Hepatitis C Service Provision at Washington State Opioid Treatment Programs

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Abstract

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Hepatitis C virus (HCV) case numbers are rapidly rising in the United States, with up to 57,500 new infections occurring per year, most often among people who inject drugs. Initial infections are usually mild and go unnoticed. However, HCV can become chronic when left untreated, creating health risks, increasing healthcare costs, decreasing productivity, reducing the quality of life, and causing premature death. In response, Washington State developed the "Hep C Free Initiative" in 2019 to mobilize a multisectoral response to help stop the epidemic. The Washington State Department of Health (DOH) plays a significant role, facilitating cross-sector partnerships that leverage diverse resources. As part of this effort, the DOH will support opioid treatment programs (OTPs) in offering on-site HCV care. To better understand the programs' needs, a descriptive study was conducted in partnership with the University of Washington. Medical directors and administrators from 23 OTPs were surveyed to determine OTPs' scope of on-site HCV testing and treatment, barriers to service expansion, and interest in future educational opportunities. Results show that OTPs have made significant progress towards the recommended Hep C Free goals and opportunities remain for future collaboration with the DOH.

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1. INTRODUCTION

Hepatitis C virus (HCV) case numbers are rapidly rising in the United States, with up to 57,500 new infections occurring per year.[1,2] A bloodborne infection, HCV can be transmitted through shared injection equipment during opioid drug use. Most acute infections remain unrecognized, as initial symptoms are mild or absent. If HCV is left untreated, the condition often becomes chronic, creating health risks, increasing healthcare costs, decreasing productivity, reducing the quality of life, and causing premature death. In response, Washington State developed the "Hep C Free Initiative" in 2019 to mobilize a multisectoral response to help stop the epidemic.[3] Aiming to eliminate HCV by 2030, coordinated implementation of the initiative's recommended goals and actions is occurring through various partner organizations.[3] The Washington State Department of Health (DOH) plays a significant role, facilitating cross-sector partnerships that leverage diverse resources.[4]

1.1 Specific Aims

Following the Hep C Free guidelines, opioid treatment programs (OTPs) in Washington are expanding their services to include HCV testing and treatment to facilitate early and convenient case identification and subsequent access to care for their clients.[3] During this transition, support for OTPs is provided by the DOH through shared resources, educational opportunities, and consultation. An understanding of OTPs' current clinical capacities and scope of medical services is needed to inform future DOH programming. To gather this information, the DOH and the University of Washington (UW) jointly designed a descriptive study of OTPs that sought to:

1. Assess current levels of infectious disease testing and treatment, including the location of HCV service delivery, through an electronic survey of program medical directors.

2. Describe programs' years of service, location sizes, average client loads, staffing levels, and reimbursement limitations through an electronic survey of program administrators.

3. Summarize medical directors' and administrators' awareness of HCV-related initiatives, guidelines, and their educational interests.

1.2 Background and Significance

Amid the national opioid epidemic, HCV has become the most common bloodborne infection in the US [5,6] The estimated national prevalence of HCV from 2013 to 2016 was 0.84%, with young adults 20-39 years old having the highest rates.[1] Similar to the national trends, HCV incidence in Washington State has risen dramatically. Washington's acute HCV rate is now more than twice the national Healthy People 2020 goal of having less than 0.25 cases/100,000.[1] Approximately 50,000 people are currently infected in Washington State alone.[1]

Despite the ongoing challenges, eliminating HCV in Washington is still possible, considering 95 percent of chronic infections resolve with direct-acting antiviral medication.[1,6] To ensure all people living with HCV are offered the treatment, the Centers for Disease Control recommends that states strategically implement screening programs in locations that are accessible to those at risk.[1] Providing prompt diagnoses followed by readily available care and medication, particularly for those with limited access to the healthcare system, such as people who inject drugs (PWID), is necessary to effectively find existing cases and prevent ongoing transmission.[6,7,8]

Opioid treatment programs (OTPs) are well-positioned to support these efforts, as they have direct and frequent contact with PWID. The client's familiarity with staff fosters trusting relationships and facilitates acceptance of additional medical services, such as infectious disease testing and treatment.[9] Receiving multiple services at one location is also convenient, providing another reason to offer HCV care on-site.

