Hepatitis B Knowledge, Testing and Vaccination Levels in Chinese Immigrants to British Columbia, Canada

T. Gregory Hislop, MDCM[1,2]
Chong Teh, PhD[1]
Angeline Low, PhD[1]
Lin Li, MD, MS[3]
Shin-Ping Tu, MD, MPH[4]
Yutaka Yasui, PhD[5]
Vicky M. Taylor, MD, MPH[3,6]

ABSTRACT

Background: Little is known about hepatitis B (HBV) and liver cancer control in Chinese in Canada. Liver cancer, a significant health problem in Asia, is preventable and can be controlled through HBV blood testing, vaccination, and community education about HBV.

Objective: The overall goal was to increase HBV testing and vaccination in Chinese adult Canadians. The objective was to present findings on HBV testing, vaccination and knowledge in Chinese immigrants.

Methods: 504 randomly selected Chinese adult immigrants residing in Vancouver responded to the survey which examined HBV blood testing and vaccination practices, HBV knowledge levels and socio-demographic characteristics. Face-to-face interviews were conducted in Cantonese, Mandarin, or English.

Results: 57% of participants reported that they had received HBV blood testing, 38% had been vaccinated, and 6% were known HBV carriers. There were gender differences, with lower rates of testing and vaccination, and higher chronic carrier rates, among men. Over 80% knew that HBV can be spread by asymptomatic persons and can cause cirrhosis and liver cancer. However, confusion existed about the routes of HBV transmission.

Interpretation: A sizeable proportion of Chinese adult immigrants in Vancouver have not been tested or vaccinated for HBV. Knowledge level, especially about routes of HBV transmission, was low. This is a concern, given that chronic HBV infection is the most common cause of liver cancer in Asian North Americans. To improve knowledge, reduce risk of infection and the burden of chronic infection and its sequelae in immigrant populations, continuing educational efforts are needed.

MeSH terms: Hepatitis B; liver neoplasms; health knowledge, attitudes, practices; asian continental ancestry group; emigration and immigration

La traduction du résumé se trouve à la fin de l'article.

1. Cancer Control Research, BC Cancer Agency, Vancouver, BC
2. Department of Health Care and Epidemiology, University of British Columbia, Vancouver
3. Fred Hutchinson Cancer Research Center, Seattle, Washington, USA
4. Department of Medicine, University of Washington, Seattle
5. Department of Public Health Sciences, University of Alberta, Edmonton, AB
6. Department of Health Services, University of Washington

Correspondence and reprint requests: Dr. T. Gregory Hislop, #2-109, 675 West 10th Avenue, Vancouver, BC V5Z 1L3, Tel: 604-675-8060 Fax: 604-675-8180, E-mail: ghislop@bccrc.ca

Acknowledgements: We thank the study participants, the Vancouver interviewers, and the members of the Vancouver community advisors coalition: I. Chan (Canadian Cancer Society), A.Cheung (S.U.C.C.E.S.S.), Dr. M. Jung (Chinese Canadian Medical Society), G. Mumick (Vancouver Coastal Health), Dr. C. Yang (Taiwanese Canadian Cultural Society), Dr. E. Yoshida (BC Hepatitis Programme), and Dr. M. Yu (Chinese Cultural Centre of Greater Vancouver).

Sources of funding: This work was supported by the US National Cancer Institute (grant number CA113663). Y. Yasui was partially supported by the Canada Research Chair Program.

Asians, one of the fastest growing and most culturally diverse minority populations in Canada, has Chinese as the largest subgroup. In 2001, approximately 1,100,000 ethnic Chinese were living in Canada,[1] the majority being foreign-born. Little is known about disease prevention behaviour and cancer control in the Chinese population.[2]

In many Asian countries, liver cancer, a preventable disease, is the most common cancer.[3-5] In North America, it occurs more frequently among Chinese than the general population,[6,7] and among Asian-born as compared to North American-born Chinese.[8] This excess risk is attributed to high rates of hepatitis B virus (HBV) infection combined with low levels of HBV vaccination.[3-5] HBV infection is endemic in most Asian countries.[9] Between 30% and 50% of Chinese immigrants to North America have serologic evidence of past HBV infection.[10,11] In Canada, approximately 250,000 persons are estimated to be infected with HBV, 70% being immigrants from foreign countries.[12]

A significant proportion of HBV-infected persons become chronic carriers, potentially infectious to others and at considerable risk of liver cancer, chronic active hepatitis and cirrhosis.[3,13,14] Chronic HBV infection is attributed to be the most common underlying cause of liver cancer in Asian North American populations.[10] Chronic carriers may benefit from antiviral therapy and regular surveillance to detect early liver cancer,[12] and should take precautions to avoid infecting others.[15-18]

There have been several recent reports on HBV-related knowledge and behaviour in Korean[19] and Vietnamese[20-22] immigrants, but not in Chinese immigrants. Potential strategies for controlling HBV infection among Asian populations in Canada include the routine testing of immigrants, vaccinating immigrants who have never been exposed to HBV, and educating communities about the routes of HBV transmission.[14] Provincial guidelines recommend HBV testing in persons at high risk of HBV infection, including immigrants from regions with high HBV endemic rates, and those who are not immune.[23]

We are not aware of any national data addressing HBV knowledge and behaviour among Chinese Canadians. Health educa-

tion programs for this population should be based on a thorough understanding of knowledge, beliefs, and practices.[24] We conducted a needs assessment survey of Chinese adult Canadians in Vancouver, British Columbia from April to September, 2005. The objective of this paper is to present findings on HBV blood testing, vaccination and knowledge for Chinese adult immigrants to Canada.

METHOD

Study group and survey procedures

A Community Advisory Committee was formed to advise the research team throughout the study and included 4 representatives from Chinese organizations serving Cantonese- and Mandarin-speaking communities in Vancouver and 3 physicians knowledgeable about HBV and liver cancer.

Households were randomly selected for interview from 10 east Vancouver postal code areas with high proportions of Chinese residents. Chinese households were identified using the 2004 electronic Vancouver telephone book and 178 Chinese surnames common in BC.[25] A total of 1,500 households were selected and mailed introductory letters (in traditional Chinese, simplified Chinese, and English) with a calendar as a small incentive. The letter explained the purpose of the study, how the household was selected, and invited Chinese adults between the ages of 20 and 64 years to participate.

Each household was subsequently approached by a trained trilingual Chinese interviewer in order to identify eligible adults and to conduct the interview in the language of choice. Individuals were eligible if they were Chinese (regardless of country of origin); aged 20 to 64 years; and able to speak Cantonese, Mandarin, or English. If there was more than one eligible adult in the household, the interviewer selected the eldest. Interviewers made at least five door-to-door attempts at contacting each household, including daytime, evening, and weekend attempts. Participants were offered $20 as a token of appreciation. Interviewers and participants were gender matched (Figure 1).

For this paper, the analysis was restricted to Chinese adults born outside of North America.

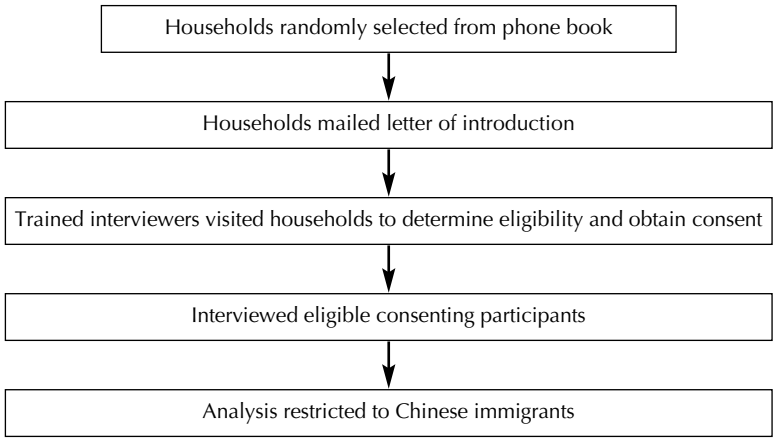

Figure 1. Sampling schema

TABLE I

Household Disposition and Survey Response

	Men (n)	Women (n)	Total (n)
Households selected from phone book	750	750	1500
Non-residential address*	25	16	41
Unable to contact household†	85	64	149
Ineligible household‡	196	179	375
Refused interview	201	183	384
Interview completed	243	308	551
Restricted to interviewed immigrants	217	287	504
Response Rate§	55%	63%	59%

* Vacant dwelling or business.
† Nobody home after five attempts; unable to access secure apartment/condominium building; or insufficient address information.
‡ Household not Chinese; no Chinese man/woman in the 20-64 age-group; or household Chinese but did not speak Cantonese, Mandarin, or English.
§ Response Rate = interview completed/(interview completed + refused interview).

