Speakers: Medical Board of California, Education Committee
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Gail Bolan, M.D.
Chief, STD Control Branch, California Department of Public Health

Dr. Bolan is the chief of the STD Control Branch of the California Department of Public Health and has served as co-chair of the California Chlamydia Action Coalition. Dr. Bolan also has directed the nationally funded California STD/HIV Prevention Training Center for the past 20 years.

Dr. Bolan served as the director of the San Francisco City and County STD Prevention and Control Program and as medical director of City Clinic, the San Francisco STD Clinic, from 1987 to 1997. Currently, she serves on the Board of the American Social Health Association and the CDC CID Board of Scientific Counselors. Previously, Dr. Bolan served as chair of the National Coalition of STD Directors (NCSD) and served on the CDC HIV/STD Prevention Advisory Committee and the American STD Association (ASTDA) Executive Committee as well as on numerous regional and local committees. Dr. Bolan has published extensively in the field of STD epidemiology, prevention, and control.

Dr. Bolan earned her medical degree from the Dartmouth Medical School in Hanover, New Hampshire. She completed her training in internal medicine at the University of Virginia, Charlottesville, and subspecialty training in infectious diseases at the Tufts New England Medical Center in Boston and the Stanford Medical Center. She trained in medical epidemiology as an Epidemic Intelligence Service (EIS) officer at the Centers for Disease Control and Prevention (CDC) in the Respiratory and Special Pathogens Branch.

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Dr. Cheung is a clinical professor of internal medicine and gastroenterology/hepatology at the UC Davis School of Medicine, and member of the clinical faculty at the Stanford University School of Medicine. He has been involved in clinical practice, research, and teaching for 30 years and is active on the national and international levels in a number of efforts in the fight against hepatitis. Dr. Cheung is chairman of the American Liver Foundation's National Asian Leadership Advisory Council. He is also president of the Chinese American Physicians Society, where he chairs the hepatitis committee.

Dr. Cheung received his medical degree from Taipei Medical University in Taiwan, received medical training in Tri-service General Hospital and Central Clinic in Taipei as well as at Catholic Medical Center in New York, and served as a fellow in digestive diseases and nutrition at the University of Louisville.

Samuel So, M.D.
Professor in the School of Medicine and Professor of Surgery, Stanford University

Dr. So is the Lui Hac Minh Professor in the School of Medicine and Professor of Surgery at Stanford University. He is the founder and director of the Stanford Liver Cancer Program and the non-profit Asian Liver Center. Dr. So is spearheading a multidisciplinary effort that aims to identify new strategies for eliminating hepatitis B worldwide and reducing the threat of liver cancer. In 2008, he founded APAVH (Asia and Pacific Alliance to Eliminate Viral Hepatitis), a new global initiative. His current bench research efforts focus on the discovery and evaluation of novel diagnostic markers and new therapies for liver cancer.

Dr. So is a member on the Board of Population Health and Public Health Practice of the Institute of Medicine, and a co-author of the IOM report on Hepatitis and Liver Cancer released in 2010. He chairs the National Hepatitis B Task Force. In 2009, the California API Joint Legislative Caucus presented Dr. So with the API Heritage Award for Excellence in Science. In 2010, he received the Outstanding American by Choice Award, a national recognition from the United States Citizenship and Immigration Services for making significant contributions to the U.S. and global community.

Dr. So is a graduate of the University of Hong Kong, Faculty of Medicine.

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Dr. Sylvestre is an assistant clinical professor of medicine at the University of California, San Francisco. A specialist in addiction medicine, she is a leading medical researcher on hepatitis C treatment in addicted patients. She is the 2004 Recipient of the California Society of Addiction Medicine's Vernelle Fox Award.

Dr. Sylvestre is a graduate of Harvard Medical School and trained at the Brigham and Women's Hospital in Boston and the Sloan Kettering Institute in New York City.

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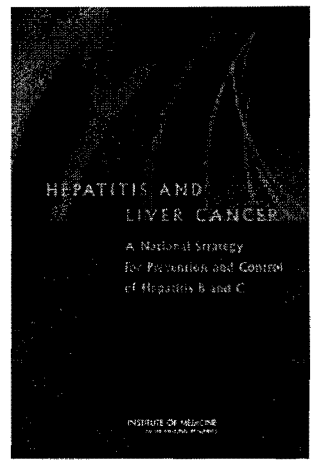
Hepatitis and Liver Cancer

Information for Health Care Providers



Hepatitis B and hepatitis C are major public health problems in the United States. Millions of people have these treatable infectious diseases, most do not know it, and about 15,000 people die each year from liver cancer or liver failure associated with these diseases. In the United States, chronic hepatitis B and C are more common, and claim more lives each year, than HIV/AIDS.

Chronic hepatitis B and C persist despite the current federal, state, and local efforts that are directed at their prevention and control. Therefore, the U.S. Centers for Disease Control and Prevention (CDC), along with several other government and private organizations, sought guidance from the Institute of Medicine (IOM) in identifying missed opportunities for addressing hepatitis B and C. The IOM report, *Hepatitis and Liver Cancer: A National Strategy for Prevention and Control of Hepatitis B and C*, offers recommendations on what health care providers, including primary care providers, can do as part of a national effort to address this epidemic.

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Finding and Treating Patients with Chronic Hepatitis B and C

For primary care providers in the United States, there is a good chance that patients in their practices have unrecognized chronic hepatitis B and C. These infections can be treated, and in some cases, cured, but at-risk people first must be identified so that they can receive serological testing. Therefore, new strategies are needed to find chronically infected people and get them the best possible care.

Boosting Knowledge about Chronic Viral Hepatitis

Among key steps, health care providers need to become more knowledgeable about chronic viral hepatitis. An estimated 3.5 million to 5.3 million people—roughly 1 to 2 percent of the nation's population—have chronic hepatitis B or C. About three-quarters of them are infected with hepatitis C virus (HCV); the rest with hepatitis B virus (HBV). In some people, HBV or HCV infection is noticeable in the acute phase, typically within a few months of the exposure. In many (though not all) people, the infection becomes chronic. These people frequently remain unaware of their infection for years, often until they develop symptoms of liver cirrhosis or a type of liver cancer called hepatocellular carcinoma.

Some population groups are at higher risk of infection. For hepatitis C, high-risk groups include users of illicit drugs, especially injected drugs. The first few years of use constitute an especially risky period in which the rate of infection can hit 40 to 60 percent. As use continues, infection rates can rise to 65 to 90 percent. Other high-risk groups include people who received a blood transfusion before 1992 and people who have known exposures to HCV, such as health care workers who have been stuck with contaminated needles. There is no licensed vaccine for hepatitis C.

There are effective hepatitis B vaccines, which have helped decrease the incidence of infection, but about 43,000 people still develop acute hepatitis B each year. This total includes some 1,000 infants who are infected during birth to HBV-positive mothers. Among adults, the group at highest risk for chronic hepatitis B are people who have immigrated to the United States from regions where HBV is endemic, especially Asia, the Pacific Islands, and sub-Saharan Africa. Other high-risk groups include users of illicit injected drugs; men who have sex with men; inmates of correctional facilities who often engage in risky behaviors; people who face occupational or household exposure to HBV or HBV-infected persons; and people who travel to countries where hepatitis B is common.

Guidance on Increasing the Hepatitis B Vaccination Rate

The federal Advisory Committee on Immunization Practices (ACIP) recommends that all infants and children and all adults in high-risk groups receive the hepatitis B vaccine—typically administered in a series of three doses. But gaps in vaccine use remain across all age groups, and the IOM report offers recommendations for expanding coverage.

