

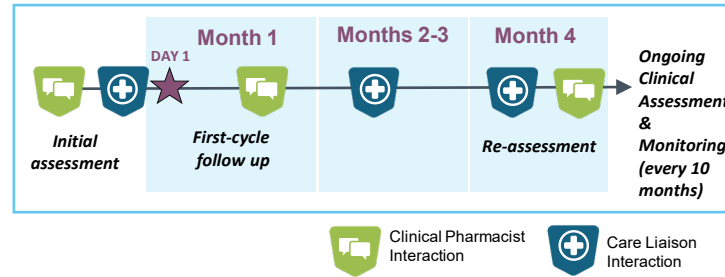
Impact of an Integrated Health System Specialty Pharmacy on HIV Clinical Outcomes

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BACKGROUND

- Patients with HIV who adhere to antiretroviral therapy (ART) achieve and maintain viral load (VL) suppression. Previous research has shown that adherence rates of $\geq 95\%$ are necessary for optimal ART efficacy and VL suppression.¹
- However, for this population there are limited data on the impact of integrated health system specialty pharmacy (HSSP) and patient demographic factors on clinical outcomes, specifically viral load suppression.
- The purpose of this analysis was to describe the impact of a HSSP model and socio-demographic factors on clinical outcomes in patients with HIV.

Figure 1: HSSP HIV Patient Journey



METHODS



Study Design: This was a single-center, retrospective, observational analysis of adult and pediatric patients with HIV on ARV therapy filling with the Proprium Specialty Pharmacy from January to December 2022.

- **Inclusion Criteria:** Patients on HIV ART enrolled in Proprium patient management program (PMP) for > 6 months with a reportable VL or if on service < 6 months with a VL of < 200 copies/mL with a clinical assessment in the past one year



Primary Outcome: HIV viral load suppression



Data Identification: The following demographic information was collected through the electronic medical record or specialty pharmacy management system:

- Age, gender, race/ethnicity, out of pocket (OOP) medication cost, days on service in the specialty pharmacy, primary insurance type, VL suppression, and adherence measured by proportion of days covered (PDC).



Analysis: A logit regression model using Rstudio 2023.03.0+386 evaluated the impact of demographic variables on VL suppression. PDC level of 95% was utilized for analysis.

REFERENCES

1. Paterson DL, et al. Adherence to protease inhibitor therapy and outcomes in patients with HIV infection. *Ann Intern Med.* 2000;133(1):21-30.
2. Viral Suppression and Barriers to Care. CDC. [cdc.gov/hiv/statistics/overview/in-us/viral-suppression.html](https://www.cdc.gov/hiv/statistics/overview/in-us/viral-suppression.html).
3. Health Resources and Services Administration. Ryan White HIV/AIDS Program Annual Client-Level Data Report 2021. hab.hrsa.gov/data/data-reports.

RESULTS

Table 1 summarizes patient characteristics and their association with VL suppression. In the Proprium population, VL suppression was 94%, higher than national averages (**Figure 1**). Only 6% of patients had any OOP cost (**Figure 2**), with the most patients in the Medicare group (OOP mean \$25.72; median \$0; max \$908.54), followed by the commercial group (OOP mean \$0.79; median \$0; max \$79.07). Average PDC in the Proprium group was 92%, and PDC $\geq 95\%$ was associated with VL suppression.

Figure 1: Viral Load Suppression Rates

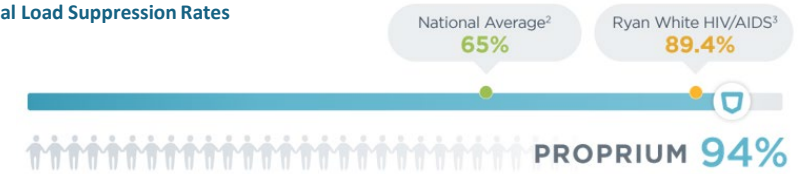
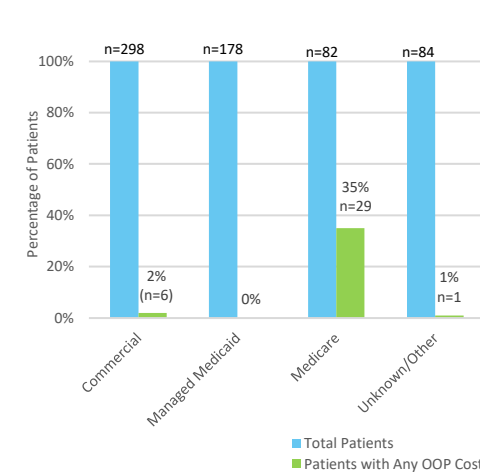


Table 1: Patient Characteristics and Impact on VL Suppression

Characteristic	N=642	p-value
Age (years) ¹	47	0.25
Sex (n, %)		0.39
M	463 (72%)	
F	179 (28%)	
Race (n, %)		0.86
Black	394 (61%)	
White	171 (27%)	0.79
Unknown/Other	77 (12%)	0.39
Hispanic or Latino (n, %)		0.43
No	533 (83%)	
Yes	94 (15%)	
Unknown	15 (2%)	
Days on Service ² (range)	1710 (2-2454)	0.50
Out-of-Pocket Cost ² (range)	\$0 (\$0-\$908.54)	< 0.005
Insurance Type (n, %)		
Commercial	298 (46%)	0.96
Managed Medicaid	178 (28%)	0.55
Medicare	82 (13%)	0.52
Unknown/Other	84 (13%)	
PDC $\geq 95\%$ (n, %)	346 (54%)	0.08

¹ Mean
² Median

Figure 2: Out of Pocket Cost by Insurance Type



PDC $\geq 95\%$ Associated with VL suppression (p=0.08)

CONCLUSIONS

- The lack of significant impact of age, gender, time on service, race/ethnicity, and insurance on VL suppression demonstrates the consistency of the HSSP model and impact on HIV clinical outcomes.
- The significant association between presence of OOP cost and improved VL suppression is likely due to the large percentage of patients with no OOP cost in the sample (>94%).
- The impact of medication adherence on VL suppression is consistent with previous findings and underscores the importance of careful monitoring and follow-up within this population.



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DISCLOSURES

The authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation