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Participatory Research to Address the Issues of HBV Infection and Vaccination

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- A Research Grant from School of Nursing, UCHSC, Denver, CO
- Oversee Korean Health Promotion Fund from SinIl Foundation, Seoul, Korea

Program Team

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- Amy Warner, MA, Manager of Infection Dep. Colorado Dept. of Public Health & Env.
- Sugie Park, President of Rocky Mountain Korean Lions Club
- Susie Kim, RN, DNSc Ewha Women's University
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- Myron J. Levin, MD, School of Medicine, UCHSC
- MeeYoung Im, RN, PhD, Post-Doc, School of Nursing, UCHSC

Collaboration

- Two Korean Churches
- Advisory Council Members
- All Participants
- University of Colorado HSC: SON & SOM
- Asian Pacific Development Center
- Colorado State Health Department

Who is the Research for

Korean Americans in Rocky
Mountain Areas

Why is the Research for this group (people)

Liver Cancer Risk from HBV

- 5% of the world's human population risk liver cancer and cirrhosis due to chronic HBV infection
 - 350,000 new LC cases per year—7000 in U.S.
- 2 billion have been infected with HBV
 - 350 million chronically infected—1.25m in U.S.
 - 75% reside in Asian countries
 - 80% of liver cancer among Asians is due to HBV
- Chronic HBV infection increases risk of liver cancer by 14 to 200 times

Top Five Most Commonly Diagnosed Cancers in the U.S. by Race/Ethnic Group, 1994-1998 Males

All Races	Korean
Prostate (28%)	Lung (16%)
Lung (17%)	Stomach (15%)
Colon & Rectum (12%)	Colon & Rectum (14%)
Bladder (7%)	Prostate (10%)
Non-Hodgkin's Lymphoma (4%)	Liver (9%)
Vietnamese	Chinese
Lung (18%)	Prostate (20%)
Liver (14%)	Colon & Rectum (16%)
Prostate (12%)	Lung (15%)
Colon & Rectum (10%)	Liver (8%)
Stomach (7%)	Stomach (6%)

DATA Disparities in AAPIs:
Healthy People 2010 Publication

- Sub-objectives related to AAPi
 - In Section 9: Infection and Immunization
 - **DATA have not been analyzed** (DNA)
 - **DATA have not been collected** (DNC)
 - **DATA are statistically unreliable** (DSU)

A lack of DATA on the Diverse AAPi Subgroups in the U.S.

No Evidence

- To understand the problems
- To develop interventions to reduce long-standing racial and ethnic disparities in health.



Data in Colorado

- 18,090 (19% of the AAPi population) infection within the AAPis (estimated data)
- No data on hepatitis B infection and vaccination rates for AAPis
- AAPi population numbers 95,213 & 2.2%
- 90% live in Denver or Colorado Springs metropolitan areas



Purpose

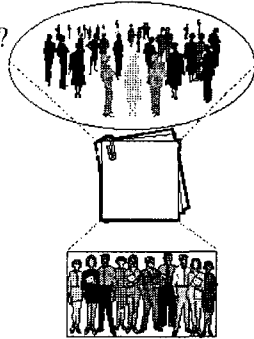
- To conduct a community-based participatory study to understand the frequency of hepatitis B infection by blood screening tests.
- To explore knowledge of Hepatitis B Virus (HBV) and liver cancer as well as social and cultural determinants of the hepatitis B infection and liver disease among Korean Americans.

Target population:

- Who are they?
- Where do we find them?
- How do we reach out to the subjects (participants)?

