National Taskforce on Hepatitis B Expert Panel: Focus on Asian Americans and Native Hawaiians & Pacific Islanders

Goals & Strategies to Address Chronic Hepatitis B

This document, built upon the proceedings of the hepatitis B track at the Asian American and Pacific Islander Health Summit in September 2006, lays out a national action agenda to eliminate hepatitis B in the Asian American (AA) and Native Hawaiian and other Pacific Islander (NHOPI) communities with broad goals and strategies that permit focus on specific sub-strategies. The components of this agenda are understood to follow as much as possible the recommended National Standards for Culturally and Linguistically Appropriate Services in Health Care. The gap in life expectancy between black and white Americans has narrowed since 1985, but significant racial and ethnic disparities remain (and socioeconomic disparities have increased) across a wide range of health measures. The 2007 National Healthcare Disparities Report found that disparities related to race, ethnicity and socioeconomic status continue to pervade the American health care system. The report also states that since the causes of disparities and their prioritization vary across the country, "successfully addressing disparities often requires focused community-based projects that are supported by detailed local data." Eliminating health care disparities is a priority of the U.S. Department of Health and Human Services and the second goal of *Healthy People 2010*. The risk of many diseases and adverse health conditions is reduced through preventive actions. A culture of wellness diminishes debilitating and costly health problems. Individual health care is built on a foundation of responsibility for personal wellness, which includes participating in regular physical activity, eating a healthy diet, taking advantage of routine medical screenings, and making healthy choices to avoid risky behaviors. Hepatitis B, in particular, remains a health disparity and one that is highly preventable since there is an effective vaccine.

Chronic Hepatitis B Infection and Liver Cancer

Hepatitis B is the world's most common serious viral infection of the liver and can cause premature death from liver disease or liver cancer. Hepatitis B virus (HBV) is recognized as a human carcinogen and is the cause of 60-80% of liver cancer worldwide. Each year approximately 700,000 people die of liver cancer or liver disease caused by hepatitis B. Because liver cancer is the third most common form of cancer death in the world, and the majority is attributable to hepatitis B, HBV is the third leading cause of cancer death worldwide after tobacco and *Helicobacter pylori*. The initial or acute HBV infection is associated with a 0.5-1% risk of death from sudden and severe liver failure, and those who fail to clear the infection and become chronically infected are at significantly increased risk of developing liver cancer or other life-threatening liver disease. The World Health Organization (WHO) estimates one third of the world's population has been infected and 1 in 20 people (350-370 million) have chronic hepatitis B. Despite the availability of the hepatitis B vaccine since 1982, vaccination rates are low in many populations, leaving many children unvaccinated and many adults chronically infected throughout the world, including in the US.

Hepatitis B in Asian Americans and Native Hawaiians and Other Pacific Islanders

Chronic hepatitis B and liver cancer caused by hepatitis B in Asian Americans, Native Hawaiian and Other Pacific Islanders comprise one of the most serious but frequently neglected racial and ethnic health disparities in the United States (US)[i]. Among foreign-born AAs and NHOPIs in the US, the prevalence of chronic hepatitis B is consistently found to be approximately 10%[ii],[iii],[iv],[v]. By contrast, the prevalence in the overall US population is below 0.5% and among non-Hispanic whites it is below 0.2%[vi],[vii],[viii]. The CDC estimates that as many as 2 million people in the country are living with chronic hepatitis B, and over half are AAs and NHOPIs. Not only is chronic hepatitis B the basis of a wide racial and ethnic health disparity in the US, but it is also a particularly menacing one: if left unmonitored and untreated, up to one out of four individuals with chronic hepatitis B will die from liver cancer or cirrhosis[ix]. Thus, AAs and NHOPIs have not only the highest rates of chronic hepatitis B among all racial/ethnic groups in the US, but they are also at disproportionately high risk of liver cancer, which is the third leading cause of cancer death among AAs and NHOPIs in the US (whereas it is the 16th leading cause of cancer death among non-Hispanic whites).

Although the incidence of acute hepatitis B across the US has declined substantially in recent years, the high prevalence of chronic hepatitis B among AAs and NHOPIs, particularly the foreign-born, appears to have remained relatively constant[x]. Because most public health departments that conduct surveillance for hepatitis B have typically focused on tracking acute disease, there is a shortage of population-based data on trends and patterns in the prevalence of *chronic* hepatitis B. Routine surveillance for chronic hepatitis B can inform planning for targeted public screening, prevention, and awareness programs, as well as facilitate case management of chronically infected individuals[xi]. An additional benefit of chronic hepatitis B surveillance is the opportunity to link viral hepatitis registries with other population-based health and disease registries, enabling a better understanding of health care management, outcomes, and other aspects of chronic hepatitis B.

