

Screening for Hepatitis B Virus and Hepatitis C Virus at a Community Fair: A Single-Center Experience

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Abstract: Despite recommendations for screening for hepatitis B virus (HBV) and hepatitis C virus (HCV), most individuals are still unaware of their infection status. The disparities in screening for HBV and HCV can be attributed to lack of awareness, language barriers, and difficulty in accessing healthcare. To address these issues, an exhibit booth was set up at an annual cultural festival to promote awareness about HBV and HCV and also provide free screening for a local Floridian community. Recruitment was conducted in various languages by physicians and nurses who specialize in hepatology. All materials associated with the screening process were sponsored by the Schiff Center for Liver Diseases, which is located at the University of Miami Miller School of Medicine in Florida. In the first year of the screening initiative, 173 of 11,000 fair attendees were screened for HBV. Twenty-nine (17%) of those screened tested positive for antibodies to hepatitis B core antigen (anti-HBc), and only 1 individual tested positive for chronic HBV, with positive hepatitis B surface antigen (HBsAg). Screening for HCV and an extended patient questionnaire were added to the screening program in the second year of the initiative. A total 231 of 9,000 fair attendees volunteered to be screened for both HBV and HCV. Twenty-nine (13%) of these people tested positive for anti-HBc, and 3 tested positive for HBsAg. Only 1 person tested positive for anti-HCV, but this individual had undetectable HCV RNA levels. Our single-center experience illustrates that, despite efforts to improve access to screening, only 2–3% of attendees at a cultural fair embraced the screening efforts. Other strategies will be required to enhance participation in screening programs for viral hepatitis.

Keywords

Screening, barriers, hepatitis B virus, hepatitis C virus, community fair

Hepatitis B virus (HBV) and hepatitis C virus (HCV) are prevalent worldwide. More than 2 billion people alive today have been infected with HBV at one point in their lives. Of these individuals, about 350 million remain chronically infected.¹ Similarly, approximately 170 million people—or 3% of

the world's population—are infected with HCV. An additional 3–4 million people are newly infected each year, and even more people have undiagnosed infections.²

Both HBV and HCV are associated with chronic liver disease, cirrhosis, and hepatocellular carcinoma (HCC).^{3,4} Early detection and treatment of HBV and HCV could potentially prevent progression of liver disease, decrease the need for liver transplantation, and reduce the risk for liver disease–related death.^{3,4} Knowledge about HBV and HCV infection among lay people could lead to behavior modification that could result in a reduction in the rates of HBV and HCV transmission.

Despite recommendations for screening and medical advances achieved through vaccinations to prevent viral liver disease and diagnostic tools and treatments to detect and prevent progression of viral liver disease, infection remains undiagnosed in most individuals. The identification of people at risk for viral liver disease continues to be a challenge because those who are most at risk often do not avail themselves of regular medical care.⁵

Accessing and maneuvering the US healthcare system is also daunting, even for US-born patients. Collaborative efforts to improve awareness of viral liver disease and the screening process have been documented in the literature, and findings have been impressive.^{6,7} Presented here are the results of a viral hepatitis screening initiative that took place for 2 consecutive years at an annual cultural fair.

Methods

The Schiff Center for Liver Diseases

The Schiff Center for Liver Diseases, located at the Miller School of Medicine at the University of Miami in Florida, is an internationally recognized center for the care of patients with liver disease. The Hepatology Diagnostic Laboratory is a reference laboratory that is directed and supervised by the Schiff Center for Liver Diseases and provides clinical and research assays.

The Festival

The Asian Culture Festival is an annual outdoor festival that began in 1990. This festival is traditionally held in Miami-Dade County to celebrate and promote cultural diversity, with the aim of building a vibrant, prosperous, and healthy community. The Asian Culture Festival is described as a fun-filled family event that offers festival participants a variety of Asian arts, crafts, entertainment, plants, and exotic cuisine.⁸

This 2-day event was held at the Fruit and Spice Park, a 37-acre tropical botanical garden located in Homestead, Florida. The festival welcomed over 10,000 visitors, performers, and exhibitors⁹ and was advertised in fliers, various newspapers, Internet sites, and by word of mouth.

