

PROGRESS REPORT 2016

PREVENT HIV, TEST AND TREAT ALL

WHO SUPPORT FOR COUNTRY IMPACT





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01

SUMMARY: PREVENT HIV, TEST AND TREAT ALL



The global HIV epidemic claimed fewer lives in 2015 than at any point in almost two decades, and fewer people became newly infected with HIV than in any year since 1991. The list of countries on the brink of eliminating new HIV infections among children keeps growing.

Prevention programmes helped reduce the annual number of people acquiring HIV to 2.1 million [1.8 million–2.4 million] in 2015, a 35% decline in incidence since 2000, according to UNAIDS/WHO estimates. A massive expansion of antiretroviral therapy (ART) has reduced the global number of people dying from HIV-related causes to about 1.1 million [940 000–1.3 million] in 2015 – 45% fewer than in 2005, when HIV-related mortality peaked (1). UNAIDS/WHO estimates show that more than 18 million people were receiving ART in mid-2016.

To achieve these results, the provision of public health care is being transformed, especially in low- and middle-income countries. Life-saving health services are reaching communities that used to be off the grid to many public health systems. The prices of vital antiretroviral (ARV) drugs and diagnostics continue to be driven down, and technological innovations are being assessed and introduced more rapidly than ever. Systems for collecting

and analysing vital information are stronger than at any time in the past. Countries' HIV responses are advancing efforts towards universal health coverage and making important contributions to attaining the Sustainable Development Goals (2).

Nevertheless, there is no room for complacency. Countries need to live up to their commitment to end the AIDS epidemic as a public health threat by 2030 – a target included in the 2030 Agenda for Sustainable Development adopted by the United Nations General Assembly in September 2015. The immediate challenge is to reach the Fast-Track targets for 2020 (Box 1.1), as new infections and HIV-related deaths are still unacceptably high. The 2020 targets include reducing the number of people acquiring HIV to fewer than 500 000 and reducing the number of people dying from HIV-related causes to fewer than 500 000. Based on current estimates, this provides an opportunity to prevent over 1.6 million new infections and 600 000 deaths per year.

BOX 1.1. THE FAST-TRACK TARGETS AND COUNTRIES

To contribute to achieving the Sustainable Development Goals, 2020 Fast-Track targets have been set to accelerate the HIV response towards ending the AIDS epidemic by 2030. The Fast-Track targets apply to everyone: children, adolescents and adults; rich and poor; women and men; and all key populations (including sex workers, people who inject drugs, men who have sex with men, transgender people and prisoners).

The Fast-Track targets include the 90–90–90 target: 90% of the people living with HIV know their HIV status, 90% of the people who know their HIV-positive status are accessing treatment and 90% of the people receiving treatment have suppressed viral loads. Reaching the 90–90–90 targets would enable global HIV-related deaths to decline to fewer than 500 000 in 2020. The Fast-Track approach also calls for zero infections among children and fewer than 500 000 people acquiring HIV globally in 2020 (a 75% reduction compared with 2010). It will require intensified combination prevention to reach that target. Thirty-five countries accounting for more than 90% of the people becoming newly infected with HIV have been designated Fast-Track countries requiring intensified action (Table 1.1).

TABLE 1

Region	Countries
African Region	Angola, Botswana, Cameroon, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Ethiopia, Ghana, Kenya, Lesotho, Malawi, Mali, Mozambique, Namibia, Nigeria, South Africa, South Sudan, Swaziland, Uganda, United Republic of Tanzania, Zambia, Zimbabwe
Region of the Americas	Brazil, Haiti, Jamaica, United States of America
Eastern Mediterranean Region	Pakistan, Iran (Islamic Republic of)
European Region	Russian Federation, Ukraine
South-East Asian Region	India, Indonesia, Myanmar
Western Pacific Region	China, Viet Nam

1.1 MOVING INTO FAST-TRACK MODE

Reaching the Fast-Track targets for 2020 requires taking HIV programmes to a new level. Prompt improvements are required to remove the gaps and achieve universal access to the kinds of interventions that have prevented an estimated 30 million people from acquiring HIV (1,3) and prevented about 9 million people from dying from HIV-related causes since the epidemic began (according to UNAIDS/WHO estimates). Countries can meet these challenges if they do the following.

- **Use focused, high-impact prevention interventions and services.**

Although the number of people acquiring HIV is still declining in several countries with large epidemics, the momentum has slowed considerably, especially among young women and girls in the WHO African Region and in key populations. Globally, the number of new HIV infections in people aged 15 years and over increased by an estimated 1% in 2010–2015. Subnational data enable countries to identify the locations where services should be focused and the populations that are being missed. Combination prevention using established and new high-impact interventions that are tailored to specific types of behaviour and by sex and age, populations, settings and contexts should be delivered along the full continuum of HIV services.

- **Innovate with HIV testing.**

Forty per cent of people living with HIV are not aware of their HIV-positive status. They need to be reached through more focused and innovative testing approaches. HIV testing for the partners of people living with HIV should be encouraged and supported. HIV self-testing and community-based testing can reach people in diverse settings outside health facilities, especially key populations and men. Treatment should be offered as soon as HIV infection has been diagnosed, and people who test HIV-negative should be linked to prevention services.

- **Treat all in need and start treatment earlier.**

An estimated 18.2 million [16.1 million–19 million] people were receiving HIV treatment in mid-2016. However, globally, only 46% [43–50%] of the 36.7 million people living with HIV in 2015 were receiving ART, and many started treatment when their HIV infection was well advanced. Men and key populations, in particular, are not being reached sufficiently with HIV testing and treatment services. Only 40% of men living with HIV receive treatment, and only 30% of the HIV tests performed are among men. Men need to be reached outside health facilities, including with HIV self-testing. About two thirds of the people dying from HIV-related causes are not receiving ART (4). Robust health systems are the basis for expanding high-quality treatment, retaining people in care, improving adherence to treatment, effectively managing comorbidities and providing chronic care.

- **Devote more attention to quality.**

Rapid expansion of HIV programmes without assuring the quality of services can undermine their effectiveness, waste precious resources and contribute to negative public health outcomes, such as the emergence of HIV drug resistance. Quality assurance and quality improvement systems should be key components of HIV programmes.

- **Reduce disparities.**

Unusually for public health and development, coverage of HIV treatment is higher in eastern and southern Africa (54% [50–58%] in 2015) than the global average (46% [43–50%]). This is a major public health achievement. At the same time, increased efforts by countries and partners are needed to avoid leaving other regions behind, especially western and central Africa (with 28% [23–34%] treatment coverage in 2015), South-East Asia (39% [33–46%]), eastern Europe and central Asia (21% [20–23%]), and the Eastern Mediterranean (11% [8–17%]), along with a range of countries that are experiencing recent HIV outbreaks or high burdens of HIV infection.

1.2 COUNTRIES ARE ACTING TO BOOST IMPACT WITH WHO SUPPORT

Overall, countries are rapidly shifting their HIV policies to include the WHO “treat all” recommendations (5) so that people start ART promptly after their HIV-positive status is confirmed, regardless of CD4 cell count. Countries are also introducing supportive prevention, testing and strategic information policies and they are acting to identify and fill the major gaps in their HIV programmes.

WHO backs country action with a continuum of support, from issuing global guidelines and promoting policy changes to synthesizing strategic information, mobilizing country partnerships and facilitating capacity-building. The activities include the following.

- **Developing and promoting consolidated guidelines on evidence-informed prevention, testing and treatment for all.**

There was rapid uptake of new policies in 2016, with 45 low- and middle-income countries adopting the “treat all” recommendations of the 2016 WHO consolidated guidelines on ARV drugs (launched with an early release in 2015) (5), and another 31 low- and middle-income countries indicating their intentions to do so before 2017.

- **Supporting implementation of the Global Health Sector Strategy on HIV (6) and the consolidated guidelines for HIV prevention, testing, treatment and care for key populations (7).**

Countries in all regions, including most Fast-Track countries, are extensively using WHO technical support to update key policies (on testing and treatment, for example), strengthen systems (including for human resources, monitoring and evaluation and strategic information), review their national programmes and update their national strategies. Over 90% of Fast-Track countries used WHO support to adapt their treatment policies, 88% did so to update their testing policies and 56% drew on WHO support to implement service packages for key populations.

- **Facilitating the mobilization and effective use of funding.**

Almost 90% of Fast-Track countries, and 68 countries in all regions, have used WHO support to access funding from the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund). WHO’s assistance to 20 focus countries to streamline the use of Global Fund grants led to a 46% rise in their HIV funding disbursements within 12 months and brought their HIV results in line with those of other grant-receiving countries. To ensure sustainability, WHO is also promoting the inclusion of essential HIV services into national health benefit packages.

This report highlights the key gaps in impact and country results and shows how WHO is working with countries and partners to address these gaps to achieve the Fast-Track targets by 2020 and contribute to attaining the Sustainable Development Goals.

02

AIMING HIGH –
WORKING TOWARDS
GREATER IMPACT
IN COUNTRIES

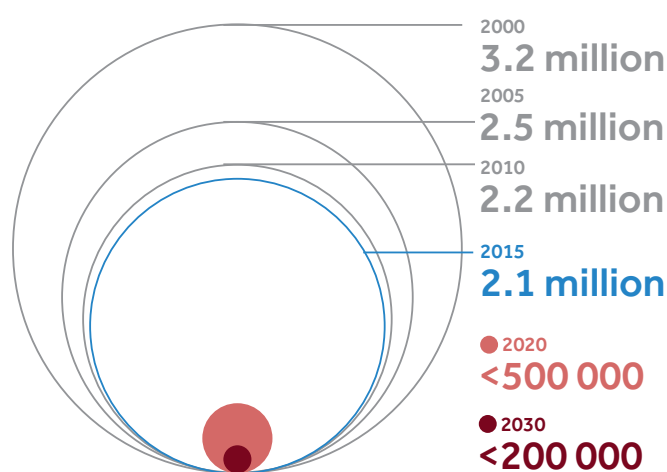


The commitment and investment in the HIV response have saved millions of lives so far, prevented tens of millions of people from acquiring HIV infection and laid the basis for making a decisive and lasting impact by 2030. Nevertheless, major gaps are preventing countries' HIV responses from realizing their full potential.

2.1 DECLINES IN HIV INCIDENCE ARE STALLING

The 2.1 million people who became infected with HIV globally in 2015 are far too many. Between 2000 and 2010, the number of people acquiring HIV dropped by more than 50% in 30 countries – amid strong evidence that changes in risk behaviour drove these declines (8,9). But the declining trend has slowed markedly in the past few years (Fig. 2.1): globally, the estimated number of adults and children newly infected with HIV decreased by only about 20 000–30 000 each year since 2010.

Fig. 2.1. The decline in the annual number of people newly infected with HIV is stalling – and the Fast-Track targets are receding.



Source: UNAIDS/WHO estimates.
The red shading shows future targets.

Virtually the entire decline in HIV incidence since 2010 has resulted from fewer children younger than 15 years acquiring HIV – one of the great recent success stories. Among children, HIV incidence declined by more than 50% in 2010–2015. Wider use of improved ARV medicine regimens and service delivery methods has been a decisive factor. The Global Plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive added strong impetus (10).¹

However, the world is faring poorly in preventing sexually active people from acquiring HIV, and they account for the vast majority of people newly infected annually. Globally, new infections among people aged 15+ years increased by <1% in 2010–2015 according to UNAIDS/WHO estimates. Three WHO regions contributed to this increase: the Region of the Americas, the Eastern Mediterranean Region and the European Region. In the African Region, women 15–24 years old continue to bear a disproportionate share of the HIV burden: in some countries, they experience infection rates up to eight times higher than among their male peers (11).

¹ The Global Plan identified 22 priority countries, all but one in the African Region: Angola, Botswana, Burundi, Cameroon, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Ethiopia, Ghana, India, Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, South Africa, Swaziland, Uganda, United Republic of Tanzania, Zambia and Zimbabwe. Relevant data for India have not been available. Together these countries accounted for an estimated 83% of the children globally who acquired HIV in 2011.

A few countries with large epidemics in eastern and southern Africa have managed to sustain substantial declines in HIV incidence – in part by drastically reducing the number of children younger than 15 years newly infected with HIV. Declines in incidence have been continuing in some of the smaller epidemics in the South-East Asia Region and Western Pacific Region as well, but those are overshadowed by rising numbers of people acquiring HIV infection in several other countries. In the eastern part of the European Region and in the Eastern Mediterranean Region, the HIV epidemics are burgeoning because the number of people in key populations acquiring HIV is increasing.

Several factors are at work, undermining further declines in HIV incidence. Because of demographic shifts, increasingly large cohorts of adolescents and young adults, especially in the African Region, are entering age groups in which the risk of HIV transmission is highest. Barriers exist in all regions to providing effective interventions (such as condoms, pre-exposure prophylaxis and harm-reduction services for young people) at sufficient scale to make progress in prevention. At the same time, in many settings, earlier behaviour change that curbed HIV epidemics has proved difficult to sustain.

2.2 SAVING LIVES

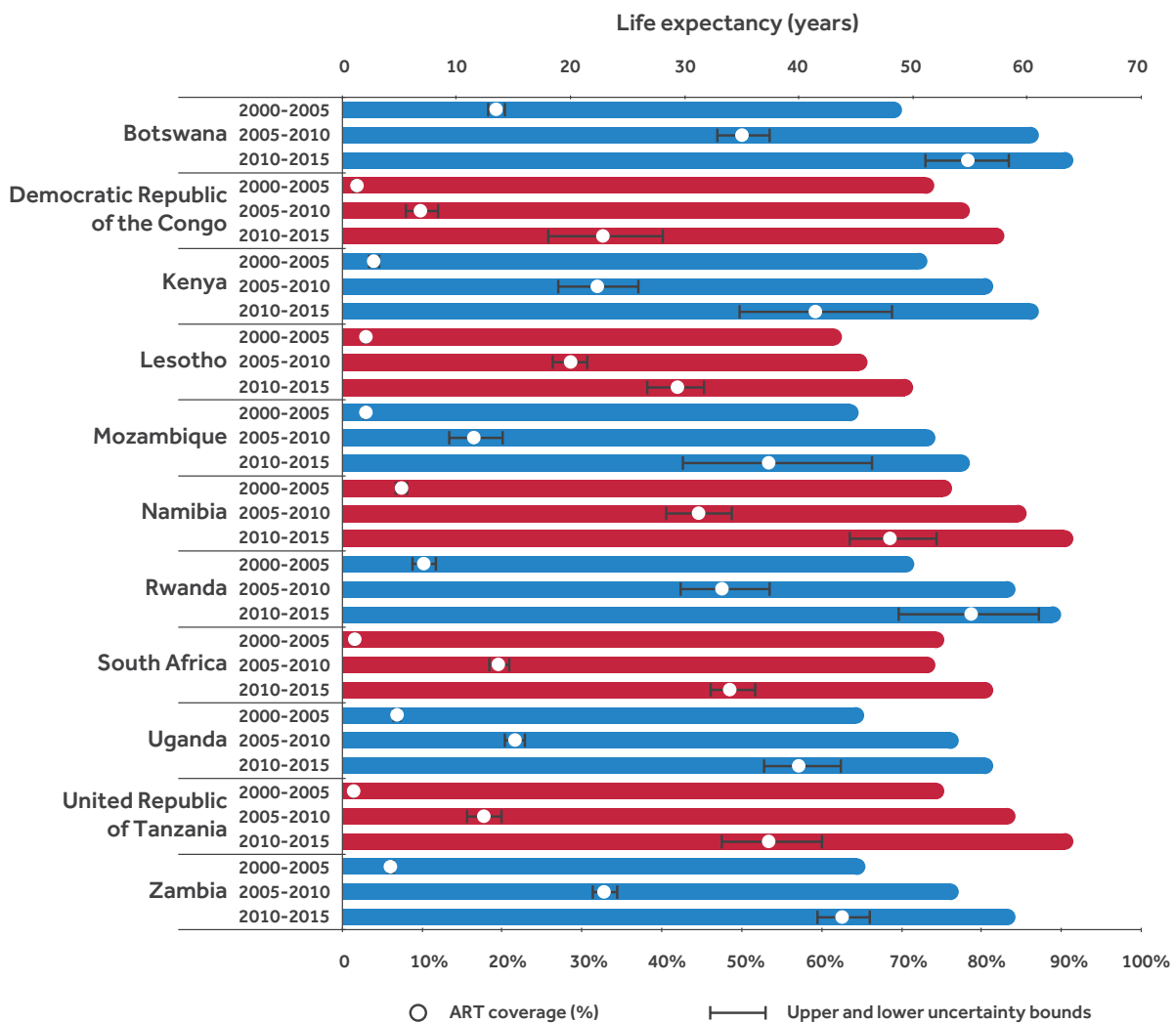
Arguably, no other public health intervention in the past half century rivals the impact of HIV treatment on the health of individuals and communities. The number of people dying globally from HIV-related causes in 2015 was 45% smaller than in 2005 and 26% smaller than in 2010. In eastern and southern Africa, which is home to several of the largest HIV epidemics in the world, life expectancy has rebounded in several countries (Fig. 2.2).

Nevertheless, 1.1 million [940 000–1.3 million] deaths from HIV-related causes in 2015 is unacceptable. HIV treatment can and should be saving millions more lives –

especially since HIV treatment is increasingly affordable and effective.

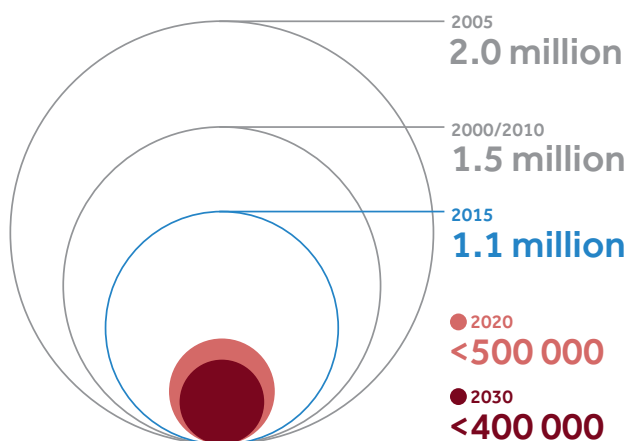
Increased and earlier access to HIV testing and ART, strengthened retention in care, improved quality of ART regimens and expanded programmes for eliminating the mother-to-child transmission of HIV (especially in the African Region), would enable the world to reach the Fast-Track target (12) endorsed in the 2016 United Nations General Assembly Political Declaration on Ending AIDS (13) of no more than 500 000 people dying from HIV-related causes in 2020 (Fig. 2.3).

Fig. 2.2. Life expectancy is rising in many countries with high HIV burdens and increasing ART coverage



Sources: United Nations Population Division and 2016 UNAIDS/WHO estimates. The life expectancy is shown at three intervals for each country: 2000–2005, 2005–2010 and 2010–2015.

Fig. 2.3. The reduction in the annual number of people dying from HIV-related causes has to accelerate to achieve the Fast-Track targets



Source: UNAIDS/WHO 2016 estimates. The red shading shows future targets.

03

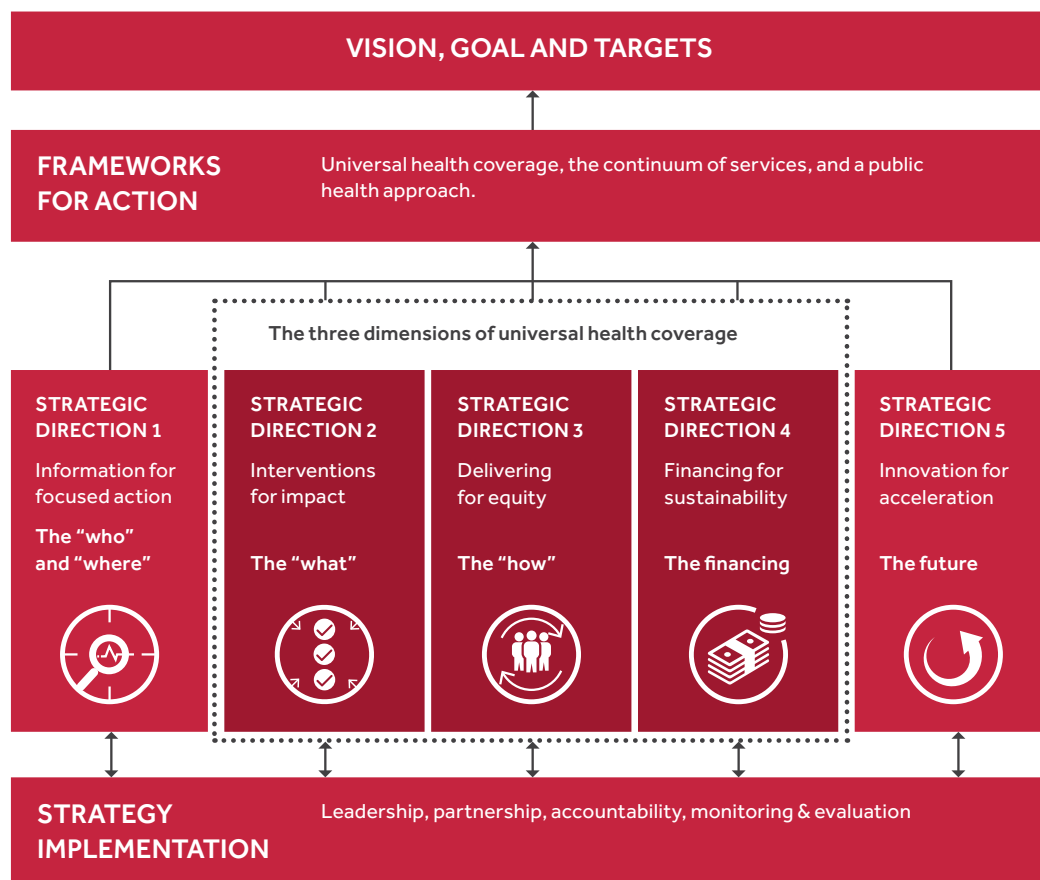
COUNTRY ACTION AND WHO SUPPORT TO REACH THE FAST-TRACK TARGETS



The focus on impact – decisively reducing HIV incidence and HIV-associated mortality – has major implications for planning and providing health services.

Greater impact requires a comprehensive health sector response in countries, including: national strategies and plans informed by evidence and supported by strong health information systems; access to a continuum of high-impact interventions; high-quality services and health systems that reach the populations and locations in greatest need; adequate financial resources to deliver a sustainable response; and the rapid adoption of innovations in technologies and service delivery. The Global Health Sector Strategy on HIV, 2016–2021 (6) adopted by the World Health Assembly in May 2016 provides a framework for such a response in the health sector (Fig. 3.1 and Box 3.1).

Fig. 3.1. The Global Health Sector Strategy on HIV, 2016–2021



Source: Global Health Sector Strategy on HIV, 2016–2021 (6).

BOX 3.1. THE WHO HEALTH SECTOR RESPONSE: MAKING IT A REALITY

Comprehensive HIV programmes, as described in the Global Health Sector Strategy on HIV, will enable countries to prevent HIV and test and treat all in need.

Invest in high-impact interventions and services and build them into comprehensive programmes (the “what”)

Focused prevention services and increased ART coverage must be combined to decisively reduce the number of people acquiring HIV and dying from HIV-related causes to the levels targeted in the Fast-Track approach (14). This requires investing in high-impact interventions and linking prevention, testing, treatment and care services along the full HIV service cascade.² The interventions should be tailored and packaged so that they fit the realities of different populations and settings.

Bring quality-assured services to the people and places most in need (the “how”)

Health services need to be adapted and health systems strengthened so that they can deliver intervention packages to different populations, settings and locations. Priority should go to assuring the quality of services and achieving equity in access so that no populations and communities are left behind.

Use improved data to target interventions (the “who” and the “where”)

HIV programmes should align with countries' actual epidemic profiles, and services should be focused where they are needed most (15,16). This would increase both the impact and cost-effectiveness of services at a time when resources are at a premium.

Ensure financial sustainability and prevent financial hardship (sustainable financing)

A health sector response that prevents HIV and tests, treats and cares for all requires sustainable financing and should be free of financial barriers that block access to individuals. Countries need to mobilize funding from diverse sources (including allocating domestic resources), reduce costs and promote systems to provide financial protection to people who need health services. This includes integrating HIV services into social insurance systems and national health benefit packages, funded by national health budgets..

Use innovations that work (the “future”)

Innovations such as pre-exposure prophylaxis, new HIV testing approaches (including self-testing) and enhanced ART regimens, improvements in record-keeping and referral systems and novel ways of strengthening treatment adherence should be implemented swiftly. Efforts must continue to achieve further innovations, such as long-acting ARV medicine regimens, effective microbicides and HIV vaccines.

2 The cascade refers to the continuum of HIV services that link activities for preventing, diagnosing and treating HIV infection.

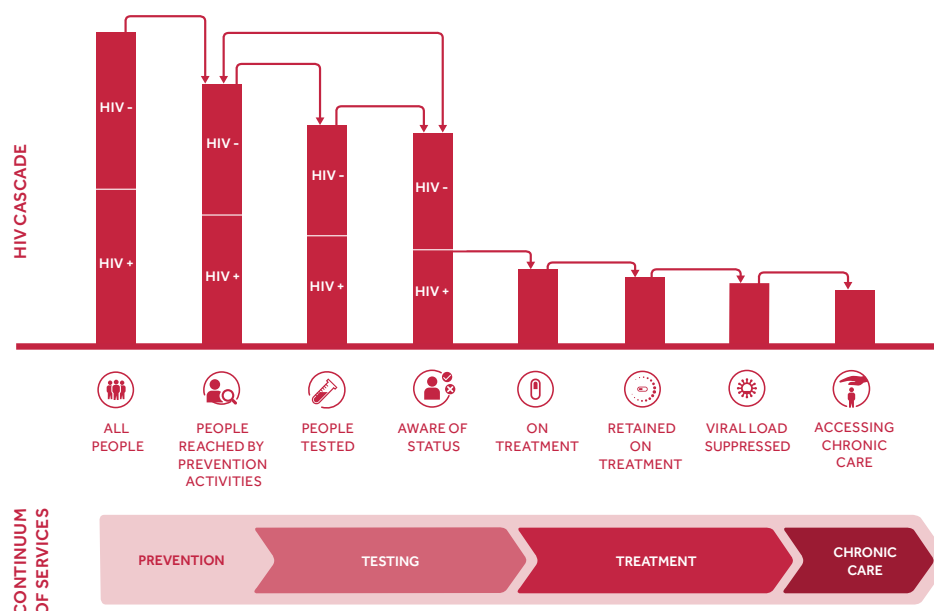
3.1 PROVIDING THE CONTINUUM OF HIV SERVICES (THE “WHAT”)

Each country needs to deliver a package of high-impact HIV interventions across the continuum of HIV services, including prevention, testing, treatment and chronic care services (Box 3.2).

BOX 3.2. THE HIV HEALTH SECTOR CASCADE

WHO and other partners work closely with countries to collect and analyse programme data along a single HIV health service cascade. The cascade describes the continuum of services for preventing and diagnosing HIV infection and for providing treatment and care for people living with HIV. The framework is proving especially useful for collecting and integrating data within a single framework that can reveal key links and gaps, and for determining where improvements would have the greatest impact.

Fig. 3.2. The cascade of HIV services



Source: Global Health Sector Strategy on HIV, 2016–2021 (6).

Progress needs to be monitored along the entire cascade of HIV services and accountability for reaching the Fast-Track targets should be ensured. WHO’s consolidated strategic information guidelines identify 10 key indicators that support the analysis of the cascade of health sector services:

- at the national level, for detecting gaps in the testing, treatment and care stages of the HIV service cascade, as Zimbabwe is doing, for example;
- at the subnational level, for pinpointing improvements in treatment and care support, for example as Kenya is doing at the county level on a monthly basis (Fig. 3.14);
- by disaggregating populations according to age and sex, for example as Jamaica has done to highlight gaps in services for men and young people (Fig. 3.6); and
- by focusing on key populations to reveal and reduce gaps in the delivery of vital HIV services, for example as India is doing with respect to female sex workers and people who inject drugs (Fig. 3.7).

WHO's global guidance and recommendations and its support to countries for adopting high-impact policies and interventions are pivotal in the global HIV response. The regularly updated HIV testing, treatment and care recommendations serve as the global reference guides for national policies and scaling-up activities. WHO has produced a core set of four consolidated guidelines for planning and implementing HIV responses along the full continuum of HIV services (Fig. 3.3):

- on the use of antiretroviral drugs for treating and preventing HIV infection (5);
- on HIV testing services (17);
- on strategic information for HIV in the health sector (18); and
- on HIV prevention, diagnosis, treatment and care for key populations (7).

WHO supplements the guidelines and standards it develops with technical support and capacity strengthening so countries can rapidly adapt their national policies and implement new approaches.

Fig. 3.3. WHO has developed four core sets of guidelines to support Fast-Track action in countries



3.1.1 PREVENTION: BOOSTING SERVICES AND LEAVING NO ONE BEHIND

Primary prevention – all along the cascade of HIV interventions – remains central to the HIV response. A recent five-country study confirmed that basic prevention and behaviour-change approaches have been central to the declines in HIV incidence so far (19). Nevertheless, positive shifts towards such protective behaviour as greater condom use, reductions in multiple sexual partners or safer drug injecting have been minor or absent in recent years, including in some countries with very high burdens of HIV.

High levels of risk behaviour are still being reported in many of the countries that systematically collect these data at the national level (20). The percentage of reported condom use in the general population remains well below the high levels (90% during sex with non-regular partners in high-prevalence settings) (21) needed to decisively reduce HIV incidence (20).

Despite their proven effectiveness, relatively few large-scale, community-based HIV prevention programmes exist for female sex workers, including in countries with generalized HIV epidemics (22–24). High HIV incidence among men who have sex with men and high rates of other sexually transmitted infections (26–28) suggest that the previous safer-sex campaigns have lost traction in many countries.

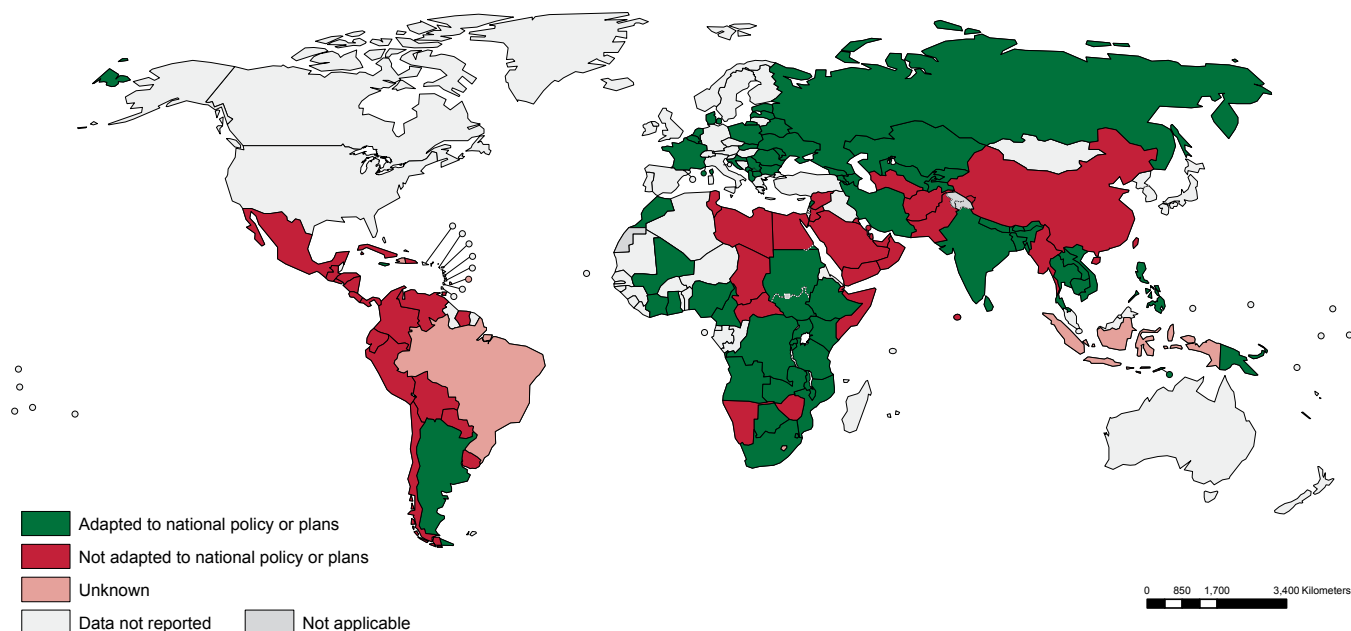
The number of people who inject drugs acquiring HIV changed little from 2010 to 2014, when approximately 150 000 people who inject drugs were newly infected with HIV. The public health benefits of harm-reduction services are well established (29–32), and increasing numbers of countries are providing such services, although not on a scale large enough to make a significant impact. WHO, along with the United Nations Office on Drugs and Crime and UNAIDS, has defined an essential package of harm-reduction interventions for people who inject drugs and a framework for setting targets and monitoring progress in the response.

Prevention resources are often poorly matched with the actual patterns of epidemics, leading to an insufficiently focused approach that spreads resources too thinly and that misses epidemic “hotspots”. Country cascades and programme reviews are pinpointing these kinds of mismatches and gaps with greater precision. Programme reviews in South Africa and Zimbabwe, for example, have highlighted a priority to expand existing prevention approaches, including community-based prevention and condom provision, and strengthen services for key populations, especially sex workers.

Countries are also drawing on the WHO consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations (7) (updated in 2016) for detailed guidance on how to enhance HIV services for key populations (Fig. 3.4). Supplementing the guidelines are toolkits, and countries such as Cambodia and the United Republic of Tanzania are using them to implement and monitor HIV services for key populations. Rwanda and Swaziland are among several countries using training tools WHO has developed for sensitizing and training healthcare workers on the needs of key populations. Burkina Faso, South Africa, Ukraine and Viet Nam are among 42 countries (including 56% of the Fast-Track countries) that have used WHO technical support in the past three years to develop or expand services for key populations. A focus on key populations works. For example, in the Democratic Republic of the Congo, the HIV prevalence among sex workers declined sharply – by more than 60% in some cities – after focused prevention services were introduced for that key population (33).

Fig. 3.4. Countries are adapting the WHO guidelines for key population services in their national HIV policies or plans

Countries that have adapted recommendations from the 2014 or 2016 WHO consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations in their national HIV policies or national plans, October 2016



Source: WHO 2016 survey (WHO HIV Country Intelligence Tool).

WHO has been promoting voluntary medical male circumcision as an important innovation in 14 priority countries in eastern and southern Africa. Between 2008 and 2015, 11.7 million people underwent voluntary medical male circumcision in the priority countries. Uptake increased significantly after 2012. During 2013–2015, between 2.5 million and 3 million people underwent voluntary medical male circumcision annually in the priority countries. Some countries (Kenya, the United Republic of Tanzania, and Gambella province in Ethiopia) have surpassed the 80% coverage targets for 2016, although uptake lags in several others. WHO has worked with partners to develop the 2011 and 2016 strategy frameworks (34) for scaling up voluntary medical male circumcision. It has also created a programme to prequalify devices for male circumcision (35) to support the procurement of safe, high-quality devices by countries.

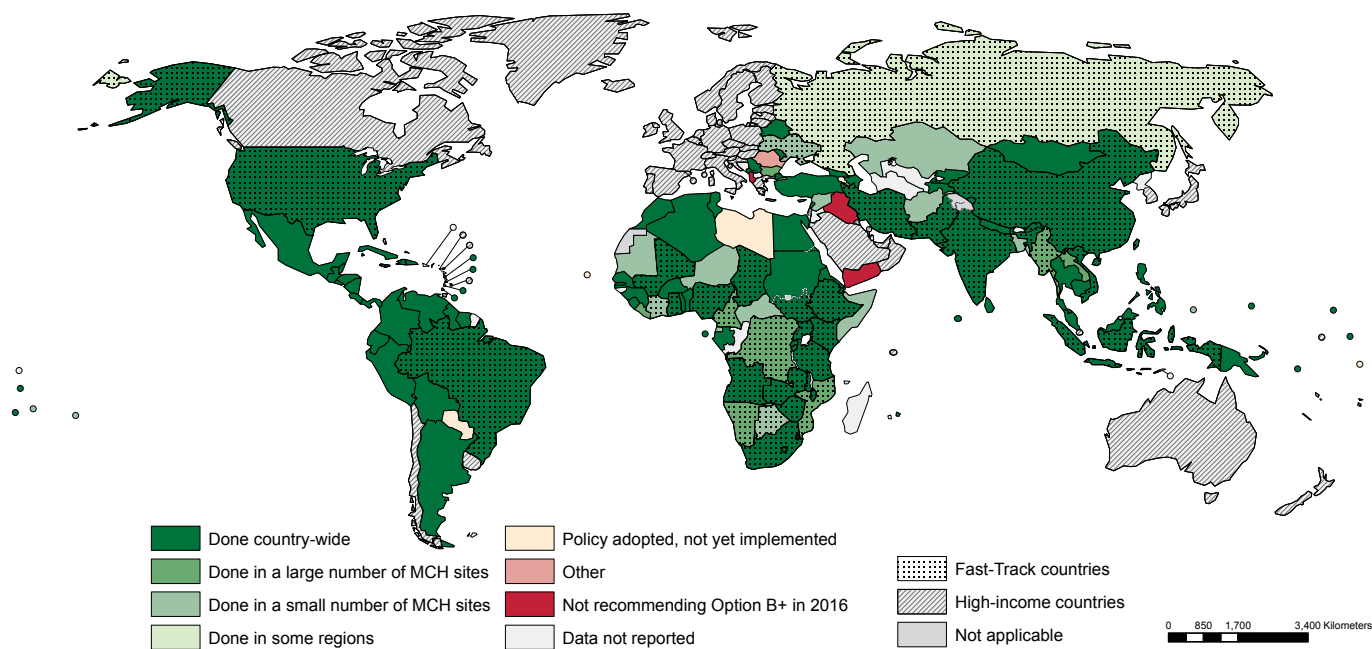
The major declines in the transmission of HIV from mother to child and in the number of children dying from HIV-related causes are a triumph for public health programmes, especially in the African Region (Box 3.3). The Global Plan towards the elimination of new

HIV infections among children by 2015 and keeping their mothers alive (10) has done much to mobilize multistakeholder commitments and action in countries. The proportions of diagnosed pregnant women living with HIV who receive effective ARV medicines for preventing mother-to-child transmission have increased vastly in the Global Plan priority countries: from 36% [32–41%] in 2009 to 80% [71–90%] in 2015, close to the Global Plan target of 90% coverage.

Countries' adoption of WHO's 2013 recommendations for simplifying and scaling up HIV interventions for pregnant and breastfeeding women, including providing lifelong ART (option B+), has contributed significantly towards eliminating HIV infection among infants and improving the health of mothers (Fig. 3.5) (36). Adoption of WHO's "treat all" recommendations is expected to further streamline, simplify and expand the provision of ART to pregnant and breastfeeding women living with HIV.

Fig. 3.5. Most countries are providing lifelong ART to pregnant and breastfeeding women living with HIV

Provision of lifelong ART to pregnant and breastfeeding women living with HIV in low- and middle-income countries and in Fast-Track countries, October 2016



Sources: Global AIDS Response Progress Reporting (WHO/UNICEF/UNAIDS) and WHO HIV Country Intelligence Tool.

A growing number of countries are achieving very low rates of mother-to-child transmission of HIV, and some (Armenia, Belarus, Cuba and Thailand) have formally validated the elimination of mother-to-child transmission of HIV (Box 3.3). Several countries with a high burden of HIV infection are closing in on that goal.

BOX 3.3. THE ELIMINATION OF HIV TRANSMISSION FROM MOTHER TO CHILD IS BECOMING A REALITY

Armenia, Belarus and Thailand have joined Cuba as countries where the elimination of mother-to-child transmission of HIV has now been validated. Belarus, the Republic of Moldova and Thailand also received validation that they have formally eliminated mother-to-child transmission of syphilis.

Cuba was the first country to reach both these milestones, in June 2015. It had introduced its programme for preventing mother-to-child transmission in 1997, within a healthcare system that is universal and free of user charges. By 2014, it reported that fewer than 100 pregnant women were living with HIV, almost all of whom received ARV medicines to prevent transmission to their children.

WHO and key partners, including UNAIDS and UNICEF, pioneered the criteria and play an important role in the process of validating the elimination of HIV transmission from mother to child (37). WHO convenes partners at the country, regional and global levels to ensure a robust process and to formulate concrete recommendations to improve country programmes.

Given the scale of Thailand's HIV epidemic, its recent achievement is especially impressive. Several breakthroughs made this possible. Success in preventing people from acquiring HIV reduced the burden of HIV among women of childbearing age. According to UNAIDS/WHO estimates, from 2000 to 2015, the annual number of adult women newly infected in Thailand fell from an estimated 15 000 [13 000–16 000] to 2000 [1800–2100]. The health authorities integrated services for eliminating the mother-to-child transmission of HIV into antenatal care and were quick to use improved ARV medicine regimens. Thailand also rolled out a universal health system to ensure that essential health services are available to everyone.

In the African Region, some countries that have very high levels of maternal testing and treatment are approaching the elimination targets, although the number of children newly infected with HIV per 100 000 live births still exceeds the validation threshold of 50 in most countries. These countries include Burundi, Namibia, Rwanda, South Africa, Swaziland and Uganda.

In the past three years, 38 countries (including 59% of the Fast-Track countries) have drawn on WHO technical support to introduce innovative prevention services. Among the promising developments are the increasing numbers of countries that are including pre-exposure prophylaxis in their prevention policies. WHO recommends using daily oral pre-exposure prophylaxis as part of a broad package of prevention services for people at substantial risk of HIV infection (5).

Recent evidence (38) shows that high levels of adherence to daily oral pre-exposure prophylaxis and high efficacy can be achieved in real-world conditions. However, actual implementation is still limited: according to Global AIDS Response Progress Reporting, the intervention was available nationally or as pilot projects in only 35 of the 140 countries surveyed in 2015. Among these countries is South Africa, which launched a national programme in June 2016 to offer pre-exposure prophylaxis and immediate ART to all sex workers. Partnerships between health providers and community groups will be important for increasing demand and knowledge about pre-exposure prophylaxis and for ensuring adherence (39). Sections 3.1 and 3.5 in this report describe innovations in pre-exposure prophylaxis and self-testing.

The latest estimates indicate that the HIV treatment scale-up to date has had a limited impact on HIV incidence trends so far (40). Evidence from trials has

shown that ART can reduce the risk of transmitting HIV by as much as 96% (41,42). But in “real world” settings, many variables (such as retention in care, treatment adherence and drug resistance) influence that impact at the population level. Recent studies clearly show this (43,44), including a large study in South Africa that failed to show significant reduction in HIV incidence in communities even when 50% of the people living with HIV started ART (45).

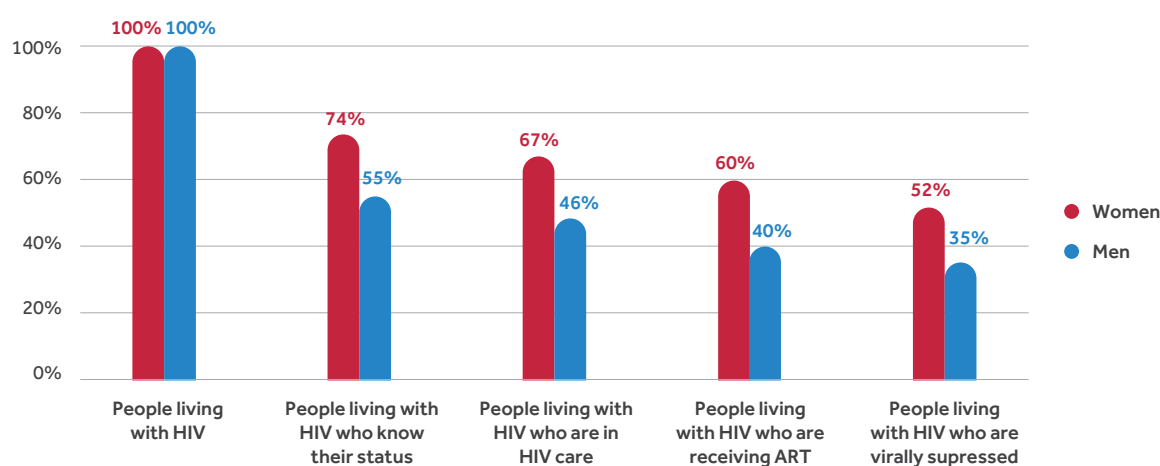
For ART to significantly reduce HIV transmission at the community level, very high levels of both treatment coverage and viral suppression are required. Treatment coverage of at least 80% is necessary to decisively affect HIV incidence; recent analysis suggests that substantially reducing HIV incidence among high-risk men who have sex with men would require levels of viral suppression of up to 90% (46,47).

The impact of treatment on HIV transmission is greatest when ART is combined with other proven behavioural, biomedical and structural prevention approaches, including behaviour change, condom use, harm reduction for people who use drugs and voluntary medical male circumcision in communities with high HIV prevalence. ART has to slot into an approach that links prevention, testing, treatment and care interventions along the entire cascade of HIV services and expands their scope and effectiveness.

3.1.2 TESTING: DIAGNOSING ALL PEOPLE LIVING WITH HIV

About 40% of the estimated 36.7 million people living with HIV at the end of 2015 were unaware of being infected. The gap in HIV diagnosis is a major stumbling block for HIV programmes. In addition, there is often a poor match between the populations reached with existing testing services and the populations most likely to have undiagnosed HIV infection. For example, as shown in Fig. 3.6, HIV testing services are often skewed towards reaching women, even in settings where men are more likely to be living with HIV. This leads to discrepancies in treatment access further along the HIV service cascade.

Fig. 3.6. Young men in Jamaica are more likely than young women to be living with HIV but much less likely to take an HIV test



Source: Ministry of Health, Jamaica, WHO Global HIV Cascade Workshop, 11–14 October 2016, Croatia.

WHO has validated a variety of testing approaches, such as the routine offer of testing in clinical settings, index partner and family testing, and community- and home-based testing, including self-testing. Countries are adopting these testing approaches (Table 3.1) and are frequently using WHO support to find optimal ways to implement them. In the past three years, almost 90% of the Fast-Track countries, and 70 countries overall, have drawn on WHO technical support to adapt testing guidelines to their contexts (Table 3.5).

Table 3.1. Countries are adapting HIV testing policies and practices in accordance with WHO guidance

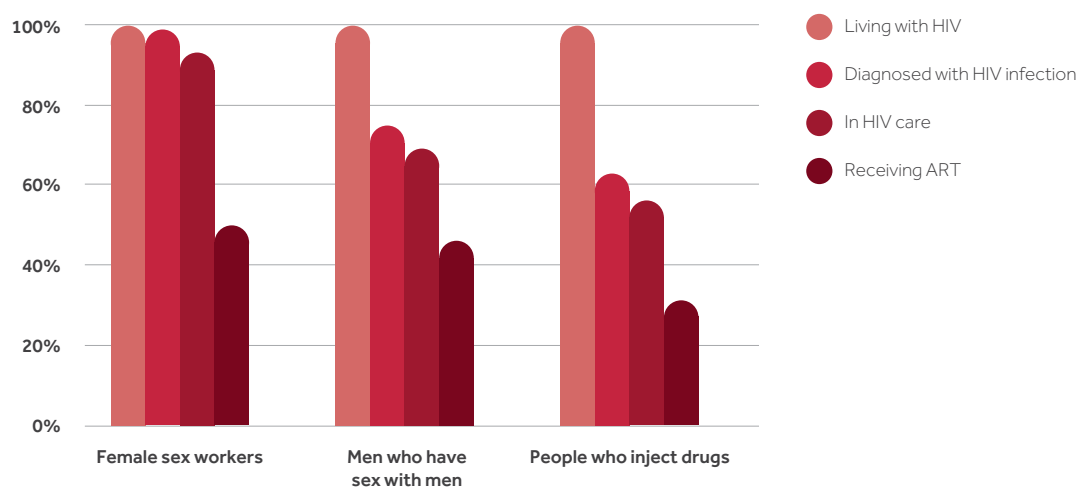
	Have recommendations from WHO's 2015 consolidated guidelines on HIV testing services been adapted in a national process on testing guidelines:	Do the current HIV testing service guidelines address:		Do the national HIV testing policies recommend provider-initiated testing and counselling for:	Do the national HIV testing policies support:				
		Children	Key populations		All people attending health facilities	The use of community-based HIV testing services	The use of diagnostic tests to be performed by lay providers	The use of rapid diagnostic tests for HIV self-testing	Couples or partner testing in programmes for eliminating the mother-to-child transmission of HIV
Yes	97	117	130	69	99	65	23	119	69
No	28	25	12	72	41	73	112	20	57
Don't know	1	0	1	1	3	3	0	4	1
Reporting countries	126	142	143	142	143	141	135	143	127

Source: Global AIDS Response Progress Reporting (WHO/UNICEF/UNAIDS).

HIV programmes should use testing approaches that reach key populations and men who may be unable or reluctant to access health services, as well as districts and localized settings with a high risk of HIV transmission. In India, for example, cascade analysis shows that community outreach services are performing well in testing female sex workers for HIV and linking them to care services but that large proportions of the women who test HIV-positive do not initiate ART. Nevertheless, localized analysis also shows that successive gaps along the testing and treatment cascade, especially for HIV testing, are blocking access to HIV services for people who inject drugs and men who have sex with men (Fig. 3.7).³ The findings demonstrate the critical importance of HIV testing in delivering a “treat all” approach.

³ The data are for 2015–2016, when a CD4 cell count <350 cells/mm³ constituted eligibility for starting ART.

