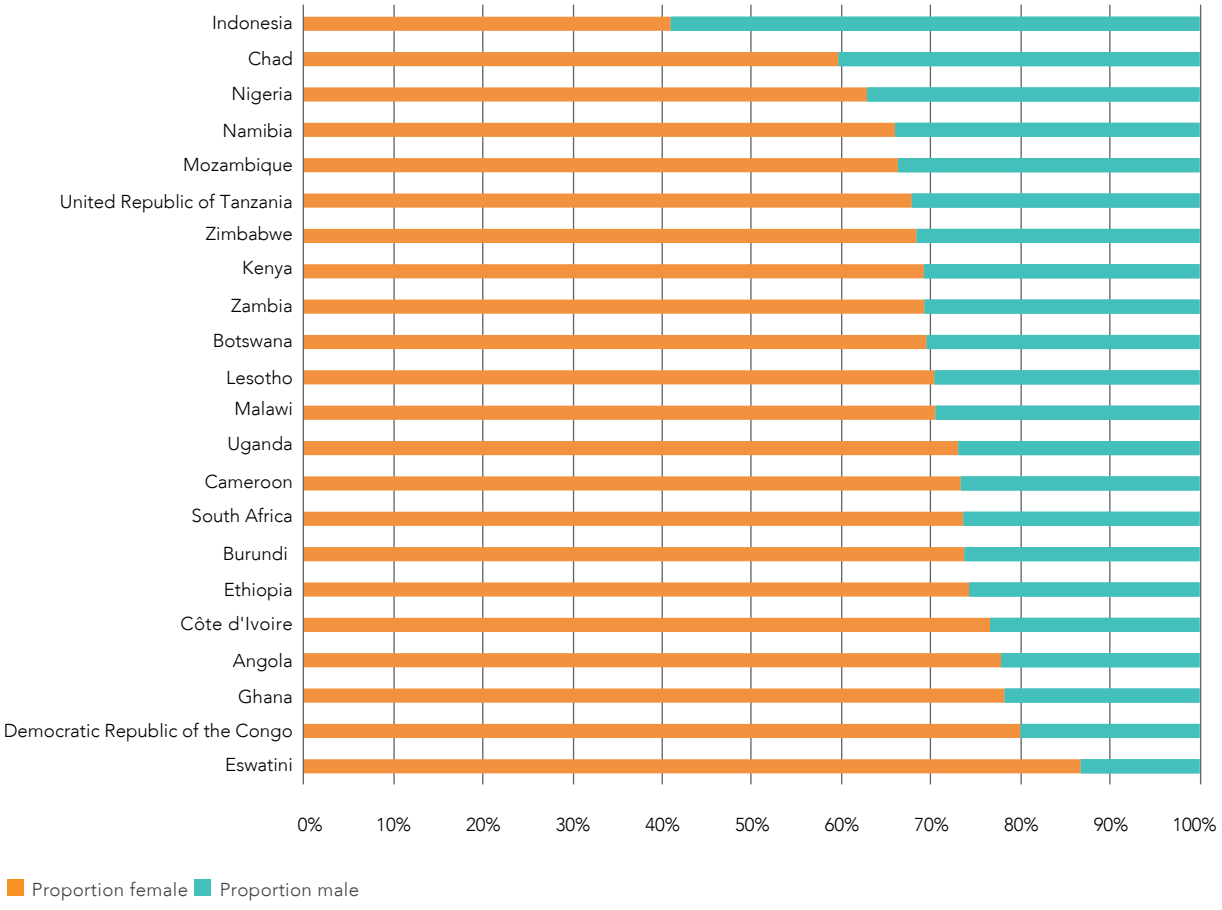
Among the focus countries, new HIV infections declined by 26% among young women between 2010 and 2018 (Figure 11).[5] However, young women aged 15–24 years account for 67% of new infections among that age group (Figure 12). Botswana, Burundi, Lesotho and South Africa have seen declines in new infections of over 40% among young women aged 15–24 years (Figure 13).[6]

In 2018 there were about 4.1 million voluntary medical male circumcisions (all ages) performed for HIV prevention in 14 high-priority countries in eastern and southern Africa

This was the highest annual number to date and an increase of 1.3 million over 2015 and 2016 (Figure 14). There are opportunities for important increases in Botswana, Eswatini, Rwanda, Zambia and Zimbabwe, where population-based surveys conducted between 2013 and 2016 indicate that less than a third of adult men are circumcised.

Figure 13. In the African focus countries adolescent girls and young women have a much higher risk of HIV infection than young men, while in Indonesia young men have a higher risk of HIV infection

Distribution of new infections among young people (aged 15–24 years) acquiring HIV by sex and country, in 22 focus countries, 2018[a]



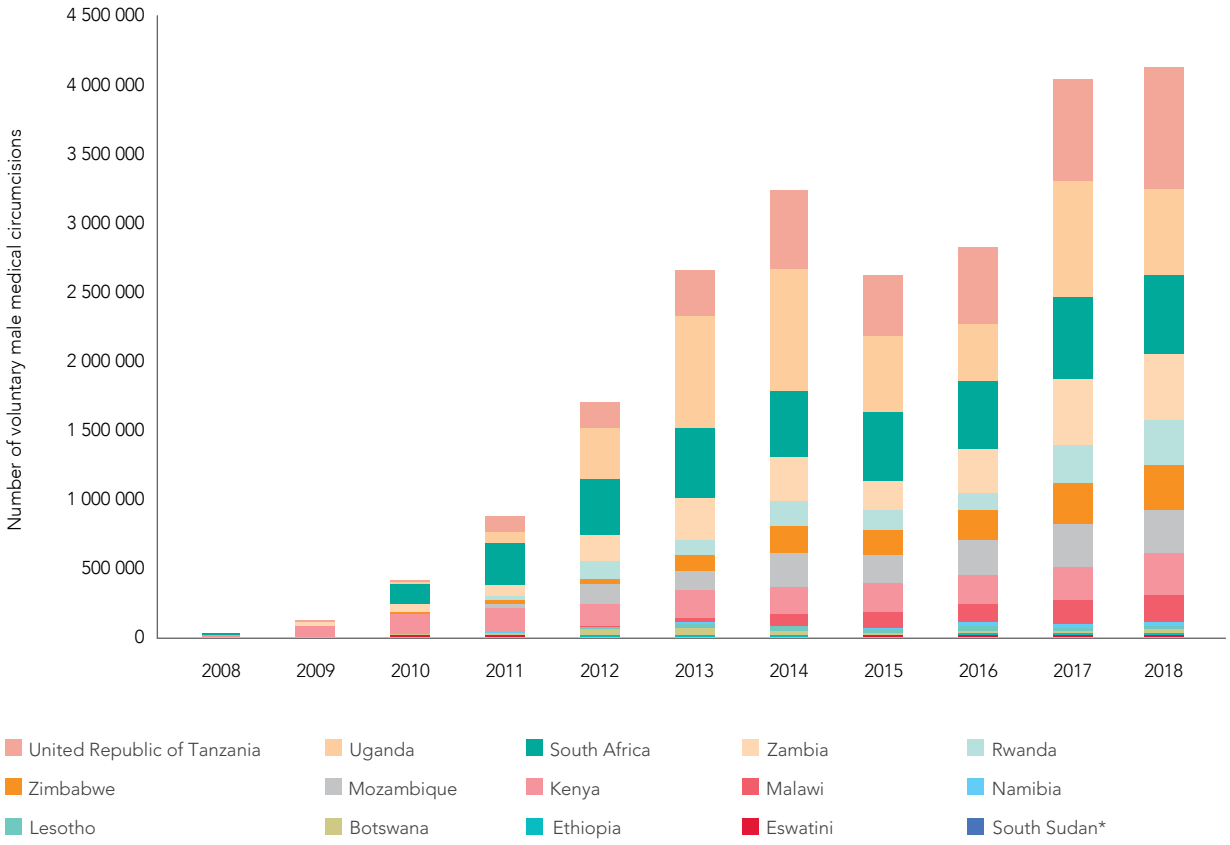
[a] India data unavailable.
Source: UNAIDS 2019 estimates.

[5] Very few people aged 10–14 years acquire HIV.

[6] In India and Indonesia, most of the people acquiring HIV are men who have sex with men and people from other key populations. More adolescent boys and young men in these countries therefore acquire HIV than their female peers *(34)*.

Figure 14. Uptake of voluntary medical male circumcision is increasing, but too slowly

Annual numbers of voluntary medical male circumcisions among the 15 prioritized countries, 2008–2018



* South Sudan has only recently initiated a pilot VMMC programme and data has been reported for the first time in 2018 which is the reason for low number.
Source: Global AIDS Monitoring, 2019

Of the 12 countries in eastern and southern Africa that have submitted age-disaggregated data on voluntary medical male circumcision for 2018,[7] almost half (44%) were among adolescent boys aged 10–14 years (Figure 15). Globally, nearly three-quarters of voluntary medical male circumcisions (71%) were among males aged 10–19 years.

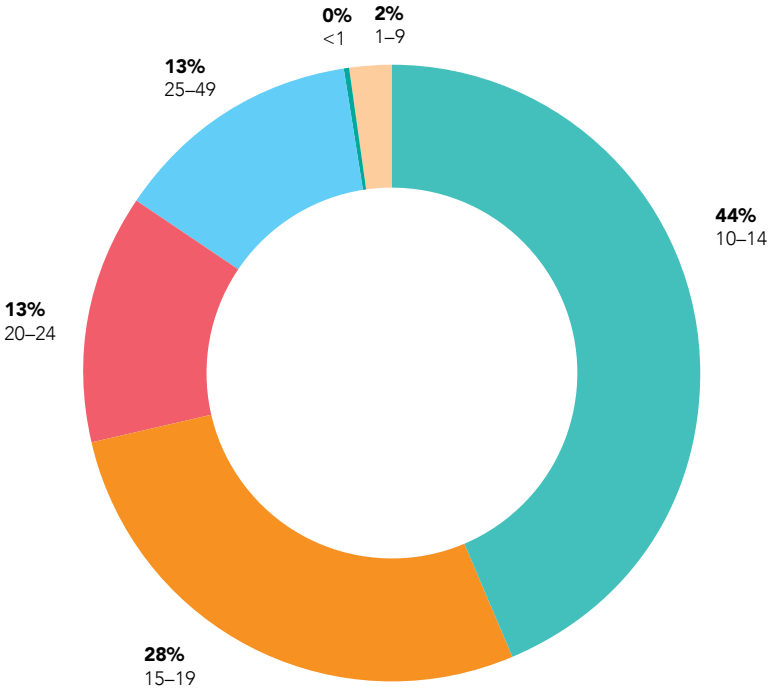
Poor knowledge of HIV among young people aged 15–24 years in 18 of 23 focus countries

People need accurate knowledge about HIV and an enabling environment in order to make appropriate decisions to protect themselves against HIV. Most of the 23 focus countries report having policies or strategies that support life skills-based HIV and sexuality education. However, there are questions surrounding the extent to which those policies are implemented and the quality of sexual and reproductive health information (Figure 16) *(35)*.

[7] Botswana, Eswatini, Ethiopia, Kenya, Lesotho, Mozambique, Namibia, Rwanda, South Sudan, the United Republic of Tanzania, Zambia and Zimbabwe.

Figure 15. Age distribution of voluntary medical male circumcision

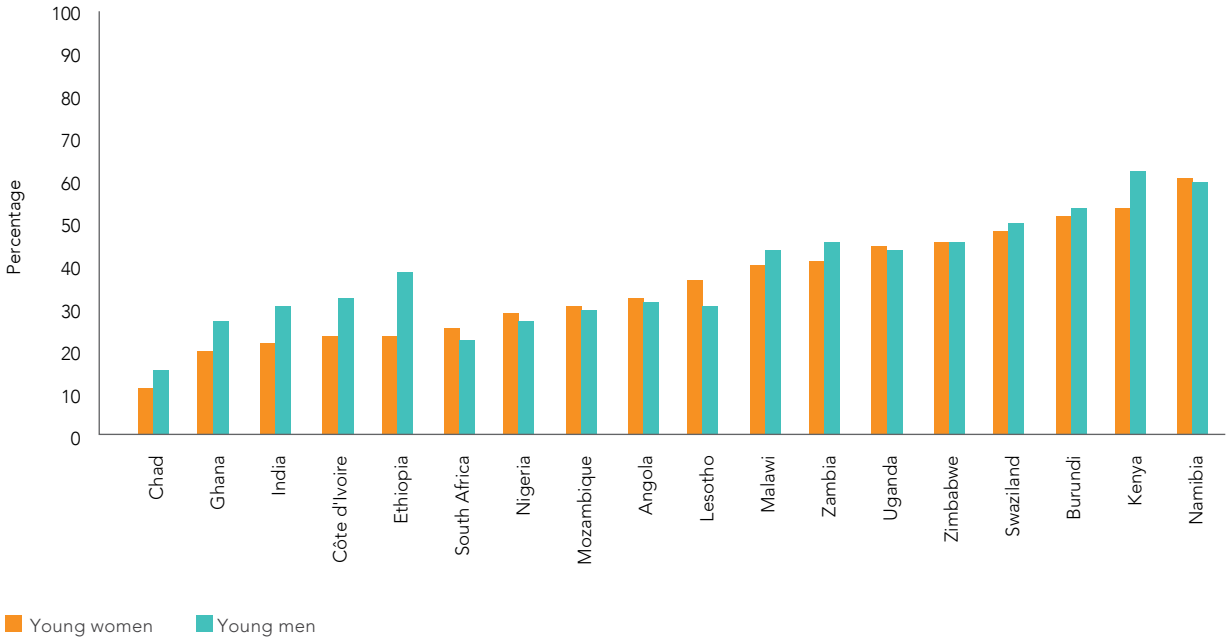
Proportion of voluntary medical male circumcisions by age group in the 12 countries prioritized for voluntary male circumcision in eastern and southern Africa with available data, 2018[a]



[a] Countries included Botswana, Eswatini, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, South Africa, South Sudan, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe.
Source: Global AIDS Monitoring, 2019

Figure 16. Young women's knowledge about HIV prevention is poor in most of the focus countries

Comprehensive knowledge about HIV prevention among women and men aged 15–24 years in 18 focus countries with available data, 2013–2018 (most recent survey)



Sources: Population-based survey data 2013–2018

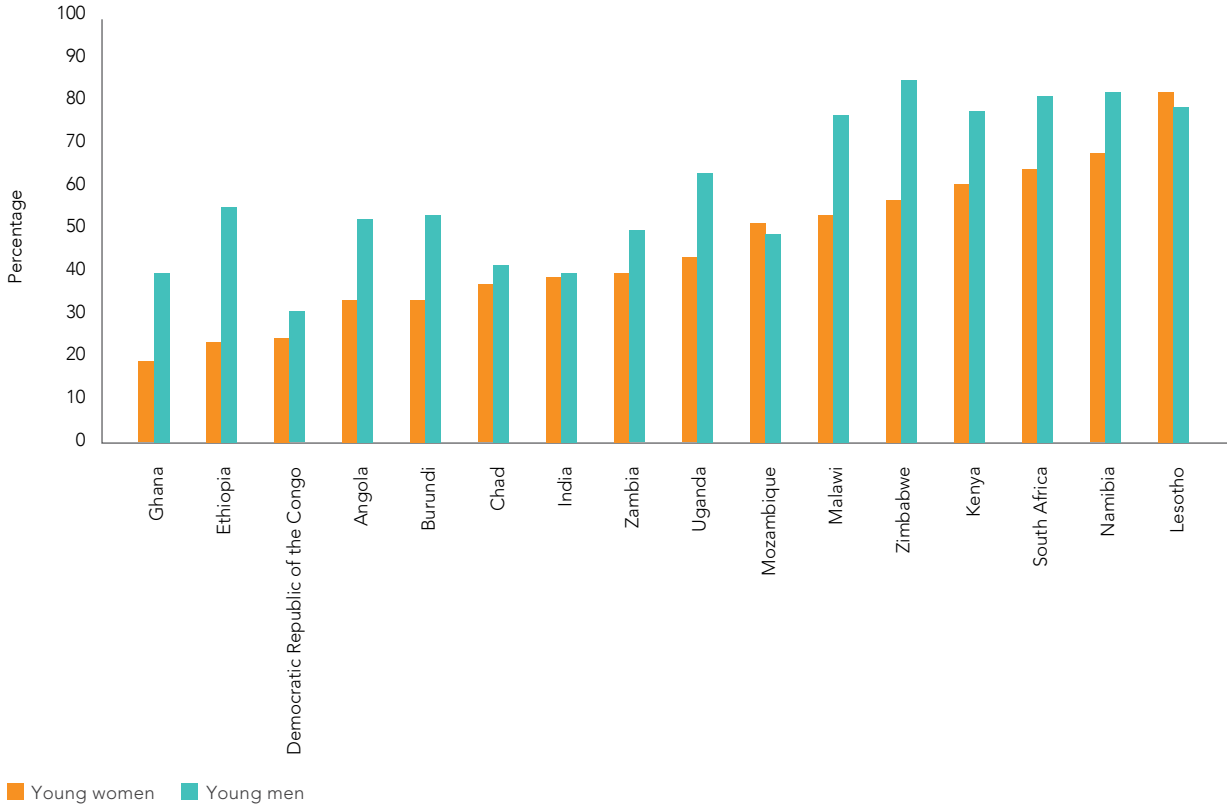
Low condom use, especially among young women, in 19 of 23 focus countries

In only 5 of the 19 focus countries with available data did more than 60% of young women report using a condom the last time they had sex with a non-marital, non-cohabiting partner (Figure 17). The unavailability of condoms also remains an issue, especially in sub-Saharan Africa, where the estimated condom need was six billion male condoms, but only about 2.7 billion condoms were distributed in 2015. Age restrictions on access to condoms are often overlooked: in 2019, five of the 17 focus countries reporting these data confirmed the existence of such age restrictions.[8] Many countries also prohibit condom promotion and distribution in schools and other venues where adolescents socialize. Of the 100 countries that reported having a national plan or strategy related to condoms in 2017, only 26 reported that the plan included condom promotion in secondary schools *(37)*.

In 2018, nine of the focus countries had adopted national policies to offer pre-exposure prophylaxis to adolescents and young women at risk of HIV

Figure 17. Condom use is still low, especially among young women

Percentage of women and men aged 15–24 years who said they used a condom at last sex with a non-marital, non-cohabiting partner in the 12 months before being surveyed in 19 focus countries with available data, 2013–2018



Sources: Population-based survey data 2013–2018

[8] According to 2019 National Commitments and Policy Instrument data, 25 of 103 reporting countries had age restrictions for accessing condoms *(36)*.

Ten of the focus countries had guidelines for young women aged 15–24 years and pre-exposure prophylaxis (Botswana, Côte d'Ivoire, the Democratic Republic of the Congo, Eswatini, Kenya, Malawi, South Africa, Uganda, Zambia and Zimbabwe). Among the focus countries, pre-exposure prophylaxis was available at some scale in Botswana, Côte d'Ivoire, the Democratic Republic of the Congo, Eswatini, India, Kenya, Lesotho, Mozambique, Namibia, Nigeria, South Africa, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe (3). The scale of these programmes varies dramatically from a few hundred people on pre-exposure prophylaxis in an early pilot programme in Côte d'Ivoire to about 30 000 people in a national programme in Kenya.

Evidence-informed actions for impact

Improve access to integrated adolescent sexual and reproductive health and rights and combination HIV prevention information and services that empower adolescent girls and young women to make informed choices about contraception and HIV prevention

Ensure that integrated sexual and reproductive health and rights services and combination HIV prevention services are accessible and acceptable to adolescent girls and young women and their male partners

Achieving the global target of fewer than 100 000 new HIV infections among adolescent girls and young women aged 15–24 years in 2020 requires combination HIV prevention to be tailored to population and location *(38)*.

United Nations development organizations have updated guidance on sexuality education to inform implementation of in- and out-of-school comprehensive sexuality education programmes, adolescent sexual and reproductive health and rights services, and comprehensive sexual and reproductive health and rights services for women living with HIV *(39–41)*.

Given recent results shared from the Evidence for Contraceptive Options and HIV Outcomes (ECHO) trial showing high rates of sexually transmitted infections among women, especially young women, sexually transmitted infection counselling, testing and treatment should be included within integrated health settings *(42)*.

The Global Prevention Coalition Road Map highlights high-priority actions for revitalizing combination HIV prevention, including biomedical, behavioural and structural interventions tailored to meet the needs of adolescent girls and young women and their male partners *(43)*.[9]

The PEPFAR Determined, Resilient, Empowered, AIDS-free, Mentored and Safe (DREAMS) partnership has been using this approach to converge around the diverse needs of the most vulnerable girls in highly affected settings in 15 targeted countries *(44)*. These countries account for over half of all HIV infections among adolescent girls and young women globally.[10] The number of HIV diagnoses among adolescent girls and young women has declined in the vast majority of the highest-burden communities and districts participating in the DREAMS partnership *(45)*.

[9] UNAIDS and the United Nations Population Fund launched the Global HIV Prevention Coalition in October 2017 comprising countries with high numbers of people newly infected with HIV.

[10] Botswana, Côte d'Ivoire, Eswatini, Haiti, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, South Africa, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe.

Increase condom programming targeted at young people aged 15–24 years

Even if knowledge on the protective effect of condoms is high, young women's knowledge of where to access condoms may be lower. Distribution points such as dispensers for male and female condoms need to be easily and discreetly accessible for adolescent girls and young women. Health-care provider-initiated condom offers, such as a three-month supply of condoms (30 condoms) at every visit, could greatly enhance the availability of condoms at relatively limited additional cost. Demand-side barriers and facilitating factors for consistent use and product preferences among young women and their male partners must be studied through quantitative and qualitative studies at the country level as a basis for increased product choice, demand generation and community outreach to improve skills in relation to condom use and negotiation. Programmes in Namibia and South Africa have demonstrated that condom promotion and distribution in schools is feasible. There is a need for continued social and behaviour change programmes that address barriers to condom use and the norms supporting them *(38)*.

Expand access to new female-controlled HIV prevention interventions for high-risk adolescent girls and young women to boost combination prevention

Countries are increasingly adopting the use of pre-exposure prophylaxis for people at substantial risk of HIV infection, including adolescent girls and young women *(45)*. Oral pre-exposure prophylaxis is acceptable to adolescent girls and young women, with adherence similar to that in older women *(46,47)*.

Pre-exposure prophylaxis programming needs to be repositioned to meet the needs of adolescents and should be framed as part of a positive life choice *(48)*. A study from KwaZulu-Natal province in South Africa reported that although pre-exposure prophylaxis was acceptable to women, most of their male partners opposed its use *(49)*. Laws that require parental consent and reluctance of clinicians to prescribe pre-exposure prophylaxis to adolescents and young adults need to be overcome *(50)*.

Raising awareness of pre-exposure prophylaxis, encouraging self-assessment of the risk of HIV exposure, and normalizing pre-exposure prophylaxis as part of an HIV prevention strategy are important first steps in pre-exposure prophylaxis demand creation. In Kenya, the needs and views of stakeholders and target audiences about pre-exposure prophylaxis were mapped; with the involvement of communications experts, various communications strategies were developed *(51)*. Uptake of pre-exposure prophylaxis was fastest among serodiscordant couples and female sex workers, but slower among adolescents and young people *(52)*. Consistent social media engagement across multiple platforms is important to understand the myths and barriers to pre-exposure prophylaxis and to tailor responses to the changing dynamics of the youth population. The integration of pre-exposure prophylaxis provision into existing safe spaces and platforms accessed by adolescent girls and young women should accelerate scale-up *(53)*.

There is evidence that the dapivirine ring is an effective, discreet HIV prevention option that adolescent girls and women can control. The vaginal ring, replaced monthly, slowly releases the antiretroviral medicine dapivirine and prevents HIV infection; early results from two studies suggest that the ring reduces acquisition of HIV by more than 50% *(54,55)*. Full results from the studies are expected later in 2019.

Ensure services meet the needs of adolescent girls and young women from key populations

Specific efforts are needed to deliver combination HIV prevention to young women from key populations, including young female sex workers and young women who use drugs.

SUPPORTING TEEN MOTHERS IN KENYA

Adolescent girls and young women are disproportionately affected by HIV, with pregnant and postpartum adolescents living with HIV being particularly vulnerable and requiring special attention and enhanced support.

In Kenya, the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) is leading the AIDSFree JUA programme,[11] which works to improve HIV and other health and social outcomes for adolescents aged 10–19 years who are pregnant or mothers, and their children up to age 2 years *(65)*.

This PEPFAR-funded programme is aimed at ensuring pregnant adolescents and young mothers have access to antenatal and postnatal care services, which are key entry points for HIV services for adolescent girls, regardless of their HIV status.

Central to the programme are trained home-visiting teams comprising a peer mentor, a supervisor, and a male and a female household facilitator, who visit and counsel adolescents. The model has three components: peer-led mentoring to encourage pregnant adolescents and teen mothers to use antenatal and postnatal care, including prevention of mother-to-child transmission services; support for their parents or guardians and households to reduce stigma and discrimination and to mobilize social support; and supervisory support. The visiting teams also work with community members, caregivers and partners of the adolescents.

A key element of the programme is to support adolescents living with HIV to access services to prevent vertical transmission. All 384 pregnant and breastfeeding adolescents who enrolled in the Kenyan programme received HIV testing services. The 20 who were diagnosed with HIV received antiretroviral therapy during pregnancy and after delivery. Those who tested negative for HIV received education on HIV prevention, including safer sex practices. Family members who participate in the programme also improve their knowledge and understanding of HIV prevention and treatment, and learn how they can help adolescents access maternal and child health services.

About 94% of the adolescents in the programme who gave birth delivered their babies with the support of a skilled birth attendant (which dramatically increases the likelihood of a safe delivery and healthy baby)—higher than the Kenyan national average of 61%. This ensures that infants exposed to HIV can immediately receive the necessary services, such as prophylaxis and HIV testing.

Comprehensive health packages for young key populations cover a range of services, such as condoms and lubricants; harm-reduction, including needles, syringes and opioid substitution therapy; sexual and reproductive health services, including sexually transmitted infection diagnosis and treatment, contraceptive options, and services related to conception, pregnancy care and abortion; and HIV testing and treatment, including prevention of vertical transmission and other health services (56). Guidance recommends programmes that draw upon and build on the strengths, competencies and capacities of young key populations *(57,58)*.

[11] JUA is an abbreviation for Jielimishe Uzazi na Afya, Swahili for "educate yourself about reproductive health".

There are encouraging examples of specific programming for young key populations from Ghana, Kenya and the United Republic of Tanzania *(59,60)*. Kimara Peers, a community-based nongovernmental organization in Dar es Salaam in the United Republic of Tanzania opened two drop-in centres near state-run health centres and dispensaries to provide outreach and services for young people who use drugs.

Preventing unintended pregnancies

Preventing unintended pregnancies among women living with HIV offers major individual and public health benefits and is essential for elimination of mother-to-child transmission *(61,62)*.

Voluntary family planning to enable women and couples to determine the timing and spacing of their pregnancies is a basic human right *(63)*. In 2017 an estimated 885 million women in low- and middle-income countries wanted to prevent a pregnancy, of whom about a quarter (214 million women) had an unmet need for contraception *(64)*.

Integrating HIV services with family planning and maternal health care can also increase the uptake of HIV testing and treatment, safe and effective contraceptive options, and other reproductive health services *(63)*.

Improve routine data quality, surveillance and research on HIV among adolescents and youth

The few studies available show that adolescents, especially older adolescents aged 15–19 years, are not retained on treatment, and few seek testing. Collecting more detailed, disaggregated and subnational data can help to identify populations being left behind for targeted planning. Countries such as Eswatini, the United Republic of Tanzania and Zimbabwe have been able to report these data and use them to improve programming and their HIV estimates, but elsewhere the paucity of age- and sex-disaggregated data for adolescents aged 10–14 years and 15–19 years limits our ability to respond to their HIV service needs. Researchers need to integrate adolescent cohorts earlier during study recruitment in order to generate adolescent-specific data on, for example, pharmacokinetics and effectiveness of antiretroviral medicines, thereby reducing the lag between new product availability and uptake by adolescents. Implementation science will facilitate our understanding of how best to reach the young people currently left behind.

Increase coverage of voluntary medical male circumcision, targeting boys and men aged 10–29 years

The Start Free Stay Free AIDS Free target focuses on coverage of voluntary medical male circumcision. In order to reduce new HIV infections in adolescent girls and young women, however, a comprehensive approach is needed to reach men with HIV services and to engage men to support the prevention, diagnosis and treatment of HIV among their female partners (see box "Engaging men to break the cycle of HIV transmission in Lesotho", page 37).

Voluntary medical male circumcision can act as a gateway for improving the health of adolescent boys and men, including risk counselling, reduction of interpersonal violence, increased condom use, and reducing multiple sexual partners *(66,67)*. Approaches that can sustain the uptake of voluntary medical male circumcision include targeting specific locations and age groups *(68)*; promoting the services at community events, with linkage facilitators present to provide support *(69)*; linking voluntary medical male circumcision to other needed health-care services *(70)*; strengthening staffing capacity; and training and encouraging adolescent girls and young women to discuss the procedure with their male partners *(71)*. Better reporting of age-disaggregated data on voluntary medical male circumcision will assist programmes to ensure they target boys and men before they are exposed to HIV.

ENGAGING MEN TO BREAK THE CYCLE OF HIV TRANSMISSION IN LESOTHO

The uptake of HIV services tends to be lower for men than for women *(72–74)*. In Lesotho, for example, a 2017 national survey found that only 71% of males aged 15–59 years living with HIV knew their HIV-positive status, compared with 82% of females living with HIV. Men were also less likely to be virally suppressed: 63% of men living with HIV were virally suppressed, compared with 71% of women living with HIV *(75)*.

Reasons for these disparities are manifold. In Lesotho, a majority of middle-aged and mobile men rarely visit clinics and are not usually home at the time of community-based testing campaigns. Norms of masculinity discourage timely health-seeking behaviours among men, health facilities customarily operate during standard hours, and most health-care staff are female. Even when they are unwell, men often present late to clinical care *(76)*. When men do not use or sufficiently benefit from HIV services, it magnifies their own HIV risk and that of their female partners.

Expanding the use of HIV prevention, testing and treatment services by men and adolescent boys is complex but feasible, as EGPAF is showing in Lesotho.

Through the PEPFAR-supported DREAMS initiative, EGPAF held focus-group discussions to understand what "male-friendly services" would entail and then worked with the Ministry of Health to design such a programme. It identified spaces in existing public health facilities to establish male-friendly clinics and recruited and trained male nurses and counsellors. Starting in June 2017, it introduced eight men's clinics at selected high-volume health facilities to increase coverage of HIV testing and treatment among men.

A wide range of HIV and TB services is now provided, including counselling on partner and family HIV testing and the importance of antenatal care and prevention of mother-to-child HIV transmission. Men's clinics also provide comprehensive primary care services, which was an intentional approach to avoid HIV-related stigmatization of clinics.

Clinic hours were extended to include early mornings, evenings and weekends, making them more accessible to men with jobs. Multi-month dispensing of antiretroviral medicines for people stabilized on treatment and outreach to surrounding communities and villages to mobilize men for services were implemented.

From June 2017 to October 2018, more than 54 000 men attended the clinics. Almost all the men eligible for HIV testing took a test; 12% of them tested positive, all of whom were started on antiretroviral therapy. About 88% of the men who received viral load test results were virally suppressed. EGPAF is now expanding the men's health programme to 35 sites across all 10 districts in Lesotho.

AIDS FREE:

ACCESS TO TREATMENT FOR CHILDREN AND ADOLESCENTS IS IMPROVING—BUT TOO SLOWLY

Targets

- Provide 95% (1.6 million) children aged 0–14 years and 1.2 million adolescents aged 15–19 years living with HIV with antiretroviral therapy by 2018.
- Provide 1.4 million children aged 0–14 years and 1 million adolescents aged 15–19 years with HIV treatment by 2020.

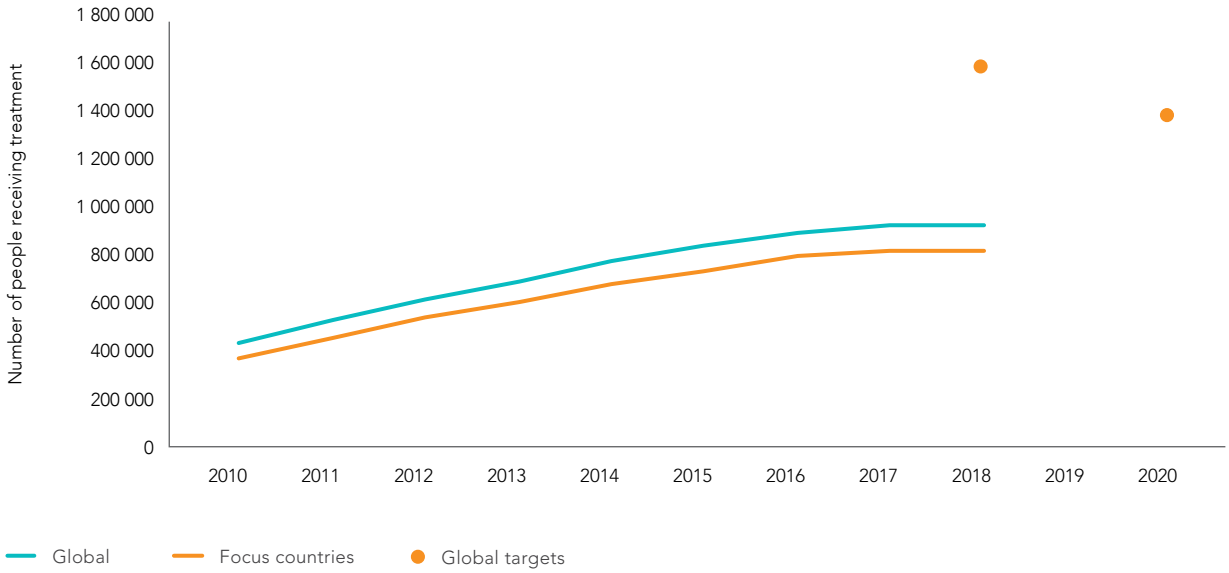
2018 data

Globally in 2018, about 937 000 [830 000–980 000] children aged 0–14 years living with HIV were receiving antiretroviral therapy

This represents over half (54% [37–73%]) of all children living with HIV in 2018, compared with 20% [14–27%] in 2010. HIV treatment access for children overall increased much too

Figure 18. The number of children receiving HIV treatment keeps rising, but not fast enough

Number of children aged 0–14 years living with HIV receiving antiretroviral therapy globally and in 23 focus countries, 2010–2018

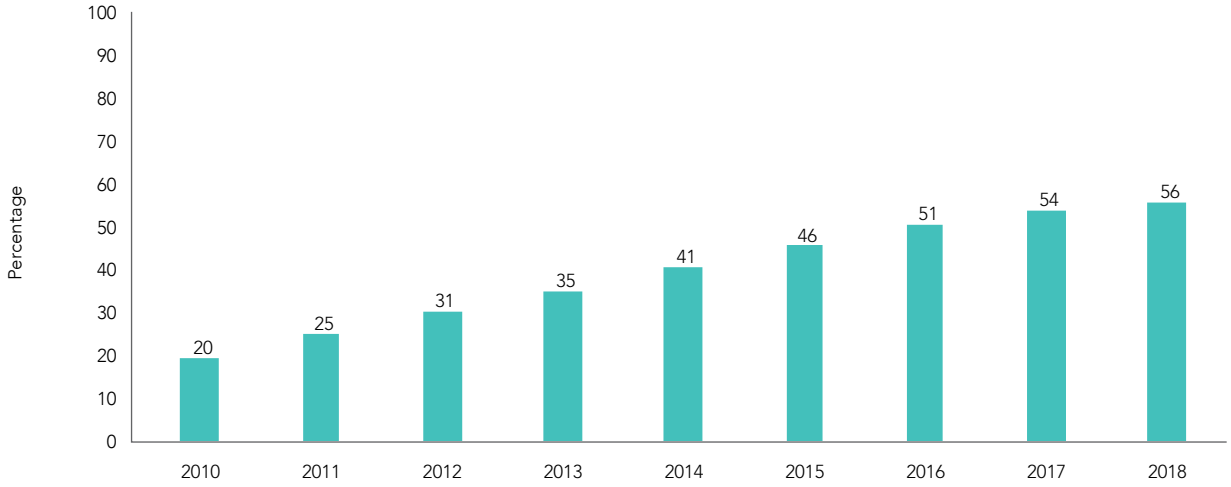


Source: Global AIDS Monitoring, 2019

slowly to reach the 95% coverage target set for 2018 (Figures 18 and 19). As the number of children living with HIV declines due to children aging into the adult cohort, coverage will increase, even if the increase in the number of children reached with treatment slows.

