

Raising life expectancy for youth with HIV requires more than just adherence to care regimens, researchers say

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Projected survival over time at age 18 years by modeled cohort within an ideal care scenario. The first value reported underneath te curves is total mean life expectancy for the reference group (youth without HIV [WoH]); the other numbers show life expectancy losses compared with that reference group. NPHIV indicates HIV acquired nonperinatally; PHIV, HIV acquired perinatally. Credit: *JAMA Health Forum* (2024). DOI: 10.1001/jamahealthforum.2024.0816

Life expectancy of youth with HIV is projected to be 10.4 years less in males and 11.8 years less in females compared to individuals without HIV, a study by researchers at Massachusetts General Hospital (MGH), a founding member of the Mass General Brigham health care system, has found.



The <u>research</u>, published in *JAMA Health Forum*, also reported that careful adherence to HIV care throughout the individual's lifespan can lead to important gains in <u>life expectancy</u>, and that for some adolescents with HIV, interventions focused on structural and <u>social factors</u> such as poverty and housing could also result in improvements.

"The U.S. has made tremendous strides toward ending the HIV epidemic in recent years, and our study showed that HIV care works especially well if individuals can access timely treatment and stay engaged with it over their lifetimes," says lead author Anne Neilan, MD, MPH, a physician investigator in the Division of Infectious Diseases at Massachusetts General Hospital.

"Particularly for youth who acquired HIV in adolescence, the lower life expectancy seen with HIV may relate more to other causes of mortality than HIV itself, since current treatment is so effective."

Nearly 46,000 people in the U.S. ages 13 to 24 are living with HIV, which can damage the <u>immune system</u>, making the body more susceptible to infections and some cancers.

In their study, MGH investigators looked at two youth cohorts: One that acquired HIV around the time of birth (perinatally); and the other that acquired HIV in adolescence (non-perinatally).

They used <u>mathematical simulation</u> modeling and U.S. national adolescent clinical data to show that youth with HIV acquired at birth were projected to have life expectancy losses of 10.4 years (for boys and young men) and 11.8 years (for girls and <u>young women</u>) compared to youth without HIV.

Life expectancy losses were even higher for youth with HIV acquired in adolescence: 15.0 years for boys and young men, and 19.5 years for girls



and young women.

The study also showed that when given ideal HIV care, life expectancy losses were projected to improve substantially for youth with HIV acquired at birth (0.5 years for boys and young men, and 0.6 years for girls and young women).

With ideal care for youth with HIV acquired in adolescence, life expectancy losses also improved, but not as much with persistent project losses of 6.0 years (for boys and young men) and 10.4 years (for girls and young women).

"Particularly for youth who acquired HIV at time of birth, their projected similar life expectancies to youth without HIV in an ideal care scenario illustrates the importance of lifelong antiretroviral therapy and care engagement," notes Neilan.

"For the group who acquired HIV in adolescence, we projected a substantial gap in life expectancy compared to their HIV-at-birth counterparts, even after ideal HIV care," she says

"We believe this difference is not attributable to HIV itself, but rather to systemic, social and behavioral factors, and that these must be addressed to improve life expectancy for this higher risk group."

Those factors include poverty, housing, insurance eligibility, transportation, health system fragmentation, and HIV stigma, the researcher elaborated.

"Life expectancy is a key population health indicator," emphasizes Neilan, "and our study underscores the significant work that needs to be done in HIV care and treatment for adolescents with HIV if they're to benefit the same way adults have from the striking progress in recent



years in HIV diagnosis and treatment."

More information: Anne M. Neilan et al, Projected Life Expectancy for Adolescents With HIV in the US, *JAMA Health Forum* (2024). DOI: 10.1001/jamahealthforum.2024.0816

Provided by Massachusetts General Hospital

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