

A TREATMENT IMPROVEMENT PROTOCOL

# Addressing Viral Hepatitis in People With Substance Use Disorders

# TIP 53



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**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES**  
Substance Abuse and Mental Health Services Administration  
Center for Substance Abuse Treatment

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## Acknowledgments

This publication was prepared for the Substance Abuse and Mental Health Services Administration (SAMHSA) by the Knowledge Application Program (KAP), a Joint Venture of The CDM Group, Inc., and JBS International, Inc., under contract numbers 270-04-7049 and 270-09-0307, with SAMHSA, U.S. Department of Health and Human Services (HHS). Christina Currier served as the Government Project Officer.

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## Recommended Citation

Substance Abuse and Mental Health Services Administration. *Addressing Viral Hepatitis in People With Substance Use Disorders*. Treatment Improvement Protocol (TIP) Series 53. HHS Publication No. (SMA) 11-4656. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2011.

## Originating Office

Quality Improvement and Workforce Development Branch, Division of Services Improvement, Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration, 1 Choke Cherry Road, Rockville, MD 20857.

HHS Publication No. (SMA) 11-4656  
Printed 2011

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# What Is a TIP?

Treatment Improvement Protocols (TIPs) are developed by the Center for Substance Abuse Treatment (CSAT), part of the Substance Abuse and Mental Health Services Administration (SAMHSA) within the U.S. Department of Health and Human Services (HHS). Each TIP involves the development of topic-specific best-practice guidelines for the prevention and treatment of substance use and mental disorders. TIPs draw on the experience and knowledge of clinical, research, and administrative experts of various forms of treatment and prevention. TIPs are distributed to facilities and individuals across the country. Published TIPs can be accessed via the Internet at <http://www.kap.samhsa.gov>.

Although each consensus-based TIP strives to include an evidence base for the practices it recommends, SAMHSA recognizes that behavioral health is continually evolving, and research frequently lags behind the innovations pioneered in the field. A major goal of each TIP is to convey “front-line” information quickly but responsibly. If research supports a particular approach, citations are provided.

## TIP Format

This TIP is organized into two parts:

- Part 1 is for counselors and administrators of behavioral health programs providing substance abuse treatment. It comprises seven chapters and emphasizes steps substance abuse treatment counselors and administrators can take to educate clients, prevent new hepatitis infections, and help clients who have viral hepatitis recover from their substance use disorders (SUDs). Information is provided at a basic level so that it can be understood by readers without medical training. Chapter 1 presents an overview of the most common types of viral hepatitis. Chapters 2 and 3 provide detailed information on screening for hepatitis and evaluation, respectively. Factors to consider when helping a client decide whether to undergo hepatitis treatment are addressed in Chapter 4; the treatment process is explained in Chapter 5. Chapter 6 describes counseling approaches for treating clients who have SUDs and viral hepatitis. Chapter 7 offers recommendations for administrators on how to add or improve hepatitis services, showcasing programs with proven track records. Note: Many people in treatment for SUDs are affected by mental disorders prior to the start of hepatitis treatment; mental disorders also may arise through the course of hepatitis treatment. Guidance for addressing co-occurring mental disorders is included throughout the TIP. Hepatitis-related issues specific to the treatment of mental disorders, not in the context of co-occurring SUDs, are covered in Appendix F.



- Part 2 is an online literature review for clinical supervisors, program administrators, and counselors interested in reviewing the medical literature on which this TIP is based. The literature review, available at <http://www.kap.samhsa.gov>, will be updated every 6 months for 5 years following publication of this TIP.

## **TIP Development Process**

TIP topics are based on the current needs of behavioral health professionals and other healthcare providers for information and guidance. After selecting a topic, SAMHSA invites staff members from Federal agencies and national organizations to be members of a resource panel that reviews an initial draft prospectus and outline and recommends specific areas of focus, as well as resources that should be considered in developing the content for the TIP. These recommendations are communicated to a consensus panel composed of experts on the topic who have been nominated by their peers. In partnership with Knowledge Application Program writers, consensus panel members participate in creating a draft document and then meet to review and discuss the draft. The information and recommendations on which they reach consensus form the foundation of the TIP. A panel chair ensures that the guidelines mirror the results of the group's collaboration.

A diverse group of experts closely reviews the draft document. Once the changes recommended by these field reviewers have been incorporated, the TIP is prepared for publication, in print and online. TIPs can be accessed via the Internet at <http://www.kap.samhsa.gov>.

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# Foreword

The Treatment Improvement Protocol (TIP) series fulfills the Substance Abuse and Mental Health Services Administration's (SAMHSA's) mission to improve prevention and treatment of substance use and mental disorders by providing best practices guidance to clinicians, program administrators, and payers. TIPs are the result of careful consideration of all relevant clinical and health services research findings, demonstration experience, and implementation requirements. A panel of non-Federal clinical researchers, clinicians, program administrators, and patient advocates debates and discusses their particular area of expertise until they reach a consensus on best practices. This panel's work is then reviewed and critiqued by field reviewers.

The talent, dedication, and hard work that TIPs panelists and reviewers bring to this highly participatory process have helped bridge the gap between the promise of research and the needs of practicing clinicians and administrators to serve, in the most scientifically sound and effective ways, people in need of behavioral health services. We are grateful to all who have joined with us to contribute to advances in the behavioral health field.

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# 1 Overview of Viral Hepatitis

## IN THIS CHAPTER

- Introduction
- Purpose of and Audience for the TIP
- Terminology
- The Liver
- What Is Viral Hepatitis?
- Hepatitis A
- Hepatitis B
- Hepatitis C
- Other Types of Viral Hepatitis
- Co-Infection With Different Types of Viral Hepatitis
- Co-Infection With Viral Hepatitis and HIV
- Chapter Summary

*You come in here to stop drinking and using drugs; I don't want to die no more. I don't want to go, to live in a box. I don't want to eat out of the garbage. I don't want to go to jail. I want to change. And 2 weeks, 3 weeks into this thing, I'm just starting to feel right, and I get news that I got hepatitis C.*

— A Client's Perspective (Strauss, Astone, Munoz-Plaza, Hagan, & Des Jarlais, 2005, pp. 1821–1822)

## Introduction

An estimated 3.5–5.3 million people in the United States live with chronic viral hepatitis (Institute of Medicine [IOM], 2010). Viral hepatitis is often a silent disease whose symptoms and signs become evident only after the disease has caused severe liver damage. The symptoms of hepatitis can take decades to manifest, so many people who are infected with hepatitis are unaware that they have the disease and therefore do not seek treatment. As a result, between 2010 and 2020, an estimated 150,000 people in the United States could die of liver cancer or other hepatitis-related liver disease (IOM, 2010). For many of these people, substance use will be a major factor that contributes to or worsens their hepatitis-related outcomes.

All people who use or have used illicit substances are at risk of contracting viral hepatitis. Injection drug use (IDU) is the primary way of contracting hepatitis C, and people who use substances are at risk for contracting other forms of viral hepatitis. Substance use disorders (SUDs) do not cause viral hepatitis, but people can contract or spread some types of viral hepatitis by sharing needles and other drug paraphernalia. In people who have chronic hepatitis, continued use of alcohol contributes to and frequently accelerates liver damage (Bhattacharya & Shuhart, 2003), increasing the likelihood that the individuals will develop cirrhosis or liver cancer.

In 2010, the U.S. Department of Health and Human Services (HHS) convened an interagency working group on viral hepatitis, comprised

of experts throughout HHS to develop a comprehensive strategy for addressing the prevention, screening, and treatment of viral hepatitis, and for improving the coordination of care and treatment of individuals infected with viral hepatitis. The working group broadened the scope of expertise even further by soliciting information from other government agencies, professional organizations, community organizations, and members of the general public. As a result of many months of work by this diverse group of experts, HHS recently released *Combating the Silent Epidemic of Viral Hepatitis: U.S. Department of Health and Human Services Action Plan for the Prevention, Care and Treatment of Viral Hepatitis* (also called the Viral Hepatitis Action Plan) (HHS, 2011). This TIP supports the goals and objectives of the Viral Hepatitis Action Plan by providing information on the prevention and treatment of viral hepatitis and by encouraging behavioral health professionals to recommend hepatitis screening for their clients who might be at risk for hepatitis infection.

Viral hepatitis can be prevented and treated. Counselors, health professionals, and administrators in SUD treatment settings play an important role in promoting the prevention and treatment of viral hepatitis among their clients.

## Purpose of and Audience for the TIP

The main objective of this Treatment Improvement Protocol (TIP) is to improve care for clients with SUDs by increasing knowledge of viral hepatitis among staff in behavioral health programs that provide substance abuse treatment. Some surveys have shown that substance abuse treatment providers are not well informed about viral hepatitis (Strauss et al., 2006). Clients often perceive

that counselors do not have the information they need (Munoz-Plaza, Strauss, Astone, Des Jarlais, & Hagan, 2004). With up-to-date information, counselors, health professionals, and administrators in SUD treatment settings can encourage clients to understand the serious nature of hepatitis, risk factors, the importance of liver wellness, screening, treatment options, and ways to avoid spreading—or contracting—hepatitis.

Other behavioral health treatment providers (e.g., counselors in mental health treatment settings, nurses, mid-level providers) will also find useful information in this TIP. Information is provided in lay terms so that it can be understood by readers who do not have medical training.

## Terminology

Terminology in the medical field may differ from that used in the substance abuse treatment field. This TIP uses terms from both disciplines. Appendix B contains a glossary of terms used in this TIP.

Because the TIP is primarily focused on care for clients with SUDs, *counselor* refers to *substance abuse treatment counselor*. *Client* refers to people seeking services at behavioral health programs providing substance abuse treatment. Occasionally, the TIP refers to people seeking services at a medical facility; in these instances, the term *patient* is used. *People* refers to adults, unless otherwise indicated.

*Treatment program* refers to a behavioral health program providing treatment for SUDs. *Medical care* refers to care for the body (e.g., treatment for hepatitis) as distinct from *behavioral health care*, which is the subset of medical care that addresses mental, emotional, and behavioral issues. *Co-occurring* is used to refer to health conditions (e.g., SUDs, mental

disorders, hepatitis) that appear together in sequence or simultaneously; wherever this term is used, the pertaining conditions are indicated. *Hepatitis* refers to viral hepatitis infection.

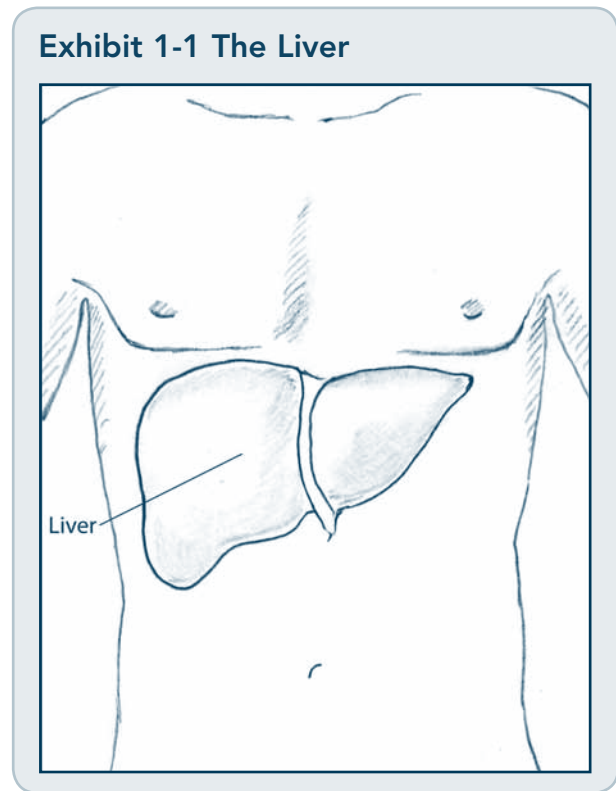
*Relapse*, when used alone, refers to relapse to substance use. Virologists sometimes use relapse to refer to the return of hepatitis after antiviral treatment, which here is referred to as *virologic relapse*.

## The Liver

To appreciate the impact of hepatitis, it is essential to understand the liver—the organ predominantly affected in people with hepatitis. The liver, located on the upper right side of the abdomen just beneath the rib cage (Exhibit 1-1), performs numerous functions essential to human life.

Blood passes from the intestines to the liver. Blood from the intestines contains nearly everything absorbed by the intestines, including nutrients and harmful or toxic substances (*toxins*). The liver breaks down toxins found in the blood and excretes them as harmless byproducts into the bile (a greenish yellow, thick, sticky fluid that aids in digestion) or back into the blood. Bile enters the intestine and leaves the body in stool. Byproducts excreted by the liver into blood are filtered out by the kidneys, then leave the body in urine. The liver also metabolizes drugs, alcohol, and prescription and over-the-counter medications, often making them inactive or easier to excrete from the body. If a person has a severely damaged liver, these substances build up in the body.

The liver manufactures several physiological products necessary for the body to function: cholesterol, bile, and other substances (e.g., clotting factors that are needed to stop



bleeding). The liver also stores sugar, fats, and vitamins for later use. Sugar is stored in the liver as glycogen, transformed into glucose, and released into the bloodstream when needed.

## What Is Viral Hepatitis?

*Hepatitis* is inflammation of the liver. It can be caused by viruses, alcohol or substance use, exposure to toxins, and certain diseases. *Viral hepatitis* refers to liver inflammation caused by one of several types of viruses that attack the liver. In the United States, these are primarily hepatitis A virus (HAV), hepatitis B virus (HBV), and hepatitis C virus (HCV) (Exhibit 1-2), but other types of hepatitis viruses do exist. The body can rid itself of infection in some cases. In others, the body cannot get rid of the infection by itself and the infection becomes chronic (continues indefinitely).



## Exhibit 1-2 Overview of the Most Common Types of Viral Hepatitis

Category	Hepatitis A	Hepatitis B	Hepatitis C
Transmission route	Fecal–oral route	Blood and body fluids	Blood
Percentage of adults infected who develop chronic infection	0%	6%–10%	75%–85%
Immunity after infection	Yes	Yes	No
Vaccine available	Yes	Yes	No

Hepatitis can be acute, which means that the infection does not last longer than 6 months. If the body’s immune system cannot fight off the virus within 6 months, the disease is considered chronic. In the United States, three to five times more people are living with chronic hepatitis B or C than with human immunodeficiency virus (HIV). Chronic hepatitis can lead to very serious health consequences—even death—because of liver failure or related medical conditions.

Most people who have chronic hepatitis do not know it (IOM, 2010). In most cases, people with infection have no symptoms of the disease, or their symptoms are so mild they do not see a medical care provider about them. Symptoms of hepatitis include the following:

- Fatigue (tiredness)
- General feeling of being unwell (malaise)
- Flu-like symptoms (e.g., headaches, muscle aches, low-grade fever)
- Lack of appetite, weight loss
- Nausea and vomiting, abdominal pain
- Jaundice (new or uncharacteristic yellow tinge to skin and mucus membranes)
- Diarrhea
- Itching of the skin
- Tea- or dark-colored urine
- Pale bowel movements

A person with chronic hepatitis can remain symptom free for decades while the liver is silently damaged. As hepatitis progresses and causes more liver damage, the liver may become scarred, referred to as *fibrosis*. Fibrosis sometimes leads to *cirrhosis*, which is profuse scarring of liver tissue. When cirrhosis develops, changes in the liver’s structure compromise its ability to function. The *spleen* (an organ that fights infections and regulates the flow of blood in the body) may also be affected. Muscle wasting can occur, resulting from lack of appetite and the liver’s inability to produce crucial proteins that build muscles. Sometimes the abdomen and ankles swell because of the body’s increased difficulty with sodium handling and removing fluids and toxins. The person may develop jaundice. When liver damage is this extensive, serious complications are likely, including bleeding from the esophagus (varices) or stomach, abdominal swelling (ascites), and difficulty thinking and making decisions (encephalopathy). By the time these symptoms occur, liver damage is extensive, and the individual is at risk of liver failure or liver cancer—a condition that almost always has a poor prognosis.

### Hepatitis A

Hepatitis A never becomes chronic, and most individuals recover within 6 months. Once recovered, a person is no longer contagious and is immune to reinfection with HAV.

## **Modes of Transmission**

HAV is spread by the oral transmission of fecal matter (stool) of a person who is infected with HAV and it is extremely contagious. Minute amounts of fecal matter containing the virus left on a person's hands can contaminate water, food, or utensils, and a person who ingests this material can develop hepatitis A. HAV can survive outside the body for several days and in water for several months. People are most infectious during the 2 weeks before the onset of symptoms. HAV is not spread through casual contact. The virus is not present in semen.

## **Disease Burden**

An estimated one-third of U.S. residents have had HAV infection (Bell et al., 2005). The number of new HAV cases has declined by 92 percent since a vaccine became available in 1995. Nevertheless, approximately 3,000 new infections were investigated and reported in 2007, representing an estimated 25,000 infections during that year (Daniels, Grytdal, & Wasley, 2009). The primary risk factor in the United States for contracting hepatitis A is traveling to areas where HAV is endemic, followed by contact with someone who is infected with HAV, or having anal intercourse with an infected person. However, many people who contract hepatitis A do not report any risk factors (Klevens et al., 2010; Daniels et al., 2009).

## **Disease Course**

HAV infection is rarely life threatening, although severity and mortality may increase with age and underlying chronic liver disease. Signs and symptoms include fatigue, fever, loss of appetite, dark urine, and jaundice. When symptoms occur, they usually appear suddenly and generally disappear within a month. Hepatitis A can be serious when coupled with other forms of hepatitis or HIV.

## **Hepatitis A and Substance Use**

People who use drugs are at risk for acquiring hepatitis A. Outbreaks occur among people who inject drugs (Daniels et al., 2009; Wells, Fenaughty, Cagle, & Jaffe, 2006) and are associated with poor hygiene and low socioeconomic status (Crowcroft, 2003; Quaglio, Lugoboni, Messelani, Des Jarlais, & Lechi, 2006).

## **Prevention**

Hepatitis A is preventable. The most effective way to prevent HAV infection is through vaccination. The vaccine is given in two doses, 6 months apart. A combined HAV and HBV vaccine is also available.

The Centers for Disease Control and Prevention (CDC, 2010a) recommends hepatitis A vaccination for the following adults:

- People who use injection drugs
- Men who have sex with men (MSM)
- People with chronic liver disease
- People who receive blood clotting-factor concentrates
- People who travel to countries that have high rates of hepatitis A
- People with occupational risks of infection (e.g., workers in daycare centers, laboratories)

Despite recommendations for vaccination, many people are not vaccinated. Vaccination rates in high-risk groups range from 8 percent to 13 percent (Carey & Perlman, 2005; Chen & Cantrell, 2006). Moreover, half of those who had been vaccinated received only one dose instead of the two doses required for full protection. However, hepatitis A vaccination in the United States among children has been increasing since May 2006, when the universal vaccination of children (aged 12–23 months) was recommended. By 2008, coverage was estimated to be 40 percent in young children (CDC, 2010b).

Contraindications to receiving the hepatitis A vaccine include having a severe allergy to vaccine components and being moderately or severely ill at the time the vaccination is offered. All clients, especially pregnant women, should consult their medical care provider to determine whether they should get vaccinated against hepatitis A.

Washing hands frequently—especially after using the bathroom, changing a diaper, and before preparing food—helps prevent the spread of HAV.

## **Hepatitis B**

Hepatitis B can be acute or chronic. More than 90 percent of infants and 30 percent of children ages 1–5 years who have been exposed to HBV will remain chronically infected with HBV. By contrast, approximately 90 percent of adults with HBV infection alone (i.e., without co-infection) recover completely from HBV infection and do not become chronically infected (CDC, 2010c). For those with chronic infection, compromise of the immune system (e.g., by chemotherapy or HIV co-infection) places the person at risk for reactivation (Luetkemeyer, 2010; CDC, 2009).

### ***Modes of Transmission***

HBV is very contagious; it is much more infectious than HIV (World Health Organization, 2009). HBV is spread through infected blood and other body fluids (e.g., semen) and can live outside the body for more than 7 days. Modes of transmission include:

- Sharing IDU equipment (e.g., needles, syringes, cookers, filters).
- Accidental needle sticks or other breaches of the skin, especially among those whose occupations expose them to blood (e.g., medical care workers, dentists).

- Unprotected sex with a partner who is infected with HBV.
- An infected mother passing the virus to her infant during delivery.
- Receipt of a blood transfusion or transplantation surgery from an infectious donor. (This is rare in the United States since mandatory screening was implemented in 1972.)

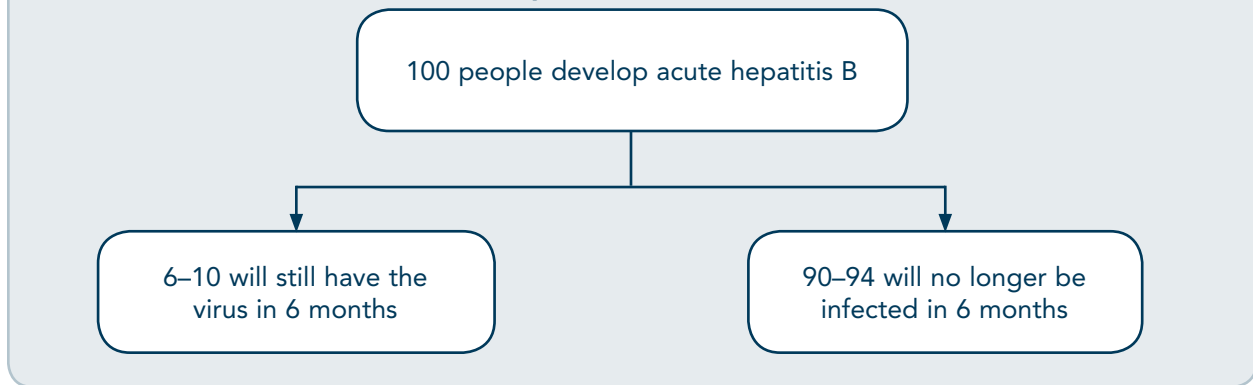
### ***Disease Burden***

Hepatitis B is a major cause of liver disease worldwide. In 2007, there were approximately 43,000 new infections in the United States. Between 800,000 and 1.4 million people in the United States live with chronic hepatitis B (Wasley et al., 2010; Daniels et al., 2009). In the United States, Asian and Pacific Islanders and MSM are disproportionately infected with HBV.

### ***Disease Course***

Approximately 35 percent of those infected exhibit symptoms. Usually, acute HBV infection alone is not life threatening.

Up to 10 percent of people with acute hepatitis B will develop chronic hepatitis after 6 months (Exhibit 1-3). Most of those with chronic infection remain symptom free, although they can infect other people. Some experience serious illness. HBV infections become chronic more frequently in people with compromised immune systems (e.g., people with HIV infection). Worldwide, hepatitis B is the most likely form of hepatitis to cause liver cancer, particularly hepatocellular carcinoma. Chronic hepatitis B can also result in cirrhosis of the liver, liver failure, and death. Daniels et al. (2009) estimate 3,000 people die in the United States per year from chronic HBV infection.

**Exhibit 1-3 Disease Course of Hepatitis B****Hepatitis B and Substance Use**

Three percent to 11 percent of people who inject drugs have chronic hepatitis B (Weinbaum et al., 2008). One study suggests that rates of asymptomatic HBV infection among clients on methadone maintenance may be as high as 25 percent (Bart et al., 2008). Alcohol use by people with hepatitis B damages the liver, which is already compromised with the hepatitis infection.

**Prevention**

Vaccination is the most effective way to prevent HBV infection. The consensus panel recommends HBV vaccination for the following adults:

- People who are infected with HCV
- People who are sexually active with or who share a household with a person with infectious HBV
- Men who have sex with men (MSM)
- People who inject drugs
- People with occupational exposure to blood (e.g., medical care workers, dentists)
- People who attend or work at institutions for people with developmental disabilities
- Hemodialysis patients or those with end-stage renal disease
- People who are infected with HIV

- Anyone with liver disease
- Anyone who lives in or travels to countries with high rates of HBV
- Adults in correctional settings

The HBV vaccine is given in three doses within a 6-month period. However, the most convenient way to provide immunization is with the combined hepatitis A/hepatitis B vaccine (sold under the brand name, Twinrix). It is administered in three intramuscular injections on a 0-, 1-, and 6-month schedule, or may be given on an accelerated schedule of four doses, given on days 0, 7, and 21–30 with a booster dose at 12 months (FDA, 2010a). Despite the availability of the HBV vaccine, many at-risk individuals have not been vaccinated. A study of people age 30 and younger who inject drugs found that only 22 percent had been vaccinated against HBV (Lum et al., 2008). Contraindications to getting the hepatitis B vaccine include having had a severe allergic reaction to a previous dose or to a component of the vaccine. Clients should discuss the vaccination with a medical care provider.

**Hepatitis C**

Hepatitis C can be acute or chronic, but it starts as an acute infection (that may go unrecognized). Unlike people with hepatitis

A and B, people who have hepatitis C and clear the virus do not develop immunity; they can become reinfected with the virus at a later date.

### **Modes of Transmission**

Hepatitis C is a blood-borne disease. IDU is the most common risk factor for acquiring hepatitis C. The virus can enter the body through any puncture in the skin (e.g., cuts, burns, sores), and travels, via the blood, to the liver. Risks of sexual transmission are unclear but appear to be low, especially compared with sexual transmission rates of HIV or HBV. Nonetheless, HCV infection rates are higher in people who have multiple sex partners. Infections have been reported in individuals with no known risk factors.

### **Disease Burden**

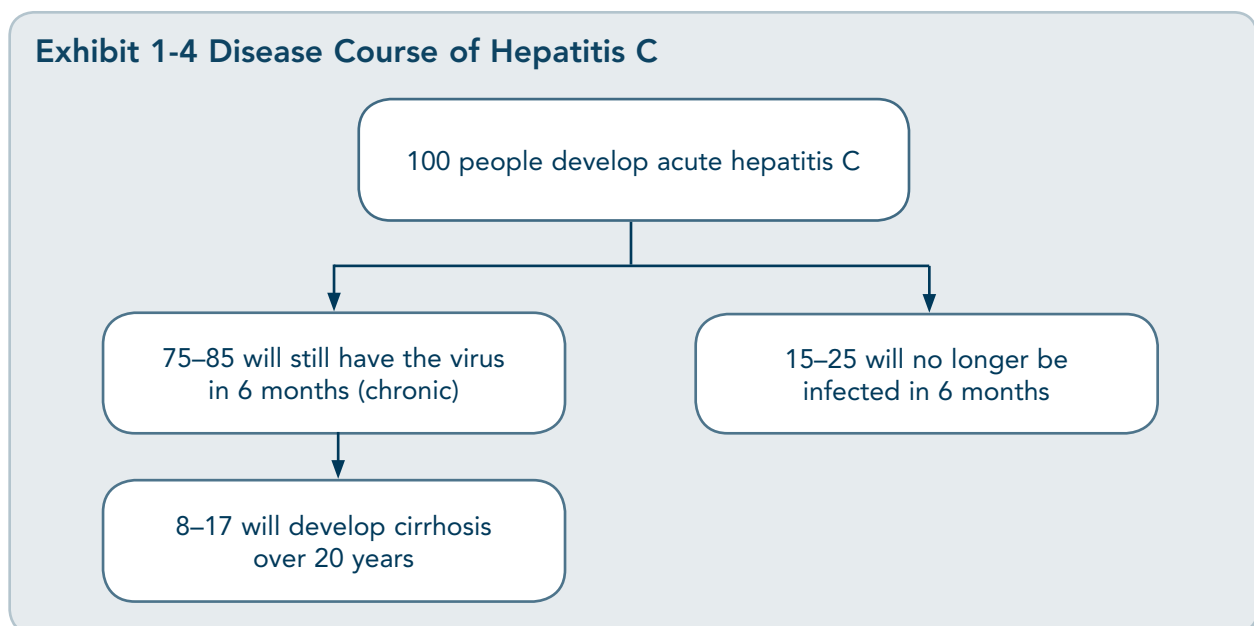
HCV infection is the most prevalent chronic, blood-borne infection in the United States (Alter et al., 1999). Approximately 3.2 million U.S. residents have chronic HCV infection (CDC, 2010c). Forty percent of chronic liver disease—the 10th leading cause of death in the United States—is caused by HCV.

Hepatitis C is most prevalent among people born between 1945 and 1965, the majority of whom were likely infected during the 1970s and 1980s, when infection rates were the highest. CDC (2010c) estimated 17,000 new infections in 2007, and people who inject drugs account for more than half of the new cases.

### **Disease Course**

HCV can be detected in the blood within 1–3 weeks of transmission. However, the majority of people with hepatitis C are asymptomatic.

Of people who contract hepatitis C, 15 percent to 25 percent clear the infection, but 75 percent to 85 percent do not and the infection becomes chronic (CDC, 2010c) (Exhibit 1-4). Chronic HCV is insidious, usually progressing very slowly and with few or no symptoms for the first 20–30 years after infection. Symptoms often do not occur until the liver damage has advanced. As the disease progresses, the liver may develop fibrosis, which can progress to cirrhosis. Approximately 12,000 people die each year from HCV-related liver disease (IOM, 2010).



HCV infection appears to progress more quickly in men, people older than 50 at the time of infection, and people with concurrent HBV or HIV (Hézode et al., 2005). Mortality is high in people with HCV/HIV co-infection.

### **Hepatitis C and Substance Use**

HCV is highly contagious; people who inject drugs are more likely to contract hepatitis C than HIV (Garfein, Vlahov, Galai, Doherty, & Nelson, 1996). People who inject drugs are at high risk for becoming infected with HCV from sharing needles and drug use paraphernalia. Up to 91 percent of people who inject

drugs and share needles or other paraphernalia over a prolonged period will eventually acquire HCV infection (Abou-Saleh & Foley, 2008; Macias et al., 2008; Maxwell, Shinderman, Miner, & Bennet, 2002; Tseng et al., 2007). Liver disease progresses more quickly in people who have HCV and abuse alcohol than in people with only one of the conditions (Bhattacharya & Shuhart, 2003; Felsen, Fishbein, & Litwin, 2010).

### **Prevention**

There is no vaccine against hepatitis C. It can be prevented only by avoiding contact with contaminated blood.

#### **HCV—True or False?**

**You can get HCV infection by using the razor of a person who is infected with HCV.**

**True.** HCV is spread through contact with infected blood, such as may be found on a razor or toothbrush.

**You'll probably get HCV infection if you eat food from a plate that wasn't cleaned well.**

**False.** You can only get HCV infection through contact with infected blood.

**Hepatitis C is mostly spread through unprotected sex.**

**False.** The greatest risk factor is IDU. Sexual transmission of HCV is rare, except in people who are infected with HIV. However, some evidence suggests that HCV might be passed through sex, if the sex includes the possibility of blood exposure (Tohme & Holmberg, 2010).

**A vaccine has been developed to protect against HCV.**

**False.** There is no vaccine against HCV.

**Hepatitis C can be spread when people who inject drugs share their rinse water.**

**True.** When people who are infected with HCV use needles, drops of their blood are mixed with the rinse water. Anyone who uses the same rinse water could contract HCV.

**Most people who have HCV infection will become seriously ill and die from liver disease.**

**False.** One to five percent of people who have HCV will die from HCV-related diseases. People who have additional medical or substance use problems are at increased risk of developing serious liver disease, which can be fatal. People who have other types of viral hepatitis or HIV infection are also more likely to get serious liver disease. However, people who adhere to hepatitis C treatment and abstain from alcohol and drugs improve their chances for a healthy life.

Adapted from Strauss et al., 2006.

## Other Types of Viral Hepatitis

Hepatitis D virus (HDV) infects only people who are already infected with hepatitis B. HDV is transmitted the same way as HBV—through blood and other body fluids. Because hepatitis D can occur only in people with hepatitis B, vaccination against HBV infection also prevents HDV infection. When people who have hepatitis B contract hepatitis D, the result can be a *superinfection*, which has a poor prognosis.

Hepatitis E virus (HEV) was first identified in 1980, and little is known about it. Hepatitis E manifests only as an acute infection. It is most often transmitted through the fecal–oral route, with the highest rates in countries with poor sanitation. While vaccines are not available at this time, they are in development.

Hepatitis F virus (HFV) was identified in 1991, and researchers disagree on whether it is a discrete type of viral hepatitis. No diagnostic tests exist for HFV infection.

