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Higher Levels of Internalized HIV Stigma at Clinic Intake Paradoxically Predict More Successful Linkage to Primary Care

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Conflict of Interest Disclosure

Dr. Christopoulos has been a scientific advisory board member for Roche and a community advisory board member for Gilead



Background

- HIV-related stigma is a barrier to engagement in care
- Research on stigma and care engagement in the U.S. has been limited by self-reported care outcomes, small sample sizes, and a lack of longitudinal data
- Real world assessments of stigma and the HIV care cascade are needed



Methods

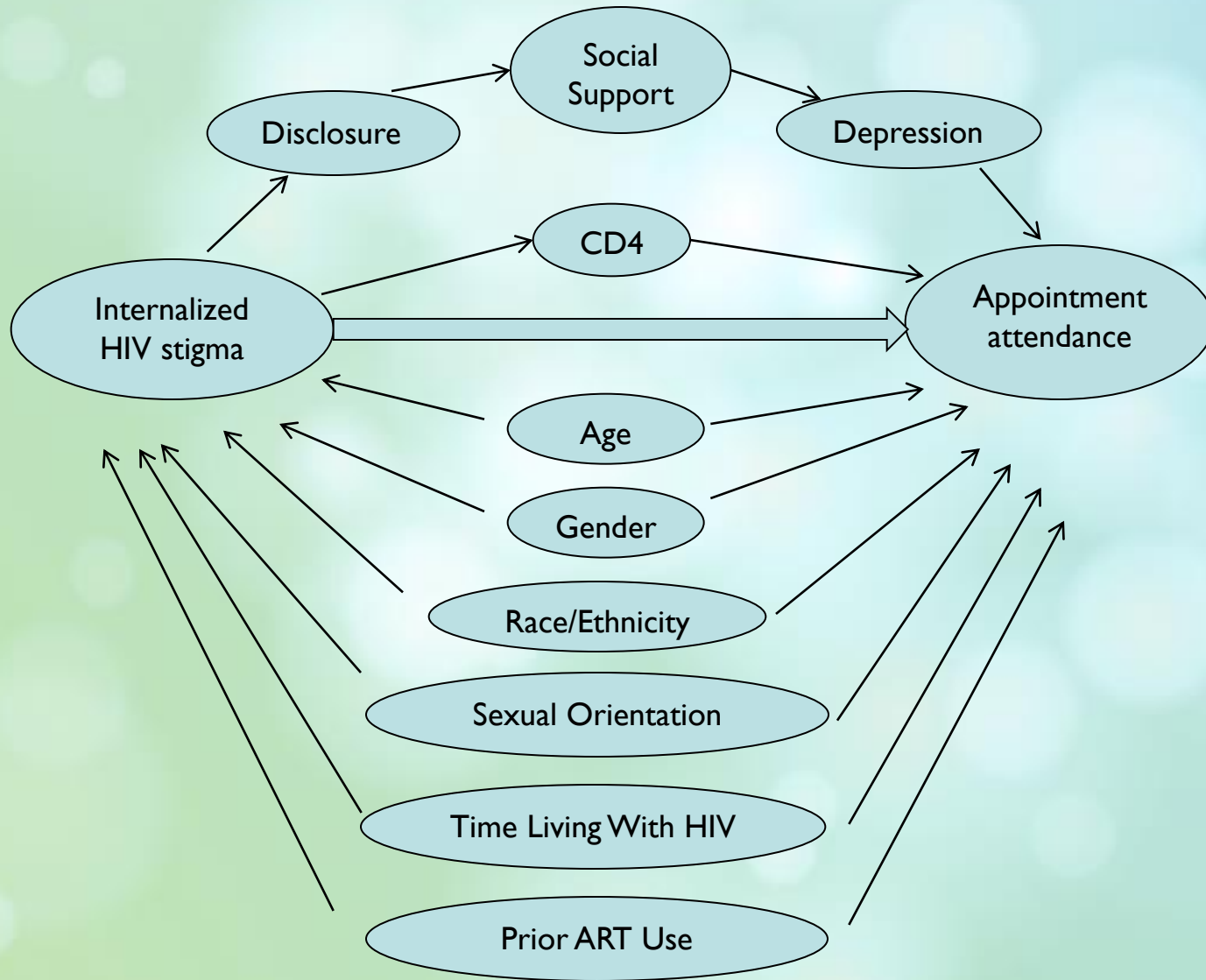
- Large safety-net HIV clinic in San Francisco
- New patients completing social work intake between February 2013 and December 2014
- Stigma assessed using the Internalized AIDS-Related Stigma Scale (IA-RSS)¹
- Multivariate logistic and linear regression used to examine the association between stigma and attendance at the first primary care visit and retention in the first year of clinic care

