Hepatitis B Control Across Clinical and Non-Clinical Settings

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Burden of HBV Disease

It is estimated that up to 2.2 million persons in the United States are chronically infected with HBV.

Foreign-born Asian and African individuals in the U.S. are *disproportionately* affected by chronic HBV

- Foreign-born Asian individuals make-up nearly 60% of the chronically infected, despite the fact that they make up <5% of the U.S. population
- Foreign-born African individuals account for nearly 25% of the chronically infected, despite the fact that they make up <0.5% of the population

1. CDC. MMWR 2008;57(No. RR-08) 2. Knowdley. Hepatology 2012;56(2)422

Morbidity and Mortality from Chronic HBV Infection

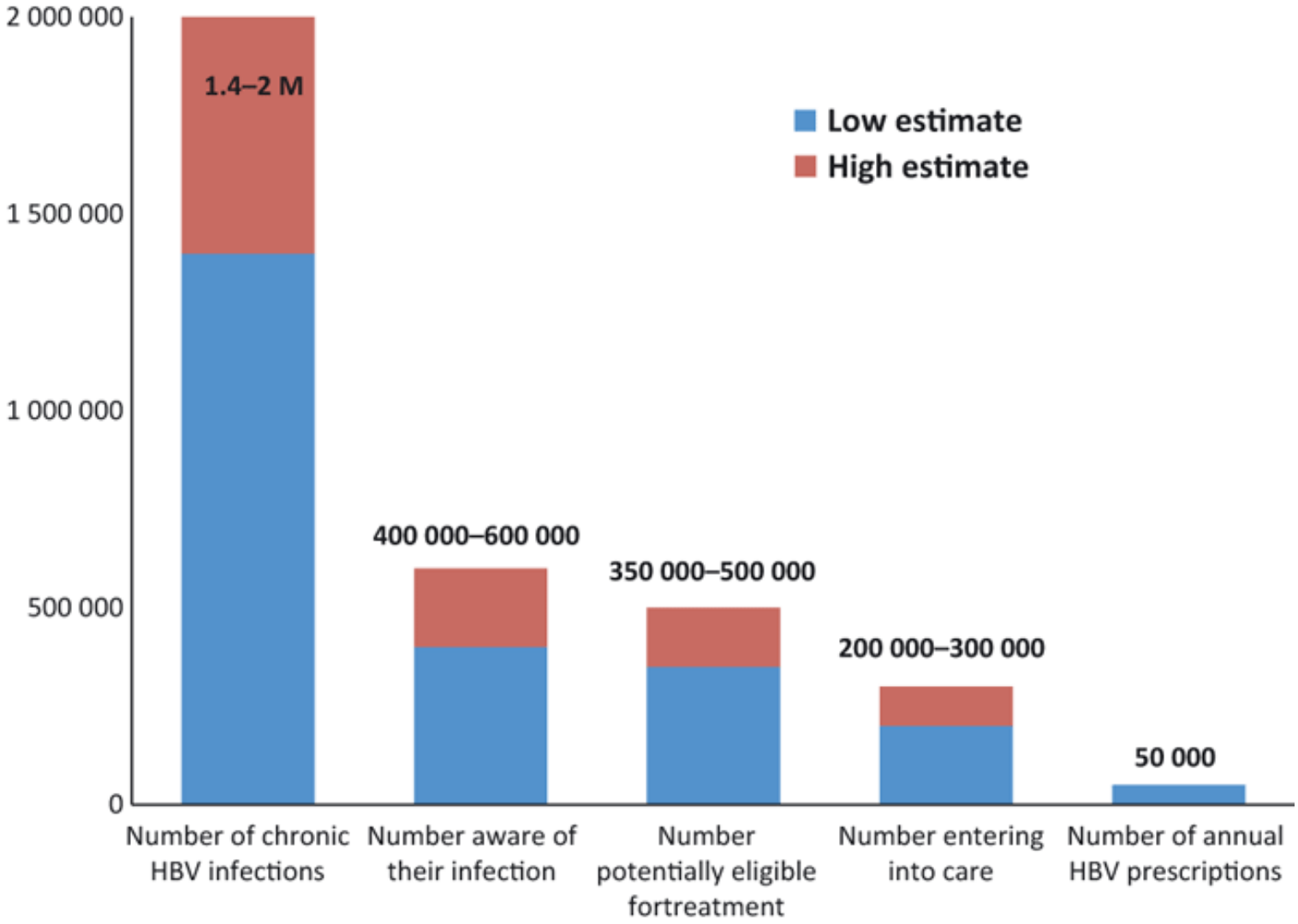
In the U.S., an estimated 1900 people die each year from HBV-related disease[1]

HBV is responsible for 75-80% of virus-associated HCC (compared to 10-20% for HCV) [2]

25% with chronic hepatitis B will die early from complications of the disease[3]

1. CDC. http://www.cdc.gov/hepatitis/Statistics/2013Surveillance/index.htm.
2. Perz. J Hepatol 2006;45(4):529
3. McGlynn. Clin Liv Dis 2015;19(2):223

Chronic HBV Infection is Undertreated



Cohen C. J Viral Hepat. 2011;18:377-383

Hepatitis Education and Prevention Program (HEPP)

In 2012, AHC awarded CDC Cooperative Grant to conduct HBV surveillance and screening in Chicago Metropolitan area.

Screenings performed	1174
Screenings available for analysis	1158 (98.6%)
HBsAg +	69 (6%)
Anti-HBc +	444 (18%)

Country of Origin	# Screened	# Positive	Carrier Rate
China	59	8	13.60%
Africa	131	14	10.7%
Laos	144	12	8.30%
Cambodia	51	4	7.80%
Nepal	28	2	7.10%
Tibet	18	2	7.10%
Other	84	6	7.10%
Philippines	114	5	4.40%
Korea	239	9	3.80%
Vietnam	170	6	3.50%
Mongolia	52	1	1.90%
India	29	0	0.00%
Burma	22	0	0.00%
USA	17	0	0.00%
TOTAL	1158	69	6.00%

COMPARISON OF LINKAGE TO CARE IN CLINICAL AND NONCLINICAL SETTINGS

J Multidiscip Healthc. 2015 Jan 6;8:1-9. doi: 10.2147/JMDH.S75239

The question: Can non clinical settings be as effective as clinical setting in reaching, screening and linking Asian immigrants to care?

SCREENINGS IN NONCLINICAL SETTINGS

Health fairs and other events hosted by community- and faith- based organizations created opportunities for language-concordant outreach and lessened perceived stigma and financial concerns.

SCREENINGS IN CLINICAL SETTINGS

Community health centers, federally qualified health centers (FQHCs), free clinics, small group physician practices, and hospitals provided direct access to primary care physicians and preventive services.

OUR HYPOTHESIS

Nonclinical settings may be more effective in HBV control, and facilitate outreach of hard to reach populations in potentially larger numbers than clinical settings.

Methods

Health center sites

Hepatitis Patient Navigators (HPNs) will be assigned at each location

- Notify individuals of results
- Vaccinate susceptible patients at risk
- *Case Management for HBsAg+ patients – refer for additional lab testing, refer and schedule specialty care, assist with access and navigate barriers

