

## IV. Assessing the Impact of VHIP

We were able to assess the impact of VHIP on hepatitis related knowledge, attitudes and beliefs, and detect any change in hepatitis related practices and behaviors by conducting staff and client surveys and focus groups. The results of these activities are discussed below.

### A. Non-Medical Staff Surveys

Baseline surveys were administered to nearly all non-medical staff at eight hepatitis trainings held between January and November 2005 (n=165). The follow-up surveys were administered to nearly all staff between April and July 2008 (n=111). The smaller sample size at follow-up was due to staff cuts and staff turnover. Only 50 of the 111 staff members that completed the follow-up survey also completed the baseline survey. This includes 44 of the 67 MMTP staff and just 6 of the 44 outreach staff.

As discussed in the methods section, the non-medical staff survey topics included:

- Attitudes and beliefs regarding hepatitis,
- Knowledge of hepatitis,
- HIV/AIDS and hepatitis proficiency,
- Hepatitis training and practices, and
- Awareness and impact of VHIP (follow-up only).

### Knowledge of Hepatitis at Baseline and Follow-up

Table 6 includes the baseline and follow-up knowledge score among MMTP staff completing both surveys, MMTP staff not completing both surveys (e.g., completing just a baseline or just a follow-up survey due to staff attrition or turnover), and all SEP staff. The SEP staff results are not separated due to the small number (n=6) of those completing both surveys.

Survey respondents were asked 14 true/false questions (Appendix B). Each respondent was given a knowledge score based upon the percentage of questions answered correctly. The mean percentage of questions answered correctly for all respondents is presented below.

**Table 6: Non-Medical Staff Knowledge at Baseline and Follow-up**

Knowledge Score	MMTP staff completing both surveys	MMTP staff not completing both surveys	SEP staff
Baseline	65.0% (n=44)	64.8% (n=70)	68.3% (n=48)
Follow-Up	80.3% (n=44)	72.3% (n=23)	67.4% (n=44)
Significance	p<.001	p<.05	NS

Results indicate similar baseline knowledge scores across all groups. However, the follow-up knowledge score differs among the groups. The largest gain in knowledge was observed among MMTP staff present for the entire VHIP study period (i.e., staff completing both surveys). More specifically, mean knowledge improved from 65.0% at baseline to 80.3% at follow-up for this group ( $p < .001$ ). Knowledge gains were also observed among MMTP staff that did not complete both surveys, although the increase was less pronounced. The mean knowledge score increased from 64.8% at baseline to 72.3% at follow-up ( $p < .05$ ). Knowledge did not change significantly among non-medical staff at the SEPs.

### Attitudes and Beliefs Regarding Hepatitis

Table 7 examines baseline and follow-up attitude/belief scores regarding hepatitis among MMTP staff completing the baseline and follow-up surveys, MMTP staff not completing both of these surveys, and all SEP staff. Survey respondents were given 11 statements and asked whether they strongly agreed, agreed, disagreed, or strongly disagreed with each one. The respondents received 1 to 4 points for each question based on the desirability of their answer (1=least desirable, 4=most desirable). The score is the sum of the responses to the 11 questions. Totals ranged from 11 to 44. The mean total score is presented below.

**Table 7: Non-Medical Staff Attitudes and Beliefs Regarding Hepatitis**

Attitudes	MMTP staff completing both surveys	MMTP staff <u>not</u> completing both surveys	SEP staff
Baseline	32.5 (n=44)	32.6 (n=72)	31.6 (n=48)
Follow-Up	31.3 (n=44)	31.9 (n=23)	31.8 (n=44)
Significance	NS	NS	NS

Results illustrate that there was almost no movement in overall attitudes between the baseline and follow-up assessment periods. This was true for all three groups. Table 7 also reveals similar attitude scores between groups, with overall attitudes ranging from 31.3 to 32.6 across the six assessment dimensions. Although attitudes towards hepatitis did not improve during VHIP, attitudes were fairly favorable to begin with, corresponding to an average score of over 3 out of 4 across each of the 11 items.

### HIV/AIDS and Hepatitis Proficiency

Table 8 presents mean total scores for HIV/AIDS and hepatitis proficiency. Respondents were asked to rate their proficiency with 15 tasks related to HIV/AIDS and hepatitis service provision. The four response categories included: limited, fair, good, and excellent. Respondents received 1 to 4 points for each item, based on the desirability of their answer (1=limited, 4=excellent). The total proficiency score was a

sum of the 15 items. Totals ranged from 15 to 60. Mean total scores across groups and settings are depicted in Table 8 below.