¹Kalichman et. al. *AIDS Care* 2009



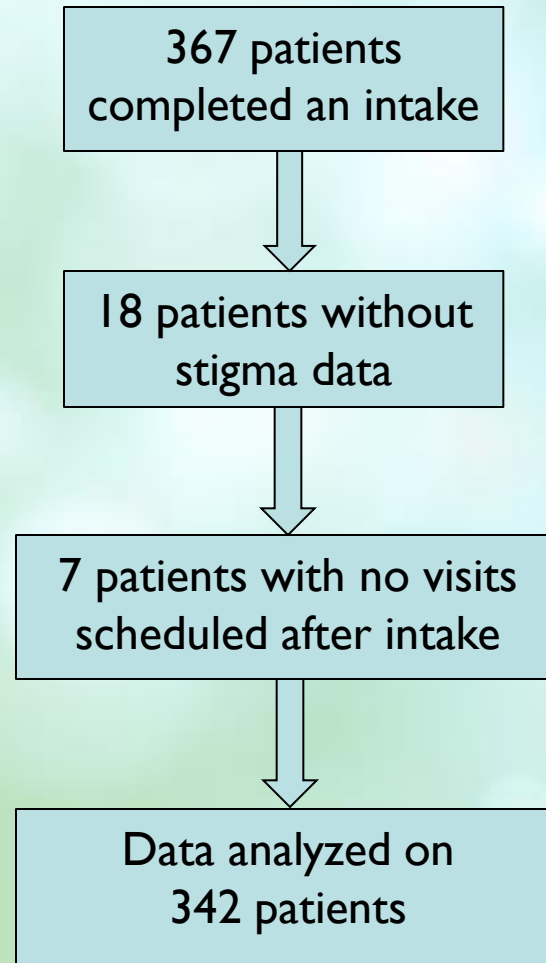
IA-RSS

- It is difficult to tell people about my HIV infection
- Being HIV positive makes me feel dirty
- I feel guilty that I am HIV positive
- I am ashamed that I am HIV positive
- I sometimes feel worthless because I am HIV positive
- I hide my HIV status from others





Results



Results

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Demographic and Clinical Characteristics	Total N	N (%)
Age, median	342	42.0 (IQR 32-50, range 20-73)
Proportion under 30 years of age	342	60 (18%)
Gender	342	
Male		314 (92)
Female		16 (5)
Transgender		12 (3)
Race/ethnicity	342	
White		160 (47)
Black		66 (19)
Latino		77 (23)
Other		39 (11)
Sexual orientation	341	
Gay		267 (78)
Bisexual		27 (8)
Heterosexual		47 (14)
Years living with HIV, median	333	8 (IQR 2-17, range 0-31)
Newly diagnosed (in past year)		62 (18)
Prior history of ART	341	272 (80)
CD4 cell count, median	319	494 (IQR 337-697, range 3-1675)
Detectable viral load	317	139 (44)



Results

Psychosocial Characteristics	N	
IA-RSS score, median	342	1.0 (IQR 0-3, range 0-6)
Endorses no stigma	342	144 (42%)
Moderate to severe depression (PHQ-9)	283	94 (33%)
Social support score (MOS-SS4), median	337	16 (IQR 9-21, range 4-24)

Linkage and Retention Measures	N	N (%)
Time to first scheduled appointment, median	342	21 days
Missed first appointment	342	75 (22)
Two appointments at least ninety days apart in year after intake	342	228 (67)
One appointment in each six month period after intake	342	186 (54)
Mean proportion of visits attended in first year (std)	342	0.66 (0.32)



