Current Hepatitis C Testing Recommendations

Recently, several organizations have issued hepatitis C virus (HCV) screening recommendations. In general, major guidelines now recommend routine one-time universal HCV testing for adults 18 years of age and older, routine HCV screening of pregnant individuals, screening younger persons at risk of acquiring HCV, and repeat screening for those with ongoing risk for HCV acquisition.

2020 CDC Recommendations for HCV Screening

On April 10, 2020, the Centers for Disease Control and Prevention (CDC) issued new recommendations for hepatitis C screening among adults in the United States (Table 1).[1] This new guidance augments prior CDC guidance on HCV screening with two new major recommendations: (1) all adults aged 18 years and older should have HCV screening at least once in their lifetime, except in settings where the prevalence of HCV infection is less than 0.1%, and (2) HCV screening should be performed for all pregnant persons during each pregnancy, except in settings where the prevalence of HCV infection is less than 0.1%.[1] The CDC continues to recommend screening persons for HCV regardless of age if risk factors for acquiring HCV are present, with repeat periodic screening in persons who have ongoing risk for acquiring HCV. These new CDC HCV screening recommendations expand prior guidance that recommended routine HCV screening for all persons born between 1945-1965.[1,2,3]

2020 USPSTF HCV Screening Recommendations

In March 2020, the U.S. Preventive Services Task Force (USPSTF) issued updated recommendations regarding screening for HCV. The USPSTF now recommends routine screening for all adults in the United States 18-79 years of age, including pregnant women (USPSTF Screening for Hepatitis C Infection).[4,5,6] The 2020 USPSTF recommendation for HCV screening was categorized as a grade B recommendation, which means that the USPSTF concludes with moderate certainty that screening for HCV in adults 18-79 years of age has substantial net benefit and that health care providers should offer this service (Table 2).[4,5,6] The USPSTF notes that most adults will require HCV screening only once, but those with ongoing risk of acquiring HCV will need periodic screening. For persons younger than 18 or older than 79 years of age, screening for HCV can be considered if the individual is considered at high risk for having acquired HCV.[4,5,6] The 2020 USPSTF recommendations for HCV screening is clearly a major change from the prior 2013 USPSTF recommendations to screen adults born during 1945-1965 and those with known risk.[7,8]

AASLD/IDSA HCV Testing Guidance

The American Association for the Study of Liver Diseases (AASLD) and Infectious Diseases Society of America
(IDSA) guidance for hepatitis C addresses HCV testing in the section HCV Testing and Linkage to Care.[9] The AASLD/IDSA recommends (1) one-time, routine, opt out HCV testing for all individuals aged 18 years and older, (2) one-time testing for persons younger than age 18 who have increased risk for acquiring HCV, (3) periodic testing for persons who have risk activity for acquiring HCV, and (4) annual testing for men with HIV who have condomless sex with men; men who have sex with men and are on HIV preexposure prophylaxis (PrEP); and people who inject drugs (PWID).[9] The AASLD/IDSA recommendations for testing incorporate birth-cohort screening as well as testing based on risk behaviors, risk exposures, and medical conditions associated with acquisition of HCV.[9]
Rationale for Expanded HCV Screening of All Adults

Since the release of the 2012 CDC birth-cohort (1945-1965) HCV screening recommendations, several key factors, as outlined below, have emerged that catalyzed recent recommendations to expand HCV screening in the United States.\[10,11,12\]

- **Changing HCV Epidemiology in the United States**: In recent years, there has been a major surge in new cases of HCV in the United States (Figure 1).\[13\] The increase in cases has disproportionately involved younger adults (Figure 2), primarily young adults with opioid dependence and associated injection drug use.\[13,14,15\] Use of the older screening recommendations (routine testing of persons born in the years 1945-1965) does not effectively screen for young individuals with HCV, unless they disclose their injection drug use.