Survey instrument

The survey questionnaire was developed in English, incorporating findings from 40 qualitative interviews of Chinese men and women,[26] and then translated into Cantonese and Mandarin. It was pretested with four Chinese adults (a Cantonese- and Mandarin-speaker of each gender) and modified where necessary by the research team. The questionnaire contained six sections (health care, health information, HBV history, HBV knowledge, heart disease, socio-demographics) and took on average 45 minutes to complete. Relevant questions are shown in Appendix 1.

The project was approved by the Research Ethics Board at the University of British Columbia.

Data analysis

Logistic regression models were used to compare the demographic characteristics of respondents who did and did not report a previous HBV test as well as those who did and did not report vaccination, adjusting for age. Since there was a significant difference in HBV testing rates between men and women, all comparisons were done stratified by gender, by including an interaction term in the regression model between a factor of interest and gender. The age adjustment was made because male respondents were slightly younger than female respondents.

RESULTS

Study group

The final study group included 504 individuals (217 men and 287 women), with an overall response rate of 59% (Table I). 366 (73%) respondents completed the survey in Cantonese, 102 (20%) in Mandarin, and 36 (7%) in English.

The majority of respondents were currently married (84%), with at least 12 years of education (67%), with less than 20 years of residence in North America (62%), fluent in English (65%), and born in China (55%) (Table II).

TABLE II

Demographic Factors Associated with Hepatitis B Blood Testing and Vaccination by Gender, Age-adjusted

Factor	Men			Women			Total		
	n	Tested	Vacc.	n	Tested	Vacc.	n	Tested	Vacc.
Total	217	50%	35%	287	62%	40%	504	57%	38%
Marital status									
Married	179	49%	33%	246	64%	42%	425	58%	38%
Previously or never married	37	55%	42%	41	61%	46%	78	58%	44%
Education									
<12 years	61	40%	34	105	54%*	37%	166	49%**	36%
≥12 years	152	55%	36%	182	69%	45%	334	63%	41%
Length of time in North America									
<20 years	133	57%*	34%	180	70%**	38%	313	64%***	36%
≥20 years	81	39%	36%	107	52%	50%	188	46%	44%
English proficiency									
Fluent	142	52%	36%	187	67%	46%	329	61%	42%
Not fluent	75	47%	33%	99	58%	35%	174	53%	34%
Birth country									
China	121	53%	34%	154	59%	37%	275	56%	36%
Hong Kong	72	48%	31%	100	70%	50%	172	61%	42%
Taiwan	6	84%	67%	11	76%	41%	17	78%	50%
Other Asian country	17	35%	53%	22	69%	46%	39	54%	49%

Vacc. = vaccination.
*p<0.05, **p<0.01, ***p<0.001.
Missing values (men, women, total): marital status (1, 0, 1), education (4, 0, 4), length of time in North America (3, 0, 3), English proficiency (0, 1, 1), birth country (1, 0, 1).

TABLE III

Hepatitis B Blood Testing and Vaccination by Age and Gender

Factor	Men			Women			Total		
	n	Tested	Vacc.	n	Tested	Vacc.	n	Tested	Vacc.
Age (years)									
20-34	36	58%	53%***	35	83%***	51%	71	70%**	52%**
35-49	88	52%	42%	114	68%	40%	202	61%	41%
50-64	91	44%	20%	136	52%	38%	227	49%	30%

Vacc. = vaccination.
*p<0.05, **p<0.01, ***p<0.001.
Missing values (men, women, total): 2, 2, 4.

TABLE IV

Hepatitis B Knowledge by Gender, Age-adjusted

Factor	Men	Women	Total	Gender Difference
a) HBV is more easily spread than AIDS	46%	29%	37%	***
b) HBV can be spread by someone who looks healthy	82%	79%	80%	
c) HBV *cannot* be spread by eating food prepared by an infected person	14%	33%	24%	***
d) HBV *cannot* be spread by sharing eating utensils	11%	10%	11%	
e) HBV can be spread during sexual intercourse	72%	60%	65%	**
f) HBV can be spread during childbirth	72%	79%	76%	
g) HBV can be spread by sharing razors	68%	68%	68%	
h) People with HBV disease can be infected for life	41%	48%	45%	
i) HBV disease can cause cirrhosis	80%	86%	83%	
j) HBV disease can cause liver cancer	78%	84%	81%	

*p<0.05, **p<0.01, ***p<0.001.
Missing values (men, women, total): a (0, 1, 1), b (0, 0, 0), c (0, 0, 0), d (1, 0, 1), e (1, 0, 1), f (0, 0, 0), g (0, 1, 1), h (0, 0, 0), i (0, 1, 1), j (0, 1, 1).

