Hepatitis B (HBV) is a complex disease entity with potentially serious outcomes, including developing hepatocellular carcinoma (HCC). HBV is estimated to be responsible for about 50-80% of HCC cases worldwide, and 75-95% of HCC cases in HBV endemic regions. HBV and HCC are great concerns especially in East Asian countries like China. In China, HCC ranks as the 2nd most common cancer and 2nd in cancer mortality, both behind only lung cancer. China is considered an endemic HBV region, with about 100-150 million people infected. In comparison, only an estimated 550,000-2 million people are chronically infected in the US. With such high volumes of HBV and HCC cases in China, there are lots to be learned from how the Chinese healthcare system addresses this public health issue.

This qualitative study was done through primary research and included the following methods:

<table>
<thead>
<tr>
<th>Method</th>
<th>US</th>
<th>China</th>
</tr>
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<tbody>
<tr>
<td>Key Informant Interviews (KII)</td>
<td>✓</td>
<td>(N=2)</td>
</tr>
<tr>
<td>Specialties Interviewed</td>
<td>Hepatology</td>
<td>Liver Surgery, Infectious Disease</td>
</tr>
<tr>
<td>Clinical Shadowing</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Photo-journaling</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

- Qualitative, cross-country comparisons were done to uncover similarities and differences with regards to how HBV patients are managed.

### Results

#### Similarities

**Pharmacologic Treatment of HBV Patients**
- Antiviral therapies, such as entecavir and tenofovir, continue to be first-line treatments in both countries.

**Clinical Management & Surveillance of HBV Patients**
- In both countries, HBV patients are followed-up every 3-6 months, with routine labs (i.e. CBC, LFTs, HBV DNA viral load, AFP, tumor markers) and imaging (i.e. abdominal US) required.

### Key Differences

#### Patient Volume / Population Volume
- Chinese physicians would often see 60-70 HBV patients/day, spending an average of 5-7 minutes per patient, with little time spent on patient education.

#### Physician-Patient Relationship
- Due to differences in patient volume, China is more focused on quantity of patients served, rather than quality of services provided.
- Relationship often adversarial; mistrust bidirectionally.
- Lack of patient privacy; often multiple patients and family members in 1 exam room.

#### Breaking News of Cancer / HCC
- Physician would describe the details including prognosis, cost, etc. to the family of the patient, instead of patients themselves.

#### Combination Therapy with Traditional Chinese Medicine
- Physicians would often refer patients to see an Eastern Medicine practitioner to be prescribed Chinese medicine in tandem.

Overall, the biggest difference in management of chronic HBV between US and China is how patients are treated. It’s typical for Chinese hepatologists to see 60-80 HBV cases per day (~5-7 minutes / patient), whereas US hepatologists see 5-15 cases per day. From clinical shadowing, it’s apparent that US hepatologists take much more time on patient education, whereas the Chinese hepatologists cannot focus on this due to time constraints.

However, China is taking many effective measures on a macro scale to address this large public health issue:
- HBV vaccinations are readily available, and often free for at-risk populations.
- Increased vaccinations have led to a drastic decrease in the prevalence (0.1% seropositivity in kids under 15 years old).
- Large academic hospitals host National Hepatitis Day, where patients are offered free education, screening, and vaccinations (Picture 1).
- Hepatologists take advantage of the largest social media platform in China, WeChat, to post educational materials to raise awareness for liver health, hepatitis, etc. The app enables patients to post questions directly to the physician to increase “face-time.”

### Limitations & Future Direction

- Generalizability may be limited due to the fact that primary research was done at 2 specific hospital sites that are large, academic, tertiary care centers.
- Whether or not the closer doctor-patient relationship in the US translates to better disease outcomes is still an open question that warrants further studies.

### References