- **High Cure Rate with DAA Therapy**: Newer direct-acting antiviral (DAA) therapy used to treat HCV has proven extraordinarily effective, with 8- or 12-week oral regimens showing an excellent safety profile and cure rates that exceed 98%.\[16\]

- **Impact of Treatment on HCV Natural History**: Extensive data has accumulated showing that achievement of sustained virologic response (SVR) with HCV treatment, which occurs in more than 98% of patients who receive recommended DAA regimens, is associated with major decreases in hepatocellular carcinoma, liver-related mortality, and all-cause mortality.\[5\]

- **Lower Cost of DAA Regimens**: Recent competitive market forces have significantly driven down the cost of HCV treatment. During the time period around 2015, the typical cost for an HCV treatment course with DAAs, such as ledipasvir-sofosbuvir, was approximately $84,000. Several years later, the pangenotypic, highly effective glecaprevir-pibrentasvir regimen became available at a substantially lower cost.\[12\]

- **Potential Public Health Benefit**: The concept of HCV treatment as prevention is based on the fundamental principle that persons with HCV who are treated and cured will not transmit HCV to others. Although clinical studies have not yet established the public health benefit of hepatitis C treatment as prevention, multiple mathematical modeling studies have concluded that treatment as prevention would have a major role in controlling (and eventually eliminating) HCV.\[17,18,19\] In recent years, several countries have initiated formal national HCV elimination plans using treatment as prevention as a key component of these plans.\[20\]
**Historical CDC HCV Testing Recommendations**

**1998 CDC Risk-Based HCV Screening Recommendations**

In 1998, the Centers for Disease Control and Prevention (CDC) issued recommendations for risk-based HCV testing as part of an overall strategy to prevent and control HCV infection and HCV-related disease. These recommendations categorize groups of persons who should undergo routine testing for HCV infection based on their risk for infection and based on a recognized exposure (Figure 3).[21]

**Limitations of Using Only Risk-Based HCV Screening**

A prior study that analyzed effectiveness of risk-based HCV screening found that 45 to 85% of adults with chronic HCV infection in the United States were unaware of their HCV infection status.[2,22,23] Problems with using risk-based screening were highlighted in the Chronic Hepatitis Cohort Study survey of 4,689 persons living with HCV infection who were asked about their choice of location and reason for their HCV testing.[24] The study analyzed data from 2006-2010 that revealed that 60% of persons living with HCV had their initial testing ordered at a physician's office and 45% underwent testing because of clinical indications related to liver disease; fewer than 25% of the persons with HCV infection had identifiable risk factors for acquiring HCV that would have prompted testing using the 1998 CDC Risk-Based HCV Screening Recommendations.[24] Notably, 78% of those diagnosed with HCV were born during the time period of 1945 to 1965.[24]

**2012 Birth-Cohort HCV Testing Recommendations**

In 2012, the CDC issued a recommendation that all adults born from 1945 through 1965 should undergo one-time testing to ascertain HCV.[2] The recommendation was intended to augment the risk-based screening in place at that time.[2] The 1945-1965 birth cohort, often referred to as the “baby boomers”, accounts for a large proportion of chronic HCV infections in the United States.[25] Among baby boomers, the prevalence of anti-HCV is approximately 3.25%, which is approximately 5-fold greater than among adults born in other years (Figure 4).[2,26,27] In 2012, the CDC selected the 1945-1965 birth cohort as the target population based on data from studies related to HCV prevalence, HCV disease burden, and cost-effectiveness analysis of routine screening. It should be noted that persons under the age of 40 years now account for the majority of acute HCV infections, and there is now a bimodal distribution of newly reported chronic HCV cases, with the highest proportions among persons 20 through 39 years of age and those 50 through 69 years of age.[2,25]
Summary Points

- The CDC recommends universal HCV screening at least once in a lifetime for all adults 18 years of age and older and HCV screening for all pregnant persons during each pregnancy; these recommendations do not apply to regions that have an HCV prevalence of less than 0.1%.
- The CDC recommends one-time HCV testing regardless of age or setting prevalence in persons with recognized risk for acquiring HCV.
- The CDC recommends periodic retesting for HCV in persons with ongoing risk for acquiring HCV.
- The USPSTF recommends routine screening for all adults in the United States 18-79 years of age, including pregnant women. Persons outside the 18-79 age range should have HCV testing if they have risk factors for acquiring HCV infection.
- The USPSTF recommends periodic screening for HCV in persons who have continued risk for acquiring HCV infection.
- The AASLD/IDSA recommends one-time, routine, opt out HCV testing for all individuals aged 18 years and older and one-time testing for persons younger than age 18 who have increased risk for acquiring HCV.
- The AASLD/IDSA recommends periodic testing for persons who have risk activity for acquiring HCV, including the recommendation to perform annual HCV testing for men with HIV who have condomless sex with other men, men who have sex with men who are taking HIV preexposure prophylaxis, and persons who inject drugs.
- Multiple factors have led to the recommendation to provide universal HCV screening in the United States; these factors include increases in HCV cases among young adults, availability of highly effective treatment for HCV, decreases in the cost of HCV therapy, and potential public health transmission benefits associated with more treatment.
- Risk-based hepatitis C screening alone is not effective and not recommended.
Citations