This event also had an entrance fee of \$10 but was free for children age 12 years and younger.

The Screening Procedure

As part of its commitment to eradicating liver disease, the Schiff Center for Liver Diseases provided free hepatitis screening at the Asian Culture Festival. The healthcare providers present at the festival included physicians and nurse practitioners who had expert knowledge of viral hepatitis and liver disease. Cumulatively, the staff was fluent in English, Cantonese, Thai, Spanish, Creole, and French. Educational pamphlets on HBV and HCV were available in English, Spanish, Creole, Chinese, Vietnamese, Thai, and Khmer (Figure 1).

In the first year, a screening booth for HBV was set up as one of the exhibits. Screening for HCV was added in the second year. Free screening was offered to all willing and volunteering fair attendees age 18–65 years, with a focused approach toward those who had visible tattoos and who were from areas in which HBV and HCV are endemic, such as Thailand, Vietnam, and Laos. Study participants younger than age 18 years required parental consent for screening. After a demographic information sheet and informed consent form (Appendix A, available online) were completed, 10 mL of blood were drawn from the antecubital vein of the left or right forearm by trained phlebotomists (Figure 2). A questionnaire (Appendix B, available online) regarding personal and family history of hepatitis and vaccination for HBV was added in Year 2. The blood specimens were centrifuged within 1 hour of collection and stored in a container at 4° C until testing could be performed.

Hepatitis B Serologic Testing

All sera were tested for total antibodies for hepatitis B core antigen (anti-HBc) using the VITROS Anti-HBc Reagent Pack on the VITROS 3600 Immunodiagnostic System (Ortho-Clinical Diagnostics). Anti-HBc–positive specimens were then examined for hepatitis B surface antigen (HBsAg) and antibodies to HBsAg (anti-HBs) using the VITROS 3600 Immunodiagnostic System. All HBsAg–positive specimens were further tested for hepatitis B e antigen (HBeAg) and antibodies to HBeAg (anti-HBe) using ETI-EBK PLUS and ETI-AB-EBK PLUS enzyme immunoassays (DiaSorin) and HBV DNA quantitative, real-time polymerase chain reaction immunoassay using the COBAS TaqMan HBV test (Roche).

Hepatitis C Serologic Testing

All sera were tested for antibodies for hepatitis C (anti-HCV) using the VITROS Anti-HCV Reagent Pack on the VITROS 3600 Immunodiagnostic System (Ortho-Clinical Diagnostics). Specimens with a signal-to-cutoff



Figure 1. Educational pamphlets on hepatitis B and hepatitis C were made available in various languages. A large banner offering free screening was displayed at the screening booth, which was sponsored by the Schiff Center for Liver Diseases.

ratio of less than 1.0 were considered positive and underwent further testing for the quantitation of HCV RNA with Cobas/Ampliprep (Roche). Testing of all blood specimens was completed within 48 hours after the end of the festival.

Data Analysis

Microsoft Excel was used to create a patient information database. Descriptive data were tabulated using summations and percentages. Statistical analysis was not performed.

Results

Year 1

Of the 11,000 people who attended the festival in Year 1 of the screening initiative, only 173 (1.6%) availed themselves of the free HBV screening (Table). Among these study participants, 54 (31%) reported to be of Asian descent, whereas 47 (27%) and 43 (25%) additional participants reported to be Hispanic and non-Hispanic white, respectively. Ninety (52%) study participants were between the ages of 45 and 65 years, and 58 (34%) were between the ages of 18 and 44 years. In addition, 111 (64%) of the participants were female.

