New HIV Diagnoses and Community Viral Load During the COVID-19 Pandemic in Washington, DC

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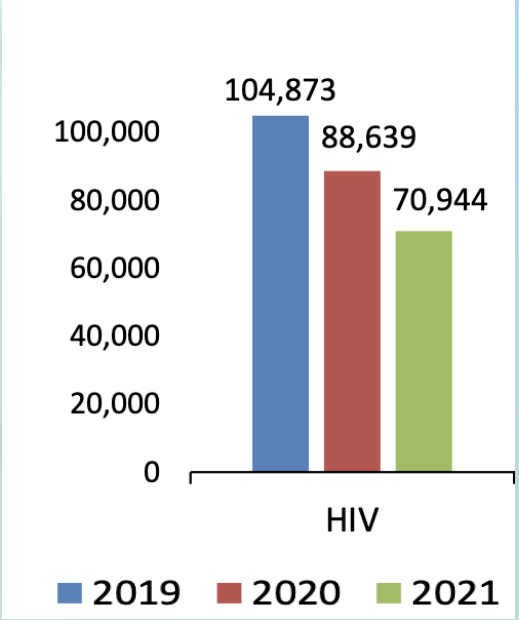
Background: Impact of COVID-19 Pandemic on HIV Services

- Widespread disruption to HIV prevention, care and treatment services during the COVID-19 pandemic
- HIV testing disruptions led to decreased testing, yet higher positivity rates among those tested
- Disruptions in HIV services may have led to increases in new and late HIV diagnoses as well as increases in community viral load (CVL)
- Overall progress may have slowed towards achieving the Ending the HIV Epidemic goals of HIV prevention and early diagnosis and treatment

Background: Pandemic Period HIV Services in Washington, DC

- Washington, DC is a priority jurisdiction for EHE efforts
  - HIV prevalence of 1.7% in 2022
  - Historically CVL was one of the highest in the US at 33,847 copies/ml (2008)
- New diagnoses city-wide have declined 85% from a peak of 1,374 cases in 2007 to 210 cases in 2022
- During the pandemic, DC Health reported
  - 32% decline in volume of HIV labs report received in 2021 vs. 2019
  - A decline in the number of new HIV diagnoses from Jan- April 2020 followed by an increase in the number of new diagnoses from May to July 2020

Volume of HIV laboratory reports received by DC Health, 2019-2021



Source: Castel et al, *AIDS* 2011, DC Health Annual Epi Report, 2022

Objective

To explore the impact of the COVID-19 pandemic on HIV services by measuring CVL and describing demographic and clinical characteristics of new diagnoses before and during the pandemic among a cohort of PWH in Washington, DC.

Methods: Data source

- DC Cohort longitudinal HIV study
  - Recruit patients from 14 HIV clinics in Washington, DC
  - Conduct monthly EHR data abstraction on >12,800 consented PWH
  - Ongoing prospective enrollment from January 2011-present
- Identified new HIV diagnoses, stratified by pandemic time-period:
  - Pre-pandemic: January 2017-March 2020
  - Peri-pandemic: April 2020-March 2023

Methods: Statistical Analysis

- Calculated frequency and prevalence estimates of new diagnoses by pandemic time-period and conducted bivariable analyses to compare by time-period
- Estimated CVL by quarter between 2017 and 2023 using most recent viral load measures
  - Total in care CVL: sum of all reported VLs among all PWH
  - Mean in care CVL: most recent VL among all PWH
- Produced Kaplan Meier survival curves for time to event for:
  - HIV diagnosis to first HIV care encounter
  - HIV diagnosis to ART initiation
  - ART initiation to viral suppression
  - HIV diagnosis to viral suppression

Results

Table 1: Demographic Characteristics among New HIV Diagnoses

	Pre-Pandemic (n=538)		Peri-Pandemic (n=93)		
	N	**%**	**N**	**%**	**P-value**
Age at diagnosis (median, IQR)	32	25, 44	32	27, 43	0.4465
Race/ethnicity					
Non-Hispanic Black	393	73.3	53	57.0	**0.0009**
Non-Hispanic White	55	10.3	9	9.7	
Hispanic	48	9.0	20	21.5	
Other/Unknown	40	7.5	11	11.8	
Gender (at consent)					
Female	109	20.3	22	23.7	0.1299
Male	419	78.2	67	72.0	
Transgender	8	1.5	4	0.30	