Fig. 3.7. Cascade analysis at selected local sites in India shows multiple gaps in HIV services among key populations, especially for men who have sex with men and people who inject drugs, 2015–2016



Source: National AIDS Control Organisation, Department of AIDS Control (DAC), Ministry of Health & Family Welfare, India, WHO Global HIV Cascade Workshop, 11–14 October 2016, Croatia.

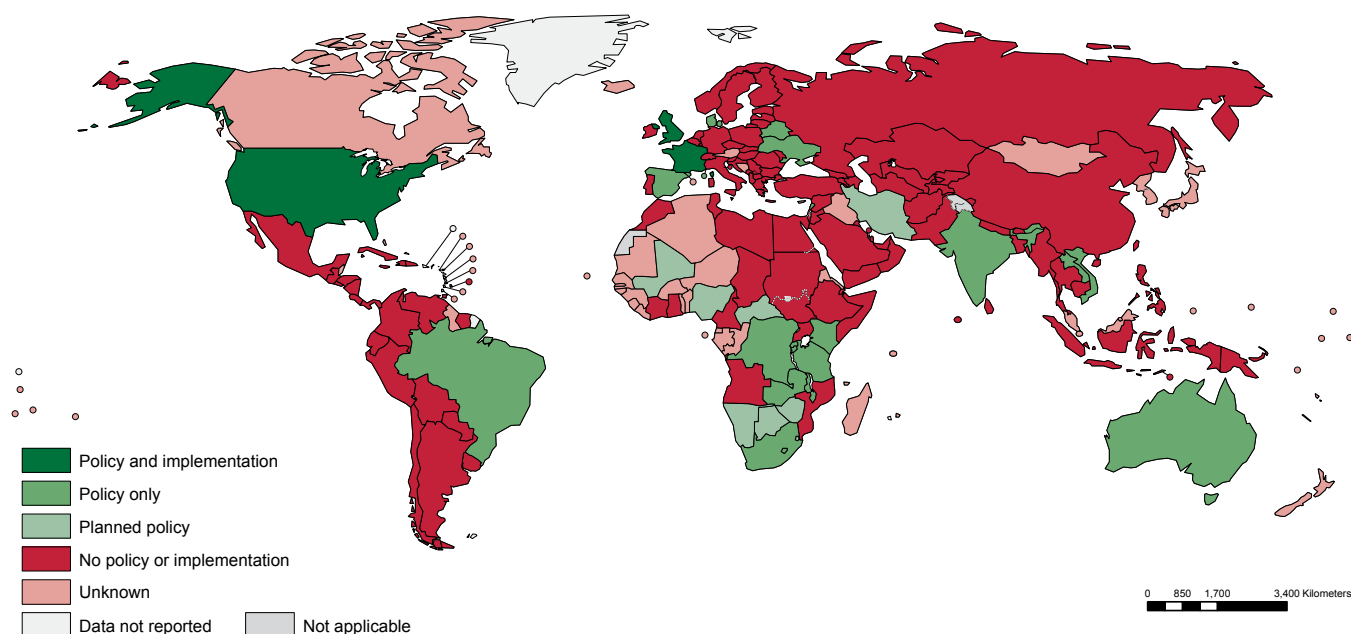
Among the important recent developments in HIV testing is the increased use of community- and home-based testing approaches, as recommended by WHO, and the use of trained lay providers to support these services (Fig. 3.8) (17). According to Global AIDS Response Progress Reporting, in 2015, 68 countries were using trained lay providers to offer home-based testing services.

HIV self-testing and assisted partner notification services are among the promising approaches WHO recommends in its latest HIV testing guidelines (48). Studies show HIV self-testing to be highly acceptable, with the potential to identify and link greater numbers of people living with HIV to early treatment and care (49–51).⁴ Section 3.5 further describes innovations in self-testing.

⁴ A self-test does not provide an HIV diagnosis; this requires confirmatory testing at a health facility.

Fig. 3.8. WHO's HIV testing guidelines are widely used around the world

Countries that have included or that plan to include HIV self-testing in their national policies, October 2016



Source: WHO 2016 survey (WHO HIV Country Intelligence Tool).

3.1.3 TREATING ALL IN NEED

The Fast-Track targets call for reducing the number of people dying from HIV-related causes to less than 500 000 globally in 2020. This will require almost doubling, within five years, the number of people receiving ART, from an estimated 18.2 million [16.1 million–19.0 million] in mid-2016 to about 30 million in 2020. This feat has been achieved before: the global number of people receiving ART has more than doubled every five years since 2005 (Fig. 3.9).

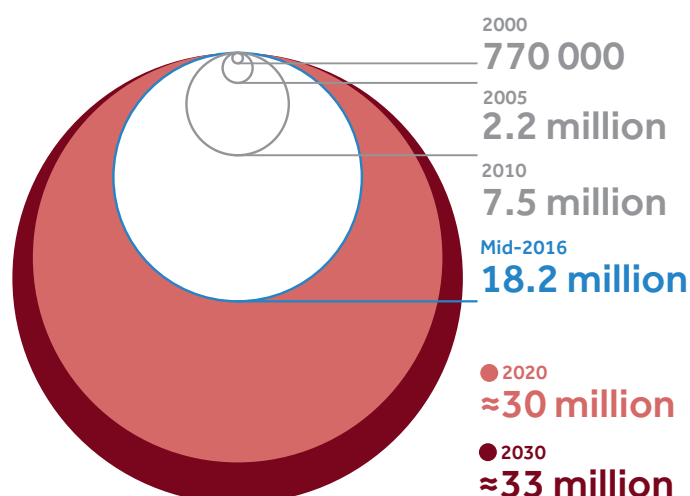
WHO and its partners have guided the adoption of a public health approach to HIV treatment and care that has underpinned the global scale-up of ART over the past decade. Virtually all the Fast-Track countries, and 81 countries worldwide, have drawn on WHO technical support to implement updated treatment guidelines in the past three years (Table 3.5).

In 2016, the focus of WHO support was the shift towards “treat all” recommendations (5), which call for immediate HIV treatment for everyone diagnosed with HIV infection. If widely implemented, the “treat all” approach would contribute significantly to achieving the 90–90–90 Fast-Track HIV testing and treatment target and the Sustainable Development Goals target of universal health coverage.

UNAIDS and WHO estimate that full implementation could prevent 21 million people from dying and prevent 28 million people from acquiring HIV by 2030.

The global number of people receiving ART rose by nearly 2.5 times from 2010, when 7.5 million people were receiving ART, to mid-2016, when the number reached 18.2 million. The number of children younger than 15 years receiving ART in 2015 was almost twice as high as in 2010: 870 000 versus 450 000. The previous gap between the ART coverage of adults and children has disappeared. However, almost 20 million people living with HIV were not receiving ART at the end of 2015, and many people are not being retained on treatment and in care. At best, the world has only just passed the halfway mark towards ending the AIDS epidemic.

Fig. 3.9. Global HIV treatment coverage has more than doubled every five years since 2000 – and has to almost double again by 2020



Source: UNAIDS/WHO estimates.
The red shading shows future targets.

BOX 3.4. TREATMENT COVERAGE VARIES GREATLY ACROSS AND WITHIN WHO REGIONS

In the WHO African Region, the estimated treatment coverage in 2015 was 47% [43–53%], with an estimated 12.1 million people receiving ART. Coverage more than doubled in 2010–2015. Nevertheless, there are major important disparities within the Region. Treatment coverage in eastern and southern Africa in 2015 exceeded the global average (54% [50–58%] versus 46% [43–50%]) but it was only 28% [23–34%] in western and central Africa. Treatment coverage for adult men in Africa overall was an estimated 39% [35–43%] versus 53% [48–59%] among adult women.

There is similar variation elsewhere. In the European Region, treatment coverage exceeded 70% in western and central Europe but was only 21% [20–23%] in eastern Europe and central Asia. Coverage was 39% [33–46%] in the South-East Asia Region but ranged from 65% [60–72%] in Thailand to 9% [8–10%] in Indonesia. Coverage in the Western Pacific Region was 47% [37–66%] overall but varied from 74% [67–82%] in Cambodia to 28% [25–33%] in Malaysia.

Coverage continues to be highest in the Region of the Americas (53% [47–60%] in 2015) and lowest in the Eastern Mediterranean Region (11% [8–17%] in 2015).

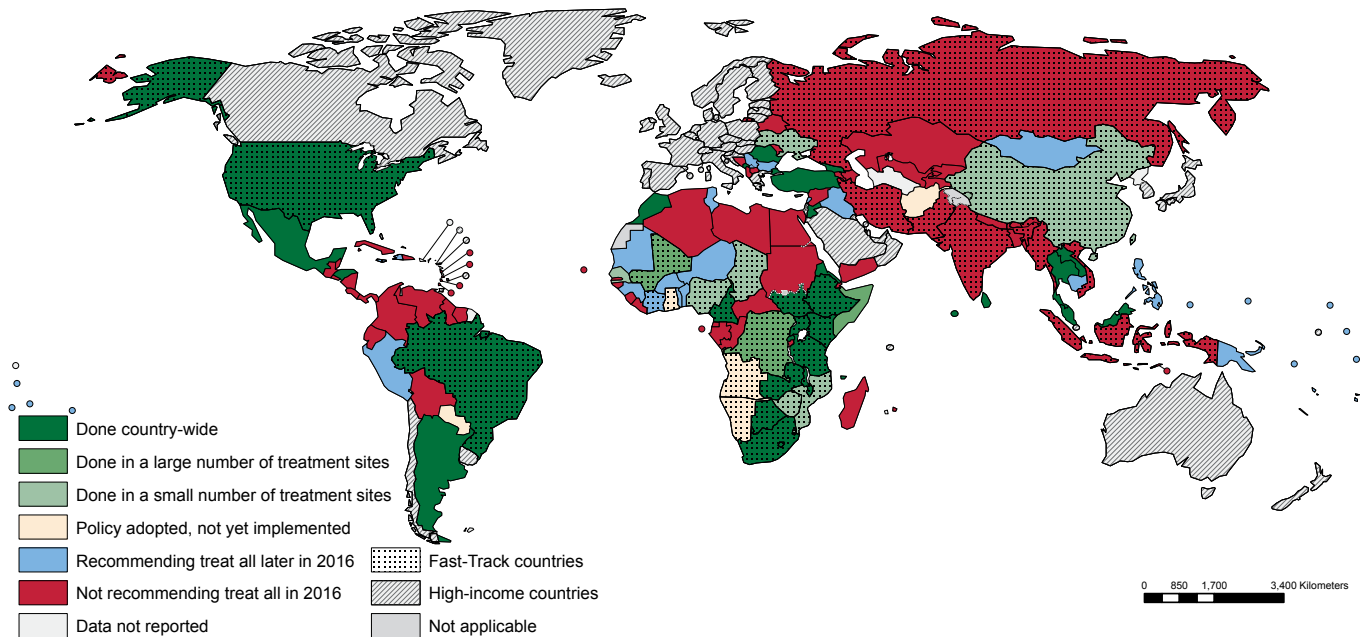
Countries are rapidly adopting and implementing “treat all” policies along with supportive HIV testing, prevention and strategic information policies to enable them to reach the 2020 Fast-Track targets (Fig. 3.10). Many countries have already begun implementing the policies and are using WHO support to put the policy changes into action (Box 3.5). Rwanda is an example of how the adoption of “treat all” policies has been accompanied by broader health system strengthening to ensure that treatment is scaled up effectively and sustainably (Box 3.6).

Linking people who test HIV-positive to care services and promptly starting them on ART are among several gaps holding back country treatment programmes. Substantial proportions of people who test HIV-positive do not receive their test results, do not return to a clinic to be assessed for eligibility for ART or, if deemed eligible, do not start HIV treatment (52). Children also have high rates of loss to care (53).

A significant, positive trend has emerged, however, as countries have implemented the updated WHO treatment guidelines in recent years. In all regions, people diagnosed with HIV were more likely to start ART, and they have been starting ART earlier, at higher CD4 cell counts, than before, according to data from the IeDEA cohort collaboration (Fig. 3.11). Globally, the median CD4 cell count at enrolment in HIV care rose from 133 cells/mm³ in 2006 to 272 cells/mm³ in 2014 (54).

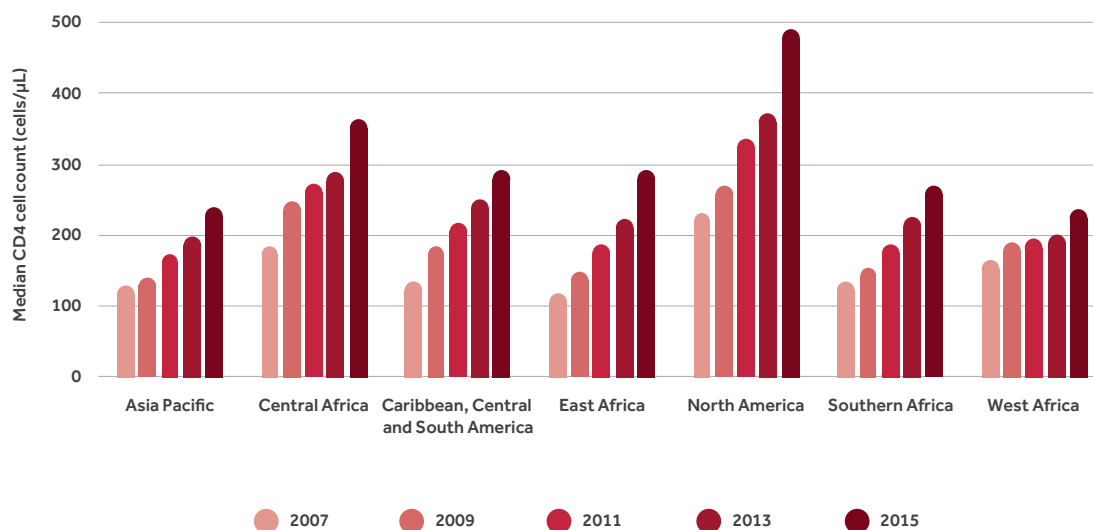
Fig. 3.10. Countries are rapidly implementing the “treat all” recommendation

Implementation of the “treat all” recommendation among adults and adolescents living with HIV in low- and middle-income and Fast-Track countries, October 2016



Sources: Global AIDS Response Progress Reporting (WHO/UNICEF/UNAIDS) and WHO HIV Country Intelligence Tool.

Fig. 3.11. Median CD4 cell counts at ART initiation have increased significantly in all regions



Source: Report prepared for the IeDEA-WHO Collaboration: global analysis of retention in care in initial HIV care and treatment program, on behalf of the International Epidemiologic Databases to Evaluate AIDS (IeDEA) (54).

BOX 3.5. NIGERIA IS PUTTING “TREAT ALL” INTO PRACTICE

Nigeria has the second-largest AIDS epidemic in the world. Access to HIV treatment in Nigeria has improved over the years, with about 830 000 people receiving ART in 2015. Nevertheless, treatment coverage is well below the global average.

In 2016, Nigeria took an ambitious step forward by adopting WHO’s “treat all” recommendations. The move followed regional dissemination workshops on the new treatment guidelines and a decisive national meeting that examined the global guidelines and adapted them to local epidemic and programming realities.

WHO has supported Nigeria’s revision of her national treatment guidelines and continues to assist in their implementation. The Ministry of Health is also using WHO technical assistance to strengthen data management systems, laboratory systems (including viral load networks) and the development of operational guidance and implementing tools.

Other priority areas for WHO support include programming for key populations. A cascade analysis is being planned to highlight where further strengthening is required along the HIV service delivery cascade. WHO is also supporting a rapid assessment of HIV service delivery in conflict-affected areas in north-eastern Nigeria to identify options for strengthening the HIV response there.

BOX 3.6. THE LAST MILE: RWANDA TAKES THE “TREAT ALL” ROUTE

Rwanda has built one of the most successful ART programmes in the world, with remarkably high rates of HIV diagnosis and ART coverage, along with high rates of retention and medication adherence with viral suppression (56). This success and an assessment of the latest scientific evidence led to Rwanda deciding in December 2015 to adopt the “treat all” approach and to provide ART to every person who tests HIV-positive.

Eligibility for ART in Rwanda gradually became more inclusive before the shift to “treat all”. For example, a study at clinics in the capital, Kigali, showed that the median CD4 cell counts when people initiated ART almost doubled from 2003 to 2012, as successive guidelines enabled earlier ART initiation (57). By mid-2016, 78% of the people living with HIV in Rwanda were receiving ART, and 86% of these had reached viral suppression (58). The aim now is to push coverage levels past the 90–90–90 Fast-Track targets.

Within months of adopting a “treat all” policy, Rwanda had developed an action plan adjusting the procurement and distribution outlook for diagnostic commodities and HIV medicines. It also conducted a series of refresher training courses countrywide for physicians, nurses and pharmacists. The policy went into operation in July 2016, and major donors have been approached to support its implementation.

