II. Hepatitis Service Delivery

A. Hepatitis Service Delivery at the SEPs

Methods

The Hepatitis Coordinator at the two SEPs recruited clients for HBV and HCV screenings and hepatitis A and B vaccinations between November 1, 2005 and October 31, 2008. Hepatitis vaccinations were administered by the PA from the MMTP one day per week at each site. Follow-up services (i.e., hepatitis screening results and subsequent doses of vaccine) were available to clients until April 30, 2009. The Hepatitis Coordinator tracked the services they provided with forms developed by the Office of Program Evaluation and Research (OPER), AIDS Institute, NYSDOH (Appendix H). Each time a client returned for a follow-up service the Coordinator updated the client's forms. The Coordinators submitted these forms to the NYSDOH twice per month. Clients did not receive an incentive for taking a screening test or for receiving their first dose of vaccine, however, they received a $4.00 metrocard (subway fare) when they returned for their screening results and/or additional doses of the HAV and HBV vaccine.

Results

Table 1 displays the demographic characteristics of VHIP participants. Eight hundred eight clients received at least one hepatitis service at the SEPs during the three year recruitment period. Approximately 70% of these clients were male, 60% were over the age of 40, and two-thirds identified as Hispanic.[3]

[3] It should be noted that gender and race/ethnicity was not collected until September 1, 2006, eleven months into the program. At the outset of the program we planned to collect this information from the NYSDOH AIDS Institute Reporting system (AIRS), however numerous issues with data reliability and matching of client IDs arose. Therefore, we began collecting this information on the VHIP tracking forms at that time.

Table 1: Demographic Characteristics of VHIP Participants

Demographics	Syringe Exchange Program A		Syringe Exchange Program B		Total	
	n	%	n	%	n	%
Clients Served by VHIP	**348**		**460**		**808**	
Age (at first VHIP service)						
<20	2	0.6%	11	2.4%	13	1.6%
21-30	33	9.5%	68	14.9%	101	12.6%
31-40	100	28.9%	110	24.1%	210	26.2%
41-50	158	45.7%	176	38.5%	334	41.6%
51+	53	15.3%	92	20.1%	145	18.1%
Missing	2		3		5	
Gender[1]						
Male	208	69.8%	281	69.2%	489	69.5%
Female	86	28.9%	124	30.5%	210	29.8%
Transgender	4	1.3%	1	0.2%	5	0.7%
Missing	50		54		104	
Race/Ethnicity[1]						
Hispanic	170	60.1%	326	81.7%	496	72.7%
Non-Hispanic Black	92	32.5%	59	14.8%	151	22.1%
Non-Hispanic White	17	6.0%	6	1.5%	23	3.4%
Non-Hispanic Other	4	1.4%	8	2.0%	12	1.8%
Missing	65		61		126	

[1]Data limited to clients who first received VHIP services after September 1, 2006.

Table 2 reveals as expected, high levels of self-reported drug use among VHIP participants. Approximately 50% of the clients self-reported that they had ever injected drugs. Of these clients, almost 60% injected drugs within the last 12 months.[4]

Table 2: Self-Reported Injection Drug Use Among VHIP Clients

	Syringe Exchange Program A		Syringe Exchange Program B		Total	
	n	%	n	%	n	%
Ever Injected Drugs[1]						
Yes	131	63.6%	142	43.4%	273	51.2%
No	75	36.4%	185	56.6%	260	48.8%
Missing	142		133		275	
Injected Drugs within the past 12 months[2]						
Yes	94	68.6%	75	45.2%	169	55.8%
No	33	31.4%	64	54.8%	97	44.2%
Missing	4		3		7	

