

CLINIC-LEVEL FACTORS ASSOCIATED WITH TIME TO VIRAL SUPPRESSION IN WASHINGTON DC, - Poster 1123

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INTRODUCTION

- Multiple individual-level factors are associated with prolonged time to antiretroviral therapy (ART) initiation and viral suppression (VS)
- Less is known about the impact of clinic-level factors on ART initiation and VS
- The DC Cohort (observational cohort of people receiving care at 14 different clinics in Washington, DC) offers a unique opportunity to examine HIV care delivery in a large city with a variety of clinical sites

OBJECTIVE

To examine which clinic-level and individual-level factors are associated with time to ART initiation and VS in the DC Cohort

METHODS

Inclusion Criteria

- Patients enrolled in the DC Cohort by March 31, 2016
- Not on ART at Cohort enrollment (baseline)
- Have at least 12 months of follow up after Cohort enrollment
- Have at least 1 additional viral load value after baseline
- Baseline VL > 200 copies/mL

Exclusion Criteria

- Receive care at a pediatric clinic (n=3 sites)

Outcomes (Time-to-event outcomes)

- ART initiation
- VS: at least one VL test result less than 200 copies/mL

Clinic-level variables

- Clinic assessment score (range 0-10; scores 7-10 labeled "high") based on clinic hours, outside referrals, visit wait time, reengagement after missed visits, text messages, and availability of group visits, urgent care, and subspecialty medical services.
- Retention monitoring - review of clinic databases and electronic health records
- Adherence monitoring - routine ART pickup review

METHODS (cont.)

Analysis: Univariable and multivariable Cox proportional hazards analyses

Model Covariates: Individual-Level variables at enrollment Age, Sex at birth, Race/ethnicity, State of residence, HIV transmission risk, Insurance status, HIV duration, History of AIDS diagnosis, History of substance abuse, Enrollment CD4, Calendar year of enrollment, Hepatitis C status, Hepatitis B status, Mental health/depression, ART naïve at enrollment

RESULTS

Table 1. Demographic and clinical characteristics of the study sample at enrollment

Characteristic	Achieved viral suppression (N=546) N (%)	Did not achieve viral suppression (N=126) N (%)	p-value
Age, median (IQR)	42.0 (31.6, 51.7)	42.0 (28.6, 50.9)	0.39
Sex at Birth			0.56
Male	408 (74.7)	91 (72.2)	
Female	138 (25.3)	35 (27.8)	
Race/ethnicity			0.43
NH Black	441 (80.8)	109 (86.5)	
NH White	60 (11.0)	9 (7.1)	
Hispanic	23 (4.2)	3 (2.4)	
State of residence			0.45
District of Columbia	408 (74.7)	100 (79.4)	
Maryland	104 (19.0)	22 (17.5)	
Virginia	28 (5.1)	4 (3.2)	
Other	6 (1.1)	0 (0)	
Transmission risk			0.27
MSM/IDU	9 (1.6)	4 (3.2)	
MSM	237 (43.4)	47 (37.3)	
IDU	36 (6.6)	7 (5.6)	
Heterosexual	190 (34.8)	52 (41.3)	
Insurance status			0.17
Public	332 (60.8)	81 (64.3)	
Private	158 (28.9)	26 (20.6)	
Other/Unk	56 (10.3)	19 (15.1)	
Median HIV duration, years (IQR)	5.5 (0.9, 13.1)	5.6 (1.9, 11.7)	0.49
AIDS diagnosis	188 (28.0)	47 (7.0)	0.54
Enrollment CD4 (median, IQR)	409 (230, 595)	482 (222, 687)	0.11
Substance abuse			
Yes	203 (37.2)	45 (35.7)	0.76
Chronic Hepatitis C	45 (8.2)	1 (0.79)	0.003
Chronic Hepatitis B	7 (1.3)	0 (0)	0.20
Mental health/depression	228 (41.8)	50 (39.7)	0.67

RESULTS (cont.)

Table 1. (cont) Demographic and clinical characteristics of the study sample

Clinic Level variables	Achieved viral suppression (N=546) N (%)	Did not achieve viral suppression (N=126) N (%)	p-value
Type of Facility			0.09
Community-based	244 (44.7)	67 (53.2)	
Hospital-based	302 (55.3)	59 (46.8)	
Median clinic assessment score (range 0-10) (IQR)	8.0 (7.0, 9.0)	8.0 (6.0, 8.0)	0.08
Clinic Assessment Score Category			0.05
High (7-9)	419 (76.7)	86 (58.7)	
Proportion attending clinic with			
Retention monitoring	348 (63.7)	74 (58.7)	0.29
Review ART Pickup	266 (48.7)	60 (47.6)	0.82

