

OREGON PUBLIC HEALTH DIVISION • OREGON HEALTH AUTHORITY

SCREEN YOUR PATIENTS FOR HIV

**Q**uiz: In the table to the right, match the disease to the U.S. Preventive Services Task Force recommended interval, and age of screening.\*

Since 2013, the U.S. Preventive Services Task Force recommends screening *all* adults aged 15–65 years at least once for HIV infection. If your patient reports HIV risk factors, such as being a man who has sex with other men, or a person who uses injection drugs or has multiple new sex partners, then repeat testing should be done, as often as every 3 months. Despite this recommendation, only 41% of Oregon adults have ever been tested for HIV.

**DECLINE IN HIV INCIDENCE?**

The number of reported new HIV infections in Oregon declined by approximately 20% from 2012 to 2014 (Figure 1). When we’ve tallied all reports for 2014, Oregon will likely count the fewest number of newly-diagnosed HIV infections since 1986. Washington State reports a similar trend.<sup>1</sup>

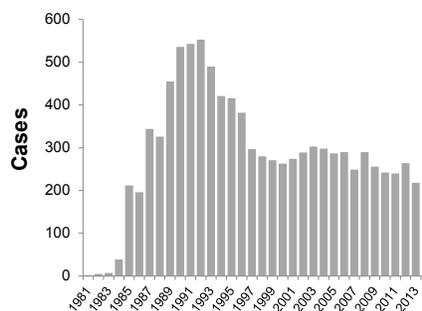
To some degree, we might be “treating our way out of it.” Declining HIV incidence is probably a result of widespread use of effective anti-retroviral drugs that suppress viral replication: people with <200 measured HIV copies per microliter of blood are “virally suppressed”; those with circulating viral copies that fall below the test’s detection threshold have “undetectable” viral loads. Evidence suggests that HIV transmission to a negative sex partner falls by 96% with viral load suppression.<sup>1</sup> Thus, HIV prevention currently focuses on linking people to medical care to assure sustained antiretroviral therapy.

Oregon has been successful in building and sustaining an infrastructure for HIV care: during

\* Answers: 1.D.ii; 2.C.i; 3.B.v; 4.A.iv; 5.E.iii  
 † [www.doh.wa.gov/Portals/1/Documents/Pubs/150-030-HIVSurveillanceSemiannualReport1-2014.pdf](http://www.doh.wa.gov/Portals/1/Documents/Pubs/150-030-HIVSurveillanceSemiannualReport1-2014.pdf).

Disease	Interval	Eligibility
1. Dyslipidemia	A. 1–10 years depending on screening test	i. All adults aged 15–65 years
2. HIV Infection	B. Once	ii. Men aged ≥35 years or 20–34 years if at risk; women: aged >20 years if at risk
3. Osteoporosis	C. At least once	iii. Adults at increased risk
4. Colorectal cancer	D. Every 5 years	iv. Men and women aged 50–70 years
5. Type 2 Diabetes mellitus** **2015 Draft recommendations	E. 1–3 years depending on risk and initial screening result	v. Women aged ≥65 years.

Figure 1. Reported HIV infections by year of diagnosis, Oregon, 1981–2014



2013, at least 84% of Oregonians with diagnosed HIV infection had at least one viral load test or CD4 count during the previous 12 months; 71% had an undetectable viral load or <200 copies/μl at the time of their most recent test. These estimates far exceed those for the U.S. as a whole and strongly support the contention that HIV incidence in Oregon is declining because of viral load suppression in people living with HIV.