9. AASLD-IDSA. HCV Guidance: Recommendations for testing, management, and treating hepatitis C. HCV testing and linkage to care. [AASLD-IDSA Hepatitis C Guidance] -


References


- Centers for Disease Control and Prevention (CDC). Know More Hepatitis. [CDC and MMWR]


[PubMed Abstract] -


Figures

Figure 1 Estimated Number of Acute Hepatitis C Cases, United States, 2010-2019

Figure 2 Reported Rate of Cases of Acute Hepatitis C, United States, by Age Group, 2019

Figure 3 CDC 1998 Risk-Based HCV Screening Recommendations.

**Figure 4 Prevalence of HCV Antibody by Year of Birth.**


### Table 1.

**CDC Recommendations for Hepatitis C Screening Among Adults — United States**

<table>
<thead>
<tr>
<th>Persons Recommended for Screening</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Universal hepatitis C screening:</strong></td>
</tr>
<tr>
<td>• Hepatitis C screening at least once in a lifetime for all adults aged ≥18 years, except in settings where the prevalence of HCV infection (HCV RNA-positivity) is &lt;0.1%</td>
</tr>
<tr>
<td>• Hepatitis C screening for all pregnant women during each pregnancy, except in settings where the prevalence of HCV infection (HCV RNA-positivity) is &lt;0.1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>One-time hepatitis C testing regardless of age or setting prevalence among persons with recognized risk factors or exposures:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Persons with HIV</td>
</tr>
<tr>
<td>• Persons who ever injected drugs and shared needles, syringes, or other drug preparation equipment, including those who injected once or a few times many years ago</td>
</tr>
<tr>
<td>• Persons with selected medical conditions, including persons who ever received maintenance hemodialysis and persons with persistently abnormal alanine aminotransferase (ALT) levels</td>
</tr>
<tr>
<td>• Prior recipients of transfusions or organ transplants, including persons who received clotting factor concentrates produced before 1987, persons who received a transfusion of blood or blood components before July 1992, persons who received an organ transplant before July 1992, and persons who were notified that they received blood from a donor who later tested positive for HCV infection</td>
</tr>
<tr>
<td>• Health care, emergency medical, and public safety personnel after needle sticks, sharps, or mucosal exposures to HCV-positive blood</td>
</tr>
<tr>
<td>• Children born to mothers with HCV infection</td>
</tr>
</tbody>
</table>

| **Routine periodic testing for persons with ongoing risk factors, while risk factors persist:** |
| • Persons who currently inject drugs and share needles, syringes, or other drug preparation equipment |
| • Persons with selected medical conditions, including persons who ever received maintenance hemodialysis |

Any person who requests hepatitis C testing should receive it, regardless of disclosure of risk, because many persons might be reluctant to disclose stigmatizing risks

Source:

### Table 2. U.S. Preventive Services Task Force (USPSTF)

#### USPSTF Grade Recommendations (after July 2012)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Definition</th>
<th>Suggestions for Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>The USPSTF recommends the service. There is high certainty that the net benefit is substantial.</td>
<td>Offer or provide this service.</td>
</tr>
<tr>
<td>B</td>
<td>The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.</td>
<td>Offer or provide this service.</td>
</tr>
<tr>
<td>C</td>
<td>The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.</td>
<td>Offer or provide this service for selected patients depending on individual circumstances.</td>
</tr>
<tr>
<td>D</td>
<td>The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.</td>
<td>Discourage the use of this service.</td>
</tr>
<tr>
<td>I</td>
<td>The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.</td>
<td>Read the clinical considerations section of USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.</td>
</tr>
</tbody>
</table>

Source: