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BACKGROUND

This study determined the **effectiveness of using antiretroviral medication** prescription claims data to provide adherence interventions in hopes to achieve virologic suppression (VS).

Adherence interventions are often implemented after an increase in HIV RNA is seen. Antiretroviral therapy (ART) prescription claims data can help clinicians target adherence interventions for people with HIV (PWH) who are at risk of virologic failure.

The use of this data source requires the collaboration of pharmacies, prescribers, payers, and public health agencies (AdhereP4).

METHODS

Patients were included in this project if they:

- 1) received care at a collaborating clinic
- 2) failed to pick up ART at least 30, 60, or 90 days from prior fill date
- 3) were eligible to receive intervention between November 2020 and December 2021 (index date) and
- 4) had an HIV RNA 12 months prior to and following the index date.

Interventions were categorized as:

- 1) "no": no patient contact
- 2) "soft": indirect patient contact (e.g., voicemail) or
- 3) "full": direct patient contact (e.g., in-person visit)

Across each intervention group, the mean difference in HIV RNA was calculated and proportion of patients with an HIV RNA <200 copies/mL (VS) was reported.

We compared the proportion of patients with VS pre- and post-index date stratified by intervention group. The differences were reported using the Chi-square test with an *a priori* significance level of 0.05.

The proportion of viremic patients decreased after adherence interventions compared to an increase in viremic patients in those who did not receive an intervention.

RESULTS

Table 1: Patient Demographics

| | | Total n (%) |
|------------------------|------------------------|-------------|
| | Total | 508 (100%) |
| Age (years) | 20-34 | 89 (18%) |
| | 35-44 | 86 (17%) |
| | 45-54 | 106 (21%) |
| | 55-64 | 149 (29%) |
| | 65-74 | 67 (13%) |
| | 75-85 | 11 (2%) |
| Sex* | Female | 208 (41%) |
| | Male | 300 (59%) |
| Race | Black/African American | 403 (79%) |
| | White | 39 (8%) |
| | Unknown/Other | 66 (13%) |
| HIV RNA <200 copies/mL | Yes | 394 (78%) |
| | No | 114 (22%) |
| HIV RNA <LLOD | Yes | 307 (60%) |
| | No | 201 (40%) |

*at birth; LLOD: lower level of detection

Of the 343 patients that received an intervention (full or soft), 107 did not have viral suppression at baseline; of which 50% (n=54/107) achieved viral suppression at follow-up.

Figure 1: Types of Interventions (n=508)

