Background

- HIV-related medication errors have been reported in rates between 5.8-86%.
- Several studies have shown a decrease in HIV-related medication errors through a variety of interventions targeting the medication use process.
- Interventions reported in the literature include providing education, having ID-trained individuals performing medication reconciliations, providing prospective audit with feedback, and updating the computerized physician order entry (CPOE) system and formulary.
- The landscape of HIV medication errors may be changing with first-line regimens having fewer pills, less drug interactions, and less frequent administration. Therefore, evaluating current HIV-related medication errors is crucial in providing sustained decreases in ART and OI errors in the inpatient setting.

Methods

Study Design and Objectives

Pilot, quasi-experimental study with a pre-test/post-test design. Institutional Review Board approval waived.

Intervention

- **Basic ART and OI-related education provided to pharmacists and internal medicine residents.**
- A quick-reference sheet and electronic book丢了 providing feedback.
- Included ART dosing, dosing adjustments, drug interactions, and enteral administration considerations.
- Prospective audit with feedback on weekdays.

Control

- **ART-related medication errors pre- and post-intervention.**
- **Time to resolution of ART and OI-related medication errors.**
- **Types of errors.**
- **Subjects:**
  - Patients admitted to the University of Mississippi Medical Center from December 1, 2014 to February 28, 2017 or December 1, 2017 to February 28, 2018.

Inclusion criteria

- >18 years old
- HIV-positive inpatients
- First admission per patient during the study period
- Receiving either OI prophylaxis, ART, or both

Exclusion criteria

- Certain indications (see Table 1)

Error Classification

- Errors were classified by timing, source and type of error.

Result

Results were reported as proportions or medians. Inter-rater reliability was >0.85. Comparisons between the pre- and post-intervention group were performed using the Mann-Whitney U test for continuous variables and chi-squared test or Fisher’s Exact test for categorical variables. A p-value of <0.05 was considered statistically significant.

Conclusions

- No significant difference found in number of ART-related medication errors with basic education and prospective audit with feedback.
- Significantly more errors were resolved upon admission and were resolved 1 day faster. Errors targeted during pharmacist-based education all numerically decreased except DDI (dosing, administration timing, and identifying incorrectly entered regimens)
- Number of pharmacist-based interventions significantly increased; acceptance was high.
- Additional interventions are needed to further decrease inpatient HIV-related prescribing errors.