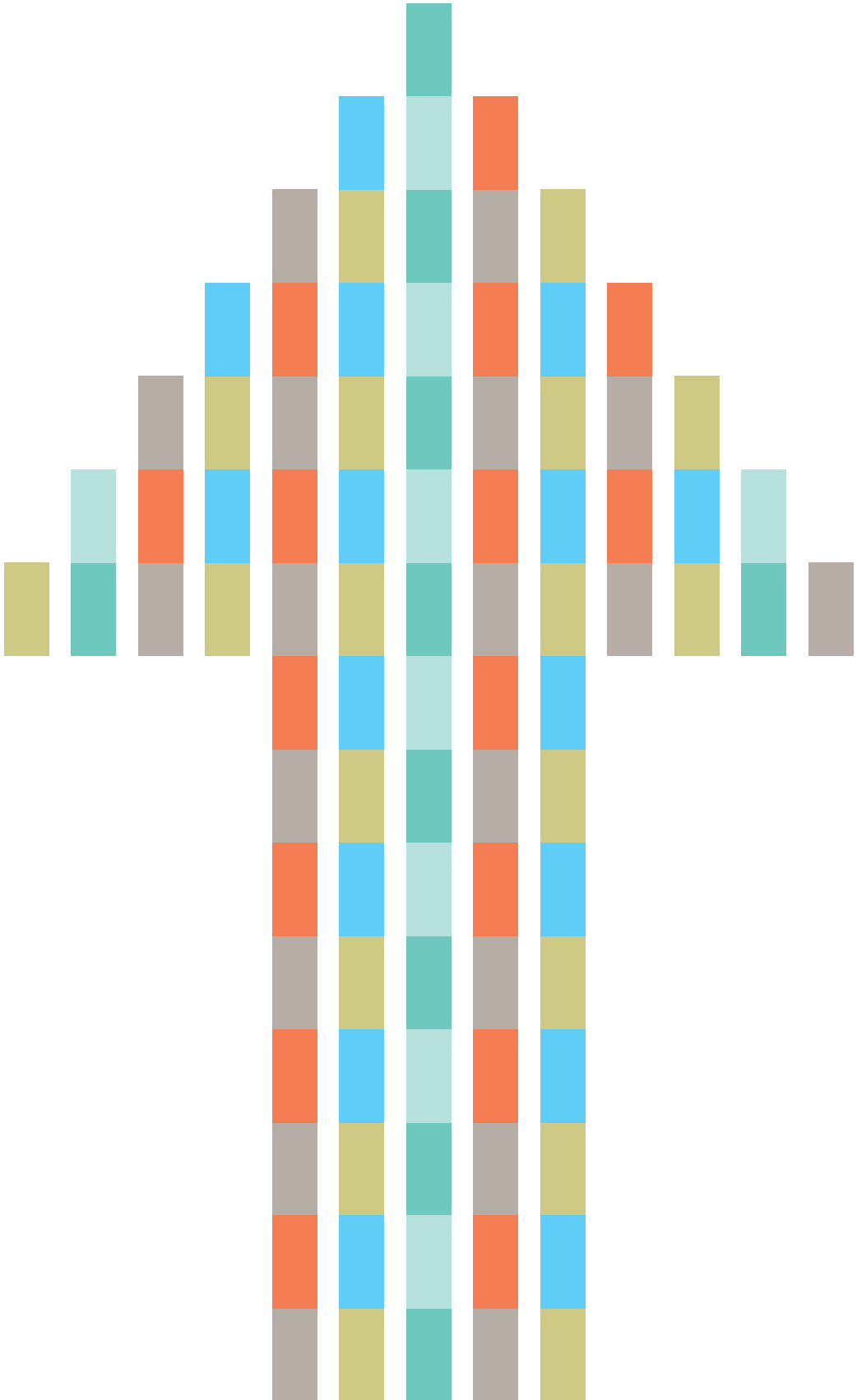
FAST-TRACK UPDATE ON INVESTMENTS NEEDED IN THE AIDS RESPONSE

UNAIDS 2016 | REFERENCE

Extraordinary achievement will require
an extraordinary and urgent effort.



Summary

The world has pledged within the Sustainable Development Goals to end the AIDS epidemic as a public health threat by 2030. Such an extraordinary achievement will require an extraordinary and urgent effort—fully funding and front-loading investment in comprehensive HIV responses and intensifying the focus on the populations and locations in greatest need. The UNAIDS 2016–2021 Strategy elaborates this Fast-Track approach. Adopted by the UNAIDS Programme Coordinating Board in October 2015, the Strategy contains HIV service coverage targets that need to be achieved by 2020 to establish the momentum necessary to overcome one of the largest public health threats in human history by 2030.

Ahead of the 2016 United Nations General Assembly High-Level Meeting on Ending AIDS, UNAIDS has updated the estimated investment needed to reach the Fast-Track targets to reflect the most recent scientific evidence on the epidemic and response, including adopting efficiency measures and cutting-edge tools. These new estimates show that domestic and international investment in HIV programmes in low- and middle-income countries will need to increase by about one third, from an estimated US$ 19.2 billion available in 2014 to US$ 26.2 billion by 2020.* After this peak, resource needs steadily decrease to US$ 22.3 billion in 2030. These investment needs include a portion of the US$ 13 billion for the 2017–2019 Replenishment of the Global Fund to Fight AIDS, Tuberculosis and Malaria.

The cost of inaction is staggering. Failure to Fast-Track would translate to an additional 17.6 million HIV infections globally and an additional 10.8 million AIDS-related deaths globally between 2016 and 2030.

Meeting the Fast-Track targets by 2020 will establish the momentum required for ending AIDS by 2030—reducing the annual number of people newly infected with HIV globally by nearly 90% compared with 2010 and reducing the annual number of people dying from AIDS-related causes globally by about 79% compared with 2010.

Countries' efforts to Fast-Track appear to be working. Between the end of 2012 and the end of 2014, HIV treatment coverage increased by 3.6 million (37%), and the annual coverage of services to prevent mother-to-child transmission increased by 140 000 (16%) in low- and middle-income countries. In the same time period, annual coverage of voluntary medical male circumcision increased by 1.4 million (82%) in 14 priority countries. These achievements have improved the global outlook on rates of new HIV infections and AIDS-related deaths. Efficiency measures have lowered the cost of antiretroviral therapy and the prevention of new infections have reduced the number of people in need of treatment, which has in turn lowered the overall estimates of the resources needed.

Scientific research and analysis of programme data have also changed various parameters in the model used to generate UNAIDS estimates, resulting in improved estimates of past and future AIDS-related deaths that are lower than previous estimates. An annex to this report describes in more detail the changes in the model for estimates.

