



## A MEDICAL PROVIDER GUIDE: Screening for hepatitis C infection in people living with HIV

### **HAVE YOU DIAGNOSED EVERY CASE OF HEPATITIS C?**

Between 1 in 3 to 1 in 5 people living with HIV are also infected with hepatitis C. Of these, nearly half remain undiagnosed, putting patients at risk for advancing liver disease. Have you diagnosed every case in your practice?

These materials are designed for medical providers who provide care for patients living with HIV, including physicians, nurse practitioners, physicians assistants and nurses as well as allied health professionals.



HEPATITIS C SCREENING GUIDELINES  
SCREENING ALGORITHM  
SEXUAL TRANSMISSION RISK  
ASSESSING RISK LEVEL  
SCREENING SCHEDULES



## Screening for hepatitis C infection in people living with HIV

Hepatitis C remains under-diagnosed in the United States, with between 50% to 75% of infected people who are unaware of their status. Although the undiagnosed numbers are better for people living with HIV, hepatitis C remains a challenging disease for many patients and providers to make appropriate screening decisions. Additionally, despite being more likely to receive hepatitis C testing, HIV-positive patients and their providers often face continued challenges given the rapidly changing landscape of hepatitis C treatment and a lack of clear guidelines for re-screening on an ongoing basis.

Routine hepatitis C screening of HIV-infected patients will help uncover previously undiagnosed disease and increased awareness among providers can aid in identifying acute cases of HCV. By providing brief and non-judgmental counseling and health education — and by taking a thorough sexual history — you can plan the best screening strategies for your patients and help them to both reduce and recognize the risk of HCV.



## Hepatitis C screening guidelines

Several HCV screening guidelines are available from a variety of professional organizations and governmental agencies. However, screening recommendations for the sexual transmission of HCV are not included in either of the CDC risk-based or birth-cohort guidelines, nor are they included in the USPSTF guidelines.

The CDC *Sexually Transmitted Diseases Treatment Guidelines* (2010, [www.cdc.gov/STD/treatment/2010/default.htm](http://www.cdc.gov/STD/treatment/2010/default.htm)) go into a very detailed description of HCV screening in HIV-infected persons. In addition to recommending HCV screening upon initial evaluation, these recommendations also call for routine monitoring of liver function tests to identify acute HCV infection. Finally, to account for the risk from possible sexual exposure in HIV-infected MSM, they suggest HCV testing at either routine intervals or when a patient presents with an ulcerative STD.

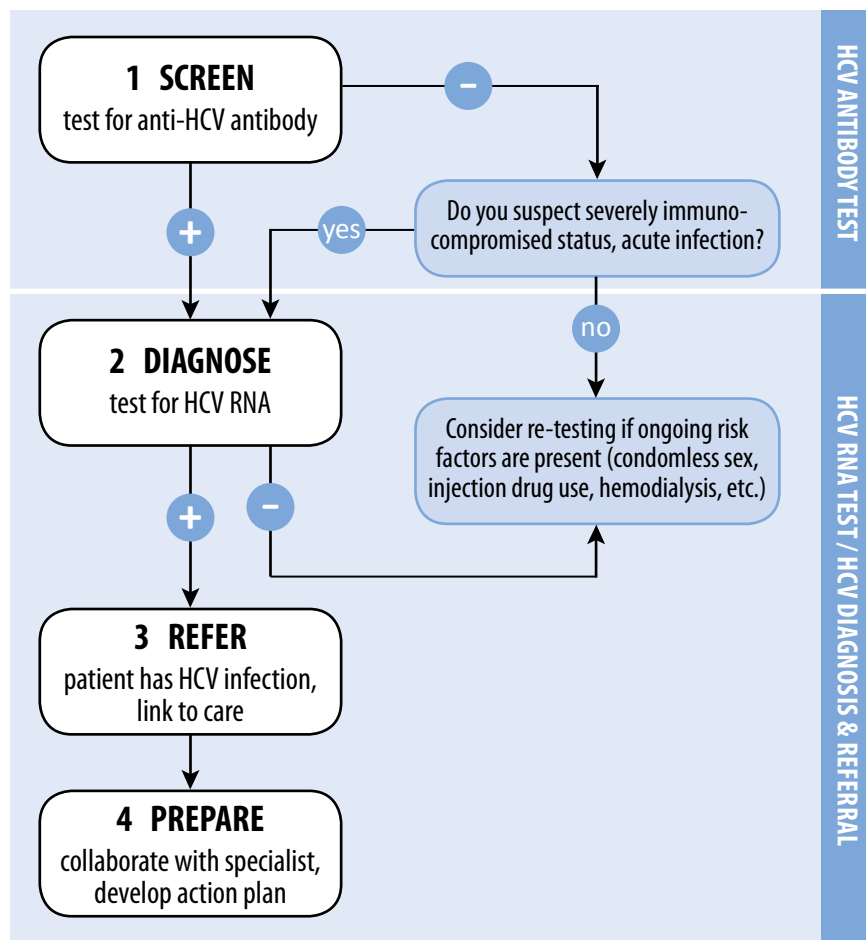
The *Guidelines for the Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents* (2013, <http://aidsinfo.nih.gov/guidelines>) recommend that all HIV-infected patients should