**Table 8: Non-Medical Staff Self-Rated HIV/AIDS and Hepatitis Proficiency**

Proficiency	MMTP staff completing both surveys	MMTP staff not completing both surveys	SEP staff
Baseline	38.7 (n=44)	41.7 (n=72)	41.4 (n=48)
Follow-Up	45.6 (n=44)	46.4 (n=23)	41.1 (n=44)
Significance	p<.001	p<.05	NS

The mean total score among MMTP staff completing both surveys was 38.7 at baseline and 45.6 at follow-up, representing a statistically significant increase in self-rated HIV/AIDS and hepatitis proficiency. Among the cross sectional samples of MMTP staff (i.e., those not completing both surveys), the mean total score increased from 41.7 at baseline to 46.4 at follow-up. This also represents a statistically significant increase, although less pronounced than that observed among staff completing both surveys. Similar to what we saw for overall knowledge, there was virtually no change in proficiency scores among SEP staff from baseline to follow-up (41.4 at baseline and 41.1 at follow-up).

More detailed results from the baseline and follow-up non-medical staff survey can be found in Appendix B.

## **B. Client Surveys**

The purpose of the baseline and follow-up client surveys was to obtain a representative picture of the impact of VHIP at each agency on knowledge of hepatitis and HIV risks, attitudes towards hepatitis and HIV prevention, and experiences with hepatitis and HIV prevention, testing, and access to care.

As previously described, cross sectional client surveys were conducted at the MMTP clinics and at the SEPs. At the SEPs, the interviews were conducted in person by the Hepatitis Coordinator. At the MMTP, the interviews were mainly conducted by the Hepatitis Educator. Client recruitment was done both actively; interviewers approached the clients as they entered the site or while they waited to receive services; and passively; clients and other staff members referred clients to the interviewers. The surveys were administered in English at one of the SEPs, and in English and Spanish at the other SEP and the MMTP.

The baseline client survey was completed by 1,414 individuals between September 2005 and September 2006. The follow-up survey was completed by 1,200 individuals between September 2007 and April 2008.

## Demographic Characteristics of Client Survey Respondents

Table 9 depicts the demographics of the clients who completed the baseline and follow-up client surveys. Approximately two-thirds of the respondents were male for each survey. Two-thirds of all respondents also self-reported that they were Hispanic. The majority of respondents (66.1% at baseline and 71.2% at follow-up) were over the age of 40. Among the clients that completed the survey at the SEPs, 18.8% of baseline respondents and 23.2% of follow-up survey respondents received at least one VHIP funded service. VHIP funded services include HBV and HCV screenings and hepatitis A and B vaccinations. MMTP clients were not categorized as VHIP and non-VHIP clients because hepatitis services were routinely provided to them all. It should also be noted that 342 clients completed both the baseline and the follow-up surveys.

**Table 9. Demographic Characteristics of Client Survey Respondents**

Demographics	Baseline (N=1,414) <sup>1</sup>	Follow-up (N=1,200) <sup>1</sup>
<b>Sex</b>		
Male	821 (59.6%)	742 (62.4%)
Female	557 (40.4%)	448 (37.6%)
<b>Race/Ethnicity</b>		
Non-Hispanic White	83 (5.9%)	87 (7.3%)
Non-Hispanic Black	371 (26.5%)	339 (28.5%)
Non-Hispanic Mixed	42 (3.0%)	16 (1.3%)
Hispanic	901 (64.4%)	746 (62.8%)
<b>Age Group</b>		
17-30	132 (9.5%)	122 (10.2%)
31-40	341 (24.5%)	222 (18.6%)
41-50	619 (44.5%)	521 (43.6%)
50+	300 (21.6%)	329 (27.6%)
<b>Agency</b>		
MMTP	797 (56.4%)	600 (50.0%)
SEP-A	338 (23.9%)	300 (25.0%)
SEP-B	279 (19.7%)	300 (25.0%)
<b>VHIP Client<sup>2</sup></b>		
Yes	116 (18.8%)	139 (23.2%)
No	501 (81.2)	461 (76.8%)
<sup>1</sup> Sample sizes within demographic categories may not add to total sample size due to missing data. <sup>2</sup> VHIP client excludes MMTP clients. Note: 342 respondents completed both a baseline and follow-up survey.		

## Knowledge Scores Among Baseline and Follow-up Client Survey Respondents

Table 10 depicts the baseline and follow-up knowledge scores among MMTP clients, SEP VHIP clients, and SEP non-VHIP clients. Survey respondents were asked 14 true/false questions (Appendix C). Each respondent was given a knowledge score based upon the percentage of questions they answered correctly. The mean percentage of correctly answered questions for all respondents is presented below.