Twenty-nine (17%) of study participants in Year 1 tested seropositive for anti-HBc. The majority of these participants were female (n=19; 66%), Asian (n=22; 76%), and in the age range of 45–65 years (n=18; 62%). In this select group, only 1 participant, an Asian man in the age group of 18–44 years, screened positive for chronic infection, with seropositive HBsAg, anti-HBc, and HBeAg. The patient's HBV DNA measured 1,160 IU/mL.



Figure 2. Skilled volunteer phlebotomists were on site to draw serum samples from study participants in the screening booth at the festival.

Year 2

Only 9,000 people attended the festival in Year 2 of our initiative. Of this group, 231 (2.6%) people volunteered to be screened for both HBV and HCV. Ninety (39%), 72 (31%), and 51 (22%) study participants were Hispanic, non-Hispanic white, and Asian, respectively. The majority of the study participants were between the ages of 45 and 65 years (n=99; 43%), whereas the second largest group of participants was between the ages of 18 and 44 years (n=84; 36%). Similar to Year 1 of the screening initiative, most study participants were female (n=137; 59%). Based on the extended questionnaire that was completed prior to drawing blood, the majority of the study participants reported no personal history (n=167; 72%) or family history (n=145; 63%) of hepatitis. In addition, only 42 (18%) participants reported having been vaccinated for HBV.

Twenty-nine (13%) of the study participants in Year 2 tested seropositive for anti-HBc. Compared with Year 1, the majority of these participants also were Asian (n=11; 38%) and in the age range of 45–65 years (n=16; 55%); however, most of these participants were male (n=19; 66%). In this select group, 3 (1%) participants, all Asians within the age group of 45–65 years, screened positive for chronic infection. All were seropositive for HBsAg, anti-HBc, and anti-HBe. Two of these 3 participants were male. HBV DNA measured 30.5 IU/mL in 1 of these participants and 910 IU/mL in the other. HBV DNA measured 2,750 IU/mL in the female participant in whom chronic HBV was identified. None of the 3 participants reported any personal or family history of hepatitis infection.

With regard to HCV, only 1 of the 231 study participants who were screened was positive for anti-HCV. This participant was female and Hispanic and did not report

Table. Characteristics of Study Participants

	Year 1			Year 2			
Total festival attendance, n	11,000			9,000			
	Total screened	Anti-HBc+	HBsAg+	Total screened	Anti-HBc+	HBsAg+	Anti-HCV+
Study participants, n (%)	173 (1.6*)	29 (17)	1 (<1)	231 (2.6*)	29 (13)	3 (1)	1 (<1)
Age, years (%)							
<18	1 (<1)	0	0	12 (5)	0	0	0
18–44	58 (34)	9 (31)	1	84 (36)	6 (21)	0	0
45–65	90 (52)	18 (62)	0	99 (43)	16 (55)	3	0
>65	20 (12)	1 (3)	0	21 (9)	2 (7)	0	0
Unknown/missing	4 (2)	1 (3)	0	15 (6)	5 (17)	0	1
Gender, n (%)							
Female	111 (64)	19 (66)	0	137 (59)	10 (35)	1	1
Male	62 (36)	10 (35)	1	93 (40)	19 (66)	2	0
Unknown/missing	0 (0)	0	0	1 (<1)	0	0	0
Ethnicity/race, n (%)							
Hispanic	47 (27)	0	0	90 (39)	9 (31)	0	1
Non-Hispanic white	43 (25)	3 (10)	0	72 (31)	4 (14)	0	0
Asian	54 (31)	22 (76)	1	51 (22)	11 (38)	3	0
Black	7 (4)	0	0	13 (6)	2 (7)	0	0
Unknown/missing	24 (14)	4 (14)	0	7 (3)	3 (10)	0	0
Personal history of hepatitis (self-reported), n (%)							
No	N/A	N/A	N/A	167 (72)	12 (41)	3	1
Yes	N/A	N/A	N/A	10 (4)	2 (7)	0	0
Unknown/missing	N/A	N/A	N/A	54 (23)	15 (52)	0	0
Vaccinated for hepatitis B virus (self-reported), n (%)							
Yes	N/A	N/A	N/A	42 (18)	2 (7)	0	0
Unknown/missing	N/A	N/A	N/A	189 (82)	27 (93)	3	1
Family history of hepatitis (self-reported), n (%)							
No	N/A	N/A	N/A	145 (63)	10 (34)	1	0
Yes	N/A	N/A	N/A	20 (9)	0	0	0
Unknown/missing	N/A	N/A	N/A	66 (29)	19 (66)	2	1

