

# The DC Cohort: A Longitudinal City-Wide Status Neutral Cohort of People in Care in the District of Columbia

---

A summary of key elements and the scientific contributions of the  
DC Cohort study

Last Updated: March 2026

Email: [dccohort@gwu.edu](mailto:dccohort@gwu.edu)

Web: <http://go.gwu.edu/dccohort>

Funded by NIAID: R24AI152598



**THE DC COHORT**

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

# Outline

---

Study  
Background  
and Rationale

Organizational  
Structure

Participant  
Overview

Data Capture  
and Data  
Variables

Clinical  
Dashboard

Substudies  
and  
Collaborations



**THE DC COHORT**

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

# DC Cohort Overview

---

- The DC Cohort is a longitudinal research project that collects clinical data from over 14,200 consenting people with HIV receiving care at 14 HIV clinics in the District of Columbia.
- More recently the Cohort expanded to a Status Neutral Cohort and is enrolling people at higher risk for acquiring HIV (“Prevention Cohort”)
- The DC Cohort is funded by the National Institute of Allergy and Infectious Diseases (NIAID) [R24AI152598] of the National Institutes of Health (NIH).

# What is the DC Cohort?

---

- NIH funded: CTU (2009-2020), R24 (2020-2030)
- Longitudinal database of consenting PWH receiving outpatient care at 14 clinics in DC that contains information on:
  - Risk factors, diagnoses, lab results, treatments and procedures
  - Baseline data extraction followed by monthly EHR extractions into a centralized database
- City-wide initiative with academic, community and government clinics
- One of the largest HIV cohorts to date (>13,800 participants)
- Close collaboration with DOH to improve the completeness of information through periodic data linkages

# Strengths of the DC Cohort

Automated  
electronic data  
capture

Population-based  
longitudinal sample

Inclusion of PWH  
from pediatrics to  
geriatrics

Racially diverse  
cohort

Diversity of  
academic, hospital-  
based and  
community-based  
clinics

Unique Cohort-DC  
Department of  
Health database  
linkage

Quality of Care  
Clinical Dashboard

Public health and  
research resource



**THE DC COHORT**

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

# DC Cohort Goals and Objectives

---

- ❑ Initially funded through ARRA funds in 2009 with recruitment beginning in 2011
- ❑ Conducted in close collaboration with DC Health HIV/AIDS Hepatitis, STD, TB Administration (HAHSTA)
- ❑ Goals
  - Improve the quality of care and treatment of patients with HIV in DC
  - Provide evidence for gaps in care and needed resources
  - Contribute to and identify new areas for research on HIV and its treatment

# R24 DC Cohort Funding Aims (6/2020-5/2030)



**Aim 1:** Enhance our **robust population-level database** to improve the longitudinal characterization of care and outcomes for people at risk for and living with HIV in a high prevalence city of Washington, DC



**Aim 2:** Identify factors and strategies to **monitor and improve HIV prevention for people at risk for HIV and care and treatment for those living with HIV** in DC and beyond through scientific discovery



**Aim 3:** Leverage the DC Cohort as a valuable and dynamic population-based resource to support the **development and tailoring of pioneering interventions to optimize HIV prevention, clinical care, and treatment** towards ending the HIV epidemic



**THE DC COHORT**

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

# DC Cohort Fast Facts: Data Sources

---

- Clinics
  - 5 academic hospitals
  - 8 community-based clinics/FQHCs
  - 1 federal hospital
- 5 distinct EHRs
  - Epic (4)
  - eClinical Works (4)
  - Cerner (3)
  - Vista (1)
  - Touchworks (2)



THE **DC** COHORT

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

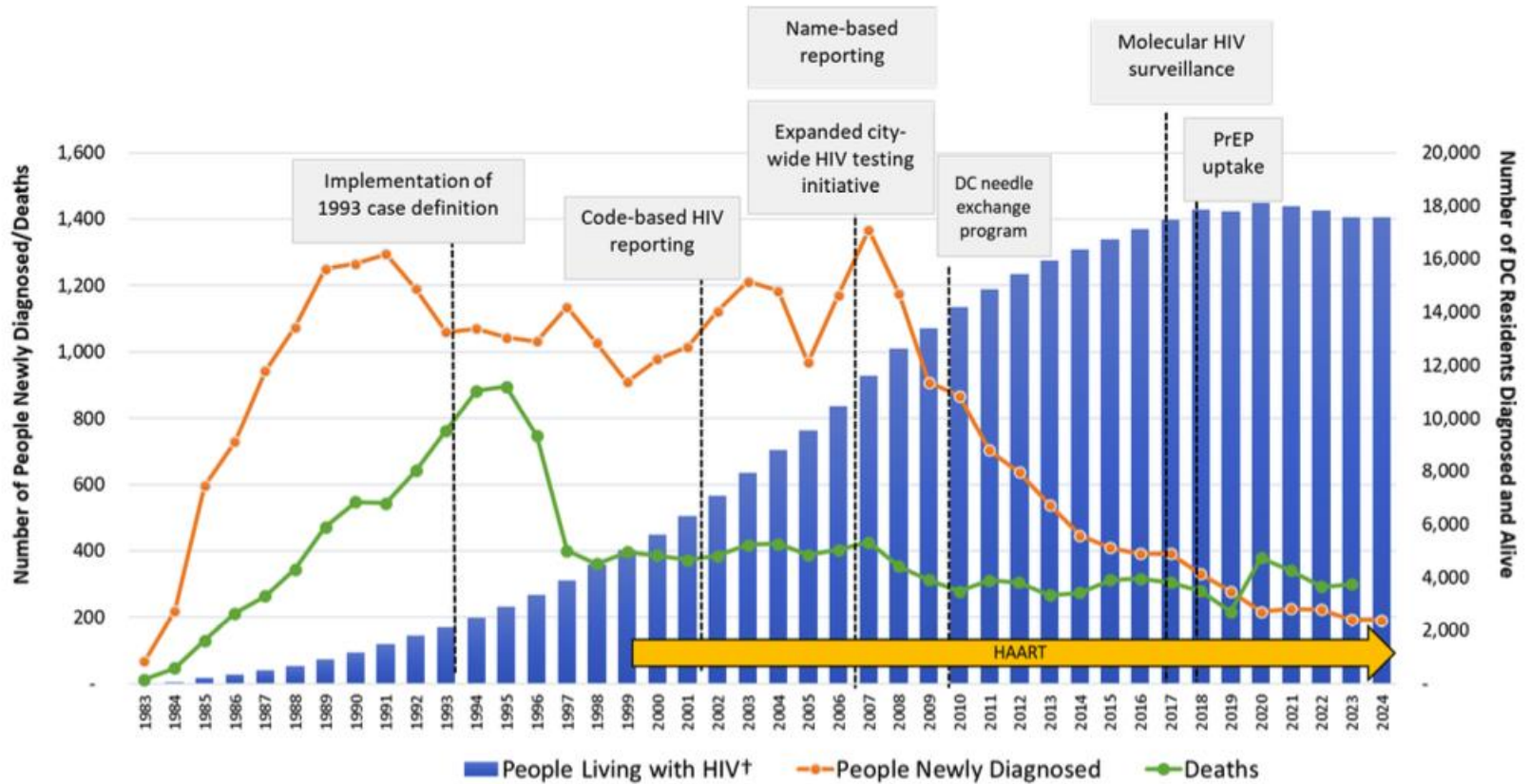
# DC Cohort Fast Facts: Participants

---

- ❑ Over 14,200 participants consented
- ❑ Longitudinal data available from >6.5K active participants from 14 sites
- ❑ Captured:
  - Approximately 107,000 person-years of data
  - ~975,000 encounters
  - 12.8 million labs
  - 98,000 procedures
  - 3.2 million diagnoses
  - 2.1 million treatments

# Trends in HIV in Washington, DC

Newly Diagnosed HIV Cases, Deaths and Living HIV Cases, by Year — Washington, DC, 1983-2024



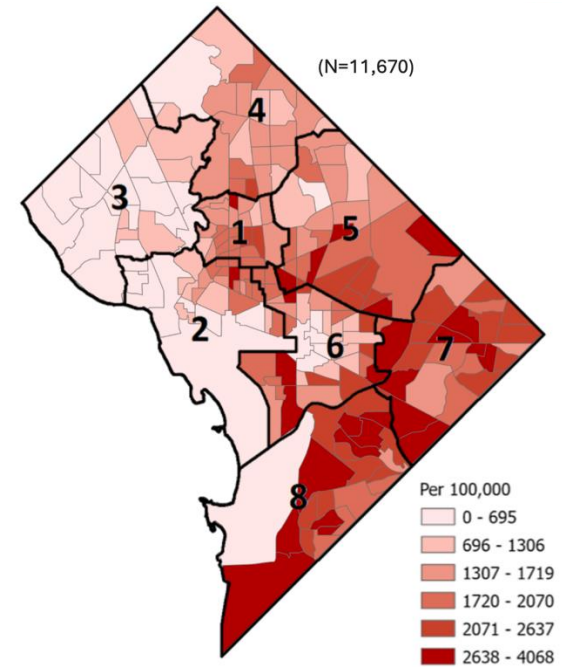
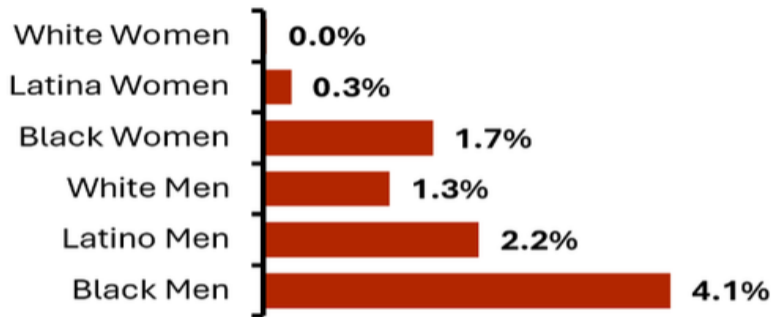
† People living with HIV who were DC residents at diagnosis \* 2024 deaths not available at time of publication



