Twenty-five patients were treated for MRSA-B; 83 additional non-OPAT-P patients were discharged on IV therapy for MRSA-B from January 2015 to December 2017. Common sources of bacteremia included central line (n = 24, 22%), cellulitis (n = 18, 16%), and osteomyelitis (n = 9, 8%). No MRSA-B patients died within 30 days of discharge. Overall, 6-month readmission and ER visit rates did not differ based on OPAT-P enrollment (54%, P = 0.46 and 57%, P = 0.43, respectively). Three of 25 (12%) MRSA-B OPAT-P patients and 9/83 (11%) MRSA-B non-OPAT-P patients were readmitted for OPAT or infectious complications (P = NS). Microbiological recurrence was rare.

**Conclusion.** Adverse events in OPAT are common and antibiotic monitoring is crucial for OPAT safety. A dedicated OPAT-P has the potential to proactively identify adverse events and change therapy to prevent unplanned admission or ER visit. Further data are needed to clarify whether an OPAT-P may improve MRSA-B post-discharge outcomes.

**Disclosures.** All authors: No reported disclosures.

### 1941. Comparison of Patient Outcomes in a Pharmacist-Led Outpatient Parenteral Antimicrobial Therapy (OPAT) Program

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**Session:** 226. Clinical Practice Issues: OPAT

**Saturday, October 6, 2018: 12:30 PM**

**Background.** Despite the benefits of OPAT programs, readmission rates of up to 20% have been reported. In November 2016 at Franciscan Alliance Indianapolis, a dedicated pharmacist was assigned to build a formal OPAT program for all patients discharged on IV antimicrobials under the care of the infectious disease physician group. This study juxtaposed 30-day readmission rates and other patient outcomes for patients with and without an OPAT consult in order to assess how the program impacted patient care.

**Methods.** This was a retrospective cohort study comparing patients discharged on IV antimicrobials between December 1, 2016 and May 31, 2017. These patients were grouped based on whether they had a consult from the OPAT program. Thirty-day readmission rate, antimicrobial selection, discharge disposition, and treatment duration were collected and compared between groups. For the primary objective, at least 87 patients were needed to attain a power of 80% and detect a 30% difference between treatment groups.

**Results.** Out of 1,502 patients screened, 117 were deemed eligible and included (95 patients with a consult and 22 patients without). No statistically significant difference was found between the readmission rates of the consult group and the nonconsult group was observed (14.74% vs. 31.80%, P = 0.07). However, the consult group exhibited lower utilization of antipseudomonal coverage (38.95% vs. 86.40%, P < 0.0001) and ceftriaxone (9.47% vs. 45.45%, P < 0.001). Use of agents requiring close therapeutic drug monitoring was higher in the nonconsult group, specifically vancomycin (86.36% vs. 41.05%, P < 0.001) and gentamicin (6.32% vs. 22.73%, P < 0.05), despite the diminished intensity of follow-up for patients not followed by the service.

**Conclusion.** The OPAT service did not show a statistically significant reduction in 30-day readmission rate during the first 6 months of the program. However, this may have been due to insufficient power to detect the true difference between treatment arms. Additionally, use of the program was associated with improved antimicrobial stewardship through reduced use of antipseudomonal coverage and ceftriaxone.

### Figure 1: Demographics

| OPAT Consult (N=95) | No OPAT Consult (N=22) |
|---------------------|------------------------|
| Median Age (IQR)    | 61(21)                 | 64(26.3)               |
| Median Length of Stay (IQR) | 6(5)                 | 7(8.3)                 |

**Indication for Therapy**

|                      | OPAT Consult (N=95) | No OPAT Consult (N=22) |
|----------------------|---------------------|------------------------|
| Empyema              | 7                   | 2                      |
| Osteomyelitis        | 11                  | 3                      |
| Bacteremia           | 36                  | 13                     |
| Intravenous-Abscess  | 10                  | 3                      |
| Skin and Soft Tissue| 26                  | 9                      |
| Other                | 5                   | 2                      |

### Figure 2: Results

- **Reductions within 30 Days**
  - OPAT Consult: 14.14% vs. 17.82%
  - No OPAT Consult: 8.36% vs. 11.05%
- **Disposition Change**
  - OPAT Consult: 38.00% vs. 12.34%
  - No OPAT Consult: 38.00% vs. 12.34%
- **Median Total Days of Therapy**
  - OPAT Consult: 21 (29) vs. 29 (24)

**Disclosures.** All authors: No reported disclosures.

### 1942. Expansion of Outpatient Parenteral Therapy Program with Addition of Advanced Practice Providers Can Lead to Reduced Readmission Rates

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**Session:** 226. Clinical Practice Issues: OPAT

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**Background.** The addition of Advanced Practice Providers (APPs) such as Nurse Practitioners or Physician Assistants as hospital-based service providers has been shown to increase efficiency of care, provide for better continuity of care across the inpatient and outpatient settings, and facilitate interdisciplinary collaboration. As healthcare systems attempt to not only increase access to care but also improve quality, the addition of APPs is becoming an option to meet division-specific goals. To decrease readmissions and increase access to care for patients discharged on intravenous (IV) antibiotics and in the Outpatient Parenteral Antibiotic Therapy (OPAT) Program, the Division of Infectious Diseases at UPMC Presbyterian hired two APPs in early 2017. Our aim was to compare readmission and follow-up rates from the time before expansion of the program with APPs to after expansion.

**Methods.** We completed a retrospective study of all OPAT patients seen by any Infectious Diseases (ID) provider (MD or APP) n the period from January to May 2017 (prior to APP outpatient clinics with OPAT patients) and in the period from January to February 2018. The total number of patients seen by an ID provider and the 30-day readmission rates were collected and evaluated. A comparison of proportions was done with a two-tailed z-test for the percentage of readmissions prior to program expansion compared with the percentage of readmissions after program expansion.

