



High Incidence of COVID-19 Infection and Related Stigma among a Cohort of Persons with HIV in Washington, DC

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Background

- Racial/ethnic minorities, people with immunosuppression and co-morbid health conditions, and those of lower socioeconomic status (SES) are at increased risk for COVID-19
- Despite known risk factors, studies have shown mixed results as to whether PWH are at increased risk for COVID-19
- Few studies have investigated the impact of HIV/COVID co-infection on SES and the overlap of co-infection and stigma among PWH



Objectives

- Measure the incidence and presentation of COVID-19 infection among a cohort of PWH
- Characterize risk factors associated with COVID-19 illness including those related to SES (e.g., housing, health insurance, and changes in income)
- Document perceptions of COVID-related stigma among PWH



Methods

- DC Cohort study is a longitudinal study of over 11,000 persons with HIV from 14 clinics in Washington, DC, enrolled from 2011-present
- Conducted a cross-sectional survey of DC Cohort participants, initiated in October 2020 and ongoing
- Survey included questions on:
 - COVID exposure
 - Infections, symptoms and long COVID
 - COVID-related stigma (adapted from Pandemic Stress Index and HIV Stigma Scale)
 - Access to HIV care during the pandemic

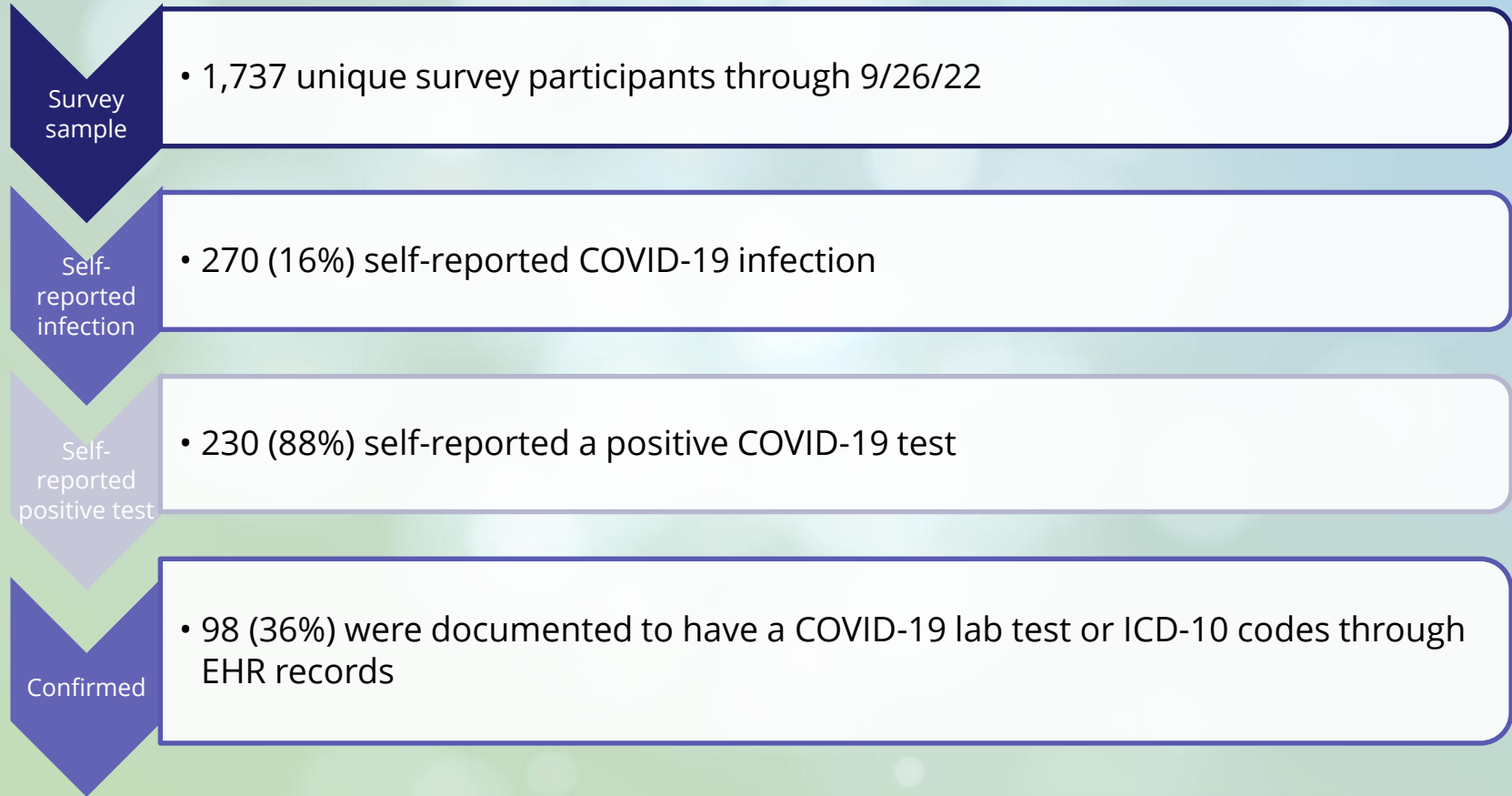


Methods (continued)