Little is known about Hepatitis G virus (HGV) infection, which was identified in 1995, but it does not appear to cause significant liver damage.

## Co-Infection with Different Types of Viral Hepatitis

Some people are infected with more than one type of hepatitis. Several studies (Cacopardo, Nunnari, & Nigro, 2008; Crockett & Keeffe, 2005; Wietzke-Braun, Manhardt, Rosenberger, Ramadori, & Mihm, 2007) indicate that when co-infection occurs, one of four scenarios is possible:

- No effect. In some cases, there is no known effect from the concurrent infections.
- More severe disease. In most cases, co-infection worsens the severity of one type of hepatitis.

### Clinical Scenario

- Sarah: "I don't see what the big deal is about hepatitis. I feel fine."
- Counselor: "Hepatitis is a silent disease. You could go for years feeling fine while hepatitis damages your liver."
- Sarah: "So, I get a little liver damage. I know lots of people with hep who just live with it."
- Counselor: "Let's work together during our sessions to better understand what hepatitis is really all about. It's true that some people can live with degrees of liver damage, depending on their overall health, but if your liver gets damaged enough, it won't work anymore. When your liver doesn't work, you become very ill. Your liver performs hundreds of functions that keep you alive. Right now, your liver is removing toxins, storing the nutrients your body needs, producing the materials you need to digest food, and doing many other things. If your liver stops working properly, your quality of life can be seriously lowered. What kind of life do you want for yourself?"
- Sarah: "I want to feel good and to be able to do all the things I like to do. I didn't realize that when a disease is 'silent,' it can actually be doing a lot of damage. I guess I can't just ignore my hepatitis and hope that it will go away."

- Activation of disease. To become an active disease, HDV infection depends on co-infection with HBV.
- Deactivation of disease. In rare cases, co-infection may suppress previously active disease.

## Co-Infection with Viral Hepatitis and HIV

### *HAV/HIV Co-Infection*

HIV treatment may need to be temporarily suspended if HAV infection is acquired. Most studies suggest that this delay does not affect HIV progression. However, hepatitis A may be more severe and last longer in people who have both infections than in people who do not have HIV (Ida et al., 2002).

### *HBV/HIV Co-Infection*

As many as 90 percent of people who have HIV infection have been infected with HBV (i.e., with prior resolved infections; Rodriguez-Mendez, Gonzalez-Quintela, Aguilera, & Barrio, 2000; Scharschmidt et al., 1992), and 10 percent to 15 percent of these people will become chronic carriers. Most studies suggest that this co-infection does not significantly change the likelihood that the HIV infection will progress to AIDS. However, the co-infection increases the likelihood that HBV infection will become chronic and progress quickly and that liver damage might be more severe (Alberti, Vario, Ferrari, & Pistis, 2005; Sulkowski, 2008).

### *HCV/HIV Co-Infection*

HIV infection may increase a person's risk of contracting HCV through sexual contact (Delwaide, Bourgeois, Colle, & Robaey, 2002). Approximately 25 percent to 33 percent of people who are infected with HIV are co-infected with HCV (Alberti et al., 2005; Rockstroh & Spengler, 2004). Some studies (Eyster et al., 1993; Garcia-Samaniego et al., 2001; Lesens, Deschenes, Steben, Belanger, & Tsoukas, 1999; Pol et al., 1998) suggest that people who have HCV/HIV co-infection are more likely to develop cirrhosis, liver cancer, and liver failure than those with hepatitis only. The presence of both infections increases the risk of liver toxicity from HIV medications. However, liver damage slows when HIV medications are taken by preserving or restoring immune function and reducing HIV-related immune activation and inflammation. Therefore, the benefits of HIV medications may outweigh the risks (Panel on Antiretroviral Guidelines for Adults and Adolescents, 2011; Hammer et al., 2008; Sherman, 2007). If untreated, HCV infection progresses more quickly in people who are co-infected with HIV than in those who are infected with HCV alone.



## Chapter Summary

Viral hepatitis is an inflammation of the liver caused by a virus. Over time, inflammation can lead to scarring, which, in turn can lead to cirrhosis and eventually to liver failure.

The most common types of hepatitis in the United States are hepatitis A, B, and C.

### Hepatitis A:

- Is spread through contaminated fecal matter.
- Is never chronic and rarely serious (severity and mortality may increase with age and underlying chronic liver disease).
- Leads to immunity to subsequent HAV infection for individuals who have been infected and cleared the virus.
- Can be prevented through vaccination, abstinence, and safe injection practices.

### Hepatitis B:

- Is spread through blood and other body fluids.
- Can be acute or chronic.
- Is usually spread through IDU or sexual contact.
- Can be prevented through vaccination, abstinence, and safe injection practices.

### Hepatitis C:

- Is the most prevalent blood-borne illness in the United States.
- Is most commonly spread in the United States through IDU.
- Becomes chronic in 75 percent to 85 percent of people who are infected.
- Can take decades to develop symptoms.
- No vaccine is available, but abstinence and safe injection practices can prevent transmission.

# 2 Screening for Viral Hepatitis

## IN THIS CHAPTER

- The Treatment Program's Role in the Screening Process
- Antigens and Antibodies
- Hepatitis A Screening
- Hepatitis B Screening
- Hepatitis C Screening
- Counseling Practices That Educate, Support, and Motivate Clients Undergoing Screening
- Chapter Summary

*I didn't know anything about [hepatitis C] so didn't know what to think except feeling like my life was over. I was only 27 years old, and thought I would not reach 30.*

—Kathleen (Hepatitis C Support Project, 2007)

## The Treatment Program's Role in the Screening Process

Medical staff members at substance abuse treatment programs might assume the primary role for screening individuals for hepatitis and explaining the screening process and test results. Opioid treatment programs with medical staff members should screen for hepatitis B and C at intake and periodically as indicated. In programs without onsite medical staff, clients may be referred elsewhere for screening with minimal (if any) involvement of the substance abuse treatment program.

Regardless of the type of program, counselors should have a basic understanding of the importance of screening, the screening process, and the meaning of the results. Counselors can encourage clients referred for hepatitis screening to follow through and complete the screening and evaluation process (evaluation is addressed in Chapter 3). Clients might feel anxious about being diagnosed with hepatitis, and they might delay or avoid getting screened.

## Antigens and Antibodies

Hepatitis screening involves testing a small sample of blood for antigens and antibodies to determine whether the individual has been infected with viral hepatitis. *Antigens* are foreign substances, such as microorganisms (e.g., bacteria, fungi, parasites, viruses) or chemicals, which invade the body. When the body is exposed to antigens, it produces antibodies as a part of its immune response. *Antibodies* are proteins that bind to the antigens to try to clear them from the body. Hepatitis blood tests look for antigens or antibodies specific to each type of hepatitis virus.

## Hepatitis A Screening

Screening for hepatitis A involves testing the blood for antibodies to the hepatitis A virus (HAV). HAV screens sometimes are referred to as *hepatitis A antibody tests* or *hepatitis A total antibody tests*.

A positive antibody test result indicates that a person has or had HAV infection or has been vaccinated against hepatitis A. This person is immune to future HAV infection. A negative test result indicates that antibodies were not detected in a person's blood. A person without antibodies has never been infected with HAV, has never been vaccinated against HAV, and is still susceptible to HAV infection.

## Hepatitis B Screening

Hepatitis B virus (HBV) antigens are proteins that appear in different areas of the virus. HBV has three antigens (surface, core, and e), some of which can be detected in the blood. The body's immune response produces antibodies tailored to each type of antigen (surface antibody, core antibody, and e antibody), which can also be detected from a blood test. The basic blood test for hepatitis B consists of three screening tests: a hepatitis B surface antigen test, which determines whether a person currently has the infection; a hepatitis B core antibody test, which determines whether a person has ever been infected; and a hepatitis B surface antibody test, which determines whether a person has cleared the virus after infection, or has been vaccinated and is now immune to future infections. These are described below.

*Is the person currently infected with HBV?* The screening test for hepatitis B surface antigens detects the presence of HBV in the blood. The antigens are detectable 4–10 weeks after exposure to HBV. A positive test result means the person is currently infected and can pass the

infection to others. Most adults who acquire HBV clear the virus within a few months, and their hepatitis B surface antigen test result will be negative after that time. Some people remain infected and continue to test positive for hepatitis B surface antigen. If, after 6 months, the person still tests positive, his or her HBV infection is considered chronic. People diagnosed with chronic hepatitis B should have an evaluation (see Chapter 3).

*Has the person ever been infected with HBV?*

The hepatitis B core antibody screening test detects the presence of antibodies to the HBV core antigen. The antibody appears in the blood within a few weeks of HBV infection. A positive result means the person has been infected with HBV, but it does not specify whether the person has cleared the virus, still has the infection, or is immune to reinfection.

*Is the person immune to HBV?* The hepatitis B surface antibody screening test detects the presence of antibodies the immune system produces to attack the virus. These antibodies appear in people who have been vaccinated against HBV, or who had been infected and cleared the virus from their bodies. A positive hepatitis B surface antibody screening test means the person has lifetime immunity from hepatitis B (the Centers for Disease Control and Prevention [CDC], 2009). In some situations, hepatitis B screening may be unavailable, but the hepatitis B vaccine is available. People can be safely vaccinated against hepatitis B if they have been previously infected or vaccinated.

## Hepatitis C Screening

The most common test for hepatitis C virus (HCV) detects antibodies to HCV in the blood, but the results are not clear cut and should be interpreted carefully. A “positive” HCV antibody test could mean the person is a chronic carrier of HCV (75 percent to

85 percent), has been infected but has resolved infection (15 percent to 25 percent), or is one of the few recently (acutely) infected (CDC, 2010c). Following HCV infection, it usually takes at least 6–8 weeks for the body to develop enough antibodies to be measured in a screening test, but it can take longer. For example, people who have suppressed immune systems (e.g., people who have HIV infection) may not test positive for 15 weeks–6 months after exposure to the virus. An infection that has been present for less than 6 months may not be detected with an antibody test. However, an infection that has been present for 6 months is almost always detectable with an antibody test.

A positive HCV antibody test means the person was infected with the virus; it does not always mean the person is still infected. Up to 25 percent of people infected with HCV successfully clear the virus from their systems within 6 months after being infected, but the antibody remains present in the screening test.

Most antibody testing requires a blood sample that is sent to a laboratory for processing. However, in 2010, the U.S. Food and Drug Administration (FDA) approved a rapid antibody blood test for HCV (the first in the United States) that is available in some medical offices. The rapid test is for individuals 15 years and older who are at risk for HCV infection or who have hepatitis symptoms. The test still requires a blood sample, but it involves the use of a “test strip” that provides results in approximately 20 minutes. However, the rapid test is not sufficient to make a final diagnosis of HCV infection. If the rapid test is positive, more traditional and sophisticated tests will be necessary to confirm the diagnosis (FDA, 2010b).

People who have a positive result on an HCV antibody screening test should receive additional tests to get more information (Exhibit

2-1). The most common followup test is a qualitative HCV RNA (ribonucleic acid) test. RNA is the genetic material of the virus, and the qualitative test determines whether the virus is present. A quantitative RNA test—or quantitative viral load test—measures how much of the virus is present (see Chapter 3). Because of the difficulty in interpreting an HCV antibody screening test, some medical care providers ask for a followup test before reporting the results of the antibody test to their patients. If HCV RNA is present for at least 6 months, the HCV infection is considered chronic.

*Clients might need help deciding whether to get screened, understanding the test results, and determining their next steps.*

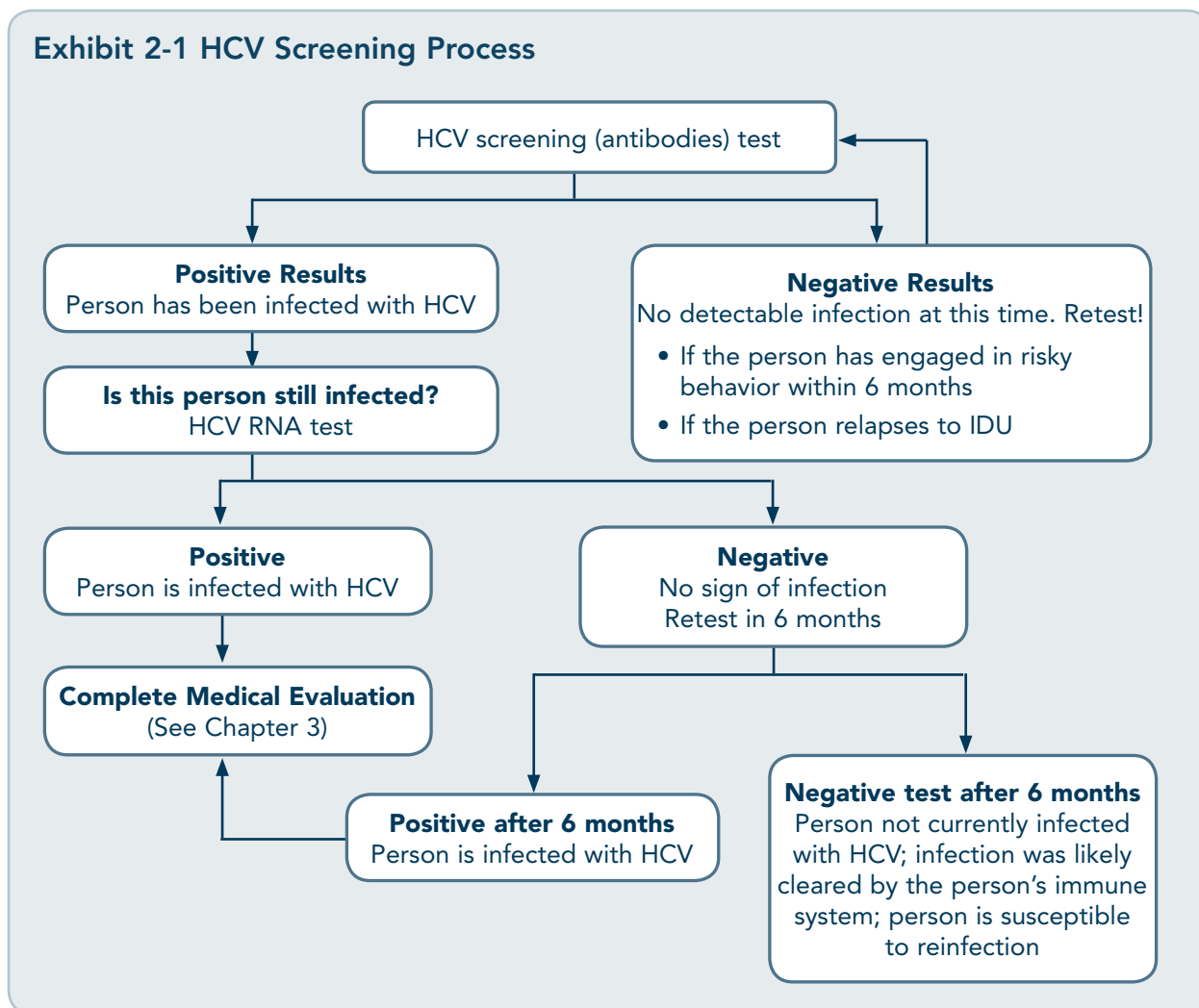
In people who are at risk of HCV infection, false positive antibody test results are rare. Therefore, a positive result in a person with a history of drug use, particularly injection drug use (IDU), is a true positive more than 99 percent of the time—meaning that the person has been infected with HCV.

The accuracy of a negative HCV antibody test result is very high. However, to account for the 6-month window period, people who inject drugs or engage in other high-risk behaviors should be retested every year (Backmund, Reimer, Meyer, Gerlach, & Zachoval, 2005).

### **Counseling Practices That Educate, Support, and Motivate Clients Undergoing Screening**

Clients might need help deciding whether to get screened, understanding the test results, and determining their next steps. Even when services offered through the substance abuse treatment program are limited, discussing

## Exhibit 2-1 HCV Screening Process



hepatitis testing with clients presents an opportunity for counselors to motivate clients for change by confronting substance use and by making choices that improve their overall health. However, this may also be true when services are offered on-site through substance abuse treatment programs. A study at one methadone clinic that offered hepatitis screening and vaccination revealed that although the majority of clients completed screening (for hepatitis A, B, and C), only 54.7 percent of clients who lacked immunity for hepatitis A received vaccinations and only 2.9 percent of clients who lacked immunity for hepatitis B received vaccinations (Felsen et al., 2010).

The Consensus Panel makes the following general recommendations while recognizing that, in some programs, the counselor's role may be limited:

- Consider screening to be more than just a blood test. It is an opportunity to educate the client about hepatitis, its effects on health, and prevention strategies. It is an opportunity for clients to identify their risk factors and learn how they can reduce the risk of contracting or transmitting viruses.
- Be aware that many clients may not know whether they have been screened for hepatitis in the past or they might not know the results. They might confuse

HIV screening or any blood test with hepatitis screening, and they might erroneously believe that they are—or are not—infected.

- Clearly explain that the hepatitis test is optional. Clients may not understand what disease the test will detect or that they have the option not to give consent (Munoz-Plaza et al., 2005).
- Follow up with clients regardless of the results. Failure to follow up is a missed opportunity to deliver or reinforce prevention messages (Munoz-Plaza et al., 2005).

### ***Discussing Screening for Viral Hepatitis***

Many clients entering substance abuse treatment do not know their hepatitis status. In two urban studies, as many as 68 percent of clients who did not know whether they had been infected with HCV tested positive (Kwiatkowski, Fortuin, Corsi, & Booth, 2002; Felsen et al., 2010). In a five-city sample, 72 percent of those who tested positive for HCV were unaware of their infection (Hagan et al., 2006).

#### **Clinical Scenario**

Counselor: “Hi, Jim. I’m glad you came in today. We’ve focused a lot on your drug use and you’ve described a lot of consequences in terms of your relationships, job, and finances. Today, I wondered if it would be okay to talk about how your use has generally affected your health.”

Jim: “Sure, I guess so.”

Counselor: “Great! First I’d like to know how much you know about your risks of getting hepatitis due to your injection drug use.”

Jim: “Well, I know some folks who have gotten sick and died from it, but I also know some who got treated and seem to be okay. I’m worried that I may have this infection and will end up like the ones who died—I’m not very lucky.”

Counselor: “It is true that hepatitis can lead to death in some people, but there have been some important improvements in hepatitis treatment over the past few years. But before we talk about hepatitis treatment, I’d like to talk a bit about how the virus is spread, tests for hepatitis, and some factors, such as alcohol use, that can affect how the virus damages the liver. Is that okay?”

Jim: “It’s something that I’d rather not think about, but I know I should. I’ve avoided getting tested because I’m worried that I’ll test positive. I don’t have any health insurance and can’t afford treatment.”

Counselor: “That’s a lot to worry about, so I do understand why you’re unsure about the next steps, if any, to take. So let’s talk a bit more about what you think your next step should be. I can tell you that we’ll do everything we can to help you. And please remember that not everyone who tests positive for hepatitis needs treatment. So, what do you think?”

For many clients, a discussion with the counselor might be the first conversation they have about hepatitis. Clients might be uninformed about hepatitis or reluctant to discuss the disease. By using motivational strategies, counselors can improve clients' chances for engagement in a discussion about hepatitis.

*It is crucial that a treatment counselor or health professional use a non-judgmental and compassionate tone.*

### **Addressing Hepatitis for the First Time**

It is crucial that a treatment counselor or health professional use a nonjudgmental and compassionate tone. Clients need to feel comfortable disclosing information about their health and risky behaviors. The following strategies can help initiate the conversation:

- Display posters, literature, or other hepatitis-related items that could help prompt the client to ask questions about hepatitis. (See Appendix C for hepatitis resources).
- Assess clients' ability to discuss hepatitis, based on their degree of openness in the counseling session, the amount of detail they provide in their responses, and the length of the therapeutic relationship.
- Raise the subject in a way that avoids making clients feel defensive or afraid. Consider introducing the subject by making parallels with other conditions that have been discussed. Say, for example, "You said you were tested for HIV several times. Were you ever tested for viral hepatitis?" or "You mentioned that your friend is sick with HIV. Have you been tested for HCV or HIV? Tell me about those tests."

- Be patient and allow time for multiple, short conversations about the subject. This might ease feelings of fear, anxiety, or shame.

### **Educating Clients About Viral Hepatitis**

Clients may believe they know about viral hepatitis, but their understanding of the disease may not be accurate. It is easy to confuse the three main types of viral hepatitis A, B, and C. Clients may have formed impressions based on limited or incorrect information. Counselors should briefly describe hepatitis A, B, and C, including their prevalence, transmission, and relationship to drug use, as well as to other infections, such as HIV and sexually transmitted diseases. (Chapter 1 provides an overview of hepatitis. Resources for online materials are in Appendix C.) Specific strategies for speaking with clients include:

- Speak clearly and keep the message simple, focused, and brief.
- Use language, examples, and concepts that the client understands.
- Use appropriate visual aids.
- Frame numerical statements in terms that are easy to visualize. Say "5 out of 100 people" rather than "5 percent of the population"; say "more than half" instead of "the majority."
- Repeat the information at different times in different ways. The average client retains only approximately one-third of what he or she is told. Summarize essential points.
- Pay attention to a client's response to the information. For example, if a client stiffens his or her posture, consider saying, "I notice that this topic seems to make you uncomfortable. It does for a lot of people. Please tell me what you're feeling right now. I'd really like to help you with this."

- Use the opportunity to describe the potential detrimental effects of alcohol and other substance use on the liver of a person who is infected with HCV.

### ***Identifying Patterns of Risky Behavior***

Screening is an opportunity to draw attention to the client's behaviors that put him or her at risk for contracting hepatitis:

- Ask for the client's perception of his or her risk for having contracted hepatitis: "How likely do you think it is that the test will be positive?"
- Listen for and identify behaviors that put the client at risk for contracting hepatitis A, B, and C and HIV, especially unprotected sex and sharing injection drug paraphernalia.
- Assess the client's alcohol consumption.

### ***Preparing Clients for Screening***

Once clients are comfortable talking about viral hepatitis, they might be more willing to undergo screening. However, clients might be anxious about the test itself; a reassurance that testing is a simple procedure can help allay these concerns. Many substance use treatment facilities do not offer screening, and clients might need to be referred elsewhere. The following strategies can enhance the discussion of the hepatitis screening process and hepatitis prevention:

- Ask the client whether he or she has ever had a hepatitis test: "Have you ever been tested before?" or "What did you do when you found out that you were positive [or negative] for hepatitis?"
- Remember that information about screening might need to be repeated, depending on the rapport between client and counselor, the client's cognitive abilities and interest,

and other issues that come up during a session.

- Discuss the benefits of screening, such as the possibility for early diagnosis and treatment (e.g., prevention of transmission to others, reduced risk of long-term complications). Clearly state that screening is voluntary.
- Describe the screening procedure and explain that blood samples are needed. Be sensitive to potential relapse triggers. For a person who injects drugs, the use of a needle in the blood draw might prompt cravings.
- Advise a client with a history of IDU that the blood draw might be difficult if his or her veins are damaged.
- Tell the client how long it generally takes to receive results (the timeframe varies by testing venue and the laboratory). A delay does not indicate a positive result.
- Make a plan with the client to get to and from the appointment.
- Ensure that the client has emotional support or referrals during the waiting period. If a support group is available, encourage the client to attend to learn more about viral hepatitis and about others' responses to it.
- Clarify the meaning of possible results. Say, for example, "A positive HCV antibody test result means that you have been infected with HCV. It does not necessarily mean that you are sick or that you are still infected. A negative result means that you have not been infected with hepatitis C or your infection occurred within the last 6 months."
- Make a plan with the client for receiving the screening results; for example, call a member of a mutual support group or schedule an additional appointment with the counselor.



## Discussing Screening Results With Clients

The medical personnel who ordered or arranged the screening test, not counselors, usually explain the results. Hepatitis screening should be part of the intake physical examination in an opioid treatment program, and medical personnel may report the results. However, the client may want to discuss the results with the counselor or ask the counselor questions.

**Anxiety might interfere with some clients' ability to comprehend or retain information, which might need to be repeated.**

Suggestions for conversations with clients when the test results are negative include the following:

- Explain results clearly and simply: “So the HCV antibody screening result was negative? This means that, as of 6 months ago, you did not have hepatitis C.”
- Emphasize that a negative result to an HCV test does not indicate immunity to hepatitis C and that the client should take precautions to avoid infection. If a relapse to drug use occurs, advise clients to avoid sharing any drug paraphernalia or equipment. Specify that this includes cookers, cotton, water, needles, syringes, pipes, and straws.
- Emphasize the importance of getting HAV and HBV vaccinations. Provide information about the availability of low- or no-cost vaccinations.

Clients whose screening test results are positive for chronic hepatitis will need additional tests and examinations—usually with doctors who specialize in diseases of the liver (i.e., gastroenterologists)—to get accurate diagnoses and

to determine their health status and the extent of liver damage. These tests are described in Chapter 3.

The following guidelines can help prepare clients for the next steps in evaluating their chronic hepatitis:

- Ask clients whether they were referred to a medical care provider for additional tests. Encourage them to make and keep appointments.
- Explain that the screening test indicates only that clients have been infected with hepatitis and additional testing is necessary to determine their health status.
- Prepare clients to consider getting further evaluation. Say, for example, “Depending on the results of the additional medical tests, you might be asked to make some important decisions about whether to undergo antiviral treatment.”
- Identify barriers to further testing (e.g., transportation to medical appointments, insurance coverage) and ways to overcome them.

Clients will react in a variety of ways to news of a positive result. Anxiety might interfere with some clients' ability to comprehend or retain information, which might need to be repeated. Some clients might be worried about spreading the virus to others or about the reaction of family, friends, and others. Impediments to clients' coping with a positive screening test for HCV include their concern about any disclosure of the positive test result and fear of inappropriate or disrespectful treatment by medical staff members or other clients (Strauss et al., 2008). For others, a positive test might be of little concern because they are more concerned with treatment for a substance use disorder (SUD) and stressors in their life other than an asymptomatic viral infection.

To help clients come to terms with their positive test results:

- Explain results clearly and simply: “Let’s look at your test result, and then we’ll talk about how best to understand it. The HCV test result is positive, which means you have been infected with the hepatitis C virus.”
- Assess reactions to the results: “How do you feel about knowing that you have been infected with hepatitis C? What does this result mean to you?”
- Address immediate fears and concerns before providing further information.
- Provide information on liver health in the client’s language of choice and at the client’s reading and comprehension levels.
- Provide reassurance and hope: “For some people, hepatitis is very serious, but for most people it never causes life-threatening disease. You can do many things to protect your liver.”
- Stress the importance of getting vaccinated against hepatitis A and B. “If you get hepatitis A or B, it can make your hepatitis C worse. There are vaccinations against hepatitis A and B. We can help arrange for you to get vaccinated.”
- Reiterate the importance of not drinking alcohol: “Alcohol damages the liver faster in people who have hepatitis. It’s really important to stick with treatment.”
- Caution against taking medications without first consulting a medical care provider. “Some medications—even ones you buy over the counter or those that are available by prescription—can harm your liver. Even some vitamins and herbal medications can be dangerous. Check with your medical care provider before you take anything.”
- Encourage clients to learn their HIV status. HBV and HCV infections cause liver damage more quickly in people who also have HIV infection. Chronic hepatitis can complicate the treatment of HIV. If clients are not HIV positive, urge them to take measures to avoid infection.
- Explain hepatitis transmission to promote prevention:
  - HCV is easily spread through exposure to infected blood by sharing drug use paraphernalia or equipment or any item that can have minute bits of blood on it, including toothbrushes and razors.
  - HCV is not spread by sneezing, coughing, hugging, or sharing eating utensils or drinking glasses; it is not spread through casual contact.
  - The risk of spreading HCV by sexual contact is very low, but HBV can be spread by sexual contact (and any close personal contact).
  - Open sores or wounds should be treated and covered with a bandage. Having hepatitis C does not exclude clients from work, school, or other settings.
  - Clients who are infected with HCV cannot donate blood, body organs, or semen.
  - In the event of a relapse, clients should not share any drug paraphernalia or equipment and should return to treatment.

## Chapter Summary

Screening for hepatitis A involves a blood test that detects antibodies produced by a person's immune system to fight the virus.

- A positive test result means the person is currently infected, had been infected, or has been vaccinated against infection and is immune to infection.
- A negative test result means the person has never been infected or vaccinated. This person should probably be vaccinated against HAV.

Screening for hepatitis B involves blood tests that measure HBV antigens and antibodies.

- The test for hepatitis B surface antigen detects the presence of HBV. A positive result means the person is currently infected and can pass the infection to others. If, after 6 months, the person still tests positive, his or her HBV infection is considered chronic.
- The test for hepatitis B core antibody detects the presence of the core protein of the virus. A positive result means the person has been infected with HBV, but it does not specify whether the person has cleared the virus, still has the infection, or is immune to reinfection. A negative result means the person has never been infected with HBV. This test does not tell whether a person is immune to infection or reinfection.
- The test for hepatitis B surface antibody detects the presence of the surface protein (or the surface antigen) of the virus that appears after the virus has been cleared (or the person has been successfully vaccinated). People who have surface antibodies have lifetime protection from future HBV infection. In people who do not clear the virus but develop chronic infection, these antibodies never appear.

Screening for hepatitis C involves a blood test to detect antibodies, but the results are not clear cut and should be interpreted carefully.

- A positive test result means the person has been infected with HCV and might be chronically infected; it does not always mean the person is still infected. Diagnostic tests are needed.
- A negative test result means either the person has not been infected or the person was infected recently and antibodies have not yet appeared. Another test might be needed in 6 months.

Counselors can use the screening as an opportunity to:

- Educate clients about hepatitis.
- Identify patterns of risky behavior.
- Urge clients to get vaccinated against HAV and HBV.
- Educate clients to prevent hepatitis transmission.

# 3 Evaluation of Chronic Hepatitis

## IN THIS CHAPTER

- The Medical Evaluation
- Liver Panel
- Viral Load Tests
- Genotype Test
- Liver Biopsy
- Chapter Summary

*After my first liver biopsy (and, yes, I was scared of the biopsy needle, but it was all over pretty fast), it was discovered that I had stage 2 fibrosis and inflammation. It was time for action.*

—Brian (Hepatitis C Support Project, 2006)

## The Medical Evaluation

Clients diagnosed with chronic hepatitis require a full medical evaluation to gather information about the nature of their infection, the severity of the disease, and factors that might affect the course of the disease and its treatment. At some point, clients will probably be referred to a specialist. This chapter focuses on the evaluation of chronic hepatitis, which is caused by the hepatitis B or C virus.

The evaluation of chronic hepatitis can involve several tests:

- Liver panel and other blood tests
- Viral load tests
- Genotype test
- Liver biopsy

Taken together, the results of these tests help a physician assess the disease progression, its prognosis, and the risks and benefits of hepatitis treatment.

## Liver Panel

A *liver panel*, also referred to as *liver function tests* (LFTs), is a series of blood tests to measure the extent of liver injury. It is among the first tests for people who are diagnosed with chronic hepatitis. A liver panel measures levels of enzymes and proteins that, if not within the normal range, might indicate liver damage. However, normal levels on a liver panel do not always mean that the liver is

not damaged. People who have cirrhosis, for example, can have normal LFTs. Exhibit 3-1 identifies the tests in a standard liver panel and what each test measures. Other tests might include complete blood counts and other measures to help round out the overall assessment of liver health.

### Viral Load Tests

Nucleic acid tests, which measure nucleic acid, can indicate the quantity of virus present in the bloodstream; hence, they are referred to as quantitative viral load tests. These are the best and most specific tests to indicate the presence of viral hepatitis B or C. Nucleic acid is composed of molecules that carry the genetic information used in the development and functioning of organs, such as the liver. The

nucleic acid test for hepatitis B is hepatitis B virus (HBV) DNA (deoxyribonucleic acid), and the test for hepatitis C is hepatitis C virus (HCV) RNA (ribonucleic acid). Qualitative HCV RNA tests, which determine whether the virus is present, are used to screen for hepatitis C (see Chapter 2).

The extent of liver damage does not correlate with measures of HBV DNA or HCV RNA. A low viral load does not mean a person has little liver damage, nor does a high viral load necessarily indicate more severe infection or more advanced disease. Clients who are familiar with HIV testing often assume that viral load results for HBV and HCV mean the same as they do for HIV viral load results. Exhibit 3-2 highlights the similarities and differences between the HIV and HBV/HCV viral load tests.

