



*Hepatitis:*  
**MAKING THE BUSINESS CASE**  
*Report of a Consultation with Business and Health Leaders*





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*December 12, 2000*  
*Washington, DC*

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**CDC**

*Centers for Disease Control and Prevention*  
*National Center for Infectious Diseases*

*and*



*Washington Business*  
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## *Table of Contents*

Acknowledgements .....	III
Preface .....	IV
Meeting Agenda and Speakers .....	1
The ABC's of Viral Hepatitis .....	2
What Employers Need to Know .....	7
What Employers Can Do .....	8
Employer-Community Partnership .....	10
Roundtable Comments and Next Steps .....	11
Appendix A: Participant List .....	12
Appendix B: Resources .....	12

## *Acknowledgements*

Many people devoted their time and expertise to plan, implement, and follow up on the Business Consultation on Hepatitis. I would like to extend special thanks to the Hepatitis Branch of the National Center for Infectious Diseases, Centers for Disease Control and Prevention (CDC), for their generous support in convening this meeting and developing this report. Throughout the process, Joanna Buffington, MD, and T. Lynn Riggs, PhD, both of the CDC, clearly demonstrated their commitment to partnering with the business community, and their leadership has started a dialogue that will continue well beyond this meeting.

We are also indebted to Claire Sharda, previously with WBGH and now with Merck, and Carol Staubach, from the Comstock Consulting Group, who gave so generously of their time and talent in bringing together leaders from the business and public health communities for this important discussion. Finally, I would like to thank Susan Murray Young for her role in developing background materials and writing this report.

*Julianna S. Gonen, PhD  
Director, Family Health  
Washington Business Group on Health*

## Preface

Hepatitis means inflammation of the liver, and can be caused by a number of things, including infection with a virus. Hepatitis C virus (HCV) is the nation's most common blood-borne infection and accounts for about 15 to 20 percent of acute viral hepatitis, 60 to 70 percent of chronic hepatitis, and 30 percent of cirrhosis, end-stage liver disease, and liver cancer. No vaccine is available. HCV infection results in 8,000 to 10,000 deaths annually in the United States, and this number is expected to double over the next decade as some of the large cohort of people already infected with HCV progress to cancer and liver failure.

In anticipation of this “awakening giant,” the Washington Business Group on Health (WBGH) and the Centers for Disease Control and Prevention (CDC) recently joined forces to initiate a dialogue on hepatitis (A, B, and C, for each offers lessons for employers) between the business and public health communities.

This dialogue was the third in a series of Business Consultations sponsored by the CDC. As with the first two—which addressed diabetes and healthy pregnancy—WBGH first surveyed its membership (made up of 150 large public and private employers) regarding current practices in managing hepatitis. Then, with the help of a group of experts from both communities, WBGH and the CDC convened *The ABC's of Hepatitis: Making the Business Case*, a consultation with business and health leaders, on December 12, 2000, in Washington, D.C.

Participants, whose names and affiliations are listed in Appendix A, included employers, public health professionals, managed care companies, disease management vendors, and experts on hepatitis.

# THE ABCS OF HEPATITIS: A WBGH BUSINESS CONSULTATION

*Sponsored by the Centers for Disease Control and Prevention  
with additional support from Schering-Plough Corporation and Merck & Company*

