

Reducing Health Disparities: Using Health Risk Assessments to Improve Viral Hepatitis Screening and Immunization

Health and Economic Burdens of Viral Hepatitis

Viral hepatitis is often referred to as a silent epidemic. Most individuals with hepatitis B or hepatitis C do not know they are infected and that with treatment they may be able to avoid deadly or disabling liver disease or cancer. While the exact number is unknown, national estimates indicate that more than 700,000 people in California are living with viral hepatitis.¹

Hepatitis B is a liver disease caused by the hepatitis B virus (HBV) that ranges in severity from a mild (acute) illness, to a serious long-term (chronic) illness. HBV is spread through contact with blood, serum, or sexual fluids. Most commonly spread through unprotected sexual intercourse, HBV can also be transmitted from mother to child at birth, by contaminated drug injecting equipment, or through needle stick injuries. One in four people who become chronically infected during childhood die from HBV-related liver disease or liver cancer.² Hepatitis B infection is preventable through a series of three injections. There is no cure, but there are treatments to slow the virus and decrease the risk of liver damage.

Hepatitis C virus (HCV) is the most common blood-borne communicable disease in California and the leading cause of liver transplantation in the United States.³ Currently, HCV is spread through blood contact, most often among injection drug users, but also through sexual transmission and needle stick injuries. Prior to screening of the blood supply for HCV, which began in 1992, the virus spread through blood transfusions, blood products, and organ transplants. There is no vaccination

against HCV; however, some individuals with HCV can be successfully treated.

Viral hepatitis affects individuals of all races, ethnicities, and cultures. However, HBV and HCV are both associated with significant racial and ethnic disparities. Despite being less than five percent of the U.S. population, over half of the 1.25 million Americans with chronic HBV are Asian/Pacific Islanders (APIs), including many who have emigrated from countries with high rates of HBV infection.⁴ While 1 in 1,000 U.S. Caucasians are estimated to have chronic HBV infection, that number is estimated at 1 in 10 in the API community.⁵ Many adults with chronic hepatitis B were infected by their mothers at birth, often in their country of origin.⁶ HBV is also more common among men who have sex with men and among injection drug users than in the general population.

Hepatitis C infection is significantly more common among those born between 1945 and 1964 than in the general population.⁷ African Americans, Hispanics, and American Indians/Alaskan Natives have higher rates of HCV infection than Caucasians.⁸ An estimated 34 percent of California's prison population has chronic HCV.⁹ According to the U.S. Department of Health and Human Services (HHS), "these health disparities are reflected in viral hepatitis-associated morbidity and mortality; for example, liver cancer incidence is highest among APIs and is increasing among African Americans, persons aged 46-64 years, and men."¹⁰

The California Department of Public Health (CDPH) estimated that California spent \$2 billion on hospitalizations for HBV

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Health Risk Assessment questions are designed to determine the need for hepatitis B and/or hepatitis C testing based on screening guidelines of the Centers for Disease Control and Prevention (CDC).²² The types of risk assessed include:

- **Receipt of a blood transfusion or blood products prior to 1992**
- **History of injection drug use (even once, many years ago)**
- **Sexual health risks (i.e., more than one sexual partner in the past six months)**
- **Country of birth (i.e., in a country where hepatitis B prevalence is 2% or higher)**
- **Occupational exposure to blood or infectious bodily fluids**
- **Signs or symptoms of liver disease (i.e., elevated liver enzymes of unknown cause)**

In addition to assessing risks, determining hepatitis A and hepatitis B vaccination history can help identify the need for immunization, per the guidelines of the Advisory Committee on Immunization Practices (ACIP).²³

and HCV in 2007.¹¹ Most of the costs were borne by public programs, including Medi-Cal and Medicare. Persons born from 1945 to 1964 have a higher prevalence of HCV than the general population and are beginning to enter Medicare.¹² Without changes in current viral hepatitis diagnosis and treatment practices, total annual HCV-related Medicare costs are expected to increase five-fold from 2009 to 2029.¹³

Vaccination against hepatitis B, as well as prevention programs, screening, early detection, and early treatment for both HBV and HCV can help prevent these cost and health consequences. Hepatitis B vaccination is mandated in California for students entering public schools, colleges, and universities, and the drop in new infections in children has been dramatic. A federally funded program that provided California with free hepatitis B vaccines for at-risk adults demonstrated the feasibility of such an effort.¹⁴ Since no vaccine is available to prevent HCV infection, the Institute of Medicine (IOM) and the CDPH recommend (1) outreach and education to injection drug users (IDUs) through drug treatment providers, homeless programs, and clinics, and (2) a widening of safe, legal access to sterile syringes through needle exchange programs and pharmacy provision of syringes to reduce syringe sharing and disease transmission among IDUs.¹⁵

In 2010, the CDPH and the IOM both released reports calling for improved access to screening for HBV and HCV and immunization for HBV.¹⁶ Since then, a rapid test for HCV has been approved by the Food and Drug Administration (FDA). Two new HCV drugs recently received FDA approval, which should greatly improve treatment effectiveness and reduce the length of treatment for many.¹⁷ If individuals do not know they are infected, however, they will not be able to take advantage of such new tests and treatments. Among API men in California, liver cancer ranks as a leading cause of cancer death.¹⁸ Without improved screening and treatment, the number of liver cancer cases in the U.S. is expected to rise 59 percent between 2010 and 2030, with the greatest increases expected in the Hispanic and API communities.¹⁹

Health Risk Assessments

Health care providers use health risk assessments (HRAs) to collect information about an individual's medical, social, and family history and health behaviors to help determine an individual's health status and risk of future disability and disease. Based on the results, health care professionals provide individuals with feedback to increase their health awareness; recommend behavior change; and determine the need for testing, preventive services, and care.

HRAs Can Assess the Need for Viral Hepatitis Vaccination or Screening

Risk assessments have been effectively used to identify individuals in need of hepatitis B immunizations and hepatitis B or C screening. The California and New York State Departments of Public Health have demonstrated the effectiveness of an integrated risk assessment questionnaire to assess risk for HIV and other sexually transmitted diseases (STDs), including HBV and HCV.²⁰ The assessment tool is designed to be self-administered and can be used in a variety of settings where immunizations or screening are available. The 2011 HHS Viral Hepatitis Action Plan calls for the implementation of "routine viral hepatitis testing as part of the standard of care in a reformed health-care system."²¹ The use of HRAs to identify those at risk of viral hepatitis is a critical component of integrating viral hepatitis testing into primary care, other health care, and community settings.

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Figure 1. Hepatitis B and C: Patient Self-Administered Risk Assessment

Hepatitis B and C are transmitted in different ways. Most people do not know they are infected until they are tested. Hepatitis vaccination and testing are available at this clinic. Please check if these statements apply to you.

I. Have you been exposed to hepatitis B?

- Were you born in an area of the world where at least two percent of the population has hepatitis B (Asia, Africa, the Amazon Basin in South America, the Pacific Islands, Eastern Europe, or the Middle East)?
- Were you not vaccinated for hepatitis B as an infant?
- Was your mother infected with hepatitis B when you were born?
- Are you pregnant?
- Are you HIV-positive, have an HCV infection, or on immunosuppressive therapy?
- Did you have abnormal liver enzyme test results for an unknown reason?
- Have you ever been on hemodialysis?
- Have you had a sexual partner infected with hepatitis B?
- Have you lived in the same house with someone infected with hepatitis B?
- Are you a man who has sex with men?
- Have you ever injected illicit drugs or shared drug injection equipment?
- Have you shared needles with someone infected with hepatitis B?
- Are you a health care or public safety worker with a known, recent occupational exposure to hepatitis B-infected blood or bodily fluids (e.g., through an accidental needle stick)?

- None of the above
 Yes, at least one of the above applies to me

II. Do you need to be vaccinated against hepatitis B?

- Are you under 18 but have not been vaccinated against hepatitis B?
- Have you had more than one sexual partner in the past six months?

- Are you seeking evaluation or treatment for a sexually transmitted disease?
- Are you a health care or a public safety worker with reasonably anticipated occupational exposures to blood or infectious body fluids?
- Do you have chronic (long-term) liver disease?
- Do you have end-stage renal disease?
- Are you planning to travel to a country where at least two percent of the population has hepatitis B (Asia, Africa, the Amazon Basin in South America, the Pacific Islands, Eastern Europe, or the Middle East)?
- Do you live or work in a facility for developmentally disabled persons?
- Do you wish to be protected from hepatitis B infection?