Most AAs and NHOPIs chronically infected with HBV were born in HBV-endemic regions or have parents who were born in endemic countries. With the exception of breast milk, the modes of transmission of HBV are somewhat similar to those of HIV: from an infected mother to her newborn at birth, direct contact with infected blood, and unprotected sex. HBV is known to be 50-100 times more infectious than HIV. Although most new infections in the US occur in close contacts of an infected person, health care and public safety workers, people with many sex partners, injection drug users, and children born to infected mothers, the majority of chronically infected persons are those born in other countries, especially in Asia. Many AAs and NHOPIs unknowingly acquired their infection at birth through vertical transmission of the virus, or during early life through horizontal transmission from close contacts[xii]. More than 90% of newly infected infants, 25-50% of children infected between ages 1 and 5 years, and 6-10% of acutely infected older children and adults develop chronic, or lifelong, HBV infection; the remainder generally develops natural immunity after acute infection[xii]. Thus, by adulthood, many AAs and NHOPIs born in an HBV-endemic country or whose parents were born in an HBV-endemic country have already acquired chronic HBV infection. Prevention of chronic hepatitis B can be achieved in a relatively straightforward manner through early-life vaccination against HBV, perinatal immunoprophylaxis in newborns born to chronically infected mothers, and public

education, especially among high-risk groups, about routes of HBV transmission[xiii],[xiv]. However despite the availability of a safe and effective recombinant vaccine for more than 20 years, many HBV-endemic countries in Asia have adopted free universal newborn HBV vaccination programs only in the past decade[xv].

HBV and Newborns

Newborns infected with HBV have the greatest risk of developing chronic hepatitis B. Therefore, the perinatal period is a critical time for intervention to prevent HBV transmission. According to the 2005 recommendations of the US Advisory Committee on Immunization Practices (ACIP), all infants born to hepatitis B surface antigen (HBsAg)-positive women should receive the hepatitis B vaccine and hepatitis B immune globulin (HBIG) within 12 hours of birth, complete the hepatitis B vaccine series by 24 weeks of age, and undergo post-vaccination serological testing for hepatitis B surface antibody (anti-HBs) and HBsAg between 9 and 18 months of age[xiii]. However, adoption of these recommendations is far from universal; of the estimated 20,000 infants born each year to women with chronic hepatitis B, fewer than half are currently identified by national perinatal hepatitis B prevention programs[xvi]. Delivery hospitals are central to preventing perinatal transmission, as these institutions are the only health care system organizations responsible for verifying maternal HBsAg status and providing timely administration of HBIG and hepatitis B vaccine. Although the ACIP recommended universal administration of a birth dose of hepatitis B vaccine, the National Immunization Survey estimated in 2006 that nationwide birth dose coverage was only 50%. Hospital performance indicators are important tools for measuring and boosting birth dose coverage in delivery hospitals. Advances in prevention of perinatal HBV transmission will require improvements to achieve 100% vaccination coverage with the birth dose, raise public and health care provider awareness of hepatitis B, establish routine reporting and documentation procedures in health care facilities, and enhance infrastructure support for public health case management programs.

Screening for Hepatitis B

Chronic hepatitis B is known as a silent killer; many chronically infected individuals feel healthy and are not aware of their infection because they have not been screened. Even blood tests for liver enzymes can be normal in the presence of chronic hepatitis B. In the US, many AA and NHOPI youth and adults have not been tested for hepatitis B. Although most people with chronic hepatitis B have no symptoms, they can still transmit the infection and develop liver cancer. Screening with a simple and inexpensive blood test for HBsAg is the only way to determine if an individual has chronic hepatitis B infection. In a study of 3,163 AA and NHOPI adults in the San Francisco Bay Area who were screened for HBV infection, approximately 8.9%, including 10.7% of those born in Asia or the Pacific Islands, were found to be chronically infected with HBV[v]. Up to two-thirds of those chronically infected were not aware of their infection prior to testing. The high prevalence of undiagnosed infection is particularly alarming, since early detection and treatment can greatly decrease the cost of further complications, and vaccination of close contacts of infected individuals can prevent disease transmission. Among individuals with chronic hepatitis B, prevention of death from liver cancer may be accomplished through routine screening using liver ultrasound and a blood test for alpha-fetoprotein and, if appropriate, antiviral therapy[xvii],[xviii]. A recent study showed that it is cost-

effective to screen all AAs and NHOPIs for hepatitis B, as this strategy will lead to the identification of chronically infected persons for medical management, as well as identification and potential vaccination of their uninfected close contacts[xix]. Vaccination is another cost-effective strategy when combined with testing to offer an opportunity to further advance disease prevention. Families of youth or adults with HBV, as well as AA and NHOPI youth and adults who undergo testing and discover they do not have HBV, should be vaccinated if they are not already protected against HBV.

