Screening a Nation for HCV Needs an Update for 2020

December 26, 2019 By Rick Nash

The Center for Disease Control is finally ready to take the first meaningful step towards Hep C Virus Elimination. In 2016 the World Health Organization began NoHep2030 a viral elimination plan. It's broad and information strategy based, and you can support it as an individual. The CDC plays a large role at the WHO, which is why it's surprising that it took until now to take this first step.

The first step in HCV elimination is universal screening. Any attempt without universal screening disenfranchises those excluded from the screening guidelines. People under 54 have been especially affected by the CDC's lack of attention (funding, resources, guidance, surveillance) for Viral Hepatitis.

The CDC is currently on an Open Comment period until December 27th 2019 for:

The recommendations propose hepatitis C screening at least once in a lifetime for all adults age 18 years and older, and for all pregnant women during each pregnancy; except in settings where the prevalence of hepatitis C infection is less than 0.1%.

The last part of that recommendation is a strange exception, because there is no setting in the United States with a prevalence less than 2%.

But here are the basic elements of why universal screening is important:

- Universal screening will help in ascertaining the true population of people with HCV.
- Universal screening will help reduce stigma in medical settings.
- Universal screening will reduce underdiagnosis, underascertainment and low knowledge.
- Universal screening will help reduce existing barriers, as barriers exist due to medical stigma.
- Universal screening will help diagnosis and link to care the US population of the #MissingMillions.

(Are you filling out comments yet? Slacktivism is activism, get on it!)

Unconvinced? Good! You should be, data is important. Also, because even though this new recommendation is way better it's still weak. What we need is to mirror HIV screening guidance, especially considering its a syndemic (co-occurring epidemics typically affecting the same groups.)

Here are some data-driven reasons to update screening practices:

Confusing information: The CDC currently shows a HCV prevalence of 2.4 million. The conflict with this estimate, is that it comes from a study, based on 2013-2016 data, and is dramatically lower than data from 2003-2010. The older data shows at least a million more people, which would be great if they were all cured, however, the CDC does not yet track cured individuals. And based on the literature included below, both estimates underascertain HCV prevalence due to structural de-emphasis of perceived non high-risk groups from current screening practices and stigma barriers. AKA the bad job high risk screening is currently doing, and the stigma it has helped perpetuate in the medical community.

> The number of US residents who have been infected with hepatitis C is unknown but is probably at least 4.6 million (range 3.4 million-6.0 million), and of these, at least 3.5 million (range 2.5 million-4.7 million) are currently infected; additional sources of potential underestimation suggest that the true prevalence could well be higher.(Edlin BR, et al. 2015,P 1353)

Underdiagnosis: This 2010 estimate was 3.5 million, which it reports is underestimated. In a study looking at an NY emergency department HCV had a 19.2% under diagnosis rate. (Torian, L. V. 2018) And if you're wondering, maybe it's not just Hep C? The study also looked at HIV underdiagnosis rates, which had a 4.8% underdiagnosis rate. Hepatitis C rates were four times higher for underdiagnosis. It's important to note that HIV has universal screening guidelines and risk based rescreening guidelines.

> CDC recommends that everyone between the ages of 13 and 64 get tested for HIV at least once as part of routine health care. For those with specific risk factors,
> CDC recommends getting tested at least once a year.

Underdiagnosis, was not a factor in the 2010, nor the 2016 basis for CDC prevalence. Diagnosis is a critical step on the journey to treatment and cure, underdiagnosis discourages knowledge seeking, as people are unaware of their status. As seen with HIV, Universal screening helps reduce underdiagnosis.

Low Knowledge: Approximately half of individuals in the United States are unaware of their HCV status. A 2015 study in San Diego found that only 32% of people who use injection drugs under the age of 35 were aware of their status(Collier, M. G., 2015), and of those who were tested positive, only 16% were offered a follow-up (Kuncio DE, 2016). People under age 54 are more likely to use injection drugs, be incarcerated, and have less knowledge of HCV while stigma reduces the likelihood of acknowledging risk-based activities. In a 2018 study, researchers found Stigma and deservedness of it alongside poor perception of care were major concerns among young People who use Injection Drugs (PWID) with HCV, reduced treatment readiness and willingness. (Skeer, et al. 2018)

Universal screening will help increase the number of people who are aware of their status, increasing knowledge, and increasing the number of follow ups.

Underascertainment: Underascertainment was a factor in the 2010 prevalence estimate, however it was not a factor in the 2016 prevalence estimate. In a Massachusetts study looking at reporting only 1 case out of the 149 people with acute HCV met the CDC reporting standards between years 2001 and 2011 (Onofrey S, 2015). While we should assume the CDC has improved ascertainment since 2011 with improved testing practices, it hasn't changed screening guidelines since then. This underascertainment is a serious weakness in understanding HCV prevalence. Universal screening will encourage the CDC to evolve its ascertainment reporting standards alongside the new guidelines and share more accurate prevalence data.

Rescreening: In a 2014 Rhode Island study in a US HIV Clinic, rescreening for HCV following an HIV diagnosis showed a 4.5% HCV seroconversion (positive for Hep C), with 1 dead from liver cancer, and one was treated and was successfully cured, Sustained Viral Response at 12 weeks(Taylor, L, 2014). Rescreening recommendations exist for HIV for the same reason as is evidenced by this study. Rescreening can save lives and prevent deaths.

Further enhanced pregnancy screening and follow up included: Between years 2009 and 2014 in the US HCV status on the birth certificate nearly doubled (89% increase,) in Tennessee, similar to many areas hit hard by the opioid epidemic, it increased 461%. (Patrick, MD, 2017, P470) In a Philadelphia study only 16% of cases testing for HCV of the newborn received a followed up. (Kuncio DE, 2016) These studies show an alarming new trend if we continue, or only take the minimal recommendations the CDC is currently proposing. Pregnancy testing recommendations should have no restrictions and should include follow up recommendations. As a person who had HCV from vertical transmission, I was diagnosed at 12 years old. Some who received it a young age through transfusion or vertical transmission at birth, did not find out until their 20s. Now that treatment is available as young as 12, there is little reason not to include recommendations of follow-up post birth for people with HCV.

It is my suggestion that the CDC should update its recommendations to the following:

> The recommendations propose hepatitis C screening at least once in a lifetime for all adults age 18 years and older, and for all pregnant women during each pregnancy. For those with specific risk factors, CDC recommends getting tested at least once a year, depending on risk factors.

Universal screening is the first step to HCV elimination, but it needs to consider the groups within it, and understand the realistic landscape.

References:

Collier, M. G., Bhaurla , S. K., Cuevas-Mota, , J., Armenta, R. F., Teshale, E. H., & Garfein, R. S. (2015). Awareness of HCVInfection Among Persons Who Inject Drugs in San Diego, California (Vol. 105(2),302-303. American Journal of Public Health. doi: 10.2105/AJPH.2014.302245

Edlin BR, Eckhardt BJ, Shu MA, Holmberg SD, Swan T. Toward a more accurate estimate of the prevalence of hepatitis C in the United States. Hepatology. 2015 Nov;62(5):1353- 63.

Hepatitis C Questions and Answers for the Public. (2019, September 10). Retrieved from https://www.cdc.gov/hepatitis/hcv/cfaq.htm#statistics

Kuncio DE, Newbern EC, Johnson CC, Viner KM. Failure to test and identify perinatally infected children born to hepatitis C-positive women. Clin Infect Dis 2016;62:980–5. https://doi.org/10.1093/cid/ciw026

Onofrey S, Aneja J, Haney GA, et al. Underascertainment of Acute Hepatitis C Virus Infections in the U.S. Surveillance System: A Case Series and Chart Review. Ann Intern Med. 2015;163:254–261. doi: 10.7326/M14-2939

Patrick, S. W., Bauer, A. M., Warren, M. D., Jones, T. F., & Wester, C. (2017). Hepatitis C Virus Infection Among Women Giving Birth — Tennessee and United States, 2009–2014. MMWR. Morbidity and Mortality Weekly Report, 66(18), 470–473. doi: 10.15585/mmwr.mm6618a3

Skeer, M. R., Ladin, K., Wilkins, L. E., Landy, D. M., & Stopka, T. J. (2018). 'Hep C's like the common cold': understanding barriers along the HCV care continuum among young people who inject drugs. Drug and Alcohol Dependence, 190, 246–254. doi: 10.1016/j.drugalcdep.2018.06.013

Taylor, L. E., Foont, J. A., Delong, A. K., Wurcel, A., Linas, B. P., Chapman, S., … Mayer, K. H. (2014). The Spectrum of Undiagnosed Hepatitis C Virus Infection in a US HIV Clinic. AIDS Patient Care and STDs, 28(1), 4–9. doi: 10.1089/apc.2013.0130

Torian, L. V., Felsen , U. R., Xia, Q., Laraque , F., Rude , E. J., Rose , H., … Zingman , B. S. (2018). Undiagnosed HIV and HCV Infection in a New York City Emergency Department, 2015 (Vol. 108(5) 652–658. . American Journal of Public Health. doi: 10.2105/AJPH.2018.304321
