

# The Global HIV/AIDS Epidemic

## Key Facts

- HIV, the virus that causes AIDS (acquired immunodeficiency syndrome), is one of the world's most serious health and development challenges. Approximately 36.9 million people are currently living with HIV, and tens of millions of people have died of AIDS-related causes since the beginning of the epidemic.
- Many people living with HIV or at risk for HIV infection do not have access to prevention, treatment, and care, and there is still no cure.
- In recent decades, major global efforts have been mounted to address the epidemic, and despite challenges, significant progress has been made.
- Under Sustainable Development Goal 3, the global community has agreed to aim to end the AIDS epidemic by 2030, and under the UNAIDS "90-90-90" targets, countries work toward achieving, by 2020, "90% of people living with HIV knowing their HIV status; 90% of people who know their HIV-positive status on treatment; and 90% of people on treatment with suppressed viral loads."
- The U.S. government (U.S.), the single largest donor to international HIV efforts in the world, supports the President's Emergency Plan for AIDS Relief (PEPFAR), which is an interagency initiative launched in 2003 as the U.S. government's effort to combat HIV around the world.

## Global Response

HIV, the virus that causes AIDS (see box), has become one of the world's most serious health and development challenges since the first cases were reported in 1981. Approximately 77 million people have become infected with HIV since the start of the epidemic. Today, there are approximately 36.9 million people currently living with HIV, and tens of millions of people have died of AIDS-related causes since the beginning of the epidemic.<sup>1</sup>

**HIV:** A virus that is transmitted through certain body fluids and weakens the immune system by destroying cells that fight disease and infection, specifically CD4 cells (often called T cells). Left untreated, HIV reduces the number of CD4 cells in the body, making it more difficult for the immune system to fight off infections and other diseases. HIV can lead to the development of AIDS, "acquired immunodeficiency syndrome."<sup>2</sup>

Over the past two decades, in particular, major global efforts have been mounted to address the epidemic, and significant progress has been made. The number of people newly infected with HIV,

especially children, and the number of AIDS-related deaths have declined over the years, and the number of people with HIV receiving treatment increased to 21.7 million in 2017.<sup>3</sup>

Still, remaining challenges continue to complicate HIV control efforts. Many people living with HIV or at risk for HIV infection do not have access to prevention, treatment, and care, and there is still no cure. HIV primarily affects those in their most productive years, and it not only affects the health of individuals, but also impacts households, communities, and the development and economic growth of nations. Many of the countries hardest hit by HIV also face serious challenges due to other infectious diseases, food insecurity, and additional global health and development problems.

## Latest Estimates<sup>4</sup>

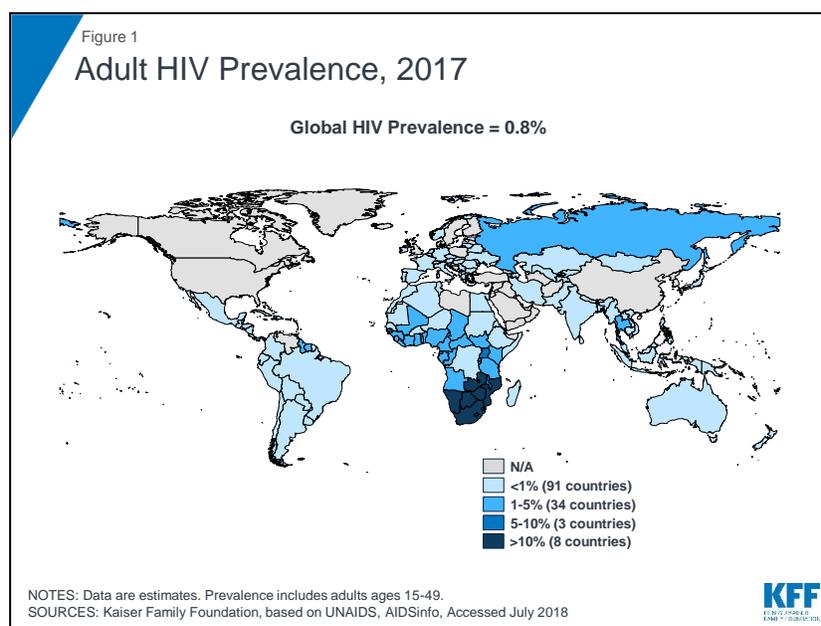
- Global prevalence among adults (the percent of people ages 15-49 who are infected) has leveled since 2001 and was **0.8%** in 2017 (see Figure 1).