* These estimates of investment needs are for low- and middle-income countries as of 2015. They do not include several countries that moved from upper-middle-income to high-income classification in the World Bank's 2015 review of countries' income levels.

A Fast-Track approach is critical to establishing the momentum necessary to reach the Sustainable Development Goal target to end the AIDS epidemic as a public health threat by 2030.

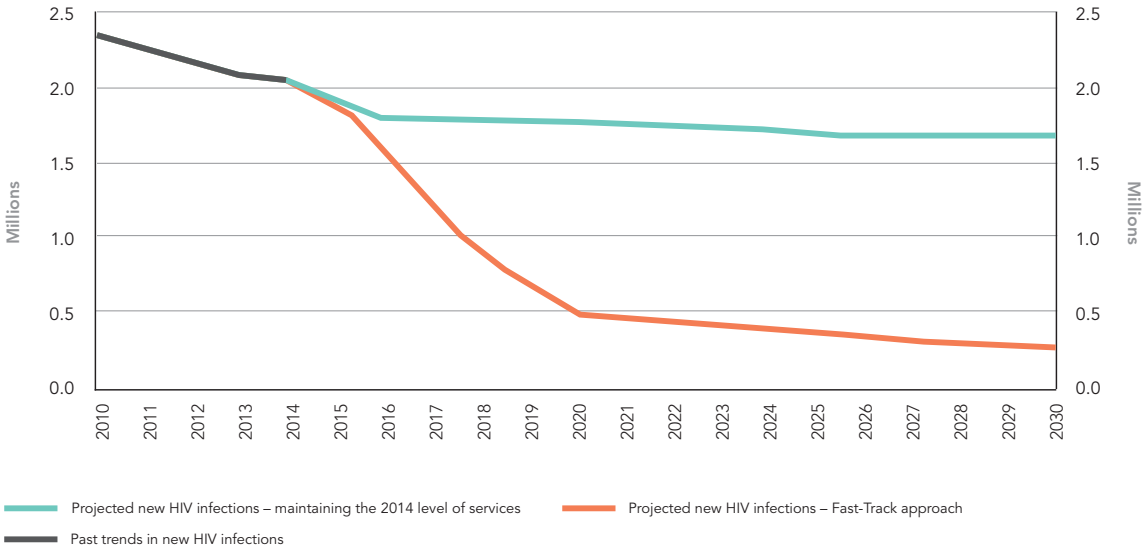
Fast-Track versus business as usual

Fast-Track is a comprehensive approach implemented by health systems working in close collaboration with civil society to deliver evidence-informed, high-impact services within an enabling environment that protects individual rights and moves society towards the goal of zero discrimination. Fast-Track is guided at the national level and realized at the local level. It requires cities, towns and communities to take charge of their HIV responses by analysing the nature of their epidemic and then using a location–population approach to focus their resources on the geographical areas and the populations in greatest need.

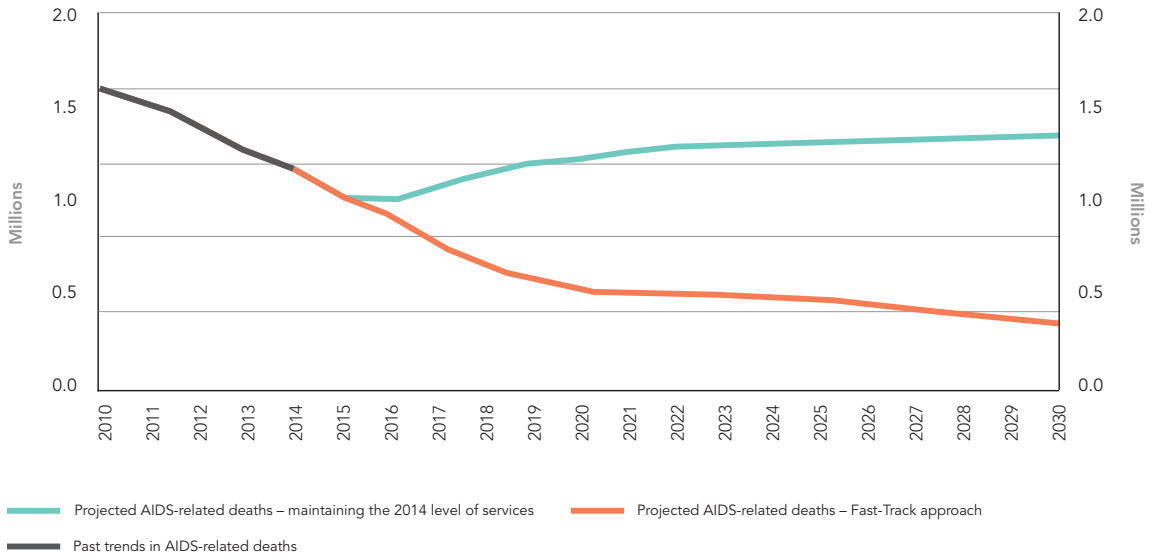
Updated UNAIDS projections reconfirm that a Fast-Track approach is critical to establishing the momentum necessary to reach the Sustainable Development Goal target to end the AIDS epidemic as a public health threat by 2030. A Fast-Track approach will result in a nearly 90% reduction in the annual number of people newly infected with HIV globally and a 79% reduction in the annual number of people dying from AIDS-related causes globally from 2010 to 2030. Scientific advances are expected to further push progress to a 90% reduction in AIDS-related deaths.

By comparison, a business-as-usual approach (maintaining the 2014 level of service coverage) will prolong the epidemic indefinitely, and in many countries the epidemic will rebound and grow. Compared with maintaining the 2014 level of HIV services, the Fast-Track approach will avert 17.6 million HIV infections and 10.8 million AIDS-related deaths from 2016 to 2030.

Projected annual number of new HIV infections globally, Fast-Track versus business as usual, 2010-2030



Projected annual number of AIDS-related deaths globally, Fast-Track versus business as usual, 2010-2030

