

Outpatient parenteral antimicrobial therapy in a changing NHS: challenges and opportunities

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ABSTRACT – Up to 4% of inpatients are in hospital solely to receive intravenous antimicrobial therapy. Outpatient parenteral antimicrobial therapy (OPAT) offers the opportunity for improved efficiency and patient choice through early discharge from hospital or admission avoidance, while maintaining quality of care. OPAT aligns well with key priorities in the new NHS and in this article I explore how new developments in the national healthcare context might be exploited to promote the ongoing evolution of OPAT in the UK.

KEY WORDS: home infusion therapy, OPAT, intravenous antibiotic therapy

Introduction

Outpatient parenteral antimicrobial therapy (OPAT) is the administration of intravenous (IV) antimicrobial treatment in the community or outpatient setting as an alternative to inpatient care. Its use for appropriate patients reduces length of hospital stay or prevents admission. OPAT has been shown to be clinically and cost effective in the NHS setting¹ and is also preferred by patients. Its potential both to improve patient care and choice, and to reduce costs is increasingly being recognised across the hospital and community sectors in the UK, and numerous new services are being established. OPAT is now cited as one of five options for antimicrobial prescribing in the Department of Health's guidance on antibiotic stewardship.² One particular area in which interest in OPAT is expanding is acute medicine services, and the Society for Acute Medicine has recently established a national OPAT working group.

Outpatient parenteral antimicrobial therapy can be delivered by a visiting nurse, at an ambulatory care centre or via patient self-administration. It can be used for relatively uncomplicated infections for which IV therapy is required, such as cellulitis and resistant urinary tract infections; these cases are increasingly managed through nurse-led care, with a defined treatment protocol and limited physician input.³ Patients who require more protracted courses of antibiotics for complex infections, such as endocarditis, bone and joint infections, and neurosurgical infections, are increasingly being trained to self-administer therapy. This offers increased freedom to fit treatment around other activities and also the possibility of giving multiple daily doses of IV antimicrobial agents.⁴

Despite its clear benefits, OPAT is associated with increased clinical risk,^{5,6} since patients have significant infections and are under

more limited medical and nursing supervision compared to inpatient care. Complications may result from the underlying infection itself, other co-morbidity, the antimicrobial therapy or the intravenous line. In light of the recent expansion of OPAT in the hospital and community settings, a new set of national OPAT practice guidelines was published earlier this year⁷ as part of a larger national OPAT project coordinated by the British Society for Antimicrobial Chemotherapy (BSAC).⁸ These good practice recommendations were developed through expert opinion from a wide range of stakeholders, supported by a thorough literature review, and national consultation. They explore five key areas relating to service design and OPAT team membership (including the recommendation that the team includes an infection specialist), patient selection, antimicrobial management, patient and outcome monitoring, and clinical governance. These five key areas provide pragmatic guidance for developing and benchmarking OPAT services in any context in order to ensure high-quality care and minimal clinical risk.

The national context

The NHS is facing severe financial pressures, with a reduction in funding in real terms over the course of the current spending review. Not only is there pressure due to the national and global economic situation, but demands on resources are increasing due to the changing demographic profile in the UK, the increasing complexity of healthcare and high public expectations. In this climate, it is not surprising, therefore, that a key government priority is to promote efficiency – that is, to do 'more with less'. In addition, the NHS in England and Wales is undergoing one of the most significant restructuring programmes in its history, as set out in the Health and Social Care Act 2012. The introduction of a new system for commissioning services will have a major impact on purchaser–provider relationships at a local level, while the new principle of 'any willing provider' enhances competition and opens the door to the private sector increasing its share of the healthcare market. Provision of 'care closer to home' is an ongoing focus. The key principles of this are that services should be organised around the interests of patients rather than institutions, should be locally relevant rather than taking a 'one-size-fits-all' approach and should involve provision of 'seamless care' by working across traditional boundaries through the development of integrated services.^{9,10}

Opportunities for outpatient parenteral antimicrobial therapy

The current climate offers substantial opportunities for the expansion and progression of OPAT in three key areas:

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- efficiency
- quality
- care closer to home.

Efficiency

Efficiency relates to the cost of a given outcome and is, therefore, a measure of cost effectiveness. In the UK, OPAT is clearly cost effective when theoretical costs are used.¹ However, the current tariff system for funding outpatient care in England and Wales may render the theoretical perspective less relevant to the real situation 'on the ground' once the treatment episode is considered in terms of the healthcare resource grouping (HRG), trimpoint and excess bed days, and the additional cost of OPAT attendances and care is taken into account. In real terms at a local level, therefore, OPAT may cost the same, or even more than, inpatient care despite the theoretical cost benefits. In expanding OPAT nationally, it is therefore essential to develop a funding system – ideally at a national level – that supports rather than inhibits OPAT.

Quality

The Darzi report defined quality as comprising three dimensions: clinical effectiveness, safety and patient experience,¹¹ all of which are highly relevant to OPAT. The recent good practice recommendations for the UK promote quality through recommendations on governance structures and outcome monitoring – both clinical and through direct patient feedback – and will serve as a useful tool for monitoring quality. Looking forward, it would be useful to standardise the methods of outcome monitoring with nationally agreed outcome measures to enable comparisons across services. A national outcomes registry, incorporating standard clinical outcome measures, would enable us to pool data from units implementing OPAT in the UK to facilitate shared learning and benchmark individual services; this is now being developed as part of the BSAC OPAT UK project,⁸ although its use will not be mandatory.

Care closer to home

The third key opportunity for OPAT is in the government's agenda to promote care closer to home through the development of integrated models of care. Currently, OPAT services in the UK exist in either the primary or the secondary care sectors, with few services operating across both. Fully or partially integrated services offer the opportunity to combine the strengths of the two settings – that is, the infection expertise and inpatient back up of secondary care and the capacity and expertise in home delivery of the community sector. However, in order to achieve this, many barriers to integration need to be overcome, including cultural and organisational differences, problems with separate electronic patient record systems and limitations in leadership.^{12,13} Although most sources stress the importance of developing integrated services for the local context, a national lead on this would be helpful – for example, to develop structural models for integrated services supported by a national specialist OPAT tariff and commissioning framework.

Conclusions

The current national context offers considerable opportunities to expand and develop OPAT locally and nationally. However, a concerted effort is needed to capitalise on these opportunities, including the development of supportive financial structures, a willingness to work across organisational boundaries at a local level and a need for collaboration of the OPAT 'body' in order to influence government policy and coordinate development of OPAT nationally.

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