The success of Rwanda's HIV treatment programme stems in large part from concerted health system improvements made over the past 15 years, including strengthening infrastructure, introducing community-based health insurance, improving workforce skills and training community health workers to deliver preventive, diagnostic and therapeutic services at the village level (59). Importantly, the country succeeded in harmonizing donor support for its HIV programme and in asserting national ownership over its health and development programmes (60).

Building on these health system improvements and using the momentum of the “treat all” approach, Rwanda is on track to become one of the first countries to reach the 90–90–90 Fast-Track targets.

High levels of viral suppression can be achieved, including in settings with limited resources (61–64). Recent door-to-door testing surveys in Botswana, for example, found that almost 70% of the people living with HIV had an undetectable viral load (65).⁶ However, few countries are close to the Fast-Track target for 2020 at the moment. Despite recent improvements, the rates of viral suppression are low in many countries, including several with large HIV epidemics in the African Region and in eastern Europe (66). Poor adherence to treatment is the main obstacle. Similar to the rest of the cascade of HIV services, men tend to fare worse than women.

5 In a national Demographic Health Survey, 86% of adults living with HIV in Rwanda said that they had previously taken an HIV test (55).

6 In the surveys, 83% of the people living with HIV knew their HIV status, 87% of the people who know their HIV-positive status were accessing treatment and 96% of the people receiving treatment had suppressed viral loads.

3.1.4 TACKLING COMORBIDITIES AND PROVIDING CHRONIC CARE

As more people start and stay on HIV treatment, preventing and managing comorbidities and providing chronic care are increasingly important challenges. Chronic hepatitis B virus and hepatitis C virus infections are growing causes of morbidity and mortality in many countries, and TB and bacterial infections continue to be the leading causes of hospital admission and mortality among adults and children living with HIV (67).

3.1.4.1. TUBERCULOSIS

In 2015 some 1.2 million people living with HIV fell ill with TB (68). However, 57% of them were not reported to have reached care. Of those that did reach care 78% received ART (up from 36% in 2005). ART coverage among notified TB patients known to be living with HIV exceeded 90% in several countries with high burdens of TB and HIV.

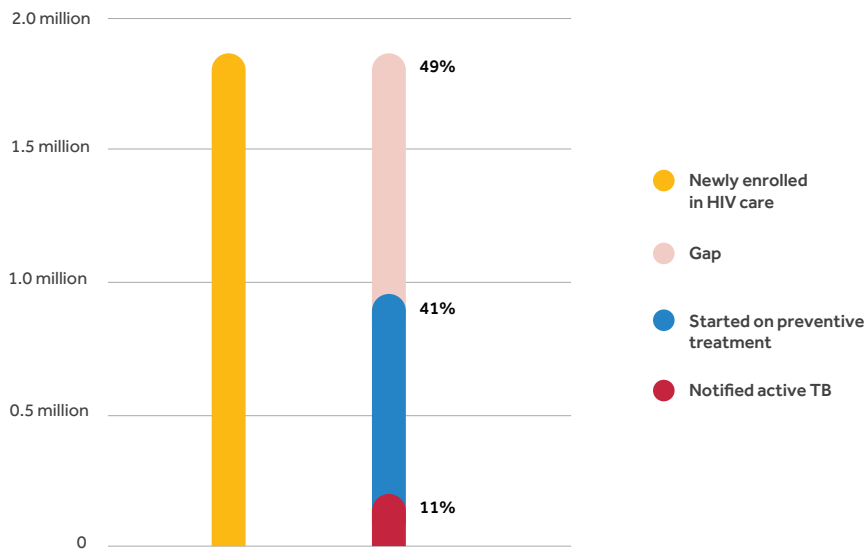
Although ART reduces the incidence of TB, TB preventive treatment (such as with isoniazid preventive therapy) has been shown to have considerable additional impact. As countries scale up ART for all people living with HIV, managing latent TB infection will continue to play a critical role. It is therefore vital that all people living with HIV be regularly evaluated for TB, and those found eligible should be started on TB preventive treatment. Fig. 3.12 shows data from six priority countries with a high burden of TB and HIV – Indonesia, Kenya, Malawi, Mozambique, Myanmar and South Africa – that reported data for both the indicators on TB detection and isoniazid preventive therapy among people living with HIV newly enrolled in care. Together the six countries accounted for 42% of the estimated TB/HIV incidence globally in 2015. The coverage gap of 49% represents a major missed opportunity for 900 000 people who should have undergone complete evaluation for TB disease or TB preventive treatment.

WHO is supporting the linking of HIV and TB programmes in countries, including implementing the WHO policy on collaborative TB and HIV activities, along with facilitating joint grant applications to the Global Fund for these programmes. As part of this countries are also encouraged to use their data to improve service delivery. For example, Kenya is using HIV and TB cascade data to close gaps in testing and treatment and to promote an integrated response.

3.1.4.2. VIRAL HEPATITIS

Viral hepatitis constitutes a significant disease burden, causing about 1.4 million people to die per year (69). It is an increasingly important cause of death among people living with HIV. An estimated 2.3 million people living with HIV worldwide are coinfecting with hepatitis C (as are up to 90% of the people who inject drugs) (70,71). Chronic hepatitis B infection affects about 2.6 million people living with HIV (70,72). Countries are beginning to take greater advantage of important vaccine and treatment opportunities, in collaboration with Médecins Sans Frontières, the French National Agency for AIDS Research, the United States Centers for Disease Control and Prevention and WHO. This shift is expected to accelerate as countries adapt and implement the first-ever Global Health Sector Strategy on Viral Hepatitis 2016–2021 (73), adopted by the World Health Assembly in May 2016, along with a set of new WHO guidelines on viral hepatitis testing and treatment (74). WHO recently reported the “first million” people receiving hepatitis C treatment in low- and middle-income countries, a major achievement based on reduced prices and expanding access in coordination with partners and countries.

Fig. 3.12. There are major gaps in the initiation of preventive treatment for TB among people living with HIV and newly enrolled in care, 2015



Source: Global Tuberculosis Programme.

Note: Data are from Indonesia, Kenya, Malawi, Mozambique, Myanmar and South Africa.

3.1.4.3. NONCOMMUNICABLE DISEASES

The burden of noncommunicable diseases is expected to grow significantly during the next two decades, especially in low- and middle-income countries. In addition, people living with HIV are at increased risk of developing a range of noncommunicable diseases, including cardiovascular disease, diabetes, liver and pulmonary

diseases, hypertension and a range of non-AIDS-associated types of cancer along with various mental health disorders (75,76). As growing numbers of people remain on HIV treatment for life, their HIV and chronic care needs have to be met. Countries are gradually introducing patient monitoring mechanisms so that individuals can be linked proactively to other chronic care services (Box 3.7).

BOX 3.7. PATIENT MONITORING SYSTEMS ARE BEING IMPROVED TO ENHANCE TREATMENT OUTCOMES

WHO is working with the Bill & Melinda Gates Foundation, Médecins Sans Frontières, the United States President's Emergency Plan for AIDS Relief (PEPFAR), the United States Centers for Disease Control and Prevention and UNAIDS to help ensure that monitoring and evaluation systems can support individuals for life along the sequence of HIV treatment and care services. Current activities focus on bringing patient forms and registries in line with the "treat all" guidelines and linking data collection as patients use various services and move between health facilities. Malawi, South Africa, the United Republic of Tanzania and Zimbabwe are among the countries using this collaboration to strengthen their patient monitoring systems. WHO will disseminate new guidelines for patient monitoring and case-based surveillance in 2017 to support country efforts to improve treatment adherence and viral suppression among people on ART and to strengthen chronic care.

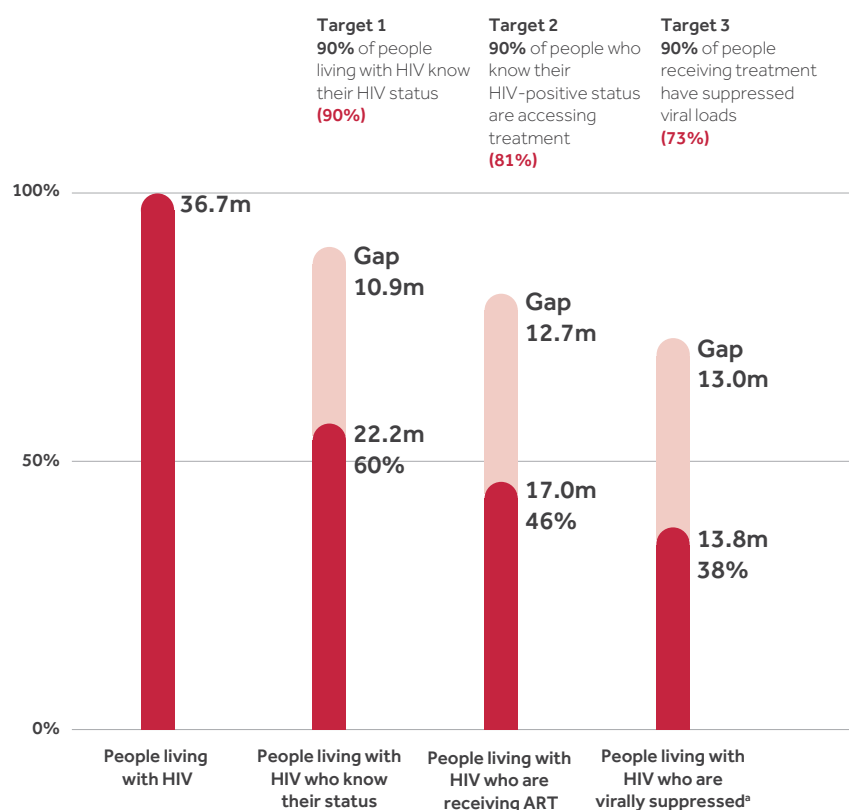
3.2 SUPPORTING SERVICE DELIVERY AND HIGH-QUALITY SERVICES (THE “HOW”)

HIV intervention packages and the continuum of HIV services need to be adapted for different populations, locations and settings, to reach those most affected. Priority should go to assuring the quality of services, promoting gender equality and achieving equity in access so that no populations and communities are left behind.

Strategies that strengthen health systems are critical for delivering essential services equitably, including strengthening human resources, securing the supply of high-quality medicines, diagnostics and other commodities, engaging and mobilizing communities and providing person-centred and integrated care.

The HIV service cascade describes the sequence of linked services that are needed to reduce the number of people acquiring HIV and the number of people dying from HIV-related causes. The cascade framework makes it easier to identify and close the gaps in services and improve their reach and impact (Fig. 3.13).

Fig. 3.13. Improvements are needed at each stage of the cascade of HIV testing and treatment services, 2015



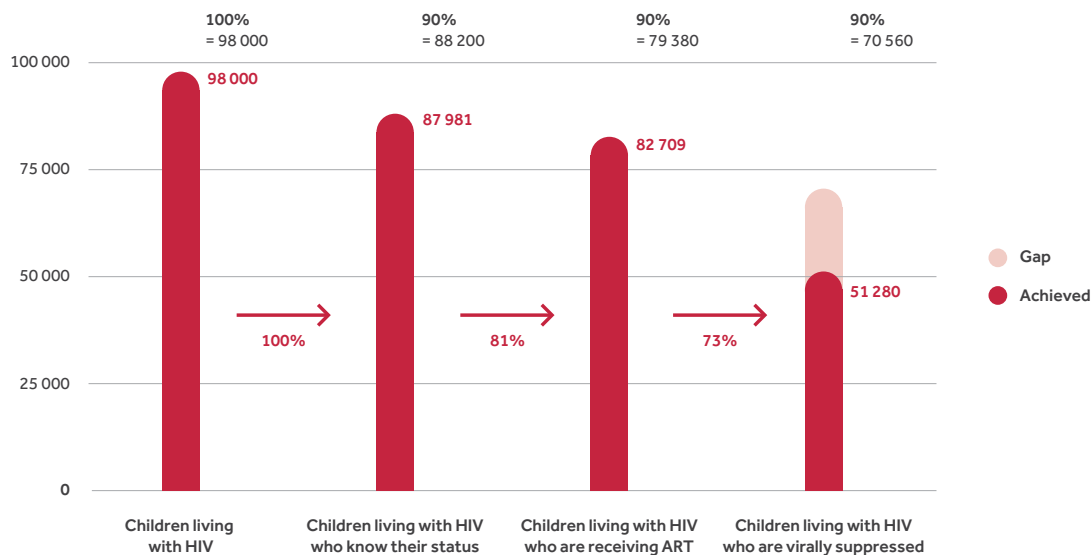
Sources: Global AIDS Response Progress Reporting (WHO/UNICEF/UNAIDS) and UNAIDS/WHO estimates.

The 2015 measure of the number of people who know their HIV status was derived from data reported by 87 countries accounting for 79% of the people living with HIV globally. The 2015 measure for the number of people with suppressed viral loads was derived from data reported by 86 countries. Globally, 22% of all people receiving ART were reported to have received a viral load test.

^a HIV-1 RNA <1000 copies/ml

More and more countries are reporting on their cascade analyses, including data disaggregated by age, sex, geography and population, and identifying where priority improvements are required. In Kenya, for example, the analysis has highlighted the need to improve viral suppression for children receiving HIV treatment (Fig. 3.14). Meanwhile, cascade analysis from Ukraine has confirmed the effectiveness of harm-reduction services: people using these services were more than twice as likely to know their HIV status, be linked to care and receive ART (Fig. 3.15). WHO is providing support to countries to undertake cascade analyses to better guide their national HIV programmes and investments (Fig 3.16).

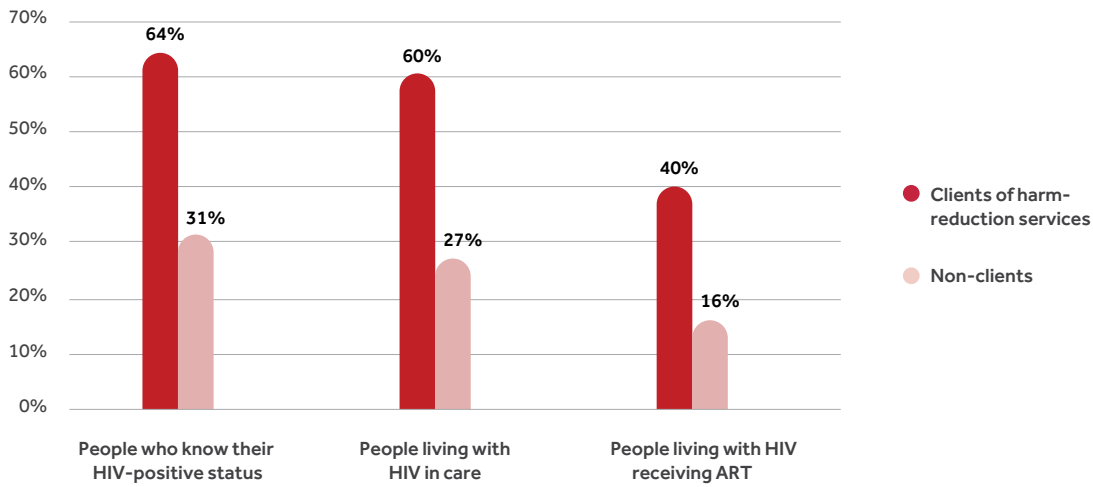
Fig. 3.14. Kenya is closing in on the 90–90–90 treatment target for children, but viral suppression has to improve, 2015



Source: National AIDS & STI Control Programme (NAS COP), Ministry of Health, Kenya, WHO Global HIV Cascade Workshop, 11–14 October 2016, Croatia.

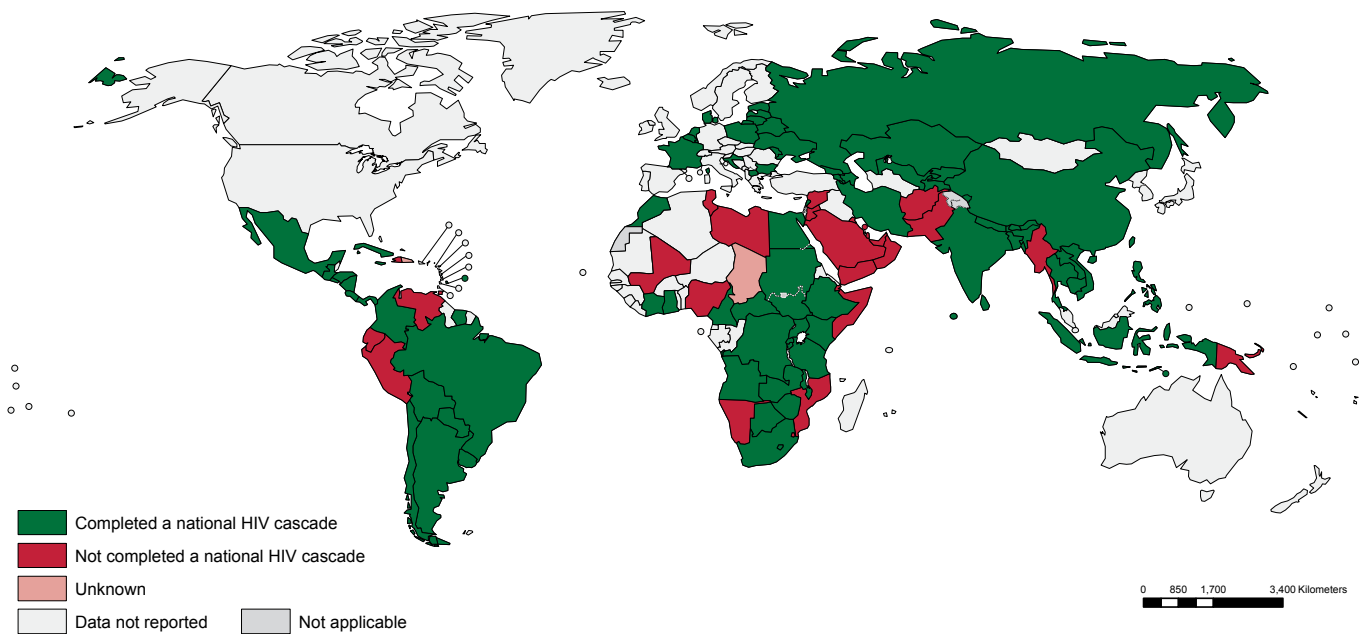
Differentiated care enables services to be tailored to meet the needs of people with different treatment and care needs, including those initiating treatment, individuals who are asymptomatic and stable on treatment and those who have advanced HIV disease and comorbidities. Differentiated care for people receiving ART is increasingly important for improving retention in care and, especially, treatment adherence (Box 3.8).

Fig. 3.15. Cascade analysis in Ukraine confirms the impact of harm-reduction programmes



Source: Barska & Sazonov (77).

Fig. 3.16. Countries that completed HIV services cascades, October 2016



Source: WHO 2016 survey (WHO HIV Country Intelligence Tool).

BOX 3.8. CONSIDERING PEOPLE'S DISTINCT NEEDS: DIFFERENTIATED MODELS OF CARE

Differentiated care is an important aspect of the “treat all” approach. It involves matching the frequency of clinical consultations, the use of lay providers and the intensity of care to people’s different care priorities. People receiving ART who are stable can receive less frequent clinical visits (every 3–6 months) and ART refills and can benefit from community-based differentiated care. Differentiated care also helps to ensure that health resources are used more effectively and are adapted to people’s needs. However, the approach requires investing in adherence support, policy changes, and reliable drug stocks at all levels of the health system. WHO works with a wide range of partners to support differentiated care in countries, including civil society organizations, the Global Fund, Médecins Sans Frontières, the French National Agency for AIDS Research, PEPFAR, UNAIDS, the United States Centers for Disease Control and Prevention, the United States Agency for International Development and the International AIDS Society.

When HIV services are accessible close to where affected populations live, service uptake and retention in care tend to improve, along with treatment outcomes. Viet Nam is among the countries showing that innovative approaches to service delivery can reach populations that are otherwise left behind (Box 3.9).



BOX 3.9. PROMOTING INNOVATIVE SERVICE DELIVERY APPROACHES TO REACH KEY POPULATIONS IN VIET NAM

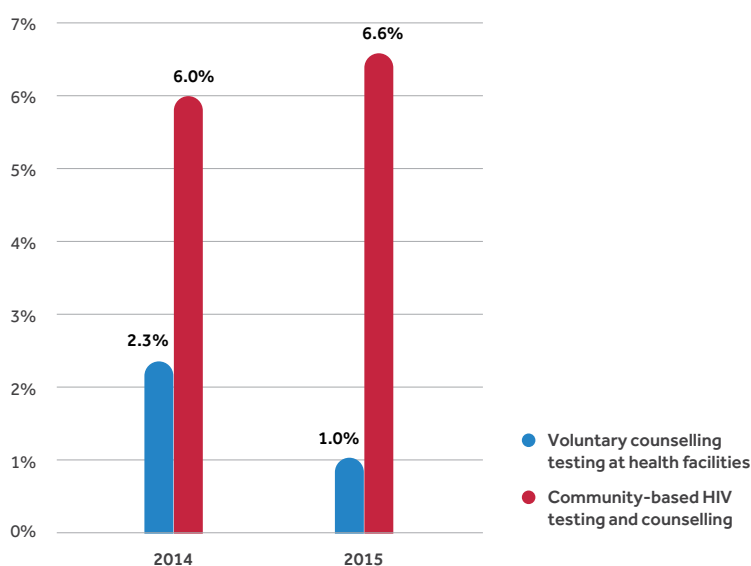
In 2012, the Viet Nam Authority of HIV/AIDS Control and WHO jointly conducted a modelling study indicating that earlier uptake of ART by people who inject drugs and other key populations would substantially reduce the number of people acquiring HIV infection and dying from AIDS-related causes. A subsequent implementation study by the Viet Nam Authority of HIV/AIDS Control and WHO demonstrated that people who inject drugs who are living with HIV can achieve high levels of retention (>85%) and viral suppression (>90%) after 12 months even if ART is initiated with a high CD4 count. These findings led the Viet Nam Authority of HIV/AIDS Control to update the national guidelines to recommend immediate ART for all key populations who test HIV-positive.

However, in reality, late diagnosis and late treatment initiation continue to be common among people who inject drugs and among other key populations. This has resulted from stigma and discrimination, fear of

disclosure or long distances to clinics. As a consequence, some people have been unwilling to attend services at healthcare facilities. To address those barriers, the Viet Nam Authority of HIV/AIDS Control undertook a demonstration project of community-based HIV testing services, supported by the WHO Country Office for Viet Nam.

In Thanh Hoa province, where access to HIV testing services was challenged by difficult access to clinics in the mountainous area, village health workers were trained to provide testing services to key populations and their partners in their communities. In Thai Nguyen province, where stigma and discrimination at health facilities were hindrances, peer educators were trained to provide testing and prevention services. In both provinces, individuals who tested HIV-positive were linked to formal facilities for confirmation testing and treatment and care services. In 2015, the community-based approach showed HIV infection rates six times higher than the facility-based approach (Fig. 3.17). Viet Nam's national guidelines on HIV testing are being updated to include this approach.

Fig. 3.17. Percentage of people testing HIV-positive among those tested through community-based HIV testing compared with those tested at health facilities



Source: Thanh Hoa Provincial AIDS Center, Viet Nam.

With support from WHO, the Viet Nam Authority of HIV/AIDS Control also set up pilot projects to decentralize HIV services to the primary healthcare facilities (commune health stations) and to integrate them with other services. HIV services used to be provided mainly at the provincial and district levels, which was among the causes of low coverage and late uptake of HIV testing and treatment. The results of the pilot were impressive. Decentralizing and integrating HIV service delivery at commune health stations led to increased coverage of testing

and treatment in remote areas. Further, opioid substitution therapy with methadone was decentralized into selected commune health stations, which was highly regarded by people who inject drugs in the locality and resulted in rapid uptake by more than 100 people in the first six months. This led the Ministry of Health to roll out decentralized and integrated HIV service delivery with support from the Global Fund and PEPFAR.

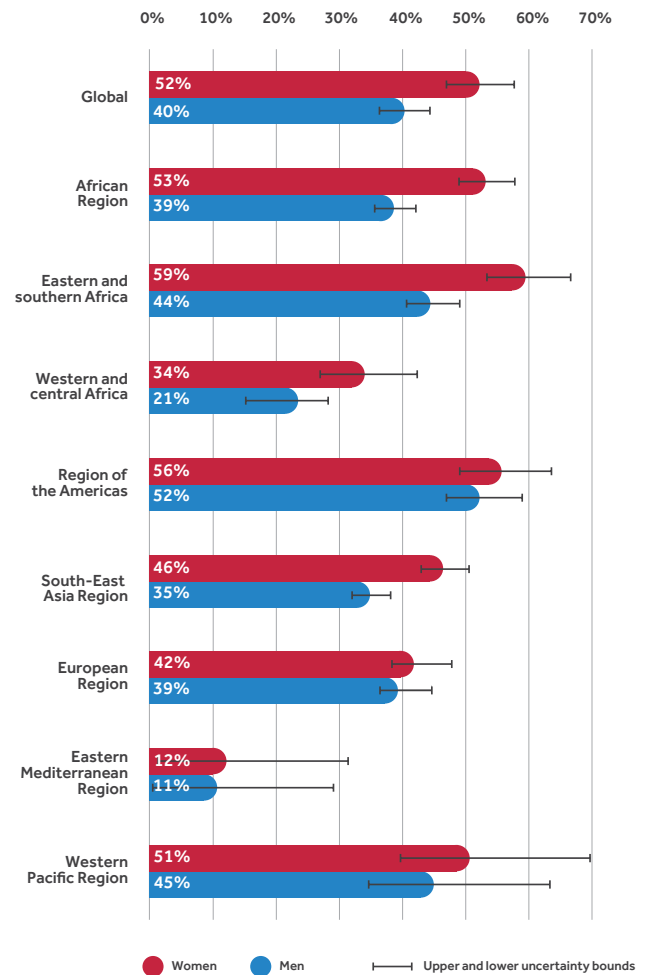
Specific attention needs to be given to populations that are disproportionately affected and underserved, so that services address the broad range of health risks and problems they experience. For example, the uptake of HIV services by men and adolescents is low, resulting in poorer outcomes for these two populations.

In 2015, 35% (an estimated 670 000) of adults newly infected with HIV were 15–24 years old. Service packages, including for HIV treatment, that are relevant and attractive are crucial for reaching new cohorts of adolescents.

Innovations in designing and delivering HIV services, including outreach services that go beyond clinics to workplaces and community venues, are needed to reach more men with HIV-related services and other health services. Compared with women, men are less likely to take an HIV test, start ART and stay on treatment (Fig. 3.18) (54). Encouraging and enabling men, especially those in their twenties and thirties, to protect themselves and their partners from HIV infection is also a major unmet challenge. Several factors deter men's use of HIV services and other health services. They include opportunity costs (related to job obligations, for example) (78), harmful gender norms that discourage proactive use of healthcare services, health service models that portray healthcare as a mainly female concern (79), concerns about privacy and confidentiality, and low self-perceptions about their risk of acquiring HIV and about other health risks (80).

Integration of HIV and maternal and child health services has played a key role in the impressive progress in eliminating the mother-to-child transmission of HIV (Box 3.10). Adoption of WHO's "treat all" recommendations is expected to further streamline, simplify and expand the provision of ART to pregnant and breastfeeding women living with HIV.

Fig. 3.18. Treatment coverage is lower for men than for women living with HIV in every region, 2015



Source: UNAIDS/WHO estimates.

BOX 3.10. SIMPLIFIED AND INTEGRATED SERVICES FOR ELIMINATING THE MOTHER-TO-CHILD TRANSMISSION OF HIV HAVE A GREAT IMPACT

Working with UNICEF and UNAIDS, WHO is promoting greater integration of HIV services and maternal and child health services and is helping streamline services for eliminating the mother-to-child transmission of HIV, improve their coverage and quality, reduce loss to follow-up and put resources to more efficient use.

In eastern and southern Africa, the HIV services are almost completely integrated into antenatal care services, with the services generally provided at the same location. Other examples include integrating ART into maternal and child health facilities in Mozambique, Swaziland, Uganda, the United Republic of Tanzania and Zambia and integrating HIV and primary care services at all levels in Brazil's public health service.

Some countries are going further. South Africa is developing a joint cascade of services for preventing the mother-to-child transmission of HIV and TB. Evidence from Malawi suggests that integrating HIV testing into the services provided at immunization clinics is an attractive option for identifying infants who have been exposed to HIV.

The most appropriate types of integration need to be explored and may depend on the specific context. In some cases, an all-inclusive one-stop shop arrangement works best; in others, a simplified, robust referral system between closely linked services is more expedient and efficient.

Further integration will require strengthening the capacity of health workers. Integration usually also requires retraining (workers need additional skills to perform multiple new tasks) and can raise questions around suitable remuneration if tasks previously performed at higher pay grades are shifted to lower grades. Donor policies and practices that require disease-specific funding streams and reporting mechanisms can also impede further integration and may need to be reviewed.

The HIV and other health needs of people, especially those living with HIV, are wide-ranging. When possible, services should be integrated or linked to ensure holistic care. This includes the smart integration of HIV prevention interventions across the whole continuum of HIV services (Box 3.11).

Community activism and engagement – and incorporating community health workers to extend public health systems – have been cornerstones of the expansion of HIV treatment and prevention globally. Community-led approaches are especially important for empowering key populations (including sex workers, people who inject drugs, men who have sex with men, prisoners and transgender people) and linking them to HIV services and other health services. According to UNAIDS/WHO estimates, these populations accounted for more than one third of the people acquiring HIV infection in 2015.

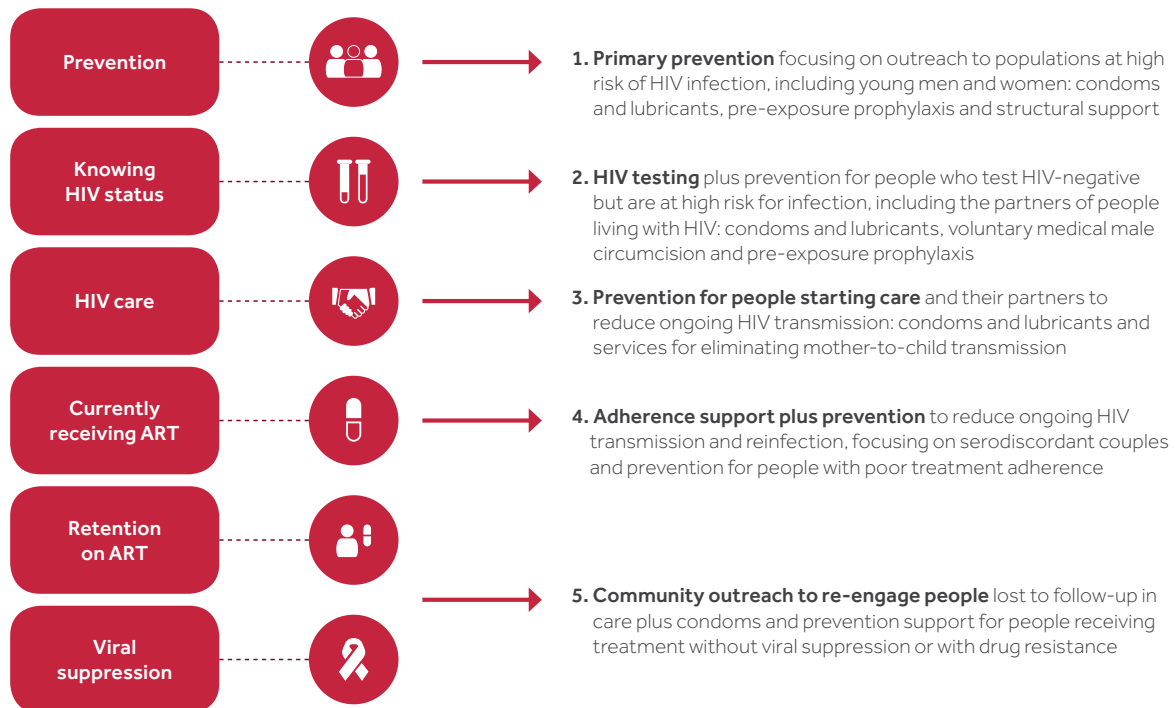
Poor adherence and retention in care not only undercuts the treatment benefits for individuals but also potentially undermines treatment outcomes at the population level since drug resistance becomes increasingly likely.

Important steps have been taken to support the monitoring of early warning indicators of HIV drug resistance to track and improve clinic and programme quality. WHO compiles these data into regular reports, most recently the 2016 global report on early warning indicators of HIV drug resistance (81). The data currently show very high levels of appropriate ARV medicine prescribing, with more than 99% of people receiving treatment using ARV medicine regimens that are in accordance with national or international treatment guidelines. However, retention on ART at 12 months averaged about 74% globally among clinics reporting these data, and this was below the WHO-recommended target of 85%. Treatment adherence also fell below global targets, as estimated by on-time pill pick-up and on-time appointment-keeping (81).

BOX 3.11. MOVING AWAY FROM THE SPLIT BETWEEN PREVENTION AND TREATMENT

Linking prevention services more integrally with testing and treatment services enables the use of every opportunity along the HIV cascade to prevent people from acquiring HIV (Fig. 3.19).

