People Aging With HIV Expected to Have More Chronic Conditions

A new simulation suggests that by 2030, multimorbidity in people with HIV will rise substantially.

March 16, 2021 By Heather Boerner

Good health for people aging with HIV will require health care providers to target diabetes, heart disease, anxiety and chronic kidney disease management to this population, especially HIV-positive gay and bisexual men and Latinos.

These are the projections of the ProjEcting Age, multimorbidity, and PoLypharmacy (PEARL) simulation model, presented by Parastu Kasaie, PhD, assistant scientist at the Johns Hopkins Bloomberg School of Public Health, at the Conference on Retroviruses and Opportunistic Infections (CROI).

PEARL used data on people living with HIV ages 15 to 85 who had ever started antiretroviral (ARV) treatment in 2009, gathering them from Centers for Disease Control and Prevention surveillance data and the North American AIDS Cohort Collaboration on Research and Design (NA-ACCORD).

From each of these sources, the PEARL researchers gathered information on CD4 count at ARV initiation, year of ARV initiation, age, risk factors for comorbidities, such as weight, smoking and hepatitis C, and the overall size of the population. In addition, they collected data on five gender identities and three racial/ethnic identities—Black, white and Latino—as well as how people acquired HIV.

Then the researchers created algorithms to mimic people disengaging from and then re-engaging in care and used them to simulate what might happen by 2030 to those people's CD4 counts, preexisting and emerging health conditions, whether they were still taking ARVs and whether they developed multimorbidity (defined as two or more health conditions besides HIV). They were especially interested in mental health conditions (anxiety and depression), noncommunicable conditions like diabetes, chronic kidney disease, high cholesterol and high blood pressure, and serious illnesses, including cancer, heart disease and end-stage liver disease.

What they project is that the median age of people living with HIV will rise from 50 to 53 by 2030. The good news is that the model projects a jump in people with access to ARVs by 2030—reaching nearly a million, or 928,000. And those people are projected to live longer.

The researchers projected that the number of HIV-positive people on treatment under 30 will remain roughly constant, as will the number of HIV-positive people on treatment ages 40 to 50, with moderate growth in the 50-to-60 age group. Where the real growth comes in is people over 60. By 2030, the model predicts that one in four ARV users are expected to be ages 65 or older.

The bad news is that this aging won't always be healthy and that ill health isn't spread equitably across the population. While high blood pressure and high cholesterol are expected to fall slightly over the next nine years, rates of heart attack and other heart disease are expected to increase substantially. Black and white men who inject drugs, Black women and Latinos are expected to see the highest increase in heart problems; only heterosexual men of all three races are expected to be spared the increase.

That increase in heart disease may be partially explained by diabetes, which is expected to rise, especially for heterosexual women of all races—whether they inject drugs or not—and Latino men who inject drugs.

Chronic kidney disease and anxiety are also expected to see major increases across the board. Anxiety is expected to spike especially hard among Latinas who inject drugs and their heterosexual Latino peers. And chronic kidney disease is projected to increase over current rates, especially among white and Latino women who inject drugs and Black heterosexual women.

When they combined all these conditions, the researchers expect that the proportion of people with two or more non-HIV health conditions will rise from 30% in 2020 to 36% in 2030—an increase of 251,000 people.

While people ages 30 to 40 are not expected to see an increase in multimorbidity by 2030, the same can't be said for people over age 50. Those who will be 70 or older in 2030 are expected to see an especially steep rise in multimorbidity, from 58% in 2020 to 69% in 2030—meaning 71,000 more people will be living with these chronic health conditions.

And again, this increase in ill health isn't expected to be evenly distributed among people living with HIV. Gay and bisexual men are projected to see multimorbidity increase the most, with an additional 34,000 Black same-gender-loving men projected to experience multiple health conditions by 2030.

Despite this, Latinos with HIV are expected to see the prevalence of multiple diseases rise the fastest, with Latinos being most at risk for multimorbidity in 2030—particularly Latinas, with a 24% increase, and Latino men who inject drugs, with a 17% increase.

This future isn't fixed, however. Many of these conditions, especially anxiety, diabetes, high blood pressure and high cholesterol, can respond well to exercise, diet changes and mindfulness practices. But people living with HIV can't do it alone, Kasaie said.

"While the [Ending the HIV Epidemic] goals rightfully focus on prevention, without a cure, the HIV epidemic will not be over in the next decade," she said in her presentation. "This highlights the

need for focusing future programs to care for populations aging with HIV. It is uncertain if the current health care systems will be able to support care for multimorbid population with HIV as they continue to grow in size over time. This promotes the need for new HIV care models that build out additional support for prevention and management of comorbidities among people aging with HIV."

Click here to read the CROI abstract.

Click here to learn more about HIV and aging.

© 2026 Smart + Strong All Rights Reserved.
http://beta.docker.poz.com/article/aging-hiv-chronic-disease-2030