Figure 19. Only just over half the children living with HIV are receiving treatment

Percentage of children (0–14 years old) living with HIV receiving antiretroviral therapy in 23 focus countries, 2010–2018

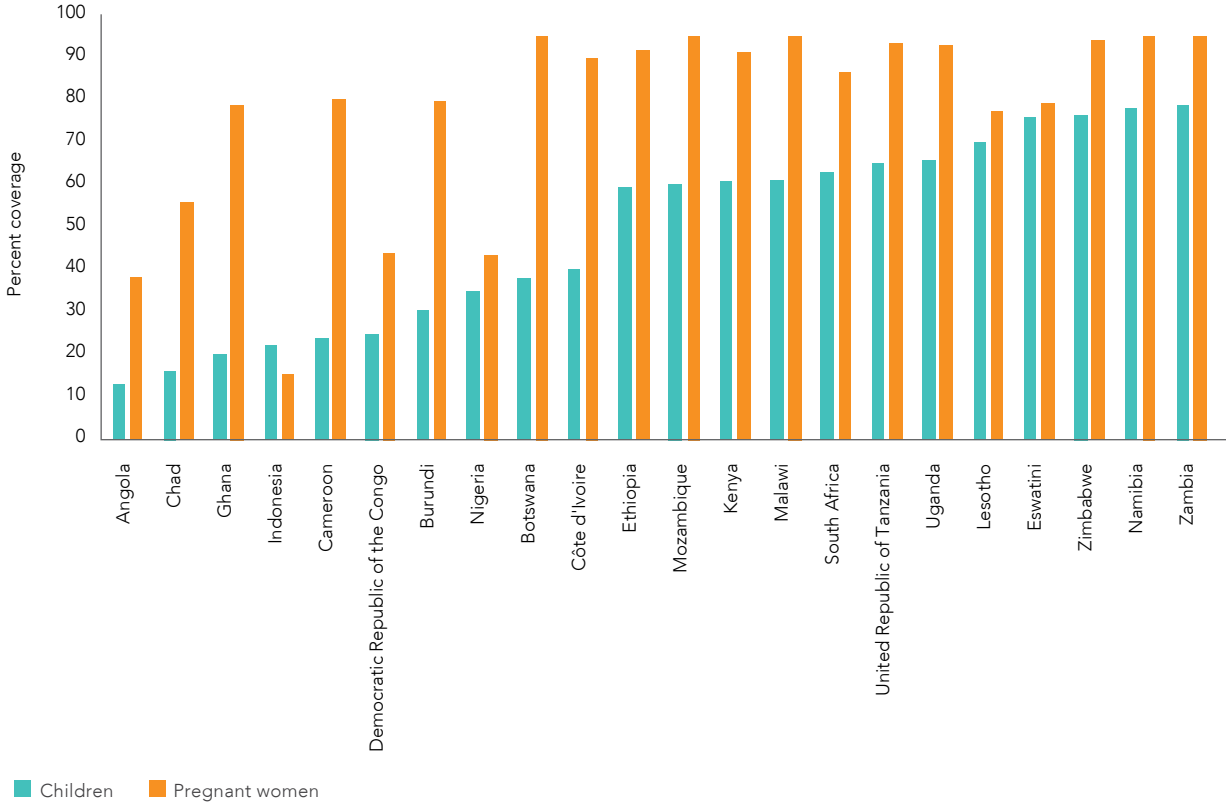


Source: UNAIDS 2019 estimates.

Nevertheless, four countries in eastern and southern Africa (Eswatini, Zimbabwe, Namibia, Zambia) were providing treatment to at least 70% of children living with HIV in 2018 (Figure 20). UNAIDS 2019 estimates suggest that improvements in treatment access have reduced the number of children (0–14 years old) dying from AIDS-related causes in almost all the focus countries (except Angola and Indonesia).

Figure 20. There is a large gap in HIV treatment access between children and pregnant women living with HIV in some countries

Percentage of pregnant women living with HIV and children (0–14 years old) living with HIV receiving antiretroviral therapy by country in 22 focus countries, 2018.



Data on antiretroviral therapy coverage among children are not available for India
Source: UNAIDS 2019 estimates.

Infants and children living with HIV are not being diagnosed and treated early enough to prevent HIV-related morbidity and mortality

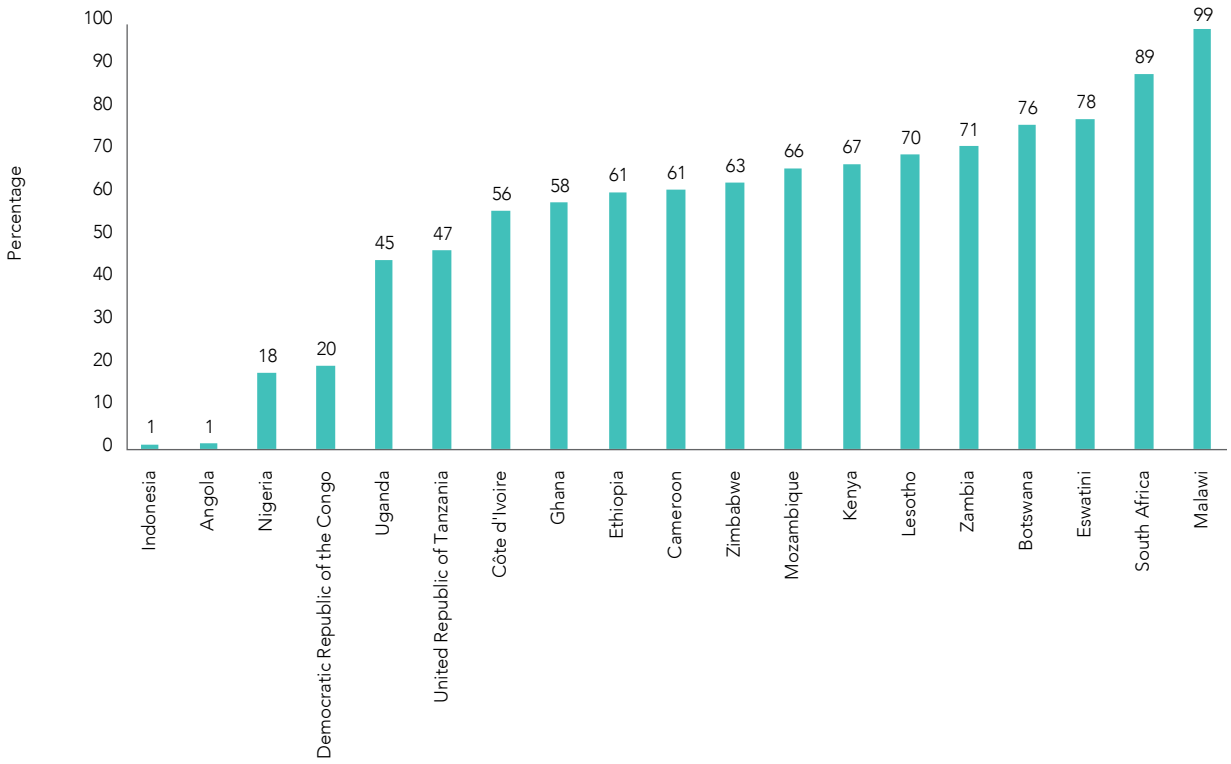
In the focus countries in 2018, only 52% [43–70%] of infants exposed to HIV were tested before two months of age, with considerable variation in coverage by country (Figure 21).

Children living with HIV are being left behind in HIV treatment scale-up

Treatment coverage for children in general lags behind that of pregnant women (Figure 20). The gap is especially wide in Botswana, Cameroon and Ghana, with over 50 percentage points difference between coverage in pregnant women and children (Figure 20).

Figure 21. Early infant diagnosis services reach about half of all infants exposed to HIV

Percentage of infants exposed to HIV who received a virological test within their first two months of life in focus countries with available data, 2018 (denominator is births to women living with HIV)



Source: UNAIDS 2019 estimates.

There is a striking difference in treatment coverage among children aged 0–14 years globally (54% [37–73]) and in western and central Africa (28% [18–39])

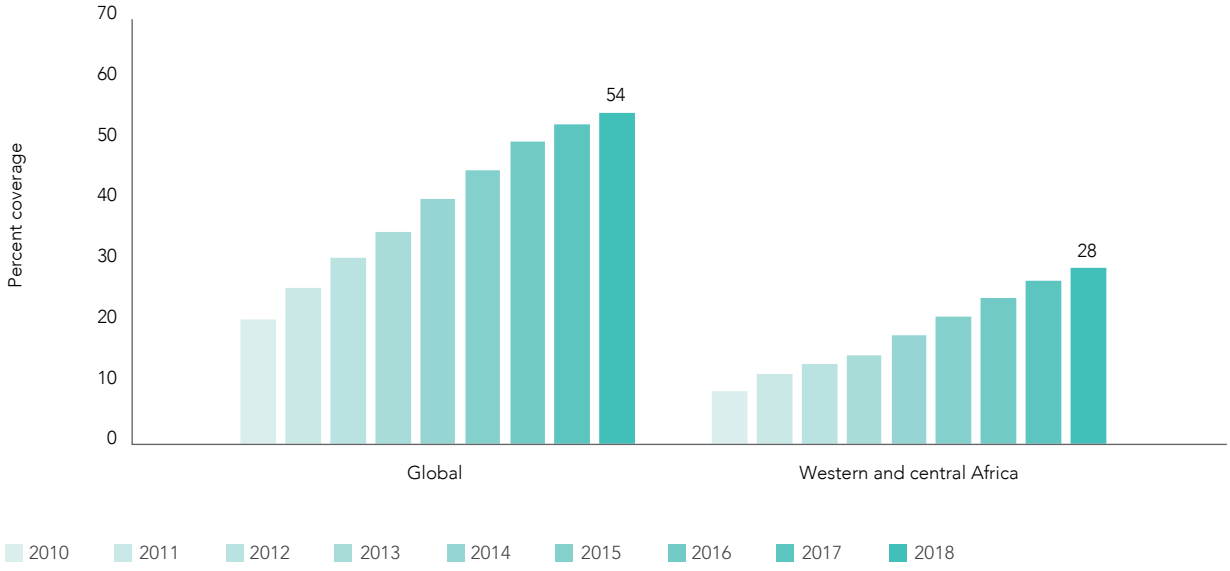
Treatment access is uneven, with coverage still well below 30% in western and central Africa as a whole (Figure 22) and in Indonesia and Angola, reflecting the low priority given to children in HIV investment and multiple weaknesses in health systems.

There are many adolescents living with HIV in the focus countries

In 2018 there were 1.4 million [940 000–2 million] adolescents aged 10–19 years living with HIV in the focus countries, 63% of whom were aged 15–19 years. The number of adolescents living with HIV has plateaued and may be beginning to decline (Figure 23).

Figure 22. Children's access to HIV treatment in western and central Africa is still very low

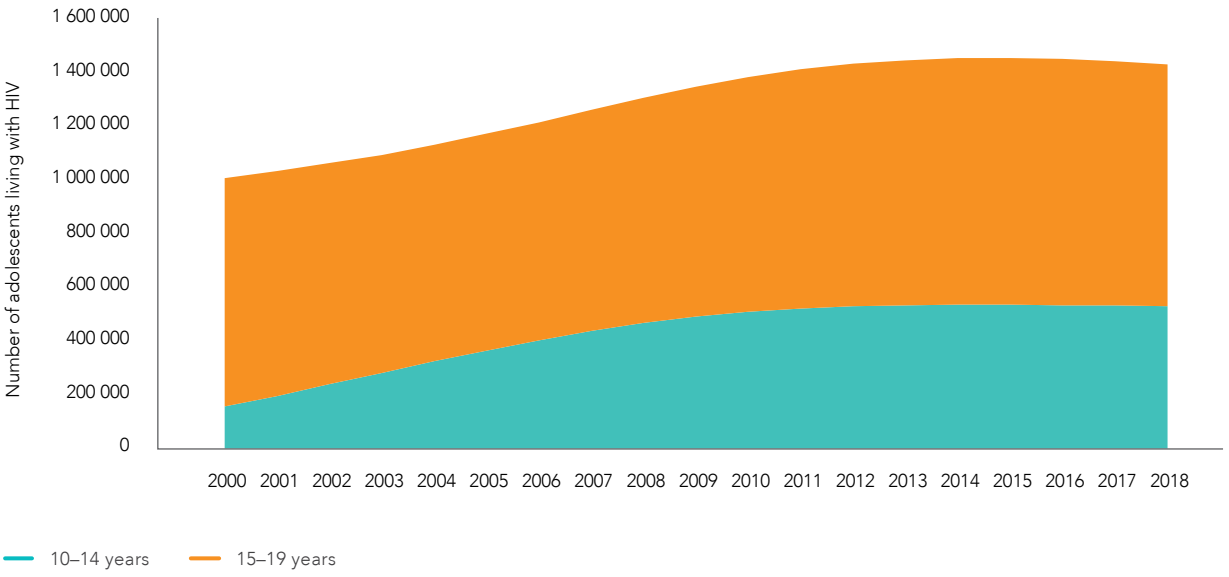
Percentage of children aged 0–14 years living with HIV receiving antiretroviral therapy in western and central Africa and globally, 2010–2018



Source: UNAIDS 2019 estimates.

Figure 23. A third of adolescents living with HIV are aged 10–14 years; this group is likely to decline in the coming years

Estimated number of adolescents aged 10–14 years and aged 15–19 years living with HIV in 23 focus countries, 2010–2018



Source: UNAIDS 2019 estimates.

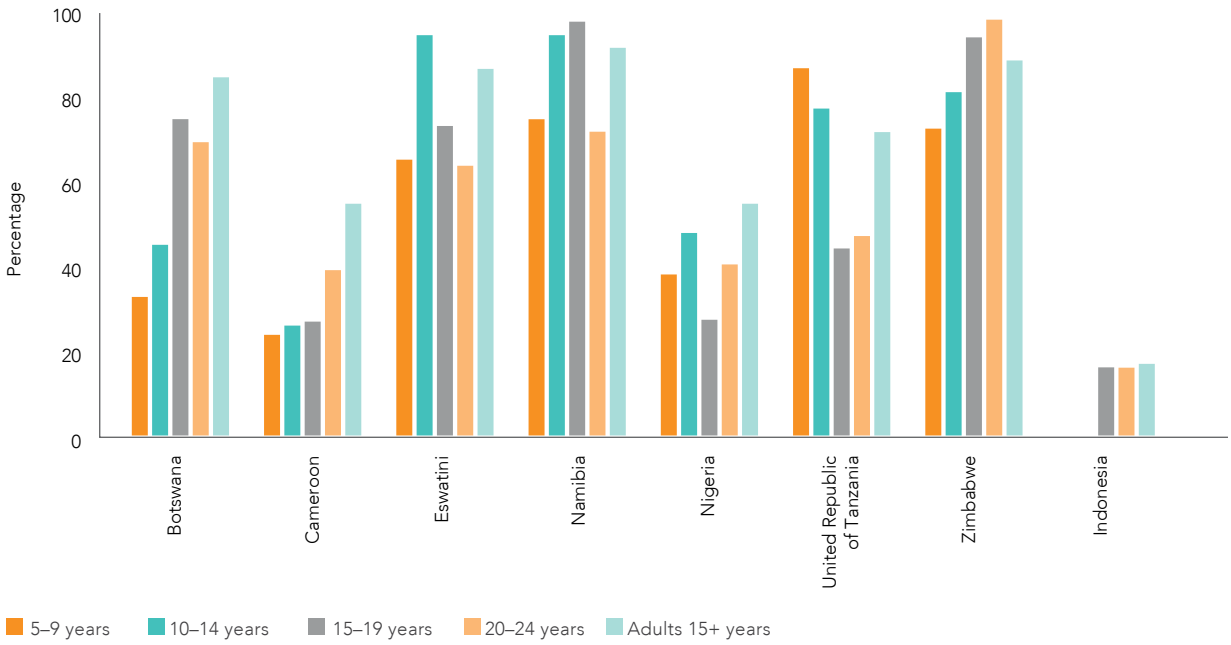
Global estimates of antiretroviral therapy coverage among adolescents aged 15–19 years living with HIV are not available for 2018

This is due to a lack of country reporting of disaggregated data by age group. In 2018 only 55 countries reported disaggregated data on treatment for adolescents aged 10–14 years through the Global AIDS Monitoring tool. Tracking and analysing the adolescent HIV epidemic has proved difficult because HIV data are inadequately disaggregated by age and sex. Subnational and site-level data collection and analysis could help reveal where significant numbers of children or adolescents are living with HIV or newly acquiring HIV, and could guide the provision of focused, adolescent-friendly services *(15)*. Several initiatives are supporting countries in collecting, modelling and presenting data at the subnational and district levels to help them focus their HIV responses more effectively *(77,78)*.

Only a few dozen countries have strong enough data to report on the numbers of adolescents receiving treatment. Among these countries, the treatment coverage among adolescents is mixed: some countries, such as Nigeria and the United Republic of Tanzania, have fairly low coverage among older adolescents aged 15–19 years compared with other age groups (44% and 27%, respectively); other countries, such as Botswana and Zimbabwe, have slightly higher coverage among older adolescents aged 15–19 years (75% and 94%, respectively) (Figure 24).

Figure 24. Antiretroviral treatment coverage varies considerably between countries and across age groups among children and adolescents living with HIV and is generally much lower than among adults

Estimated antiretroviral treatment coverage by age group in focus countries with available data, 2018



Source: UNAIDS 2019 estimates.

As a result, viral load suppression among adolescents is considerably lower than among all adults or children. Viral suppression among young men is especially low in three of four countries with published population-based HIV impact assessment data.

Viral load suppression is low among children aged 10–14 years

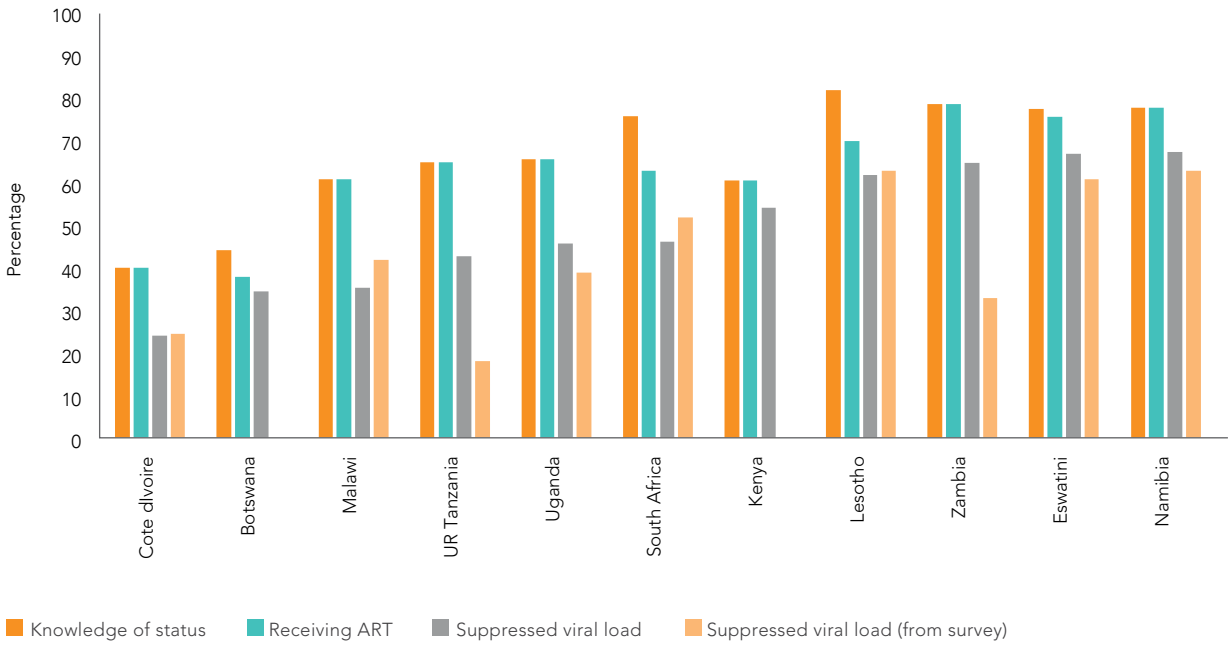
Viral load suppression is low among children living with HIV aged 10-14 years, the reasons for this need to be better understood.

There is a shift in the epidemic, with children aged 5–14 years making up an increasingly larger number of all children living with HIV

In 2018 there were 440 000 [330 000–570 000] children aged 0–4 years living with HIV; 510 000 [390 000–660 000] children aged 5–9 years; and 530 000 [400 000–690 000] children aged 10–14 years. An important demographic shift is occurring among children living with HIV. Increased access to improved programmes for elimination of mother-to-child transmission is reducing the number of young children aged 0–4 years who acquire HIV and the total number of children aged 0–14 years living with HIV. However, postnatal transmission contributes significantly to new infections, and survival without treatment is longer for children who acquire HIV postnatally than for those who acquire it perinatally *(79)*. At the same time, appropriate treatment and care are enabling children living with HIV to grow into their early teens and beyond. Consequently, among children aged 0–14 years living with HIV, the proportion of children aged 5–14 years is larger compared with a decade ago (Figure 26). Identifying these children and linking them to treatment and care services is highly important *(80)*.

Figure 25. Viral load suppression is low among children living with HIV on antiretroviral therapy

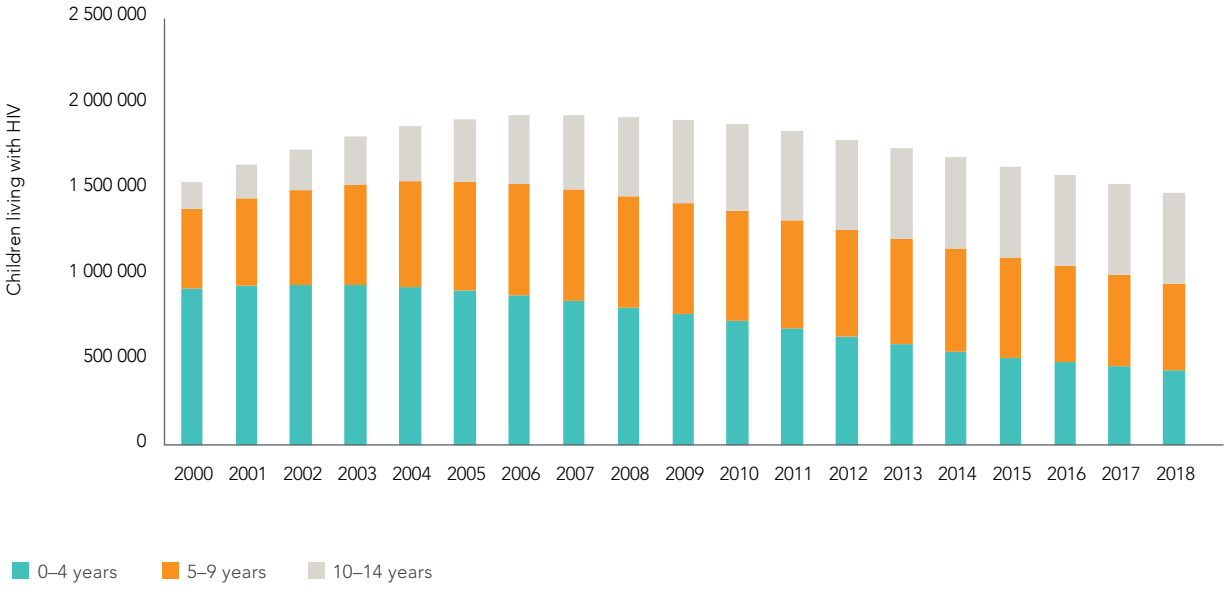
Percentage of children aged 0–14 years living with HIV who know their HIV-positive status, are receiving antiretroviral therapy and are virally suppressed, focus countries with available data, 2018



Source: UNAIDS 2019 estimates and Population-based household surveys 2015–2018.

Figure 26. The number of young children aged 0–4 years needing HIV treatment is declining, while the number of older children aged 5–14 years needing treatment is now a larger proportion of all children living with HIV

Number of children aged 0–14 years living with HIV by age group in 23 focus countries, 2000–2018



Source: UNAIDS 2019 estimates.

Evidence-informed actions for impact

Find, diagnose and initiate antiretroviral therapy early, and retain children and adolescents living with HIV

Enhanced early infant diagnosis of HIV saves children's lives

WHO guidelines recommend that every infant exposed to HIV be tested at six weeks of life, or at the earliest opportunity thereafter, and be rapidly linked to care and treatment if positive *(16)*. Infant diagnosis services need to be well integrated into immunization and child health check-ups and should be offered universally to infants and children who present at nutrition and inpatient wards with signs and symptoms suggesting HIV. In Lesotho, health facilities increased coverage of early infant diagnosis by integrating HIV testing with the first diphtheria, pertussis and tetanus vaccination at six weeks and by including early infant diagnosis as a key performance indicator for the regions.

Diagnosis of HIV in infants requires virological rather than antibody tests. Conventional virological assays are often available only in centralized laboratories, requiring specimens to be transported, which can lead to significant delays and multiple clinic visits before the final test results are returned to caregivers *(81)*.

WHO also recommends a virological test at birth (birth testing) to detect newborns who acquire HIV during pregnancy among those at high risk of HIV infection (81).

However, countries should assess whether introduction of birth testing is feasible and appropriate. Birth testing should not replace early infant diagnosis and is best adopted in countries that already have at least 80% coverage of the test at 4–6 weeks (15). Infants who test positive at birth should be linked promptly to effective antiretroviral therapy for newborns. All infants exposed to HIV should have a repeat test at the end of the breastfeeding period in order to detect HIV infections that occur during breastfeeding.

DOING BETTER AT GETTING HIV TREATMENT TO YOUNG CHILDREN

Point-of-care technologies have been shown to rapidly return test results and facilitate early HIV treatment for far greater numbers of infants living with HIV *(82)*. These platforms are easy to use in a variety of service delivery settings and do not require specialized laboratory technicians.

A 2019 study in eight sub-Saharan African countries compared laboratory-based early infant diagnosis with point-of-care testing and found substantial advantages to using the latter technology *(83)*:

- 98% of point-of-care testing results were returned to caregivers within 30 days, compared with only 19% of laboratory-based early infant diagnosis results.
- The median time from sample collection to return of results to caregivers was 0 days for point-of-care testing but 55 days for laboratory-based early infant diagnosis.
- 92% of infants diagnosed using point-of-care technology initiated antiretroviral therapy within 60 days of sample collection, compared with 43% of those diagnosed using laboratory-based early infant diagnosis.
- Infants diagnosed with point-of-care technology initiated antiretroviral therapy much more rapidly (same day compared with 49 days) and at a younger age (1.6 months compared with 3.3 months) than those diagnosed through laboratory-based early infant diagnosis.

The impact and efficiency of point-of-care technology is highly positive. Financial cost is an additional consideration for national programmes and funders: when the eight-country study compared the total costs of running a test and returning the results to caregivers within 30 days, point-of-care technology was considerably cheaper than the laboratory-based process—US$ 27.24 [US$ 21.39–US$ 33.10] versus US$ 131.02 [US$ 96.26–US$ 165.76].

Point-of-care technology was also found to be cost-effective. Compared with conventional early infant diagnosis, its incremental cost–effectiveness ratio[12] was US$ 680 per year of life saved, and it led to an improved survival rate for infants exposed to HIV at 12 weeks of age (84% versus 76%). It is likely that prices will decrease as economies of scale take effect.

Ministries of health in several countries are supporting the introduction of point-of-care platforms. Countries and funders need to work together to overcome potential implementation barriers that could compromise the impact and sustainability of this powerful tool for bringing lifesaving treatment to children in need *(84)*.

[12] The incremental cost–effectiveness ratio describes the difference in cost between two possible interventions divided by the difference in their effect.

While point-of-care and near-point-of-care early infant diagnosis with rapid linkage to treatment and care can save infants' lives, it is important to balance this by minimizing the risk of vertical transmission by primary prevention of HIV for adolescent girls and women and ensuring women living with HIV are started on antiretroviral therapy and virally suppressed before conception or as early as possible after conception. With optimal service delivery, the final mother-to-child transmission rate at the end of breastfeeding can be as low as 0.3% if the mother has started antiretroviral therapy before conception, but this can rise to 1.5–4%, depending on when a woman living with HIV starts antiretroviral therapy during pregnancy or breastfeeding *(85)*.

Need to expand differentiated HIV testing services to find all children and adolescents living with HIV

Family-based index testing to promote testing among child (aged 0–14 years) and adolescent (aged 15–19 years) contacts of adults living with HIV: children and, to a lesser extent, young adolescents depend on their parents and caregivers to access HIV testing and treatment. While countries strive to increase their capacity to decentralize early HIV testing capacity, including through point-of-care diagnostic technology, it is imperative to better engage family and community members in the treatment and care of children and adolescent living with HIV.

Testing the family and household members of any index adult or child living with HIV has been shown to be an effective strategy for identifying children living with HIV *(15,86,87)*, including in relatively low-prevalence settings, as shown in Cameroon, the Democratic Republic of the Congo and Togo *(88,89)*. Family index testing may also facilitate disclosure and communication within the family and improve adherence and retention. HIV self-testing is a discreet and appealing option that can sidestep some stigma-related barriers *(90)*.

Case-finding within specific health service entry points where there is a high potential yield for identifying children and adolescents living with HIV: systematic reviews have found high HIV prevalence rates among children tested in TB clinics, paediatric inpatient wards, malnutrition centres and some outpatient departments *(91,92)*. Screening protocols for mothers using health-care services can also help in identifying women living with HIV who do not know their HIV-positive status and serve as a basis for recommending HIV tests for their children. Children who receive orphan and vulnerable children services should be assessed for HIV testing. In settings with a high prevalence of food insecurity and HIV infection, HIV screening at nutrition centres can be considered.

Testing the infants and children of members of key populations who are living with HIV, especially female sex workers and people who inject drugs, can improve the case-finding of children living with HIV. Many key population programmes do not routinely include counselling about the need to test infants and children as part of their services *(15)*.

Ensure availability of commodities for early diagnosis and optimal treatment of paediatric HIV

Almost half of all children aged under 15 years living with HIV who are receiving antiretroviral therapy are still receiving nevirapine-based regimens, despite high levels of resistance to non-nucleoside reverse transcriptase inhibitors among children living with HIV in several of the focus countries (Eswatini, Mozambique, South Africa, Uganda and Zimbabwe). Current WHO treatment guidelines *(93)* will soon be updated to optimize paediatric treatment from infancy through to adulthood, with better regimens that will improve tolerability and adherence and lead to better viral load suppression.

The 2017 Rome Action Plan outlines specific commitments from major pharmaceutical companies, regulatory authorities, United Nations agencies, donors, implementing entities and other partners, including faith-based entities, to enhance access to optimal antiretroviral formulations for children *(8)*. In 2018 a follow-up meeting expanded the commitments in the Rome Action Plan to accelerate the development and introduction of improved diagnostics for paediatric HIV. The Global Accelerator for Paediatric Formulations also aims to accelerate the development, regulatory filing, and introduction of new HIV (hepatitis C and TB) medicines for children in age-appropriate formulations by 2020 *(94,95)*.

Providing differentiated, family-centred, age-sensitive HIV treatment and care

Differentiated delivery of services tailored to meet the needs of children and adolescents living with HIV and keep them in care, on treatment and virally suppressed are needed. Children and adolescents living with HIV have a lifetime of antiretroviral therapy ahead of them. They require tailored support to remain in care, on treatment and virally suppressed with their changing life circumstances.

Adolescents aged 15–19 years living with HIV are less likely than adults to know their HIV-positive status; are more likely than adults to start HIV treatment late and to interrupt treatment; and are less likely than adults to achieve viral load suppression *(96,97)*. Stigma, health-care workers' attitudes, and age-of-consent laws discourage adolescents from accessing HIV testing and treatment services *(74,98)*.

Differentiated family-centred service delivery models can increase retention. Coordinating the timing of visits for the mother or caregiver, infant and other children in the family can reduce the burden of travel and waiting times for caregivers. Coordinating immunizations, treatment follow-up and pharmacy refills for all family members on the same day, as a one-stop-shop model, would be ideal. Caregivers should be trained in the signs and symptoms and action to be taken in the event of opportunistic infections or any change in clinical condition among children living with HIV on treatment. Psychosocial support is an important component of care. Depression is common among adolescents living with HIV, and managing it can improve HIV treatment outcomes *(99,100)*. Differentiated treatment service delivery can reduce avoidable burdens on people living with HIV and their families and on health-care systems by reducing frequency of clinic visits with multi-month dispensing of antiretroviral medicines. Community dispensing can improve outcomes for children and adolescents living with HIV and reduce costs *(16,101–105)*.

Health services can be made more accessible to adolescents and more "youth-friendly" by a variety of approaches, including staff training, stigma reduction, adapting opening hours, shortening waiting times, offering psychosocial support, and peer support groups, that improve HIV testing uptake and treatment outcomes among adolescents and that provide services related to sexual and reproductive and mental health *(106–114)*.

Comprehensive HIV care for children and adolescents living with HIV

TB, pneumonia and severe bacterial infections are the main causes of hospital admission among children living with HIV (115). Management of opportunistic infections and malnutrition should be prioritized in children in hospital living with HIV, and antiretroviral therapy initiated once stabilized. The package of care for all children and adolescents living with HIV should include cotrimoxazole prophylaxis and screening for TB, with TB treatment or preventive treatment as indicated. Increased pill or syrup burden is a particular concern for children and, where possible, fixed-dose combination formulations should be used, including the new fixed-dose combination of cotrimoxazole, isoniazid and pyridoxine.

DOLUTEGRAVIR ROLLOUT AMONG ADOLESCENT GIRLS AND YOUNG WOMEN IN UGANDA

Uganda adopted dolutegravir-containing antiretroviral therapy (tenofovir, lamivudine and dolutegravir—TLD) as the preferred first-line treatment in 2018, in line with WHO guidelines (93). However, high teenage pregnancy rates and the safety signal on the potential for increased risk of birth defects among women who conceive while taking dolutegravir raised concerns about use of TLD among women of reproductive age. In response, the Ugandan Ministry of Health convened stakeholder meetings with civil society to revise national HIV guidelines and recommend TLD as the preferred first-line regimen for men and adolescent boys, and for women and adolescent girls with effective contraception or not of childbearing potential. Women of childbearing potential but not on contraceptives are to be informed and counselled about the potential benefits and risks of dolutegravir, including the risk of potential birth defects, in order to support them to make an informed decision about their treatment and contraceptive choices. If they choose TLD, their choice should be clearly documented and endorsed by the young woman or girl and her parent or legal guardian in writing.

- A transition checklist can guide health-care workers through the eligibility criteria for transition to TLD, prompting proactive assessment of age, weight and use of effective contraceptives, and excluding pregnancy in women of reproductive age. In addition, the checklist embeds an informed consent section, requiring a signature from women of reproductive age and not on effective contraception but who opt to take TLD for its benefits.
- A reliable procurement and supply chain network is needed to ensure uninterrupted supplies of TLD and effective contraceptive methods. In faith-based facilities that do not offer family planning, there is an option to refer women in need of contraception.
- Emphasis on dolutegravir transition in both antiretroviral therapy and maternal–child health clinics is necessary. Women living with HIV are followed for their antiretroviral therapy within the maternal–child health clinic with their infant at the mother–baby care point for 2 years after delivery. Health-care workers are encouraged to offer transition to TLD and voluntary family planning during this period.
- An early assessment of dolutegravir transition identified low confidence among health-care workers in counselling women. Standardized comprehensive counselling materials and messages were developed, including a decision-making tool, flowchart and client brochure to aid decision-making. Messages regarding dolutegravir for women of reproductive potential are also included in routine health education talks at all antiretroviral therapy facilities.
- Sites have established adolescent-friendly services, adolescent peer counsellors, peer support groups, and programmes that support adolescent girls and young women to develop marketable skills and join village savings and loan activities. Uganda is adapting Zimbabwe's young people and adolescent peer support programme model to the Uganda context to further support adherence within this population.
- Indicators of dolutegravir uptake and adherence included in the national weekly reporting dashboard, disaggregated by sex and location of antiretroviral therapy provision (antiretroviral therapy versus mother–baby care point), led to rapid identification of low uptake and additional mentorship at mother–baby care points. Six months after the national launch of the dolutegravir transition, over 40% of people on dolutegravir-based regimens are women. A pharmacovigilance plan is under development, including reporting of birth defects, and an ongoing birth defect surveillance study in four-large volume facilities in Kampala is actively monitoring birth outcomes among women, including those on dolutegravir.

