

# Practice Transformation and iART Outcomes for Newly Diagnosed Minority Patients in NYC

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## INTRODUCTION

- Major disparities in new HIV diagnoses exist among young racial/ethnic minority men who have sex with men (MSM).
- Immediate ART (iART), defined as same-day ART at linkage and part of NY State's End the Epidemic (EtE) Initiative, has been shown to decrease time to viral suppression and improve retention in care.
- To embrace EtE goals, our large urban sexual health and HIV center in NYC underwent significant practice transformation including an Open Access model for same day visits, iART, and integration of care coordination. Here we present HIV care cascade outcomes for the newly diagnosed at our institution between 2017-18.

## METHODS AND ACTIVITIES

- Demographic and clinical characteristics of new diagnoses including linkage, time to ART, retention in care (defined as two visits in the preceding year) and viral suppression (<200 c/mL) were collected.
- We used linear regression to evaluate associations between various exposures including iART and time to viral suppression and logistic regression to evaluate for associations with retention in care.

## RESULTS

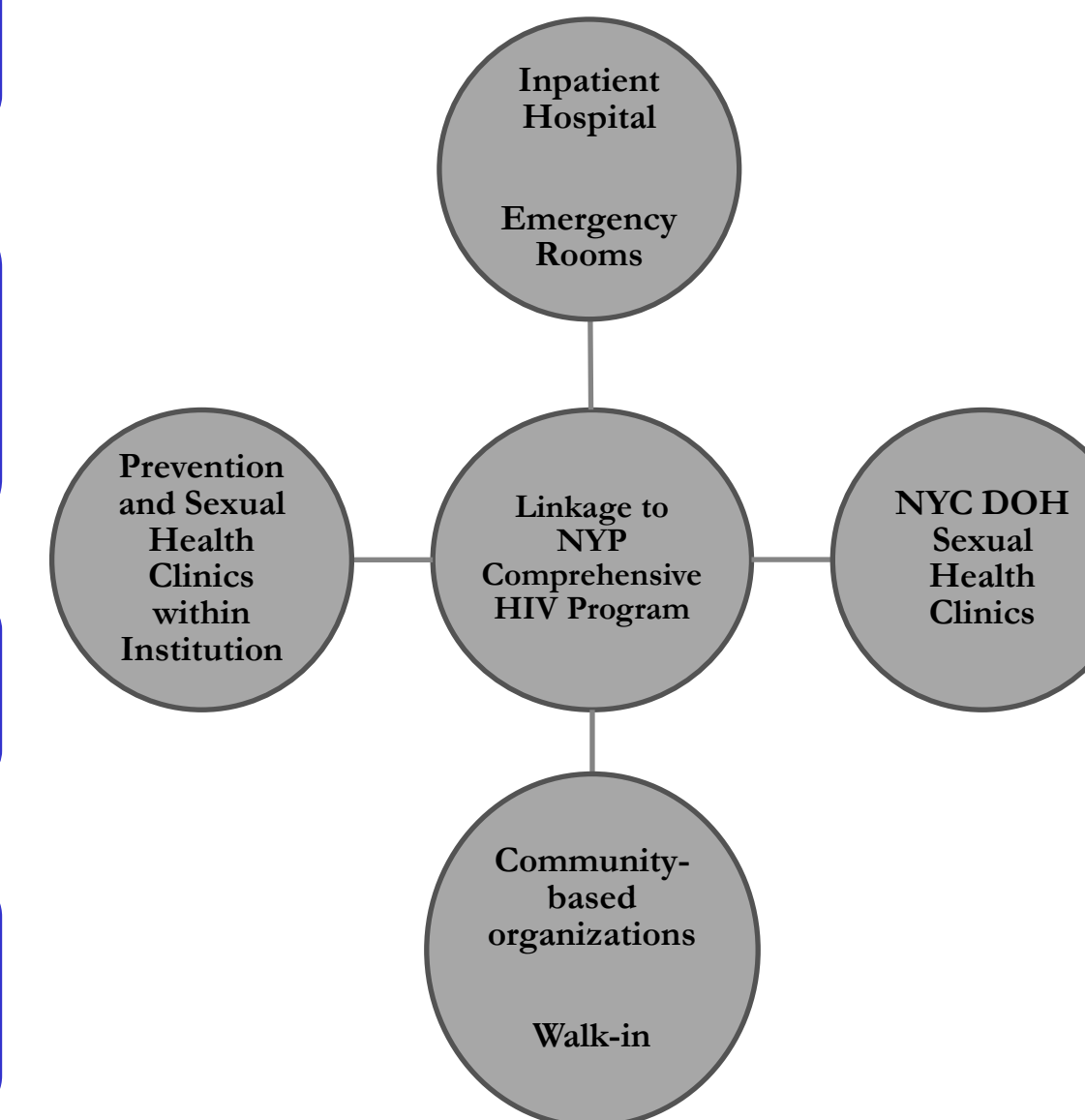
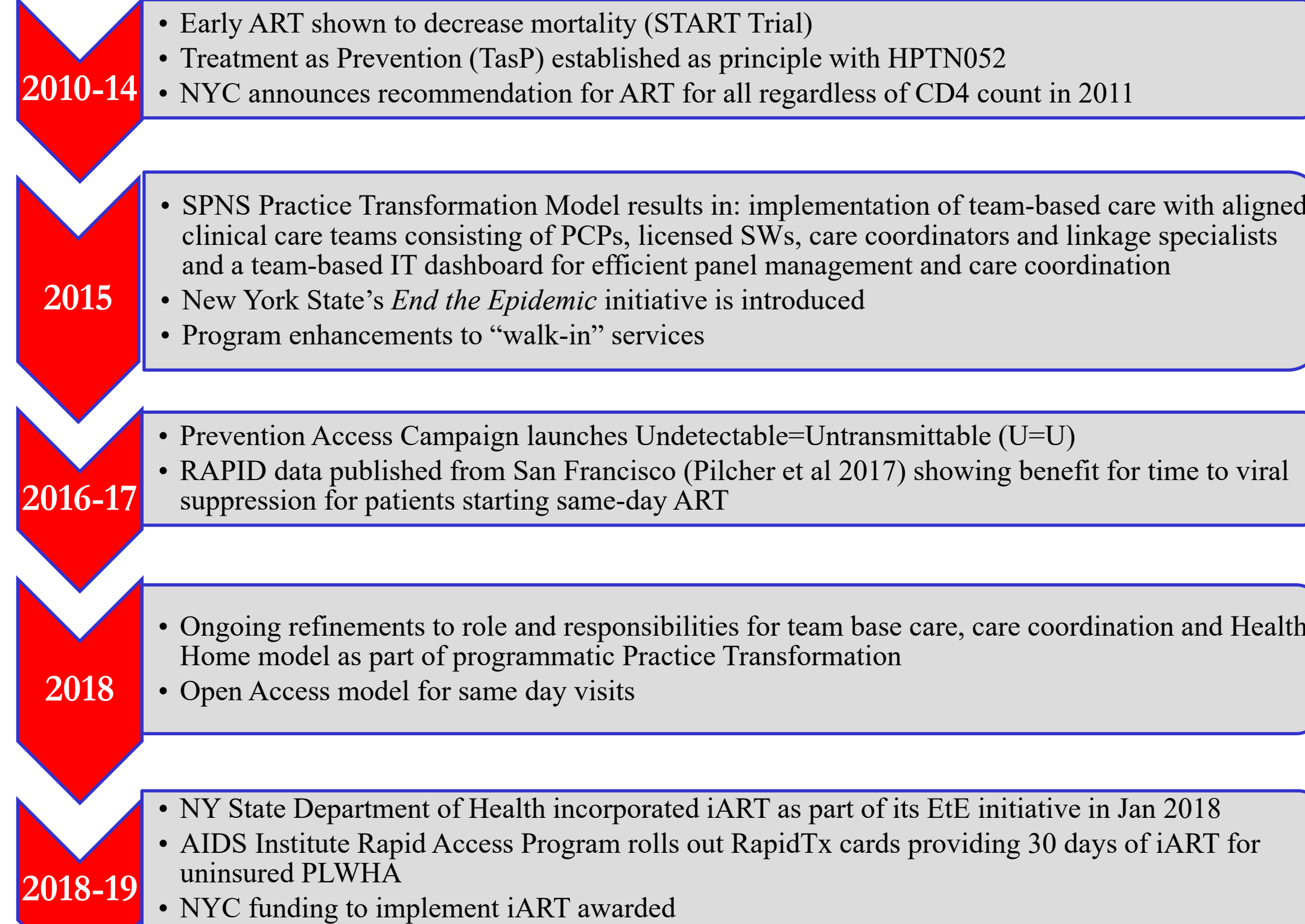
- Demographics are summarized in Table 1. 151 patients were newly diagnosed between 2017-18. Most were male (75.5%) with a median age of 31. Patients mostly identified either as Black (40.4%) or Hispanic (50.3%). MSM was the risk factor in almost half of cases (45.0%).

