

## The impact of an integrated health-system specialty pharmacy on HIV antiretroviral therapy adherence, viral suppression and CD4 count in an outpatient ID clinic

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### ABSTRACT

**Background:** Atrium Health (AH) is a Charlotte-based not for profit hospital network that currently cares for HIV-infected patients through three outpatient ID clinics. AH recognized that novel approaches to patient care which incorporate clinical pharmacists and health-system specialty pharmacy into the practice model can help improve the HIV continuum. As a result, AH created an HIV specialty pharmacy service line that embedded an HIV-trained clinical pharmacist and pharmacy technician within one of three health-system outpatient ID clinics.

**Aims:** This study aimed to evaluate the antiretroviral medication adherence rate, viral load, and CD4 count among patients utilizing Atrium Health Specialty Pharmacy Service (AH SPS) compared to patients that opted out of the program.

**Methods:** This was a single-center, retrospective cohort study conducted from 7 August 2017 to 30 June 2018. All patients were already on HIV therapy at either entry or declination to the AH SPS program. The intervention group was defined as HIV patient care that incorporated AH SPS into the practice model. The control group was defined as HIV patient care that did not involve our health-system specialty pharmacy. The primary endpoints were medication adherence, viral suppression, and CD4 counts. Adherence was measured using pharmacy claims data and the Medication Possession Ratio (MPR) calculation. Baseline viral load and CD4 count at the time of entry or declination to the program was recorded as well as at the end of the observation period. Comparisons between the opt-in and opt-out groups were made.

**Results:** For those patients using AH SPS, the overall average adherence rate was 100% versus only 89% for those patients that opted out of the service ( $p < 0.01$ ). Furthermore, all but 3 patients using AH SPS reached viral suppression ( $p = 0.03$ ) and all but one had improved immunefunction with a CD4 count 200 or greater by the end of the observation period ( $p = 0.03$ ). The change in viral suppression and CD4 count of 200 or greater was not statistically improved between baseline and follow up in those opting out of using AH SPS.

**Conclusions:** The AH SPS utilized an innovative practice model that fully integrated a specialty pharmacy team within an outpatient ID clinic. This novel approach to patient care significantly improved adherence which in turn lead to improved viral suppression and immune markers in patients enrolled within the program compared to those opting out.

### KEYWORDS

HIV; adherence; specialty pharmacy; viral load

### PRESENTER

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