Tele-OPAT Outcomes at Two Community Hospitals

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BACKGROUND

Outpatient parenteral antimicrobial therapy (OPAT) is well-established for the care of patients requiring IV antibiotics after hospital discharge, but little is known about the effectiveness of OPAT delivered through telemedicine.[1-3] We therefore investigated outcomes from telemedicine OPAT services (Tele-OPAT) at two community hospitals.

METHODS

Data was collected from two community hospitals in the UPMC health system for which both inpatient and outpatient telemedicine ID services (Tele-ID) are provided, including Tele-OPAT services. Tele-ID services at Site 1 (171 beds) began in January 2014 and at Site 2 (133 beds) in January 2018. All patients had inpatient Tele-ID consults via live audio-video (AV) visits or EHR review. After discharge, patients were managed by a Tele-OPAT team consisting of an ID pharmacist, RN and ID physician. Live AV Tele-OPAT outpatient follow-up visits were conducted with the assistance of a tele-presenter at 2 outpatient clinics site.

Figure 1. Clinic Follow up Rates

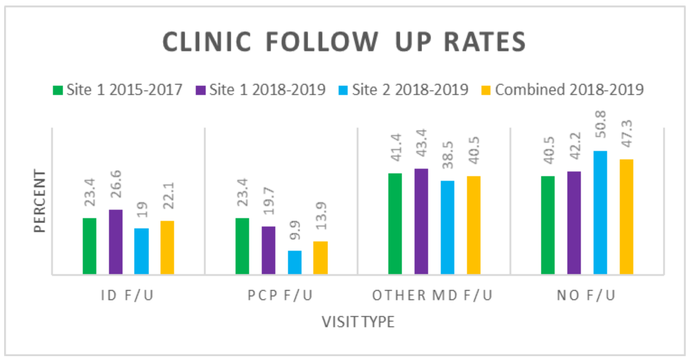


Figure 2. 30 Day Readmission Rates

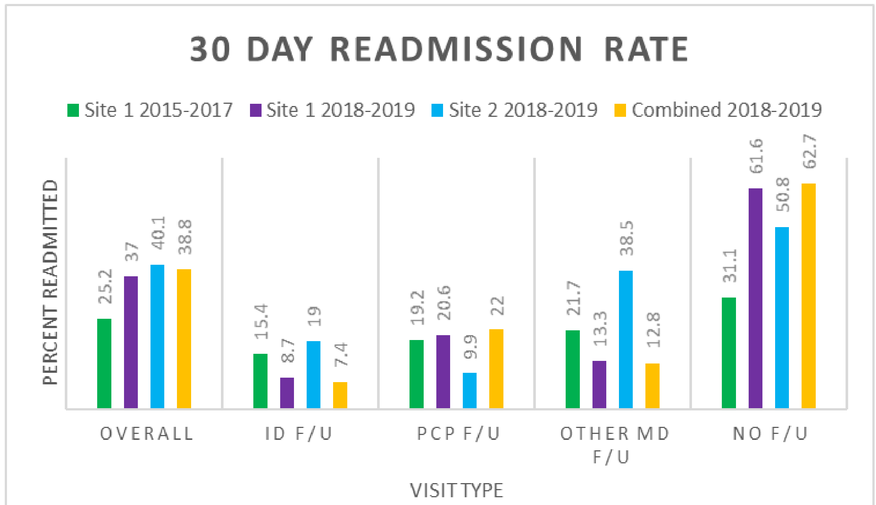
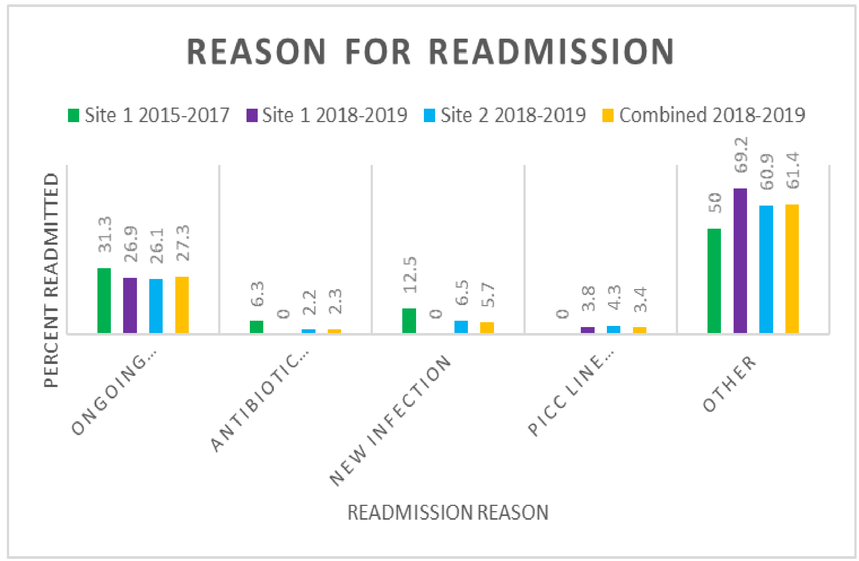


Figure 3. Reason for Readmission



RESULTS

A total of 489 unique patients with 536 encounters were evaluated.

Site 1 accounted for 284 patients, Site 2 had 252.

Demographics were:

- 47% of the patients were male
- The average age was 65.
- 51% of the patients were diabetic.
- 51% of the patients were discharged to home.
- Bacteremia (24.4%) and osteomyelitis (23.3%) were the most frequent diagnoses.
- Vancomycin was the most commonly used antibiotic (25.6%) followed by Ceftriaxone (20.9%) and Ertapenem (14%).

Figure 1: Tele-ID Clinic follow up rates varied by year and site between 19 to 26.6%. The choice of follow-up was determined by the primary inpatient physician.

Figure 2: 30 Day Readmission Rates were lower for patients that were seen by the Tele-OPAT service (combined rate of 7.4%) vs. no follow up (62%) vs. PCP follow up (22%) vs. follow up with another MD (12.8%).

Figure 3: Most patients seen by Tele-OPAT were readmitted for reasons not related to their initial infection or their antibiotic course.

CONCLUSION

Patients discharged on IV antibiotics who were managed via a Tele-OPAT service in an outpatient clinic had lower readmission rates than those who were seen by non-ID physicians or who had no outpatient follow-up. Tele-OPAT is an important option for patients residing in rural areas who are discharged on parenteral antibiotics.

References

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2. Hunag V, Ruhe JJ, Lerner P, Fedorenko M. Risk factors for readmission in patients discharged with outpatient parenteral antimicrobial therapy: a retrospective cohort study. BMC Pharmacol Toxic 2018 Aug 6; 19(1):50.
3. Tan, Shu J et al. Successful Outpatient Parenteral Antibiotic Therapy Delivery via Telemedicine J Antimicrob Chemother. 2017 Oct 1;72(10):2898-2901.