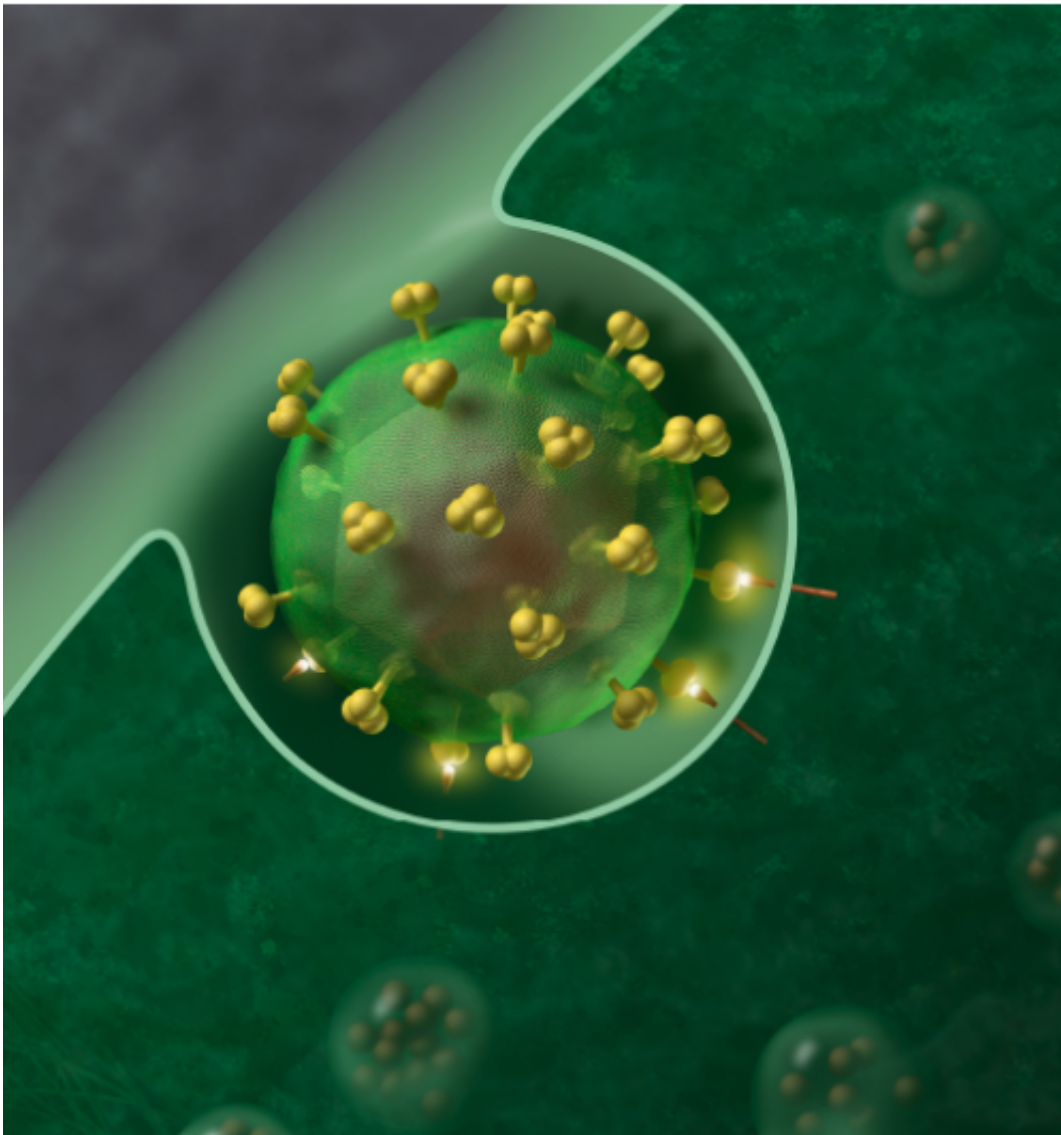


Significant life expectancy increase for adults living with HIV on ART in Latin America

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HIV-1 Virus. Credit: J Roberto Trujillo/Wikipedia

Life expectancy among adults living with HIV receiving antiretroviral therapy (ART) in Latin America and the Caribbean has increased significantly since HIV testing and treatment services became more widely available, according to research published today in *The Lancet HIV* journal.

The largest study of its kind indicates that life expectancy for people in the region living with HIV who receive ART is now close to that for the [general population](#), mirroring trends seen in higher-income countries.

In 2016, the WHO launched the 'Treat All' policy recommendations to help achieve the global target of ending AIDS by 2030 by treating all people living with HIV using antiretroviral drugs. By the end of 2020, 96% of low- and middle-income countries (LMICs) were on course to adopt Treat All, compared with 40% in 2016.

ART was introduced to Latin America in the 1990s and became more available during the 2000s. However, little data exists on the life expectancy of people living with HIV in LMICs. Until now, no large-scale investigations had taken place, with studies limited to single-country analyses in South Africa and Brazil. Large studies in Europe, Canada, and the U.S. have previously shown that ART has greatly increased life expectancy among people living with HIV.

Dr. Claudia P. Cortes, from Fundación Arriarán and University of Chile School of Medicine, Chile, said: "More data on HIV in Latin America and the Caribbean is needed and there are several countries in Latin America for which there is practically no information on HIV. Latin America and the Caribbean is a large, heterogeneous, and diverse region, and HIV impacts a number of different populations. It is also, however, a region with the least resources available for HIV clinical studies and research.

"In our analysis, the greatest gains in life expectancy coincided with the period after the launch of Treat All. Since the end of the study period in 2017, more LMICs have gone on to adopt the policies, so we are hopeful that further analysis will show that Treat All is continuing to help transform the lives of people living with HIV."

The authors of the new study analysed data on adults living with HIV starting ART for the first time at CCASAnet (Caribbean, Central and South America network for HIV epidemiology) sites in Argentina, Brazil, Chile, Haiti, Honduras, Mexico, and Peru between 2003-2017. Life expectancy at 20 years old was estimated for three time periods (2003-2008, 2009-2012, and 2013-2017), and by demographic and clinical factors when participants began ART. Life expectancy estimates for the general population were obtained from World Health Organization data.

Among 30,688 study participants living with HIV, 17,491 (57%) were from Haiti and 13,197 (43%) were from other CCASAnet sites. There were 1,470 deaths among people in Haiti and 1,167 deaths at other sites during the study period.

The analysis reveals that life expectancy increased among all age groups over time. From 2003-2008 to 2013-2017, overall life expectancy for people living with HIV who are 20 years of age (or expected number of remaining years of life from age 20 years) increased from an additional 13.9 to 61.2 years in Haiti, and from 31.0 to 69.5 years in the other countries. This has brought life expectancy among people living with HIV on ART to within around 10 years of the general population (69.9 years in Haiti and 78.0 years at all other sites).

However, the authors identified a number of factors contributing to persistent disparities in life expectancy throughout the study. Women had greater life expectancy than men, with estimates of 65.3 years for

those in Haiti, and 81.4 years for women in other countries, by the end of the study period. By comparison, estimated life expectancy was 56.0 years of age for men in Haiti, while in other countries estimates for heterosexual men and men who have sex with men were 58.8 and 67.0 years, respectively

In countries other than Haiti, life expectancy for participants with low numbers of CD4 cells (fewer than 200 cells per microlitre of blood) - a type of white blood cells that fight infection, and a marker of HIV disease severity—was 52.7 years by the end of the study. This was considerably lower than the 84.8 years for those with higher CD4 cell counts (more than 200 cells per microlitre). Similar trends were observed in Haiti, with life expectancies of 48.5 and 71.0 years, respectively.

People with a history of tuberculosis—one of the leading causes of death among people living with HIV—also had a lower life expectancy than those with no history of the disease. By the end of the study, in countries other than Haiti, life expectancy was estimated at 48.0 years of age for people with a history of tuberculosis, compared with 74.1 years of age for those without. For the same groups in Haiti, life expectancy was 44.1 and 66.6 years, respectively.

Lower educational attainment was also linked with lower life expectancy. In countries other than Haiti, life expectancy was estimated at 75.5 years of age for people with upper secondary education compared with 57.0 years of age for those with lower secondary education. In Haiti, estimated life expectancies among these groups was 77.7 and 53.3, respectively.

Dr. Jessica L. Castilho, from Vanderbilt University Medical Center, U.S., said: "The significant gains in life expectancy that we've observed are very encouraging, and mirror reports from higher-income countries

on the impact of the WHO's 'Treat All' approach to ART. Ongoing efforts should see the gap between the life expectancies of people living with HIV and the general population in low- and [middle-income countries](#) narrow yet further.

"We did, however, also observe that a number of disparities in life expectancies remain, and may in some instances be increasing, indicating a need for future investigations to help improve outcomes for these vulnerable groups."

The authors acknowledge some limitations. A high number of patients were lost to follow-up and, while the authors sought to account for this in their analyses, this may have led to an overestimation of life expectancy. The analysis method used also resulted in a lack of adjustment for some confounding factors in life expectancy estimates. For instance, it was not possible to determine whether differences in life expectancy by HIV transmission risk factors and tuberculosis status were reflective of disparities in CD4+ cell counts. Most CCASAnet sites are located in major urban centres, meaning estimates may not reflect trends in rural or less populous areas.

The study focused on the life expectancy of people starting ART for the first time, so estimates are not reflective of all people with HIV receiving care. A lack of complete information on some key demographic and social factors may also have contributed to disparities in estimated life expectancy.

Writing in a linked Comment, Lara E Coelho and Paula M Luz, from Instituto Nacional de Infectologia Evandro Chagas, Brazil, who was not involved in the study, said: "The findings from the study by Smiley and colleagues suggest that, with prompt ART initiation irrespective of socioeconomic status, life expectancy for all people with HIV will reach that of the uninfected populations in Latin America and the Caribbean.

Sadly, however, the old challenges linger amid the COVID-19 pandemic, such that [life expectancy](#) gains among people with HIV could wane. The region is affected by endemic income and health inequalities that have been severely aggravated by the COVID-19 pandemic, transforming a health crisis into a humanitarian one. By the end of 2020, poverty was projected to have reached 231 million people in Latin America, a level that was last seen 15 years ago. We anticipate the syndemic effects of the COVID-19 pandemic in the region will disproportionately impact the most vulnerable groups, including people with HIV."

More information: Casey L Smiley et al, Estimated life expectancy gains with antiretroviral therapy among adults with HIV in Latin America and the Caribbean: a multisite retrospective cohort study, *The Lancet HIV* (2021). [DOI: 10.1016/S2352-3018\(20\)30358-1](https://doi.org/10.1016/S2352-3018(20)30358-1)

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