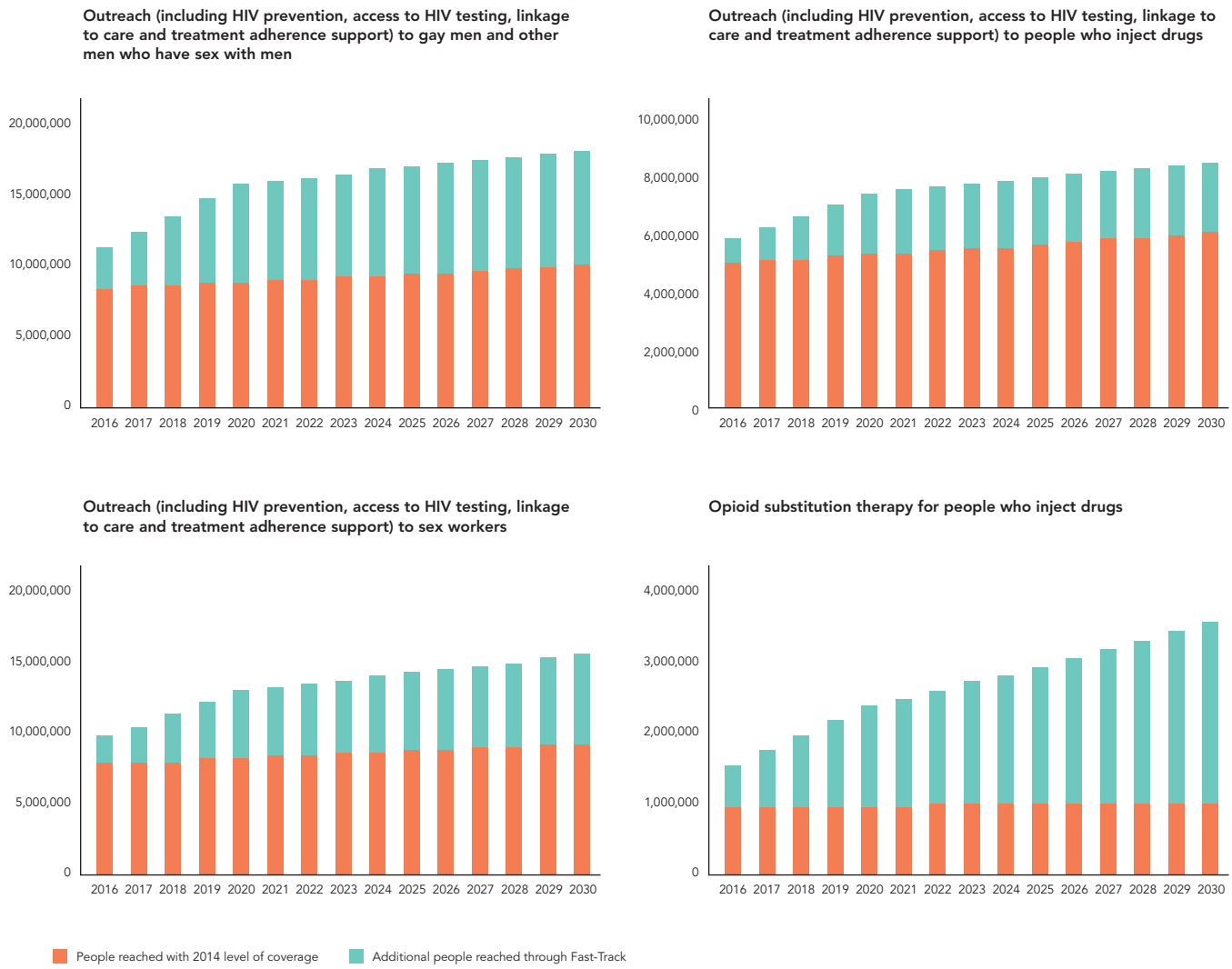


Compared with the impact projections in the December 2014 UNAIDS report *Fast-Track: ending the AIDS epidemic by 2030*, UNAIDS' latest projections include two additional years of programme data that show great increases in coverage of HIV services between the end of 2012 and the end of 2014. HIV treatment coverage increased by 3.6 million (37%), and the annual coverage of services to prevent mother-to-child transmission increased by 140 000 (16%) in low- and middle-income countries. In the same time period, annual coverage of voluntary medical male circumcision increased by 1.4 million (82%) in 14 priority countries.* The result is an improved outlook that is at least in part attributable to increases in service delivery.

Additional changes in the impact projections are due to changes in various parameters in the model used to generate UNAIDS estimates, based on scientific research and analysis of programme data. For example, a proportion of the reduction in past and future AIDS-related deaths results from improved understanding of the rate of disease progression among people living with HIV and also a reduction in the estimated number of people newly infected with HIV during the peak of the epidemic.

* Botswana, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, South Africa, Swaziland, United Republic of Tanzania, Uganda, Zambia, and Zimbabwe

Fast-Track service delivery projections in low- and middle-income countries, select programme areas and select populations