Patient Awareness and Education

Not only do AAs and NHOPIs have a high prevalence of chronic hepatitis B and a high incidence rate of liver cancer, but they are also poorly informed about the transmission, prevention, symptoms, risks, and occurrence of chronic hepatitis B. Fewer than 60% of highly educated AA and NHOPI adults in San Francisco reported having been tested for hepatitis B, and only 31% reported having been vaccinated against hepatitis B[xx]. Half were misinformed about the routes of HBV transmission, and one-fourth did not know that HBV infection can be prevented by vaccination. Likewise, Traditional Chinese Medicine (TCM) practitioners and acupuncturists, who serve a predominantly AA and NHOPI patient population, lack basic knowledge about hepatitis B. In a 2005 survey of non-Western health care providers in San Francisco, only 47% knew how to test for immunity against HBV, 54% could identify all common routes of HBV transmission, and 18% were aware that newborn infants are at highest risk of developing chronic hepatitis B upon exposure to the virus[xxi]. Thus, there is a clear need for expanded hepatitis B education and improved community-based interventions to increase hepatitis B awareness and prevent HBV-related liver disease in the AA and NHOPI community.

Provider Awareness

Additionally, many physicians and health care providers are not aware that a higher proportion of their AA and NHOPI patients may be infected already with HBV and that a lack of awareness of their infection might make them more likely to transmit hepatitis B. A recent survey distributed by the San Francisco Public Health Department and the University of California, San Francisco demonstrated that 45% of physicians surveyed could not correctly select the proper test for chronic hepatitis B, 46% were unaware of treatment options, and 40% incorrectly stated that chronic hepatitis B was curable[xxii]. This is problematic for physicians practicing in a city where over a third of the population is at high risk for chronic hepatitis B.

Therefore, it is reasonable to believe that, through a concerted effort involving public health professionals, health care providers, scientists, community leaders, local legislators and the general population, it is possible not only to reduce the racial and ethnic health disparity due to chronic hepatitis B, but to eliminate the disease altogether.

Goals & Strategies to Address Chronic Hepatitis B

Goal

- Reduce the risk of chronic hepatitis B virus (HBV) infection and its long-term complications

Objectives

- Prevent new HBV infections by promoting screening, immunization and education
- Promote early detection, appropriate follow-up and clinical management of persons with chronic HBV infection
- Increase awareness and support of HBV and liver cancer research among national and state policy makers

Strategy #1: Improve HBV-related Public Health Prevention Infrastructure

1. Emphasize the importance of HBV surveillance systems to document and monitor the burden of chronic HBV infection and its associated liver disease, including hepatocellular carcinoma (HCC)
2. Promotion of comprehensive case registries and prevention, care and treatment networks at state and local levels.
3. Support infrastructure development for vaccination, screening, and prevention services.
4. Enhance health system data management, intentional reporting and communication so that HBV disease surveillance occurs in a way that facilitates public health action and follow-up.

Strategy #2: Increase HBV-related Health Education and Awareness

1. Develop a national education and awareness campaign targeting the general public and at-risk communities by concurrently engaging, mobilizing, and facilitating a grassroots movement among community stakeholders including, but not limited to, health care providers, employers, mainstream and ethnic media, community groups, community-based organizations, and students
2. Raise hepatitis B birth dose vaccination coverage to 100 percent.
3. Provide culturally competent education and training about HBV for health care providers.
4. Ensure that every health care professional is educated about whom to vaccinate and whom to screen, the appropriate use and interpretation of hepatitis B serology screening tests, and the need to evaluate all persons who are HBsAg+ with additional tests (e.g., HBV viral load) to identify the stage of infection and the risk of liver cancer
5. Develop a national advocacy plan in order to educate national and state policy makers about HBV.
6. Promote the establishment of support networks for patients with chronic HBV and HCC on national, regional and local levels.

Strategy #3: Increase Screenings for Chronic HBV Infection

1. Promote programs that properly screen, provide links to those that require vaccination or follow-up care, and collect de-identified data for persons at risk for chronic hepatitis B (based on CDC recommendations).
2. Promote the use of HBsAg testing as a tool for liver cancer screening.
3. Support adherence to CDC recommendations to screen for HBV using HBsAg, anti-HBc, and anti-HBs prior to immunosuppressive therapies.