# People Living with HIV in Washington, DC, 2023

- 11,670 people reported to be living with HIV in DC at the end of 2023
  - 70% were Black
- 1.7% of the District's population diagnosed with HIV
- 55.2% are 50 yrs or older

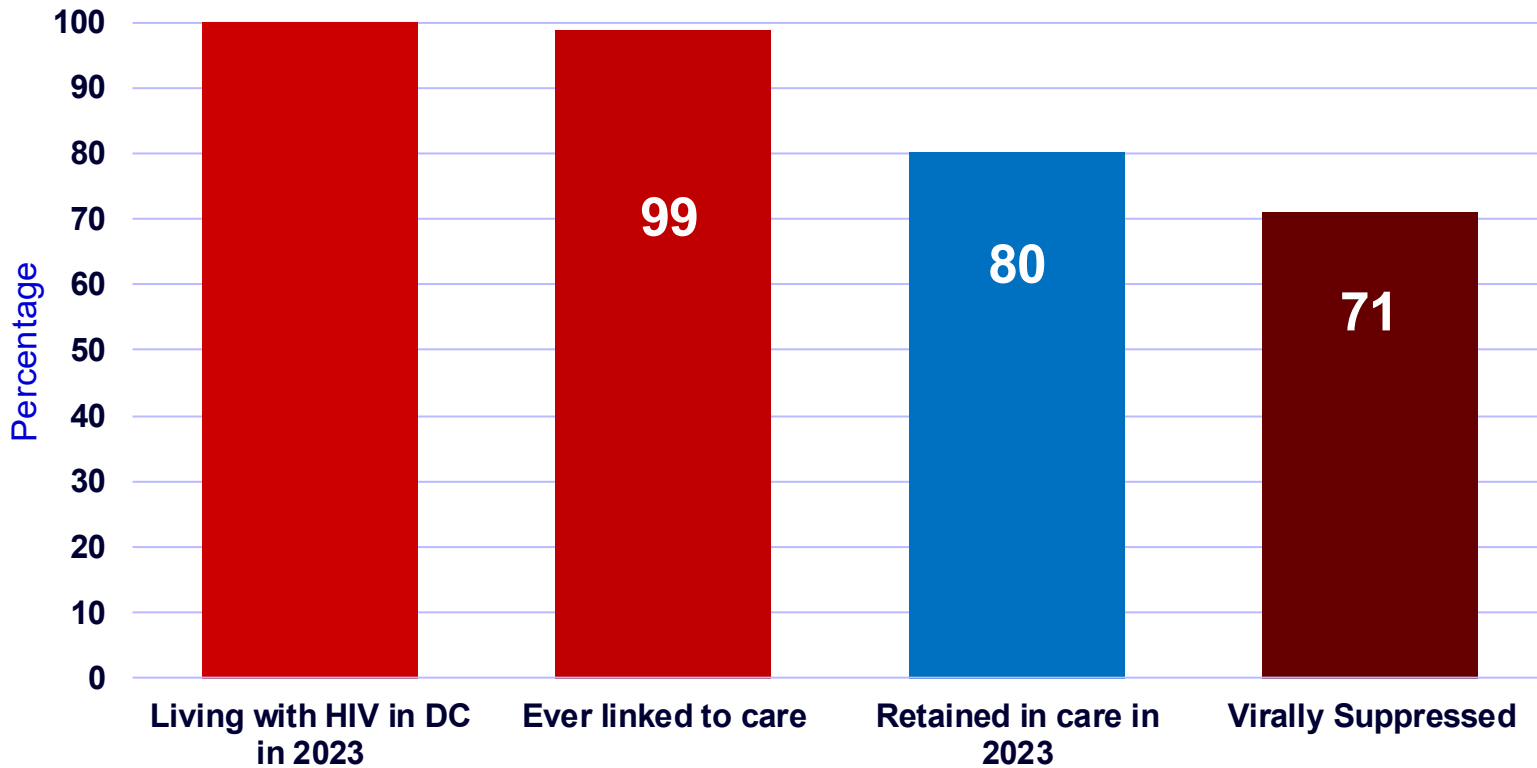
## Prevalence of HIV by Race/Ethnicity and Sex, 2023



People Living with HIV by Census Tract, 2023



# HIV Care Continuum among People Living with HIV, Washington, DC, 2023 (N=11,760)



Source: DC Dept. of Health, 2024, Annual Epidemiology and Surveillance Report

# The D.C. DOH Plan to End HIV



## D.C. plan goals

⑩ By 2030

⑩ 95% of HIV positive D.C. residents will know their HIV status

⑩ 95% of those with HIV will be on treatment

⑩ 95% of those on treatment will achieve viral suppression

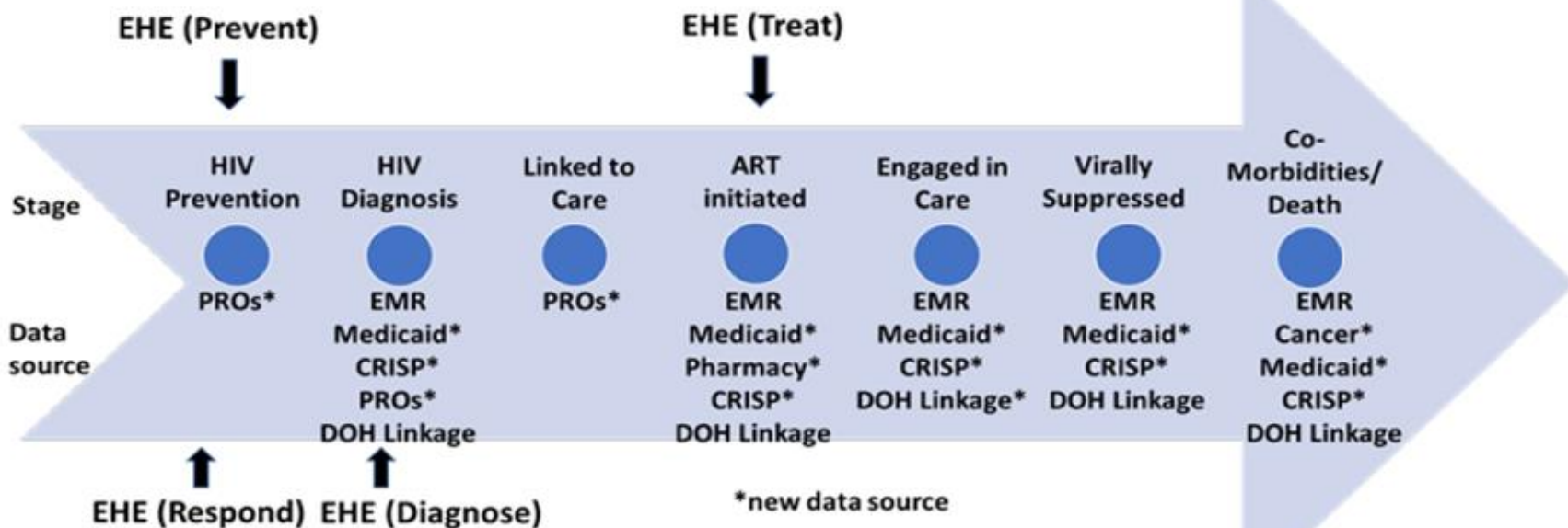
⑩ Fewer than 20 new HIV diagnoses per year by 2030

## DC Ending the HIV Epidemic Plan Goal Update, 2023

Ending the HIV Epidemic Measures	2019	2020	2021	2022	2023*	2030 Goal
Goal #1: 95% of HIV-positive District residents know their status*	93%	94%	94%	95%	N/A	95%
Goal #2: 95% of District Residents living with HIV are in treatment	80%	76%	78%	81%	80%	95%
Goal #3: 95% of District residents living with HIV who are in treatment reach viral suppression	87%	87%	86%	85%	88%	95%
Goal #4: Reduction in new HIV diagnoses	278	219	228	220	192	21

