

How HIV became a treatable, chronic disease

December 2 2015, by Allison Webel

It has been almost 35 years since the world was introduced to the term AIDS. In the 1980s, researchers and physicians were trying to understand what was causing waves of strange infections and discovered it was a new virus called the human immunodeficiency virus, or HIV. Since that time, HIV has gone from a death sentence to a manageable chronic disease. Today, [it is estimated](#) that 1.2 million people living with HIV in the United States and 50,000 Americans are infected with HIV every year.

Thanks to [treatment](#) advances, [people](#) with HIV can and do live long and full lives. And that has led to a challenge that doctors and patients in the 1980s and early 1990s may not have imagined: the aging HIV patient.

And yet, while we have a treatment regimen that can keep people living with HIV well, and even prevent transmission of the virus, many people, both in the US and overseas, can't access it.

How did HIV become manageable?

Before 1996, when the first combination drug therapy became available, managing HIV was a burden for patients. The [available medications](#) were very highly toxic and didn't suppress the virus very well. People had to take 4-5 pills every four hours, through the day and night, and endured terrible side effects such as nausea, vomiting and nerve pain. During this time, people living with HIV often advanced to fullblown AIDS and then died.

Then in 1996 it was discovered that a combination of HIV medications could suppress the virus' replication, or spread, allowing the immune system to recover and fight off other infections like pneumonia. This was a life-changing breakthrough. A patient with HIV can develop AIDS when their immune system is badly damaged, and their body isn't able to fight infections. Since these new medicines could suppress the virus and prevent immune system damage, they prevented AIDS from developing.

But these drugs still had the same problems that made pre-1996 treatment so tough: a lot of pills, taken all day long. And it was expensive. Initially this kind of treatment was accessible only to people living in developed countries who could afford to pay the high cost of these medicines.

Better treatment and longer lives

Today, people are generally treated with a single, once-a-day, fixed-dose tablet that combines multiple drugs. It is much easier to manage, and has fewer side effects.

And the standard of care to [suppress the virus](#) is for a patient to [begin treatment](#) as soon as possible after diagnosis, and to take it [continuously](#) for the rest of his or her life.

This strategy also revolutionized how we think about HIV prevention. Five years ago we learned that as soon as patients start taking these medicines and suppresses HIV replication, they are [much less likely to transmit HIV](#) to someone else.

In 2012, the US Food and Drug Administration approved the first medication [to protect](#) those who do not have HIV from infection, called pre-exposure prophylaxis (PrEP). Today, the Centers for Disease Control and Prevention (CDC) and the World Health Organization

[recommend PrEP](#), in combination with behavioral interventions, for populations at high risk of acquiring HIV, such as men who have sex with men and couples where one partner is HIV-infected.

A lifetime of treatment

In the United States today, most people living with HIV can afford medicine, through insurance and programs like the [AIDS Drug Assistance Program](#) (a federally funded safety net program providing HIV medications to those underinsured), but these benefits vary widely by state.

These medications are redefining what it means to live a healthy life with HIV. Today, people [living with HIV](#) are going to college, working, volunteering, getting married and having children. They are not only having children, they also have grandchildren. According to the CDC, one-quarter of people living with HIV in the United States [are 55 or older](#).

Yet even with effective treatment, HIV is now a risk factor for cardiovascular disease, cancer, kidney disease and bone diseases like osteoporosis. That proper treatment can suppress the virus means that we can see the [secondary illnesses](#) that HIV can cause.

Though the exact reasons why this happens are unknown, it appears a combination of factors – including HIV medication use and increased inflammation from the infection itself – raise risks. And of course, so do health habits such as smoking, substance use, inactivity and a poor diet.

That means people with HIV may need to take medication to manage these other conditions in addition to their HIV medication. That means more pills, which can be complicated for patients to manage. And new medications can also cause new side effects. Patients and doctors need to

keep an eye out for new symptoms and medication side effects.

It takes more than medication for someone with HIV to stay healthy. But the diet and lifestyle changes that can help reduce the risk of chronic disease can be especially tough to manage.

For example, in my research on older adults living with HIV, we found they want to engage in activities that would minimize the risk of these health conditions, [like exercise](#) or eating a healthy diet, but that it can be hard to do [when balancing](#) their HIV-related self-management work, such as medical and laboratory appointments, tracking symptoms and taking medication. After all, we know these healthy living guidelines are tough even for Americans who aren't living with HIV to stick to.

But exercise and diet are rarely addressed in HIV primary care visits, missing a great opportunity to evaluate and encourage these behaviors. New work is needed to test strategies to improve and sustain health-promoting behaviors, tailored to the needs of older adults living with HIV. Given the increase in illness and health conditions in this population, the need for these kinds of interventions is urgent.

Excellent treatment is available, but not everyone gets it

While the World Health Organization [recommends](#) starting all 36 million people living with HIV worldwide on treatment, many people in developing world still [don't have access](#) to adequate treatment.

The situation is much better in the United States, but there are dramatic disparities in HIV infection prevention, diagnosis and treatment. Here, [one in eight](#) Americans living with HIV does not know their HIV status. Without a diagnosis, these people will not get necessary treatment and

are more likely to develop AIDS and to spread HIV.

African Americans, Latinos, gay and bisexual men, and transgender people are still bearing a [disproportionate burden](#) of this disease in the United States. They are more likely to become HIV-infected and less likely to see a doctor regularly, and, thus, to receive treatment. For example, African Americans comprise 12% of the US population but 44% of all new HIV infections. African Americans are also [more likely to die](#) from HIV than other racial groups.

There's a disparity between men and women as well. Women with HIV have the same health concerns as men with HIV, but they often [face additional hurdles](#) in managing their disease and other chronic health conditions due to family responsibilities, trauma and violence, poverty, gynecological issues and childbearing.

HIV stigma and shame remain a problem and make it hard for people to manage their condition. Finally, we still lack a cure or vaccine for HIV which would provide the ultimate relief from this disease.

As we remember all of the loved ones we've lost to HIV, we should also reflect on how far we've come and celebrate that progress. In 2015, the lifespan of a person living with HIV is approximately the same as someone not living with HIV, an impossibility in the early days of the epidemic. But we should also resolve to be part of the generation that stops this virus in all populations. The time to act is now.

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