Long-Term Virologic Suppression Rates in the Ward 86 HIV Clinic's Long-Acting ART Program (SPLASH)

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BACKGROUND

The Ward 86 HIV Clinic in San Francisco serves publicly-insured people with HIV (PWH) with high rates of substance use and housing insecurity.

Shortly after the approval of long-acting (LA) cabotegravir/rilpivirine (CAB/RPV) in 2021, Ward 86 starting using LA-ART for those with viremia due to adherence challenges on oral ART.

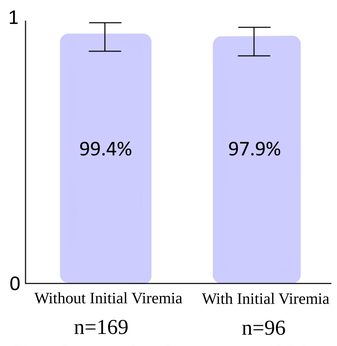
Our demonstration project found that those who switched from oral suppressive therapy to LA ART could maintain VS; nearly all PWH with viremia (>30 copies/mL) who were not using oral ART before LA-ART initiation achieved suppression (PMID: 37399555).

Almost four years into the program, we now compare and report longer-term viral suppression (VS) outcomes in those who started LA ART with and without initial viremia.

METHODS

- Retrospective study conducted of 370 PWH (129 with viremia>30 copies/mL; 241 with initial VS) who initiated LA-CAB/RPV in January 2021 through September 2024 in the Special Programs to Stop HIV using long-Acting ART (SPLASH) program.
- Using electronic medical record data verified by clinician review, we compared 48-week outcomes for those starting LA ART with or without VS (the window used for ascertaining VL data was 48-weeks +/- 2 weeks).
- For those starting with initial viremia, time to VS was calculated by Kaplan-Meier methods; Chi-squared testing compared VS cross-sectionally at 48 weeks; logistic regression compared characteristics between those starting LA ART with or without viremia.
- Study approved by University of California, San Francisco Institutional Review Board, with informed consent not required as data were collected as part of quality improvement efforts.
- **Primary outcomes:** 1) Long-term rates of VS (≤200 copies/mL) among those with and without initial VS; 2) Time to achieve viral suppression in those who started with viremia at baseline; 3) Difference in the probability of VS among those with and without initial VS.

Figure 1. Viral Suppression outcomes at 48 weeks in those who started LA ART with and without viremia at baseline with at least 48 weeks of observation (n=265)



Among 370 PWH who started LA-ART at Ward 86 (129 with initial viremia, 241 without), Viral suppression (VS) ≤200 copies/mL among entire cohort at W48 was high (98%). Of those who started without viremia, 99.4% remained suppressed at 48 weeks (128/129). Of those who started with viremia, 97.9% achieved and maintained viral suppression at 48 weeks: **no statistically significant difference in VS in both groups** (94/96; p=0.61)

RESULTS

Overall, **370** participants starting LA ART from January 2021-September 2024 were included in this analysis (129 with initial viremia, 241 with initial VS)

At 48 weeks, of the 265 sufficient follow-up: **99.4%** of those who started with VS remained suppressed (128/129; 95% CI=97-100%) ; **97.9%** of those with initial viremia achieved VS (94/96; 95% CI=93-99%; **Figure 1**)

Proportion achieving/maintaining VS did not significantly differ between the two groups at 48 weeks (p = 0.61).

Five people were lost to follow-up who had at least 48 weeks of observation following initiation, 3 in the viremic group

Median time to achieve VS (≤200 copies/ml) in those with viremia was **32 days** (95% CI 30-45; **Figure 2**)

Rates of current or past substance use (OR = 1.22, 95% CI 1.11-1.34, p < .001) and unstable housing (OR = 1.11, 95% CI 1.01-1.23, p = .031) higher than in those starting LA ART with initial viremia; PWH with initial viremia were also more likely to have CD4 counts <200 cells/mm3 (OR = 1.22, 95% CI 1.09-1.36, p < .001) at initiation (**Table 1**)

Figure 2. Kaplan-Meier Curve for PWH who initiated LA ART (cabotegravir/rilpivirine) with viremia (HIV RNA ≥30 copies/ml).