- There were **36.9 million** people living with HIV in 2017 (see Table 1), up from 32.4 million in 2010, the result of continuing new infections and people living longer with HIV.

- Although HIV testing capacity has increased over time, enabling more people to learn their HIV status, about **one in four** people with HIV are still unaware they are infected.

- While there have been significant declines in new infections since the mid-1990s, there were still about **1.8 million** new infections in 2017, or about 5,000 new infections per day. Recent data shows that the pace of decline in new infections is too slow to reach global targets.<sup>5</sup> Furthermore, the pace of decline varies by age group, sex, and region.

- HIV remains a leading cause of death worldwide and the leading cause of death globally among women of reproductive age. However, deaths have declined, due in part to antiretroviral treatment (ART) scale-up. **940,000** people died of AIDS in 2017, a 33% decrease from 1.4 million in 2010 and a 51% decrease from the peak of 1.9 million in 2004.



**Table 1: Snapshot of Global Epidemic Today, by Region<sup>6</sup>**

Region	% of Adults Living with HIV (Adult Prevalence)	# of People Living with HIV (% of Global Total)	# of People Newly Infected with HIV	# of AIDS-Related Deaths
<b>Global, Total</b>	<b>0.8%</b>	<b>36.9 million (100%)</b>	<b>1.8 million</b>	<b>940,000</b>
Eastern and Southern Africa	6.8%	19.6 million (53%)	800,000	380,000
Western and Central Africa	1.9%	6.1 million (17%)	370,000	280,000
Asia and the Pacific	0.2%	5.2 million (14%)	280,000	170,000
Western and Central Europe and North America	0.3%	2.2 million (6%)	70,000	13,000
Latin America	0.5%	1.8 million (5%)	100,000	37,000
Eastern Europe and Central Asia	0.8%	1.4 million (4%)	130,000	34,000
The Caribbean	1.2%	310,000 (<1%)	15,000	10,000
Middle East and North Africa	<0.1%	220,000 (<1%)	18,000	9,800

NOTES: Reflects 2017 data.

## AFFECTED AREAS

Sub-Saharan Africa<sup>7</sup>, with more than two-thirds of all people living with HIV globally, is the hardest hit region in the world, followed by Asia and the Pacific (see Table 1). The Caribbean as well as Eastern Europe and Central Asia are also heavily affected.

- Eastern and Southern Africa.** Eastern and Southern Africa are home to more than half (53%) of all people living with HIV, as well as two-thirds of children living with HIV (67%). Despite the significant impact, new infections in the region have declined by 30% since 2010. Almost all of the region's nations have generalized HIV epidemics – that is, their national HIV prevalence is greater than 1%. South Africa has the highest number of people living with HIV in the world (7.2 million). Eswatini (formerly known as Swaziland) has the highest prevalence in the world (27.4%).
- Western and Central Africa.** An estimated 6.1 million people are living with HIV in Western and Central Africa. Annual new HIV infections among adults declined by 8% between 2010 to 2017, and the annual number of new infections among children declined by nearly a quarter during the same period, primarily due to increased access to services to prevent mother-to-child HIV transmission in the region. The region also accounts for a third of undiagnosed people living with HIV globally (34% of 9.4 million).
- Asia and the Pacific.** An estimated 5.2 million people are living with HIV in Asia and the Pacific. The region's annual number of new HIV infections declined by 14% since 2010. However, trends vary from country to country. The region is also home to the two most populous nations in the world – China and India – and even relatively low prevalence translates into large numbers of people.
- Western and Central Europe and North America.** An estimated 2.2 million people are living with HIV in this region. High coverage of ART plays a key role in the reduction of AIDS-related deaths in the region; since 2010, the number of AIDS-related deaths decreased by 36%.
- Latin America.** An estimated 1.8 million people are living with HIV in Latin America. Between 2010 and 2017, the number of AIDS-related deaths fell by 12% in the region overall, but rose in some countries.