Table 2. Clinic-level factors associated with HIV care outcomes (time to ART initiation and viral suppression), adjusted for all individual-level covariates

Point estimates for adjusted Hazard Ratios (with 95% Confidence Intervals) for clinic-level variables in 6 separate models:

Clinic-level variable # 1: Clinic assessment score (high vs. low)

Association with time to ART initiation	1.42 (1.14, 1.76)
Association with time to viral suppression	1.50 (1.20, 1.89)

Clinic-level variable # 2: Routinely review ART pick up (Y vs. N)

Association with time to ART initiation	1.30 (1.06, 1.60)
Association with time to viral suppression	1.28 (1.02, 1.60)

Clinic-level variable # 3: Routinely monitor retention (Y vs. N)

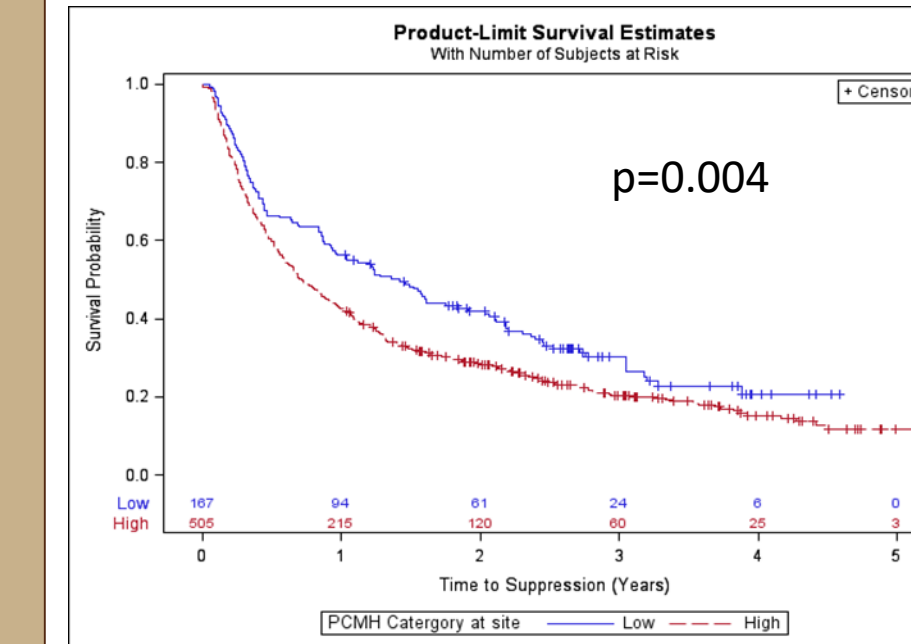
Association with time to ART initiation	1.46 (1.19, 1.79)
Association with time to viral suppression	1.46 (1.17, 1.82)

RESULTS SUMMARY

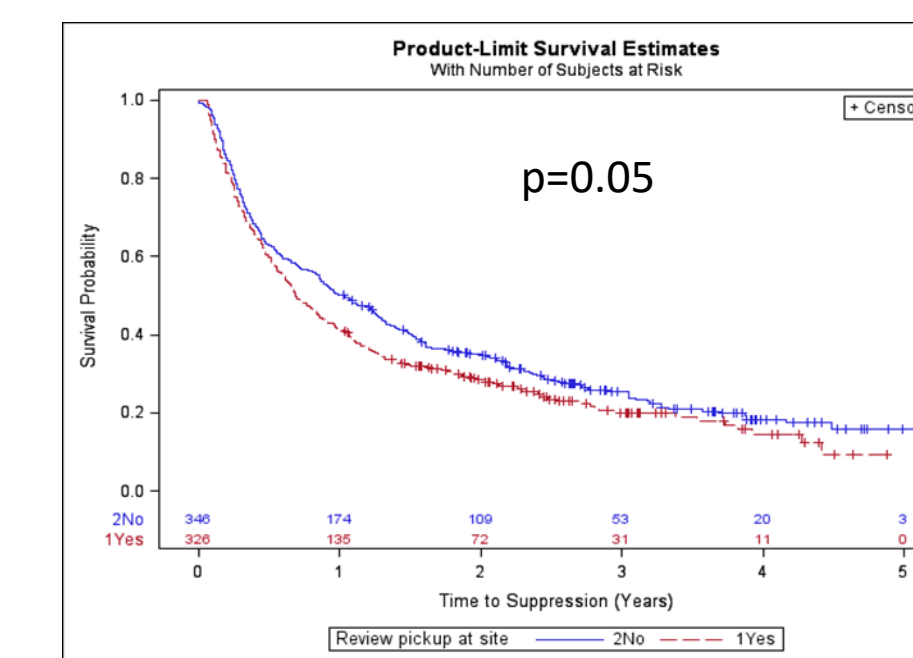
- The median age of the 672 participants was 42 years, 82% were black, 74.3% were male, and 42.3% had MSM as their baseline HIV risk factor
- 75% of participants attended a clinic with a high assessment score, 62.8% attended a clinic with routine retention monitoring, and 48.5% attended a clinic with routine review of ART pick up.
- 86% of participants were started on ART; VS was achieved by 82% of participants.