*Percent of people screened out of the total estimate of festival attendees.

Anti-HBc=hepatitis B core antibody; anti-HCV=hepatitis C antibody; HBsAg=hepatitis B surface antigen; N/A=not available. (Questions pertaining to personal and family history of hepatitis and previous vaccination were added in the second year.)

her age or personal or family history regarding hepatitis. Upon further testing, HCV RNA was not detected.

None of the study participants were co-infected with HBV and HCV. Due to the small sample size, no meaningful statistical analysis could be ascertained.

Follow-Up

Written notifications of the serology results were sent to the study participants by mail or e-mail at their request.

Individuals in whom a diagnosis of chronic HBV infection was made were given a courtesy telephone call. Two of the 4 individuals in whom HBV infection was diagnosed did not pick up the telephone call despite repeated attempts, and they did not return the call despite several voice messages that were left for them.

Serology results in relation to the viral disease and its potential complications were discussed and explained in great detail to each of the 2 individuals who had HBV

infection and did respond to the telephone call. The importance of screening for their family members also was emphasized. Furthermore, these individuals were advised to seek medical care with their own primary care physicians or were provided the option of establishing medical care at the Schiff Center for Liver Diseases. Because of a lack of healthcare insurance and overall resistance to seeking further healthcare, neither of these 2 participants chose to follow-up with a visit to the Schiff Center.

Discussion

Most individuals are unaware of their HBV and HCV infection status.¹⁰ Guidelines written by the American Association for the Study of Liver Diseases (AASLD) recommend that HBV screening be performed prior to starting immunosuppressive therapy and in people born in endemic areas, such as Asia, South America, and the Caribbean; US-born individuals who were not vaccinated during infancy and whose parents are from highly HBV-endemic areas; people with chronically elevated liver enzyme levels; men who have sex with other men; people with multiple sexual partners or a history of sexually transmitted disease; inmates of correctional facilities; pregnant women; and people who have used injecting drugs, are on dialysis, are infected with HIV or HCV, or are in close contact with people infected with HBV.³ AASLD guidelines also recommend HCV screening in individuals with hemophilia who have received clotting factor concentrates prior to 1987, recipients of blood transfusions or organ transplants before 1992, children born to HCV-infected mothers, and healthcare workers who have had a needle stick injury or mucosal exposure to HCV-positive blood.⁴

The Centers for Disease Control and Prevention (CDC) recommend routine HBV testing for all individuals born in regions with an intermediate or high population seroprevalence of HBsAg, as well as US-born individuals who were not vaccinated during infancy and whose parents were born in regions in which HBsAg seroprevalence is high.¹¹ The CDC also recommends that anyone born from 1945 through 1965—otherwise known as the “baby boomer” generation—should be tested for HCV because these people are 5 times more likely to be infected and are at greater risk for the development of serious, life-threatening liver disease due to HCV.¹² Yet despite these recommendations, barriers to screening still exist and are related to challenges regarding patients, healthcare providers, and the healthcare system.¹³

Barriers in relation to patients include the lack of awareness of the risk for and progression of liver disease, language and cultural differences, and fear of social stigma.^{13,14} In a study surveying those with viral hepatitis,

45% of survey respondents perceived language to be the chief barrier, whereas the lack of knowledge of available treatment options was reported by 40%.¹⁴ In addition, 53% of the survey respondents reported fear of discrimination or stigma about having a liver disease, while 22% reported cultural barriers to accessing adequate healthcare.