However, given the complexity and interconnectedness of the US healthcare system, the expansion of OTP services is not an autonomous process. Coordination across agencies is needed to ensure adequate resources, provide timely diagnoses and treatment, and promote optimal health outcomes.[10, 11] To guide care integration efforts, DOH and the University of Washington (UW) partnered to undertake a statewide assessment of the current capacity and needs of OTPs to provide HCV services.

2. Methods

2.1 Study Design

A formative evaluation was conducted through two electronic, cross-sectional surveys. One survey was completed by opioid treatment program administrators and the other by medical directors. The questions asked of respondents in each role overlapped to some degree and were also customized to take advantage of each professionals' expertise in specific areas.

2.2 Population and Setting

Eligible programs included all 28 OTPs listed in the Washington State Healthcare Authority's 2020 Directory. The programs are behavioral health treatment agencies licensed by both the state and federal government to provide all three types of medication for Opioid Use Disorder in an outpatient setting. The study team purposively sampled one medical director and administrator (program sponsor or site director) from each OTP to ensure program and role representation.

2.3 Data Collection

The DOH and UW team members collaboratively developed the survey questions. Survey items measured program characteristics, the current scope of and barriers to infectious disease care, models of integration, awareness of guidelines and recommendations, and financial barriers to implementing HCV services. The survey was self-administered, and response options included binary and multiple-choice questions, rating scales, and open-ended answers. Information for each location was collected via a separate questionnaire.

We introduced the study in November 2020 during an administrator and a medical director monthly meeting with the Washington State Healthcare Authority. REDCap's automated features were then utilized to email the survey to participants during December 2020 and January 2021. Three weeks were allotted for survey completion. Responses were entered directly into and stored in REDCap's secure database.

2.4 Statistical Analysis

Descriptive statistics, including counts and proportions, were generated. We calculated the mean and standard deviation or median and interquartile ranges for answers with continuous outcomes.

2.5 Ethical Considerations

The UW Institutional Review Board (IRB) provided an exemption determination for the study. Responses were not anonymous, though data were reported in aggregate to avoid identifying answers with specific respondents. Participants were able to stop the survey at any time or skip any questions. Upon completion of the survey, all participants were eligible to receive a gift card from the DOH.

3. RESULTS

3.1 General Program Characteristics

Eighteen program administrators and eight medical directors responded to the survey. Administrators were the only respondent from 14 programs, both an administrator and a medical director responded for four programs, solely medical directors responded for three programs, and one medical director responded for two programs; thus, 23 out of the eligible 28 OTPs (82.1%) were represented.

The majority of programs (56.5%) were located in the Puget Sound area, with the Southwest (13.0%) region representing the next highest number (Table 1). The majority of programs (83.3%) were from urban areas, most (88.9%) were part of a larger organization, with a median of 9.5 years in service [interquartile range (IQR): 3.8-34.8]. Program size varies, with a median of 336 clients per week (IQR: 300.0-620.0), 16 new clients per month (IQR: 11.0-30.0), and 12 full-time equivalent staff (IQR: 12.0-30.5).

Table 1. Washington State Opioid Treatment Program Characteristics Reported by Program Administrators and Medical Directors

Program Characteristics	n=23 programs No. (%) Median (IQR)
Region	
North	1 (4.3)
Puget sound	13 (56.5)
East	2 (8.7)
South central	1 (4.3)
Southwest	3 (13.0)
West	2 (8.7)
Northwest	1 (4.3)
Urban location*	15 (83.3)
Part of a larger organization*	16 (88.9)
Years in service*	9.5 (3.8 - 34.8)
Physical size (ft^2)†	5100.0 (2000.0 - 10,000.0)
Number of clients per week*	336 (300.0 - 620.0)
Number of new clients per month†	16 (11.0 - 30.0)
Total Staff FT‡	12 (12.0 - 30.5)

*Missing responses from 5 sites.
†Missing responses from 6 sites.
‡Missing responses from 12 sites.