**Table 10. Client Knowledge at Baseline and Follow-Up**

Knowledge	MMTP Clients	SEPs	
		VHIP Clients	Non-VHIP Clients
Baseline	53.6%	67.1%	66.0%
Follow-Up	55.4%	70.3%	62.9%
Significance <sup>1</sup>	NS	NS	NS

<sup>1</sup>Reflects differences between baseline and follow-up values.

Data reveals slight increases in mean knowledge among MMTP clients (from 53.6% to 55.4%) and those SEP clients who received at least one VHIP-related service (from 67.1% to 70.3%); however neither increase reached the level of statistical significance. Overall, knowledge decreased slightly among the non-VHIP SEP clients (from 66.0% at baseline to 62.9% at follow-up), although this decrease was not statistically significant.

## Attitudes and Beliefs Regarding Hepatitis

Table 11 includes baseline and follow-up attitude/belief scores regarding hepatitis among MMTP clients, SEP VHIP clients, and SEP non-VHIP clients. Survey respondents were given nine statements and asked whether they strongly agreed, agreed, disagreed, or strongly disagreed with each one. The respondents received 1 to 4 points for each question based on the desirability of their answer (1=least desirable, 4=most desirable). The score is the sum of the responses to the nine questions, with totals ranging from 9 to 36. The mean total score is presented in Table 11 below.

**Table 11. Client Attitudes and Beliefs Regarding Hepatitis**

Attitudes/Beliefs	MMTP Clients	SEPs	
		VHIP Clients	Non-VHIP Clients
Baseline	26.8	27.3	27.4
Follow-Up	29.9	31.4	30.7
Significance <sup>1</sup>	p<.001	p<.001	p<.001

<sup>1</sup>Reflects differences between baseline and follow-up values.

The results reveal statistically significant increases in positive attitudes towards hepatitis services among clients from the baseline to the follow-up assessment periods. This increase was observed for both MMTP and SEP clients (and for both VHIP and non-VHIP clients within the SEP setting).

### Self-Reported HAV and HBV Vaccinations

Table 12 presents self-reported history of hepatitis A and B vaccinations. At baseline, 32.8% of MMTP clients reported ever receiving a dose of HAV vaccine. This percentage increased significantly to 57.2% by the follow-up assessment period. Similar results were realized for HBV vaccine: at baseline 31.9% of MMTP clients reported ever receiving a dose of vaccine for HBV and this increased significantly to 53.9% at follow-up. It should also be noted that the percentage of MMTP clients reporting that they did not know whether or not they had received vaccinations decreased significantly for both HAV (43.7% to 19.8%) and HBV (44.9% to 20.4%) vaccinations.

The greatest increase in self-reported vaccine uptake was observed among clients receiving VHIP services at the SEPs. At baseline, 28.6% of VHIP clients reported receiving a dose of HAV vaccine, while at follow-up 79.0% reported the same. Vaccine rates for HBV experienced a similar increase among SEP clients accessing VHIP services (from 33.9% at baseline to 79.6% at follow-up). These results were not unexpected, since vaccination services represent one of the core services offered through VHIP.

Somewhat surprising was the positive trend in hepatitis vaccinations apparent among non-VHIP clients at the SEPs. At baseline, 38.0% of these clients reported ever receiving a dose of HAV vaccine and 40.7% reported ever receiving a dose of HBV vaccine. These percentages increased at follow-up to 44.9% and 47.7% for HAV and HBV vaccinations, respectively. Both increases were statistically significant ( $p < .05$ ).

**Table 12. Clients' Self-Reported Hepatitis A and B Vaccinations**

	MMTP Clients			Syringe Exchange Clients					
				VHIP Clients			Non-VHIP Clients		
<b>HAV</b>	Yes	No	Unk	Yes	No	Unk	Yes	No	Unk
Baseline	32.8%	23.5%	43.7%	28.6%	55.4%	16.1%	38.0%	47.7%	14.3%
Follow-up	57.2%	23.0%	19.8%	79.0%	13.8%	7.3%	44.9%	41.8%	13.4%
Significance <sup>1</sup>	p < 0.0001			p < 0.0001			p < 0.05		
<b>HBV</b>									
Baseline	31.9%	23.2%	44.9%	33.9%	51.8%	14.3%	40.7%	45.7%	13.6%
Follow-up	53.9%	25.7%	20.4%	79.6%	13.9%	6.6%	47.7%	38.5%	13.8%
Significance <sup>1</sup>	p < 0.0001			p < 0.0001			p < 0.05		

<sup>1</sup>Reflects differences between baseline and follow-up values.

