JAMA Network Open

Editorial

# USPSTF's Hepatitis C Screening Recommendation—A Necessary Step to Tackling an Evolving Epidemic

Eli S. Rosenberg, PhD; Joshua A. Barocas, MD

Hepatitis C virus (HCV) is a cause of significant morbidity and mortality in the United States, with an estimated 4.1 million adults ever infected and 2.4 million adults currently infected.[1,2] Left untreated, HCV infection can lead to liver fibrosis, cirrhosis, and hepatocellular carcinoma and is associated with more than 20 000 deaths in the United States annually.[1,2] The burden of illness is not uniform across age, with persons born between 1945 and 1965, otherwise known as the "birth cohort," representing the majority of prevalent infections. This evidence led the US Preventive Services Task Force (USPSTF) in 2013 to recommend offering 1-time HCV screening of members of the birth cohort, along with periodic screening of those at continued risk, at unspecified intervals.[3] That previous recommendation was an incremental step away from risk-based screening and was based on the evidence that the birth cohort had the highest prevalence, had acquired their infections in the distant past (through blood transfusions or previous injection drug use), and had little ongoing risk. Yet, over the past decade, the HCV epidemic has evolved and a substantial number of new infections have emerged among persons born after 1965. Of the projected 44 700 acute infections annually, a majority are estimated to be among persons younger than 40 years and are associated with injection drug use.[4]

With the advent of curative direct-acting antivirals, we now have the promise of eliminating HCV as a public health threat. Screening for HCV infection and subsequent linkage to care are essential to realizing the benefits of direct-acting antivirals, yet an estimated 38% of persons in the birth cohort have undiagnosed HCV infection, with higher levels noted among people who inject drugs (PWID) and HIV-infected men who have unprotected sex with men.[5] Furthermore, diagnosis often occurs later during the disease course when liver damage is more severe. A recent study[6] by the US Centers for Disease Control and Prevention found that 21% of new diagnoses between 2014 and 2016 occurred in persons with advanced liver disease. Given the changing epidemiology of HCV infection, new public health priorities, advancements in treatment, and unmet diagnostic needs, it is wise to periodically reevaluate screening recommendations to ensure that they are maximally addressing these areas and patients' individual needs.

To address the evolving HCV epidemic, the USPSTF took a necessary step by expanding the HCV screening recommendations to 1-time, universal screening for all adults aged 18 to 79 years.[7] The new recommendation acknowledges that new infections are now largely driven by transmission via injection drug use and occur in younger adults. Although there remains no specific recommendation for screening intervals for persons with ongoing risks, 1-time universal screening will likely identify substantially more HCV cases, leading to improved outcomes, including additional cures, fewer cases of hepatocellular carcinoma, and fewer liver-related deaths.[8] Importantly, the recommendations are designated as B grade, which means that the USPSTF recommends the service and there is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial. The Affordable Care Act requires private insurers and Medicaid to cover preventive services recommended by the USPSTF with a grade of A or B with no cost sharing (ie, no deductible or co-payment).[9] These recommendations are nearly identical to those of the American Association for the Study of Liver Diseases and Infectious Diseases Society of America[10] and the Centers for Disease Control and Prevention,[11] the latter of which are still in draft form. The notable difference between the USPSTF recommendations[7] and the American Association

+ Audio

+ **Related article** at jama.com

Author affiliations and article information are listed at the end of this article.

for the Study of Liver Diseases and Infectious Diseases Society of America recommendations[10] is that the latter include a lower-graded recommendation for annual HCV screening for PWID and HIV-infected men who have unprotected sex with men. Relative to the USPSTF recommendation,[7] the draft Centers for Disease Control and Prevention recommendations[11] include a 0.1% HCV prevalence threshold and repeat screening with each pregnancy, acknowledging the risk of vertical transmission.

We commend the USPSTF for taking such a bold step in the fight against HCV. As we look toward eliminating the infection, these recommendations are a necessary step, but by no fault of their own, they are not sufficient. They are an improvement over previous ones because, in increasing their sensitivity by age and removing barriers to assessing risk, they provide a broader safety net so that fewer people's HCV infections remain undetected. The scope of these recommendations is a matter of discussion on 2 points in particular. First, we caution health care practitioners not to see these recommendations solely as a box to be checked without considering the patient in front of them. For example, interpreted literally at one extreme, 1-time screening of younger adults without repeated reassessments of their HCV-related risk factors would certainly miss subsequent incident infections. Thus, 1-time screening should not be interpreted like catch-up vaccinations, whereby we immunize someone at any age for hepatitis B virus, for example, and they are then immunized for the remainder of their life. We must acknowledge that individual and societal risk factors are always evolving, and our approach to screening should be to continually reassess both.