**Exhibit 3-1 The Liver Panel**

Test	Significance
Alanine aminotransferase (ALT)	Elevated levels of this enzyme indicate liver damage. Normal levels do not necessarily indicate healthy liver.
Albumin	Decreased levels of this protein indicate liver disease, such as cirrhosis (or other health conditions). Levels are often normal until liver disease is extensive.
Alkaline phosphatase	High levels of this enzyme indicate an obstruction in the liver (or bile ducts).
Aspartate aminotransferase (AST)	Elevated levels of this enzyme might mean liver damage. The enzyme is not specific to the liver, so high levels could mark problems elsewhere in the body.
Total bilirubin	Elevated levels of this blood byproduct cause jaundice.
Gamma-glutamyl transpeptidase (GGT)	Elevated levels of this enzyme indicate liver damaged by alcohol use or viral hepatitis.
Prothrombin time (PT)	This test measures the time it takes blood to clot. Longer than normal clotting time might indicate severe liver damage.

**Exhibit 3-2 Comparison of HIV and HBV/HCV Viral Load Tests**

Component	HIV Viral Load Test	HBV/HCV Viral Load Test
What does the test measure?	The presence or amount of HIV in the blood.	The presence or amount of HBV or HCV in the blood.
What does a negative result mean?	In a person who is HIV positive, the person still has HIV infection but the virus's replication is under control.	In a person with HCV antibodies, the person has no evidence of chronic hepatitis.
What does a positive result mean?	The person is infected with HIV.	The person is infected with the hepatitis virus.
What do the levels mean?	High levels correlate with disease severity and indicate a high likelihood of disease progression.	High levels before hepatitis treatment might suggest a low likelihood of clearing the virus once antiviral treatment begins. People who have high levels might be more infectious to others. During treatment for hepatitis B or C, viral load tests can determine whether antiviral treatment is working. After treatment, increased viral load might indicate virologic relapse.

**Genotype Test**

This test identifies the type or strain of the hepatitis virus. HBV has eight genotypes, labeled A–H; genotypes A–D constitute the most prevalent genotypes in the United States. Knowing the genotype of HBV might predict how successful antiviral treatment will be, but more studies are needed.

At least six genotypes (and some subtypes) of HCV exist, but genotypes 1, 2, and 3 are most common in the United States. The genotype of the virus does not change. Once the HCV genotype is determined, another genotype blood test is not needed unless the person clears the HCV infection and then acquires a new HCV infection.

No genotype causes more severe disease than any other, but the genotype has implications for response to antiviral treatment and the

duration of treatment. Historically, genotype 1 has been characterized as less treatable, or more difficult to cure, than genotypes 2 and 3. People who had genotypes 2 or 3 were more likely to respond to hepatitis treatment than are people who had genotype 1. However, people who have genotype 1 hepatitis have reason to be treated. Boceprevir and telaprevir were approved by the U.S. Food and Drug Administration (FDA, 2011a; FDA, 2011b) in 2011 to be used in combination with interferon and ribavirin for the treatment of adults with chronic hepatitis C, genotype 1. These medications have demonstrated higher success rates and shorter treatment times for genotype 1, and other new medications are currently in development. Chapter 4 provides information on how genotype factors into hepatitis treatment decisions. Exhibit 3-3 compares genotypes 1 with genotype 2 and 3.

Counselors can help clients understand the significance of their genotypes in the following ways:

- Ask clients what they have been told about genotypes.
- Respond accordingly. Although genotype 1 has historically been less responsive to antiviral treatment than other genotypes, as many as 68 percent of clients who have genotype 1 respond to newer treatments. Types 2 and 3 are more responsive to antiviral treatment than type 1.
- Assure clients that having genotype 1 does not mean that the disease will progress more quickly or that the symptoms will be more severe.
- Tell clients that the most important thing is to follow up with their physician, because all genotypes have possible treatments that are rapidly improving.
- Ask clients, “What does this information mean to you? Does it make sense? How might this information help you decide your next step?”

### Exhibit 3-3 Comparison of the Most Common HCV Genotypes in the United States

Component	Genotype 1	Genotypes 2 and 3
Frequency	The most common genotype in the United States; accounts for approximately 75% of HCV cases.	Combined, they account for approximately 25% of HCV cases in the United States.
Response to antiviral treatment*	Nearly 50% of people respond successfully to hepatitis treatment with interferon and ribavirin. The addition of telaprevir or boceprevir can increase this to as much as 67%–68% (McHutchison, 2009; Poordad et al., 2011).	Approximately 80% of people respond successfully to treatment and clear the virus.
Length and dose of antiviral treatment*	Antiviral treatment with interferon and ribavirin lasts 12 months and involves a higher dose of medication compared with genotypes 2 or 3. The addition of boceprevir or telaprevir can reduce treatment time to 24 weeks (FDA, 2011a; FDA, 2011b).	Antiviral treatment lasts 6 months and involves a lower dose of medication compared with genotype 1.

\*Applies only to people who have HCV alone, not to people who have co-infections with other forms of viral hepatitis or HIV.

## Liver Biopsy

A *liver biopsy* involves removing and examining a small number of liver cells that can reveal:

- The extent of liver inflammation.
- The amount of scarring (fibrosis) present.
- Presence or absence of cirrhosis.
- Lesions in the liver.
- Other conditions (e.g., alcoholic liver disease) that might be damaging the liver and the severity of the conditions.
- Possible effects of hepatitis treatment.

Reasons to have a liver biopsy include the following:

- It is the best way to evaluate the health of the liver and the only way to reveal the extent of scarring (if any).
- It can help the physician decide whether antiviral treatment is advisable or needed. Treatment might not be necessary if the liver is healthy, or it might be inadvisable if the patient has other issues that might contraindicate treatment.
- The results can be used when deciding whether to continue antiviral treatment if side effects are severe. Chapter 4 addresses factors to consider in making medical decisions about hepatitis treatment.

As with any surgical procedure, liver biopsies have risks, including pain and internal bleeding. Some clients might feel the risks of biopsy are not worth the potential information gleaned from the procedure. Increasingly, people who have genotype 2 or 3 HCV start antiviral treatment without having a liver biopsy. People who have these genotypes might decide that, because treatment is likely to succeed, they will try treatment regardless of their biopsy results. People for whom antiviral treatment is not as likely to be successful might decide not to go through treatment unless their liver disease is progressing. Thus,

the most important factor in determining whether individuals should have a biopsy is how essential the results are to them and to their medical care provider.

## Helping Clients Decide Whether to Have a Liver Biopsy

Following are suggestions to help clients decide whether to have a liver biopsy:

- Help clients weigh the potential risks and benefits. Counselors cannot provide medical advice, but they can, with the clients' medical care providers, help clients understand their choices.
- Listen to clients' fears, and respond with accurate information.
- Help clients plan how they will cope with pain after the procedure. Some will require medications to treat pain. Taking any medication may be a relapse trigger for someone with a history of drug use. Counselors can explain that taking medications under a medical care provider's supervision is appropriate to relieve pain; these medications do not necessarily lead to relapse. Untreated pain might be as likely to trigger craving for opioids as the appropriate use of pain medications.
- Help clients find someone to accompany them to the procedure. Patients are required to have someone take them home afterward. A substance abuse treatment program can offer to find a peer or staff person who could take a patient to and from the procedure (Litwin, Soloway, & Gourevitch, 2005).
- Address the positive aspects of a biopsy (e.g., it provides important information that can help clients move forward).
- Help clients work out logistical issues. For some clients, arranging for child care or taking care of other logistical issues present problems.



## Clinical Scenario

Counselor: "Hi, Susan. Tell me about your recent doctor's visit for your HCV evaluation."

Susan: "Yeah, I went. I found out that my liver is fine and I don't have to worry."

Counselor: "That's great news! What else did the doctor say?"

Susan: "She said that the liver tests—the enzymes—are real good and low."

Counselor: "Terrific news! You must be very relieved."

Susan: "Yeah, I am. I was really worried after the last relapse. The discussions that we had really helped me to see how my drug use might be causing more problems with my liver and in other areas of my health. My doctor said she'd like me to get a biopsy, but if my liver enzymes are okay, I'm not sure why I should do that."

Counselor: "It sounds confusing that your health seems to have improved and yet your doctor wants more information. So what are you thinking at this point?"

Susan: "Well, I'm not sure. I mean, how is this possible, you know, how could my liver be improved and yet I still have HCV?"

Counselor: "Well, let's talk about that for a few minutes, if that's okay."

Susan: "Sure, can you make sense of this? I really don't want to have a biopsy."

Counselor: "You know, this happens quite often. People who have HCV will see improvements in their enzyme numbers, but those tests are only one piece. It's really important to get more testing to get the whole picture of what's going on in there. What do you think?"

Susan: "Well, I guess that makes sense. Would I really have to get a biopsy?"

Counselor: "Well, that's really up to you to decide, with information from your doctor. But it sounds as if you might be willing if she could tell you more about why it's really important."

Susan: "Yeah, maybe I should. Could you help me with that?"

Counselor: "Sure. Let's see how you might start that conversation with her, and you could make another appointment right now from my office if that would help."

- Help clients explore ways to pay for the biopsy. Be familiar with medical assistance programs for uninsured clients, and keep a list of physicians who are willing to perform biopsies on people who have a history of drug use. Insured clients need to make sure that their insurance covers the procedure.
- Help clients identify support from family and peers. The additional burden of an illness can make people who are already marginalized feel more isolated. Supportive people can help clients cope with the disease and antiviral treatment side effects and identify potentially dangerous side effects.

### **Liver Biopsy Procedure**

The physician should thoroughly inform the patient about the procedure, including alternatives, risks, benefits, and limitations. The procedure typically takes place at an outpatient surgical center or in a hospital. The patient will need to sign an informed consent form before the procedure. The physician determines preprocedure orders (e.g., when the patient needs to stop eating and drinking; special diet, if necessary; which medications, including over-the-counter, to stop taking (Rockey, Caldwell, Goodman, Nelson, & Smith, 2009)).

The biopsy procedure involves the following:

- Patients receive a local anesthetic on the right side of the abdomen to numb the area. The degree of pain anticipated during and after the procedure should be taken into account.
- The surgeon inserts a needle into the liver and extracts a small piece of liver tissue.
- Laboratory personnel examine the liver tissue and provide the physician with the results within a few days.

- Nurses observe the patients for a few hours before they are discharged. Following the procedure, it usually is necessary for patients to lie on their right sides for 3–4 hours to prevent bleeding.

Precautions to take after the biopsy include the following:

- For at least 24 hours, patients should not lift objects heavier than 15 pounds.
- Some patients might be sore where the needle was inserted, or they might experience pain in their right shoulders. These symptoms are temporary and usually go away in a few days.
- With the physician's approval, patients might take acetaminophen for pain. As is the case for most medical procedures, patients should not take aspirin or ibuprofen for 7 days before or after the biopsy.

Resources for information about liver biopsy are in Appendix C.

### **Chapter Summary**

A hepatitis evaluation provides information for making informed decisions about antiviral treatment.

HCV evaluation can include the following:

- Liver panel
- Viral load tests
- Genotype test
- Liver biopsy

Counselors can help clients cope with an evaluation of chronic hepatitis by:

- Helping them identify and weigh the risks and benefits of evaluation.
- Exploring the client's feelings.
- Helping clients plan how they will cope with waiting for and receiving evaluation results.



# 4 Helping Clients Make Medical Decisions About Hepatitis Treatment

## IN THIS CHAPTER

- The Counselor's Role
- Factors to Consider About Hepatitis Treatment
- Counseling Clients Diagnosed With Chronic Hepatitis
- Supporting the Decision to Treat Hepatitis
- Special Populations: Barriers to Hepatitis Treatment
- Chapter Summary

*When I was trying to decide whether I should get on the interferon or not, I was hammered until I made a decision. Some medical staff and some clinical staff think because you use drugs that you're totally stupid, or you're playing to get time off. There's got to be a little more compassion and a little more education. They definitely need to let the residents be part of the decision. I mean, it's their lives.*

—Counselor and Former Client in “Program C”  
(Strauss et al., 2005, p. 1821)

## The Counselor's Role

Medical care providers that once would have denied hepatitis treatment to people with substance use disorders (SUDs) now routinely screen and evaluate such people and often recommend antiviral treatment. Pharmacotherapy for an opioid addiction, for example, is no longer considered a contraindication to evaluation, care, or treatment of chronic hepatitis (Kresina et al., 2008). Informed counselors can help their clients make decisions about medical care for hepatitis and can support the clients in managing the risks and benefits that come with any decision.

## Factors to Consider About Hepatitis Treatment

People who have chronic viral hepatitis have three options:

1. They can be treated with potent antiviral medications.
2. They can defer antiviral treatment.
3. They can decide not to be treated.

Although antiviral treatment holds the best promise of eliminating chronic hepatitis, the treatment is long, could be difficult, and could be expensive without insurance. (Sources for financial assistance are listed in Appendix H.) Undergoing treatment might not be the best choice for everyone.

The decision to start antiviral treatment should be made by the patient and the medical treatment team, based on the patient's characteristics, circumstances, and an overall assessment of the treatment risks and benefits. Many times, a patient needs to consult a specialist, such as a hepatologist, to get all the information needed to make a sound decision. Before developing the hepatitis treatment plan, the physician and patient need to consider several factors:

- Timing of hepatitis treatment
- Treatment contraindications
- Presence of more urgent problems
- Likelihood of adhering to hepatitis treatment
- Likelihood of treatment success

### **Timing of Hepatitis Treatment**

Timing is primarily a factor of how much damage the hepatitis has done to the liver. Patients with *mild liver disease* (mild scarring), detected by biopsy, might be able to defer hepatitis treatment. Some people, however, might want to do what they can to get rid of their hepatitis C virus (HCV) infection regardless of the state of their liver disease. In this situation, a patient's feelings about being infected and his or her level of interest in undergoing treatment can be the deciding factors.

Those with *intermediate liver disease* (intermediate scarring) should seriously consider hepatitis

treatment, weighing all relevant factors. For example, people who have HIV co-infection who face the likelihood of an accelerated progression of liver disease have an increased incentive to treat their hepatitis C.

For people who have *cirrhosis* (severe scarring), timely treatment of hepatitis treatment might be warranted, unless the liver disease has advanced beyond the point that it will respond to antiviral treatment, or the risks of treatment outweigh possible benefits.

Patients with *end-stage liver disease* (decompensated cirrhosis) might not be appropriate for treatment, unless they are on a transplant waiting list and/or being cared for by experts. Information on hepatitis treatment options, including transplantation, is included in Chapter 5.

### **Hepatitis Treatment Contraindications**

Some co-occurring medical or behavioral health conditions, certain lifestyle choices, or pregnancy can contraindicate treatment for chronic hepatitis (Ghany, Strader, Thomas, & Seeff, 2009). Contraindications include:

- Major uncontrolled psychiatric disorders (e.g., depression, bipolar, schizophrenia).
- Prior solid organ (i.e., renal, heart, lung) transplantation.
- Pregnancy or unwillingness to use adequate contraception (see Exhibit 4-1).

#### **Exhibit 4-1 Pregnancy and Antiviral Treatment**

- Interferon and ribavirin can cause birth defects, so pregnant women (or their sexual partners) should not be administered these medications. Women who are breastfeeding should not undergo antiviral treatment for hepatitis.
- A man receiving antiviral treatment for HCV should not impregnate a woman during his treatment and for 6 months thereafter because of the possible risk of birth defects.
- Women with HCV have to decide whether to complete antiviral treatment before trying to become pregnant or to delay treatment until after delivery.

- A condition that would make hepatitis treatment dangerous (e.g., severe uncontrolled hypertension, untreated heart failure, significant and uncontrolled coronary heart disease, poorly controlled diabetes, chronic pulmonary disease).
- An allergy or hypersensitivity to medications (e.g., interferon, ribavirin).
- Stabilization of a mental or substance use disorder might be necessary.
- The priority of some clients might be to meet basic needs (e.g., finding housing; getting regular, nutritious meals).
- Clients in crisis might need to stabilize before antiviral treatment can begin, depending on the number and severity of stressors in their lives.

Use of drugs and alcohol is no longer an absolute contraindication to antiviral treatment (see Exhibit 4-2). Many people who actively inject drugs are not willing to undergo antiviral treatment or might have difficulty adhering to treatment. However, some people who use drugs, including people who inject drugs, are willing and able to undergo and adhere to antiviral treatment (Ghany et al., 2009).

**Presence of More Urgent Problems**

Some health issues might take precedence over beginning treatment for hepatitis, particularly if the extent of liver damage is mild or intermediate:

- Treatments for HIV infection or other life-threatening conditions might need to begin first.
- Hepatitis C treatment is associated with exacerbation of existing psychiatric

**Likelihood of Adhering to Hepatitis Treatment**

It is difficult to predict which individuals can or will adhere to hepatitis treatment. Until recently, the standard practice was to recommend against treating chronic hepatitis in people whose circumstances or conditions might interfere with their ability to adhere to treatment (e.g., continued substance abuse, mental illness). But this is no longer the case. The following points summarize the current thinking on treating people who have conditions previously considered contraindications to antiviral treatment:

**Exhibit 4-2 Statements and Recommendations on Hepatitis Treatment**

Agency	Treatment Guideline
National Institutes of Health Consensus Statement on the Management of Hepatitis C	Decisions about treatment of hepatitis C in people who inject drugs should be made on a case-by-case basis; drug use itself is not an absolute contraindication to antiviral treatment for hepatitis C (National Institutes of Health [NIH], 2002).
New York State Department of Health Guidelines for the Medical Management of Hepatitis C	"Patients actively using injection drugs should be offered drug counseling and psychiatric support services.... [T]reatment of the actively injecting drug using person should be based upon the willingness of the client to undergo therapy, ability to regularly attend appointments for close monitoring, and agreement to use of contraception to prevent pregnancy" (New York State Department of Health, 2005a, p. 11).
American Association for the Study of Liver Diseases Guidelines on Diagnosis, Management, and Treatment of Hepatitis C	Therapy should be individualized for people who currently use alcohol and who are willing to participate in a substance abuse or alcohol treatment support program (Ghany et al., 2009).

symptoms, new symptoms, and thoughts of suicide. Depression is a common side effect of antiviral treatment and a main reason people stop treatment. However, with psychiatric treatment and monitoring, people who have psychiatric disorders have rates of adherence and successful outcome comparable with rates of those who do not have psychiatric disorders (Martin-Santos et al., 2008).

- People in opioid treatment programs sometimes have structured support, which helps them adhere to antiviral treatment and have successful outcomes.
- People who relapse to alcohol or injection drug use can sometimes successfully complete antiviral treatment at rates that do not significantly differ from those of people who do not abuse substances (Anand et al., 2006; Backmund, Meyer, & Edlin, 2004; Dalgard, 2005; Robaey, Van Vlierberghe, Mathei, Van Ranst, & Buntinx, 2006; Van Thiel, Anantharaju, & Creech, 2003).

### Likelihood of Hepatitis Treatment Success

Hepatitis C treatment success is defined as achieving a sustained virologic response (SVR)

(see Exhibit 4-3)—when the virus cannot be detected for up to 24 weeks (and usually many years) after therapy. If the virus cannot be eradicated, treatment is generally considered unsuccessful, even though the progression of liver disease might have slowed during treatment. For individuals with mild liver disease, a higher predicted likelihood of achieving an SVR might make them more interested in antiviral treatment than individuals whose expected likelihood of responding is lower. Historically, success rates for those who received hepatitis treatment were between 40 percent and 50 percent (Heathcote & Main, 2005), but new therapies promise higher success rates and shorter treatment times.

Several factors affect the likelihood of treatment success:

- *Genotypes.* Clients who are infected with HCV genotype 2 or 3 have approximately an 80 percent chance of success, as opposed to as much as a 67 percent to 68 percent chance for those who are infected with genotype 1 (see Chapter 3).
- *Viral load.* Treatment response rates tend to be low for those with genotype 1 HCV infection and high pretreatment viral load (see Chapter 3).

#### Exhibit 4-3 Hepatitis C Treatment Response Classifications

Treatment Outcome	Description
Sustained virologic response (SVR)	The virus is absent from the blood at the end of treatment and 6 months later. SVR is considered a successful treatment response.
Non-response	Antiviral treatment does not work, meaning the virus can be detected in viral load tests. If the level of virus does not decrease by one hundredfold after 12 weeks of treatment, or if it does not go away completely after 24 weeks, treatment is unsuccessful and can be stopped.
Virologic relapse	The virus disappears from the blood during antiviral treatment but returns when treatment is stopped.

- *Ethnicity.* For reasons that are not understood but might be related to genetic factors (Balagopal, Thomas, & Thio, 2010), hepatitis treatment response rates are low among Blacks and Hispanics, compared with rates among Whites and Asians (Conjeevaram et al., 2006; Rodriguez-Torres et al., 2009).
- *HIV co-infection.* Response rates are lower in individuals with HIV co-infection.
- *Liver damage.* People who have extensive liver damage are less likely to respond to hepatitis treatment than those with moderate or low liver damage, although treatment is more urgent for people who have severe liver damage.

### Counseling Clients Diagnosed With Chronic Hepatitis

Exhibit 4-4 lists potential counseling approaches to various HCV evaluation results. Individual circumstances vary, and treatment decisions will ultimately reflect advice from a medical professional working in concert with the client. For clients who are considering antiviral treatment, counselors can:

- Encourage clients to ask their medical care provider for the information needed to make informed decisions about treatment.
- Encourage thorough, informed consideration of treatment.

**Exhibit 4-4 Counseling Approaches Based on HCV Status**

Evaluation Result	Hepatitis Treatment Approach	Counseling Approach
<ul style="list-style-type: none"> <li>• No evidence of liver damage</li> <li>• No HCV found in blood (negative antibody test); might need to retest in 6 months</li> </ul>	<ul style="list-style-type: none"> <li>• No HCV antiviral treatment needed</li> </ul>	<ul style="list-style-type: none"> <li>• Educate client about liver health</li> <li>• Create risk-reduction plan</li> <li>• Encourage vaccination against hepatitis A virus (HAV) and hepatitis B virus (HBV)</li> </ul>
<ul style="list-style-type: none"> <li>• Evidence of mild liver damage</li> <li>• HCV ribonucleic acid (RNA) found in blood</li> <li>• Stable mental/physical health and life circumstances</li> </ul>	<ul style="list-style-type: none"> <li>• Consider antiviral treatment</li> <li>• Monitor liver health</li> </ul>	<ul style="list-style-type: none"> <li>• Educate client about liver health</li> <li>• Create risk-reduction plan</li> <li>• Encourage vaccination against HAV and HBV</li> <li>• Encourage thorough, informed consideration of hepatitis treatment</li> </ul>
<ul style="list-style-type: none"> <li>• Evidence of mild liver damage</li> <li>• HCV RNA found in blood</li> <li>• Unstable mental/physical health or life circumstances</li> </ul>	<ul style="list-style-type: none"> <li>• Defer antiviral treatment</li> <li>• Stabilize health and life circumstances</li> <li>• Monitor liver health</li> </ul>	<ul style="list-style-type: none"> <li>• Educate client about liver health</li> <li>• Create risk-reduction plan</li> <li>• Encourage vaccination against HAV and HBV</li> <li>• Encourage action toward improved health and/or life circumstances</li> </ul>



### Exhibit 4-4 Counseling Approaches Based on HCV Status (continued)

Evaluation Result	Hepatitis Treatment Approach	Counseling Approach
<ul style="list-style-type: none"> <li>Evidence of severe liver damage</li> <li>HCV RNA found in blood</li> <li>Stable or unstable mental/physical health and life circumstances</li> </ul>	<ul style="list-style-type: none"> <li>Consider antiviral treatment</li> <li>Monitor and stabilize health or life circumstances</li> </ul>	<ul style="list-style-type: none"> <li>Encourage treatment adherence</li> <li>Educate client about liver health</li> <li>Create risk-reduction plan</li> <li>Encourage vaccination against HAV and HBV</li> <li>Encourage action toward improved health and/or life circumstances</li> </ul>
<ul style="list-style-type: none"> <li>HCV RNA found in blood</li> <li>Genotype 2 or 3</li> <li>Stable or unstable mental/physical health or life circumstances</li> </ul>	<ul style="list-style-type: none"> <li>Urge antiviral treatment</li> <li>Stabilize health and life circumstances as necessary</li> </ul>	<ul style="list-style-type: none"> <li>Encourage treatment adherence</li> <li>Educate client about liver health</li> <li>Create risk-reduction plan</li> <li>Encourage vaccination against HAV and HBV</li> <li>Encourage action toward improved health and/or life circumstances</li> </ul>
<ul style="list-style-type: none"> <li>End-stage liver disease, regardless of other factors</li> </ul>	<ul style="list-style-type: none"> <li>Consider liver transplantation</li> </ul>	<ul style="list-style-type: none"> <li>Encourage vaccination against HAV and HBV</li> <li>Encourage action toward meeting requirements for transplantation</li> </ul>

- Encourage clients to take action toward improved health or life circumstances.
- Assess mental health and SUD recovery statuses.
- Emphasize the importance of alcohol abstinence.
- Help clients strengthen their support systems.

Counselors can explain the following information to clients:

- If hepatitis treatment does not completely clear the virus, some benefit might still occur (e.g., lower viral levels, less inflammation or fibrosis) (NIH, 2002). Also,

many people who have hepatitis C do not develop cirrhosis, end-stage liver disease, or liver cancer.

- The length of antiviral treatment varies.
- Clients will need to get frequent lab tests to ensure medication tolerance and effectiveness.
- If side effects are too severe or if the medication is not working, the medical care provider might reduce the dose or stop treatment altogether. This does not mean the client failed; it means that the treatment failed. It should be noted, however, that the client might still receive some benefit from treatment even though treatment was not completed (NIH,

2002). Nonresponse to treatment does not mean that liver damage is more severe.

## Supporting the Decision to Treat Hepatitis

For many clients who have chronic hepatitis, the decision to initiate hepatitis treatment is difficult. Some clients might feel an urgent need to undergo aggressive antiviral treatment. Others might feel that treatment, even if strongly recommended by their medical care provider, is not right for them, or they want to wait until they are further along in their recovery from substance use. Questions to help clients weigh their hepatitis treatment options include the following:

- “What are the possible gains and losses of your decision to get or not to get antiviral treatment?”

- “Which of these are most important to you?”
- “If you’re not ready to begin hepatitis treatment now, what would have to happen to get you ready or make you decide to begin treatment?”
- “What would you be interested in doing now?”

Only the client, in conjunction with his or her medical care provider, can decide whether antiviral treatment is the right choice. After discussing the benefits and risks of treatment in the context of the client’s life, the counselor should respect and support the client’s decision. Counselors can help clients who undertake antiviral treatment adhere to the regimen, as well as help those who defer treatment understand how to promote and maintain liver health.

### Clinical Scenario

Selena is a 36-year-old Hispanic woman who has been in outpatient treatment for opioid dependence for 2 months after completing detoxification and a residential treatment program. Her HCV treatment has caused side effects that feel like opioid withdrawal, which has triggered cravings for oxycodone. She stated in her last meeting with her counselor that she is going to stop taking her hepatitis medications to avoid relapsing. What should the substance abuse treatment team do in response to this situation?

### Primary Concerns

- Selena wants to stop taking her hepatitis medications.
- Selena might not be ready to tolerate the side effects of antiviral treatment.
- Selena needs stronger coping skills for managing her cravings.

### Intervention Options

- In consultation with her medical care provider, help her weigh the risks and benefits of stopping antiviral treatment and how it can be done safely.
- Discuss ways to help Selena manage her current cravings (e.g., ongoing counseling, support groups, referral to an intensive outpatient program or a residential treatment program, increased or random urine drug testing and other monitoring, waiting until she is further along in her recovery from using opioids to resume hepatitis medications).
- Help Selena understand that she can restart antiviral treatment at a later date.
- Discuss the possibility of starting opioid maintenance treatment if she is not already on medication-assisted treatment.

## Special Populations: Barriers to Hepatitis Treatment

Many people might have to overcome barriers to screening and treatment of chronic hepatitis, including people who are homeless or incarcerated; people who have mental illness; members of ethnic, racial, or gender minorities; people whose first language is not English; and others. Although conditions differ among populations and individuals, the needs of marginalized people are often similar. Counselors can assist these clients by:

- Helping them obtain basic information about all types of hepatitis in a format or language they can understand.
- Encouraging them to get vaccinated against hepatitis A and B.
- Advocating screening and treatment when the medical care provider's reluctance to treat is based solely on the SUD diagnosis.
- Helping clients find medical care providers who are familiar with and understanding of their culture or subculture.
- Making referrals to specialized case management services for shelter services, housing, food, and other basic needs.
- Understanding marginalized clients' distrust of medical care systems and public health surveillance requirements.
- Helping clients understand and navigate complex medical care requirements.
- Monitoring for the co-occurrence of mental and substance use disorders, especially for the worsening of psychiatric symptoms when HCV treatment begins, and managing care or referring for specialized care, as indicated.

Appendix C includes resources available for people facing particular barriers to treatment.

### Chapter Summary

In determining eligibility for treatment of viral hepatitis, medical care providers consider:

- Timing of hepatitis treatment.
- Treatment contraindications.
- The presence of more urgent problems.
- The likelihood of patients' adhering to hepatitis treatment.
- The likelihood of treatment success.

Medical care providers, clients, and counselors should work together to consider the advisability of antiviral treatment.

There is growing consensus that people who have injected or still inject drugs can be successfully treated for hepatitis.

Steps to help clients decide whether to begin antiviral treatment include:

- Helping clients understand the meaning of evaluation results for hepatitis treatment.
- Assessing clients' SUD recovery, mental health issues, support systems, and life circumstances.
- Educating clients about their choices.
- Helping clients reframe goals of recovery to include a meaningful, healthy life.

Once a client makes a decision about hepatitis treatment, the counselor should support that decision and offer to reconsider in the future if circumstances change.

Clients from special populations might require additional education or advocacy. Their unique needs must be considered in antiviral treatment planning.

# 5 Hepatitis Treatment

## IN THIS CHAPTER

- Overall Treatment Recommendations
- Treatment for Hepatitis A
- Treatment for Hepatitis B
- Treatment for Hepatitis C
- People Receiving Medication-Assisted Treatment for Opioid Dependence
- People Who Relapse to Substance Use
- People Who Have HCV/HIV Co-Infection
- People Who Have Co-Occurring Behavioral Health Disorders
- Chapter Summary

*It was late July 2006 and I was ready to commit to getting myself better. I remember taking my first ribavirin pill and knowing that this is the start of a new life for me. I had help with my first pegylated interferon shot. I scheduled my shots for Friday nights just in case I got sick afterwards. I was nervous and scared. That first night I had a fever and just felt very tired and weak. But the end of the next day I was ok.... The first doctor's appointment after starting treatment went very well. My liver enzymes were already back to normal. I felt so happy. Twelve weeks into treatment they checked my viral count and it was undetectable. I knew I was going to make it through this.*

—Kathleen (Hepatitis C Support Project, 2006)

## Overall Treatment Recommendations

Clients who become infected with hepatitis and seek antiviral treatment—especially for hepatitis C—face long and in some cases difficult treatment regimens that, in the end, might not clear the virus from their bodies. Clients in treatment for chronic viral hepatitis might have to manage serious side effects of the treatment while striving to manage their behavioral health issues. People who decide to delay or forgo hepatitis treatment must learn new skills to live with their disease.

Facing these difficult decisions, some clients will feel overwhelmed, fearful, and hopeless. Counselors who understand hepatitis treatment options and their side effects can better support their clients in recovery from substance use disorders (SUDs).

Clients who have any form of viral hepatitis will benefit from:

- Resting.
- Avoiding alcohol and discontinuing drug use.

- Avoiding other substances that can harm the liver, including acetaminophen (Tylenol) in large doses.
- Eating nutritious, well-balanced meals.
- Getting vaccinated against hepatitis A and hepatitis B.
- Reinforce the importance of maintaining SUD recovery activities. Say, “Your liver is injured. If you drink or use drugs, you could make it worse. Let’s talk about everything you’re doing to stay free of alcohol and other substances.”

