

HIV and viral hepatitis co-infection in Oregon

Hepatitis C (HCV) and hepatitis B (HBV) are common infections among people also infected with HIV. HIV infection accelerates progression to cirrhosis, end-stage liver disease and hepatocellular carcinoma caused by viral hepatitis. People who are co-infected with viral hepatitis and HIV can also have fewer HIV treatment options.

Monitoring viral hepatitis and HIV in Oregon

Oregon health care providers and laboratories must report all cases* of HIV, HBV and HCV infection to the Oregon Health Authority. Chronic HCV infection was the most recent addition to this list in 2005. Previously, only acute HCV infection was reportable. The Oregon Health Authority uses information about reported cases of HIV and viral hepatitis to monitor disease occurrence and inform disease control strategies.

The Medical Monitoring Project (MMP)** annually interviews and reviews medical records for a subset of people living with HIV infection in Oregon. During 2011–2012, MMP staff reviewed medical records and interviewed 501 people. Some information about viral hepatitis in people with HIV comes from MMP.

Oregon HIV and viral hepatitis facts at a glance

- At least 5 percent of deaths in people with HIV were liver-related. Most of these were from chronic hepatitis C.
- Seventeen percent of Oregonians with HIV reported ever having hepatitis C virus (HCV) infection; 22 percent of Oregonians with HIV reported ever having hepatitis B virus infection (HBV).**
- Viral hepatitis prevalence among Oregonians with HIV may be higher because of underreporting.
- Chronic HCV is a more severe infection in people with HIV than in people who are not HIV-infected.

Liver-related mortality in people with HIV

Among 2,595 HIV-infected people diagnosed in Oregon during the 10-year period 2004–2013, 21 percent of those who died also had a reported case of viral hepatitis. In survival analyses of Oregonians diagnosed with HIV infection from 2004 to 2013,

* For this report, a “case” is defined as an Oregon resident with laboratory confirmed HIV infection that has been reported to the Oregon Health Division. Co-infection refers to persons with laboratory confirmed cases of viral hepatitis and HIV that have been reported to the Oregon Health Division. HIV Surveillance only has cause of death for HIV cases who died in Oregon, although these do include cases originally diagnosed in another state or country.

** Medical Monitoring Project (MMP) interviews during 2011–2012, 501 patients receiving HIV medical care in Oregon. MMP examines clinical outcomes and behaviors of adults receiving HIV care in the United States.

10-year probability of survival was 88 percent among people with HIV infection but not viral hepatitis. This compared to 74 percent among people with HIV and chronic HBV infection and 70 percent among cases with HIV and chronic HCV infection. Ten-year risk of death among Oregonians diagnosed with HIV during 2004–2013 was 2.1 times higher among those who also had viral hepatitis compared to those who did not also have viral hepatitis. As people live longer with HIV infection, and if detection and public health monitoring of both diseases improves, we expect the proportion of deaths among HIV-infected people attributable to viral hepatitis to increase (Figure 1).

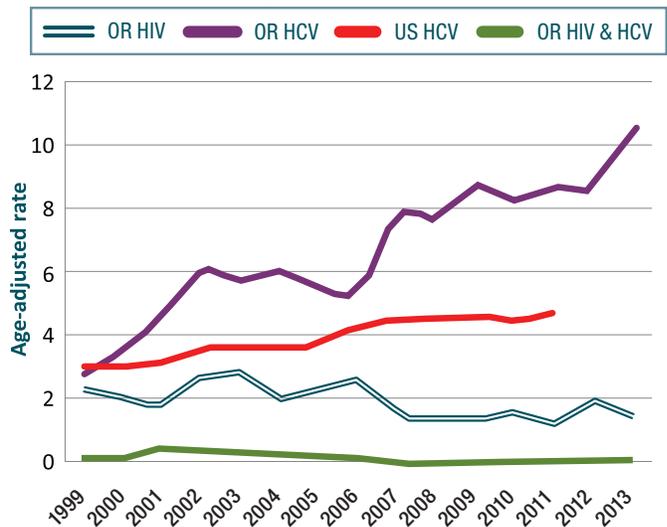
HCV in people with HIV

HCV, a bloodborne infection, is common among people who use injection drugs (PWID) because the virus is 10 times more likely than HIV to be transmitted after a single exposure to an infected person. A person who uses injection drugs and gets a new HIV infection often already has HCV infection.

While sexual transmission of HCV is rare, it can occur. HCV infection is more likely to be acquired through anal intercourse in someone who has HIV infection relative to someone who doesn't have HIV infection. HIV-related changes in the lining of the rectum make it more susceptible to hepatitis C infection.

Nationally, about 16 percent of everyone with HIV is co-infected with HCV. From 50 to 90 percent of people with HIV who use or used injection drugs likely have HCV infection. In Oregon, based on disease reporting, approximately 10 percent of everyone and 29 percent of PWID who were living with HIV infection during 2006–2013 also had HCV. This compares

Age-adjusted death rate for HIV and HCV, Oregon, 1993–2013^{†**}



[†] Listed as underlying cause or among other causes of death on death certificate.

^{**} Rates for race, sex and overall total are age-adjusted per 100,000 U.S. standard population.

Figure 1

roughly with 2011–12 MMP participants, 17 percent of whom reported ever having HCV infection. HIV-HCV co-infection prevalence did not substantially vary by race or ethnicity in Oregon.

HCV outcomes are generally worse in people who also have HIV. Individuals with HIV infection who are newly infected with HCV are more likely to develop chronic HCV infection, more likely to experience faster progression of liver disease, and less likely to be cured with treatment than people who have acute HCV infection without HIV infection. Unlike HIV, HCV can be cured. New, highly effective HCV treatments cure more than 90 percent of people.

HBV in people with HIV

Like HIV, HBV can be transmitted sexually or through injection drug use. It can also be transmitted from an infected mother to a

newborn. Because of the availability of a preventive vaccine and efficient screening of the U.S. blood supply, neither is commonly transmitted anymore through transplants or transfusions. In the United States, 39 percent of people with HIV have evidence of HBV infection, 11 percent of them being chronically infected. The U.S. prevalence of HBV infection at the time of HIV diagnosis decreased from 34 percent in 1989 to 9 percent in 2008. Among 2011–12 Oregon MMP participants, 22 percent reported ever having HBV.

Like HCV, HBV is more efficiently transmitted via bloodborne exposure than HIV. As a result, networks of PWID, many of whom were infected with HBV prior to HIV

acquisition, show evidence of widespread HBV infection.

Unlike HCV, HBV can be prevented by vaccination. However, many adults at risk for HBV infection have not been vaccinated. The low rate persists even though universal infant, child and adolescent immunization programs have existed for more than two decades. Vaccination is recommended for men who have sex with men, adults with multiple sex partners and persons who inject drugs. All people with HIV who do not have evidence of HBV immunity should be vaccinated. As the number of U.S. adults vaccinated for HBV increases, public health officials hope to see the proportions of HIV/ HBV co-infections decline.



PUBLIC HEALTH DIVISION

Epidemiologic resources:

Oregon Health Authority, HIV/AIDS epidemiology:
[http://public.health.oregon.gov/DiseasesConditions/
CommunicableDisease/DiseaseSurveillanceData/
HIVData/Pages/index.aspx](http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/HIVData/Pages/index.aspx)

Centers for Disease Control and Prevention:
www.cdc.gov/hiv

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