UT Southwestern Medical Center

Poster # 753

Depression is Associated with Missed Visits, Emergency Room Utilization, and Drug Use

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Background

- The US Preventive Service Task Force recommends screening all patients for depression[1].
- Depression has been associated with non-adherence and unsuppressed HIV viral load[2,3].
- We collected data obtained form a nurse-administered clinical tool in an urban HIV clinic to characterize the relationship of depression , HIV, and health care utilization.

Objectives

- To examine the prevalence of moderate to severe depression in a large, urban HIV clinic.
- To examine the association between moderate to severe-depression and demographics, substance use, health care utilization, and HIV outcomes.

Methods

Patient selection: We retrospectively examined patients who had a Patient Health Questionnaire -9 (PHQ-9)[4] administered during an HIV clinic visit to screen for depression symptoms in 2014 or 2015. Those who had more than one PHQ-9 completed were counted once.

Additional Data: We obtained drug screen data from Substance Abuse and Mental Illness Symptoms Screener (SAMISS) completed during the same time frame. Additional variables were obtained from the electronic medical record and included demographics, HIV viral load, CD4 cell count, number of hospitalizations, number of missed visits, number of emergency room visits, and proportion of overall visits attended.

Depression: moderate to severe depression was defined as PHQ-9≥10 (score 0-27)

Analysis: Baseline frequencies were compared using chi square. Predictors of moderate to severe depression were examined by univariate and multi-variate logistic regression.

Results

Study Population

Figure 1: Prevalence of Depression

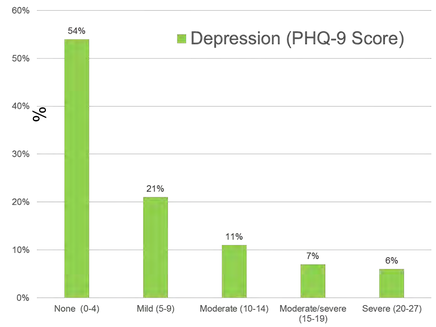


Figure2: Risk of Depression by CD4

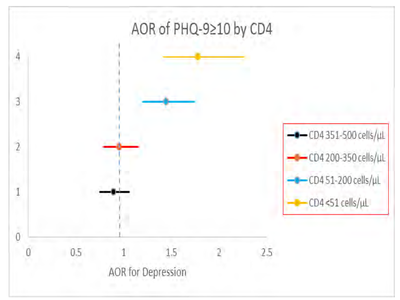


Table 1: Baseline Characteristics	Overall n (%) n= 5127	Non-Depressed n (%) n=3855 (75.2%)	Depressed n (%) N=1272 (24.8%)	p value
Gender				0.003
Male	3555 (69.34)	2722 (70.61)	833 (65.49)	
Female	1497 (29.2)	1079 (27.99)	418 (32.86)	
Transgender	75 (1.46)	54 (1.4)	21 (1.65)	
Race/ethnicity				<.0001
Black	2855 (56.27)	2166 (56.19)	719 (56.53)	
White	1268 (24.73)	897 (23.27)	371 (29.17)	
Hispanic	895 (17.46)	726 (18.83)	169 (13.29)	
Other	79 (13)	66 (1.71)	13 (1.02)	
Age				0.991
< 40 years	2063 (40.24)	1551 (40.23)	512 (40.25)	
> 40 years	3064 (59.76)	2304 (59.77)	760 (59.75)	
HIV Risk Factors				0.001
Heterosexual	2329 (45.5)	1782 (46.29)	547 (43.1)	
MSM	2289 (44.72)	1722 (44.73)	567 (44.68)	
IDU/MSM& IDU	309 (6.04)	203 (5.27)	106 (8.35)	
Other/unknown	192 (3.75)	143 (3.71)	49 (3.86)	
HIV Viral suppression				<.0001
No	1322 (25.79)	908 (23.87)	414 (33.2)	
Yes	3729 (72.73)	2896 (76.13)	833 (66.8)	
AIDS , CD4 <200 cells/µL				<.0001
No	3890 (75.87)	3016 (79.24)	874 (70.03)	
Yes	1164 (22.7)	790 (20.76)	374 (29.97)	
Alcohol use				0.191
No	2834 (89.01)	2116 (89.43)	718 (85.78)	
Yes	350 (10.99)	250 (10.57)	100 (12.22)	
Drug Use				<.0001
No	3001 (92.62)	2278 (94.68)	723 (86.69)	
Yes	239 (7.38)	128 (5.32)	111 (13.31)	
Hospitalized inpatient				<.0001
No	4428 (86.37)	3396 (88.09)	1032 (81.13)	
Yes	699 (13.63)	459 (11.91)	240 (18.87)	
Emergency Department visits				<.0001
No	3764 (73.42)	2953 (76.6)	811 (63.76)	
Yes	1363 (26.58)	902 (23.4)	461 (36.24)	
Overall show rate >80%				<.0001
No	2181 (47.3)	1561 (40.49)	620 (48.74)	
Yes	2946 (57.46)	2294 (59.51)	652 (51.26)	
Missed visit				<.0001
No	2423 (47.3)	1938 (50.27)	485 (38.13)	
Yes	2704 (52.7)	1917 (49.7)	787 (61.9)	