## Treatment for Hepatitis A

Because hepatitis A is always acute, its treatment is generally limited to addressing symptoms, monitoring liver health, and letting the virus run its course. Clients recently exposed to hepatitis A virus (HAV) might be advised by their medical care providers to receive the HAV vaccination or immunoglobulin injection to reduce the likelihood of becoming ill (Franciscus, Highleyman, & Kukka, 2007; Victor et al., 2007).

In rare cases, hepatitis A leads to severe liver problems that require medication, hospitalization, or transplantation. If left untreated, liver problems can lead to life-threatening conditions. Therefore, a client who might have been infected with HAV should seek the care of a medical care provider.

Suggestions for counseling clients who have hepatitis A include the following:

- Assure clients that their symptoms are temporary.
- Reinforce prevention with messages such as, “You will recover from hepatitis A; let’s talk about what you can do to make sure you never get the more serious types. A vaccine against hepatitis B can protect you, and there are ways to reduce the risk of getting hepatitis C.”
- Encourage clients to take care of themselves. Say, for example, “Your body is working hard to fight off the hepatitis infection. It is very important that you take care of yourself now.”

## Treatment for Hepatitis B

All cases of hepatitis B begin as an acute infection and most cases resolve without treatment. However, if the person does not recover completely within 6 months, the infection is considered chronic. Clients diagnosed with chronic hepatitis B should get regular monitoring by a medical care provider, and some might undertake treatment. Several medications are used for chronic hepatitis B. Treatment might be started with any of the U.S. Food and Drug Administration (FDA)-approved antiviral medications, but interferon, tenofovir, or entecavir are preferred (Lok & McMahon, 2009). These medications might be prescribed individually or in combination (see Exhibit 5-1).

Any treatment for hepatitis B has benefits and risks. Antiviral treatment generally lasts 6 months–1 year and can extend for years longer (possibly for life). Managing side effects can be difficult. The decision to undertake treatment should not be made in haste because ending some antiviral medications early can reactivate the HBV infection. Many people elect to delay hepatitis B treatment until they are better able to adhere to it. Exhibit 5-2 provides counseling tips for addressing clients’ concerns about hepatitis B.

## Treatment for Hepatitis C

Because most people who have hepatitis C have mild symptoms or no symptoms, clients often do not know they are infected and, therefore, do not seek hepatitis treatment until severe hepatitis C virus (HCV)-related

**Exhibit 5-1 Medications for Chronic Hepatitis B**

Medication	Administration	Side Effect
Short-acting interferon	Injected several times a week for 6 months–1 year, sometimes longer	Depression, suicidal behavior, aggression, homicidal behavior, flu-like symptoms, diarrhea, nausea, taste alteration, anorexia, weight gain, liver and biliary system disorders, bone pain, arthritis, leg cramps, blood disorders
Long-acting (pegylated) interferon	Injected once per week for 6 months–1 year	Dry mouth, flushing, headache, fatigue, malaise, dizziness, hypothyroidism, nausea, anorexia, diarrhea, blood disorders, liver and biliary system disorders, musculoskeletal system disorders, insomnia, depression, anxiety, emotional lability, impaired concentration, menstrual disorders, coughing, sinusitis, rash, dry skin, taste alteration, blurred vision, conjunctivitis
Lamivudine	Tablet taken once per day for 1 year or longer	Headache, fever, nausea and vomiting, malaise, fatigue, cough, diarrhea, insomnia, rash, shortness of breath; hepatitis B virus (HBV) infection might worsen if medication is stopped
Adefovir dipivoxil	Tablet taken once per day for 1 year or longer	Lactic acidosis, fluid retention, nausea and vomiting, pain in abdomen or stomach, jaundice, drowsiness, kidney problems, liver problems; hepatitis might worsen if medication is stopped
Entecavir	Tablet taken once per day for 1 year or longer	Lactic acidosis, liver problems, headache, fatigue, dizziness, nausea; hepatitis might worsen if medication is stopped
Telbivudine	Tablet taken once per day for 1 year or longer	Fatigue, cough, diarrhea, headache, abdominal pain, rash, fever, back pain, muscle pain, sore throat, joint pain, nausea, lactic acidosis, liver problems; hepatitis worsens if medication is stopped
Tenofovir	Tablet taken once per day for 1 year or longer	Lactic acidosis, liver problems, serious psychiatric symptoms, depression, diarrhea, dizziness, fatigue, headache, kidney problems, nausea, vomiting, stomach pain, rash, insomnia, weakness, bone problems (pain, softening of bones, decreased bone density); hepatitis worsens if medication is stopped

Source: *Physicians' Desk Reference 2010* (64th ed.), 2009.

## Exhibit 5-2 Counseling Tips for Addressing Concerns About Chronic Hepatitis B

- Help clients understand that although their symptoms might have diminished, they remain infected. Explain, “I know you feel better now, but remember that you still have the infection and could spread it to others. Have other members of your household been tested or vaccinated?”
- Help clients understand the importance of seeing a medical care provider for regular monitoring. Ask, “Have you talked to your doctor lately about your chronic hepatitis B? What decisions have you made about hepatitis treatment?”
- If clients are treating their hepatitis B, ask, “What are you doing to help yourself adhere to treatment?”
- For clients who do not have hepatitis A, hepatitis C, or HIV co-infection, stress the importance of prevention. Say, “It’s great that you are addressing your HBV infection. It is very important that you make sure you don’t get other forms of hepatitis or HIV. These can make your HBV infection worse. Let’s make a plan to make sure you don’t contract another infection and that you get vaccinated.”
- Reinforce the importance of maintaining substance abuse recovery activities.

diseases have produced other symptoms or their infections are found in a screening test. Approximately one in five people clears HCV infection without treatment. In rare cases, acute HCV infection quickly leads to liver failure (for example, following reinfection after a liver transplant). Therefore, any client diagnosed with hepatitis C is a potential candidate for antiviral treatment.

### Acute Hepatitis C

Treating hepatitis C early might greatly increase a patient’s chances of sustained virologic response (SVR) and prevent long-term liver damage (Kresina et al., 2008). Response rates in acute HCV infection are radically better than in chronic infection, but to maximize the likelihood of viral clearance, treatment should be initiated within the first 20 weeks. Therefore, counselors should encourage clients who have hepatitis C to seek specialized care immediately. No clear regimen exists for treating acute hepatitis C. Currently, treatment is a shortened form (approximately 12 weeks) of the antiviral treatment for chronic hepatitis C.

### Chronic Hepatitis C

Treatment options for people who have chronic hepatitis C include:

- Antiviral treatment. A course of potent medications might slow disease progression or eliminate the disease.
- Deferring treatment. Not all patients want treatment, even if it is advised.
- Liver transplantation. For people who have end-stage liver disease, transplantation surgery might be the only option. However, the waiting list for such surgery can be long.

### Antiviral Treatment

Antiviral treatment helps the body fight off HCV infection (i.e., weakens the virus). When the virus is not detected in the blood of a patient who is receiving antiviral treatment, and when it remains undetected for 6 months after treatment is completed, the patient is said to have an SVR. The virus does not return in 95 percent to 99 percent of patients who achieve an SVR, and it does not appear to cause further damage (McHutchison et al., 2006; Swain et al., 2007).

However, an SVR does not make a person immune to reinfection. If reexposed to HCV, a person could be reinfected. Clearing HCV does not make a person immune to other forms of hepatitis or to liver disease. For instance, drinking heavily can still cause liver damage, even after successful treatment of hepatitis C.

The standard recommended treatment for hepatitis C is a combination of pegylated interferon injections and ribavirin (Exhibit 5-3). However, in 2011, the FDA approved two new oral medications, *boceprevir* and *telaprevir*. They represent a new type of medication for HCV infection that works differently than interferon and ribavirin and works in combination with those traditional medications (FDA, 2011a; FDA, 2011b).

Hepatitis C treatment works well for most people, whereas for a minority it produces little or no improvement. Counselors can help their clients improve their chances for successful hepatitis treatment by encouraging them to:

- Take all medications as prescribed, keep all medical appointments, and reschedule missed appointments as soon as possible.
- Maintain a healthful lifestyle.

- Learn about HCV medications, including special risks and warnings even after antiviral treatment has finished.
- Always carry a list that includes the prescribing medical care provider's name and phone number and the names and dosages of the medications.
- Check with their medical care provider before starting new medicines, including vitamins, supplements, herbal remedies, prescription medications, and over-the-counter medications.
- Avoid drinking alcohol or taking drugs with no known medical use.
- Maintain as many recovery activities as possible.
- Report side effects to their medical care provider.

Side effects of antiviral medication differ from person to person. Some side effects are mild to moderate and remain so. But in some people, side effects become more severe with continued hepatitis treatment. HCV treatment is long, and having to manage side effects for the duration of treatment can strain individuals and those they turn to for support. Side effects—particularly flu-like symptoms and

### Exhibit 5-3 Medications Approved for Treating Chronic Hepatitis C

Medication	Administration
Long-acting (pegylated) interferon	Injected weekly for 6 months–1 year
Ribavirin	Tablet or capsule taken orally, usually twice per day for 6 months or longer
Boceprevir	Capsule taken orally, three times per day (with food). The length of dosing time varies based on viral response and the extent of liver disease. It must be taken in combination with interferon and ribavirin.
Telaprevir	Tablet taken orally, three times per day (with food) for 12 weeks (another 12–36 weeks may be required, depending on viral response). It must be taken in combination with interferon and ribavirin.



depression, which are common side effects of interferon—are the primary reason people stop hepatitis C treatment. Because people are more likely to clear the virus if they complete their antiviral treatment, it is crucial that they get the support they need to manage side effects so the side effects do not cause them to discontinue treatment (Exhibit 5-4).

Although most side effects are manageable by the patient, others require medical intervention. Conditions requiring medical attention include the following:

- Depression or mania. Counselors need to be particularly attuned to the development of these neuropsychiatric symptoms, routinely assess for them, and refer clients for mental health treatment as appropriate.
- Anemia (reduced red blood cell count). Ribavirin often leads to anemia that can cause fatigue and increase the risk of chest pain, shortness of breath, or heart attack.
- Neutropenia (reduced white blood cell count resulting in an increased risk of infections). Neutropenia is rarely severe enough to terminate antiviral treatment.

- Pulmonary conditions. Shortness of breath or cough might develop during hepatitis treatment. People who develop these symptoms should consult their medical care provider to rule out other causes.
- Eye problems. Antiviral treatment can induce or aggravate eye problems, especially in people who have diabetes or hypertension. Clients who complain of blurry vision, any obstruction to vision, or loss of vision should receive an immediate medical examination.

Appendix D provides practical approaches to managing common side effects of hepatitis C antiviral treatment. The U.S. Department of Veterans Affairs, National Hepatitis C Program, offers information on managing side effects on its Web site (<http://www.hepatitis.va.gov/pdf/treatment-side-effects.pdf>).

### **Deferring Treatment**

Some clients might choose to postpone antiviral treatment. They might have more urgent health problems to tend to, or they might feel they are not strong enough in their SUD recovery to undergo hepatitis treatment.

### **Exhibit 5-4 Adhering to Antiviral Treatment**

Substance abuse treatment counselors can help clients adhere to antiviral treatment by:

- Explaining intended effects and side effects of medication.
- Paying attention to side effects and advising clients to report them to their medical care providers.
- Being respectful and nurturing.
- Providing reminder services (e.g., cell phone reminders, pill organizer boxes).
- Addressing depression, when appropriate.
- Striving for multidisciplinary collaboration among all professionals caring for the client.

Where possible, observed dosing might also encourage treatment adherence.

Source: Robaey & Buntinx, 2005

Medical care for clients who choose to defer treatment generally involves:

- Getting regular medical evaluations.
- Having liver enzyme and cancer screening tests once or twice every year.
- Getting a liver biopsy every 3–5 years.
- Adopting a lifestyle that promotes liver health.

It is critical for clients with compromised liver functions to take precautions against contracting HIV and to get vaccinated against HAV and HBV. Clients who are co-infected with HCV and HIV should be encouraged to get treated for their HIV. Clients who are HIV negative should be retested for HIV at the advice of their medical care provider. Counseling tips for working with clients who have chronic hepatitis include:

- Help clients understand that they should see a medical care provider regularly. “When was the last time you saw your doctor about your hepatitis?”
- Encourage patients to adopt habits that support liver health, such as avoiding alcohol and eating a healthful diet.
- Help clients think about how to create or improve their support networks so that no matter what hepatitis treatment choices they eventually face, they have help from others. “Would you like to create a list of people you know and list the help they could provide you as you cope with hepatitis?”

### ***Liver Transplantation***

Although many people who have hepatitis C respond to antiviral treatment or can live indefinitely with their illness, in some people, liver damage will be extensive and a liver transplantation is needed. Counselors should be prepared to support clients who have been told that liver transplantation surgery

is necessary. They might also need to educate the transplantation team about the value of medication-assisted treatment (MAT) for opioid dependence. The following factors influence a patient’s acceptance to a transplant waiting list:

- Urgency of need
- Willingness and ability to endure the extensive preoperative and postoperative tests and procedures
- Willingness and ability to follow physician’s instructions
- Willingness to adjust to the postoperative lifestyle
- Access to caregivers who can provide support during the lengthy transplantation process
- Ability to stop all alcohol use

Patients obtaining a liver transplant generally go through the following phases:

1. Contacting a transplant center. People who have been told that a liver transplant is their only hope should obtain a physician’s referral to a transplant center as soon as possible. Each transplant center has its own criteria for placing patients on its waiting list. Clients who are not accepted for a waiting list might be deferred until the conditions that prevented the client from being accepted are resolved.
2. Waiting for the transplant. The time between being put on a waiting list and receiving the transplant can be as short as a few days or as long as several years. While waiting, patients must keep their records updated at the transplant center and stay as healthy as possible to be ready for surgery when a liver becomes available. They must avoid consuming alcohol or drugs and continue to take medications as prescribed.

## Complementary or Alternative Medicine

Clients might turn to complementary or alternative medicine (CAM), believing it will bolster nutrition, attack the hepatitis, protect or strengthen the liver, or mitigate side effects of viral hepatitis treatment. As many as 20 percent of people who have liver disease use herbal remedies. No conclusive scientific evidence supports the use of CAM for hepatitis C; herbal treatments, dietary supplements, alternative medicines, and acupuncture have not been proven to cure or relieve symptoms of hepatitis C (Dieticians of Canada, 2003; National Center for Complementary and Alternative Medicine, 2008). In addition, some herbal treatments might harm the liver, further damaging an already compromised organ. Plants and alternative treatments that can harm the liver are provided in Appendix E.

3. Getting the transplant. The surgery itself takes up to 12 hours. Recovery can take months.
4. Living with the transplant. Following a transplantation procedure, patients must take medication for the rest of their lives to reduce the chance of their bodies rejecting the donated liver. This medication weakens the immune system. Patients might experience an array of intense emotions following the surgery. Counselors can help clients explore their emotions while developing realistic expectations for their futures. Liver transplants buy some time, but not necessarily a lot of it. Within 5–10 years, many patients contract hepatitis C again and, because medications suppress their immune response, the disease progresses much more rapidly (Berenguer et al., 2006; National Institutes of Health [NIH], 2002). In fact, the recurrence of HCV after a transplant is universal unless viral eradication occurs before the transplant. In such cases, progression of the disease might be rapid, sometimes resulting in cirrhosis within 1 year of transplant.

Counselors can play a critical role with clients who have end-stage liver disease or liver cancer and are not likely to obtain a liver transplant in time, who have been rejected from waiting lists, or who cannot go through the procedure.

Specifically, counselors can help clients with end-of-life decisions, help ensure that those decisions are respected, and obtain palliative care. This work might be enhanced by collaboration with medical care providers, social workers, ethicists, family, hospice care, spiritual advisors, and therapists. Resources for liver transplantation are provided in Appendix C.

## People Receiving Medication-Assisted Treatment for Opioid Dependence

Some medical care providers and clients believe that people on methadone or buprenorphine are ineligible for, or will not benefit from, antiviral treatment. However, research suggests that treatment for hepatitis C can be effective for people receiving MAT for opioid dependence (Kresina, Bruce, Cargill, & Cheever, 2005; Mauss, Berger, Goelz, Jacob, & Schmutz, 2004; Sylvestre, Litwin, Clements, & Gourevitch, 2005). NIH (2002) hepatitis C treatment guidelines state that MAT has been shown to reduce risky behaviors that can spread HCV infection, and it is not a contraindication to HCV treatment.

Many clients receiving methadone, buprenorphine, or naltrexone might want antiviral treatment, but it is not offered to them by their medical care providers. Counselors can provide a crucial service by informing clients

that their receipt of MAT for opioid dependence does not exclude them from hepatitis treatment. Counselors can help clients search for medical care providers who are open to assessing them for hepatitis treatment, and counselors can advocate treatment if they perceive that clients are being discriminated against because of their past or current substance use status.

Adherence to antiviral treatment is an important factor in treatment success, and studies show that individuals receiving methadone treatment can adhere to treatment for hepatitis C (Schaefer et al., 2007; Sylvestre & Clements, 2007). Modifying treatment for clients receiving MAT for opioid dependence might help them adhere to antiviral treatment (Exhibit 5-5). Chapter 7 provides more information on program-level modifications.

## People Who Relapse to Substance Use

People who relapse, continue to use, or have only recently quit using drugs or alcohol are often denied treatment for viral hepatitis. One study found that more than one-third of substance abuse treatment programs listed recent drug use as a reason their clients had not been treated for HCV infection (Astone-Twerell, Strauss, Hagan, & Des Jarlais, 2006). Several factors determine whether a person is a good candidate for antiviral treatment, and recovery status is just one factor. Clients should not be denied hepatitis treatment for this reason alone. Other misperceptions abound. NIH (2002) indicates that treatment of chronic hepatitis C can be successful even when patients have not abstained from active drug use.

### Exhibit 5-5 SUD Treatment Modifications for Clients Receiving MAT for Opioid Dependence

Type of Interaction	Recommendation
Support meetings, peer support, and counseling sessions	These activities might help clients cope with side effects and urges to relapse that result from injecting medication (Litwin et al., 2005). If an opioid treatment program (OTP) is the only source of counseling, additional referrals for more intensive individual or family counseling might help clients with the multiple psychosocial issues that might arise.
Flexible counseling schedules while maintaining medication schedules	If licensure standards allow, 15-minute sessions four times monthly instead of monthly 1-hour sessions might be more realistic for clients with fatigue from chronic hepatitis or antiviral treatment. Programs could allow one outside support group meeting to substitute for a monthly group session.
Flexible individual dosing regimens	Clients in OTPs who undergo treatment for HCV infection often report increased opioid cravings and request increased methadone doses. It is unclear why hepatitis treatment is associated with increased cravings, but for some clients the side effects of antiviral medications might mimic withdrawal. Increasing methadone doses might help relieve the flu-like side effects caused by hepatitis treatment. Research has not confirmed that interferon lessens the effects of methadone.
Observed dosing by staff	Some people might better adhere to antiviral treatment if they take their oral medication or interferon in the presence of SUD treatment staff. Residential programs and OTPs might be better able to offer medication observation than non-OTP outpatient programs.

### **Misperception 1. Antiviral Treatment Is Ineffective in People Who Continue to Abuse Substances**

People who have recently used injection drugs or who relapsed to drug use during hepatitis treatment have SVRs comparable with SVRs in other groups (Robaey & Buntinx, 2005; Van Thiel et al., 2003). However, SVR is more likely in people who have at least 6 months of abstinence than in people who continue to abuse substances regularly (Robaey & Buntinx, 2005).

### **Misperception 2. People Who Abuse Substances Do Not Adhere to Antiviral Treatment**

Research suggests that, with support, people who use substances can adhere to antiviral treatment. Clients who are not in OTPs are more likely to discontinue treatment early, particularly in the first 8 weeks of therapy (Schaefer, Heinz, & Backmund, 2004). Sylvestre et al. (2005) found that individuals with occasional drug use had adherence rates that were comparable with rates of those who were abstinent. However, people who relapsed to regular heavy drug use showed a significantly lower level of adherence.

### **Misperception 3. People Who Continue to Abuse Substances Will Be Reinfected With HCV Even if SVR Is Achieved**

Although data are limited, evidence suggests that the risk of reinfection with HCV is low, even among people who relapse to injection drug use (Backmund et al., 2004; Dalgard et al., 2002; Robaey & Buntinx, 2005; Schaefer et al., 2004).

Strategies for helping clients who relapse to substance use include:

- Developing an SUD treatment plan that includes a range of effective treatment options; additional testing to evaluate HAV, HBV, and HCV status; and a hepatitis treatment referral.
- Using motivational interviewing to engage clients in treatment to improve their quality of life.
- Providing education on HCV transmission and treatment and helping with psychosocial difficulties.
- Recognizing clients' ambivalence, efforts in SUD treatment, and attempts to reduce substance use.
- Referral to mental health treatment, if warranted.

## **People Who Have HCV/HIV Co-Infection**

People who are co-infected with HCV and HIV must adjust to two major diagnoses that can have difficult treatment regimens. In clients with HIV, hepatitis C treatment is generally advised when the likely benefits outweigh the risks of serious side effects (Ghany et al., 2009). Approximately 35 percent of people who have HCV/HIV co-infection achieve an SVR (Sherman, 2007), and this success rate might be improved with new medications.

Counselors can help clients understand the implications of HCV/HIV co-infection and provide support. Strategies to address the issues include the following:

- Educate clients about HCV/HIV co-infection. Many people who have HIV might be aware of the health consequences of HIV but be unaware that HIV infection greatly increases the progression of HCV, increasing the likelihood of

- cirrhosis, end-stage liver disease, and liver cancer. In fact, liver disease—from underlying hepatitis B, C, or alcohol abuse—is the major non-AIDS cause of death in HIV-infected persons.
- Stress the importance of being tested for hepatitis and receiving antiviral treatment as soon as possible. All individuals who are infected with HIV should be screened annually for HCV.
  - Screen for and address cognitive deficits. People who are co-infected are more likely to suffer cognitive deficits in multiple areas, including learning, abstraction, motor abilities, memory, and information processing (Cherner et al., 2005). Counselors should be attentive to signs of these problems, conduct assessments, help clients cope with these issues, and advocate on behalf of their clients with HCV treatment providers.
  - Help clients manage side effects. Individuals who have HIV often receive medications that can have significant side effects. People who are co-infected with HCV and HIV might experience many side effects with antiviral treatment (Gish, Afdhal, Dieterich, & Reddy, 2005).
  - Encourage clients to seek and receive compassionate medical care. Medical care providers who have not received training in managing HCV/HIV co-infection can present barriers to effective hepatitis treatment. Clients might also be negatively influenced by judgmental approaches, frustration, and unrealistic expectations for treatment (Kresina et al., 2005). These attitudes can result in distrust and poor communication between client and provider, as well as in frustration and lack of adherence by the client. Counselors can help clients find medical care providers who are familiar with and able to treat this population.
  - Help coordinate care. People who have HCV/HIV have multiple needs requiring an array of medication and treatment. Counselors can coordinate with medical care providers to address these needs. A multidisciplinary approach can help clients access the treatment that they need and increase treatment retention.
  - Emphasize adherence to treatment. Effective results depend on close adherence to all treatment regimens. Counselors should explain the importance of taking medications exactly as directed.

### People Who Have Co-Occurring Behavioral Health Disorders

Studies have demonstrated that completion and outcome of antiviral treatment can be similar for clients who have co-occurring substance use and mental disorders compared with clients who do not have these co-occurring conditions (Chainuvati et al., 2006; Guadagnino, Trotta, Carioti, Caroleo, & Antinori, 2006; Sylvestre & Clements, 2007). People who have and do not have psychiatric histories had similar rates of HCV treatment adherence. In people who have depressive symptoms, medications to treat depression should be given early in HCV treatment to improve treatment adherence. Freedman and Nathanson (2009) suggest that optimal results are obtained when coordinated substance abuse and psychiatric treatment occurs before and during treatment for hepatitis C.

Counselors can help their clients with co-occurring substance use and mental disorders cope with hepatitis. Suggestions for initiating conversations follow:

- “Your doctor expressed some concern about your candidacy for treatment because of your depression. How do you see things?”

- “What would be helpful for your depression?”
- “Your doctor says you can go ahead with hepatitis treatment. What do you think you need to do for this to be successful?”

Information specific to supporting clients who have co-occurring substance use and mental disorders and hepatitis is provided in Appendix F.

## Chapter Summary

- Hepatitis A rarely requires treatment.
- Chronic HBV can be treated with several oral antivirals; currently, tenofovir or entecavir are the recommended first-line options for initial oral treatment options.
- Hepatitis C can be treated effectively if discovered early (i.e., in its acute phase), but it is rarely discovered early.
- Treatment for chronic hepatitis C is lengthy, can cause side effects that are difficult to manage in some people, and requires good adherence. It is not appropriate for everyone.
- Some clients might elect (or be advised) to defer antiviral treatment.
- For some people, a liver transplant is the only option. Counselors can help clients through the process.
- Clients in OTPs are eligible for antiviral treatment.
- Clients who use substances or relapse can achieve SVR comparable with that of other groups if they adhere to hepatitis treatment.
- HCV/HIV co-infection can be very serious.
- Clients with co-occurring behavioral health disorders can adhere to—and respond to—antiviral treatment.

# 6 Counseling Approaches for People Who Have Viral Hepatitis

## IN THIS CHAPTER

- The Need for Counseling Strategies
- Ensuring Safety
- Providing Reliable Information
- Building the Therapeutic Relationship
- Helping Clients Understand Their Diagnoses
- Incorporating Client Needs in Substance Abuse Treatment Planning
- Developing a Prevention Plan
- Using Motivational Approaches
- Confronting the Social Factors of Hepatitis
- Addressing Relapse
- Building Support Systems
- Providing Effective Case Management
- Chapter Summary

*When I found out that I had hepatitis C, I was really angry. I worked so hard to get off drugs and was just starting to get my life together. Then they told me I had this disease. I couldn't believe it. I didn't go back to the doctor for a while—I didn't want to deal with it.*

—Carlos (New York State Department of Health, 2005b)

## The Need for Counseling Strategies

Counselors are in a unique position to provide education, emotional support, and other types of assistance for clients who have hepatitis and substance use disorders (SUDs). However, most treatment programs do not have components in place to address viral hepatitis. According to the 2007 National Survey of Substance Abuse Treatment Services, only 22 percent of treatment facilities offer onsite screening tests for hepatitis B; 23 percent offer onsite screening for hepatitis C (Office of Applied Studies, 2007). Other studies have shown that only 54 percent of treatment programs provide education about hepatitis, and many counselors are uninformed or misinformed about the disease (Astone, Strauss, Vassilev, & Des Jarlais, 2003).

Depending on the resources available, counselors might be able to implement only some of the strategies presented for supporting clients who have hepatitis. Readers are encouraged to accomplish what they can to improve SUD treatment practices for their clients and to advocate for client access to services that cannot be implemented immediately. Information specific to supporting clients who have co-occurring mental disorders and hepatitis, absent a co-occurring SUD, is provided in Appendix F.



## Ensuring Safety

If a client with infectious hepatitis becomes injured and bleeds, staff members are at risk of contracting the infection. Counselors should use universal precautions, such as wearing gloves and other protective gear when exposure to infected blood or other body fluids is possible. Counselors should take care to avoid accidental needle sticks, which can transmit hepatitis and HIV. Counselors should also know their hepatitis status and take cautions to protect clients and coworkers, if necessary.

*Counselors can discuss hepatitis in ways that build the therapeutic relationship.*

## Providing Reliable Information

Providing current, accurate information is an important counseling service. Misinformation obtained by word of mouth or on the Internet can increase clients' fears and feelings of hopelessness. Counselors can dispel misinformation about hepatitis by providing educational sessions incorporated into treatment programming. Chapter 1 gives an overview of viral hepatitis, and Appendix C provides a list of resources that are available on the Internet.

## Building the Therapeutic Relationship

Counselors can discuss hepatitis in ways that build the therapeutic relationship. Clients are more likely to ask questions and express concerns and fears about screening, a diagnosis of chronic hepatitis, and its treatment if the counselor and client have a good working relationship. There are a number of ways in which a counselor can help clients (Astone, Strauss, Munoz-Plaza, Hagan, & Des Jarlais, 2005).

These include:

- Being well informed about hepatitis, especially chronic hepatitis C.
- Talking to clients about their diagnoses and medical treatment with empathy.
- Assuring clients that the counselor will help them negotiate necessary services, either within or outside the treatment program.
- Helping clients overcome possible barriers to hepatitis treatment.
- Interpreting information clients receive from medical care providers, the Internet, family, friends, and other clients.
- Repeating information in different ways until clients understand it.
- Asking about clients' families' responses to their diagnoses and helping clients cope with those responses.
- Educating clients about the liver and how to stay healthy with hepatitis and stating that the majority of people who have chronic hepatitis C and who do not use alcohol will not develop life-threatening complications.
- Offering messages of hope about living with hepatitis.
- Emphasizing consistently the importance of clients' addressing their health-related issues.
- Explaining complex hepatitis treatment and test results or collaborating with medical professionals who can provide necessary explanations to clients.
- Helping to make medical appointments and advocating for clients with medical care providers.
- Helping clients devise strategies for remembering medical and other scheduled appointments.

## Helping Clients Understand Their Diagnoses

Clients' reactions to a diagnosis of viral hepatitis vary. For some clients, the possibility that they might become ill in 20–30 years might be the least of their concerns as they face the immediacy of their potentially life-threatening SUD and other life stressors. For others, a diagnosis might present a crisis. Those who have been in substance abuse treatment for many years, for example, might view a diagnosis as a threat to their hard-won sense of stability (Litwin et al., 2005). New clients might feel overwhelmed by the extra complications placed on the already daunting prospect of recovery. Some might use their diagnoses of hepatitis as an excuse to start using substances again.

Counselors need to be prepared for a range of reactions. Some clients might need to talk through fears and anger many times before moving forward with medical treatment. In these situations, counselors might need to schedule more individual sessions with clients to discuss these issues. Other clients might need prodding to understand their diagnoses and take appropriate steps to reduce their risks of spreading the illness or worsening their prognosis. Clients might be concerned about how to tell loved ones about their diagnoses and worried about transmitting the virus to others. Women might be concerned about pregnancy and hepatitis treatment or viral transmission.

## Incorporating Client Needs in Substance Abuse Treatment Planning

Substance abuse treatment planning might be complicated by both hepatitis symptoms and potential side effects of the antiviral treatment. Counselors might need to adjust substance abuse treatment for clients who have hepatitis-related symptoms or antiviral treatment side effects.

Facets of substance abuse treatment might need to be flexible for clients who have hepatitis (within accreditation and licensing guidelines) and allow for the following:

- Individualized, flexible substance abuse treatment planning to permit missed sessions resulting from hepatitis symptoms, antiviral treatment, or medical appointments
- Time for clients to rest
- Time for hepatitis-specific support groups for clients in residential treatment (individual sessions could be scheduled to replace missed group sessions)
- More frequent sessions or more intensive programs
- Longer duration of substance abuse treatment to make up for missed sessions and to provide ongoing support during the hepatitis treatment regimen

Ongoing screening and assessment for depression and other mental disorders are necessary for all clients but are particularly important for clients with hepatitis who are receiving interferon. Depression is a major side effect of interferon treatment, and clients with a history of depression are at particular risk for worsening of symptoms. Treatment plans for clients who have co-occurring substance use and mental disorders should include:

- Periodic screening for depression, referral for evaluation by a mental health professional, and consideration of initiating antidepressant treatment, if warranted.
- Regular medication adherence checks for clients who are taking antidepressant medication.
- Frequent communication among substance abuse, mental health, and medical care providers, with permission of the client.

