

Voter Registration Among People With HIV in North Carolina

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Persons with HIV (PWH) represent a socially and medically vulnerable population who often depend on public resources. We examined voter registration among PWH in North Carolina. Sixty-four percent were registered to vote. Registration was lower among PWH who were young, Hispanic, publicly insured or uninsured, and who had poor HIV health status.

Keywords. HIV; politics; voting; voter registration.

Voter participation is linked with health. Persons with disabilities, certain chronic conditions, and worse health are less likely to vote [1], although these populations are especially impacted by health care policies determined by elections. Persons with HIV (PWH) exemplify a medically and socially vulnerable population, with high rates of noninsurance [2], incarceration [3], and suboptimal clinical outcomes despite availability of effective treatment [4]. HIV exists at the nexus of individual and public health, with the highest incidence rates among young Black and Hispanic men in the Southeastern United States [5]. To assess civic engagement among PWH, we examined voter registration in a large cohort of PWH in North Carolina and evaluated demographic and clinical factors associated with voter registration.

METHODS

Data on PWH were drawn from the University of North Carolina (UNC) Center for AIDS Research Clinical Cohort (UCHCC), which contains demographic and clinical information about consenting persons receiving HIV care at UNC. UCHCC participants aged ≥ 18 years who had at least 1 HIV

care visit during 2019 were included and linked to publicly available voter registration records from the NC State Board of Elections, downloaded in July 2020. Of the total 8 007 192 voter records available in July 2020, voter records for persons aged < 18 years or > 115 years were excluded ($n = 29\,359$). UCHCC participants residing outside North Carolina were excluded ($n = 30$). Linkage was performed using first name, last name, zip code of residence, and birth year, using Link Plus 2.0 (Centers for Disease Control and Prevention). The linkage strategy is described in the [Supplementary Data](#). Four UCHCC participants matched to 2 separate voter records each. Their match status was determined by individual review of available identifiers.

UCHCC patient records that could not be linked to a registration record or were linked but had a registration status coded as “denied” or “removed” were considered unregistered. UCHCC patient records that were linked and had a registration status coded as “active,” “inactive,” or “temporary” were considered registered, as these statuses denote the ability to vote with the current registration. Demographic information was drawn from UCHCC data. CD4 cell count and HIV RNA were based on the last available value from 2019. Rural residence was defined by county [6]. Persons with Medicare, Medicaid, or Tricare were labeled as having public insurance. Viral suppression was defined as HIV RNA ≤ 50 copies/mL.

Proportions of registered voters were calculated among UCHCC participants and examined based on demographic and clinical factors. The association between voter registration and clinical and demographic factors was estimated with multivariable logistic regression, including gender, age, race/ethnicity, rural residence, insurance status, and viral suppression. CD4 cell count was not included in the multivariable model due to substantial missingness (245 persons, 15%). Analyses were performed with SAS, version 9.4.

Patient Consent Statement

Participants provided written informed consent to be included in the UCHCC. The study was approved by the UNC institutional review board.

RESULTS

Of 1555 PWH residing in North Carolina with at least 1 care visit in 2019, 992 (64%) were registered to vote. Among PWH who were registered, 916 had an active registration status and 76 had an inactive status. None had registration removed or denied. Overall, the cohort was primarily male (72%), aged 50–64 years (43%), and Black/non-Hispanic (58%) (Table 1). A substantial minority had rural residence (27%), and the most common insurance types were public (47%) and commercial

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Table 1. Demographic and Clinical Factors of Persons With HIV in North Carolina, by Voter Registration Status

	Total		Registered		Unregistered		Bivariable		Multivariable	
	No.	No.	Row %	No.	Row %	Estimate	95% CI	Estimate	95% CI	
Gender										
Male	1112	717	64	395	36	1		1		
Female	443	275	62	168	38	0.90	(0.72–1.13)	0.78	(0.60–1.01)	
Age										
18–34 y	250	122	49	128	51	0.38	(0.28–0.51)	0.37	(0.27–0.52)	
35–49 y	429	235	55	194	45	0.48	(0.37–0.61)	0.56	(0.43–0.74)	
50–64 y	673	483	72	190	28	1		1		
≥65 y	203	152	75	51	25	1.17	(0.82–1.68)	1.23	(0.83–1.81)	
Race/ethnicity										
White/non-Hispanic	477	333	70	144	30	1		1		
Black/non-Hispanic	904	601	66	303	34	0.86	(0.68–1.09)	1.07	(0.83–1.39)	
Hispanic	127	26	20	101	80	0.11	(0.07–0.18)	0.15	(0.09–0.25)	
Other/unknown	47	32	68	15	32	0.92	(0.49–1.76)	1.06	(0.54–2.01)	
Rural										
No	1133	719	63	414	37	1		1		
Yes	422	273	65	149	35	1.06	(0.84–1.33)	1.15	(0.89–1.49)	
Insurance^a										
Commercial	649	447	69	202	31	1		1		
Public	722	475	66	247	34	0.87	(0.69–1.09)	0.68	(0.52–0.88)	
None	176	66	38	110	63	0.27	(0.19–0.38)	0.43	(0.29–0.63)	
CD4^b										
>350 cells/mm ³	1093	709	65	384	35	1				
201–350 cells/mm ³	149	81	54	68	46	0.61	(0.44–0.86)			
≤200 cells/mm ³	68	28	41	40	59	0.36	(0.22–0.59)			
Viral load^c										
Suppressed (≤50 copies/mL)	1403	918	65	485	35	1		1		
Not suppressed	120	55	46	65	54	0.45	(0.31–0.65)	0.57	(0.38–0.85)	
Party affiliation^d										
Democratic		708								
Republican		61								
Unaffiliated		217								

Bolded values correspond to $P < .05$.

