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Paper Poster Session
Uses of prescription point prevalence surveys

Ceftriaxone use in Australian hospitals: results from the 2014 and 2015 Hospital National Antimicrobial Prescribing Survey

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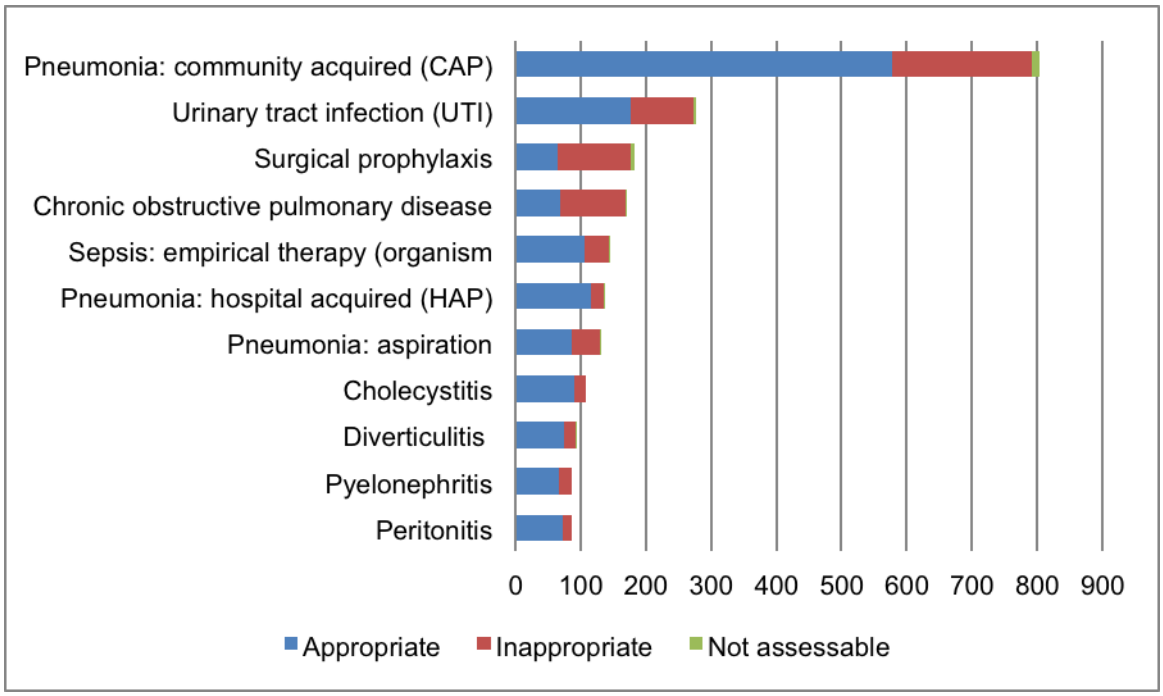
Background: Since 2013, all Australian acute care facilities have been encouraged to participate in the Hospital National Antimicrobial Prescribing Survey[i] (Hospital NAPS) using a Guidance AMS tool, an electronic database developed by a multidisciplinary team. Hospital NAPS provides a standardised methodology to audit antimicrobial prescribing practices and compares prescribing patterns against like facilities or the national combined average. Ceftriaxone was the most commonly and second most commonly prescribed antimicrobial in the 2013 and 2014 surveys respectively, and therefore an important target for antimicrobial stewardship.

Material/methods: Data relating to ceftriaxone prescribing were analysed from the Hospital NAPS, including indication for use, compliance with the National Antimicrobial Therapeutic Guidelines[ii], and appropriateness of the prescription with regards to dosing, indication, allergy, and microbiology.

Results: In 2013, 151 hospitals participated in Hospital NAPS and 248 in 2014. A total of 3,320 ceftriaxone prescriptions were analysed; 36% were non-compliant with any national or local guidelines and 32% were deemed to be inappropriate. The most common reasons for inappropriate use were failure to use a narrower spectrum antimicrobial (44%), lack of clinical indication (12%) and incorrect dose or frequency (11%). Ceftriaxone usage is largely driven by use in the treatment of community acquired pneumonia (24%), urinary tract infection (8%) and surgical prophylaxis (5%). Other common reasons for ceftriaxone use in Australia is outlined in Figure 1. More than half of ceftriaxone use for surgical prophylaxis and infective exacerbation of chronic pulmonary disease was deemed inappropriate. This was due to extended surgical prophylaxis beyond 24 hours after surgery and failure to use a narrower spectrum antimicrobial respectively.

Figure 1. Common indications for ceftriaxone use in Australia 2013 – 2014



Conclusions: From the 2013 and 2014 Hospital NAPS data it was demonstrated that ceftriaxone is used for a multitude of indications within Australian hospitals, possibly due to its broad-spectrum activity, with a substantial percentage of these deemed inappropriate. It therefore stands out as a target for antimicrobial stewardship activities within Australian hospitals, encouraging prescribers to only prescribe ceftriaxone where appropriate and to utilise narrower spectrum antimicrobials as recommended in the nationally endorsed prescribing guidelines.

References:

[i] Australian Commission on Safety and Quality in Health Care. Antimicrobial prescribing practice in Australia: results of the 2014 National Antimicrobial Prescribing Survey. Sydney: ACSQHC, 2015.

[ii] Antibiotic Expert Groups. Therapeutic guidelines: antibiotic. Version 15. Melbourne: Therapeutic Guidelines Limited; 2014.