Longer life expectancy for HIV-positive people in North America

Large studies, primarily from Western Europe, the U.S. and Australia, have found that potent combination anti-HIV therapy (commonly called ART or HAART) has led to tremendous improvement in the health of HIV-positive people. In Canada and other high-income countries, AIDS-related infections are uncommon for HIV-positive people who are in care and who are taking ART. As a result, researchers increasingly expect that a young adult who is infected with HIV today and who begins ART shortly thereafter and who takes his or her medicine every day exactly as directed and who does not have untreated co-existing health issues—such as addiction, depression, schizophrenia, co-infection with hepatitis C virus—is likely to live for several decades.

Until recently, analyses of life expectancy for large numbers of HIV-positive people in Canada and the U.S. were not available. Now a consortium of researchers across the continent has pooled health-related data collected from HIV-positive people and analysed their life expectancy. The researchers found that overall the life expectancy for HIV-positive people has increased over the past decade and is approaching that of HIV-negative people. However, not all key groups affected by HIV are experiencing the same degree of life expectancy. In this bulletin we explain which groups are affected and offer possible reasons for the observed differences.

Study details

Researchers across North America with the NA-ACCORD database analysed health-related information from 22,937 participants who initiated ART between January 1, 2000 and December 31, 2007.

The average profile of participants was as follows:

- 77% were male, 23% were women

Participants were distributed across the following age ranges:

- 20 to 34 years – 25%
- 35 to 44 years – 42%
- 45 to 54 years – 25%
- 55+ years – 8%

Route of infection

- sharing equipment for injecting street drugs (IDUs) – 20%
- having unprotected sex with another man (MSM) – 39%
- other, unspecified routes of infection – 41%

Race/ethnicity

- people of colour – 62%
- white people – 38%

CD4+ count at the time ART was initiated:

- less than 350 cells – 72%
- 350 or more cells – 28%

Results—Overall

A total of 1,622 people died during the study; details about causes of death were not provided.
In general, rates of death were high among groups of people with the following features/characteristics:

- a history of injecting street drugs
- people of colour
- people who started ART when their CD4+ count was 350 or less

**Life expectancy - The numbers**

Based on its analysis, the research team predicted that the average life expectancy of a 20-year-old person in the U.S. or Canada who began ART shortly after he or she became HIV positive should be around 70. However, this is just an average figure, and some groups will have shorter or longer life expectancy. Below are the estimated life expectancies of a 20-year-old person in different groups in 2009, starting with HIV-negative people for comparison. At the end of the figures we provide possible explanations for these results:

- HIV-negative men in Canada – 80 years
- HIV-negative men in the U.S. – 77 years
- HIV-negative women in Canada – 84 years
- HIV-negative women in the U.S. – 82 years

**Gender**

- HIV-positive men - 62 years
- HIV-positive women - 64 years

**Route of infection**

- IDUs – 49 years
- MSM – 77 years
- other risk groups – 70 years

**Race/ethnicity**

- people of colour – 58 years
- white people – 72 years

**CD4+ count when ART was initiated**

- less than 350 cells – 59 years
- 350 or more cells – 75 years

These life expectancies should be compared to the time before ART became available when, on average, HIV-positive people in high-income countries lived for between 10 and 12 years after diagnosis.

**Reasons for the gaps:**

**Women**

The overall life expectancy of HIV-positive women in this study was less than that of MSM and HIV-negative women. The researchers suggested several possibilities for their findings. It is possible that “women may be accessing HIV-related care at later stages of HIV disease than [some] men.” The study enrolled large numbers of women who had a history of injecting street drugs (IDUs). In general, people who inject street drugs have worse survival, regardless of HIV status, than non-IDUs. Women in this study may have had less education, lower incomes and more difficulty interacting with the health care system and may have experienced more social stigma and isolation than HIV-positive MSM in the study.

Unmentioned by the researchers are the many roles that women have thrust upon them, including caring for children and other family members, running a household and working outside the home. Due to these multiple roles, women sometimes are forced to prioritize the care of others and have insufficient time to care for themselves. All of these factors could have impacted the overall health and survival of women in this study.
People who inject street drugs

The research team suggested that the following factors likely played a role in the poorer life expectancy of people who inject street drugs in this study:

- having co-morbidities such as hepatitis C virus (HCV)
- difficulty taking ART every day exactly as directed
- the destabilizing effect of active drug use
- unstable housing
- low income

Race/ethnicity

The study team stated that the differences in life expectancy between people of colour and white people may reflect the impact of a number of factors, such as “underlying socioeconomic conditions, access to care and health insurance coverage....” The researchers found that at the beginning of the study the gap in life expectancy between the two racial groups was huge—23 years. However, toward the end of the study period, it had fallen to nine years.

CD4+ count at the start of ART

The findings from the present study support recommendations by leading treatment guidelines in Canada and the U.S. that HIV-positive people should initiate ART as early as possible regardless of their CD4+ count.

Limitations and strengths

It is possible that researchers may have underestimated recent or future developments in technology, care and medicine that could extend the life expectancy of HIV-positive people.

It is also possible that in the future HIV-positive people may develop age-related problems faster than HIV-negative people that cause their life expectancy to stagnate or even decrease.

Researchers were unable to follow each participant from the age of 20 until they reached their 70s. This is a reasonable limitation, as ART only became available in 1996 in most high-income countries. However, there are other databases that have monitored the health of HIV-positive people who began taking ART in 1996 (note that this is merely four years earlier than the start of the present study). These other studies have found broadly similar trends as the present NA-ACCORD analysis. The researchers in the present study used similar methodology as is routinely used to estimate the average life expectancy in HIV-negative people and so the findings from the present study are reasonable and are based on ongoing trends.

The benefits of regular care

Bear in mind that compared to HIV-negative people, many HIV-positive people in Canada and similar countries are under a relatively high degree of medical scrutiny—they undergo visits to the clinic for interviews and laboratory tests several times each year. This degree of heightened medical surveillance is likely to detect any complications early on, before they can become serious. This is yet another factor that may help extend the lifespan of HIV-positive people.

In the next article, we explore trends in survival among HIV-positive people in countries with health care systems similar to Canada and issues that can be addressed to help prolong survival.

REFERENCE:

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Production of this content has been made possible through a financial contribution from the Public Health Agency of Canada.

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