In 2017, nearly half (48%) of new HIV infections in Latin America occurred in Brazil, which has the greatest number of people living with the disease (860,000) in the region.

- **Eastern Europe and Central Asia.** An estimated 1.4 million people are living with HIV in this region, including 190,000 newly infected in 2016. New HIV infections in the region increased by 29% between 2010 and 2017. The epidemic is driven primarily by injecting drug use, although heterosexual transmission also plays an important role.
- **The Caribbean.** An estimated 310,000 people are living with HIV in the Caribbean. The number of people living with HIV on treatment more than doubled since 2010 (from 69,000 in 2010 to approximately 181,000 in 2017). However, the percentage of people living with HIV who have suppressed viral loads in the region (40%) is below the global average (47%).
- **Middle East and North Africa.** An estimated 220,000 people are living with HIV in the Middle East and North Africa. Treatment coverage among people living with HIV in this region is 29%, the lowest of any region. Criminalization of key populations and stigma serve as barriers to coverage in the region. The region is also one of two in the world where the number of AIDS-related deaths is increasing (the other is Eastern Europe and Central Asia); the number of AIDS-related deaths increased by 11% since 2010.

## AFFECTED/VULNERABLE POPULATIONS

- Most HIV infections are transmitted heterosexually, although risk factors vary. In some countries, men who have sex with men, injecting drug users, sex workers, transgender people, and prisoners are disproportionately affected by HIV.
- Women represent almost half (49%) of all adults living with HIV worldwide, and HIV (along with complications related to pregnancy) is the leading cause of death among women of reproductive age.<sup>8</sup> Gender inequalities, differential access to service, and sexual violence increase women's vulnerability to HIV, and women, especially younger women, are biologically more susceptible to HIV.
- Young people, ages 15-24, account for approximately a third of new HIV infections, and in some areas, young women are disproportionately impacted. In sub-Saharan Africa, young women 15-24 account for a quarter of all new HIV infections in the region in 2017, even though they represent only 10% of the population.
- Globally, there were 1.8 million children living with HIV, 110,000 AIDS-related deaths, and 180,000 new infections among children in 2017. Since 2010, new HIV infections among children have declined by 35%.

## HIV & TB

HIV has led to a resurgence of tuberculosis (TB), particularly in Africa, and TB is a leading cause of death for people with HIV worldwide.<sup>9</sup> In 2016, approximately 10% of new TB cases occurred in people living with HIV.<sup>10</sup> However, between 2000 and 2016, TB deaths in people living with HIV declined substantially, largely due to the scale up of joint HIV/TB services. See the KFF [fact sheet](#) on TB.

## Prevention and Treatment<sup>11</sup>

Numerous **prevention** interventions exist to combat HIV, and new tools such as vaccines, are currently being researched.<sup>12</sup>

- Effective prevention strategies include behavior change programs, condoms, HIV testing, blood supply safety, harm reduction efforts for injecting drug users, and male circumcision.
- Additionally, recent research has shown that engagement in HIV treatment not only improves individual health outcomes but also significantly reduces the risk of transmission (referred to as “treatment as prevention” or TasP). Those with undetectable viral loads (known as being virally suppressed) have effectively no risk of transmitting HIV sexually.<sup>13</sup>
- Pre-exposure antiretroviral prophylaxis (PrEP) has also been shown to be an effective HIV prevention strategy in individuals at high risk for HIV infection. In 2015, the World Health Organization (WHO) recommended PrEP as a form of prevention for high-risk individuals in combination with other prevention methods.<sup>14</sup> Further, in 2016, the U.N. Political Declaration on HIV/AIDS stated PrEP research and development should be accelerated.<sup>15</sup>
- Experts recommend that prevention be based on “knowing your epidemic” (tailoring prevention to the local context and epidemiology), using a combination of prevention strategies, bringing programs to scale, and sustaining efforts over time. Access to prevention, however, remains limited, and there have been renewed calls for the strengthening of prevention efforts.<sup>16</sup>