Methodological Issues

- Complete List of AAPIs?
- Speaking English?
- Literate?
- Cooperate: understanding of research?
- Geographic restrictions?



low inclusion rates

- African Americans
 - Distrust and Suspicion of research conducted by the white-dominated medical and research communities
- Korean Americans
 - Language barrier
 - Availability
 - dispersed and scattered

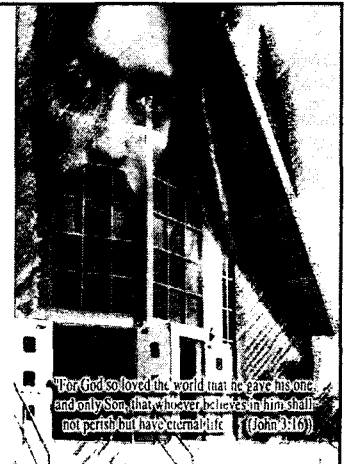
How to Reach?!

- Recognizing these limitations, the primary question remains how to reach or gain access to this hard to reach population

Methodology

Community-Based Participatory Research:

Integrate
A participatory
Research into a
Church-based health
survey and HBV blood
screening tests and
Vaccination



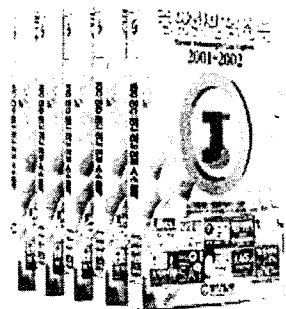
Strategies for successful community-based programs for AAPIs¹

- Use compelling and accurate ethnic-specific national, regional and/or local data to identify where gaps exist.
- Establish alliances and coalitions with existing groups.
- Provide ethnic-specific culturally sensitive and linguistically appropriate materials and media outreach
- Develop a cadre of knowledgeable lay counselors.
- identify ways local, state, and federal governments can be held accountable for eliminating health disparities.
- Use consumer feedback.
- Evaluate & document qualitatively & quantitatively

¹ <http://search.ncbi.nlm.nih.gov/search97cgi/s97.cgi>

Korean American Capacity: Community Members and Agencies

- 22 Korean American community organizations
- 3 Korean daily newspapers
- 4 Korean weekly newspapers
- 52 Korean churches
 - 51 Protestant
 - 1 Catholic
 - 1 Buddhist



Clusters of Korean Americans: Relationships

- Blood (Hyul-Yurn), or strong family relationships
- Alumni (Hack-Yurn), or strong educational institutional relationships
- Geography (Gee-Yurn), or hometown
 - Chen, et al., (1997)
- 77% of their Korean American subjects were Christian
 - 68% participated in religious activities at least once a month
- 3% were Buddhist

- Key individuals and organizations in the Korean American community
- Korean Lions' Club
- University of Colorado Health Sciences Center
 - School of Nursing
 - School of Medicine



Gaining Access

- Provide community services to gain trust and respect
- To develop personal relationships

Development of Trusted and Respected Partnerships

- Researcher teams,
- Existing community capacity,
- Fluidity and flexibility of the process,
- Intimacy and respectful relationships, and
- Tangible benefits for both partners.

Recruitment Strategies

- Researchers met with pastors, AC, and churches leaders to describe the purpose and the process of the research
- With the pastors' support, the program was presented at a variety of church activities
- With the pastors' support, church members were called to participate in the survey using church directories (personal approach)
- Pastors made announcements about the project during church services and other church activities
- The project was introduced in the church bulletin (public approach)

Lessons Learned

- The research team represented the participant by race and language and is seen as the person who is sharing the same burden or risks.
- Research team and AC members together have zeal and commitment to enhance the quality of the community's health.
- Based on the past experiences and current work, both sides have developed respectful and trusted relationships.

- Korean Americans already have substantial community capacity, and this capacity is built on their unique cultural norm of “relationships.”
- The research process was not a classic, structured, phased stage, but rather a spiral process with no start point or end point.
- Direct benefits including free blood tests, blood test reports with detailed explanation of the meaning of numbers in Korean, and free vaccinations at participant churches.