**DECEMBER 12, 2000, 10:00 AM – 3:30 PM**

## AGENDA

- 10:00      **Welcome & Introductions**  
                 Mary Jane England, MD, *President, WBGH*  
                 Julianna S. Gonen, PhD, *Project Director, WBGH*
- 10:10      **Initial Participant Perspectives**  
                 Mary Jane England, MD, *WBGH*  
                 Dean M. Burgess, RN, *Delta Airlines*
- 10:25      **“An Employer’s Guide to Hepatitis A, B and C”**  
                 Joanna Buffington, MD, MPH, *Medical Epidemiologist, CDC*
- 10:45      **“Viral Hepatitis A, B and C: Clinical Aspects”**  
                 Jorge L. Herrera, MD, *University of South Alabama*
- 11:05      **Questions and discussion**
- 11:15      **“The Costs of Viral Hepatitis”**  
                 T. Lynn (Tammy) Riggs, PhD, *Economist, CDC*
- 11:25      **“Employer Initiatives For Prevention & Management of Viral Hepatitis”**  
                 Carol A. Staubach, *Principal, Comstock Consulting Group*
- 11:40      **“Educating a Community About Hepatitis C: The California Experience”**  
                 Lela Folkers, *Department of Health Services, State of California*
- 12:00      **Questions and discussion**
- 12:15      **Lunch Break**
- 1:00        **Roundtable Discussions**  
                 Mary Jane England, MD, *WBGH*
- How might these diseases be affecting your company’s health and disability costs and productivity? What data does your company have to evaluate this?
  - How is your company approaching the prevention and management of Hepatitis A, B and C?
  - What barriers at your company hinder more effective Hepatitis management?
  - What community resources might enrich your company’s efforts?
- 2:10        **Break**
- 2:20        **Roundtable Reports and Group Discussion**
- 3:15        **Wrap-Up and Adjourn**  
                 Mary Jane England, MD, *WBGH*

## THE ABC'S OF VIRAL HEPATITIS

Hepatitis is inflammation of the liver that can be caused by a virus. There are several different kinds of viruses that can cause hepatitis. Hepatitis B and C are the most likely to cause serious liver damage.

Hepatitis A, B and C share common symptoms; hepatitis B and C share some common risk factors. The biggest differences among the three viruses are how they are spread, whether they become chronic (lasting more than 6 months) and whether a vaccine is available to prevent infection. *[See chart]*

Characteristics	Hepatitis C	Hepatitis B	Hepatitis A
Methods of Transmission	Primarily bloodborne (also sexual and perinatal)	Bloodborne, sexual, perinatal	Fecal-oral
Acute Symptoms (if any)	jaundice, fatigue, abdominal pain, loss of appetite, nausea, vomiting	same	same
Chronicity rate	75-85%	5-10% (adults)	0%
Vaccine?	no	yes	yes
Post-exposure prophylaxis?	no	yes	yes
Risk groups	<ul style="list-style-type: none"> <li>• Injection drug users</li> <li>• Hemodialysis patients</li> <li>• Health care workers</li> <li>• Recipients of transfusions before July 1992 and clotting factors made before 1987</li> <li>• Infants born to infected women</li> <li>• Sex contacts of infected people</li> </ul>	<ul style="list-style-type: none"> <li>• Injection drug users</li> <li>• Sexually active heterosexuals</li> <li>• Men who have sex with men</li> <li>• Infants/children of immigrants from disease-endemic areas</li> <li>• Sexual or household contacts of chronically infected people</li> <li>• Infants born to infected women</li> <li>• Health care workers</li> <li>• Hemodialysis patients</li> </ul>	<ul style="list-style-type: none"> <li>• Injection drug users</li> <li>• Men who have sex with men</li> <li>• International travelers</li> <li>• People exposed to contaminated food and/or water</li> <li>• Sexual contacts of infected people</li> </ul>



## HEPATITIS C

Hepatitis C is a liver disease caused by the hepatitis C virus (HCV). HCV is one of the five viruses (A, B, C, D and E) which together account for the vast majority of cases of viral hepatitis. No vaccine is available. Hepatitis C causes 8,000 to 10,000 deaths annually in the United States (CDC data), and this number is expected to double over the next decade as some of the large cohort of people already infected with HCV progress to cancer and liver failure.

Hepatitis C has been called a “silent epidemic,” because many who are infected do not know it. The CDC estimates that 1.8 percent of the U. S. population (about 4 million people) has antibody to HCV (anti-HCV), indicating ongoing or previous infection with the virus. (By comparison, about 750,000 Americans are infected with HIV, the virus

that causes AIDS.) Symptoms of serious consequences of HCV infection (e.g., cirrhosis, liver cancer) may not surface for decades after infection.

