Diagnosis At A Glance

<table>
<thead>
<tr>
<th>Anti-HCV Antibody</th>
<th>HCV RNA</th>
<th>Interpretation</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative</td>
<td>Negative</td>
<td>This patient is not infected with HCV</td>
<td>No further testing needed</td>
</tr>
<tr>
<td>Positive</td>
<td>Positive</td>
<td>This patient has chronic HCV infection</td>
<td>Perform medical evaluation for chronic infection and liver disease</td>
</tr>
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<td>Administer hepatitis A and hepatitis B vaccines as appropriate</td>
</tr>
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<td></td>
<td></td>
<td>Refer patient to experienced treater/hepatologist to explore management and treatment options</td>
<td>Counsel patient on alcohol reduction and how to avoid transmission to others</td>
</tr>
<tr>
<td>Positive</td>
<td>Negative</td>
<td>This patient has cleared the infection (temporarily or ~25% or with treatment)</td>
<td>Remind patient that anti-HCV antibodies will not prevent reinfection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consider retesting for HCV RNA in 4-6 months to confirm resolution of HCV infection</td>
<td>Counsel patient on how HCV can be transmitted</td>
</tr>
<tr>
<td>Positive</td>
<td>Positive</td>
<td>Early acute HCV infection (prior to antibody development) OR HCV infection in severely immunocompromised setting (eg, HIV infection, organ transplant, chemotherapy)</td>
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Helpful HCV Resources

- Check for Hep C (www.checkforhepc.com)
- Help C Link to Care (www.helplinktocare.org)
- Centers for Disease Control and Prevention (CDC) (www.cdc.gov/hepatitis/HCV/index.htm)
- American Association of Family Physicians (AAFP) (www.aafp.org/afp20100601/p151.html)
- American Association of Nurse Practitioners (AANP) (www.aanp.org/AANPMCM2/AboutAANP/Links/SpecificConditions/hrm)
- American College of Gastroenterology (ACG) (http://patients.gi.org)
- Help4Hep (www.help4hep.org)
- Standardized Depression Scale: Patient Health Questionnaire (http://www.hiv.va.gov/provider/tools/audit-c.asp)
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- Check for Hep C (www.checkforhepc.com)
- American Association of Nurse Practitioners (AANP) (www.aanp.org/AANPMCM2/AboutAANP/Links/SpecificConditions/hrm)
- Hepatitis C Link to Care (www.heplinktocare.org)
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Hepatitis C Infection Differs From Hepatitis A and B

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<tr>
<th>Hepatitis A</th>
<th>Hepatitis B</th>
<th>Hepatitis C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route of Transmission</td>
<td>Facial-Oral Transmission</td>
<td>Exposure to Blood and Body Fluids</td>
</tr>
<tr>
<td>Development of Chronic Infection in Adults</td>
<td>0 ~ 5%</td>
<td>~75%</td>
</tr>
<tr>
<td>Number of Chronically Infected (in the US)</td>
<td>N/A</td>
<td>0.8-1.4 Million</td>
</tr>
<tr>
<td>Treatment Strategy</td>
<td>No Specific Treatment</td>
<td>Long-Term Viral Suppression</td>
</tr>
<tr>
<td>Curable</td>
<td>Yes (Self-Limiting Disease)</td>
<td>No</td>
</tr>
<tr>
<td>Vaccine Available</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Antibodies Protective Against Future Infection?</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

References
1. Centers for Disease Control and Prevention. MMWR. 2012;61:1-16
Positive anti-HCV antibody test results:
– Retesting should be considered if ongoing or recent risk factors are present (eg, injection-drug use, hemodialysis patients).  
– For most patients, a negative anti-HCV antibody result will not require additional testing.

Persons of all ages at risk for HCV infection include:
– Persons who injected illegal drugs, including those who injected once or a few times many years ago and do not consider themselves as drug users.
– Persons who received clotting factor concentrates produced before 1987.
– Persons who were ever on chronic hemodialysis.
– Persons with unexplained abnormal liver enzyme tests, even once (eg, current or past elevated ALT).
– Prior recipients of transfusions or organ transplants, including persons who were notified that they received blood from a donor who later tested positive for HCV.
– Persons who received a transfusion of blood or blood components before July 1992.
– Persons who received an organ transplant before July 1989.
– Persons with HIV.
– Health care, emergency medical, and public safety workers after needle sticks, sharps, or mucosal exposures to HCV-positive blood.
– Children born to HCV-positive women.

Negative anti-HCV antibody test results:  
– A positive HCV RNA test with a positive anti-HCV antibody test indicates: 
– If a patient is positive for anti-HCV antibodies, an HCV RNA test should be performed to evaluate for active infection.
– About 75% of infected individuals develop a chronic infection (HCV RNA test positive).

Persons with ongoing or recent risk factors should be evaluated for active infection: 
– Active HCV infection.
– Following infection, HCV RNA can be detected in the blood within 2 to 3 weeks.

Examples of HCV RNA tests include but are not limited to:  
– COBAS® TaqMan HCV
– VERSANT® HCV RNA TMA
– COBAS® AmpliPrep/TaqMan® HCV

According to CDC guidelines, all patients diagnosed with HCV should be:  
– Evaluated for their alcohol use and brief intervention should be provided, if clinically indicated.
– Referred to a clinician experienced in managing HCV.

Diagnose: Confirm Diagnosis With an HCV RNA Test

A positive HCV RNA test with a positive anti-HCV antibody test indicates:
– Early acute and active infection OR
– HCV infection in severely immunocompromised people (eg, HIV infection, organ transplant, chemotherapy).

A positive HCV RNA test with a negative anti-HCV antibody test indicates:
– Preventing HCV transmission.
– HCV antibodies are not protective.
– Avoid alcohol.
– Avoid illicit drugs.
– Avoid medications including OTCs and herbal agents without first checking with a healthcare provider.
– Assessment of all current medications.
– What can I do for my patient while waiting for the appointment (eg, lab tests, management)?

Refer: Linking HCV Patients to Specialty Care Provides Them With the Opportunity for Treatment

Refer your patients with HCV to a specialist (eg, hepatologist, gastroenterologist) who has experience in treating HCV.

Prepare Your HCV Patients for Care

Identify any existing mental health and alcohol/substance abuse issues following diagnosis, so they are well controlled if treatment is started.  
– Mental health issues and substance abuse are the primary reasons for treatment deferral.
– Evaluate all patients for psychiatric disorders, especially depression and suicidal thoughts/behaviors (eg, with the use of Beck Depression Inventory or Patient Health Questionnaire), refer to a mental health professional, if needed.

Avoid any new medications including OTCs and herbal agents without first checking with a healthcare provider.

Preventing HCV transmission
– Sources of support (eg, social, emotional, financial).
– Avoid alcohol and HBV vaccinations.
– Comorbidity management (eg, depression, diabetes, and hypertension).

Conservative approach to patients with diabetes and hypertension.

Counseling

Transmitting of HCV:  
– Transmitted through blood-to-blood contact.
– Individuals who engage in risky behaviors (eg, ongoing injection drug use) are at higher risk of infection.
– Less commonly transmitted by sharing personal care items such as a razor or toothbrush.

Counseling and education are recommended.

For more information and resources please visit www.checkforhepc.com