Results

- Difficult to disclose HIV status = 42%
- Feel ashamed = 24%
- Feel dirty = 22%
- Feel guilty that have HIV = 22%
- Feel worthless = 18%
- Hide HIV status from others = 35%



Results

- Mean stigma scores significantly higher for
 - Blacks compared to whites ($p=0.005$)
 - Latinos compared to whites ($p=0.001$)
 - Newly diagnosed individuals ($p=0.002$)
- No significant differences with regard to youth under 30 ($p=0.10$), gender ($p=0.44$), and sexual orientation ($p=0.70$)



Unadjusted and Adjusted Odds Ratios for Missing the First Primary Care Appointment

	Unadjusted OR	Adjusted OR
Stigma, per unit increase	0.86 (0.73, 0.99)*	0.83 (0.70, 0.97)*
Age, per 10 year increase	0.69 (0.54, 0.88)**	0.59 (0.40, 0.84)**
Gender		
Male	--	--
Female	0.92 (0.23, 2.78)	0.64 (0.14, 2.48)
Transgender	1.30 (0.32, 4.23)	0.0 (0.11, 3.13)
Race/ethnicity		
White	--	--
Black	1.67 (0.88, 3.14)	1.55 (0.74, 3.18)
Latino	0.74 (0.36, 1.45)	0.70 (0.31, 1.48)
Other	0.69 (0.25, 1.63)	0.69 (0.25, 1.71)
Sexual orientation		
Homosexual	--	--
Bisexual	1.18 (0.43, 2.85)	1.21 (0.43, 3.12)
Heterosexual	1.69 (0.84, 3.31)	1.76 (0.70, 4.28)
Years living with HIV	0.98 (0.95, 1.01)	1.03 (0.98, 1.08)
Prior history of ART	0.42 (0.24, 0.76)**	0.44 (0.23, 0.86)*

N for adjusted analysis = 332

* p<0.05 ** p<0.01



Association of Stigma with Proportion of Kept Visits in First Year of Clinic Care		
	Unadjusted <i>B</i>	Adjusted <i>B</i>
Stigma (per unit increase)	1.87 (0.11, 3.62)*	2.15 (0.43, 3.88)*
Age (per 10 year increase)	4.97 (1.89, 8.05)**	7.73 (3.74, 11.71)***
Gender		
Male	--	--
Female	-5.38 (-21.40, 10.64)	12.33 (-4.81, 29.48)
Transgender	-1.47 (-19.86, 16.92)	9.02 (-10.29, 28.33)
Race/ethnicity		
White	--	--
Black	-12.35 (-21.32, -3.38)**	-7.66 (-16.70, 1.37)
Latino	4.90 (-3.61, 13.41)	6.10 (-2.42, 14.62)
Other	6.22 (-4.74, 17.17)	5.72 (-4.72, 16.16)
Sexual orientation		
Gay	--	--
Bisexual	-8.58 (-20.89, 3.72)	-9.32 (-21.23, 2.59)
Heterosexual	-20.86 (6.27, -11.22)***	-24.26 (-35.70, -12.81)***
Years Living with HIV	0.20 (-0.17, 0.57)	-0.40 (-0.90, 0.10)
Prior history of ART	12.81 (4.48, 21.14)**	10.08 (1.64, 18.51)*



Conclusions

- Each unit increase in internalized HIV stigma was associated with a 17% decrease in the odds of missing the first primary care appointment, adjusting for potential confounders
- Stigma was also associated, on average, with a 2.5% increase in the proportion of visits kept, adjusting for the same confounders
- No significant interactions with age, gender, race/ethnicity or sexual orientation



Conclusions

- Paradoxical findings that deserve qualitative exploration
- Potential reasons may include
 - Support offered by the clinic
 - Greater concern about one's health



Limitations

- Analysis limited to those who have begun the linkage process
- Role of substance use?
- Stigma scale employed includes two items that are more about disclosure concerns



Future Directions

- Mediation analyses to look at role of social support and depression as well as CD4 count
- Virologic suppression (as mediated by ART adherence)
- Need to investigate different types of HIV-related stigma (anticipated, enacted)



Thank You

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R24 AI067039 (CFAR Network of Integrated Clinical Systems)