Factors Predicting Retention In Care and Health Outcomes Among HIV Patients

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Objective

To provide knowledge on the factors that predict retention in care and health outcomes among HIV patients and be able to understand viral load and its relation to retention in care.

Introduction

The prevalence of persons living and diagnosed with HIV infection in the United States in 2010 to 2014 increased in number and rate (Center for Disease Control & Prevention (CDC), 2016). In 2015, persons aged 25–29 years had the highest rate (33.4), followed by persons aged 20–24 years (31.2) (CDC, 2016). Consistent reduced viral load is associated with reduced morbidity and mortality and a lower likelihood of transmitting HIV to sex partners (CDC, 2011). Retention into HIV care promotes life and decreases the risk for HIV transmission (Yehia et. al. 2015). Preventing HIV transmission, prevention intervention strategy is critical and should be ongoing to all HIV patients consistently. New cases of HIV in the United States are increasing by approximately 30, 000 per year and with this increase, more providers are needed (Weiser et al.2016).

Methods

Quantitative cross sectional study: 2017 Palm Beach County Needs Assessment Survey was used, The data used was secondary-deidentified data. The sample size consisted of 357 survey participants.The surveys were collected from September 2016 to January 2017. The Florida Department of Health (FDOH) Institutional Review Board (IRB) approval was granted before data Collection.. The participants were not at risk due to de-indentifieddata. The demographic and clinical data was reviewed. Ethical practices were followed by securing data and only the data needed to conduct study were utilized.

The Independent Variables were: Age, Educational Level, Race, Gender, Condom Use, Unprotected sex, Sexual Orientation, Blood Tests-Viral Load, Medical care type facility. The Dependent Variables were: Medical Care/In Care, Miss HIV Meds and Hospitalization.

Four Research Questions are posed in this study, the results section list the research questions. Statistical Test were computed with the use of SPSS with ANOVA and Linear Regression

Results

RQ:Is there a statistical significant association between age of HIV patients, retention in care and health outcomes, in Palm Beach County?

Analysis of variance (ANOVA) was conducted to investigate if there was a statistical significant association between age of HIV patients and retention in care . Analysis Result: ANOVA, F (9, 0.393.) =2.181, $p<0.05$ ($p=0.023$). There was statistically significant association between age and retention in care between groups. Post Hoc (Dunnett test revealed differences between the 50-54 $p=0.006$, between 55-59, $p=0.009$ and 60 $\geq$ $p=0.010$

RQ2: Is there a statistically significant association between HIV patients at risk for sexually transmitted diseases and retention in care as evidenced by unprotected sex?

Analysis of variance (ANOVA) was conducted to investigate if there was a statistical significant association between at risk for STD of HIV patients and retention in care as evidenced by unprotected sex.

Analysis Result: ANOVA, F (3, 4.531) =15.975, $p<0.001$ ($p=0.000$). There was statistically significant association between at risk for STD and retention in care as evidenced by unprotected sex .

Post Hoc (Dunnett) test revealed differences between retention in care and risk for sexually transmitted diseases as evidenced by unprotected sex, p=0 RQ3: Are MSM HIV patients who attend health department clinics and or other health care facilities, more likely to retain in care than other groups of HIV patients?

Analysis of variance (ANOVA) was conducted to investigate if MSN patients who attend health department clinics and other health care facilities, more likely to retain in care than other groups of HIV patients?

ANOVA, F (4, 0.280) = 1.516, p > 0.05 (p= 0.197). There was no statistically significant association between MSN HIV patients who attend health department clinics and other health care facilities than other groups of HIV patients more likely to remain in care?

RQ4: Do patients knowledge of viral load test predict retention in care?

Logistic Regression was conducted to investigate knowledge of viral load and retention in care. Retention in care and viral load tests regression model was statistically significant

The regression model showed P < 0.01, p=0.000

Viral Load test significantly predicted retention in care. Coefficients of Viral Load greater than 1000 and Less than 200 were statistically significant: Viral Load

>1000 p = 0.010;Viral Load < 200 p = 0.004

Conclusions

Limitations to the study included the time frame to complete the study and the use of secondary data which was available to conduct the study. Low viral load is indicative of better health outcomes. Many studies have attempted to address barriers to retain in care and more work is needed to address the factors that impact retention in care.

Findings are consistent with other research that retention in care are due to social, behavioral and system factors. Some of the reasons the patients gave for their not in care are treatment of staff in clinic and or doctors office, long wait times, transportation, language barrier, child care and the clinic hours. The three most frequent answers were treatment of staff in clinic, long wait times and transportation. The burden o fnew HIV infection transmitting HIV if patients do not remain in care.

Findings are consistent with other research that retention in care are due to social, behavioral and system factors. Three most frequent answers were treatment by staff, long wait times and transportation.

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Logistic Regression Result

Model	DF	Mean Square	F	Sig
Regression	2	3.005	17.663	0.000b
Residual	353	.170		
Total	355			

Results of Logistic Regression

Linear Regression

Model	R	RSquare	Adjusted R Square	Standard Error of Estimates	Durbin Watson
1	.032Bb	.091	.086	.41244	1.803
a. Predictor Constant Blood Test, Viral Load < 200	Blood Test Viral Load > 1000				
b. Dependent Variable: Medical Care					

Results of Linear Regression