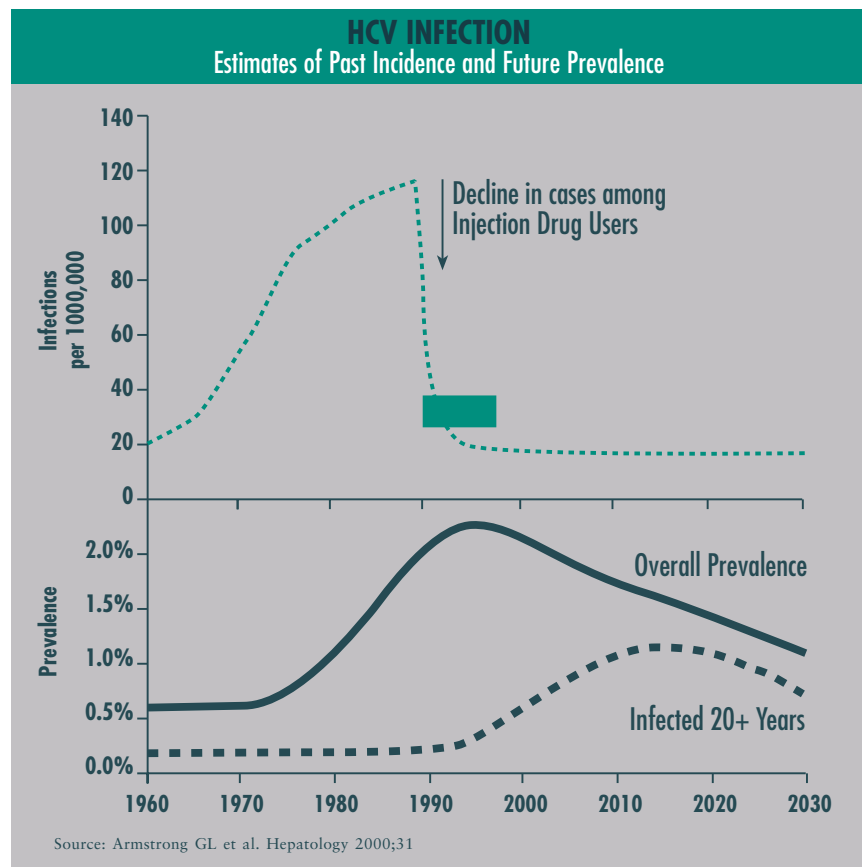
This means that many people infected before blood screening tests were available (about 10 years ago) may soon need help managing the effects of this disease. So the real impact of HCV—both in human and economic terms—may be just around the corner. Overall prevalence of HCV peaked in the 1990s, but the prevalence of those infected more than 20 years will likely peak between 2010 and 2020.<sup>1</sup>

### *Disease progression, risk factors and symptoms*

As many as 85 percent of patients with acute hepatitis C develop chronic infection, and 70 percent of these patients have accompanying chronic liver disease. Chronic hepatitis C varies greatly in its course

*“One of the biggest obstacles to managing hepatitis is that education and information do not necessarily lead to behavior change. Client-centered counseling works much better.”*

Joanna Buffington, M.D.  
CDC



1 Armstrong GL, Alter MA, McQuillan GM, and Margolis HS. The past incidence of hepatitis C virus infection; implications for the future burden of chronic liver disease in the United States. Hepatology 2000;777-782.

and outcome. Some patients have no signs or symptoms of liver disease and completely normal levels of serum liver enzymes. Liver biopsy usually shows some degree of chronic hepatitis, but the damage to the liver is mild and the overall prognosis may be good. Others have few signs or symptoms, mild to moderate elevations in liver enzymes and an uncertain prognosis.

The last group of patients includes those with severe hepatitis C, HCV-RNA detectable in their blood, elevated serum liver enzymes and who ultimately develop cirrhosis (scarring of the liver) and end-stage liver disease or cancer. Researchers estimate that up to 20 percent of patients with chronic hepatitis C may develop cirrhosis, a process that takes 10 to 30 years. After 20 to 40 years, a smaller percentage of patients with chronic disease develop liver cancer.

### OF EVERY 100 PEOPLE INFECTED WITH HCV:

- 75-85 may develop long-term infection;
- 70 may develop chronic liver disease;
- 15 –20 may develop cirrhosis over a period of 20 to 30 years; and
- 5 may die from the consequences of long term infection (liver cancer or cirrhosis) without a transplant.

HCV is spread primarily by contact with infected blood. Blood transfusions and the use of shared, unsterilized or poorly sterilized needles and syringes have been the main causes of the spread of HCV in the United States. With the introduction in 1990 of routine blood screening for HCV antibody and improvements in the test in mid-1992, transfusion-

related hepatitis C has virtually disappeared. Currently, injection drug use is the most common risk factor for contracting the disease, but some people (less than 10 percent) acquire hepatitis C without any reported exposure to blood or drug use.