Fig 3.19. HIV prevention needs to be integrated all along the cascade of HIV services



WHO and its partners are closely involved in monitoring the emergence of HIV drug resistance worldwide using standardized protocols and tools (82). The rise in HIV drug resistance has been modest, but there are worrying signs. In recent years, high levels of HIV drug resistance have been observed among people naive to ARV medicines in Angola (16%), Argentina (13%; Argentina ART programme, personal communication, May 2016), Botswana (10%), Cuba (22%), Mexico (15%), Papua New Guinea (16%) and South Africa (14%) (83–87). Even higher levels of resistance have been observed among individuals restarting ART after treatment interruption (88).

Systematic drug resistance monitoring and surveillance, as set out in the WHO HIV drug resistance monitoring and surveillance strategy (89), are therefore essential. More than 25 countries have integrated HIV drug resistance surveillance and monitoring strategies into their national AIDS programmes. Forty-seven countries, including 74% of the Fast-Track countries, have used WHO technical support in the past three years to strengthen their HIV drug resistance surveillance systems and laboratory systems (Table 3.5).



3.3 MAKING FUNDING WORK IN COUNTRIES (SUSTAINABLE FINANCING)

Modelling shows that achieving long-term control of the HIV epidemic requires increasing annual investment in HIV to US\$ 31.9 billion in 2020 before decreasing gradually to US\$ 26.2 billion in 2030. (90) In 2015, the resources mobilized for HIV programmes totalled an estimated US\$ 21.7 billion (91). The successful Global Fund replenishment in October 2016 provided an important marker for sustained financial commitment.

Countries are expected to use their HIV funding as effectively and efficiently as possible, including the financial resources received from the Global Fund and PEPFAR, which are the major sources of external funding for most countries with large HIV epidemics.

WHO is working closely with countries to get “more money for health and more health for the money” (Table 3.2). In the past three years, WHO has supported more than 80% of the Fast-Track countries in conducting epidemiological analysis and programme reviews to use this information to develop new and improved national

strategies. Together with UNAIDS, WHO assisted 79 countries, including 94% of the Fast-Track countries, in revising their national HIV strategies between 2013 and 2015 (Table 3.5).

3.3.1 SUPPORTING COUNTRIES IN OBTAINING AND USING GLOBAL FUND AND PEPFAR FUNDING

WHO support to countries for drafting and submitting major grant applications for their HIV programmes is having a major impact. Since 2013, more than 100 countries have drawn on WHO technical support to develop concept notes for their Global Fund grant applications, which has resulted in grants totalling US\$ 2 billion for their HIV programmes. The Technical Review Panel of the Global Fund has reported important improvements in the quality of funding applications received from countries.

Table 3.2. WHO has provided a wide range of vital in-country support for countries to access Global Fund grants, 2014–2015

	African Region	Region of the Americas	South-East Asia Region	European Region	Eastern Mediterranean Region	Western Pacific Region
Epidemiological analysis	6	3	1	5	1	6
Programme reviews	7	8	1	11	4	4
Programme and financial gap analysis	8	5	1	2	1	5
Strategic plan development	9	5	1	4	5	3
Country dialogue for joint TB and HIV efforts	12	13	1	4	1	6
Grants Approvals Committee and Technical Review Panel clarifications	2	2	1	5	1	2

Source: WHO programme data.

Savings in the procurement of HIV drugs and other commodities and the guidance laid out in WHO's consolidated guidelines are enabling countries to use their HIV funding as effectively and efficiently as possible (Box 3.12). Innovating service delivery and using data to target and tailor services are opportunities to bolster efficiency, as is PEPFAR's country operational plan process, which guides annual PEPFAR investments. WHO is among the partners contributing to that inclusive process, and this collaboration is credited with improving the efficiency and alignment of HIV activities in countries.

Meanwhile, WHO's participation in the Global Fund's Implementation through Partnership project is enabling 20 targeted countries to remove hindrances blocking the absorption and use of grants.⁷ The disbursement of HIV funding has been streamlined in several countries (Box 3.13), and the grant absorption rate has improved by almost 50% in the 20 targeted countries.

Working with countries, WHO also works to focus funding on impact and supporting the funding model of the Global Fund, as shown in Zimbabwe (Box 3.14).

BOX 3.12. UKRAINE ENTERS A NEW TREATMENT ERA

In Ukraine, more than 60 000 people were receiving ART in 2015, but high procurement costs for ARV medicines have limited further expansion of HIV treatment programmes.

Ukraine's decision to adopt the "treat all" recommendations has highlighted another challenge: reducing the number of ART regimens in use and increasing both the effectiveness and efficiency of the country's treatment programme. In April 2016, a national meeting on HIV treatment brought consensus on a new strategy for optimizing ART.

The country is now using technical support from WHO to update its national ART protocols and to take advantage of existing though neglected options for reducing ARV medicine costs, such as simplified, standard first-line regimens, less expensive generic drugs and simplified approaches to clinical monitoring.

These adjustments are expected to boost both the impact and sustainability of Ukraine's treatment programme. Early indications are promising. A three-fold increase in domestic funding has been pledged for ARV medicine procurement in 2017. The procurement of costly protease inhibitors has already declined, and patent protection for an important fixed-dose combination has been lifted, opening the way for procuring generic ARV medicines at one quarter of the previous unit cost.

⁷ Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Ghana, Guinea, India, Kenya, Malawi, Mali, Mozambique, Niger, Nigeria, Pakistan, South Africa, South Sudan, Uganda and United Republic of Tanzania.

BOX 3.13. SPEEDING UP GRANT IMPLEMENTATION IN THE DEMOCRATIC REPUBLIC OF THE CONGO

The Democratic Republic of the Congo faces a dynamic and challenging HIV epidemic. An estimated 370 000 [290 000–460 000] people were living with HIV in 2015 in this vast country, and only about one third (33% [26–40%]) were receiving HIV treatment.

Among the hindrances undermining more rapid progress are procurement and supply management difficulties (including stock-outs and unreliable distribution systems), delays in disbursing funding and low funding absorption rates (low expenditure compared with the allocated budgets). These are not unusual problems: the Global Fund launched its Implementation through Partnership project in 2015 precisely to help countries resolve these kinds of difficulties.

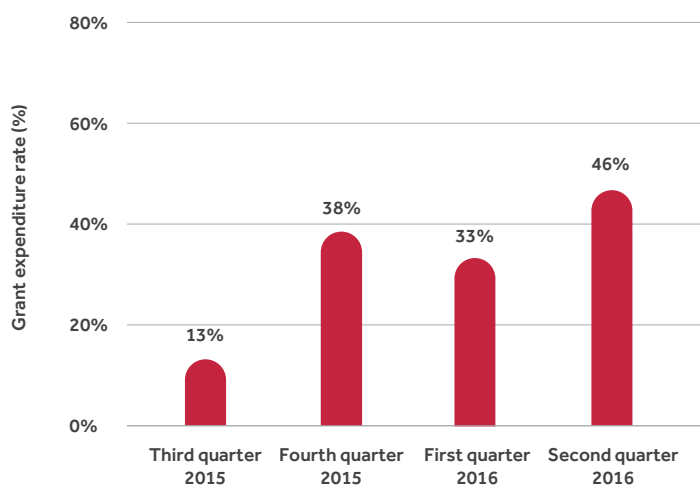
WHO is acting as an Implementation through Partnership lead partner in the Democratic Republic of the Congo. Priority improvements have included resolving procurement and supply

management problems and strengthening the project management capacity of principal recipients to increase funding absorption and grant implementation rates.

A partnership with France Expertise Internationale had identified and removed several administrative blockages that had been holding up the disbursement of funding. This led to the release of large funding portions to the Ministry of Health, as the principal recipient, in mid-2016.

Other support has focused on strengthening the project development capacity of principal recipients to facilitate a speedier release of funds for implementation. Together with implementing partners and grant management, this has more than tripled the funding absorption rates for HIV and TB projects within nine months (Fig. 3.20). The "Implementation through Partnership" support is ongoing and is expected to foster further improvement in implementing HIV and other Global Fund grants in the Democratic Republic of the Congo.

Fig. 3.20. Absorption rates of Global Fund grants in the Democratic Republic of the Congo have improved markedly



Source: 2016 Global Fund portfolio statement note.

BOX 3.14. MOBILIZING FUNDING TO INCREASE IMPACT IN ZIMBABWE

Zimbabwe is among many countries working hard to increase domestic funding for the HIV response. Despite these efforts, external grants are crucial for Zimbabwe's HIV response, especially for accelerating its treatment programme, which is currently shifting to the "treat all" approach. The Global Fund is the country's largest contributor of HIV funds.

Zimbabwe, with technical support from WHO, compiled its first grant concept note under the Global Fund "new funding model", a process that included a comprehensive programme review and a new national strategic plan. This led to approval of a US\$ 500 million grant. In 2015 and 2016, Zimbabwe developed an incentive funding note and a bridging concept note to address potential funding gaps ahead of the next grant implementation phase (set for early 2018). Zimbabwe is using these grant allocations to strengthen other aspects of the health system, laboratory systems, healthcare worker capacity and healthcare worker retention.



3.3.2 ENSURING RELIABLE ACCESS TO HIV COMMODITIES

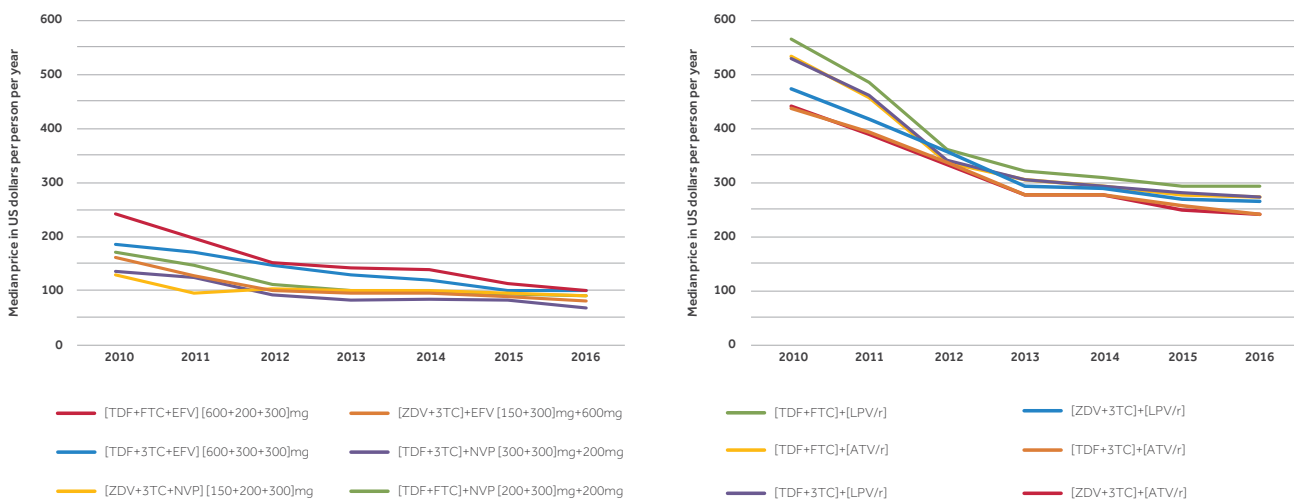
A prevent HIV and test and treat all approach requires uninterrupted supplies of increasing quantities of quality-assured HIV-related medicines, diagnostics and other commodities. By prequalifying key HIV commodities, WHO adds an important layer of quality control that guides procurement decisions and enables countries to rapidly adopt new technologies. In recent years, WHO has prequalified 251 finished pharmaceutical products for treating HIV-related conditions, 29 active pharmaceutical ingredients, more than 30 diagnostic products and 2 male circumcision devices.

Almost 40 countries, including 47% of the Fast-Track countries, drew on WHO technical support in the past three years to strengthen their procurement and supply management systems (Table 3.5). These improvements are vital to ensure reliable supplies of ARV medicines and other HIV commodities, which in turn supports treatment adherence and reduces the emergence of HIV drug resistance. Among the 1150 clinics monitoring drug stock-outs, 36% experienced at least one drug stock-out of routinely dispensed ARV medicines during the previous reporting year. The WHO-recommended target is zero drug stock-outs (81).

The prices of both first- and second-line ART regimens have continued to fall in the past five years (Fig. 3.21). Sustaining this trend is crucial for further scaling up HIV treatment. Preliminary data for 2016 suggest that the price reductions for first-line regimens should continue, with these regimens expected soon to cost less than US\$ 100 per person per year. The price of second-line regimens also fell in 2011–2015 but was still about three times higher than for first-line regimens (92).

Working with partners, WHO manages the Global Price Reporting Mechanism and the Regulatory Status Database, which countries use for price negotiations and logistical planning. Countries also use technical and other support from WHO to devise price reduction strategies and negotiate differential pricing arrangements with manufacturers, including by applying the flexibilities of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement.

Fig. 3.21. Prices are still falling, but second-line ART costs three times more than first-line ART



Source: WHO Global Price Reporting Mechanism.



3.4 USING DATA AND ANALYSIS FOR FOCUS AND IMPACT (THE “WHO” AND “WHERE”)

Countries require reliable strategic information systems to focus and improve their HIV and other health programmes. Partnering with PEPFAR and the United States Centers for Disease Control and Prevention, UNAIDS and UNICEF, WHO has developed normative guidance and provided technical support to almost 80% of the Fast-Track countries and at least 70 countries in all regions in the past three years to carry out epidemiological analysis and programme reviews. These countries include Côte d’Ivoire, Democratic Republic of the Congo, Lesotho, Mozambique, South Africa and the United Republic of Tanzania.

The enhanced collection and use of nuanced strategic information is therefore a vital tool for achieving greater impact in HIV programmes. WHO has provided capacity building support to 80 countries in the use of the consolidated strategic information guide for HIV in the health sector (18). These guidelines, which WHO published in 2015, set out an HIV surveillance agenda for collecting and analysing:

- HIV prevalence (and incidence) data that is granular and disaggregated to the local level, by age, sex and population;
- key population data that inform programme and national estimates;
- HIV case reporting and facility-level data to determine service coverage and assess links from prevention through treatment and care; and
- data on HIV-related mortality and HIV incidence, including modelling and estimation approaches and programme impact reviews.

The guidelines also aim to strengthen capacity to use multiple, large data sets from various sources, including surveys, health facilities and social media for advocacy, programme improvement and impact assessment. Countries are using the indicators and methods set out in the guidelines to conduct detailed cascade analysis to pinpoint gaps and improve programmes.

The same partnership supported service cascade analysis in 85% of the Fast-Track countries and 58 countries worldwide to identify gaps in service delivery and uptake at the subnational and local levels. It also helped to strengthen patient monitoring systems in 76% of the Fast-Track countries and 67 countries overall to improve HIV treatment linkage and retention (Table 3.3).

Tracking the performance of HIV services and making prompt improvements requires strong, up-to-date monitoring and evaluation methods. More than three quarters of the Fast-Track countries have used WHO technical support to improve the collection, linking and use of data on HIV testing, care and outcome. This work, which is benefiting from close collaboration with PEPFAR, the United States Centers for Disease Control and Prevention and the Bill & Melinda Gates Foundation, is facilitating several improvements, including shifting to electronic reporting systems and using unique identifiers to improve individual care.

Table 3.3. WHO provides wide-ranging technical support to improve the use of data in HIV programmes

Support area	Countries supported	Percentage of Fast-Track countries supported
Epidemiological analysis	72	79%
Patient monitoring and case reporting	67	76%
Cascade analysis	58	85%
Programme reviews	70	82%

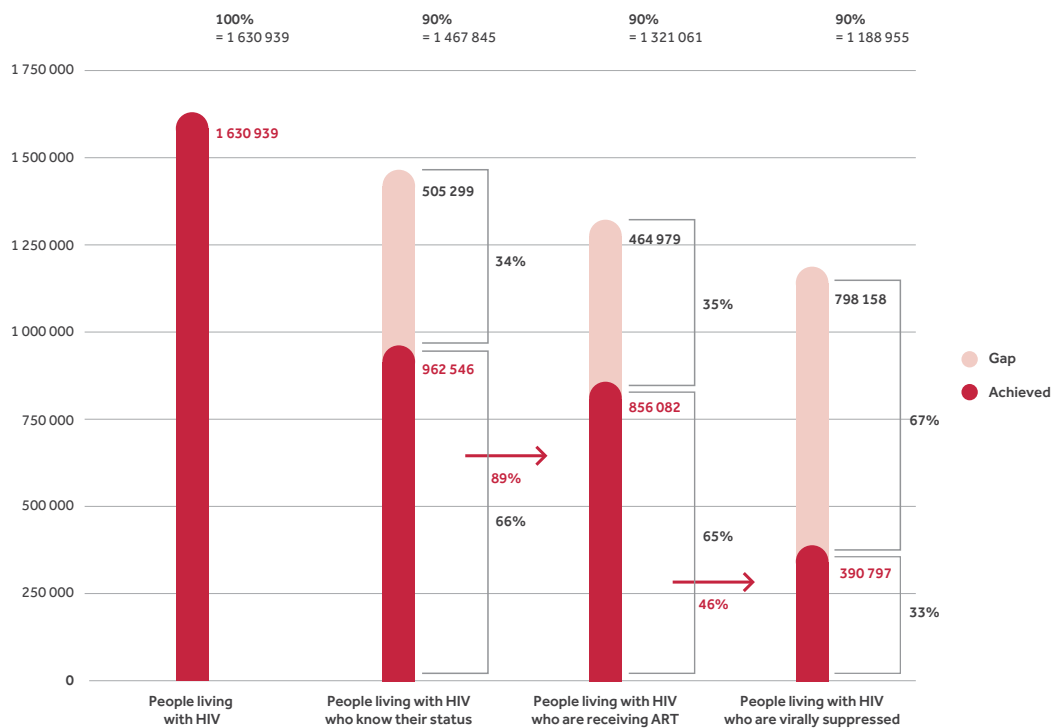
Source: WHO 2016 survey (WHO HIV Country Intelligence Tool).