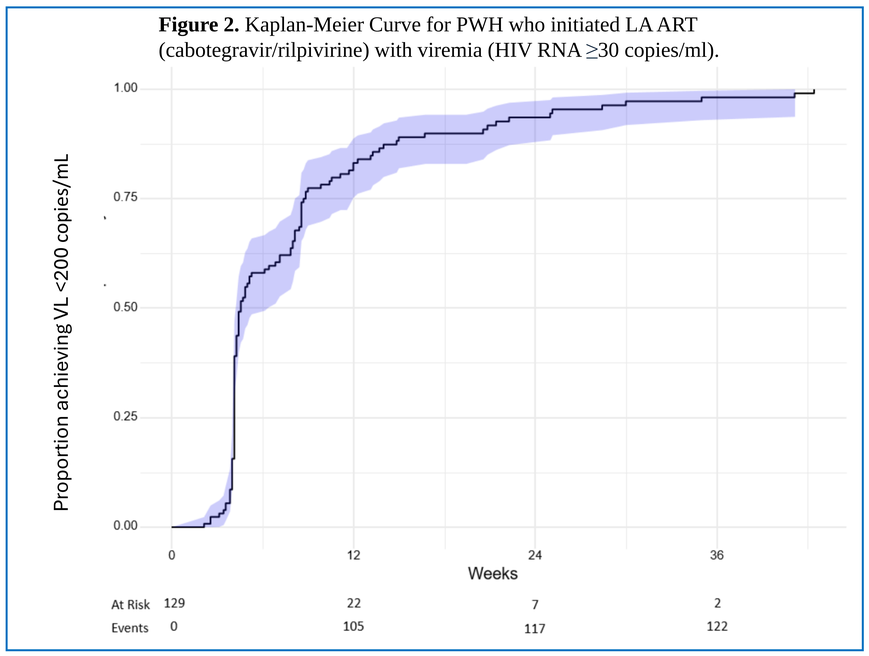


Table 1. Characteristics for PWH initiating LA CAB/RPV without and without initial VS

	Suppressed (N=241)	Viremic (N=129)	Overall (N=370)
Age at referral (years)			
Mean (SD)	45.6 (12.3)	47.5 (10.1)	46.3 (11.6)
Median [Min, Max]	44.0 [21.0, 70.0]	48.0 [25.0, 67.0]	45.0 [21.0, 70.0]
Race			
White	95 (39.4%)	56 (43.4%)	151 (40.8%)
American Indian	9 (3.7%)	3 (2.3%)	12 (3.2%)
Asian	23 (9.5%)	6 (4.7%)	29 (7.8%)
Black	53 (22.0%)	32 (24.8%)	85 (23.0%)
Multi-racial	4 (1.7%)	3 (2.3%)	7 (1.9%)
Other	51 (21.2%)	27 (20.9%)	78 (21.1%)
Missing	6 (2.5%)	2 (1.6%)	8 (2.2%)
Gender			
Cisgender man	191 (79.3%)	111 (86.0%)	302 (81.6%)
Nonbinary	6 (2.5%)	1 (0.8%)	7 (1.9%)
Other	1 (0.4%)	1 (0.8%)	2 (0.5%)
Transgender woman	42 (17.4%)	14 (10.9%)	56 (15.1%)
Missing	1 (0.4%)	2 (1.6%)	3 (0.8%)
Housing			
Housing unstable (SRO, shelter, outdoors, vehicle)	97 (40.2%)	67 (51.9%)	164 (44.3%)
Stable (rent or own)	144 (59.8%)	62 (48.1%)	206 (55.7%)
CD4 count at CAB+RPV initiation			
CD4 >= 200	88 (36.5%)	30 (23.3%)	118 (31.9.%)
CD4 < 200	106 (44.0%)	88 (68.2%)	194 (52.4%)
Missing	47 (19.5%)	11 (8.5.%)	58 (15.7%)
Substance use			
No current or past substance use	148 (61.4%)	51 (39.5%)	199 (53.8%)
Current or past substance use	93 (38.6%)	78 (60.5%)	171 (46.2%)

Ward 86
Special Program on Long-Acting Antiretrovirals to Stop HIV

SUMMARY AND CONCLUSION

- In 2021, Ward 86 started a LA-ART program for those with and without initial viremia: this analysis describes outcomes for first 370 PWH on LA ART (now 430 on LA ART at Ward 86)
- In a cohort of PWH with high rates of housing instability, substance use and low CD4 counts, LA ART highly effective with high VS either maintained (99.4%) in those initiating ART with VS or achieved (97.9%) in those starting with viremia at week 48
- These data support the changes in the DHHS and IAS-USA guidelines in 2024 on using LA ART in those with viremia and adherence challenges, especially among those at high risk of HIV progression

Acknowledgements: The Ward 86 clinical team for their wonderful care of our patients .
Funding: NIAID/NIH 5R37AI098472 (PI Gandhi)