Prevalence and Correlates of SARS-CoV-2 Vaccine Hesitancy among U.S. People with HIV

1011

Matthew A. Spinelli, Mallory O. Johnson, Nadra E. Lisha, Jennifer P. Jain, Carlos V. Moreira, David V. Glidden, Greer A. Burkholder, Heidi M. Crane, Jeffrey M. Jacobson, Edward R. Cachay, Kenneth H. Mayer, Sonia Napravnik, Richard D. Moore, Monica Gandhi, Katerina A. Christopoulos

BACKGROUND

- People with HIV (PWH) have higher risk of COVID-19 morbidity and mortality, especially with greater immunocompromise
- SARS-CoV-2 vaccination is highly effective in preventing severe COVID-19 among people with and without HIV
- However, multiple factors may contribute to vaccine hesitancy among PWH, including mistrust of the health system or government, side effect concerns, and low perceived vaccine efficacy

METHODS

- The CFAR Network of Integrated Clinical Systems (CNICS) is a multi-site cohort of patients in routine HIV care that includes tablet-based patient-reported outcomes survey at provider visits every 4-6 months
- From Feb '21- April '22, PWH at 8 CNICS sites were asked if they had received a COVID vaccine and if not, and whether they would receive it if told it was safe and effective by a provider
- Those who responded they would "probably or definitely not" receive the vaccine were considered to have vaccine hesitancy and asked to select reasons why
- We assessed factors associated with SARS-CoV-2 vaccine hesitancy using logistic regression, and adjusted for demographic characteristics, unsuppressed viral load >200 copies/mL, calendar month, and time on ART

Table: Factors Associated with Vaccine Hesitancy

Factor	Adjusted Odds Ratio	95% CI	p-value
Female sex at birth	2.04	1.48-2.81	<0.001
Black vs. White Race	1.78	1.28-2.49	0.001
Age< 30 years	2.79	1.49-5.24	0.001
Region vs. Northeast (ref): West	1.23	0.84-1.81	0.29
South/Midwest	1.73	1.23-2.44	0.002
Unsuppressed Viral Load (>200 copies/mL)	2.20	1.41-3.45	0.001
Years on ART (per 5 years)	0.79	0.69-0.86	<0.001
Study month	0.88	0.84-0.93	<0.001

Analyses were adjusted for age, birth sex, race/ethnicity, site, time on ART, viral suppression, and study month.

Vaccine hesitancy was reported by 7% of PWH in a multi-site cohort within routine HIV care; hesitancy was higher among female and Black PWH, and in the South/Midwest, but decreased over time

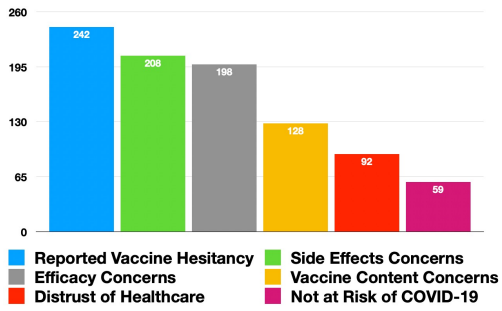
RESULTS

- Among 3,278 PWH who responded to the survey within 8 clinics within the CNICS Network:
  - 19% were female sex at birth; median age was 55; 93% were virally suppressed
- At the time of survey, 27% reported they had not received the SARS-CoV-2 vaccine, of whom 27% (n=242; 7% overall) reported vaccine hesitancy, with diverse reasons for vaccine hesitancy **(Figure)**
- Factors associated with vaccine hesitancy included **(Table):**
  - Female sex (AOR 2.0; 95% CI: 1.5-2.8)
  - Black vs. White race (AOR 1.8; 95% CI: 1.3-2.5), age<30 years (AOR 2.8; 95% CI: 1.5-5.2)
  - South/Midwest vs. Northeast region (AOR 1.7; 95% CI: 1.2-2.4)
  - Years on ART (0.8; 0.7-0.9)
  - Unsuppressed viral load (AOR 2.2; 95% CI: 1.4-3.5)
- Hesitancy decreased over time (AOR 0.9 per month; 95% CI: 0.8-0.9)
- Primary concern with the vaccine by population:
  - Women: vaccine side effects
  - Black PWH and without viral suppression: vaccine contents (i.e. trackers, infection risk)
  - Youth: lack of perceived COVID-19 risk

CONCLUSIONS

- Vaccine hesitancy was reported by approximately 7% of a U.S. multi-site cohort of PWH
- Ongoing engagement in the health care system may help to counter vaccine hesitancy given relationship between time on ART and lower vaccine hesitancy
- Hesitancy was more prevalent among Black PWH, women, youth, those with unsuppressed viral loads, and residents of the South/Midwest
- Association between virologic non-suppression and vaccine hesitancy in this study may highlight the need to address competing needs to improve healthcare engagement among this population
- Tailored interventions may be needed given different reasons for vaccine hesitancy among populations
- Although vaccine hesitancy decreased over time, renewed efforts will be needed to address concerns of PWH about the COVID-19 vaccine given plans for revaccination with evolution of the pandemic

Figure: Reported Reasons for Vaccine Hesitancy



CNICS CFAR Network Of Integrated Clinical Systems

UCSF Division of HIV, Infectious Diseases & Global Medicine, Department of Medicine