

Background

Polypharmacy is a common occurrence among older individuals and can increase their risk of morbidity and mortality.

- 42% of older HIV-positive individuals live with polypharmacy, which is particularly concerning due to their risk of experiencing adverse events.

The Golden Compass Program at San Francisco General Hospital (SFGH) Ward 86 offers comprehensive multidisciplinary care to address the healthcare needs of older HIV-positive adults.

- Includes an initial geriatric consult visit with a pharmacist and geriatrician
- Pharmacists play a crucial role in this care by identifying drug-drug interactions (DDIs) and potentially inappropriate medications (PIMs).

Objectives

Among adults aged 50 and older living with HIV and receiving care at SFGH Ward 86, this study aims to:

1. Describe prescribing issues including PIMs as detailed in Beers START/STOPP criteria, drug-drug interactions, and pill burden
2. Evaluate the effect of a pharmacist intervention during geriatric clinic visits in reducing prescribing issues

Methodology

Design: Single-center pre-post prospective study

Data Collection: The following data was collected from 123 patients between July 2016-December 2018 from electronic medical record (EMR) medication lists at two different time points ("pre" = initial geriatric consult visit and "post" = 6-month follow-up visit):

- Medication list and corresponding ATC classifications
- Total pill burden, total medications
- Drug-drug interactions
- PIMs (medications on list included in Beers START/STOPP)

Results

Table 1. Patient Characteristics (N = 123)

Characteristic	N (%) or Mean (SD)/Median (IQR)
Age, years	64 (7.12 years); Range 50-81 years
Sex	Male: 114 (93%)
CD4 (N = 117)	515 cells/mm ³ ; Range 365-686
On ART	120 (98%)
Polypharmacy	116 (94%)
≥ 1 DDI	99 (81%)
≥ 1 PIM	76 (62%)

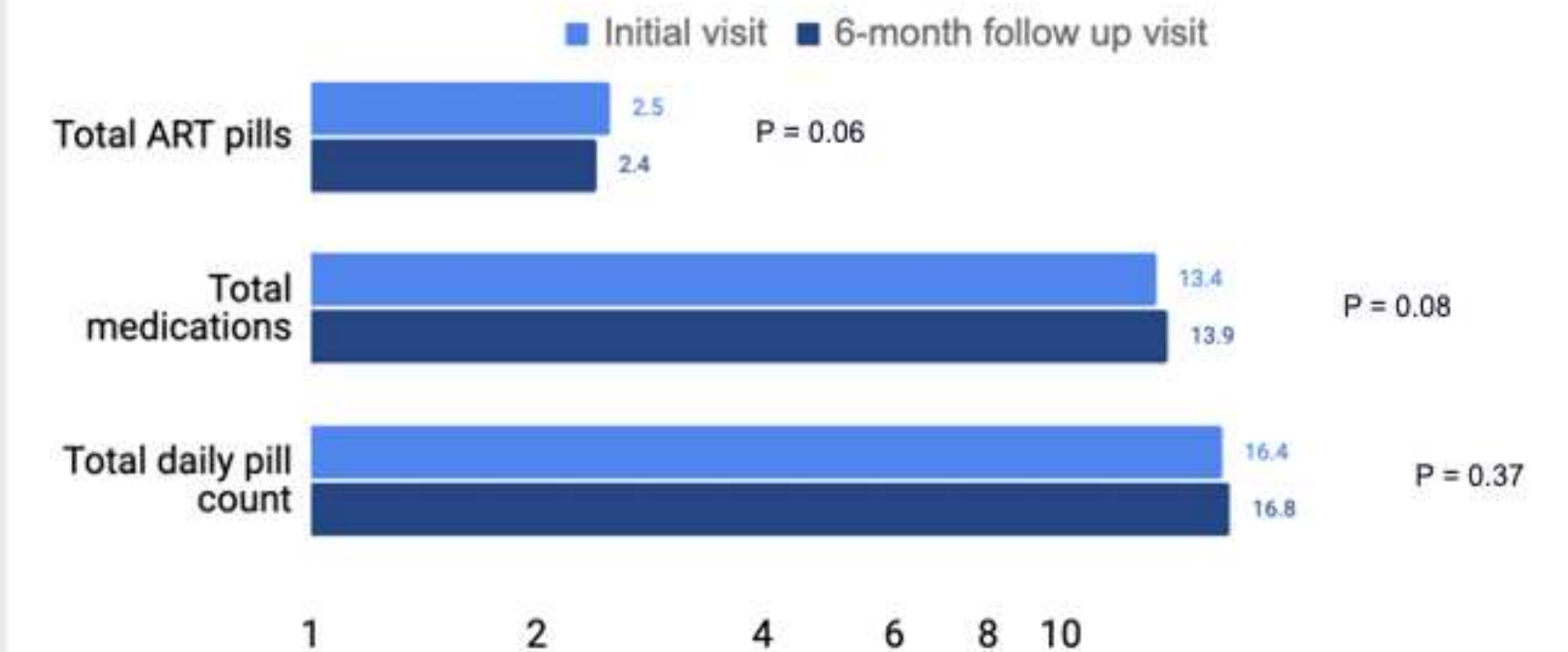
Most Common Comorbidities

Depression	63 (51%)
Hypertension	61 (50%)
Hyperlipidemia	61 (50%)
Falls	41 (33%)

