

The Antimicrobial Susceptibility of *Streptococcus pneumoniae* in Community-Acquired Lower Respiratory Tract Infection Varies with Patient Age.

The BSAC Extended Working Party on Respiratory Resistance Surveillance¹ and GR Micro Limited² ¹British Society for Antimicrobial Chemotherapy, 16 Bridge Street, Birmingham, B1 2JS ²7 - 9 William Road, London, NW1 3ER

Methods

1328 *S. pneumoniae* from lower respiratory specimens were collected from 20 laboratories in the UK and Ireland in the winters of 1999-2000 and 2000-2001.

Duplicate isolates (collected within 2 weeks of a previous isolate) and isolates from patients with cystic fibrosis or in hospital more than 48 hours were excluded.

Isolates were centrally tested by the BSAC agar dilution MIC method and categorised by BSAC breakpoints.

Results

Multiple logistic regression identified patient age as a predictor of susceptibility in *S. pneumoniae*. In univariate analysis, the relationship was quadratic (U-shaped).

Non-susceptibility to amoxicillin was too rare (1.3%) to relate to patient age. Non-susceptibility to erythromycin, clindamycin and ciprofloxacin increased with patient age. Non-susceptibility to penicillin, cefaclor, cefuroxime and tetracycline was higher for isolates from both younger and older patients. Non-susceptibility to cefotaxime, moxifloxacin and levofloxacin in *S. pneumoniae* was very rare (0.2 - 0.4%) and seen only in isolates from patients aged 50+.

The graphs show % non-susceptible in the age groups 0-4 (n=79), 5-24 (n=71), 25-49 (n=254), 50-74 (n=622) and 75+ (n=301).

Conclusion

Antimicrobial susceptibility in lower respiratory community-acquired *S. pneumoniae* varied with patient age. It was reduced for most drugs among isolates from older patients, and for a smaller number of drugs also among isolates from younger patients.

Acknowledgements

Working Party Members (July 2002): A. MacGowan¹ (Chair), D. Brown², S. Coles³, D. Felmingham⁴, F. Hughes⁵, I. Harding⁶, V. Heaton⁷, D. Livermore⁸, V. Reed⁶, R. Reynolds⁹, J. Shackcloth⁴, C. Thomson⁷, A. White⁵, R. Wise¹⁰

Statistical Advice: K. Parry¹

¹Southmead Hospital, Bristol; ²Addenbrookes Hospital, Cambridge; ³Abbott Laboratories Ltd.; ⁴GR Micro Ltd; ⁵GlaxoSmithKline; ⁶Micron Research; ⁷Bayer Pharmaceuticals; ⁸Central Public Health Laboratory; ⁹BSAC; ¹⁰City Hospital Birmingham.

Collecting Laboratories: Royal Aberdeen; WGH Edinburgh; SGH Glasgow; Royal Belfast; Meath Adelaide Dublin; UCH Galway; UHW Cardiff; Wrexham Maelor; City Birmingham; Southmead Bristol; Addenbrooke's Cambridge; St. James's Leeds; Royal Leicester; University of Liverpool; St. Bartholomew's and Royal London; UCH, London; Royal Victoria Newcastle; Derriford Plymouth; Hope Salford; Southampton.

