Viral Suppression Trajectories among High-Need Patients in Low-Barrier HIV Care

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BACKGROUND

- Our objective was to characterize viremia trajectories among persons enrolled in a low-barrier HIV clinic.

Ending the HIV epidemic in America will require intensive efforts to sustain viral suppression among persons with HIV (PWH) who have complex barriers to care. We previously showed that a low-barrier clinic offering walk-in access to primary HIV care and incentives for care engagement and viral suppression (the Max Clinic) increased viral suppression among high-need PWH. Here we examine viremia trajectories among Max Clinic patients.

METHODS

Population

Patients with ≥180 days of observation time after enrollment in the Max clinic during Dec 2014 - Jan 2019, starting on the date of enrollment and ending at the time of death, relocation out of King County, or July 31, 2019.

Data Sources

- Demographics - administrative clinic database
- Housing, substance use, injection drug use, psychiatric diagnoses and incarceration – chart note review
- Viral load results – electronic health record

Analysis

Patients categorized into groups defined *a priori* based on knowledge of common viremia trajectories:

1. *Early consistent suppression*: First viral load (VL)<200 copies/mL ≤6 mo after enrollment; all subsequent VL<200
2. *Late consistent suppression:* First VL<200 >6 mo after enrollment; all subsequent VL<200
3. *Transient/intermittent suppression:* ≥1 VL<200, subsequent VL>200
4. *No suppression:* No VL<200.

Characteristics of patients in each group compared with χ^2 tests for categorical variables and Kruskal-Wallis one-way ANOVA for continuous variables.

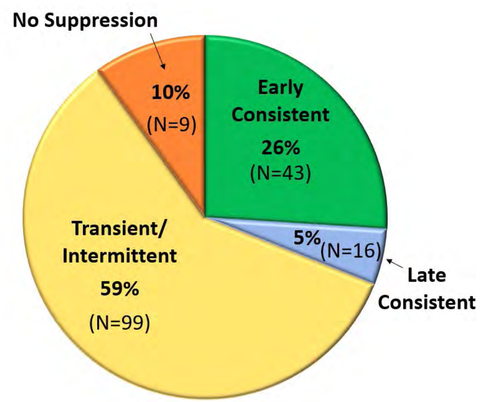
90% of patients in a low-barrier HIV clinic reach viral suppression even in the context of unstable housing, substance use, and mental illness, but most (59%) continue to have periods of viremia

RESULTS

- Of 167 patients, 69% were homeless/unstably housed, 54% used methamphetamine, 51 % injected drugs and 32% had diagnosed psychosis, bipolar or personality disorder at the time of enrollment.
- The median time from the first suppressed VL to subsequent unsuppressed VL was 4 (IQR 2-10) mo.

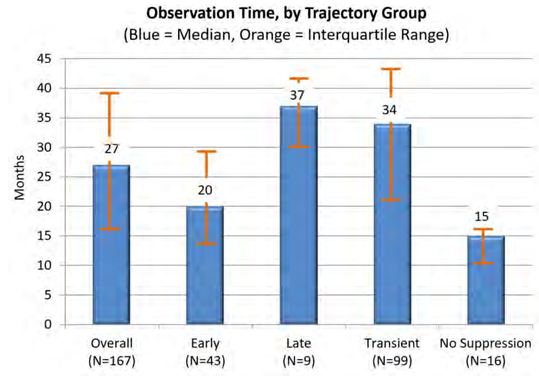
		N (%)
Gender	Cisgender male	115 (69)
	Cisgender female	43 (26)
	Transgender/Genderqueer/Non-Binary	9 (5)
Race	White	88 (53)
	Black	53 (32)
	American Indian/Alaska Native	9 (5)
	Asian/Pacific Islander	8 (5)
	Multiple	9 (6)
Ethnicity	Hispanic	11 (6)
	Not Hispanic	156 (94)
Housing[1]	Homeless	91 (55)
	Unstable/Transitional housing	23 (14)
	Stable housing	53 (32)
Substance use[2]	Methamphetamine	91 (54)
	Heroin	56 (33)
	Cocaine, crack-cocaine	34 (20)
	Hazardous alcohol	37 (22)
	None of the above	33 (14)
Injection drug use[2]		85 (51)
Psychiatric diagnoses[1]	Psychosis, bipolar or personality disorder	53 (32)
	Depression or anxiety disorder	79 (47)
	None of the above	
Incarceration history		104 (62)

[1]At the time of enrollment
[2]In the past year, at the time of enrollment. Patients who reported using multiple substances are represented in >1 category



RESULTS, cont.

- The groups did not differ significantly by gender, race, ethnicity, housing status, substance use or depression/anxiety disorder diagnoses (ancillary table).
- Patients in the no suppression and late suppression groups were less likely to have psychosis, bipolar or personality disorder (6%, 11%) than those in the early consistent (39%) and transient (35%) groups (p=0.04).
- Observation time differed significantly by group (p<0.05).



KEY LIMITATION

- Data on housing, substance use, psychiatric diagnoses and incarceration were ascertained through medical records review, which likely underestimated prevalence.

CONCLUSIONS

- The vast majority of patients in the low-barrier clinic reach viral suppression despite complex barriers, but most are intermittently unsuppressed.
- Even with high-intensity support, most patients in low-barrier HIV care continue to have periods of viremia.
- Sustaining viral suppression among PWH in low-barrier care will likely require long-acting injectable antiretroviral therapy and other innovative HIV treatments.
- Expansion of low-barrier HIV care remains a priority for *Ending the HIV Epidemic* efforts in King County.

ADDITIONAL KEY INFORMATION

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