Accelerated HIV Care through the Integrated Specialty Pharmacy in a Rapid Anti-Retroviral Therapy Start Model

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Background

- Rapid initiation of antiretroviral therapy (ART) following HIV diagnosis improves retention in care, viral suppression, and overall clinical outcomes.
- However, barriers such as insurance delays, cost, and medication access can impede timely initiation.
- Health system specialty pharmacies (HSSP) are uniquely positioned to address these barriers.
- Although Rapid Start ART programs have demonstrated significant clinical benefits, the specific impact of HSSP involvement in facilitating successful rapid ART initiation and optimizing patient outcomes has not been well characterized.

Objective

To evaluate the impact of the integrated health system specialty pharmacy (HSSP) model on access, adherence, and clinical outcomes within a Rapid ART Start Model.

Methods

Retrospective review included patients referred to the health system's infectious disease clinic for Rapid ART (regimen bictegravir / emtricitabine / tenofovir alafenamide) between 2023 and 2025

Specialty pharmacy liaisons conducted benefits investigation and assisted with financial support

Uninsured patients were enrolled in the manufacturers bridge program while social work assisted with Connecticut AIDS Drug Assistance Program (CT ADAP)

1. The primary outcome included evaluating viral load and CD4 counts at baseline, 4-week, and 12-week when available

2. Proportion of days covered (PDC) was evaluated for secondary outcome

Results

Figure 1: Patient enrollment and characteristics

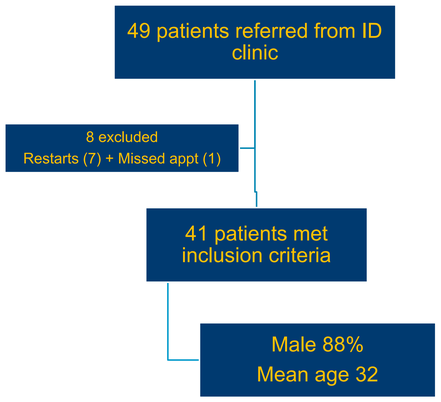


Figure 1 (a): Patient demographics (age)

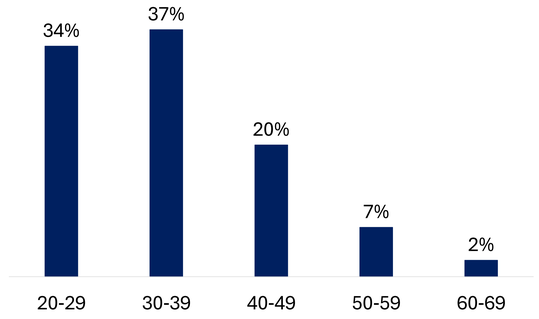
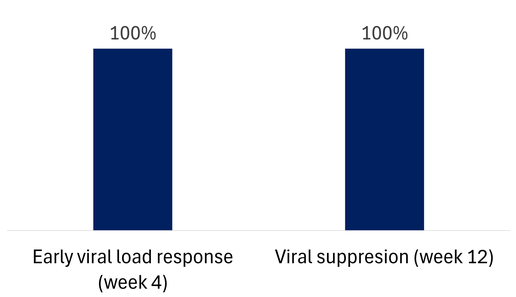


Figure 2: Viral load suppression at week 4 and week 12



*Early viral load response defined as ≥1 $\log_{10}$ reduction
*Viral suppression defined as viral load < 200 copies/mL

Figure 3: Mean CD4 counts at baseline and week 12

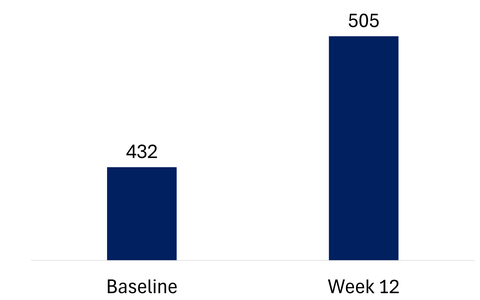
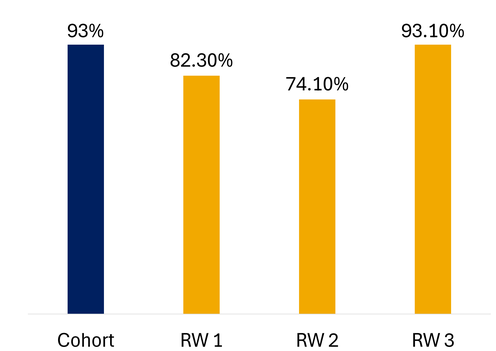
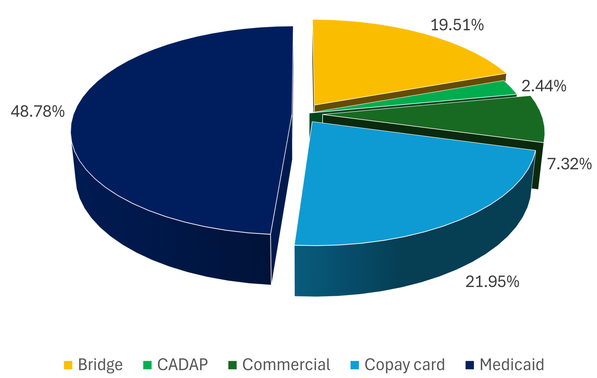


Figure 4: Proportion of Days Covered (PDC) [1,2,3]



*RW real world

Figure 5: Distribution of coverage categories



Discussion

- Proactive benefits investigation, and financial navigation at the HSSP helped minimize delays in ART access.
- Same-day ART delivery was achieved in 98% of the referred patients, supporting therapy initiation.
- Affordability remains a significant barrier in this population, with nearly 41% of patients requiring copay card enrollment or bridge program assistance.
- All patients achieved at least a $\log_{10}$ reduction in viral load within 4 weeks and viral suppression (< 200 copies/ml) by 12 weeks.
- Adherence threshold needed to achieve viral suppression varies across literature. While the Pharmacy Quality Alliance identifies a proportion of days covered (PDC) ≥90% as the benchmark for viral suppression, studies suggest that integrase inhibitor-based regimens may achieve a 90% reduction in viral load with a PDC as low as 78%.[1]
- Study cohort PDC of 93% compares favorably to that reported in literature (74% to 93%) among patients living with HIV.[1,2,3]
- Implementation of a rapid start ART model within HSSP may shorten time to treatment initiation and improve access to therapy.

Limitations

- PDC was used as an adherence proxy and may not reflect actual medication taking behavior.
- PDC calculations did not capture patients who filled their ART once at HSSP and subsequently transferred their care or changed therapies.
- CD4 data were not available for all patients and long-term viral suppression was not evaluated.
- Sample size was small, and findings from this cohort may not be generalizable to other settings.

Conclusion

- Integration of HSSP within a Rapid ART Start Model facilitates same day initiation, minimizes access barriers, and supports continued adherence to achieve rapid and complete suppression of viral load

References

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3. Komandt M, Canfield S, Lengel M, Gilmore V, Kilcrease C. Correlation between medication adherence using proportion of days covered and achieving viral suppression in patients living with HIV. J Manag Care Spec Pharm. 2023;29(10):1129-1137.

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