UPDATE to abstract: Results now cover two years’ surveillance.

BACKGROUND
Colistin is used increasingly in the face of increasing multi-resistance among Gram-negative pathogens. The BSAC Resistance Surveillance Project monitors colistin resistance in Enterobacteriaceae.

METHODS
45 centres contributed 1934 isolates of E. coli, Klebsiella and Enterobacter from blood (Jan 2011 - Dec 2012) and 1246 from hospital-onset (>48hours) lower respiratory tract infection (LRTI, Oct 2010 - Sept 2012). MICs were measured centrally by BSAC agar dilution and interpreted by BSAC/EUCAST breakpoints.

RESULTS - Enterobacter

Colistin resistance in Enterobacter was clear-cut and geographically widespread.

Resistance was high-level (MIC ≥4 mg/L) in 24/51 resistant isolates (47%) and borderline (MIC of 4 mg/L) in only 7 (14%).

The colistin-resistant isolates came from 29 of 45 centres in total: 19 centres contributed 28 isolates from LRTI, and 20 centres contributed 23 isolates from blood.

There was no evidence that colistin resistance was related to patient age or sex, or to non-susceptibility to other antibiotics.

All 51 colistin-resistant isolates were susceptible to CIP, GEN and IPM; 44 were also susceptible to TZP; and 42 were susceptible to CTA and CAZ.

Colistin resistance appeared more prevalent in hospital-onset (8%) than community-onset (4%) bacteraemia, but this difference was not significant (p=0.06).

Source & hospital stay N %CST-R
Blood, up to 48 hours 177 4.0
Blood, >48 hours 204 7.8
LRTI, >48 hours 276 10.1

CONCLUSION
• Clinicians should be alert to appreciable rates of colistin resistance (7-14%) among isolates of Enterobacter cloacae complex; BUT
• These colistin-resistant isolates were susceptible to standard antibiotics.

ABBREVIATIONS and susceptible breakpoints (mg/L) CAZ ceftazidime (≤1), CIP ciprofloxacin (≤0.5), CST colistin (≤2), CTX cefotaxime (≤1), GEN gentamicin (≤1), IPM imipenem (≤2), TGC tigecycline (≤1), TZP piperacillin/tazobactam (≤8). R = resistant, NS = non-susceptible.