- Defined COVID-19 infection as a self-report of a positive COVID test or symptoms of loss of taste or smell
- Linked survey data to electronic health record data from the DC Cohort, including HIV labs (i.e., CD4 and VL), COVID-19 tests, and documented COVID-19 infections (i.e., ICD10 codes) for validation of self-reported COVID
- Conducted bivariable analyses comparing demographic, socioeconomic, HIV measures, and COVID impact among those with and without self-reported COVID using data from October 2020-September 2022

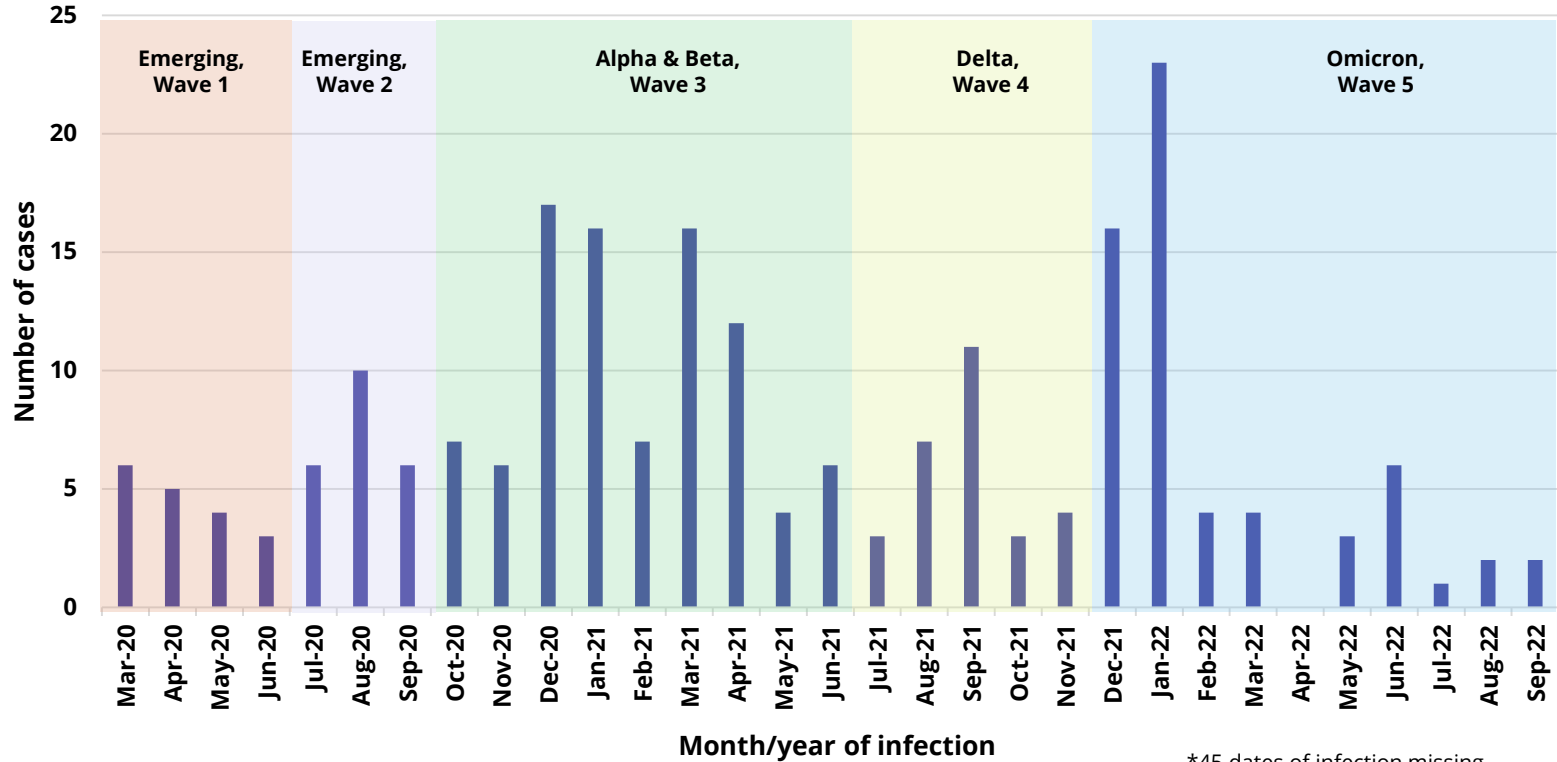
Incidence of Self-Reported and Confirmed COVID infection among PWH in the DC Cohort