receive an anti-HCV antibody test upon entry to care. Additionally, for individuals who are not infected with HCV, these guidelines recommend either annual testing or another interval based upon their risk exposures.

### This list summarizes everyone who should be screened for HCV:

- All baby boomers (those born between 1945 and 1965) should receive a one-time screening for HCV with no need to determine risk factors, just order the test;
- Persons who inject or have ever injected drugs (including those who may have injected only once or those who did many years ago);
- Persons who received a blood transfusion, blood products or an organ transplant before 1992;
- Persons who have been on long-term hemodialysis;
- Persons born to an HCV-infected mother;
- Persons who are incarcerated or have a history of incarceration;
- Persons who use non-injectable, intranasal drugs and crack/crystal meth pipes;
- Persons who received an unregulated tattoo; and
- Persons with HIV.

### Algorithm for how to screen for hepatitis C infection



### Chart of results from screening hepatitis C infection

Anti-HCV antibody result	HCV RNA result	Interpretation
Negative	Negative	Patient does not have HCV.
Positive	Negative	Patient has cleared the virus, either through treatment or as one who has spontaneously cleared the virus.
Positive	Positive	Patient has chronic HCV.
Negative	Positive	Patient has acute HCV OR patient has a severely compromised immune system from HIV and cannot produce enough antibodies.

## Explain the meaning of the screening process

Much confusion exists over the HCV testing process. Your patients' experience with HIV testing may influence their understanding of this. Additionally, some clinicians may not be fully aware of the steps involved in HCV screening. (A recent CDC report showed that ~50% of patients with a positive anti-HCV antibody test result do not have a record of a confirmatory HCV RNA test.)

The first test offered to previously HCV-negative persons is an anti-HCV antibody test. Several FDA-approved tests are available, including a point of care (rapid) test that can provide results in 20 minutes. Several lab-based testing options are also available.

A person with a negative anti-HCV antibody test is negative for HCV at this time. However, the "window period" could persist up to 6 months before enough antibodies can be detected. Therefore, follow-up screening may be in order depending upon the patient's risk factors and timing.

A person with a positive anti-HCV antibody test has been exposed to HCV at some point in his life, and may now be chronically infected. However, an FDA-approved HCV RNA test, preferably

a quantitative RNA PCR, MUST be performed in order to confirm chronic infection with HCV.

Approximately 20% of people with HIV will spontaneously clear hepatitis C within the first 6 months of exposure. Those who clear the virus will always test anti-HCV antibody positive but test negative for HCV RNA. This is also true of individuals who are successfully treated and cured of HCV. Additionally, the presence of anti-HCV antibodies does not offer protection against future re-infection.

A patient who tests positive for both anti-HCV antibody and HCV RNA is confirmed to have chronic HCV infection. In this case, the following should be done:

- Perform medical exam to assess for liver disease;
- Confirm vaccination against hepatitis A and/or B (Hep A total antibody and Hep B surface antibody positive confer immunity to Hep A/B respectively and should be checked prior to vaccination), or administer vaccines as necessary;
- Counsel patient on alcohol reduction or ideally abstinence;
- Counsel patient on risk reduction and transmission; and
- If necessary, refer to or consult an experienced HCV provider for management, treatment options.

