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Impact of the COVID-19 Pandemic on HIV Outpatient Care and Viral Suppression in NYC

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BACKGROUND

The COVID-19 pandemic has had significant impacts on the healthcare system, including on HIV outpatient care. Lockdowns, infection concerns, and staffing and resource shortages have had the potential to affect patient care and viral suppression. We evaluated effects on the HIV care continuum in our New York City clinics.

METHODS

- Retrospective analysis comparing outcomes in a pre-COVID period [**PC**], March 2019-February 2020, to a COVID period [**CP**] of March 2020-February 2021
- **Population of interest**
  - Patients receiving care in one of the Mount Sinai Institute of Advanced Medicine HIV clinics in NYC
  - 9,740 patients living with HIV (PLWH), all of whom had at least one viral load assessment in the PC period
- **Outcomes:** occurrence of viral load testing, viral suppression (VL <200 copies/mL on last VL checked), viral non-suppression (VL≥ 200 copies/mL at any given point), rebound viremia (detectable VL after sustained suppression pre-COVID), primary care encounters, ART prescription rates, hospitalizations
- **Statistical analysis:** We used univariate tests to compare characteristics by outcome groups and evaluated for independent predictors by fitting multivariate logistic regression models

RESULTS (contd.)

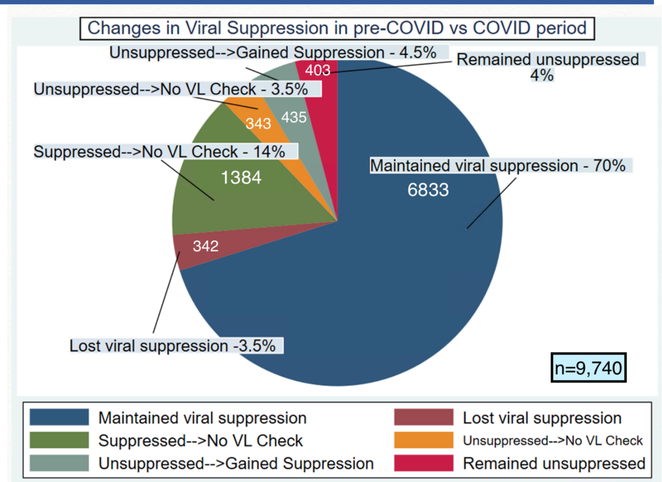
Baseline Demographics

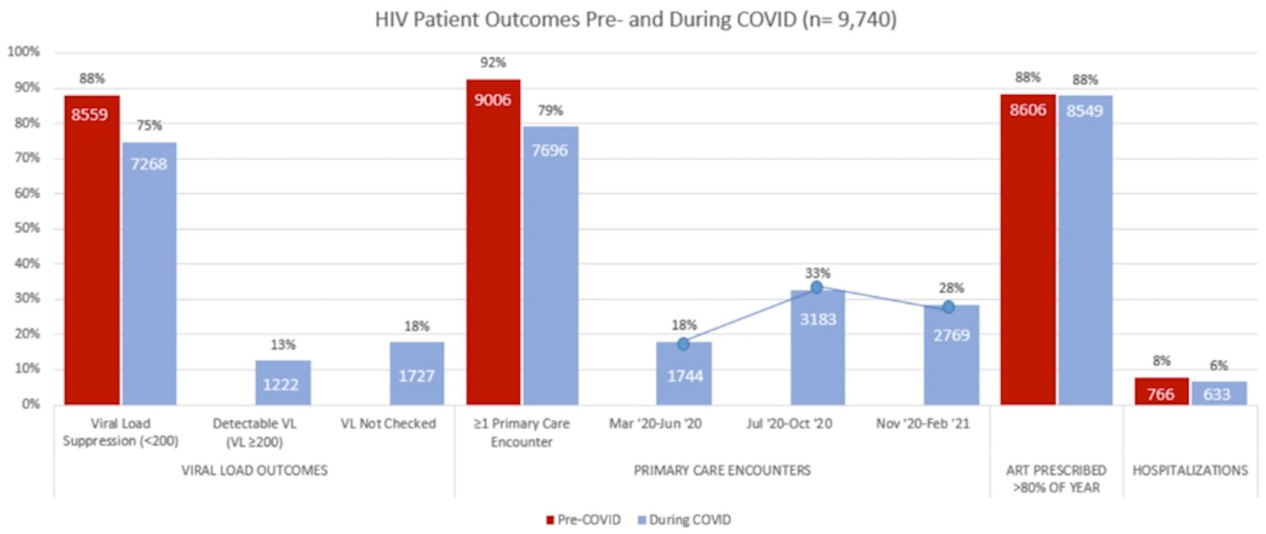
Characteristic	n (%)
Total patients	9,740
Age (median)	53
Sex at Birth	
Male	7,730 (79%)
Female	2,010 (21%)
Gender	
Male	5,798 (60%)
Female	1,701 (17%)
Transgender Woman (MTF)	117 (1%)
Transgender Man (FTM)	5 (.05%)
Nonbinary/Nonconforming/Gender Queer	37 (0.4%)
Other or NOS	2,082 (21%)
Race/Ethnicity	
White	1,960 (20%)
African-American	3,596 (36%)
Hispanic	2,936 (30%)
Asian/Pacific Islander	211 (2%)
Other or Unknown	1,037 (11%)
HIV Risk Factor	
MSM	4,105 (42%)
Heterosexual Sex	2,117 (22%)
Injection Drug Use (IDU)	351 (3.6%)
Other/Unknown	3,167 (33%)