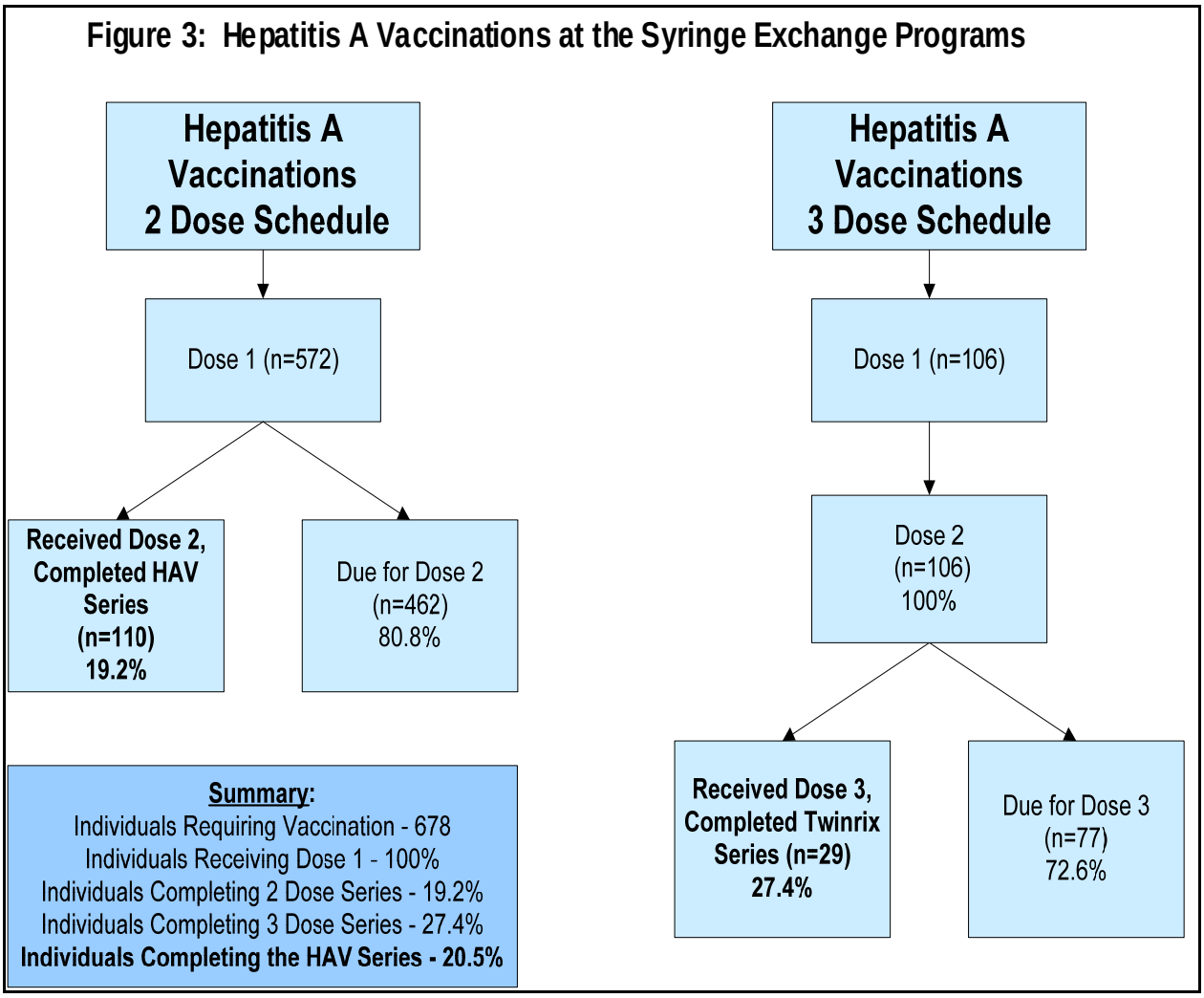
[1]Data limited to clients who first received VHIP services after August 1, 2006.
[2]Data limited to clients who ever injected drugs.

[4]These data were not collected until August 1, 2006; ten months after the program began.

Hepatitis A Vaccination (Figure 3)

Figure 3 represents client uptake of HAV vaccines at the SEPs. Clients were either given monovalent vaccine or Twinrix for the HAV vaccine. If a client received at least one dose of monovalent vaccine, they only needed two doses of vaccine to be fully protected. However, if a client only received Twinrix vaccine, the client required three doses to be protected.