Table 1: Demographic Characteristics among New HIV Diagnoses (2)

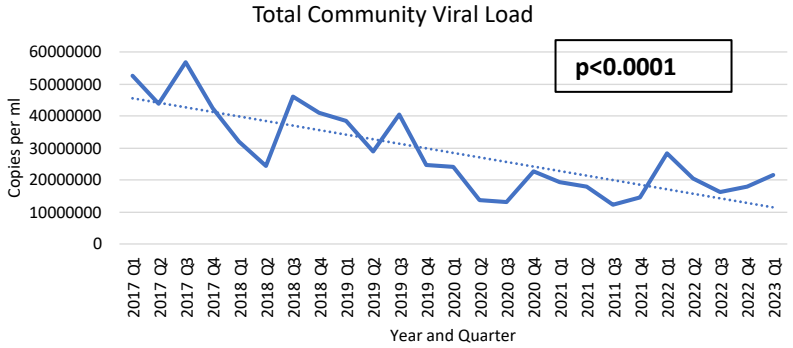
	Pre-Pandemic (n=538)		Peri-Pandemic (n=93)		
	N	%	N	%	P-value
Employment status					
Full time	140	26.0	34	36.6	**<0.0001**
Part time	16	3.0	7	7.5	
Student/retired/disabled	34	6.3	4	4.3	
Unemployed	75	13.9	23	24.7	
Unknown/missing	273	50.7	25	26.9	
Insurance (at consent)					
Public	204	38.0	45	48.4	**<0.0001**
Private	316	58.9	36	38.7	
Ryan White	11	2.1	10	10.8	
Other	6	1.1	2	2.2	

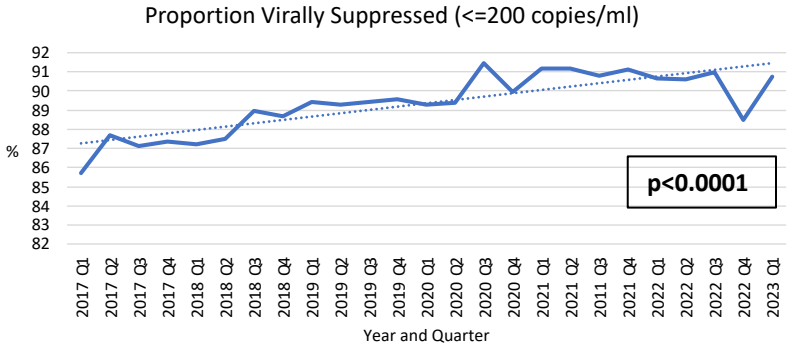
Table 1: HIV Characteristics among New HIV Diagnoses

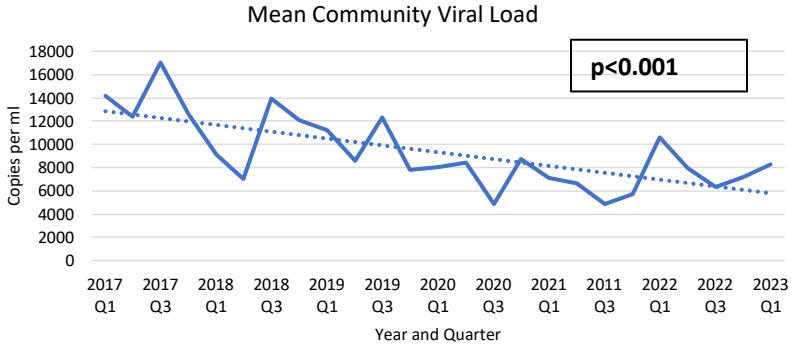
	Pre-Pandemic (n=538)		Peri-Pandemic (n=93)		
	N	**%**	**N**	**%**	**P-value**
HIV transmission risk					
High risk heterosexual	135	25.1	30	32.3	0.4656
IDU	11	2.0	2	2.2	
MSM	293	54.5	48	51.6	
Other	99	18.4	13	14.0	
Late HIV Diagnosis	142	27.3	30	33.7	0.2152
Most recent CD4 ≥200 cells/mm3	505	93.9	87	93.6	0.1792
Most recent VL suppressed (≤200 copies/mL)	329	79.7	67	95.7	**0.0003**
Most recent VL detectable (≥20 copies/mL)	164	31.4	22	25.0	0.2264

