HIV Nurse Navigation: Charting the course to improve retention in care and HIV virologic suppression

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Background

- Retention in care, medication adherence, and virologic suppression can reduce health complications, hospitalization, and mortality for patients with HIV.
- In 2013, approximately 21.4% of the 960 Washington DC VAMC ID Clinic patients had a detectable HIV viral load, indicating possible barriers to engagement in care.
- In response to this need, the ID Clinic hired a dedicated HIV/HCV Nurse Navigator in March 2014.

Purpose

- To describe patients referred for Navigation relative to the general population of HIV+ veterans.
- To assess the impact of Navigation on clinic attendance, medication adherence, and viral load.

Methods

- Patients referred (03/01/14 to 09/01/14) were identified retrospectively.
- HIV clinic data from the DC Cohort was used for comparison (*n* = 706).
- DC Cohort is a longitudinal study of HIV+ DC residents.
- Analyses included test of proportions and paired samples *t*-tests.

Results

- 47 males (95.9%) and 2 females (4.1%), mean age was 54.8 years (*SD* =12.5).
- Most were Black (*n* = 46; 93.9%) and single (*n* = 24; 49.0%) with their first contact with Nurse Navigator during their primary care visit (*n* = 23; 46.9%).
- Average duration of 110 days (*SD* =12.5).

Table 1
Baseline comparisons between Nurse Navigation and DC Cohort samples

	Nurse Navigation N = 49		DC Cohort N = 706		*p*-value
***Age (years)* n (%)**					
18-29	**7**	**(14.3)**	**26**	**(3.7)**	**<0.001**
30-39	5	(10.2)	57	(8.1)	ns
40-49	**20**	**(40.8)**	**156**	**(22.1)**	**0.003**
50-59	14	(28.6)	293	(41.5)	ns
60-69	**3**	**(6.1)**	**140**	**(19.8)**	**0.02**
70+	0	(0.0)	34	(4.8)	ns
Male	47	(95.9)	678	(96)	ns
Ethnicity					
Non-Hispanic Black	46	(93.9)	592	(83.9)	ns
Non-Hispanic White	2	(4.1)	90	(12.7)	ns
Hispanic	1	(2.0)	15	(2.1)	ns
Other	0	(0.0)	9	(1.2)	ns
Housing					
Permanent/stable	**33**	**(67.3)**	**646**	**(91.5)**	**<0.001**
Temporary/unstable	**9**	**(18.4)**	**32**	**(4.5)**	**<0.001**
Homeless	2	(4.1)	15	(2.1)	ns
Other	**5**	**(10.2)**	**13**	**(1.9)**	**<0.001**
Employment					
Employed (full or part-time)	15	(30.6)	276	(39.1)	ns
Unemployed	**2**	**(4.1)**	**242**	**(34.3)**	**<0.001**
Retired	3	(6.1)	64	(9.1)	ns
Disabled/SSI	**19**	**(38.8)**	**9**	**(1.3)**	**<0.001**
Other	10	(20.4)	115	(16.3)	ns
Comorbid Psychiatric Diagnosis					
Psychoses	3	(7.3)	116	(16.4)	ns
Depression/dysthymia	11	(22.4)	122	(17.3)	ns
Anxiety/stress disorder	3	(7.3)	27	(3.8)	ns
Other mental health disorder	6	(12.2)	65	(9.2)	ns
Current Substance Use Disorder					
Alcohol	4	(8.2)	46	(6.5)	ns
Recreational/illicit drugs	**9**	**(18.4)**	**46**	**(6.5)**	**0.002**
CD4 count (cell/µl)					
<50	**3**	**(6.1)**	**13**	**(1.8)**	**0.04**
50-199	**11**	**(22.4)**	**62**	**(8.8)**	**0.002**
200-349	**13**	**(26.5)**	**100**	**(14.2)**	**0.02**
350-499	10	(20.4)	142	(20.1)	ns
≥500	**12**	**(24.5)**	**363**	**(51.4)**	**<0.001**
Missing	0	(0.0)	26	(3.7)	ns
HIV-1 RNA (copies/ml)					
0-199	**21**	**(42.9)**	**536**	**(75.9)**	**<0.001**
200-999	1	(2.0)	37	(5.2)	ns
1,000-9,999	**7**	**(14.3)**	**39**	**(5.5)**	**0.01**
10,000-99,999	**12**	**(24.5)**	**44**	**(6.2)**	**<0.001**
100,000+	**7**	**(14.3)**	**24**	**(3.4)**	**<0.001**
Missing	1	(2.0)	26	(3.7)	ns