CROSSCUTTING ISSUES

Demographic shifts have important impacts on progress

Important demographic changes impact on progress towards Start Free Stay Free AIDS Free. The number of children aged under 15 years living with HIV is declining every year because of the rapid uptake of prevention of mother-to-child transmission services in the mid-2000s. In the 23 focus countries, an estimated 100 000 children aged 14 years living with HIV transitioned to adulthood in 2018—up from 85 000 children aging to adulthood in 2010. Throughout this transition period, adolescents face a new set of challenges of managing their own treatment and finding their way through sexual and reproductive health choices. Their interactions with caregivers and health-care staff around their treatment and care may change. Ensuring smooth transitions is critical for children being retained in care and supported with the decisions they make.

Globally, the number of people aged 15–24 years is growing as the global population expands. The pace of growth is slowing, and the proportion of the total population aged 15–24 years is declining. Rates of new HIV infections among young people are decreasing faster than the population is increasing. Assuming HIV incidence rates do not reverse, there will be fewer young people living with HIV in future years *(116)*. While this is good news in general, young people, and especially young people in key populations, must remain at the centre of prevention and care efforts.

Younger women living with HIV are less likely to receive HIV treatment and may require additional support to be retained on treatment. Ensuring appropriate programmes are directed at this demographic group is important for HIV diagnosis, treatment and prevention, and for prevention of mother-to-child transmission. Monitoring national trends in this age group will help programme managers plan services accordingly. The proportion of pregnant women aged 15–24 years living with HIV is decreasing over time. In 2000 approximately 40% of pregnant women living with HIV were aged 15–24 years; in 2018 that proportion has decreased to 28%. Much of this decline is due to declining fertility in younger age groups. In addition, the decline in HIV incidence among people aged 15–24 years means fewer women in this age group are living with HIV. Within the focus countries, the largest declines in the proportion of women aged 15–24 years living with HIV and giving birth have been in South Africa and Eswatini, where the proportion of women aged 15–24 years declined by 12 and 9 percentage points, respectively, between 2010 and 2018.

Stigma and discrimination remain major barriers to progress across the Start Free Stay Free AIDS Free framework

HIV-related stigma continues to be a powerful deterrent that shapes the decisions and behaviour of all age groups. The fear of HIV-related stigma and discrimination weighs heavily when pregnant women and their partners make decisions about taking HIV tests, disclosure, initiating antiretroviral therapy, remaining in treatment and care, and having their infants tested for HIV *(117–119)*. As a priority, steps must be taken to eliminate HIV-related stigma from health-care settings. This requires sensitivity training for health-care workers and monitoring their conduct, including through complaints procedures for patients.

Community support, especially from trained peer mothers, helps to reduce the fear of stigma and to cushion its effects. Civil society and faith-based organizations can play powerful roles in confronting and discouraging community norms and attitudes that feed stigma *(119)*. People living with HIV, especially women, can make powerful contributions to reducing stigma.

Reducing stigma from partners, family, health-care providers and the wider community is vitally important. Stigma and discrimination prevent many mothers living with HIV and their children from being diagnosed and then initiating and staying on treatment *(120)*. Peer and other community-based support schemes, including faith-based entities and traditional leadership structures, can reduce the impact of stigma and support girls and women to make positive health-care choices.

Address social and structural barriers that increase vulnerability of adolescent girls and young women to HIV

Reversing the very high rates of new HIV infections among young people aged 15–24 years in focus countries needs comprehensive approaches to address the multiple vulnerabilities that increase their HIV risk. The root factors driving girls' vulnerability to HIV are social, structural and behavioural and must be addressed to achieve durable prevention outcomes. Gender discrimination, gender-based violence, restricted access to opportunities, limited aspirations, and a lack of tailored services compound vulnerability to HIV. Effective responses prioritize combined delivery of evidence-based biomedical interventions (access to sexual reproductive health services, condoms for girls and their male partners, and pre-exposure prophylaxis for people at highest risk of HIV), with a carefully calibrated package of socio-behavioural (community mobilization, comprehensive sexuality education, and parenting) and structural (social protection, girl-responsive education, strategic communication, and supportive legal environment) interventions. For optimized impact, responses must synchronize girl- and woman-centred prevention with interventions for them and their male partners (particularly medical male circumcision, social norms change to address negative masculinities, and access to a male-responsive continuum of care) in high-prevalence locations. Social protection packages can almost double adherence to antiretroviral therapy among adolescents *(121)*.

There are multiple entry points to reach at-risk adolescent girls and young women within the health service with a comprehensive package of HIV and sexual and reproductive health and rights services and to link them with social and educational support, but these are seldom integrated into an acceptable one-stop-shop package that meets the needs of young people, limiting uptake. Outside the health service, this robust, integrated, coordinated package of services rarely converges to meet the diverse needs of the most vulnerable girls in highly affected settings. Young people should be engaged in developing policies and implementing programmes to ensure comprehensive integrated sexual and reproductive health and rights services and combination HIV prevention and treatment services are accessible and acceptable and meet their needs *(122)*.

The barriers blocking adolescents' uptake of HIV services require concerted action. These hindrances include parental consent requirements, stigma, judgemental and unsupportive attitudes of health-care personnel, misconceptions about the risk of acquiring HIV, and a lack of adolescent-oriented services *(123)*. Advocacy is needed to lower the age of consent for using HIV and sexual and reproductive health services, and to clarify who, besides parents, can provide such consent.

Engage boys and men across the Start Free Stay Free AIDS Free framework

Men are left behind by HIV services, and targeted actions are required to ensure they access HIV diagnosis, prevention, treatment and care. Reaching boys and men with HIV services can also directly and indirectly benefit girls and women. Studies have found that HIV self-testing increases the uptake of HIV testing among men *(12)*. Shorter waiting times and more welcoming maternal–child health services have also shown positive results (10). Promoting joint clinic visits by linking child–maternal health services with basic health screening for both partners and offering couples testing could also increase men's engagement and uptake of HIV services *(11)*.

The uptake of maternal antiretroviral therapy improves when a mix of community interventions is used to increase male partner involvement *(124)*. Engaging community leaders and community health workers has been effective in increasing male involvement in services for elimination of mother-to-child transmission in Africa, but care must be taken to monitor and avoid any unintended harmful consequences *(10)*.

Health-care workers' attitudes towards male partners has been associated with men's involvement in services for elimination of mother-to-child transmission. However, major barriers to men's participation include men's own fears of stigma and discrimination and the enduring perception of reproductive health as "women's health" *(125)*. Faith-based organizations and traditional leaders have important roles to play in overcoming these misperceptions.

The MenStar Coalition, launched in mid-2018, is aiming to support similar, creative ways to expand the diagnosis and treatment of HIV infections in men around the world, with the aim of breaking the cycle of HIV transmission *(126)*.

WHAT BOTSWANA DID RIGHT

Although Botswana is a sparsely populated country, its exceptionally high HIV prevalence 20% [17–22%] among adults aged 15–49 years meant there were an estimated 350 000 [320 000–380 000] adults aged over 15 years living with HIV in 2018. Yet the country has already reached the 90–90–90 targets,13 which, along with wide access to HIV testing and antiretroviral medicines for pregnant women living with HIV, has reduced vertical transmission rate at the end of breastfeeding to 2.5% [1.9–4.4%], among the lowest in all of sub-Saharan Africa.

In 2019, with more than 95% [79% to >95%] of pregnant women living with HIV receiving antiretroviral medicines, fewer than 500 [<500–630] children aged 0–14 years acquired HIV. Botswana has averted more than 19 000 new HIV infections in children since 2010.

Civil society, health officials and politicians came together early to recognize the problem and HIV became a national priority. Strong political commitment led to the creation of the National AIDS Coordinating Agency under the oversight of the Botswanan President *(127)*. Prevention of vertical transmission pilot programmes were launched in 1999 and expanded nationally in 2002.

The country's First Lady, UNAIDS Special Ambassador for the engagement and empowerment of young people, has been a strong champion of primary HIV prevention and elimination of mother-to-child transmission through the Free to Shine initiative, engaging men and communities to engage in difficult discussions around gender-based violence and the societal factors that put adolescent girls and young women at risk of HIV and unintended pregnancy.

Strong leadership and coordination of integrated reproductive, maternal, newborn, child and adolescent health services with HIV services through a technical working group at national and district levels provide guidance, support and capacity-building for health facility staff, reliable supply chain management, rapid adoption and scale-up of new technologies such as mHealth for maternal and newborn care, and use of drone technology for the collection and delivery of medical products.

When Botswana became the first African country to introduce an opt-out HIV testing strategy in 2004, the uptake of HIV testing and counselling by pregnant women attending antenatal care soared. The use of rapid testing by lay counsellors, with same-day results, brought an additional boost to the prevention of vertical transmission *(127)*.

Task-shifting became routine and was supported with certified training and mentorships after studies assessed and confirmed the quality and effectiveness of shifting management of paediatric HIV to nurses *(128)*. Health officials highlighted the importance of empowering and supporting health staff to build confidence and overcome their fears of treating pregnant women and children living with HIV. KITSO, a national HIV training and certification programme, initially for adults and then for paediatric HIV treatment and care, was rolled out for health-care workers, including components for people-centred services and engaging mothers, their children and their partners. Clinical competence following the training is built through the provision of ongoing mentoring and support for facility health staff. The training has been modified for teachers to ensure a multisectoral approach to addressing sexual and reproductive health and HIV in schools.

Decentralization further broadened the coverage of prevention of vertical transmission and other HIV services (which, like other basic health services, are free of charge for citizens), making them much more accessible for residents. The Botswanan Government is now exploring the option of providing free HIV treatment and care to the estimated 30 000 non-residents living with HIV, including children, to ensure no one is left behind. Community campaigns and people's improved knowledge about HIV have helped to reduce HIV-related stigma *(129)*, even though it remains a significant barrier for people from key populations.

The innovative Y+ Programme is a network led by and for young people living with HIV that ensures the meaningful engagement and involvement of young people in the governance, programming, advocacy and outreach for the national HIV response *(130)*. There is also a national network of youth-focused services pioneered by Botswana-Baylor, including teen clubs, young adult support groups and young mother support groups.

[13] In 2018, 91% of people living with HIV knew their status, 92% of people who knew their HIV-positive status were receiving antiretroviral therapy, and more than 95% of people on antiretroviral therapy were virally suppressed.

WHAT MALAWI DID RIGHT

Malawi has one of the highest burdens of HIV infection in the world, with approximately one million [940 000–1 100 000] people living with HIV. Yet it ensured that more than 95% of pregnant women took an HIV test in 2018 and that 95% [80% to >95%] of those who tested positive received antiretroviral medicines to prevent vertical transmission of HIV. Among adults overall, 79% [71–85%] were accessing antiretroviral therapy. In addition to protecting the health of mothers, this has enabled Malawi to avert an estimated 71 000 new infections in children since 2010.

How did Malawi, a low-income country facing major fiscal and health system constraints, achieve such impressive results? Country experience points to several salient elements.

A technically competent and politically adept national AIDS coordinating programme provided strong direction and leverage to develop rational evidence-based policies that were implemented in ways that took account of the health system constraints. In 2003, for example, Malawi had only 4000 doctors and nurses serving a population of about 12 million people *(131)*, and the cost of treating all people living with HIV amounted to 8% of the gross domestic product in the 2000s *(132)*. To deal with infrastructure constraints, processes and protocols were standardized and simplified, which facilitated two pivotal elements: decentralization of services and task-shifting.

Decentralization of treatment provision to all health facilities massively expanded access in a country where more than 80% of the population lives in rural areas *(133)*. For example, community health workers were enrolled and trained to support the provision of basic health services, and nurse-based HIV treatment began in 2005 *(134)*.

Malawi's early adoption, in 2011, of the Option B+ model (whereby all pregnant women living with HIV were offered antiretroviral therapy, irrespective of their CD4 cell count) boosted and simplified the programme by removing diagnostic steps and standardizing services.

Funding from the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), which finances about 90% of HIV treatment-related commodities, and financial, technical and implementation support from PEPFAR, have been crucial. The Global Fund's grant cycle has facilitated longer-term planning, while performance-based funding has fostered efficiency and accountability.

Public campaigns and the hard work of community-based organizations helped to reduce HIV-related stigma *(135)* and fostered demand for HIV testing and treatment services. There was also a keen awareness that service disruptions, stockouts and poor-quality services would drain public trust and undermine the entire programme. Streamlined, responsive and reliable supply-chain management became a priority. The Ministry of Health's data-management system was upgraded to provide daily estimates of numbers of patients and stock levels of HIV commodities at all facilities. The Ministry of Health also set up a toll-free HIV supply hotline.

Also important was the decision to avoid unrealistic targets, which reduced temptations for service providers to merely "chase numbers" or embellish results. Accurate and manageable reporting was emphasized.

Underpinning the programme is an extensive and nationally coordinating process of supportive supervision, which nurses and clinicians at district and facility levels participate. Malawi currently has more than 200 health workers and district-level prevention of mother-to-child transmission and antiretroviral therapy coordinators, who participate in supervising the national programme 4 times a year. This approach to supervision has promoted a strong sense of ownership and pride, and it helps avoid scenarios where implementing partners compete against each other for donor funding.

More recently, Malawi aligned its strategy for eliminating vertical transmission of HIV with the Start Free Stay Free AIDS Free framework. It is now focusing on tackling several current challenges, which include preventing and diagnosing new HIV infections during the pregnancy and breastfeeding periods, improving mothers' adherence to treatment after they have given birth, and rapidly identifying infants who may have acquired HIV. Mentoring programmes are being scaled up, and assisted partner notification and index case tracing are being used to reach family members who may be living with HIV.

CONCLUSION

The failure to meet any of the global 2018 Start Free Stay Free AIDS Free targets is deeply disappointing and cause for global alarm.

Examples from the 23 focus countries, however, demonstrate that the targets are achievable and reveal a pathway to success by the end of 2020.

Antiretroviral therapy coverage for pregnant women has reached at least 90% in 10 focus countries and reached at least 70% of children living with HIV in 5 focus countries. New HIV infections among adolescent girls and young women aged 15–24 years have declined by over 40% in Botswana, Burundi, Lesotho and South Africa.

Country experiences have identified several high-priority actions for impact.

Differentiated HIV testing services increase knowledge of status and access to HIV prevention and treatment services. HIV testing services must be designed and tailored to community needs and reaching people being left behind, including family-based index testing, voluntary assisted partner notification, and self-testing, with point-of-care platforms for early infant diagnosis in remote high-burden settings.

There is an urgent need to optimize all potential entry points and differentiated service delivery options to find, assess and provide comprehensive services to reach infants, children, adolescent girls and young women, pregnant and breastfeeding women, and the partners of adolescent girls and young women with HIV diagnosis, prevention, treatment, care and support services.

Preventing new HIV infections and achieving sustained viral load suppression among all people living with HIV will reduce AIDS-related mortality, reduce HIV incidence, and achieve epidemic control.

In 2018 an estimated 15 million [11 million–18 million] children were exposed to HIV but had not acquired the virus. Although the decline in children acquiring HIV is a major success, it is increasingly clear that children who are exposed to but uninfected by HIV have higher morbidity and almost a two-fold increase in mortality than non-exposed children and should be followed up regularly in child health services.

Better data collection, analysis and use are needed across the Start Free Stay Free AIDS Free framework. The stacked-bar analysis can help programmes to identify the greatest gaps in HIV testing, prevention and treatment services before conception, during pregnancy, and up to the end of breastfeeding.

Task-shifting can increase access to paediatric and adolescent HIV treatment and care. Health-care workers' confidence, competence and capacity need to be built through training, job aids, mentoring and supportive supervision to demystify paediatric and adolescent HIV care. Simplified, standardized, palatable HIV treatment regimens, support to caregivers, and regular review of mother–baby pairs can increase treatment coverage, retention and positive treatment outcomes.

Combination HIV prevention tailored to meets the needs of adolescent girls and young women, including those from key populations, and for HIV-negative pregnant women who are at high risk of HIV infection is needed. Female-controlled methods such as pre-exposure prophylaxis and the dapivirine ring may be important in some settings. Condom access and use must be expanded and accessible to adolescent boys and girls.

Men and boys are left behind by HIV diagnosis, prevention and treatment services and must be targeted for their own health. Reducing the pool of HIV infection and unsuppressed viral load among men, however, will also reduce the number of new HIV infections among adolescent girls and young women. Engaging men can also support their female partners to access HIV, antenatal, postnatal, and sexual and reproductive health and rights services.

Beyond biomedical interventions, prioritized action is needed to address the social, economic and structural factors that increase the vulnerability to HIV of adolescent girls and young women and prevent girls and women from accessing sexual and reproductive health and rights, antenatal and postnatal services. The removal of user fees, already showing benefit in some countries, will be paramount to reaching universal access and equity and will need the renewed support of governments to commit to a new generation free from AIDS.

Global policy on Start Free Stay Free AIDS Free should be evidence-informed and data-driven. Countries should rapidly adopt global policy into national policy and implementation guidelines. National policies and guidelines should be fully implemented in all health facilities. This is not happening! Some countries are still providing antiretroviral medicines to mothers living with HIV only during pregnancy, many countries do not provide repeat HIV testing for HIV-negative pregnant and breastfeeding women during pregnancy and up to the end of breastfeeding, incident HIV infections are missed and children are being newly infected with HIV as a result. Evidence-informed policies must be implemented at all levels to save the lives of mothers, their partners and their children.

Affected communities must drive an empowering child-, adolescent- and mother-centred, human rights-based approach to Start Free Stay Free AIDS Free *(2)*. To reach those left behind, the response should engage the mother's partner, family and household, while minimizing the impact of stigma and discrimination. Service delivery must be integrated around the person's needs, including at a minimum HIV diagnostic, prevention, treatment and care services; antenatal care; maternal, neonatal and child health care; and sexual and reproductive health and rights services. This should reflect the lifecycle approach that links the three components of the Start Free Stay Free AIDS Free framework and the transition from child to adolescent to adult.

Without a global paradigm shift in political commitment and accelerated country action, focused on saving the lives of women and girls, mothers and babies, we will not reach the global Start Free Stay Free AIDS Free targets by the end of 2020.

This is the wake-up call.

COUNTRY PROFILES

KEY INDICATORS: START FREE STAY FREE AIDS FREE

Percentage of pregnant women living with HIV receiving antiretroviral therapy for preventing the mother-to-child transmission of HIV

<40	40–49%	50–59%	60–69%	70–79%	80–89%	>90%
Angola	Democratic Republic of the Congo	Chad		Eswatini	Burundi	Botswana
Indonesia	Nigeria			Ghana	Cameroon	Côte d'Ivoire
				Lesotho	South Africa	Ethiopia
						Kenya
						Malawi
						Mozambique
						Namibia
						Uganda
						United Republic of Tanzania
						Zambia
						Zimbabwe

Percent decline in new HIV infections among young women between 2010 and 2018, 22 focus countries

Increase	0–9%	10–19%	20–29%	30–39%	30–39%
Angola	Ghana	Malawi	Indonesia	Namibia	Burundi
Nigeria	Chad	Ethiopia	Kenya	Zimbabwe	South Africa
	Mozambique	United Republic of Tanzania		Democratic Republic of the Congo	Lesotho
		Zambia		Eswatini	Botswana
				Uganda	
				Cameroon	
				Côte d'Ivoire	

Antiretroviral therapy coverage among children (0–14 years old)

10–19%	20–29%	30–39%	40–49%	50–59%	60–69%	>70%
Angola	Cameroon	Botswana	Côte d'Ivoire	Ethiopia	Kenya	Eswatini
Chad	Democratic Republic of the Congo	Burundi			Malawi	Lesotho
	Ghana	Nigeria			Mozambique	Namibia
	Indonesia				South Africa	Zambia
					Uganda	Zimbabwe
					United Republic of Tanzania	

ANGOLA

7000 [5000–9500]

Number of children (aged 0–14 years) newly infected with HIV

38% [29–48%]

Pregnant women living with HIV receiving antiretroviral medicine

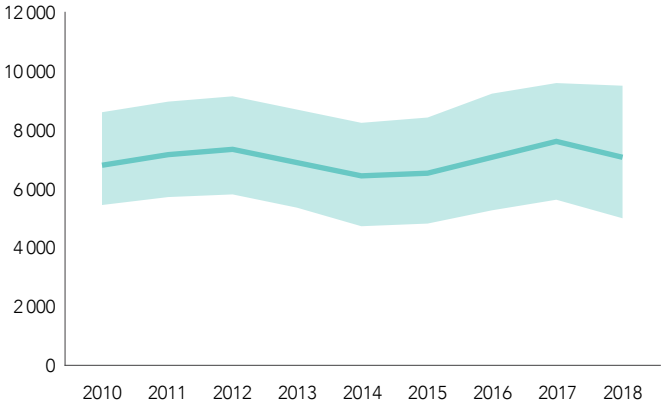
13% [10–16%]

Antiretroviral therapy coverage among children (aged 0–14 years)

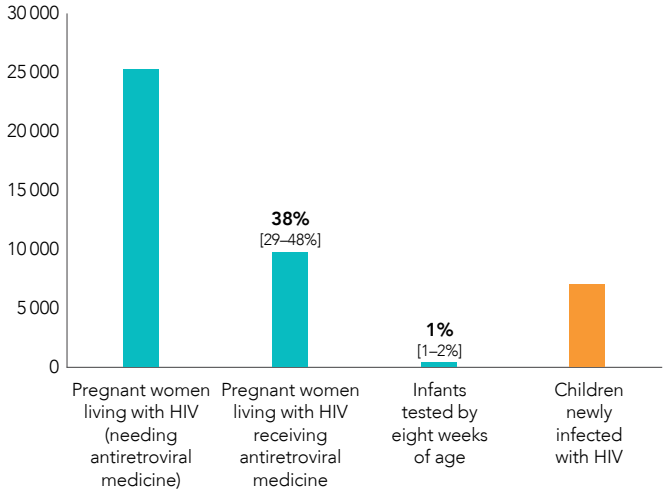
27.8% [25.4–30.3%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

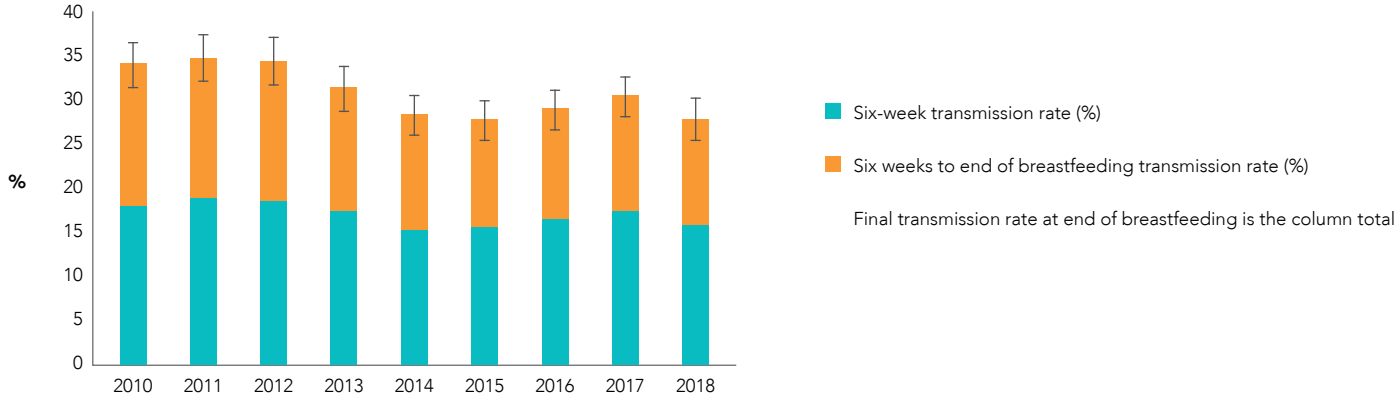
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



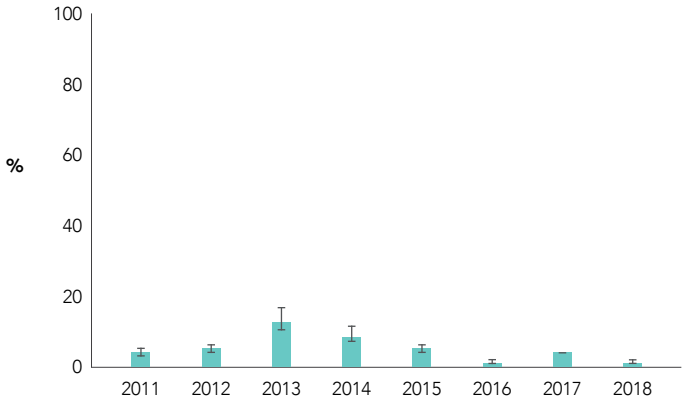
Cascade of services for preventing mother-to-child transmission of HIV, 2018



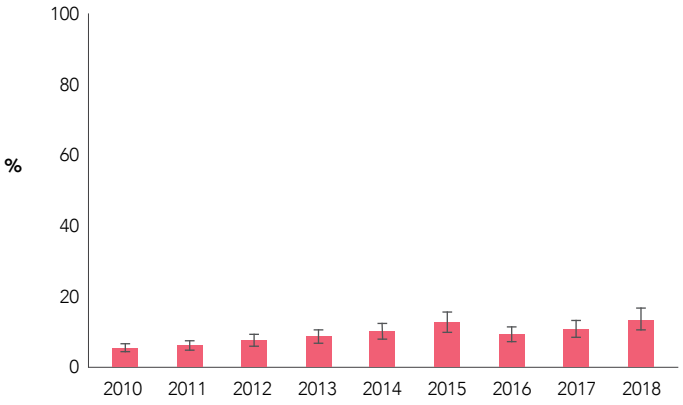
Mother-to-child transmission of HIV by timing of transmission, 2010–2018



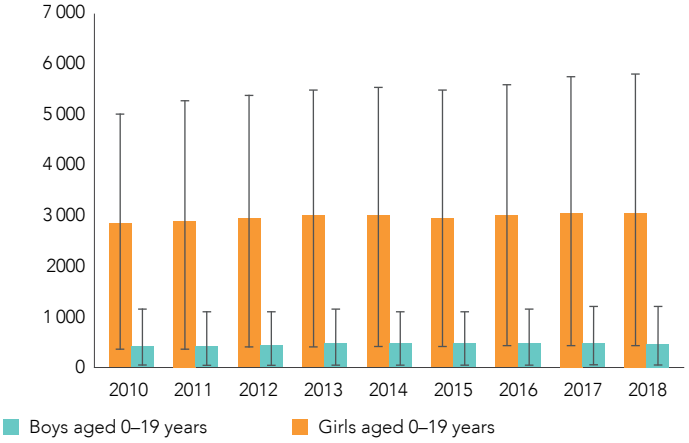
Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018



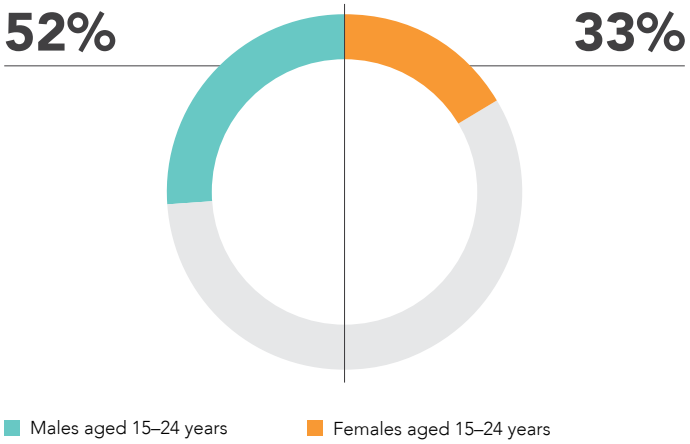
Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018



Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018



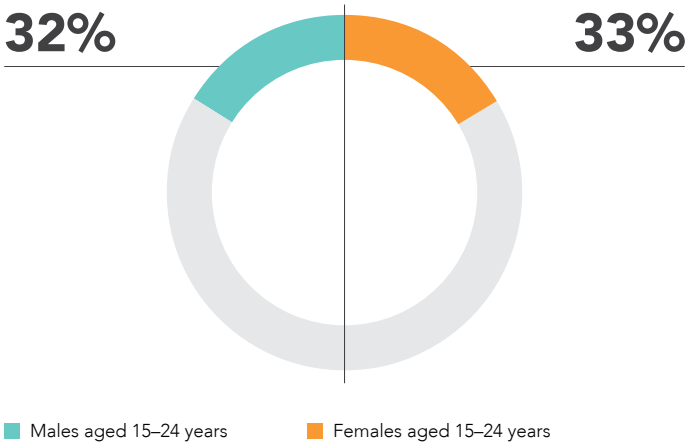
Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018

No data

Comprehensive knowledge about HIV



Sources

UNAIDS 2019 estimates (methods available at unaids.org), except as follows:
Infants born to women living with HIV: Global AIDS Monitoring 2019 and UNAIDS 2019 estimates.
Comprehensive knowledge on HIV and condom use: latest available household survey data.

BOTSWANA

<500 [<500–630]

Number of children (aged 0–14 years) newly infected with HIV

>95% [77– >95%]

Pregnant women living with HIV receiving antiretroviral medicine

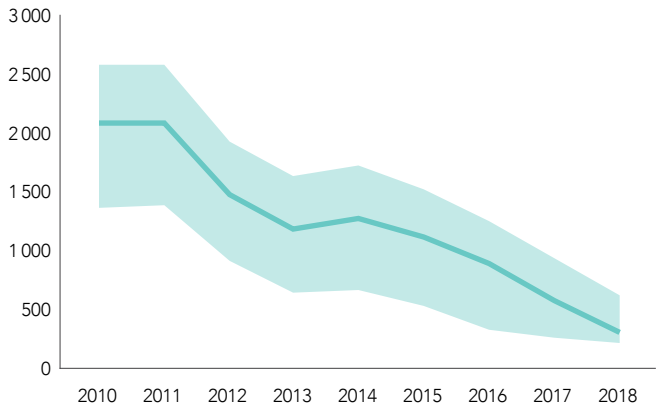
38% [28–46%]

Antiretroviral therapy coverage among children (aged 0–14 years)

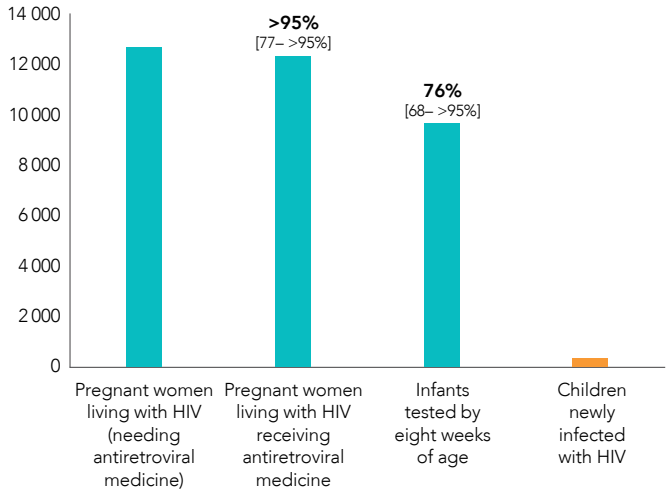
2.5% [1.9–4.5%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

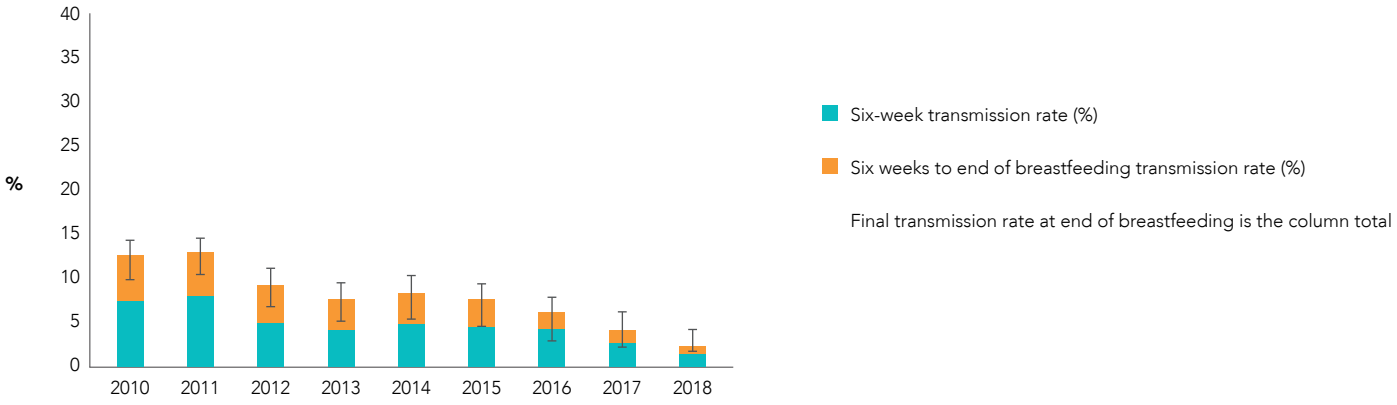
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



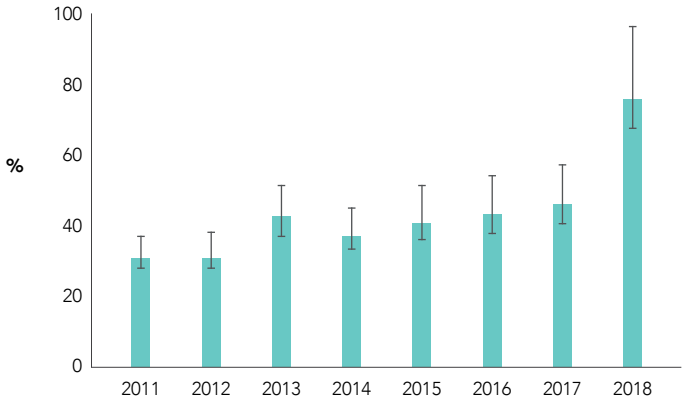
Cascade of services for preventing mother-to-child transmission of HIV, 2018



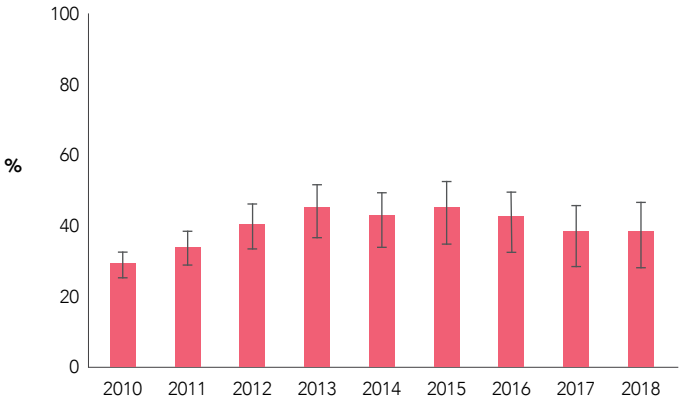
Mother-to-child transmission of HIV by timing of transmission, 2010–2018



Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018



Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018

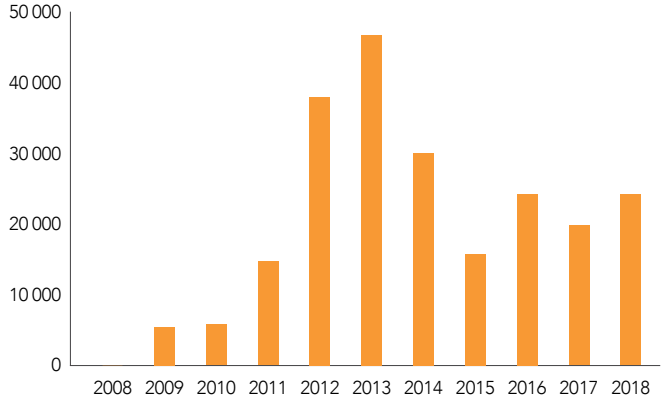


Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018

Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)

No data

Voluntary medical male circumcision (all ages), 2008–2018



Comprehensive knowledge about HIV

No data

Sources

UNAIDS 2019 estimates (methods available at unaids.org), except as follows:
Infants born to women living with HIV: Global AIDS Monitoring 2019 and UNAIDS 2019 estimates.
Comprehensive knowledge on HIV and condom use: latest available household survey data.