- None of the above
 Yes, at least one of the above applies to me

III. Have you been exposed to hepatitis C?

- Have you ever injected illicit drugs, even once, many years ago?
- Did you receive donated blood or donated organs before 1992 and/or blood clotting products before 1987?
- Have you ever been on hemodialysis?
- Are you a health care or public safety worker with a known, recent occupational exposure to hepatitis C-infected blood or bodily fluids (e.g., through an accidental needle stick)?
- Are you HIV-positive?
- Have you had signs or symptoms of liver disease (e.g., abnormal liver enzyme tests, jaundice)?
- Was your mother infected with hepatitis C when you were born?

- None of the above
 Yes, at least one of the above applies to me

For administrative use only:

- If yes to I, order test for HBV (HBsAg and anti-HBs)
- If yes to II, administer first dose of HBV vaccine
- If yes to III, order test for HCV (anti-HCV)

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Policy Recommendations

Implementation of the Affordable Care Act provides an opportunity for California to improve its response to the viral hepatitis epidemics and reduce disparities in morbidity and mortality. The following recommendations are designed to ensure that individuals are screened in an efficient and accessible manner, with appropriate follow up.

1. Include a Health Risk Assessment with a viral hepatitis component in Medi-Cal and private health insurance plans.

Individuals enrolled in Medi-Cal or private insurance plans would benefit from the availability of HRAs to help them identify ways to lower health risks. Adding a few questions to existing HRAs used in these plans would greatly increase the number of persons with HBV and HCV who are aware of their infection. Since early treatment can reduce premature deaths and prevent costly complications, health care costs can be reduced by identifying those infected with HBV or HCV at an earlier stage. Also, identifying those who should be immunized against HBV can prevent future infections and associated costs. HRAs should be designed in a way that does not require patients to disclose the exact risk factor, to avoid triggering resistance based on embarrassment, stigma, or cultural barriers (see Figure 1 for sample assessment developed by the California Department of Public Health).²⁴

2. Ensure that HRAs are accessible to patients via multiple venues, in languages representative of California's population.

HRAs could be used in public and private hospitals and clinics, federally qualified health centers (FQHCs), and community settings, in particular those frequented by high-risk individuals (i.e., methadone clinics and other drug treatment programs, syringe services programs, STD

clinics, prisons and jails). Formats could include waiting area kiosks, and paper and online options. To improve health equity, HRAs would need to be available in multiple languages spoken in the community. For individuals unable to complete a HRA on their own (e.g., those with limited written language skills), clinic/agency staff or interpreters who could communicate in the individual's native language and provide assistance would be required. Training of staff on how to interpret the HRA and communicate next steps would be important to ensure effective use of results. Data from the HRAs could also be used to assess racial and ethnic differences in risk factors within a community, which could point to the need for targeted prevention and screening efforts.

3. Include HBV and HCV testing in California's "essential benefits package" and provide HBV immunization, HBV testing, and/or HCV testing for those who are identified through the HRAs as benefiting from those services, in keeping with national recommendations.

Many insurers are now required to cover HBV immunization at no cost to insured individuals who are recommended for vaccination by the Advisory Committee on Immunization Practices. California will soon define which preventive services will be included in the "essential benefits package" for persons newly eligible for Medi-Cal or enrolled in health plans offered by the Health Benefit Exchange. It is important that HBV and HCV screening be included in this benefits package. California should provide funding to ensure that those at risk can receive HBV immunization and HBV and HCV screening. Early detection and treatment of viral hepatitis is urgently needed to protect families and individuals from disabling disease, reduce disparities in morbidity and mortality, and protect taxpayers and insurers from unnecessary costs.



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The California Hepatitis Alliance (CalHEP) is an alliance of more than 90 organizations dedicated to reducing the scope and consequences of the hepatitis B and C epidemics in California. CalHEP is an initiative of the Center for Health Improvement (CHI), an independent, nonprofit health policy center dedicated to improving population health and encouraging healthy behaviors.

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