Hepatitis B testing and vaccination

Two hundred and eighty-seven (57%) persons indicated they had received a HBV blood test, and 191 (38%) indicated they had been vaccinated against hepatitis B. HBV testing was significantly less common in men as compared to women (p=0.01, Table II). Also, HBV testing and vaccination were significantly more common at younger ages (men-vaccinated, p=0.002; women-tested, p=0.0006) (Table III).

The proportions of participants reporting they had been tested and vaccinated, tested but not vaccinated, vaccinated but not tested, and neither tested nor vaccinated were 20%, 30%, 14%, and 35%, respectively, for men, and 33%, 29%, 8%, and 30%, respectively, for women. Of those indicating that they had been tested, 73% of the men, and 76% of the women, reported that their blood test was done in North America. Likewise, of those indicating that they had been vaccinated, 57% of the men, and 73% of the women, reported they had received their shots in North America. Fourteen (7%) men and 14 (5%) women reported that a doctor had told them that they were hepatitis B carriers. Of these 28 carriers, 3, 10 and 15 were ages 20-34 years, 35-49 years and 50-64 years, respectively.

HBV testing was associated with higher education in women (p=0.01), and shorter length of time in North America in both men (p=0.02) and women (p=0.003). Vaccination was not associated with any demographic factor other than age (Table II).

Hepatitis B knowledge

Finally, hepatitis B knowledge was assessed after age adjustment and most respondents knew that HBV can cause cirrhosis (83%) and liver cancer (81%), and can be spread by someone who looks healthy (80%) (Table IV). Few persons knew that HBV was not spread by sharing eating utensils (11%) or eating food prepared by an infected person (24%). In general, the scores were similar for men and women. However, fewer women than men knew that HBV was more easily spread than AIDS (p=0.0001) and could be spread during sexual intercourse (p=0.003). Fewer men than women knew that HBV was not spread by eating food prepared by an infected person (p<0.0001).

DISCUSSION

We found that slightly more than one half of Chinese adult immigrants to Vancouver

reported being tested for HBV, with higher proportions in women than men (most likely due to prenatal testing) and at younger ages. Blood testing was associated with higher education and more recent arrival in North America for both genders. This latter finding may be due to HBV testing campaigns in Asia which are lacking in North America. However, most testing was reported as being done in North America. Perhaps there is greater attention given to recent immigrants for HBV testing rather than longer-term residents who are still at risk.

Slightly more men than women reported that their doctor had told them that they were HBV carriers. The higher carrier rate in men cannot be explained by age differences between genders because men in our sample tended to be younger than women, which would suggest more testing and vaccination. The gender difference may actually be greater because fewer men received testing and hence knew their carrier status.

The literature suggests that between 5% and 15% of ethnic Chinese are chronic carriers, compared to less than 1% of the general Canadian population.[10,11,15,27] This is consistent with our findings, as only about one half of the survey participants reported that they had been tested for HBV and hence might know their carrier status.

Regarding vaccination, only slightly over one third of respondents reported being vaccinated for HBV. Again, the proportion was lower in men than women, with fewer vaccinations being done in North America for men. The gender difference may suggest a higher HBV infection in men, which is consistent with the higher carrier rate, as vaccination is not recommended in these cases. Vaccination was associated with younger age in men. Although the numbers of respondents were small, HBV testing and vaccination rates were highest among immigrants from Taiwan. Taiwan, Hong Kong and Singapore have led the world in universal childhood HBV vaccination programs.[28] We also found that about 10% of respondents had been vaccinated without testing, with higher percentages in men than women. Some of these persons who have been vaccinated without testing may be carriers who would benefit from surveillance for liver cancer and antiviral medication.[16]

Regarding knowledge about HBV infection, most knew that it was associated with cirrhosis and liver cancer. However, we identified some important gaps in knowledge. Many respondents did not know how the disease was transmitted. Few recognized that it was not a food-borne disease, especially the men. This would suggest that many Chinese immigrants may be confusing hepatitis B with other communicable diseases such as hepatitis A. Also, less than one half knew that a person can be infected with HBV disease for life.

