

HCV Testing: CDC Recommendations Miss 25% of Infections

Fran Lowry

April 20, 2016

Current Centers for Disease Control and Prevention (CDC) recommendations for hepatitis C virus (HCV) screening are inadequate, according to a study conducted in an urban emergency department (ED).

A review of blood samples for nearly 5000 patients who were seen in the Johns Hopkins Hospital Emergency Department, Baltimore City, Maryland, during an 8-week period showed that the CDC screening recommendations miss up to a quarter of all cases. The authors argue that one-time universal screening is needed.

"We found high prevalence rates of HCV even in young adult patients, suggesting we need to expand testing beyond the baby boomer cohort," said lead author Yu-Hsiang Hsieh, PhD, from Johns Hopkins University School of Medicine, Baltimore, in a university press release. "Urban EDs should consider expanding CDC HCV testing recommendations to permit more robust identification of patients with unknown HCV status."

Dr Hsieh and colleagues report their findings in an article that appears in the May issue of *Clinical Infectious Diseases*.

The CDC recommends one-time HCV birth cohort testing in people born from 1945 to 1965, as well as risk-based testing in those considered to be at high risk for HCV infection, including people with HIV, history of drug injection use, hemodialysis, transfusion, transplant, or use of clotting factor concentrates; with recognized exposures at work; who were born to HCV-infected women; or with persistent abnormal alanine aminotransferase levels.

"The burden of HCV infection in patients attending [EDs] is high because EDs serve as a medical safety net for many Americans who are also at high risk for HCV," Dr Hsieh and colleagues write. "Seroprevalence studies have demonstrated extremely high prevalence of HCV antibody positivity (13% to approximately 18%) in some urban ED populations."

Few EDs have evaluated the underlying burden of HCV infections in their populations, Dr Hsieh and colleagues write. Yet EDs are key venues for HCV testing because of the population served and their previously demonstrated success in HIV screening.

In the current study, the authors therefore sought to determine the overall burden of undocumented HCV infection in their ED to provide guidance for implementation of ED-based HCV testing.

Dr Hsieh and colleagues performed HCV antibody testing on blood samples from 4713 patients older than 17 years who presented to their ED between June and August 2013.

Overall, 652 (13.8%) patients were HCV antibody-positive. Of these patients, 204 (31.3%) had undocumented HCV infection.

"Among patients with undocumented infections, 99 (48.5%) would have been diagnosed based on birth cohort testing, and an additional 54 (26.5%) would be identified by risk-based testing," the authors write.

Remarkably, 51 (25.0%) patients with undocumented HCV would not have been tested if the ED had followed CDC guidelines, the authors emphasize. Extrapolating from those data, the researchers estimate that 7727 patients with HCV come through their ED each year, 2419 of which are previously undocumented. Of the undocumented cases, current screening recommendations would identify 1815 and miss 526 cases.

On the basis of those findings, they suggest testing all ED patients born after 1945 might be most feasible and efficient.

"Our findings on high HCV seroprevalence in young adult patients have become less surprising after a recent community outbreak of HIV/HCV in Indiana earlier this year. This outbreak was linked with [injection drug use] of oxycodone. There is also an increase in HCV infection associated with adolescent and young white adult injection drug users in states in central Appalachia in recent years," Dr Hsieh and colleagues write.

Their results emphasize the importance of broad screening, beyond risk and the currently CDC-established birth cohort of 1945 to 1965, and highlight an important role for EDs as sites that could identify HCV in the communities they serve, the authors say.

They note several limitations in their study, including the lack of generalizability to other EDs and the fact that their study included only those patients who had blood drawn in the ED.

Many people with risk factors such as injection drug use do not disclose their risk information to ED staff, so universal testing, "in addition to the CDC recommendations, is the only way to identify as many HCV infections as possible," Dr Hsieh said in a university news release.

The study was supported by the Division of Intramural Research at the National Institute of Allergy and Infectious Diseases and the National Institute on Drug Abuse. The authors have disclosed no relevant financial relationships.

Clin Infect Dis. 2016;62:1059-1065.