Chronic Hepatitis-B Mentorship Hub Program (CHiP) Patient Outcomes Study

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Background

CE Outcomes, LLC collaborated with Asian Health Communications (AHC) to conduct a study designed to assess the impact of a series of quarterly live mentorship programs, *Chronic Hepatitis-B Mentorship Hub Program (CHiP),* on primary care physicians' (PCPs) approach to managing patients with chronic hepatitis B (CHB) and the resulting impact on the health of patients with CHB. Patient health improvement was measured using information gathered from a patient chart abstraction tool. The chart abstraction tools were completed by a group of physicians who participated in the education. This poster presents interim data collected from a sample of 16 physician participants who submitted a total of 49 patient chart audits following the first educational program, which occurred in February 2012. Additional programs occurred in the Fall of 2012, and data collection for this group is ongoing through February 2013.

Methods

A chart audit tool was designed to assess participants' approach to testing and treating patients with CHB, to determine the overall impact of the education on the health of these patients. Additionally, a brief survey was distributed to participants immediately after they completed the programs, to capture physician demographic information, barriers to treating patients with CHB, and likelihood of screening various patient types for hepatitis B virus (HBV).

Invitations to participate in the chart audit portion of the study were distributed by AHC to PCP participants after the education. The chart audit tools and study instructions were mailed to those who accepted the invitation.

Patient inclusion criteria were:

- 18 years of age or older
- Diagnosis of chronic HBV infection
- Seen for at least 2 follow-up visits regarding their HBV infection during the following timeframes:

  Preceding visit: Prior to February 1, 2012
  Most recent visit: March 1, 2012, to present

Demographics

Table 1: Physician demographics

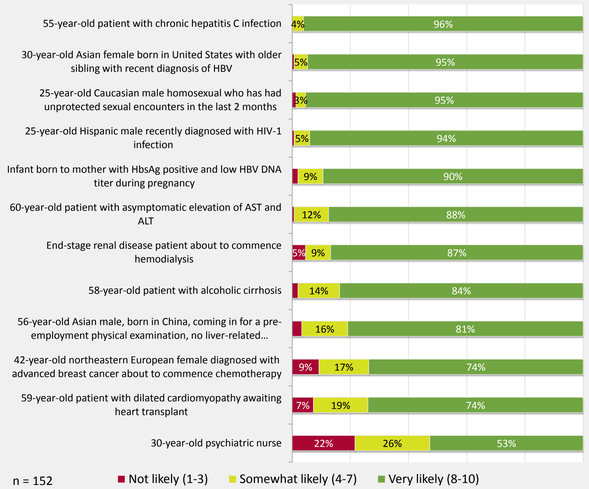
	(n = 146)
Degree	
MD/DO	81%
PA	6%
NP	4%
Other	13%
Patients seen per week with HBV	6 patients

Table 2: Patient demographics

	(n = 49)
Age	
21–40 years	**33%**
41–50 years	**20%**
51–60 years	**22%**
61–70 years	**18%**
71–80 years	**6%**
80 years or more	**2%**
Patient diagnosed with CHB by participating physicians	**57%**
Gender (percent male)	**51%**
Ethnicity	
Asian	**84%**
Caucasian	**10%**
Other	**6%**
Years since diagnosis (mean)	**5.5 years**

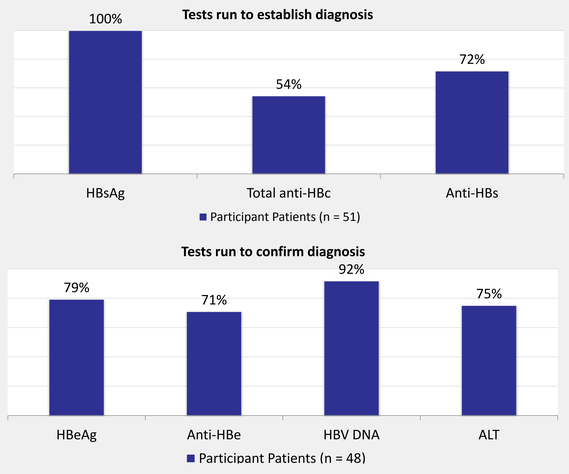
Results

Figure 1: Self-reported likelihood of screening different types of patients for HBV



