

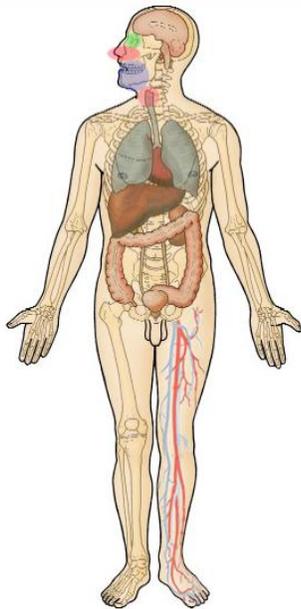
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Abstract (poster session)

Measuring the effects of a web-based antimicrobial resource on antimicrobial prescribing

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Objectives. This English Trust had been performing badly in terms of the two monitored healthcare associated infections (HCAI) in the UK: Clostridium difficile infection (CDI) and meticillin resistant Staphylococcus aureus (MRSA) bacteraemia. A comprehensive web-based antimicrobial resource was developed as the foundation to the Leeds Teaching Hospitals NHS Trust antimicrobial stewardship programme. The resource allowed access to infection treatment guidelines. These were developed by an inclusive consultation process and informed by both available evidence and local consensus. The aim of this project was to analyse the effect of this antimicrobial prescribing improvement project on antimicrobial use and HCAI. **Methods.** Antimicrobial usage data as defined daily doses were collected from pharmacy management system. HCAI data were those submitted to the central surveillance systems. "Hits" on guidelines were collected as a surrogate marker of use. **Results.** By third quarter (Q3) of 2009, 100 guidelines had been developed covering common and complex infections and prophylaxis; guidelines received over 14000 hits per quarter. Using Q3 2009 as the reference point, regression analysis of an interrupted time series showed a statistically significant reduction in IV benzylpenicillin and IV cefuroxime use; an increase in IV piperacillin-tazobactam and IV and oral co-amoxiclav use but no change in IV flucloxacillin, IV levofloxacin or IV third generation cephalosporin use in the second period compared to the first. The rate of decline in oral ciprofloxacin use increased. Increases in meropenem and oral levofloxacin use were reversed. The prevalence of antimicrobials use decreased from 35% in 2008 to 28% of patients in 2012. Both CDI and MRSA bacteraemia episodes decreased markedly over the period and both oral ciprofloxacin use and IV cefuroxime use were positively correlated with CDI and MRSA bacteraemias reduction. **Conclusions.** A web-based, antimicrobial resource had significant effects on antimicrobial prescribing patterns. Reductions in IV cefuroxime and oral ciprofloxacin correlated with reductions in HCAI but the nature of the relationship is unknown.



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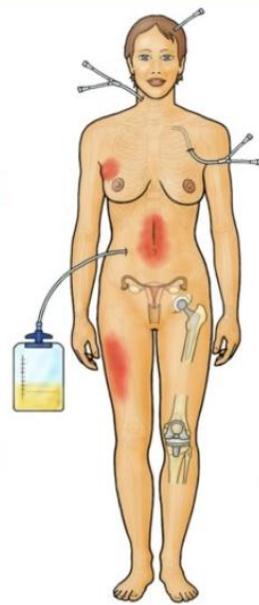
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