Countries are increasingly collecting and using data to allocate resources and focus interventions in areas and populations where the need is greatest. In Haiti, for example, such an exercise has revealed fluctuating demand for HIV services at the commune level. The country is using data gathered at that level to align resources and the provision of services with the migration patterns of people living with HIV.

Kenya's national cascade analysis (Fig. 3.22), meanwhile, shows a high percentage of people living with HIV indeed

initiate ART (89%), but major gaps exist in diagnosing people living with HIV and in retaining those who start ART in care so they can achieve viral suppression. Kenya is now doing similar analysis at the county level, using data that are updated every month to identify local-level gaps and set appropriate local targets for reaching people with HIV testing and treatment. Similarly, Myanmar is using WHO technical support to assess epidemiological data at the township level and is deploying the information to refocus its national service delivery strategy (Box 3.15).

Fig. 3.22. Kenya's HIV cascade analysis shows strong linkage to care amid major gaps, 2015



Source: National AIDS & STI Control Programme (NAS COP), Ministry of Health, Kenya.

BOX 3.15. USING DATA TO TAKE HIV SERVICES WHERE THEY ARE NEEDED THE MOST IN MYANMAR

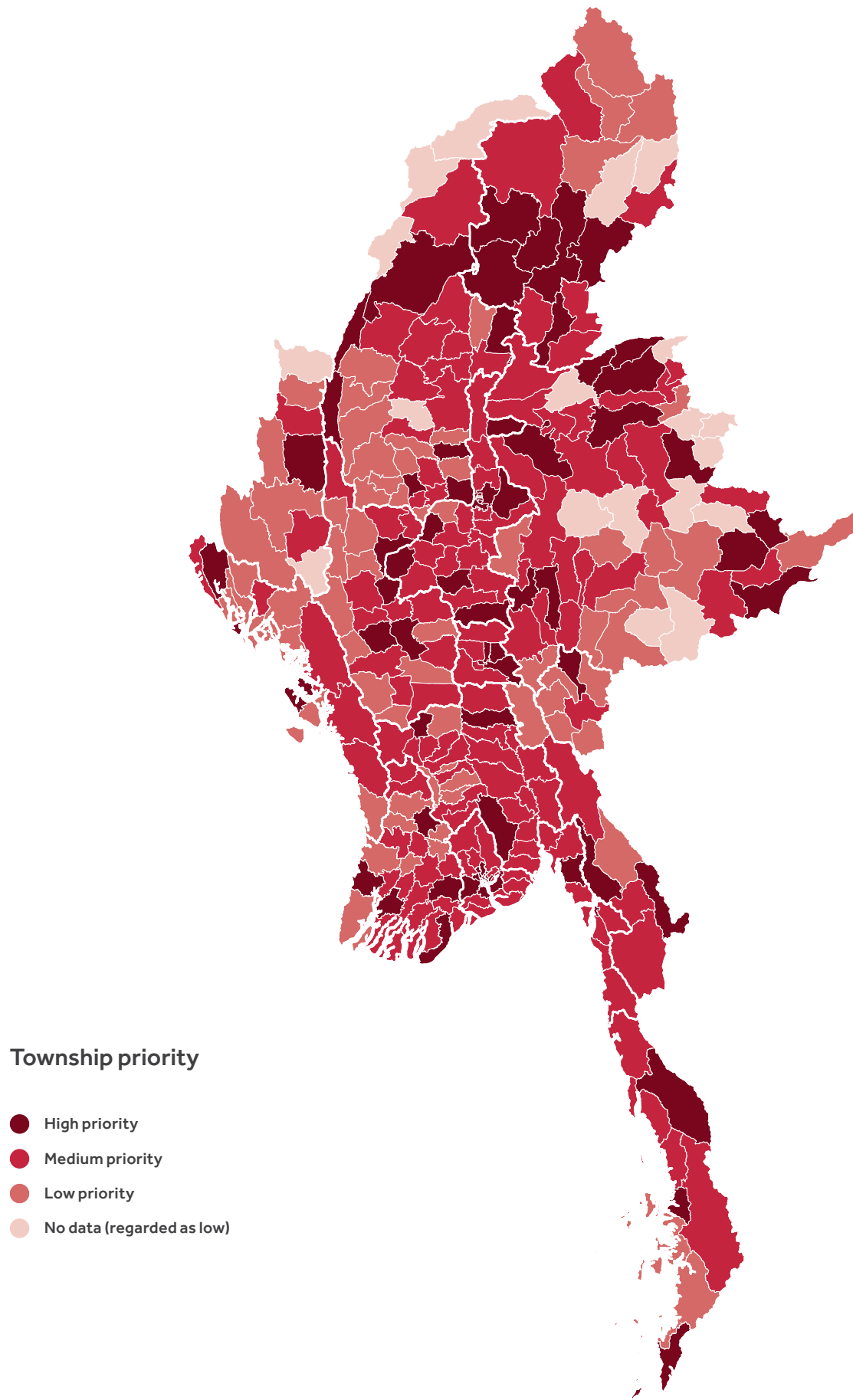
According to UNAIDS/WHO estimates, Myanmar reduced the number of people acquiring HIV infection from 15 000 [14 000–17 000] to 12 000 [11 000–13 000] in 2010–2015 and almost doubled the number of people receiving ART in 2012–2015, from about 54 000 to 106 500. Despite this improvement, access to HIV services has remained uneven, especially for key populations, and there is concern that HIV resources are not being focused where they can have the greatest impact.

In 2015, WHO and a group of technical partners (including UNAIDS, the United States Centers for Disease Control and Prevention, and ICAP at Columbia University) worked with Myanmar's National AIDS Programme to lead the review of its previous national strategic plan on HIV and to assist in developing a new plan for 2016–2020. Drawing on data from surveillance studies, programme reviews and field research, service delivery performance was assessed, with the involvement of all key stakeholders. The evaluation identified major variations, including geographical disparities, in the need for services.

WHO then supported the government in developing criteria for categorizing Myanmar's 330 townships according to their respective epidemic burdens. Effective approaches for delivering services to priority populations were identified for each category. Myanmar's National AIDS Programme has adopted the framework featured in the new national strategic plan that was used to develop Myanmar's Global Fund concept note in 2016. This concept note has been approved, with the Global Fund's Technical Review Panel commending its innovative service delivery approach.

The Ministry of Health and Sports is now applying these service delivery approaches in programme sites across the country. Aligning the allocation of resources and provision of services with actual local realities is expected to boost both the impact and sustainability of Myanmar's HIV programme.

Fig. 3.23. Myanmar is using local-level data to focus its HIV programmes at the township level



Source: Oo (93).



3.5 PUTTING INNOVATIONS TO WORK (THE FUTURE)

In addition to sustaining effective HIV services, countries need to introduce innovative and promising approaches that can strengthen their HIV programmes. WHO works closely with UNITAID, a funding mechanism that raises new money for global health to support the rapid identification and introduction of innovations, such as pre-exposure prophylaxis and HIV self-testing, new treatment options as well as ongoing research into the development of effective microbicides and HIV vaccines. The two organizations also collaborate to ensure that countries can rapidly access affordable, high-quality treatments for comorbidities such as viral hepatitis.

WHO is promoting the use of pre-exposure prophylaxis as an important component of HIV prevention packages in collaboration with UNITAID. WHO-supported demonstration projects in India, Kenya, Mozambique and Nigeria have shown very strong acceptability for short-term pre-exposure prophylaxis and are now assessing actual pre-exposure prophylaxis uptake in specific key populations. This and other compelling evidence of the effectiveness and acceptability of pre-exposure prophylaxis led WHO to recommend in 2015 that it be

offered to all population groups who are at substantial risk of HIV infection (5). About 35 countries have adopted this recommendation and WHO is working with several health ministries to determine how pre-exposure prophylaxis would best fit into their prevention programmes. WHO is developing guidance to support the implementation of these decisions.

HIV self-testing, as recommended in WHO's 2016 testing guidelines update (48), is an important new option for reaching greater numbers of people living with HIV who otherwise may not take an HIV test. In addition to issuing guidance for the use of this approach (48), WHO is supporting a major UNITAID-funded self-testing project in Malawi, Zambia and Zimbabwe to determine how best to distribute self-test products effectively, ethically and efficiently, with adequate post-test support services (Box 3.16).

In addition to those kinds of innovations, it is essential that the search for effective microbicides and vaccines continue. The development and use of an effective vaccine, even one with partial efficacy, would take the HIV response to another level.

BOX 3.16. WHO, UNITAID AND PSI ARE PREPARING THE GROUND FOR HIV SELF-TESTING

The Fast-Track targets call for diagnosing at least 90% of people living with HIV by 2020, considerably more than the estimated 60% of people with HIV who currently are aware of their HIV-positive status. Countries are exploring ways to rapidly increase the access to and uptake of HIV testing services, especially among populations that are at high risk for HIV but that may be unable or reluctant to use current HIV testing services. Among the promising approaches is HIV self-testing.

Since WHO convened the first global consultation on self-testing in 2013, numerous studies have confirmed the feasibility and acceptability of this approach in different populations and settings (94,95). WHO has played a central role in reviewing and synthesizing the available evidence. In 2014, it presented global guidance encouraging countries to implement HIV self-testing in the context of operational research. By October 2016, 22 countries had adopted national HIV self-testing policies, including 11 Fast-Track countries, and several others were developing policies. WHO is examining the ethical and other considerations for the wide use of self-testing and is supporting a major self-testing initiative in southern Africa to help maximize the market potential for new HIV self-testing technologies. It is releasing the first guidelines and a pre-qualification pathway for HIV self-testing in December 2016.

3.6 HOW WHO SUPPORTS THE HEALTH SECTOR RESPONSE

WHO is working closely with partners to provide a continuum of support to countries to bring about a fully fledged health sector response. The preceding sections have already provided examples of WHO's contributions and support to countries. More broadly, WHO's support links global evidence and guidelines with country policies and actions, spanning the entire HIV service cascade. In addition to regularly updating core HIV guidelines and standards, WHO provides support for:

- convening partners and advocating for public health action;
- validating and rapidly adopting innovative technologies and approaches and integrating them into policies and services;
- adapting and implementing global recommendations captured in WHO guidelines;
- developing national policies and updating national strategic plans;
- building the capacity of institutions, communities and networks in countries to scale up high-quality services and report on the results;
- enhancing monitoring and evaluation systems for cascade analysis and programme reviews that assess the coverage, impact and equity of HIV services;
- improving national investment cases to mobilize funding, enhancing efficiency, reducing costs and supporting the development of major funding applications, including to the Global Fund; and
- overhauling health funding systems to limit the financial hardship of individuals and communities.

Core WHO recommendations have been extensively taken up and implemented worldwide, including for treating adults and children living with HIV, preventing HIV transmission from mothers to children and protecting the lives of mothers, expanding HIV testing, scaling up services for key populations and enhancing the quality and use of strategic information. Overall in 2016, more than 100 countries participated in seven WHO-led capacity-building workshops for adopting and using new WHO guidelines (Table 3.4).

WHO focuses on country results, as shown by the policy changes, service delivery and impact described in this report. WHO's extensive presence in all regions – through offices in 150 countries and territories and six Regional Offices – enables it to meet requests for support from Member States and promote policy changes across the world.

Table 3.4. Capacity-building workshops are supporting the implementation of key WHO guidelines, 2016

Regions	Participating countries	Participants	Location and date
Americas	21	120	Trinidad and Tobago March 2016
Americas	15	52	Colombia April 2016
Anglophone Africa, Eastern Mediterranean	16	130	South Africa May 2016
Africa, Eastern Mediterranean	16	67	Cameroon June 2016
Lusophone Africa	5	70	Mozambique June 2016
South-East Asia, Western Pacific, Eastern Mediterranean	23	130	Thailand August 2016
Europe	12	70+	Belarus September 2016

At the same time, it focuses much of its specialized HIV support in areas where guidance and assistance is most crucial and most likely to have the greatest impact: the Fast-Track countries. It provides the support in several ways, including through hands-on mentoring, training, technical briefings, workshops and support for policy changes and service delivery in countries.

In the past three years, all regions, including the vast majority of Fast-Track countries, have made use of WHO support at country level for a focused and comprehensive HIV health sector response (Table 3.5). There are major gaps and challenges, but WHO is committed to sustained country support to ensure that the comprehensive HIV health sector strategy, policy changes and Fast-Track targets are implemented and achieved by 2020.

Table 3.5. WHO provided countries with wide-ranging, significant technical support for their HIV programmes in the past three years

Support area	Fast-Track countries (total 34)	Percentage of Fast-Track countries	WHO region						Total (out of 95 countries reporting)
			African Region	Region of the Americas	South-East Asia Region	European Region	Eastern Mediterranean Region	Western Pacific Region	
Testing policies	30	88%	31	9	5	12	7	6	70
Treatment policies	33	97%	34	10	5	11	15	6	81
Optimization of service delivery	28	82%	27	7	5	8	6	6	59
Service packages for key populations	19	56%	21	6	3	1	5	6	42
Innovative prevention packages	20	59%	21	7	4	1	1	4	38
Epidemiological analysis	27	79%	31	7	5	10	12	7	72
Patient monitoring and case reporting	26	76%	24	9	5	12	11	6	67
Cascade analysis	29	85%	24	10	6	6	7	5	58
Procurement and supply chain management	16	47%	19	7	3	2	5	3	39
Monitoring of HIV drug resistance	25	74%	25	8	4	4	1	5	47
Expansion of viral load testing	19	56%	19	7	4	7	1	5	43
National strategies	32	94%	32	10	6	9	15	7	79
Programme reviews	28	82%	31	9	5	11	7	7	70
Funding applications	30	88%	33	6	5	9	11	4	68
Retention	20	59%	20	7	5	2	6	5	45

Source: WHO 2016 survey (WHO HIV Country Intelligence Tool).

The table reflects data received from 34 of the 35 Fast-Track countries. Significant technical support entailed WHO Country Office staff devoting time and effort that went beyond the usual level of support on an issue; WHO spending funds and other staff costs in support of the work; the hiring of a consultant(s); and/or WHO staff from regional or headquarter levels providing active support.

04

CONCLUSION



The number of people who are diagnosed with HIV and start ART should almost double by 2020, and HIV prevention has to be boosted and integrated at each stage of the health sector response. For that to happen, HIV programmes have to become both more effective and equitable: no one who is at risk for HIV infection can be left behind.

The track record of the HIV response shows that these challenges can be conquered – if countries promptly and successfully address the gaps in their HIV services. That will require the full force of the health sector response to HIV, using data for focus and impact, making funding work in countries and ensuring that quality services and innovations reach people in need.

The HIV response has progressed through adaptation and improvement. Countries are now shifting their treatment policies towards the “treat all” approach and are adapting their testing, key population and strategic information policies to support these changes. Innovations are being introduced to improve the effectiveness and quality of treatment and to strengthen service delivery. Integrating prevention into every stage of the service cascade is a priority.

WHO is working with a wide range of partners to support countries to reach the Fast-Track targets, including networks of people living with HIV and civil society organizations, local and international nongovernmental organizations, development agencies and private foundations (notably PEPFAR, the Global Fund, Médecins Sans Frontières, the Bill & Melinda Gates Foundation and UNITAID).

WHO provides a continuum of support that ranges from global guidelines for HIV prevention, testing, treatment, care and strategic information, to capacity-building and country support for implementing policies and getting results. It also works closely with health ministries, alongside other partners, to adapt policies and make funding work as effectively as possible in countries. Together we have the means to decisively reduce HIV incidence and mortality and to build healthcare systems that can achieve the goal of ending the AIDS epidemic.

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