## Self-Reported Hepatitis B and C Screenings

Table 13 depicts the self-reported history of HBV and HCV screenings among MMTP clients and VHIP and non-VHIP clients at the SEPs. At baseline, 55.2% of MMTP clients reported being screened for HBV. This percentage increased significantly to 70.8% at follow-up. Similar results were realized for HCV screenings among these clients: at baseline 73.0% of MMTP clients recalled being screened for HCV and this proportion increased significantly to 84.2% at follow-up.

As with vaccinations, the greatest increase in self-reported hepatitis screenings was observed among VHIP clients at the SEPs. At baseline, 55.7% of VHIP clients reported being screened for HBV. This percentage increased to 87.7% at follow-up. Rates of HCV screenings also increased significantly, from 73.3% at baseline to 87.1% at follow-up.

There was no change in self-reported HBV screening rates from baseline to follow-up among SEP clients not served by VHIP (62.9% at baseline vs. 61.3% at follow-up). Rates of HCV screening actually decreased among non-VHIP clients from baseline (73.6%) to follow-up (64.9%).

**Table 13. Client's Self-Reported Hepatitis B and C Screenings**

	MMTP Clients			Syringe Exchange Clients					
				VHIP Clients			Non-VHIP Clients		
<b>HBV</b>	Yes	No	Unk	Yes	No	Unk	Yes	No	Unk
Baseline	55.2%	12.4%	32.5%	55.7%	26.1%	18.3%	62.9%	23.1%	14.0%
Follow-up	70.8%	11.2%	18.0%	87.7%	8.7%	3.6%	61.3%	26.3%	12.5%
Significance <sup>1</sup>	p < 0.001			p < 0.001			NS		
<b>HCV</b>									
Baseline	73.0%	8.1%	18.9%	73.3%	18.1%	8.6%	73.6%	18.8%	7.6%
Follow-up	84.2%	7.2%	8.6%	87.1%	7.2%	5.8%	64.9%	24.8%	10.2%
Significance <sup>1</sup>	p < 0.001			p < 0.01			p < 0.01		

<sup>1</sup>Reflects differences between baseline and follow-up values.

Additional results of the baseline and follow-up client surveys can be found in Appendix C.

### C. Focus Groups

Focus groups with clients and staff demonstrate that VHIP was well received at the agencies (Appendix G). Focus group participants said that hepatitis services were basically non-existent before VHIP and that it was great to have expertise on-site to refer their clients for education, testing, screening, and evaluation and treatment referrals.

Examples of the positive impact the program had on the agencies and their clients include:

*“...I had a female patient who was scared to death and I referred her to [the Hepatitis Coordinator]. She came back and was armed with information. The [Hepatitis Coordinator] arranged an escort for her biopsy, and she is continuing with her hep C treatment. At one point she just did not want to be bothered with it so it was like she was sticking her head in the sand...but the [Hepatitis Coordinator] managed to encourage her to take a more active role in her own life ...she is quite pleased now and talks about it all the time...it's not this big boogie man to her anymore.”*

*“...As a counselor when the program was brought on site I was able to get a lot of information that was able to help me help my patients. Information that I would have never otherwise googled, if I may. But because of [the Hepatitis Coordinator] and the program and because of the different trainings that she brought in rather than sending us out for training, I now have a wealth of information thanks to this particular program.”*

*“...One of my patients, he did not have hepatitis C. He was there to get information for a family member. So like someone said before people are getting the information and bringing it back to the community. Which is helping the community as a whole as well.”*

## **Assessing the Impact of VHIP - Discussion**

The Viral Hepatitis Integration Project had a positive impact on the participating agencies, their staff and clients. Among staff, the impact was greatest among those that were exposed to the program the longest (i.e., MMTP staff that completed both surveys). However, improvements in proficiency were realized among all staff at that agency. The high rates of turnover at the SEPs precluded any meaningful impact on their knowledge, attitudes, or proficiency. Clients' attitudes and beliefs regarding hepatitis and recall of services received improved across the board. The findings illustrate that the presence of the VHIP program and its services increased awareness of viral hepatitis and clients were more aware of and understood the services they had received.

The focus group results also indicated that the Hepatitis Coordinator was seen as the most central element in VHIP at the MMTPs and the SEPs. Although integration did occur, the model was heavily dependent on the knowledge and resources from the Coordinators.