## Developing a Prevention Plan

Clients might continue to put themselves or others at risk for contracting viral hepatitis, especially early in recovery. By identifying a client's risky past or current behavior, the counselor can help the client create a plan to reduce the chances of contracting or spreading viral hepatitis. The following steps are suggested:

- Identify a specific high-risk incident. Focusing on past behavior might be difficult for a client who feels shame or regret. Discussing one specific incident might be less onerous for the client. Ask the client to describe the “who, what, where, when, and how” of the most recent risky experience. Ask whether the client talked about hepatitis risks with partners. Try to determine whether the client's patterns of risky behavior are chronic, episodic, or a single incident. Ask, for example, “Was that the first time you let someone inject you?”
- Start where the client is. Keep in mind that some clients will not know how they became infected. Developing a risk-reduction plan for this type of client might require a gradual, supportive approach to identifying risk factors.
- Identify a situation when the client minimized his or her risk. Ask the client to describe what precautions he or she took and why. Offer positive reinforcement, such as “So you refused to share a needle. That must have been hard to do. Good for you.”
- Synthesize patterns of behavior. Identify the client's pattern of risky behavior and the specific circumstances that lead to the behavior.
- Negotiate a prevention plan. Clients might feel besieged by the many changes they are asked to make. Develop incremental

and achievable steps to minimize risk for transmitting viral hepatitis. Put the behavioral change plan in writing, and give a copy to the client.

- Revisit the plan periodically, and assess progress. Check with the client periodically to determine whether new behaviors, stressors, or circumstances need to be addressed in the plan. Renegotiate the plan if necessary.
- Include vaccinations against hepatitis A or hepatitis B and prevention strategies for other infections, such as HIV, that are spread in the same way as different types of hepatitis.

## Using Motivational Approaches

Using motivational approaches, the counselor can help clients understand the relationship between good health and recovery (Litwin et al., 2005). Counselors can identify the strengths clients have demonstrated in counseling sessions and encourage clients to develop ways to use those strengths to cope with current health challenges. Appendix G provides sources of information about motivational interviewing and counseling.

## Confronting the Social Factors of Hepatitis

Many people who have viral hepatitis report that the social ramifications of a hepatitis C diagnosis are severe (Astone-Twerell, Strauss, & Munoz-Plaza, et al., 2006). Many people who have SUDs and chronic hepatitis feel they are judged as immoral and blameworthy because the infection results primarily from the sharing of contaminated injection drug use equipment (Astone-Twerell, Strauss, Munoz-Plaza et al., 2006). People who have hepatitis C virus (HCV) infection might be viewed by some as having made poor choices because they engaged in dangerous and illegal

behaviors that resulted in their illnesses. Negative attitudes about people who have chronic hepatitis remain, even among some medical professionals (Brener, Von Hippel, & Kippax, 2007; Paterson, Backmund, Hirsch, & Yim, 2007; Von Hippel, Brener, & Von Hippel, 2008). Counselors can advocate non-discriminatory treatment for clients who have hepatitis.

For some clients, a diagnosis of hepatitis can generate feelings of low self-worth. Some clients who have viral hepatitis report that their diagnoses caused them to develop a negative sense of self (Astone-Twerell, Strauss, Munoz-Plaza, et al., 2006). The majority of clients reported experiencing fear, shame, and social rejection (Brener et al., 2007; Conrad, Garrett, Cooksley, Dunne, & MacDonald, 2006; Zickmund, Ho, Masuda, Ippolito, & LaBrecque, 2003).

Clients might need to use discretion in revealing their diagnoses. Counselors can help clients decide whom they can tell by encouraging clients to ask themselves the following questions:

- Does this person *need* to know?
  - Household members need to know, particularly if they are sex partners or likely to share things like razors or hair clippers. Extended family members might not need to know.
  - Under some circumstances employers might need to know. For example, if a client's work is affected by the illness or if he or she frequently misses work because of illness or medical appointments, a supervisor might need to be told.
- What is the person likely to do with the information? Is this person trustworthy?

- Is this the right time to tell this person?
- What are the risks in telling the person? Is a negative reaction likely?
- What questions might the person have about the client's diagnosis? Can the client answer those questions?

***A diagnosis of viral hepatitis might increase a client's potential for relapse to alcohol or drug use.***

Clients might need help with talking to their families, employers, and friends about their hepatitis. Counselors can help by:

- Role playing with clients, allowing them to practice how they tell various people.
- Offering to be present when clients talk to family members.
- Providing family members and friends with information about the symptoms, treatment, and transmission of the disease.

## Addressing Relapse

A diagnosis of viral hepatitis might increase a client's potential for relapse to alcohol or drug use. The diagnosis might also exacerbate depression and anxiety, which are known triggers for an SUD relapse. Treatment for HCV infection itself also can trigger relapse. The reasons for this are unknown, although the act of injecting medication might trigger cravings in clients who injected drugs. Side effects from antiviral treatment might also mimic withdrawal. Increases in methadone doses might be appropriate (Sylvestre & Clements, 2007).

The counselor can start conversations about relapse by asking the client the following questions:

- “What kinds of things make you think about using again?”
- “Do you consider getting injections during treatment a possible trigger to drug use?”
- “What kinds of things could help you avoid substance use?”
- “Who could support you in these efforts?”
- “How worried are you about the possibility of a relapse?”

*Clients might need the counselor’s help in telling family members about a hepatitis diagnosis.*

Counselors can give clients the following tips (U.S. Department of Veterans Affairs, 2004):

- “Remind yourself that interferon is working to heal your liver from the damage caused by HCV infection.”
- “Try not to isolate yourself while injecting interferon. It might be helpful to inject interferon around people you trust, such as family members.”
- “Talk openly about your feelings of injecting interferon with members of your support group and other people you trust.”
- “Remind yourself that being abstinent is the best thing you can do to keep yourself healthy when you have HCV infection.”
- “Get help managing side effects. Remember to talk with your doctor if you are experiencing side effects from your HCV treatment.”
- “Do not skip or change doses of interferon. Try to make the injections part of your routine.”

## Building Support Systems

### Support Groups

Hepatitis groups are a widely used source of ongoing support for clients living with hepatitis and might help demystify treatment for participants. In these groups, clients educate and support one another about the infection, the treatment process, and managing medication side effects. Support groups help clients “believe that good outcomes are attainable” (Litwin et al., 2005, p. S342).

Support groups in substance abuse treatment settings can be facilitated by a counselor, nurse, or peer. The choice of facilitator should be based on a program’s resources and the needs of its clients. Support groups can also be found at hospitals and clinics. Appendix C lists national organizations that help people find local resources or that offer online support communities. Counselors can help clients get the support they need by asking clients the following questions:

- “How can you get professional help if you need it?”
- “It takes courage to take on this challenge. Would you be interested in the names and numbers of people you could talk to?”
- “Talking to others in drug recovery who have successfully been through hepatitis treatment can be really helpful. Do you see this as being part of your hepatitis recovery?”

### Peer Counseling and Support

In a study at a residential treatment program (Munoz-Plaza et al., 2004), clients most frequently recommended the use of peer counselors as a way to enhance hepatitis treatment services. These clients found that peers who had experience with HCV infection were

more valuable than “even the most knowledgeable and well-trained staff person” (Munoz-Plaza et al., 2004, p. 874). Peers can facilitate or co-facilitate support groups; act as mentors to newly diagnosed clients; and provide information, support, and assistance (e.g., provide transportation, accompany clients to medical appointments). Peers can be clients who are farther along in hepatitis treatment, graduated clients, or volunteers from the community.

### **Family Support**

Families might be supportive or might react badly to a family member’s diagnosis of hepatitis. Clients might need the counselor’s help in telling family members about a hepatitis diagnosis. Families might not be willing or able to support the client (e.g., family members might be using drugs). However, counselors can reduce families’ fears and encourage families through the following:

- Educate family members about hepatitis. Families need the same information as clients about the illness, its treatment, the potential effects on a client’s SUD recovery, and the increased risk of relapse to substance use.
- Help families adjust to lifestyle changes. Some clients might make lifestyle changes, particularly in diet and sexual behavior, following a diagnosis of hepatitis or as part of their substance abuse treatment (Castera, Constant, Bernard, de Ledinghen, & Couzigou, 2006; Fabris et al., 2006). These changes affect family members.
- Help family members adopt new roles and routines. Clients might need time away from their families to attend support group meetings and medical appointments. These added demands, coupled with the symptoms of the disease and possible side effects of

antiviral treatment, can affect a person’s ability to meet family obligations. Clients might need help negotiating with family members to establish new roles and routines that accommodate the client’s treatment for hepatitis and an SUD.

- Help family members determine how best to support their loved one. Counselors can help the client identify needs and encourage family members to decide what they can do to support the client.
- Help family members recognize changes in behavior. Family members living with the client might be the first to notice an adverse reaction to antiviral treatment. Ask family members to provide feedback on any changes in mood, either elevated or depressed, and encourage the client to heed a family member’s observations.
- Help family members find support for themselves. Family members who have lived with a client who abused substances are now faced with helping that individual cope with another illness. Some might resent the additional burden. Family members can find support at hepatitis support groups. Some families need more education and support than do others. Counselors should be prepared to make referrals to local resources for couples or family therapy, if needed.

### **Providing Effective Case Management**

Clients who have hepatitis might need intensive case management. Some clients receive case management services through their medical care providers, but many do not. Some substance abuse treatment programs have designated case managers to assist clients. Counselors or program nurses sometimes perform these functions. A program’s structure and administrative decisions about staff

roles influence the level of case management counselors provide. Counselors should clearly convey the expectations of their programs to clients. If they cannot provide the level of case management a client needs, they should do what they can to connect the client with a case manager in another healthcare or social services system.

Case management for clients who have hepatitis is often the same as that for clients with SUDs, but clients who have hepatitis might need more intensive and specialized help. Some clients who have hepatitis might be unable to work because of illness or hepatitis treatment side effects. Counselors can help by:

- Working with clients on budgeting or referring clients to consumer counseling agencies for debt management.
- Referring clients to local food banks, utility assistance programs, and rent assistance programs.
- Assisting in negotiating short-term disability claims or emergency family assistance.

Clients might need help accessing and navigating medical care systems. Counselors can help by:

- Identifying local providers who treat hepatitis; have experience working with people who have SUDs; and, when relevant, are comfortable treating people in medication-assisted treatment.
- Establishing relationships with clients' medical care providers and staying abreast of clients' hepatitis treatment.
- Helping clients understand and complete written documents and consent forms.

- Working with clients to establish procedures that help them remember medical appointments and adhere to medication regimens.
- Ensuring that clients have transportation to medical appointments.

Clients might need help understanding insurance requirements and, possibly, challenging insurers' coverage decisions. If clients are uninsured, counselors can:

- Identify government sources of healthcare and support benefits (e.g., Medicaid, Medicare, food stamps, unemployment insurance). (See Appendix H.)
- Look for assistance programs in medical centers and clinics.
- Identify local, private nonprofit clinics that offer many types of services; public health departments might be a source of information about community health resources.

Even if clients are insured, co-payments might be very high. Counselors can help clients identify sources of assistance, such as State medication assistance programs and local and national medication assistance programs. Appendix H lists resources for patient financial assistance with medications and transplantation surgeries.

Sources of information on SUD treatment and medical case management procedures include Treatment Improvement Protocol 27, *Comprehensive Case Management for Substance Abuse Treatment* (Center for Substance Abuse Treatment, 1998) and *Case Management Adherence Guidelines*, Version 2.0 (Case Management Society of America, 2006).

## Chapter Summary

Counselors are in a unique position to provide education, emotional support, and tangible help for clients who have hepatitis.

To be effective, counselors must first be well educated about hepatitis.

Key counselor goals should include:

- Ensuring the safety of clients.
- Providing reliable information to clients and their families.
- Building the therapeutic relationship with clients.
- Helping clients understand their diagnoses.
- Incorporating client needs in substance abuse treatment planning.
- Developing a prevention plan.
- Using motivational interviewing.
- Confronting the social ramifications of hepatitis.
- Addressing relapse issues.
- Building support.
- Providing case management.

Counselors also can help by:

- Being flexible about treatment logistics (e.g., participation, treatment duration), within accreditation and licensing guidelines.
- Being alert to co-occurring mental disorders, particularly depression.
- Assessing clients' readiness and using motivational approaches to help clients make medical treatment decisions.
- Assessing and mobilizing clients' strengths.

Counselors can help clients develop social support systems by:

- Providing onsite support groups.
- Helping clients locate community-based support groups.
- Facilitating onsite peer counseling and support programs.
- Facilitating family support through education and counseling.

Counselors can provide effective, targeted case management, such as:

- Helping clients understand and complete written documents and consent forms.
- Helping clients obtain medical care and adhere to medical regimens.
- Helping clients find sources for financing medical treatment and medications for hepatitis.





# 7 Adding or Improving Hepatitis Services: A Guide for Administrators

## IN THIS CHAPTER

- Program Assessment and Planning
- Screening for Viral Hepatitis
- Medical Evaluation and Diagnosis
- Treatment for Chronic Hepatitis
- Prevention and Vaccination
- Education
- Support Services
- Outreach
- Integrating Hepatitis Interventions With Existing HIV Services
- Developing Policies and Procedures
- Evaluation
- Successful Implementation
- Legal and Ethical Issues
- Chapter Summary

## Program Assessment and Planning

A significant positive correlation has been found between administrators' beliefs about the value of hepatitis services and the availability of hepatitis-related services at their substance abuse treatment programs (Astone, Strauss, Hagan, & Des Jarlais, 2004). To determine the types of services to implement or enhance treatment, administrators must consider the client population, staffing patterns and issues, availability of local resources, potential partners, and sources of funding. Program administrators can support the provision of hepatitis services by allocating a budget for implementation and by training or hiring appropriate staff members to implement the new services.

Hepatitis services include the following:

- Screening for viral hepatitis
- Medical evaluation and diagnosis
- Treatment for chronic hepatitis
- Prevention and vaccination
- Education
- Support services
- Outreach

A first step toward implementing change is to assess the hepatitis services currently offered by the substance abuse treatment program and identify components that could be implemented or expanded. This assessment can be performed by a workgroup or task force consisting of staff members interested in implementing or expanding hepatitis services. A group comprising staff members from different disciplines can provide diverse information and viewpoints. The next step is to consider the staff at hand, possible funding sources, and local agencies that could partner with the treatment program to provide hepatitis services.

Once these steps are completed, an implementation plan should be written. Organizational change might be needed to develop and sustain hepatitis treatment services. Technical Assistance Publication (TAP) 31, *Implementing Change in Substance Abuse Treatment Programs* (Center for Substance Abuse Treatment [CSAT], 2009a), provides practical advice regarding this topic and about incorporating new components into a treatment program.

## Screening for Viral Hepatitis

Screening activities include:

- Assessing a client's risks of acquiring or transmitting hepatitis.
- Obtaining a client's history of hepatitis infection or vaccination.
- Conducting blood tests for hepatitis or working with local health departments and other medical facilities that provide screening tests.

Because drug use is a risk factor for contracting viral hepatitis, the Centers for Disease Control and Prevention recommends that all clients in substance abuse treatment programs have routine access to hepatitis screening services. Clients who use or have used injection drugs are at particular risk of contracting viral hepatitis. (Chapters 1 and 2 provide information on risk factors and screening, respectively.) Substance abuse treatment programs can screen for viral hepatitis during the intake medical examination (Hagan, Strauss, Astone, & Des Jarlais, 2005). Treatment Improvement Protocol (TIP) 40, *Clinical Guidelines for the Use of Buprenorphine in the Treatment of Opioid Addiction* (CSAT, 2004); and TIP 43, *Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs* (CSAT, 2005), provide information about screening and assessing clients.

Most opioid treatment programs (OTPs) have onsite medical staff members who can draw blood samples for hepatitis screening tests. With the client's consent, an OTP that routinely provides physical examinations could add a hepatitis test to a client's initial blood work. Because viral hepatitis is a communicable disease, new cases must be reported. In many cases, the laboratory reports the case, but program administrators should contact local or State health departments for current information about reporting requirements and procedures; this information should be included in the program's written procedures.

## Medical Evaluation and Diagnosis

Evaluation and diagnosis activities include providing onsite medical evaluations after a screening, or referring clients to local providers for evaluation and diagnosis.

The medical screening and evaluation of hepatitis B and C can be complicated, and the required laboratory tests are expensive. However, a qualified and experienced medical care provider can order proper tests, evaluate the results, provide an accurate diagnosis, and make treatment recommendations. Evaluative services are needed after a positive test result for hepatitis B and C. The Institute of Medicine (2010) recommends that the inability of a facility to provide evaluation and diagnosis services should not be an impediment to its providing screening services.

## Treatment for Chronic Hepatitis

Hepatitis treatment activities include providing treatment onsite at the substance abuse treatment program or referring clients to local partners, establishing a multidisciplinary treatment team, and obtaining clients' permission to share information among team members.

### **Case Study: Funding Comprehensive Services, Project Samaritan Health Services, New York City**

Project Samaritan Health Services provides hepatitis C care at four residential treatment facilities and a community-based facility in the New York City area. The program was established in response to State recommendations that substance abuse treatment centers provide hepatitis screening and education to clients—a recommendation the program fully supported. Project Samaritan administrators also wanted to help all clients with hepatitis obtain proper treatment. Project Samaritan provides education and training to its counselors and medical health care personnel so that they are well versed in working with clients who have hepatitis.

More than 25 percent of Project Samaritan's clients do not have medical insurance. By forming a coalition of several large substance abuse treatment programs in New York State that collectively serve approximately 10,000 clients, Project Samaritan and its partners persuaded State officials to expand Medicaid to cover hepatitis-associated services, including testing for hepatitis C. The coalition also persuaded the State to convene a workgroup that created comprehensive guidelines for hepatitis care. Administrators worked with compassionate care programs to provide medications to eligible individuals; they also worked with a national medical laboratory to provide laboratory testing at no charge for individuals with incomes below the poverty level, and they negotiated with a local hospital to provide a substantially discounted rate for liver biopsy procedures.

Other hepatitis services are provided by Project Samaritan's medical staff. Physicians specializing in gastroenterology or hepatology provide hepatitis treatment. A nurse practitioner works approximately 8 hours per week; a physician, approximately 12 hours.

Despite a rigorous treatment regimen and limited hours dedicated to providing hepatitis care, Project Samaritan has a low rate of attrition. The program's hepatologist attributes the low dropout rate, in large part, to two factors: (1) extensive education offered to patients about treatment and its implications; and (2) patient empowerment to make decisions about their treatment. The program works to be client centered and strives to positively engage clients in treatment by emphasizing the steps that clients can take to improve their health.

Interviews by a JBS International, Inc., consultant with Administrators Marguerite Gebhardt and Pat Kennedy on April 22, 2008, and with hepatologist Nicholas Triantafillou, M.D., on April 23, 2008.

Substance abuse treatment program administrators tend to agree that hepatitis treatment for clients in recovery from substance use disorders (SUDs) is important. However, opinions diverge on when and how to treat clients for chronic hepatitis while they are in early recovery (Strauss, Astone, Hagan, & Des Jarlais, 2004). Some administrators are reluctant to refer clients for hepatitis treatment, citing difficult treatment regimens and serious side effects that could jeopardize a client's recovery. Research suggests, however, that people in recovery from substance abuse can

successfully adhere to the prescribed course of antiviral medication. Some clients will need financial assistance for hepatitis treatment. Low- and no-cost healthcare sources are listed in Appendix H.

#### **Onsite Treatment**

Onsite medical care in substance abuse treatment programs has been shown to be more effective than outside referrals for improving clients' overall health and their access to comprehensive medical care (Samet, Saitz, &

Larsen, 1996; Umbricht-Schneiter, Ginn, Pabst, & Bigelow, 1994). Advantages of providing onsite medical care include the ability to address both needs in one visit and streamlined communication between substance abuse treatment counselors and medical care providers (Sorensen, Masson, & Perlman, 2002). Onsite medical care providers learn more about clients' substance use behaviors and can monitor and manage psychiatric disorders (Vassilev, Strauss, Astone, Friedmann, & Des Jarlais, 2004), which might encourage adherence to treatment. Communication among counseling and medical staff members about a client's hepatitis status, while maintaining appropriate client confidentiality, can improve client care. Administrators should keep abreast of guidelines about hepatitis treatment eligibility (Exhibit 7-1).

### **Referring Clients to a Hepatitis Treatment Provider**

In referring clients for hepatitis care, a major undertaking is finding medical care providers who understand the challenges facing people who have co-occurring hepatitis and SUDs and developing cooperative working relationships with them. Medical care providers might not have the experience or training needed to work with people who have SUDs and hepatitis. When medical care providers lack knowledge about how to treat clients with SUDs, clients are less likely to follow medical advice

and more likely to relapse to substance use (Astone-Twerell, Strauss, Hagan, et al., 2006).

To locate health professionals who are experienced in treating hepatitis and sensitive to the needs of people in early recovery, administrators can contact potential partners who indicate an interest in reducing the spread of hepatitis in the community. These partners can include public health departments, nearby teaching hospitals and medical schools, non-profit hepatitis organizations, and programs that offer HIV treatment. Health departments might be able to provide some hepatitis care for clients and assist with transportation needs. Many clients need assistance in contacting medical service providers (Sylvestre & Zweben, 2007).

### **Multidisciplinary Teams**

Once a relationship is established with in-house or external medical care providers, a treatment team should be developed. Explicit permission must be obtained from clients to share information among identified clinical staff members. After permission is obtained, collaborative communication among the medical care and substance abuse treatment providers can begin. A case manager, either within the healthcare system or at the substance abuse treatment facility, can promote communication between clients and staff members and treatment providers.

#### **Exhibit 7-1 Hepatitis Treatment Guidelines**

- Substance Abuse and Mental Health Services Administration's Division of Pharmacologic Therapies: <http://www.dpt.samhsa.gov/comor/hepatitis.aspx>
- Practice Guidelines of the American Association for the Study of Liver Diseases: <http://www.aasld.org>, Practice Guidelines section
- Centers for Disease Control and Prevention: <http://www.cdc.gov/hepatitis>
- U.S. Department of Veterans Affairs: <http://www.hepatitis.va.gov>

## Prevention and Vaccination

Prevention activities include:

- Providing counseling before and after hepatitis screening.
- Educating clients about the role of injection drug use (IDU), sharing drug paraphernalia, and risky sexual behaviors in virus transmission.
- Providing vaccinations against hepatitis A and B.

Vaccines against hepatitis A virus (HAV) and hepatitis B virus (HBV) exist, but vaccination can be provided most efficiently with the combined hepatitis A/hepatitis B vaccine (sold under the brand name, Twinrix). It is the only U.S. Food and Drug Administration-approved combination hepatitis A and hepatitis B vaccine. The vaccine is administered in three intramuscular injections on a 0-, 1-, and 6-month schedule, or may be given on an accelerated schedule of four doses, given on days 0, 7, and 21–30 with a booster dose at 12 months (FDA, 2010a). Vaccinating clients for HAV and HBV can be done onsite or by referral. State-by-State information on obtaining no-cost vaccinations is available at <http://www.hepclinics.com/templates/hepclinic/index.html>.

OTPs, which maintain frequent interactions with clients over a long period, are good settings in which to offer hepatitis vaccinations because clients are likely to complete the full vaccination course during treatment. When determining whether to offer onsite hepatitis vaccinations, some questions to consider are:

- Does the facility have sufficient space to store the vaccine and give the injections in private?

- Does the facility have the proper equipment?
- Can the facility follow cold chain (temperature control) procedures to ensure the vaccine is effective?
- Does the facility have staff members licensed to give injections?

Full adherence to HAV and HBV vaccination regimens can be challenging because months separate immunizations. Whether clients are vaccinated at the substance abuse treatment program or at another program or agency, substance abuse treatment program administrators can take the following steps to ensure that clients complete their vaccination regimens:

1. Keep medical records of client's completed and needed vaccinations.
2. Use reminder tools to alert clients when the next vaccination is scheduled.
3. Allow flexible vaccination schedules (higher doses in a condensed timeframe).
4. Provide transportation to the clinic if the vaccine is administered offsite.
5. Offer incentives if the program's budget allows (National Alliance of State and Territorial AIDS Directors [NASTAD], 2005).

## Education

Based on research and clinical expertise, the Consensus Panel strongly recommends an increased substance abuse treatment program investment in hepatitis education for all staff members and clients. These investments begin with training staff, learning about community resources available to clients who have chronic hepatitis, and designing education protocols in line with substance abuse treatment programs' missions and approaches.

## **Staff Education**

To properly inform clients about hepatitis, staff members must be adequately trained to convey information accurately and completely, and they must be proficient in teaching methods that help clients understand and retain the information presented. Staff preferences and program resources need to be considered when designing hepatitis training. Literature, manuals, and other print materials can be valuable sources for training, but alone they are insufficient. Hands-on opportunities (e.g., classes and workshops that provide an opportunity for role play), are generally more effective than reading print material. Staff members want to learn, for example, how to educate clients about hepatitis C virus (HCV) without alarming clients to the point of impeding their recovery from substance abuse (Munoz-Plaza et al., 2004). Hepatitis training can be incorporated into inservice training schedules. Some training needs are presented in Exhibit 7-2.

Several training resources are available, and many are free. Resources for hepatitis training programs developed for substance abuse treatment program staff are presented in Appendix I.

## **Client Education**

Most substance abuse treatment programs do not offer education about hepatitis to their clients (Strauss, Astone, Hagan, & Des Jarlais, 2004; Strauss et al., 2007). Program budget and audience determine the format and delivery of hepatitis education, which can range from printed matter to educational sessions.

Hepatitis education can be incorporated into the general educational component of the treatment program, with one or more sessions devoted to hepatitis, for example. For clients in OTPs who have chronic hepatitis, more extensive education sessions could be

developed. Individual sessions with counselors or other treatment staff members allow clients the opportunity to ask questions, review information, and learn how SUDs affect hepatitis. Chapter 6 provides information for counselors to use to educate their clients. Resources for information on hepatitis are presented in Appendix C.

## **Support Services**

Some clients will need additional support services, such as services to obtain healthcare coverage from Medicaid or other sources. These clients might also need incentives and intensive case management services to adhere to hepatitis treatment, keep medical appointments, and locate hepatitis support groups. Administrators might need to assign staff members as case managers or work with the medical team to access these services. For example, a medical facility might have transportation services, but the clients might not be aware of them. Information on support groups is in Appendix C. Resources for financial assistance are in Appendix H.

## **Outreach**

Outreach activities include:

- Joining community leaders, client representatives, and public health officials in providing information about viral hepatitis and substance use.
- Participating in health fairs and taking advantage of other outreach opportunities.
- Building ties to outreach agencies (e.g., HIV counseling and testing centers, community outreach agencies, public health departments, correctional facilities, local hospitals).

In addition to partnering with local agencies and organizations, substance abuse treatment

**Exhibit 7-2 Staff Training for Hepatitis in Substance Abuse Treatment Programs**

Service	Topic
Assessment and screening	<ul style="list-style-type: none"> <li>• Assessing a client’s risk factors of acquiring or transmitting infection</li> <li>• Obtaining a history of hepatitis disease or vaccination when collecting medical information</li> <li>• Knowing the procedures for conducting or referring for hepatitis screening</li> <li>• Counseling before and after screenings</li> <li>• Assessing potential barriers to screening</li> </ul>
Preventing infection (primary prevention)	<ul style="list-style-type: none"> <li>• Educating clients about the use of drug paraphernalia and risky sexual behaviors to prevent their contracting or transmitting the virus</li> <li>• Identifying clients in need of hepatitis C treatment or HAV/ HBV vaccinations</li> <li>• Understanding the procedures for referring or providing HAV/HBV vaccinations</li> <li>• Including hepatitis in client/family educational components</li> <li>• Collaborating with other agencies (e.g., HIV counseling and testing centers, nonprofit organizations, community outreach agencies, community health clinics, private medical care providers) that treat hepatitis B and C</li> <li>• Retaining clients who relapse</li> </ul>
Limiting disease consequences (secondary prevention)	<ul style="list-style-type: none"> <li>• Linking clients to hepatitis medical care or providing care onsite</li> <li>• Promoting medication adherence (e.g., through reminder systems, social support, incentives)</li> </ul>
General information and communication	<ul style="list-style-type: none"> <li>• Research, ethical, and legal issues</li> <li>• Coordinated care with medical staff members while maintaining client confidentiality</li> <li>• Quality improvements identified by regular assessment of program components and processes related to hepatitis</li> <li>• Followups with clients and other medical care providers</li> <li>• Case management</li> </ul>

programs that implement hepatitis services can direct outreach and educational activities toward populations at risk for SUDs and viral hepatitis—particularly toward people who inject drugs—to raise awareness of liver

disease and risky behaviors, promote screening and early treatment, and encourage vaccination against hepatitis A and B.



## Case Study: Support Groups at OASIS, Oakland, California

The Organization to Achieve Solutions in Substance-Abuse (OASIS) developed a peer-based hepatitis C group that provides education, testing, and treatment of HCV infection among people who abuse substances (Sylvestre & Zweben, 2007). It integrates services for hepatitis C, IDU, mental disorders, and psychosocial issues for an inner-city population. The OASIS model demonstrates the ability of a small clinic not associated with major healthcare facilities to implement hepatitis care.

At the model's core are support groups called Educate-Motivate-Facilitate, in which HCV-knowledgeable peers and a medical provider co-lead groups that address a range of topics. The groups include clients with different knowledge levels and who are at different stages, from hepatitis screening through treatment. As participants become knowledgeable and stable in recovery, they are encouraged to serve as group leaders.

The groups discuss participants' experience with HCV treatment and side effects, substance use, depression, and other topics. Medical staff members interject correct information or add information, as needed. The interactive format and peer support seem to improve attendance and adherence to medical recommendations.

## Integrating Hepatitis Interventions With Existing HIV Services

Some substance abuse treatment facilities have programs for managing blood-borne infections, such as HIV. The benefits of incorporating hepatitis services within existing HIV services include the following:

- Counselors working with HIV/AIDS are familiar with the challenges of chronic infection and complex therapeutic regimens, as well as with psychosocial issues that accompany a chronic disease.
- Relationships are already established with medical care providers and public health departments.
- Federal or State funding might be available (Strauss et al., 2005; Stringari-Murray, Clayton, & Chang, 2003).

Some substance abuse treatment program staff members have described integrated HCV and HIV services as a “natural fit” (Strauss et al., 2005). With adequate training, counselors

can adapt HIV/sexually transmitted disease prevention messages to HCV prevention. Integration need not entail providing all services onsite; it could mean a simple coordinated referral system (NASTAD, 2005).

Administrators who would like to incorporate hepatitis services into existing HIV services should consider the following (Strauss et al., 2005):

- There are different prevention messages for HIV and hepatitis, which are based on different rates of parenteral and sexual transmission.
- Clients often know less about HCV than about HIV.
- Some funding might be dedicated to support services for one virus, while prohibiting funds from being redirected to or shared with other activities.
- Counselors and staff might be reluctant to integrate services.

## Developing Policies and Procedures

Once the workgroup decides which services to implement, policies and procedures need to be established. Examples include:

- Developing an overall policy regarding the program’s approach to providing hepatitis services.
- Implementing and revising policies and procedures to reflect the organization’s goal to provide quality services to clients who need screening or treatment for hepatitis.
- Establishing a system to monitor and evaluate policies and procedures and to revise them, as needed.
- Providing staff development and educational opportunities related to hepatitis.

Writing and implementing new policies and procedures often involve adapting existing ones. Programs might already have a variety of policies and procedures that apply to clients

who have hepatitis. For example, most programs probably have policies on what actions to take when a client has an infectious disease, who will work with the client, or where the client could be referred for additional medical treatment. The workgroup can review current policies and procedures to see which ones need to be adapted and revised. Exhibit 7-3 provides an example policy.

## Evaluation

Once the treatment program implements hepatitis services, it can incorporate quality improvements identified by regular evaluation of the new program components and processes. The program can use the existing quality assurance function to develop a tracking system, which could measure the number of clients with hepatitis A, B, and C; hepatitis-related treatment outcomes; and the severity of co-occurring substance use and mental disorders. This information can be used to improve services, to request funding, and to motivate staff.

### Exhibit 7-3 Sample Policy: Screening for Hepatitis

**Policy Statement:** All counseling staff members will receive training in screening for viral hepatitis and will demonstrate competence in supporting, educating, and referring clients for hepatitis screening.

#### **Procedures:**

1. All counselors will participate in training about hepatitis and its relationship to substance abuse, attitudes toward clients who have hepatitis, and hepatitis screening intervention and referral resources.
2. The clinical supervisor of new employees will provide site-specific information on the procedures for facilitating the screening, treatment, or referral of clients who either are already diagnosed with hepatitis or are at risk for developing hepatitis.
3. Clinical competence checklists completed at hire and annually thereafter will ensure that all clinical staff members (1) have basic knowledge of the benefits of addressing hepatitis with clients who abuse substances, (2) understand the protocols for assessing key risk factors for hepatitis, and (3) are aware of appropriate referral procedures.

