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COVID-19 Vaccination in Persons With and Without HIV – Veterans Aging Cohort Study

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BACKGROUND

- COVID-19 vaccination:
  - Effective at preventing symptomatic infection, hospitalization, death from COVID-19
  - Many have experienced barriers to receiving this life preserving intervention
- Prior study in New York state found persons with HIV (PWH) were less likely to be vaccinated for COVID-19 than the general population

Objective: To determine whether PWH are less likely to be vaccinated compared with persons without HIV (PWoH) in the Veterans Affairs (VA) Healthcare System.

METHODS

- Veterans Aging Cohort Study (VACS): open cohort of PWH and 1:2 age-, race/ethnicity-, sex-, and site-matched PWoH
- Inclusion criteria: VACS participants with a VA encounter from 10 December 2020 to 12 September 2022
- Calculated proportion of individuals fully vaccinated, boosted, and vaccine type; assessed differences using chi-square tests, by HIV status
  - Fully-vaccinated defined as:
    - 14 days after second dose of mRNA vaccine (Pfizer BNT162b2 or Moderna mRNA-1273)
    - Single dose of a viral vector vaccine (Janssen Ad26.COV2.S).
  - Boosted defined as: additional vaccination ≥180 days after fully vaccinated

VACS
Veterans Aging Cohort Study

TABLE 1. COVID-19 Vaccination in People with HIV (PWH) and People without HIV (PWoH) – Veterans Aging Cohort Study, as of 12 September 2022

		PWH N=31,337		PWoH N=78,084	
Fully vaccinated	(of all eligible)	24,327	77.6%	53,658	68.7%
Boosted	(of fully vaccinated)	16,437	71.1%	32,019	63.0%
Vaccine type					
Pfizer	(of fully vaccinated)	12,106	49.8%	24,886	50.0%
Moderna	(of fully vaccinated)	10,533	43.3%	24,746	46.1%
Janssen	(of fully vaccinated)	1,688	6.9%	4,026	7.5%

TABLE 2. Baseline demographics and characteristics

		PWH		PWoH	
Fully Vaccinated		**Yes N=24,327**	**No N=7,010**	**Yes N=53,658**	**No N=24,426**
		%	%	%	%
Sex	Male	96.5	95.9	96.1	96.5
Race/ethnicity	Non-Hispanic white	37.7	37.5	35.3	42.6
	Non-Hispanic Black	48.4	49.9	50.4	43.9
	Hispanic	9.2	6.9	10.0	8.0
	Other/unknown	4.7	5.8	4.3	5.5
Age	20-29	0.8	2.5	0.1	0.4
	30-39	6.8	14.0	3.2	10.5
	40-49	9.2	13.0	5.9	12.7
	50-59	25.0	24.4	20.0	24.6
	60-69	35.6	30.7	40.5	32.5
	70-79	20.1	13.4	26.5	16.8
	≥80	2.6	1.9	3.8	2.6
Smoking	Never	33.8	28.6	33.8	31.2
	Current	43.6	51.1	40.8	46.4
	Former	19.5	14.3	22.2	17.0
	Unknown	3.2	6.0	3.1	5.4
Alcohol use disorder hx	Yes	11.6	11.6	11.4	10.8
CD4	≥500	54.9	37.2		
	350-499	14.0	11.2		
	200-349	9.3	7.9		
	<200	4.1	6.0		
	Unknown	17.6	37.8		
HIV Viral Load	≤40	68.7	48.3		
	>40	17.9	18.8		
	Unknown	13.4	32.9		

RESULTS

- From VACS, we identified 31,337 PWH and 78,082 PWoH who had a VA encounter between December 2020 and September 2022
- PWH were more likely than PWoH to be:
  - fully vaccinated (p<0.001)
  - boosted (p<0.001) [Table 1]
- Most received an mRNA vaccine [Table 1]
- Among PWH, high CD4 and undetectable HIV viral load more common in fully vaccinated (p<0.001) [Table 2]

CONCLUSIONS

In a cohort of demographically similar veterans with access to VA healthcare, PWH were ***more likely*** than PWoH to be fully **vaccinated** and boosted against **COVID-19**.

- These findings contrast with a New York state study which found lower COVID-19 vaccination rates in PWH, possibly due to differential healthcare access; all patients in VACS have access to VA healthcare.
- **Further studies are needed to understand differences in vaccine acceptance and receipt** to prevent COVID-19 infections, hospitalizations, and deaths.

ADDITIONAL KEY INFORMATION

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