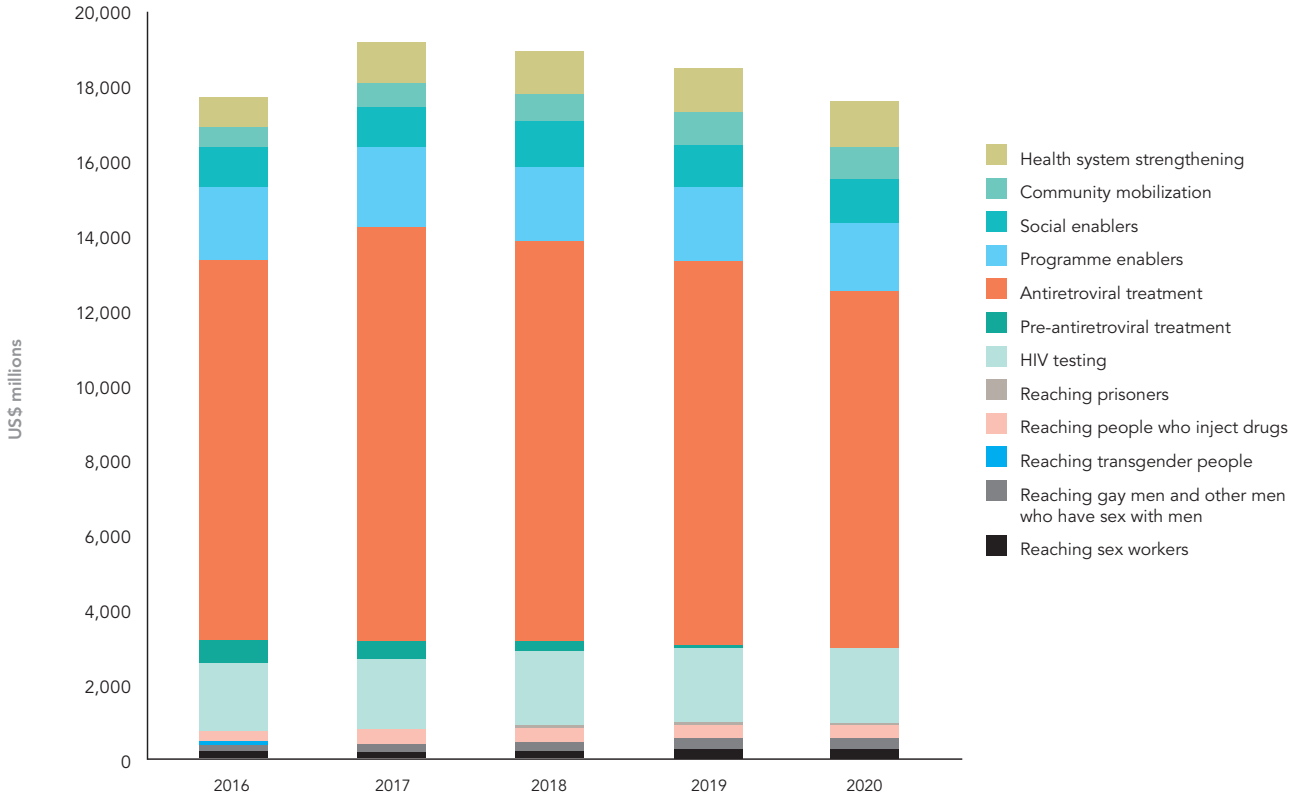


Beyond these adjustments in the model, scaling up high-impact HIV treatment and prevention programmes since the end of 2012 has changed the trajectory of new HIV infections and AIDS-related deaths. Fast-Track appears to be working. Staying on track will require additional focus on community-based service delivery models. Compared with the 2014 level of service delivery in low- and middle-income countries, Fast-Track will need to provide antiretroviral therapy to an additional 12 million people living with HIV in 2020. Finding these people and initiating treatment will require outreach to key populations at higher risk of HIV infection with a comprehensive package of HIV services, including HIV prevention, access to HIV testing, linkage to care and treatment adherence support. Under Fast-Track, this comprehensive package will be provided to an additional 6.9 million gay men and other men who have sex with men, 2.2 million people who inject drugs and 4.9 million sex workers.

Front-loading investment

The Fast-Track approach requires front-loading investment: a rapid increase in resources allocated to HIV during the next few years to achieve greater long-term gains and reduce the resources needed in the future. From an estimated US$ 19.2 billion available in 2014 for HIV programmes in low- and middle-income countries, investment from all sources will need to increase by about one third to US$ 26.2 billion by 2020. These investment needs include a portion of the US$ 13 billion for the 2017–2019 Replenishment of the Global Fund to Fight AIDS, Tuberculosis and Malaria. After 2020, the vast majority of people living with HIV will have been diagnosed. Because of this and other factors, the resources needed for HIV then steadily decrease to US$ 22.3 billion in 2030.

Resources needed to achieve the 90-90-90 treatment target by 2020



UNAIDS' latest investment projections contain several important changes. The latest estimate of resources available in 2014 is lower than previous estimates because it does not include several countries that have moved from upper-middle-income to high-income status, according to the World Bank's 2015 classification of countries' income levels. Estimates of future investment needs have been affected by several adjustments, including:

- Higher targets for combination HIV prevention services and several other programme areas within the UNAIDS Strategy.
- Adoption of the World Health Organization's *Consolidated guidelines on the use of antiretroviral drugs for treating and prevention HIV infection—what's new,* released in November 2015.
- Efficiency gains caused by further reductions in the prices of antiretroviral medicines and supplies, and a streamlined package of care recommended for stable patients.

The adjustments that cause the greatest effect are the lower prices for antiretroviral medicines and the streamlined package of care, which lower the unit cost of antiretroviral therapy and, in turn, lower overall estimates of the resources needed.††

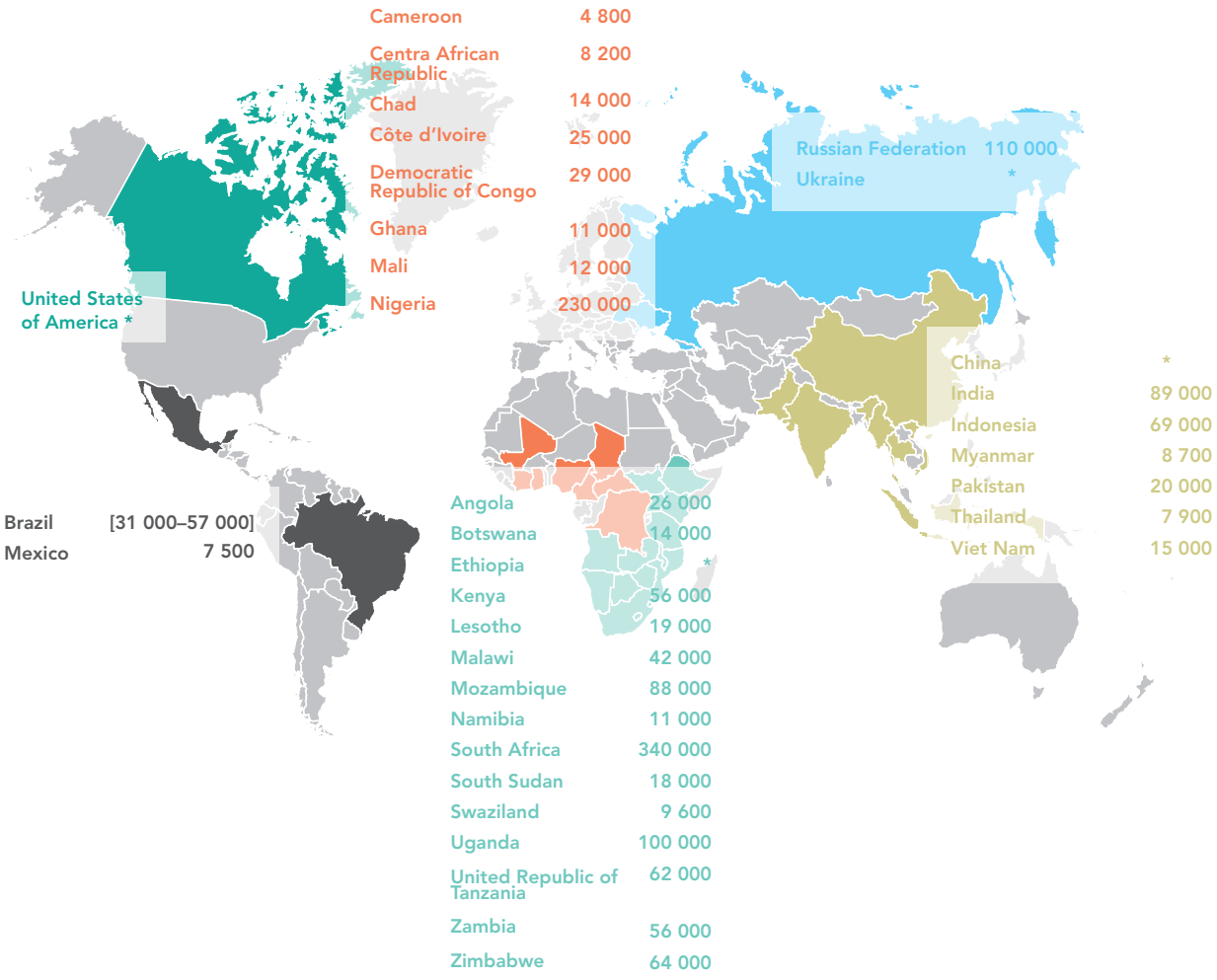
The resources needed to achieve the 90–90–90 treatment target in low- and middle-income countries will peak in 2017 at US$ 19.3 billion, or 73% of the total investment needs for the year. The resources needed to achieve 90–90–90 then decline to US$ 17.6 billion in 2020, or 67% of the total resources needed, as projected reductions in the cost of antiretroviral therapy are achieved. The estimate of the investment needed to achieve the 90–90–90 target includes a proportion of the total costs required for critical enablers, health system strengthening and outreach to key populations. Outreach services for key populations are critical for both HIV prevention and also for achieving the level of HIV testing required to diagnose 90% of all people living with HIV by 2020.