The major high-risk groups for HCV infection are:

- Injection drug users, including those who used drugs briefly many years ago
- People who had blood transfusions before July 1992, when more sensitive tests for anti-HCV were introduced for blood screening
- People on long-term hemodialysis
- People who received clotting factor produced before 1987
- Health care workers who sustain needle-stick accidents with contaminated blood
- Infants born to HCV-infected mothers

Other groups that may be at increased risk for hepatitis C include:

- People with high-risk sexual behavior, multiple partners, and sexually transmitted diseases
- People who share other items that may have blood of an infected person on them (e.g., shared equipment for tattoos, intranasal administration of cocaine)

Many people with chronic hepatitis C have no symptoms of liver disease. If symptoms are present, they are usually mild, non-specific and intermittent. They may include:

- Fatigue
- Jaundice
- Mild right-upper-quadrant discomfort or tenderness
- Nausea
- Poor appetite
- Muscle and joint pain

*“Infection with hepatitis C happens when one is young and foolish; but the consequences appear when they are in the middle of their working life.”*

Jorge Herrera, M.D.  
University of South Alabama

## ACUTE vs. CHRONIC VIRAL HEPATITIS

	<u>ACUTE</u>	<u>CHRONIC</u>
Duration	< 6 months	> 6 months
Outcome	spontaneous resolution	unlikely to clear on its own
Permanent liver damage	none	likely

### Treatment and Management

Antiviral drugs such as *interferon*, used alone or in combination with *ribavirin*, are approved for the treatment of people with chronic hepatitis C. Treatment with these drugs lasts for 6 months to one year. Testing for viral genetic variation (genotype) is required as various HCV genotypes respond differently to current treatments.

Genotype 1 accounts for about 75 percent of U.S. HCV infections but is less responsive to standard interferon-based treatments. Currently, the goal of treatment is to induce a state where the virus is not detectable in the blood during and at the end of treatment, and for six months after treatment is discontinued (a “sustained virological response”).

Long-term follow-up studies of patients with such a response to treatment have demonstrated continued undetectability of the virus in over 95 percent of patients and marked improvement in liver biopsies over time. In recent trials of ribavirin combined with alpha interferon, a sustained virological response has been demonstrated in about 30 percent of patients infected with genotype 1, and 66 percent of patients infected with genotype 2 or 3<sup>2</sup>.

Although not currently considered a “cure,” treatment can lead to long-term undetectability of HCV and associated improvement in liver biopsies for years after the treatment is discontinued. In the future, treatment advances such as pegylated interferon (combined with ribavirin) may significantly improve the rates of sustained response.

### HCV TESTING ROUTINELY RECOMMENDED FOR:

- People who ever injected illegal drugs
- People who
  - received clotting factor concentrates produced before 1987
  - have ever been on chronic hemodialysis
  - have evidence of liver disease
- Prior recipients of transfusions or organs
  - before July 1992
  - if notified that donor later tested positive
- Healthcare, emergency medical and public safety workers after needle sticks, sharps or mucosal exposures to HCV-positive blood
- Children born to HCV-positive women

At **Delta Airlines**, the current focus is on hepatitis A and B vaccination, plus other adult immunizations. Cost analysis of a pilot program in Atlanta showed that start-up costs were prohibitive. The cost of the vaccine was less problematic. The company is now working closely with its health care provider, United HealthCare, to provide adult immunizations and will eventually include them in health plan purchasing requirements.

<sup>2</sup> Although effective in many cases, treatment with these drugs can bring several difficult side effects. Most patients have flu-like symptoms (fever, chills, headache, muscle and joint aches, fast heart rate) early in treatment, but these lessen with continued treatment. Later side effects may include tiredness, hair loss, low blood count, trouble with thinking, moodiness, and depression. In addition to the side effects due to interferon, ribavirin can cause anemia (low red blood cell count) and can be a serious problem for people with conditions that cause anemia, such as kidney failure.

## HEPATITIS B

Hepatitis B virus (HBV) is another blood-borne infection that can cause serious liver damage. Each year, more than 200,000 people become infected with HBV and close to 5,000 die from complications of the disease (including chronic liver disease and liver cancer). An estimated \$700 million is spent each year on medical and work loss costs associated with Hepatitis B. More than 1 million Americans are chronic carriers of the virus, which means they may spread the disease to others and suffer complications themselves.

