State of Alaska Epidemiology Bulletin

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# Updated Hepatitis C Testing and Treatment Recommendations

## Background

Hepatitis C virus infection (HCV) is the most common chronic bloodborne infection in the United States. The Centers for Disease Control and Prevention (CDC) estimates that 1.0%–1.5% of the U.S. population (i.e., 2.7–3.9 million persons) is infected with HCV, and 45%–85% of those persons are unaware of their infection status.[1] On average in Alaska, 134 HCV infections per 100,000 persons are reported annually—many of these reports represent new diagnoses in persons with long-standing HCV infection.

There are at least six distinct HCV genotypes (1–6), and more than 50 subtypes. Genotype 1 is the most common genotype in the U.S. Subtyping helps to better characterize the epidemiology of HCV infection and guide the type and duration of treatment. HCV is primarily spread through contact with infected blood. People who inject drugs are at increased risk for HCV infection. According to CDC, there was a 75% increase in the number of acute HCV cases reported in the United States from 2010 to 2012, predominantly among white adolescents and young adults with history of injection drug use (IDU).[2] Of all people living with HCV in the U.S., 75% were born between 1945–1965 (the 'Baby Boomer' generation). Symptoms of acute HCV include flu-like illness and either jaundice or elevated serum aminotransferase levels >400 IU/L, but most acute cases are asymptomatic. Approximately 75%–85% of persons who acquire HCV become chronically infected. Chronic HCV infection is also often asymptomatic.

The purpose of this *Bulletin* is to provide updated testing and treatment recommendations for chronic hepatitis C disease.

## Testing

Testing and notification of persons infected with HCV enables them to make informed decisions regarding treatment options, and to be counseled on how to minimize the risk of transmission to others.[3,4]

*Who Should Be Tested?*

- All adults born during 1945–1965 should receive one-time HCV testing, regardless of having had HCV risk factors.[1]
- Testing should also be performed for all other persons with prior and ongoing exposure risk.[2]

*Types of Tests*[4]

| Screening tests* |
|---|
| • Enzyme immunoassay (EIA) to detect HCV antibody<br>• Rapid test (fingerstick) to detect HCV antibody |
| **Diagnostic tests** |
| • Nucleic acid test (NAT) to detect HCV RNA<br>• Genotyping |

**Positive results from EIA and rapid fingerstick antibody tests (e.g., OraQuick®) should always be confirmed by NAT testing.*

## Treatment

In late 2013, the Food and Drug Administration (FDA) approved two new direct acting antiviral drugs, Sofosbuvir (Sovaldi™) and Simeprevir (Olysio™) to treat chronic HCV infection (Table). Clinical trials have shown that these new medications achieve sustained viral response (i.e., no detected HCV RNA 12 weeks after the end of treatment, which is indicative of cure) in 80%–95% of patients after 12–24 weeks of treatment. More recently, additional direct-acting antiviral drugs have been FDA-approved for the treatment of chronic HCV genotype 1 infection (Table). These new medications show improved response rates, involve shorter treatment duration, and are associated with fewer side effects.

While a lack of primary care provider expertise and limited access to specialists are known barriers to HCV treatment,[5] provision of HCV treatment by primary care providers, in collaboration with specialists, is now more feasible than ever before.[5]

## Recommendations

1. All persons born during 1945–1965, and all persons with risk factors for HCV infection (see above), should be screened per the CDC guidelines.[1]
2. Primary care providers who are not already doing so should consider incorporating HCV treatment into their practice to improve access and reduce barriers to care.[3,5]
3. Prior to initiation of treatment, HCV-infected patients should be screened for ongoing alcohol and IDU abuse, and screened for human immunodeficiency virus (HIV) and hepatitis B virus infection, and offered appropriate intervention services.
4. Health care providers and laboratories should report confirmed and suspected HCV cases to SOE via secure voice message at 907-561-4234 or fax at 907-561-4239.
5. Review the additional resources available on SOE's Viral Hepatitis webpage at: http://www.epi.alaska.gov/id/hepatitis
6. All persons with HCV infection should be vaccinated against hepatitis A and B, if they are not already immune.

## References

1. CDC. Recommendations for identification of chronic HCV infection among persons born during 1945–1965. *MMWR* 2012;61(RR-04);1-18. Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6104a1.htm
2. CDC. Surveillance for Viral Hepatitis – United States 2012. Available at: http://www.cdc.gov/hepatitis/Statistics/2012Surveillance/Commentary.htm
3. CDC. Hepatitis C FAQs for Health Professionals (updated March 6, 2015). Available at: http://www.cdc.gov/hepatitis/HCV/HCVfaq.htm
4. CDC. Testing for HCV infection: An update of guidance for clinicians and laboratorians. *MMWR* 2013:62;(18):362-65. Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6218a5.htm
5. CDC. Expanding primary care capacity to treat HCV infection through an evidence-based care model — Arizona and Utah, 2012–2014. *MMWR* 2014;63(18);393-98. Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6318a2.htm

**Table. Current Options for Treating HCV Infection**

| Genotype | Cirrhosis | Ledipasvir/Sofosbuvir (Harvoni®) | Viekira Pak® (Ombitasvir, Paritaprevir, and Ritonavir; Dasabuvir) | Simeprevir (Olysio®)/ Sofosbuvir (Sovaldi®) | Sofosbuvir (Sovaldi®) AND Ribavirin |
|---|---|---|---|---|---|
| 1, Naïve* | Y | 12 weeks | | 24 weeks | |
| | N | 12 weeks | | 12 weeks | |
| 1, Experienced* | Y | 24 weeks | | 24 weeks | |
| | N | 12 weeks | | 12 weeks | |
| 1a | N | | 12 weeks with Ribavirin | | |
| | Y | | 24 weeks with Ribavirin | | |
| 1b | N | | 12 weeks | | |
| | Y | | 12 weeks with Ribavirin | | |
| 2 | Y | | | | 12 weeks |
| 3 | Y | | | | 24 weeks |
| 4 | Y | | | | 12 weeks (and Pegylated-INFa) |

**"Naïve" persons have never been treated for HCV; and "Experienced" persons have failed prior HCV therapy.*

(Contributed by Annette Hewitt, ANP, Alaska Native Tribal Heath Consortium; and Ginger Provo, BSN, and Michael Cooper, MD, MS, Section of Epidemiology.)