

# OUTPATIENT PARENTERAL ANTIMICROBIAL THERAPY (OPAT) - WHEN THINGS GO WRONG!

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## BACKGROUND

OPAT is a method by which intravenous (IV) antimicrobials are administered to patients in the community. OPAT has potential to reduce bed pressures, NHS costs and improve quality of patient care<sup>1,2</sup>.

## AIM/OBJECTIVE

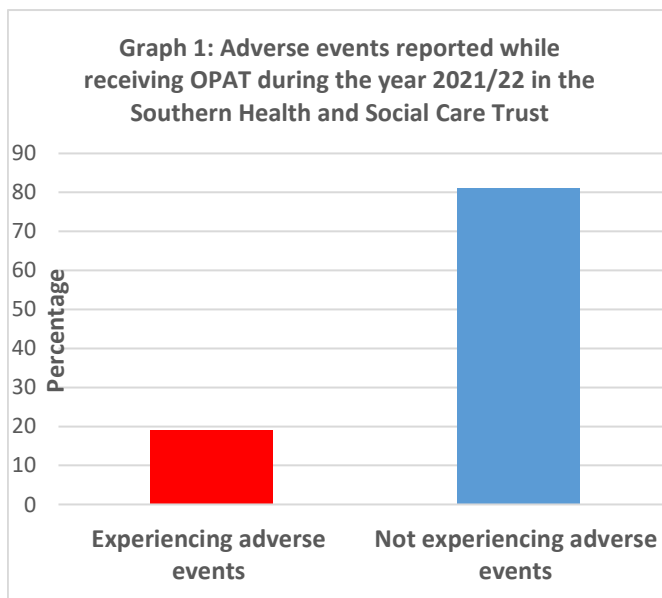
To review OPAT adverse events during the year 2021/22 in the Southern Health and Social Care Trust (SHSCT) in Northern Ireland and assess actions taken.

## METHODS

Information for OPAT patients is documented throughout their journey including demographics, antibiotics used, outcomes and adverse events. Information is collected against categories defined by the British Society for Antimicrobial Chemotherapy and actions taken documented contemporaneously.

## RESULTS...

The SHSCT OPAT team treated 126 patients during 2021/22. This saved 3209 bed days, which equalled 8.8 bed days per day. 24 of these 126 patients (19%) experienced adverse events as shown in graph 1. No patient died or was admitted as a result of these events.



## RESULTS CONTINUED...

Table 1 provides a summary of the adverse event experience by patients.

Antibiotic combination	Adverse event	Number of patients experiencing adverse events
Ceftriaxone 2g	White cell count (WCC) & CRP rise	1
	Low WCC	1
	<i>Clostridium difficile</i>	1
	Swollen arm - ? clot	1
Ceftriaxone 4g	Low WCC	4
	Increased eosinophils & rash	1
Linezolid	Rash	2
	Low platelets	1
	Deranged LFTs	1
Ertapenem	Rash	1
	<i>Clostridium difficile</i>	1
	Fall	1
Levofloxacin and rifampicin	Diarrhoea	1
	Vomiting	1
Piperacillin/tazobactam	Raised eosinophils	1
Meropenem	Deranged LFTs	1
Voriconazole	Deranged LFTs	1
Teicoplanin and rifampicin	Low platelets	1
Daptomycin	Raised Creatine Kinase (CK)	1
Tigecycline	Nausea	1

Table 1. Summary of adverse events experienced by patients

All adverse events were managed by the OPAT team and no patient required admission to hospital. It is noted that the patient experiencing deranged LFT's receiving meropenem and the patient that fell did so while an inpatient.

## CONCLUSION

One fifth of patients will experience an adverse event while receiving IV antibiotics when managed by the OPAT team, thus, it is vital to maintain strong communication links and ensure close monitoring. This allows early identification of adverse events, timely intervention and prevents readmission to hospital.

## REFERENCES

- Berrevoets MAH, Oerlemans AJM, Tromp M, et al. Quality of outpatient parenteral antimicrobial therapy (OPAT) care from the patient's perspective: a qualitative study. *BMJ Open* 2018;8:e024564. doi: 10.1136/bmjopen-2018-024564
- Tice AD, Rehm SJ, Dalovisio JR, et al. Practice guidelines for outpatient parenteral antimicrobial therapy. *IDSA guidelines. Clin Infect Dis* 2004;38:1651-71. doi:10.1086/420939