To help prevent infections in newborns, the ACIP recommends that infants born to infected mothers receive the first dose of vaccine within 12 hours of birth. But these first doses often are missed or delayed due to a lack of clear delivery-room policies. As a solution, the IOM report recommends that health care institutions and providers establish policies to ensure that full-term infants born to HBV-infected women receive the first dose of vaccine—in conjunction with hepatitis B immune globulin (HBIG)—in the delivery room as soon as they are stable and washed. Infants born to mothers whose status is unknown should receive the first dose within 12 hours of birth, and if further tests show a mother is infected, her infant should receive HBIG as soon as possible (no later than one week after birth). Infants born to uninfected mothers should receive the first dose of vaccine before hospital discharge.

The ACIP also calls for vaccination of all children and young adults under 19 years old. School-entry mandates have proven effective in increasing hepatitis B vaccination rates, but there is variability in coverage among states. Additionally, there are racial and ethnic disparities in vaccination rates—Asian and Pacific Islander, Hispanic, and black children have lower vaccination rates than white children. To overcome such disparities, the IOM report recommends that all states mandate that the hepatitis B vaccine series be completed or

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in progress as a requirement for school attendance.

Among adults, only about half of those at high-risk for HBV infection currently receive the vaccine. Health care providers can help improve identification of at-risk adults by routinely seeking their patients' risk histories through direct questioning and self-assessment. In addition, organizations that serve high-risk people should offer the hepatitis B vaccination series, and correctional institutions should offer vaccinations to all incarcerated persons.

Guidance on Screening and Testing for HBV and HCV Infections

As most chronically infected people are unaware of their infection, it will be necessary to expand screening programs to identify those who are infected and help them find medical services. Health care providers can serve as the foundation for improved screening efforts. This will require providers to be knowledgeable about chronic HBV and HCV infections and to be able to identify patients who are at risk because of their behavior or previous potential exposure to the viruses. Though generally applicable, this requirement is particularly important for providers who specifically serve at-risk populations.

People identified through screening as being at high-risk for chronic viral hepatitis should receive testing to detect a history of exposure or to ascertain whether a person has HBV or HCV infection. While the tests to determine if someone is infected with HBV and HCV are relatively straightforward, the follow-up tests to determine the stage and activity of the diseases are more complex. The IOM report provides clinicians with specific, detailed information on interpretation of test results. In some settings that serve high-risk populations, it may be appropriate to test all patients for HBV and HCV at least once and to repeat testing on those patients with continued high-risk behaviors.

Guidance on Medical Management and Treatment

Put simply, the goals of medical management of chronically infected people include decreasing their risk of developing liver cirrhosis and hepatocellular carcinoma and preventing virus transmission to others. But services for addressing viral hepatitis often are fragmented, which means the full spectrum of services is seldom easily accessible. The barriers can be physical (as when screening and testing are in a different location from medical-management services), financial, or cultural.

The report identifies a number of steps that health care providers and institutions can take to improve the availability of services for people with chronic viral hepatitis. These efforts focus on providing five core services: outreach and awareness, prevention of new infections, identification of infected people, social and peer support for counseling and care, and medical management.

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As the nation's largest purchaser of health insurance, the federal government is positioned to lead in developing and enforcing guidelines to ensure that the people it serves have access to screening, testing for HBV and HCV, and appropriate medical management. Among specific actions, programs such as Medicare and Medicaid should incorporate guidelines for screening for hepatitis B and C as a required component of preventive care. In addition, the federal government should ensure that federally funded community health facilities and other health care settings that often serve at-risk people have adequate resources for provision of comprehensive viral hepatitis services.

Conclusion

Despite being preventable diseases, hepatitis B and C continue to be serious health problems in the United States. They can both be prevented in people at risk and successfully managed in people already chronically infected. Improved knowledge and awareness of these diseases among health care providers, including primary care providers, will lead to increased identification of infected people who can then receive appropriate medical management. Providers should build screening, testing, and vaccination strategies into their routine practices. Without concerted action, thousands more Americans will die each year from liver cancer or liver failure related to these diseases.

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