Second, ideally, HCV screening recommendations would not have to be so broad and could, in fact, be targeted toward those at risk. Like any set of recommendations, however, these are developed not solely on the basis of available evidence, but also accounting for the practice patterns of practitioners who implement them and the existing societal context in which they are placed. As such, we have forced the USPSTF to adopt age-based screening recommendations because we, as a society, have created a culture in which we have stigmatized these behaviors and we, as practitioners, have proven to be inadequate at eliciting HCV risk behaviors. Studies have shown that practitioners are suboptimal in eliciting information about sexual and drug-related risk factors from patients. This is partly because of underreporting of risk behaviors by patients, but is also, in large part, because of our aversion toward conversations about topics that may be difficult or uncomfortable for us.[12,13] Underpinning both of these is the structural stigmatization of sex and drug use.

To make further progress, we need to change the stigma landscape among clinicians, the health care system, and society at large. This may include changing the language around risk and developing antistigma educational campaigns, but should also include supportive actions by state and federal governments, such as decriminalizing drug use, that would dramatically alter the current paradigm.[14] Beyond signaling that persons struggling with the disease of addiction should be treated and valued, rather than disparaged and condemned, such actions may facilitate expansion of federal funding for syringe service programs and support of safe consumption sites. As this is done, we will finally be able to develop the optimal evidence base for HCV screening strategies, particularly around repeated screening among groups with a higher incidence of HCV (eg, PWID and HIV-infected men who have unprotected sex with men) and those for whom HCV infection may have greater consequences (eg, pregnant women). Our success in eliminating HCV, therefore, depends largely on our willingness to acknowledge and overcome the challenges posed by these recommendations and by ourselves.

Finally, we must also consider where these recommendations fit into broader public health strategies to eliminate HCV infection in the United States. Many jurisdictions have embarked on elimination plans that emphasize the identification of persons with undiagnosed infection and expanding treatment access more generally, with a lesser role given to prevention of new infections, particularly among PWID, a community that we often ineffectively engage for screening and treatment initiatives.[15] Recent simulation studies have confirmed a crucial principle that is applicable to both national and local HIV and HCV elimination planning—screening and treatment of infected

persons alone are insufficient to reach elimination targets, especially in the context of the expanding injection drug use epidemic.[16] Rather, these elements must be coupled with expanded prevention efforts among PWID using combination approaches that lower HCV risks associated with injection (eg, syringe services) and treat the underlying substance use disorder (eg, medications for opioid use disorder). Such activities also bear ancillary health benefits, in helping to prevent overdose, HIV transmission, and other sequelae of addiction and injection drug use.

The USPSTF HCV screening recommendations take an important step in recognizing fundamental changes in the HCV epidemic and the populations most affected. Our responsibility as a society and practice community is to address structural and individual factors that limit our ability to most precisely address the needs of our patients and truly move toward HCV elimination. Simply put, these recommendations are necessary but not sufficient. The next steps are on us.

## ARTICLE INFORMATION

**Published:** March 2, 2020. doi:10.1001/jamanetworkopen.2020.0538



**Corresponding Author:** Eli S. Rosenberg, PhD, Department of Epidemiology and Biostatistics, University at Albany School of Public Health, SUNY, One University Place, Room 123, Rensselaer, NY 12144 (erosenberg2@albany.edu).

**Author Affiliations:** Department of Epidemiology and Biostatistics, University at Albany School of Public Health, SUNY, Rensselaer, New York (Rosenberg); Center for Collaborative HIV Research in Practice and Policy, University at Albany School of Public Health, SUNY, Rensselaer, New York (Rosenberg); Section of Infectious Diseases, Boston Medical Center, Boston, Massachusetts (Barocas); Department of Medicine, Boston University School of Medicine, Boston, Massachusetts (Barocas).

**Conflict of Interest Disclosures:** Dr Rosenberg reported receiving grants from the Centers for Disease Control and Prevention outside the submitted work. No other disclosures were reported.

**Funding/Support:** Dr Rosenberg was supported by contract MOU 00612 (Research to Inform Hepatitis C Elimination Strategies in New York State) from the New York State Department of Health. Dr Barocas received support from the Charles A. King Trust.

