DC | HEALTH
GOVERNMENT OF THE DISTRICT OF COLUMBIA

Linkage to Care and Viral Suppression Faster Over Time among New HIV Diagnoses in DC

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Rupali Kotwal Doshi[1,2], Jenevieve Opoku[1], Adam Allston[1]
[1]District of Columbia Department of Health, Washington, DC, United States [2]George Washington University, Washington, DC, United States

BACKGROUND

In the United States, universal HIV testing recommendations were made in 2006 by CDC and reinforced in 2013 by the USPSTF. National guidelines recommended treatment for all people with HIV in 2012 (HHS). HIV surveillance data can be used to assess the effectiveness of universal test-and-treat policies in Washington, DC, which is a US jurisdiction with high HIV prevalence (1.8%) and one of the hotspots named in the US Ending the HIV Epidemic Initiative.

Objectives:

1. Describe changes in initial HIV care outcomes (linkage to care and viral suppression) for people diagnosed with HIV in the District of Columbia (DC) before and after the "treat all" recommendations were made
2. Assess disparities in achievement of initial HIV care outcomes in the universal test-and-treat era.

METHODS

- Retrospective analysis of HIV surveillance data from DC Department of Health
- Compared people diagnosed with HIV in DC in 2009-2012 vs. 2013-2017
- Linkage to care defined as evidence of HIV labs within 30 days of HIV diagnosis (LTC-30)
- Initial viral suppression defined as first HIV RNA <200 copies/ml) after HIV diagnosis
- Viral suppression within 90 days of HIV diagnosis (VS-90)
- Assessed correlates of LTC-30 and VS-90 among people diagnosed with HIV in 2013-2017
- Statistical methods:
  - Frequencies and Chi-square
  - Multivariable logistic regression models controlled for age at HIV diagnosis, gender, race/ethnicity, and CD4 count within 90 days of HIV diagnosis, for 2 outcomes:
    - LTC-30
    - VS-90

Viral suppression within 90 days of HIV diagnosis has improved over the past decade in Washington, DC, but disparities remain. Facilitating expansion of rapid ART initiation may improve overall time to viral suppression and reduce disparities.

RESULTS

Linkage to HIV care and time from HIV diagnosis to initial viral suppression among people diagnosed with HIV in DC, 2009-2012 versus 2013-2017

	Diagnosed with HIV in DC in 2009-2012		Diagnosed with HIV in DC in 2013-2017		Percent Difference	Chi-square p-value
	No.	%	No.	%		
TOTAL	3124	NA	2119	NA	NA	NA
CD4 ≤350 cells/µl at HIV diagnosis	1011	32.3	514	24.3	-8.0	<0.0001
CD4 >350 cells/µl at HIV diagnosis	1942	62.1	1472	69.5	7.4	
Linked to HIV care within 30 days of diagnosis	2172	69.5	1525	72	2.5	0.1625
Never linked to HIV care	130	4.2	77	3.6	-0.6	0.1625
Never virally suppressed						
Overall	710	22.7	401	18.9	-3.8	<0.0001
Among those with CD4 cell count ≤350 cells/µl at HIV diagnosis	272	26.9	123	23.9	-3.0	<0.0001
Among those with CD4 >350 cells/µl at HIV diagnosis	427	22	259	17.6	-4.4	
Virally suppressed within 90 days of HIV diagnosis						
Overall	642	20.5	611	28.8	8.3	<0.0001
Among those with CD4 cell count ≤350 cells/µl at HIV diagnosis	142	14.0	112	21.8	7.7	0.0078
Among those with CD4 >350 cells/µl at HIV diagnosis	473	24.4	465	31.6	7.2	

Correlates of linkage to care within 30 days (LTC-30) and viral suppression within 90 days (VS-90) of HIV diagnosis, District of Columbia, 2013-2017

	Linkage to care within 30 days of HIV diagnosis	Viral suppression within 90 days of HIV diagnosis
	aPR (95% CI)	aPR (95% CI)
Gender		
Men	Reference	Reference
Women	0.94 (0.69-1.28)	1.35 (1.02-1.79)*
Transgender or non-binary	1.09 (0.57-2.06)	2.31 (1.28-4.17)*
Race/ethnicity		
Black	0.56 (0.40-0.78)**	0.73 (0.55-0.97)*
White	Reference	Reference
Latino	0.57 (0.37-0.97)*	0.71 (0.49-1.03)
Other or Unknown	0.39 (0.23-0.65)**	0.66 (0.41-1.06)
Mode of HIV Transmission		
MSM	Reference	Reference
Heterosexual	1.20 (0.87-1.65)	0.85 (0.64-1.14)
PWID	0.55 (0.30-1.02)	0.85 (0.45-1.59)
MSM/PWID	0.48 (0.25-0.90)*	0.45 (0.22-0.91)*
Other or Risk Not Identified	1.01 (0.74-1.36)	1.04 (0.79-1.38)
Age at HIV Diagnosis (years)		
13-18	0.66 (0.30-1.43)	0.68 (0.34-1.36)
19-24	0.72 (0.43-1.19)	0.81 (0.52-1.27)
25-29	0.55 (0.34-0.91)*	0.67 (0.43-1.05)
30-39	0.57 (0.35-0.92)*	0.77 (0.51-1.18)
40-49	0.78 (0.47-1.30)	0.85 (0.54-1.32)
50-59	0.72 (0.43-1.22)	0.74 (0.46-1.18)
60 and older	Reference	Reference
Year of Diagnosis		
2013	Reference	Reference
2014	0.56 (0.42-0.74)***	1.07 (0.81-1.42)
2015	1.65 (1.21-2.27)*	1.58 (1.19-2.08)*
2016	1.72 (1.24-2.37)*	2.64 (1.99-3.50)***
2017	2.0 (1.43-2.78)***	2.34 (1.75-3.12)***
CD4 count at HIV diagnosis (cells/µl)		
<200 or symptomatic/OI	Reference	Reference
200-350	0.76 (0.44-1.30)	1.45 (0.91-2.30)
351-500	0.83 (-0.62-1.11)	1.12 (0.87-1.45)
>500	0.69 (0.52-0.93)*	1.47 (1.13-1.90)*
Unknown	0.12 (0.078-0.20)***	30.36 (13.68-67.4)***
* P<0.05, ** P<0.001, ***P<0.0001		
†Multivariable models were adjusted for age at HIV diagnosis, race/ethnicity, gender, year of HIV diagnosis, and CD4 cell count within 90 days of HIV diagnosis		

CONCLUSIONS

- Time from HIV diagnosis to linkage to care and initial viral suppression has improved over the past decade in DC.
- Black individuals, as well as MSM/PWID, were less likely to achieve initial viral suppression within 90 days of HIV diagnosis.
- Expanding rapid antiretroviral therapy initiation across multiple HIV care providers in DC may reduce the time from HIV diagnosis to viral suppression and reduce HIV treatment disparities.

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- Contact Information: Rupali K. Doshi, MD, MS (rkdoshi@gwu.edu)