

Point Prevalence Survey of Antimicrobial Prescriptions at a Tertiary Hospital in Southern Ireland, 2015



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Introduction

Point prevalence surveys (PPSs) are useful to obtain a detailed snapshot of antimicrobial prescription patterns in a hospital setting. This provides a picture of antimicrobial usage and informs investigators of areas that need further interventions for improvement. It can also be used to assess local guideline compliance. Cork University Hospital is a tertiary referral hospital in the South of Ireland with a broad range of medical and surgical specialties.

Methods

The study was conducted between 14th September and 10th October 2015 using a standardised protocol and data collection form. All inpatients in the hospital were included. All drug charts were reviewed for current systemic antimicrobial prescriptions and data were subsequently analysed using Excel management software.

Results

Two hundred and nineteen patients out of 505 patients were prescribed antimicrobials (43%) and a total of 344 antimicrobials were charted. The numbers of antimicrobials for patients in surgical, medical and intensive care wards were 35%, 56%, and 6% respectively. Piperacillin-tazobactam was the most commonly prescribed antimicrobial (21%), followed by amoxicillin-clavulanate (15%), vancomycin (10%), metronidazole (7%), and flucloxacillin (6%). Pneumonia was the main indication for all prescriptions (28%), followed by skin & soft tissue infections (15%), and intra-abdominal infections (8%). Ninety four percent of patients who received surgical prophylaxis received <24 hours of antimicrobials. Seventy percent were charted as intravenous. Of these, 14 prescriptions (6%) were assessed as inappropriate. Only 31% of prescriptions had a proposed duration specified and 94% had a correct dose prescribed. In total, 20% of prescriptions were assessed as inappropriate.

Figure 1: The prevalence of antimicrobial prescriptions in CUH and Nationally, according to specialty

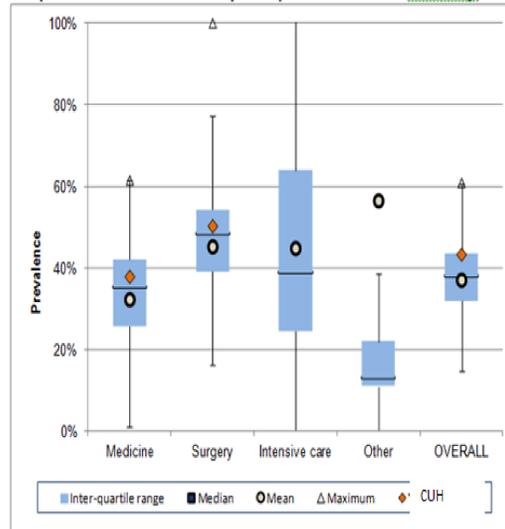


Figure 2: Comparison of CUH and National data for most frequently prescribed antimicrobials

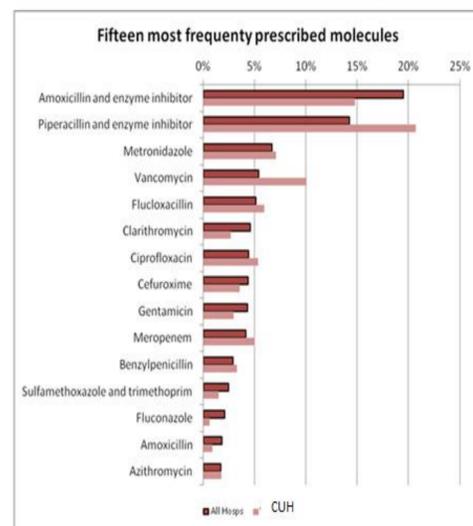


Figure 3: Comparison of CUH and national data for compliance with various criteria.

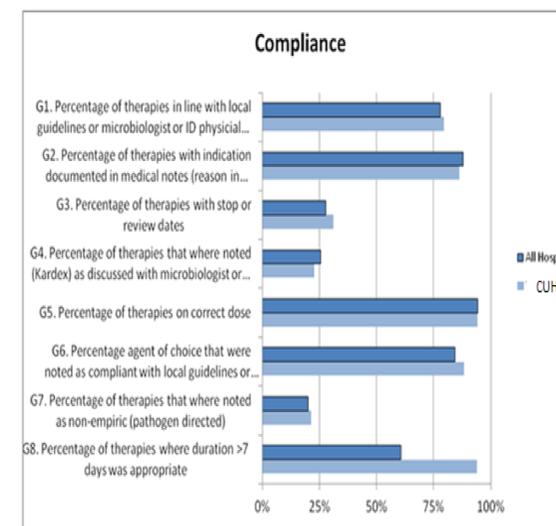
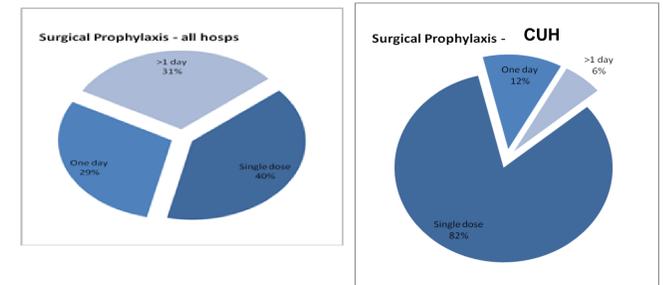
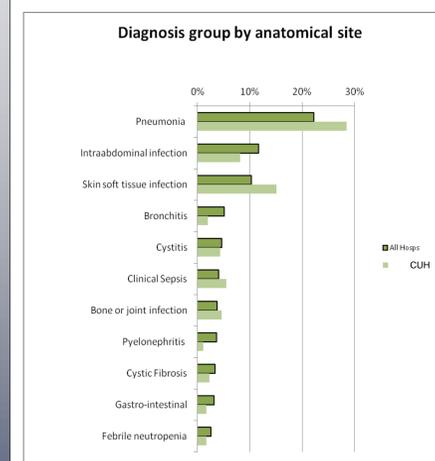


Figure 4: Comparison of site of infection in CUH versus national data



Discussion

Forty-three percent of inpatients were prescribed antimicrobials and 80% were deemed appropriate. The hospital compares well with national figures. Piperacillin/tazobactam was the most commonly prescribed agent. Ongoing antimicrobial stewardship by the antimicrobial stewardship team and clinical pharmacists is important to ensure high levels of appropriate antimicrobial prescribing at individual patient level to improve patient outcomes.

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