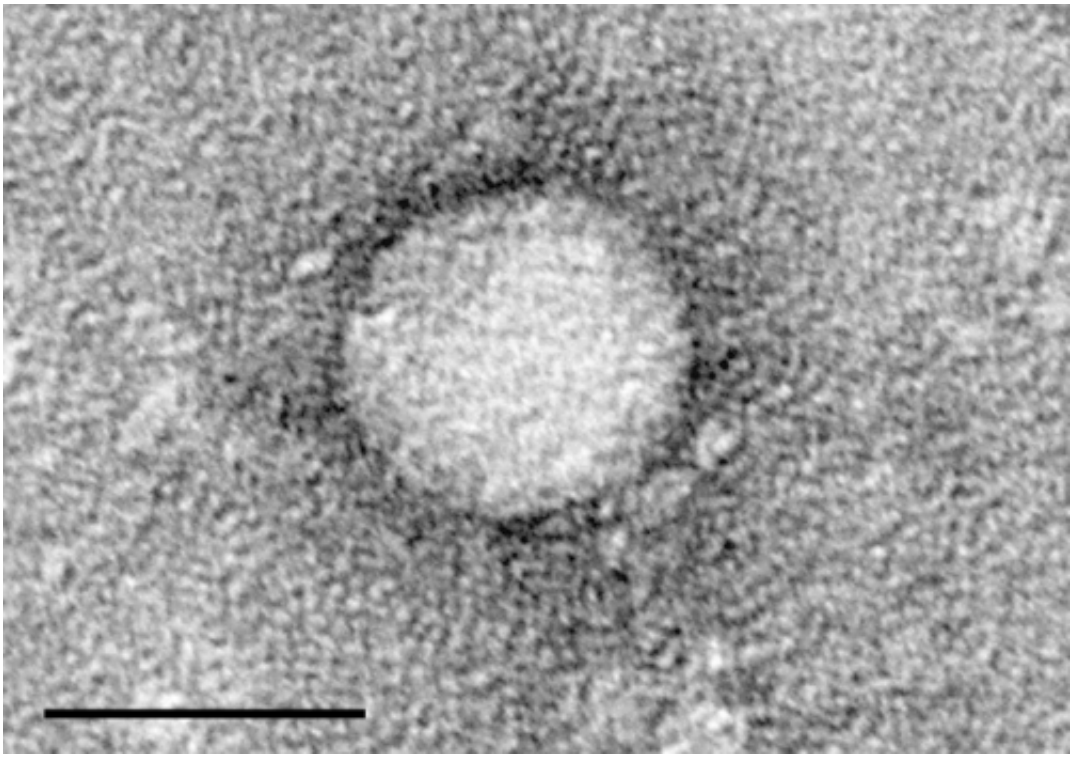
Weill analysis finds high prevalence of hepatitis C

October 22 2015, by Abigail Fagan



Electron micrographs of hepatitis C virus purified from cell culture. Scale bar is 50 nanometers. Credit: Center for the Study of Hepatitis C, The Rockefeller University.

Upwards of a million more people have been infected with the hepatitis C virus (HCV) than current estimates indicate, according to new research from Weill Cornell Medicine. The investigators say their finding exposes a critical flaw in the survey that calculates disease

prevalence and underscores the need for stronger public health policies to combat the viral infection.

The study, published online Aug. 25 in *Hepatology*, examined the National Health and Nutrition Examination Survey, a government survey designed to assess the health of a representative sample of the country's population. In a 2014 report, the most recent one available, the survey estimated that 3.6 million people have HCV antibodies (meaning they have been infected, but might have fought off the virus on their own), of whom 2.7 million are currently infected.

But a closer analysis revealed that the report excludes six populations, some of which are stigmatized and marginalized, yet critically in need of public health resources: people who are homeless or hospitalized, prisoners, military personnel, nursing home residents and residents of Native American reservations. Including these groups, the researchers estimate that 4.6 million people have antibodies for HCV and that 3.5 million are infected – and even those figures likely underestimate the disease's prevalence. It is nearly impossible to assess disease prevalence in populations like the homeless with complete accuracy.

"The populations that are uncounted in the national numbers are very disadvantaged populations, so not only do we miss the magnitude of the problem, but we also don't see how much more concentrated these problems are in people affected by economic disadvantage, ethnic discrimination and challenges accessing care," said first author Dr. Brian Edlin, associate professor of medicine at Weill Cornell Medicine.

He continued, "We need to pay more attention to our research and surveillance of these populations, and find effective methods for reaching them and engaging them in the process of overcoming the health challenges that they face."

The scientists obtained their data from publicly available records in hospital and prison databases, among others. They then multiplied the number of people in the institutions by the prevalence of HCV reported in the literature. An accurate estimate of hepatitis C and other diseases is important for many reasons, such as assessing the mortality rate of the disease and its financial burden on the health care system, designing targeted public health interventions, allocating resources and implementing treatment plans.

Interventions such as outreach, education, testing, counseling and especially needle exchange and other syringe access programs are vital for helping people who use drugs that contain bloodborne viral disease epidemics, such as HIV and hepatitis C, in their communities, Edlin said. He noted that these initiatives have proven very successful at decreasing and managing HIV, for example. But more funding is needed to establish hepatitis C public health initiatives, such as disease tracking, prevention, treatment and research.

"Now that we have effective treatment for hepatitis C," Edlin said, "antiviral treatment needs to be delivered to the populations most severely affected by the disease."

"With a more accurate estimate we'd be able to direct resources to create programs to address the needs," he said. "Knowing the numbers doesn't accomplish anything by itself. The numbers have to be used."

More information: Brian R. Edlin et al. Toward a more accurate estimate of the prevalence of hepatitis C in the United States, *Hepatology* (2015). DOI: 10.1002/hep.27978

Provided by Cornell University