BURUNDI

820 [<500–1300]

Number of children (aged 0–14 years) newly infected with HIV

80% [61– >95%]

Pregnant women living with HIV receiving antiretroviral medicine

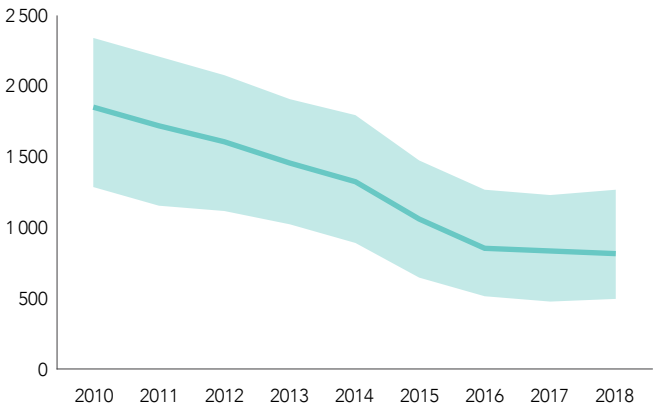
30% [22–38%]

Antiretroviral therapy coverage among children (aged 0–14 years)

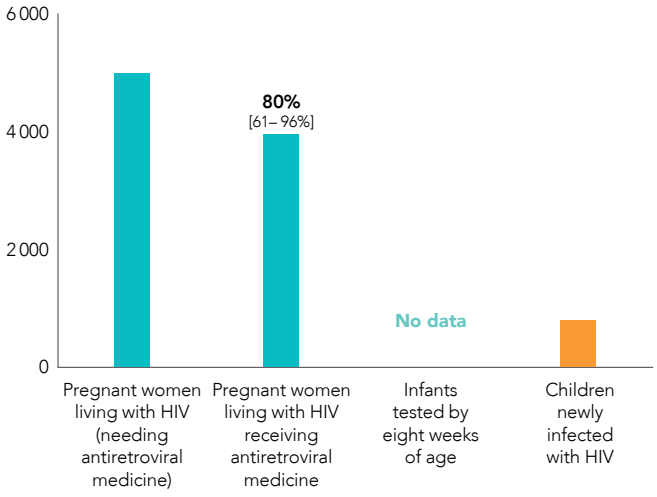
16.4% [12.5–21.3%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

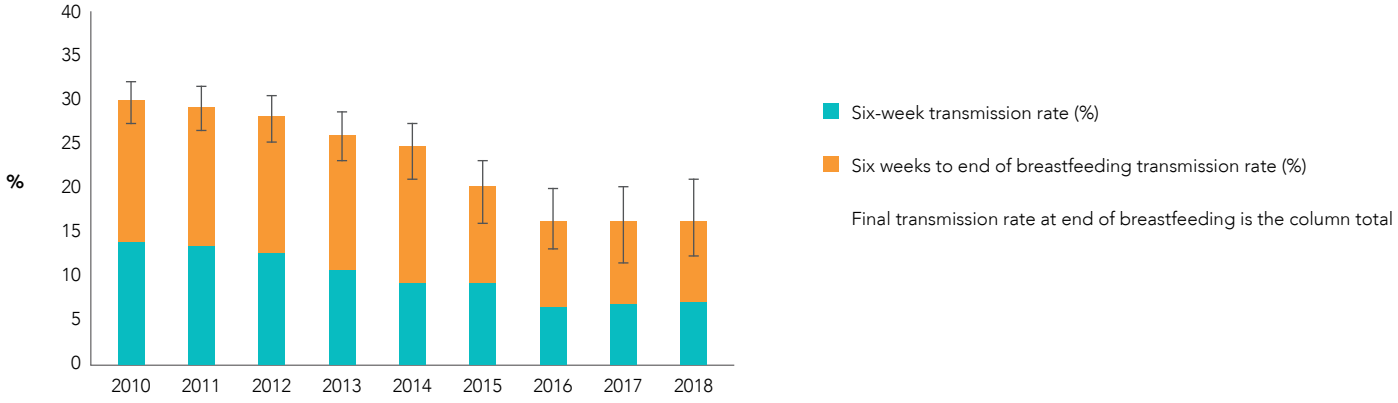
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



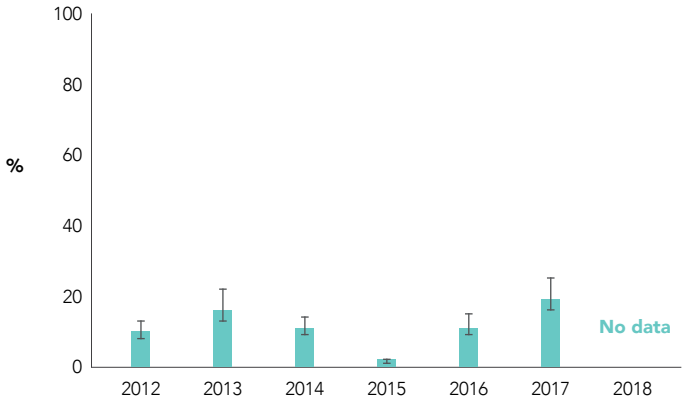
Cascade of services for preventing mother-to-child transmission of HIV, 2018



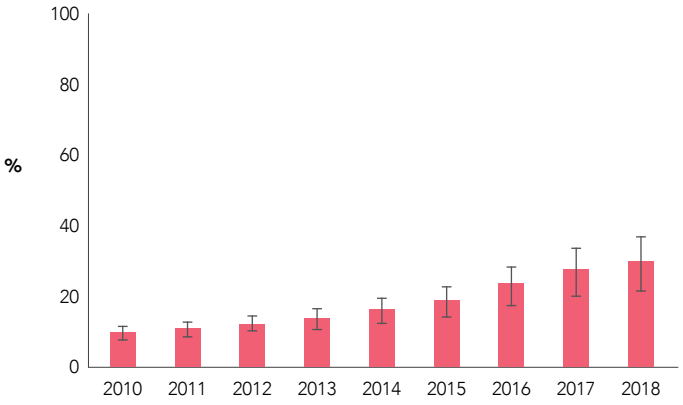
Mother-to-child transmission of HIV by timing of transmission, 2010–2018



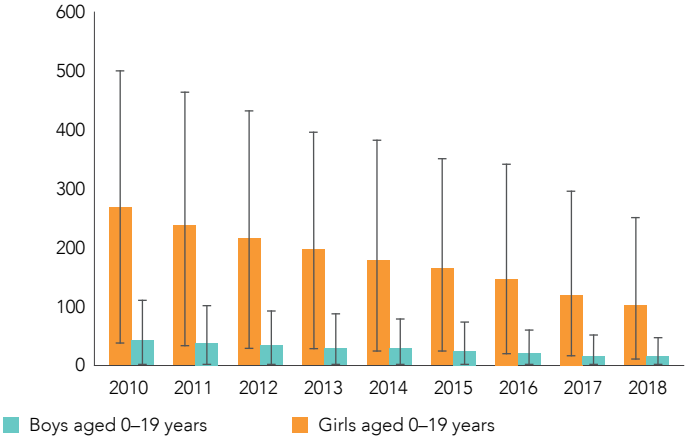
Infants born to women living with HIV receiving a virological test within the first two months of life, 2012–2018



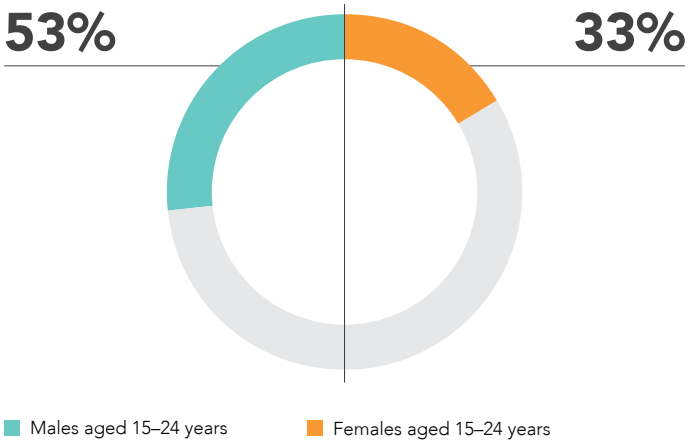
Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018



Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018



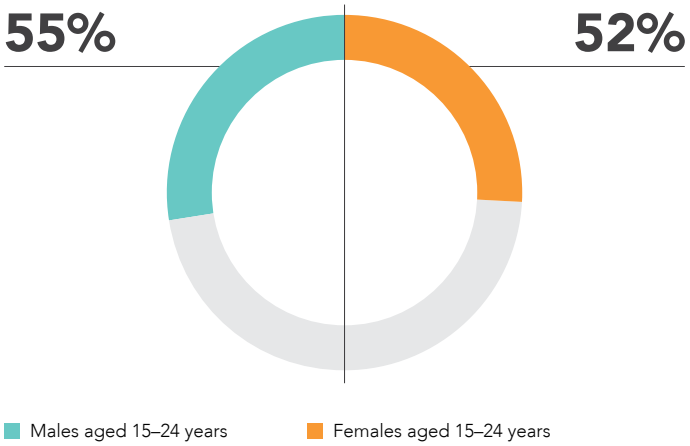
Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018

No data

Comprehensive knowledge about HIV



Sources

UNAIDS 2019 estimates (methods available at unaids.org), except as follows:
Infants born to women living with HIV: Global AIDS Monitoring 2019 and UNAIDS 2019 estimates.
Comprehensive knowledge on HIV and condom use: latest available household survey data.

CAMEROON

4500 [2800–5900]

Number of children (aged 0–14 years) newly infected with HIV

80% [61–94%]

Pregnant women living with HIV receiving antiretroviral medicine

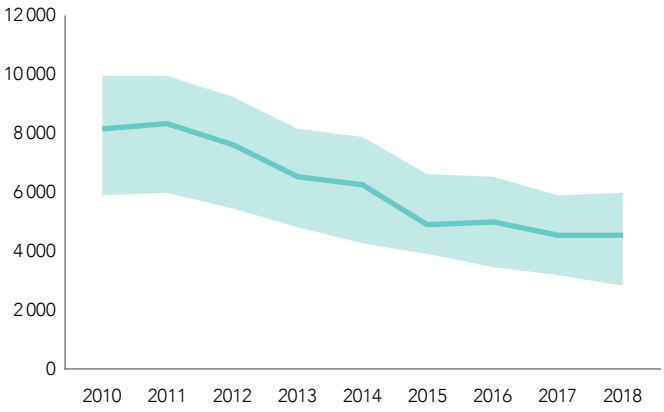
24% [18–28%]

Antiretroviral therapy coverage among children (aged 0–14 years)

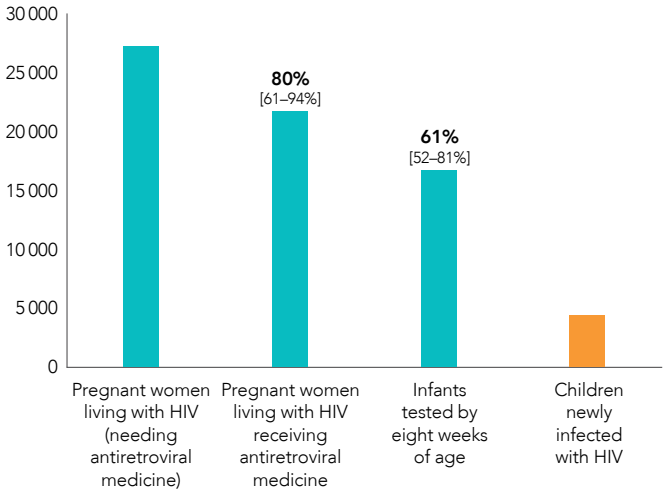
16.5% [13.5–18.9%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

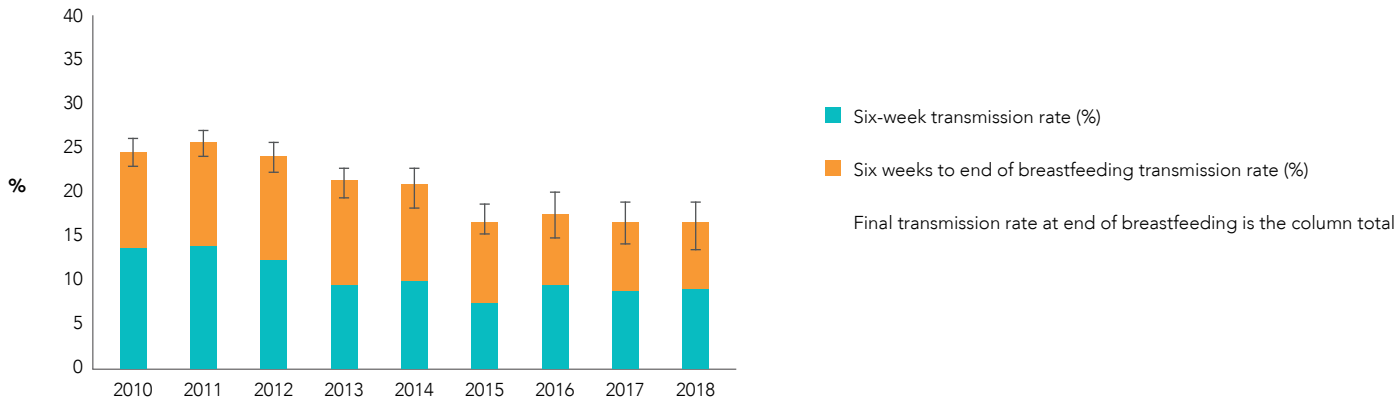
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



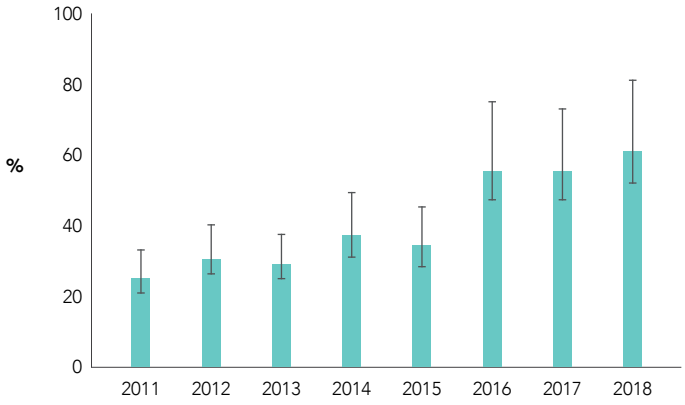
Cascade of services for preventing mother-to-child transmission of HIV, 2018



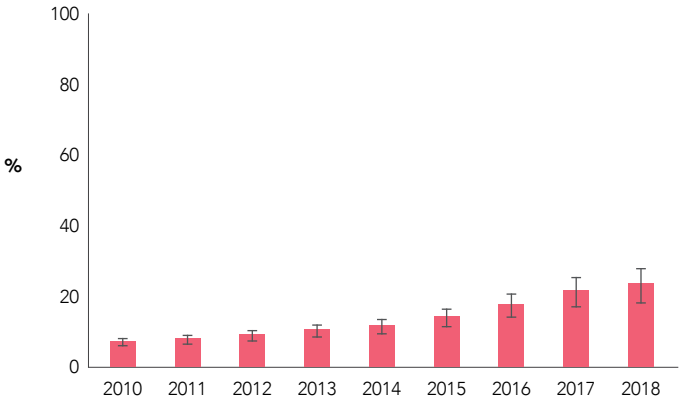
Mother-to-child transmission of HIV by timing of transmission, 2010–2018



Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018



Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018



Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018

Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)

No data

Voluntary medical male circumcision (all ages), 2008–2018

No data

Comprehensive knowledge about HIV

No data

Sources

UNAIDS 2019 estimates (methods available at unaids.org), except as follows:
Infants born to women living with HIV: Global AIDS Monitoring 2019 and UNAIDS 2019 estimates.
Comprehensive knowledge on HIV and condom use: latest available household survey data.

CHAD

2200 [1200–3200]

Number of children (aged 0–14 years) newly infected with HIV

56% [40–72%]

Pregnant women living with HIV receiving antiretroviral medicine

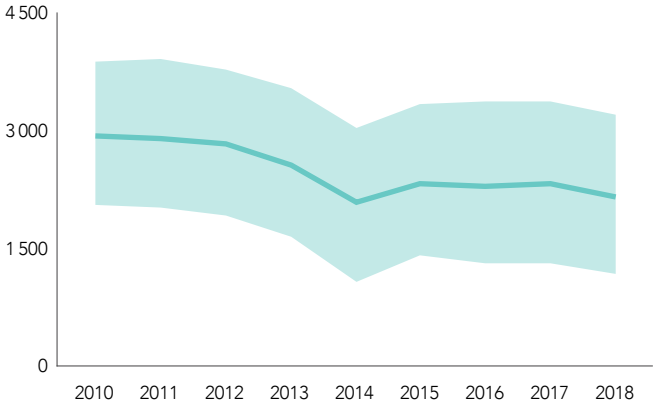
16% [11–22%]

Antiretroviral therapy coverage among children (aged 0–14 years)

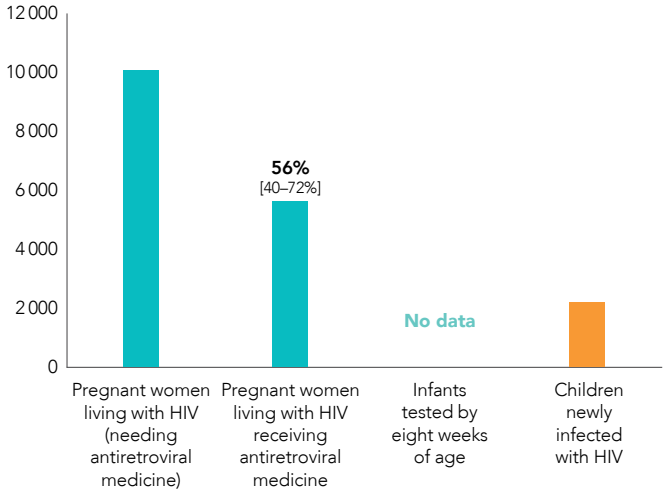
21.4% [5.6–25.4%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

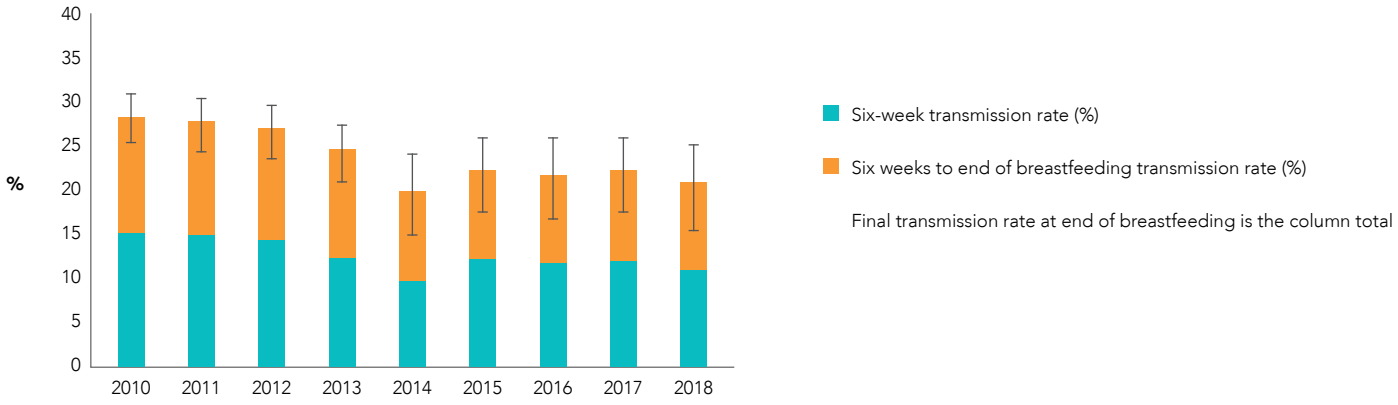
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



Cascade of services for preventing mother-to-child transmission of HIV, 2018



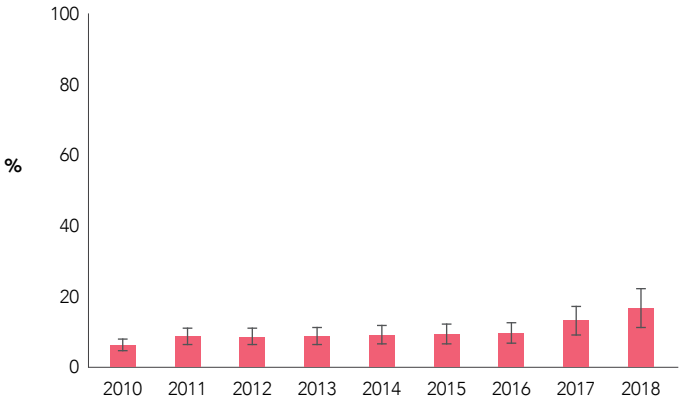
Mother-to-child transmission of HIV by timing of transmission, 2010–2018



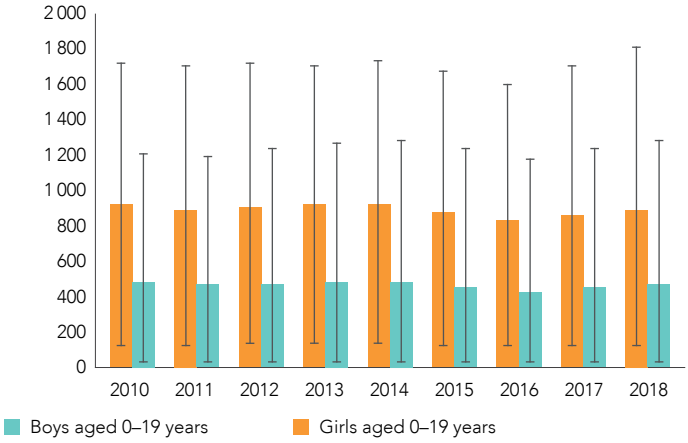
Infants born to women living with HIV receiving a virological test within the first two months of life, 2010–2018

No data

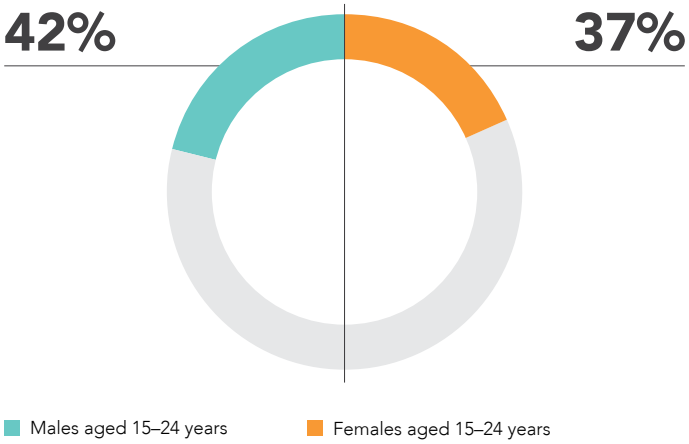
Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018



Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018



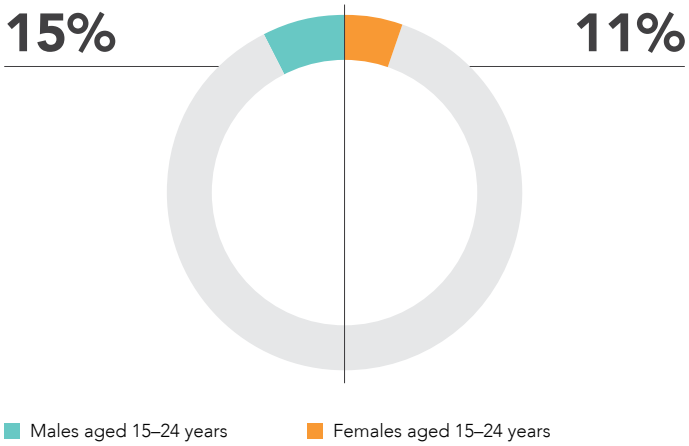
Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018

No data

Comprehensive knowledge about HIV



Sources

UNAIDS 2019 estimates (methods available at unaids.org), except as follows:
Infants born to women living with HIV: Global AIDS Monitoring 2019 and UNAIDS 2019 estimates.
Comprehensive knowledge on HIV and condom use: latest available household survey data.

CÔTE D'IVOIRE

2600 [1300–4900]

Number of children (aged 0–14 years) newly infected with HIV

90% [65– >95%]

Pregnant women living with HIV receiving antiretroviral medicine

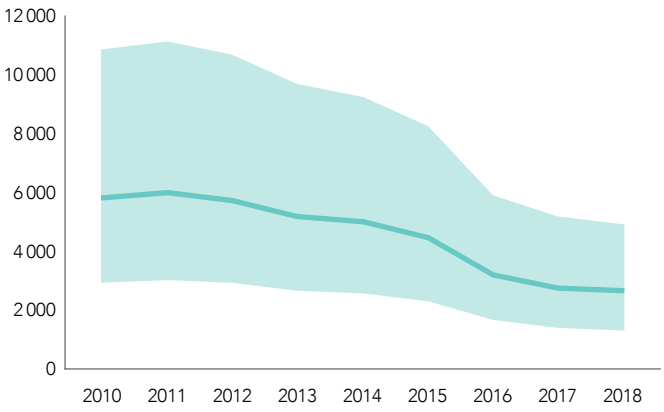
40% [29–54%]

Antiretroviral therapy coverage among children (aged 0–14 years)

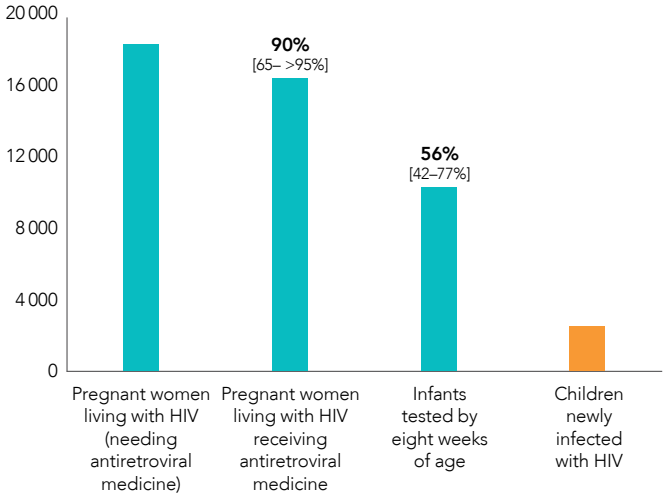
14.2% [9.3–20.2%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

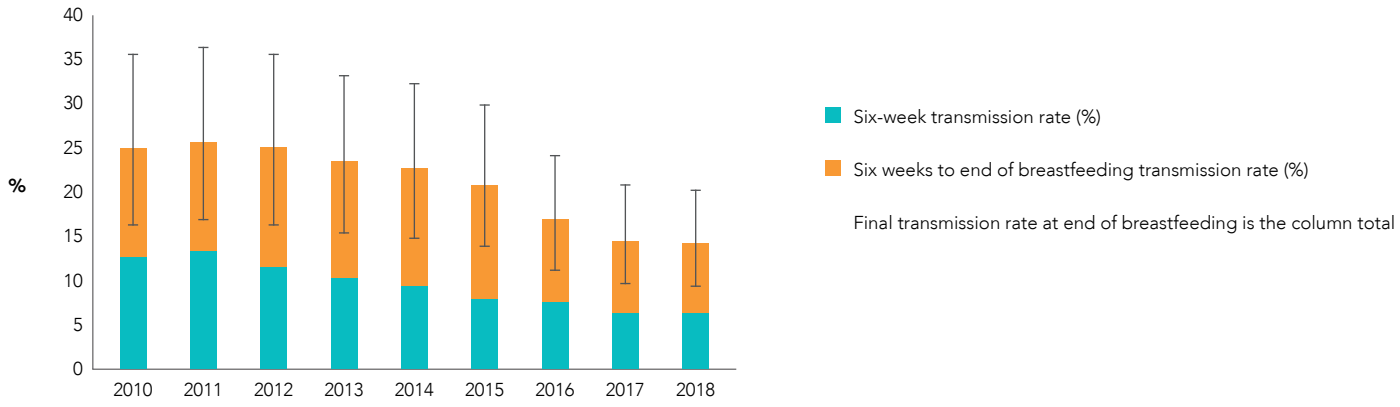
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



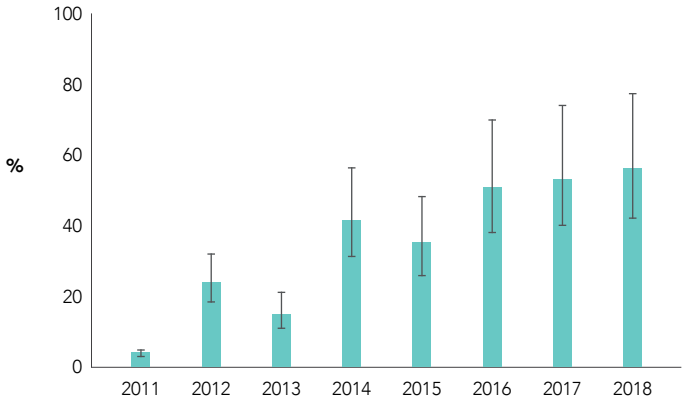
Cascade of services for preventing mother-to-child transmission of HIV, 2018



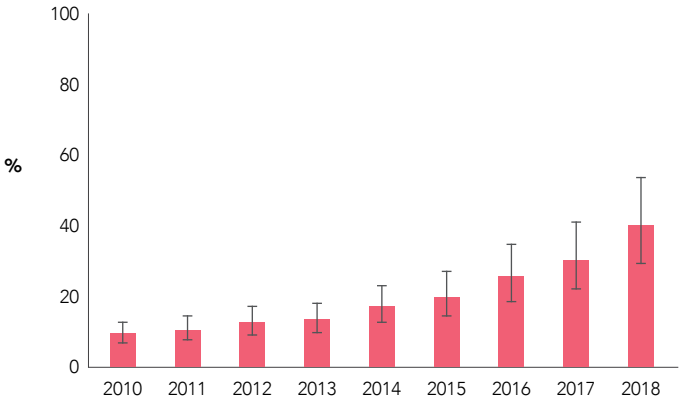
Mother-to-child transmission of HIV by timing of transmission, 2010–2018



Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018

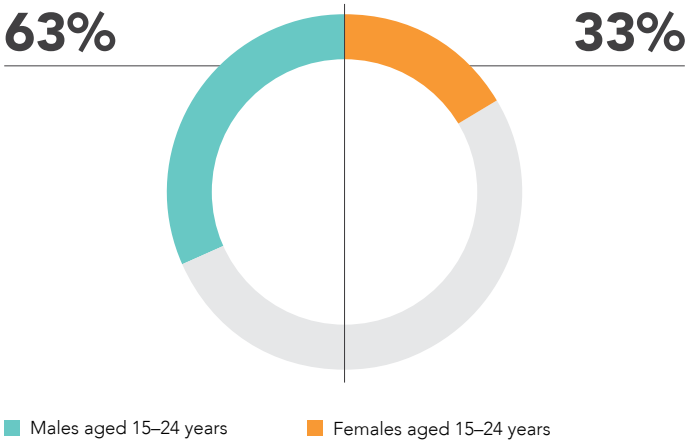


Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018



Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018

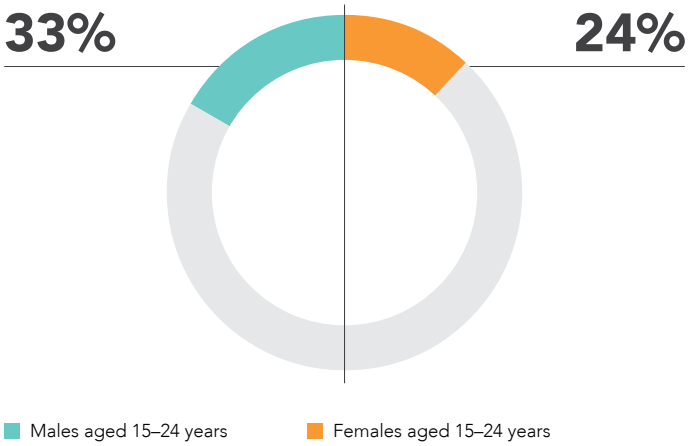
Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018

No data

Comprehensive knowledge about HIV



Sources

UNAIDS 2019 estimates (methods available at unaids.org), except as follows:
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Comprehensive knowledge on HIV and condom use: latest available household survey data.

