Hep B Hangout: Culturally Integrated Education Material: Photonovel

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Hepatocellular Carcinoma (HCC)
from a Global Perspective

- Ranks 4th in cancer incidence and 3rd in cancer mortality
- >80% of HCC occurs in the developing world
- HCC is largely preventable (80% caused by chronic HBV, 15% chronic HCV)
HBV Infection

- 2 billion people worldwide infected.
- >400 million HBV carriers worldwide
- 1.4 million people chronically infected in U.S.
- 46,000 Americans were newly infected with hepatitis B in U.S.
- 1 out of 12 Asian Americans has chronic hepatitis B
<table>
<thead>
<tr>
<th>Maternal race/ethnicity</th>
<th>2002 Births</th>
<th>Estimated maternal HBsAg Prevalence</th>
<th>Estimated Births to HBsAg positive women</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, non-Hispanic</td>
<td>2,298,156</td>
<td>0.13%</td>
<td>2,988</td>
</tr>
<tr>
<td>Hispanic</td>
<td>876,642</td>
<td>0.09%</td>
<td>789</td>
</tr>
<tr>
<td>African American</td>
<td>593,691</td>
<td>0.5%</td>
<td>2,968</td>
</tr>
<tr>
<td>Asian Pacific Islander</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign born</td>
<td>175,264</td>
<td>8.9%</td>
<td>15,598</td>
</tr>
<tr>
<td>US born</td>
<td>35,643</td>
<td>1.4%</td>
<td>499</td>
</tr>
<tr>
<td>Other</td>
<td>42,330</td>
<td>0.5%</td>
<td>212</td>
</tr>
<tr>
<td>Total</td>
<td>4,021,726</td>
<td></td>
<td>23,054</td>
</tr>
</tbody>
</table>

1. Asian Liver center [http://liver.stanford.edu](http://liver.stanford.edu)
2. Draft ACIP hepatitis B recommendations, CDC 2005
Liver cancer is SECOND in mortality and FORTH in incidence among all cancers for Asian Americans.

- Incidence Rate of liver cancer among males (per 100,000)
  - Vietnamese Americans: 41.8
  - Korean Americans: 24.8
  - Chinese Americans: 20.9
  - White: 3.7
Introduction (2)

- HBV infection contributes to 80% of liver cancer cases.
- Asian Americans are 20 to 30 times more likely to have HBV infection compared to other ethnic groups.
- Sustainable hepatitis B (Hep B) screening and vaccination programs are necessary to reduce liver cancer incidence among Asian Americans.
Low Screening & Vaccination among Asian Americans

- Factors associated with low Hep B Screening and vaccination rate among Asian Americans:
  - Low awareness of HBV infection
  - Limited English fluency and low health literacy
  - Limited access to care
  - Cultural barriers, such as spiritual belief (e.g., believing that suffering is an integral part of life among Buddhists), and less emphasis on prevention.

Culturally and linguistically tailored education programs to increase Hep B knowledge and communication skills with physicians are needed for Asian Americans.
Content Analysis

- Collect all the existing brochure related to HBV infection and liver cancer
  - National Cancer Institute (English)
  - Stanford Asian Liver Center (English, Korean, Vietnamese, Chinese)
  - Bristol Myers Squibb (English, Korean, Vietnamese, Chinese)
  - Gilead (English)
  - Hepatitis Foundation International (English, Asian Languages)
  - Hepatitis B Initiative - DC (English, Korean)

- Do content analysis
- Think about the problems of existing material
- Think about some story line based on your own culture
Current HBV Brochures

- Culturally-tailored interventions that target specific ethnic groups are needed

Source: Asian Cancer Liver Center
What Is A Photonovel?

Components

• Format: similar to a comic book, but uses photos and dialogues of target population instead of cartoon drawings;

• Storyline: common experience from that community;

• Tailored to the culture, ethnicity, race, gender, language and class status.