# DC Cohort Care Continuum

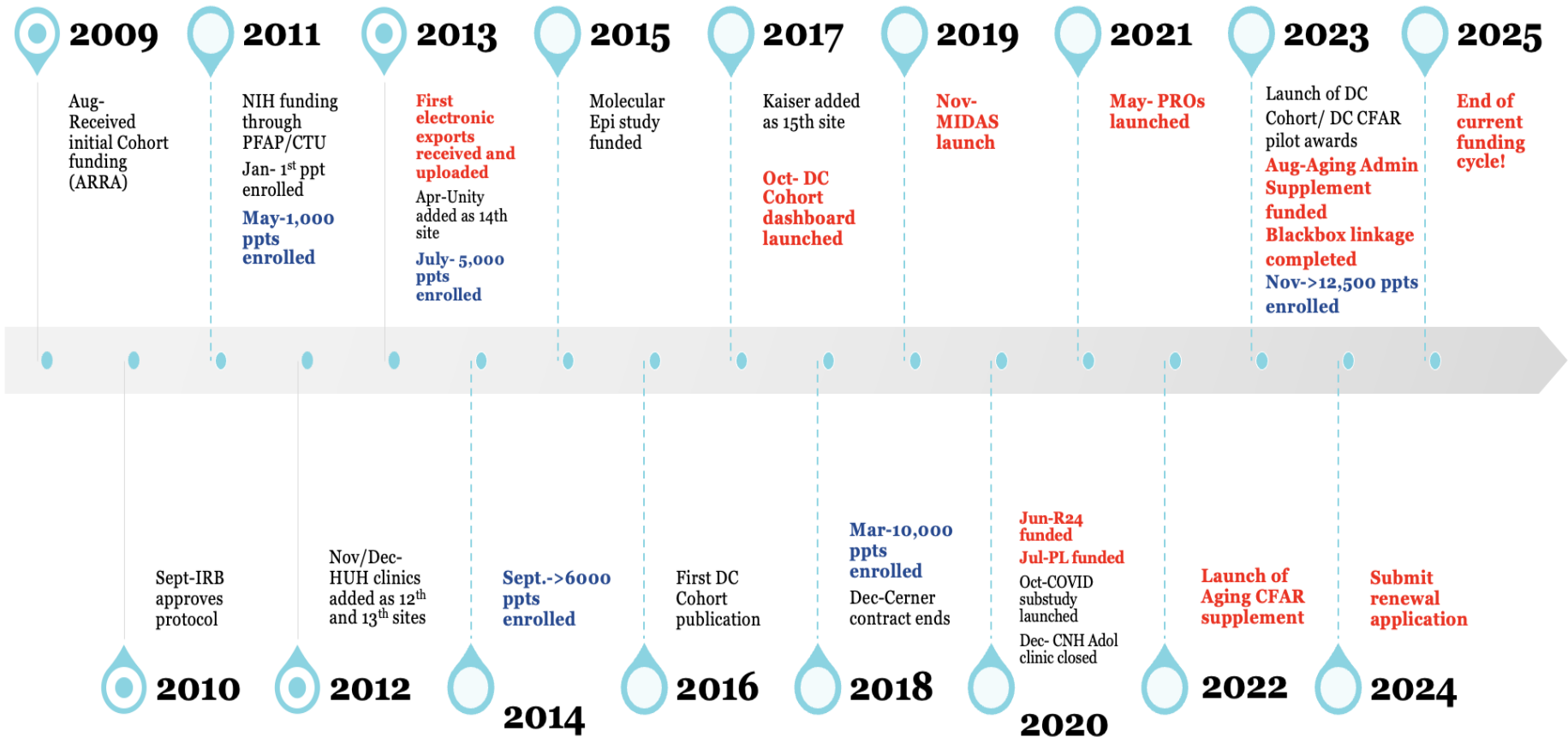
Fig 5. DC Cohort's Ability to Comprehensively Measure All Stages of the Care Continuum



**THE DC COHORT**

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

# DC Cohort Major Milestones 2009-2025



**THE DC COHORT**

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

# DC Cohort Study Leadership

---



Amanda D. Castel, MD, MPH  
Contact Principal Investigator



Ella Temprosa, PhD, MPH  
Multiple Principal Investigator

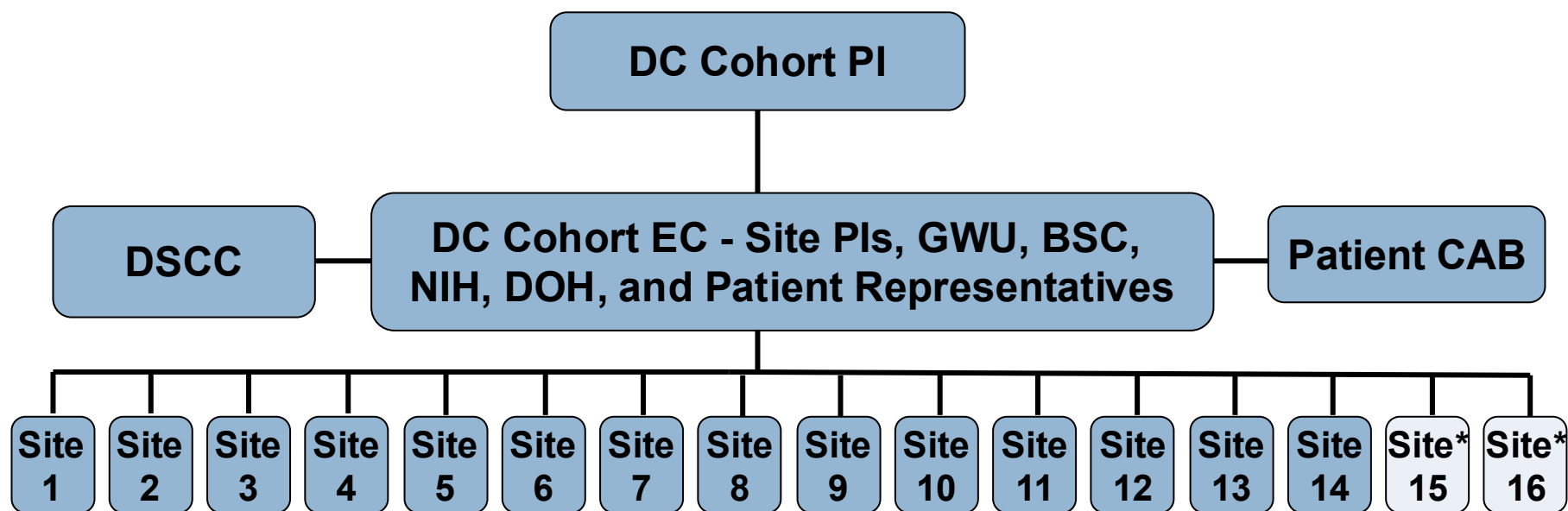


Alan Greenberg, MD, MPH  
Senior Co-Investigator



Megan O'Brien, PhD, MPH  
Project Director

# DC Cohort Organizational Structure



\*CNMC Adolescent clinic closed as of 2021; Metro Health closed as of July 2024

DSCC: Data and Statistics Coordinating Center

EC: Executive Committee

BSC: GWU Biostatistics Center

CAB: Community Advisory Board

# DC Cohort Clinics by EMR and Clinic Type

Clinic	EMR and Year of Implementation	Clinic Type
DC Veterans Affairs Medical Center	Vista-CPRS, 1994	Federal Hospital
Georgetown University	Cerner, 2016	Academic Hospital
Whitman-Walker Health	Epic, 2025	Community Based/FQHC
GWU Medical Faculty Associates	Epic, 2021	Academic Hospital
Family and Medical Counseling Service	eClinical Works, 2008	Community Based/FQHC
Washington Hospital Center	Cerner, 2016	Hospital
Children's National Health System Pediatric Clinic	Cerner, 2016	Academic Hospital
Howard Univ. Hosp. Pediatric Clinic	Touchworks, 2009	Academic Hospital
Howard Univ. Hosp. Adult Clinic	Touchworks, 2009	Academic Hospital
La Clinica del Pueblo	eClinical Works, 2008	Community Based/FQHC
Unity Health Care	Epic, 2025	Community Based/FQHC
Washington Health Institute	eClinical Works, 2013	Hospital
Kaiser Permanente	Epic, 2004	Non-profit
UHU	eClinical Works, 2008	Community Based