DEMOCRATIC REPUBLIC

7000 [5400–8600]

Number of children (aged 0–14 years) newly infected with HIV

44% [33–52%]

Pregnant women living with HIV receiving antiretroviral medicine

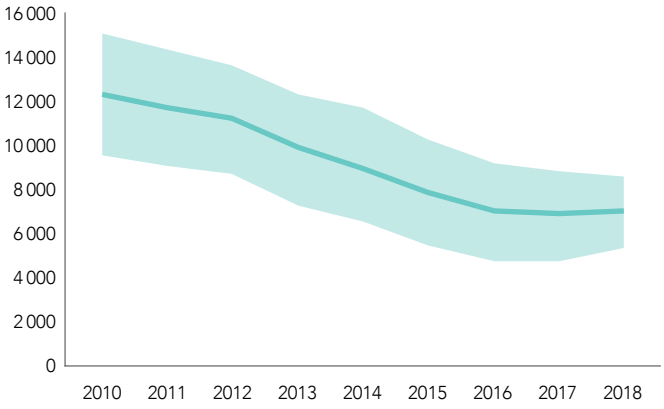
25% [20–30%]

Antiretroviral therapy coverage among children (aged 0–14 years)

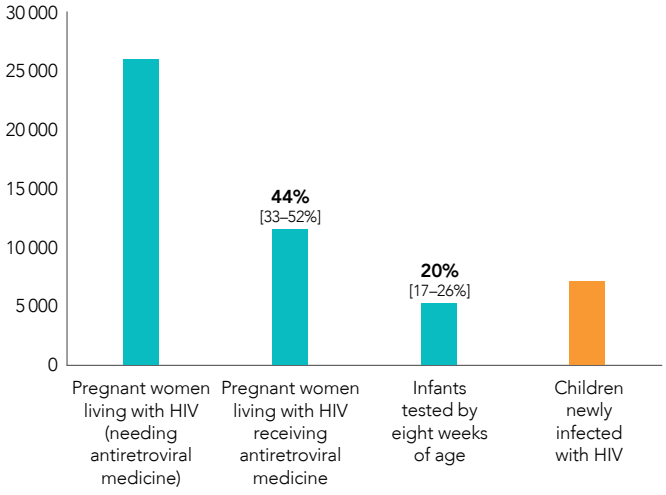
27.1% [24.4–30.0%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

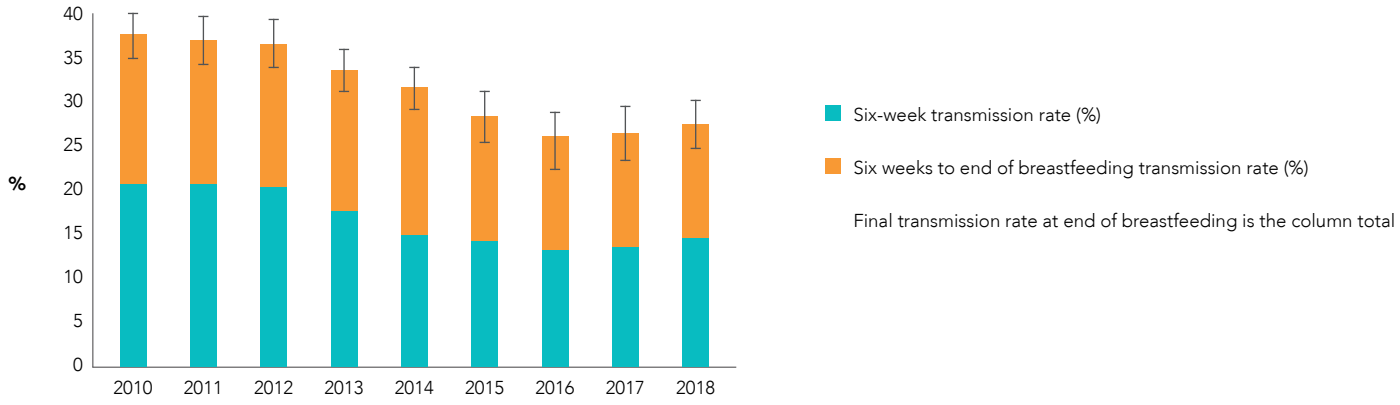
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



Cascade of services for preventing mother-to-child transmission of HIV, 2018

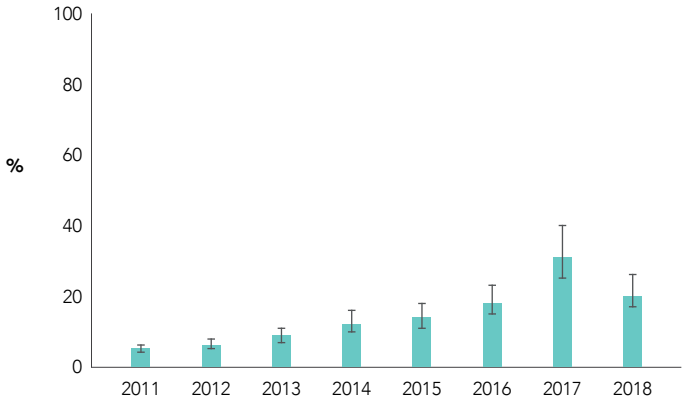


Mother-to-child transmission of HIV by timing of transmission, 2010–2018

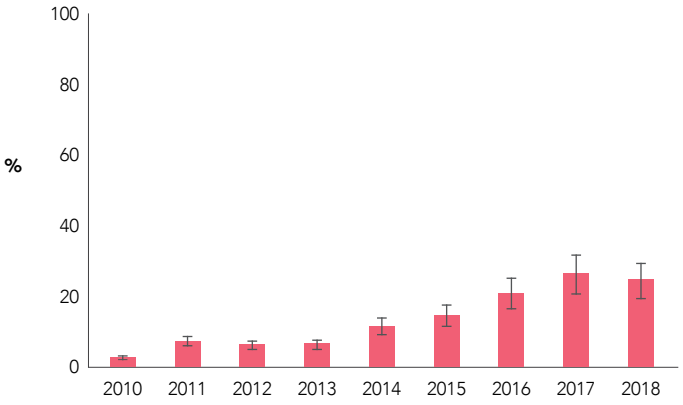


C OF THE CONGO

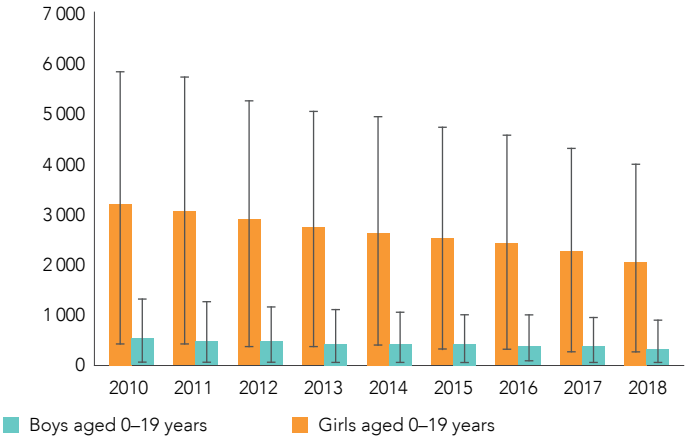
Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018



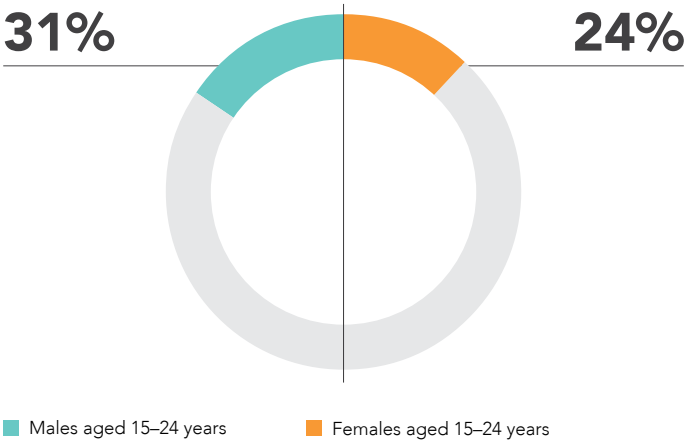
Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018



Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018



Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018

No data

Comprehensive knowledge about HIV

No data

Sources

UNAIDS 2019 estimates (methods available at unaids.org), except as follows:
Infants born to women living with HIV: Global AIDS Monitoring 2019 and UNAIDS 2019 estimates.
Comprehensive knowledge on HIV and condom use: latest available household survey data.

ESWATINI

850 [510–1200]

Number of children (aged 0–14 years) newly infected with HIV

79% [66–89%]

Pregnant women living with HIV receiving antiretroviral medicine

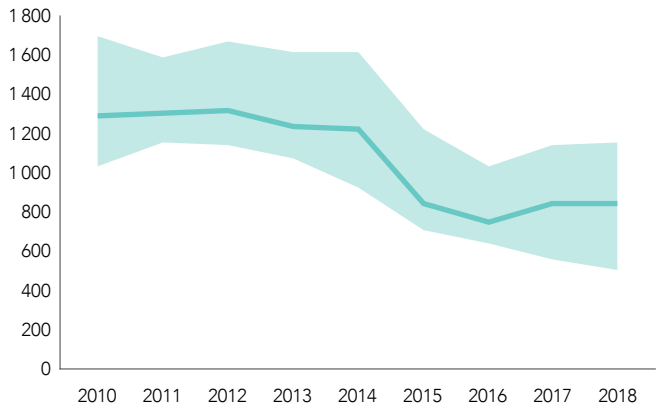
76% [63–88%]

Antiretroviral therapy coverage among children (aged 0–14 years)

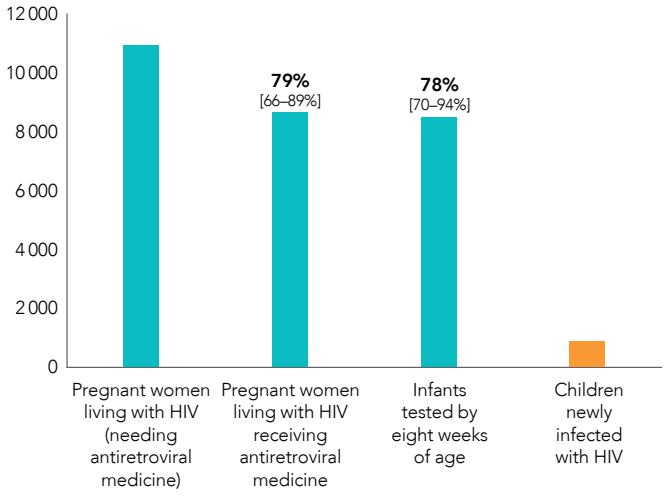
7.8% [5.7–9.6%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

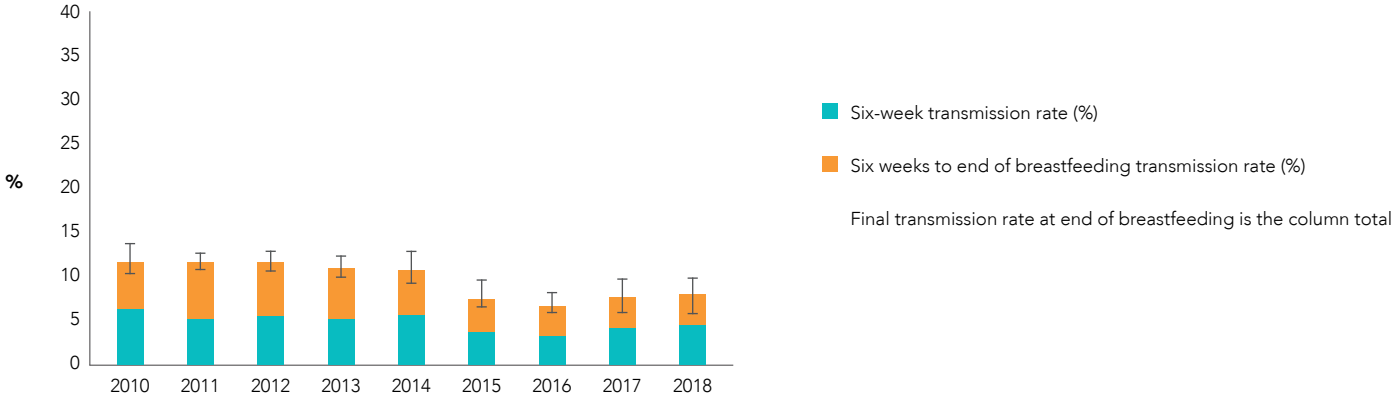
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



Cascade of services for preventing mother-to-child transmission of HIV, 2018

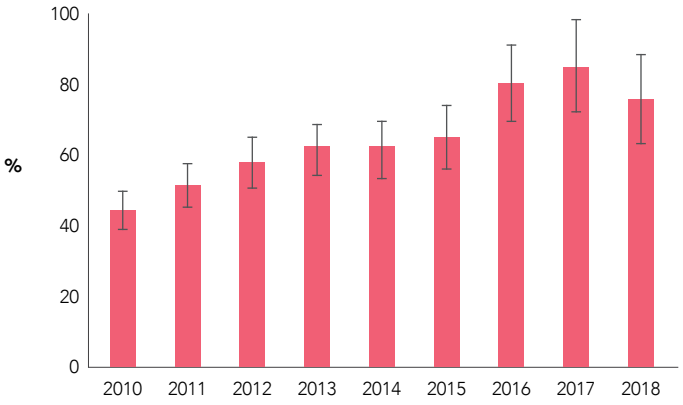


Mother-to-child transmission of HIV by timing of transmission, 2010–2018



Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018

Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018

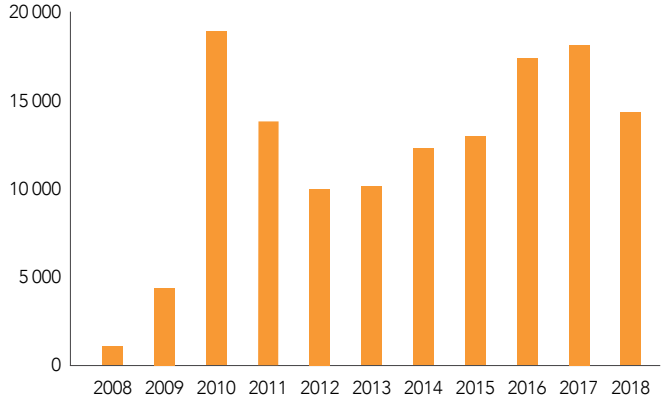


Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018

Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)

No data

Voluntary medical male circumcision (all ages), 2008–2018



Comprehensive knowledge about HIV

No data

Sources

UNAIDS 2019 estimates (methods available at unaids.org), except as follows:
Infants born to women living with HIV: Global AIDS Monitoring 2019 and UNAIDS 2019 estimates.
Comprehensive knowledge on HIV and condom use: latest available household survey data.

ETHIOPIA

2700 [1600–5600]

Number of children (aged 0–14 years) newly infected with HIV

92% [63– >95%]

Pregnant women living with HIV receiving antiretroviral medicine

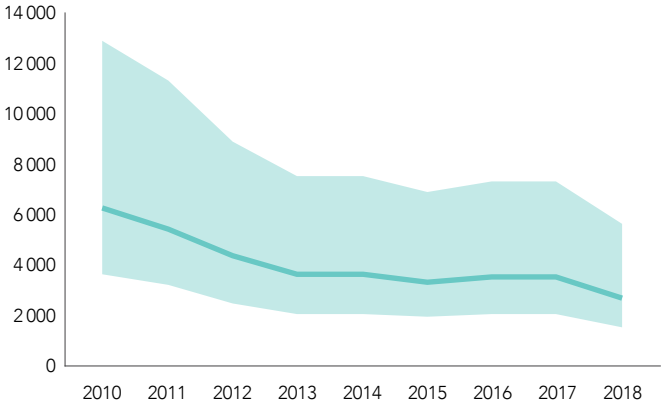
59% [38–90%]

Antiretroviral therapy coverage among children (aged 0–14 years)

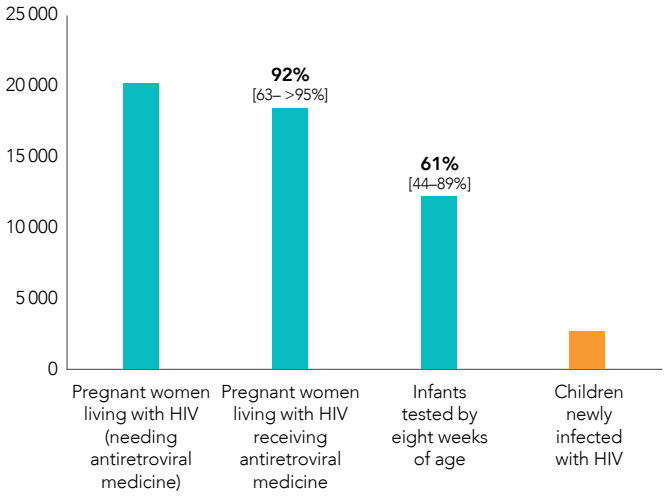
13.4% [10.3–19.7%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

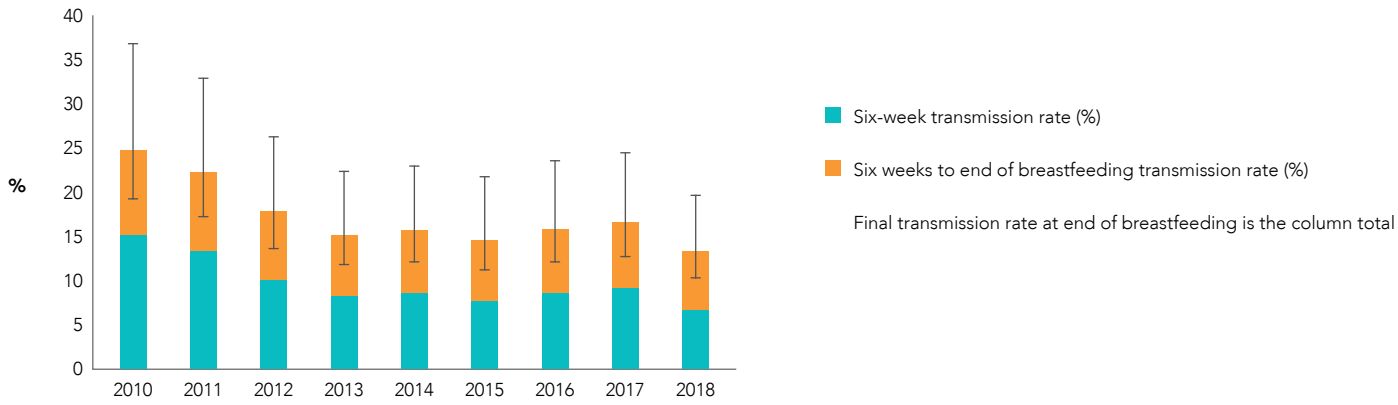
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



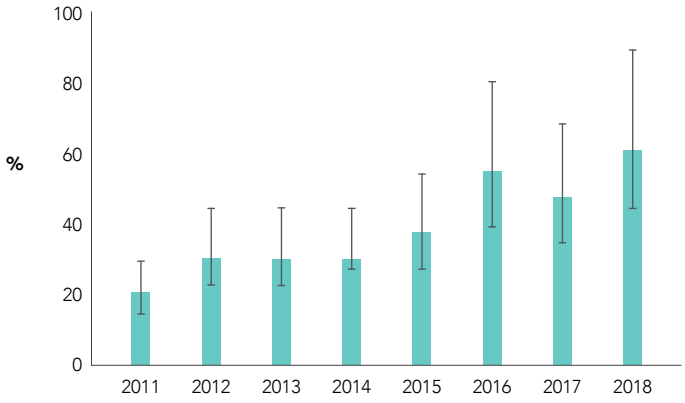
Cascade of services for preventing mother-to-child transmission of HIV, 2018



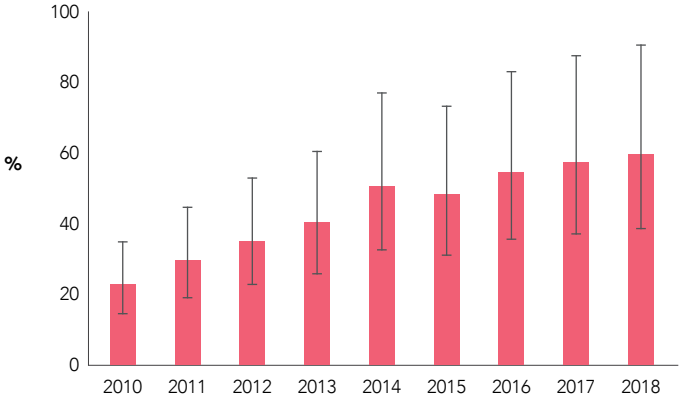
Mother-to-child transmission of HIV by timing of transmission, 2010–2018



Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018

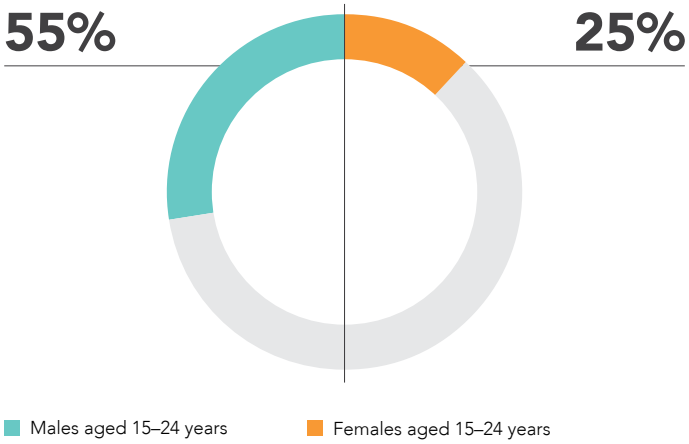


Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018

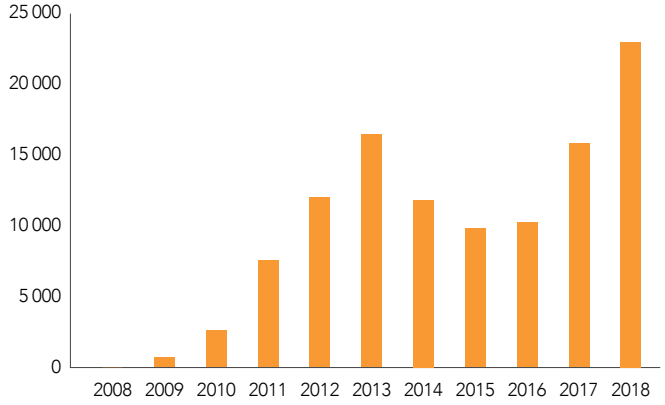


Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018

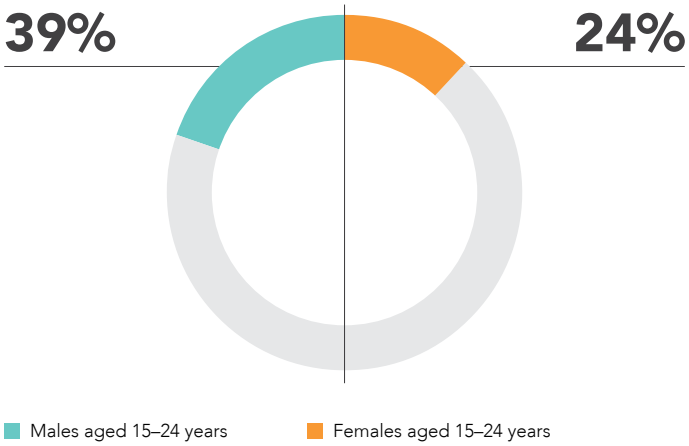
Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018



Comprehensive knowledge about HIV



Sources

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Comprehensive knowledge on HIV and condom use: latest available household survey data.

GHANA

3300 [2200–5000]

Number of children (aged 0–14 years) newly infected with HIV

79% [58– >95%]

Pregnant women living with HIV receiving antiretroviral medicine

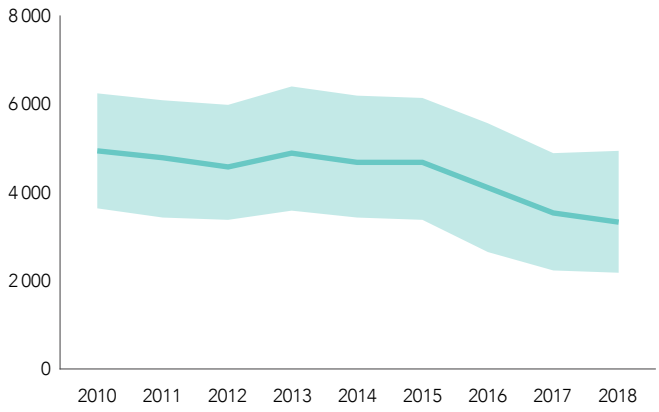
20% [15–25%]

Antiretroviral therapy coverage among children (aged 0–14 years)

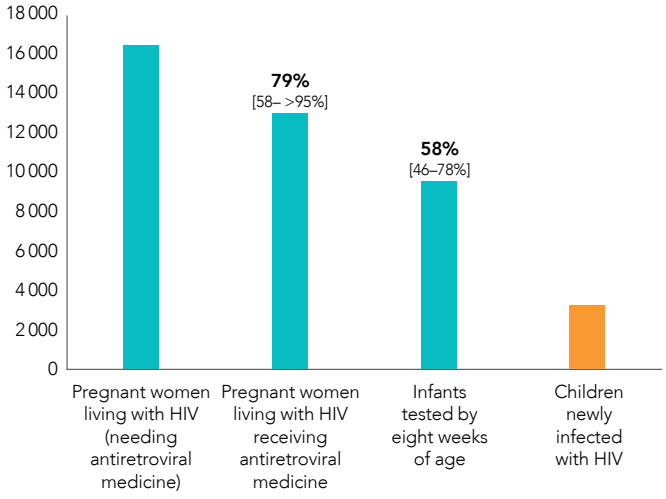
20.2% [16.9–23.9%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

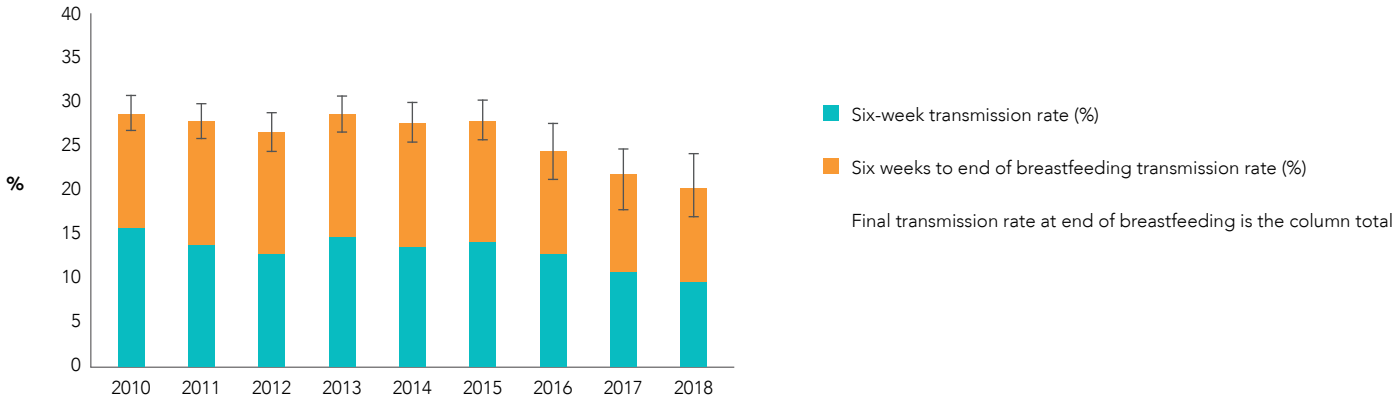
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



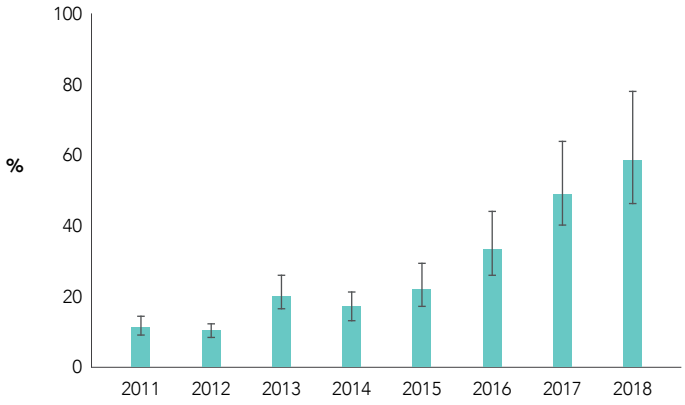
Cascade of services for preventing mother-to-child transmission of HIV, 2018



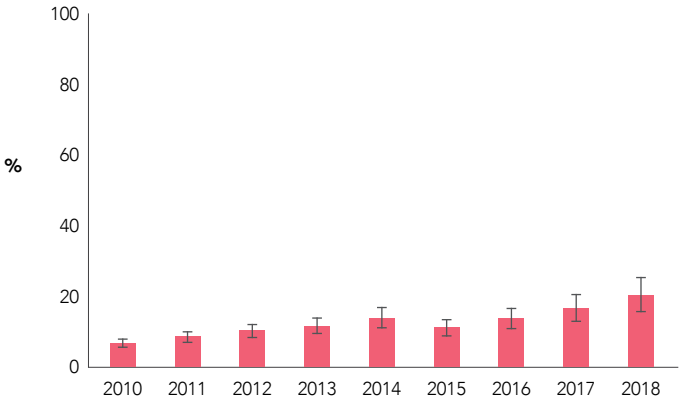
Mother-to-child transmission of HIV by timing of transmission, 2010–2018



Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018

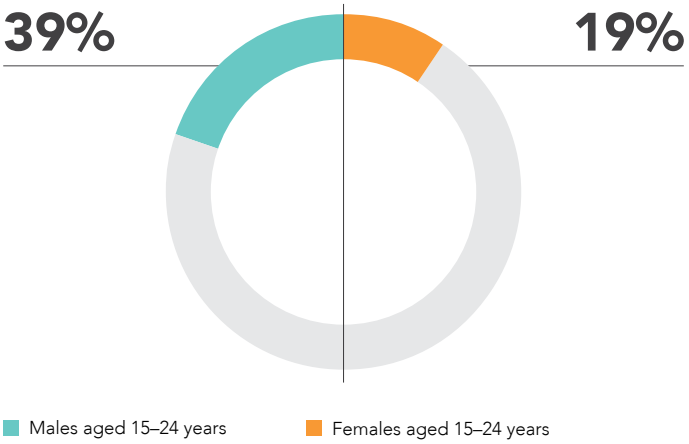


Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018



Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018

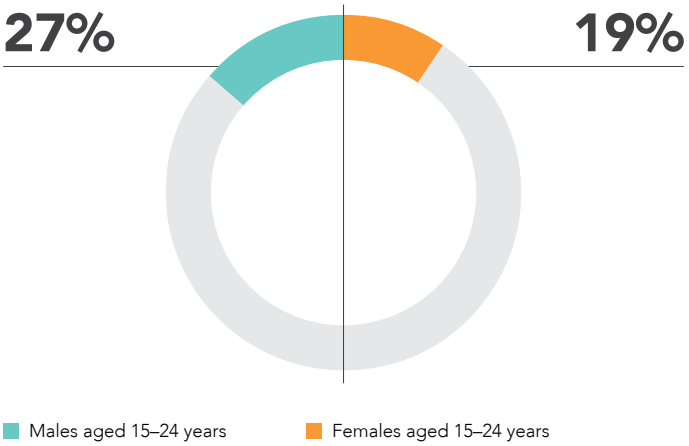
Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018

No data

Comprehensive knowledge about HIV



Sources

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Comprehensive knowledge on HIV and condom use: latest available household survey data.

INDONESIA

3500 [2900–4200]

Number of children (aged 0–14 years) newly infected with HIV

15% [13–18%]

Pregnant women living with HIV receiving antiretroviral medicine

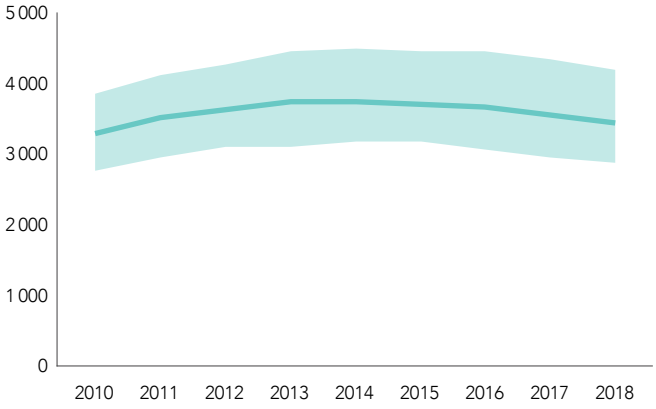
22% [19–26%]

Antiretroviral therapy coverage among children (aged 0–14 years)

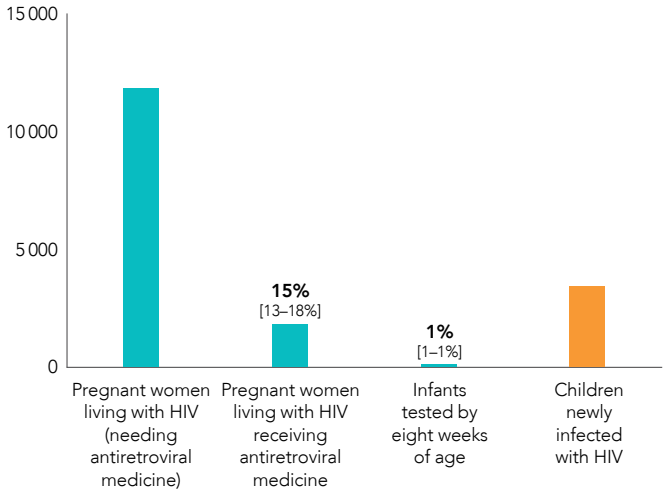
29.3% [27.5–31.1%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

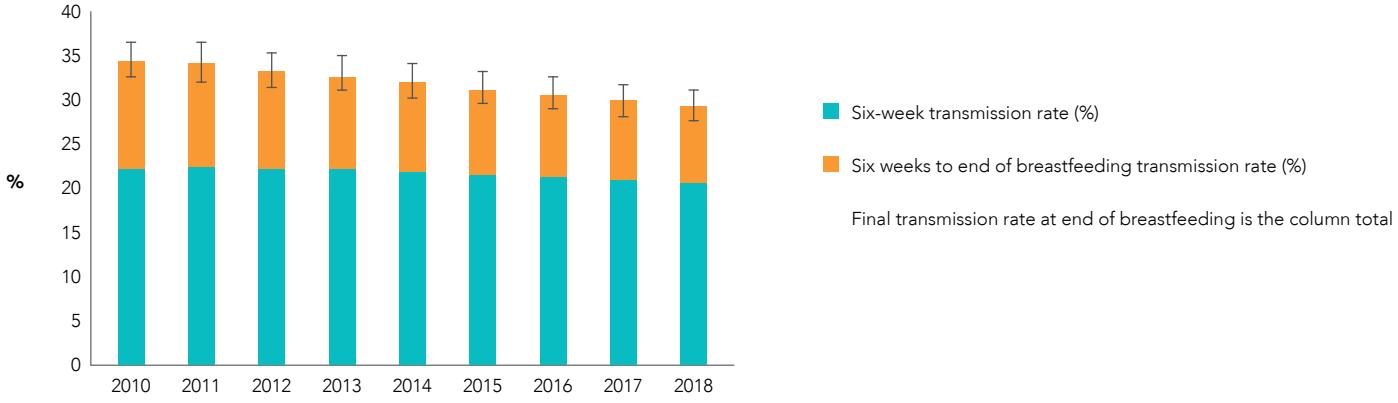
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



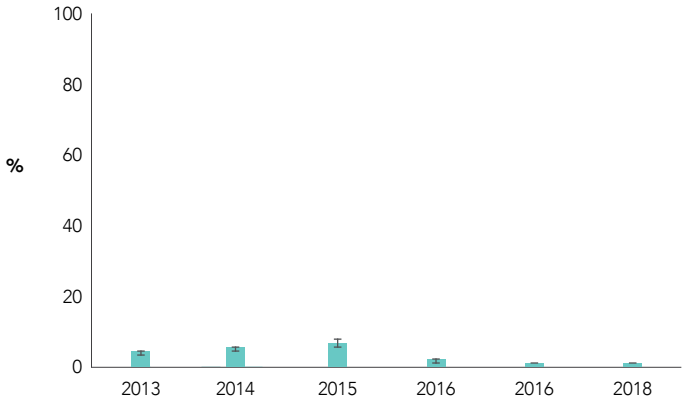
Cascade of services for preventing mother-to-child transmission of HIV, 2018



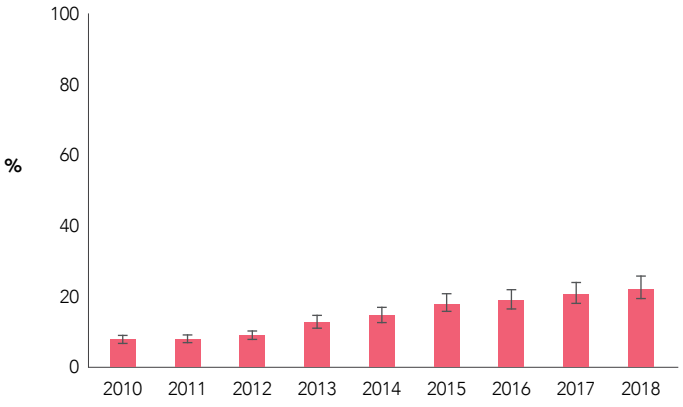
Mother-to-child transmission of HIV by timing of transmission, 2010–2018



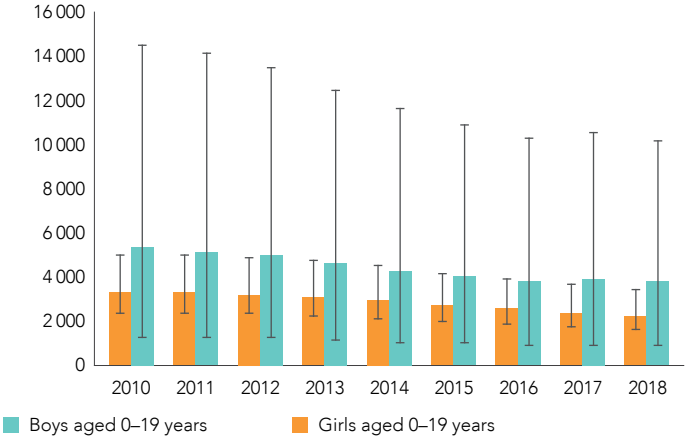
Infants born to women living with HIV receiving a virological test within the first two months of life, 2013–2018



Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018



Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018



Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)

No data

Voluntary medical male circumcision (all ages), 2008–2018

No data

Comprehensive knowledge about HIV

No data

Sources

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Infants born to women living with HIV: Global AIDS Monitoring 2019 and UNAIDS 2019 estimates.
Comprehensive knowledge on HIV and condom use: latest available household survey data.