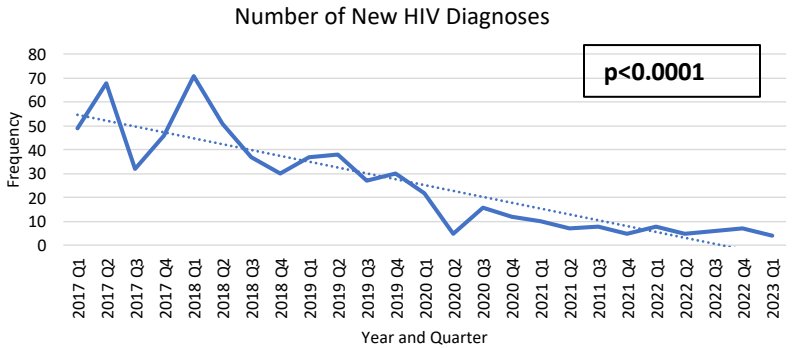
Trends in CVL, HIV Diagnoses and Viral Suppression #CONTINUUM2024

Figure 1: Community Viral Load Measures Among All DC Cohort Participants, January 2017-March 2023, n=11, 156

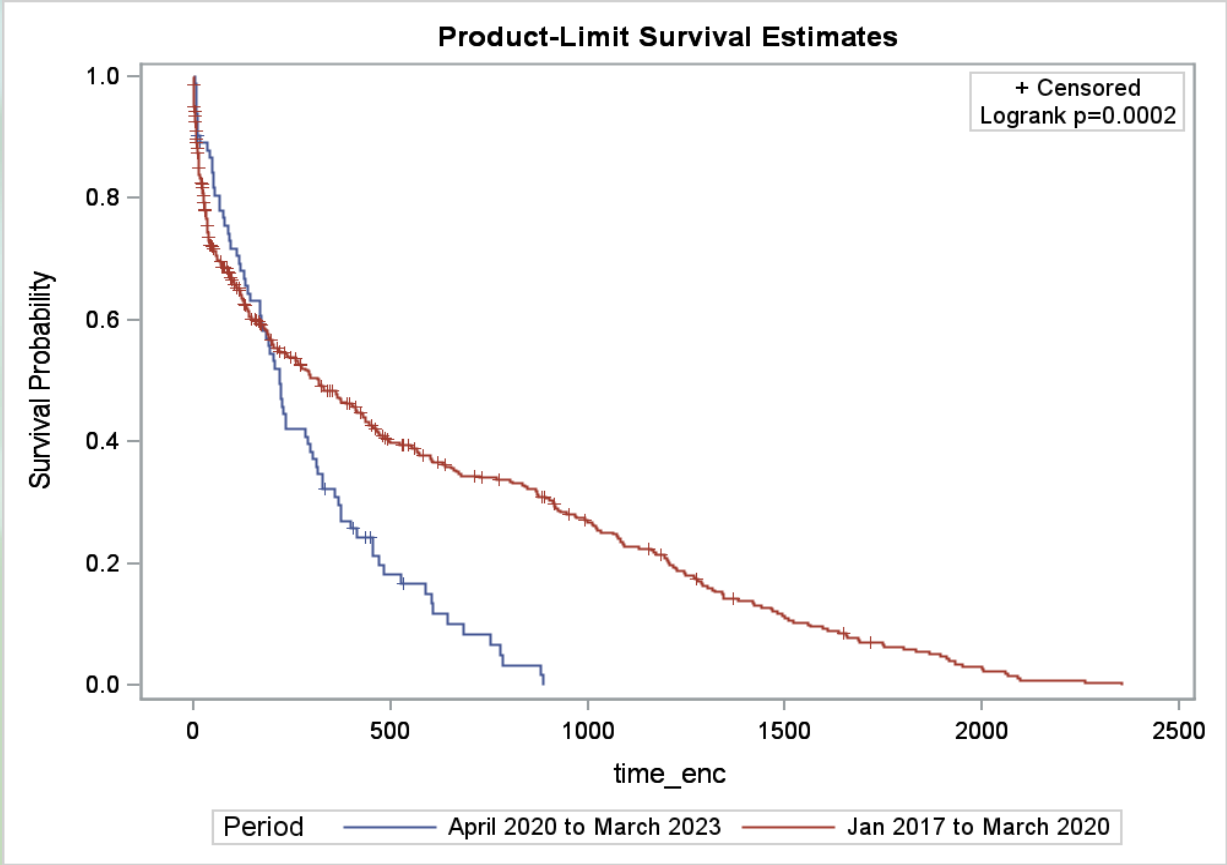




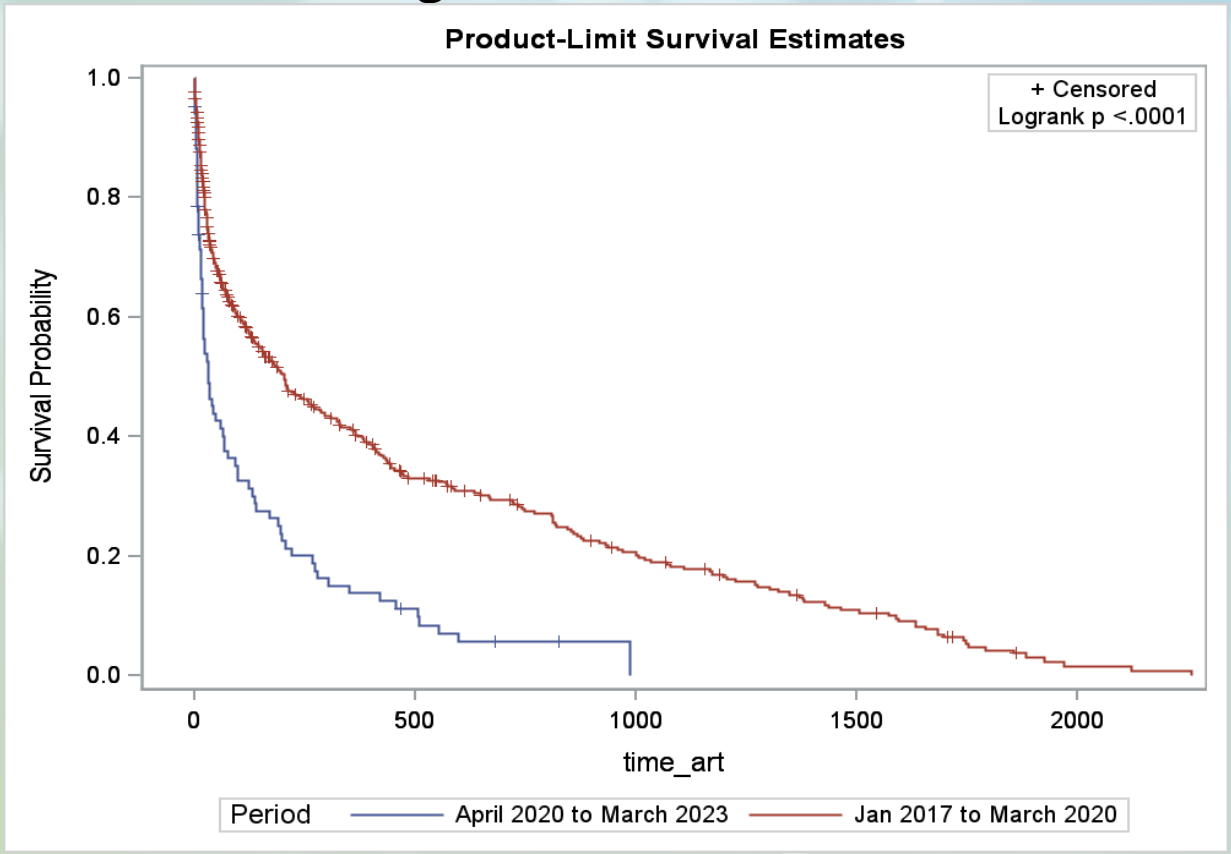