Distribution of HIV-1 RNA Pre and Post Navigation

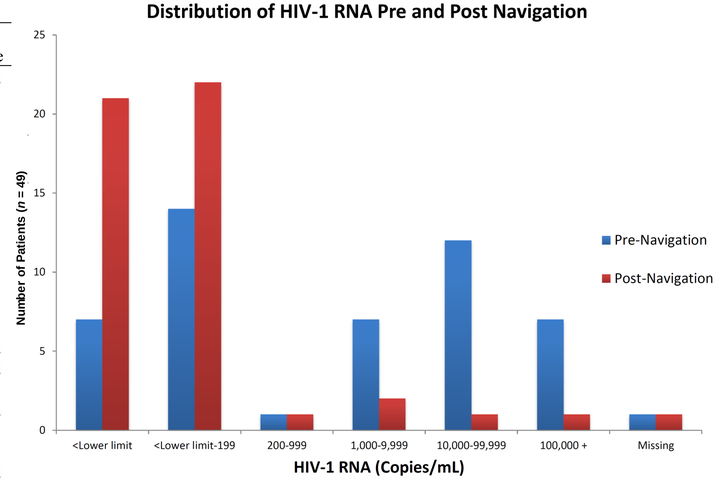

Table 2
Pre and Post-Navigation comparisons

	Pre-Navigation		Post-Navigation		
	n	(%)	*n*	(%)	*p*-value
HIV-1 RNA (copies/ml)					0.03
<Lower limit	7	(14.3)	21	(42.9)	
Lower limit-199	14	(28.6)	22	(44.9)	
200-999	1	(2.0)	1	(2.0)	
1,000-9,999	7	(14.3)	2	(4.1)	
10,000-99,999	12	(24.5)	1	(2.0)	
100,000+	7	(14.3)	1	(2.0)	
Missing	1	(2.0)	1	(2.0)	
CD4 count (cell/µl)					ns
<50	2	(4.1)	2	(4.1)	
50-199	12	(24.5)	12	(24.5)	
200-349	8	(16.3)	8	(16.3)	
350-499	14	(28.6)	14	(28.6)	
≥500	11	(22.4)	11	(22.4)	
Missing	2	(4.1)	2	(4.1)	

Note. Data reflect one year of follow-up (03/01/2014 to 02/01/2015)

Results

- Navigation patients (*n* = 49) were younger than the general HIV population.
- They were more likely to be disabled or receiving disability, have detectable viral load, and use illicit drugs.
- Following navigation, the number of clinic visits doubled and the mean medication adherence increased from
  48.6% (*SD* = 38.5) to
  92.3% (*SD* = 17.5).
- Viral suppression (<200 copies/ml) was achieved in 42.9% of patients pre-navigation, compared to 87.8% following navigation.

Conclusions

- Integrating Nurse Navigation has a significant effect on virologic suppression, retention to care, & medication adherence.
- Navigation enrollment reduced barriers to care and improved health outcomes.
- Future studies will investigate the long-term effects and durability of Nurse Navigation.

Acknowledgements

- The authors would like to thank the staff of the DCVAMC ID Clinic for contributing to the development of this project.
- The work of the DC Cohort is supported by National Institute of Allergy and Infectious Diseases at the National Institutes of Health [UO1 AI69503-03S2]. Local DC Cohort activities supported by Mary Jane Nettles, Shirley Cummins, and Doug Thomas.
- The VA had no other role in study design; in the collection analysis and interpretation of data; in the writing of the report; nor does the views expressed in this poster necessarily reflect those of the US government or the VA.