THE PRESIDENT JOHN F. KENNEDY SCHOOL OF GOVERNMENT

Advancing HIV Prevention, Care, and Treatment in the District of Columbia

# DC Cohort Sites and Principal Investigators

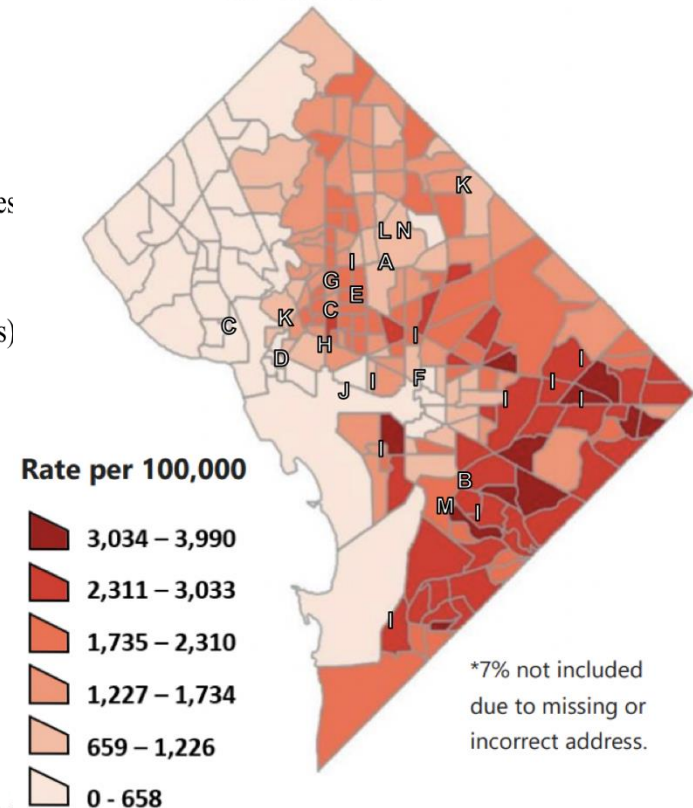
---

- ❑ Children's National Medical Center (N. Rakhmanina)
- ❑ Family and Medical Counseling Services (A. Wood, B. Ahmed)
- ❑ George Washington University Medical Faculty and Associates (M. Ruiz)
- ❑ Georgetown University (P. Kumar)
- ❑ Howard University Adult Clinic (J. Gajjala)
- ❑ Howard University Pediatric Clinic (S. Rana)
- ❑ Kaiser Permanente Mid-Atlantic States (M. Horberg)
- ❑ La Clinica Del Pueblo (A. Chaudry)
- ❑ Medstar Washington Hospital Center (A. Klein)
- ❑ Unity Health Care (G. Teferi)
- ❑ Us Helping Us (D. Hickson)
- ❑ Veterans Affairs Medical Center (R. Denyer)
- ❑ Washington Health Institute (J. Bordon)
- ❑ Whitman-Walker Institute (S. Abbott)
- ❑ Howard University Hospital (Adult Infectious Diseases) (R. Denyer)
- ❑ The Milken Institute of Public Health (A. Castel, A. Greenberg)

# Map of DC Cohort Sites

Rate of HIV Cases Living in the District by  
Census Tract, District of Columbia, 2022  
(N=11,747\*)

- |   |  |
|---|--|
| <b>A</b> Children's National Hospital         | <b>H</b> Metrohealth                           |
| <b>B</b> Family and Medical Counseling Servi  | <b>J</b> Us Helping Us                         |
| <b>C</b> Georgetown University                | <b>K</b> Washington Health Institute (2 sites) |
| <b>D</b> George Washington University         | <b>L</b> Washington Hospital Center            |
| <b>E</b> Howard University Hospital (2 sites) | <b>M</b> Whitman-Walker Health (2 Clinics)     |
| <b>F</b> Kaiser Permanente                    | <b>N</b> Veterans Affairs Medical Center       |
| <b>G</b> La Clinical del Pueblo               |  |



# Enrollment Progress as of March 31, 2026

Cumulative Enrollment in the DC Cohort as of March 31, 2026				
Site	Total Estimated Patients	Consented	Refused/ Withdrawn*	Undecided
Veterans Affairs Medical Center	1,300	1,188	196	131
Georgetown University	1,233	1,016	120	95
Whitman-Walker Health	3,795	2,457	470	258
George Washington Medical Faculty Associates	1,800	1,229	386	173
Washington Hospital Center	1,012	882	333	25
Family and Medical Counseling Service	880	772	79	30
Children's National Hospital Adolescent Clinic^	200	169	22	2
Children's National Hospital Pediatric Clinic	270	230	50	33
Howard University Hospital Pediatric Clinic	45	45	0	1
Howard University Hospital Adult Clinic	600	491	116	96
MetroHealth#	280	158	47	58
La Clinica del Pueblo	350	256	45	31
Unity Health Care	2,500	2,021	446	272
Washington Health Institute (formerly Providence Hospital)	1,335	822	95	64
Kaiser Permanente Mid-Atlantic	2,124	2,129	0	N/A
Us Helping Us	50	12	0	0
<b>TOTAL</b>	<b>17,774</b>	<b>13,877</b>	<b>2,405</b>	<b>1,269</b>

\*Total of 43 withdrawals as of March 31, 2026

^Children's National Hospital Adolescent Clinic is no longer open for enrollment

# MetroHealth recruitment ended July 2024

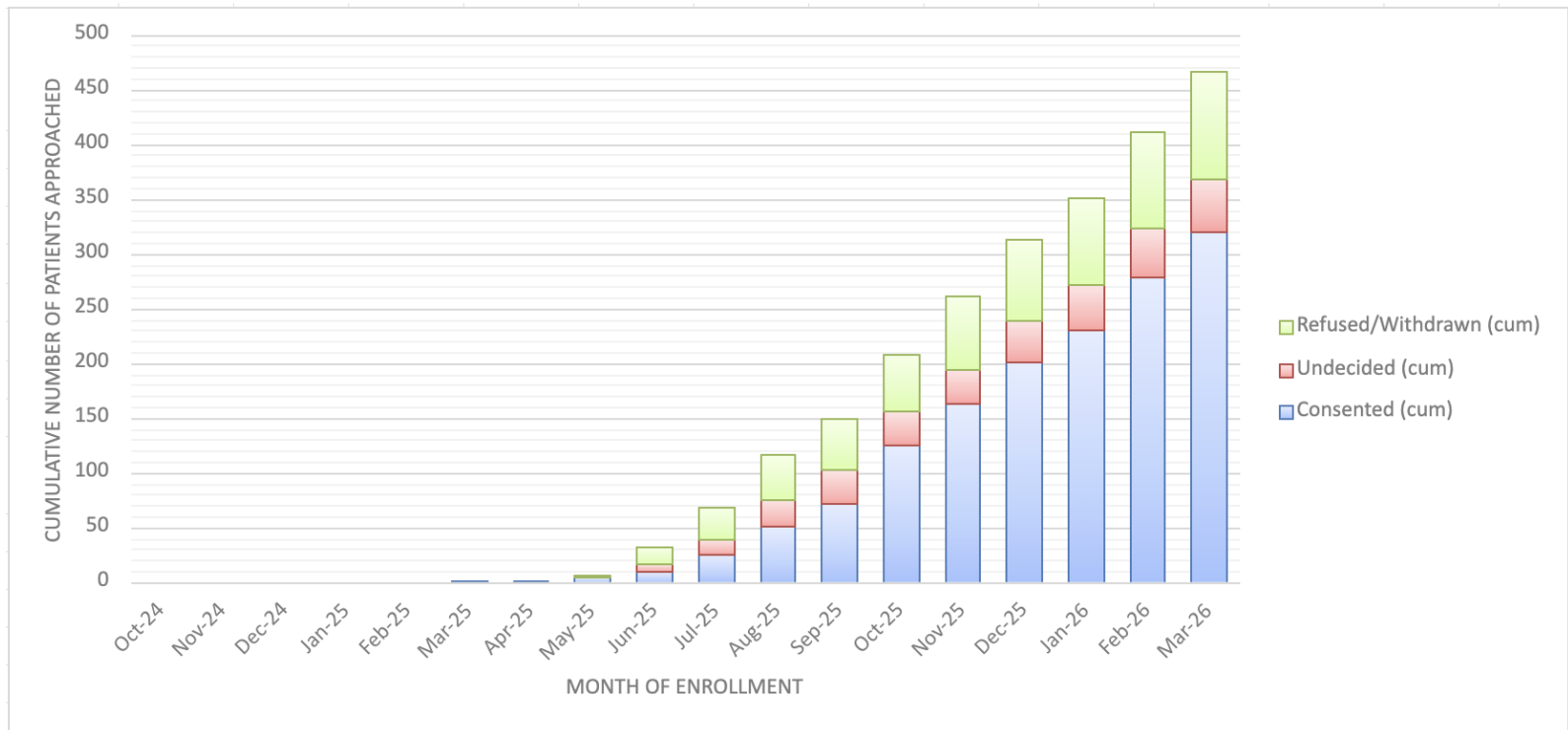
# DC Cohort Treatment Cohort Demographic Characteristics through March 31, 2026 (N=6,373)

Characteristic	n	%
Age (median, IQR)	57	(45,65)
Race (NH Black)	4806	75.4
Gender (Male)	4501	70.6
<b>HIV Transmission Risk Factor</b>		
MSM <sup>b</sup>	2882	45.2
Heterosexual	2070	32.5
IDU	257	4
Perinatal	103	1.6
ARV experienced at baseline	5718	89.7
<b>Baseline co-morbidities</b>		
Hypertension	2224	34.9
Mood Disorder	1496	23.5
Hepatitis C	554	8.7
Diabetes	783	12.3
Hepatitis B	246	3.9
Characteristic	Median	IQR
Length of HIV diagnosis in years at enrollment	11	(5,19)
CD4 cells/ $\mu$ l (most recent)	681	(480,913)
VL copies/ml (most recent)	20	(20,20)

# DC Cohort Prevention Cohort Demographic Characteristics through March 31, 2026 (N=563)

Characteristic	n	%
Age (median, IQR)	38	(32,47)
Race (NH Black)	217	38.8
Gender (Male)	513	91.8
<b>Eligibility Criteria for Prevention Cohort</b>		
Positive STI Test	22	3.9
2+ STI Tests	132	23.6
2+ HIV Tests	177	31.7
Qualifying Prescription <sup>a</sup>	530	94.8
High-risk Sexual Encounter	0	0.0
Injection Drug Use	0	0.0
ICD Code for HIV Exposure/PrEP	204	36.5
PrEP or PEP experienced at baseline	516	92.3
<b>Baseline co-morbidities</b>		
Hypertension	102	18.2
Mood Disorder	100	17.9
Hepatitis C	2	0.4
Diabetes	24	4.3
Hepatitis B	0	0.0

