

Summary of Mortality and Causes of Death among People with HIV and AIDS in Oregon, 2002–2004

This is a summary of mortality and causes of death among people with HIV and AIDS in Oregon during 2002–2004. The purpose of this analysis was to describe differences in mortality rate by sex, race/ethnicity, or risk and to summarize cause of death.

Data Sources

Deaths among HIV/AIDS cases diagnosed in Oregon were assessed through the use of three different data sources. The HIV/AIDS Reporting System (HARS) is a registry of HIV/AIDS cases reported in Oregon and that also includes information about date of death. Information in HARS about deaths among reported cases comes from periodic matches of HARS with the Oregon Vital Statistics Death Registry and from reports of deaths from Multnomah County HIV Health Services Clinic. Vital Statistics data provided information on date and cause of death in Oregon's general population. The 2004 U.S. Census American Family Survey was used to estimate population denominators for calculations of rates.

Observations in Mortality among Oregon HIV/AIDS Cases (2002–2004)

- The crude average annual rate of death from HIV/AIDS was 2.93 deaths per 100,000 Oregon residents
- Age-adjusted mortality among American Indians/Alaskan Natives (8.14 deaths/100,000 residents) and Black or African Americans (7.77 deaths/100,000 residents) was more than 2 times higher the age-adjusted rates for other race/ethnicities (e.g., whites 2.80 and Hispanics 2.62)
- More males with HIV/AIDS died during 2002–2004 than women (268 males vs. 34 females), age-adjusted mortality being over 7 times higher among males than females (4.95 deaths/100,000 vs. 0.64 deaths/100,000)
- The annual HIV/AIDS case fatality rate in Oregon was 2.67 deaths per 100 person-years, which indicates that people living with HIV/AIDS have almost 8 times the age-adjusted annual risk of death relative to Oregonians in general

- The annual HIV/AIDS case fatality rate was highest among American Indians/Alaskan Natives (6.62 per 100 person-years), 2 times the fatality rate among whites (2.63)
- The annual HIV/AIDS case fatality rate was similar among whites and Hispanics per 100 person-years (2.63 and 2.67), but was lower among Blacks or African Americans (1.79)
- HIV/AIDS-specific age-adjusted mortality was highest among American Indians/Alaskan Natives and Black or African Americans, but these race/ethnicities also have higher all-cause mortality
 - Blacks or African Americans with HIV/AIDS had over 2 times the age-adjusted risk of death relative to all Oregon Black or African Americans
 - Whites with HIV/AIDS had over 6 times the risk of death relative to all Oregon whites
 - American Indians/Alaskan Natives with HIV/AIDS had almost 7 times the risk of death relative to all Oregon American Indians/Alaskan Natives
 - Hispanic cases had almost 20 times the risk of death relative to all Oregon Hispanics ¹
- The annual HIV/AIDS case fatality rate was similar among men and women (2.69 vs. 2.45 per 100 person-years). However, women with HIV/AIDS had an 11 times higher age-adjusted risk of death than Oregon women overall, and men with HIV/AIDS had a 6-fold greater annual risk of death than men in the general population
- The annual case fatality rate for injecting drug users with HIV/AIDS was higher for both males and females (3.43 and 3.75 per 100 person years) than among other risk factors
- 72% of men and 59% of women with HIV/AIDS who died during 2002–2004 died because of underlying HIV disease (i.e., HIV was determined by Vital Statistics as the underlying cause of death)
- Of those that died with underlying HIV disease (males 165/229 and females 16/27), the top 5 contributing causes of death were:
 - Among males (n=165): cancer 22%, viral hepatitis 14%, pneumonia or influenza 11%, septicemia 7%, and heart disease 7%.
 - Among females (n=16): viral hepatitis 13%, septicemia 13%, meningitis 13%, cerebrovascular disease 13%, and pneumonia or influenza 13%.

¹ This high relative risk may be high in part due to the inaccurate census counts of Hispanics in Oregon illegally.

Definitions

The crude average annual rate of death among reported HIV/AIDS cases is:
[the sum of HIV/AIDS cases who died 2002–2004 / the sum of Oregon annual populations 2002–2004]*100,000

The age-adjusted mortality rate minimizes the distortion in crude rate differences created by differences in age composition (e.g. whites are older than non-whites and are therefore more likely to die of age-related causes). Age-adjusted rates are calculated by weighting the age-specific rates for a given population by the age distribution of a standard population (i.e., age-distributions in U.S. population). The weighted age-specific rates are then summed to produce the adjusted rate across all ages for a given population.

The case fatality rate is: [Number of Oregon HIV&AIDS deaths during 2002–2004 / sum of Oregonians living with HIV&AIDS for each year 2002–2004]. The case fatality rate reflects severity of disease.

The age-adjusted relative annual risk of death among HIV/AIDS cases is the age-adjusted ratio of the case fatality among HIV/AIDS cases to all-cause mortality in the overall population.

Additional Information:

Oregon mortality statistics can be found at the Center for Health Statistics website: <http://www.oregon.gov/DHS/ph/chs/data/vol2.shtml>

Information specific to 2004 HIV/AIDS mortality can be found in Tables (6-6 and 6-7) at: <http://www.oregon.gov/DHS/ph/chs/data/arpt/04v2/chp6toc.shtml>

Information on statistics and analytical procedures:

<http://www.dhs.state.or.us/dhs/ph/chs/data/arpt/03v2/appendxb.shtml>