Isn’t it nice to experience technological advances that change the practice of medicine and improve patients’ lives? HIV/AIDS, formerly almost universally fatal, can now be mostly managed, albeit not cured, similar to other chronic medical conditions. The game changer was the arrival of protease inhibitors in the mid-1990s. Soon combination-based, highly active antiretroviral therapy (HAART) became the standard of HIV care. Thanks to HAART, AIDS-related mortality has decreased by 90% and many more HIV-infected persons have been able to lead productive, working lives (see figure 1). HAART also stimulated international efforts to extend HIV treatment to the developing world, such as the President’s Emergency Plan For AIDS Relief (PEPFAR), as it became increasingly indefensible to have widespread disparities in access to life-saving medications. The flip side, however, is that increased survival increases the importance of other health risks shared by both HIV- and non-HIV-infected persons. Notably, HIV-infected persons are at high risk for coronary heart disease (CHD). In this issue, we look more closely at this risk, and what needs to be done to prevent CHD in people with HIV.

**HOW CHD RISK IS ELEVATED IN HIV-INFECTED PERSONS**

Higher risk for CHD in HIV-infected persons is mediated through several pathways. First, 50–70% of HIV-infected persons smoke cigarettes, increasing risk for not just CHD, but also all of the other “usual suspects” of tobacco-related diseases, such as lung cancer and COPD. Second, HIV and HAART can cause and/or exacerbate dyslipidemia. Early in untreated HIV, for example, HDL (“good cholesterol”) levels often decline, but don’t quite return to premorbid levels with HAART. On the other hand, some anti-retrovirals, such as ritonavir-based regimens, can increase triglycerides. Finally, HIV infection itself, especially with low CD4 count, increases risk of CHD independent of any effect on lipids. How much CHD risk is associated with HIV? In one analysis of health records from Boston, the relative risk for developing acute MI in HIV-infected persons was 1.75 (95% CI: 1.51-2.02), compared with non-HIV infected, after adjusting for age, gender, race, and diagnoses of hypertension, diabetes, and dyslipidemia. The authors, however, were unable to adjust for differences in smoking, which might have accounted for some of the increased risk.

**MEDICAL MONITORING PROJECT IN OREGON**

Oregon is one of 20 states participating in the Medical Monitoring Project (MMP). Begun in 2007, MMP is a CDC-funded survey of HIV-infected persons currently receiving health care, and looks at patient behaviors, clinical outcomes, and quality of care. It includes both medical record abstractions and in-person patient interviews. Through MMP, we are able to answer questions as varied as: What percentage of HIV-infected persons take their medications as prescribed? How many received a flu shot last year? How often are HIV-infected males using condoms during sexual activity? MMP provides important public health surveillance data that can identify and understand health problems in HIV-infected persons, and evaluate public health prevention and treatment programs. Unlike HIV cohort studies, which enroll patients and follow them longitudinally for years, the MMP is a cross-sectional survey of a new sample of HIV-infected patients each year.

**CHD RISK FACTORS IN OREGON HIV-INFECTED PERSONS**

We looked at 2007–2008 Oregon MMP data to determine the extent of CHD risk factors in HIV-infected persons. The average age of the 539 patients in the survey was 46 years, and the average length of time between HIV diagnosis and patient interview was 12 years. The most common CHD risk factors included smoking (46% of the participants), low HDL (55%), and elevated triglycerides (42%) (see figure 2, verso). The prevalences of high total cholesterol (9%) and obesity (17%) were actually lower than non-HIV-infected persons with similar age/sex demographics. The low prevalence of obesity was not because of weight loss from advanced HIV infection, as weight was probably not attributable to associated with markers of advanced HIV infection, such as low CD4 or high viral load. Other CHD risk factors present among the survey participants included diabetes (11%) and hypertension (28%); 5% already had a diagnosis of CHD (see figure 2, verso).

The high prevalence of smoking is especially worrisome. Smoking prevalence among Oregon HIV-infected
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Definitions:
- High chol: ≥240mg/dL
- Low HDL: <40mg/dL
- High TGA: ≥200mg/dL
- Obesity: BMI ≥30

References: