

Hearing From the Silent Epidemic

Hepatitis C virus (HCV) infection has been called a "silent epidemic" (1). Millions of Americans infected with HCV during the 1960s through 1980s were not recognized as such until after 1989, when diagnostic tests became available. The baby-boom generation's high prevalence of infection led to recommendations for universal screening for everyone born between 1945 and 1965 (2). Although these recommendations are 5 years old, we still have a long way to go before all those infected are identified and presented with the option of curative, albeit expensive, therapy. Moreover, surveys on which prevalence estimates were based, such as NHANES (National Health and Nutrition Examination Survey) (3), included only persons willing to respond and participate and left out a growing population at risk for more recent infection (4).

Another silent epidemic of HCV has been occurring as a syndemic within the outbreak of opioid and injection drug use. The lack of diagnostic tests does not account for the silence associated with this epidemic, although underresourced public health surveillance explains much of the delayed recognition. The consequences of this epidemic in a younger generation are more challenging than in baby boomers because transmission of the virus is ongoing; the population is hard to reach and has less access to, or interaction with, health care; and the demand for substance use treatment and associated services is great, although the supply is limited. The benefits of prevention, medical care, and treatment for the individual and society are evident. How to institute them effectively is not.

The ongoing HCV epidemic in persons younger than 30 years was first identified primarily through public health surveillance (5-7). Unlike the almost 2:1 ratio of men to women among baby boomers with HCV infection, cases in younger people occur with closer gender parity. Thus, more children are being born to HCV-infected mothers than at any time since HCV became detectable. Ly and colleagues, in their current *Annals* report (8), used data from national surveillance and a large diagnostic testing laboratory to explore the implications of the current epidemic in reproductive-aged women and their babies. They estimate that approximately 29 000 women with HCV infection give birth each year, resulting in approximately 1700 infected infants. They note that only 200 infections in children aged 2 to 13 years are reported to public health surveillance each year, so many cases go unrecognized. Although the rate ascribed to vertical transmission of HCV (5.8%) is much lower than the 90% for hepatitis B virus (HBV), the number of children with chronic HCV infection may now be greater than that of children with chronic HBV infection because of the lack of recognition and prevention of maternal HCV infection, as well

as the effectiveness of public health programs to control perinatal HBV with vaccine and immune globulin.

Of course, babies were born to women with HCV infection in the 1960s through 1980s, but no tests were available to diagnose those cases. Presumably, the children of that era in whom the infection did not clear are now among the adults whose ages fall between the 2 epidemic age cohorts. Today, however, recognizing the infection in pregnant women and neonates is possible, and clinical trials of antiviral therapy may show safety and efficacy in pregnant women and in children. Rather than silence, HCV infection calls out for public health action directed at all aspects of the epidemic, including consideration of screening pregnant women. At the very least, screening of pregnant women for HCV infection risk factors, as well as risk-based testing, requires more emphasis. Another issue in need of attention is the lack of authoritative, consensus-based recommendations for the identification, testing, and case management of newborns of infected mothers. A population-based study in Philadelphia revealed that among 537 babies born to HCV-infected mothers in 2011 through 2013, only 84 (16%) had HCV laboratory results reported by at least 20 months of age (9).

A recent report from the National Academies of Sciences, Engineering, and Medicine proposes eliminating the public health problem of HBV and HCV infection (10). Much work lies ahead to eradicate HCV, starting with resources for public health surveillance to monitor incidence and prevalence, and to fully characterize the infection in the population. Strategies to effectively prevent or cure infection in reproductive-aged women and their sexual and needle-sharing partners are critical. The public will be best protected from the consequences of HCV infection only if accurate surveillance data are available to guide prevention and care, innovative and effective treatment and medical care for substance use disorder are delivered to an often marginalized population, and evidence-based harm reduction interventions are deployed.

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