Routine OPAT clinic review minimises inpatient re-admission

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Dear Editor,

We read with interest the paper by Palms and Jacob describing risk factors for re-admission following an episode of Outpatient Parenteral Antimicrobial Therapy (OPAT) care[1]. In the context of a large American hospital the authors describe a re-admission rate to hospital of 18% within 30 days of discharge on OPAT. Overall 73% of patients were seen in clinic following discharge, of which only 52% were seen in a dedicated OPAT clinic. In this setting active follow-up in any clinic was associated with a significantly reduced risk of readmission (OR 0.1 95% CI 0.06-0.17).

The model of care described by Palms and Jacob differs from that delivered by many United Kingdom OPAT services. Whilst in both settings, acceptance onto OPAT requires consultation with an Infectious Diseases clinician, follow-up in a multi-disciplinary OPAT clinic is routine in the UK National Health Service in keeping with UK good practice guidelines for OPAT [2]. For comparison, we reviewed rates of readmission for patients accepted onto our OPAT service at University College London Hospitals (UCLH), a large 980-bed tertiary hospital in the United Kingdom. Patients accepted onto the OPAT service at UCLH are reviewed weekly at a dedicated OPAT clinic and a multidisciplinary meeting[3,4]. We extracted data from our prospective OPAT database [5] on the criteria for OPAT eligibility, duration of OPAT, number of outpatient clinical reviews and the number and reasons for readmission. When calculating the number of follow-up review numbers, we excluded phone consultations and in the weekly MDT meeting.

Over the period 2016 to 2019 a total of 826 patients were managed through the OPAT service at UCLH. The most common reasons for OPAT were skin and soft tissue infections (240, 29.1%), bone and joint infections (173, 20.9%), and urinary tract infections (108, 13.1%) (Table 1). Patients received OPAT for a median of 7 days (IQR 3 – 17 days) and received a median of three reviews during their OPAT episode (IQR 1-4). Only 3.8% were readmitted to hospital and mortality was only 0.25%. Of patients requiring readmission, the majority were for reasons unrelated to their primary infective diagnosis (n = 16, 51.6%) (Table 1). We previously described markedly lower rates of adverse events in our service compared with data reported in US-based OPAT care [4,6]. Together our data suggest that the regular monitoring provided to patients through UK OPAT services reduces OPAT patients' complication and readmission rates .

OPAT undoubtedly offers an effective model to avoid inpatient admissions and to save costs. However delivering OPAT care is complex and requires ongoing input from a dedicated multidisciplinary team and review in a dedicated outpatient clinic.

OPAT services are evolving in light of data from studies such as OVIVA demonstrating a reduced requirement for intravenous antibiotics [7,8]. However, as with other areas of complex infection management, where specialist consultation improves outcome [9], our data support the notion that regular outpatient review, regardless of the route by which antibiotics are delivered, will remain a cornerstone of successful clinical outcomes of these patients[10].

None of the authors has any potential conflicts to disclose.

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Table 1. Clinical characteristics of 826 episodes of OPAT care at a tertiary referral centre, including a breakdown of readmission rates and reasons.

Indication for OPAT	**Skin and Soft Tissue Infection**	240 (29.1%)
	Bone and Joint Infections including Prosthetic Joint Infection	173 (20.9%)
	Urinary Tract Infection	108 (13.1%)
	Respiratory Infection	65 (7.9%)
	Bacteraemia	49 (5.9%)
	Endocarditis	28 (3.4%)
	Malignant Otitis Externa	27 (3.3%)
	Central Nervous System Infection	26 (3.1%)
	Other	85 (10.3%)
Readmission	**No**	792 (95.3%)
	Yes	31 (4.7%)
Reason for Readmission	**Unrelated to Original Infection**	16 (51.6%)
	Relapse of Original Infection	11 (35.5%)
	New Infection	3 (9.7%)
	Planned Procedure	1 (3.2%)