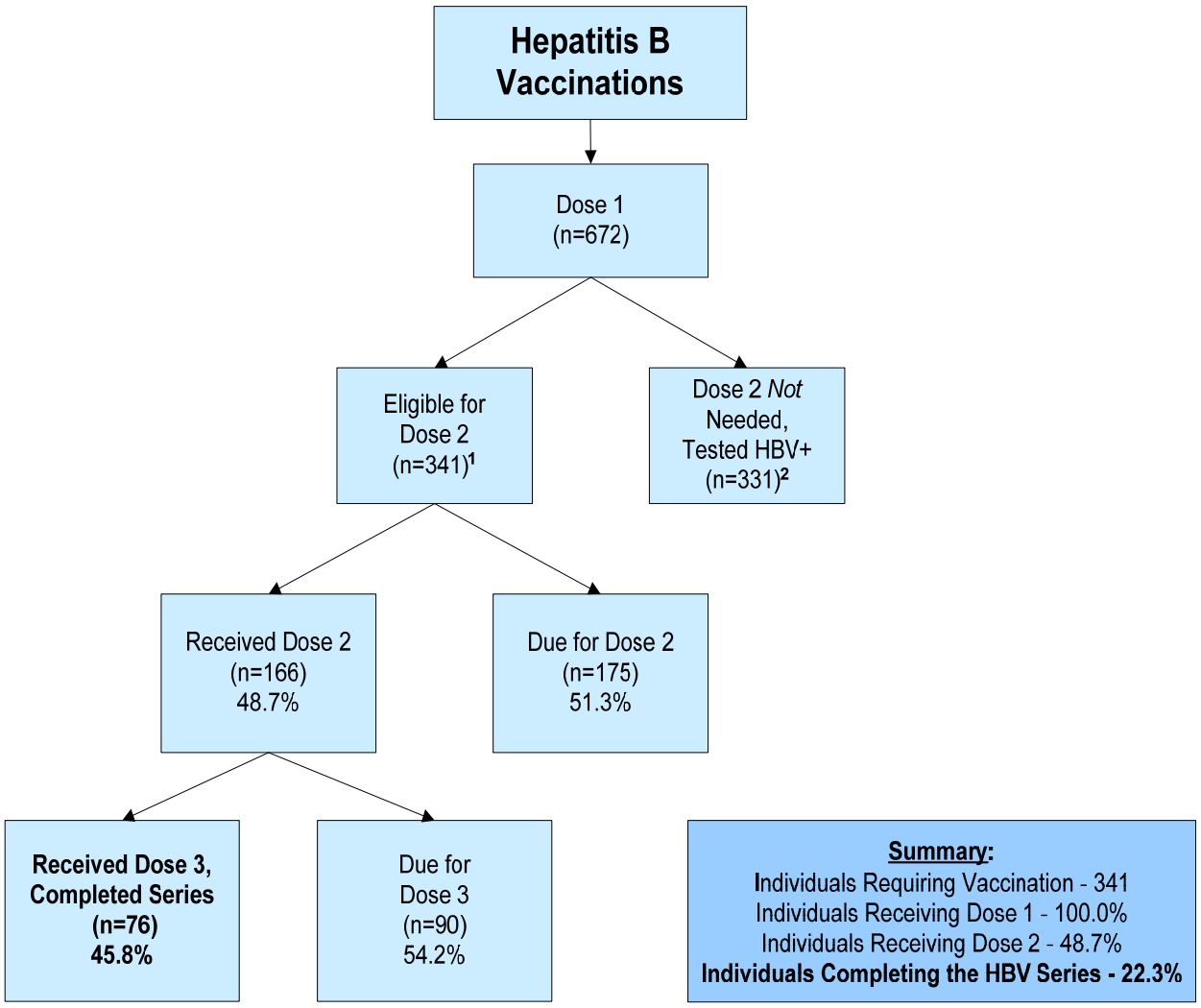
For clients on the two dose schedule, 572 clients received one dose of monovalent vaccine and 110 (19.2%) of these clients completed the vaccination series. For clients on the three dose schedule, 106 clients received two doses of Twinrix vaccine and 29 (27.4%) of them completed the vaccination series. Overall, 678 clients received at least one dose of HAV vaccine and 139 clients (20.5%) clients completed the HAV vaccine series.



Hepatitis B Screening and Vaccination (Figure 4)

Figure 4 depicts HBV screening results and vaccines provided to SEP clients. Six hundred seventy-two clients received at least one dose of HBV vaccine. When screened for HBV, 341 of the clients were negative and, therefore eligible for additional doses of vaccine. Of the 341 vaccine eligible clients, 166 (48.7%) received their second dose. Seventy-six of these clients (45.8%) received the third and final dose of vaccine. Overall, 341 clients were eligible for HBV vaccines and 22.3% of these clients completed the HBV vaccine series.

Figure 4: Hepatitis B Screenings and Vaccinations at the Syringe Exchange Programs