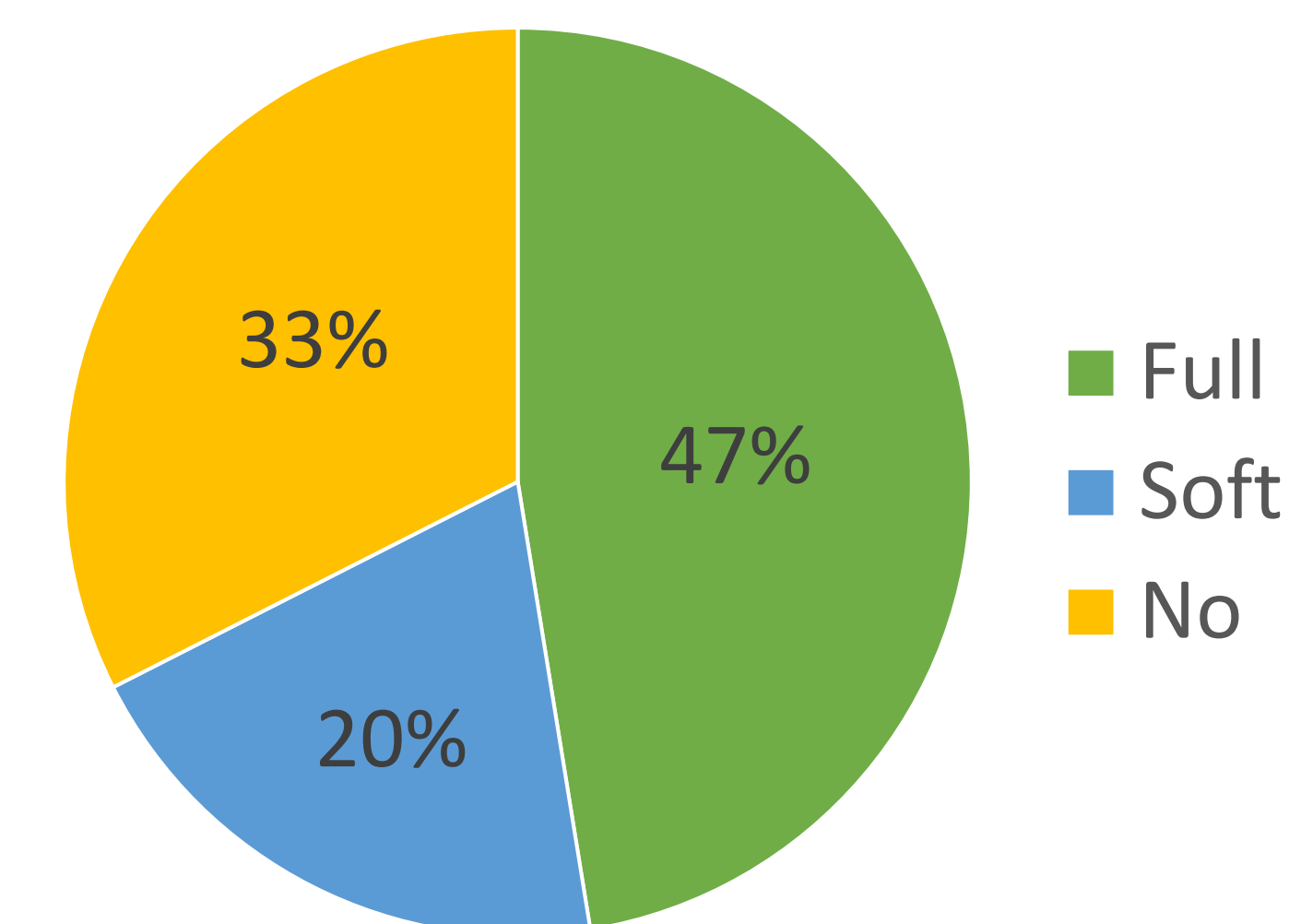


Figure 2: Percent of Patients with Viremia

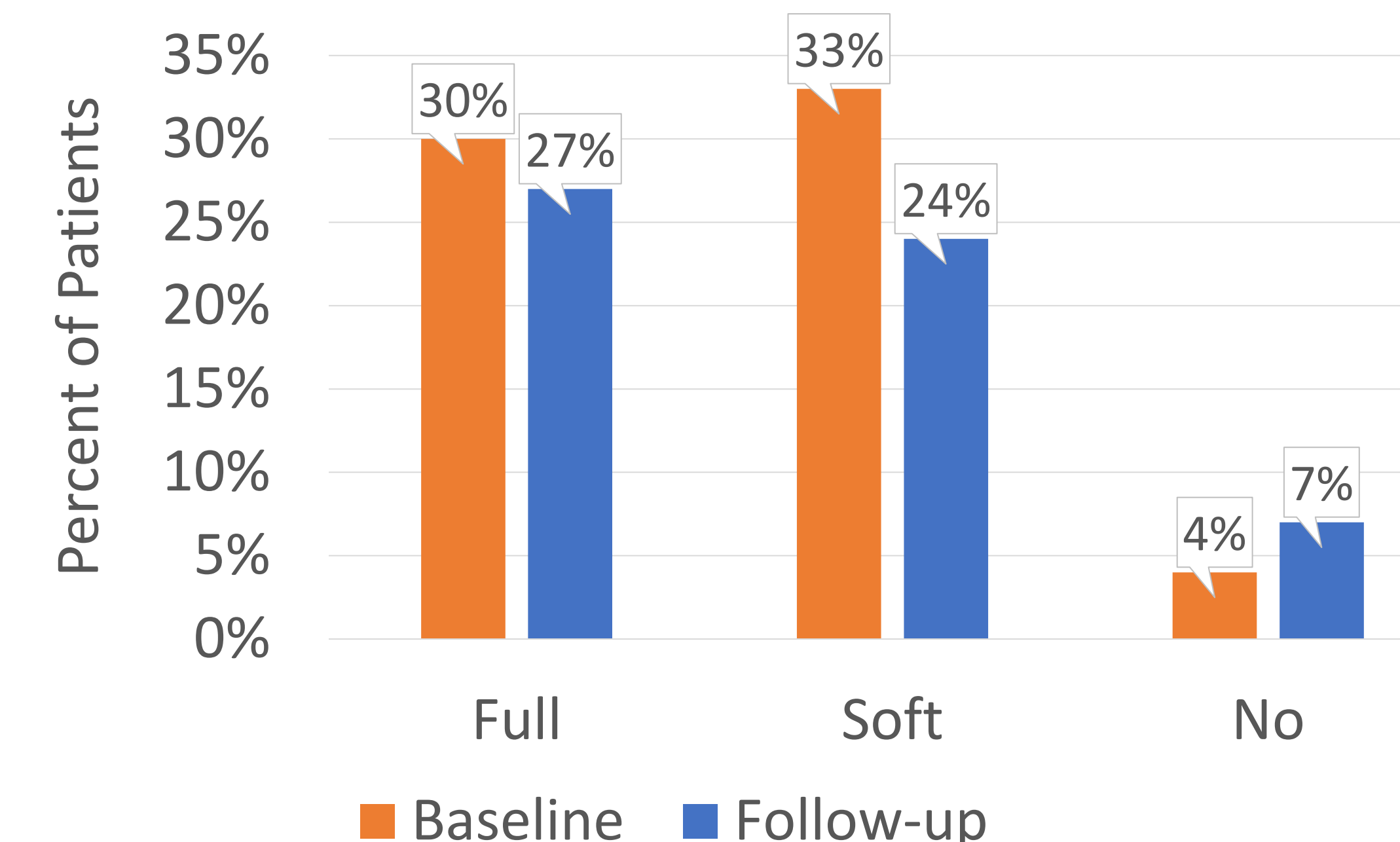
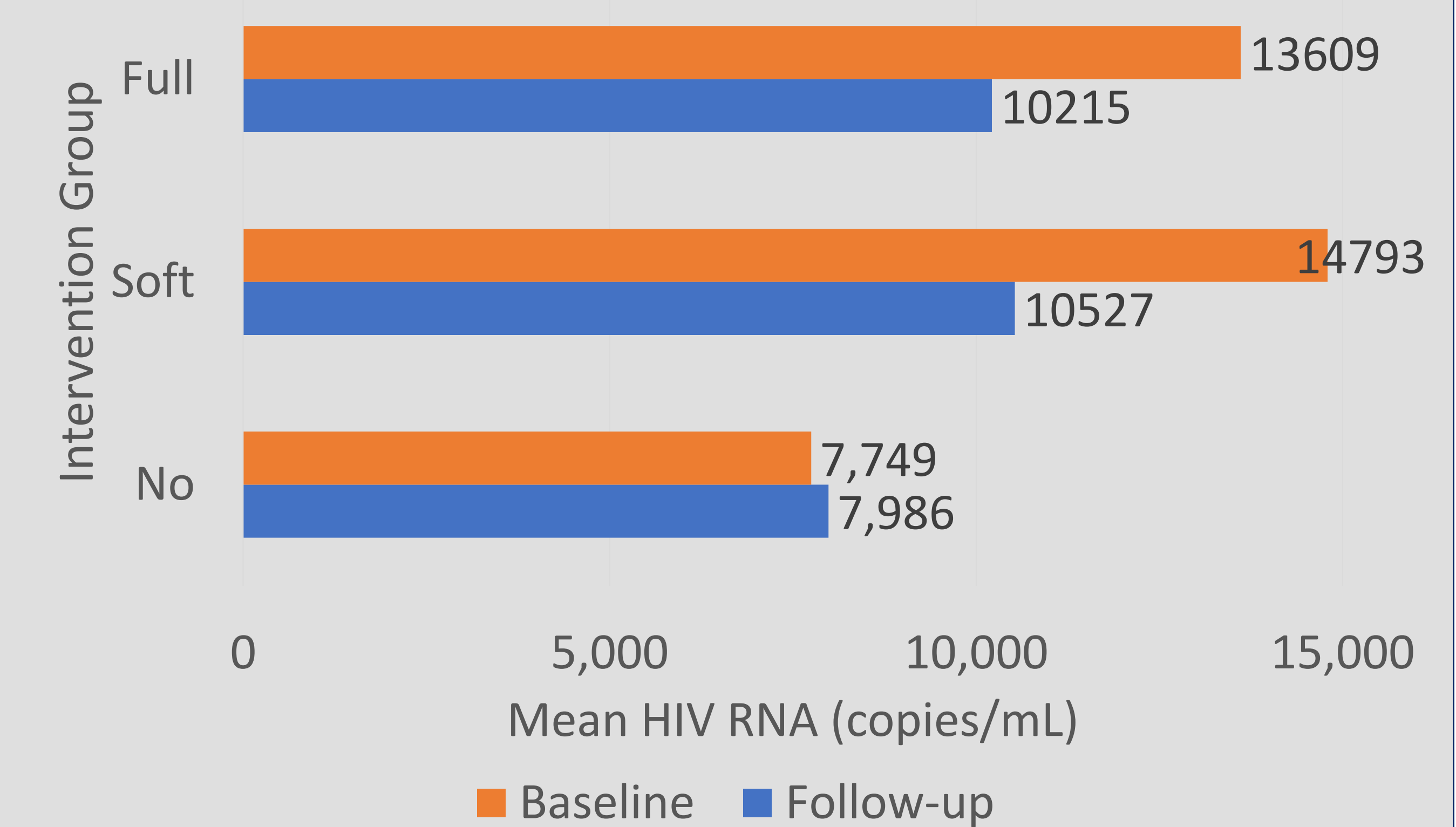


Figure 3: Mean HIV RNA Levels by Intervention Group



CONCLUSIONS

- 1) Proactive dissemination of pharmacy claims data to health care clinicians can guide targeted adherence interventions in real time.
- 2) Viral suppression may be high in patients who fail to pick up ART as virologic failure may not have developed yet.
- 3) The use of pharmacy claims data may to identify individuals with late ARV refills may help prevent virologic failure through targeted medication adherence interventions.

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