# Summary of Prevention Cohort Enrollment through March 31, 2026



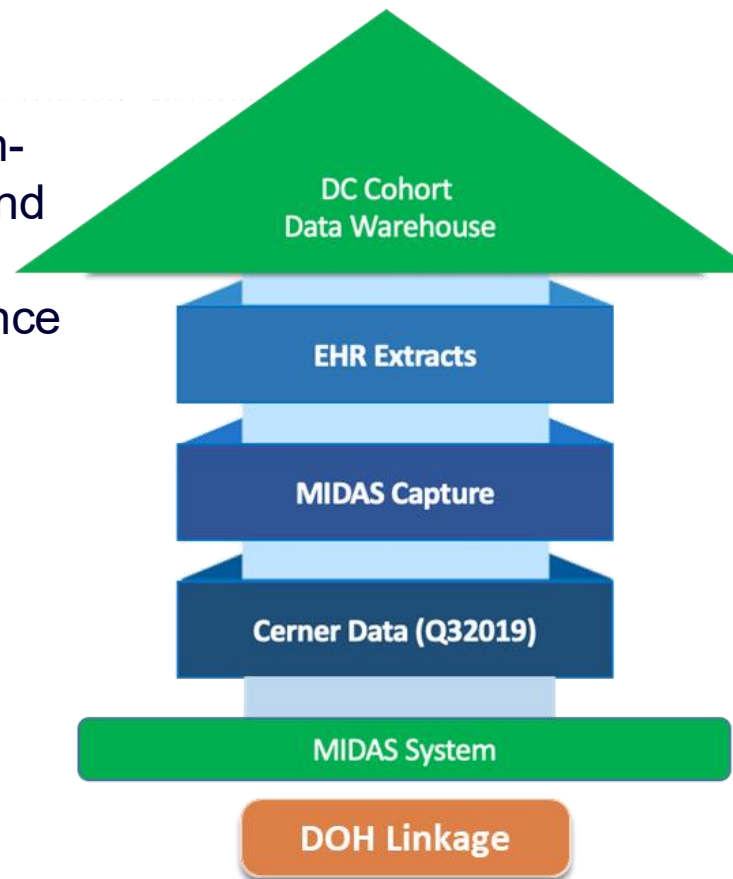
- Six participating sites (WWH, Kaiser, Us Helping Us, DC VAMC, WHI, GW MFA)
- Enrollment started in October 2024 with sequential addition of sites and eligibility criteria

# Summary of Accumulated Data as of April 20, 2026

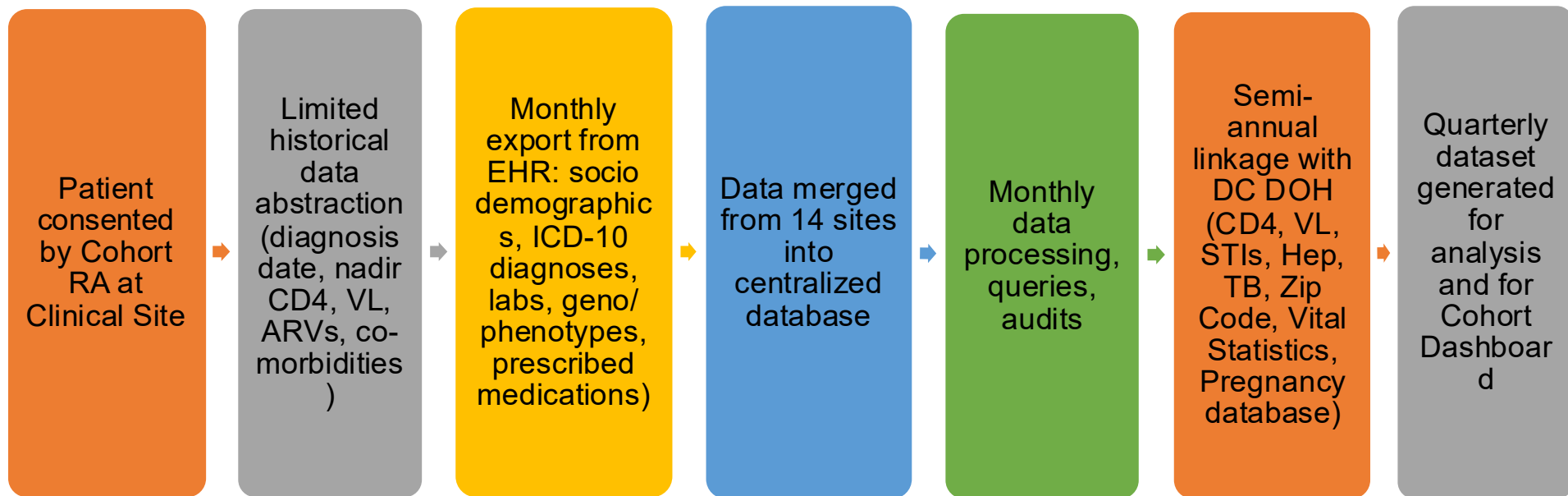
Domain	Q3 2019	Current as of Apr 26	% Increase (since Q3 '19)
Encounters	61,035	1,021,901	1575%
HIV Encounters	-	264,701	
Labs	3,904,621	13,682,482	250%
Procedures	7,816	308,326	3845%
Diagnoses	427,794	3,349,198	683%
Treatment	87,800	2,273,976	2490%

# Data Management Summary

- **Overarching Goal:**
  - Maintain and expand our robust population-level data repository to comprehensively and longitudinally track treatment of and outcomes among PLWH in a high prevalence city.
  
- **Specific Goals:**
  - Balance quality and quantity of data
  - Efficiency and sustainability of the data infrastructure
  - Robust data – data quality by design
  - Harmonization of disparate practices, and systems