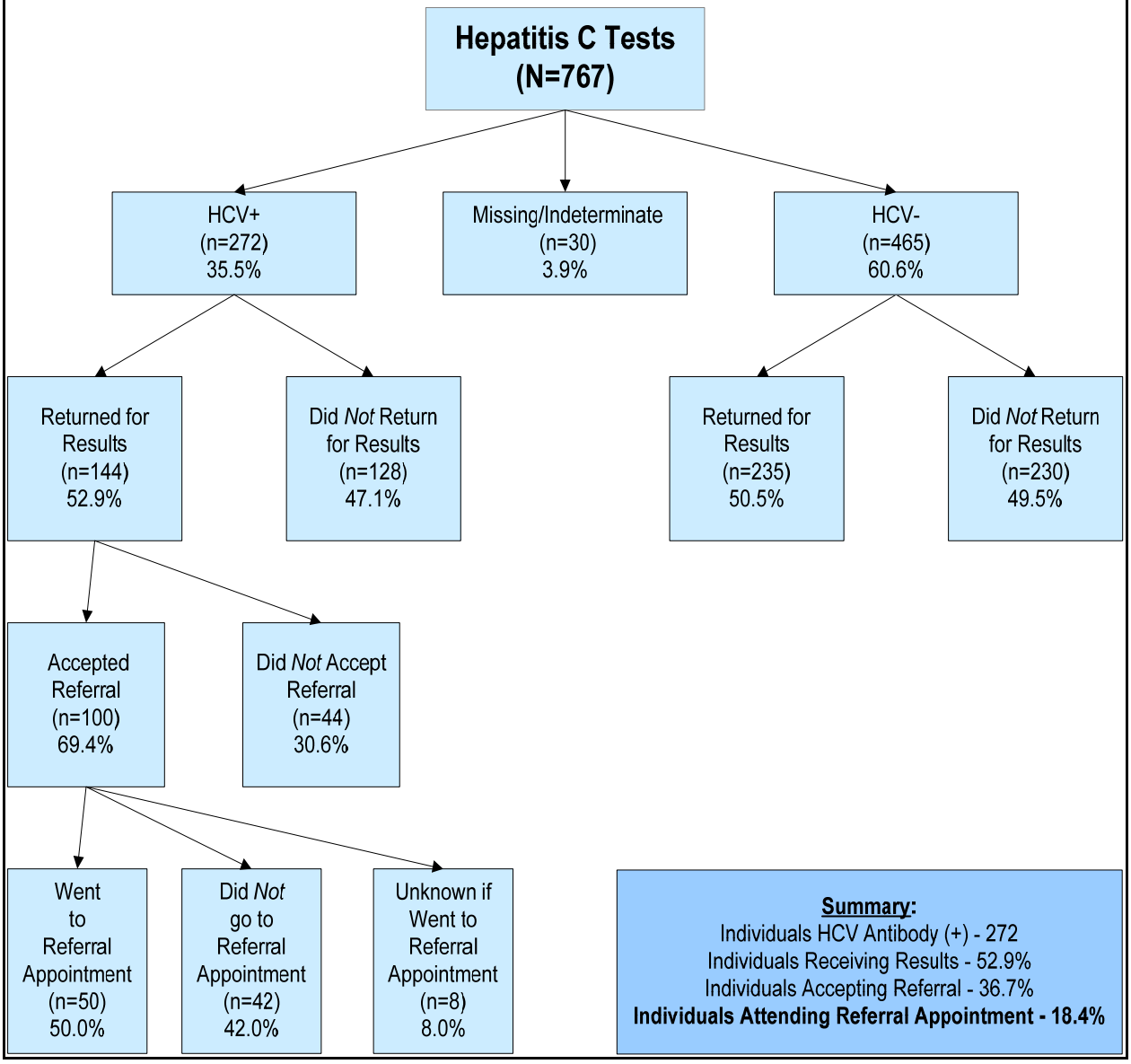


[1]Limited to clients who received HBV vaccine dose 1 and are HBsAg, HBsAb, and HBcAb negative.
[2]Includes 24 individuals who received dose 2 and 8 individuals who received dose 2 and 3, but tested positive.

Hepatitis C Screening (Figure 5)

Figure 5 depicts HCV screening results and referral attendance for SEP clients. Seven hundred sixty-seven clients were screened for HCV and 272 (35.5%) of them were antibody positive. Of the antibody positive clients, 144 (52.9%) returned to the agency and received their screening results from the Hepatitis Coordinator. One hundred of these clients (69.4%) accepted a referral from the Coordinator for HCV evaluation and possible treatment. Fifty of these clients (50.0%) attended their appointment. These 50 individuals represent 18.4% of those diagnosed HCV antibody positive.

Figure 5: Hepatitis C Results at the Syringe Exchange Programs



Hepatitis Service Delivery at the SEPS - Discussion

Syringe exchange programs are ideal settings to reach high-risk individuals in need of hepatitis prevention and care. Eight hundred eight clients at the SEPs accepted at least one hepatitis service from the on-site Hepatitis Coordinator, 2,361 clients attended hepatitis related support groups, and 16,000 fact sheets, brochures, and other hepatitis educational materials were distributed during the five year program. Vaccine completion rates, follow through with screening results, and attendance at HCV evaluation appointments was lower than expected. Only 20.5% of clients who initiated the HAV vaccine series completed it, 22.3% of clients initiating the HBV vaccine series completed it, and 18.4% of HCV antibody positive clients attended a follow-up referral appointment.

It is important to note that the vaccine completion rates above represent minimum values. During the time that the SEPs were offering hepatitis screenings and vaccinations to clients, other agencies across NYC were doing so as well. Therefore, it is possible that clients who did not return to the SEPs for additional doses of vaccine received them elsewhere. Study team members received several anecdotal accounts to this effect from the Hepatitis Coordinator and other program staff during the course of the program.