## PATIENT DEMOGRAPHICS

Table 1. Demographic Characteristics of newly diagnosed cohort (N=151)

Characteristic	N (%)
<b>Age</b>	Median (Range) 31 (2 - 86)
<b>Race</b>	Black 61 (40.4) White 34 (22.5) Other/Multi-Race 27 (17.9) Unknown 29 (19.2)
<b>Ethnicity</b>	Hispanic 76 (50.3) Non-Hispanic 57 (37.8) Unknown 18 (11.9)
<b>Gender Identity</b>	Male 114 (75.5) Female 33 (21.9) Transgender Man 0 (0.0) Transgender Woman 3 (1.9) Non-Binary/Non-Conforming 1 (0.7)
<b>Housing</b>	Stable 136 (90.1) Unstable 15 (9.9)
<b>HIV Risk Factor</b>	Men who have sex with men 68 (45.0) Heterosexual Contact 64 (42.4) Intravenous Drug Use 5 (3.3) Other 5 (3.3) Unknown 9 (6.0)
<b>Referral Source</b>	Inpatient 25 (16.6) Outpatient 73 (48.3) DOH/CBO/Primary Clinic 40 (26.5) Other 13 (8.6)

## PRACTICE TRANSFORMATION TIMELINE AND NY HEALTH SYSTEM CONTEXT



## PATIENT FLOW CHART FOR INCLUSION IN ANALYSES

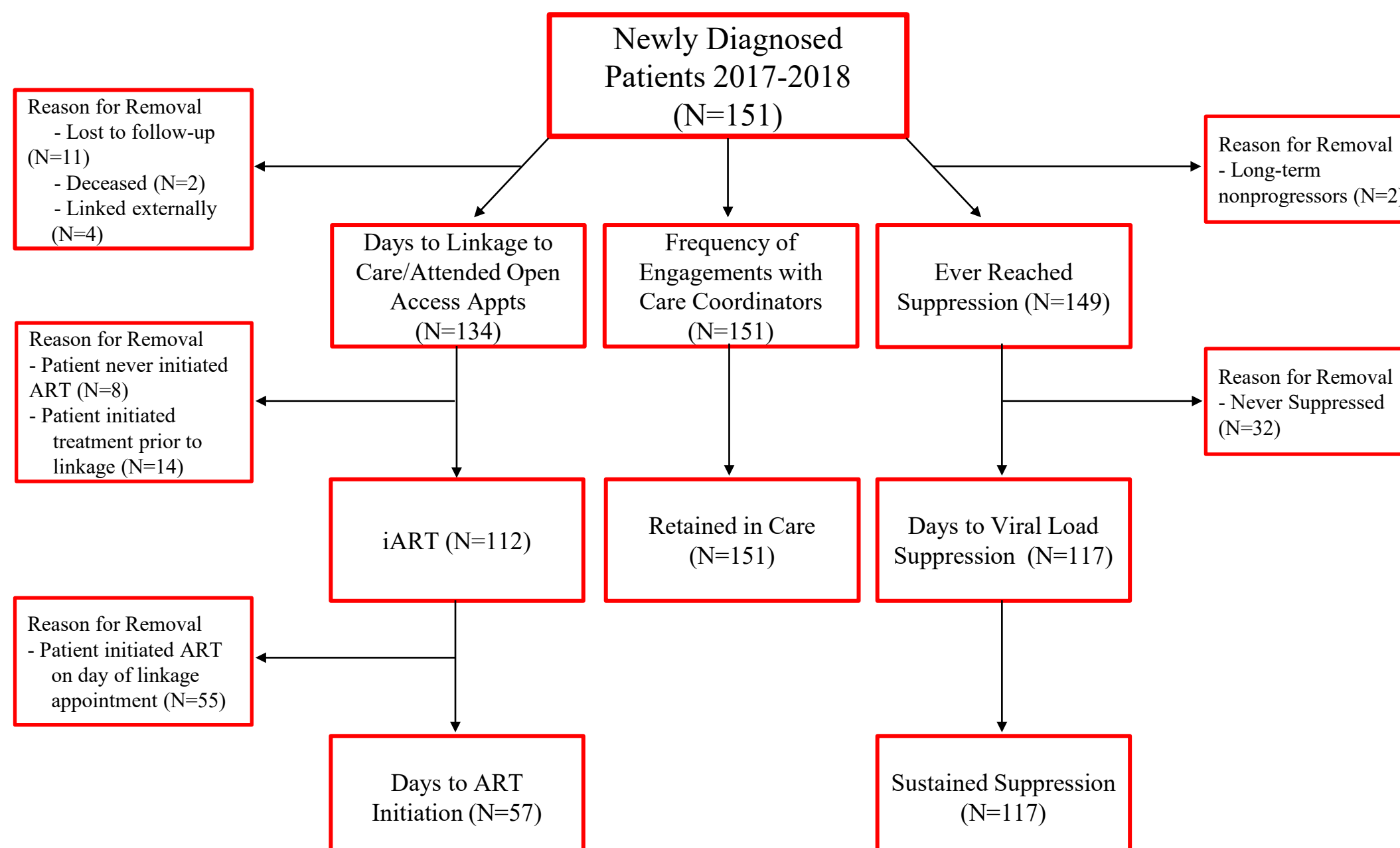


Figure 1. The number of patients included in each level of analysis varied because of set inclusion criteria. The reason for the patients' removal from the following level of analysis is noted here.

