Unmet Service Needs Associated with Unsuppressed Viral Load among Transgender Women, Cisgender Men and Women in Los Angeles County

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Background

- Transgender women (TGW) experience disproportionately higher prevalence and incidence of HIV compared to cisgender men (CGM) and women (CGW).

- Data on characteristics, risk factors and, particularly, on medical and support service needs of TGW living with HIV are limited due to small samples and non-representative, convenience sampling designs.

- Assessment data for HIV-positive patients enrolled in Ryan White Medical Care Coordination (MCC) services in Los Angeles County (LAC) from 2013-2019 was evaluated

  – To describe the association between unmet support service needs among MCC program clients and unsuppressed viral load by gender and

  – To tailor interventions, which may help reaching the goals of *Ending the HIV Epidemic* national initiative.

Overview of Medical Care Coordination (MCC)

- An integrated model to provide medical and psychosocial support services to patients identified as being at risk for poor health outcomes at 35 Ryan White-funded HIV medical homes in LAC

- Comprehensive assessment completed at enrollment was used to identify unmet service needs in 11 domains associated with poor engagement in care and ART adherence and calculate acuity level

- In previous analysis, TGW reported significantly higher unmet service needs in medical access, housing, substance addiction, sexual risk, mental health, financial, and social support domains compared to CGM or CGW.

11 DOMAINS
- ❖ Health Status
- ❖ ART Adherence
- ❖ Medical Access
- ❖ Sexual Risk
- ❖ Substance Use
- ❖ Mental Health
- ❖ Housing
- ❖ Quality of Life
- ❖ Financial
- ❖ Social Support
- ❖ Legal Needs

Methods

- Secondary analysis using a cross-sectional study design

- Matched MCC programmatic data from 2013-2019 to LAC HIV Surveillance data to get viral load, CD4 and resistance test results to estimate HIV care outcomes prior to enrollment

  - Not Retained in Care (RiC): < 2 CD4, viral load (VL) or resistance tests or ≥2 test but < 90 days apart in the past 12m

  - Unsuppressed Viral Load (UVL): Most recent VL ≥200 copies/mL in past 6m (missing=failure)

- Used gender-specific multivariable GEE regression models to examine association between unmet service needs and unsuppressed viral load (*proc genmod*)

- Final models were identified using bootstrapping method (high LR and Hosmer-Lemeshow fit statistics), changes in estimates

Sample Characteristics (n=9,173)

- **Socio-demographic:**
  - **Age[1]:** 48% age 40 years and older
  - **Race[1]:** 47% Latino, 28% African-American, 21% White, 4% Other
  - **Gender[1]:** 85% CGM, 12% cisgender female (CGW), 3% transgender
  - **Income and insurance[1]:** 72% at or below federal poverty level; 68% uninsured
  - **Homelessness[2]:** 25% homeless in the past 6m
  - **Incarceration[2]:** 25% ever incarcerated; 8% incarcerated in the past 6m
- **HIV History and Care:**
  - 24% currently not prescribed ART[1]
  - 43% not retained in care in the past 12m[2]
  - 56% virally unsuppressed in the past 6m[2]
- **Psychosocial[2]**
  - 20% symptoms of substance addiction disorder
  - 29% met criteria for depression (PHQ-9)
  - 27% met criteria for anxiety disorder (GAD-7)

[1]Provider reported; [2]patient self-report

Characteristics of TGW Compared to CGM and CGW

- Compared to CGM and CGW significantly higher proportions of TGW reported:

Characteristic	TGW (n=249)	CGM (n=7,816)	CGW (n=1108)
Latino/a	53%	47%	43%
Ever incarcerated	41%	24%	25%
Incarcerated ≤6M	16%	8%	6%
Ever interpersonal violence (IPV)	41%	24%	25%
Ongoing IPV	16%	8%	6%
Sex for Drugs/Money ≤6M	16%	5%	3%
Depressive symptoms	37%	30%	27%
Anxiety symptoms	36%	26%	25%
High/severe acuity level	41%	27%	24%

- No significant differences by gender in retention in care or viral suppression at enrollment

Unmet Needs Associated with of Unsuppressed VL by gender (Unadjusted)

Unmet Need Domains	TGW			CGM			CGW		
	OR	95% CI		OR	95% CI		OR	95% CI	
Health Status (ref="No")	3.7*	2.1	6.4	5.9*	5.3	6.5	8.8*	6.6	11.8
Adherence (ref="No")	13.6*	7.3	25.4	27.1*	23.9	30.6	44.9*	31.0	64.9
Medical Access (ref="No")	1.8*	1.1	2.9	2.0*	1.8	2.2	2.0*	1.6	2.6
Sexual Risk (ref="No")	1.6	0.9	2.6	1.6*	1.4	1.7	1.3	1.0	1.6
Substance/drug addiction (ref="No")	2.1*	1.1	4.0	1.3*	1.1	1.4	1.4	1.0	2.1
Mental Health (ref="No")	1.8	1.0	3.3	1.1	1.0	1.3	1.4*	1.1	2.0
Housing (ref="No")	1.2	0.7	2.3	0.9	0.8	1.0	1.2	0.8	1.6
Financial (ref="No")	1.3	0.8	2.2	1.2*	1.1	1.3	1.5*	1.1	1.9
Support (ref="No")	1.2	0.7	2.0	1.2*	1.1	1.4	1.1	0.9	1.5
Legal (ref="No")	0.9	0.5	1.6	0.8*	0.7	0.9	0.7	0.4	1.0
Quality (ref="No")	0.7	0.3	1.6	0.5*	0.4	0.6	0.6*	0.5	0.9

Unmet Needs Associated with of Unsuppressed VL of TGW (Adjusted)

TGW	OR	Lower 95% CI	Upper 95% CI
Age (ref = 30-49 years)			
29 years and younger	0.88	0.41	1.88
50 years and older	0.50	0.20	1.25
Race (ref = White)			
Latino(a)	1.73	0.50	6.08
Black	2.32	0.63	8.56
Other	2.60	0.39	17.22
Adherence to ART (ref = No need)	**15.43***	**7.78**	**30.59**
Legal (ref = No need)	0.60	0.28	1.30
Medical Access (ref = No need)	1.24	0.66	2.35
Sexual Risk (ref = No need)	**2.24***	**1.14**	**4.39**

Unmet Needs Associated with of Unsuppressed VL of CGM (Adjusted)

CGM	OR	Lower 95% CI	Upper 95% CI
Age (ref = 30-49 years)			
29 years and younger	**1.54***	**1.32**	**1.80**
50 years and older	**0.60***	**0.52**	**0.70**
Race (ref = White)			
Latino(a)	0.88	0.75	1.03
Black	**0.78***	**0.66**	**0.94**
Other	0.84	0.61	1.16
Adherence to ART (ref = No need)	**24.78***	**21.15**	**29.03**
Financial (ref = No need)	1.03	0.90	1.17
Health Status (ref = No need)	1.12	0.96	1.32
Legal (ref = No need)	**0.69***	**0.57**	**0.84**
Medical Access (ref = No need)	**1.26***	**1.11**	**1.42**
Sexual Risk (ref = No need)	**1.42***	**1.25**	**1.62**

Unmet Needs Associated with of Unsuppressed VL of CGW (Adjusted)

CGW	OR	Lower 95% CI	Upper 95% CI
Age (ref = 30-49 years)			
29 years and younger	1.27	0.75	2.15
50 years and older	**0.59***	**0.40**	**0.87**
Race (ref = White)			
Latino(a)	0.62	0.34	1.15
Black	0.78	0.43	1.42
Other	0.61	0.20	1.90
Adherence to ART (ref = No need)	**31.97***	**21.05**	**48.54**
Financial (ref = No need)	1.32	0.89	1.97
Health Status (ref = No need)	**2.20***	**1.43**	**3.36**
Legal (ref = No need)	**0.40***	**0.22**	**0.73**
Medical Access (ref = No need)	**1.55***	**1.07**	**2.24**
Mental Health (ref = No need)	1.55	0.97	2.46

Limitations

- Cross-sectional design, so can only describe associations and not infer causation

- Assessment data were self-reported and may be subject to bias

- Potential for misclassification of transgender identity

- TGM excluded from analysis due to extremely small numbers (>5)

- Sample included those targeted for services and may not be generalizable beyond MCC

- There could be other factors associated with unsuppressed VL that were not accounted for in the models

Conclusions

- Unmet needs in ART adherence domain is the main predictor of unsuppressed VL for all gender groups.
  - Among TGW unmet need for sexual risk services were also associated with unsuppressed VL.
  - Among CGM unmet need for sexual risk, medical access were associated with unsuppressed VL.
  - Among CGW unmet needs for health status, medical access were associated with unsuppressed VL.

- Informed improvements to MCC program, including provider training about importance of individualized services for clients of different gender groups.

- Tailored interventions may improve outcomes at the individual, provider/clinic and community levels, which will help reaching the *Ending the HIV Epidemic* national strategy goals.

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MCC Service Guidelines and Assessment available at: http://publichealth.lacounty.gov/dhsp/MCC.htm

Thank you