3.2 OTP Programs' Availability and Integration of Infectious Disease Services

Medical directors reported information on the availability of HCV and infectious disease services as well as integration with existing program services. Most of the nine OTPs offer HCV services either integrated (55.6% testing and 44.4% treatment) or co-located (22.2% testing and 33.3% treatment) (Table 2). The majority (66.7%) have a provider on-site offering HCV care at least five days/month. Four programs (44.4%) provide HCV rapid testing to clients, while seven (77.8%) offer RNA assay testing (55.6% integrated and two (22.2%) co-located). Six OTPs (66.7%) provide treatment with antiviral medication prescribed for the client to take independently. Two (22.2%) offer directly observed medication therapy.

Table 2 Integration of Infectious Disease Testing & Treatment Services at Washington State Opioid Treatment Programs as Reported by Medical Directors (n=9 programs)

	Infectious Disease Service Location			
Clinical Service	Integrated* n (%)	Colocated† n (%)	Referred‡ n (%)	Not offeredŠ n (%)
Hepatitis C Services				
Hepatitis C Rapid Test	1 (11.1)	3 (33.3)	0 (0.0)	5 (55.6)
Hepatitis C RNA Test	5 (55.6)	2 (22.2)	2 (22.2)	0 (0.0)
Hepatitis C Treatment	4 (44.4)	3 (33.3)	2 (22.2)	0 (0.0)
Addiction Specialist that also treats HCV	6 (66.7)	2 (22.2)	1 (11.1)	0 (0.0)
HCV Specialist -Physician/Provider	0 (0.0)	1 (11.1)	6 (66.7)	2 (22.2)
Other Testing Services				
Clinical Laboratory (n=7)	1(11.1)	5 (55.6)	1 (11.1)	0 (0.0)
Hepatitis B	5 (55.6)	3 (33.3)	1 (11.1)	0 (0.0)
HIV	6 (66.7)	2 (22.2)	1 (11.1)	0 (0.0)
Gonorrhea	5 (55.6)	2 (22.2)	0 (0.0)	2 (22.2)
Chlamydia	5 (55.6)	2 (22.2)	0 (0.0)	2 (22.2)
Syphilis	7 (77.8)	2 (22.2)	0 (0.0)	0 (0.0)
Tuberculosis	7 (77.8)	2 (22.2)	0 (0.0)	0 (0.0)
Treatment Services				
HIV	2 (22.2)	2 (22.2)	3 (33.3)	2(22.2)
Chlamydia	5 (55.6)	2 (22.2)	0 (0.0)	2 (22.2)
Gonorrhea	5 (55.6)	2 (22.2)	0 (0.0)	2 (22.2)
Syphilis	5 (55.6)	2 (22.2)	1 (11.1)	1 (11.1)
Tuberculosis	3 (33.3)	3 (33.3)	2 (22.2)	1 (11.1)
Preventive Services				
Hepatitis A Immunization	3 (33.3)	2 (22.2)	2 (22.2)	2 (22.2)
Hepatitis B Immunization	3 (33.3)	2 (22.2)	2 (22.2)	2 (22.2)

*Integrated services are provided by the OTP program staff on-site
†Co-located services are provided by another department/agency in the same location as the OTP
‡Referred clients are directed to a clinic/provider that is located off-site
ŠNot offered as part of the program

Among other infectious disease services, nine sites offer syphilis (100.0%) and tuberculosis testing (100.0%). HIV testing is available at 88.9% of programs. Treatment is less commonly integrated. Four programs (44.4%) offer HIV treatment and seven (77.8%) treat chlamydia, gonorrhea, and syphilis. Five (55.6%) include hepatitis A and B immunizations.