Most people infected as adults<sup>3</sup> (about 94 percent) will develop antibodies to HBV, which will completely clear the virus from their system. These people may experience symptoms of acute HBV (the same symptoms as acute hepatitis A or C, discussed above) but will recover fully. The other 6 percent will become chronic HBV carriers, often without knowing it. Chronic carriers have an increased risk of developing liver disease, such as cirrhosis or liver cancer. Chronic carriers may have no symptoms of HBV infection for many years, but may pass the virus on to others.

The risk of HBV infection is greater among:

- Injection drug users
- Sexually active heterosexuals
- Men who have sex with men
- Infants and children of immigrants from disease-endemic areas
- Sexual or household contacts of chronically infected people
- Infants borne to infected mothers
- Health care workers exposed to infected blood
- Hemodialysis patients

There is no cure for chronic HBV infection, but there is a safe and effective vaccine for prevention.

*“Community partnership often requires us to work with people and organizations that are outside our comfort zone.”*

Lela Folkers  
California Department of Health Services

3 Ninety percent of infants infected with HBV at birth (from their mothers) will be chronically infected unless they receive prophylactic treatment.

The hepatitis B vaccine is recommended for:

- All babies at birth
- All persons up through 18 years old who have not been previously vaccinated
- Adolescents and adults in high-risk groups
- People with occupational exposure to blood products

## HEPATITIS A

Hepatitis A is caused by the hepatitis A virus (HAV). Person-to-person contact or ingesting anything contaminated by infected human feces spreads it. Most outbreaks of hepatitis A are traced to person-to-person transmission. Fewer cases are associated with eating shellfish harvested from waters contaminated by human sewage or by eating raw food made by ill food handlers with poor hygiene. About 150,000 people in the United States are infected each year with hepatitis A.

Infections with hepatitis A are acute. This means that the infection lasts for less than 6 months and resolves itself without the help of medical treatment. People with hepatitis A virus infection may not have any signs or symptoms of the disease. Older people are more likely to have symptoms than children. If symptoms are present, they usually occur abruptly and may include fever, tiredness, loss of appetite, nausea, abdominal discomfort, dark urine and jaundice (yellowing of the skin and eyes).

A vaccine is available to prevent HAV infection. The vaccine is recommended (before exposure to hepatitis A virus) for people who are more likely to get hepatitis A virus infection or are more likely to get seriously ill if they do get hepatitis A. Immune globulin is also available. This is a preparation of antibodies that can be given before exposure for short-term protection against hepatitis A and for

people who have already been exposed to hepatitis A virus. Immune globulin must be given within 2 weeks after exposure to hepatitis A virus for maximum protection.

The hepatitis A vaccine is recommended for:

- People traveling to or working in countries that have high or intermediate rates of hepatitis A
- Children in communities that have high rates of hepatitis A and periodic hepatitis A outbreaks
- Men who have sex with men
- Illegal-drug users (injection and non-injection)
- People who have occupational risk for infection (i.e., persons who work with HAV-infected primates or with HAV in a laboratory setting; no other occupations have been associated with HAV infection)
- People who have chronic liver disease
- People who have clotting-factor disorders

## WHAT EMPLOYERS NEED TO KNOW ABOUT HEPATITIS

### **Hepatitis can be prevented—or at least detected early.**

A vaccine exists for prevention of hepatitis A and B. Most new cases of hepatitis C infection are caused by high-risk behaviors such as intravenous drug use, and education may prevent such behaviors. For hepatitis B and C, early detection is essential for reducing damage to the liver.

### **Complications from hepatitis may be prevented or slowed.**

Avoiding alcohol and other things that may damage the liver can prevent or slow complications. Patients with hepatitis should also learn about available treatment options and about how to avoid spreading the disease to others.

### **Complications from hepatitis are costly.**

Hepatitis A, B, and C together account for more than \$1.8 billion per year in costs associated with medical care and work loss. This does not include the cost of liver transplants.

A recent analysis concluded that people with HCV consume at least \$15 billion per year for all of their medical care. Without effective curative treatment, total healthcare costs for these patients will peak at an estimated \$26 billion (in current dollars) per year in about 2021. The disability losses associated with HCV alone will cost employers billions of dollars.