## HIV CARE CASCADE

Table 3. Independent associations between exposures of interest and the three outcomes of interest: Time to Suppression, Ever Suppressed, and Retained in Care

Covariate	Days to Suppression		Ever Suppressed		Retained in Care	
	B (SE)	P	OR (95% CI)	P	OR (95% CI)	P
<b>Open Access Appointment</b>						
Yes	11.5 (13.9)	0.410	1.66 (0.4, 7.0)	0.495	0.97 (0.4, 2.2)	0.935
No	Referent		Referent		Referent	
<b>iART</b>						
Yes	-4.16 (15.2)	0.786	5.34 (0.66, 42.9)	0.115	1.75 (0.7, 4.7)	0.267
No	Referent		Referent		Referent	
<b>Days to ART Initiation</b>	1.54 (0.8)	0.058	0.59 (0.1, 3.6)	0.559	1.03 (0.9, 1.1)	0.390
<b>Days to HIV Care Linkage</b>	0.27 (0.1)	<b>0.035</b>	0.99 (0.9, 1.0)	0.518	1.01 (0.9, 1.0)	0.162
<b>Frequency Care Coordination Engagement</b>	0.43 (1.3)	0.742	1.07 (0.9, 1.2)	0.179	0.91 (0.8, 0.99)	<b>0.037</b>

\*The following confounders were assessed in all models: AIDS at diagnosis, CD4 count at Diagnosis, HIV risk factors, gender, ethnicity, and race. Any significant confounders were adjusted for in the final model.

## LESSONS LEARNED

- Practice transformation and iART resulted in strong linkage rates and viral suppression. Nearly half initiated iART and days to linkage was associated with time to suppression. Frequency of care coordination decreased odds of retention in care at 12 months. Retention in care was modest despite care coordination support, suggesting that additional strategies are necessary.
- Despite integration of Open Access, Patient Centered Medical Home enhancements and robust care coordination, better community-based engagement and custom strategies to retain newly diagnosed patients is needed.

## OUTCOMES

Table 2. Clinical characteristics of newly diagnosed cohort

Characteristic	N (%)
<b>CD4 Count at Diagnosis (N=127)</b>	Median (Range) 395 (5 - 1521)
<b>AIDS at Diagnosis (N=127)</b>	Yes 25 (19.7) No 102 (80.3)
<b>Days to Linkage to Care (N=134)</b>	Median (Range) 9 (0 - 258)
<b>iART (N=112)</b>	Yes 55 (49.1) No 57 (50.9)
<b>Days to ART Initiation (N=57)*</b>	Median (Range) 7 (1 - 56)
<b>Days to Viral Load Suppression (N=117)</b>	Median (Range) 35 (7 - 403)
<b>Ever Reached Suppression (N= 149)</b>	Yes 117 (78.5) No 32 (21.5)
<b>Sustained Suppression (N=117)</b>	Yes 95 (81.2) No 22 (18.8)
<b>Retained in Care (N=151)</b>	Not Retained 71 (47.0) Retained 80 (53.0)
<b>Number of Engagements with Care Coordinator (N=151)</b>	Median (Range) 5 (0 - 30)
<b>Attended Open Access Appointment (N=134)</b>	Yes 41 (30.6) No 93 (69.4)

\*Patients who started ART on same day or before their first HIV medical appointment were removed from the denominator

## CHALLENGES AND LIMITATIONS

- The accurate collection of race/ethnicity data is important to understand HIV-related disparities, however is a challenge for most health systems, especially with majority Hispanic patient populations that have complex relationships with racial identity
- Establishing effect of specific interventions (e.g. iART, Open Access) is challenging with continually evolving national, state and city policies in a large, fragmented complex academic health center
- Implementation of new strategies requires buy-in, culture of openness to change, adequate funding, and a high performing team-based clinical environment, thus outcomes measurement at one time point does not reflect
- Data does not capture 2019 data when iART more successfully integrated into practice, but highlights transition period outcomes

## GRANT SUPPORT

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