KENYA

7600 [4400–13 000]

Number of children (aged 0–14 years) newly infected with HIV

91% [70– >95%]

Pregnant women living with HIV receiving antiretroviral medicine

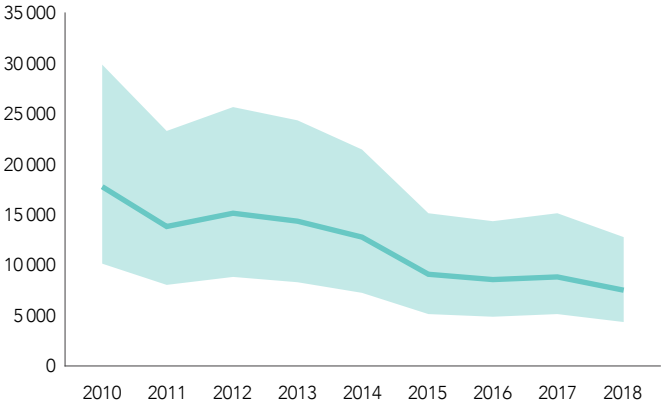
61% [47–78%]

Antiretroviral therapy coverage among children (aged 0–14 years)

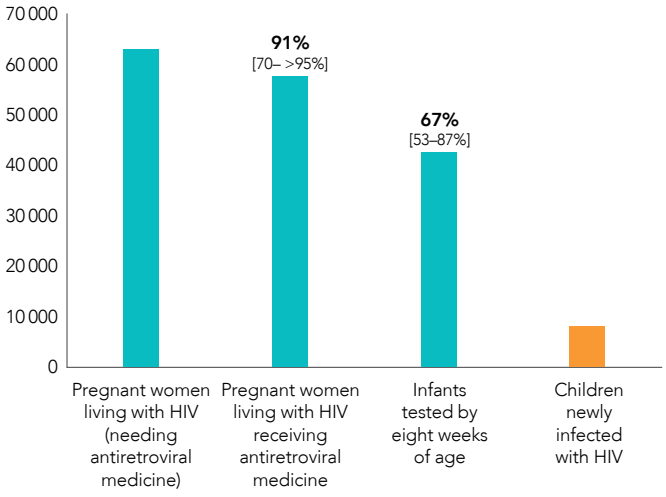
12.1% [8.6–16.5%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

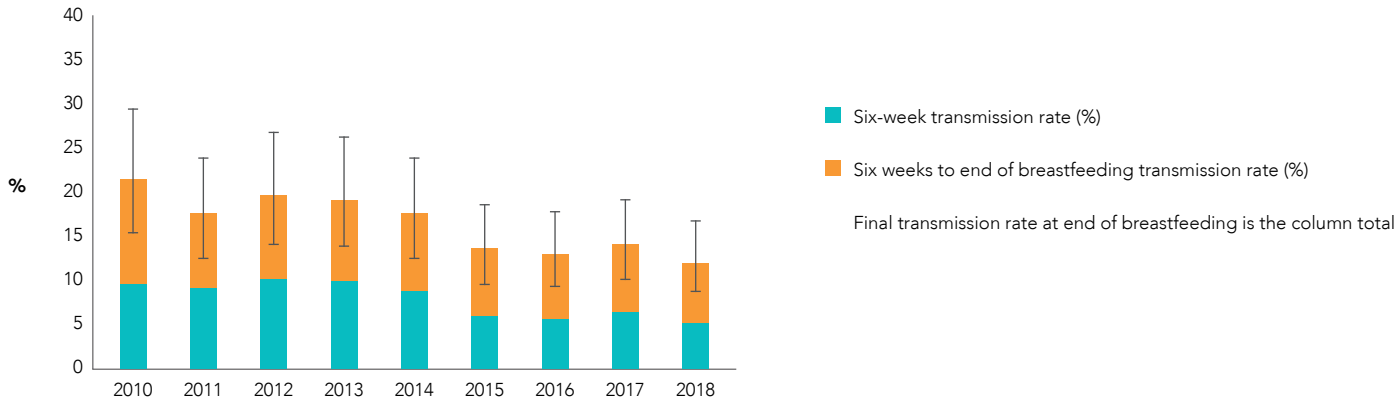
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



Cascade of services for preventing mother-to-child transmission of HIV, 2018

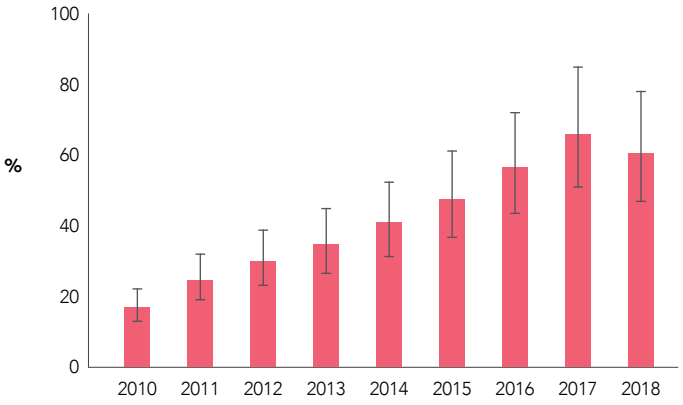


Mother-to-child transmission of HIV by timing of transmission, 2010–2018

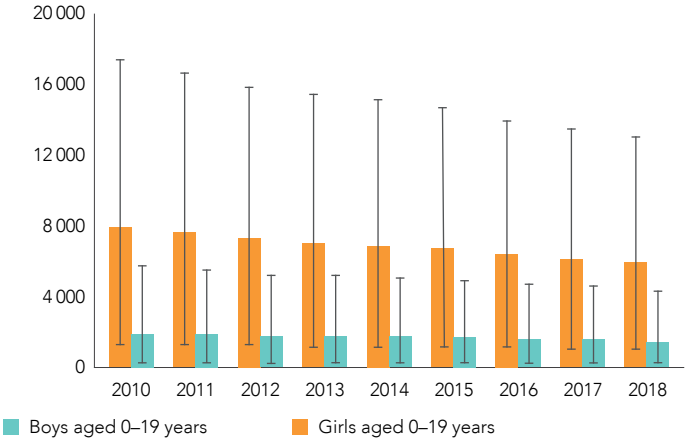


Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018

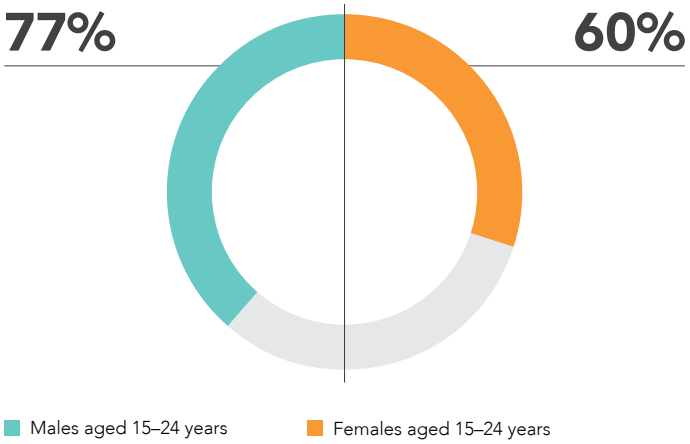
Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018



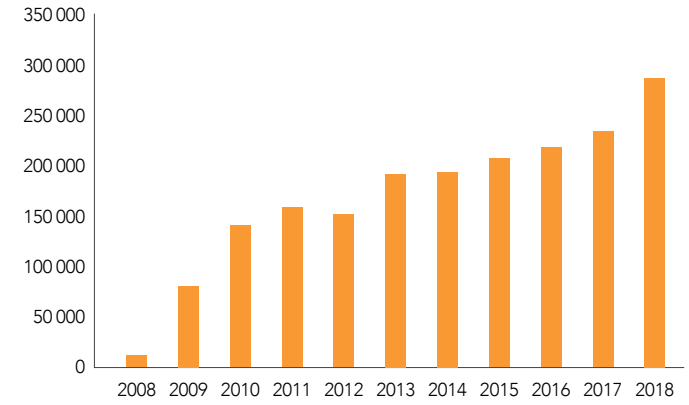
Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018



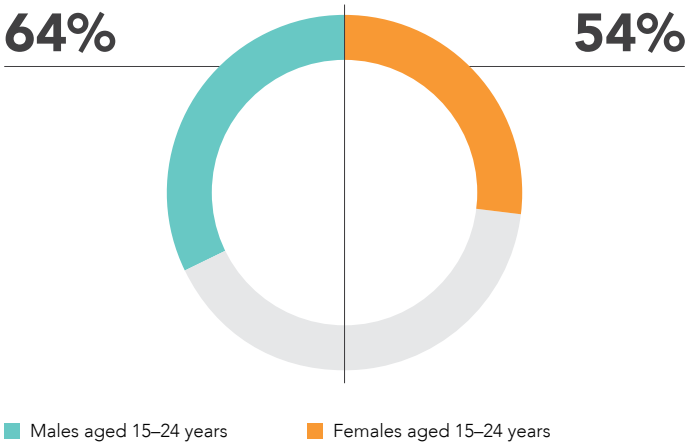
Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018



Comprehensive knowledge about HIV



Sources

UNAIDS 2019 estimates (methods available at unaids.org), except as follows:
Infants born to women living with HIV: Global AIDS Monitoring 2019 and UNAIDS 2019 estimates.
Comprehensive knowledge on HIV and condom use: latest available household survey data.

LESOTHO

1300 [780–1800]

Number of children (aged 0–14 years) newly infected with HIV

77% [59–89%]

Pregnant women living with HIV receiving antiretroviral medicine

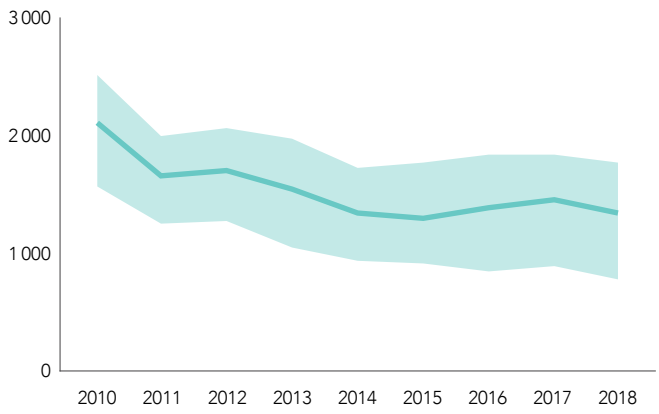
70% [55–81%]

Antiretroviral therapy coverage among children (aged 0–14 years)

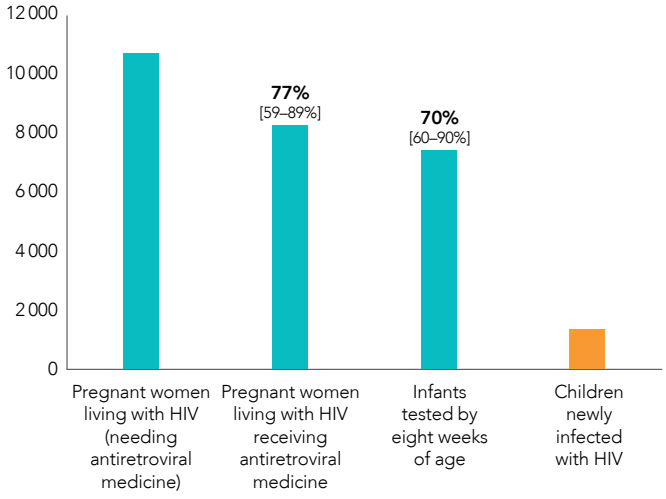
12.7% [9.9–14.4%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

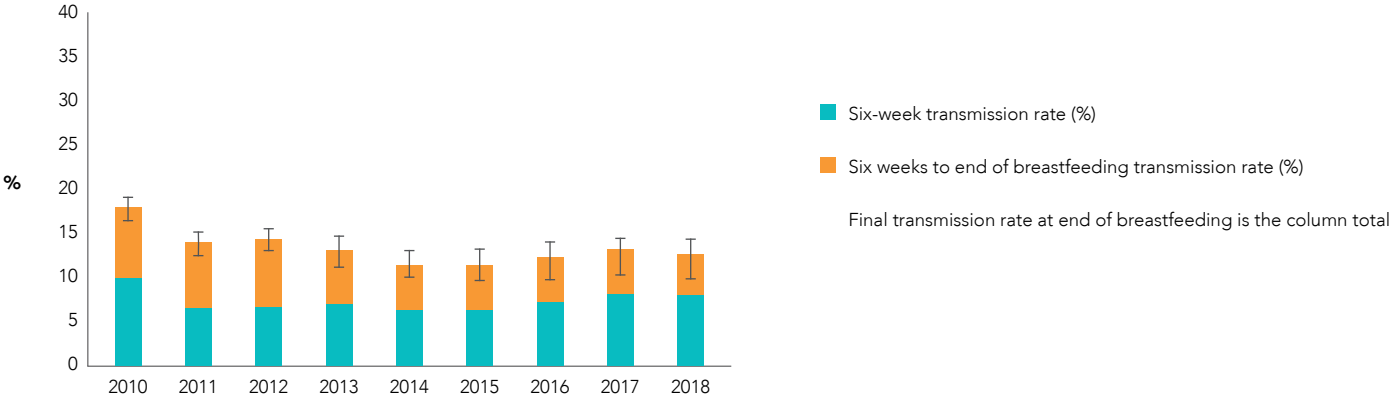
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



Cascade of services for preventing mother-to-child transmission of HIV, 2018

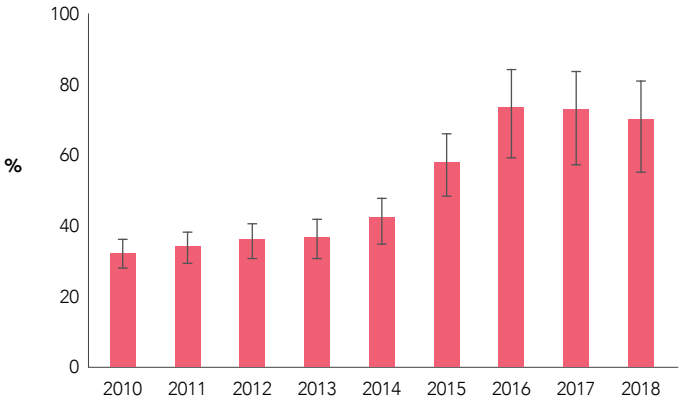


Mother-to-child transmission of HIV by timing of transmission, 2010–2018

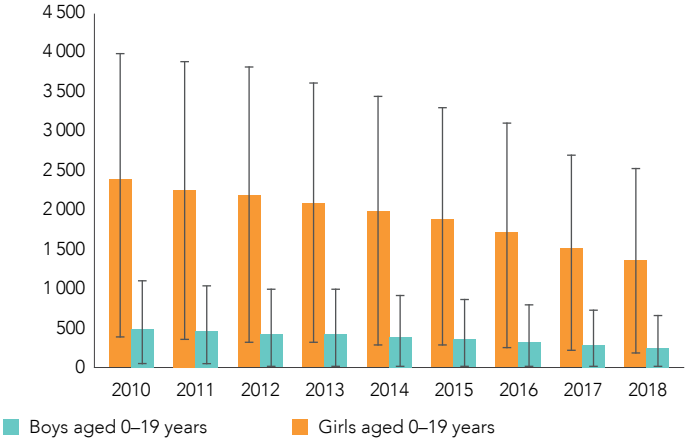


Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018

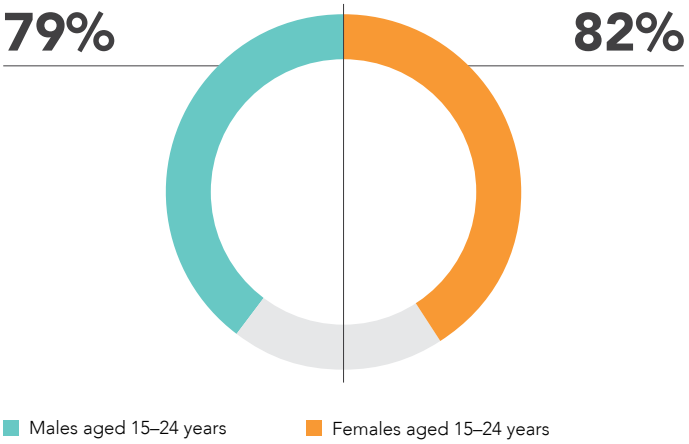
Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018



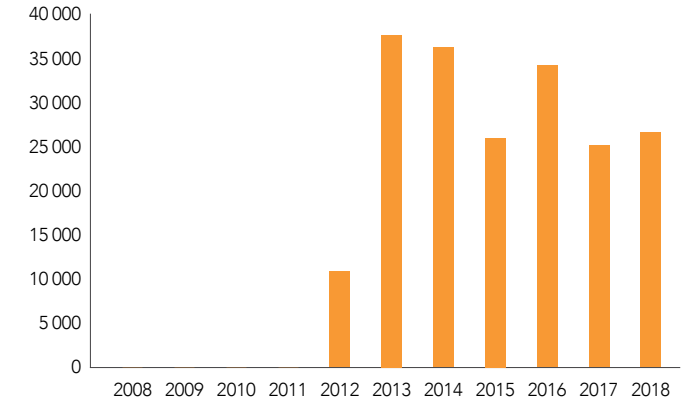
Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018



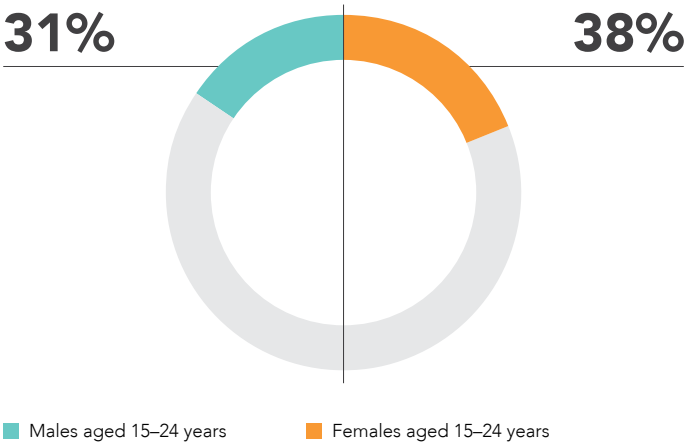
Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018



Comprehensive knowledge about HIV



Sources

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Comprehensive knowledge on HIV and condom use: latest available household survey data.

MALAWI

3500 [2900–5100]

Number of children (aged 0–14 years) newly infected with HIV

>95% [80– >95%]

Pregnant women living with HIV receiving antiretroviral medicine

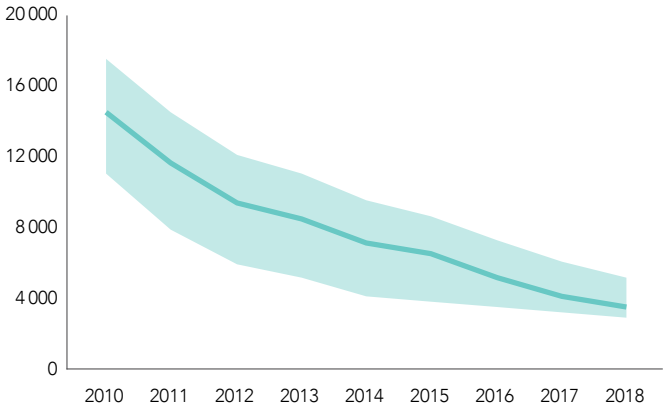
61% [47–73%]

Antiretroviral therapy coverage among children (aged 0–14 years)

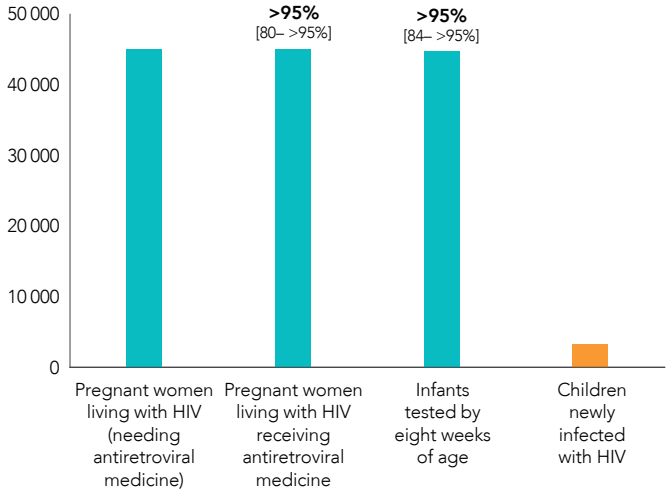
7.8% [6.9–9.4%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

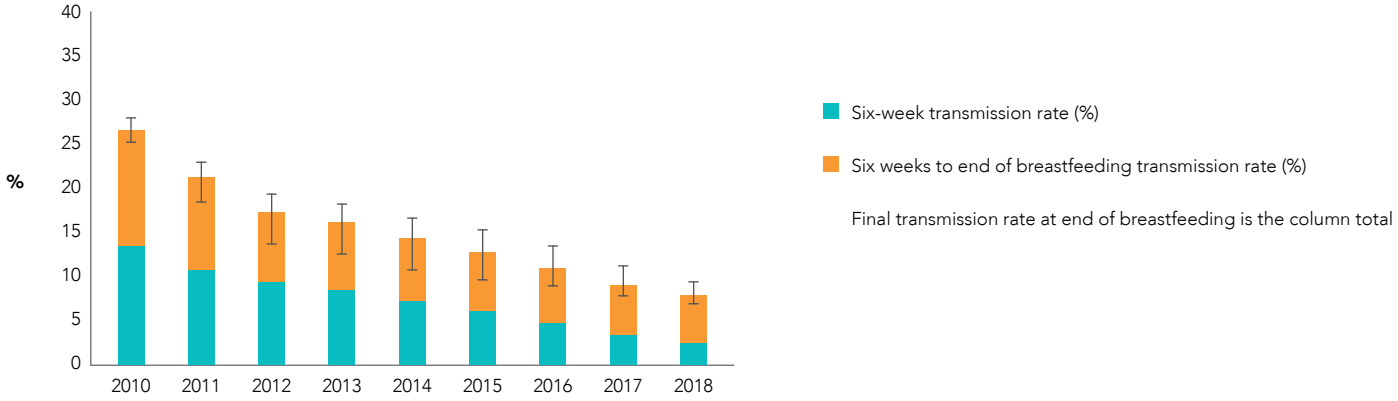
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



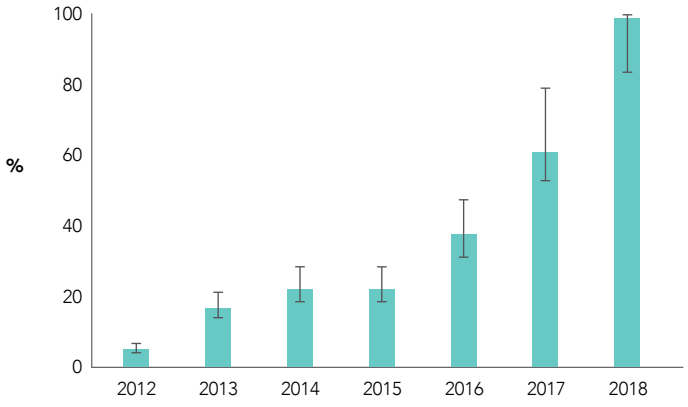
Cascade of services for preventing mother-to-child transmission of HIV, 2018



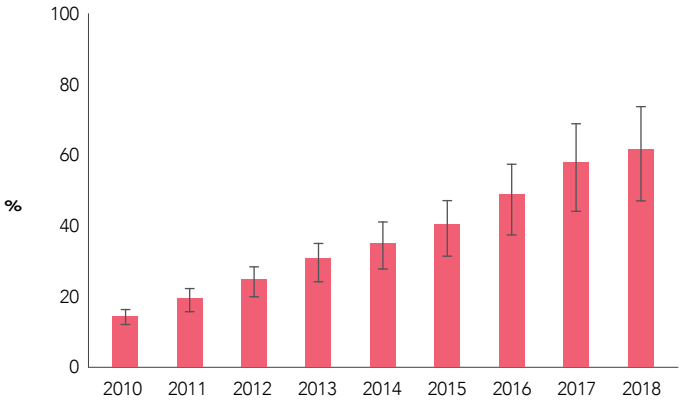
Mother-to-child transmission of HIV by timing of transmission, 2010–2018



Infants born to women living with HIV receiving a virological test within the first two months of life, 2012–2018

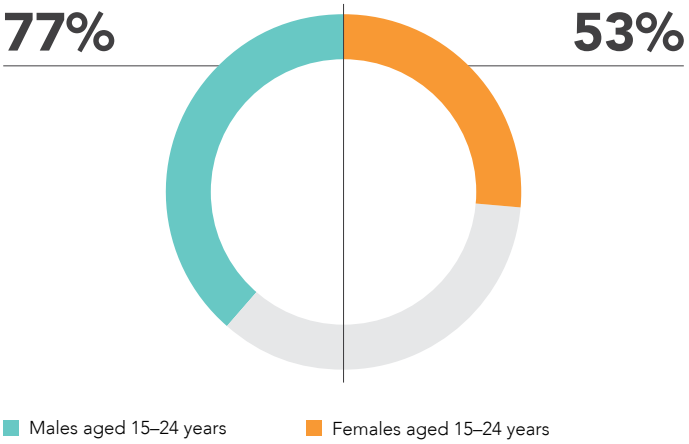


Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018

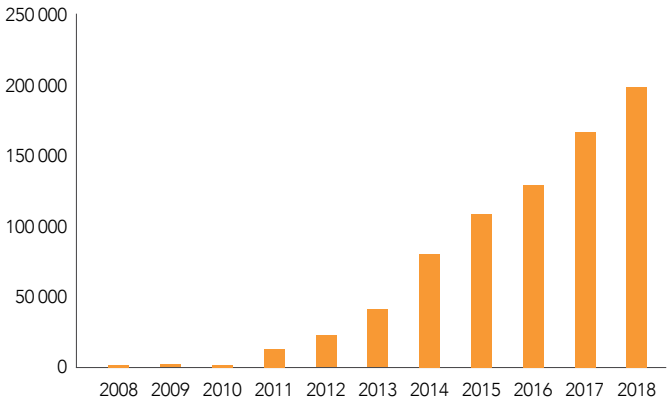


Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018

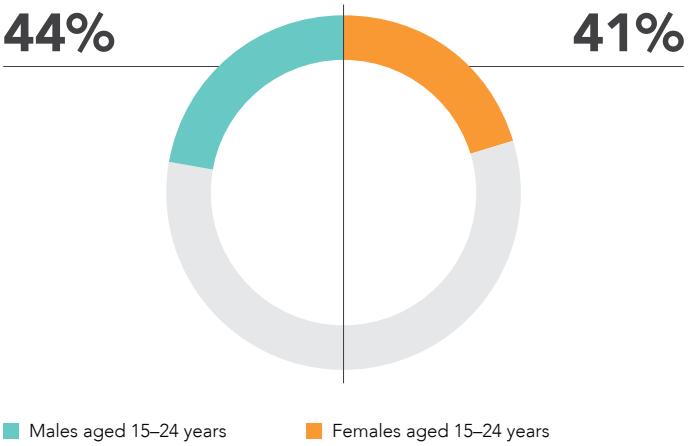
Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018



Comprehensive knowledge about HIV



Sources

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Comprehensive knowledge on HIV and condom use: latest available household survey data.

MOZAMBIQUE

16 000 [10 000–27 000]

Number of children (aged 0–14 years) newly infected with HIV

>95% [73– >95%]

Pregnant women living with HIV receiving antiretroviral medicine

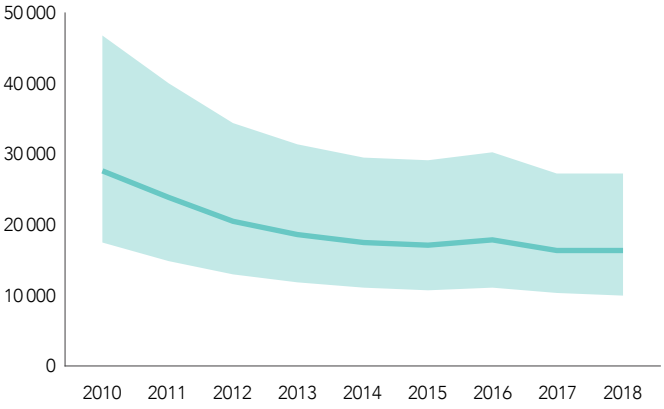
60% [45–81%]

Antiretroviral therapy coverage among children (aged 0–14 years)

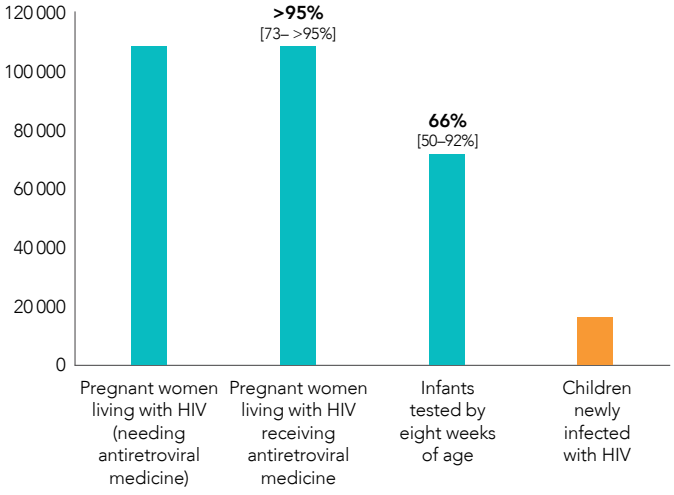
15.0% [11.8–19.0%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

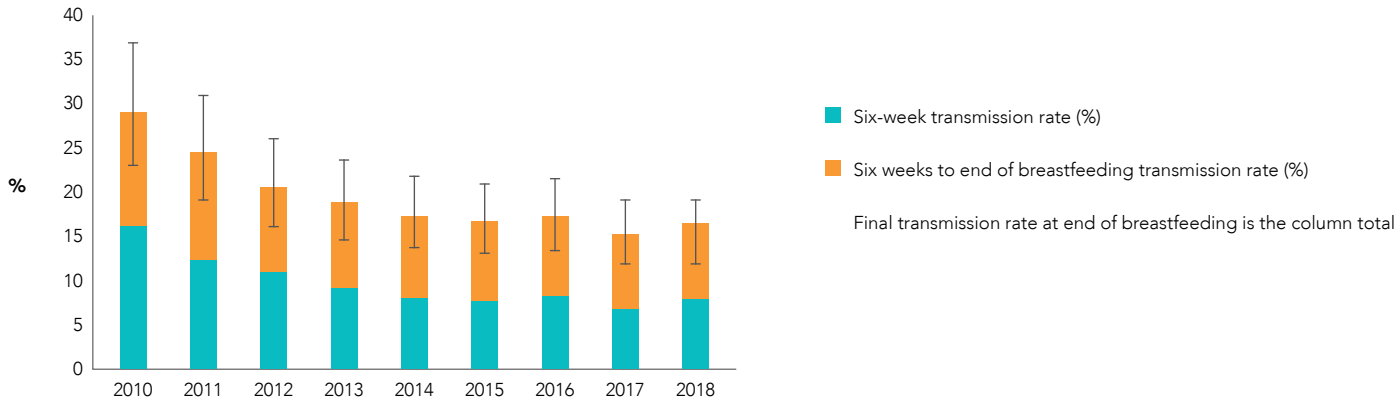
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



Cascade of services for preventing mother-to-child transmission of HIV, 2018

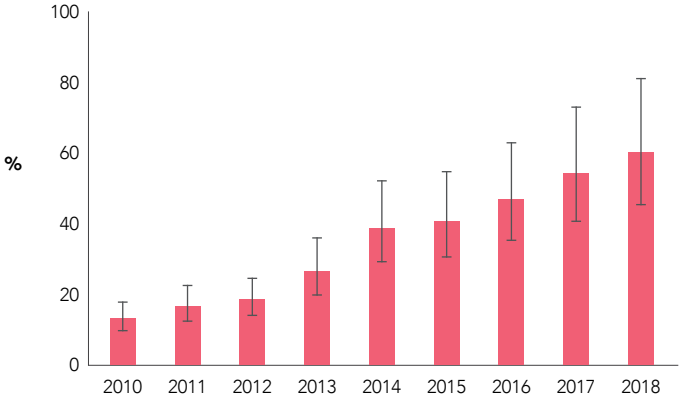


Mother-to-child transmission of HIV by timing of transmission, 2010–2018



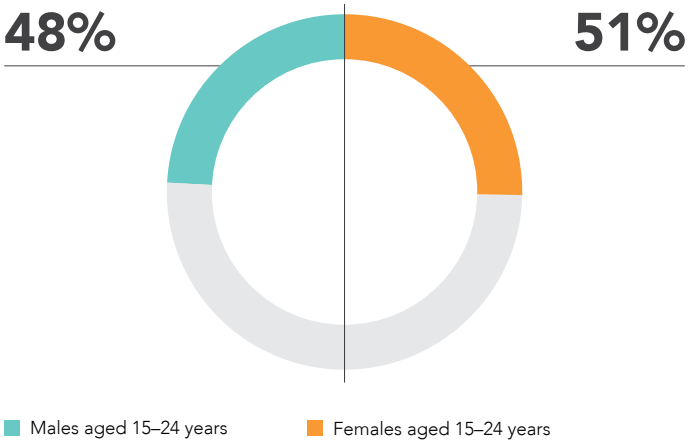
Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018

Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018

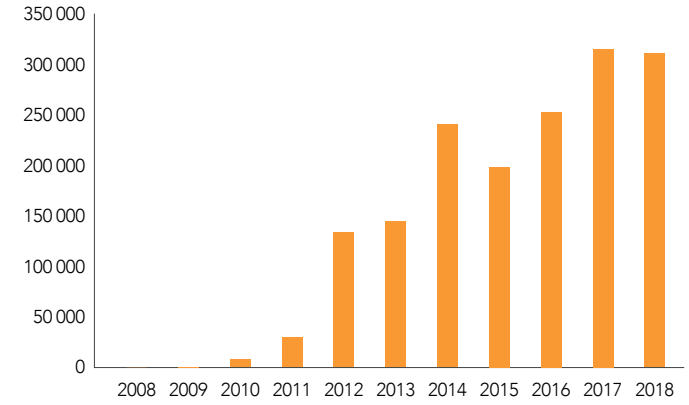


Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018

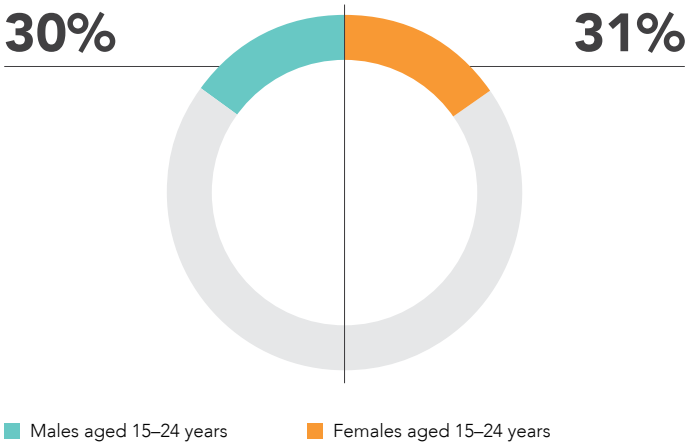
Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018



Comprehensive knowledge about HIV



Sources

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Infants born to women living with HIV: Global AIDS Monitoring 2019 and UNAIDS 2019 estimates.
Comprehensive knowledge on HIV and condom use: latest available household survey data.

