An innovative study of Intra-abdominal Infections to test the appropriateness of the revised trust antibiotics prophylaxis in adult surgery guidance: Results from Intra-abdominal infections study for monitoring antimicrobial resistance trend

A. Gan, R. Sharma, S. Ravi, M. Wong, A. Peel, M. Przybylo, A. Guleri
Department of Microbiology, Blackpool Teaching Hospitals, United Kingdom

**BACKGROUND**
Blackpool Teaching Hospitals [BTH] operate a successful healthcare associated infection [HAI] and antibiotic stewardship programme. Revised antibiotic prophylaxis in adult surgery [APAS ] guidance including new antibiotic choices to reduce C. difficile infections [CDI] was implemented.

BTH was one of the UK sites for the study monitoring antimicrobial resistance trend [SMART] in intra-abdominal infections [IAI]. We present findings of an innovative project aimed to assess the appropriateness of the revised APAS antibiotic choices in abdominal surgery by comparing it to SMART IAI isolates/susceptibility results.

**METHOD**
A review of database of 61 intra-abdominal infections (IAI) isolates [from pus/intra-abdominal swabs] was submitted to SMART [2008-10]. We then used this results to inform the antibiotic stewardship steering group and also compared these with revised APAS guidance for abdominal surgery.

**RESULTS**
The trust has successfully and significantly reduced rates of CDI, MRSA and ESBL+ve Gram negatives over the last three years. There is high emphasis on antibiotic stewardship, education/training, regular microbiology ward rounds and consultations, regular antibiotic compliance audits and feedback. This innovative project examined the appropriateness of the revised APAS guidance. All isolates were susceptible to aminoglycosides while reduced susceptibility to cefuroxime was evident from this study.

**ANTIMICROBIAL SUSCEPTIBILITY RESULTS**

**CONCLUSION**
Recent revised APAS guideline in our hospital has seen a replacement of combination of cefuroxime and metronidazole with aminoglycoside (gentamicin) and metronidazole. This has been proven to be equally effective. This study also revealed that 5% E. coli were ESBL positive but fully sensitive to gentamicin. We will continue to regularly monitor our current use of antibiotics in this trust to ensure that it is up to date in view of patient safety.