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HIV and the Veterans Choice Act: A Geospatial Analysis in Georgia, 2014-2022

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BACKGROUND

- One-quarter of all Veterans with HIV (VWH) – and three-quarters of rural VWH – live more than an hour's drive from the nearest HIV clinic in the Veterans Administration (VA).[1]
- Rural VWH who are not linked and retained in HIV care have suboptimal outcomes across the continuum of care.[2]
- The 2014 Veterans Choice Act was enacted to expand healthcare access, which is purchased by the VA but administered by non-VA providers.[3]
- We compared the incidence and geospatial distribution of HIV treatment failure between VWH who only receive VA care with those who also receive non-VA care.

METHODS

- The HIV Atlanta VA Cohort Study (HAVACS) includes all VWH who sought care at the Atlanta VA Medical Center.[4]
- All HAVACS patients diagnosed with HIV between 2014 and 2022, on combination antiretroviral therapy (cART), and reside in Georgia (GA) were included in this analysis.
- Purchased care patient records in the VA Corporate Data Warehouse (CDW) were used to differentiate VWH who have and have not ever received non-VA outpatient care. Note, outpatient care includes both HIV and non-HIV care.
- HIV treatment failure was defined as:
  - **Virologic failure** – HIV viral load ≥200 copies/mL for two consecutive measurements, with ≥3 months between and after >6 months on cART.
  - **Immunologic failure** – CD4 count ≤ baseline value or CD4 counts ≤100 cells/mL for two consecutive measurements, with ≥3 months between and after >6 months on cART.
- Adjusted incidence rates and ratios were estimated for HIV virologic and immunologic failure by Poisson regression.
- Geospatial distributions of patients' homes and locations of non-VA visits were examined, as well as the proportion of non-VA visits among all visits (VA and non-VA) and its relation with HIV virologic and immunologic failure.

Table 1. Characteristics of VWH on cART by care received.

Factors	Only VA N=703 n (%)	VA+nonVA N=413 n (%)	P-value
Sociodemographics			
Age at HIV dx, mean (SD)	43.5 (14.3)	46.7 (10.8)	<0.001
Sex			<0.001
Female	6 (0.9)	41 (11.9)	
Male	697 (99.1)	304 (88.1)	
Race			0.020
Black	578 (86.0)	278 (83.2)	
White	81 (12.1)	55 (16.5)	
Other	13 (1.9)	1 (0.3)	
Home location			0.020
Rural	33 (5.4)	29 (9.6)	
Urban	582 (94.6)	274 (90.4)	
Clinical			
Nadir CD4 (cells/mL)			<0.001
<50	40 (5.7)	97 (23.5)	
≥50	663 (94.3)	316 (76.5)	
First HIV viral load (copies/mL)			0.035
<400	460 (65.4)	243 (58.8)	
≥400	243 (34.6)	170 (41.2)	
Last HIV viral load (copies/mL)			0.797
<400	633 (90.0)	374 (90.6)	
≥400	70 (10.0)	39 (9.4)	
AIDS status			0.022
No	577 (81.7)	314 (76.0)	
Yes	129 (18.3)	99 (24.0)	

Figure 1. Patients' homes and locations of non-VA visits.

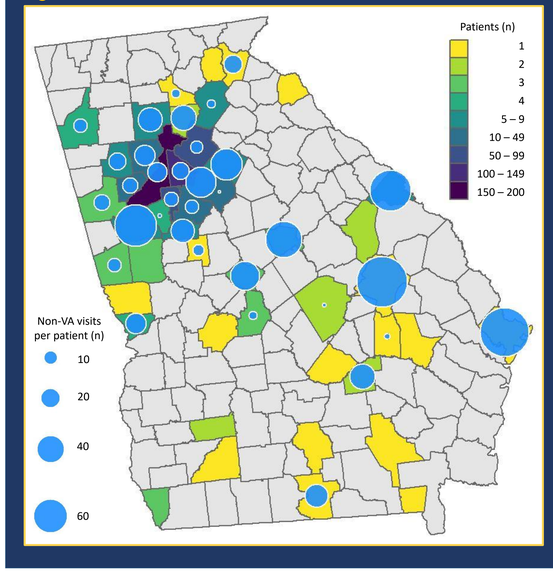


Table 2. Adjusted rate ratios of HIV treatment failure by care received.

	IR (95% CI) per 10 PY	IDR (95% CI)	P-value
Virologic failure			0.003
Only VA	1.33 (0.93, 1.90)		
VA + non-VA	1.82 (1.31, 2.51)	1.36 (1.11, 1.68)	
Immunologic failure			0.350
Only VA	0.21 (0.10, 0.44)		
VA + non-VA	0.17 (0.09, 0.35)	0.83 (0.55, 1.23)	

Figure 2. Proportion of non-VA visits and HIV virologic failure.

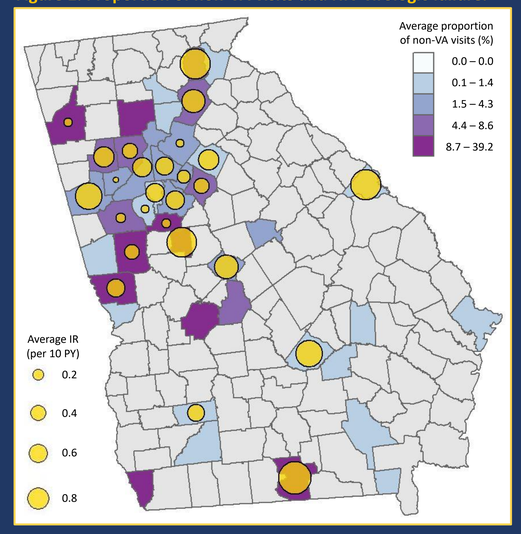
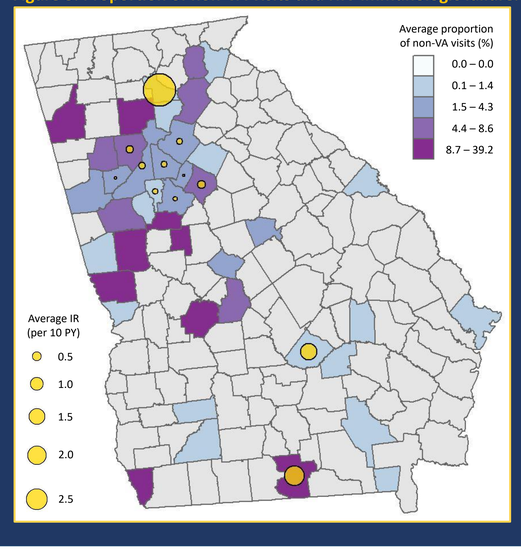


Figure 3. Proportion of non-VA visits and HIV immunologic failure.



CONCLUSIONS

- Patients who received both VA and non-VA care were more likely to be older, female, White, rural, and have poorer HIV outcomes than those who only received VA care (Table 1).
- Although most patients live in urban areas close to the Atlanta VA Medical Center, the number of non-VA visits per patient was disproportionately higher in rural GA (Figure 1).
- The rate of HIV virologic failure among patients who received both VA and non-VA care was 1.4 times higher than those who only received VA care (Table 2).
- The average rate of HIV treatment failure in each county closely aligned with the average proportion of non-VA visits, particularly for HIV virologic failure (Figures 2-3).

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