**Results.** Following the expansion of the OPAT program with the addition of two APPs in 2017, there was a decrease, from 14.7% to 9.6%, in 30-day readmissions for all patients who were seen for follow-up (P = 0.0461, 95% CI 0.0672–0.3164). The percentage of patients who were seen for follow-up increased after expansion of the program from 29.5% to 39.3% (P = 0.0051, 95% CI 2.8714–16.9153).

**Conclusion.** Expansion of the OPAT program within the Division of Infectious Diseases at UPMC with the addition of two APPs has significantly increased access to care and significantly decreased 30-day readmissions when the patient was seen for follow-up by an ID provider (MD or APP).

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### 1943. Collateral Benefits of Diabetes Management Associated With Self-administered Outpatient Parenteral Antimicrobial Therapy

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**Session:** 226. Clinical Practice Issues: OPAT

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**Background.** Self-administered outpatient parenteral antimicrobial therapy (S-OPAT) is a self-care treatment modality in which patients requiring extended courses of intravenous antibiotics are trained to safely self-administer treatment via indwelling catheter in their own homes. A large proportion of S-OPAT patients are baseline diabetics who present with osteomyelitis and soft-tissue infections associated with poor glycemic control. Given the degree of patient activation demanded by the S-OPAT program, we hypothesized that S-OPAT may benefit patients in other self-care modalities, including diabetes self-management.

**Methods.** We conducted a before-after retrospective analysis of diabetic patients receiving S-OPAT. Outcomes were compared between the 6-month period prior to and the 6-month period following initiation of S-OPAT. Outcomes of diabetes self-management included HgbA1c, diabetes medication adherence (as measured by proportion of days covered, or PDC), and use of any diabetes medication. A subgroup analysis was conducted among insulin users. Difference in outcome was tested for significance using paired t-tests.

**Results.** A total number of 348 diabetic S-OPAT patients were identified. The mean HgbA1c decreased by 1.82 from the 6 months prior to the 6 months after initiation of S-OPAT (P < 0.001). Subgroup analysis showed an additional significant reduction in HgbA1c among insulin users (P = 0.002). There were no differences in adherence rates to diabetes medications or initiation of medications prior and post-institution of S-OPAT (P > 0.05). The degree of patient activation obtained through the S-OPAT model yields collateral benefits in other aspects of self-care, including glycemic control.

**Conclusions.** Initiation of S-OPAT was associated with a significant reduction in HgbA1c among diabetic patients. A similar reduction was noted among insulin users, a group requiring a higher level of self-care. Reduction in HgbA1c was not attributable to changes in medication regimens or adherence. Resolution of infection alone is not sufficient to explain the marked reduction in HgbA1c demonstrated pre- and post-initiation of S-OPAT. We hypothesize that the degree of patient engagement obtained through the S-OPAT model yields collateral benefits in other aspects of self-care, including glycemic control.

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### 1944. Patients With Prosthetic Joint Infections Receiving Outpatient Parenteral Antimicrobial Therapy: Characteristics and Readmission Rates

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Results. A shared system list and communication tools used by ID physicians, nurses, and pharmacists were created. As soon as an inpatient is identified as an OPAT discharge, an OPAT "Plan of care" note is created by an ID fellow, note is sent to the OPAT team members (OPAT nurse, nurse practitioner, and ID pharmacist) and the patient is added to the shared list. An order set was built to facilitate accurate electronic prescribing of antimicrobials, supplies for home infusions, and pertinent laboratory tests. The order set sends an automatic message to OPAT team members, a back-up method for identifying OPAT patients. A comprehensive patient report, the "OPAT monitoring" view, was designed to facilitate patient care. The view displays OPAT relevant data from multiple sections of the patient chart onto one screen (ID notes, laboratory results, medications, appointments, free text box, etc.) without entering each patient’s chart. These EMR modifications significantly reduced the time needed for weekly case reviews and facilitates more efficient management of 90–100 patients weekly.

Conclusion. Modifications made to the Epic EMR at our institution have improved patient safety and efficiency of the OPAT program. Fewer patients are missed, patient monitoring is enhanced, clinician time is saved, and ordering is more accurate. Physician satisfaction was improved by creating tools that were designed with workflow efficiency in mind. These modifications were independent of and predate the recommendations made in the Epic "OPAT setup and support guide," and provide more enhancements for efficient patient management, and could easily be made by other EMR vendors.

Disclosures. All authors: No reported disclosures.

1945. Making the EMR Work for You: Modifications to Epic to Improve Management of Outpatient Parenteral Antibiotic Therapy (OPAT) Patients Sonal Munsiff, MD,1, Erica Dobson, PharmD2, and Colleen Burgoyne, NP3. 1Medicine, Infectious Diseases, University of Rochester Medical Center, Rochester, New York; 2University of Rochester Medical Center, Rochester, New York; 3Infectious Diseases, University of Rochester Medical Center, Rochester, New York

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Background. Our institution uses Epic as its electronic medical record (EMR) and managing the complex needs of OPAT patient's has been challenging and also time-consuming with our EMR. It became imperative that the EMR be modified to capture all OPAT patients and manage them efficiently. We describe the development and managing the complex needs of OPAT patient’s has been challenging and also time-consuming with our EMR.

Methods. The infectious diseases (ID) physician and pharmacist identified multiple ways in which OPAT patient care could be improved by modifying the EMR. In 2016, a multidisciplinary team at URMC created software modifications in Epic to meet the needs of the OPAT program.

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