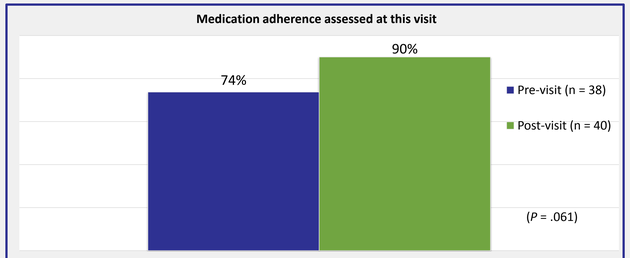
Of concern is that 20% or more of participants were not "very likely" to screen some patients who should be screened according to guidelines, indicating a need for continued education. Only 81% would screen an Asian man born in China, 74% would screen a patient before she received cancer chemotherapy, and 74% would screen a patient awaiting a transplant.

Figure 2: Tests run to establish and confirm diagnosis



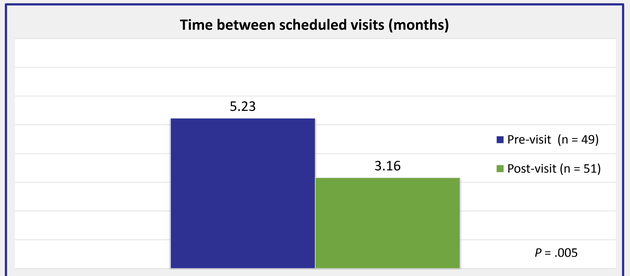
Fifty-seven percent of patients were diagnosed with CHB by the physician submitting the chart review. All patients had a test for HBsAg performed at the time of diagnosis, but only 54% of patients had a total anti-HBc, and 72% had an anti-HBs.

Figure 3: Addressing medication adherence at visit



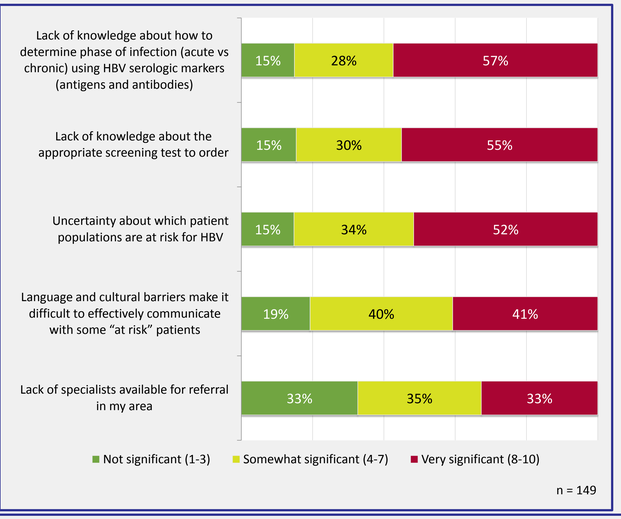
Medication adherence was assessed for significantly more patients at the visit following participation in the education, as compared with the pre- education visit.

Figure 4: Time between scheduled visits



When comparing time between visits for the before and after education, the mean time between patient visits significantly declined from over 5 months to approximately 3 months.

Figure 5: Significance of barriers to managing patients with HBV



Conclusions

An ongoing need for education for PCPs about HBV screening is demonstrated by the fact that, while they were "very likely" to screen some patients considered high risk by the CDC guidelines, 20% or more of PCPs would not screen some patients who should be screened:

- A person born in a geographic region with HBsAg prevalence of $\geq$ 2%
- A patient about to receive cytotoxic or immunosuppressive therapy

Three-quarters of the patients with HBV infection whose charts were reviewed by PCPs are aged 60 or younger, with the mean patient age of 50. Most of the patients were Asian.

Of interest, 43% of participants did not make the diagnosis of HBV infection in these patients. All patients had an HBsAg test done to establish the diagnosis of HBV infection; many also had testing for markers of immune response to HBV (anti-HBs and total anti-HBc) done as well. To confirm the diagnosis, almost all had HBV-DNA levels measured and most had HBeAg (a measure of viral replication) documented; ALT levels and anti-HBe were measured in about three-quarters of patients.

After the education the time between visits decreased, from 5.23 months to 3.16 months. This increase in monitoring is desirable, as 60% of patients were on medication at the initial visit and 71% at the second. In addition, assessment of medication adherence increased from 74% pre-education to 90% post-education.

The barriers seen as "very significant" by more than half of participants included lack of knowledge about how to determine phase of infection using HBV serology markers, lack of knowledge about appropriate screening tests to order, and uncertainty about which patient populations are at risk for HBV.

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