

Background

- Outpatient parenteral antimicrobial therapy (OPAT) is defined as the administration of parenteral antimicrobial therapy in at least 2 doses on different days without an overnight hospital stay¹
- OPAT can be utilized for patients with infections requiring intravenous (IV) antimicrobials for extended durations such as bacteremia, endocarditis, and osteomyelitis
- OPAT shortens hospital stays, reduces the risk of healthcare-related infection development, allows patients to return to their normal activities of daily living, and provides significant cost savings^{2,3}
- Previous studies indicated involvement of an infectious diseases trained multidisciplinary team in OPAT is associated with fewer antimicrobial therapy errors, increased laboratory test receipt, and improved outpatient follow-up⁴⁻⁶

Purpose

To determine whether pharmacist managed review and monitoring of OPAT improves adherence to standard of care laboratory monitoring recommendations compared to historical practices

Study Design

Retrospective chart review of OPAT patients at University Hospital in San Antonio, Texas before and after ID transitions of care pharmacist implementation

Inclusion

- Age \geq 18 years old
- IV antibiotic orders placed for OPAT prior to hospital discharge

Exclusion

- Less than 1 week of OPAT
- Completion of IV antibiotic therapy prior to hospital discharge
- Death prior to discharge
- Incarcerated patients
- Pregnant women

References

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4. Heintz BH, Halilovic J, Christensen CL. Impact of a multidisciplinary team review of potential outpatient parenteral antimicrobial therapy prior to discharge from an academic medical center. *Ann Pharmacother*. 2011 Nov;45(11):1329-37.
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Outcomes

Primary Outcome

Adherence to laboratory monitoring recommendations for \geq 75% of the duration of planned OPAT

Secondary Outcomes

- Adherence to laboratory monitoring recommendations:
 - \geq 50% to <75%
 - \geq 25% to <50%
 - < 25%
- 30-day readmissions
- 30-day all-cause mortality
- ED or ED observation visits
- Complications

Results

Baseline Characteristics

	Pre (n = 198)	Post (n = 211)	p-value
Age, years*	54 (43-63)	55 (40-63)	0.8
OPAT clinic patient, n (%)	161 (81.3)	176 (83.4)	0.61
OPAT setting, n (%)			
Home health	130 (65.6)	133 (63.0)	0.24
Skilled nursing facility	54 (27.3)	55 (26.1)	
Other	14 (7.1)	23 (10.9)	
Type of infection, n (%)			
Bacteremia	68 (34.3)	78 (37.0)	0.61
Osteomyelitis	71 (35.9)	79 (37.4)	0.76
Prosthesis or hardware	22 (11.1)	24 (11.4)	1.0
Skin and soft tissue	17 (8.6)	24 (11.4)	0.41
Urinary tract	19 (9.6)	18 (8.5)	0.73
Abdominal	24 (12.1)	11 (5.2)	0.01
Endocarditis	11 (5.6)	13 (6.2)	0.84
Other	30 (15.2)	45 (21.3)	0.1
Length of stay, days*	10 (7-16)	9 (6-14)	0.02
Total duration of therapy, weeks*	6 (4-6)	6 (4-6)	0.89
Total days of OPAT post-discharge*	29 (16-37)	30 (14-37)	0.89

*Median (Interquartile range)

The authors of this study have nothing to disclose. For more information or a reprint of this poster, please contact Emily Kirkpatrick at emily.kirkpatrick@uhs-sa.com.

Results

Primary Outcome

Adherence	Pre (n = 161)	Post (n = 176)	p-value
\geq 75%, n (%)	42 (26.1)	98 (55.7)	0.0001

Secondary Adherence Outcomes

Adherence	Pre (n = 161)	Post (n = 176)	p-value
\geq 50% but <75%, n (%)	17 (10.6)	16 (9.1)	0.65
\geq 25% but <50%, n (%)	34 (21.1)	14 (7.9)	0.001
<25%, n (%)	63 (39.1)	35 (19.9)	0.0001
Inpatient for all labs, n (%)	5 (3.1)	13 (7.4)	0.08

Other Secondary Outcomes

Outcome	Pre (n = 198)	Post (n = 211)	p-value
30-day readmissions, n (%)	38 (19.2)	42 (19.9)	0.9
30-day ID attributed readmissions, n (%)	20 (10.1)	19 (9.0)	0.74
OPAT clinic patients	n = 161 18 (11.2)	n = 176 14 (8.0)	0.31
Non-OPAT clinic patients	n = 37 2 (5.4)	n = 35 5 (14.3)	0.2
30-day non-ID attributed readmissions, n (%)	15 (7.6)	22 (10.4)	0.39
30-day all-cause mortality, n (%)	3 (1.5)	0 (0)	1.0
ED or ED observation, n (%)	31 (15.7)	31 (14.7)	0.78
Infection-related	8 (25.8)	2 (6.5)	0.04
Line-related	16 (51.6)	18 (58.1)	0.61
Antibiotic-related	4 (12.9)	1 (3.2)	0.16
Complications, n (%)	28 (14.1)	37 (17.5)	0.34
Infection-related	5 (17.9)	3 (8.1)	0.24
Line-related	9 (32.1)	14 (37.8)	0.64
Antibiotic-related	15 (53.6)	21 (56.8)	0.8

Conclusions

- Pharmacist review and management of OPAT patients significantly improved adherence to guidelines recommended laboratory monitoring
- No difference in rates of 30-day readmissions
- Significantly less ED visits for infection-related reasons and a trend toward less visits for antibiotic-related issues