3.3 Models Integration: OTP Infectious Disease Services

OTPs operate under various care models and degrees of integration that influence the scope of infectious disease services provided. One privately-run integrated program has two locations offering holistic healthcare, including outpatient opioid treatment, mental health counseling, and primary care. Another program integrates care to a lesser degree by embedding clinical care via telemedicine, including HCV treatment but not testing. Co-located programs fill gaps in care by placing multiple programs or services under one roof. Some federally-supported Veteran's Administration and Tribal Health Services co-locate their clinics, enabling referrals and coordination between providers. Others consist of geographic groupings of smaller, independent programs that agree to partner to optimize client care. For instance, one respondent's OTP contracts with two other agencies: a primary care clinic that provides infectious disease treatment on-site twice weekly and a non-governmental organization that offers free HCV testing.

The medical directors also rated the extent of their program's HCV services. Three sites provide very extensive integrated RNA assay testing and treatment. Two additional programs also integrate HCV testing extensively but differ in their methods of treatment: one utilizes co-located treatment and the other refers clients to an off-site primary care provider or specialist. Both testing and treatment are co-located at two OTPs, but the sites differ in how frequently the services are offered. One tests and treats very extensively and the other only tests occasionally and treats even less often. Another program with co-located rapid testing very frequently tests clients and then refers to a laboratory for confirmatory RNA assay tests followed by a primary care physician for treatment.

3.4 Barriers to OTP and HCV Integration

A variety of factors were reported to hinder the availability and amount of HCV testing and treatment. Client-related barriers include needle phobias and hard-to-access blood vessels, making phlebotomy difficult. Other problems are laboratory-related, such as limits on the number of butterfly needles and timing requirements for sample submission. Thirdly, respondents indicated that adequate staffing is not always available to support the time and effort required to provide additional medical services.

3.5 Program Reimbursement for HCV Clinical Services

Sixteen administrators responded to questions about Apple Health reimbursement levels for HCV clinical services (Table 3). The most frequent responses to this set of questions were "Not Offered" or "Do Not Know." Fifteen of the sixteen respondents reported that rapid HCV screening and HCV RNA testing are not offered (62.5%), or reimbursement amounts are unknown (31.3%). The single remaining program receives no reimbursement for HCV testing. Nine (56.3%) programs operate without provider visits for HCV care, and of the three programs that have visits available, two (12.5%) are at least satisfactorily reimbursed and one (6.3%) does not receive funding. One program (6.3%) offers HCV medication despite a lack of insurance coverage, 12 (75.0%) do not prescribe antivirals for clients, and three respondents were not sure (18.8%).

Table 3 Apple Health Reimbursement Levels for Hepatitis C Clinical and Behavioral Services Reported by Program Administrators (n = 16 administrators representing 16 programs)

	Level of Apple Health Reimbursement for the Service				Not Offering the Service or Not Sure	
HCV Clinical Service	None n (%)	Very Poor or Poor n (%)	Satisfactory or Good n (%)	Excellent n (%)	Do Not Know n (%)	Not offered n (%)
Hepatitis A Immunization	1 (6.3)	0 (0.0)	1 (6.3)	0 (0.0)	3 (18.8)	11 (68.8)
Hepatitis B Immunization	1 (6.3)	0 (0.0)	1 (6.3)	0 (0.0)	3 (18.8)	11 (68.8)
Hepatitis C Rapid Screen	1 (6.3)	0 (0.0)	0 (0.0)	0 (0.0)	5 (31.3)	10 (62.5)
Hepatitis C RNA Test	1 (6.3)	0 (0.0)	0 (0.0)	0 (0.0)	5 (31.3)	10 (62.5)
Provider Visit for Hepatitis C Care	1 (6.3)	0 (0.0)	2 (12.5)	0 (0.0)	4 (25.0)	9 (56.3)
Hepatitis C Medication	1 (6.3)	0 (0.0)	0 (0.0)	0 (0.0)	3 (18.8)	12 (75.0)
Directly Observed Medication Therapy	2 (12.5)	1(6.3)	0 (0.0)	1(6.3)	4 (25.0)	8 (50.0)
Hepatitis C Education	1 (6.3)	0 (0.0)	4 (25.0)	0 (0.0)	4 (25.0)	7 (43.8)
Care Management	4 (25.0)	0 (0.0)	3 (18.8)	1 (6.3)	3 (18.8)	5 (31.3)
Peer Support	2 (12.5)	0 (0.0)	2 (12.5)	1 (6.3)	4 (25.0)	7 (43.8)

Administrators' responses included information about Apple Health reimbursement levels for HCV behavioral health services. Twenty-five percent of programs receive at least satisfactory reimbursement for education, one (6.3%) provides information but is not funded, and the remaining 11 (68.8%) either do

not offer the service or do not know. Ratings of case management reimbursement vary widely across programs, with 25.0% of programs receiving no reimbursement, 18.8% receiving satisfactory or good reimbursement levels, and one program (6.3%) reporting excellent reimbursement. Six programs incorporate peer support, with three (18.8%) satisfactorily reimbursed and two (12.5%) receiving no funds.

The administrators' survey included questions about the extent that cost limits the program's ability to provide HCV services. Participants from programs receiving specialized streams of federal funding reported that cost is not a barrier to any aspects of HCV care. On the other hand, a public health program accepting Apple Health reports reimbursement rates as a barrier to providing HCV testing, medical management, and antiviral medication. Two non-governmental programs reported cost as a limiting factor for employing an on-site HCV provider, supplying antiviral medication, and utilizing care management to improve outcomes.

As a strategy to receive full reimbursement for all medical services provided, OTPs are encouraged by the Washington Healthcare Authority to document all client care accurately. Thus, participants (both medical directors and administrators) were asked about the barriers they experience to supplying precise clinical documentation. The most common response from medical directors was unfamiliarity with payer guidelines (50.0%), followed by electronic health system barriers (37.5%), lack of supportive personnel (25.0%) and lack of knowledge regarding the effect documentation factors have on reimbursement (25.0%). Asked the same question, administrators selected lack of time (25.0%), personnel (18.8%) and standard procedures (18.8%) the most frequently. Three participants provided additional barriers: "lack of coordination of implementation of services," "lack of corporate policy and procedure," and "keeping in contact with patients when they have limited access to communication, completing necessary pre-treatment and follow-up screening labs."

3.6 Familiarity with HCV-Related Policies and Guidelines

Eight medical directors and eleven administrators each self-rated their awareness of specific HCV-related policies and guidelines (Table 4, following page) and then shared their interests in future education on the topics. Generally, medical directors reported higher awareness (median range 4.0-5.0) than administrators (median range 1.0-4.0) across all topics. Seventy-five percent of medical directors were not interested in future educational opportunities on these policies and guidelines.

Table 4 Self-Rated Familiarity with HCV Policies and Guidelines among Washington State Opioid Treatment Program Medical Directors and Administrator

HCV Policies and Guidelines	Current Level of Awareness*	
	Medical Directors n = 8 Median (IQR)	Administrators n = 11 Median (IQR)
2020 US Preventative Service Task Force's screening guidelines a. Person's at high risk for HCV infection b. 1-time HCV screening for all adults from 18-79 years	4.5 (4.0 - 5.0)	2.0 (1.0 - 4.0)
2015 CDC guidelines recommending HCV treatment for all	5.0 (4.3 – 5.0)	2.0 (1.0 - 4.0)
Recent advances in treatment can now cure hepatitis C in almost all people living with the virus in as little as 8-12 weeks	5.0 (5.0 – 5.0)	4.0 (2.0 - 5.0)
2018 Governor Inslee directive to eliminate HCV by 2030	4.5 (2.5 - 5.0)	2.0 (1.0 - 4.0)
Hepatitis C Free Washington Initiative's recommendation that HCV services be provided in locations that serve people using injection drugs	4.0 (4.0 - 4.8)	3.0 (1.0 - 5.0)
The HCA's policy change that no longer requires prior authorization for the antiviral medication, Mavyret	4.5 (3.3 - 5.0)	2.0 (1.0 - 5.0)
HCA's policy that any provider licensed to prescribe antiviral treatments is permitted to screen and treat Apple Health members	4.0 (1.5 - 4.8)	1.0 (1.0 - 4.0)

*Self-Rating is based on the following scale:
1 - Not at all aware 2 - Slightly aware 3 - Somewhat aware 4 - Moderately aware 5 - Extremely aware

Administrator awareness was lowest for HCA's policy that any provider licensed to prescribe antiviral treatments is permitted to screen and treat Apple Health members (median 1.0, IQR: 1.0-4.0). Guidelines including 2020 screening guidelines and 2015 treatment guidelines recommending HCV treatment for all scored lower (median 2.0, IQR 1.0-4.0). Administrators also were less familiar with the Washington State directive to eliminate HCV by 2030 (median 2.0, IQR: 1.0-4.0) and changes to HCA prior authorization policies for Mavyret (median 2.0, IQR: 1.0-4.0). The administrators are interested in learning more about the policies and guidelines. The three subjects of the highest interest are CDC HCV Treatment Guidelines (63.6%), Healthcare Authority HCV-related policies (54.5%), and the Hep C Free Washington Initiative. When asked about the preferred modality of delivery, 63.6% of administrators prefer a webinar format.

3.7 Comfort Discussing HCV Topics with Staff

Respondents self-rated their comfort level discussing various HCV topics with their staff. Medical directors reported high confidence across all prevention, testing, and treatment topics (median range 4.0-5.0).

Insurance coverage received a single lower rating (4.0 IQR: 4.0-5.0), though the topic was still rated "somewhat comfortable."

Administrators reported slightly lower ratings than medical directors (median range 3.0-5.0), with the lowest responses being related to HCV treatment. HCV treatment efficacy and side effects of HCV treatment both ranked "neutral." Like medical directors, administrators rated themselves as "very comfortable" talking about issues of HCV prevention, testing, and health consequences (all medians 5.0).

Table 5 Comfort-Level Discussing Hepatitis C with Staff among Washington State Opioid Treatment Program Medical Directors and Administrators

	Comfort Level Discussing with OTP Staff*	
Hepatitis C Topics	Medical Directors n = 8 Median (IQR)	Administrators n = 11 Median (IQR)
Hepatitis C prevention, including re-infection	5.0 (5.0 - 5.0)	5.0 (4.0 - 5.0)
Hepatitis C testing	5.0 (5.0 - 5.0)	5.0 (4.0 - 5.0)
Health consequences of hepatitis C	5.0 (5.0 - 5.0)	5.0 (3.0 - 5.0)
Hepatitis C treatment candidacy	5.0 (4.0 - 5.0)	4.0 (3.0 - 5.0)
Hepatitis C treatment efficacy	5.0 (5.0 - 5.0)	3.0 (4.0 - 5.0)
Insurance coverage of hepatitis C treatment	4.0 (4.0 - 5.0)	4.0 (1.0 - 5.0)
Side effects of hepatitis C treatment	5.0 (3.5 - 5.0)	3.0 (1.0 - 5.0)
Importance of adherence to treatment	5.0 (1.8 - 5.0)	4.0 (3.0 - 5.0)
Medical monitoring while on treatment	5.0 (2.8 - 5.0)	4.0 (3.0 - 5.0)
Use of alcohol during treatment	4.5 (4.0 - 5.0)	4.0 (4.0 - 5.0)
Use of drugs during treatment	4.5 (4.0 - 5.0)	5.0 (4.0 - 5.0)

*Self-rating is based on the following scale:
1 - Very uncomfortable 2 - Somewhat uncomfortable 3 - Neutral 4 - Somewhat comfortable 5 - Very Comfortable

3.8 Interest in Future Staff HCV Education Topics

Respondents also indicated their interests in future HCV educational opportunities for OTP staff (Table 6, following page). Medical directors reported low to moderate interest in having staff learn more, with the highest interest in rapid screening and care reimbursement. Three of the eight (37.5%) indicated that no further education related to HCV was necessary. Administrators most frequently requested continuing staff education on HCV treatment (81.8%) and rapid screening (72.7%).

Table 6 Interest in Obtaining Additional Information about HCV Topics for OTP Staff among Washington State Opioid Treatment Program Medical Directors and Administrators

	Interested in Education On this Subject for OTP Staff	
Topics	Medical Directors n = 8 no. (%)	Administrators n = 11 no. (%)
Rapid screening	3 (37.5)	8 (72.7)
Diagnostic testing	1 (12.5)	4 (36.4)
Prevention	0 (0.0)	4 (36.4)
Treatment	1 (12.5)	9 (81.8)
Long-term health risks	1 (12.5)	4 (36.4)
Care reimbursement	3 (37.5)	4 (36.4)
Local HCV resources	0 (0.0)	4 (36.4)
No HCV education needed	3 (37.5)	2(18.2)

4. Discussion

The purpose of this study was to characterize Washington State OTPs, determine the availability of their on-site infectious disease testing and treatment, and understand directors' and administrators' awareness of and comfort in discussing HCV care and guidelines. OTPs have made significant progress toward service expansion. More than half of medical directors report that their program is implementing the Hep C Free initiative's recommendation to offer on-site HCV care. Programs' HCV service delivery occurs via diverse methods, as the initiative allows for flexibility to accommodate differing OTP characteristics and models of care. It is unclear how widespread the progress is however, given the concentration in urban areas and the fact that only nine of the state's 28 OTP programs (32.1%) were represented in the medical directors' survey. A more complete sample is needed to better understand the availability of HCV care at substance use programs across all regions of Washington State.

Survey responses help identify ongoing constraints hindering further progress toward fully implementing the state HCV guidelines for OTPs. The obstacles cited by respondents are similar to those described previously in the literature.[8,10,12-14] At the organizational level, there is a reported need for corporate, standardized HCV procedures and adequate reimbursement for supplies and staff time.[13, 14] The detailed documentation required to support such reimbursement is limited by electronic medical record systems and providers' self-reported unfamiliarity with payer guidelines.[10,12] Respondents describe difficulty submitting laboratory samples quickly, performing phlebotomy, and having adequate supplies due to laboratory limits. Finally, at the individual level of care, needle phobias and clients' social determinants of health are limiting their acceptability and completion of HCV testing and treatment.[14, 15]

Medical directors self-report high levels of awareness and low interest in future education on HCV policies and guidelines. This finding may indicate that awareness has increased since an unpublished study of Washington State-licensed opioid use disorder (OUD) medical providers was completed in 2018. The previous study found that 84% had heard of direct-acting antivirals, 58% knew that primary care providers in Washington could prescribe direct-acting antivirals, and 52% knew that treatment is recommended regardless of risk behavior.[3] The one topic area where there may be a need for additional training is the Healthcare Authority's policies regarding which providers are permitted to evaluate and treat HCV and the changes to pre-authorization requirements for antiviral medication.

The administrators' self-ratings of awareness were lower, with a higher interest in ongoing HCV-related education. Similar to the medical directors, the administrators indicated they have low awareness of the Healthcare Authority's policies and would like to know more. The difference between the two groups' awareness may be explained by the professionals' specialized knowledge pertinent to their specific role within the OTP. Future cross-training between the two groups may facilitate information-sharing, enhancing inter-agency collaboration and coordination.

Altogether, these findings suggest specific ways the DOH can support OTPs in expanding access to HCV services and progress toward integration. One need is outreach to smaller or more rural sites that may have not been represented in the survey. Second, as integration can be seen as a spectrum of fully integrated care, somewhat integrated care, co-located but separate care, to referral only, DOH may be able to offer technical support for incremental gains or gradual shifts tailored to particular settings. As reimbursement challenges were frequently mentioned, short online tutorials or email policy updates may further assist programs in addressing barriers.

5. Strengths and Limitations

This study had several limitations. The joint survey development with DOH partners and inclusion of medical directors and program administrators ensured a variety of perspectives were reported. The primary limitation was the small sample size and the high proportion of incomplete responses. This could be attributed in part to unfamiliarity with some questions, particularly reimbursement. Second, the data reported in this study are based on self-report rather than objective counts of the number of patients tested and treated, which could invite bias.

