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Paper Poster Session

Best practices of hospital antimicrobial stewardship interventions

Electronic recording of infection clinical consults: impact on hospital acquired infections and antimicrobial stewardship

Abid Hussain^{*1}, Rashmeet Bhogal¹, Das Pillay¹

¹*The Heart of England Foundation Trust, Birmingham, United Kingdom*

Background: The global threat of antimicrobial resistance has prompted the development of many toolkits and local initiatives to improve specialist infection team consults. In 2014, we devised a new electronic method of communication (iAdvice) with clinical teams requiring clinical consults on infected patients as well as the communication of significant laboratory results. This allowed an effective blending of telephone and bedside consultations, and prevented possible transcription errors of advice in clinical notes. Electronic entries generated from these interactions form part of the patients electronic patient record which can be viewed by all healthcare professionals. We aimed to assess the impact on hospital infection rates and antimicrobial stewardship.

Material/methods: The study period was defined as one calendar year either side of the introduction of iAdvice, in November 2014. The hospital information system was interrogated to extract the following data sets: total numbers of hospital acquired infections, compliance with the antibiotic policy and the compliance of administration of stat doses within 1 hour.. This data was analysed in parallel with the numbers of clinical interactions, their nature, as well as the clinical specialty involved.

Results: In the year since the introduction of iAdvice, there have been 23 871 clinical interactions with the service of which 74% were by the microbiology specialist team, either laboratory precipitated consults or direct clinical enquires. 21% of all of the interactions were from general medical wards, with 13% of calls from assessment units and emergency medicine. 65% of all interactions were by telephone, with 32% of the calls resulting in a bedside visit. There was a reduction of 33% for hospital acquired infections, although the overall trend is reducing.

In terms of antimicrobial stewardship, there has been a 13% reduction in the late administration of antibiotics for sepsis, defined as antibiotics given after the first hour of admission, as well as a 19% reduction of non-administrations during the study period. Snapshot audits performed in September 2013 and repeated in September 2015 revealed a 15% improvement in the overall administration of IV stat doses.

Conclusions: Secure and timely documentation of infection advice that is visible to all clinical teams is an essential component of antimicrobial stewardship. Integrating this with the electronic patient record allows continuity of care and consistent patient handover. Robust involvement of infection specialists has a significant impact in controlling hospital acquired infection rates both through infection control and antibiotic prescribing advice.