Examples

From http://photonovel2009.blogspot.com/
http://photonovel2008.blogspot.com/
Educational products from the English Department at Escola Móbile

FEW STUDIES HAVE EXAMINED THE EFFECTIVENESS OF A PHOTONOVEL IN PROMOTING HEALTH.
Innovative approach using Photonovel

• Participatory-based action research method (Freire 1973)
• The most successful educational experiences are those that involve and engage the learner using Freire’s problem-solving educational methods (Roter et al., 1981).
Components of Photonovel

- Plot
- Dialogue
- Visual content
• Non-traditional educational materials
• Format of comic book but substitute photos of real people and places for cartoon drawing
• Dialogue is placed in word bubbles to transmit a dramatic story line, generated by the participants
• The themes from everyday experience; dialogue from people’s actual speech
Plot

- Narrative events with the emphasis on cause and effect
- Easily understood
- Keep the cast to a minimum (<5)
- Clarify scene changes
- Limited number of pages (<16)
- Try to sell idea
Dialogue

- Open discussion between the characters
- Clarity
  - Use as few words as possible
- Familiar words and expressions
- Express ideas with narrative inserts
  - To shorten the story
  - To clarify the message
Visual Content

- Motivates the reader to pick up the photonovel in the first place (i.e., cover)
- Photograph
- Drawings
Focus Groups & Exploratory Study

- Eight focus groups were conducted to investigate knowledge, stigma, perceived risk, and barriers of Hep B and liver cancer.

<table>
<thead>
<tr>
<th>Focus group language</th>
<th>Chinese</th>
<th>Korean</th>
<th>Vietnamese</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td># of focus groups</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

- The development of photonovels incorporated findings from focus groups.
- Products were piloted tested with lay health persons from each ethnic groups and community advisory board and revised correspondingly.
- Process evaluation was collected by mails one-month after the intervention.
Findings from Focus Groups

**Chinese**
- Strong stigma associated with Hep B
- Having a pamphlet on Hep B in hand would make others think they are Hep B carriers.
- Low awareness of Hep B prevention and risk factors.

**Korean**
- Heavy reliance on alternative medicines such as herbal medicines and supplements.
- Fate and personal stress was thought to be related to have liver cancer.
- Low awareness of cancer prevention.

**Vietnamese**
- Stigma associated with Hep B: an unlucky thing to talk about hepatitis B and liver cancer.
- Younger people have better access to medical information.
- Knowledge about prevention of Hep B was limited even among young generations.
Development of Photonovels

- **Storyline** was developed from the themes emerged from the focus group.

- **Actors and Actresses**

<table>
<thead>
<tr>
<th>Ethnic group</th>
<th>Chinese</th>
<th>Korean</th>
<th>Vietnamese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actors/actress recruitment</td>
<td>Chinese students from UMD</td>
<td>Church members in Anne Arundel County</td>
<td>nail salon workers</td>
</tr>
</tbody>
</table>

- **The doctor** in the photonovel was a Chinese physician who had been working for hepatitis B advocacy and known to Asian community.

- **All pictures** were taken by the research team with the help of community people.

- **The settings** of the story were local places such as nail salons, personal residence, schools, parks, and doctor’s offices.

- **Epidemiologic statistics and facts** were presented in “fact boxes” separate from the main storylines.
## Storylines of the Photonovels: Chinese

<table>
<thead>
<tr>
<th>Storyline</th>
<th>Cultural factors being conveyed</th>
</tr>
</thead>
<tbody>
<tr>
<td>A young Chinese couple is about to get married while the bride confesses that she has chronic Hep B. The groom is shocked.</td>
<td>• Marriage setting might attenuate the stigma against Hep B and its pamphlet.</td>
</tr>
<tr>
<td>The couple are advised by a family member to see the doctor.</td>
<td>• Family involvement</td>
</tr>
<tr>
<td>They find out that the groom is not infected, but needs vaccination.</td>
<td>• Low awareness of Hep B and liver cancer prevention.</td>
</tr>
<tr>
<td>The couple are glad to know that patients with chronic Hep B can live a normal life with proper treatments. They get married happily.</td>
<td></td>
</tr>
<tr>
<td>Storyline</td>
<td>Cultural factors being conveyed</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>A typical Korean immigrant family lives in the U.S. The parents rely heavily on oriental medicine and have wrong beliefs about Western medicine. The father is shocked to learn that his brother has liver cancer caused by chronic hepatitis B. The son urges his parents to do a screening since they have a family history of hepatitis B and liver cancer. It turns out that the father is infected and he gets treatment information.</td>
<td>• Reliance on supplements. • Family involvement. • Low awareness of risk factors, such as family history.</td>
</tr>
</tbody>
</table>
### Storylines of the Photonovels: Vietnamese