Investment needs for HIV prevention—including condom promotion, prevention of mother-to-child transmission, pre-exposure prophylaxis, voluntary medical male circumcision and a contribution towards outreach services for key populations—increase from US$ 4.5 billion in 2016 to US$ 7.3 billion in 2020. It is recognized that resources will need to be utilized in locations with higher HIV burden and among populations at greater risk of HIV infection. Unlike HIV treatment, future resource needs for prevention continue to increase as the sizes of key populations continue to increase.

†† The previous resource needs estimate included in the UNAIDS 2016–2021 strategy was US$ 30 billion in 2020.

Greater investment in civil society and community-based service delivery is critical to the Fast-Track approach. Outreach to key populations in low- and middle-income countries for HIV prevention and linkage to HIV testing and treatment should grow to about 7.2% of total investment by 2020, and the estimated resources needed for community-based delivery of antiretroviral therapy should grow to about 3.8% of total investment. By 2020, investment in community mobilization should increase three-fold to 3% of total resources in low- and middle-income countries to help civil society represent the interests of communities affected by HIV, and to drive ambition, funding and equity in the AIDS response. Social enablers—including advocacy, political mobilization, law and policy reform, human rights, public communication and stigma reduction—should reach 8% of total expenditure by 2020.

Thirty-five countries account for 90% of new HIV infections globally, 2014



* Data not available at the time of publication.

A shared responsibility

Ending the AIDS epidemic is a shared responsibility, requiring increases in both international and domestic investment in the AIDS responses of low- and middle-income countries. Particular focus is required on the 33 low- and middle-income countries that are among the 35 countries that account for 90% of the people newly infected with HIV.

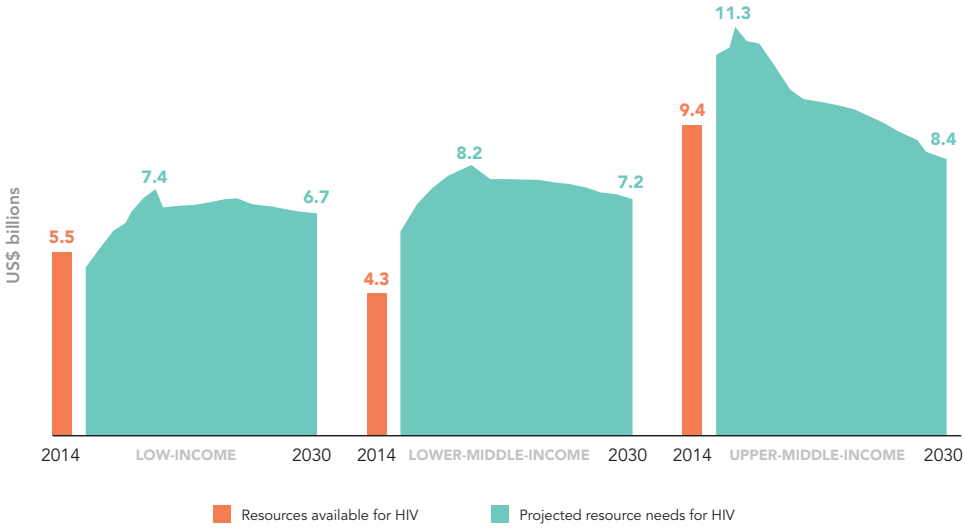
Low-income countries require a 35% increase in HIV resources, from US$ 5.5 billion available in 2014 to a peak of US$ 7.4 billion needed in 2020.

In lower-middle-income countries, where a large percentage of the world's people living with HIV are located, investment needs to increase by 91%, from US$ 4.3 billion available in 2014 to a peak of US$ 8.2 billion needed in 2020.

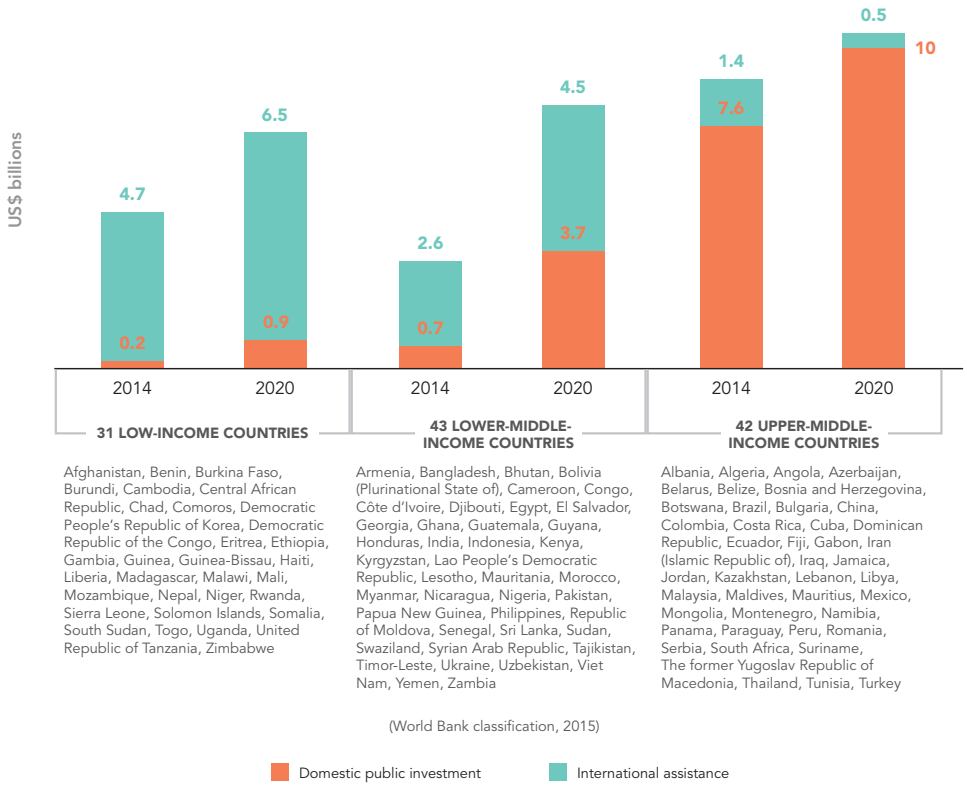
In upper-middle-income countries, which generally have higher unit costs, investment needs peak in 2017 at US$ 11.3 billion, 20% higher than the US$ 9.4 billion available in 2014.

