



Outpatient parenteral antimicrobial therapy (OPAT) is an established approach to patient care. A lack of data on antimicrobial stability within administration devices is a barrier to service expansion, and poses an antimicrobial stewardship dilemma”  
Jenkins et al (2017).

Abstract:

BACKGROUND: Outpatient parenteral antimicrobial therapy (OPAT) is an established approach to patient care. A lack of data on antimicrobial stability within administration devices is a barrier to service expansion, and poses an antimicrobial stewardship dilemma. Often broad-spectrum, long half-life agents are used instead of narrow-spectrum agents, which need more frequent administration, but could possibly be used if stability data were available.

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OBJECTIVES: To complete a comprehensive literature review of published antimicrobial stability data, and assess these against a nationally recognized minimum dataset for medicines compounded into administration devices.

**METHODS:** Medline, EMBASE, Global Health, International Pharmaceutical Abstracts and Biomedical Research Database were interrogated in April 2014 and updated in November 2015.

**RESULTS:** A total of 420 citations were reviewed with 121 selected for full text review. None of these papers met the inclusion criteria stipulated in the national standards. The most frequent reason for study exclusion was the tolerance limit for the level of the active pharmaceutical ingredient being wider than 95%-105% and absence of 'in-use' testing at 37 °C.

**CONCLUSIONS:** This review found no published studies that comply with UK national standards for stability testing. We recommend further research and publication of antimicrobial stability data to support OPAT within the antimicrobial stewardship agenda.

Reference:

Jenkins, A., Hills, T., Santillo, M. and Gilchrist, M. (2017) Extended stability of antimicrobial agents in administration devices. *The Journal of Antimicrobial Chemotherapy*. January 10th. .

doi: 10.1093/jac/dkw556.

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