During the program, focus groups were held with clients at the agencies to determine the barriers to follow-through with these services. Some of the barriers identified by clients included:

- Lack of a rapid test for HCV;
- Client lifestyle and characteristics:
  - homelessness;
  - incarceration;
  - lack of reliable transportation; and
  - lack of health insurance;
- Insufficient number of health providers willing to treat and care for injection drug users;
- Misinformation and confusion about the three types of hepatitis and how each is transmitted;
- Fear of the liver biopsy and side effects of treatment;
- Long wait time for follow-up appointments; and
- Limited social support from family and friends.

Suggested ways to overcome such barriers were identified by focus group participants including graduated incentives (i.e., offering small incentives to be screened for hepatitis and larger incentives to return for their results); and ensuring peer escorts were available to take clients to and from their appointments.

Focus groups were also held with medical and non-medical staff to determine methods for improving the hepatitis service delivery at the SEPs. Several themes were identified

and consistent with those the clients identified. Suggestions included: the use of a rapid HCV test; one stop shopping; increased incentives; escorts to medical appointments by a peer or trusted person; support groups before, during, and after HCV treatment; and a dedicated staff member (e.g., Hepatitis Coordinator) to set-up appointments and follow-up with lab work and liver biopsies.

Research to better understand why clients initially accept hepatitis services, but then fail to either return for their test results or complete their vaccination series may provide additional strategies and insight. It is also important to note that even those individuals who received only one dose of vaccine still received some protection – one dose of vaccine confers immunity/equals immunity in about 50% of people. Therefore, receiving one dose is better than not receiving any.

B. Hepatitis Service Delivery at the MMTPs

Methods

Hepatitis service delivery data were collected on chart reviews of 300 clients randomly selected from 800 MMTP clients that completed the baseline Client Survey. The sample was stratified by clients who received services at the intake clinic, which provided more intense hepatitis services, and the hepatitis service clinic that provided less intensive hepatitis care. By stratifying the sample we were able to assess the impact that the different service structures had on clients' utilization of hepatitis services. Baseline chart reviews were conducted in August 2005 and updated periodically through February 2009.

Results

Table 3 depicts the demographic characteristics of the chart review sample. Three hundred clients comprised the sample. A slight majority of the sample was female (53.5%), 68% of the clients were over the age of 40, and two-thirds of the sample identified as Hispanic. Approximately half of the sample received services at the intake (high service needs) clinic and the other half were seen at the low service HCV clinic. Over the three years that chart review data were collected, more than half (53.7%) of the sample dropped out or graduated from the program.

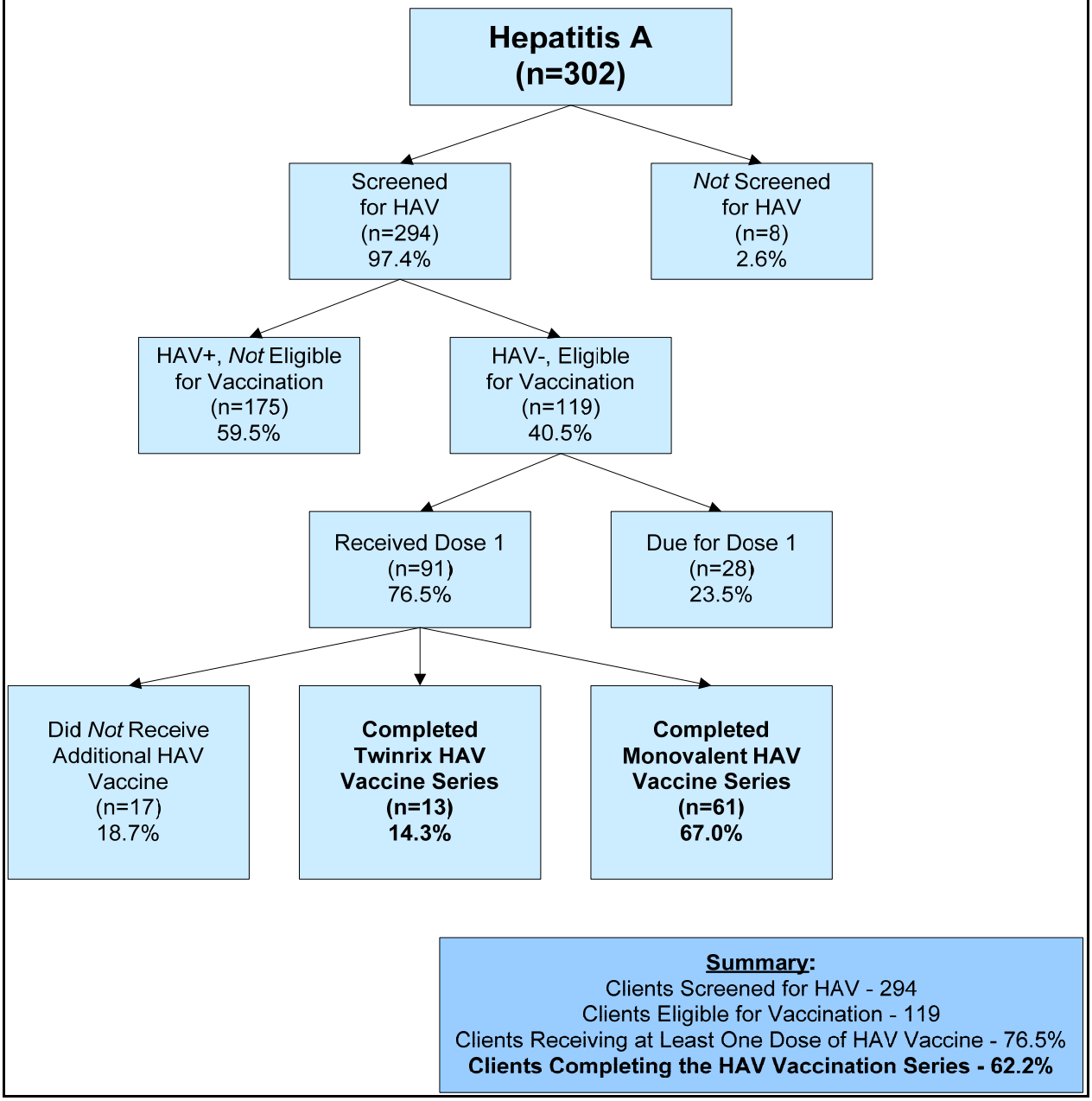
Table 3. The Demographic Characteristics of the Chart Review Sample

Characteristic	Number	Percent of Total Sample
Total Sample	**300**	**100%**
Gender		
Male	132	46.5%
Female	152	53.5%
Age Group		
30 or under	21	7.2%
31 – 40	73	24.9%
41 – 50	130	44.4%
51 and over	69	23.6%
Race/Ethnicity		
Hispanic	183	62.5%
Non-Hispanic White	83	28.3%
Non-Hispanic Black	16	5.5%
Non-Hispanic Other	11	3.7%
MMTP Site		
Intake	160	53.5%
Low HCV service	139	46.5%
Dropout/Graduated		
Yes	161	53.7%
No	139	46.3%

Hepatitis A Screening and Vaccination (Figure 6)

Figure 6 depicts the HAV screening results and vaccine uptake among the MMTP client sample. Of the 302 clients included in the sample (the MMTP included two extra clients when they pulled charts for review), 294 (97.4%) were screened for HAV. One hundred nineteen clients were negative and eligible for vaccination. Of these clients, 91 (76.5%) received at least one dose of vaccine. Seventeen (18.7%) of these clients did not receive any additional vaccine. Eight of these clients (47.1%) either dropped out of the program or were discharged. Thirteen (14.3%) completed the 3 dose Twinrix series, and 61 (67.0%) completed the 2 dose monovalent vaccine series. Overall, of the 119 clients eligible for vaccination, 62.2% completed a HAV vaccine series.