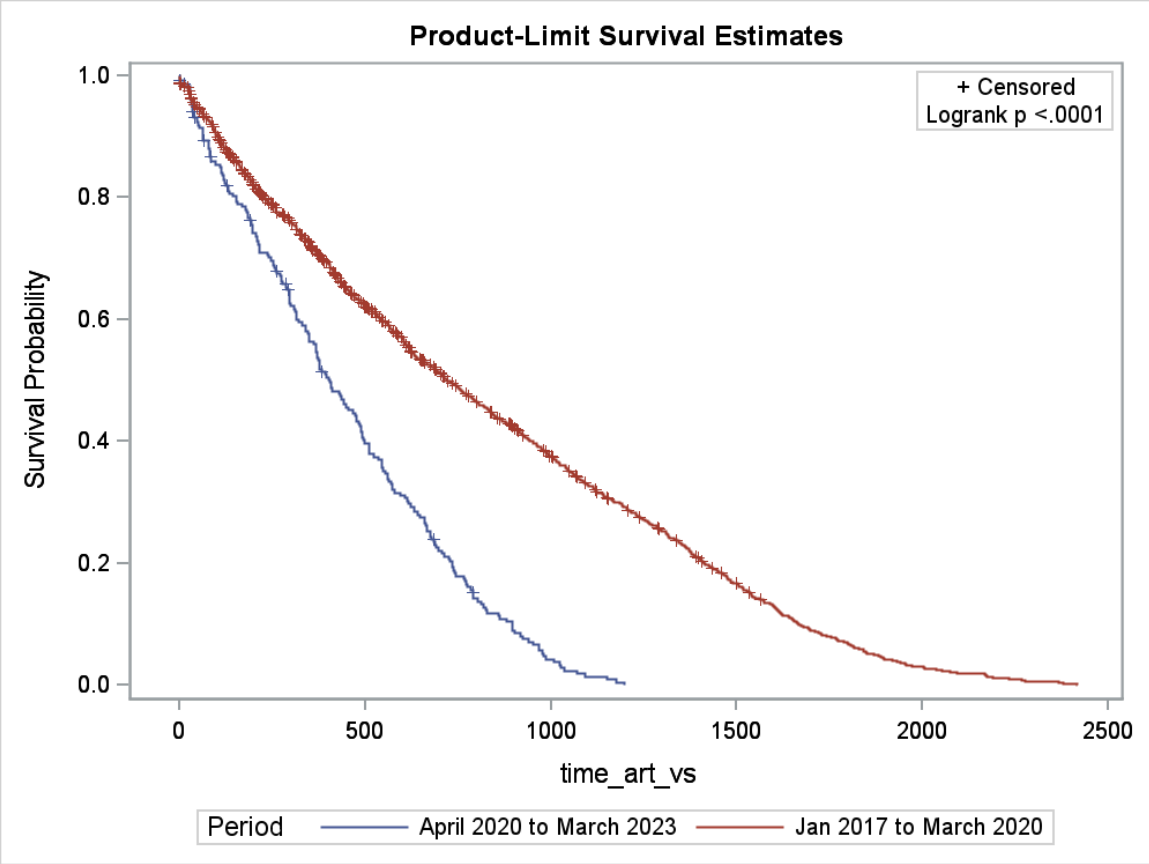
Survival Curves for Key Care Continuum Metrics: Time from HIV diagnosis to first HIV encounter