Domestic investment, which nearly tripled from 2006 to 2014, now accounts for nearly 60% of all resources for HIV in low- and middle-income countries. To achieve the Fast-Track targets, domestic investment needs to further increase from 2016 to 2020, reaching US$ 0.9 billion in 31 low-income countries, US$ 3.7 billion in 43 lower-middle-income countries and US$ 10.0 billion in 42 upper-middle-income countries.

Resources available for HIV in 2014 and investment needs for 2016-2030, by level of income in low- and middle-income countries



Domestic public investment and international assistance in low- and middle-income countries, by income level (US$ billions)*



*The 2014 resource availability figures in this graph exclude out-of-pocket spending in low- and middle-income countries.

International assistance should continue to focus on low-income countries, which have lower domestic ability to pay, and priority lower-middle-income countries with high HIV prevalence and large numbers of people living with HIV. The total annual international assistance for HIV will need to increase by at least US$ 2.8 billion compared with 2014 levels. This includes an additional US$ 1.8 billion for low-income countries and an additional US$ 1.9 billion for lower-middle-income countries, while upper-middle-income countries' international assistance reduces. The remaining annual international investment in upper-middle-income countries of US$ 0.5 billion in 2020 is required for countries with a particularly high burden of HIV, and challenges are expected regarding the transition to self-reliance and the provision of services to key populations.

From 2014 to 2020, the share of HIV investment from domestic public sources is proposed to increase from 10% to 12% in 31 low-income countries, from 22% to 45% in 43 lower-middle-income countries and from 84% to 95% in 42 upper-middle-income countries. This proposed proportion of future domestic and international investment is consistent with the Addis Ababa Action Agenda agreed in July 2015 at the United Nations Third International Conference on Financing for Development.

The proposed share of HIV investment from domestic public sources has also been informed by an analysis of fiscal space for 28 of the 33 low- and middle-income countries that are a priority for Fast-Track (*Fiscal space analysis and funding options for the UNAIDS Fast-Track countries*, report prepared for UNAIDS, August 2015). This analysis found that eight low-income countries† currently use an average of 5.6% of domestic public expenditure for health and, of that, 20% for HIV. Recent economic forecasts indicate that these countries are likely to achieve annual economic growth of 6% on average. Assuming that economic growth translates to an increase in public revenue, a small portion of this additional revenue can be used to increase their spending on health to 7% of domestic public expenditure by 2020. The resulting 30% increase in domestic public HIV expenditure exceeds the proposed increase in these countries' domestic share of total investment in their HIV responses (from 10% to 12%). Other low-income countries not included in this analysis have a similar economic outlook and a lower burden of HIV.

A similar analysis of 14 lower-middle-income countries‡ indicates that these countries currently use an average of 8.1% of their domestic public expenditure for health and, of that, 8.6% for HIV. If these countries increase their health spending to the level of the best performer in this group (13% of domestic public expenditure for health and 12% of that for HIV) by 2020, their spending on HIV would more than double, easily achieving the proposed increase in the share of domestic public spending for HIV in lower-middle-income countries (from 22% to 45%).

The six upper-middle-income countries included in the fiscal-space analysis§ currently use about 15% of their domestic public expenditure on health. Five of these countries use an average of 1% of this domestic public expenditure on HIV; South Africa uses 10%. These countries are expected to achieve economic growth of about 3.5% per year, which would almost triple their fiscal space for HIV and cover their proposed 95% share of domestic investment in their HIV responses.

Ending the AIDS epidemic is achievable

Scaling up high-impact HIV treatment and prevention programmes since the end of 2012 has changed the trajectory of epidemic. The Fast-Track approach appears to be working. The latest UNAIDS investment projections confirm that a combination of fully funding and front-loading investment in combination with improving coverage and quality of HIV services can end AIDS as a public health threat by 2030. Increased investment, efficiency gains and programme scale-up achieved within the last few years already appear to be having an important effect on the trajectory of the epidemic.

† Democratic Republic of the Congo, Ethiopia, Haiti, Malawi, Mozambique, Uganda, United Republic of Tanzania and Zimbabwe.

‡ Cameroon, Chad, Côte d'Ivoire, India, Indonesia, Kenya, Lesotho, Nigeria, Pakistan, South Sudan, Swaziland, Ukraine, Viet Nam and Zambia.

§ Angola, Brazil, China, Islamic Republic of Iran, Jamaica and South Africa.

Annex: Fast-Track estimates and projections – what has changed between 2014 and 2016?

UNAIDS periodically revises its projections of investment needs and programme impact to incorporate changes in programme guidance, global and regional targets and the publication of peer-reviewed scientific evidence, including the latest research on innovative approaches and cutting-edge tools.

The calculations of the resources needed by low- and middle-income countries are based on modelled projections from 116 low- and middle-income countries. The projected global impact of the Fast-Track approach is based on modelled estimates from 46 countries that account for more than 90% of new HIV infections, extrapolated to 163 countries, including high-income countries.

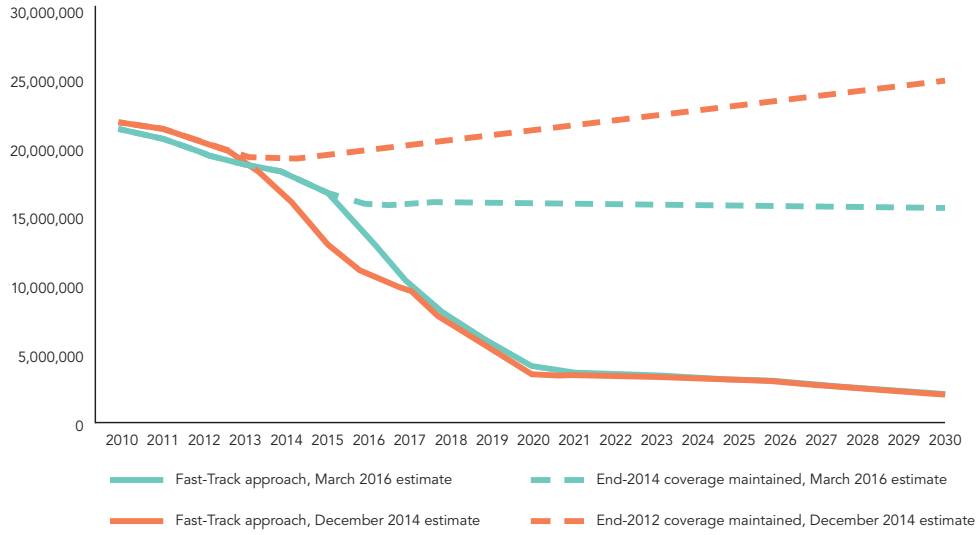
The estimates in this publication were generated using the same modelling approach used for the estimates within the December 2014 UNAIDS report *Fast-Track: ending the AIDS epidemic by 2030*. The model for the 2016 estimates contains many enhancements, including revised inputs and revised assumptions.

