Transitions of Care Quality Metrics in Patients Discharged on Parenteral Antimicrobial Therapy in a Large Urban Hospital that Lacks a Formal Outpatient Parenteral Antimicrobial Therapy Program Leah Rodriguez, PharmD¹; Jeffrey Minuk, MD²; Sara Schultz, MD³

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Background

- \succ With the evidence demonstrating the need for antimicrobial stewardship in the transition from inpatient to outpatient intravenous (IV) antibiotic therapy, it is imperative to have effective communication and coordination in a multidisciplinary team.
- > OPAT assessments recommended the by Infectious Disease Society of America (IDSA) have been associated with reduced hospital readmissions, decreased length of stay, and fewer line-related infections.
- \succ The goal of this study is to assess quality metrics in a sample of patients discharged on IV antibiotics prior to initiation of a pilot OPAT program.

Methods

- \succ This is a retrospective, multicenter chart review of patients admitted to Temple University Health System from 10/1/2020-10/31/2021 who were discharged on IV antibiotics.
- > Patients with multiple admissions were documented as separate
- > Data were collected on the appropriateness of OPAT indication, pathogens targeted, antibiotics used, performance of infection diseases (ID) consult, line selection, clinical outcomes, and demographics.
- \succ Primary endpoint = the percentage of global IV antibiotic prescribing errors (antibiotic, dose, route, frequency, duration, parenteral access device)

Defining Terms

- > Appropriate antibiotic choice: Based on indication and guidelines > **Dose and frequency:** Based on hospital dose adjustment protocol and indication.
- **Duration:** If indication is not applicable, decision based on infectious diseases consult review
- > Prescribing errors: antibiotic choice, dose, frequency, duration, inability to use an oral agent, administration appropriateness, parenteral access device
- Appropriate parenteral access device: Based on 2018 Infectious Diseases Society of America Outpatient Parenteral Antimicrobial Therapy guidelines

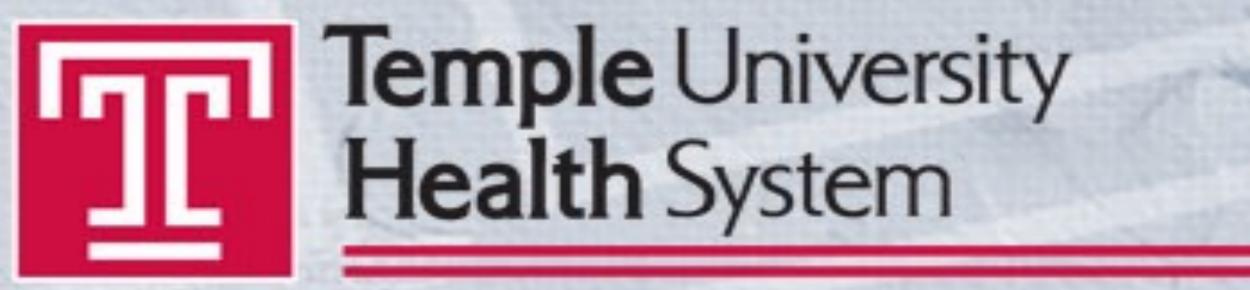
Results

N (%) unless otherwise noted Table 1: Demograp	nics N=109
Male	60 (55)
Male, mean ± SD	63 ± 22
Antibiotic allergies	
Penicillin	10
Other	31
Allergy manifestation	
Anaphylaxis	2
Hives/swelling	9
Other	13
Social factors	
PWID/homeless/alcohol abuse/long-term care facility	20 (18)
Organism	
Gram positive	73
Gram negative	54
Other	10
Non identified	5
Indication	
SSTI/ABSSSI	21
UTI	22
PNA	8
IE	8
Osteomyelitis/prosthetic joint infection/septic arthritis/epidural abscess	20
Intra-abdominal	4
Bacteremia	44
Other	4
ID consult	97 (89)
Disposition	
AMA	1 (9)
SNF/LTAC/rehabilitation	62 (57)
Dialysis	14 (13)
Treatment at home	31 (28)
Hospice	1 (9)
Hospital length of stay, mean ± SD	12 (3-40)

Table 2: Antibiotic Prescription Appropriateness		
N (%) unless otherwise noted	N=109	
Oral option	20 (18)	
Antibiotic choice	101 (93)	
Dose	90 (83)	
Frequency	102 (94)	
Duration	70 (64)	
Administration appropriate (intravenous push versus continuous)	105 (96)	
Appropriate parenteral access device recommended	71 (65)	
Completion of therapy		
Yes	55 (50)	
No	16 (15)	
Unknown	38 (35)	

in 705 unique pts

- option
- had abnormal findings.
- prescribing errors.
- with infectious diseases.



*PWID: people who inject drug; SSTI: skin and soft tissue infections; ABSSSI: acute bacterial skin and skin structure infections; UTI: urinary tract infections; PNA: pneumoni IE: infective endocarditis; ID: infectious diseases; AMA: against medical advice; SNF: skilled-nursing facility; LTAC: long-term acute care

Results

>There were 748 total discharges on IV antimicrobials

> A random sample of 109 discharges were chosen. >Twenty (18%) had an oral antimicrobial available as an

>ID recommended laboratory monitoring for 44 (40%) patients, of which 8 (18%) were sent to ID clinic; all

> Of the 25 patients who required ID follow-up, 11 had a scheduled ID appointment of which 8 attended. No mortality was identified from these patients, but two were readmitted within 30 days.

>Overall, 39% patients were readmitted within 30 days, 6% had mortality within 30 days and 50% were known to have completed therapy.

Conclusion

 \succ This study captured a 65% rate of global prescribing errors in a sample of 109 patients receiving IV antibiotics at discharge. These include all antibiotic

> This is deemed a significant amount of prescribing errors at discharge leading to poor patient outcomes while also increasing hospital costs.

> The findings demonstrate an urgent need for an OPAT program to help with antimicrobial, parenteral access selection, monitoring, and follow-up

 \succ Guidelines recommend infectious diseases expert review prior to initiating OPAT. By implementing this program, it is expected the health system will have improved infectious diseases outpatient follow-up, improved laboratory monitoring, and improved readmission metrics.