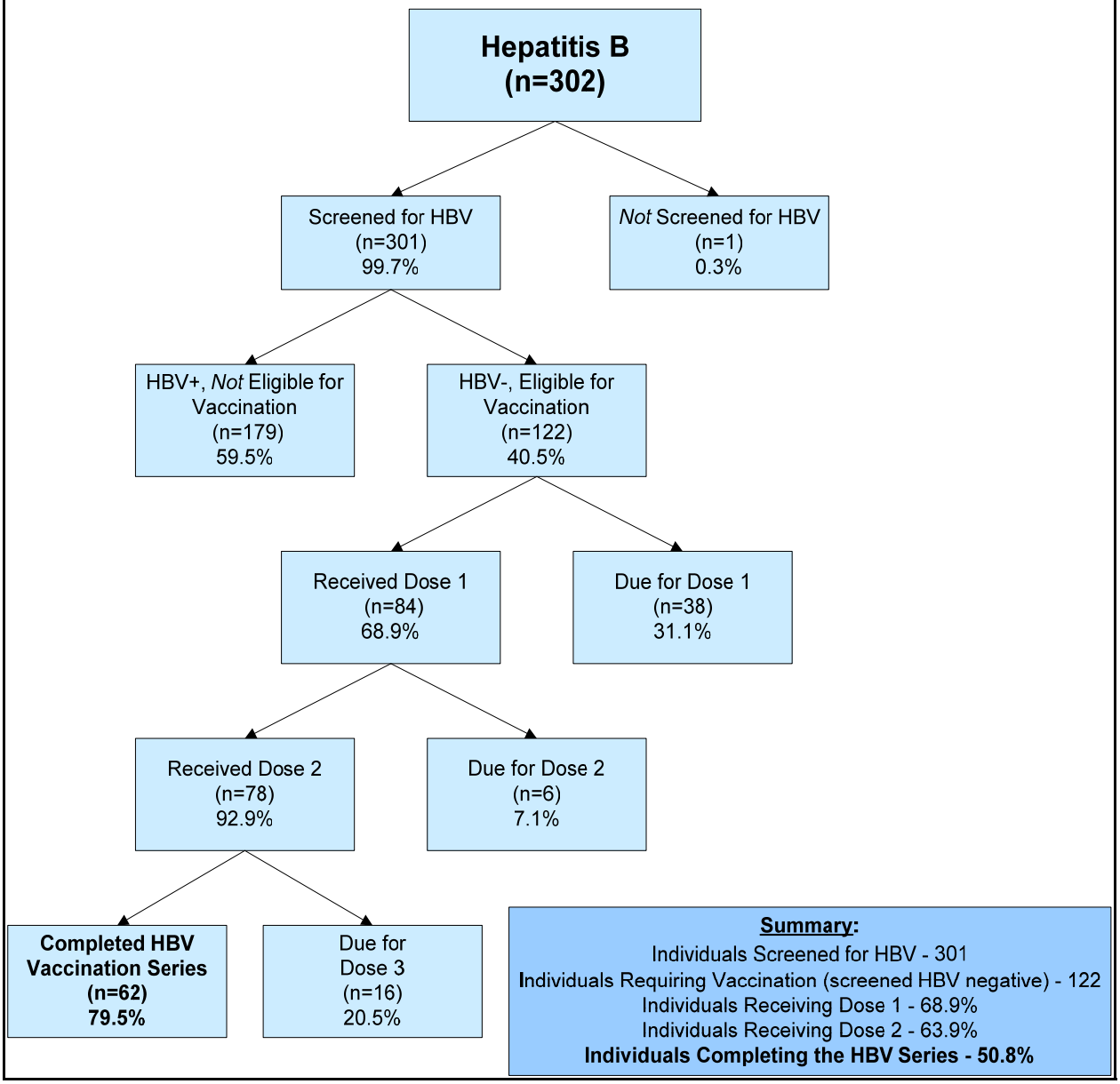
Figure 6: Hepatitis A Screenings and Vaccinations at the MMTPs



Hepatitis B Screening and Vaccination (Figure 7)

Figure 7 represents HBV screenings and vaccinations among the MMTP client sample. Of the 302 clients in the sample, 301 (99.7%) were screened for HBV. One hundred twenty-two clients were susceptible and therefore, eligible for vaccination. Eighty-four (68.9%) of these clients received their first dose of vaccine. Of these clients, 78 (92.9%) received their second dose. Three of the six clients who did not receive their second dose dropped out or were discharged from the program. Of the clients receiving their second dose, 62 (79.5%) received their third and final dose and ten (12.8%) were discharged or dropped out of the program. Overall, 122 clients were eligible for vaccine and 50.8% of the clients completed the HBV vaccine series.

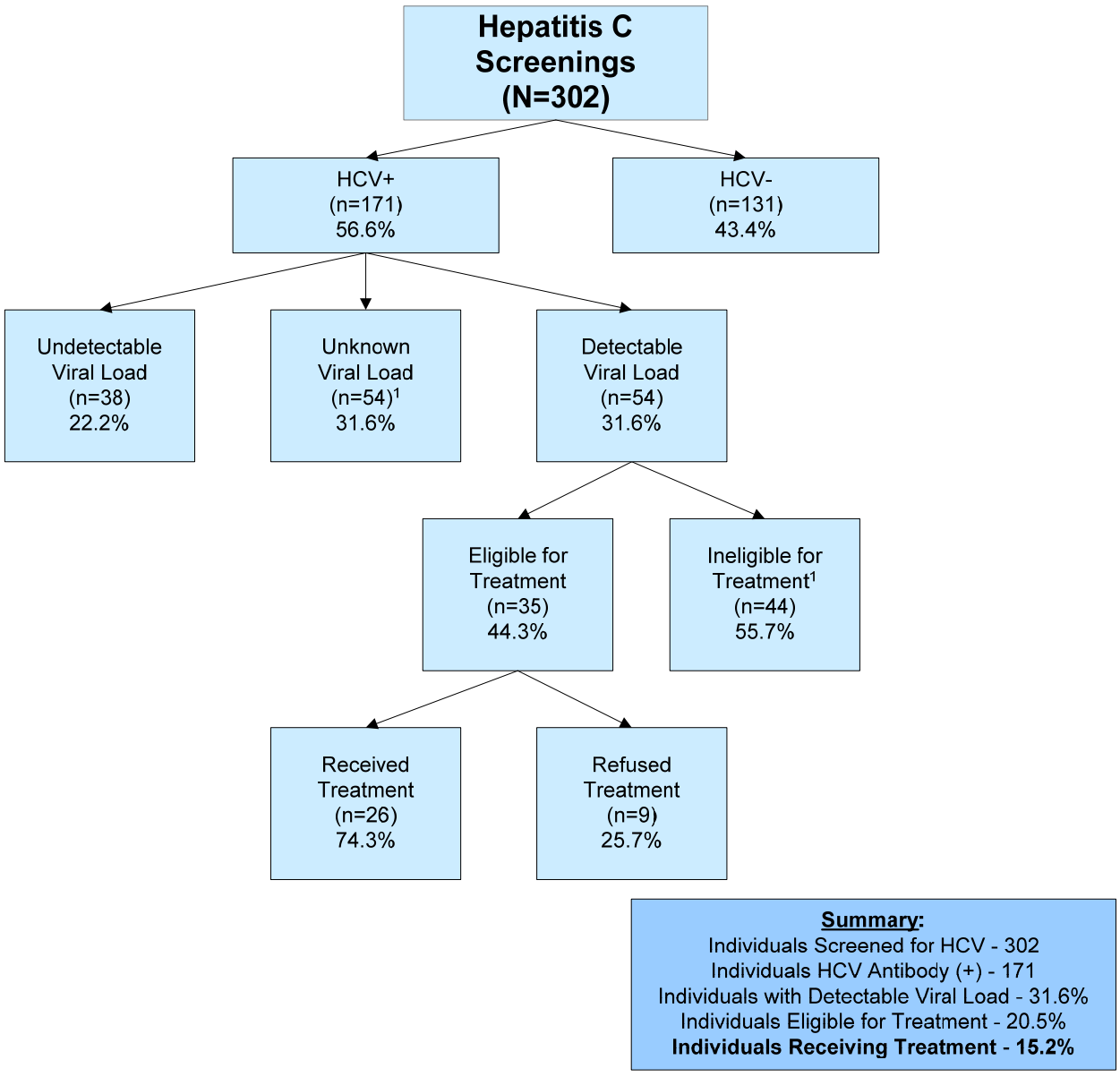
Figure 7: Hepatitis B Screenings and Vaccinations at the MMTPs



Hepatitis C Screening (Figure 8)

HCV screening results and further evaluation and treatment are depicted in Figure 8. All of the clients in the sample were screened for HCV antibodies. One hundred seventy-one clients (56.6%) were antibody positive. Of these clients, 22.2% had an undetectable hepatitis C viral load. No further action was needed for these clients. Thirty-one percent of the clients had an unknown viral load because they did not follow-up with the MMTP for testing or they received their testing off-site. The remaining 31.6% had a detectable viral load. Of these 54 clients, 44.3% were eligible for treatment. Of these clients, 74.3% initiated treatment.

Figure 8: Hepatitis C Results at the MMTPs



[1]Clients are considered ineligible for treatment if they have mild fibrosis, psychological instability, or other serious health concerns.

Hepatitis Service Delivery at the MMTP - Discussion

Methadone maintenance treatment programs are also ideal settings to reach high-risk individuals in need of hepatitis prevention and care. Almost all of the clients in the sample received HAV screenings (97.4%) and two-thirds (62.2%) of these clients completed the HAV vaccine series. Similarly, almost all (99.7%) of the clients were screened for HBV and 50.8% completed the HBV series. In addition, all clients in our sample were screened for HCV and over half of the HCV antibody positive clients (53.8%) received viral load and genotype testing.

The proportion of clients completing their vaccine series and attending HCV evaluation and treatment appointments is significantly higher at the MMTP than at the SEPs, where only 20% to 25% of clients completed these services. One reason for this may be the attendance structure at the MMTP. The MMTP requires clients to visit the office almost daily for their methadone dose and staff routinely call/follow-up with clients who miss appointments. In contrast, there is no expectation of service frequency at the SEPs. Another reason for the increased service completion at the MMTP is that each office provided medical services on-site. If a client was in need of hepatitis services, staff could direct them to medical personnel immediately. Medical providers were only available one day each week at the SEPs. SEP clients typically waited until that day for services or received referrals to another provider. Therefore, hepatitis services at the MMTP were more convenient and readily obtained.