Other patient-reported barriers to seeking care are the misperception that HCV infection is a relatively benign disease, fear of investigations and treatment, and feeling well overall.¹⁵ On further inquiry about these particular misperceptions, it was learned that they were shaped by conversations that the surveyed patients had had with peers about viral hepatitis, including “horror stories” about liver biopsies and treatments.¹⁵ Patients also cited difficulties in accessing healthcare, which included limited knowledge of testing sites, not being referred for specialist investigations, and ineligibility for treatment.¹⁵

Patients’ relationships with their healthcare providers in relation to trust in the provider, concern from the provider, and continuity of care also influenced their commitment to medical care.¹⁵ In addition, patients often did not seek medical care because other priorities, such as employment, education, and addiction behavior, took greater precedence.¹⁵ Therefore, education on HBV and HCV infections and their associated testing and treatment options, as well as patients’ determination to improve their health, appear to drive whether a patient will take advantage of screening and medical intervention for hepatitis infection.¹⁵

Major barriers in relation to healthcare providers include their level of knowledge about viral hepatitis with regard to risk factors, interpretation of laboratory results, and treatment.¹³ Primary care physicians are often the point of entry into the US healthcare system; therefore, they are essential to identifying at-risk individuals, providing screening, and making the necessary referrals to specialists.¹³ Still, in a survey of general practitioners (GPs), 42% reported that they lacked confidence in interpreting HCV serology, and 20% reported that they lacked confidence in interpreting HBV serology.¹⁶ Likewise, 22% and 18% did not recognize HCC as a complication of HBV and HCV infections, respectively. Further, 20% of GPs were unaware of treatment for HBV infection, whereas 47% were uncertain whether pregnant women could receive treatment for HCV infection. In addition, 89% of GPs also identified language difficulties as the main barrier to treatment among the immigrant population.¹⁶ In another study that surveyed GPs, it was learned that, although 83% perceived chronic HBV infection to be a serious disease, 62% reported that they were not familiar with the treatment guidelines.¹⁷

The complexity of the existing US healthcare system poses other challenges for both patients and providers.¹³ More specifically, navigating this system can be

challenging, especially for those patients without adequate health insurance or knowledge of how the system works.¹³ The lack of knowledge about health benefits and available health and social services, language barriers within the clinic setting, and the lack of appropriate and timely referrals to specialists are also limiting factors.^{10,13} Furthermore, underutilization of healthcare services has been noted among high-risk groups, regardless of their health insurance status.¹⁸

Identifying these disparities is vital to providing optimal healthcare. Recommendations to address these deficits have strongly emphasized the importance of disseminating educational materials about viral hepatitis, including information about pathogenesis and available treatments, in both culturally and linguistically tailored mediums for both patients and healthcare providers.^{14,17,19} Effective screening programs are also recommended to include culturally sensitive educational outreach efforts to promote awareness, screening, and vaccination and should also include a counseling component with connections to healthcare services and follow-up care.^{13,20}

Efforts to bridge disparities about hepatitis education, screening, and care were not embraced through the 2-year screening initiative at a cultural fair. The presence of healthcare specialists did not ignite much interest or inquiry. In fact, most festival attendees rushed past the exhibit after an initial glance. When verbally approached to participate, several attendees replied that they had been screened by their primary care physicians “last week” and were waiting to hear about the results of their blood work. When verbally approached in their native languages, some festival-goers still shielded themselves from further contact, refusing to be persuaded to participate even by family members.