<table>
<thead>
<tr>
<th>Storyline</th>
<th>Cultural factors being conveyed</th>
</tr>
</thead>
</table>
| • A young immigrant couple runs a nail salon business in the U.S.  
• The wife is discussing Hep B with her aunt triggered by the news that a celebrity dies of liver cancer.  
• The wife thinks it is unlucky to have the conversation.  
• She finds out her husband used to live with a roommate who is infected with Hep B.  
• The couple sees the doctor and finds out the husband is infected.  
• Treatment and vaccination information is given to the couple. | • Unlucky to talk about the disease;  
• Nail salon workers.  
• Low awareness of transmission of Hep B. |
Pilot Test

• The photonovels were translated into Chinese/Korean/Vietnamese and tested in the community and discussed with eight community advisory board members.

• Key questions included:
  • Storyline (cultural relevancy);
  • Actors and actresses (familiarity to the community and their acting skills);
  • Understandability;
  • Size, format, color, and overall design of the material;
  • Fact box contents (understandability).
How Are Photonovels Used in the Intervention?

• Intervention: a community-based participatory research (CBPR)
• The intervention goal was to
  • improve knowledge about Hep B/liver cancer;
  • increase screening among Asian Americans.
• The intervention consists of:
  • Pre-test;
  • A PowerPoint presentation with a role-play video on doctor-patient communication, and Q & A;
  • Immediate post-test;
  • **Take-home photonovels**;
  • **Process evaluation on photonovels at one-month follow-ups**.
  • Post-test on knowledge and behavior change at six-month follow-ups.
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Material test</strong></td>
<td></td>
</tr>
<tr>
<td>Understandability</td>
<td>Is it easy to understand? Does it use medical jargon?</td>
</tr>
<tr>
<td>Contents</td>
<td>Is the information useful to the targeted population?</td>
</tr>
<tr>
<td></td>
<td>Do the readers feel ownership?</td>
</tr>
<tr>
<td><strong>Visual Appeal</strong></td>
<td></td>
</tr>
<tr>
<td>Cultural relevancy</td>
<td>Are the information/contents relevant to the target population?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Attitude and behavior test</strong></td>
<td></td>
</tr>
<tr>
<td>Behavior change</td>
<td>Did you recommend the photonovel to others? How many? To whom?</td>
</tr>
<tr>
<td>Self efficacy</td>
<td>Did you become confident to get tested for HBV after reading the photonovel?</td>
</tr>
<tr>
<td>Intention</td>
<td>Do you intend to get tested for HBV within five months after reading the photonovel?</td>
</tr>
</tbody>
</table>

Notes: Criteria is guided by previous studies: (Estey, 1991; Frank-Stromborg & Cohen, 1991; Roter et al., 2006; Walters et al., 1994)
Results from Process Evaluation (n=347)

Information helpful?
- Strong agree: 63%
- Agree: 24%
- Neutral/Disagree/Strongly disagree: 13%

A good teaching tool?
- Strong agree: 65%
- Agree: 23%
- Neutral/Disagree/Strongly disagree: 12%

Intent to do a screening within 5 month after reading the photonovel?
- Yes: 53%
- No: 26%
- Not sure: 15%

Story written by someone knows the community
- Strongly agree: 46%
- Agree: 31%
- Neutral/Disagree/Strongly disagree: 23%

Confident to get screening after reading photonovel?
- Very confident: 29%
- Confident: 50%
- Neutral/little confident/not at all confident: 21%
Conclusion (1)

• Our photonovels successfully reached most of our target population.
  • Response rate: 87%; Among the responded, 94% reported to have read it

• Majority of participants strongly agreed or agreed:
  • Cancer information in photonovel was helpful
  • Photnovel was a good teaching tool
  • Story was written by someone who knows the community

• About half of the participants intend to have HBV screening in next 5 months or confident to get HBV screening after reading photonovel
Conclusion (2)

- Overall evaluation of the photonovel was high with an appropriate level of understandability and cultural relevance to our target population.
- Photonovel may serve as a good health communication and educational tool for Asian Americans.

“One of friends did hepatitis B testing after reading photonovel, so I think this is helpful.”

“This brochure gave me good information about hepatitis B testing and risk. The story is realistic.”

(Feedback from our participant on the process evaluation)

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