Over 90% of PLWH who remained in care during the COVID-19 pandemic maintained or achieved viral suppression. However, 18% had no VL monitoring in the first 12 months of the pandemic and 15% had neither testing nor a primary care encounter (in-person or telehealth); 13% experienced viral non-suppression during the pandemic period.

RESULTS

In our cohort of 9,740 patients, 87.9% (8559/9740) of people living with HIV during PC had VL suppression (VLS). While 90.7% (7268/8013) of the population assessed during CP had VLS, 18% of the initial cohort had no VL testing during this period and 15% had neither testing nor a clinical visit (in-person or telehealth visit) during CP. There were notable differences in suppression and engagement outcomes between groups based on sex, gender, age, race, and HIV risk factor.





CONCLUSION

- In this large cohort of PLWH in NYC, VLS of those who remained in care was stable during the first year of the COVID-19 pandemic
- 18% of patients had no VL monitoring during the COVID period
- A substantial portion of patients (15%) were lost to follow-up; i.e. not engaged in care nor monitored for VLS
- We saw a drop in primary care visits, while ART prescription rates were unchanged
- Black and Hispanic patients were at particular risk of rebound viremia in the COVID period
- Factors including age <35, being male or a transgender woman, Black or Hispanic race, and HIV risk factor of injection drug use or heterosexual sex were associated with viral non-suppression or no VL monitoring during COVID
- Strategies to retain patients in care and ensure suppression (e.g. with telehealth visits and care coordination) helped mitigate effects of the pandemic, but clinics must continue targeted efforts to re-engage patients, facilitate access to testing and low barrier care, and prevent longstanding loss to follow-up in at-risk groups

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RESULTS (contd.)

Adjusted models predicting viral non-suppression and loss to follow-up

	Viral non-suppression or no VL check	p-value	Viral non-suppression	p-value	No VL check	p-value	Rebound viremia	p-value
	aOR (CI)		aOR (CI)		aOR (CI)		aOR (CI)	
Male (ref: Female)	1.3 (1.2-1.5)	<0.001	1 (0.8-1.1)	0.8	1.5 (1.3-1.8)	<0.001	1 (0.8-1.3)	1
Transgender Woman	1.8 (1.2-2.7)	0.003	1.4 (0.9-2.4)	0.2	1.7 (1.1-2.8)	0.02	0.7 (0.2-2)	0.5
Age <35 (Ref: Age 50+)	1.7 (1.5-2)	<0.001	1.3 (1.1-1.5)	0.01	1.8 (1.6-2.1)	<0.001	1.1 (0.8-1.4)	0.6
Age 35-49	1.3 (1.2-1.4)	<0.001	1.1 (0.9-1.3)	0.2	1.4 (1.2-1.5)	<0.001	0.8 (0.7-1.1)	0.2
Black (ref: White)	1.4 (1.2-1.6)	<0.001	2.8 (2.3-3.5)	<.001	0.8 (0.7-1)	.01	2.1 (1.5-2.9)	<0.001
Hispanic	0.9 (0.8-1.1)	0.2	1.8 (1.4-2.2)	<.001	0.7 (0.6-0.8)	<0.001	1.8 (1.3-2.4)	<0.001
Heterosexual sex (ref: MSM)	1.5 (1.3-1.8)	<0.001	1.5 (1.2-1.8)	<.001	1.3 (1.1-1.5)	.004	1 (0.8-1.4)	0.9
IDU	1.7 (1.4-.2.2)	<0.001	2 (1.5-2.7)	<.001	1.1 (0.8-1.6)	0.6	1.2 (0.7-1.9)	0.4