HIV **treatment** includes the use of combination antiretroviral therapy (ART) to attack the virus itself, and medications to prevent and treat the many opportunistic infections that can occur when the immune system is compromised by HIV. In light of recent research findings, WHO released a guideline in 2015 recommending starting HIV treatment earlier in the course of illness.<sup>17</sup>

- Combination ART, first introduced in 1996, has led to dramatic reductions in morbidity and mortality, and access has increased in recent years, rising to nearly 22 million people (59% of people living with HIV) in 2017.
- The percentage of pregnant women receiving ART for the prevention of mother-to-child transmission of HIV increased to 80% in 2017, up from 47% in 2010.
- Access to ART among children has also risen significantly, from 17% in 2010 to 52% in 2017.
- Approximately 47% of all people living with HIV are virally suppressed, which means they are likely healthier and less likely to transmit the virus. Viral suppression varies greatly by region, key population, and sex.

## Global Goals

International efforts to combat HIV began in the first decade of the epidemic with the creation of the WHO's Global Programme on AIDS in 1987. Over time, new initiatives and financing mechanisms have helped increase attention to HIV and contributed to efforts to achieve global goals; these include:

- **the Joint United Nations Programme on HIV/AIDS (UNAIDS)**, which was formed in 1996 to serve as the U.N. system's coordinating body and to help galvanize worldwide attention to HIV/AIDS; and
- **the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund)**, which was established in 2001 by a U.N. General Assembly Special Session (UNGASS) on HIV/AIDS as an independent, international financing institution that provides grants to countries to address HIV, TB, and malaria (see the KFF [fact sheet](#) on the Global Fund).

The contributions of affected country governments and civil society have also been critical to the response. These and other efforts work toward achieving major global HIV/AIDS goals that have been set through:

- the **Sustainable Development Goals (SDGs)**. Adopted in 2015, the SDGs aim to end the AIDS epidemic by 2030 under SDG Goal 3, which is to “ensure healthy lives and promote well-being for all at all ages.”<sup>18</sup> The SDGs are the successor to the Millennium Development Goals (MDGs), which included an HIV target under MDG 6: to halt and begin to reverse the spread of HIV/AIDS by 2015 and achieve universal access to treatment for HIV/AIDS by 2010.<sup>19</sup> As of 2015, the AIDS-related targets of MDGs were met.<sup>20</sup>
- **UNAID's “90-90-90” targets**. On World AIDS Day 2014, UNAIDS set the “90-90-90” targets for 2020 aimed at ending the epidemic by 2030. The targets include achieving “90% of people living with HIV knowing their HIV status; 90% of people who know their HIV-positive status on treatment; and 90% of people on treatment with suppressed viral loads.”<sup>21</sup> These goals and targets were reiterated in the UNAIDS 2016-2021 Strategy, which also aligns with the SDGs.<sup>22</sup> As of 2017, 75% of people living with HIV knew their status; among those who knew their status, 79% were accessing treatment; among those accessing treatment, 81% were virally suppressed.<sup>23</sup>