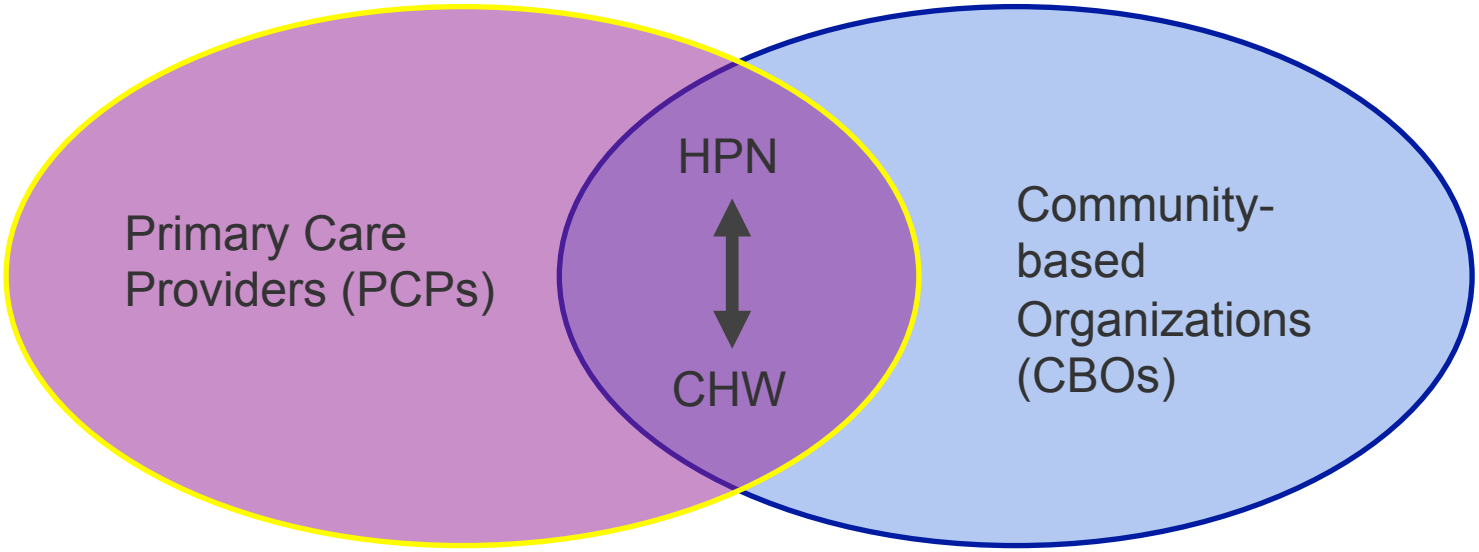
Community Sites

Community-Health Workers (CHWs)

- Provide culturally relevant education
- Encourage screening at Health Centers or Free events
- Notify patients of screening results
- *Refer patients to local providers and PCP sites for vaccination and care of chronically infected

CHWs and HPNs work together to ensure patients schedule and make appointments

Methods



- CHWs and HPNs will have joint:
  - Reciprocal site and facility visits
  - Cultural competency training
  - HBV education and training
  - Medical Process and Linkage-to-care training

Results

- Twice as many Asian Americans were screened in NCS vs CS
- No significant differences in % positivity, sex, insurance, years in the US or education

Table 1 Screening sites and participant counts

Site type	Name of screening site	Designation	Frequency (n)	Percent
Clinical settings	Asian Human Services	FQHC	53	7.0
	Heartland Health Centers	FQHC	101	13.3
	Korean American Family Clinic	CHC	75	9.9
Nonclinical settings	Quang Minh Viet Temple	FBO	43	5.7
	African United Community Methodist Church	FBO	39	5.1
	Cambodian Association of Illinois	CBO	28	3.7
	Chinese American Service League	CBO	57	7.5
	Chicago Mongolian Mission Church	FBO	43	5.7
	Ethiopian Community Association of Chicago	CBO	44	5.8
	Filipino Community Health Fair	Health fair	42	5.5
	Hanul Family Alliance	CBO	48	6.3
	Lao American Organization of Elgin	CBO	144	19.0
	Tibetan Alliance of Chicago	CBO	41	5.4
Totals			758	100

Abbreviations: CBO, community-based organization; CHC, community health clinic; FBO, faith-based organization; FQHC, federally qualified health center.

Participant Demographics

Variable	Total Number (n_T=758)	Percentage (%)
Site Type		
Clinical Settings	229	30.2
Non-Clinical Settings	529	69.8
Gender		
Male	285	37.6
Female	470	62.0
Not indicated	3	.4
Race		
Asian	620	81.8
Other	93	12.2
Not indicated	45	5.9
Age		
Less than 30 years	67	8.8
30-39 years	104	13.7
40-49 years	186	24.5
50-59 years	181	23.9
60-69 years	169	22.3
70 years or older	50	6.6
Not indicated	1	.1
Residence Years in United States		
Less than 10 years	108	14.2
10-19 years	101	13.3
20-29 years	78	10.3
30 or more years	120	15.8
Not indicated	351	46.3
Insurance status		
Yes	271	35.8
No	400	52.8
Not indicated	87	11.5
English as Primary Language		
Yes	74	9.8
No	684	90.2

Linkage-to-Care Results

Clinical: 56%
Non-clinical: 77%
P=0.010

Type of setting	Number of Positive Individuals	Post-test counselling provided (Y=Yes; N=No)		Referred to Medical care (Y=Yes; N=No)		Source of Care When Referred to Medical Care Indicated	
		Y	N	Y	N	PCP	Medical facility
Clinical setting	16	16	0	9	7	5	4
Non-Clinical setting	39	39	0	30	7	11	19

There was not a significant association between test result and screening site type (χ^2=.02, df=1, p>.05, Φ_C=.005). Individuals who ended up testing positive for the disease were as likely to participate in clinical as in non-clinical settings.

Conclusions

- We found no significant associations between a number of demographic factors and between sites. Screening rates were higher in non-clinical sites. Most importantly, in our cohort, referral rates were significantly higher in NCS
- Non-clinical settings have the capacity to reach a larger segment of underserved foreign-born populations who tend to be uninsured and have limited English proficiency.
- This program demonstrated the merits of using a community-based patient navigation model for linkage-to-care, providing infected individuals with access to culturally competent medical care for HBV.

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