Background: HIV patients prescribed highly active antiretroviral therapy (HAART) are at high risk for medication errors. We sought to determine the rate of such errors.

Methods: Retrospective chart review of patients admitted between 1/1/2011 and 10/31/2011 prescribed antiretroviral therapy. Patients treated with monotherapy lamivudine or tenofovir for hepatitis B were excluded. Rates and types of errors with HAART or opportunistic infection treatment interactions were determined by the infectious diseases clinical pharmacists. Drug interaction classifications were defined per Micromedex®.

Results: During the 10 month study period, 162 admissions with a median length of stay of 4 days (range 1-28) Median CD4 count was 272 cells/µL (IQR 33-2234) and median viral load log10 copies/ml 2.07. Rate of medication errors was 59%, 62% of 162 admissions had at least 1 error. Total of 106 errors, 45% (48) were resolved, average time to resolution 78.7 hrs. 40% of errors were not resolved, average time from error to discharge. Time to resolution for the most common errors were major drug interaction 28%, dosing 20%, contraindicated drug interaction 12%, frequency 11%, and incomplete regimen 11%. Baseline characteristics that occurred more frequently in the patients with errors were females gender (4% in error group vs. 28% in no error group, p=0.046) and hemodialysis (17% in error group vs. 5% in no error group, p=0.022). Infectious Diseases (ID) was consulted in 53% of admissions. Errors occurred in 58% of admissions in which ID was consulted and 41% without (p=0.049). Significantly more errors were resolved when ID was consulted (65% resolved vs. 35% resolved, p=0.022).

Conclusions: Medication errors were common (50%) in HIV patients. Errors were more likely to be resolved when patients received an Infectious Diseases consult services, no dedicated HIV/AIDS ward and improve resolution rate and time to resolution.

Quality Improvement Measures

- Multidisciplinary, multidisciplinary stewardship efforts
- Education
- Completeness for all pharmacists on antiretroviral dosing and drug interactions
- Updates and modifications of medication files in computerized physician order entry system
- Addition of common dosage and frequency defaults
- Perspectives audit and review of all antiretroviral regimens by an infectious diseases-trained pharmacist
- Pharmacy-staffed inpatient medication rounds
- Decreased reliance continually during transitions of care
- Future Initiatives

- Ongoing evaluation of current initiatives to reduce rate of errors, improve resolution rate and time to resolution
- Implementation of computer-based decision software to improve efficiency and detection of medication errors.