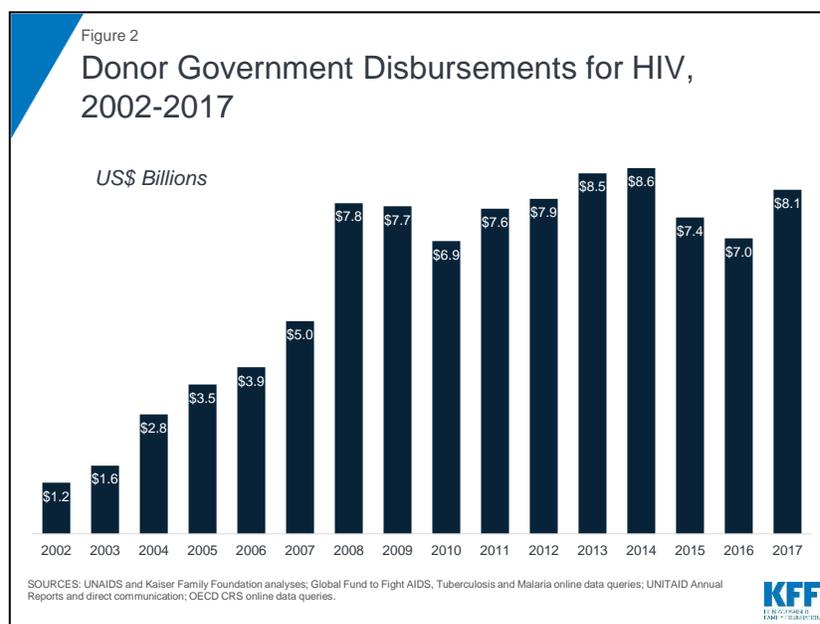
More recently, at the June 2016 U.N. General Assembly High-Level Meeting on Ending AIDS, world leaders adopted a new Political Declaration that reaffirmed commitments and called for an intensification of efforts to end AIDS by 2030.<sup>24</sup> In 2017, a report of the U.N. Secretary-General emphasized these commitments, calling for the global community to reinvigorate global efforts to respond to AIDS.<sup>25</sup>

## Global Resources

UNAIDS estimates that **\$21.3 billion** was available to address HIV in low- and middle-income countries in 2017.<sup>26</sup> Of this, much funding to address HIV in low- and middle-income countries came from major donor governments, which disbursed \$8.1 billion in 2017; the U.S. was the largest donor, followed by the U.K. and France. Donor government funding in 2017 increased after two years of declines, however, this

increase was largely due to the timing of U.S. funding and is not expected to continue.<sup>27</sup> Other governments and organizations also contribute substantially to funding the global response, including:

- hard-hit countries, which have also provided resources to address their epidemics;
- the Global Fund, which has committed approximately \$20 billion for HIV efforts in more than 100 countries to date;<sup>28</sup> and
- the private sector, including foundations and corporations, which also plays a major role (the Bill & Melinda Gates Foundation, for one, has committed more than \$3 billion in HIV grants to organizations addressing the epidemic, as well as provided additional funding to the Global Fund).<sup>29</sup>



Looking ahead, UNAIDS estimates **\$26.2 billion** will be needed annually by 2020 to meet global targets to end AIDS as a global public health threat by 2030.<sup>30</sup>

## U.S. Government Efforts

The U.S. government (U.S.) has been involved in HIV efforts since the 1980s and, today, is the single largest donor to international HIV efforts in the world, including the largest donor to the Global Fund.<sup>31</sup> The U.S. first provided funding to address the global HIV epidemic in 1986. U.S. efforts and funding increased slowly over time through targeted initiatives to address HIV in certain countries in Africa, South Asia, and the Caribbean, but they intensified with the 2003 launch of the President's Emergency Plan for AIDS Relief (PEPFAR), which brought significant new attention and funding to address the global HIV epidemic, as well as TB and malaria.<sup>32</sup>

## PEPFAR

Created in 2003, PEPFAR is the U.S. government's global effort to combat HIV. As an interagency initiative, PEPFAR involves multiple U.S. departments, agencies, and programs that address the global epidemic, and it is carried out in close coordination with host country governments and other organizations, including multilateral organizations such as the Global Fund and UNAIDS.<sup>33</sup> Collectively, U.S. bilateral activities span more than 60 countries, including countries reached through regional

programs in Africa, the Americas, Asia, and the Caribbean, with U.S. support for multilateral efforts reaching additional countries.<sup>34</sup> To date, PEPFAR funding, which includes all bilateral funding for HIV as well as U.S. contributions to the Global Fund and UNAIDS, has totaled more than \$80 billion.<sup>35</sup>

For FY 2018, Congress appropriated \$5.2 billion for bilateral HIV and \$1.35 billion for the Global Fund, totaling \$6.6 billion. For FY 2019, the current Administration has requested \$4.3 billion for bilateral HIV and \$925 million for the U.S. contribution to the Global Fund, a significant decrease from prior years' levels.

For more information, see the KFF fact sheets on [PEPFAR](#), the [U.S. Global Health Budget: HIV/PEPFAR](#) (bilateral funding), the [U.S. Global Health Budget: Global Fund](#), and [trends in U.S. federal funding for HIV/AIDS](#).

