

INVESTMENT IN RESEARCH SAVES LIVES AND MONEY

HIV/AIDS

Human Immunodeficiency Virus (HIV) is a viral infection that, if left untreated, can lead to Acquired Immunodeficiency Syndrome (AIDS). HIV works in three stages, attacking the body's immune cells and initially producing a flu-like illness. During the second stage of the disease, patients may not feel sick but the virus is still multiplying. AIDS is the advanced stage of infection when the immune system can no longer provide protection from infections, cancers, or other diseases.¹ Treatment can halt the progression of HIV and allow the condition to be managed as a chronic illness, but no vaccine or cure exists.² However, people living with HIV, when able to manage treatment as prescribed, now have life expectancies nearly equal to those without the condition, highlighting the progress made since the start of the epidemic in the 1980s.³

TODAY

About **1.1 million** Americans are currently living with HIV.⁴

Roughly **1 in 7** people with HIV in the U.S. do not know they have it.⁴

While the number of new HIV diagnoses is declining in some populations, **770,000** HIV-related deaths still occurred globally in 2018.⁵

COST

\$34.8 billion:

Fiscal year 2019 spending in the U.S. related to HIV, including care & treatment, cash & housing assistance, prevention, research, and global efforts.⁶

\$28,861 – \$40,804:

Estimated annual cost of HIV antiretroviral treatment for an American patient.⁷

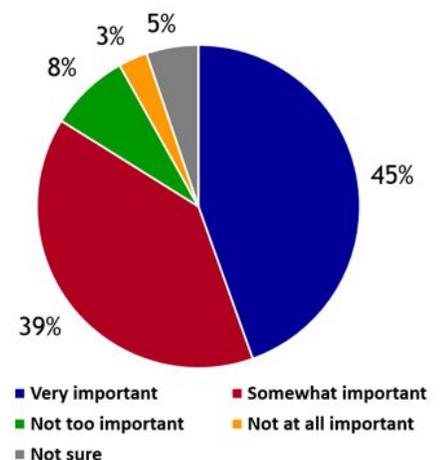
Research Delivers Solutions

During the AIDS epidemic in the 1980s, research to develop HIV/AIDS drugs was critical. Several drugs known as **antiretrovirals** were developed during this time that had short-term benefits for HIV patients, but limited long-term efficacy. This research, however, paved the way for scientists to realize that combining certain antiretroviral drugs could have more powerful effects, which led to the discovery of **combination antiretroviral therapies (cART)**. Because of this research, HIV patients who take cART long-term can now effectively manage the disease and prevent it from both developing into AIDS and being passed onto others,⁸ a key factor to ending the epidemic around the world.

An international clinical trial, iPrEx, published in 2010 and a follow-up study showed that taking the cART drug **emtricitabine-tenofovir (FTC-TDF)**, or **Truvada**, every day resulted in a 99% risk-reduction of contracting HIV.^{9,10} This drug combination is now prescribed around the world to treat HIV and to prevent acquisition in high-risk populations, a use known as **pre-exposure prophylaxis (PrEP)**.¹¹

Two HIV patients known as the **Berlin** and **London patients** have been reported to be in remission (meaning they have been able to go off antiretroviral therapy completely) due to bone marrow transplants they received during cancer treatment. The donor cells they received had a rare mutation in a receptor called **CCR5** which essentially protects them from the virus. While bone marrow transplants cannot regularly be used to treat HIV due to a high risk of complications, researchers are now exploring the development of HIV drugs or therapies that mimic this CCR5 mutation.^{12,13,14}

How important is it for the President and Congress to assign a high priority to ensuring faster medical progress?



Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2019

HIV/AIDS

Then. Now. Imagine.

THEN

At the height of the HIV/AIDS epidemic in the U.S., an estimated 130,400 Americans acquired new HIV infections in 1985 alone.¹⁵

NOW

Thanks to research discoveries about HIV transmission and treatment, public health efforts, and increased awareness, the number of new HIV diagnoses made in 2017 in the U.S. has decreased to 38,182.¹⁶

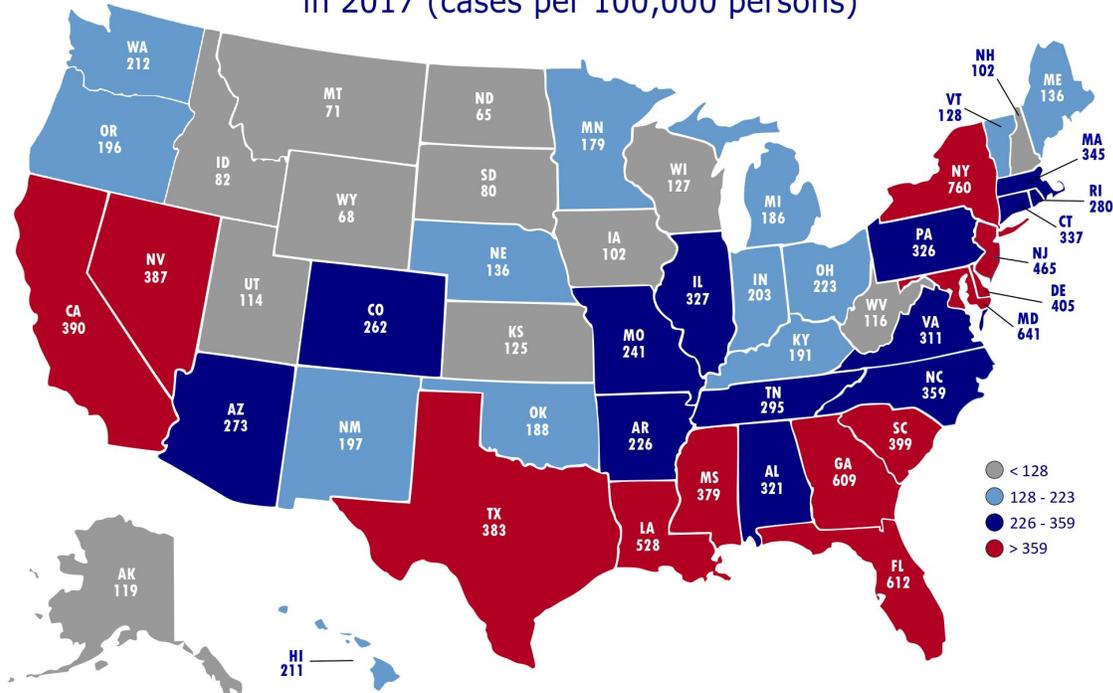
IMAGINE

A cure.

Spotlight on Minorities

The CDC estimates that in 2017, **African American women** had a 15 times greater risk of acquiring HIV than white women in the U.S., and 70% of Americans with new HIV diagnoses were **gay or bisexual men**.¹⁶ While the CDC doesn't consistently report information on gender identity relative to HIV status,¹⁶ UNAIDS states that globally in 2018, **transgender individuals** had a 12 times greater risk of acquiring HIV than did adults aged 15-49 in the general population.¹⁷ Minorities face disproportionately high burdens of HIV, and researchers are working to address these issues. In fact, in 2019, the NIH announced it would be awarding \$11.3 million to 23 institutions across the U.S. to allow researchers and local communities with high HIV burdens to work together, understand, and address these disparities.¹⁸

HIV Prevalence in U.S. Adults and Adolescents in 2017 (cases per 100,000 persons)



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SOURCE: "Diagnoses of HIV Infection in the United States and Dependent Areas, 2018 (Preliminary)." *HIV Surveillance Report*, 2018 (Preliminary), vol. 230, CDC, 2019.

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