A patient may be negative for anti-HCV antibodies and positive for HCV RNA. In this case, the patient is either in the acute stage of infection, or his immune system is compromised to the point where it cannot produce enough antibodies.

## Risk of sexual transmission in HIV-infected MSM

Hepatitis C is a major health issue for people living with HIV: HIV/HCV co-infection is associated with a more rapid progression of HCV-related liver diseases, and greater risk of both cirrhosis and hepatocellular carcinoma (HCC). In the United States, HCV-related liver disease is the leading cause of death, after AIDS-related conditions, in HIV-infected persons. Overall, injection drug use is the leading risk factor for HCV infection, but for people living with HIV, sexual transmission is another cause for concern.

Although sexual transmission of HCV is low in HIV-negative individuals, several studies and reports have found much higher rates of HCV in non-injecting HIV-infected MSM. The reasons for this increased risk are not fully understood, but Taylor and colleagues have summarized the data clearly and succinctly in the following excerpt:

*“Epidemiologic studies have identified HIV as an independent factor in HCV transmission and acquisition since the earliest days of the HIV epidemic. HIV-infected individuals are less likely to spontaneously clear HCV, and their HCV RNA set point tends to be higher, making them more*

*infectious to their partners than HCV-monoinfected individuals. One study found that co-infected men were more likely than HIV-uninfected men to shed HCV RNA in semen, although this was not substantiated in other studies. HIV-infected individuals may have compromised gastrointestinal mucosal barriers and may be more likely to have chronic inflammation, facilitating HCV transmission. HIV-infected MSM who engage in unprotected sex, often with partners who may have the same HIV status (termed serosorting), may be at increased risk for sexually transmitted diseases (STDs), which may upregulate HCV in the genital tract. Multiple studies of the sexual transmission of HCV have found associations with STDs” (Taylor, et al 2012)*

HCV re-infection after successful treatment or spontaneous viral clearance in HIV-infected persons is another issue that clinicians must be aware of. In a retrospective analysis of HIV-infected MSM in London, Martin and colleagues found that as many as 25% of previously treated or spontaneously cleared patients may become re-infected within 2 years.

Results such as this highlight the need for continued prevention education and regular screening for HCV in HIV-infected MSM.



## Making decisions on the frequency of HCV screening for HIV-infected gay men

There is no consensus for the frequency of HCV screening in either PWIDs or HIV-infected gay men, so clinicians should make decisions on a case-by-case basis with their patients. The AASLD/IDSA's *Recommendations for Testing, Managing and Treating Hepatitis C* state: "Annual HCV testing is recommended for persons who inject drugs (PWIDs) and for HIV sero-positive men who have unprotected sex with men. Periodic testing should be offered to other persons with ongoing risk factors for exposure to HCV."

### Detection of acute HCV infection

There are no clinical markers for acute HCV infection. However, if an elevated ALT occurs that is >10 times the upper limit of normal in the absence of chronic liver disease and with a clear risk factor, then acute infection can be suspected and appropriate HCV screening tests can be ordered.

### A note on HCV antibodies and people with HIV

Patients who are severely immunocompromised may not produce anti-HCV antibodies. For these patients, HCV RNA tests will be needed to detect both acute and chronic HCV infection.

### HIGHER RISK EXPOSURES SUGGESTING MORE FREQUENT SCREENING

(every 3–6 months)

- Patients who report sharing injection drug using equipment (syringes, but also cookers, cotton, water, etc.);
- Patients who report sharing non-injectable drugs (crack/crystal meth pipes, snorting straws), especially when used in conjunction with sex;
- Patients who report sexual activity likely to cause trauma or breaks in tissue (such as fisting, multiple sex partners, use of sex toys, etc);
- Patients who report bleeding during anal sex;
- Patients who report not using, or not consistently using, barriers during anal sex (condoms, glove for fisting, etc);
- Patients who practice serosorting;
- Patients with a history of genital ulcerative diseases (HSV, LGV, primary syphilis)

### NOTE

Due to stigma and fear of disclosure, patients may not disclose these risk behaviors. While elevated LFTs can be an indicator for acute infection, when in doubt and you suspect an HCV infection, order the appropriate HCV test as part of your routine labs.

Project Inform thanks the following clinicians for reviewing this toolkit.  
Any errors are the responsibility of Project Inform.

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