Table 2: Univariate & Multivariate Analysis	OR (95% CI)	P value	AOR (95% CI)	p value
Gender				
Male	Reference		Reference	
Female	1.27 (1.10, 1.45)	0..001	1.65 (1.31, 2.09)	<.001
Transgender	1.27 (0.76, 2.12)	0.36	1.11 (0.61, 2.02)	0.73
Race/ethnicity				
Black	Reference		Reference	
White	1.24 (1.08, 1.44)	0.003	1.25 (1.02, 1.53)	0.03
Hispanic	0.70 (0.58, 0.85)	<.001	0.77 (0.60, 0.98)	0.03
Other	0.59 (0.32, 1.08)	0.09	0.57 (0.25, 1.29)	0.18
HIV Risk Factors				
Heterosexual	Reference		Reference	
MSM	1.07 (0.94, 1.22)	0.31	1.36 (1.08, 1.70)	0.008
IDU/MSM& IDU	1.70 (1.32, 2.19)	<.001	1.70 (1.19, 2.42)	0.003
Other/unknown	1.12 (0.80, 1.57)	0.52	1.07 (0.68, 1.70)	0.77
HIV Viral suppression				
No	Reference		Reference	
Yes	0.63 (0.55, 0.73)	<.0001	0.85 (0.71, 1.03)	0.1
AIDS , CD4 <200 cells/µL				
No	Reference		Reference	
Yes	1.63 (1.41, 1.89)	<.001	1.35 (1.11, 1.64)	0.002
Drug Use				
No	Reference		Reference	
Yes	2.7 (2.09, 3.57)	<.001	2.32 (1.75. 3.07)	<.001
Hospitalized inpatient				
No	Reference		Reference	
Yes	1.72 (1.45, 2.04)	<.001	1.22 (0.97, 1.54)	0.09
Emergency Department visits				
No	Reference		Reference	
Yes	1.86 (1.62, 2.13)	<.001	1.59 (1.33, 1.90)	<.001
Overall show rate >80%				
No	Reference		Reference	
Yes	0.72 (0.63, 0.81)	<.001	1.16 (0.93, 1.45)	0.19
Missed visits				
No	Reference		Reference	
Yes	1.64 (1.44, 1.87)	<.001	1.63 (1.31, 2.03)	<.001

Conclusions

- Moderate to severe depression is prevalent in our clinic (24.8%).
- Certain populations were at a higher risk for depression such as women, Whites (compared to Blacks), MSM & IDU (compared to Heterosexual).
- Depression was associated with AIDS, substance use, emergency room visits, and missed visits.
- Depression was not independently associated with HIV viral suppression.
- Further studies are needed to understand the impact of depression on healthcare utilization.

References

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4. Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. J Gen Intern Med. 2001;16(9):606-613.