## Endnotes

<sup>1</sup> UNAIDS. *2018 Global AIDS Update: Miles to go—closing gaps, breaking barriers, righting injustices*; July 2018. UNAIDS. *AIDSinfo website*; accessed July 2018, available at: <http://aidsinfo.unaids.org/>. UNAIDS. *Core Epidemiology Slides*; July 2018.

<sup>2</sup> AIDS is the last and most severe stage of HIV infection, during which the immune system is so weak that people with AIDS acquire an increasing amount of severe illnesses. CDC HIV Website, <https://www.cdc.gov/hiv/basics/whatishiv.html>.

<sup>3</sup> UNAIDS. *2018 Global AIDS Update: Miles to go—closing gaps, breaking barriers, righting injustices*; July 2018.

<sup>4</sup> UNAIDS. *2018 Global AIDS Update: Miles to go—closing gaps, breaking barriers, righting injustices*; July 2018. UNAIDS. *AIDSinfo website*; accessed July 2018, <http://aidsinfo.unaids.org/>. UNAIDS. *Core Epidemiology Slides*; July 2018. UNAIDS. *Fact Sheet – Latest statistics on the status of the AIDS epidemic 2018*; July 2018; UNAIDS. *UNAIDS data 2018, July 2018*.

<sup>5</sup> The target by 2020 is less than 500,000 new infections. UNAIDS. *Press release: UNAIDS warns that progress is slowing and time is running out to reach the 2020 HIV targets*; July 2018.

<sup>6</sup> UNAIDS. *AIDSinfo website*; accessed July 2017; UNAIDS. *Core Epidemiology Slides*; June 2017.

<sup>7</sup> Sub-Saharan Africa constitutes as East and Southern Africa and West and Central Africa.

<sup>8</sup> UNAIDS. *UNAIDS 2016-2021 Strategy*; Aug. 2015.

<sup>9</sup> WHO. Tuberculosis, fact sheet, <http://www.who.int/mediacentre/factsheets/fs104/en/index.html>.

<sup>10</sup> WHO. *Global tuberculosis report*; 2017.

<sup>11</sup> UNAIDS. *2018 Global AIDS Update: Miles to go—closing gaps, breaking barriers, righting injustices*; July 2018. UNAIDS. *AIDSinfo website*; accessed July 2018, <http://aidsinfo.unaids.org/>. UNAIDS. *Core Epidemiology Slides*; July 2018. UNAIDS. *Fact Sheet – Latest statistics on the status of the AIDS epidemic 2018*; July 2018; UNAIDS. *UNAIDS data 2018, July 2018*.

<sup>12</sup> UNAIDS. *2018 Global AIDS Update*; July 2018. UNAIDS. *Get on the Fast Track*; 2016. Global HIV Prevention Working Group. *Behavior Change for HIV Prevention: (Re) Considerations for the 21st Century*; Aug. 2008.

<sup>13</sup> UNAIDS. *UNAIDS Explainer: Undetectable = untransmittable*; July 2018.

<sup>14</sup> WHO. *Guideline on When to Start antiretroviral Therapy and on Pre-Exposure Prophylaxis for HIV*; Sept. 2015. WHO. *WHO expands recommendation on oral pre-exposure prophylaxis of HIV infection (PrEP)*; Nov. 2015.

<sup>15</sup> United Nations. *Political Declaration on HIV and AIDS: On the Fast-Track to Accelerate the Fight Against HIV and to End the AIDS Epidemic by 2030*; June 8, 2016.