Some of the costs of end-stage liver disease include:

- Mean charge per hospitalization due to variceal<sup>4</sup> bleeding: \$30,980
- Mean charge per patient who requires a shunt during hospitalization: \$53,894
- Mean charge for liver transplantation: \$250,000
- Mean charge per patient who died while hospitalized with end-stage liver disease: \$110,576<sup>5</sup>

### **Hepatitis can be treated and managed, with cost-effective results.**

Hepatitis A is generally managed with supportive care during the 2-6 week acute infection; it does not cause chronic liver disease. Hepatitis B may become chronic in 5-10 percent of cases, and may be treated with Interferon alfa-2b or Lamivudine, both of which inhibit viral replication.

Hepatitis C can also be managed medically. The average cost per patient for combination therapy (interferon plus ribavirin) is \$8,000 to \$10,000; necessary testing and medical follow-up can increase the cost to \$15-\$20,000. In many patients, treatment with combination therapy either eliminates the virus or reduces its impact on the liver. Enhanced versions of combination therapy are expected to provide even greater rates of viral clearance.

*Shell/Alliance has a very diverse, widely dispersed workforce. The company has had 6 or 7 cases of hepatitis C identified over several months. The cases came to light because of disability/fitness for duty issues. For example, one employee lost more than eight months of work time during treatment for hepatitis C. Others tolerated treatment well, but the disease itself led to intermittent absences, which can be challenging to manage.*

4 An enlarged or convoluted vein, artery or lymphatic vessel.

5 Wong et al, *Archives of Internal Medicine* 1997; 157:1429.

A recent cost-benefit analysis, supported by funding from Schering-Plough Corp., manufacturers of the only currently-licensed combination therapy, estimated that every \$1 spent on combination therapy could result in about \$4 of medical cost savings. In fact, for a typical patient with hepatitis C, curative treatment (combination therapy) pays for itself within 10 years—before considering avoided disability costs and lost productivity costs. This considers the total healthcare costs of both patients who respond and those who don't respond to treatment as well as the present value of future healthcare spending.<sup>6</sup>

The same authors maintained that if all of the eligible population were working and were treated with combination therapy, employers could save \$4-5 billion in lost work-time costs over the course of the epidemic.

<b>ECONOMIC BURDEN OF VIRAL HEPATITIS<sup>7</sup></b>	
Hepatitis A .....	\$300 million
Hepatitis B.....	\$900 million
Hepatitis C .....	\$600 million
Total per year .....	\$1.8 billion

## WHAT EMPLOYERS CAN DO ABOUT VIRAL HEPATITIS

### Increase awareness.

Population-based programs should work to educate *all* employees about the risk factors and symptoms of hepatitis. The primary goal is to create awareness and foster an environment that encourages people to seek testing if they have known risk factors. Employees should learn how to prevent exposure to the hepatitis viruses and how and where to be screened if they feel they may be at risk due to past exposure. Potential occupational risk factors should also be thoroughly addressed.

### Educate providers.

Working through the health plan, efforts should be made to educate providers, especially those in primary care, about risk factors, disease progression and cost-effective treatment and/or management strategies for hepatitis.

### Promote patient compliance.

Employees and dependents with hepatitis can be encouraged to comply with treatment plans by ensuring confidentiality, offering appropriate health plan coverage, providing support services, and allowing flexible work schedules as needed.

### Improve patient care.

In many communities, there is a dearth of physicians knowledgeable in the treatment of hepatitis, which has led to long patient waiting lists. Health plans may need to recruit hepatologists or other specialists to alleviate this access problem. Employers can also provide community support through community organizations, confidential clinics, and rehabilitation organizations. For more on working with community groups, see “*Employer-Community Partnerships*,” below.

### Change risk-prone behaviors.

Employers can support drug and alcohol prevention programs through their EAP, in the community, and via school/youth interventions.

### Vaccinate at-risk groups.

Employers can cover vaccination for hepatitis A and B, promote community vaccination efforts, educate high-risk groups about the availability and importance of vaccinations, and provide referrals to vaccination programs. Vaccination is among the most cost-effective prevention efforts available in health care today.