Figures 1- 3. Kaplan Meier Curves of Virologic Suppression Comparing clinic-level variable categories

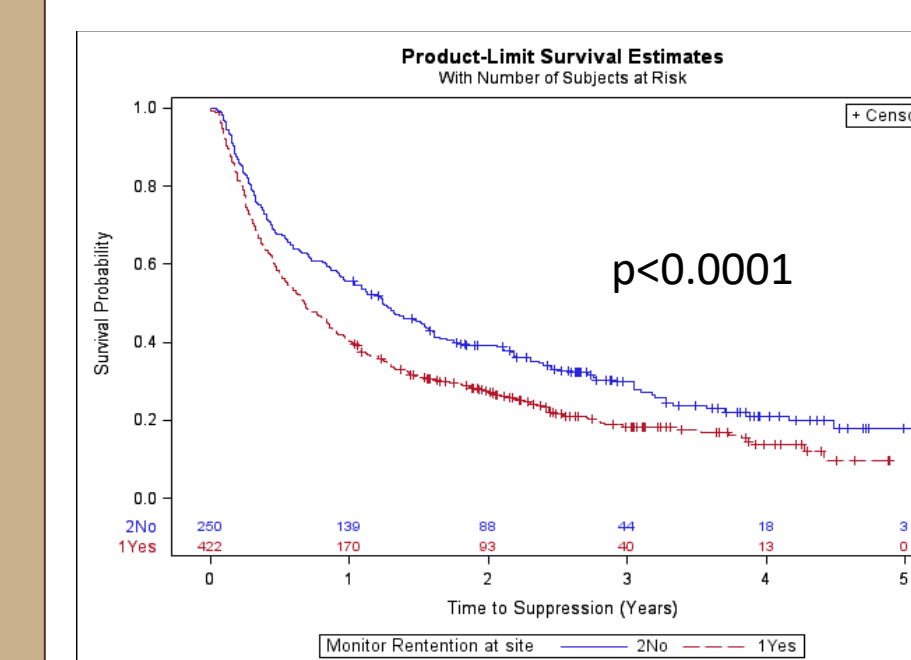
Clinic Assessment Score (high vs low)



Routinely review ART pick up (Y vs. N)



Routinely monitor retention (Y vs. N)



CONCLUSIONS

- Clinics with services that increase accessibility and comprehensiveness of care as well as actively monitor retention and ART adherence have faster time to ART initiation and VS.
- Our findings highlight aspects of HIV care models that may optimize patient outcomes.
- Additional analyses to adjust for multiple clinic services at once will help further determine which services have the greatest impact on patient outcomes

ACKNOWLEDGEMENTS

Acknowledgements: This work was supported by the National Institute of Allergy and Infectious Diseases at the National Institutes of Health under Grant U01 AI69503-0352. Data in this poster were collected by the DC Cohort investigators and research staff located at: Cerner Corporation (Jeffrey Binkley, Cheryl Akridge, Thia Subramanian, Qingjiang Hou, Stacey Purinton, and Rob Taylor); Children's National Medical Center Adolescent (Lawrence D'Angelo) and Pediatric (Natella Rakhmanina) clinics; The Senior Deputy Director of the DC Department of Health HAHSTA (Michael Kharfen); Family and Medical Counseling Service (Michael Serlin); Georgetown University (Princy Kumar); George Washington Medical Faculty Associates (David Parenti); George Washington University Department of Epidemiology and Biostatistics (James Peterson, Lindsey Powers Happ, Maria Jaurretche, Brittany Wilbourn, and Kevin Trac); Howard University (Ronald Wilcox); La Clinica Del Pueblo (Ricardo Fernandez); MetroHealth (Annick Hebout); National Institutes of Health (Carl Dieffenbach); Unity Health Care (Gebeyeu Teferi); Veterans Affairs Medical Center (Debra Benator); Washington Hospital Center (Maria Elena Ruiz); Whitman-Walker Health (David Hardy, Deborah Goldstein); Kaiser Permanente (Michael Horberg). We would also like to acknowledge the Research Assistants at all of the participating sites, the DC Cohort Community Advisory Board and the DC Cohort participants.