Montgomery County, Maryland
Department of Health and Human Services
Asian American Health Initiative
in Partnership with the
Chinese Culture and Community Service Center

Hepatitis B Education, Screening, and Referral to Vaccination or Treatment Program:
A Pilot Project in the Chinese American Community in Montgomery County, Maryland

Evaluation Report FY 2010
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The Asian American Health Initiative (AAHI), in partnership with the Chinese Culture and Community Center (CCACC), piloted a hepatitis B outreach project in the Chinese American community in Montgomery County, Maryland in fiscal year 2010. The project provided free hepatitis B education, screenings, and referrals to vaccination or treatment to residents of the County over the age of 18, regardless of income level or insurance status. In total, 121 individuals participated.

The project achieved considerable success through its initial launch among Chinese Americans and aimed to increase public awareness about hepatitis B and open the door to treatment and vaccination options for at-risk and infected individuals. Program feedback provided insight into both the Chinese American and other Asian American communities of Montgomery County, particularly with regard to attitudes and behaviors regarding health and healthcare. Through the lessons learned of the pilot project, AAHI is able to further identify gaps and continue efforts to eliminate hepatitis B disparities in the Asian American community.
I. Background

About the Asian American Health Initiative

Montgomery County’s Asian American population is increasing steadily. According to the 2010 U.S. Census, Asian and Pacific Islanders are the second fastest growing population in the County, up 37.5 percent in the last decade. Asian Americans now comprise 13.9 percent of the County’s population, totaling about 135,451 residents. Approximately 42.5 percent of Maryland’s Asian American population resides in Montgomery County (US Census, 2011). The Asian American Health Initiative (AAHI) was officially formed in fiscal year 2005 to meet the needs of this growing population and address existing health disparities between Asian Americans and their non-Asian counterparts.
Hepatitis B and the Asian American Community

Hepatitis B has been a priority area since AAHI’s inception, as an estimated 1 in 10 Asian Americans has chronic hepatitis B, compared to 1 in 1000 Caucasian Americans (Asian Liver Center, 2011). Furthermore, when left unmonitored and untreated, as many as 1 in 4 individuals with chronic hepatitis B will die from liver cancer or cirrhosis (World Health Organization [WHO], 2008).

Hepatitis B Facts

- The hepatitis B virus (HBV) causes 80 percent of all primary liver cancer worldwide. It is a leading cause of cancer death in Asian Americans (3rd among Asian Americans, 16th among the general population) and is the second leading carcinogen after tobacco (Office of Minority Health [OMH], 2008).
- Asian Americans are generally 3 to 13 times more likely to develop liver cancer caused by hepatitis B than Caucasians (President’s Advisory Commission on Asian Americans and Pacific Islanders, 2005).
- Hepatitis B is the most common chronic infectious disease in the world and is considered 50-100 times more infectious than HIV (WHO, 2008).
- HBV is regarded as a “silent killer” because it can be asymptomatic and people often are unaware that they are infected until it reaches advanced stages (Asian Liver Center, 2006).
- There are 1 million deaths per year due to HBV worldwide, or roughly two deaths per minute (OMH, 2008).
- Hepatitis B is both preventable and treatable.
- The HBV vaccine is so effective that the World Health Organization has called it the first “anti-cancer vaccine”. Screenings are a precursor for the life-saving vaccine.

In September 2008, the Centers for Disease Control and Prevention (CDC) released a recommendation that individuals born in Asia, Africa, and other geographic regions with 2 percent or higher prevalence of chronic HBV infection should be screened for hepatitis B. Previous CDC recommendations called for testing of people born in areas with 8 percent prevalence or higher. With respect to Asia, the prevalence of chronic HBV infection is high...
(≥8 percent) in all socioeconomic groups in all of Southeast Asia, including China, Korea, Indonesia, and the Philippines (see Figure 1). Expanded testing is essential since the rate of liver cancer deaths and chronic HBV in the United States remains high among foreign-born U.S. populations from these areas (Centers for Disease Control and Prevention [CDC], 2008). Since hepatitis B is both preventable and treatable, the importance of screening cannot be understated, especially before the development of cirrhosis, liver cancer, or other complications. In a study of 3,163 Asian Americans and Native Hawaiian or Pacific Islander adults in the San Francisco Bay Area, as many as two-thirds of those chronically infected were not aware of their infection prior to testing (OMH, 2008).

**Figure 1. Prevalence of chronic infection with hepatitis B virus, 2006**

Furthermore, screening has also been found to be cost effective in the long run, leading to the early identification of chronically infected persons for medical management, as well as identification and potential vaccination of their uninfected close contacts (OMH, 2008). Early access to screenings, vaccinations, and treatment for chronic hepatitis B infection can produce long-term cost savings. According to the National Viral Hepatitis Roundtable, HBV costs $658 million in medical costs and lost wages annually.

**National Task Force on Hepatitis B Expert Panel Strategies & Recommendations**

AAHI would like to pay particular attention to the strategies and recommendations from the National Task Force on Hepatitis B Expert Panel published in the 2008 CDC and OMH joint report titled, *Goals and Strategies to Address Chronic Hepatitis B in Asian American, Native Hawaiian and Other Pacific Islander Populations.*

- Strategy #1: Improve HBV-related Public Health Prevention Infrastructure
- Strategy #2: Increase HBV-related Health Education and Awareness
- Strategy #3: Increase Screenings for Chronic HBV Infection

John Ward, MD, Director of the CDC’s division of viral hepatitis stated that this document provides us with a “clear roadmap to move forward in recognizing hepatitis B prevention as a national priority and protecting Asian Americans from the ravages of the disease” (CDC, 2008).

**National Viral Hepatitis Roundtable Fact Sheet**

The medical costs associated with care for viral hepatitis include:

- Screening blood test for hepatitis B: $8
- Hepatitis B vaccination: $60 for each of 3 vaccinations
- Hepatitis B immune globulin for post-exposure prevention: $400
- HBV treatment: $2,000 - $16,000 per year

However, the limited access to these basic interventions, leads to exorbitant costs:

- End stage liver disease: $30,980 - $110,576 per hospital admission
- Liver transplantation: $314,000 (uncomplicated cases)
- HBV infections result in an estimated $658 million in medical costs and lost wages annually

* Costs may vary.

AAHI’s 2008 countywide health needs assessment report, *Asian American Health Priorities: Strengths, Needs, and Opportunities for Action* (2008), made a recommendation to expand health promotion and disease prevention programs to raise awareness and level of knowledge of health issues that disproportionately affect Asian Americans. One devised action step was to “expand current health promotion and disease prevention/control efforts on infectious diseases including hepatitis B.” The report also called for AAHI to “provide hepatitis B screening and vaccination.”

In line with this recommendation, AAHI educated more than 1000 people in the community at various health fairs on hepatitis B related issues. Additionally, AAHI implemented educational media campaigns in local Asian ethnic media and distributed bilingual hepatitis B posters throughout the community. Special interest has also been given to educating providers and mobilizing researchers, advocates, and professionals working with hepatitis B issues in Montgomery County.

The dearth of hepatitis B screening services in Montgomery County is detrimental to those who may be at risk. Low-income and uninsured Asian Americans, many of whom have limited English language proficiency (LEP), are particularly vulnerable. An option for low income residents to receive screenings is through the Dennis Avenue Health Center, as part of a complete sexually transmitted disease (STD) screening. However, due to associated stigma of STDs among some Asian American communities and other barriers, the health needs are yet met. Similarly, individuals with insurance coverage also report encountering difficulty in obtaining hepatitis B screenings in the County because many physicians are
unaware of national screening guidelines and the prevalence of hepatitis B among Asian Americans.

Overall, many Montgomery County residents continue to encounter obstacles to obtaining hepatitis B screening and vaccination, despite its efficacy. In light of the growing community need for hepatitis B services and the efficacy and long-term cost effectiveness of such services, AAHI piloted a hepatitis B project in line with national best practice models and federal recommendations.
III. About the Pilot Project

**Purpose:** To provide culturally and linguistically competent hepatitis B education, screening, and referrals to vaccination or treatment for Chinese American adults through a pilot project in Montgomery County, MD

**Goals:**
- To increase knowledge and awareness about hepatitis B
- To increase access to hepatitis B screening and vaccination
- To engage community members and strengthen capacity to address hepatitis B related issues
- To enhance data collection on hepatitis B

**Planning**

Strong partnerships and effective community engagement with a variety of community- and faith-based organizations was critical during the program planning process. The Chinese Culture and Community Service Center (CCACC) was AAHI’s main community-based partner in the pilot project. Serving the Chinese American community of Montgomery County for nearly 30 years, CCACC promotes innovative, culturally- and linguistically-conscious health, education and social programs. CCACC also operates the Pan Asian Volunteer Health Clinic (PAVHC) in Gaithersburg, Maryland. The PAVHC is a clinic within the Montgomery Cares network and is staffed by bilingual health care professionals (e.g., physicians, nurses, pharmacists) and volunteers of various ethnic backgrounds. With its extensive community network and fully operational health clinic for follow-up treatment and vaccinations, CCACC was a valuable project partner.
Internal planning for the pilot project began months prior to the event and included program mapping, drafting of a program plan, and identifying key partners. Project partners, AAHI Health Promoters, Patient Navigators, Steering Committee members, and the volunteer physician aided with community outreach efforts. Information about hepatitis B awareness and the importance of screening was dispersed through flyers, email, local ethnic media, and in-person recruitment, particularly at partner events and community health fairs. Participants were asked to pre-register for the education and screening event. Upon registration, they were mailed an informational packet containing educational hepatitis B material and a schedule of events, including directions and parking instructions to the education and screening event.

The creation and translation of requisite documents was a critical step in the planning process. Educational materials (e.g. presentations and brochures), forms (e.g., registration forms, privacy forms, consent forms), and follow-up letters were prepared in both English and Chinese.

Implementation

On the day of the education and screening, participants first completed the necessary consent forms and paperwork (provided in both English and Chinese) to participate in the project and subsequent clinical screening. AAHI Health Promoters, Patient Navigators and
bilingual volunteers provided technical assistance in a range of Asian languages as necessary.

Following registration, individuals participated in an educational seminar and question and answer session on hepatitis B, covering topics such as transmission, symptoms, treatment and screening. The education seminar, facilitated by a physician, was delivered in English and Mandarin. Confidential pre- and post-tests were administered to assess knowledge and attitudes regarding hepatitis B.

Thereafter, participants were offered HBV screening by venipuncture. Phlebotomists collected blood samples and sent them to a laboratory to test for hepatitis B surface antigen (HBsAg)—to test for virus in the blood—and surface antibodies (HBsAb), to determine immunity. During the screening, the AAHI volunteer physician was available to provide medical consultation as necessary and to respond to any additional questions. AAHI Health Promoters, Patient Navigators, and community volunteers were available throughout the event to facilitate the process and assist participants with any and all questions regarding the project and hepatitis B.

**Figure 2. Education and Screening Day Flow Chart**

![Flow Chart](image-url)
Post-Screening Follow-Up

A comprehensive follow-up management plan was developed to ensure all participants received his/her clinical results in a timely fashion, understood the results, and if necessary, understood follow-up options available. Each participant was mailed his or her individual laboratory report and a confidential letter explaining the HBV screening result. To ensure receipt of results and to answer questions regarding follow-up options, AAHI Health Promoters and Patient Navigators individually called each participant, placing an average of three calls to each individual until confirmation was obtained.
Table 1. HBV Status and Follow Up Care Coordination

<table>
<thead>
<tr>
<th>HBV Status</th>
<th>Follow Up Care Coordination</th>
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<tr>
<td>Infected</td>
<td>All infected participants were strongly advised see their primary care physician for appropriate follow-up care. AAHI also arranged follow-up consultations with the volunteer physician so individuals could ask questions and receive information on available area treatment options such as the PAVHC, Frederick County Hepatitis Clinic, and National Institutes of Health clinical trials. AAHI coordinated referrals for eligible, uninsured participants to follow-up care and treatment at the PAVHC. AAHI Patient Navigators provided coordination for eligible patients as necessary.</td>
</tr>
<tr>
<td>Immune</td>
<td>Individuals with immune status were encouraged to promote hepatitis B awareness and screening among their family and friends. They were also encouraged to connect with AAHI’s information channels to receive updated information on local free screenings when available.</td>
</tr>
<tr>
<td>At-Risk</td>
<td>Individuals with at-risk status were strongly advised to get vaccinated. AAHI coordinated referrals for eligible, uninsured at-risk patients to the PAVHC for immunization at no cost. Participants who were ineligible to receive services at a local clinic were referred to private clinics in the County to obtain vaccinations at a discounted rate. Insured at-risk participants were similarly referred to their personal health care providers for follow-up and informed of alternative care options in Montgomery County.</td>
</tr>
</tbody>
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IV. Outcomes

Figure 3. Follow-up Flow Chart

Planning, Media Campaign & Pre-Registration

Education & Screening Day

Clinical Evaluation & Follow-up Management

Infected

Immune

At-risk

Treatment Referral
(e.g., PAVHC, NIH clinical trials, Frederick County Hepatitis Clinic, private provider)

Vaccination Referral
(e.g., PAVHC, community clinics, private provider)

SPREAD AWARENESS
Encouraged to have family and loved ones screened
About the Participants

Although the event targeted the Chinese American community, individuals of all communities were welcomed to participate. Participants predominantly identified as some form of ethnic Chinese. The project also reached other Asian American communities including those born in Cambodia, Korea, Malaysia, Thailand, and Vietnam. Many individuals reported low income, poor access to healthcare, and minimal English proficiency. Ages of participants ranged from 18 to over 80 years of age. The majority of participants heard about the event through flyers and advertisement.