The **Coca-Cola Company** provides travelers’ immunizations at no cost to the employee. The company hopes to soon provide immunizations at an on-site facility, rather than through an off-site travel clinic. The expectation is that this will help with compliance for vaccines that require multiple doses.

6 Dulworth, S., Patel, S., Pyenson, B. *The hepatitis C epidemic: Looking at the tip of the iceberg*. Milliman and Robertson, 2000.

7 In 1999 dollars, including direct medical costs and lost productivity. Source: Centers for Disease Control and Prevention.

### **Minimize occupational risks.**

Potential occupational risk factors should be thoroughly addressed. An infection control program should include:

- bloodborne pathogens training;
- vaccinations;
- surveillance plan;
- notification process for exposures;
- investigation process and report of injury;
- post-exposure protocols;
- referral to supportive services; and
- workers' compensation claims process.

### **Managing employees with hepatitis: case management, medical management, health maintenance and work maintenance.**

Managing employees with hepatitis requires *case management, medical management and post-treatment health maintenance*, all of which would likely be coordinated through the health plan. Case management is crucial for ensuring follow-up on positive test results and coordinating the many services that may be needed. Medical management includes ensuring compliance with treatment and tracking its outcome, help coping with side effects, promoting self-care and behavior change, and minimizing the risk of transmission to others. A post-treatment health maintenance plan encourages continued self-care and involvement with peer support groups, provides information about and access to new developments in treatment, and supports employees in maintaining their work status.

*Work maintenance* requires partnership and communication between the employer and health care providers. Physicians need to understand the essential functions of the employee's job to determine whether symptoms and side effects can be medically managed or will require time off from work. Employers, meanwhile, need to consider whether temporary accommodations are possible and, if not, how to guide workers through the short- or long-term disability process.

Before initiating any of these programs, it is crucial to assess needs and gauge the level of organizational support. A comprehensive needs assessment requires careful review of current health care, disability and workers' compensation claims data. Confidentiality concerns may hinder this process; if so, national data can provide a starting point for estimating a given company's status. Aggregate health risk assessment data may also prove helpful.

If hepatitis education and management initiatives are to be successful, the organization must also have the infrastructure to support them. For example, absence, disability, and return-to-work policies must be aligned with the goals of the program and health plan coverage should include vaccination, screening, counseling, and access to knowledgeable providers. The initiative should be integrated into existing programs, such as the EAP, on-site clinical services, health promotion and disease management, and infection control programs.

*“The most visible people are those who don't tolerate treatment or its side effects well. Most patients, in my experience, do not need much time off from work, provided their symptoms are managed by a knowledgeable physician.”*

Jorge Herrera, M.D.

## EMPLOYER-COMMUNITY PARTNERSHIPS

Partnering with public health or community organizations can be a powerful way to raise awareness of hepatitis and reduce its impact in the community. Employees may come and go, but the community will remain the pool from which employees are drawn. Employers and public health leaders therefore share a mutual interest in promoting healthy communities, and have much to gain from working together toward that end.

The State of California recently launched a community-based effort to educate individuals about the risks and consequences of hepatitis C. Lela Folkers, of the State’s Department of Health Services, is spearheading the process, which includes very diverse stakeholders working together with a common purpose. The program will soon include employers; in the meantime, the California experience offers lessons and inspiration for any employer about involvement in community-based action.

In community-based initiatives, all interest groups participate to identify challenges; people from all perspectives give input on the issues; and individuals have the power to make informed decisions. This approach allows the community to examine its challenges and identify the assets it can bring to bear. Building on community strengths to solve problems ensures that emerging solutions have the support and ownership necessary to carry them through.

Community action involves numerous challenges, as well. In addition to significant time and energy, it requires “give and take” from all members to achieve consensus. Members must work with people and organizations that may be outside their comfort zone, and must be willing and able to discuss sensitive—perhaps even politically-charged—issues.

### PATIENT TO HEALTHCARE WORKER VIRUS TRANSMISSION

Virus	Percentage infected after sharps injury with infected blood	Vaccine preventable?	Post-exposure prophylaxis available?
Hepatitis B (HBV)	>30% <sup>8</sup>	yes	yes
Hepatitis C (HCV)	1.8%	no	no
Human Immunodeficiency Virus (HIV)	.3%	no	yes

<sup>8</sup> if source has the hepatitis B “e” antigen, and the person injured is not immune



## ROUNDTABLE WRAP-UP: COMMENTS AND QUESTIONS FROM PARTICIPANTS

### *Community/Public Health Partnerships*

Use the local public health systems. Don't write off "the bureaucracy;" instead, help lobby to make it work better.