## Case Study: Overcoming Staff Resistance, Minneapolis Healthy Liver Program

The Minneapolis Healthy Liver Program was established in the Minneapolis Veterans Affairs Medical Center Substance Use Disorder Clinic (Hagedorn et al., 2007). A stakeholders group composed of clinical and administrative personnel from the medical center's substance abuse treatment clinic and hepatitis clinic designed the program. Components included screening for hepatitis A, B, and C, which was added to routine blood work during intake, and intervention, which included a 60-minute group educational session and vaccinations against HAV and HBV, if indicated. As a result:

- Testing rates for HCV increased from 72 percent to 98 percent.
- Testing rates for HAV and HBV increased from less than 20 percent to 98 percent.
- Referral rates of clients newly diagnosed with chronic hepatitis C to a hepatitis clinic increased from 50 percent to 100 percent.

A major challenge was addressing staff resistance to accepting additional responsibility. Lessons learned include:

- Invite staff representatives at all levels—from administration to support—to be represented in a stakeholders' group.
- Keep general staff informed of stakeholders' group's progress via meeting announcements and emails.
- Give staff members an opportunity to comment on the program's plans and revise the plans based on their concerns.
- Provide staff with ongoing education about potential medical services to improve treatment retention and outcomes.

## Successful Implementation

Munoz-Plaza et al. (2006) analyzed four treatment programs that implemented or expanded hepatitis services. The programs provided educational and social support services (e.g., health education class, hepatitis C education and support sessions, a peer-led hepatitis C seminar). The researchers identified three features that facilitated the implementation of hepatitis services in these programs:

- At least one program administrator promoted efforts to incorporate hepatitis services into the treatment program. At all four programs, supervisory staff encouraged adoption and innovation regarding hepatitis services.
- At least one change agent on staff advocated for the services. One or more people were generally credited for increasing

staff awareness about hepatitis, promoting the implementation of hepatitis services, leading the incorporation of hepatitis education and support services, and often taking on associated responsibilities without significant additional compensation. These change agents frequently had a commitment to incorporating hepatitis services, and they often identified themselves as having hepatitis C.

- There was collective buy-in from the substance abuse treatment team. A majority of the staff members at each program eventually supported the incorporation of hepatitis services once they were implemented.

Buy-in from staff members is necessary for success. Administrators can encourage progress by advocating change or supporting staff

members' efforts to implement change. Some staff members are resistant to implementing hepatitis services because they believe these services are outside the scope of substance abuse treatment. Information in Chapters 1–6 of this TIP can mitigate staff members' resistance for implementing change by helping them understand the numerous links between viral hepatitis and substance use.

## **Legal and Ethical Issues**

Substance abuse treatment program administrators need current knowledge of the legal and ethical issues about providing hepatitis care and, in particular, about providing medical care to people in their programs. The most significant issues concern confidentiality, informed consent, and staff member rights. Programs that include a peer education component must ensure that peers, like others involved in care, maintain client confidentiality as required by applicable laws and regulations.

### ***Confidentiality and Privacy Issues***

Programs must closely guard information about clients. Although information must be shared with program staff members to the extent necessary to support clients' needs, its dissemination must be carefully restricted to protect client confidentiality.

The privacy rule under the Health Insurance Portability and Accountability Act (HIPAA) sets limits on how health plans and covered providers might use health information. It allows healthcare providers to share information needed to provide treatment, but it prohibits most other releases of medical information without the client's authorization. Information about the HIPAA privacy rule as it pertains to substance abuse treatment is available at <http://www.hipaa.samhsa.gov>.

Substance abuse treatment programs covered under HIPAA must generally comply with longstanding requirements under 42 Code of Federal Regulations (CFR), Part 2, Confidentiality of Alcohol and Drug Abuse Patient Records, which gives substance abuse treatment clients a right to confidentiality. These requirements largely parallel those under the HIPAA privacy rule and prohibit most disclosures of client information unless the client provides consent. Information about 42 CFR is at <http://www.gpoaccess.gov/cfr/retrieve.html>.

Other Federal and State laws and regulations might govern confidentiality of drug referral and treatment information. For assistance in complying with applicable requirements, treatment programs can request input from State agencies, provider organizations, and legal counsel.

### ***Informed Consent***

Where testing or treatment is involved, informed consent is a legal and ethical prerequisite to administering care. Informed consent ensures that a client understands the therapeutic approach and has the power to make medical decisions. In addition to receiving descriptions of therapeutic options, the client must be informed of the expected risks and benefits. Clients generally have the right to refuse therapeutic interventions and must not be discriminated against based on such decisions.

### ***Staff Member Rights***

All employees whose jobs involve the risk of direct contact with blood or other potentially infectious materials must be offered the hepatitis B vaccination without charge. If they decline, they must sign a form to document the decision.

## Chapter Summary

Administrators can add a variety of viral hepatitis services to their programs, such as:

- Hepatitis screening, evaluation, and diagnosis.
- Hepatitis prevention activities, including education and vaccination.
- Hepatitis treatment or referral to vetted medical care providers for treatment.
- Support services for clients needing hepatitis treatment.
- Outreach to at-risk groups.

Successful programs tend to have:

- At least one administrator to promote efforts to incorporate hepatitis services into the treatment program.
- At least one change agent on staff who advocated for the services.
- Collective buy-in from the treatment team.

Administrators should be familiar with:

- Confidentiality and privacy issues.
- Legal requirements for informed consent.
- Staff member rights pertaining to risks of hepatitis exposure.

# Appendix A—Bibliography

- Abou-Saleh, M. T., & Foley, S. (2008). Prevalence and incidence of hepatitis C in drug users: A review. *Addictive Disorders & Their Treatment*, 7(4), 190–198.
- Alberti, A., Vario, A., Ferrari, A., & Pistis, R. (2005). Review article: Chronic hepatitis C—Natural history and cofactors. *Alimentary Pharmacology and Therapeutics*, 22(Suppl 2), 74–78.
- Alter, M. J., Krusran-Moran, D., Nainan, O. V., McQuillan, G. M., Gao, F., Moyer, L. A., et al. (1999). The prevalence of hepatitis C virus infection in the United States, 1988 through 1994. *New England Journal of Medicine*, 341(8), 556–562.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.
- American Psychiatric Association. (2010). *Practice guideline for the treatment of patients with major depressive disorder* (3rd ed.). Arlington, VA: Author. Retrieved March 4, 2011, from <http://www.psych.org/guidelines/mdd2010>
- Anand, B. S., Currie, S., Dieperink, E., Bini, E. J., Shen, H., Ho, S. B., et al. (2006). Alcohol use and treatment of hepatitis C virus: Results of a national multicenter study. *Gastroenterology*, 130(6), 1607–1616.
- Astone, J. M., Strauss, S. M., Hagan, H., & Des Jarlais, D. C. (2004). Outpatient drug treatment program directors' hepatitis C-related beliefs and their relationship to the provision of HCV services. *American Journal of Drug and Alcohol Abuse*, 30(4), 783–797.
- Astone, J. M., Strauss, S. M., Munoz-Plaza, C., Hagan, H., & Des Jarlais, D. C. (2005). Providing support to drug users infected with hepatitis C: The role of methadone maintenance treatment staff. *Journal of Maintenance in the Addictions*, 3(1), 33–46.
- Astone, J. M., Strauss, S. M., Vassilev, Z. P., & Des Jarlais, D. C. (2003). Provision of hepatitis C education in a nationwide sample of drug treatment programs. *Drug Education*, 33(1), 107–117.

- Astone-Twerell, J. M., Strauss, S. M., Hagan, H., & Des Jarlais, D. C. (2006). Drug treatment programs' HCV service delivery to their HCV positive patients. *Addiction Research & Theory*, *14*(3), 289–302.
- Astone-Twerell, J. M., Strauss, S. M., & Munoz-Plaza, C. (2006). Stigma: Hepatitis C and drug abuse. *HCV Advocate Medical Writer's Circle*. Retrieved March 4, 2011, from <http://www.hcvadvocate.org/hcsp/articles/Stigma.html>
- Backmund, M., Meyer, K. & Edlin, B. R. (2004). Infrequent Reinfection after Successful Treatment for Hepatitis C Virus Infection in Injection Drug Users. *Clinical Infectious Diseases*, *39*(10), 1540–1543.
- Backmund, M., Reimer, J., Meyer, K., Gerlach, J. T., & Zachoval, R. (2005). Hepatitis C virus infection and injection drug users: Prevention, risk factors, and treatment. *Clinical Infectious Diseases*, *40*(Suppl 5), S330–S335.
- Balogopal, A., Thomas, D. L., & Thio, C. L. (2010). IL28B and the control of hepatitis C virus infection [review]. *Gastroenterology*, *139*(6), 1865–1876.
- Bart, G., Piccolo, P., Zhang, L., Jacobson, I., Schaefer, R. A., Kreek, M. J., et al. (2008). Markers for hepatitis A, B and C in methadone maintained patients: An unexpectedly high co-infection with silent hepatitis B. *Addiction*, *103*(4), 681–686.
- Belfiori, B., Ciliegi, P., Chiodera, A., Bacosi, D., Tosti, A., Baldelli, F., et al. (2009). Peginterferon plus ribavirin for chronic hepatitis C in opiate addicts on methadone/buprenorphine maintenance therapy. *Digestive and Liver Disease*, *41*(4), 303–307.
- Bell, B. P., Kruszon-Moran, D., Shapiro, C. N., Lambert, S. B., McQuillan, G. M., & Margolis, H. S. (2005). Hepatitis A virus infection in the United States: Serologic results from the Third National Health and Nutrition Examination Survey. *Vaccine*, *23*(50), 5798–5806.
- Berenguer, M., Palau, A., Fernandez, A., Benlloch, S., Aguilera, V., Prieto M., et al. (2006). Efficacy, predictors of response, and potential risks associated with antiviral therapy in liver transplant recipients with recurrent hepatitis C. *Liver Transplantation*, *12*(7), 1067–1076.
- Bhattacharya, R., & Shuhart, M. C. (2003). Hepatitis C and alcohol: Interactions, outcomes, and implications. *Journal of Clinical Gastroenterology*, *36*(3), 242–252.
- Brener, L., Von Hippel, W., & Kippax, S. (2007). Prejudice among health care workers toward injecting drug users with hepatitis C: Does greater contact lead to less prejudice? *International Journal of Drug Policy*, *18*(5), 381–387.
- Butt, A. A., Wagener, M., Shakil, A. O., & Ahmad, J. (2005). Reasons for non-treatment of hepatitis C in veterans in care. *Journal of Viral Hepatitis*, *12*, 81–85.
- Cacopardo, B., Nunnari, G., & Nigro, L. (2008). Clearance of HCV RNA following acute hepatitis A superinfection. *Digestive and Liver Disease*, *41*(5), 371–374.
- Carey, J. D., & Perlman, C. (2005). Knowledge of hepatitis among active drug injectors at a syringe exchange program. *Journal of Substance Abuse Treatment*, *29*(1), 47–53.

- Case Management Society of America. (2006). *Case management adherence guidelines: Version 2.0*. Little Rock, AR: Author.
- Castera, L., Constant, A., Bernard, P. H., de Ledinghen, V., & Couzigou, P. (2006). Lifestyle changes and beliefs regarding disease severity in patients with chronic hepatitis C. *Journal of Viral Hepatitis*, *13*, 482–488.
- Center for Substance Abuse Treatment. (1998). *Comprehensive case management for substance abuse treatment*. Treatment Improvement Protocol (TIP) Series 27. HHS Publication No. (SMA) 98-3222. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Center for Substance Abuse Treatment. (1999). *Enhancing motivation for change in substance abuse treatment*. Treatment Improvement Protocol (TIP) Series 35. HHS Publication No. (SMA) 99-3354. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Center for Substance Abuse Treatment. (2004). *Clinical guidelines for the use of buprenorphine in the treatment of opioid addiction*. Treatment Improvement Protocol (TIP) Series 40. HHS Publication No. (SMA) 04-3939. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Center for Substance Abuse Treatment. (2005). *Medication-assisted treatment for opioid addiction in opioid treatment programs*. Treatment Improvement Protocol (TIP) Series 43. HHS Publication No. (SMA) 05-4048. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Center for Substance Abuse Treatment. (2006). *Enhancing motivation for change in service training*. HHS Publication No. (SMA) 06-4190. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Center for Substance Abuse Treatment. (2009a). *Implementing change in substance abuse treatment programs*. Technical Assistance Publication (TAP) Series 31. HHS Publication No. (SMA) 09-4377. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Center for Substance Abuse Treatment. (2009b). *Addressing suicidal thoughts and behaviors in substance abuse treatment*. Treatment Improvement Protocol (TIP) Series 50. HHS Publication No. (SMA) 09-4381. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Centers for Disease Control and Prevention. (2009). Hepatitis B FAQs for the public. Atlanta: Author. Retrieved June 7, 2011, from <http://www.cdc.gov/hepatitis/B/bFAQ.htm>
- Centers for Disease Control and Prevention. (2010a). Recommended adult immunization schedule—United States, 2010. *Morbidity and Mortality Weekly Report*, *59*(SS-1), 1–4.
- Centers for Disease Control and Prevention. (2010b). National, state, and local area vaccination coverage among children aged 19–35 months—United States, 2008. *Morbidity and Mortality Weekly Report*, *58*(33), 921–926.



- Centers for Disease Control and Prevention. (2010c). *The ABCs of hepatitis*. Atlanta: Author. Retrieved March 4, 2011, from <http://www.cdc.gov/hepatitis/Resources/Professionals/PDFs/ABCTable.pdf>
- Chainuvati, S., Khalid, S. K., Kancir, S., Shea, M., Edwards, J., Sernyak, M., et al. (2006). Comparison of hepatitis C treatment patterns in patients with and without psychiatric and/or substance use disorders. *Journal of Viral Hepatitis*, *13*(4), 235–241.
- Chen, H., & Cantrell, C. R. (2006). Prevalence and factors associated with self-reported vaccination rates among US adults at high risk of vaccine-preventable hepatitis. *Current Medical Research Opinion*, *22*(12), 2489–2496.
- Cherner, M., Letendre, S., Heaton, R. K., Durelle, J., Marquie-Beck, J., Gragg, B., et al. (2005). Hepatitis C augments cognitive deficits associated with HIV infection and methamphetamine. *Neurology*, *64*(8), 1343–1347.
- Conjeevaram, H., Fried, M., Jeffers, L., Terrault, N., Wiley-Lucas, T., Afdhal, N., et al. (2006). Peginterferon and ribavirin treatment in African American patients and Caucasian American patients with hepatitis C genotype 1. *Gastroenterology*, *131*(2), 470–477.
- Conrad, S., Garrett, L. E., Cooksley, W. G., Dunne, M. P., & MacDonald, G. A. (2006). Living with chronic hepatitis C means you just haven't got a normal life any more. *Chronic Illness*, *2*(2), 121–131.
- Crockett, S. D., & Keeffe, E. B. (2005). Natural history and treatment of hepatitis B virus and hepatitis C virus co-infection. *Annals of Clinical Microbiology and Antimicrobials*, *13*(4), 13.
- Crowcroft, N. S. (2003). Hepatitis A virus infections in injecting drug users. *Communicable Disease and Public Health*, *6*(2), 82–84.
- Dalgard, O. (2005). Follow-up studies of treatment for hepatitis C virus infection among injection drug users. *Clinical Infectious Disease*, *40*(Suppl 5), S336–S338.
- Dalgard, O., Bjøro, K., Hellum, K., Myrvang, B., Skaug, K., Gutigard, B., et al. (2002). Treatment of chronic hepatitis C in injection drug users: 5 years' follow-up. *European Addiction Research*, *8*(1), 45–49.
- Daniels, D., Grytdal, S., & Wasley, A. (2009). Surveillance for acute viral hepatitis—United States, 2007. *Morbidity and Mortality Weekly Report*, *58*(SS03), 1–27.
- Delwaide, J., Bourgeois, N., Colle, I., & Robaeys, G. (2002). Risk factors for hepatitis C: Past, present and future. *Acta Gastroenterologica Belgica*, *65*(2), 87–89.
- Dieticians of Canada. (2003). Hepatitis C: Nutrition care. Canadian guidelines for health care providers. *Canadian Journal of Dietetic Practice and Research*, *64*(3), 139–141.
- Evon, D. M., Verma, A., Dougherty, K. A., Batey, B., Russo, M., Zacks, S., et al. (2007). High deferral rates and poorer treatment outcomes for HCV patients with psychiatric and substance use comorbidities. *Digestive Diseases and Sciences*, *52*(11), 3251–3258.

- Eyster, M. E., Diamondstone, L. S., Lien, J. M., Ehmann, W. C., Quan, S., & Goedert, J. J. (1993). Natural history of hepatitis C virus infection in multitransfused hemophiliacs: Effect of coinfection with human immunodeficiency virus. *Journal of Acquired Immune Deficiency Syndromes*, 6(6), 602–610.
- Fabris, P., Tositti, G., Giordani, M. T., Baldo, V., Pignattari, E., Cantons, S., et al. (2006). Assessing patients' understanding of hepatitis C virus infection and its impact on their lifestyle. *Alimentary Pharmacology and Therapeutics*, 23(8), 1161–1170.
- Felsen, U. R., Fishbein, D. A., & Litwin, A. H. (2010). Low rates of hepatitis A and B vaccination in patients with chronic hepatitis C at an urban methadone maintenance program. *Journal of Addictive Diseases*, 29(4), 461–5.
- Fireman, M., Indest, D. W., Blackwell, A., Whitehead, A. J., & Hauser, P. (2005). Addressing tri-morbidity (hepatitis C, psychiatric disorders, and substance use): The importance of routine mental health screening as a component of a comanagement model of care. *Clinical Infectious Diseases*, 40(Suppl 5), S286–S291.
- Franciscus, A., Highleyman, L., & Kukka, C. (2007). HCSP fact sheet. *Hepatitis A: What you need to know*. San Francisco: Hepatitis C Support Project.
- Freedman, K., & Nathanson, J. (2009). Interferon-based hepatitis C treatment in patients with preexisting severe mental illness and substance use disorders. *Expert Review of Anti-infective Therapy*, 7(3), 363–376.
- Garcia-Samaniego, J., Rodriguez, M., Berenguer, J., Rodriguez-Rosado, R., Carbo, J., Asensi, V., et al. (2001). Hepatocellular carcinoma in HIV-infected patients with chronic hepatitis C. *American Journal of Gastroenterology*, 96(1), 179–183.
- Garfein, R. S., Vlahov, D., Galai, N., Doherty, M. C., & Nelson, K. E. (1996). Viral infections in short-term injection drug users: The prevalence of the hepatitis C, hepatitis B, human immunodeficiency and human T-lymphotropic viruses. *American Journal of Public Health*, 86(5), 655–661.
- Ghany, M. G., Strader, D. B., Thomas, D. L., & Seeff, L. B. (2009). Diagnosis, management, and treatment of hepatitis C: An update, American Association for the Study of Liver Diseases (AASLD) practice guidelines. *Hepatology*, 49(4), 1335–1374.
- Gish, R. G., Afdhal, N. H., Dieterich, D. T., & Reddy, K. J. (2005). Management of hepatitis C virus in special populations: Patient and treatment considerations. *Clinical Gastroenterology and Hepatology*, 3(4), 311–318.
- Goldsmith, J., & Hauser, P. (2003). Psychiatric issues in patients with hepatitis C. *Psychiatric Annals*, 33(3), 57–60.
- Guadagnino, V., Trotta, M. P., Carioti, J., Caroleo, B., & Antinori, A. (2006). Does depression symptomatology affect medication compliance during the first weeks of anti-HCV therapy in intravenous drug users? *Digestive and Liver Disease*, 38(2), 119–124.

- Guadagnino, V., Trotta, M. P., Montesano, F., Babudieri, S., Caroleo, B., Armignacco, O., et al. (2007). Effectiveness of a multi-disciplinary standardized management model in the treatment of chronic hepatitis C in drug addicts engaged in detoxification programmes. *Addiction*, *102*(3), 423–431.
- Hagan, H., Campbell, J., Thiede, H., Strathdee, S., Ouellet, L., Kapadia, F., et al. (2006). Self-reported hepatitis C virus antibody status and risk behavior in young injectors. *Public Health Report*, *121*(6), 710–719.
- Hagan, H., Strauss, S. M., Astone, J. M., & Des Jarlais, D. C. (2005). Medical examinations at entry to treatment for drug abuse as an opportunity to initiate care for hepatitis C virus infection. *Clinical Infectious Diseases*, *40*(Suppl 5), S297–S303.
- Hagedorn, H., Dieperink, E., Dingmann, D., Durfee, J., Ho, S. B., Isenhardt, C., et al. (2007). Integrating hepatitis prevention services into a substance use disorder clinic. *Journal of Substance Abuse Treatment*, *32*(4), 391–398.
- Hammer, S. M., Eron, J. J., Reiss, P., Schooley, R. T., Thompson, M. A., Walmsley, S., et al. (2008). Antiretroviral treatment of adult HIV infection: 2008 recommendation of the International AIDS Society—USA Panel. *JAMA*, *300*(5), 555–570.
- Heathcote, J., & Main, J. (2005). Treatment of hepatitis C. *Journal of Viral Hepatitis*, *12*(3), 223–235.
- Hepatitis C Support Project. (2006). *Living with hepatitis C*. San Francisco: Author. Retrieved March 4, 2011, from <http://www.hcvadvocate.org/community/stories/Brian.pdf>
- Hepatitis C Support Project. (2007). *Living with hepatitis C*. San Francisco: Author. Retrieved March 4, 2011, from <http://www.hcvadvocate.org/community/stories/Kathleen.pdf>
- Hézode, C., Roudot-Thoraval, F., Nguyen, S., Grenard, P., Julien, B., Zafrani, E. S., et al. (2005). Daily cannabis smoking as a risk factor for progression of fibrosis in chronic hepatitis C. *Hepatology*, *42*(1), 63–71.
- Huckans, M., Mitchell, A., & Pavawalla, S. (2010). The influence of antiviral therapy on psychiatric symptoms among patients with hepatitis C and schizophrenia. *Antiviral Therapy*, *15*(1), 111–119.
- Ida, S., Tachikawa, N., Nakajima, A., Daikoku, M., Yano, M., Kikuchi, Y., et al. (2002). Influence of human immunodeficiency virus type I infection on acute hepatitis A infection. *Clinical Infectious Diseases*, *34*(3), 379–385.
- Institute of Medicine. (2010). *Hepatitis and liver cancer: A national strategy for prevention and control of hepatitis B and C*. Washington, DC: The National Academies Press.
- Klevens, R. M., Miller, J. T., Iqbal, K., Thomas, A., Rizzo, E.M., Hanson, H., et al. (2010). The evolving epidemiology of hepatitis A in the United States: incidence and molecular epidemiology from population-based surveillance, 2005–7. *Archives of Internal Medicine*, *170*(20), 1811–1818.

- Kresina, T. F., Bruce, R. D., Cargill, V. A., & Cheever, L. W. (2005). Integrating care for hepatitis C virus (HCV) and primary care for HIV for injection drug users coinfecting with HIV and HCV. *Clinical Infectious Diseases*, *41*(Suppl 1), S583–S588.
- Kresina, T. F., Sylvestre, D., Seeff, L., Litwin, A. B., Hoffman, K., Lubran, R., et al. (2008). Hepatitis infection in the treatment of opioid dependence and abuse. *Substance Abuse: Research and Treatment*, *1*, 15–61.
- Kwiatkowski, C. F., Fortuin Corsi, K., & Booth, R. E. (2002). The association between knowledge of hepatitis C virus status and risk behaviors in injection drug users. *Addiction*, *97*(10), 1289–1294.
- Lesens, O., Deschenes, M., Steben, M., Belanger, G., & Tsoukas, C. M. (1999). Hepatitis C virus is related to progressive liver disease in human immunodeficiency virus–positive hemophiliacs and should be treated as an opportunistic infection. *Journal of Infectious Diseases*, *179*(5), 1254–1258.
- Litwin, A. H., Soloway, I., & Gourevitch, M. N. (2005). Integrating services for injection drug users infected with hepatitis C virus with methadone maintenance treatment: Challenges and opportunities. *Clinical Infectious Diseases*, *40*(Suppl 5), S339–S345.
- Lok, A. S., & McMahon, B. J. (2009) American Association for the Study of Liver Diseases practice guidelines: Chronic hepatitis B: Update 2009. Retrieved March 4, 2011, from [http://www.aasld.org/practiceguidelines/Documents/Bookmarked%20Practice%20Guidelines/Chronic\\_Hep\\_B\\_Update\\_2009%208\\_24\\_2009.pdf](http://www.aasld.org/practiceguidelines/Documents/Bookmarked%20Practice%20Guidelines/Chronic_Hep_B_Update_2009%208_24_2009.pdf)
- Luetkemeyer, A. (2010). *Hepatitis B and HIV coinfection*. University of California, San Francisco: HIV InSite Knowledge Base Chapter. Retrieved May 17, 2011, from <http://hivinsite.ucsf.edu/InSite?page=kb-05-03-04#S3X>
- Lum, P. J., Hahn, J. A., Shafer, K. P., Evans, J. L., Davidson, P. J., Stein, E., et al. (2008). Hepatitis B virus infection and immunization status in a new generation of injection drug users in San Francisco. *Journal of Viral Hepatitis*, *15*(3), 229–236.
- Macias, J., Palacios, R. B., Claro, E., Vargas, J., Vergara, S., Mira, J. A., et al. (2008). High prevalence of hepatitis C virus infection among noninjecting drug users: Association with sharing the inhalation implements of crack. *Liver International*, *28*(6), 781–786.
- Martin-Santos, R., Diez-Quevedo, C., Castellvi, P., Navines, R., Miquel, M., Masnou, H., et al. (2008). De novo depression and anxiety disorders and influence on adherence during peginterferon-alpha-2a and ribavirin treatment in patients with hepatitis C. *Alimentary Pharmacology and Therapeutics*, *27*(3), 257–265.
- Mauss, S., Berger, F., Goelz, J., Jacob, B., & Schmutz, G. (2004). A prospective controlled study of interferon-based therapy of chronic hepatitis C in patients on methadone maintenance. *Hepatology*, *40*(1), 120–124.
- Maxwell, S., Shinderman, M. S., Miner, A., & Bennet, A. (2002). Correlation between hepatitis C serostatus and methadone dose requirement in 1,163 methadone-maintained patients. *Heroin Addiction and Related Clinical Problems*, *4*(2), 5–10.

- McCance-Katz, E. F., Sullivan, L. E., & Nallani, S. (2009). Drug interactions of clinical importance among the opioids, methadone and buprenorphine, and other frequently prescribed medications: A review. *American Journal on Addictions, 19*(1), 4–16.
- McHutchison, J. G., Everson, G. T., Gordon, S. C., Jacobson, I. M., Sulkowski, M., Kauffman, R., et al. (2009). Telaprevir with peginterferon and ribavirin for chronic HCV genotype 1 infection. *New England Journal of Medicine, 360*(18), 1827–1838.
- McHutchison, J. G., Shiffman, M. L., Gordon, S. C., Lindsay, K. L., Morgan, T., Norkrans, G., et al. (2006). Sustained virologic response to interferon-alfa-2b +/- ribavirin therapy at 6 months reliably predicts long-term clearance of HCV at 5-year follow up (abstract #744), 41st Annual Meeting of the European Association for the Study of the Liver. *Journal of Hepatology, 44*(Suppl 2), S275.
- Munoz-Plaza, C. E., Strauss, S. M., Astone, J. M., Des Jarlais, D. C., & Hagan, H. (2004). Drug treatment programs as sites of opportunity for the delivery of hepatitis C prevention education: Client and staff perspectives. *Journal of Drug Issues, 34*(4), 861–878.
- Munoz-Plaza, C. E., Strauss, S. M., Astone, J. M., Des Jarlais, D. C., & Hagan, H. (2005). HCV (hepatitis C virus) pre-test and post-test counseling services at drug treatment programs: Missed opportunities for primary prevention. *Contemporary Drug Problems, 32*, 655–675.
- Munoz-Plaza, C. E., Strauss, S. M., Astone-Twerell, J. M., Des Jarlais, D. C., & Hagan, H. (2006). Staff perspectives on facilitating the implementation of hepatitis C services at drug treatment programs. *Journal of Psychoactive Drugs, 38*(3), 233–241.
- National Alliance of State and Territorial AIDS Directors. (2005). *Viral hepatitis and HIV/AIDS integration: A resource guide for HIV/AIDS programs*. Washington, DC: Author. Retrieved March 4, 2011, from [http://www.nastad.org/Docs/highlight/200638\\_VHEP%20Resource%20Guide.pdf](http://www.nastad.org/Docs/highlight/200638_VHEP%20Resource%20Guide.pdf)
- National Center for Complementary and Alternative Medicine. (2008). *CAM and hepatitis: A focus on herbal supplements*. Bethesda, MD: Author. Retrieved March 4, 2011, from <http://nccam.nih.gov/health/hepatitisc/hepatitisc.pdf>
- National Institutes of Health. (2002). *Management of hepatitis C: 2002, Consensus conference statement*. Bethesda, MD: Author. Retrieved March 4, 2011, from <http://consensus.nih.gov/2002/2002HepatitisC2002116html.htm>
- National Institute of Mental Health. (2008). *Mental health medications*. NIH Publication No. 08-3929. Bethesda, MD: Author.
- New York State Department of Health. (2005a). *Clinical guidelines for the medical management of hepatitis C*. Albany, NY: Author. Retrieved March 4, 2011, from <http://www.health.state.ny.us/diseases/communicable/hepatitis/guidelines>
- New York State Department of Health. (2005b). *HCV: What you need to know about hepatitis C*. Albany, NY: Author. Retrieved March 4, 2011, from [http://www.health.state.ny.us/diseases/communicable/hepatitis/hepc\\_needtoknow\\_stories.htm](http://www.health.state.ny.us/diseases/communicable/hepatitis/hepc_needtoknow_stories.htm)

- Office of Applied Studies. (2007). *National Survey of Substance Abuse Treatment Services: 2007, Data on substance abuse treatment facilities*. DASIS Series: S-44. HHS Publication No. (SMA) 08-4348, Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Panel on Antiretroviral Guidelines for Adults and Adolescents. (2011). *Guidelines for the use of antiretroviral agents in HIV-1-infected adults and adolescents*. Washington, DC: Department of Health and Human Services. Retrieved March 4, 2011, from <http://www.aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf>
- Paterson, B. L., Backmund, M., Hirsch, G., & Yim, C. (2007). The depiction of stigmatization in research about hepatitis C. *International Journal of Drug Policy, 18*(5), 364–373.
- Physicians' Desk Reference 2010* (64th ed.). (2009). Montvale, NJ: PDR Network, LLC.
- Pol, S., Lamorthe, B., Thi, N. T., Thiers, V., Carnot, F., Zylberberg, H., et al. (1998). Retrospective analysis of the impact of HIV infection and alcohol use on chronic hepatitis C in a large cohort of drug users. *Journal of Hepatology, 28*(6), 945–950.
- Poordad, F., McCone, J., Bacon, B. R., Bruno, S., Manns, M. P., Bruno, S., et al. (2011). Boceprevir for untreated chronic HCV genotype 1 infection. *New England Journal of Medicine, 364*(13), 1195–1206.
- Quaglio, G., Lugoboni, F., Messelani, P., Des Jarlais, D., & Lechi, A. (2006). Hepatitis vaccination among drug users. *Vaccine, 24*(15), 2702–2709.
- Robaey, G., & Buntinx, F. (2005). Treatment of hepatitis C viral infections in substance abusers. *Acta Gastro-Enterologica Belgica, 68*, 55–67.
- Robaey, G., Van Vlierberghe, H., Mathei, C., Van Ranst, M., & Buntinx, F. (2006). Similar compliance and effect of treatment in chronic hepatitis C resulting from intravenous drug use in comparison with other infection causes. *European Journal of Gastroenterology and Hepatology, 18*(2), 159–166.
- Rockey, D. C., Caldwell, S. H., Goodman, Z. D., Nelson, R. C., & Smith, A. D. (2009). Liver biopsy. *Hepatology, 49*(3), 1017–1044.
- Rockstroh, J. K., & Spengler, U. (2004). HIV and hepatitis C virus co-infection. *Lancet Infectious Diseases, 4*(7), 437–444.
- Rodriguez-Mendez, M. L., Gonzalez-Quintela, A., Aguilera, A., & Barrio, E. (2000). Prevalence, patterns, and course of past hepatitis B virus infection in intravenous drug users with HIV-1 infection. *The American Journal of Gastroenterology, 95*(5), 1316–1322.
- Rodriguez-Torres, M., Jeffers, L. J., Sheikh, M. Y., Rossaro, L., Ankoma-Sey, V., Harnzeh, F. M., et al. (2009). Peginterferon alfa-2a and ribavirin in Latino and non-Latino whites with hepatitis C. *New England Journal of Medicine, 360*(3), 257–267.

