



## **Impact of a Pharmacy Resident on OPAT Prior to Patient Discharge**

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### **CASE OVERVIEW**

A new PGY2-infectious disease (ID) rotation was created in the outpatient parenteral antimicrobial therapy (OPAT) clinic. The interventions performed by two residents on rotation for a total of 8 weeks were quantified and qualified while the patients were hospitalized prior to discharge.

### **KEY ELEMENTS**

At the time, there was not a dedicated pharmacist to assist with OPAT needs. The inpatient ID pharmacists assisted as needed, but not consistently. A key element of this rotation was dedicated pharmacist time, in the form of a PGY2 resident, Monday through Friday for 4 weeks.

Residents would review patients as they were enrolled in the OPAT program, but still admitted in the institution. Daily activities involved drug selection, dosing, duration, route, and allergy information. Residents would meet with patients prior to discharge, introduce the OPAT program, counsel them on their medication, and make adjustment recommendations to the team.

This rotation is now a required PGY2 rotation and the PGY2 program has been expanded to 2 residents per year.

### **IMPACT ON PATIENT OUTCOMES**

During the 8-week time period, 77 patients were reviewed by the residents and included in the analysis. While most (55.8%) patients were discharged on one intravenous antibiotic, 33.8% were discharged on two antibiotics and 10.4% were discharged on three antibiotics.

Eighty-five patients visits were performed and 63 interventions were recommended to the team. Of those, 50 recommendations (79.4%) were accepted. The most common interventions included dosing recommendations (23.5%), coordination of care (20.6%), antibiotic choice (13.2%), monitoring (11.8%), and duration of therapy (8.8%).

The most commonly intervened on medications included vancomycin (25.5%), daptomycin (21.8%), ceftriaxone (10.9%), cefazolin (9.1%), and metronidazole (7.3%).

## PHARMACY AND PHARMACIST ROLES

The pharmacy resident independently reviewed patients as they were enrolled into the OPAT program. The resident presented their interventions to the preceptor. After discussion, the resident independently visited the patients, provided recommendations to the OPAT team, and documented a note in the electronic medical record. No additional training or credentials were required, as it was performed under the supervision of a pharmacist mentor.

## LESSONS LEARNED

The biggest challenge was creating a new role, one that pharmacists were previously not involved in. Another challenge was lack of a dedicated pharmacist that offered these services. As the teams acclimated to a pharmacist counseling patients on OPAT, these services were desired beyond the 4-week rotation period.

## BUDGET & RESOURCE ALLOCATION

Using some of this data, a full time equivalent (FTE) pharmacist OPAT was proposed and approved, but ultimately unable to be funded. The need was demonstrated, but additional OPAT support was required to independently see patients and prescribe therapy. Therefore a nurse practitioner was hired.

However, a year later, the specialty pharmacy was able to fund a 0.5 FTE clinic pharmacist and 0.5 FTE OPAT pharmacist. The program is now budgeted with consistent pharmacist presence in the OPAT program.

## FUTURE GOALS

The response to this poster has been encouraging. Other organizations have requested assistance and guidance in setting up similar rotations or budget proposals for pharmacists.

In addition to the 0.5 FTE pharmacist, the rotation offerings have increased with 2 annual PGY2 ID pharmacists completing their 4-week rotations and P4 pharmacy students rotating as an elective. The findings of this poster are in the process of being written up as a manuscript for publication.

A request has been submitted for an OPAT dashboard to better identify patients for targeted interventions and as a data repository for research. The OPAT team has also overall expanded to include a physician lead, nurse practitioner, one pharmacist, two clinic nurses, and one administrative assistant.