Consent Procedures

- Bilingual Korean American researchers
- Two Korean Churches
- Both Korean and English consent forms were available
- One consent form with one signature for multiple research procedures including survey data collection, qualitative interview, blood tests, and vaccination

Survey Data Collection

- Face-to-face interview
- Korean churches
- Before and after Sunday worship celebration
- Subject: Household / Not individual participants

Tool Development

- Translation and Back-Translation
- Pre-testing Collaboration with Advisory Council

Variables to be Measured

- Demographic and cultural Characteristics
- Knowledge of Hepatitis B infection and Liver Cancer
- Health Care Access
- Vaccination Rate
- A Needs Assessment for Future Community Health Programs

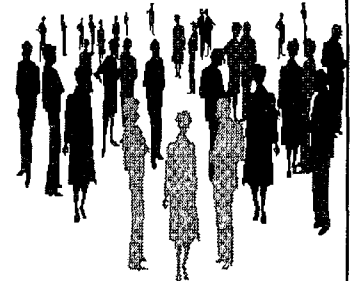
Blood Screening Tests

- Two Korean churches
- Men and women between 18 and 70 years of age
- Hepatitis B screening and liver and kidney function tests were given at no cost
- Since a blood glucose test was included, blood was drawn after a 12-hour fast
- After centrifuge the blood at the churches, the blood was delivered to the University Hospital laboratory for final analysis by the Private Instigator

Findings: HBV screening Tests

RESULTS: HBV tests

- 178 adults
- 74% were Women,
- Mean age was 48 (19 to 70 years)



Rate of HbsAg & HbsAb

<i>Variables</i>	<i>N (%)</i>
HBsAg	5 (3%)
HBsAb	101 (57%)

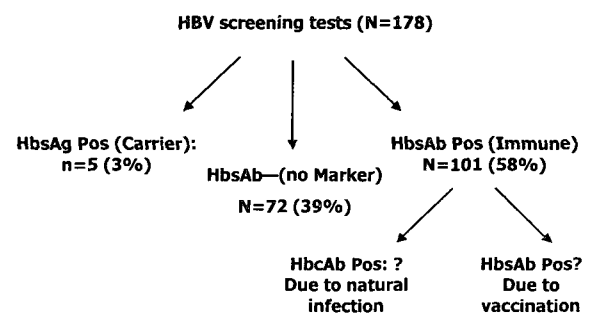


Figure 1: Interpretation of Common Hepatitis B Panel Results

RESULTS: Vaccination

- Received HBV vaccination: 20/111(18%)
- Received a series of 3 vaccination: 6 (5%)
- Receiving place: Korea (19) vs. U.S (1)

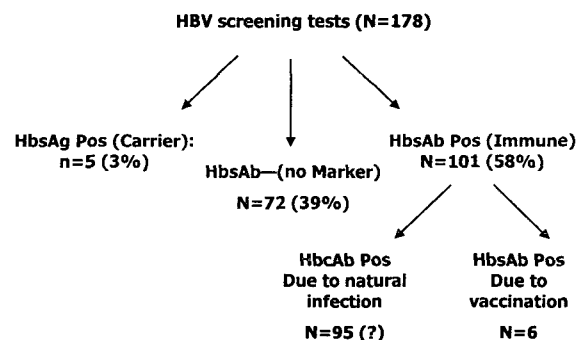


Figure 1: Interpretation of Common Hepatitis B Panel Results

Findings: Survey

Demographic Profiles

- Age: 49 (± 10)
- Female: 93 (85%)
- Married: 86 (78%)
- High school: 51 (48%)
- College: 51 (48%)
- Income (missing data): 60 (%)

Acculturations

- Birth Place: Korea (n=110)
- Length of stay in U.S: 19 yrs (1-43)
- Spouse: Korean (n=59)
- Korean Dinner: 72 (65%)
- English Fluent: 29 (26%)

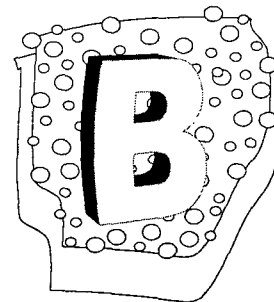
Level of Spoken English

- None: 2.7%
- A Little: 61.2%
- Fluent: 26.1%

Health Insurance

- No Health Insurance: 40%
- Private Insurance: 37%
- Medicare: 16%
- Medicaid: 11%