^aFewer than 10 participants had other insurance status and are not reported due to small cell size.

^bMissing for 245 participants (71 unregistered and 174 registered).

^cMissing for 31 participants (12 unregistered and 19 registered).

^dFewer than 10 participants had another party affiliation and are not reported here.

(42%). Most patients had a CD4 >350 (83%) and viral suppression (92%). Among registered voters, Democrat was the most common party affiliation (71%).

In bivariable analyses, PWH who were young (18–34 and 35–49), Hispanic, uninsured, had low CD4, and were not virally suppressed were significantly less likely to be registered to vote. In the results from a multivariable model, public insurance status was also significantly associated with not being registered.

DISCUSSION

In this cohort of PWH in North Carolina, less than two-thirds were registered to vote. The health of underserved and disadvantaged populations, including PWH, is impacted by social determinants, government resources, and government policies.

PWH frequently rely on safety net public assistance programs for medical care, prescription drugs, and community services, and such programs are influenced by political will, budgets, and leadership. Because many PWH are not registered to vote, their interests may be politically underrepresented.

We found that those insured by public insurance or uninsured were less likely to be registered to vote. These persons may be most impacted by health policy decisions. For example, Medicaid expansion remains unadopted in North Carolina; nonexpansion states include much of the Southeast, where incident HIV infections are highest [5, 7]. Similarly, uninsured PWH rely on the AIDS Drug Assistance Program for medication access, a state-operated program, co-funded by federal and state funds and vulnerable to state budget cuts, which can result in waitlists and barriers to care for PWH [8]. Further, PWH with poorer HIV health status (lower CD4 cell count and viral

nonsuppression) were registered in lower proportions than those with better HIV metrics. While this finding may indicate poor health status impeding civic engagement, it also may be a marker for other psychosocial and structural barriers impacting both health and voting.

People choose not to register to vote for myriad reasons, including perceiving that their vote does not impact real-world decisions, busy schedules, or a lack of interest in government [9]. While qualitative research around civic engagement among PWH is needed, PWH likely face unique issues and barriers, including experienced and internalized stigma, ineligibility due to incarceration or citizenship, or lack of opportunity. In 2019, the most common source of voter registration in North Carolina was the Department of Motor Vehicles (DMV) [10]. Yet PWH, especially those most medically impacted by HIV, may be less likely to visit the DMV. Research from another setting in the Southeast has found that lower community viral suppression was associated with residence in areas with lower automobile ownership [11]. We found no records of voter registration applications denied due to felony status. However, persons who are aware of ineligibility may not apply and thus may not appear in the voter registration database.

To our knowledge, this is the first report directly examining voter registration among PWH in the United States. Identifying a benchmark voter registration rate for comparison is difficult because different methodologies result in a wide range of registration rates. In North Carolina, there were 7 000 558 registered voters as of July 2020, representing 86% of the 8 187 369 residents over 18 years during 2019 [12]. However, state voter registration records may contain duplicate records and registrations for persons who have died or moved out of state. In contrast, a survey performed by the United States Census Bureau found that 65% of eligible voters in North Carolina were registered for the 2018 election. Patterns of registration identified in the survey were generally similar to patterns we identified in our population of PWH [13]. For example, both our study and the survey found that the proportion of those registered increased with age and that patterns of registration by racial and ethnic category were similar. However, the Census Bureau findings were drawn from self-report, so they may not be a reasonable comparison to our study findings considering the different methodologies. Further study among PWH and other socio-medically vulnerable populations is needed to fully understand voter registration and participation as well as the most effective means to improve them.

This study is limited by the possibility of invalid or missed linkage of UCCHC and voter records. Given that the linkage strategy incorporated residence information, persons who recently moved or with unstable housing may have been missed and thus labeled as unregistered. As we did not have data on citizenship or felony convictions, we were unable to restrict the

analysis based on eligibility. Lastly, the generalizability of our findings to all PWH or states is unknown. However, the limited data available suggest that our study population reflects the demographic and clinical profile of PWH in care in North Carolina [14].

In summary, we found that more than one-third of PWH were not registered to vote, and those who are most medically vulnerable were less likely to be registered. Providers and health systems addressing social determinants of population health should consider their role in encouraging patients' civic engagement. These findings support implementation of clinic-based nonpartisan interventions to enhance voter registration and enfranchise PWH and other underrepresented patients in the electoral process.

Supplementary Data

Supplementary materials are available at *Open Forum Infectious Diseases online*. Consisting of data provided by the authors to benefit the reader, the posted materials are not copyedited and are the sole responsibility of the authors, so questions or comments should be addressed to the corresponding author.

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