- Rosenberg, S. D., Goodman, L. A., Oshe, F. C., Swartz, M. S., Essock, S. M., Butterfield, M. I., et al. (2001). Prevalence of HIV, hepatitis B, and hepatitis C in people with severe mental illness. *American Journal of Public Health, 91*(1), 31–37.
- Rosenberg, S. D., Swanson J. W., Wolford, G. L., Osher, F. C., Swartz, M. S., Essock, S. M., et al. (2003). The five-site health and risk study of blood-borne infections among persons with severe mental illness. *Psychiatric Services, 54*(6), 827–835.
- Samet, J. H., Saitz, R., & Larson, M. J. (1996). A case for enhanced linkage of substance abusers to primary medical care. *Substance Abuse, 17*(4), 181–199.
- Schaefer, M., Heinz, A., & Backmund, M. (2004). Treatment of chronic hepatitis C in patients with drug dependence: Time to change the rules? *Addiction, 99*(9), 1167–1175.
- Schaefer, M., Hinzpeter, A., Mohmand, A., Janssen, G., Pich, M., Schwaiger, M., et al. (2007). Hepatitis C treatment in difficult-to-treat psychiatric patients with pegylated interferon-alpha and ribavirin: Response and psychiatric side effects. *Hepatology, 46*(4), 957–959.
- Schaefer, M., & Mauss, S. (2008). Hepatitis C treatment in patients with drug addiction: Clinical management of interferon-alpha-associated psychiatric side effects. *Current Drug Abuse Reviews, 1*(2), 177–187.
- Schaefer, M., Schmidt, F., Folwaczny, C., Lorenz, R., Martin, G., Schindlbeck, N., et al. (2003). Adherence and mental side effects during hepatitis C treatment with interferon alpha and ribavirin in psychiatric risk groups. *Hepatology, 37*(2), 443–451.
- Scharschmidt, B. F., Held, M. J., Hollander, H. H., Read, A. E., Lavine, J. E., Veereman, G., et al. (1992). Hepatitis B in patients with HIV infection: Relationship to AIDS and patient survival. *Annals of Internal Medicine, 117*, 837–838.
- Scheft, H., & Fontenette, D. C. (2005). Psychiatric barriers to readiness for treatment for hepatitis C virus (HCV) infection among injection drug users: Clinical experience of an addiction psychiatrist in the HIV–HCV coinfection clinic of a public health hospital. *Clinical Infectious Diseases, 40*(Suppl 5), S292–S296.
- Sherman, K. E. (2007). New paradigms in the management of hepatitis C virus co-infections. *Nature Clinical Practice Gastroenterology and Hepatology, 4*(Suppl 1), S10–S16.
- Silberbogen, A. K., Mori, D. L., & Sogg, S. (2005). The structured interview for the treatment of the hepatitis C virus (SIT-HCV). *Journal of Clinical Psychology in Medical Settings, 12*(1), 57–69.
- Sorensen, J. L., Masson, C. L., & Perlman, D. C. (2002). HIV/hepatitis prevention in drug abuse treatment programs: Guidance from research. *NIDA Science & Practice Perspectives, 1*(1), 4.
- Straits-Tröster, K. A., Sloan, K. L., & Dominitz, J. A. (2003). Psychiatric and substance use disorder comorbidity with hepatitis C. *Psychiatric Annals, 33*, 362–368.

- Strauss, S. M., Astone, J. M., Des Jarlais, D. C., & Hagan, H. (2005). Integrating hepatitis C services into existing HIV services: The experiences of a sample of U.S. drug treatment units. *AIDS Patient Care and Standards*, *19*(2), 78–88.
- Strauss, S. M., Astone, J. M., Hagan, H., & Des Jarlais, D. C. (2004). Content and comprehensiveness of hepatitis C education in methadone maintenance and drug-free treatment units. *Journal of Urban Health*, *81*(1), 38–47.
- Strauss, S. M., Astone, J. M., Munoz-Plaza, C., Hagan, H., & Des Jarlais, D. (2005). Residential substance user treatment programs as venues for HCV pharmacological treatment: Client and staff perspectives. *Substance Use & Misuse*, *40*(12), 1811–1829.
- Strauss, S. M., Astone-Twerell, J., Munoz-Plaza, C. E., Des Jarlais, D. C., Gwadz, M., & Hagan, H. (2007). Drug treatment program patients' hepatitis C virus (HCV) education needs and their use of available HCV education services. *BMC Health Services Research*, *7*, 39.
- Strauss, S. M., Astone-Twerell, J. M., Munoz-Plaza, C., Des Jarlais, D. C., Gwadz, M., Hagan, H., et al. (2006). Hepatitis C knowledge among staff in U.S. drug treatment programs. *Journal of Drug Education*, *36*(2), 141–158.
- Strauss, S. M., Munoz-Plaza, C., Tiburcio, N. J., Astone-Twerell, J., Des Jarlais, D. C., Gwadz, M., et al. (2008). Barriers and facilitators to undergoing hepatitis C virus (HCV) testing through drug treatment programs. *Journal of Drug Issues*, *38*(4), 1161–1185.
- Stringari-Murray, S., Clayton, A., & Chang, J. (2003). A model for integrating hepatitis C services into an HIV/AIDS program. *Journal of the Association of Nurses in AIDS Care*, *14*(Suppl 5), S95–S107.
- Substance Abuse and Mental Health Services Administration. (1999). *Estimation methodology for adults with serious mental illness (SMI)*. Federal Register 64, No. 121 (24 June, 1999). Pages 33890–33897. Retrieved March 4, 2011, from <http://www.gpo.gov/fdsys/pkg/FR-1999-06-24/html/99-15377.htm>
- Sulkowski, M. S. (2008). Viral hepatitis and HIV coinfection. *Journal of Hepatology* *48*(2), 353–367.
- Swain, M. G., Lai, M. Y., Shiffman, M. L., Cooksley, W. G., Abergel, A., Lin, A., et al. (2007, April). Sustained virologic response resulting from treatment with peginterferon alfa-2a alone or in combination with ribavirin is durable and constitutes a cure: An ongoing 5-year follow-up [abstract #444]. Abstracts of Digestive Disease Week and the 108th Annual Meeting of the American Gastroenterological Association Institute, May 19–24, 2007, Washington, DC. *Gastroenterology*, *132*(4 Suppl 2), A741.
- Sylvestre, D. L., & Clements, B. J. (2007). Adherence to hepatitis C treatment in recovering heroin users maintained on methadone. *European Journal of Gastroenterology and Hepatology*, *19*(9), 741–747.
- Sylvestre, D. L., Litwin, A. H., Clements, B. J., & Gourevitch, M. N. (2005). The impact of barriers to hepatitis C virus treatment in recovering heroin users maintained on methadone. *Journal of Substance Abuse Treatment*, *29*, 159–165.



- Sylvestre, D. L., & Zweben, J. E. (2007). Integrating HCV services for drug users: A model to improve engagement and outcomes. *International Journal of Drug Policy*, 18(5), 406–410.
- Tohme, R. A., & Holmberg, S. D. (2010). Is sexual contact a major mode of hepatitis C virus transmission? *Hepatology*, 46(3), 1497–1505.
- Tseng, F. C., O'Brien, T. R., Zhang, M., Kral, A. H., Ortiz-Conde, B. A., Lorvick, J., et al. (2007). Seroprevalence of hepatitis C virus and hepatitis B virus among San Francisco injection drug users, 1998 to 2000. *Hepatology*, 46(3), 666–671.
- Umbricht-Schneiter, A., Ginn, D. H., Pabst, K. M., & Bigelow, G. E. (1994). Providing medical care to methadone clinic patients: Referral vs. on-site care. *American Journal of Public Health*, 84(2), 207–210.
- U.S. Department of Health & Human Services. (2011). *Combating the silent epidemic of viral hepatitis: Action plan for the prevention, care & treatment of viral hepatitis*. Washington, DC: Author. Retrieved May 13, 2011, from [http://www.hhs.gov/ash/initiatives/hepatitis/actionplan\\_viralhepatitis2011.pdf](http://www.hhs.gov/ash/initiatives/hepatitis/actionplan_viralhepatitis2011.pdf)
- U.S. Department of Veterans Affairs. (2004). *Challenges for people in drug and alcohol recovery*. Retrieved March 4, 2011, from <http://www.hepatitis.va.gov/vahep?page=treat-14-04>
- U.S. Department of Veterans Affairs. (2007). *Managing side effects of hepatitis C treatment*. Retrieved March 22, 2011, from <http://www.hepatitis.va.gov/pdf/treatment-side-effects.pdf>
- U.S. Department of Veterans Affairs. (2011). *Alternative and complementary therapies*. Retrieved March 22, 2011, from <http://www.hepatitis.va.gov/patient/alternative-therapies/index.asp>
- U.S. Food and Drug Administration, Consumer Health Information Update. (2009). *Understanding antidepressant medications*. Retrieved July 29, 2011, from <http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm095980.htm>
- U.S. Food and Drug Administration. (2010a). *Prescribing information for Twinrix (hepatitis A & hepatitis B [recombinant] vaccine)*. Retrieved July 6, 2011, from <http://www.fda.gov/downloads/BiologicsBloodVaccines/Vaccines/ApprovedProducts/UCM110079.pdf>
- U.S. Food and Drug Administration. (2010b, June 25). *FDA approves rapid test for antibodies to hepatitis C virus*. Retrieved May 12, 2011, from <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm217318.htm>
- U.S. Food and Drug Administration. (2011a, May 13). *FDA approves Victrelis for Hepatitis C*. Retrieved May 12, 2011, from <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm255390.htm>
- U.S. Food and Drug Administration. (2011b, May 23). *FDA approves Incivek for hepatitis C*. Retrieved May 23, 2011, from <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm256299.htm>

- U.S. Food and Drug Administration. (2011c). Highlights of prescribing information for Incivek (telaprevir). Retrieved July 6, 2011, from [http://www.accessdata.fda.gov/drugsatfda\\_docs/label/2011/201917lbl.pdf](http://www.accessdata.fda.gov/drugsatfda_docs/label/2011/201917lbl.pdf)
- U.S. Food and Drug Administration. (2011d). Highlights of prescribing information for Victrelis (boceprevir). Retrieved July 6, 2011, from [http://www.accessdata.fda.gov/drugsatfda\\_docs/label/2011/202258lbl.pdf](http://www.accessdata.fda.gov/drugsatfda_docs/label/2011/202258lbl.pdf)
- Van Thiel, D. H., Anantharaju, A., & Creech, S. (2003). Response to treatment of hepatitis C in individuals with a recent history of intravenous drug abuse. *American Journal of Gastroenterology*, 98(10), 2281–2288.
- Vassilev, Z. P., Strauss, S. M., Astone, J. M., Friedmann, P. D., & Des Jarlais, D. C. (2004). Provision of on-site medical care to patients with hepatitis C in drug treatment units. *Journal of Health Care for the Poor and Underserved*, 15(4), 663–671.
- Victor, J. C., Monto, A. S., Surdina, T. Y., Suleimenova, S. Z., Vaughan, G., Nainan, O. V., et al. (2007). Hepatitis A vaccine versus immune globulin for postexposure prophylaxis. *New England Journal of Medicine*, 357(17), 1685–1694.
- Von Hippel, W., Brener, L., & Von Hippel, C. (2008). Implicit prejudice toward injecting drug users predicts intentions to change jobs among drug and alcohol nurses. *Psychological Science*, 19(1), 7–11.
- Wasley, A., Kruszon-Moran, D., Kuhnert, W., Simard, E. P., Finelli, L., McQuillan, G., et al. (2010). The prevalence of hepatitis B virus infection in the United States in the era of vaccination. *Journal of Infectious Diseases*, 202(2), 192–201.
- Weinbaum, C. M., Williams, I., Mast, E. E., Wang, S. A., Finelli, L., Wasley, A., et al. (2008). Recommendations for identification and public health management of persons with chronic hepatitis B virus infection. *Morbidity and Mortality Weekly Report*, 57(RR-8), 1–20.
- Wells, R., Fenaughty, A., Cagle, H., & Jaffe, A. (2006). Hepatitis A prevalence among injection drug users. *Clinical Laboratory Science*, 19(1), 12–17.
- Wietzke-Braun, P., Manhardt, L. B., Rosenberger, A., Uy, A., Ramadori, G., & Mihm, S. (2007). Spontaneous elimination of hepatitis C virus infection: A retrospective study on demographic, clinical, and serological correlates. *World Journal of Gastroenterology and Hepatology*, 13(31), 4224–4229.
- Wilson, M. P., Castillo, E. M., & Batey, A. M. (2010). Hepatitis C and depressive symptoms: Psychological and social factors matter more than liver injury. *International Journal of Psychiatry in Medicine*, 40(2), 199–215.
- World Health Organization. (2009). *Hepatitis B fact sheet no. 204*. Retrieved June 3, 2011, from <http://www.who.int/mediacentre/factsheets/fs204/en/>
- Yawn, B. P., Wollan P., Gazzuola, L., & Kim, W. R. (2002). Diagnosis and 10-year follow-up of a community-based hepatitis C cohort. *Journal of Family Practice*, 51(2), 135–140.

Zickmund, S., Ho, E. Y., Masuda, M., Ippolito, L., & LaBrecque, D. R. (2003). "They treated me like a leper"—Stigmatization and the quality of life of patients with hepatitis C. *Journal of General Internal Medicine*, 18(10), 835–844.

# Appendix B—Glossary

**acetaminophen**—The generic name for a common nonprescription medication used to treat mild pain or fever.

**acute hepatitis**—An inflammatory process in the liver that resolves in 6 months.

**adefovir dipivoxil**—A U.S. Food and Drug Administration-approved antiviral medication for treating chronic hepatitis B, taken orally.

**alanine aminotransferase (ALT)**—An enzyme found in the liver; an increased level of ALT in the blood indicates liver inflammation.

**albumin**—A protein made in the liver that helps move small molecules through the bloodstream. It plays an important role in keeping the fluid from the blood from leaking into the tissues. If albumin drops to very low levels, fluid might leak into tissues from the blood vessels, resulting in edema (swelling).

**alkaline phosphatase (ALP)**—An enzyme found in the liver and other parts of the body; elevated levels might indicate liver injury.

**antibody**—A type of protein produced by the body's immune system. Antibodies protect the body from disease by binding to antigens (see below) and destroying them.

**antigens**—Foreign substances (e.g., bacteria, viruses) in the body that are capable of causing disease. The presence of antigens in the body triggers an immune response, usually the production of antibodies (see above).

**antiviral (literally against-virus)**—Any medicine capable of destroying or weakening a virus or suppressing its ability to replicate.

**aspartate aminotransferase (AST)**—An enzyme found in the liver; an increased level of AST in the blood indicates liver inflammation.

**asymptomatic**—Presenting no symptoms of disease.

**boceprevir**—A U.S. Food and Drug Administration-approved medication for treating chronic hepatitis C, taken orally.

**chronic hepatitis**—An inflammatory process in the liver that lasts longer than 6 months.

**cirrhosis**—Irreversible scarring of the liver caused by ongoing damage, which might affect liver function. Cirrhosis in some cases can lead to liver failure, liver cancer, and death.

**co-infection**—The condition of an organism or cells being infected simultaneously by two different pathological microorganisms, such as infection with both hepatitis C virus and HIV.

**contagious**—Capable of being transmitted from one person to another by contact or close proximity.

**coronary heart disease**—A narrowing of the small blood vessels that supply blood and oxygen to the heart. Also called coronary artery disease.

**decompensated cirrhosis**—A progression of cirrhosis that can be life threatening. Symptoms include internal bleeding, large amount of fluid in the abdomen, encephalopathy (confusion), and jaundice.

**end-stage liver disease**—Severe damage to the liver. End-stage complications include liver failure and liver cancer. These conditions occur primarily in people who develop permanent scarring of the liver (cirrhosis).

**entecavir**—An oral prescription medicine used for chronic infection with hepatitis B virus in adults.

**enzyme**—A protein (or, rarely, ribonucleic acid) that catalyzes a chemical reaction; it is produced by living cells and catalyzes specific biochemical reactions at body temperatures.

**exposure**—Coming in direct contact with an agent that might cause a disease or infectious process (e.g., exposure to hepatitis B virus might result in hepatitis B infection).

**fecal–oral route**—A mode of transmission of an infectious agent from person to person by putting something in the mouth that has been contaminated with infected stool (feces).

**fibrosis**—Scar tissue developed as a result of chronic infection and inflammation. The presence of fibrosis usually means infection has been active for several years.

**genotype**—The genetic makeup of the virus that describes the “family” to which the specific virus belongs.

**hepatitis**—Inflammation of the liver. The most common cause is infection with a hepatitis virus, but hepatitis can also be caused by other viruses, bacteria, parasites, and toxic reactions to drugs, alcohol, and chemicals.

**hepatitis A**—An inflammatory process of the liver caused by the hepatitis A virus.

**hepatitis B**—An inflammatory process of the liver caused by the hepatitis B virus.

**hepatitis B core antibody**—A protein that appears at the onset of symptoms in acute hepatitis B and persists for life. Its presence indicates previous or ongoing infection with the hepatitis B virus.

**hepatitis B surface antibody**—A protein that the immune system produces to attack hepatitis B virus. Its presence generally indicates recovery and immunity from the hepatitis B virus.

**hepatitis B surface antigen**—A serologic marker on the surface of the hepatitis B virus. It can be detected in high levels in serum during acute or chronic hepatitis.

**hepatitis B virus DNA (deoxyribonucleic acid)**—A molecule that controls the manufacture of the hepatitis B virus. Its presence indicates active viral replication; high levels correlate with high rates of replication. Levels predict response to antiviral therapy.

**hepatitis C**—An inflammatory process of the liver caused by the hepatitis C virus.

**hepatitis C virus RNA (ribonucleic acid)**—A fragment of the replicating hepatitis C virus. It can be detected using sophisticated tests to determine the level of the virus in serum.

**hepatocellular carcinoma**—The most common primary liver cancer.

**high-risk behavior**—Behavior that puts a person at risk of contracting hepatitis (e.g., sharing needles or drug paraphernalia; having multiple sex partners).

**high-risk group**—A group with an elevated risk of disease.

**immune system**—The complex system in the body responsible for fighting disease. It identifies foreign substances in the body (e.g., bacteria, viruses, fungi, parasites) and develops a defense against them known as the immune response. It produces protein molecules called antibodies to eliminate foreign organisms that invade the body.

**immunity**—Protection against a disease. There are two types of immunity: passive and active. Immunity is indicated by the presence of antibodies in the blood and can usually be determined with a laboratory test.

**immunization**—The process by which a person or animal becomes protected against a disease.

**immunoglobulin**—Proteins found in the blood that function as antibodies that fight infection.

**infection**—An invasion of an organism by a pathogen such as bacteria or viruses. Some infections lead to disease.

**infectious**—Capable of spreading disease. Also called communicable.

**interferon**—A group of proteins produced naturally by the cells of human bodies; interferon increases the resistance of surrounding cells to attacks by viruses.

**jaundice**—Yellow color in the skin, the mucous membranes, and the eyes.

**lamivudine**—A U.S. Food and Drug Administration-approved antiviral medication for treating chronic hepatitis B, taken orally.

**liver enzyme**—A protein that catalyzes chemical reactions needed for body functions. Levels of certain enzymes, such as alanine aminotransferase and aspartate aminotransferase, are higher when the liver is injured, as they leak into the bloodstream when the cell is inflamed, injured, or destroyed.

**liver panel**—Common blood tests that are used to evaluate liver function. Also called liver function tests.

**medication-assisted treatment (MAT)**—Treatment for substance use disorders that uses medications such as methadone, buprenorphine, or naltrexone.

**neutropenia**—Low count of a type of white blood cell. Neutropenia has several causes including side effects of medications, viral infections, and autoimmune diseases.

**pulmonary disease**—A disease of the lungs.

**ribavirin**—A U.S. Food and Drug Administration-approved antiviral medication that improves the effectiveness of interferon in treating chronic hepatitis C, taken orally.

**ribonucleic acid (RNA)**—Chemical found in the nucleus and cytoplasm of cells; plays an important role in protein synthesis and other chemical activities of the cell.

**sustained virologic response (SVR)**—Achieving and sustaining a virus negative state for 6 months or longer after completing treatment for a virus, such as hepatitis C.

**telaprevir**—A U.S. Food and Drug Administration-approved medication for treating chronic hepatitis C, taken orally.

**telbivudine**—A U.S. Food and Drug Administration-approved medication for treating hepatitis B, taken orally.

**tenofovir**—A U.S. Food and Drug Administration-approved medication for treating hepatitis B, taken orally.

**transmission**—An incident in which an infectious agent is passed from one person to another.

**viral load**—Measurement of the amount of virus in the bloodstream.

**virologic relapse**—A return of the hepatitis C virus after antiviral treatment.

**virus**—An organism that multiplies within cells and causes diseases such as chickenpox, measles, mumps, rubella, pertussis, and hepatitis. It is not affected by antibiotics, the medications used to kill bacteria.

# Appendix C—Hepatitis Resources

Organization	Contact Information	Topics Covered
<b>American Association for the Study of Liver Diseases</b>	<a href="http://www.aasld.org/Pages/Default.aspx">http://www.aasld.org/Pages/Default.aspx</a> 1-703-299-9766	<ul style="list-style-type: none"> <li>• Hepatitis A</li> <li>• Hepatitis B</li> <li>• Hepatitis C</li> <li>• Biopsy</li> <li>• Transplantation (members only)</li> </ul>
<b>American Liver Foundation</b>	<a href="http://www.liverfoundation.org">http://www.liverfoundation.org</a> 1-800-405-4837	<ul style="list-style-type: none"> <li>• Hepatitis A</li> <li>• Hepatitis B</li> <li>• Hepatitis C</li> <li>• Support groups</li> <li>• Information for special populations</li> <li>• Patient education materials</li> <li>• Resources in English and other languages</li> </ul>
<b>Centers for Disease Control and Prevention</b>	<a href="http://www.cdc.gov/ncidod/diseases/hepatitis">http://www.cdc.gov/ncidod/diseases/hepatitis</a> 1-800-232-4636	<ul style="list-style-type: none"> <li>• Hepatitis A</li> <li>• Hepatitis B</li> <li>• Hepatitis C</li> <li>• Information for special populations</li> <li>• Patient education materials</li> <li>• Resources in English and other languages</li> </ul>
<b>Department of Veterans Affairs</b>	<a href="http://www.hepatitis.va.gov">http://www.hepatitis.va.gov</a>	<ul style="list-style-type: none"> <li>• Hepatitis A</li> <li>• Hepatitis B</li> <li>• Hepatitis C</li> <li>• Biopsy (for medical care providers)</li> <li>• Transplantation</li> <li>• Information for special populations</li> <li>• Patient education materials</li> </ul>



Organization	Contact Information	Topics Covered
<b>HCV Advocate</b>	<a href="http://www.hcvadvocate.org">http://www.hcvadvocate.org</a>	<ul style="list-style-type: none"> <li>• Hepatitis B</li> <li>• Hepatitis C</li> <li>• Biopsy</li> <li>• Support groups</li> <li>• Information for special populations</li> <li>• Patient education materials</li> <li>• Resources in English and other languages</li> </ul>
<b>Hepatitis B Foundation</b>	<a href="http://www.hepb.org">http://www.hepb.org</a> 1-215-489-4900	<ul style="list-style-type: none"> <li>• Hepatitis B</li> <li>• Support groups</li> <li>• Information for special populations</li> <li>• Patient education materials</li> <li>• Resources in English and other languages</li> </ul>
<b>Hepatitis C Association</b>	<a href="http://www.hepcassoc.org">http://www.hepcassoc.org</a> 1-866-437-4377	<ul style="list-style-type: none"> <li>• Hepatitis C</li> <li>• Support groups</li> <li>• Information for special populations</li> <li>• Patient education materials</li> </ul>
<b>Hepatitis C University</b>	<a href="http://www.hcvu.org/et_patient.php">http://www.hcvu.org/et_patient.php</a> 1-877-428-8123	<ul style="list-style-type: none"> <li>• Resources for medical care providers</li> </ul>
<b>Hepatitis Education Project</b>	<a href="http://www.hepeducation.org">http://www.hepeducation.org</a> 1-206-732-0311	<ul style="list-style-type: none"> <li>• Hepatitis A</li> <li>• Hepatitis B</li> <li>• Hepatitis C</li> <li>• Support groups</li> <li>• Transplantation</li> <li>• Information for special populations</li> <li>• Patient education materials</li> </ul>
<b>Hepatitis Foundation International</b>	<a href="http://www.hepfi.org">http://www.hepfi.org</a> 1-800-891-0707	<ul style="list-style-type: none"> <li>• Hepatitis A</li> <li>• Hepatitis B</li> <li>• Hepatitis C</li> <li>• Support groups</li> <li>• Information for special populations</li> <li>• Patient education materials</li> <li>• Resources in English and other languages</li> </ul>

Organization	Contact Information	Topics Covered
<b>HepClinics</b>	<a href="http://www.hepclinics.com/templates/hepclinic/index.html">http://www.hepclinics.com/templates/hepclinic/index.html</a>	<ul style="list-style-type: none"> <li>• Hepatitis A</li> <li>• Hepatitis B</li> <li>• Information for special populations</li> <li>• Patient education materials</li> </ul>
<b>Immunization Action Coalition</b>	<a href="http://www.immunize.org">http://www.immunize.org</a> 1-651-647-9009	<ul style="list-style-type: none"> <li>• Hepatitis A</li> <li>• Hepatitis B</li> <li>• Information for special populations</li> <li>• Patient education materials</li> <li>• Resources in English and other languages</li> </ul>
<b>Indian Health Service</b>	<a href="http://www.ihs.gov">http://www.ihs.gov</a>	<ul style="list-style-type: none"> <li>• Hepatitis A</li> <li>• Hepatitis B</li> <li>• Hepatitis C</li> <li>• Information for special populations</li> <li>• Patient education materials</li> </ul>
<b>Massachusetts General Hospital</b>	<a href="http://www.mgh.harvard.edu/default.aspx">http://www.mgh.harvard.edu/default.aspx</a> 1-617-726-2000	<ul style="list-style-type: none"> <li>• Hepatitis A</li> <li>• Hepatitis B</li> <li>• Hepatitis C</li> <li>• Biopsy</li> </ul>
<b>Medline Plus</b>	<a href="http://www.nlm.nih.gov/medlineplus/tutorials/hepatitisc/htm/index.htm">http://www.nlm.nih.gov/medlineplus/tutorials/hepatitisc/htm/index.htm</a>	<ul style="list-style-type: none"> <li>• Hepatitis C</li> </ul>
<b>Methadone Anonymous Support</b>	<a href="http://www.MethadoneSupport.org">http://www.MethadoneSupport.org</a>	<ul style="list-style-type: none"> <li>• Hepatitis C</li> <li>• Support groups (for methadone)</li> <li>• Resources in English and other languages</li> </ul>
<b>National AIDS Treatment Advocacy Project</b>	<a href="http://www.natap.org">http://www.natap.org</a> 1-888-266-2827	<ul style="list-style-type: none"> <li>• Hepatitis B</li> <li>• Hepatitis C</li> <li>• Transplantation</li> <li>• Patient education materials</li> </ul>
<b>National Digestive Diseases Information Clearinghouse</b>	<a href="http://digestive.niddk.nih.gov">http://digestive.niddk.nih.gov</a> 1-800-891-5389	<ul style="list-style-type: none"> <li>• Hepatitis A</li> <li>• Hepatitis B</li> <li>• Hepatitis C</li> <li>• Biopsy</li> <li>• Transplantation</li> <li>• Resources in English and other languages</li> </ul>

Organization	Contact Information	Topics Covered
<b>National Foundation for Transplants</b>	<a href="http://www.transplants.org">http://www.transplants.org</a> 1-800-489-3863	<ul style="list-style-type: none"> <li>• Transplantation</li> <li>• Resources in English and other languages</li> </ul>
<b>National Hepatitis C Advocacy Council</b>	<a href="http://www.hepcnetwork.org">http://www.hepcnetwork.org</a>	<ul style="list-style-type: none"> <li>• Hepatitis C</li> <li>• Resources in English and other languages</li> </ul>
<b>National Transplant Assistance Fund</b>	<a href="http://www.ntafund.org">http://www.ntafund.org</a> 1-800-642-8399	<ul style="list-style-type: none"> <li>• Transplantation</li> <li>• Resources in English and other languages</li> </ul>
<b>New York State Office of Alcoholism and Substance Abuse Services</b>	<a href="http://www.oasas.state.ny.us/admed/documents/HEPATITIS.pdf">http://www.oasas.state.ny.us/admed/documents/HEPATITIS.pdf</a>	<ul style="list-style-type: none"> <li>• Hepatitis A</li> <li>• Hepatitis B</li> <li>• Hepatitis C</li> </ul>
<b>StopHep.Com</b>	<a href="http://www.stophep.com/StopHep">http://www.stophep.com/StopHep</a>	<ul style="list-style-type: none"> <li>• Hepatitis A</li> <li>• Hepatitis B</li> <li>• Hepatitis C</li> <li>• Patient education materials</li> <li>• Special populations</li> </ul>
<b>Transplant Recipients International Organization</b>	<a href="http://www.trioweb.org">http://www.trioweb.org</a> 1-800-874-6386	<ul style="list-style-type: none"> <li>• Support services</li> <li>• Transplantation</li> </ul>

# Appendix D—Managing Side Effects of Hepatitis C Antiviral Treatment

Side Effect	Potential Management Strategy
<b>Bad taste in mouth</b>	<ul style="list-style-type: none"> <li>• Try sugar-free lemon drops or lemon wedges.</li> <li>• Eat a small amount of yogurt ½ hour before meals.</li> <li>• Eat dark chocolate or drink lemonade or cranberry juice.</li> <li>• Eat food cold or at room temperature.</li> <li>• Brush teeth frequently.</li> <li>• Use plastic utensils if experiencing metallic taste.</li> </ul>
<b>Cough</b>	<ul style="list-style-type: none"> <li>• Increase fluid intake (noncaffeinated).</li> <li>• Use a humidifier.</li> <li>• Try sugar-free hard candy or cough drops.</li> </ul>
<b>Diarrhea</b>	<ul style="list-style-type: none"> <li>• Eat more fiber foods like bananas, white rice, applesauce, and white toast (the BRAT diet).</li> <li>• Avoid spicy or acidic foods (like citrus) and dairy products for several days after diarrhea resolves.</li> <li>• Drink plenty of fluids (six to eight 8-oz glasses/day).</li> </ul>
<b>Dry mouth or mouth ulcers</b>	<ul style="list-style-type: none"> <li>• Brush teeth frequently, especially after eating.</li> <li>• Avoid mouthwash containing alcohol.</li> <li>• Drink plenty of water or use ice chips or sugar-free lemon drops.</li> <li>• Ask medical care provider about medications for mouth sores/ulcers.</li> </ul>
<b>Dry skin/rashes</b>	<ul style="list-style-type: none"> <li>• Avoid long, hot showers or baths.</li> <li>• Use moisturizing soap and lotions, sunscreen, and mild unscented laundry detergents.</li> <li>• Avoid fabric softeners.</li> <li>• Rub or press on the itchy areas rather than scratch them.</li> <li>• Use petroleum jelly on affected areas and ask medical care provider about other solutions.</li> </ul>
<b>Fatigue</b>	<ul style="list-style-type: none"> <li>• Try low-impact exercise such as walking or low-impact aerobics, if approved by medical care provider.</li> <li>• Drink plenty of fluids and get plenty of rest.</li> <li>• Lessen work schedule if possible.</li> <li>• Eat well-balanced meals every day.</li> </ul>

Side Effect	Potential Management Strategy
<b>Fever/Chills</b>	<ul style="list-style-type: none"> <li>• Notify medical care provider if the temperature is above 101°F for more than 24 hours.</li> <li>• Inject interferon at bedtime.</li> <li>• Take acetaminophen 30–60 minutes before weekly interferon injection and repeat 4–6 hours later, if approved by medical care provider.</li> <li>• Use ibuprofen or naproxen, if approved by medical care provider.</li> <li>• Try a cool sponge bath, ice pack, or cold pack.</li> <li>• Use extra blankets and clothes.</li> </ul>
<b>Hair thinning or hair loss</b>	<ul style="list-style-type: none"> <li>• Avoid harsh hair products such as dyes, perms, gels, sprays, and mousses.</li> <li>• Use mild shampoo such as baby shampoo.</li> <li>• Avoid braiding hair.</li> <li>• Use a wide-tooth comb or soft brush.</li> </ul>
<b>Headaches</b>	<ul style="list-style-type: none"> <li>• Drink plenty of fluids and get plenty of rest.</li> <li>• Try taking acetaminophen or ibuprofen, if approved by medical care provider.</li> <li>• Keep lights dim, wear sunglasses, or stay in darkened rooms.</li> </ul>
<b>Injection site reactions</b>	<ul style="list-style-type: none"> <li>• Warm the vial by gently rolling it in between two hands for a minute before injecting.</li> <li>• Rotate injection sites—thigh, upper arm, and abdomen.</li> <li>• Do not inject into an area that is irritated, bruised, or red.</li> <li>• Do not rub injection site.</li> <li>• Apply a cold pack.</li> <li>• Apply hydrocortisone cream or other medications, if approved by medical care provider.</li> </ul>
<b>Insomnia</b>	<ul style="list-style-type: none"> <li>• Go to bed and get up at the same times every day.</li> <li>• Do not read or watch TV in bed.</li> <li>• Limit daytime naps.</li> <li>• Take ribavirin in the late afternoon instead of before bedtime, if it causes the jitters.</li> <li>• Limit fluid intake for 2 hours before bedtime to avoid getting up to go to the bathroom.</li> <li>• Avoid caffeinated products, especially in the afternoon and at night.</li> <li>• Avoid heavy meals close to bedtime.</li> <li>• Take warm baths, read or listen to music, get a massage.</li> <li>• Drink a glass of warm milk (contains tryptophan, a natural sleep agent).</li> <li>• Take diphenhydramine (Benadryl) or other medications recommended by medical care provider.</li> </ul>

Side Effect	Potential Management Strategy
<b>Muscle and body aches</b>	<ul style="list-style-type: none"> <li>• Try low-impact exercise such as walking or low-impact aerobics, if approved by medical care provider.</li> <li>• Drink plenty of fluids, at least six to eight noncaffeinated 8-oz glasses/day.</li> <li>• Apply warm moist heat or massage affected areas.</li> </ul>
<b>Nausea and vomiting</b>	<ul style="list-style-type: none"> <li>• Take ribavirin with food.</li> <li>• Eat small meals.</li> <li>• Avoid foods or smells that trigger nausea; eat cold foods and avoid cooking smells.</li> <li>• Eat healthful foods; avoid greasy, spicy, acidic, or sweet foods.</li> <li>• Try ginger tea, ginger ale, or gingersnaps.</li> <li>• Eat crackers or dry white toast for morning nausea.</li> </ul>
<b>Poor appetite</b>	<ul style="list-style-type: none"> <li>• Eat small, more frequent (4–6) meals throughout the day.</li> <li>• Try protein drinks and snacks (cheese, peanut butter, eggs).</li> <li>• Eat whatever appeals to you even if not hungry; eat a variety of foods.</li> <li>• Walk before a meal.</li> </ul>

Source: National Hepatitis C Program, U.S. Department of Veterans Affairs,  
<http://www.hepatitis.va.gov/pdf/treatment-side-effects.pdf>



# Appendix E—Medicinal Plants/Alternative Treatments Potentially Harmful to People Who Have Hepatitis

Clients who have hepatitis should check with their medical care providers before taking nutritional supplements or alternative treatments. The substances listed below might harm the liver.