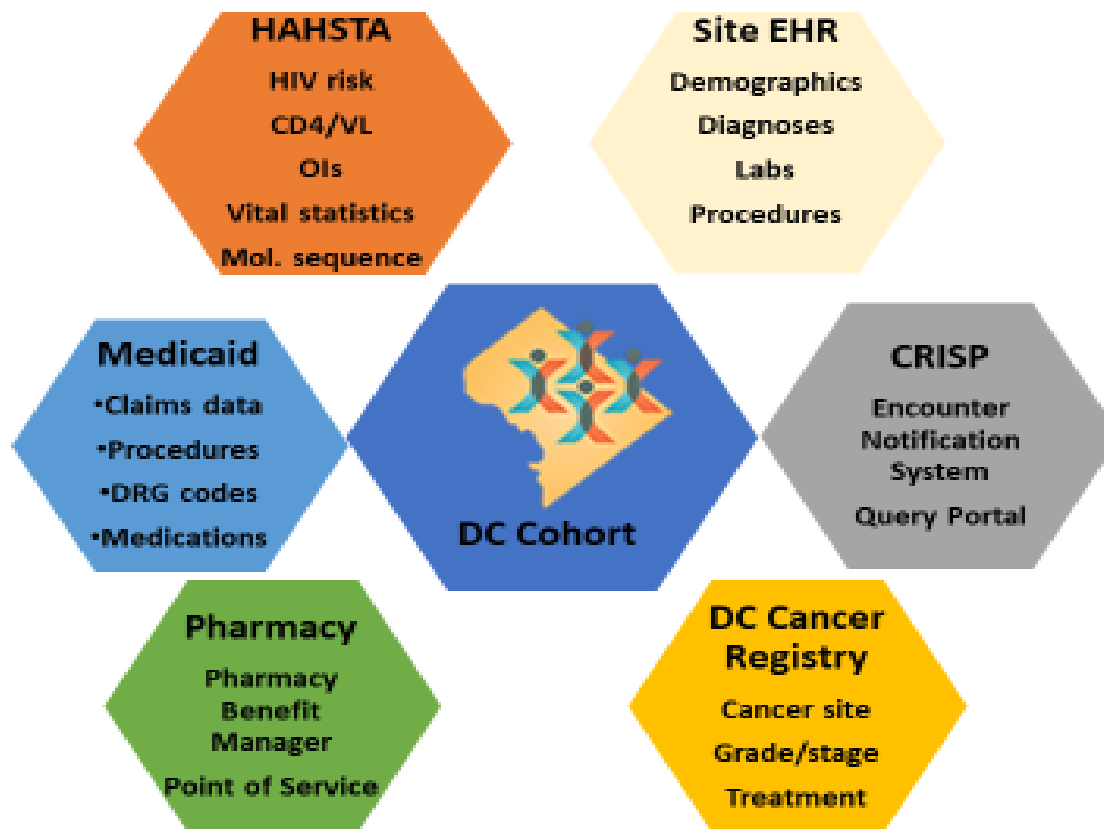
# DC Cohort Consent and Data Flow



**THE DC COHORT**

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

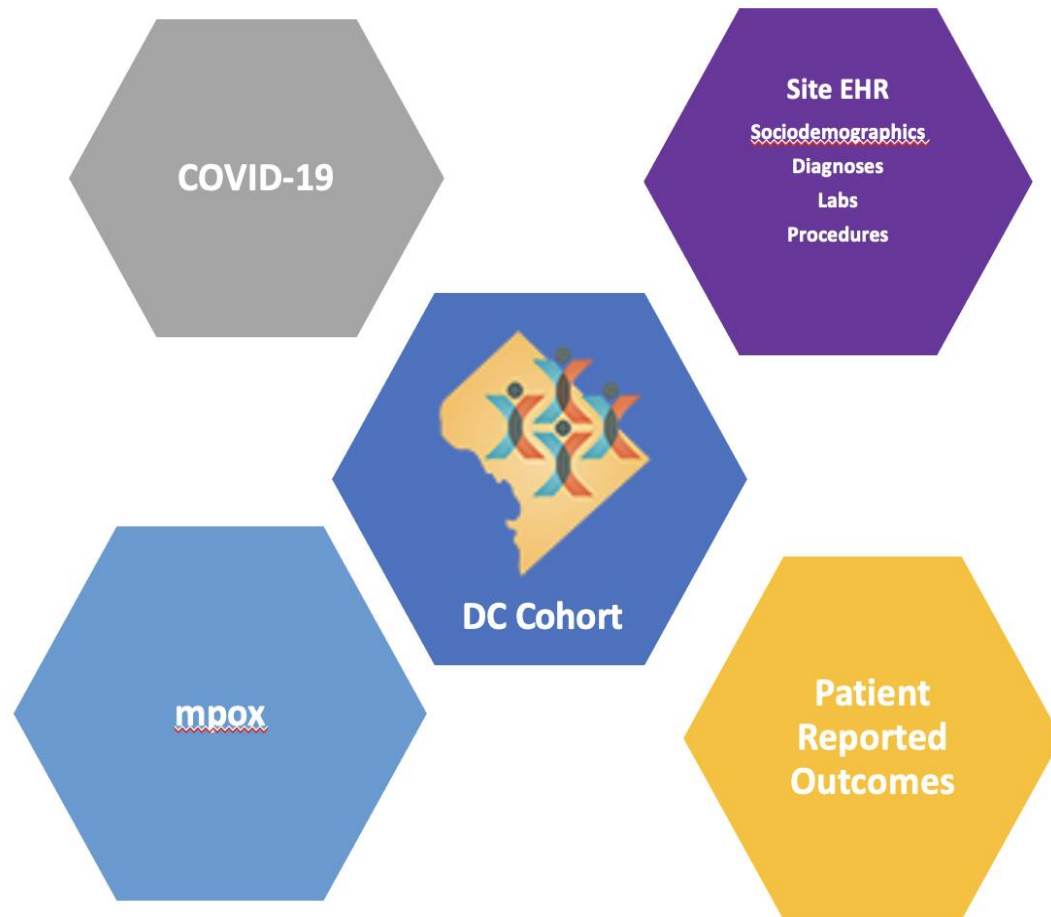
# DC Cohort Data Linkages (in Progress)



**THE DC COHORT**

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

# DC Cohort Existing Data Linkages



# MIDAS

## (Multi-modal Integrated Data Acquisition System)

---

- A web-based data acquisition system developed by the GW Biostatistics Computing Center which can support direct data capture or paper-based studies
  - includes data validation, datacheck reporting, and interactive datacheck resolution
  - provides interactive development of data dictionaries, form layout and formatting, range and value checking, missing value reporting



THE DC COHORT

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

# Data Export: Getting All 14 Sites to Monthly Extract

**DC Cohort**  
14 Sites

**Enrolled Ppts in Last 6  
Months**  
11 Sites

**Full Data Extract**  
13 Sites

**Monthly Extract**  
12 Sites



**THE DC COHORT**

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

# Types of DC Cohort Data Collected

---

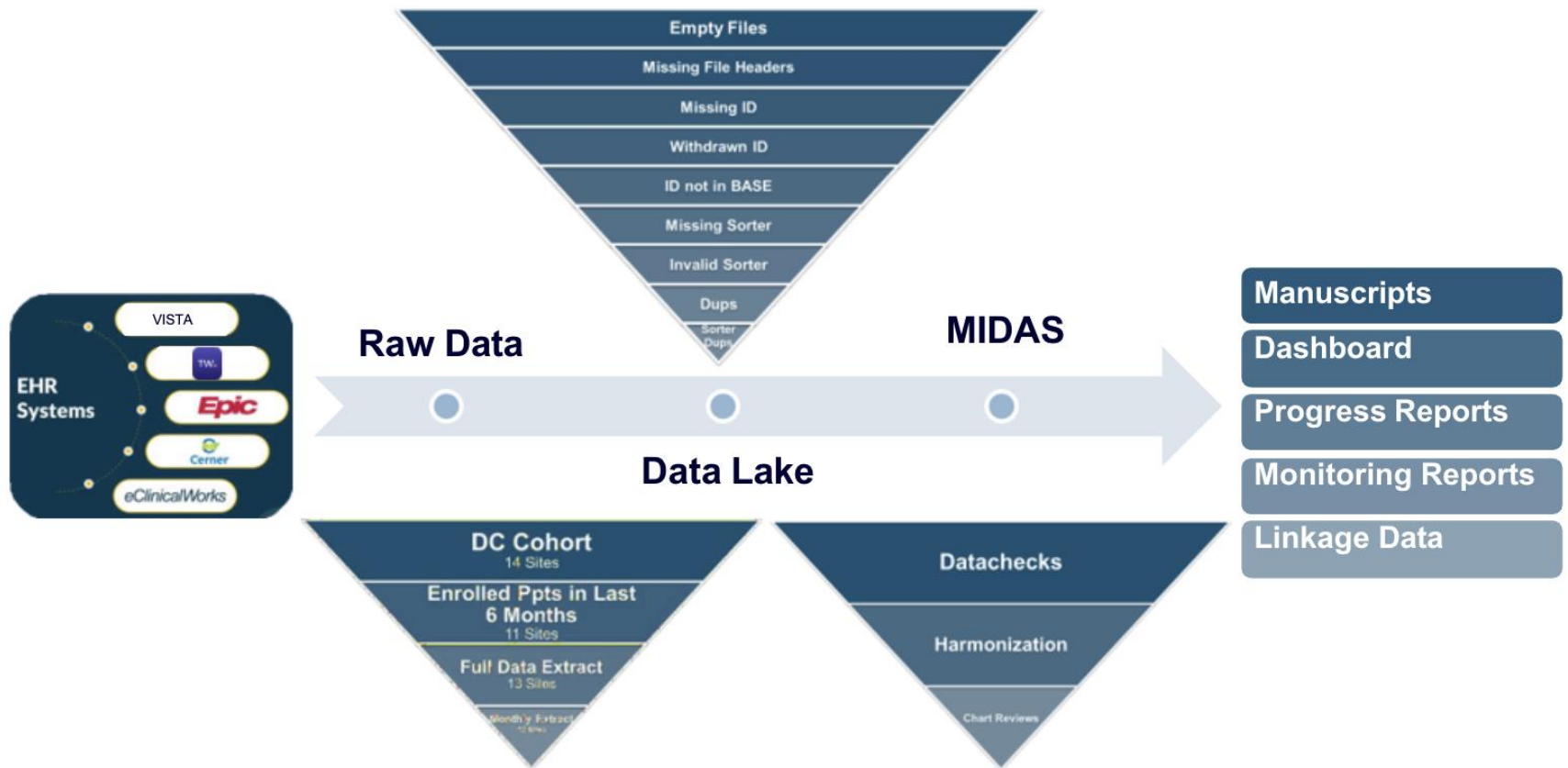
- ❑ Demographics
- ❑ General risk factors (e.g., smoking, substance use)
- ❑ HIV diagnosis history
- ❑ Social factors (e.g., housing, employment)
- ❑ Pediatrics
- ❑ Encounters
- ❑ Diagnoses
- ❑ Treatments
- ❑ Endocrinology labs
- ❑ Hematology labs
- ❑ Hepatitis labs
- ❑ HIV labs
- ❑ Lipid profile
- ❑ Liver function tests
- ❑ Other chemistry
- ❑ Serology/virology
- ❑ Phenotype
- ❑ Genotype
- ❑ Trofile
- ❑ Procedures
- ❑ Pathology labs
- ❑ ARV medications
- ❑ Birth type
- ❑ Biopsy type/results
- ❑ C/P/N/U



**THE DC COHORT**

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

# Data Pipeline with QC by Design



**THE DC COHORT**

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

# Data Quality (MIDAS Datachecks)

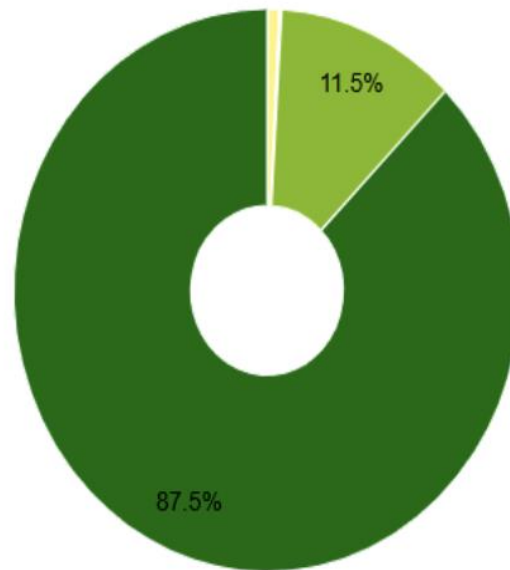
Latest Validation Date: 2026-01-21 21:00:04.0  
Latest Report Date: 2026-01-22 23:59:49.0

