Should Family Physicians Routinely Screen Patients for Hepatitis C?

Yes: Screening Makes Sense for High-Risk Adults

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This is one in a series of pro/con editorials discussing controversial issues in family medicine.

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Chronic hepatitis C virus (HCV) infection is an important public health issue. It is estimated that 1% of the noninstitutionalized U.S. population has chronic HCV infection, corresponding to 2.7 million persons.[1] This figure is likely low because of undersampling of populations in whom the prevalence of chronic HCV infection is higher. The incidence of HCV infection is on the rise. After correction for underascertainment and underreporting, there were approximately 30,000 new infections in 2013, and more than 19,000 HCV-related deaths. Since 2007, death from HCV infection has exceeded that of human immunodeficiency virus infection.[2] Potential long-term sequelae of chronic HCV infection include the development of cirrhosis, decompensated liver disease, hepatocellular carcinoma, and liver-related death. Modeling suggests that these serious complications are expected to increase over the next decade. The cost of managing complications of the infection is estimated at $6.5 billion per year.[3]

The purpose of screening is to identify persons who are still asymptomatic and may benefit from medical intervention. In general, for a disease to warrant screening, there should be serious, irreversible consequences if it is not treated; earlier treatment should be more effective than that at a later stage; the prevalence of disease should be sufficiently high in the population to justify the resources spent on screening; a sensitive, specific, affordable, and easy screening test and an effective treatment should be available; and individuals who screen positive should have access to health care. Screening for chronic HCV infection meets all of these requirements.

Consequently, national and international groups, such as the Centers for Disease Control and Prevention (CDC),[4] the American Association for the Study of Liver Diseases,[5] and the World Health Organization,[6] strongly endorse screening for chronic HCV infection in high-risk individuals *(Table 1[4])*, because it is beneficial to the individual and public health. In 2012, the CDC modified its existing guidance to include a one-time HCV test for all individuals born between 1945 and 1965, regardless of risk.[7] Although risk-based screening is sensitive, health care and patient barriers limit its effectiveness. In 2012, the U.S. Preventive Services Task Force (USPSTF) recommended screening high-risk individuals and also

Table 1. High-Risk Individuals for Whom HCV Infection Screening Is Recommended

Persons who have ever injected illicit drugs, including those who injected only once and do not consider themselves to be drug users
Persons with factors associated with a high prevalence of HCV infection including:
Human immunodeficiency virus infection
Hemophilia if clotting factor concentrates received before 1987
History of hemodialysis
Unexplained abnormal transaminase levels
Recipients of transfusions or organ transplantations before July 1992
Children born to mothers with HCV infection
Health care, emergency medical, and public safety workers after a needlestick injury or mucosal exposure to HCV-positive blood
Current sex partners of persons with HCV infection

HCV = hepatitis C virus.

Adapted from Recommendations for prevention and control of hepatitis C virus (HCV) infection and HCV-related chronic disease. Centers for Disease Control and Prevention. MMWR Recomm Rep. *1998;47(RR-19):21.*

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supported the CDC birth cohort recommendation, although with less enthusiasm (grade B) than in other national and international guidelines.[8] Importantly, a USPSTF grade B classification permits the screening test to be covered under the Affordable Care Act.

The most compelling reason to screen for chronic HCV infection is the availability of safe and highly effective therapy. Current regimens can achieve sustained viral response (SVR) rates upward of 90%.[9] Notably, cohort studies with reasonable length of follow-up have shown that SVR is correlated with a reduction in adverse clinical outcomes, need for liver transplantation, and liver-related mortality.[10,11] Furthermore, SVR has been associated with improvement in quality of life and general well-being, issues that are important to patients and health care professionals. Achieving viral eradication is projected to lead to a net annual savings of $2.7 billion.[12] All oral treatments are easy to administer, require minimal monitoring, and are well tolerated, which means they will no longer require subspecialist consultation to administer and likely will enter the domain of family physicians and other primary care clinicians.

Whether all patients with chronic HCV infection need to be treated, particularly those with mild liver disease, is controversial, and there are limited data to guide practice. Therapy response rates are certainly higher when the disease is treated at an earlier stage, but whether this will translate into better patient outcomes is unknown. Viral eradication may have other benefits beyond improvement in liver-related morbidity and mortality that are often underappreciated. For example, HCV clearance has been associated with improvement in comorbid diseases, such as diabetes mellitus and cardiovascular disease, and may result in reduction of extrahepatic malignancy, such as lymphoma.[13,14]

There are other reasons to identify patients with persistent infection even if therapy is not being considered. The majority of persons with chronic HCV infection are unaware they have the disease. Empowering patients with health knowledge and allowing them to participate in decision making has been shown to lead to better patient outcomes and satisfaction.[15] A diagnosis allows patients to receive education on lifestyle changes to help limit the progression of disease, such as avoidance of alcohol and potentially hepatotoxic medications, and maintaining a healthy body weight. Patients may be counseled on measures to prevent transmission to others, including family members. They can also be offered vaccination against coinfection with hepatitis A or B, which may have a more severe course or precipitate liver decompensation in patients with chronic HCV infection. Screening can identify persons with more advanced disease who may benefit from screening for esophageal varices and hepatocellular carcinoma, complications that can be prevented or have better outcomes if treated at an earlier stage.

For patients to receive appropriate care for their chronic infection and receive curative treatment, they must first know they are infected, and it all begins with screening.

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