Despite monetary incentives, such as free souvenir bags and a raffle for professional basketball tickets, most at-risk individuals at the festival declined the opportunity to receive free screening for HBV or HCV serology status. Those who did participate were influenced by secondary gains. Some already had some knowledge of HBV or HCV or had personal or family history of HBV or HCV. Some of the study participants were persuaded after hearing that they were at risk based on their country of origin and comorbidities. Others were best persuaded by supportive and encouraging family members who were also willing participants. A few reported that they simply wanted to know their status, and even fewer volunteered to be screened because they wanted to take advantage of the free medical advice and intervention being offered.

Our study had limitations. First, we participated in a festival that was aimed at providing recreation and entertainment, not healthcare. The endeavor of drawing blood may have appeared to be intrusive and disruptive

to the festival-goers’ pursuit of merriment. Second, the written consent form and subsequent questionnaire were offered only in the English language. Although the volunteers present were fluent in various languages such as Creole, Cantonese, and Thai, language barriers still persisted, which may have hindered the willingness of festival attendees to participate. Third, our goals were to build awareness about and screen for HBV and HCV in high-risk individuals in our community. Our study objectives did not include assessing barriers to screening. The attitudes and behaviors of those who rejected free screening during the festival are based on conjecture. Given the infrastructure of our booth, questionnaires and detailed interviews with those who rejected free screening could not be conducted for confirmation and validation about reasons for rejection. Finally, testing for anti-HBs for all of the study participants was not performed due to laboratory costs. This added information would be helpful in distinguishing those individuals with immunity from those without immunity for HBV.

Conclusion

Screening for HBV and HCV at community fairs is not a novel approach. Participation in community-based events is important because it represents a collaborative effort by healthcare providers and community leaders to address the deficiencies in healthcare for certain populations. Although our study was not large or meticulously designed, our results still emphasize that chronic viral infections remain underdiagnosed. The disparities in screening can be attributed to lack of awareness, language barriers, and difficulty in accessing healthcare. Even in an effort to bridge these gaps, barriers to screening still exist. To address these challenges, further culturally and linguistically tailored studies are needed to determine better tactics to motivate screening among patients and providers. Cross-cultural training should be provided to all healthcare personnel as well as incorporated in medical training. In addition, implementing universal screening for HBV and HCV—similar to HBV screening for pregnant women and tuberculosis screening for all immigrants prior to entry into the United States—should become a standard of care. With this, we can become one step closer to eradicating both HBV and HCV.

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The institutional review board at the University of Miami approved the retrospective review of the data obtained at the festival and waived the requirement for informed consent.

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Written Informed Consent for Hepatitis B Screening

The following explains your rights and benefits associated with participating in a hepatitis B screening supported by the Center for Liver Diseases.

Screening Description

You understand this hepatitis B screening is free using a venous draw sample. You understand and agree that the results of this program are confidential.

Hepatitis B

Hepatitis B is a virus in the blood that infects the liver. It causes liver disease, cancer and death. 1 in 10 Asian Americans has hepatitis B. Children get infected at birth, others get infected by coming in contact with blood such as sharing razors, toothbrushes, getting tattoos and body piercing with unclean needles; sharing unclean needles to inject drug and having unprotected sex.

Procedure:

I am (or your child) are being offered free hepatitis B testing. You (or your child) will also provide a brief questionnaire. Blood will be removed from a vein in your arm. I understand that answer to my questions will be held confidential.

Risk:

The most common side effects during blood draws: you (or your child) may have pain and/or bruising at the place on your (or your child's) arm. Blood clots may form and infections may occur, but this does not happen often. If you feel faint, you (or your child) should lie down right away to avoid falling down. Then you (or your child) should notify one of the CFLD staff.

Because you (or your child) will be notified of your (or your child) test results, the risk of knowing, if tested positive, may cause you (or your child) anxiety and other distress. You know that there is a risk of not knowing or of testing negative during the period after the exposure when you (or your child) may be infected, but not yet have a positive test result and the risk is the possibility of transmitting the hepatitis B to others and not obtaining proper medical follow up. You (or your child) understand that though tests are highly reliable, there is no guarantee that the results are correct.