For comparative purposes, the figures below contain both the 2014 and 2016 projections of new HIV infections and AIDS-related deaths for low- and middle-income countries.**

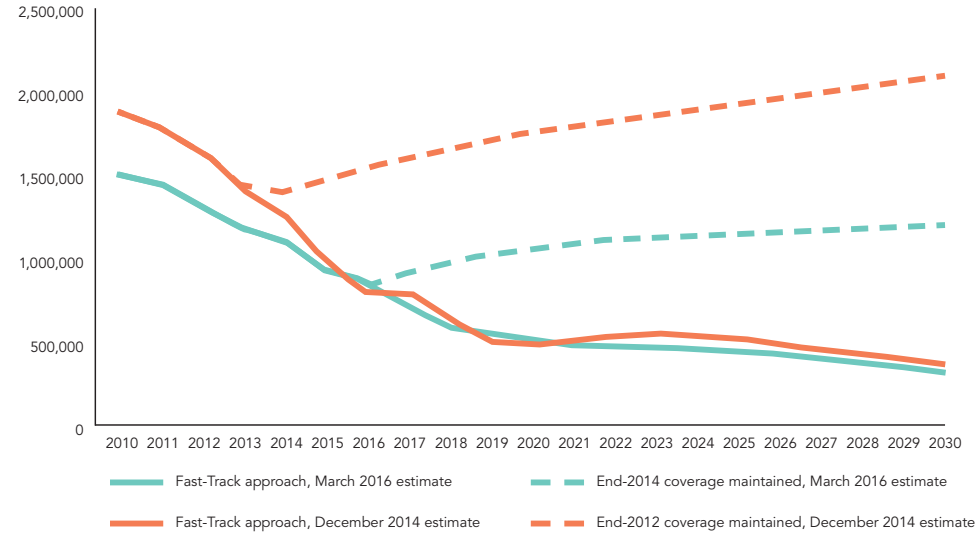
The matrix on pages 16 and 17 contains the major differences between 2014 and 2016 Fast-Track projections.

** The figures in the main text present the 2016 projections of new HIV infections and AIDS-related deaths for all countries.

New HIV infections in low- and middle-income countries
Different scenarios, 2010–2030



AIDS deaths in low- and middle-income countries
Different scenarios, 2010–2030



MATRIX OF CHANGES TO MODEL PARAMETERS BETWEEN THE 2014 AND 2016 FAST-TRACK PROJECTIONS			
	2014 FAST-TRACK PROJECTIONS	2016 FAST-TRACK PROJECTIONS	SOURCE
UPDATED TARGETS FOR 2020 AND MODEL SCENARIOS			
Coverage of services for key populations (sex workers, gay men and other men who have sex with men, transgender people and people who inject drugs)	80%	90%	UNAIDS 2016–2021 strategy
Voluntary medical male circumcision	80%	90%	UNAIDS 2016–2021 strategy
Cash transfers for 10–24-year-old girls	Yes, in all hyper-endemic countries (Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia, Zimbabwe)	Yes, in hyper-endemic countries with low rates of female secondary enrollment (all except South Africa)	World Health Organization. Policy brief: Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection: what's new? November 2015
Pre-exposure prophylaxis for 10% (2020) and 30% (2030) of key populations	For sex workers, gay men and other men who have sex with men and transgender people	For sex workers, gay men and other men who have sex with men, transgender people and people who inject drugs	World Health Organization. Policy brief: Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection: what's new? November 2015
Pre-exposure prophylaxis was added for sexually-active young people	For males and females aged 10–19 in hyper-endemic countries	Only for females 15–24, in areas where HIV incidence is >3% in this population	World Health Organization. Policy brief: Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection: what's new? November 2015
Condom use	Condom use was affected by media communications and also testing, school-based AIDS education, community mobilization and outreach to key populations	Condom use rate specified directly as 90% among people with multiple partners	UNAIDS 2016–2021 strategy
IMPROVED MODEL ASSUMPTIONS, INPUTS AND PROGRAMME DATA			
Surveillance data	Data up to and including 2012	Data up to and including 2014	Country HIV estimates teams
Demographic data	World Population Prospects 2012	World Population Prospects 2015	UN Population division
Trends in HIV prevalence reflect changes in characteristics of antenatal clinic attendees	No	Yes	Eaton et al AIDS 2014
Mortality among people on antiretroviral treatment lost to follow up included	Yes	Improved	Stover et al STI 2012 UNAIDS Reference Group on Estimates, Modeling and Projections, 2015
Parameters describing the progression of people from seroconversion to death for adults receiving antiretroviral treatment	2012 estimates	2015 estimates	UNAIDS Reference Group on Estimates, Modeling and Projections, 2014
Non-AIDS related deaths among people who inject drugs	1.08	1.6	Mathers et al AIDS 2014
Age of children starting antiretroviral treatment	Distributed according to child infections	Distribution based on data from IeDEA consortium	UNAIDS Reference Group on Estimates, Modeling and Projections, 2016
Parameters describing the progression of children from seroconversion to death, by CD4 cell count	No	Yes	UNAIDS Reference Group on Estimates, Modeling and Projections, 2015
Mother-to-child HIV transmission rates	Based on Rollins et al STI 2012	Updated based on Mofenson et al, unpublished manuscript 2015	
Goals model applied	28 countries	45 countries	Avenir Health (www.avenirhealth.org)
Fit to estimates of the HIV prevalence and incidence	Based on 2013 estimates	Updated to 2015 estimates	UNAIDS
Number of people on antiretroviral treatment	End 2012 – 9.8 million in low- and middle-income countries	End 2014 – 13.5 million in low- and middle-income countries	UNAIDS Global AIDS Response Progress Reporting 2015