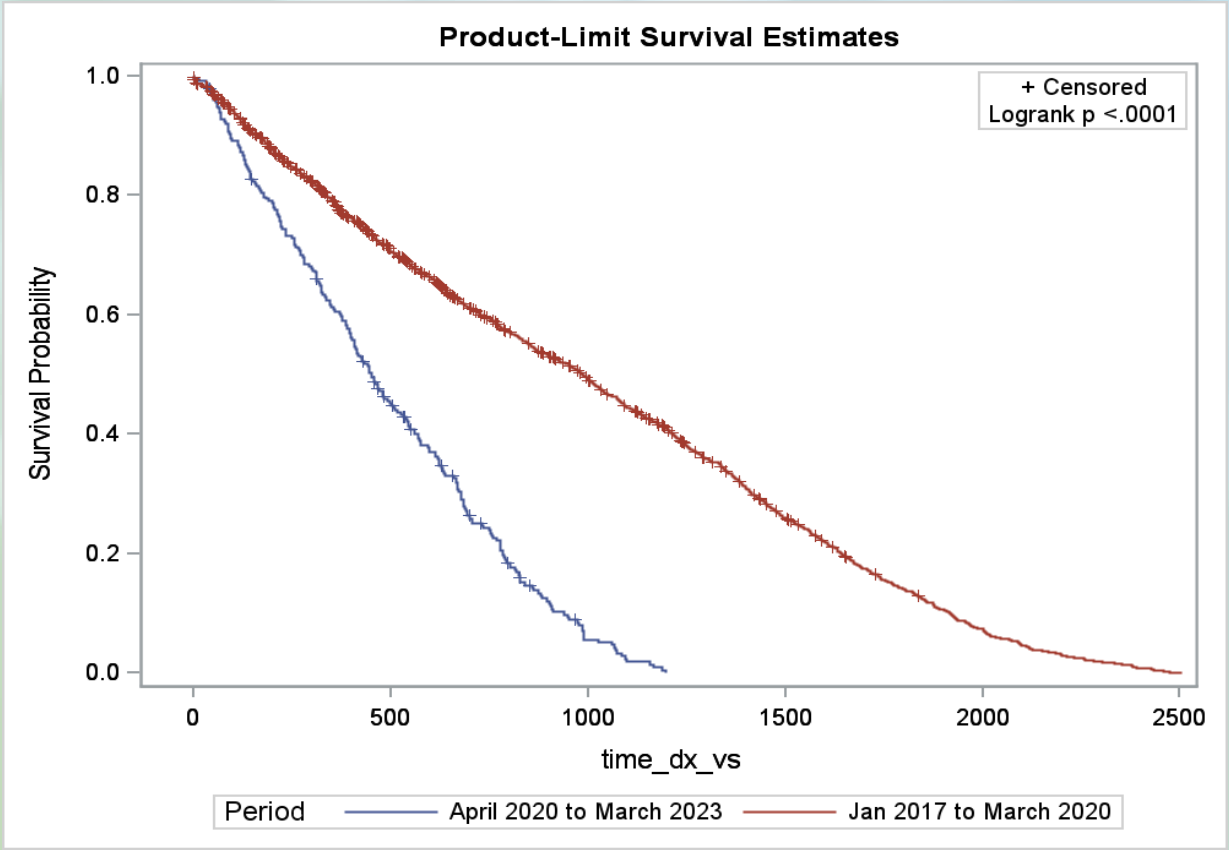
Survival Curves for Key Care Continuum Metrics: Time from HIV diagnosis to ART initiation



Survival Curves for Key Care Continuum Metrics: Time from ART initiation to viral suppression



Survival Curves for Key Care Continuum Metrics: Time from HIV diagnosis to viral suppression



Conclusions

- Despite COVID-19 pandemic disruptions to HIV services, we observed a decrease in CVL in our cohort of PWH.
- While new HIV diagnoses decreased during the pandemic
  - Certain demographic groups were disproportionally represented (Hispanics, unemployed, underinsured)
  - Demonstrates persistent health disparities in access to testing and HIV care
- New diagnoses during the pandemic experienced shorter time to first encounter, ART initiation, and viral suppression.
  - Might be explained by changes in clinical level services (e.g., prioritization of new diagnoses, availability of telehealth)
- As the pandemic ends, increased emphasis on HIV testing and access to HIV care will help identify delayed diagnoses and improve care continuum outcomes.

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Questions

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The DC Cohort

THE DC COHORT
Advancing HIV Care and Treatment in the District of Columbia

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