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BACKGROUND Hospital use of carbapenems in England increased by 31% and piperacillin-tazobactam by 46% between 2010 and 2013 [ESPAUR, www.gov.uk].

The BSAC Resistance Surveillance Project tracks antimicrobial non-susceptibility in *P. aeruginosa* from bacteraemia and hospital-onset lower respiratory infections (LRTI). [www.bsacsurv.org]

METHODS A total of 68 clinical laboratories in the UK and Ireland (36–40 each year) collected 1293 isolates from LRTI (Oct2008–Sep2014) and 1322 from blood (Jan2009–Dec2014). Carbapenem testing was with imipenem until 2013, then meropenem.

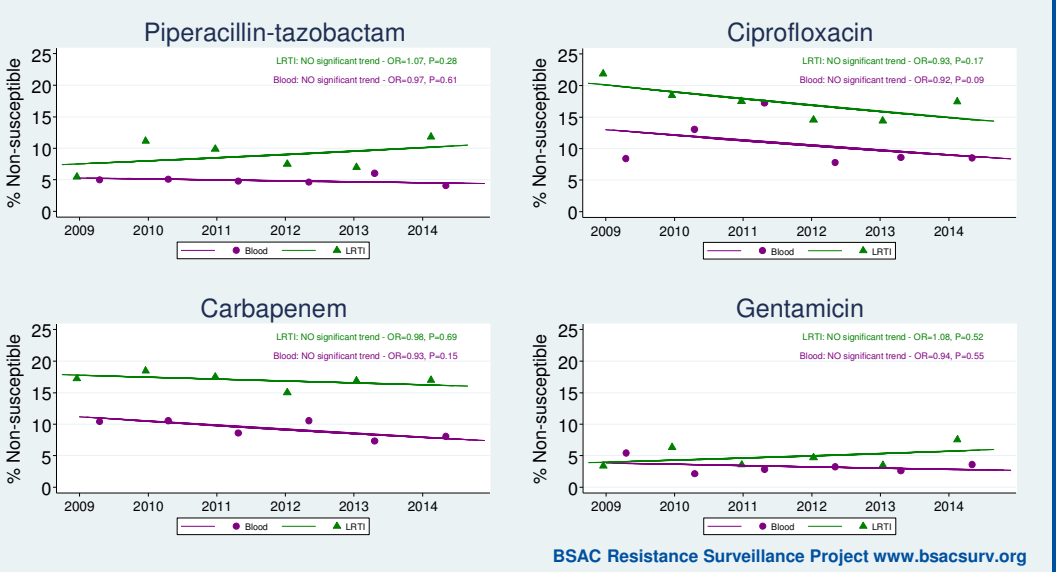
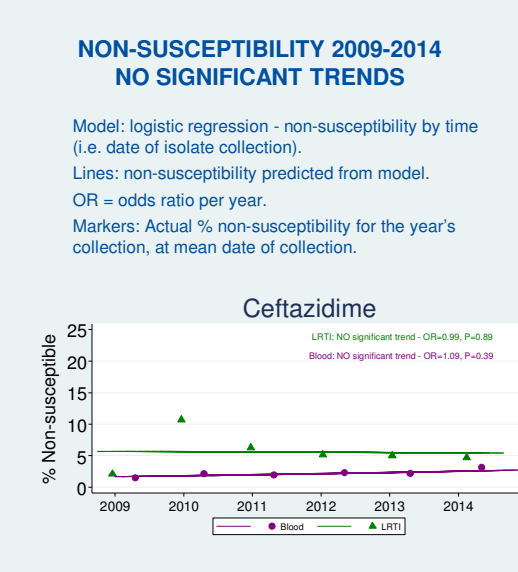
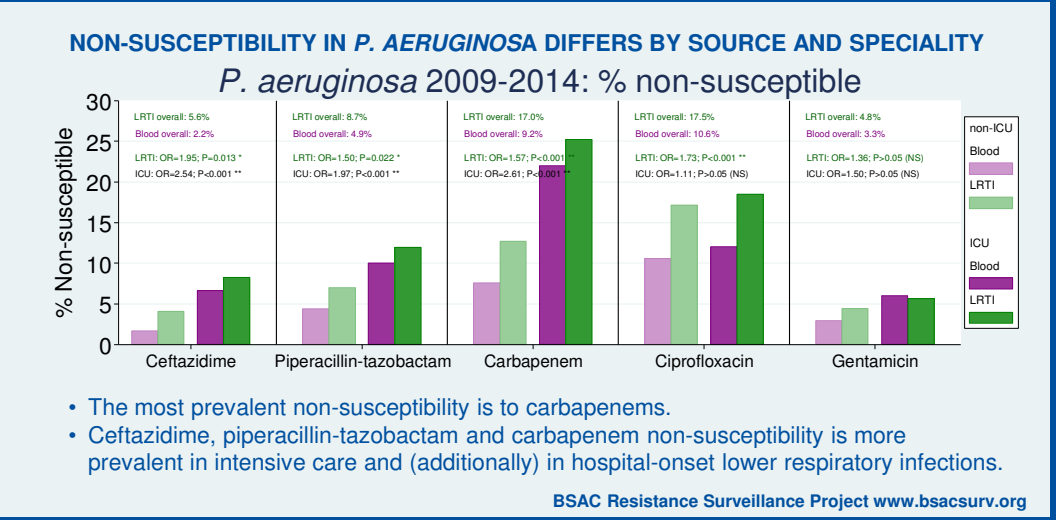
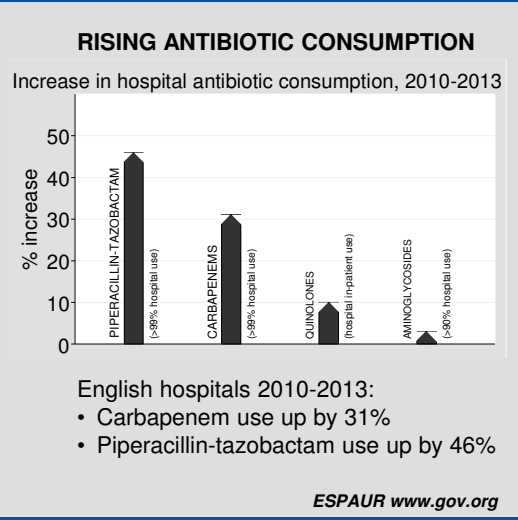
MICs were measured centrally by BSAC agar dilution and interpreted by BSAC/EUCAST breakpoints. Non-susceptibility was modelled by logistic regression accounting for centre clustering.

RESULTS - see panels.

CONCLUSIONS

Among *P. aeruginosa* 2009-2014:

- Non-susceptibility to five major anti-pseudomonal antibiotics **did not alter significantly** despite substantially increased hospital consumption of piperacillin-tazobactam and carbapenems.
- Non-susceptibility was significantly more prevalent in ICUs than elsewhere for ceftazidime, carbapenems and piperacillin-tazobactam, but not for gentamicin or ciprofloxacin.
- Overall, non-susceptibility to carbapenems was at least double that for piperacillin-tazobactam and triple that for ceftazidime.



BSAC Resistance Surveillance Project – www.bsacsurv.org

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Organism ID and Susceptibility Testing (2015): S. Mushtaq and staff at Public Health England⁵
Collecting Laboratories: See www.bsac.org.uk

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Central Laboratories: **Public Health England**, London; **LGC**, Fordham

Support: **BSAC**

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