Our study has several strengths. We used population-based sampling methods and administered the survey in person in the language of choice. However, our study also has several limitations. Specifically, respondents were recruited in one lower-income geographic area, which may not be representative of all Chinese in Vancouver; only households with listed telephone numbers were eligible; individuals of Chinese descent who spoke a language/dialect other than Cantonese, Mandarin, or English were excluded; and a proportion of households were unreachable or refused to participate. Vaccination rates may in fact be higher if the non-responders were younger persons, as childhood HBV vaccination programs have been operational in Asia, beginning with Taiwan in 1984.[29] Differential response rates between genders may also suggest that younger men were less likely to be interviewed, which could introduce bias in the gender comparisons. Finally, we did not attempt medical records verification of self-reported HBV testing and vaccination.

Caution has to be exercised in interpreting the reported statistical significance levels. We did not report multiple-comparison-adjusted p-values, as we believe the interpretation of p-values depends on *a priori* scientific plausibility of each factor. Rather, we reported the numeric values of the p-values so that readers could interpret the results according to their own *a priori* beliefs on the scientific plausibility of each factor's association.

Our research group is currently conducting a randomized controlled trial to evaluate the impact of a multi-faceted outreach worker intervention (home visit by an outreach worker, a video, and a pamphlet) on hepatitis B knowledge and testing levels among Chinese Canadians. We are also conducting a group-randomized controlled trial to evaluate a hepatitis B educational curriculum for Chinese Canadian immigrants attending English as a Second Language classes. Our findings confirm the need for continued efforts to develop and implement targeted educational campaigns to reduce the high burden of chronic hepatitis B infection and liver cancer in Chinese immigrants.

REFERENCES

1. Statistics Canada. Population by selected ethnic origins, by provinces and territories (2001 Census). Available online at: http://www40.statcan.ca/l01/cst01/demo26a.htm?sdi=chinese (Accessed July 2, 2006).
2. Jenkins CNH, Kagawa-Singer M. Cancer. In: Zane NW, Takeuchi DK, Young KN (Eds.), *Confronting Critical Health Issues of Asian and Pacific Islander Americans.* Thousand Oaks, CA: Sage Publications, 1994.
3. Di Bisceglie AM, Rustgi VK, Hoofnagle JH, Dusheiko GM, Lotze MT. NIH conference: Hepatocellular carcinoma. *Ann Intern Med* 1988;108:390-401.
4. Euler GL. Asian and Pacific Islander child hepatitis B vaccination catch-up: Why now is the best time. *Asian Am Pacific Isl J Health* 1997;5:40-45.
5. London WT, McGlynn KA. Liver cancer. In: Scottenfeld D, Fraumeni JF (Eds.), *Cancer Epidemiology and Prevention.* New York, NY: Oxford University Press, 1996.
6. Perkins CI, Morris CR, Wright WE, Young JL. Cancer incidence and mortality in California by detailed race/ethnicity, 1988-1992. Sacramento, CA: California Department of Health Services, 1995.
7. Miller BA. Racial/ethnic patterns of cancer in the United States, 1988-1992. Bethesda, MD: National Cancer Institute, 1996.
8. Rosenblatt KA, Weiss NS, Schwartz SM. Liver cancer in Asian migrants to the United States and their descendants. *Cancer Cause Control* 1996;7:345-50.
9. Nguyen MH, Keeffe EB. Chronic hepatitis B and hepatitis C in Asian Americans. *Rev Gastroenterol Dis* 2003;3:125-34.
10. Merican I, Guan R, Amarapuka D, Alexander MJ, Chutaputti A, Chien RN, et al. Chronic hepatitis B virus infection in Asian countries. *J Gastroenterol Hepatol* 2000;15:1356-61.
11. Walker PF, Jaranson J. Refugee and immigrant health care. *Med Clin North Am* 1999;83:1103-20.
12. Sherman M, Bain V, Villeneuve JP, Myers RP, Cooper C, Martin S, et al. The management of chronic viral hepatitis: A Canadian Consensus Conference 2004. *Can J Gastroenterol* 2004;18:715-28.
13. Hwang SJ, Tong MJ, Lai PPC, Ko ES, Co RL, Chien D, et al. Evaluation of hepatitis B and C viral markers: Clinical significance in Asian and Caucasian patients with hepatocellular carcinoma in the United States of America. *J Gastro Hep* 1996;11:949-54.
14. Jenkins CNH, Buu C, Berger W, Son DT. Liver carcinoma prevention among Asian Pacific Islanders. *Cancer* 2001;91:252-56.
15. Tong MJ, Hwang SJ. Hepatitis B virus infection in Asian Americans. *Gastroenterol Clinics N Am* 1994;23:523-36.
16. Malik AH, Lee WM. Chronic hepatitis B virus infection: Treatment strategies for the next millennium. *Ann Intern Med* 2000;132:723-31.

17. Lin OS, Keefle E. Current treatment strategies for chronic hepatitis B and C. *Annu Rev Med* 2001;52:29-49.
18. Lok A, McMahon B. Chronic hepatitis B. *Hepatol* 2001;34:1225-41.
19. Choe JH, Chan N, Do HH, Woodall E, Lim E, Taylor VM. Hepatitis B and liver cancer beliefs among Korean immigrants in Western Washington. *Cancer* 2005;104:2955-58.
20. Taylor VM, Yasui Y, Burke N, Choe JH, Acorda E, Jackson JC. Hepatitis B knowledge and testing among Vietnamese-American women. *Ethn Dis* 2005;15:761-67.
21. Taylor VM, Yasui Y, Burke N, Nguyen T, Chen A, Acorda E, et al. Hepatitis B testing among Vietnamese American men. *Cancer Detect Prev* 2004;28:170-77.
22. Burke NJ, Jackson JC, Thai HC, Stackhouse F, Nguyen T, Chen A, Taylor VM. 'Honoring tradition, accepting new ways': Development of a hepatitis B control intervention for Vietnamese immigrants. *Ethn Health* 2004;9:153-69.
23. BC Health Services Guidelines and Protocols Advisory Committee 2005. Viral Hepatitis Testing. Available online at: www.healthservices.gov.bc.ca/msp/protoguides/gps/vihep.pdf (Accessed July 2, 2006).
24. Hubbell FA, Chavez LR, Mishra SI, Magana JR, Burciaga Valdez R. From ethnography to intervention: Developing a breast cancer control program for Latinas. *Natl Cancer Inst Monogr* 1995;109-15.
25. Hislop TG, Schwartz SM, Taylor VM, Pineda M, Tu S, Teh C, et al. Identification of Chinese subjects for etiological and cancer control research: Description of sampling methods based upon surnames. North American Association of Central Cancer Registries Annual Meeting, New Orleans, 15-20 April 2000, p. 87.
26. Chen H, Tu SP, Teh C, Yip MP, Choe JH, Hislop TG, et al. Lay beliefs about hepatitis among North American Chinese: Implications for hepatitis prevention. *J Community Health* 2006;31:94-112.
27. Centers for Disease Control. Screening for hepatitis B virus infection among refugees arriving in the United States. *MMWR* 1991;45:784-86.
28. Farrell GC, Liaw YF. Towards consensus on the control of chronic hepatitis and hepatitis C in the Asia-Pacific region. *J Gastroenterol Hepatol* 2000;15:1-2.
29. Chen DS, Hsu NH, Sung JL, Hsu TC, Hsu ST, Kuo YT, et al. A mass vaccination program in Taiwan against hepatitis B virus infection in infants of hepatitis B surface antigen-carrier mothers. *JAMA* 1987;257:2597-603.

Received: March 14, 2006
Accepted: July 14, 2006

Appendix 1

Relevant Survey Questions on HBV Blood Testing, Vaccination and HBV Knowledge

Section on Hepatitis B History

Hepatitis is an inflammation of the liver caused by a viral infection. It sometimes makes the skin and eyes go yellow. People with hepatitis sometimes lose their appetite and experience nausea as well as vomiting. Now I am going to ask you about one type of hepatitis. The type that I am going to ask you about is hepatitis B.

1. Have you ever had a blood test to see if you have been exposed to hepatitis B? *(Responses for 1, 4, 7: Yes, No, Not sure/Don't know, Refused)*
2. What did your hepatitis B blood test show? *(Write in exact response)*
3. Where did you have your hepatitis B blood test? *(Asia, Canada, United States, Other-specify, Not sure/Don't know, Refused)*
4. Have you ever had shots (vaccinations) to prevent you from getting hepatitis B?
5. How many hepatitis B shots (vaccinations) have you had? *(Number of shots)*
6. Where did you have your hepatitis B shots (vaccinations)? *(Asia, Canada, United States, Other-specify, Not sure/Don't know, Refused)*
7. Has a doctor ever told you that you are a hepatitis B carrier?

