



Outcomes of Rapid Antiretroviral Therapy (ART) Restart among People with Previously Diagnosed HIV at a Safety-Net HIV Clinic in San Francisco

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Continuum 2024 • June 9-11, 2024 • Puerto Rico



Background

- Rapid ART restart refers to same-day restart of ART for those “out of care” and off of ART (known HIV, with prior treatment experience)
- Viral suppression (VS) after rapid ART restart achieved in 51% (SFAF population)¹, but was lower in a Baltimore rapid program (47% VS at week 28)² and when compared to a rapid ART population (new HIV dx)³
- Rapid ART restart done in many settings but no standard model of care to guide clinics and clinicians
- Strategies to support engagement/retention and improve VS for this “last mile” population are critical



Study Objectives

- 1.** Describe sociodemographic and clinical characteristics of the rapid ART restart population at the Ward 86 HIV Clinic in San Francisco
- 2.** Determine proportion with viral suppression (VS) and optimal primary care provider (PCP) appointment attendance following rapid ART restart
- 3.** Assess associations of housing status, substance use, and mental illness with VS and optimal PCP appointment attendance outcomes



Methods

Design



EMR-based
retrospective
review

Setting



Ward 86 HIV
Clinic in San
Francisco

Population



Adults ≥ 18 yo with
known HIV, self-reporting
off ART, completed a rapid
ART restart visit

Time Period



August 2020 -
October 2023



Methods: Measures

- **Measures:** Age, gender, race, ethnicity, **housing status, substance use, mental illness**

Housing Status

Stable: renting/owning or living in stable SRO

Unstable: couch surfing, staying with friends/family, in navigation center, short-term SRO, transitional housing, or in a treatment program

Homeless: living on the street, in vehicle, or shelter

Substance use

Stimulant use (meth, crack, cocaine)

Opioid use

Alcohol use

Other (ecstasy, GHB, and/or PCP)

Mental illness

Depression

Bipolar disorder

Anxiety

Psychosis (hallucinations, schizophrenia)

Other (unspecified mood disorder, PTSD)

Variables extracted from EMR documentation:

- 1) Social work assessment & intake
- 2) Rapid restart clinician note (free text, assessment & plan list, ICD-10 codes)
- 3) If unknown/not documented, clinical encounters within 90 days of rapid ART restart visit reviewed for variables of interest



Methods: Outcomes

Primary outcomes:

- Proportion with any VS within 180 days of the rapid ART restart visit
 - VS defined as HIV-1 RNA <200 copies/mL
- Proportion with optimal PCP appointment attendance
 - Defined as attending at least 1 PCP visit within first 90 days **AND** within next 91-180 days of the rapid ART restart visit



Methods: Analysis

- **Analysis:**
 - Descriptive statistics of sociodemographic traits, clinical characteristics, and outcomes
 - Chi-square analyses for associations with VS and optimal PCP appointment attendance
 - Variables: age, gender, race, ethnicity, housing status, substance use, mental illness
- **Viral suppression analysis:**
 - **Complete case analysis:** included only those with complete viral load (VL) data at baseline (who were unsuppressed) and who had follow-up VLs
 - **Sensitivity analysis:** missing follow-up VLs = unsuppressed



Baseline Characteristics

141 unique rapid ART restart patients from
August 2020 – October 2023

Characteristic	Total N = 141 (%)
Age (in years, median, range)	42 (24 – 72)
Gender identity	
Cis-male	120 (85%)
Cis-female	10 (7%)
Transgender female	6 (4%)
Transgender male	1 (1%)
Nonbinary/Gender queer	2 (1%)
Unknown/Not reported	2 (1%)
Sexual orientation	
Heterosexual	33 (23%)
Lesbian/Gay	72 (51%)
Bisexual	10 (7%)
Other	10 (7%)
Choose not to disclose	7 (5%)
Unknown/Not reported	9 (6%)
Ethnicity	
Non-Hispanic	103 (73%)
Hispanic	36 (26%)
Unknown/Not reported	2 (1%)
Race	
White	55 (39%)
Black	29 (21%)
Asian	11 (8%)
Native Hawaiian or Pacific Islander	1 (1%)
Other (including multiracial)	44 (31%)
Choose not to disclose	1 (1%)

Characteristic	Total N = 141 (%)
Housing status	
Stable	67 (48%)
Unstable	42 (30%)
Experiencing homelessness	23 (16%)
Unknown/Not reported	9 (7%)
Substance use*	
Yes	86 (61%)
No	42 (30%)
Unknown/Not reported	13 (9%)
Mental illness*	
Yes	69 (49%)
No	22 (16%)
Unknown/Not reported	50 (35%)



Clinical Characteristics

Clinical Characteristic	Total N = 141 (%)
Rapid ART Restart baseline labs	
CD4 count (median, IQR)	270 (94 – 491)
CD4 count < 200 cells/uL	56/121 (46%)
HIV-1 RNA >200 copies/mL	106/126 (84%)
Last prescribed ART regimen	
BIC/TAF/FTC	53 (38%)
ABC/DTG/3TC	26 (18%)
DTG + TAF/FTC	15 (11%)
DTG + TDF/FTC	3 (2%)
DRV/cobi/TAF/FTC	13 (9%)
EVG/cobi/TAF/FTC	8 (6%)
Other regimen	23 (16%)
HIV care history	
New to Ward 86 HIV clinic	75 (53%)
Prior HIV care location	
<input type="checkbox"/> Within San Francisco County	38 (51%)
<input type="checkbox"/> Out of San Francisco County, but in-state	19 (25%)
<input type="checkbox"/> Out of state	15 (20%)
<input type="checkbox"/> Outside of the US	3 (4%)
Insurance issue	57 (40%)



Rapid ART Restart Process Elements

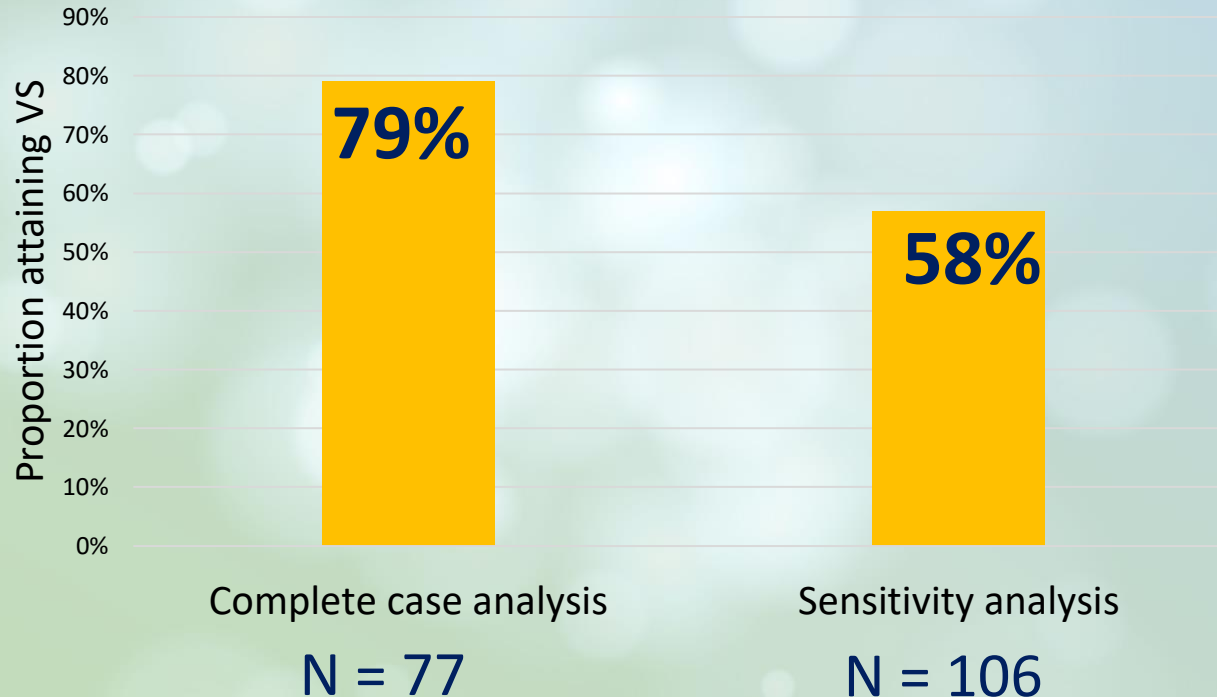
Table 2 Rapid ART Restart process elements