NAMIBIA

<500 [<500–610]

Number of children (aged 0–14 years) newly infected with HIV

>95% [92– >95%]

Pregnant women living with HIV receiving antiretroviral medicine

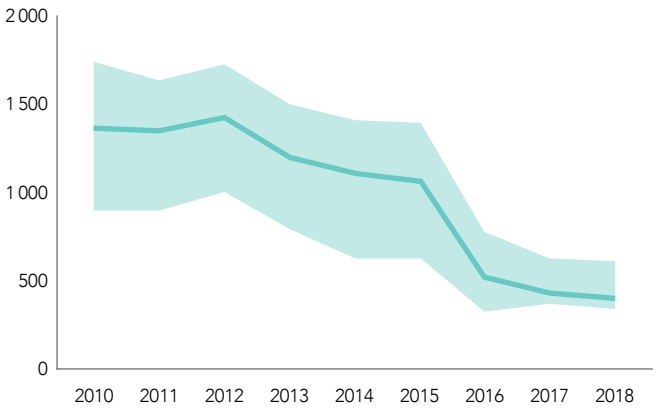
78% [61–89%]

Antiretroviral therapy coverage among children (aged 0–14 years)

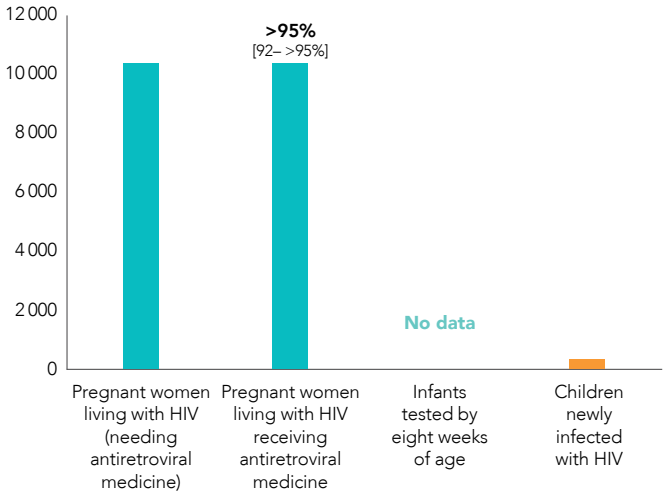
3.9% [3.6–5.1%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

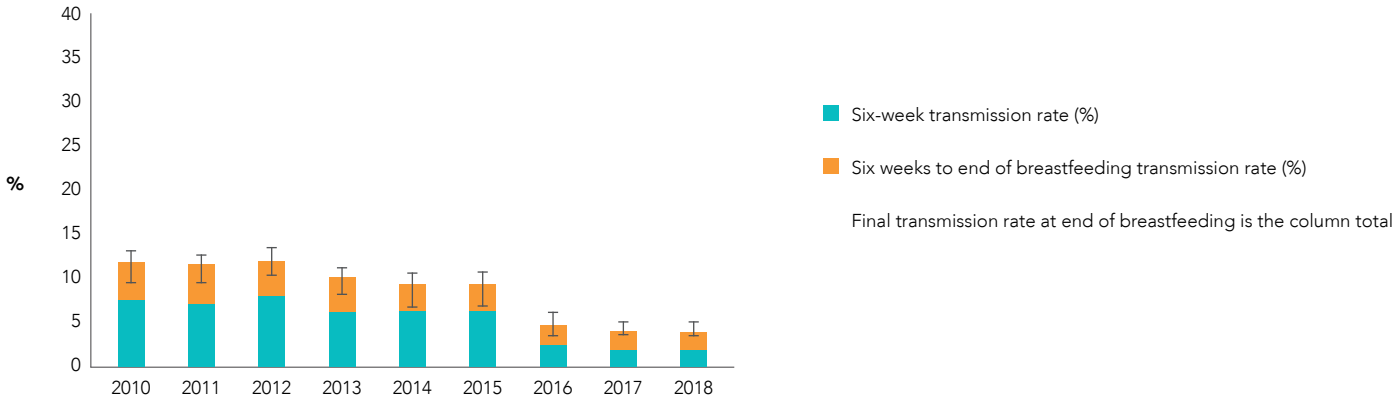
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



Cascade of services for preventing mother-to-child transmission of HIV, 2018



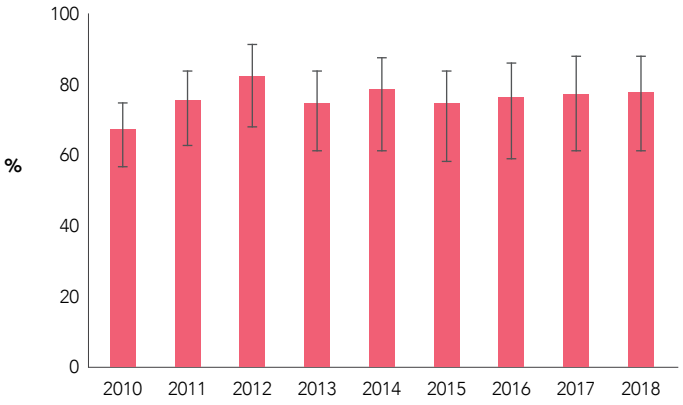
Mother-to-child transmission of HIV by timing of transmission, 2010–2018



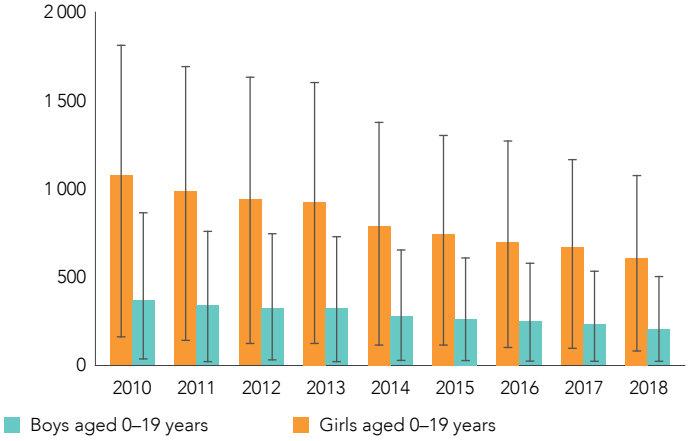
Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018

No data

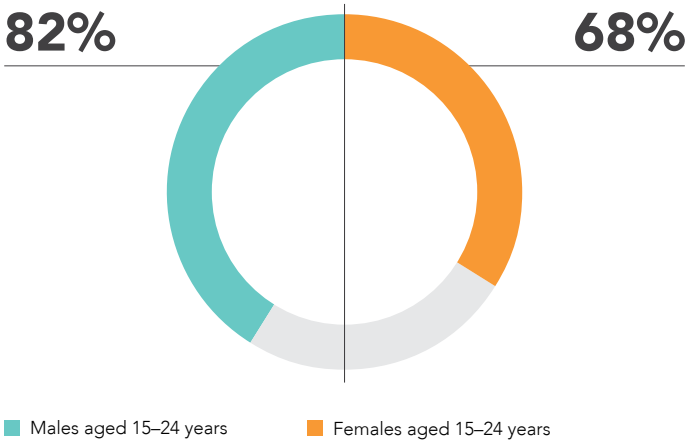
Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018



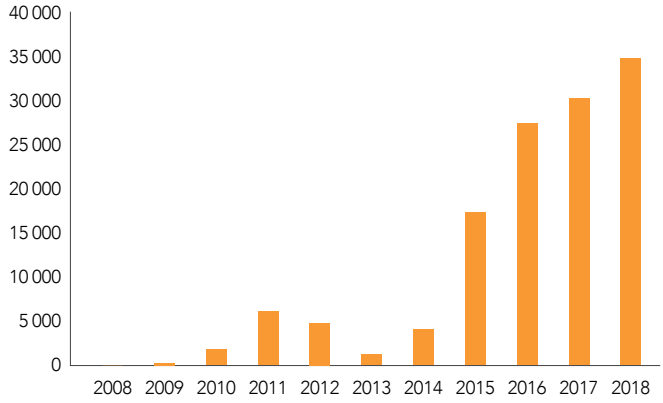
Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018



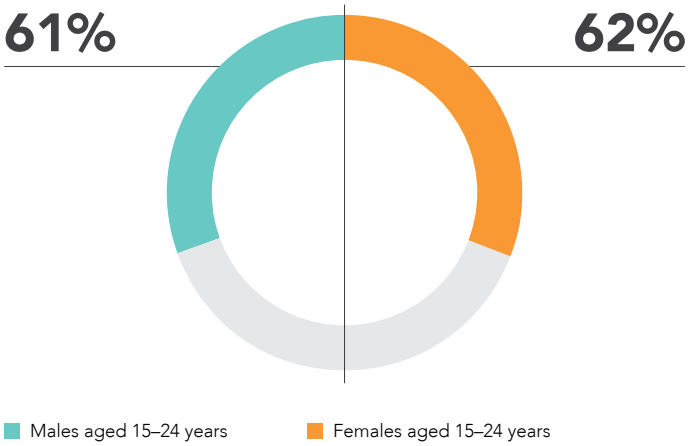
Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018



Comprehensive knowledge about HIV



Sources

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Comprehensive knowledge on HIV and condom use: latest available household survey data.

NIGERIA

24 000 [14 000–38 000]

Number of children (aged 0–14 years) newly infected with HIV

44% [28–62%]

Pregnant women living with HIV receiving antiretroviral medicine

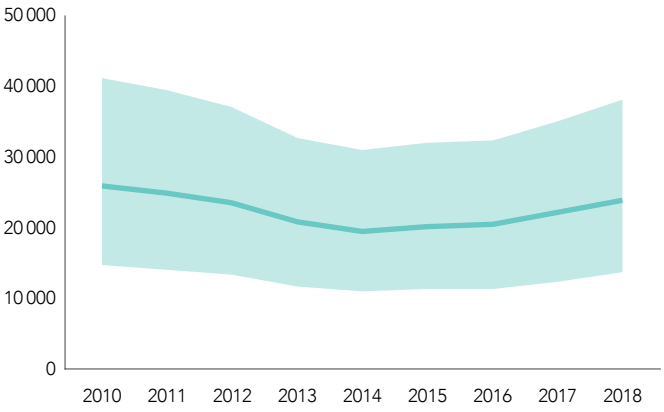
35% [22–53%]

Antiretroviral therapy coverage among children (aged 0–14 years)

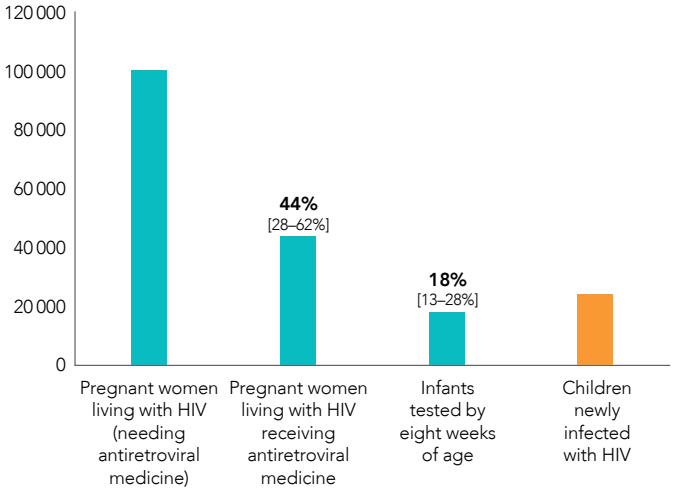
24.1% [19.9–27.7%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

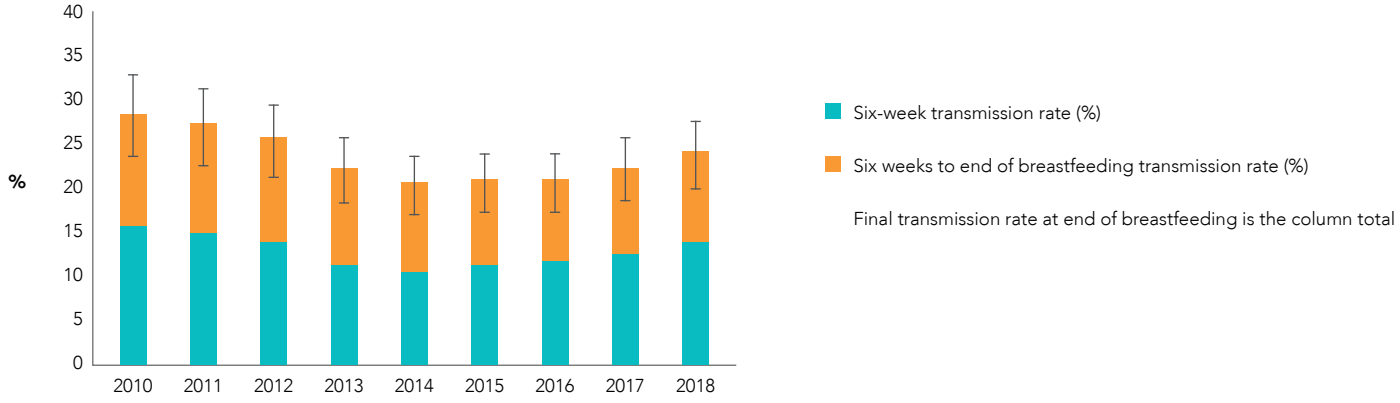
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



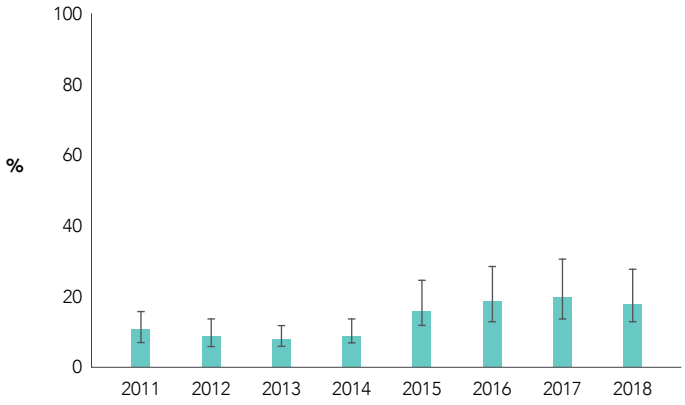
Cascade of services for preventing mother-to-child transmission of HIV, 2018



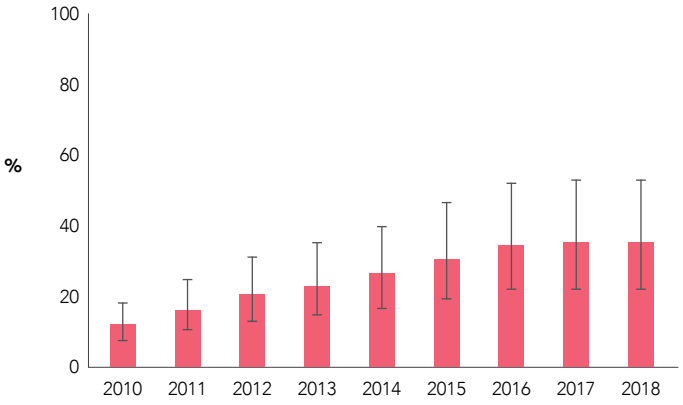
Mother-to-child transmission of HIV by timing of transmission, 2010–2018



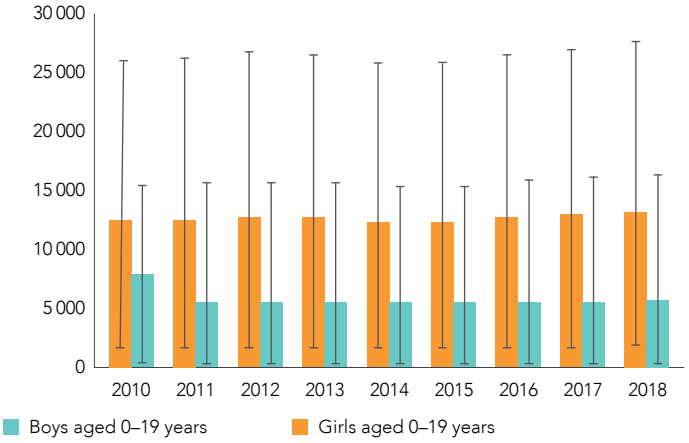
Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018



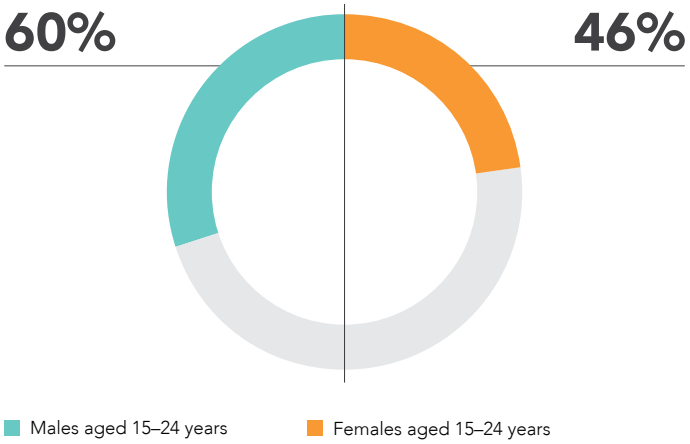
Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018



Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018



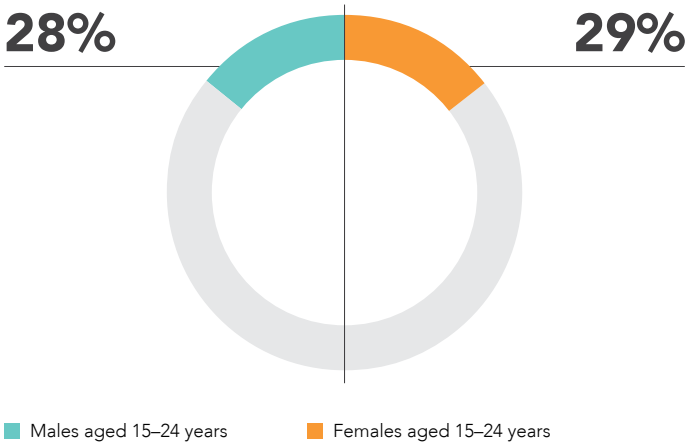
Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018

No data

Comprehensive knowledge about HIV



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Comprehensive knowledge on HIV and condom use: latest available household survey data.

SOUTH AFRICA

14 000 [11 000–35 000]

Number of children (aged 0–14 years) newly infected with HIV

87% [63– >95%]

Pregnant women living with HIV receiving antiretroviral medicine

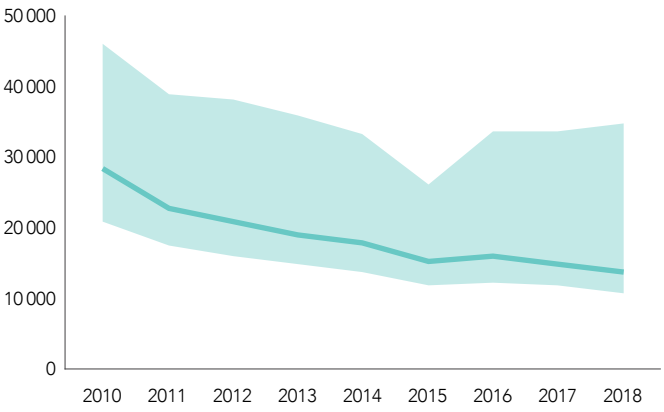
63% [49–87%]

Antiretroviral therapy coverage among children (aged 0–14 years)

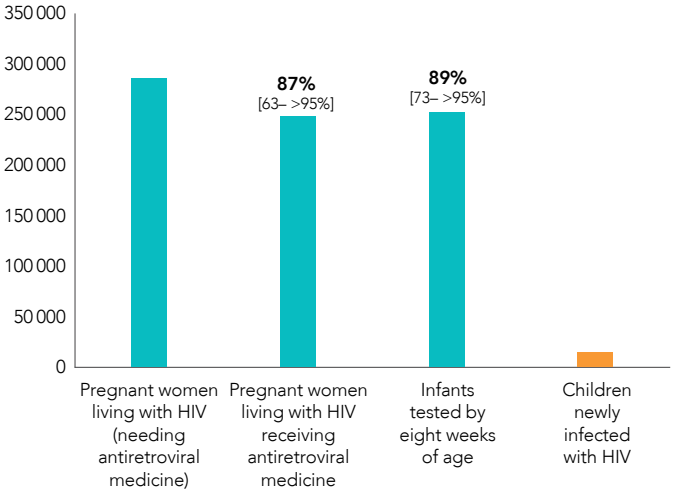
4.9% [4.3–9.6%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

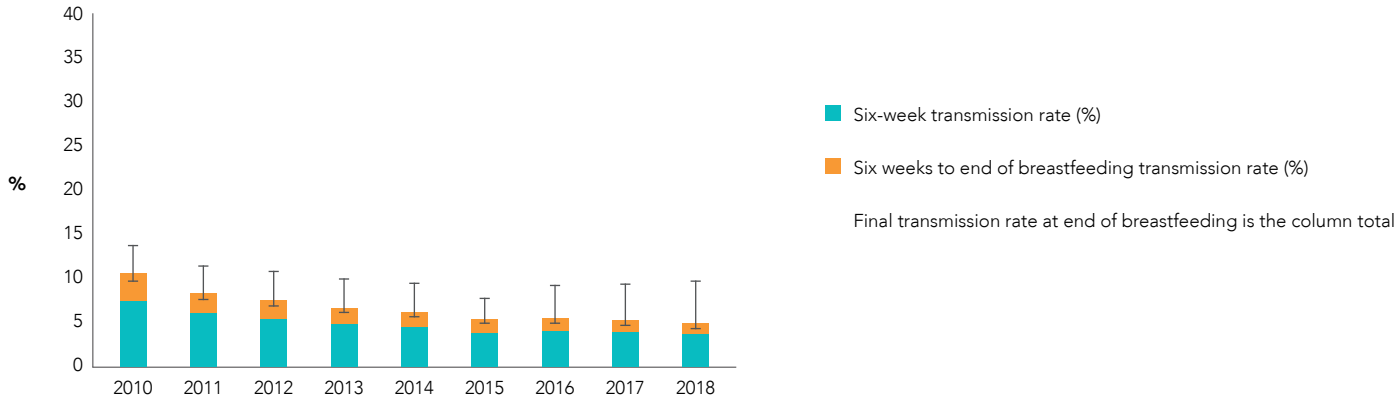
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



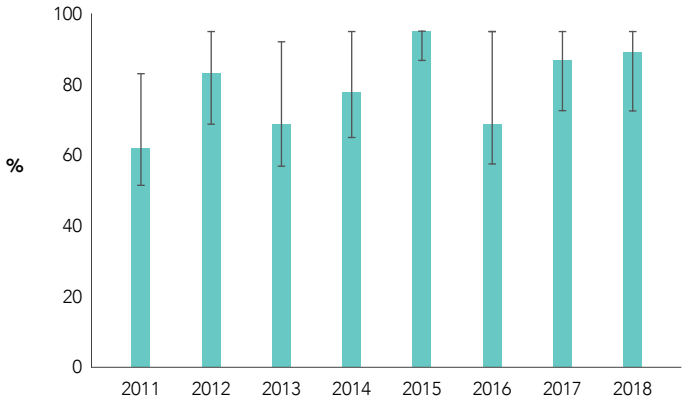
Cascade of services for preventing mother-to-child transmission of HIV, 2018



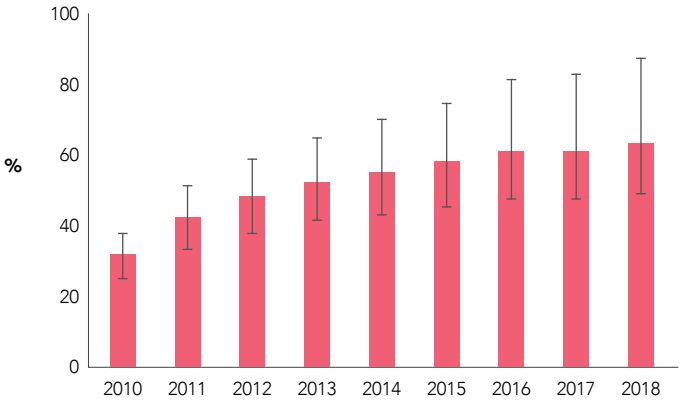
Mother-to-child transmission of HIV by timing of transmission, 2010–2018



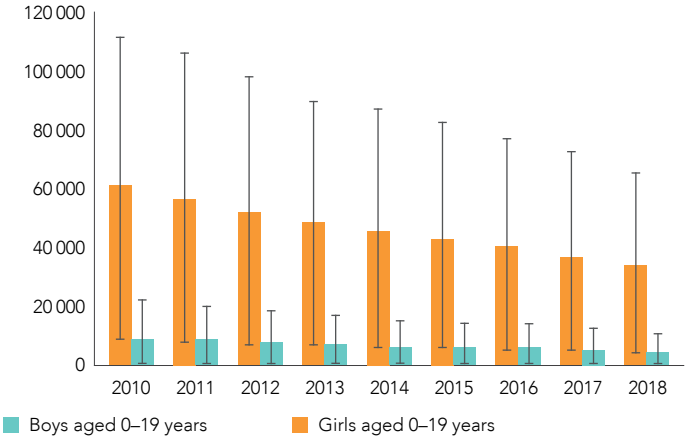
Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018



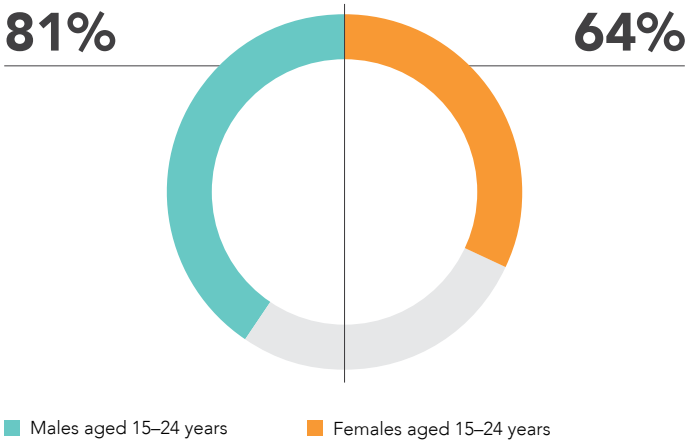
Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018



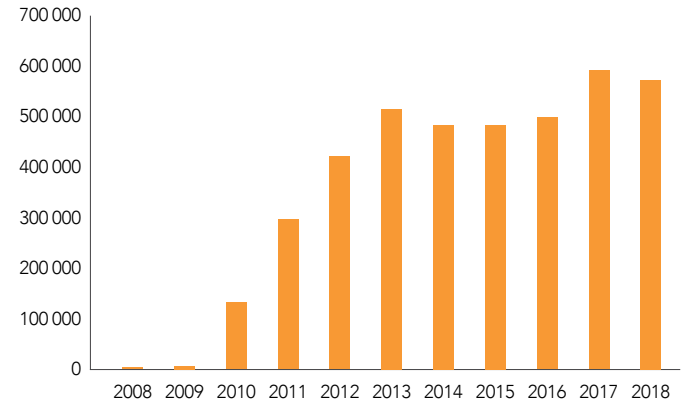
Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018



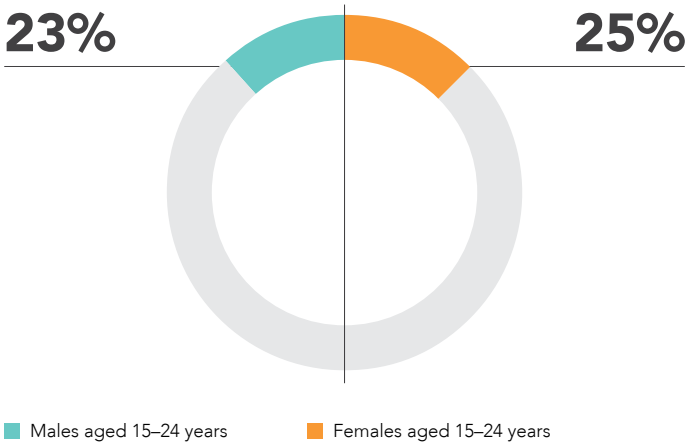
Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018



Comprehensive knowledge about HIV



Sources

UNAIDS 2019 estimates (methods available at unaids.org), except as follows:
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Comprehensive knowledge on HIV and condom use: latest available household survey data.

UGANDA

7500 [5100–11 600]

Number of children (aged 0–14 years) newly infected with HIV

93% [73– >95%]

Pregnant women living with HIV receiving antiretroviral medicine

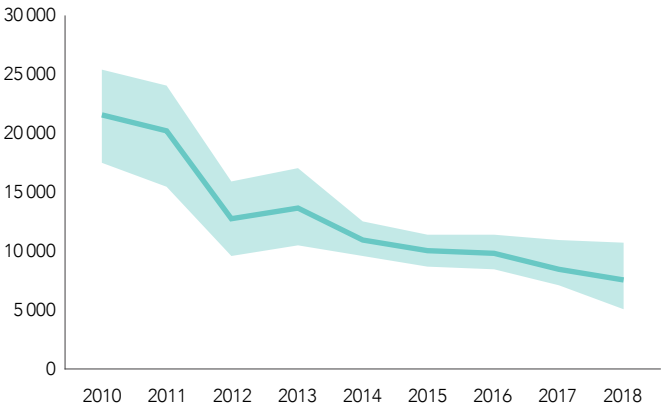
66% [57–74%]

Antiretroviral therapy coverage among children (aged 0–14 years)

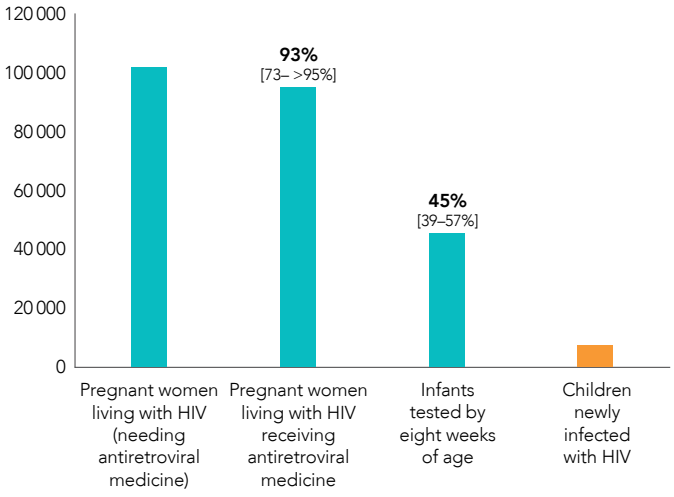
7.4% [5.9–9.6%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

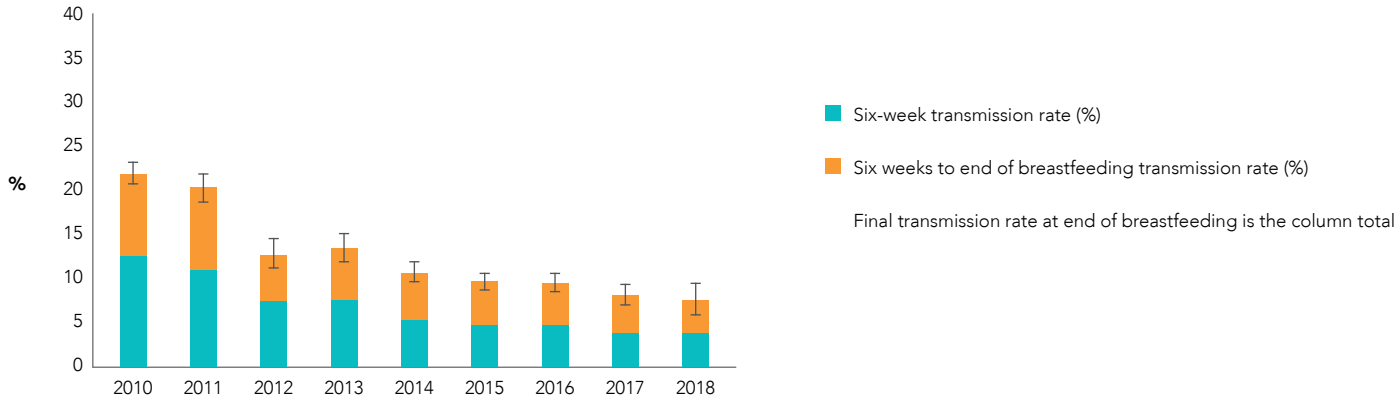
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



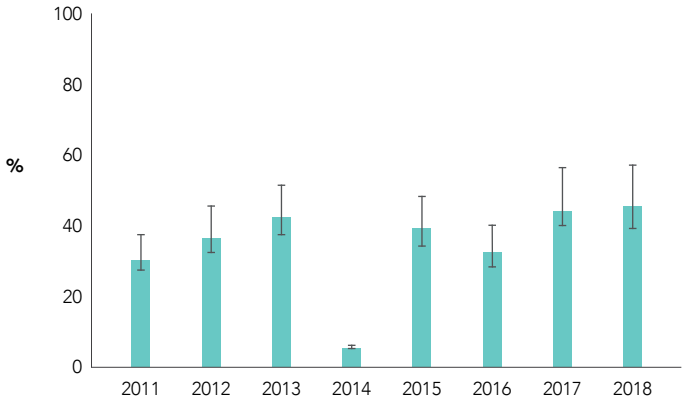
Cascade of services for preventing mother-to-child transmission of HIV, 2018



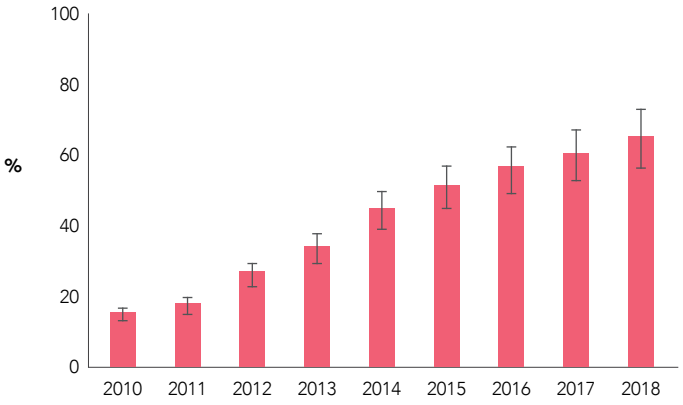
Mother-to-child transmission of HIV by timing of transmission, 2010–2018



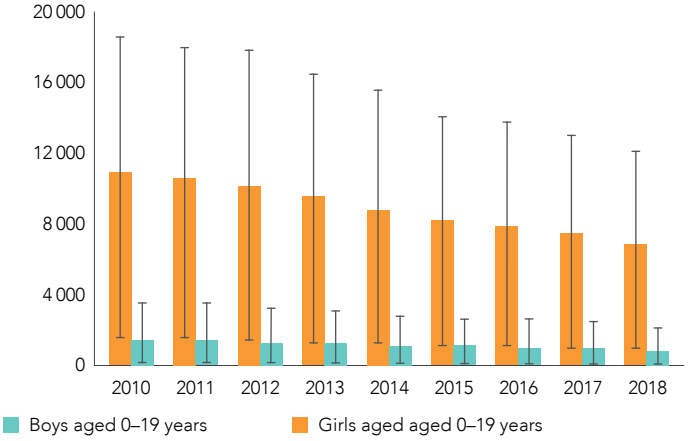
Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018



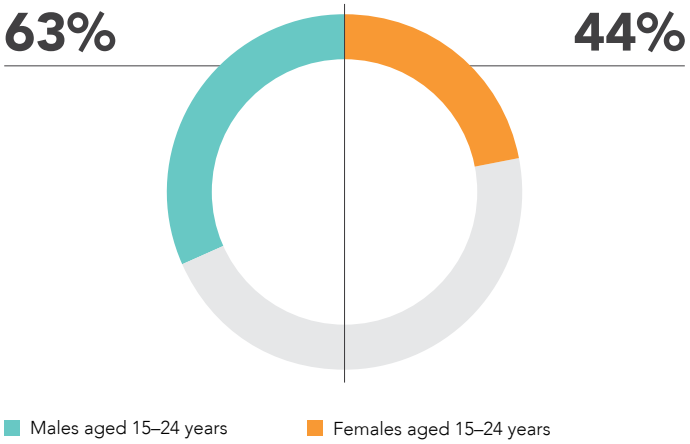
Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018



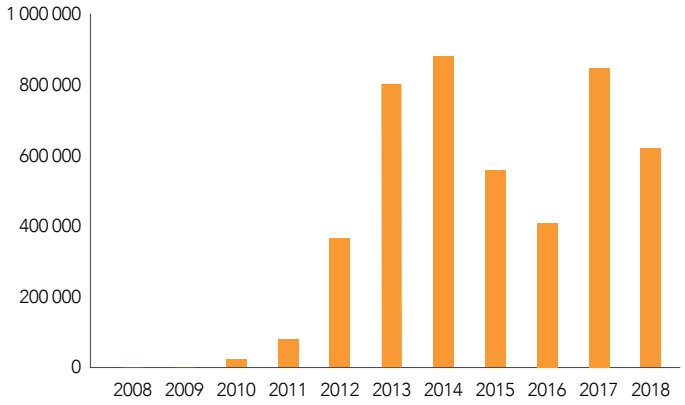
Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018



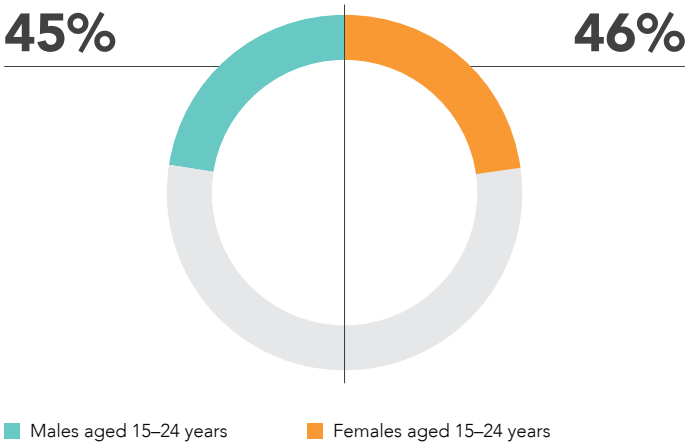
Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018



Comprehensive knowledge about HIV



Sources

UNAIDS 2019 estimates (methods available at unaids.org), except as follows:
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Comprehensive knowledge on HIV and condom use: latest available household survey data.