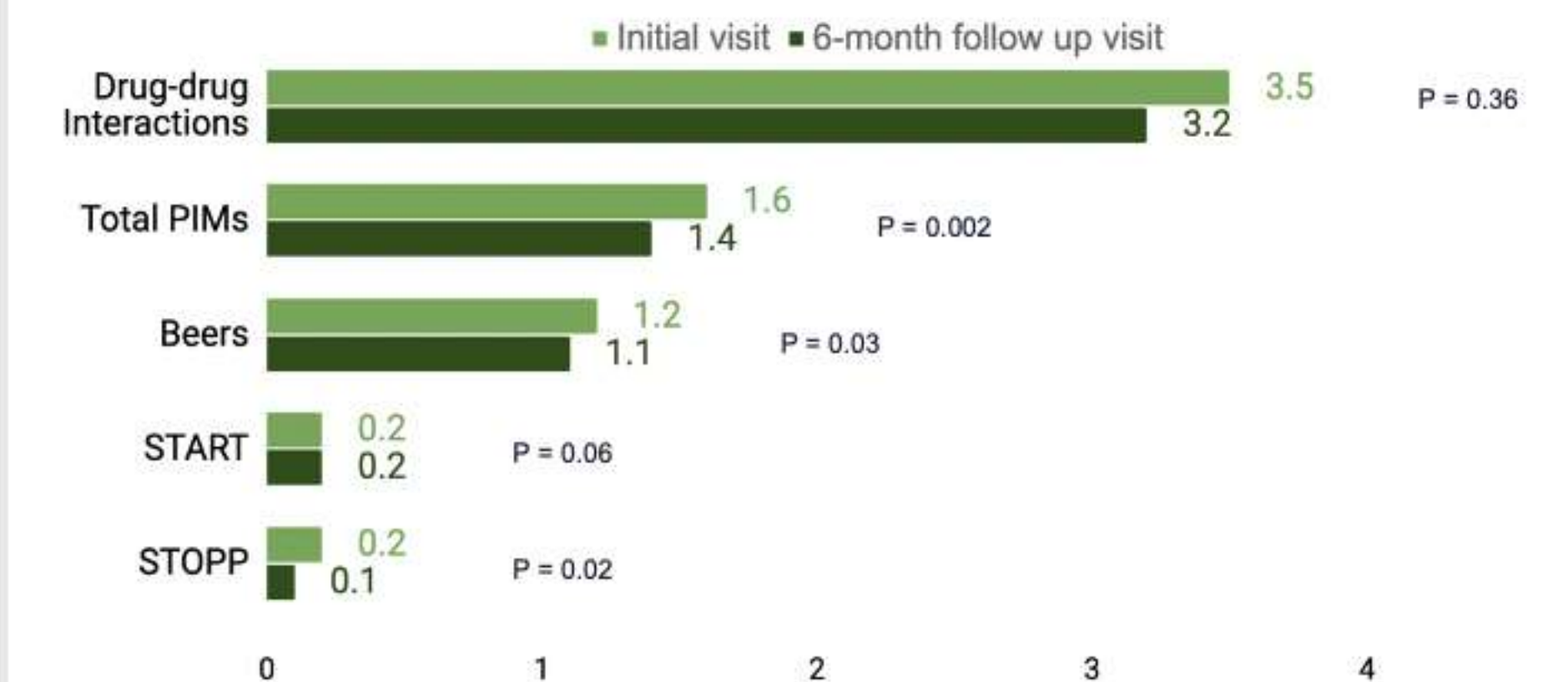
Table 2. Most Common Medications

Non-ART	Antiretroviral Therapy (ART)
Atorvastatin (6%) <i>Hyperlipidemia</i>	Integrase inhibitors (78%)
Aspirin (5%) <i>ASCVD risk reduction</i>	Protease inhibitors (24.4%)
Benazepril (3%) <i>Hypertension</i>	Non-nucleotide reverse transcriptase inhibitors (24.4%)
Gabapentin (3%) <i>Peripheral Neuropathy</i>	-----

Medication List Characteristics



Prescribing Issues



Conclusion

Within the SFGH Ward 86 patient population, 94% of older HIV-positive adults experienced polypharmacy, with 81% having at least 1 DDI and 62% having at least 1 PIM.

A pharmacist intervention significantly reduced number of PIMs with a decreasing trend in ART pill burden. However, total pill burden, total number of medications, and DDIs did not change significantly. This observation could be due to multiple factors, such as chronic disease progression and pharmacist interventions not being adequately recorded/reflected in the EMR.

For future studies, the characterization of DDIs and medication regimen complexity score will be explored, as well as comparison with non-intervention control groups.

References:

1. Quinn, K. J., & Shah, N. H. (2017). A dataset quantifying polypharmacy in the United States. *Scientific data*, 4, 170167. <https://doi.org/10.1038/sdata.2017.167>
2. Okoli, C., de los Rios, P., Eremin, A., Brough, G., Young, B., & Short, D. (2020). Relationship Between Polypharmacy and Quality of Life Among People in 24 Countries Living With HIV. *Preventing Chronic Disease*, 17. <https://doi.org/10.5888/pcd17.190359>

