

HIGH VIROLOGIC SUPPRESSION RATES ON LONG-ACTING ART IN A SAFETY-NET CLINIC POPULATION

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BACKGROUND

- Despite effective daily oral ART regimens, adherence barriers persist, multifactorial (stigma, recall, substance use, depression, housing/food insecurity, etc)
- Long-acting ART promising for adherence-challenged but only studied in virologically suppressed in FLAIR, ATLAS, ATLAS 2M, now SOLAR
- 1.4% virologic failure rate across clinical trials (68% within 24 weeks)
- Ward 86 HIV Clinic in SF (launched in January 1983) serves publicly insured patients (96% Medicaid/care) with high rates of mental illness, substance use, unstable housing

Aim: To study long-acting ART in a diverse urban population at Ward 86, including those with adherence challenges and viremia

METHODS

- We designed a demonstration project at Ward 86 for long-acting cabotegravir/rilpivirine (CAB/RPV)
- **Inclusion criteria:**
 - No RPV or INSTI mutations (strengthened criteria later)
 - Express willingness to come to clinic q4 weeks, contact information, outreach from staff
 - Rigorous protocol, Biweekly review of patients
- Descriptive statistics of patient characteristics, median/range number of injections, viral suppression outcomes, stratified by viral load ≥ 30 copies/mL at LA-ART initiation; Kaplan Meier plot for viremic

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RESULTS

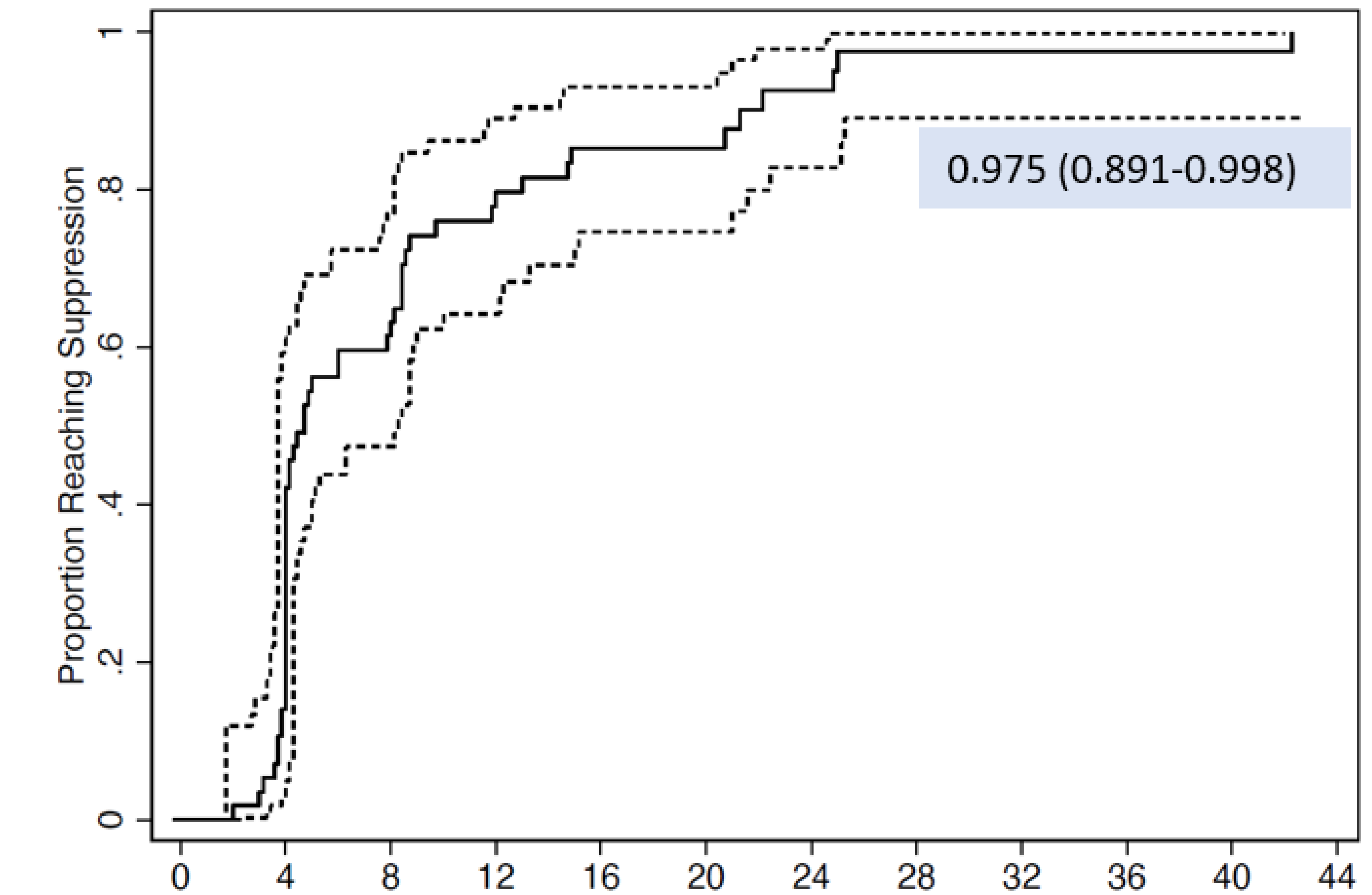
133 participants enrolled (median age 45 years, 88% cis men; 68% non-White; 66% unstably housed; 33% current substance use) – 76 with virologic suppression, 57 with viremia; 97.5% virologic suppression rate median 26 weeks (same rate of non-suppression as in clinical trials)

Demographics and clinical characteristics of cohort in Ward 86 LA ART program (n=133)

Characteristic	Distribution, n (%)
Age (median, range)	45 (38–45) years
Gender	
Cis Man	117 (88%)
Cis Woman	11 (8%)
Transgender Woman	5 (4%)
Race/ethnicity	
Black	21 (16%)
Latino/a	50 (38%)
White	43 (32%)
Multiracial	19 (14%)
Housing	
Unstable	77 (58%)
Stable	45 (34%)
Homeless	11 (8%)
Insurance	
Medicare or Medicaid or both	130 (98%)
ADAP	3 (2%)
Current stimulant use	44 (33%)
Major mental illness	51 (38%)
Virologically non-suppressed (>30 copies/ml)	57 (43%) with log ₁₀ viral load (mean, STD) 4.21 (1.30)
CD4 count (median with interquartile range)	Virologically suppressed 616 (395–818) Virologically non-suppressed 215 (75–402)

* Note: ADAP is AIDS Drug Assistance Program; Baseline CD4 defined as the CD4 count closest to and including date of first injection. Median time from CD4 count to first injection was 70 (range 0 to 882) days

Figure: KM curve of probability of reaching virologic suppression (VL <30) on LA ART (n=57); dotted lines 95% CI



- Between June 2021-November 2022, 133 diverse PWH started on LA-ART, 76 (57%) suppressed on oral ART, 57 (43%) with viremia
- Median CD4 count in those with viremia lower in suppressed
- 74% (66-81%) on-time injections
- In those with suppression, 100% (95% CI 94%-100%) remained so
- Among viremic PWH, all suppressed but 2 with early virologic failure.
- Current cohort virologic failure rate 1.5% similar to that across clinical trials (1.4%) by 48 weeks (68% by 24 weeks)

Patient #1 without suppression: Started with V179I mutations, didn't show 2 log₁₀ reduction by 1st visit (baseline viral load 214,540 → 39,293 copies/mL); Developed Y181C, L100I

Patient #2 without suppression: Started with T97A mutation, didn't show 2 log₁₀ reduction by 1st (baseline viral load 137,134 → 4,371 copies/mL); Developed R263K, E138K mutations

Both patients could not take oral ART before or after injectable ART attempt

CONCLUSION

- Even among viremic patients in a real-world cohort, high rates of virologic suppression with long-acting CAB/RPV based ART (same rate of failure as in registrational clinical trials of 1.5%)
- Forward-thinking programs to attempt LA ART in adherence-challenged populations warranted



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