6. Conclusion

The Washington State DOH and OTPs have put forth great efforts to address the current HCV epidemic and meet the goals set forth by Healthy People and the Hep C Free Initiative. Their contributions have led to substantial progress and their ongoing support is needed to maintain the momentum required to eliminate HCV. By partnering to provide site-specific support and remote educational opportunities, OTPs will be able to further statewide coverage of HCV screening and treatment for their highly important patient population. These efforts have the potential to ultimately reduce the total number of new and existing HCV infections and enable Washington State to become completely "Hep C Free."

7. References

1. Centers for Disease Control. Content source: Division of Viral Hepatitis, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Accessed July 11, 2020. https://www-cdc-gov.offcampus.lib.washington.edu/hepatitis/statistics/2016surveillance/commentary.htm
2. Washington State Department of Health. *Viral Hepatitis C in Washington State*. 2016. https://www.doh.wa.gov/Portals/1/Documents/Pubs/420-159-HCVEpiProfile.pdf
3. Washington State Department of Health. *Hep C Free Washington. Plan to Eliminate Hepatitis C in Washington State by 2030*. 2019.
4. Scott J FM, Baer A, Glick S, Barash E, Armstrong H, Kowdley K, Golden M, Millman A, Nelson N, Canary L, Messerschmidt M, Patel P, Ninburg M, Duchin J. . A Population-Based Intervention to Improve Care Cascades of Patients with Hepatitis C Virus Infection. *Hepatology Communications*. 2020;5(3)
5. Centers for Disease Control and Prevention. Managing HIV and hepatitis C outbreaks among people who inject drugs—A guide for state and local health departments. March 2018. Available at: https://www.cdc.gov/hiv/pdf/programresources/guidance/cluster-outbreak/cdchiv-hcv-pwid-guide.pdf. Accessed July 11, 2020.
6. Rosenberg ES, Rosenthal EM, Hall EW, et al. Prevalence of Hepatitis C Virus Infection in US States and the District of Columbia, 2013 to 2016. *JAMA Netw Open*. 12 2018;1(8):e186371. doi:10.1001/jamanetworkopen.2018.6371
7. National Academies of Sciences E, and Medicine. A *National Strategy for the Elimination of Hepatitis B and C: Phase Two Report.* Washington DC: National Academies Press; 2017.
8. Habchi J, Thomas A, Sprecht-Walsh S, et al. Optimizing Hepatitis C Virus (HCV) Treatment in a US Colocated HCV/Opioid Agonist Therapy Program. *Open Forum Infect Dis*. 2020;7(10)doi:10.1093/ofid/ofaa310
9. Treloar C, Rance J, Backmund M. Understanding barriers to hepatitis C virus care and stigmatization from a social perspective. *Clinical infectious diseases: an official publication of the Infectious Diseases Society of America*. 2013 Aug 2013;57 Suppl 2doi:10.1093/cid/cit263
10. Bornstein S. The Challenges of Behavioral Health Integration: The Persistence of the Mind–Body Problem. article-commentary. *https://doiorg/107326/M20-2887*. 2020-06-02 2020;doi:AIME202007210-M202887
11. Hochstatter K. Using database linkages to monitor the continuum of care for hepatitis C virus among syringe exchange clients: Experience from a pilot intervention. *International Journal of Drug Policy*. 2017;42:22-25.
12. Litwin A, Drolet M, Nwanko C. Perceived barriers related to testing, management, and treatment of HCV infection among physicians prescribing opioid agonist therapy: The C-SCOPE Study. J Viral Hepat. 2019 26(9): 1094-1104. *J Viral Hepat*. 2019;26(9):1094-1104.
13. Frimpong J. Missed opportunities for hepatitis C testing in opioid treatment programs. *Am J Public Health*. 2013;103(6):1028-30. doi:10.2105/AJPH.2012.301129
14. Orkis L, Carr M, Parker L, Waller K, Watkins S. *Assessment of Hepatitis C - Related Services in Pennsylvania Drug and Alcohol Facilities*. 2021.
15. Tsui J, Miller C, Scott J, et al. Hepatitis C continuum of care and utilization of healthcare and harm reduction services among persons who inject drugs in Seattle. *Drug Alcohol Depend*. 2019;195:114-120.