Strategy #4: Improve Access to Care and Treatment for Chronic HBV

1. Improve access to and maintenance of care for insured, uninsured, underinsured and low-income persons who have chronic HBV infection.
2. Provide access to culturally and linguistically appropriate treatment to all.
3. Improve access to and maintenance of care by increasing patient education and compliance.

Strategy #5: Increase Research for HBV and Liver Cancer

1. Advocate and support HBV and primary liver cancer research at NIH and CDC that will lead to better prevention, management and treatment of chronic HBV infection and earlier detection and improved treatment of HCC:
    A. Epidemiologic research - to better understand the burden of disease and groups most at risk of infection
    B. Behavioral research - to prevent behaviors that lead to the spread of new infections and foster behaviors that lead to better adherence to care and treatment
    C. Basic and translational research – to improve our understanding of the host and virus interactions during infection and develop new treatments and better treatment regimens
    D. Clinical research – to understand better the spectrum of HBV disease and identify risk factors for disease progression
    E. Diagnostic research - to develop point-of-care diagnostic assays and better biomarkers for the early detection of liver cancer
    F. Prevention research - to understand how best to implement interventions within the healthcare system or in other settings that are feasible, effective, and culturally appropriate.
2. Promote conduct of clinical trials to improve early detection, prevention and treatment of chronic HBV infection and HCC that includes minority populations and incorporates the principles of community-based participatory research.

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Goals & Strategies to Address Chronic Hepatitis B

The *Goals and Strategies to Address Chronic Hepatitis B* was developed by the National Task Force on Hepatitis B Expert Panel funded through the Office of Minority Health, U.S. Department of Health and Human Services. The Expert Panel is comprised of health professionals and community health leaders in the fields of hepatitis B, liver cancer, and Asian American, Native Hawaiians and Other Pacific Islander health.

The Expert Panel works in collaboration with the National Task Force on Hepatitis B: Focus on Asians and Pacific Islanders. The Task Force, organized in 1997, brings together scientists, health professionals, not-for-profit organizations, and concerned citizens in a concerted effort to eliminate hepatitis B-related mortality and morbidity over the next generation. The Task Force's mission is to support national, state, and local efforts to prevent new hepatitis B infections through vaccination, to identify chronically infected individuals, and to offer appropriate treatment and cancer screening.

Hepatitis B Expert Panel Participants:

A. Sam Gerber, MS, RD
Public Health Analyst
Office of Minority Health and Health Disparities
Centers for Disease Control and Prevention (CDC)

Angela An
Representing USABC
Executive Director, U.S. Asia Center

Mirtha R. Beadle, MPA
Deputy Director
Office of Minority Health
U.S. Department of Health and Human Services

Joan M. Block, RN, BSN
Co-Founder and Executive Director
Hepatitis B Foundation

Carol L. Brosgart, MD
Vice President, Public Health and Policy
Gilead Sciences

Jeffrey Caballero, MPH
Executive Director
Association of Asian Pacific Community Health Organizations

Denton Chase
Communications Representative
Asian Health Foundation

Moon S. Chen, Jr., PhD, MPH
Professor and Principle Investigator
Liver Cancer Control Investigations for Asian Americans
University of California Davis Cancer Center

Chari Cohen, MPH
Senior Program Manager
Hepatitis B Foundation

Molli C. Conti
Associate Director – B-PAL Program
Bristol-Myers Squibb

Corinna Dan
Chief Operating Officer
Hepatitis Foundation International

Son T. Do, MD
Past Chair, Task Force
Digestive Health Associates of Texas

Edward Doo, MD
Director, Liver Disease Research Program
National Institute of Diabetes and Digestive and Kidney Diseases, NIH

Ted Fang
Executive Director
Asian Week Foundation

Garth N. Graham, MD, MPH
Deputy Assistant Secretary for Minority Health
Office of Minority Health
U.S. Department of Health and Human Services

J. Michael Hall
Representing American Liver Foundation (ALF)

Mary C. Hitch
Senior Policy Advisor
Office of External Relations
U.S. Food and Drug Administration

Jay Hoofnagle, MD
Senior Investigator
National Institute of Diabetes and Digestive and Kidney Diseases, NIH

Jessica Hwang, MD, MPH
Assistant Professor
The University of Texas M.D. Anderson Cancer Center