**Role of the Funder/Sponsor:** The funders had no role in the preparation, review, or approval of the manuscript and the decision to submit the manuscript for publication.

## REFERENCES

1. Hofmeister MG, Rosenthal EM, Barker LK, et al. Estimating prevalence of hepatitis C virus infection in the United States, 2013-2016. *Hepatology*. 2019;69(3):1020-1031. doi:10.1002/hep.30297

2. Centers for Disease Control and Prevention. National progress report 2020 goal: reduce the rate of hepatitis C–related deaths to 4.17 per 100,000 population. https://www.cdc.gov/hepatitis/policy/NationalProgressReport-HepC-ReduceDeaths.htm. Published 2019. Accessed January 10, 2020.

3. Moyer VA, LeFevre ML, Siu AL, et al; U.S. Preventive Services Task Force. Screening for hepatitis C virus infection in adults: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med*. 2013;159(5):349-357. doi:10.7326/0003-4819-159-5-201309030-00672

4. Centers for Disease Control and Prevention. Viral hepatitis surveillance, United States, 2017. https://www.cdc.gov/hepatitis/statistics/2017surveillance/pdfs/2017HepSurveillanceRpt.pdf. Published November 14, 2019. Accessed January 10, 2020.

5. Kim HS, Yang JD, El-Serag HB, Kanwal F. Awareness of chronic viral hepatitis in the United States: an update from the National Health and Nutrition Examination Survey. *J Viral Hepat*. 2019;26(5):596-602. doi:10.1111/jvh.13060

6. Moorman AC, Xing J, Rupp LB, et al; CHeCS Investigators. Late diagnosis of hepatitis C virus infection, 2014-2016: continuing missed intervention opportunities. *Am J Manag Care*. 2019;25(8):369-374.

7. Chou R, Dana T, Fu R, et al. Screening for hepatitis C virus infection in adolescents and adults: updated evidence report and systematic review for the US Preventive Services Task Force. *JAMA*. Published online March 10, 2020. doi:10.1001/jama.2019.20788

**8**. Barocas JA, Tasillo A, Eftekhari Yazdi G, et al. Population-level outcomes and cost-effectiveness of expanding the recommendation for age-based hepatitis C testing in the United States. *Clin Infect Dis*. 2018;67(4):549-556. doi:10.1093/cid/ciy098

**9**. US Preventive Services Task Force. Appendix I: congressional mandate establishing the U.S. Preventive Services Task Force. https://www.uspreventiveservicestaskforce.org/Page/Name/appendix-i-congressional-mandate-establishing-the-us-preventive-services-task-force. Published July 2017. Accessed January 10, 2020.

**10**. American Association for the Study of Liver Diseases; Infectious Diseases Society of America. HCV guidance: recommendations for testing, managing, and treating hepatitis C—HCV testing and linkage to care. https://www.hcvguidelines.org/evaluate/testing-and-linkage. Published November 6, 2019. Accessed January 10, 2020.

**11**. Schillie S, Wester C, Osborne M, Wesolowski L, Ryerson AB. CDC recommendations for hepatitis C screening among adults. https://www.cdc.gov/hepatitis/policy/pdfs/CDC-2019-0094-0002.pdf. Published 2019. Accessed January 10, 2020.

**12**. Chen WJ, Fang CC, Shyu RS, Lin KC. Underreporting of illicit drug use by patients at emergency departments as revealed by two-tiered urinalysis. *Addict Behav*. 2006;31(12):2304-2308. doi:10.1016/j.addbeh.2006.02.015

**13**. Epstein RM, Morse DS, Frankel RM, Frarey L, Anderson K, Beckman HB. Awkward moments in patient-physician communication about HIV risk. *Ann Intern Med*. 1998;128(6):435-442. doi:10.7326/0003-4819-128-6-199803150-00003

**14**. Marcus JL, Snowden JM. Words matter: putting an end to "unsafe" and "risky" sex. *Sex Transm Dis*. 2020;47(1):1-3. doi:10.1097/OLQ.0000000000001065

**15**. US Department of Health and Human Services. Mapping hepatitis elimination in action. https://www.hhs.gov/hepatitis/get-involved/hepatitis-elimination/index.html. Published 2019. Accessed January 10, 2020.

**16**. Fraser H, Vellozzi C, Hoerger TJ, et al. Scaling up hepatitis C prevention and treatment interventions for achieving elimination in the United States: a rural and urban comparison. *Am J Epidemiol*. 2019;188(8):1539-1551. doi:10.1093/aje/kwz097