There are no other foreseeable risks to you (or your child).

Benefits:

Through the pre-test counseling I will gain information on how to prevent hepatitis B infections and its consequences. If your (or your child) test results show that you (or your child) have been infected with hepatitis B, you (or your child) will be told ways to prevent spreading the disease to other people and ways to stop further damage.

Results:

By participating in this Hepatitis B Screening, I am authorizing the University of Miami, Hepatology Diagnostic Laboratory to confidentially report my hepatitis B results to me, and that you might request a referral to a physician with experience with hepatitis B in my area, from whom you (or your child) might seek care. I accept that the University of Miami shall have any liability or responsibility with respect to the acts of omissions of any such physicians health practitioner.

Right to Refuse:

You (or your child) have been assured that acceptance of this screening is strictly voluntary and that you (or your child) might choose not to participate in this screening.

Other terms:

You acknowledge that you (or your child) received pre-test counseling and education for hepatitis B.

Written Informed Consent for Hepatitis B and Hepatitis C Screening

The following explains your rights and benefits associated with participating in a Hepatitis B and Hepatitis C screening supported by the Center for Liver Diseases.

Screening Description

You understand this hepatitis B and Hepatitis C screening is free using a venous draw sample. You understand and agree that the results of this program are confidential.

Hepatitis B

Hepatitis means inflammation of the liver. Hepatitis B is a virus in the blood that infects the liver. It causes liver disease, cancer and death. 1 in 10 Asian Americans has hepatitis B. Children get infected at birth, others get infected by coming in contact with blood such as sharing razors, toothbrushes, getting tattoos and body piercing with unclean needles; sharing unclean needles to inject drug and having unprotected sex. The best way to prevent Hepatitis B is to get vaccinated.

Hepatitis C

Hepatitis C is usually spread when blood from a person infected with the Hepatitis C virus enters the body of someone who is not infected. Most people become infected with Hepatitis C by sharing needles or other equipment to inject drugs. Having a sexually transmitted disease or HIV, sex with multiple partners or rough sex appears to increase a person's risk for Hepatitis C. Similar to HBV, whenever tattoos or body piercings are given with unclean needles or instruments transmission of Hepatitis C and other infectious diseases is possible.

Procedure:

I am (or your child) are being offered free hepatitis B and C testing. You (or your child) will also provide a brief questionnaire. Blood will be removed from a vein in your arm. I understand that answer to my questions will be held confidential.

Risk:

The most common side effects during blood draws: you (or your child) may have pain and/or bruising at the place on your (or your child's) arm. Blood clots may form and infections may occur, but this does not happen often. If you feel faint, you (or your child) should lie down right away to avoid falling down. Then you (or your child) should notify one of the CFLD staff.

Because you (or your child) will be notified of your (or your child) test results, the risk of knowing, if tested positive, may cause you (or your child) anxiety and other distress. You know that there is a risk of not knowing or of testing negative during the period after the exposure when you (or your child) may be infected, but not yet have a positive test result and the risk is the possibility of transmitting the hepatitis B to others and not obtaining proper medical follow up. You (or your child) understand that though tests are highly reliable, there is no guarantee that the results are correct.

There are no other foreseeable risks to you (or your child).

Benefits:

Through the pre-test counseling I will gain information on how to prevent hepatitis B and hepatitis C infections and its consequences. If your (or your child) test results show that you (or your child) have be infected with hepatitis B or hepatitis C, you (or your child) will be told ways to prevent spreading the disease to other people and ways to stop further damage.

Results:

By participating in this Hepatitis B and Hepatitis C Screening, I am authorizing the University of Miami, Hepatology Diagnostic Laboratory to confidentially report my hepatitis B and hepatitis C results to me, and that you might request a referral to a physician with experience with hepatitis B or hepatitis C in my area, from whom you (or your child) might seek