*Artemisia* (mugwort, sagebrush, wormwood)

*Aspalathus linearis* (bush tea)

*Atractylis gummifera* (pine thistle)

*Callilepis laureola*

*Crotalaria*

*Ephedra sinica* (ma huang)

*Gnaphalium* (Gordolobo herbal tea)

*Hedeoma* (pennyroyal, squaw mint oil)

*Heliotropium*

Iron supplements

Kombucha mushroom tea

*Larrea tridentata* (chaparral leaf, creosote bush, greasewood)

Margosa oil

Mate (Paraguay) tea

*Myristica* (nutmeg)

*Piper methysticum* (kava)

*Sassafras*

*Scutellaria lateriflora* (skullcap)



*Senecio aureus*

*Senecio jacobaea* (tansy ragwort, variation of ragwort)

*Senna*

*Symphytum officinale* (comfrey)

*Valeriana officinalis* (valerian root)

*Viscum album* (mistletoe)

Vitamin A supplements

Yerba tea

Source: *Alternative and Complementary Therapies*, U.S. Department of Veterans Affairs, <http://www.hepatitis.va.gov/patient/alternative-therapies/index.asp>

# Appendix F—Mental Health Treatment Considerations for People Who Have Chronic Viral Hepatitis C

Mental illness and hepatitis frequently co-occur (Rosenberg et al., 2001; Rosenberg et al., 2003). People who have mental illness are at greater risk than the general public for exposure to infectious diseases, including chronic hepatitis (Rosenberg et al., 2001). For instance, in a study of veterans with hepatitis C, Fireman, Indest, Blackwell, Whitehead, and Hauser (2005) found that 93 percent of subjects had one or more psychiatric or substance use disorders at the time of or before the study.

Behavioral health conditions are not absolute contraindications for chronic hepatitis treatment. As healthcare providers increasingly consider treating hepatitis in patients with mental disorders, they might turn to behavioral health providers to assess their patients for readiness for antiviral treatment. In addition, behavioral health treatment providers might have clients who have chronic hepatitis and who require support through the lengthy and challenging hepatitis treatment process.

## Behavioral Health Counseling

Goldsmith and Hauser (2003) advocate the participation of an informed behavioral health treatment provider in a client's antiviral treatment for chronic hepatitis. They assert that, to provide effective support in the treatment process, behavioral health treatment providers need to know:

- The natural history of hepatitis C virus infection (see Chapter 1 in this Treatment Improvement Protocol [TIP]).
- Standard treatment for chronic hepatitis (Chapter 5).
- Common adverse effects of treatment (Chapter 5).
- How to manage side effects of treatment (Appendix D).
- How to work with high-risk populations (Chapters 4, 5, and 6).
- How to manage (particularly with psychotropic medications) a client's mood and cognitive changes that might result from antiviral treatment (see below).

Behavioral health treatment providers can partner with healthcare providers to help patients with chronic hepatitis get evaluated for treatment (see Chapter 3) and adhere to treatment (Chapter 6). Psychiatrists are especially well suited to monitor patients being treated for hepatitis for psychiatric side effects of treatment (Straits-Tröster, Sloan, & Dominitz, 2003).

## Issues Clients Who Have Chronic Hepatitis B or C Might Bring to Counseling

Treatment for chronic hepatitis is challenging for most people. Behavioral health treatment providers might have clients who need assistance with making psychological adjustments to having a chronic disease (e.g., coping with a chronic disease, learning about hepatitis, making healthful lifestyle changes) and making decisions related to having hepatitis (e.g., whether/how to disclose the condition to others, deciding on whether to undertake antiviral therapy, adhering to the treatment regimen). Helping clients make medical decisions about hepatitis treatment is the subject of Chapter 4. Chapter 6 of this TIP includes the following relevant topics:

- Using effective counseling strategies, including motivational approaches
- Ensuring safety of the counselor
- Providing reliable information about hepatitis
- Building the therapeutic relationship
- Helping clients understand their diagnoses
- Incorporating client needs in substance abuse treatment planning
- Developing a plan to prevent infecting others and to prevent further liver damage
- Using motivational approaches
- Confronting the social ramifications of disclosing hepatitis status
- Addressing relapse
- Building support systems
- Providing effective case management

Patients with baseline depression, anxiety, bipolar disorder, post-traumatic stress disorder (PTSD), or other behavioral health conditions might face additional challenges that

come with the neuropsychiatric side effects of hepatitis treatment, such as worsening of their symptoms, or relapse. Therefore, the issue of readiness for treatment is particularly relevant for mental health care professionals.

## Readiness for Treatment

Many clients who have mental illnesses do not receive hepatitis pharmacotherapy because they are not prepared (in their view or in a care provider's view) to successfully complete the regimen. For example, some healthcare providers might defer treatment until an individual's mental illness, such as depression, can be stabilized. Individuals might choose to defer treatment until they are in stable housing or until they have built strong support networks.

Little information is available on how frequently clients receive a second referral for chronic hepatitis treatment if they are initially deferred but later become eligible for treatment. One study reported that none of the 306 patients who deferred had a second referral for treatment (Yawn, Wollan, Gazzuola, & Kim, 2002). A more recent study reported that of 111 patients deferred for psychiatric issues (including psychiatric instability and suicidal ideation), 53 percent received a followup referral, of which only 18 percent (20 individuals) were ultimately treated (Evon et al., 2007). These rates suggest that, if treatment for hepatitis is deferred at the initial assessment, few clients have opportunities to receive treatment after they become eligible.

In addition, although some clients might have healthcare providers who defer hepatitis treatment because of the client's behavioral health issues, some data suggest that some individuals do not follow through with steps necessary to get treatment (Butt, Wagener, Shakil, & Ahmad, 2005).

Behavioral health treatment providers can help clients who are currently ineligible for hepatitis treatment become eligible. For example, they can motivate clients to attend medical appointments. Helping a client become ready for treatment can take several months (Scheft & Fontenette, 2005). Behavioral health treatment providers can work with a client’s healthcare provider and advocate a referral for hepatitis treatment when clients are ready.

An expanded psychiatric evaluation can enhance the assessment of client readiness for hepatitis treatment (Scheft & Fontenette, 2005; Silberbogen, Mori, & Sogg, 2005). Silberbogen et al. (2005) developed a structured interview to help determine a client’s readiness for treatment. Facets of the structured interview include the following:

- Hepatitis C history
- Social support network
- Understanding of chronic hepatitis C and its treatment
- History of motivation and adherence to treatment
- Psychiatric history
- Mental status exam

Tools that might assist the psychiatric assessment include the following:

- Beck Anxiety Inventory
- Beck Depression Inventory
- Bipolar Spectrum Diagnostic Scale
- Brief Psychiatric Rating Scale
- Center for Epidemiologic Studies Depression Scale
- Geriatric Depression Scale
- Major Depression Inventory
- Mood Disorders Questionnaire

- Montgomery Asberg Depression Rating Scale
- Post-Traumatic Stress Disorder Checklist (civilian version)
- Quick Inventory of Depressive Symptoms
- State-Trait Anxiety Inventory
- Young Mania Rating Scale
- Zung Self-Rating Depression Scale

An important part of the expanded assessment is screening for substance use disorders. Tools to assess substance use disorders include the following:

- Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST)
- Alcohol Use Disorders Identification Test (AUDIT)
- Alcohol Use Disorders Identification Test—Consumption (AUDIT-C)
- CAGE Adapted to Include Drugs (CAGE-AID)
- Drug Abuse Screening Test
- Michigan Alcoholism Screening Test (MAST) (MAST-G for older adults)
- Patient Health Questionnaire (PHQ9)

Pharmacological approaches (see the section on Medications for People Who Have Behavioral Health Disorders, below) and nonpharmacological approaches (see Chapter 6) might be beneficial for helping the client become ready for treatment of hepatitis.

## Effects of Antiviral Treatment for Chronic Hepatitis on Behavioral Health

People who never had problems with anxiety, depression, or irritability might experience these as a result of treatment for chronic hepatitis, and stable patients with previous mental health problems might have

exacerbations. Some early symptoms of treatment-related depression might also mimic opioid withdrawal. This can complicate clinical management for the large subset of patients with chronic hepatitis C who have a history of opioid injection drug use (Schaefer & Mauss, 2008).

In a review article by Robaey and Buntinx (2005), neurobehavioral changes leading to depression often begin by the eighth week of antiviral therapy, which coincides with the peak time for quitting medication treatment. Addressing mental health symptoms is important to antiviral treatment success because close adherence to and completion of multiple-week therapy are required for achieving treatment success (Sylvestre & Clements, 2007).

Clients with mental illness who decide to undergo treatment for chronic hepatitis will require regular psychiatric monitoring. In addition, treatment adherence might be enhanced with the following supports:

- Psychosocial interventions
- Medication, therapy, or both to manage anger, anxiety, irritability, depression, or other side effects of interferon treatment
- Support groups to combat social isolation and discrimination resulting from a hepatitis diagnosis
- Support to prevent relapse to substance use
- Motivational therapy to inspire changes in daily life that support antiviral treatment
- Education on how to prevent transmission of the hepatitis C virus

For patients with risk factors for depression (e.g., personal or family history of depression, suicide attempts, alcohol abuse, poor sleep quality) preemptive treatment with selective serotonin reuptake inhibitors (SSRIs) has been used as a prevention strategy (Schaefer & Mauss, 2008). Concurrent use of interpersonal psychotherapy, behavioral psychotherapies, and psychosocial support might also be beneficial to these clients (American Psychiatric Association, 2010; Wilson, Castillo, & Batey, 2010).

Preexisting psychiatric medication regimens might need modification during hepatitis treatment. For example, a patient with bipolar disorder who takes valproic acid might need to change to a mood stabilizing medication that is less toxic to the liver while on antiviral therapy. A patient who was previously stable on an SSRI might need an increased dosage or a medication change. Psychiatric medications and care might need to continue for at least 6 to 12 weeks after antiviral treatment is completed because mood disorders, neurocognitive changes, and other psychological problems might persist (Schaefer & Mauss, 2008).

With pretreatment screening to determine need for medication, continuous monitoring, and individualized treatment, patients with preexisting or emerging mental health problems might be able to mitigate the adverse IFN- $\alpha$  psychiatric side effects, complete treatment, and achieve sustained viral response. These positive outcomes have been reported with collaborative care provided by multidisciplinary management teams that include healthcare providers, psychologists, psychiatrists, addiction specialists, and other behavioral health workers (Belfiori et al., 2009; Guadagnino et al., 2007; Schaefer et al., 2003; Sylvestre & Clements, 2007).

## Medications for People Who Have Behavioral Health Disorders

### **Affective Disorders**

Depression is common among patients who require antiviral treatment of chronic hepatitis C (Schaefer & Mauss, 2008). Others can develop major depression during the course of antiviral treatment. The medications most commonly prescribed for depression include SSRIs (e.g., fluoxetine, citalopram, sertraline, paroxetine, escitalopram), serotonin and norepinephrine reuptake inhibitors (e.g., duloxetine, venlafaxine), and the chemically unique bupropion. Older antidepressant medications (e.g., monoamine oxidase inhibitors, tricyclics) are less often prescribed because they have more side effects and drug interactions (National Institute of Mental Health [NIMH], 2008). Depression screening scales that rely on patient self-reporting can be used, but the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) criteria (APA, 2000) and clinical evaluation are essential to guide treatment decisions.

Bipolar disorder is another affective disorder in which patients cycle through alternating episodes of depression and mania. Patients are treated with mood stabilizers (e.g., carbamazepine, lamotrigine, lithium, oxcarbazepine, valproic acid). Antidepressants are sometimes added to mood stabilizers to treat symptoms of depression in bipolar disorder, but these medications need to be used with great care because of the risk of exacerbating manic symptoms and/or inducing suicidality (NIMH, 2008). Atypical antipsychotics (e.g., aripiprazole, clozapine, olanzapine, risperidone, ziprasidone) are sometimes added to treat depression or bipolar disorder.

### **Anxiety Disorders**

Anxiety disorders include obsessive-compulsive disorder, PTSD, generalized anxiety disorder, panic disorder, social phobia, and others (APA, 2000). When patients undergoing treatment for chronic hepatitis exhibit symptoms related to anxiety disorders, it is important to determine whether symptoms are related to the psychological demands of coping with a chronic disease, whether they are due to the rigors of treatment, or whether they are an exacerbation of a preexisting condition so that appropriate pharmacological and non-pharmacological treatments can be arranged. Cognitive behavioral therapy is frequently used for the treatment of anxiety disorders and can improve symptoms significantly within a short timeframe. Other nonpharmacological treatments include group therapy, systematic desensitization, acupuncture, and biofeedback.

### **Suicidality**

Suicide is the worst outcome of major depressive disorder, and treatment of modifiable risk factors (anxiety, insomnia, agitation, psychotic symptoms, and substance abuse) are recommended in addition to treating the depressive episode (APA, 2010).

Some of the medications that are used to treat depression and bipolar disorder might increase the risk of suicidal thoughts and behaviors (U.S. Food and Drug Administration, 2009). All clients should be screened for risk of suicide. People at risk for suicide should be closely monitored for new or worsening symptoms of depression, suicidal thoughts or behaviors, or unusual changes in mood or behavior (NIMH, 2008). More information can be found in TIP 50: *Addressing Suicidal Thoughts and Behaviors in Substance Abuse Treatment*

(Center for Substance Abuse Treatment, 2009b). Other materials are available at the National Suicide Prevention Lifeline (<http://www.suicidepreventionlifeline.org>).

## Treating Patients With Hepatitis C and Serious Mental Illness

Adults with a serious mental illness (SMI) are people ages 18 and older who, at any time during a given year, have a diagnosable mental, behavioral, or emotional disorder that meets the criteria of DSM-IV-TR (APA, 2000) and that results in functional impairment which substantially interferes with or limits one or more major life activities (Substance Abuse and Mental Health Services Administration [SAMHSA], 1999).

Whether SMIs such as psychotic disorders and major mood disorders should be contraindications to undergoing antiviral therapy for hepatitis C is controversial. The American Psychiatric Association (APA, 2010) states that SMIs are not necessarily contraindications to antiviral treatment. Psychotic symptoms (hallucinations and delusions) make effective coping with a chronic infectious disease difficult, increase patient risk of suicide, and might make adherence with complex antiviral regimens impossible. Patients with psychotic symptoms frequently need antipsychotic medications (e.g., aripiprazole, chlorpromazine, clozaril, fluphenazine, haloperidol, olanzapine, paliperidone, perphenazine, quetiapine, risperidone, ziprasidone) alone or in combination with other medications (NIMH, 2008). These complex psychiatric medication treatment regimens can be difficult to manage during antiviral treatment. Patients with depression frequently experience increased depressive symptoms during antiviral treatment (Ghany et al., 2009). This increase in symptoms has not been reported for patients

with schizophrenia (Huckans, Mitchell, & Pavawalla 2010); however, this has not been well studied.

Antiviral therapy can be successful for chronic hepatitis C patients with SMIs but often requires expert psychiatric management and close monitoring by clinical staff. Intensive case management by a behavioral health case manager might be needed to support treatment adherence, make and monitor treatment appointments, and assist with housing, food, and employment needs. More frequent physician appointments might be needed for laboratory monitoring of liver function and to detect any dangerous medication interactions. The decision to treat needs to consider the social support network and the availability of social services, as well as the patient's abilities.

### **Drug Interactions**

A combined medication regimen consisting of pegylated interferon and ribavirin is the standard of care for chronic hepatitis C (Ghany et al., 2009). Both antiviral drugs have side effects and potential toxicities, but they have few specific interactions with medications used to treat behavioral health disorders (see Exhibit F-1). Interferon has no clinically significant interactions with methadone used to treat opioid addiction; however, its potential interaction with buprenorphine has not been adequately studied to identify such interactions. Ribavirin's potential interactions with methadone or buprenorphine have also not been studied in depth and are unknown (McCance-Katz, Sullivan, & Nallani, 2009). Ribavirin does not interact adversely with any medications listed in Exhibit F-1. The patient should be monitored closely for any adverse effects or drug interactions when receiving medications that are metabolized by the liver.

**Exhibit F-1 Potential Interactions Among Medications Used to Treat Chronic Hepatitis and Behavioral Health Conditions**

Prescription Medication	Indication	Potential Interaction With Hepatitis Medications
Alprazolam	Anxiety	<p>The use of telaprevir with alprazolam increases exposure to alprazolam. Clinical monitoring for dose adjustment is recommended.</p> <p>The use of boceprevir could result in increased sedation or respiratory depression when used with alprazolam. A lower dose of alprazolam should be considered.</p>
Buprenorphine	Opioid dependence	The use of boceprevir could result in an increase or decrease in buprenorphine levels. However, the combination of buprenorphine and boceprevir has not been studied. Clinical monitoring for dose adjustment is recommended.
Bupropion	Depression; nicotine dependence	The use of bupropion is associated with an increased risk of seizures. Use of interferon and bupropion together might increase seizure risk as well.
Clozapine	Schizophrenia; psychosis	Clozapine might cause marrow disorders, neuroleptic malignant syndrome, and increased seizure risk. When taken with interferon, the risks of these might increase.
Desipramine	Depression	The use of telaprevir or boceprevir could result in an increase in desipramine concentration, which might lead to adverse events (e.g., nausea, dizziness). The combination of telaprevir or boceprevir and desipramine should be used with caution and a lower dose of desipramine should be considered.
Disulfiram	Alcohol use disorders	Disulfiram might cause or worsen hepatitis. When taken with interferon alpha 2a, there is increased risk of peripheral neuropathy.
Escitalopram	Depression	The use of telaprevir can result in decreased escitalopram concentration. Clinical monitoring for dose adjustment is recommended.
Methadone	Opioid dependence	<p>The use of telaprevir is associated with decreased methadone concentration. Clinical monitoring for dose adjustment is recommended.</p> <p>The use of boceprevir could result in an increase or decrease in methadone levels. However, the combination of methadone and boceprevir has not been studied. Clinical monitoring for dose adjustment is recommended.</p>



**Exhibit F-1 Potential Interactions Among Medications Used to Treat Chronic Hepatitis and Behavioral Health Conditions (continued)**

Prescription Medication	Indication	Potential Interaction With Hepatitis Medications
Midazolam	Anxiety	Telaprevir is contraindicated with oral midazolam. The interaction could result in increased sedation or respiratory depression.  The use of boceprevir could result in increased sedation or respiratory depression when used with intravenous midazolam. A lower dose of intravenous midazolam should be considered.
Naltrexone	Opioid and alcohol use disorders	When taken with interferon alpha 2a, naltrexone might exacerbate liver damage.
Trazodone	Depression	The use of telaprevir or boceprevir can result in an increase in trazodone concentration, which might lead to adverse events (e.g., nausea, dizziness). The combination of telaprevir or boceprevir and trazodone should be used with caution and a lower dose of trazodone should be considered.
Triazolam	Insomnia	Telaprevir and boceprevir are contraindicated with triazolam. The interaction could result in increased sedation or respiratory depression.
Zolpidem	Insomnia	The use of telaprevir can result in decreased zolpidem concentration. Clinical monitoring and dose adjustment of zolpidem is recommended to achieve the desired response.

Sources: *Physicians' Desk Reference 2010* (64th ed.), 2009; U.S. Food and Drug Administration, 2011c and 2011d.

# Appendix G—Motivational Interviewing and Counseling Resources

- *Case Management Adherence Guidelines, Version 2.0* (Case Management Society of America, 2006), <http://www.cmsa.org/portals/0/pdf/CMAG2.pdf>
- *Enhancing Motivation for Change in Substance Abuse Treatment* (Center for Substance Abuse Treatment [CSAT], 1999), <http://www.ncbi.nlm.nih.gov/bookshelf/br.fcgi?book=hssamhsatip&part=A61302>
- *Enhancing Motivation for Change Inservice Training* (CSAT, 2006), <http://www.kap.samhsa.gov/products/manuals/tip35c/index.htm>
- *Group Treatment for Substance Abuse: A Stages-of-Change Therapy Manual*. M. Velasquez, G. Maurer, C. Crouch, & C. DiClemente. New York: Guilford Press, 2001
- *Motivational Groups for Community Substance Abuse Programs*. K. Ingersoll, C. Wagner, & S. Gharib. Kansas City: Addiction Technology Transfer Center Network, 2000
- *Motivational Interviewing: Preparing People for Change*, 2nd ed. W. Miller & S. Rollnick. New York: Guilford Press, 2002
- The Motivational Interviewing Web Page, <http://www.motivationalinterview.org>



# Appendix H—Sources for Financial Assistance

- A source for identifying government sources of healthcare and support benefit programs by State. (<http://www.benefits.gov/>)
- Low-income clients might be eligible for **Medicaid**, but benefits vary significantly across States. (<http://cms.hhs.gov>)
- **Federally funded health centers** provide medical services to people who are uninsured and underinsured. (1-800-ASK-HRSA [1-800-275-4772]).
- The **Veterans Healthcare System** offers hepatitis C virus screening, treatment, and support services to eligible U.S. veterans. (<http://www.hepatitis.va.gov>)
- The **Ryan White CARE Act** provides medications to eligible low-income U.S. residents who have HIV, including those co-infected with hepatitis. (<http://hab.hrsa.gov>)
- **NeedyMeds.org** is a consumer site providing sources on pharmaceutical, State, Medicare, and Medicaid financial support for the treatment of serious diseases, including hepatitis. (<http://www.needymeds.org/>)
- **Partnership for Prescription Assistance** is a pharmaceutical-company-sponsored resource that offers low- or no-cost medication to people who lack prescription drug coverage. (<http://www.pparx.org>)
- **National Foundation for Transplants** helps individuals find financial support for transplantation operations. (<http://www.transplants.org>)
- **National Transplant Assistance Fund** raises funds for uninsured medical expenses related to transplantation. (<http://www.transplantfund.org>)
- **Hepatitis clinical trials** are available to a limited number of people. (<http://clinicaltrials.gov/ct2/results?term=hepatitis>)



# Appendix I—Hepatitis C Training Programs for Substance Abuse Treatment Program Staff

**Focus on Hepatitis C** was developed by the Hepatitis C Association, sponsored by the Substance Abuse and Mental Health Services Administration. The 3-hour training includes a PowerPoint presentation, a question-and-answer session, and a discussion of local resources. Content includes functions of the liver, risk factors, modes of transmission, diagnostic process and treatment of HCV, natural history and progression of HCV and HCV/HIV co-infection, healthful lifestyle choices that preserve liver health, counseling guidelines, and issues and challenges in providing care for clients with hepatitis C in treatment centers. Training provides information on locating community resources; Web sites, toll-free support lines, and venues for medical care; and information on obtaining treatment assistance for people who are not insured or are underinsured. Continuing education credits can be earned (<http://www.hepcfocus.com>).

- The **Centers for Disease Control and Prevention** (CDC) maintains numerous trainings and resources (<http://www.cdc.gov/ncidod/diseases/hepatitis/resource/training/counseling.htm>).
- **HCV Advocate** offers training resources and information from the client's perspective ([http://www.hcvadvocate.org/hepatitis/training\\_resources.asp](http://www.hcvadvocate.org/hepatitis/training_resources.asp)).
- **CDC's Division of Viral Hepatitis** provides funding to HCV coordinators across the country to offer viral hepatitis counseling, testing, vaccinations, and other services (<http://www.cdc.gov/hepatitis/index.htm>).
- Pharmaceutical manufacturers of hepatitis medications are often willing to conduct free onsite training sessions for counseling staff. Contact manufacturers directly.



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# Appendix L— Acknowledgments

Numerous people contributed to the development of this Treatment Improvement Protocol (TIP), including the TIP Consensus Panel (p. xiii), stakeholders (Appendix J), and field reviewers (Appendix K).

This publication was written and produced under contract numbers 270-04-7049 and 270-09-0307, by the Knowledge Application Program (KAP), a Joint Venture of JBS International, Inc., and The CDM Group, Inc., for the Center for Substance Abuse Treatment (CSAT), Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services (HHS).

Lynne MacArthur, M.A., A.M.L.S., served as the JBS KAP Executive Project Co-Director, and Barbara Fink, RN, M.P.H., served as the JBS KAP Managing Project Co-Director. Other JBS KAP personnel included Candace Baker, M.S.W., MAC, Deputy Director for Product Development; Deborah Steinbach, M.A., Senior Writer; Patricia Kassebaum, M.A., Senior Writer; Kris Rusch, M.A., Senior Writer; Martha J. Horn, Ph.D., Senior Writer; Frances Nebesky, M.A., Quality Assurance Editor; Wendy Caron, Quality Assurance Manager; Erin P. Doherty, Copy Editor; Terrie Young, Graphic Designer; and Erin Sandor, Graphic Designer.



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## CSAT TIPs and Publications Based on TIPs

### What Is a TIP?

Treatment Improvement Protocols (TIPs) are the products of a systematic and innovative process that brings together clinicians, researchers, program managers, policymakers, and other Federal and non-Federal experts to reach consensus on state-of-the-art treatment practices. TIPs are developed under CSAT's Knowledge Application Program to improve the treatment capabilities of the Nation's alcohol and drug abuse treatment service system.

### What Is a Quick Guide?

A Quick Guide clearly and concisely presents the primary information from a TIP in a pocket-sized booklet. Each Quick Guide is divided into sections to help readers quickly locate relevant material. Some contain glossaries of terms or lists of resources. Page numbers from the original TIP are referenced so providers can refer back to the source document for more information.

### What Are KAP Keys?

Also based on TIPs, KAP Keys are handy, durable tools. Keys may include assessment or screening instruments, checklists, and summaries of treatment phases. Printed on coated paper, each KAP Keys set is fastened together with a key ring and can be kept within a treatment provider's reach and consulted frequently. The Keys allow you—the busy clinician or program administrator—to locate information easily and to use this information to enhance treatment services.

### Ordering Information

Publications may be ordered for free at <http://store.samhsa.gov>. To order over the phone, please call 1-877-SAMHSA-7 (1-877-726-4727) (English and Español). Most publications can also be downloaded at <http://www.kap.samhsa.gov>.

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| <b>TIP 3</b> Screening and Assessment of Alcohol- and<br>Other Drug-Abusing Adolescents— <i>Replaced<br/>by TIP 31</i>                                   | <b>TIP 11*</b> Simple Screening Instruments for Outreach<br>for Alcohol and Other Drug Abuse and<br>Infectious Diseases—BKD143<br>Quick Guide for Clinicians QGCT11<br>KAP Keys for Clinicians KAPT11  |
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| <b>TIP 5</b> Improving Treatment for Drug-Exposed<br>Infants—BKD110  | <b>TIP 13</b> Role and Current Status of Patient<br>Placement Criteria in the Treatment of<br>Substance Use Disorders—BKD161<br>Quick Guide for Clinicians QGCT13<br>Quick Guide for Administrators QGAT13<br>KAP Keys for Clinicians KAPT13 |
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| <b>TIP 7</b> Screening and Assessment for Alcohol and<br>Other Drug Abuse Among Adults in the<br>Criminal Justice System— <i>Replaced by TIP 44</i>      |  |
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- TIP 14 Developing State Outcomes Monitoring Systems for Alcohol and Other Drug Abuse Treatment**—BKD162
- TIP 15 Treatment for HIV-Infected Alcohol and Other Drug Abusers**—*Replaced by TIP 37*
- TIP 16 Alcohol and Other Drug Screening of Hospitalized Trauma Patients**—BKD164  
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- TIP 17 Planning for Alcohol and Other Drug Abuse Treatment for Adults in the Criminal Justice System**—*Replaced by TIP 44*
- TIP 18 The Tuberculosis Epidemic: Legal and Ethical Issues for Alcohol and Other Drug Abuse Treatment Providers**—BKD173  
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- TIP 19 Detoxification From Alcohol and Other Drugs**—*Replaced by TIP 45*
- TIP 20 Matching Treatment to Patient Needs in Opioid Substitution Therapy**—*Replaced by TIP 43*
- TIP 21 Combining Alcohol and Other Drug Abuse Treatment With Diversion for Juveniles in the Justice System**—(SMA) 08-4073  
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HHS Publication No. (SMA) 11-4656  
Printed 2011

**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES**  
Substance Abuse and Mental Health Services Administration  
Center for Substance Abuse Treatment