Evaluation Tools

AAHI developed several evaluation tools to monitor and assess project quality. On the education and screening day, information about participants' knowledge, attitudes, and beliefs of hepatitis B were gathered through a seven item pre- and post-test survey administered before and after the educational presentation. Based on survey results from participants who completed both a pre- and a post-test, the majority (59 percent) demonstrated an increase in knowledge from the pre- to the post-test. The average pre-test score was 80 percent out of a possible 100 percent; the average post-test score was 92 percent. Participants were also asked to complete a satisfaction questionnaire about their general experience at the end of the education and screening day.

Approximately eight months following the education and screening day, a comprehensive final program evaluation questionnaire was mailed to all participants to gather feedback about the overall project and follow-up process. Postal mail appeared to be the preferred and best mode of communication with project participants. Questionnaires for at-risk individuals receiving vaccination through the PAVHC were distributed and collected on-site during the third vaccination. Phone calls to all participants were made to remind them to complete and mail back the questionnaires. The overall response rate was approximately 72 percent. Participants consistently rated high satisfaction with the project. Overall, the majority of participants were pleased with the clarity and efficiency of information provided.
Participants reported satisfaction with the comprehensive, individualized follow-up support and referrals to appropriate resources.

Moreover, an external project consultant conducted four in-depth qualitative interviews with the following key project stakeholders for additional insight:

- CCACC/PAVHC Representative: Mr. Meng K. Lee
- AAHI Representative: Mr. Perry Chan
- AAHI Volunteer Physician: Dr. Frank Trinh
- Project Participant

<table>
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<th>Table 2. Outputs, Outcomes and Quality Measures</th>
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<tr>
<td><strong>OUTPUTS and OUTCOMES</strong></td>
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<tr>
<td>Number of participants educated</td>
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<tr>
<td>Number of participants screened</td>
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<tr>
<td>Percentage of infected participants linked to follow-up treatment options</td>
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<tr>
<td>Percentage of uninsured infected participants who received treatment through PAVHC</td>
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<tr>
<td>Percentage of uninsured at-risk participants who completed vaccination series through PAVHC</td>
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<tr>
<td>Percentage of participants report they will urge family and friends to be screened and/or vaccinated</td>
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<tr>
<td>Percentage of participants report since participating in the program, they have encouraged family and friends born in high prevalence regions (such as China) to get screened</td>
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| **SERVICE QUALITY**                          | **RESULTS** |
| Percentage of participants report that the pre-registration process was easy | 100%        |
| Percentage of participants report that the registration was organized | 100%        |
| Percentage of participants report the educational lecture was informative | 100%        |
| Percentage of participants report the screening process was efficient | 100%        |
| Percentage of participants report the follow-up steps were explained clearly | 100%        |
| Percentage of participants report overall satisfaction with program | 97%         |
| Percentage of participants report they would recommend family and friends participate in future AAHI hepatitis B screening programs | 91%         |

[^a]: Eligibility determinant on insurance status, income, and residency
[^b]: Remaining participants opted to seek treatment through private provider
[^c]: Remaining participants opted to seek vaccination through private provider or other clinic
Figure 4. Project Follow-up Outcomes

Educated and Screened (121)
- Uninsured (69) 57.0%
- Insured (52) 43.0%

Infected (8) 6.6%
- Uninsured (7)
- Insured (1)

At-Risk/Need Vaccine (53) 43.8%
- Uninsured (24)
- Insured (29)

Immune (60) 49.6%
- Uninsured (37)
- Insured (23)

Received treatment through PAVHC (6)
- Sought treatment through other provider (1)

Completed vaccination series through PAVHC (19)
- Sought vaccination through other provider (5)

Completed vaccinations (1)
- Planned to schedule vaccinations (4)
- Did not plan to receive vaccinations (5)
- Reported insurance will not cover vaccinations (4)
- Unresponsive (15)
As aforementioned, a number of comprehensive evaluation instruments were utilized to assess and monitor all phases of the project. Feedback from project partners and community participants were collected via evaluation forms and in-depth interviews. The information collected was analyzed and distilled into useful recommendations and lessons learned. Overall, feedback suggested that the AAHI’s 2010 hepatitis B pilot project has potential to provided valuable and needed services to the Asian American population of Montgomery County. According to the assessments, participants and partners believe that the pilot project laid a foundation for future hepatitis B programming to serve local Asian American communities. Evaluations of the project provided several important recommendations for future efforts, outlined below:

- **Enhance access to culturally and linguistically competent hepatitis B services and resources.**
  Inadequate culturally and linguistically competent resources is reported to be a barrier to seeking care for at-risk and infected individuals who wish to seek vaccination and treatment for hepatitis B, respectively. Participants with and without health insurance expressed this as a challenge. In-language services, confidence in health care providers, clinic operating hours, clinic locations, and proximity to public transportation all present challenges to the early identification and adequate treatment of hepatitis B among Asian Americans. Through the project, HBV infected individuals expressed preference to seek treatment through the PAVHC because of the bilingual and culturally-sensitive clinic staff and convenient location, particularly for seniors. Identifying reasonable HBV treatment options for Asian Americans and addressing the barriers to care is integral to increasing access to quality and timely care.

- **Promote hepatitis B awareness and early detection among Asian Americans and healthcare professionals who serve Asian American patients.**
  Program findings call for more comprehensive hepatitis B outreach work in the Asian American community. According to evaluation surveys, 95 percent of participants believe that hepatitis B is a serious health risk among Asian Americans. However, the majority of respondents (62.8 percent) reported not ever being tested for HBV before participating in the
project; over one-forth (26.4 percent) reported not knowing if they have ever been tested. Lack of awareness about HBV, screening, vaccination, and treatment puts the health of the community at risk and can carry life-threatening implications. This is particularly true for isolated pockets of the community who are difficult to reach, including small business employees and owners (e.g., nail salons, grocery stores, and restaurants). Efforts to connect these vulnerable groups with mainstream health events can be challenging as they are often unaware or unable to attend local health events due to non-traditional work schedules.

Additionally, there appears to be a need to improve awareness among physicians and healthcare professionals who serve Asian American populations. According to participant surveys, the most common reason cited for not having been tested was “never being instructed to do so by a doctor.” National research indicates that many practitioners may not be aware that a higher proportion of their Asian American patients may be already infected with HBV and that a lack of awareness of their infection might make them more likely to transmit hepatitis B. Typically, testing for hepatitis B may not included in routine physical examination blood tests and must be requested. Some physicians do not routinely perform liver cancer screening in patients with chronic hepatitis B (Nguyen & Keeffe, 2002). Moreover, some physicians are not aware of how to screen for liver cancer (Ferrante, Winston, Chen, & de la Torre, 2008). A recent study conducted in San Francisco demonstrated that 45 percent of physicians surveyed could not correctly select the proper test for chronic hepatitis B, 46 percent were unaware of treatment options, and 40 percent incorrectly stated that chronic hepatitis B was curable (Dulay, Zola, Hwang, Baron, & Lai, 2007).

Empower community-based organizations to advocate for and collaborate on hepatitis B prevention, early detection and screening, vaccination, and treatment programs for Asian Americans

Capacity building requires champions who have a vested interest in the health of their community. It is important to engage and empower residents, local health professionals, clinics and organizations to increase their capacities to serve their respective community’s
unmet health needs, especially hepatitis B. Effective collaborations among the diverse and active Asian American community- and faith-based organizations in Montgomery County can broaden the scope of effective and efficient health resource and service delivery. As with the 2010 pilot project, AAHI will continue supporting its partners to adopt a health and wellness component in their community work.

✔ **Enhance data collection and reporting efforts**

It is critical to enhance and support more reliable health data and research efforts to better describe and understand the need of Asian American subgroups in relation to hepatitis B, particularly at the local level. Aggregate data often masks important differences between distinct Asian American communities. Lack of detailed and quality data on Asian American subgroups makes it difficult to develop and implement prevention and treatment programs appropriate for these populations.
VI. References


AAHI’s 2010 hepatitis B pilot project and subsequent report never could have occurred without the support of the Montgomery County Department of Health and Human Services leadership, the staff and volunteers at the Chinese Culture and Community Service Center, Pan Asian Volunteer Health Clinic, AAHI Health Promoters, Patient Navigators and community partners and volunteers throughout the County. Our volunteer physician, Dr. Frank Trinh, provided his expertise and countless hours throughout project planning, implementation, and evaluation. We wish to express our gratitude to the members of the AAHI Steering Committee, Mrs. Julie Bawa, Ms. Nouf Bazaz, Mr. M.K. Lee, and Dr. Wendy Shiau for providing unwavering support and guidance during all project phases. We also wish to thank Mr. Craig Lassner for his assistance with compiling this report. Finally, we indebted to the project participants who provided valuable program feedback and have pledged a strong commitment to improving the health of all County residents and spreading awareness of hepatitis B-related concerns in the community.

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