Hepatitis B



Main Causes of Liver Cancer

- Chronic hepatitis C virus infection-20%
- Chronic hepatitis B virus infection-60%
- Aflatoxin in diet
- Cigarette smoking
- Alcohol consumption

Hepatitis B Virus Modes of Transmission

- Infectious body fluids—
primarily blood, semen and
vaginal
- Perinatal
- Sexual
- Household contact exposure
 - Razors, toothbrushes,
abrasions, etc
- Any other blood to blood
exposure
 - IVDU, medical, etc.



Knowledge of Liver Cancer

- Do you think liver cancer is caused by drinking a lot of alcohol? 45%
- Do you think liver cancer is caused by eating fat or toxic food? 26%
- Do you think liver cancer is caused by smoking? 42%
- Do you think liver cancer is caused by stress or overwork? 64%
- Do you think that liver cancer can be prevented? 67%

Knowledge of HBV Infection

- Do you think that hepatitis B infection has signs or symptoms? 23%
- Do you think that many non-Korean people in the U.S. have hepatitis B? 68%
- Do you think Korean Americans should get hepatitis B vaccinations even if they are healthy? 68%
- In the past 2 years, has a doctor recommended that your or your children get a vaccination? 1%

Knowledge of HBV Infection

- Do you think that people get hepatitis B from genes (heredity)? 23%
- Do you think that people get hepatitis B through the air (coughing or staying in the same room)? 15%
- Do you think that people get hepatitis B by sexual relationships? 16%
- Do you think that people get hepatitis B by sharing spoons or bowls for food? 58%

Knowledge of HBV Vaccination

- Do you know the place to get hepatitis B immunizations? 24%
- Do you intend to make sure that your family has hepatitis B vaccinations? 86%
- Do you think you need a vaccination at your age? 82%
- Do you think only children under 2 years old need to be vaccinated? 11%
- Do you know vaccinations can be free or low-cost through certain programs? 17%

Reasons for Not Receiving Vaccination

- No symptoms/healthy: 55%
- MD did not recommend: 55%
- High cost & no insurance: 24%
- Transportation: 0%
- Do not trust vaccination: 0%
- Only need for children: 3%

Barriers to Vaccination

- High Cost: 54 (49%)
- Reservations due to English: 27 (24%)
- Communication with Health care providers: 24 (22%)
- Not knowing where to go: 19 (17%)
- Transportation: 7 (6%)
- Childcare: 7 (6%)

Sources of Health Information

- Eastern medical personnel: 31%
- Korean media (TV & Radio): 80%
- Booklets or other printed material (Korean): 52%
- Church: 46%
- Friends or relatives: 62%
- Internet: 32%
- Western medical personnel: 32%
- English media (TV & Radio): 48%
- Booklets or other printed material (English): 32%

So What!? Clinical Implication

- The high incidence of hepatitis B infection and hepatitis B antibody among Korean Americans
- Serum HBAb indicated either a past vaccination history, or exposure to HBV previously. Based on the low report of vaccination, it could be concluded that the majority of Koreans were exposed to HBV, and that they are at high risk to be infected by HBV.
- Therefore based on this evidence, providing vaccinations to KAs who are high risk for HBV infection is imperative

So What!? Clinical Implication

- Survey data/evidence revealed a low-level of knowledge of HBV infection, liver cancer, and vaccination is problematic therefore, community education is imperative.
- Several factors have been identified as obstacles to health care and vaccination including language barriers, lack of health insurance, and inability to use medical system in the U.S.

So What!? Clinical Implication

- This study captured a phenomenon that was not previously identified in other infection literature. For instance, KAs strongly believed that sharing bowls and utensils, and drinking alcohol caused liver problems and HBV infection.
- All these factors are related to meals or Korean's eating culture and helped to better understand the varying ideas of HBV infection, liver cancer, and accompanying misunderstandings held by ethnic minority KAs.