Community group process can seem interminable to employers, who must have results for upper management.

Involve employers in state plans to address hepatitis C.

The CDC needs health care data from the private sector to make recommendations.

Community groups want to know how best to approach employers for money or to form partnerships related to chronic diseases like hepatitis.

### *Employer/Worksite Initiatives*

Be sure EAPs are properly positioned for involvement in the psychological consequences of chronic diseases—they can be an excellent resource for referrals to support groups.

As with HIV, employers need to educate workers that hepatitis C is NOT casually transmitted.

The Healthy Communities/Healthy Cities movement is a national campaign. It provides a support infrastructure for health education, awareness, and action on the local level. Employers are involved in this, and could use it as a vehicle for hepatitis education.

The workplace provides a "captive audience" for risk assessment and education. For example, employers could provide hepatitis education during annual flu vaccine programs.

Use your existing health and case management infrastructure; integrate hepatitis efforts there for best results.

### *Health Plans/Providers*

A primary care/specialist partnership is ideal for treatment.

Employers could consider sponsoring training days for their preferred providers.

Vaccination of adults is often overlooked by employers. Employers and providers need help in deciding whom to immunize.

### *Business Case*

Employers need to be convinced of the benefit of involvement with hepatitis, since hepatitis A and B are entirely preventable (vaccine available) and chronic infection with hepatitis B or C are long-term diseases in an increasingly transient workforce.

Employers need to know the prevalence of hepatitis in the workforce, how many should be vaccinated against hepatitis A or B (and how many get vaccinated), how many get treated, and how many of those lose work time.

There is a real need for guidelines regarding typical time lost during hepatitis treatment—most patients are NOT on disability.

It would be helpful if employers were able to quantify time lost to care for dependents with hepatitis.

## APPENDIX A: BUSINESS CONSULTATION PARTICIPANT LIST

Faiyaz Bhojani, MD Shell & Alliance Companies	Lela F. Folkers State of California, Dept. of Health Services	Jamie Pickering, RN Liberty Mutual Insurance
Laurie Bodenheimer Office of Personnel Management	Julie Gonen WBGH	T. Lynn Riggs, PhD Centers for Disease Control and Prevention
Joanna Buffington, MD Centers for Disease Control and Prevention	Jorge L. Herrera, MD University of South Alabama	Elizabeth Scardino Bank One
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Barbara Edwards Texas Instruments	Susan Murray Young Health and Medical Writer	
Mary Jane England, MD WBGH	Janet Pfleeger Office of Personnel Management	

## APPENDIX B: RESOURCES

### CENTERS FOR DISEASE CONTROL AND PREVENTION

Website: [www.cdc.gov/hepatitis](http://www.cdc.gov/hepatitis)  
Toll-free information line: 1-888-4HEPCDC  
Web-based HCV training for health care professionals: [www.cdc.gov/hepatitis](http://www.cdc.gov/hepatitis)  
Brochures, posters, slide sets, videos

### AMERICAN LIVER FOUNDATION

1425 Pomptom Ave.  
Cedar Grove, NJ 07009  
1-800-GO LIVER (1-800-465-4837)  
[gi.ucsf.edu/alf/alffinal/homepagealf.html](http://gi.ucsf.edu/alf/alffinal/homepagealf.html)

### HEPATITIS C FOUNDATION

1502 Russett Drive  
Warminster, PA 18974  
215) 672-2606  
[www.hepcfoundation.org](http://www.hepcfoundation.org)

### HEPATITIS FOUNDATION INTERNATIONAL

30 Sunrise Terrace  
Cedar Grove, NJ 07009-1423  
1-800-891-0707  
[www.hepfi.org](http://www.hepfi.org)

### NATIONAL DIGESTIVE DISEASES INFORMATION CLEARINGHOUSE

2 Information Way  
Bethesda, MD 20892-3570  
301-654-3810  
[www.niddk.nih.gov](http://www.niddk.nih.gov)