- 
- <sup>16</sup> UNAIDS. *2018 Global AIDS Update*; July 2018. United Nations. *Reinvigorating the AIDS response to catalyse sustainable development and United Nations reform: Report of the Secretary-General*. June 2017.
- <sup>17</sup> UNAIDS. *Get on the Fast Track*; 2016. WHO. *Guideline on When to Start antiretroviral Therapy and on Pre-Exposure Prophylaxis for HIV*; September 2015. WHO. *Press Release: NIAID START Trial confirms that immediate treatment of HIV with antiretroviral drugs (ARVs) protects the health of people living with HIV*; May 28, 2015. NIAID. *Starting Antiretroviral Treatment Early Improves Outcomes for HIV-Infected Individuals*; May 27, 2015.
- <sup>18</sup> United Nations. *Transforming our world: the 2030 Agenda for Sustainable Development*; 2015.
- <sup>19</sup> United Nations, “Official List of MDG Indicators,” webpage, <http://unstats.un.org/unsd/mdg/Host.aspx?Content=Indicators/OfficialList.htm>.
- <sup>20</sup> UNAIDS. *Global AIDS Update 2016*; 2016.
- <sup>21</sup> UNAIDS. *Fast-Track: ending the AIDS epidemic by 2030*; 2014.
- <sup>22</sup> UNAIDS. *UNAIDS 2016-2021 Strategy*; Aug. 2015.
- <sup>23</sup> UNAIDS. *Fact Sheet – Latest statistics on the status of the AIDS epidemic 2018*; July 2018.
- <sup>24</sup> UNAIDS. *2011 Political Declaration on HIV/AIDS*; 2011, <http://www.unaids.org/en/aboutunaids/unitednationsdeclarationsandgoals/2011highlevelmeetingonaids/>. UNAIDS. *Press Release: Bold Commitments to Action Made at the United Nations General Assembly High-Level Meeting on Ending AIDS*; June 10, 2016.
- <sup>25</sup> UNAIDS. *Reinvigorating the AIDS response to catalyse sustainable development and United Nations reform*; 2017.
- <sup>26</sup> UNAIDS estimates that US\$20.6 billion was available for HIV from all sources (domestic, donor governments, multilaterals, and philanthropic) in 2017, expressed in 2016 USD. For purposes of this fact sheet, this estimate was converted to 2017 USD, or \$21.3 billion. KFF/UNAIDS. [\*Donor Government Funding for HIV in Low- and Middle-Income Countries in 2017\*](#); July 2018.
- <sup>27</sup> KFF/UNAIDS. [\*Donor Government Funding for HIV in Low- and Middle-Income Countries in 2017\*](#); July 2018.
- <sup>28</sup> Global Fund. *Grant Portfolio*; accessed July 2018, <http://www.theglobalfund.org/en/portfolio/>.
- <sup>29</sup> Bill & Melinda Gates Foundation. *HIV Strategy Overview*; accessed July 2018, <http://www.gatesfoundation.org/What-We-Do/Global-Health/HIV#OurStrategy>.
- <sup>30</sup> UNAIDS. *2018 Global AIDS Update: Miles to go—closing gaps, breaking barriers, righting injustices*; July 2018.
- <sup>31</sup> KFF analysis of data from the Office of Management and Budget, Agency Congressional Budget Justifications, and Congressional Appropriations Bills. KFF/UNAIDS. [\*Donor Government Funding for HIV in Low- and Middle-Income Countries in 2017\*](#); July 2018.
- <sup>32</sup> U.S. Congress. P.L. 108-25; May 27, 2003. KFF analysis of data from the Office of Management and Budget, Agency Congressional Budget Justifications, and Congressional Appropriations Bills. KFF/UNAIDS. [\*Donor Government Funding for HIV in Low- and Middle-Income Countries in 2017\*](#); July 2018.
- <sup>33</sup> KFF. [\*The U.S. Government Engagement in Global Health: A Primer\*](#); Jan. 2017. CRS. *PEPFAR Reauthorization: Key Policy Debates and Changes to U.S. International HIV/AIDS, Tuberculosis, Malaria and Programs and Funding*; Jan. 2009.
- <sup>34</sup> KFF analysis of data from ForeignAssistance.gov; PEPFAR’s “Where We Work: PEPFAR Bilateral Countries” webpage; CDC’s Global HIV & Tuberculosis “Where We Work” webpage; accessed July 2018.
- <sup>35</sup> KFF analysis of data from the Office of Management and Budget, Agency Congressional Budget Justifications, and Congressional Appropriations Bills. Totals include funding for HIV and the Global Fund.