All Datachecks

All Datachecks Analytics ▾

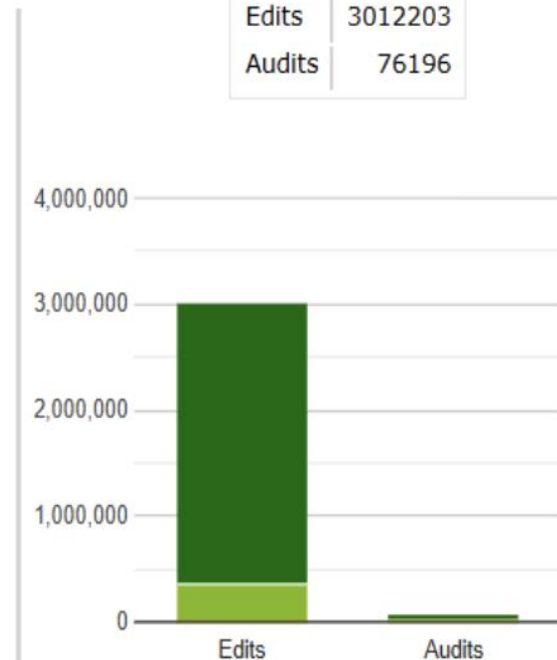
## By Status

Incorrect Scripts		
Bad Criteria	1689	0.1%
Script Bug	0	0%
In Review		
Hold	22259	0.7%
Pending	4770	0.2%
Done		
Explained	356147	11.5%
Fixed	2703534	87.5%



## By Criteria Type

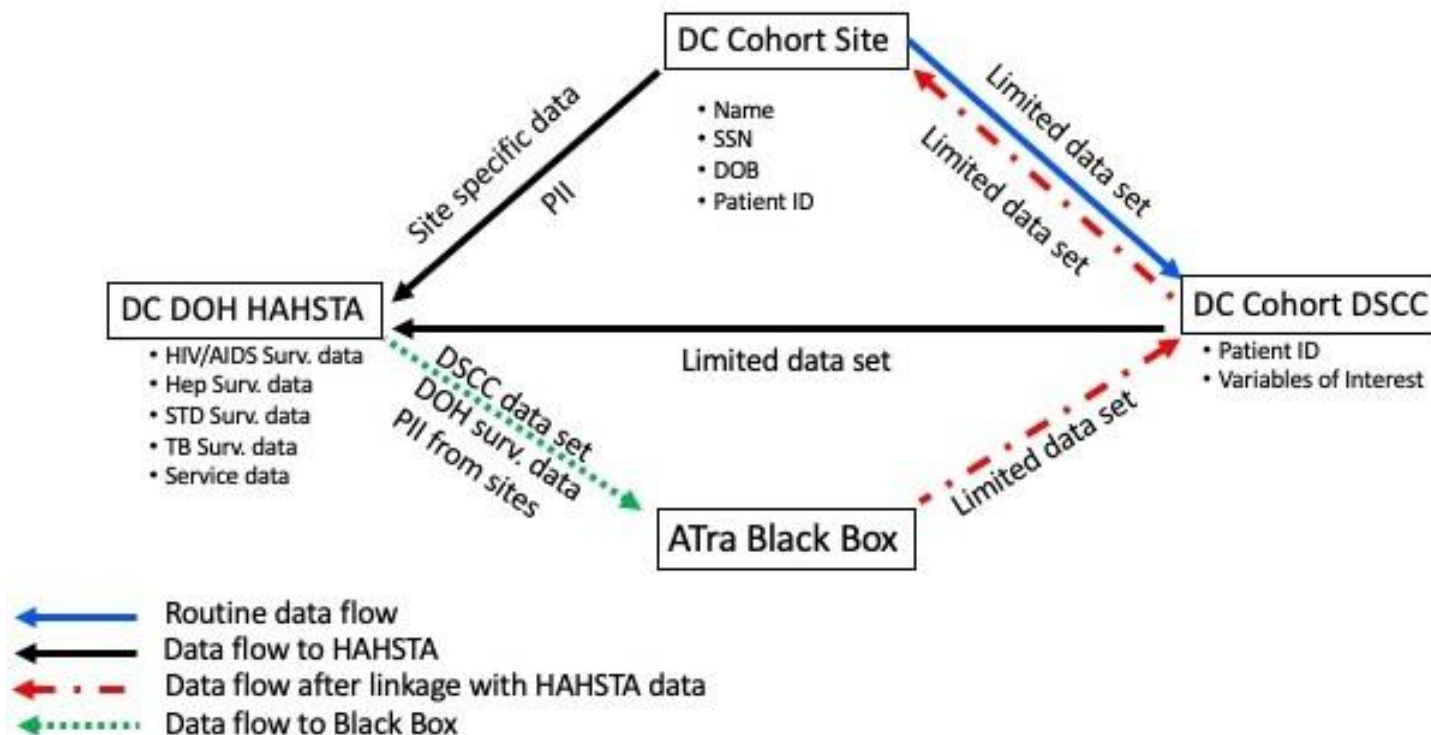
Edits 3012203  
Audits 76196



# Data Linkages - DC DOH HAHSTA



## ○ DC Cohort Data Synergy



THE DC COHORT

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

# Dashboard Goals and Objectives

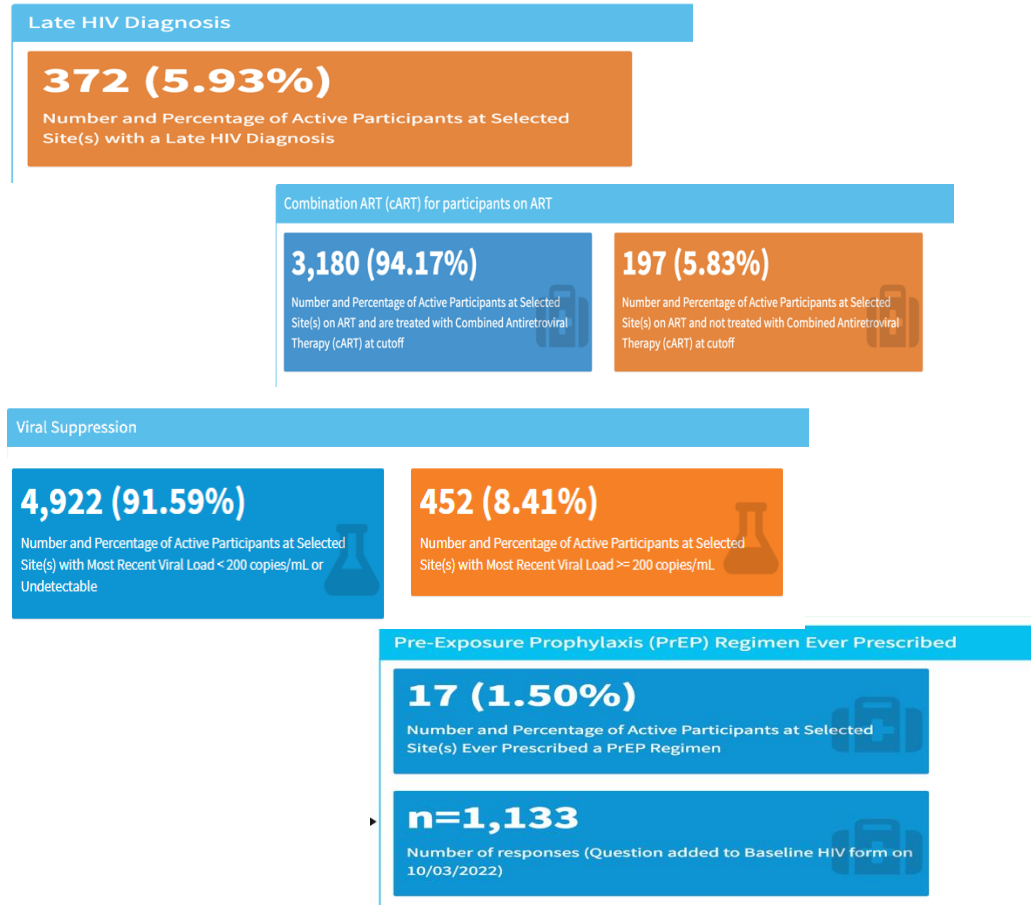
---

- **Goals:**
  - Provide timely data to assist the Principal Investigator and Research Assistant(s) at each DC Cohort site in managing and improving the quality of care for HIV-infected patients at that site.
  - Provide actionable measures pertinent to HIV care at both the patient and population level.
  - Enable the Principal Investigators and Research Assistant(s) to measure overall quality of care for the site by visualizing a core set of indicators on patient outcomes.
  - Assist in identifying patients who may not be meeting defined HIV care goals so that staff can intervene when necessary.