Characteristics and Components	Total N = 141 (%)
Location of Rapid ART Restart	
Ward 86 linkage team visit (PHAST)	7 (5%)
Urgent care visit	125 (89%)
PCP visit	9 (6%)
Source of referral	
Self/friend	97 (69%)
Ward 86 social work	6 (4%)
ZSFG Adult Urgent Care Clinic	9 (6%)
ZSFG ED	2 (1%)
Community partner clinic (SF City Clinic, Strut/Magnet, MXM, etc.)	23 (16%)
Navigation services (LINCS)	4 (3%)
ART regimen chosen	
BIC/TAF/FTC	82 (58%)
ABC/DTG/3TC	10 (7%)
DTG + TAF/FTC	6 (4%)
DRV/cobi/TAF/FTC	26 (18%)
Other regimen	15 (11%)
None	2 (1%)
ART changed from prior	56/139 (40%)
ART prescription or starter pack given	135 (96%)
Baseline labs completed	
CD4 count	121 (86%)
HIV-1 RNA	126 (89%)
Baseline social work assessment/intake	63 (45%)



Viral Suppression Outcomes

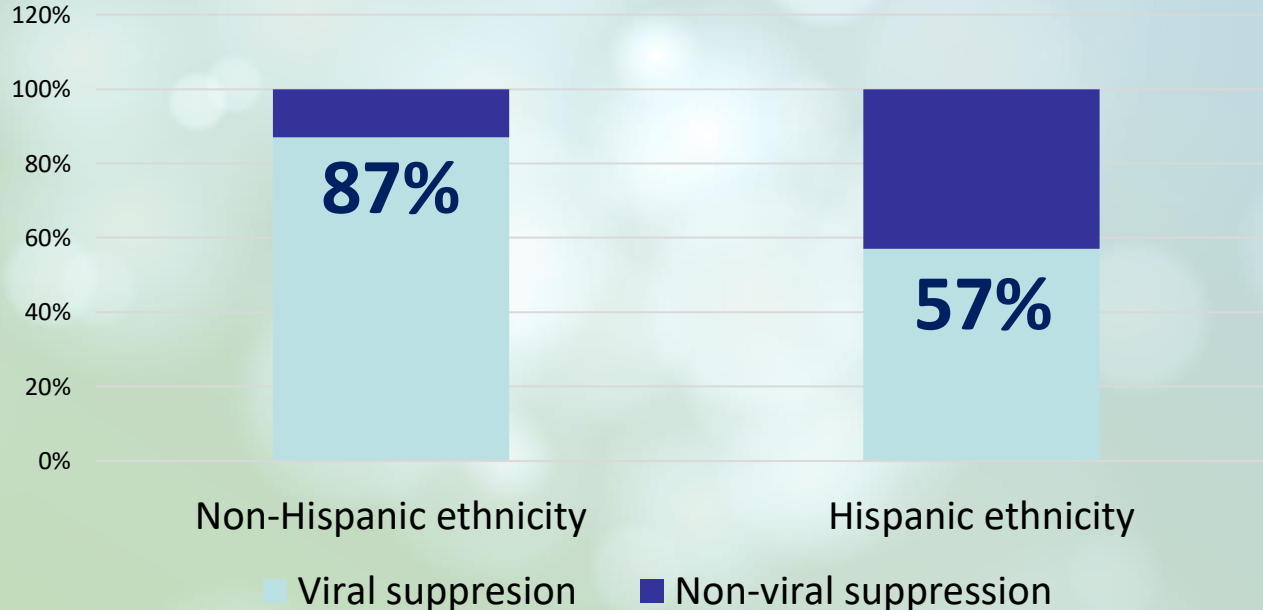
VS within 180 days by Type of Analysis





Viral Suppression Outcomes

Proportion with VS vs non-VS by Ethnicity

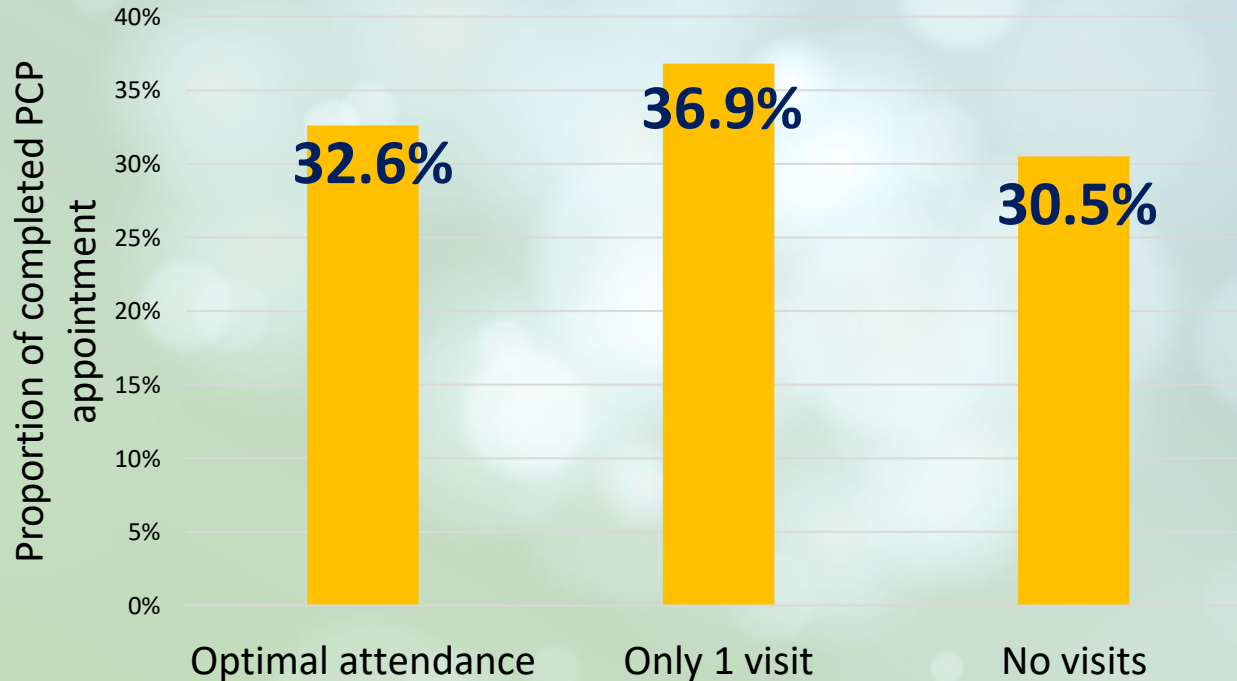


p value = 0.004



PCP Appointment Outcomes

PCP Appointment Attendance within 180 days



**No associations
seen with PCP appt
attendance**



Conclusions

- Viral suppression after rapid ART restart was observed in 79%, but lowered to 58% in sensitivity analysis; 33% had optimal PCP appointment attendance
- Non-Hispanic ethnicity was associated with VS; no associations were seen with optimal PCP appointment attendance
- Limitations included small sample sizes; more precise measures of substance use and mental illness may serve as better predictors
- Rapid restart of ART is successful (96% prescribed ART/given starter pack), but the issue lies in follow-up with a need to identify strategies to support engagement/retention and ART adherence



Next Steps

- Will be performing logistic regression with imputation methods to address missing data
- Predictive engagement risk score being developed by Ward 86 clinic to guide triage of patients into structured tiers of clinical support for retention and engagement
- Qualitative exploration of barriers to oral ART and assessment of interest/readiness of long-acting ART



Acknowledgments

Ward 86 RAPID Restart Clinical Team

Susa Coffey, MD
Jess Bloome, MD, MPH
Salvador Franco, RN
Anthony Suarez

Ward 86 Rapid Restart Data

Lisa Fleming

Division of HIV, ID and Global Medicine

Matt Hickey, MD
Diane Havlir, MD

Career Mentors

Katerina Christopoulos, MD, MPH
John Saucedo, PhD, MSc
Monica Gandhi, MD, MPH