

The Max Clinic: A multi-agency collaborative approach to addressing the complex health and social needs of people living with HIV in Tacoma, WA

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Background

- The MAX Clinic is a multi-agency partnership between Community Health Care (HIV specialty care clinic), Tacoma-Pierce County Health Department (local public health agency), and the Pierce County Aids Foundation (AIDS service organization)
- Exists to address the complex medical and social needs of people living with HIV who are not currently engaged in HIV care in a traditional clinic setting because:
 - One in three people living with HIV (35 %*) are not receiving HIV care
 - 80 % of new HIV infections are transmitted by people who are not aware they have HIV or are not actively engaged in any HIV care (from [CDC Webpage: Status of HIV in the U.S.](#))
- Modeled after a high-resourced academic institution and tailored to respond to the needs of those residing in Pierce County

Methods/Analysis

- MAX Clinic Model
 - Walk-in access Monday through Friday 8am-5pm
 - MAXIMUM support through Medical Case Management, HIV Peer Navigation, Disease Investigation, Behavioral Health, MOUD, HIV specialty nurse and providers
 - Incentivized care including: transportation assistance, housing assistance, cell phones, in-clinic food and beverages, grocery cards for: lab draws, initial viral load suppression, continuous viral load suppression
 - Criteria for MAX entry: unsuppressed viral load, out of care in the last 12 months, major barrier to care including mental health diagnosis, substance use, homelessness, lacking insurance
- Analysis
 - Retrospective controlled study
 - Intervention population: 50 MAX clinic patients
 - Control populations: 50 RW clinic patients, 50 Seattle MAX clinic patients
 - Similar demographics to MAX
 - VL >200 copies/ml
 - Seen around the same times as MAX patients seen
 - Definitions:
 - Viral Suppression (≥ 1 VL <200 copies/ml)
 - Continuous viral suppression (≥ 2 consecutive VL <200, ≥ 60 days apart)
 - Retention in Care (≥ 2 visits ≥ 60 days apart)
 - Patient Centered Outcomes (themes learned from MAX and RW patients via interview/survey)

Analysis

Table 1: Demographic Characteristics of Tacoma Max Clinic and Ryan White Patients at Enrollment (enrolled 8/2021-6/2022)

Characteristic	Max (N=30) n (%)	Ryan White (N=70) n (%)	p-value ^a
Age (mean, SD)	42.2 (11.2)	43.8 (12.5)	0.559
Gender			
Male	21 (70.0)	47 (67.1)	0.951
Female	8 (26.7)	20 (28.6)	
Transgender	1 (3.3)	3 (4.3)	
Race/Ethnicity			
NH Asian	1 (3.3)	1 (1.4)	0.268
NH Black / African American	7 (23.3)	21 (30.0)	
NH Multirace	1 (3.3)	3 (4.3)	
NH Pacific Islander	0 (0.0)	1 (1.4)	
NH White	19 (63.3)	27 (38.6)	
Hispanic/Latinx	0 (0)	3 (4.3)	
Other/Multiple/Unknown ^a	2 (6.7)	14 (20.0)	
Housing Status			
Not Unstably Housing	15 (51.7)	69 (98.6)	<0.001
Unstably Housed	14 (48.3)	1 (1.4)	
Substance Use ^b			
Methamphetamine	23 (76.7)	12 (17.1)	<0.001
Heroin	3 (10.0)	1 (1.4)	0.045
Opioid Pills	3 (10.0)	1 (1.43)	0.045
Alcohol	6 (20.0)	4 (5.7)	0.029
Cocaine	1 (3.3)	2 (2.9)	0.898
None	3 (10.)	49 (70.0)	<0.001
Psychiatric diagnoses ^b			
Depression	20 (66.7)	18 (25.7)	<0.001
Bipolar/related disorders			
Anxiety	6 (20.0)	17 (24.3)	0.641
PTSD	4 (13.3)	4 (5.7)	0.198
Schizophrenia/Other Psychotic Disorders	3 (10.0)	0 (0)	0.007
ADHD/ADD	2 (6.7)	4 (5.7)	0.854
Personality disorder	1 (3.3)	0 (0.0)	0.125
Other ^c	0 (0)	4 (5.7)	0.181
None	8 (26.7)	38 (54.3)	0.011

^a P-values calculated using chi square tests for categorical variables and t-tests for continuous variables.

^a Includes those missing race, ethnicity, or both.

^b Not mutually exclusive: patients may be in multiple categories.

^c Includes other diagnoses such as insomnia and memory loss

Table 2: Viral Suppression Among Tacoma Max Clinic and Ryan White Patients (8/2021-6/2022)

Viral Suppression >=once in 6 mo.			Time to viral suppression (days) ^a						
Max (N=30)	Ryan White (N=70)		Max (N=30)			Ryan White (N=70)			
N (%)	N (%)	p ^b	Mean (SD)	Median	IQR	Mean (SD)	Median	IQR	p ^c
23 (76.7)	57 (81.4)	0.585	78.7 (35.0)	60	60-90	66.6 (39.4)	60	30-90	0.201

^a Number of days from enrollment date to collection date of first lab that indicated viral suppression.

^b Calculated using chi-square tests

^c Calculated using t-tests comparing means.

Table 3: Engagement in Care Among Tacoma Max Clinic and Ryan White Patients (8/2021-6/2022)

Max (N=30)	Ryan White (N=70)	
Attended at least 2 Visits w/in 6 mo. of Enrollment		
N (%)	N (%)	p-value ^a
26 (86.7)	63 (90.0)	0.625

^a Calculated using chi-square test

Analysis Continued

Table 4: Demographic Characteristics of Tacoma Max Clinic and Seattle Max Clinic Patients at Enrollment (enrolled through 1/2022)

Characteristic	Tacoma Max ^a (N=30) n (%)	Seattle Max ^a (N=292) n (%)
Age (mean, SD)	42.2 (11.2)	40.4 (10.0)
Gender		
Male	21 (70.0)	215 (73.6)
Female	8 (26.7)	63 (21.6)
Transgender	1 (3.3)	10 (3.4)
Nonbinary	--	3 (1.0)
Other	--	1 (0.3)
Race/Ethnicity		
NH American Indian/Alaskan Native	--	17 (5.8)
NH Asian	1 (3.3)	7 (2.4)
NH Black / African American	7 (23.3)	76 (26.0)
NH Multirace	1 (3.3)	10 (3.4)
NH Pacific Islander	0 (0.0)	4 (1.4)
NH White	19 (63.3)	160 (51.4)
Hispanic/Latinx	0 (0)	26 (8.8)
Other/Multiple/Unknown ^b	2 (6.7)	3 (1.0)
Housing Status		
Not Unstably Housing	15 (51.7)	93 (31.9)
Unstably Housed	14 (48.3)	199 (68.1)
Substance Use ^c		
Methamphetamine	23 (76.7)	178 (61.0)
Heroin	3 (10.0)	76 (26.0)
Opioid Pills	3 (10.0)	0 (0)
Alcohol	6 (20.0)	43 (14.7)
Cocaine	1 (3.3)	46 (15.8)
None	3 (10.)	40 (13.7)
Psychiatric diagnoses ^c		
Depression	20 (66.7)	151 (51.7)
Bipolar/related disorders		49 (16.8)
Anxiety	6 (20.0)	15 (5.1)
PTSD	4 (13.3)	46 (15.8)
Schizophrenia/Other Psychotic Disorders	3 (10.0)	55 (18.8)
ADHD/ADD	2 (6.7)	13 (4.5)
Personality disorder	1 (3.3)	13 (4.5)
Other ^c	0 (0)	15 (5.1)
None	8 (26.7)	12 (4.1)

* P-values calculated using chi square tests for categorical variables and t-tests for continuous variables.
^a Tacoma Max clinic patients were enrolled from 8/2021-1/2022, whereas Seattle Max clinic group includes everyone enrolled in the Seattle Max clinic through 1/2022.
^b Includes those missing race, ethnicity, or both.
^c Not mutually exclusive: patients may be in multiple categories.
^d Includes other diagnoses such as trauma and stressor related disorders, eating disorders, insomnia, memory loss, etc.

Table 5: Viral Suppression Among Tacoma Max Clinic and Seattle Max Patients (through 6/2022)

Viral Suppression >=once in 6 mo.		Time to viral suppression (days) ^b					
Tacoma Max (N=30)	Seattle Max (N=292)	Tacoma Max (N=30)			Seattle Max (N=292)		
N (%)	N (%)	Mean (SD)	Median	IQR	Mean (SD)	Median	IQR
23 (76.7)	182 (62.3)	78.7 (35.0)	60	60-90	52.4 (48.5)	45	4-75

^a Tacoma Max clinic patients were enrolled from 8/2021-1/2022, whereas Seattle Max clinic group includes everyone enrolled in the Seattle Max clinic through 1/2022. All patients were followed up to six months through 6/2022. Fourteen Seattle Max patients enrolled but did not have any visits within 6 months of enrollment.

^b Number of days from enrollment date to collection date of first lab that indicates viral suppression.

Table 6: Engagement in Care Among Tacoma Max Clinic and Seattle Max Clinic Patients (through 6/2022)

Tacoma Max (N=30)	Seattle Max (N=292)
Attended at least 2 Visits w/in 6 mo. of Enrollment	
N (%)	N (%)
26 (86.7)	230 (82.7)

^a Tacoma Max clinic patients were enrolled from 8/2021-1/2022, whereas Seattle Max clinic group includes everyone enrolled in the Seattle Max clinic through 1/2022. All patients were followed up to six months through 6/2022. Fourteen Seattle Max patients enrolled but did not have any visits within 6 months of enrollment.

Qualitative Discussion

- Survey and patient interviews conducted in RW patients and MAX patients at baseline and at 6 months (12-month data will be available in 2023)
- Patients were asked questions such as:
 - What prevented you from getting into medical care?
 - What things about the medical system make it difficult for you to come in?
 - Can you think of a time that you faced discrimination or difficulty while in the medical system?
 - How does the medical care you receive affect your health?
 - What does being healthy look like to you?

RW Patient Themes	MAX Patient Themes
Reports positive patient-provider experience	Reports positive patient-provider experience
Reports needed improvements in lobby wait-times and front desk logistics	Reports receiving better access to mental health care
Reports receiving adequate access to medical care	Reports transportation and “self” as biggest barrier to accessing care
Reports improved wellbeing and accomplishment of healthcare goals	Reports maintaining sobriety and achieving improved life outcomes
Reports familiarity with 3 or more services offered	Reports familiarity with 3 or more services offered

Summary/Limitations/ Conclusions/Implications

- **SUMMARY**

- MAX patients tend to have more barriers to care than RW patients
- Despite the difference in models of care, use of multi-disciplinary, high intensity HIV services improves the care continuum on all points. Though not yet measured this can contribute to treatment as prevention as higher risk people living with HIV are virally suppressed
- Patient report favored the highly specialized, personal, multi-disciplinary support offered through the MAX Clinic model

- **LIMITATIONS**

- Study period delayed and extended because of the COVID-19 pandemic
- Modification of interview and survey from in person to a hybrid of in person and phone interviews, helped facilitate data collection despite COVID-19 limitations
- Staffing issues/remote work impacted this study, due to the COVID-19 pandemic

- **CONCLUSIONS/IMPLICATIONS**

- The MAX Clinic model is effective in linking, retaining and virally suppressing high risk people living with HIV (PLWH) and can be replicated in other parts of the US
- The low barrier high intensity clinic model successfully demonstrated in an academic center in Seattle translated similarly to positive outcomes within a federally qualified health center in Tacoma, WA
- Stabilized MAX Clinic patients can graduate and receive continuous medical care and case management services through the bridged partnership with our RW clinic
- Effective partnerships and collaboration are integral to this work. A coordinated network of support from other service providers is key
- Understanding the patient experience helps incorporate clinical quality improvement into the health care delivery model
- Multidisciplinary approaches to clinical care that involve case management, field investigation, and comprehensive medical services could make an important impact on national initiatives such as the National HIV/AIDS Strategy