

Hepatitis C 'treatment as prevention' strategy examined in new study

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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.

Hepatitis C infection is a global phenomenon that affects millions worldwide, with an estimated 30,500 new cases in the United States alone each year. Expanding treatment, however, could go a long way toward preventing transmission of the virus among high-risk individuals

who inject drugs, according to new Yale-led research.

For the study, infectious disease experts Alexei Zelenev and Dr. Frederick Altice, and their research colleagues used data from 1,574 people who inject drugs to model different treatment strategies. They employed a network-based study design to reflect how hepatitis C commonly spreads among individuals in a social network of people who inject drugs. They then simulated transmission of the virus through the network, using varying levels of hepatitis C prevalence and treatment coverage, and analyzed different strategies targeting individuals based on their network position.

The researchers found that when hepatitis C prevalence is high, "treatment as prevention" had limited impact in combating infection. However, they also determined that expanded coverage for treatment increased the effectiveness of the prevention strategy. The findings underscore the importance of increased coverage for hepatitis C treatment if efforts to combat the epidemic are to succeed, the researchers said.

More information: Alexei Zelenev et al. Hepatitis C virus treatment as prevention in an extended network of people who inject drugs in the USA: a modelling study, *The Lancet Infectious Diseases* (2017). [DOI: 10.1016/S1473-3099\(17\)30676-X](https://doi.org/10.1016/S1473-3099(17)30676-X)

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