**CLOSING THE DEAL**

To further increase the percent of HIV-infected persons in care and reduce incidence, we need to increase HIV diagnoses through universal screening. We estimate that 500–1000 people in Oregon have HIV infection

but don’t know it. Because they are unaware that they have HIV and have unsuppressed viral loads, this group of undiagnosed people is believed to be the source for a disproportionate number of all new HIV infections. Modeling studies suggest that while representing only 10% to 15% of the population of people with HIV, people with undiagnosed infection are the source for nearly 50% of all new infections.<sup>2</sup>

**WHY TEST ALL ADULTS?**

In short, risk-based testing misses too many infections and delayed diagnosis is common. During 2008–2012, 39% (503) of Oregonians with newly diagnosed with HIV infection had severe enough immune suppression to meet criteria for AIDS within 12 months of the initial diagnosis, indicating that they had been infected for ≥7 years. Most of these people had sought health care and rued multiple missed opportunities for diagnosis, often because they didn’t recognize or report their HIV risks.<sup>3</sup>

A 2006 study modeled cost-effectiveness of routine screening in the U.S. population. The investigators estimated that one-time HIV screening of the general US population, with an estimated prevalence of undiagnosed infection of 0.1%, cost approximately



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\$60,000 per quality adjusted life year (QALY) saved.<sup>4</sup> Since then, the cost per QALY has likely decreased: antiretroviral therapy is now being initiated earlier; adverse effects have declined; and survival continues to increase. A person diagnosed with HIV at 30 years of age now has a projected median life expectancy of ≥70 years of age.<sup>5</sup>

### WHAT TO EXPECT WHEN YOU'RE EXPECTING (TO SCREEN)

CDC recommends that laboratories screen for HIV using a "fourth generation" test for HIV antibodies and the HIV P24 antigen.<sup>6</sup> A fourth generation rapid HIV test (Alere Determine™ HIV-1/2 Ag/Ab Combo) is even available. These tests often detect HIV within 2–3 weeks of infection.

In Oregon, several labs still use a third generation test that doesn't detect P24 antigen and might not be positive as early as a fourth generation test. Positive screening tests should be automatically confirmed with an FDA-approved antibody immunoassay that differentiates HIV-1 from HIV-2 antibodies. Specimens that are reactive on the initial antigen/antibody combination immunoassay and nonreactive or indeterminate on the HIV-1/HIV-2 antibody differentiation immunoassay should be tested with a third test: an FDA-approved HIV-1 nucleic acid amplification test (NAT).

In Oregon, we expect to detect HIV infection in 2 to 4 persons per 10,000 screened. But be aware: lower prevalence of HIV infection means more false positive tests. For every person confirmed by the dual-test, as

many 10 may have a positive initial screen and a negative confirmatory test. Most of this latter group will not have HIV. All people with discordant initial and confirmatory testing should have an approved HIV nucleic acid test in follow up.

### RECOMMENDATIONS

- **Use opt-out testing.** Specific informed consent for HIV screening is no longer mandated in Oregon. Current law simply requires that patients must be notified that HIV testing may occur and given an opportunity to decline. That's it. Patients can be notified verbally by any member of the health care team or in writing via a general medical consent form, brochure, fact sheet, or sign in a waiting area. For more information about Oregon policies related to HIV testing, including sample language to add to a general form for consent for medical treatment, visit <http://bit.ly/HIVtestOR>.
- **Include reminders** in your electronic health records system, which: 1) could order HIV screening automatically, leaving it to the clinicians to uncheck the order if not needed; or 2) prompt providers to order an HIV test.
- **Build HIV screening notification** and opt-out options for into clinical materials and general consents for care, then include an HIV test when a person has lab work for other purposes, or receives other preventive services.
- **Advise patients** before screening that tests are occasionally falsely positive and that additional testing might be needed. Use an approved qualitative or quantitative "viral

load" test for viral RNA to confirm positive tests. Consult with an infectious disease specialist if unsure about confirming a positive HIV tests identified via routine screening.

- **Make a plan** for giving news about positive HIV test results (including the need to rule-out a false positive), and referral of patients with true positive tests to an HIV-proficient provider. Use our tips for delivering HIV-positive test results, available <http://bit.ly/PosTest>.

### RESOURCES

- For information about HIV in Oregon visit <http://bit.ly/HIV-STI-VH>
- For physicians serving high-risk clients:
  - PrEpline: (855) 448-7737 (8am – 3pm PT)
  - PEpline: (888) 448-4911 (6am – 11pm PT)

### REFERENCES

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