	2014 FAST-TRACK PROJECTIONS	2016 FAST-TRACK PROJECTIONS	SOURCE
IMPROVED MODEL ASSUMPTIONS, INPUTS AND PROGRAMME DATA (CONTINUED)			
Main characteristics of HIV care services for people on HIV treatment by type of patient	Intensity of service delivery (estimated average or range, not disaggregated by type of patient)	Intensity of service delivery	
Patients initiating antiretroviral treatment			
CD4 per year	1–3	1	
Viral load test per year	0–1	2	
Medical consultations per year	8–12	4	World Health Organization
Drug delivery/adherence per year	0–12	4	Policy brief: Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection: what's new? November 2015
Other blood tests	0–3	1	
Stable patients			
CD4 per year	1–3	0	
Viral load test per year	0–1	1	
Medical consultations per year	8–12	1.16 (on average)	Ad hoc unpublished virtual consultation on the application of the WHO guidelines including WHO, CHAI, MSF, PEPFAR and individual experts, 2016
Drug delivery/adherence per year	0–12	2	
Other blood tests	0–3	0	
Non-virally suppressed patients			
CD4 per year	1–3	0	
Viral load test per year	0–1	2	
Medical consultations per year	8–12	3	
Drug delivery/adherence per year	0–12	2	
Other blood tests	0-3	1	
Unit costs for antiretroviral therapy	Projected average cost per patient per year in 2020 (service delivery for people on first-line antiretroviral treatment, including laboratory costs)	Projected annual cost per stable patient per year in 2020 (Stable patients will constitute approximately 90% of all people on antiretroviral treatment in 2020)	Clinton Health Access Initiative, Match 2.0 study; National Institute of Public Health Mexico/ Bill & Melinda Gates Foundation, ORPHEA study; Pangea Best Practices (Clinton Health Access Initative, PANGEA); Clinton Health Access Initative, unpublished communication; Medecins sans Frontieres, HIV/AIDS: community models of care explained; VR Prabhu et al, Clinton Health Access Initiative, New ARVs Could Represent Over US$ 3 Billion in Cost Savings Through 2025, IAS Boston 2016; Joint WHO/UNAIDS Meeting with Manufacturers and Partners on Global ARV Demand Forecast 2015-2020, Geneva, 8–9 March 2016. Country investment cases.
South Asia	$ 447	$ 177	
East Asia Pacific	$ 527	$177	
Eastern Europe and Central Asia	$1,185	$ 214	
Latin America and the Caribbean	$ 980	$ 481	
Middle East and North Africa	$1,103	$ 171	
Sub-Saharan Africa	$ 429	$ 141	
Unit costs for opioid substitution therapy			
South Asia and the Pacific	$ 410	$ 363	Road to Success: Towards Sustainable Harm Reduction, Financing Regional Report, First year of the Regional Program "Harm Reduction Works – Fund It!", December 2015, Vilnius, Lithuania
Eastern Europe and Central Asia	$ 4,300	$ 664	
Latin America and the Caribbean	$ 3,450	$ 664	
Middle East and North Africa	$ 4,520	$ 236	
Sub-Saharan Africa	$ 265	$ 265	

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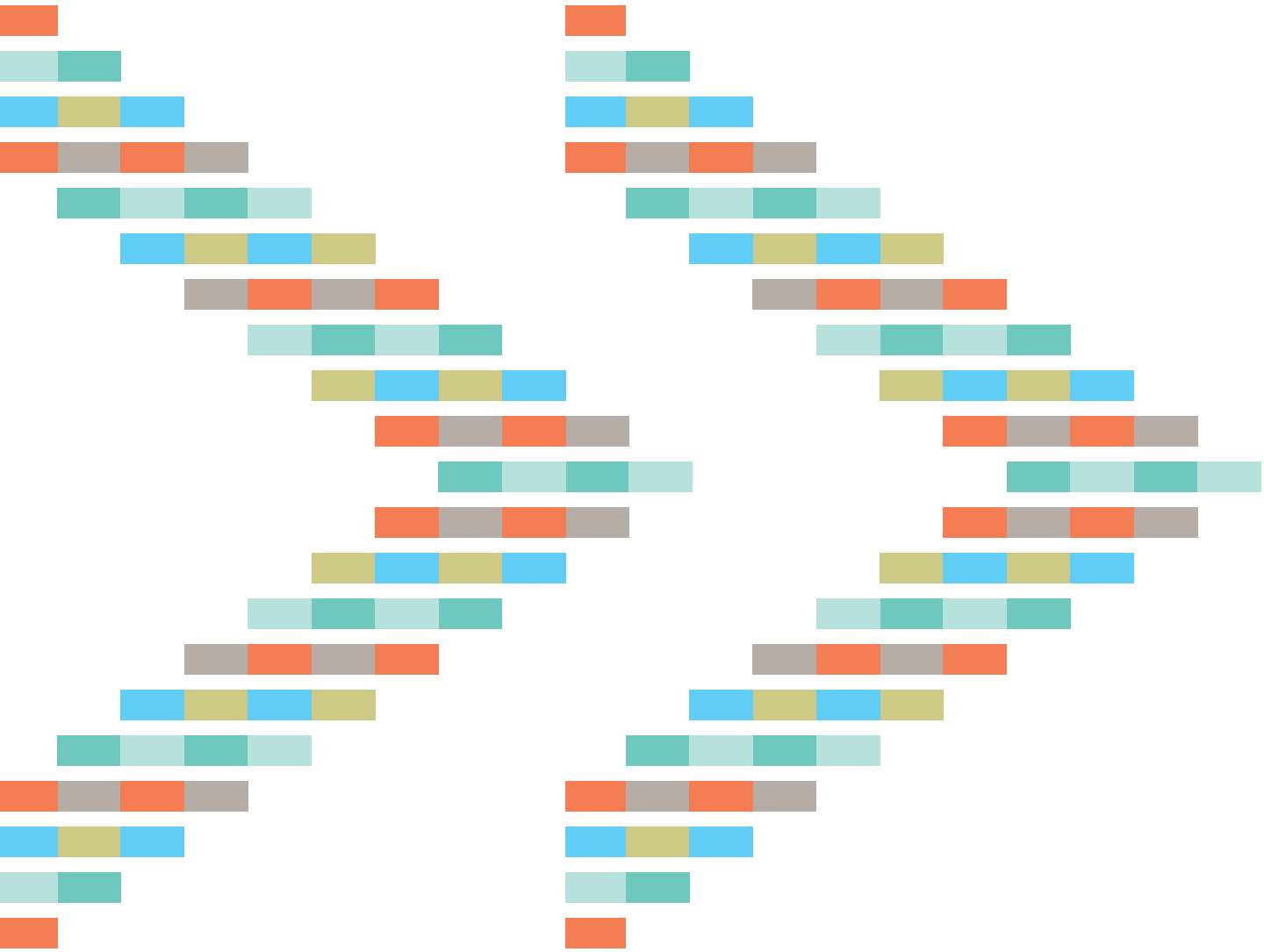

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