A Comparative Trial of Improving Care for Underserved Asian Americans Infected With HBV

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I. PROTOCOL SUMMARY

1. Significant Burden and Impact of Chronic HBV on Asian Americans.

An estimated 1.4 to 2 million individuals in the U.S. are chronically infected with Hepatitis B Virus (HBV or CHB).[1-2] The number of Americans with HBV infection has been rapidly rising primarily due to the increasing number of immigrants from areas with high rates of CHB (infection >8%) including Asian countries such as China, Korea and Vietnam,[3-4] the three largest subgroups of Asian Americans (AAs). While AAs make up 4.2% of U.S. total population,[5] they account for more than 50% of Americans living with CHB.[6] Since chronic HBV is usually asymptomatic over many years, the HBV screening rate is low; and, as a result, only 35% of infected individuals know they have this disease.[7] Among Asian Americans, fully 2 in 3 of those infected are unaware that they have HBV.[8]

Chronic HBV (CHB) is an emerging health crisis in the US. Approximately 15%-40% of those with chronic HBV will develop serious liver diseases during their lifetime including decompensated cirrhosis and hepatocellular carcinoma (HCC).[4, 9-11] Asian Americans (AA) have the highest liver cancer mortality rates and the highest prevalence of CHB.[12] Further, inadequate disease monitoring and care will contribute to poorer outcomes and increased healthcare costs. Indeed, the soaring medical costs associated with HBV infection are estimated to be as high as $1.5 billion each year.[1, 13-15]

Early monitoring and adherence to recommended HBV disease management guidelines improves health outcomes, prevents expensive complications such as cancer treatments or liver transplants, and reduces premature deaths.[1, 11, 15, 16-20]

Despite the health and economic advantages of early monitoring and regular follow up care for HBV, few people are receiving such care. One study indicated that fewer than 50,000 US HBV patients have sought early treatment for HBV, meaning that less than 10% of those eligible for treatment actually receive monitoring and regular follow up care.[20] Asian Americans with CHB may not seek care because they “feel well”[21, 22], have lower access to care (e.g., no regular healthcare provider, need for English translator), face more economic (e.g., lack of health insurance, low income) and cultural barriers (e.g., negative perceptions of Western medicine, stigma of HBV disease), or have a low level of knowledge about HBV and the benefits of care.[21, 23-29] Even among Asian American CHB patients receiving care, adherence to monitoring and treatment guidelines is low as 40%-53% at 12 month follow-up.[21, 30]

2. Significance of the Proposed Study:

CHB is a major contributor to the racial/ethnic health gap and HBV disparities in mortality between AAs and Whites are widening.[6, 12] Early monitoring and adherence to recommended CHB management guidelines are an essential part of a comprehensive approach to improving CHB control for reducing incidence and mortality rates of liver cancer.[1,7,21-23, 31, 32-35] Patient adherence to regular follow up tests every 6 and 12 months is associated with optimal CHB control.[11] Unfortunately, early onset of liver problems comes without apparent symptoms and only consistent follow-up testing allows for early treatment. However, adherence rates to monitoring guidelines are poor among AA CHB patients.

This application provides a unique opportunity to address these gaps in the literature and respond to this critical health disparity issue by investigating a Patient Navigator-led Text Messaging Intervention (PMNI).

II. OBJECTIVES

The described study is a collaborative effort between the lead agency, Center for Asian Health of Temple University and its long-term clinical partners in greater Philadelphia area and New York city.

III. STUDY DESCRIPTION

1. Overview of Study Design

Patient-centered and community-based participatory research approach will be applied to the randomized comparative trial design, a range of quantitative and qualitative evaluation methods, and implementation of a HBV intervention to improve care for underserved AA chronic HepB patients. Temple U. Center for Asian Heath (CAH) partnered with Federally Qualified Community Health Center (FQHC) and community primary care clinics that serve low-income Chinese, Korean and Vietnamese patients to conduct a comparative trial to evaluate the effectiveness of the patient navigator-led plus mobile phone text messaging intervention (PNMI), an interactive patient-centered culturally and linguistically appropriate approach. The study builds on a strong foundation of 20-year clinic-community-academic partnership. As shown in our pilot studies, CBPR approach were applied to engage patient partners and stakeholders in project planning, recruitment, delivery, evaluation and dissemination.

The proposed study is a 2-arm randomized comparative trial with individual patients as the unit of randomization. Bilingual patient navigators will be recruited and trained to deliver the PNMI intervention to help patients improve adherence to HBV monitoring tests on time.

2. Selection of Patient Participants

Inclusion Criteria**:** Patients (N=500) will be included in the study if they meet the following criteria:

- self-identified Chinese, Korean and Vietnamese ethnicity (these three Asian subgroups consist of the largest number of immigrants from countries with high prevalence of HBV infection,
- age 18 and above
- not enrolled in any chronic HBV adherence management intervention (to prevent a potential program impact),
- medically diagnosed chronic HBV infection with positive for hepatitis B surface antigen (HBsAg) for more than six months, and
- not had HBV monitoring tests for more than six months.