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Self-Reported COVID Incidence by Month among DC Cohort COVID Survey Participants, N=225



*45 dates of infection missing

Demographic, HIV, and Co-Morbid Conditions among PWH by Self-Reported COVID Status, DC Cohort COVID Survey Participants, N=270

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Characteristic	Total (N=1,737)	No COVID (N=1,467)	COVID (N=270)
Age* (median, IQR)	54 (42, 63)	55 (44,62)	52 (41, 59)
Male	69%	68%	73%
Non-Hispanic Black	69%	69%	66%
High school education or less	20%	38%	30%
Household income < \$25,000*	32%	33%	25%
Employed*	55%	53%	63%
Essential worker*	31%	30%	36%
Ever smoker	71%	72%	66%
Asthma	18%	18%	14%
Hypertension	41%	42%	36%
Obese/overweight	20%	19%	23%
On ART	81%	84%	81%
Suppressed VL (i.e., <200 copies/ml)	79%	78%	83%
CD4>200 cells/microliter	84%	84%	87%
Vaccinated*	66%	64%	78%

*chi-square p-value <0.05



Most Frequently Reported COVID Symptoms among PWH with Self-Reported COVID, DC Cohort COVID Survey Participants, N=270

Symptom	Percentage
Cough	52%
Fatigue	43%
Loss of taste	41%
Fever	41%
Headache	40%
Loss of smell	39%

- Among those self-reporting COVID, 10% received treatment for their infection and 9% were hospitalized
- Among those hospitalized, 1 was intubated, 1 in the ICU and 4 required oxygen. We have not examined deaths yet.

Impact of the COVID Pandemic on Health Insurance, Housing, and Income among PWH by Self-Reported COVID Status, DC Cohort COVID Survey Participants, N=270

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Characteristic	Total (N=1,737)	No COVID (N=1,467)	COVID (N=270)
Have you lost your health insurance at any point since March 1, 2020?	6%	6%	6%
Have you lost your housing at any point since March 1, 2020?	5%	5%	6%
Since March 1, 2020, has your household income decreased as a result of COVID-19?	34%	33%	37%

Stigma of COVID infection among PWH with Self-Reported COVID, DC Cohort COVID Survey Participants, N=270

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COVID Stigma	Percentage Agreed
Disapproval or discrimination experienced as a result of being diagnosed with COVID:	
It was difficult to tell people about my COVID diagnosis	28%
I feel guilty that I had COVID	20%
I am ashamed that I had COVID	20%
Being diagnosed made me feel dirty	18%
I hid my COVID diagnosis from others	15%
I sometimes felt worthless because I had COVID	8%

Stigma of COVID infection among PWH with Self-Reported COVID, DC Cohort COVID Survey Participants, N=270

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COVID Stigma	Percentage Agreed
After being diagnosed with COVID-19, were you made to feel less than others because of any of the following:	
Race/ethnicity	7%
Sexual preference	7%
Poverty	5%
Gender	2%
Homelessness	2%
Incarceration	0.3%
Decline to answer	24%

- Overall, N=109 (40%) reported experiencing at least one form of stigma

Limitations and Strengths

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- **Limitations:**
 - Survey bias (response bias, non-response bias)
 - Inability to capture repeat COVID infections due to cross-sectional nature of the survey
 - Inability to establish temporality of changes in housing, health insurance, and income
- **Strengths:**
 - Large number of survey responses
 - Ability to link survey data to electronic medical records including labs and ICD-10 codes
 - Inclusion of survey questions related to stigma and socioeconomic impact during COVID

Conclusions

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- Incidence of COVID among persons with HIV in our cohort was lower than expected, though additional information on survey non-responders is needed to affirm generalizability.
- Among PWH in our cohort, household income was negatively impacted by the pandemic, though impact did not differ by COVID diagnosis status.
- Persons with HIV, an often-stigmatized population, experienced additional stigma related to COVID illness with 40% experiencing at least one form of stigma.
- Efforts to provide additional support for persons with HIV experiencing multiple forms of stigma are needed.

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Questions