Poster # 1107

HIV Stigma Predicts Retention in Care Among US Patients in Care

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Background

HIV-related stigma is a known barrier to engagement in care. However, no large-scale, multi-site studies have prospectively evaluated the effect of stigma on retention in care for those currently in HIV care in the United States.

Methods

• The Centers for AIDS Research Network of Integrated Clinical Systems (CNICS) cohort integrates medical record and survey data from patients in primary care at 8 academic HIV clinics across the US. Sites administer tablet-based patient surveys every 4-6 months during primary care visits.

• We added a yearly, validated 4-item assessment of internalized HIV stigma (response scale 1=strongly disagree to 5=strongly agree, α=0.91) into patient surveys. We report the results of these assessments from 6 CNICS sites.

• We used multivariable logistic regression models to evaluate associations between mean stigma and two common prospective retention in care outcomes:

- keeping the next primary care appointment after stigma assessment
- keeping all scheduled primary care appointments in the 12 months following the stigma assessment

• We controlled for age, gender, race/ethnicity, sexual orientation, time since CNICS enrollment, and CNICS site. We checked for interactions between stigma and these covariates. We addressed missing covariate data under the missing at random assumption via direct maximum likelihood estimation using M*plus*.

Results

• From April 2016 to October 2017, 5,968 patients completed the stigma assessment.

• Median age was 49 years (IQR 39-56); 80% were male, 39% were Black, 15% were Latinx, and 32% identified as heterosexual. Median (IQR) time since CNICS enrollment was 6 (3-11) years.

• Mean stigma was 1.9 (SD 1.08). Each unit increase in mean stigma was associated with decreased odds of keeping the next primary care appointment (aOR=0.93, 95% CI 0.87-0.99, p 0.015), as well as decreased odds of keeping all primary care appointments (median of 3 appointments, IQR 2-5) in the subsequent year (aOR=0.91, 95% CI 0.86-0.96, p <0.001). In both models, younger age, black race, and non-cis gender identification were associated with suboptimal appointment attendance. There were no statistically significant interactions between stigma and covariates.

Results

Table 1. Sample characteristics (N=5968)

Characteristic, N (%)			Characteristic, N (%)	
Site			Current gender	
	UCSD	1715 (28.7)	Cis-male	4788 (80.2)
	UAB	1866 (31.3)	Cis-female	1018 (17.1)
	UW	646 (10.8)	Gender minority	162 (2.7)
	FENWAY	543 (9.1)	Race	
	JH	875 (14.7)	Black	2317 (39.1)
	UCSF	323 (5.4)	White	2435 (41.1)
Age			Latinx	907 (15.3)
	19-29 years	469 (7.9)	Other	267 (4.5)
	30-39 years	1090 (18.3)	Heterosexual orientation	1889 (32.2)
	40-49 years	1487 (24.9)	Current ART	5384 (92.8)
	50+ years	2922 (49.0)	Unsuppressed viral load (>200 copies/mL) †	707 (12.8)
CD4 * (median, IQR)		563 (365, 802)	Years in CNICS (median, IQR)	6.3 (2.8, 11.4)

Note: † VL closest to the stigma assessment from +/- 90 day window (N=5506). * CD4 closest to the stigma assessment from -180 days before to 90 days after stigma assessment (N=3440).

Figure 1: Distribution of Responses to Each Stigma Question. Q1-3: "HIV makes me…", Q4: "Having HIV…"

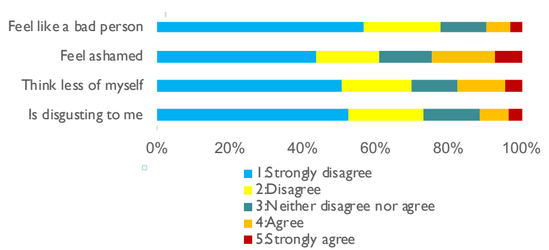
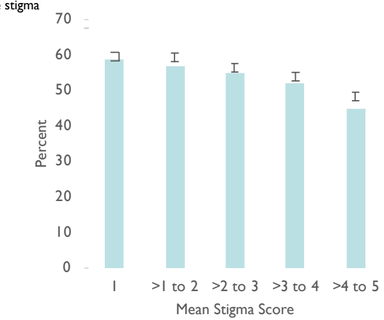


Figure 2: Kept Next Visit by Mean Stigma Score



95% Wald Confidence Intervals

Figure 3: Kept All Visits in Year Post Stigma by Mean Stigma Score



95% Wald Confidence Intervals

Results

Table 2: Unadjusted and Adjusted Odds Ratios for the Association between Stigma and Keeping Next Primary Care Appointment and Keeping All Primary Care Appointments in the Following Year

	First Primary Care Appointment				All Primary Care Appointments			
Characteristic	OR (95% CI)	p-value	aOR (95%CI)	p value	OR (95% CI)	p-value	aOR (95%CI)	p value
Mean Stigma	0.89 (0.84-0.95)	**<0.0001**	0.93 (0.87-0.99)	**0.015**	0.86 (0.82-0.91)	**<0.0001**	0.91 (0.86-0.96)	**<0.0001**
Age								
18-29	0.43 (0.35-0.54)	**<0.0001**	0.39 (0.31-0.51)	**<0.0001**	0.46 (0.38-0.57)	**<0.0001**	0.39 (0.31-0.50)	**<0.0001**
30-39	0.55 (0.46-0.65)	**<0.0001**	0.52 (0.43-0.63)	**<0.0001**	0.55 (0.47-0.63)	**<0.0001**	0.49 (0.42-0.58)	**<0.0001**
40-49	0.65 (0.55-0.76)	**<0.0001**	0.63 (0.54-0.74)	**<0.0001**	0.63 (0.55-0.71)	**<0.0001**	0.58 (0.51-0.67)	**<0.0001**
50+	Reference		Reference		Reference		Reference	
Race/Ethnicity								
Black	0.70 (0.61-0.81)	**<0.0001**	0.60 (0.50-0.72)	**<0.0001**	0.66 (0.59-0.75)	**<0.0001**	0.55 (0.48-0.65)	**<0.0001**
Latinx	0.66 (0.54-0.79)	**<0.0001**	0.85 (0.70-1.04)	**0.09**	0.58 (0.50-0.68)	**<0.0001**	0.88 (0.75-1.05)	0.13
Other	0.82 (0.59-1.14)	0.23	1.15 (0.82-1.61)	0.44	0.66 (0.51-0.85)	**0.002**	1.05 (0.80-1.39)	0.72
White	Reference		Reference		Reference		Reference	
Gender Identity								
Cis-female	0.95 (0.80-1.12)	0.52	0.97 (0.79-1.20)	0.8	0.86 (0.75-0.98)	**0.03**	0.99 (0.83-1.18)	0.89
Gender minority	0.60 (0.42-0.86)	**0.005**	0.72 (0.49-1.03)	**0.03**	0.55 (0.40-0.76)	**<0.0001**	0.64 (0.45-0.90)	**0.001**
Cis-male	Reference		Reference		Reference		Reference	
Sexual Identity								
Heterosexual	0.99 (0.87-1.14)	0.93	1.01 (0.83-1.22)	0.95	0.83 (0.74-0.93)	**0.001**	0.85 (0.73-1.00)	**0.03**
Sexual minority	Reference		Reference		Reference		Reference	
Years in CNICS	1.02 (1.007-1.03)	**0.001**	0.99 (0.98-1.01)	0.69	1.03 (1.02-1.04)	**<0.0001**	1.01 (1.00-1.02)	0.051

Conclusions

- Internalized HIV stigma had a modest statistically significant independent effect on the odds of subsequent appointment attendance.
- This study highlights the importance in identifying even small differences in internalized stigma. In addition, developing successful interventions to address internalized stigma in individuals living with HIV is critical to supporting retention in care and ultimately ending the HIV epidemic.

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