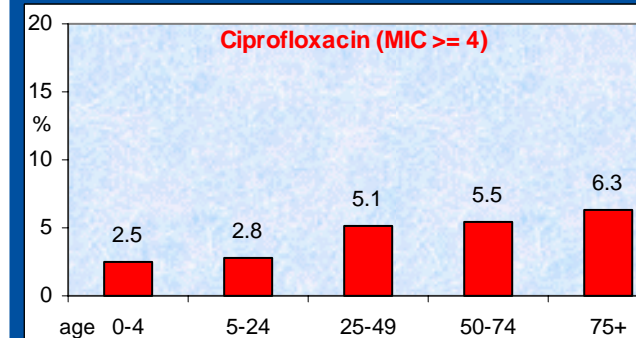
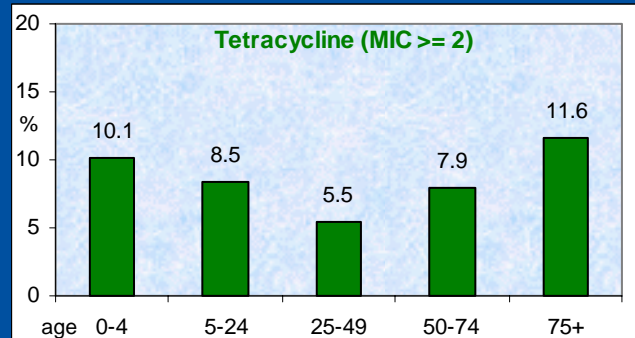
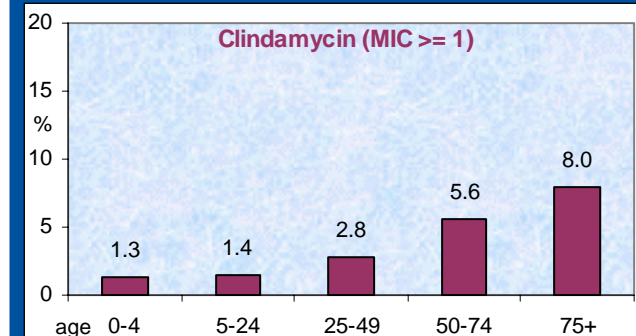
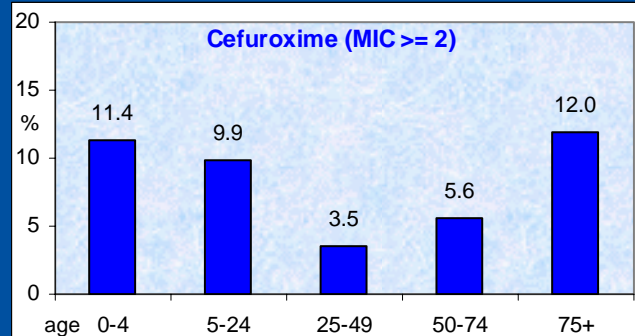
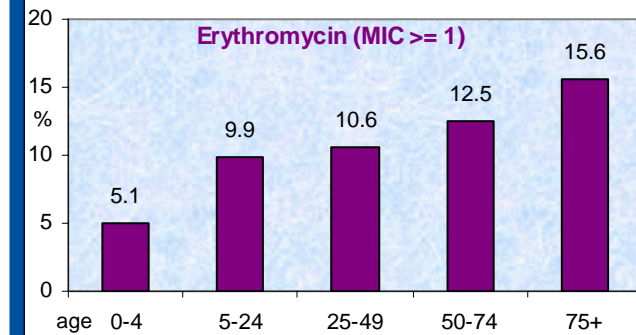
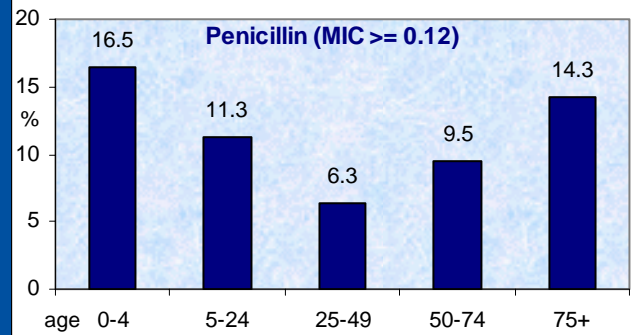
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Please address correspondence to: Dr. R. Reynolds, BSAC Resistance Surveillance Co-ordinator
Department of Medical Microbiology, Southmead Hospital, Bristol, BS10 5NB, England.

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