Survival

Left untreated, HIV infection is almost universally fatal. With the advent of highly active antiretroviral treatment (HAART), mortality rates among people living with HIV disease (PLWHA) have declined. Despite advances in treatment and expanded care initiatives, PLWHA in the U.S. continue to die from HIV disease.

An important measure of the public health response to HIV disease is the length of time PLWHA survive after diagnosis. Among individuals diagnosed with HIV disease in Illinois in 2005–2010, 93% of individuals were alive 36 months after diagnosis.* Survival among PLWHA with an AIDS diagnosis is lower than among PLWHA overall. Among individuals diagnosed with AIDS in 2005–2010, 85% were alive 36 months after diagnosis. For both HIV disease and AIDS diagnoses, survival rates varied by population subgroup.

Figure 1. Survival after HIV Disease and AIDS Diagnoses in 2005–2010, Illinois

The difference in survival rates between PLWHA diagnosed in 1995 compared to PLWHA diagnosed in 2010 is due to both earlier diagnosis and reporting (in 1995, only AIDS cases were reportable to IDPH; in 2010 all cases of HIV disease were reportable) and also, due to the availability and uptake of HAART. Initiation of treatment at earlier stages of HIV disease has likely also contributed to increased survival rates.

Figure 2. Survival after an HIV Disease Diagnosis in 1995–2010, Illinois

Age

Survival rates among individuals diagnosed with HIV disease in Illinois in 2005–2010 decreased with increasing age. Among children diagnosed when <13 years, all survived at least 36 months. The lowest survival rates were among adults aged ≥50 years with 80% alive 36 months after diagnosis.

Figure 3. Survival after an HIV Disease Diagnosis in 2005–2010 by Age, Illinois

* Mortality can be due to any cause, not necessarily as a result of HIV infection.
Race/Ethnicity
Among PLWHA diagnosed with HIV disease from 2005–2010, blacks had a slightly lower survival rate compared with other racial/ethnic groups. PLWHA who identified as being of multiple races had the highest post-diagnosis survival rates.

Sex and Transmission Risk Category
By transmission risk category, PLWHA who acquired HIV via injection drug use (IDU) had the lowest survival rates at 12, 24, and 36 months after HIV disease diagnosis. Lower survival rates in this risk group have also been seen nationally (CDC, 2015). Older age at diagnosis among IDUs (see section, “Injection Drug Users”) may negatively affect survival rates (Costagliola, 2014). Health care providers may defer HIV treatment for IDUs, which can contribute to lower survival rates (Westergaard, Ambrose, Mehta, and Kirk, 2012). Significant Hepatitis C co-infection may also contribute to higher mortality rates among IDUs (May et al., 2015).

Individuals with infection attributable to perinatal transmission had the highest rates of survival, followed by MSM. Among PLWHA with infection attributable to heterosexual contact, survival was higher among females than males at 36 months post-diagnosis (94% vs. 91%).
Figure 7. Survival after an AIDS Diagnosis in 1995–2010, Illinois

Survival rates among Illinois PLWHA who progressed to AIDS from 2005–2010 decreased with increasing age. Among children <13 years at AIDS diagnosis, 100% were alive 36 months after the diagnosis. Among PLWHA ≥50 years at AIDS diagnosis, 71% were alive 36 months after diagnosis.

Figure 8. Survival after an AIDS Diagnosis in 2005–2010 by Age, Illinois

Survival rates among Illinois PLWHA who progressed to AIDS from 2005–2010 decreased with increasing age. Among children <13 years at AIDS diagnosis, 100% were alive 36 months after the diagnosis. Among PLWHA ≥50 years at AIDS diagnosis, 71% were alive 36 months after diagnosis.

Figure 9. Survival after an AIDS Diagnosis in 2005–2010 by Race/Ethnicity, Illinois

Race/Ethnicity
Blacks had the lowest survival rates after an AIDS diagnosis with 82% alive 36 months post-diagnosis. Asians had the highest survival rates after an AIDS diagnosis with 95% alive 36 months after diagnosis.

Source: Illinois Department of Public Health, April, 2015

Sex and Transmission Risk Category
Injection drug users had the lowest survival rates after an AIDS diagnosis. Among IDUs, females had a lower survival rate compared to males (70% versus 75%). Among males, MSM had the highest survival rate at 36 months after diagnosis (90%).

Figure 10. Survival after an AIDS Diagnosis in 2005–2010 among PLWHA ≥13 Years by Sex and Transmission Risk Category, Illinois

Source: Illinois Department of Public Health, April, 2015
REFERENCES