# Improving the Quality of Care through the DC Cohort Clinical Dashboard: Monitoring EHE Outcomes

## EHE pillars and the DC cohort

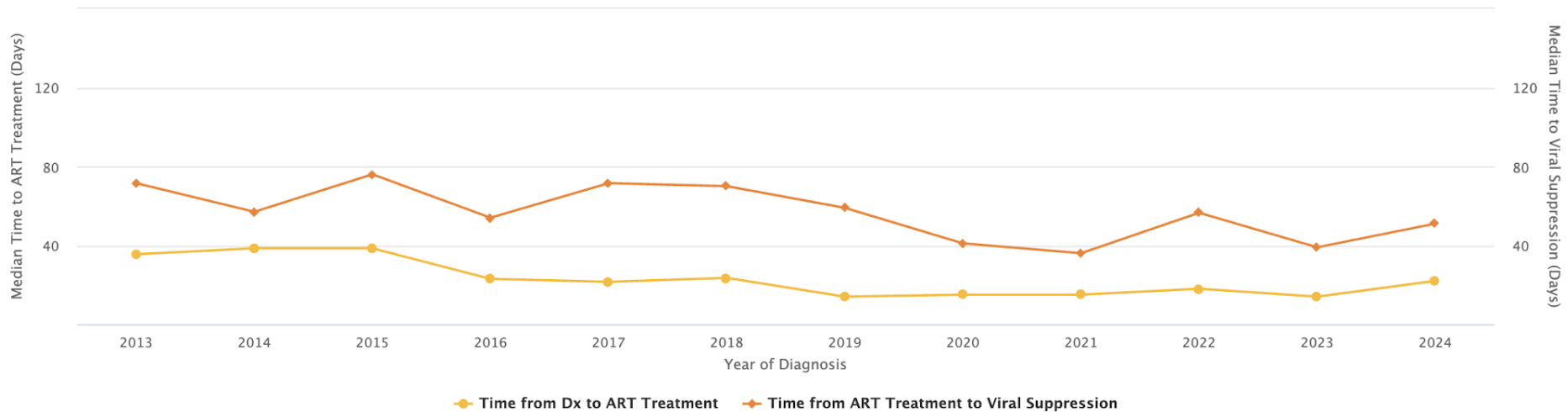
- ❑ *Diagnose*
  - ❑ Track all new diagnoses
- ❑ *Treat*
  - ❑ Monitor time to ART initiation
  - ❑ Check that on the recommended ART regimens
- ❑ *Prevent*
  - ❑ Track missed opportunities for prevention through the history of PrEP use
- ❑ *Respond*
  - ❑ Collect viral sequences through DOH linkage and assess for clusters (on hold)



# Longitudinal Measures: Time to ART Initiation and Time to Viral Suppression

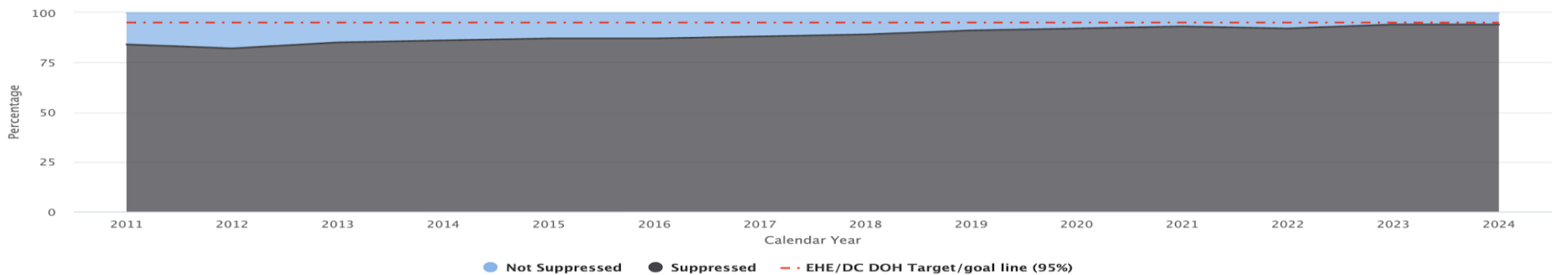
## Time to ART Initiation and Viral Suppression

Trends in Time to ART Initiation and Time to Viral Suppression



## Viral Suppression

Trends in HIV Viral Suppression Indicator



HIV viral suppression measured is the percentage of patients with  $\geq 1$  HIV care visit in January to June of a given calendar year who had an HIV RNA  $\leq 200$  copies/mL as their last measurement in the year

# DC Cohort as a Platform for Substudies (1)

## Molecular Epidemiology (Admin. Supplement)

- Characterize phylogenetics, transmission patterns and behavioral risks for transmission among PWH (N=218); ended 11/2020

## Impact of COVID-19 on PWH (COVID-19 Admin. Supplement)

- Cross-sectional survey via REDCap to assess incidence and impact of COVID-19 among PLWH (N=2,308)
- Added mpox questions August 2022 (N=503)
- Ended 6/2023

## Patient Reported Outcomes (PI: Monroe)

- Gathering patient reported data to complement EHR abstraction with a focus on mental health and substance use (all participants annually; N=1,328 baseline, N=295 annual)



**THE DC COHORT**

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

# DC Cohort as a Platform for Substudies (2)

## Positive Links R01 (PI: Castel, Ingersoll [UVA])

- Cluster randomized trial of an mHealth app to improve retention in care and viral suppression (N=560)

## HIV and aging (PI: Monroe, CFAR supplement)

- Funding to support research on polypharmacy/potentially inappropriate prescribing among older PWH

## Aging and HIV among MSM (PD: Malone, Aging Administrative Supplement)

- Funding to support research on how sexual minority status and aging impact the relationship between mental health and HIV viral suppression and ART



**THE DC COHORT**

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

# DC Cohort as a Platform for Substudies (3)

## COVID-19 Supplement: Missed Opportunities

- Aimed to better understand newly diagnosed people and barriers to HIV prevention in the DC Cohort during the COVID-19 pandemic (March 2020 – March 2023). Included chart abstractions and in-depth interviews (IDIs) of persons diagnosed with HIV during the pandemic

## Multimorbidity in PWAs over 50 (PI: Yeung, CFAR pilot award)

- Aims to understand the age-related multimorbidity of substance misuse, cognitive impairment, and chronic pain among PWH 50+ years old

## Life Chaos and Viral Suppression (PD: Moody, MACC Scholar Award)

- Aims to understand and conceptualize life chaos and its impact on viral suppression among adults living with HIV in Washington, DC



**THE DC COHORT**

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

# HIV and aging

## (PI: Monroe, CFAR supplement)

---

- MSM with HIV over the age of 50 and disparities in mental health diagnoses and ART adherence
  - Uses PROs and DC Cohort data to assess for differences by age and sexual minority status
  - Conduct in-depth interviews among aging SMM DC Cohort participants to explore the acceptability and feasibility of using mHealth interventions in improving mental health outcomes.
- Performing leukocyte telomere length (LTL), which is a proposed marker of biological age

# Aging and HIV among MSM

## (PD: Malone, Aging Admin Supp)

---

- **Aim 1:** To explore how mental health impacts HIV progression and to see if this differs by age and sexual minority status
- **Aim 2:** To see if there is an association between biological markers of aging and mental health (e.g. HIV coping skills)
- **Aim 3:** To explore the experiences of aging and mental health needs of MSM over 50 who are living with HIV

# COVID-19 Supplement: Missed Opportunities

---

- **Aim 1:** Compare demographic and clinical characteristics of new diagnoses pre-pandemic (2017-2019) to pandemic times (2020-2022)
- **Aim 2:** Characterize and identify missed opportunities for prevention among newly diagnosed people in the DC Cohort during the COVID-19 pandemic (Mar 2020-Mar 2023)
- **Aim 3:** Qualitatively document barriers to HIV prevention among people newly diagnosed with HIV from March 2020 to March 2023

# CFAR Pilot Award – Dr. Ellen Yeung, GWU

## Dept. of Psychology

---

**Title:** An investigation of the multimorbidity of **substance misuse, cognitive impairment, and chronic pain** among people living with HIV over the age of 50

- **Aim 1:** Understand the age-related multimorbidity of substance misuse, cognitive impairment, and chronic pain among PLWH over the age of 50 using existing DC Cohort data
- **Aim 2:** Tease apart the mutually reinforcing and interactive nature of age-related multimorbidity and obtain effect sizes.
- **Aim 3:** Study within-person dynamic processes of this age-related multimorbidity.



**THE DC COHORT**

Advancing HIV Prevention, Care, and Treatment  
in the District of Columbia

# MACC Scholar Award - Dr. Kendall Moody – HU School of Social Work

---

**Title:** Understanding and conceptualizing **life chaos and its impact on viral suppression** among adults living with HIV in Washington, DC

- **Aim 1:** To determine the association between family demographic variables (e.g., marital status, number of dependent and nondependent children, relationship to the PLWH, primary caregiver status, and recent changes in family dynamics) and clinical outcome data (i.e., viral load, CD4 count) among 200 DC Cohort participants.
- **Aim 2:** To explore how a variety of patients PLWH who live with or have some connection to family (e.g., no missed appointments in the previous 12 months, viral load suppression) describe their experiences within their family system. Semi-structured interviews will be conducted with 30 patients receiving care at CIDMAR, and themes related to families, life chaos, and treatment adherence will be extracted.

# Acknowledgements

---

- DC Cohort Executive Committee
- DC Cohort Community Advisory Board
- DC Cohort Data and Statistics Center-Epidemiology
- GWU Biostatistics Center
- Molecular Epidemiology Study Team
- DC COH HAHSTA
- DC CFAR
- NIH Funders
- NIH Funding Sources: NIAID, NIMH