Deeana Jang
Policy Director
Asian & Pacific Islander American Health Forum

Karen E. Kim, MD, MS
Associate Professor of Medicine
American Cancer Society/Asian Health Coalition of Illinois

W. Ray Kim, MD
Associate Professor of Medicine
Mayo Clinic

Sarah Landry
Director, Vaccine Public Policy and Advocacy
GlaxoSmithKline

Hong Liu, PhD
Executive Director
Asian Health Coalition of Illinois

Anna Lok, MD
Director of Clinical Hepatology
University of Michigan, Department of Internal Medicine, Gastroenterology

Kate Moraras
Research Fellow
Office of Minority Health
U.S. Department of Health and Human Services

Kim Nguyen
WA State API Hepatitis B Program
Coordinator, Within Reach

Henry Pollack, MD
Associate Professor
NYU Center for the Study of Asian American Health

Tanya Pagán Raggio-Ashley, MD, MPH, FAAP
Director, Office of Minority Health and Health Disparities
Chief Medical Officer
Health Resources and Services Administration

Kyu Rhee, MD, MPP, FAAP, FACP
Director, Office of Innovation and Program Coordination
National Center on Minority Health and Health Disparities
National Institutes of Health

Daniel Riedford
Associate Director of Policy, Planning, and External Affairs
Division of Viral Hepatitis, NCHHSTP
Centers for Disease Control and Prevention

Frank Silva
Senior Advisor on Health Disparities
Office of Minority Health and Health Disparities
Health Resources and Services Administration

Samuel So, MD, FACS
Director
Asian Liver Center at Stanford University

Carol Sparks
Perinatal HBV Coordinator
CA Dept Public Health

CAPT Raymond A. Strikas, M.D., FACP
U.S. Public Health Service
Medical Officer
National Vaccine Program Office
U.S. Department of Health and Human Services

Janelle Tangonan Anderson, M.A.
Co-coordinator, National Task Force on Hepatitis B
Editorial Assistant, Immunization Action Coalition

Chris Taylor
Viral Hepatitis Program Manager and Chair
National Alliance of State and Territorial AIDS Director and
National Viral Hepatitis Roundtable

Thelma King Thiel
Chaiman and CEO
Hepatitis Foundation International

Ho Luong Tran, MD, MPH
President and CEO
Asian & Pacific Islander American Health Forum

Naoky Tsai, MD
Professor of Medicine
University of Hawaii

Thomas Tsang, MD, MPH
Chief Medical Officer
Charles B. Wang Community Health Center

Susan Van Aacken, MSPP
Acting Associate Director for Policy, Planning, and External Affairs
Division of Viral Hepatitis, NCHHSTP
Centers for Disease Control and Prevention

Susan Wang
Medical Officer
NCHHSTP/Division of Viral Hepatitis

John Ward, MD
Director, Division of Viral Hepatitis, NCHHSTP
Centers for Disease Control and Prevention

Cindy Weinbaum, MD, MPH
Medical Epidemiologist
Division of Viral Hepatitis, NCHHSTP
Centers for Disease Control and Prevention

Deborah L. Wexler, MD
Executive Director
Immunization Action Coalition

Jacquie Wilson
Associate Director, Alliance Development
Novartis Pharmaceutical Corporation

Janet Zola, MPH
Health Promotion Specialist, Communicable Disease Control and Prevention
San Francisco Department of Public Health

The National Task Force on Hepatitis B: Focus on Asian and Pacific Islander Americans

Member Organizations:

Asian American Hepatitis B Program, New York, NY

Association of Asian Pacific Community Health Organization, Oakland, CA

American Liver Foundation

Asian Health Coalition of Illinois

Asian Liver Center, Stanford University, California

Asian Pacific Health Center, San Diego, CA

Centers for Disease Control and Prevention, National Immunization Program, Georgia

The Center for the Study of Asian American Health, New York, NY

Digestive Health Associates of Texas

Free Hepatitis Info, New York

Harborview Medical Center, University of Washington

Hepatitis B Foundation, Pennsylvania

Hepatitis B Initiative, Boston, Maryland, Virginia, and Washington, D.C.

Hepatitis Foundation International, Maryland

Houston International Health Foundation, Texas

Immunization Action Coalition, Minnesota

Immunization Coalition of Los Angeles County, California

Managed Risk Medical Insurance Board, Sacramento, CA

Massachusetts Department of Public Health

National Viral Hepatitis Roundtable

University of California, Davis

University of California Davis Cancer Center

University of California, Los Angeles

University of Florida

Vietnamese Community Health Promotion Project, Califonia

Visionary Health Concepts, New York

Washington State API Hepatitis B Task Force