Exclusion Criteria: Patients will be excluded from the study for the following conditions:

- diagnosed with cirrhosis, hepatocellular carcinoma, liver failure and liver cancer (The purpose of regular follow up tests is to detect early signs of CHB

complications). Monitoring the progression of CHB complications is different in schedules and tests),

3. Intervention Procedures

1) Study Timeline

- **The duration of the project**
  1/1/2015-12/31/2017
- **The duration of a subject's participation in the study.**
  12-13 months
- **The duration anticipated to enroll all subjects.**
  12 months
- **The estimated date that the investigators will complete the study.**
  December 31, 2017

2) Intervention delivery

Following randomization, intervention patients will receive PNMI in-person education sessions from patient navigators who navigate patients through the program. PNMI focuses on recognizing patients as active participants in their own health care. PNMI intervention bilingual patient navigator-led HBV management; text messaging; clinical support assistance and HBV management education visual aids.

4. Statistical considerations

Data Analysis Plan

The primary outcome analysis will calculate the difference in adherence rates between two groups (PNMI – SC) at 6m or 12m post-intervention. Bonferroni multiple comparison adjustment will be used for two primary hypothesis tests. The difference of two binomial proportions and its 97.5% (due to Bonferroni adjustment) 2-sided confidence interval (C.I) will be calculated for inference. We expect the tests for intervention effects for both 6m and 12m post intervention will be highly significant with effect size substantially larger than 20%, based on our pilot study data and other screening studies. Though not a primary hypothesis, we will examine if the adherence rate has declined at 12m from that at 6m by calculating a 95% C.I for the difference of two rates. If the decline is statistically significant, a booster intervention after 6m post intervention may be needed for future disseminations.
To control for known and postulated factors, a number of variables will be included as covariates in most analyses, including (1) race, (2) clinics, (3) education, (4) age, (5) gender, (6) time living in U.S., (7) birthplace, and (8) English proficiency

5. Withdrawal of Subjects

If a participant to be found out with conditions meeting any of the exclusion criteria, she/he will be withdrawn from the research because the medical procedures of those conditions are very different with the purpose of proposed study. There will not be any consequences for participants if they decide to withdraw from any phase of our project.

6. Privacy & Confidentiality

All collected data will be used solely for the purpose of the research study and treated with full confidentiality. Specifically, each participant will be assigned an ID number, which will be used in place of her/his name. The data will be kept on computers, which will only be used by project research team staff. All study team staff computer is locked by unique user name and password. Qquestionnaires will be stored in a locked office where only project staff will be permitted to view questionnaire contents. Computer research data will not have participants' private information.

7. Risks to Subjects

We do not anticipate major risks for study participants. The study participants of both intervention and comparison groups will receive medical care for HBV monitoring. There may be psychological response to some participants because of possible worsen test results from HBV monitoring status. However, the long-term benefits of early detection of HBV progression status are much greater than the psychological and emotional trauma may be precipitated by a test results. In contrast, these participants can be alerted by those results and take early action for necessary medical care. The PI and study team members and collaborating health providers will provide adequate counseling and assistance to participants.

No potential long-range risks are anticipated as a result of this research project.

We do not anticipate major risks for study participants. The PI and her team members and collaborating health providers will provide adequate counseling and assistance to participants. In addition, all collaborating clinical partners have capacity to support subjects if there are any needs as result of anticipated consequences of participation in the research.

8. Potential Benefits to Subjects

The purpose of this study is to improve HBV routine/regular monitoring adherence. Subjects in intervention group of this study will receive education on knowledge about HBV monitoring and navigation assistance for their further medical care needs. Participants in comparison group will also receive standard care for their routine HBV care. Stay with adherence of HBV monitoring is a critical practice to ensure early detection of HBV progression and capture the right momentum of early treatment for HBV.

9. Informed Consent

The consent process will be taken place on site of collaborating clinical partners and CBOs located in greater Philadelphia area and New York City. Project staff will inform participants of the nature and purpose of the study as well as participant rights. A consent and HIPPA form will be provided to participants prior to participation in the study. Participants will be informed about the purpose and nature of the study, intervention and comparison contents of the project, foreseeable risks, benefits of participation and right of participants, confidentiality statement, voluntary participation statement, and institutional IRB contact and research contact. Participants will be encouraged to contact the PI or IRB regarding any concerns about component of the study. Participants are also informed that they may choose withdrawing at any time during the study without penalty.

10. Data Safety and Monitoring

To ensure all regulatory requirements of PCORI are met, a Data Safety Monitoring Committee consists of five individuals who are expert in the study areas and who are familiar with the community but having no conflict of interest with the proposed project.

The Monitoring Committee will meet in person or teleconference two times a year over the course of the study, or at an intermediate time, if needed, in response to immediate needs/concerns on IRB related issues, implementation of protocol, and any unanticipated problems.

11. Adverse Event Reporting

Prior to commencement of the study, the project PI and staff will identify possible adverse events in consultation with experienced physicians, psychologists, and the Data Safety Monitoring Committee for handing participant concerns. Research team will be trained on how to respond in a comforting and compassionate manner to discomfort expressed by participants. Contact information of a family medical practice doctor and specialist will be made available to participants to consult psychological or medical concerns. Contact information of the PI and IRB staff is provided to participants for them to address any concerns about any component of the study and confidentiality issues.

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