Section on Hepatitis Knowledge

Hepatitis B can be spread from person to person. As I read each question, please tell me whether you think hepatitis B can be spread from person to person in this way. Please answer "yes" if you think it is true or "no" if you do not think it is true.

1. Do you think hepatitis B can be spread from person to person by eating food prepared by an infected person? *(Responses for 1-5, 7-10: Yes, No, Not sure/Don't know, Refused)*
2. Do you think hepatitis B can be spread from person to person by sharing razors?
3. Do you think hepatitis B can be spread from person to person by sharing eating utensils during a meal?
4. Do you think hepatitis B can be spread from person to person during sexual intercourse?
5. Do you think hepatitis B can be spread from mother to baby during childbirth?
6. Which do you think is more easily spread from person to person: hepatitis B or AIDS? *(Hepatitis B, AIDS, Both equally, Not sure/Don't know, Refused)*

The next questions are also about hepatitis B.

7. If someone is infected with hepatitis B but he or she looks and feels healthy, do you think that person can spread hepatitis B?
8. Do you think people who get hepatitis B can be infected for life?
9. Do you think hepatitis B disease can cause cirrhosis?
10. Do you think hepatitis B disease can cause liver cancer?

Section on Socio-demographics

1. What year were you born? *(Write in year)*
2. Where were you born? *(Write in country)*
3. What year did you first come to Canada? *(Write in year)*
4. How well would you say you speak English? *(Fluently, Well, Quite well, Not well, Not at all, Not sure/Don't know, Refused)*
5. What is your marital status? *(Married, Living as married, Widowed, Separated, Divorced, Never married, Other-specify, Not sure/Don't know, Refused)*
6. How many years of formal education have you had? (Include formal education in any country. Do not include ESL or job training classes.) *(Write in number of years)*

RÉSUMÉ

Contexte : On sait peu de choses sur le virus de l'hépatite B (VHB) et la lutte contre le cancer du foie dans la population chinoise du Canada. Le cancer du foie, un important problème de santé en Asie, est une maladie évitable que l'on peut contrôler par le dépistage du VHB dans le sang, par la vaccination et par la sensibilisation communautaire au VHB.

Objectif : La finalité de l'étude était d'accroître le dépistage du VHB et la vaccination anti-VHB chez les adultes canadiens d'origine chinoise. Son objectif était de présenter les constatations sur le dépistage, la vaccination et les connaissances sur le VHB aux immigrants chinois.

Méthode : Cinq cent quatre (504) immigrants chinois adultes sélectionnés au hasard habitant à Vancouver ont répondu à notre questionnaire, qui portait sur les pratiques de dépistage sanguin du VHB et de vaccination anti-VHB, les niveaux de connaissances du VHB et les caractéristiques sociodémographiques des répondants. Des entretiens en personne ont été menés en cantonais, en mandarin ou en anglais.

Résultats : Cinquante-sept p. cent (57 %) des participants ont dit avoir subi un test de dépistage sanguin du VHB, 38 % ont dit avoir été vaccinés, et 6 % étaient des porteurs connus du VHB. Nous avons constaté certaines différences entre les sexes : chez les hommes, les taux de dépistage et de vaccination étaient plus faibles, et les taux de portage chronique plus élevés. Plus de 80 % des répondants savaient que le VHB peut être propagé par des porteurs asymptomatiques, et qu'il peut causer une cirrhose et le cancer du foie. Il régnait toutefois une certaine confusion quant aux voies de transmission du virus.

Interprétation : Une proportion appréciable d'immigrants adultes d'origine chinoise vivant à Vancouver n'avait ni subi un test de dépistage, ni été vaccinée contre le VHB. Le niveau de connaissances, surtout sur les voies de transmission du virus, était faible. C'est une situation préoccupante, car l'infection chronique à VHB est la cause la plus commune du cancer du foie chez les Nord-Américains d'origine asiatique. Pour améliorer les connaissances, réduire les risques d'infection et alléger le fardeau de l'infection chronique et de ses séquelles dans les populations immigrantes, il faut poursuivre les efforts de sensibilisation.