UNITED REPUBLIC OF T

8600 [6500–13 000]

Number of children (aged 0–14 years) newly infected with HIV

93% [70– >95%]

Pregnant women living with HIV receiving antiretroviral medicine

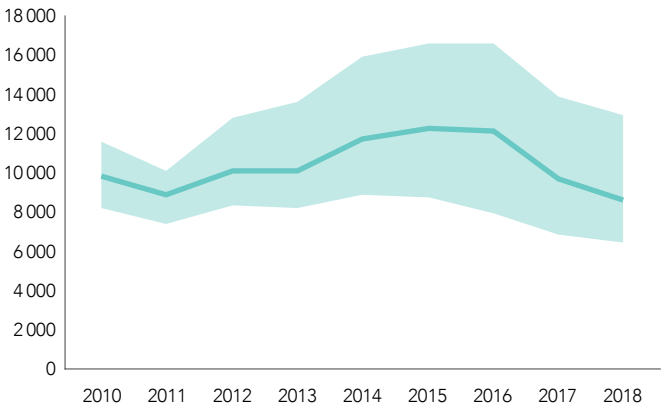
65% [51–80%]

Antiretroviral therapy coverage among children (aged 0–14 years)

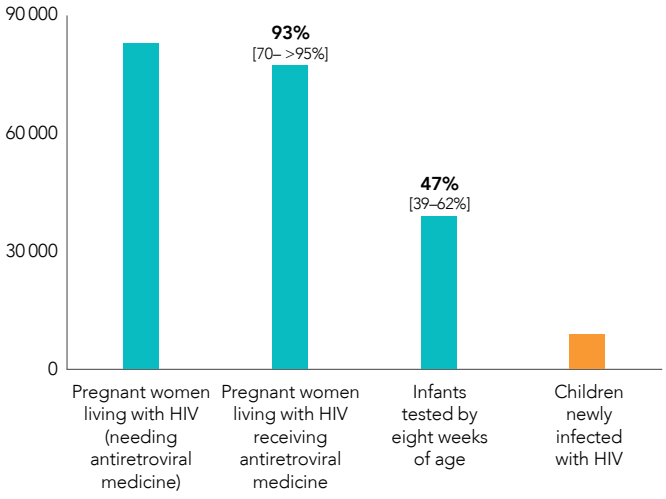
10.5% [9.0–13.2%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

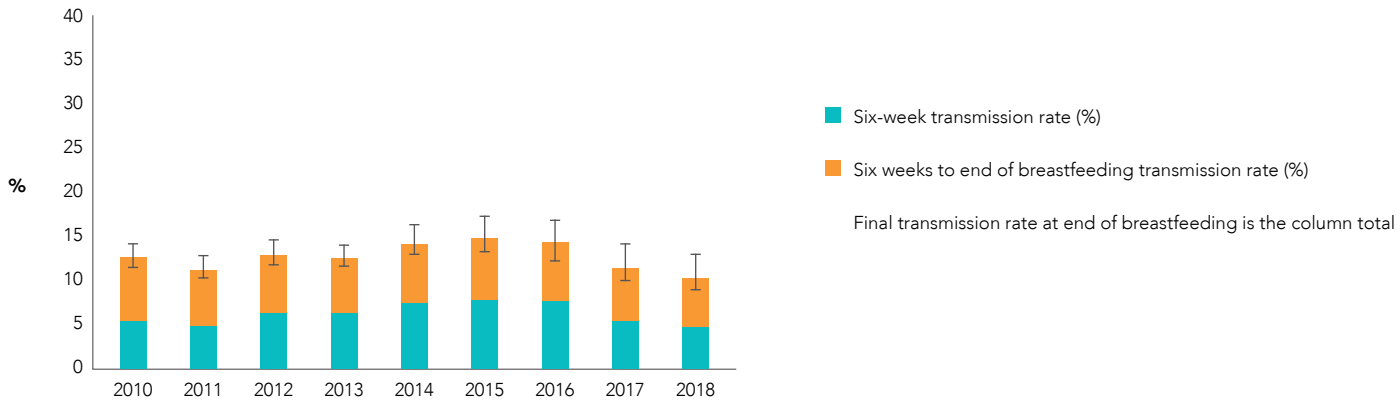
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



Cascade of services for preventing mother-to-child transmission of HIV, 2018

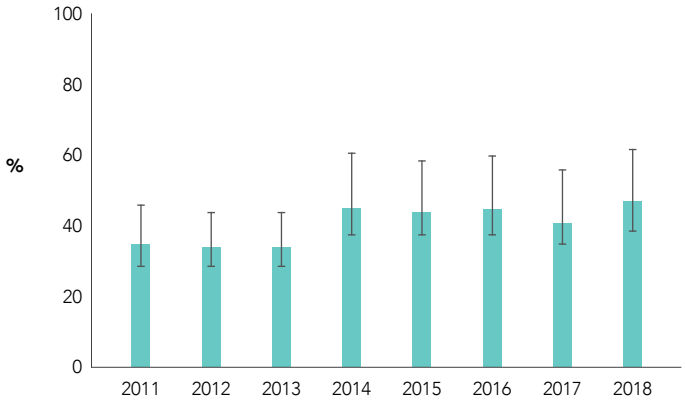


Mother-to-child transmission of HIV by timing of transmission, 2010–2018

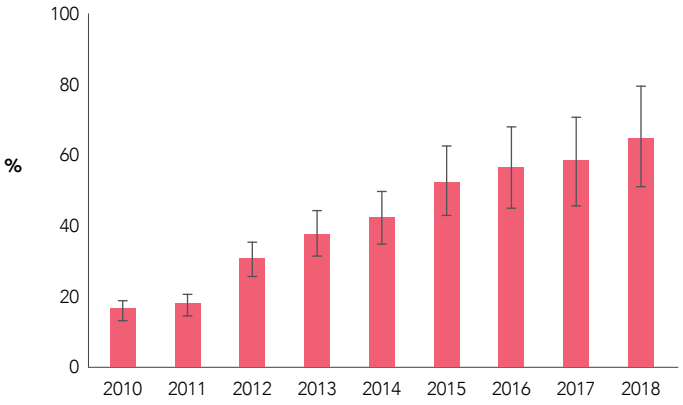


TANZANIA

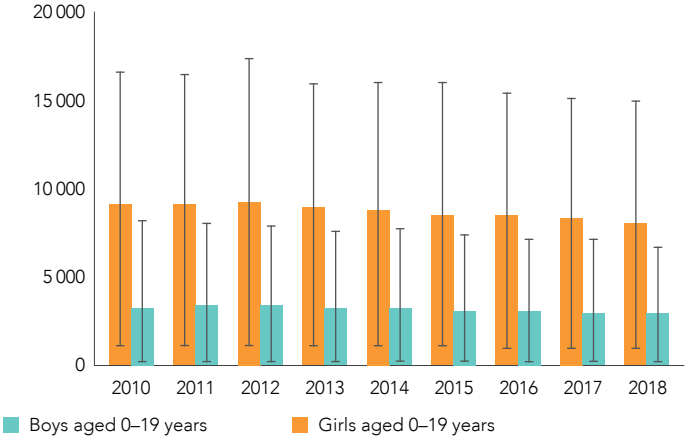
Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018



Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018



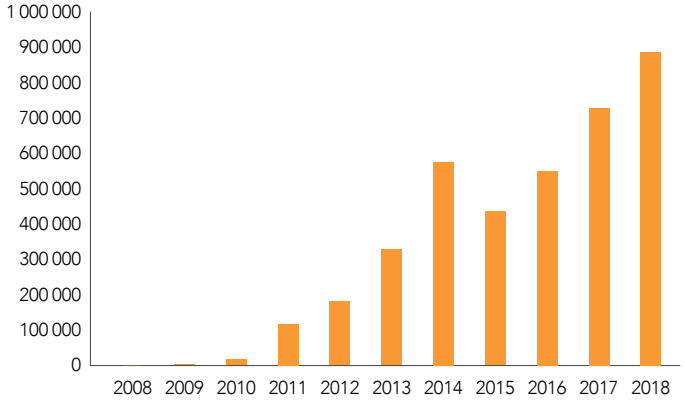
Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018



Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)

No data

Voluntary medical male circumcision (all ages), 2008–2018



Comprehensive knowledge about HIV

No data

Sources

UNAIDS 2019 estimates (methods available at unaids.org), except as follows:
Infants born to women living with HIV: Global AIDS Monitoring 2019 and UNAIDS 2019 estimates.
Comprehensive knowledge on HIV and condom use: latest available household survey data.

ZAMBIA

5400 [3900–7600]

Number of children (aged 0–14 years) newly infected with HIV

>95% [94– >95%]

Pregnant women living with HIV receiving antiretroviral medicine

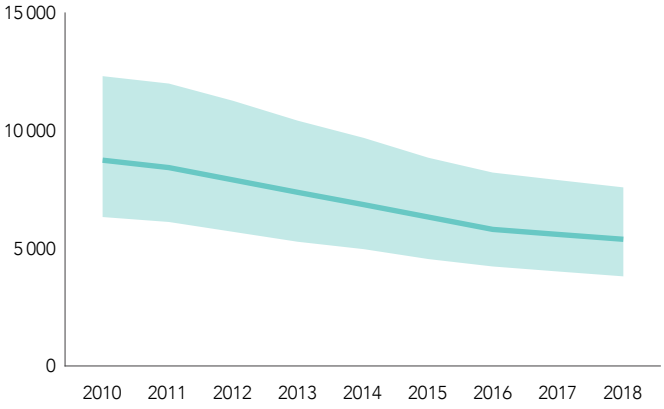
79% [65–93%]

Antiretroviral therapy coverage among children (aged 0–14 years)

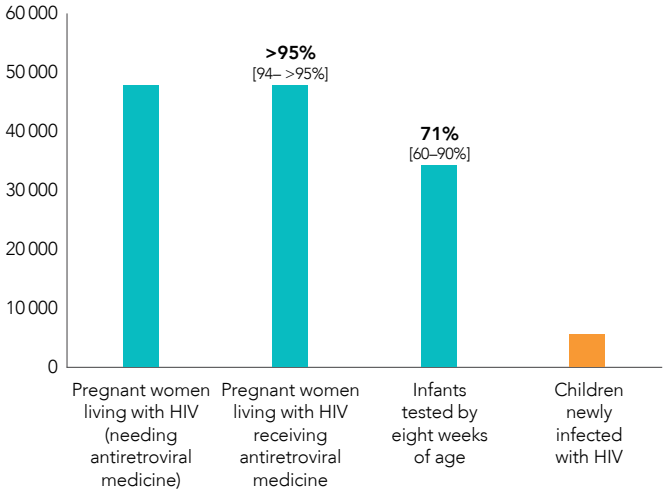
11.2% [9.2–14.0%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

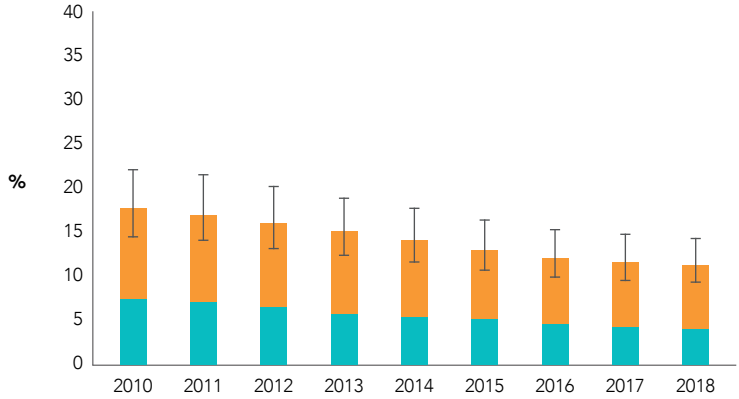
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



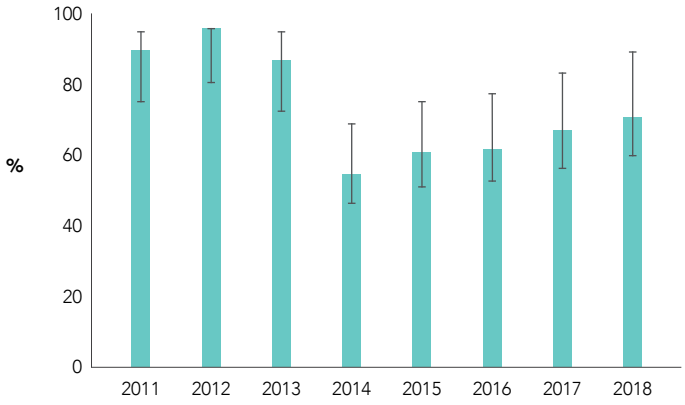
Cascade of services for preventing mother-to-child transmission of HIV, 2018



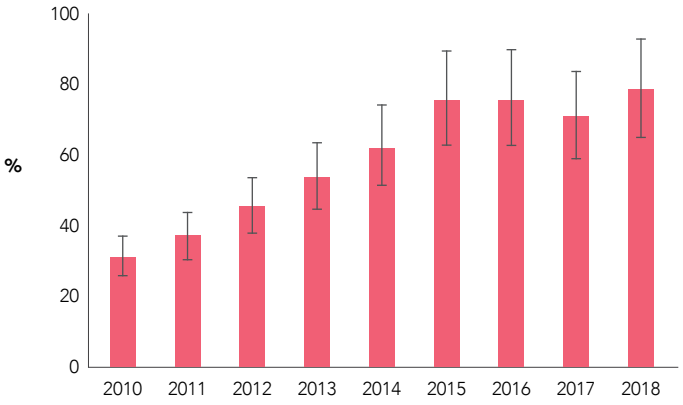
Mother-to-child transmission of HIV by timing of transmission, 2010–2018



Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018

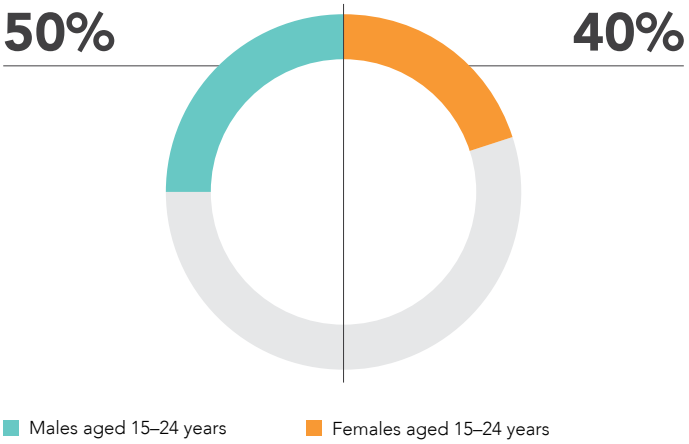


Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018

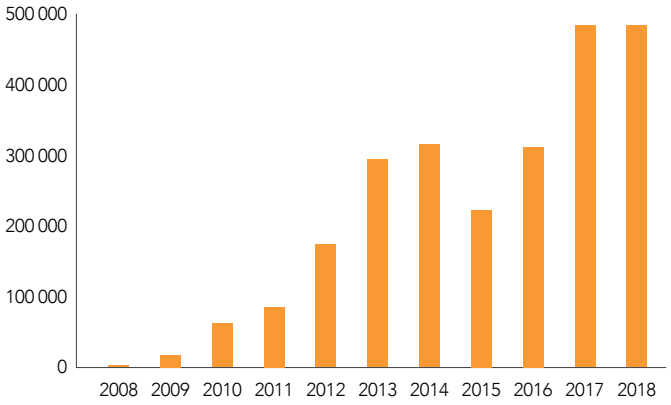


Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018

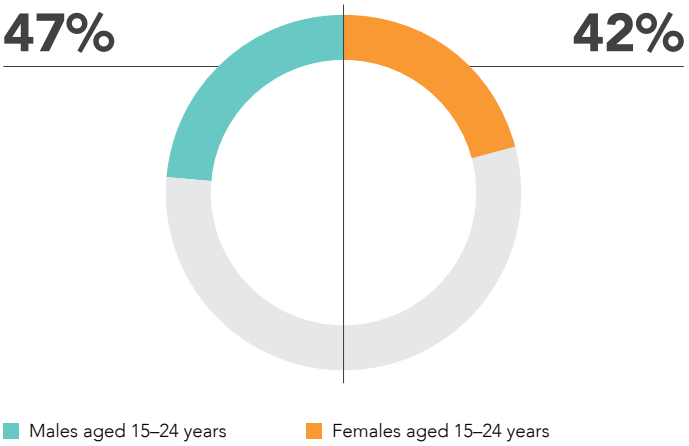
Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018



Comprehensive knowledge about HIV



Sources

UNAIDS 2019 estimates (methods available at unaids.org), except as follows:
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Comprehensive knowledge on HIV and condom use: latest available household survey data.

ZIMBABWE

4800 [3100–7900]

Number of children (aged 0–14 years) newly infected with HIV

94% [71– >95%]

Pregnant women living with HIV receiving antiretroviral medicine

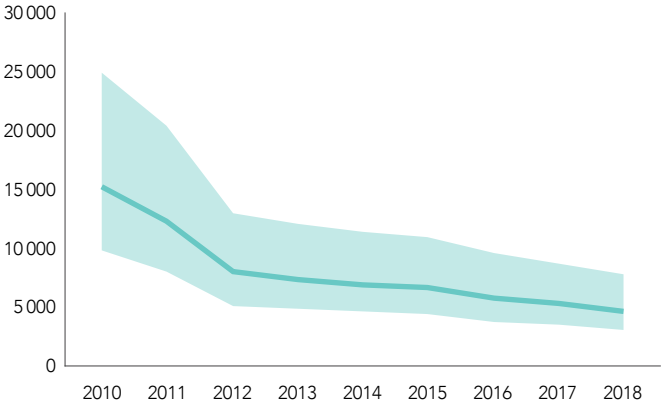
76% [59–93%]

Antiretroviral therapy coverage among children (aged 0–14 years)

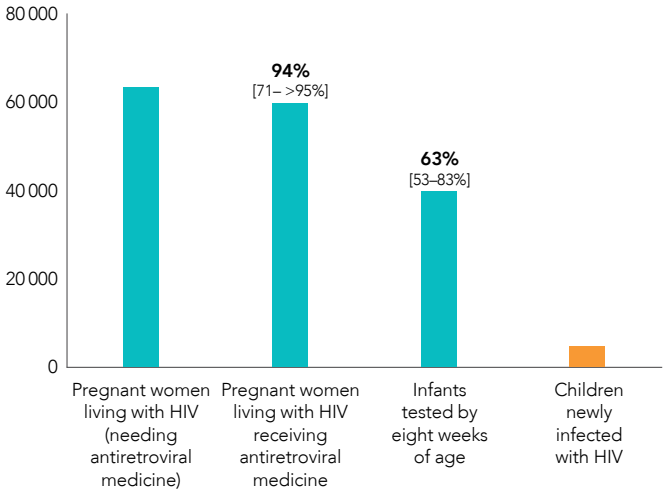
7.6% [5.9–10.3%]

Rate of mother-to-child HIV transmission at the end of breastfeeding

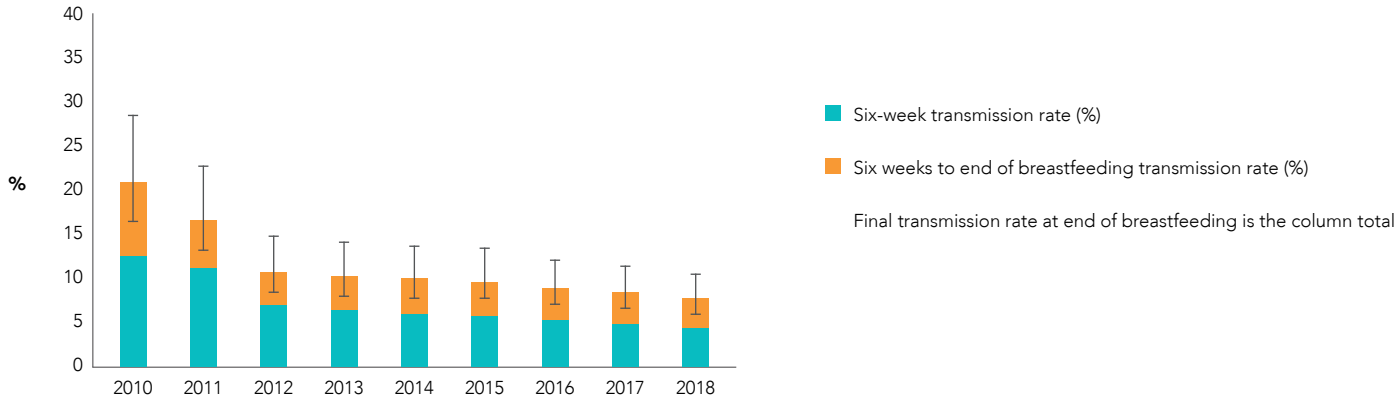
Number of children (aged 0–14 years) newly infected with HIV, 2010–2018



Cascade of services for preventing mother-to-child transmission of HIV, 2018

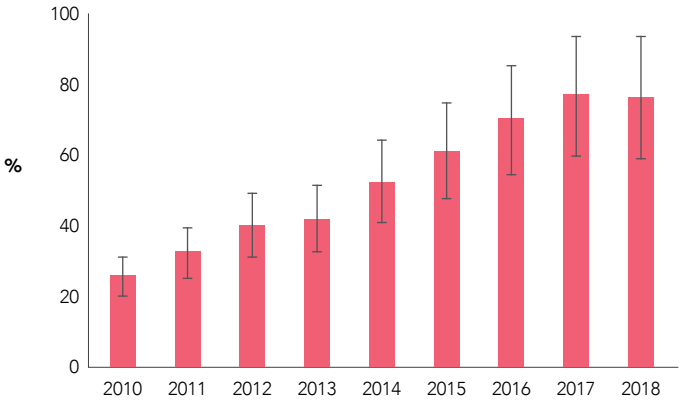


Mother-to-child transmission of HIV by timing of transmission, 2010–2018



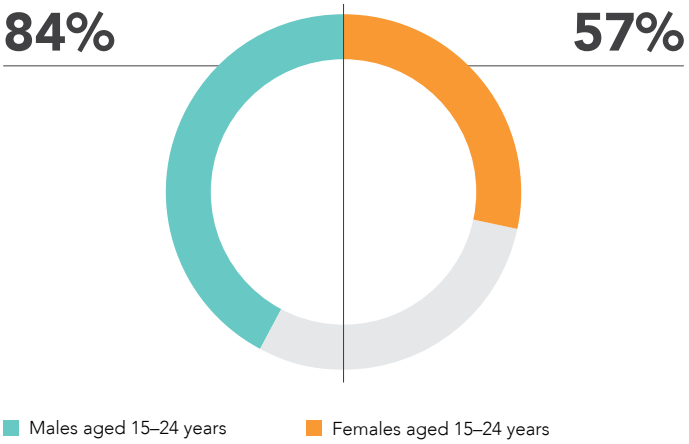
Infants born to women living with HIV receiving a virological test within the first two months of life, 2011–2018

Antiretroviral therapy coverage among children (aged 0–14 years), 2010–2018

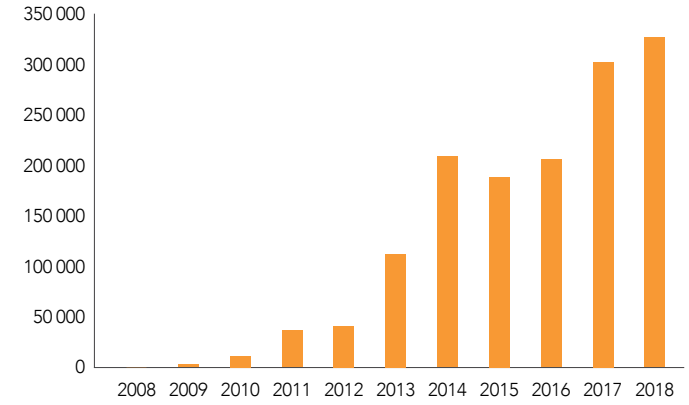


Adolescent boys and girls (aged 0–19 years) newly infected with HIV, 2010–2018

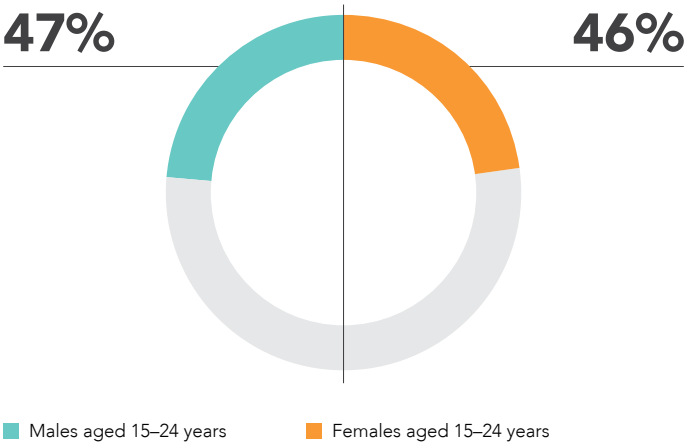
Condom use at last high-risk sex among adolescents and young adults (aged 15–24 years)



Voluntary medical male circumcision (all ages), 2008–2018



Comprehensive knowledge about HIV



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Comprehensive knowledge on HIV and condom use: latest available household survey data.

SUMMARY TABLES

	Percentage of pregnant women living with HIV receiving antiretroviral medicine, 2018	Percentage of pregnant women living with HIV receiving antiretroviral medicine, 2018 – uncertainty bounds	Rate of mother-to-child HIV transmission at the end of breastfeeding, 2018	Rate of mother-to-child HIV transmission at the end of breastfeeding, 2018 – uncertainty bounds	Number of children (aged 0–14 years) newly infected with HIV, 2018	Number of children (aged 0–14 years) newly infected with HIV, 2018 – uncertainty bounds	Percentage of infants born to women living with HIV receiving a virological test within the first two months of life, 2018	Percentage of infants born to women living with HIV receiving a virological test within the first two months of life, 2018 – uncertainty bounds	Number of children living with HIV (aged 0–14 years), 2018	Number of children living with HIV (aged 0–14 years), 2018 – uncertainty bounds
23 Focus Countries	**85**	**[63–>95]**	**11.8**	**[9.8–15.2]**	**130 000**	**[87 000–210 000]**			**1 500 000**	**[1 100 000–1 900 000]**
Angola	38	[29–48]	27.8	[25.4–30.3]	7000	[5000–9500]	1	[1–2]	38 000	[30 000–47 000]
Botswana	>95	[77–>95]	2.5	[1.9–4.5]	<500	[<500–630]	76	[68–>95]	14 000	[10 000–17 000]
Burundi	80	[61–>95]	16.4	[12.5–21.3]	820	[<500–1300]	…	…	11 000	[8000–14 000]
Cameroon	80	[61–94]	16.5	[13.5–18.9]	4500	[2800–5900]	61	[52–81]	43 000	[33 000–51 000]
Chad	56	[40–72]	21.4	[15.6–25.4]	2200	[1200–3200]	…	…	16 000	[11 000–21 000]
Côte d'Ivoire	90	[65–>95]	14.2	[9.3–20.2]	2600	[1300–4900]	56	[42–77]	31 000	[23 000–41 000]
Democratic Republic of the Congo	44	[33–52]	27.1	[24.4–30.0]	7000	[5400–8600]	20	[17–26]	64 000	[50 000–76 000]
Eswatini	79	[66–89]	7.8	[5.7–9.6]	850	[510–1200]	78	[70–94]	11 000	[9400–13 000]
Ethiopia	92	[63–>95]	13.4	[10.2–19.7]	2700	[1600–5600]	61	[44–89]	36 000	[23 000–55 000]
Ghana	79	[58–>95]	20.2	[16.9–23.9]	3300	[2200–5000]	58	[46–78]	30 000	[23 000–37 000]
India	…	…	…	…	…	…	…	…	…	…
Indonesia	15	[13–18]	29.3	[27.5–31.1]	3500	[2900–4200]	1	[1–1]	18 000	[15 000–20 000]
Kenya	91	[70–>95]	12.1	[8.6–16.5]	7600	[4400–13 000]	67	[53–87]	120 000	[95 000–160 000]
Lesotho	77	[59–89]	12.7	[9.9–14.4]	1300	[780–1800]	70	[60–90]	12 000	[9500–14 000]
Malawi	>95	[80–>95]	7.8	[6.9–9.4]	3500	[2900–5100]	>95	[84–>95]	74 000	[57 000–89 000]
Mozambique	>95	[73–>95]	15.0	[11.8–19.0]	16 000	[10 000–27 000]	66	[50–92]	140 000	[110 000–190 000]
Namibia	>95	[92–>95]	3.9	[3.6–5.1]	<500	[<500–610]	…	…	11 000	[8700–13 000]
Nigeria	44	[28–62]	24.1	[19.9–27.7]	24 000	[14 000–38 000]	18	[13–28]	140 000	[91 000–220 000]
South Africa	87	[63–>95]	4.9	[4.3–9.6]	14 000	[11 000–35 000]	89	[73–>95]	260 000	[200 000–360 000]
Uganda	93	[73–>95]	7.4	[5.9–9.6]	7500	[5100–11 000]	45	[39–57]	100 000	[88 000–110 000]
United Republic of Tanzania	93	[70–>95]	10.5	[9.0–13.2]	8600	[6500–13 000]	47	[39–62]	92 000	[72 000–110 000]
Zambia	>95	[94–>95]	11.2	[9.2–14.0]	5400	[3900–7600]	71	[60–90]	62 000	[52 000–74 000]
Zimbabwe	94	[71–>95]	7.6	[5.9–10.3]	4800	[3100–7900]	63	[53–83]	84 000	[65 000–100 000]

Sources: UNAIDS 2019 estimates (methods available at unaids.org), except as follows:
Infants born to women living with HIV: Global AIDS Monitoring 2019 and UNAIDS 2019 estimates. Comprehensive knowledge on HIV and condom use: latest available household survey data.

Percentage of children (aged 0-14 years) living with HIV receiving antiretroviral therapy, 2018	Percentage of children (aged 0-14 years) living with HIV receiving antiretroviral therapy, 2018 – uncertainty bounds	Number of children (aged 0–14 years) receiving antiretroviral therapy, 2018	Number of adolescent girls and young women (aged 15–24 years) newly infected with HIV, 2018	Number of adolescent girls and young women (aged 15–24 years) newly infected with HIV, 2018 – uncertainty bounds	Number of adolescent boys and young men (aged 15–24 years) newly infected with HIV, 2018	Number of adolescent boys and young men (aged 15–24 years) newly infected with HIV, 2018 – uncertainty bounds	Comprehensive knowledge about HIV prevention, adolescent boys and young men (aged 15–24 years)	Comprehensive knowledge about HIV prevention, adolescent girls and young women (aged 15–24 years)	Condom use at last sex with non-marital, non-cohabiting partner, adolescent boys and young men (aged 15–24 years)	Condom use at last sex with non-marital, non-cohabiting partner, adolescent girls and young women (aged 15–24 years	Annual number of men (all ages) voluntary medical circumcised, 2018	
56	**[38-76]**	**827 000**	**270 000**	**[150 000–400 000]**	**130 000**	**[31 000–210 000]**	**%**	**%**	**%**	**%**		**23 Focus Countries**
13	[10–16]	4800	6800	[3900–10 000]	1900	[<500–2900]	31.6	32.5	52.2	32.9	…	**Angola**
38	[28–46]	5400	2000	[1100–2700]	860	[<200–1200]	…	…	…	…	24 207	**Botswana**
30	[22–38]	3400	<500	[<200–<500]	<100	[<100–<200]	54.9	52.4	53.0	33.1	…	**Burundi**
24	[18–28]	10 300	5400	[3000–7700]	2000	[<500–2800]	…	…	…	…	…	**Cameroon**
16	[11–22]	2600	1500	[730–2500]	990	[<500–1700]	15.4	11.2	41.8	36.7	…	**Chad**
40	[29–54]	12 300	3100	[1500–6000]	960	[<500–1900]	33.0	24.0	63.4	33.3	…	**Côte d'Ivoire**
25	[20–30]	16 000	4100	[2100–6200]	1000	[<200–1800]	…	…	30.6	24.1	…	**Democratic Republic of the Congo**
76	[63–88]	8600	2400	[1600–3000]	<500	[<100–<500]	…	…	…	…	14 316	**Eswatini**
59	[38–90]	21 500	5800	[2800–11 000]	2000	[<500–4000]	39.1	24.3	54.6	23.8	23 009	**Ethiopia**
20	[15–25]	5900	4300	[2200–6600]	1200	[<200–1900]	27.2	19.9	39.4	19.2	…	**Ghana**
…	…	…	…	…	…	…	31.5	21.7	39.7	38.5	…	**India**
22	[19–26]	3900	9600	[7900–12 000]	14 000	[8800–18 000]	…	…	…	…	…	**Indonesia**
61	[47–78]	74 300	11 000	[6100–20 000]	5000	[1300–9600]	63.7	54.2	77.3	60.3	286 899	**Kenya**
70	[55–81]	8500	3200	[2100–4100]	1300	[<500–1900]	30.9	37.6	78.7	81.9	26 448	**Lesotho**
61	[47–73]	45 100	9900	[5900–13 000]	4200	[770–5700]	44.3	41.1	76.8	53.4	199 399	**Malawi**
60	[45–81]	86 900	39 000	[22 000–63 000]	20 000	[4800–34 000]	30.2	30.8	48.4	51.4	311 891	**Mozambique**
78	[61–89]	8600	1400	[900–1900]	740	[<200–990]	60.6	61.6	82.0	67.5	34 942	**Namibia**
35	[22–53]	50 200	26 000	[12 000–44 000]	15 000	[2700–28 000]	27.9	29.3	59.7	45.9	…	**Nigeria**
63	[49–87]	163 000	69 000	[39 000–92 000]	25 000	[4000–33 000]	23.2	25.3	81.0	64.0	572 442	**South Africa**
66	[57–74]	67 100	14 000	[8500–18 000]	5000	[1100–7200]	44.8	45.7	63.1	43.7	619 082	**Uganda**
65	[51–80]	59 600	16 000	[9000–21 000]	7600	[1200–10 000]	…	…	…	…	885 599	**United Republic of Tanzania**
79	[65–93]	49 100	13 000	[7600–18 000]	5600	[1300–8600]	46.7	41.5	49.8	40.1	482 183	**Zambia**
76	[59–93]	63 900	9000	[5000–13 000]	4200	[810–6400]	46.6	46.3	84.4	56.5	326 012	**Zimbabwe**

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