OPAT programs are now widely accepted for monitoring patients on intravenous antibiotics. Various models exist. We evaluated if a pharmacist based monitoring program impacts 30 day readmission rates. Patients were monitored by an ID trained pharmacist for six months and by a non-ID trained pharmacist for the second six month period. Overall we found a reduction in our baseline readmission rate with either intervention. However, there was a lower readmission rate when patients were monitored by an ID trained pharmacist.

### Methods

Patients discharged from our facility on IV antibiotics that were followed by the ID service as an inpatient were included. Patients were evaluated from December 2013 through January 2015. We investigated co-management by an ID trained pharmacist impacts 30 day readmission rates. Our intervention period that included management by an ID trained pharmacist was December 2013 through June 2014. From July 2014 onward, patients were followed by a non-ID trained pharmacist. All patients had lab monitoring as recommended by the IDSA OPAT guidelines and were offered an appointment for evaluation in the ID clinic prior to discontinuation of their antibiotic course. The CPA allowed for dose adjustments based on renal function as well as ordering of labs. Any lab value that was more than 30% from the week prior was reviewed with the monitoring physician to determine if a change in therapy was indicated. Pharmacists focused on patients receiving aminoglycosides and vancomycin.

### Results

During our intervention period, we were able to demonstrate a reduction in 30 day readmission rate to 18% from 32%. The 30 day readmission rate increased after our intervention period to an average of 24%; however, we were able to maintain an overall reduction in all cause readmission rates with ongoing non-ID trained pharmacist monitoring. Most reasons for readmission were not related to the antibiotic course or ongoing infection. During both periods, reasons grouped as “other” counted for the majority of our readmissions. This included MI, alcohol intoxication, stroke, etc. Very few patients each month developed a new infection, such as a PICC line infection or Clostridium difficile infection. Several patients were readmitted for planned ongoing surgical procedures related to their initial infection and were grouped as “ongoing infection”.

### Conclusions

ID trained or non-ID trained pharmacist monitoring using a collaborative practice agreement in an OPAT program leads to a reduction in all cause 30 day readmission rates. ID trained pharmacists are likely more adept at pharmacokinetic monitoring of complex patients with multiple co-morbidities and drug interactions. However, our data show that a non-ID trained pharmacist can also effectively reduce 30 day readmission rates in the OPAT patient. There appears to be a learning curve for monitoring patients in the outpatient setting for both pharmacists. Monitoring by non-ID trained pharmacists may be more realistic in resource limited settings.

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### References


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