

# Comparative Prevalence of Antimicrobial Resistance in Community-acquired Lower Respiratory Tract *Streptococcus pneumoniae* from Countries of the UK, and from Eire

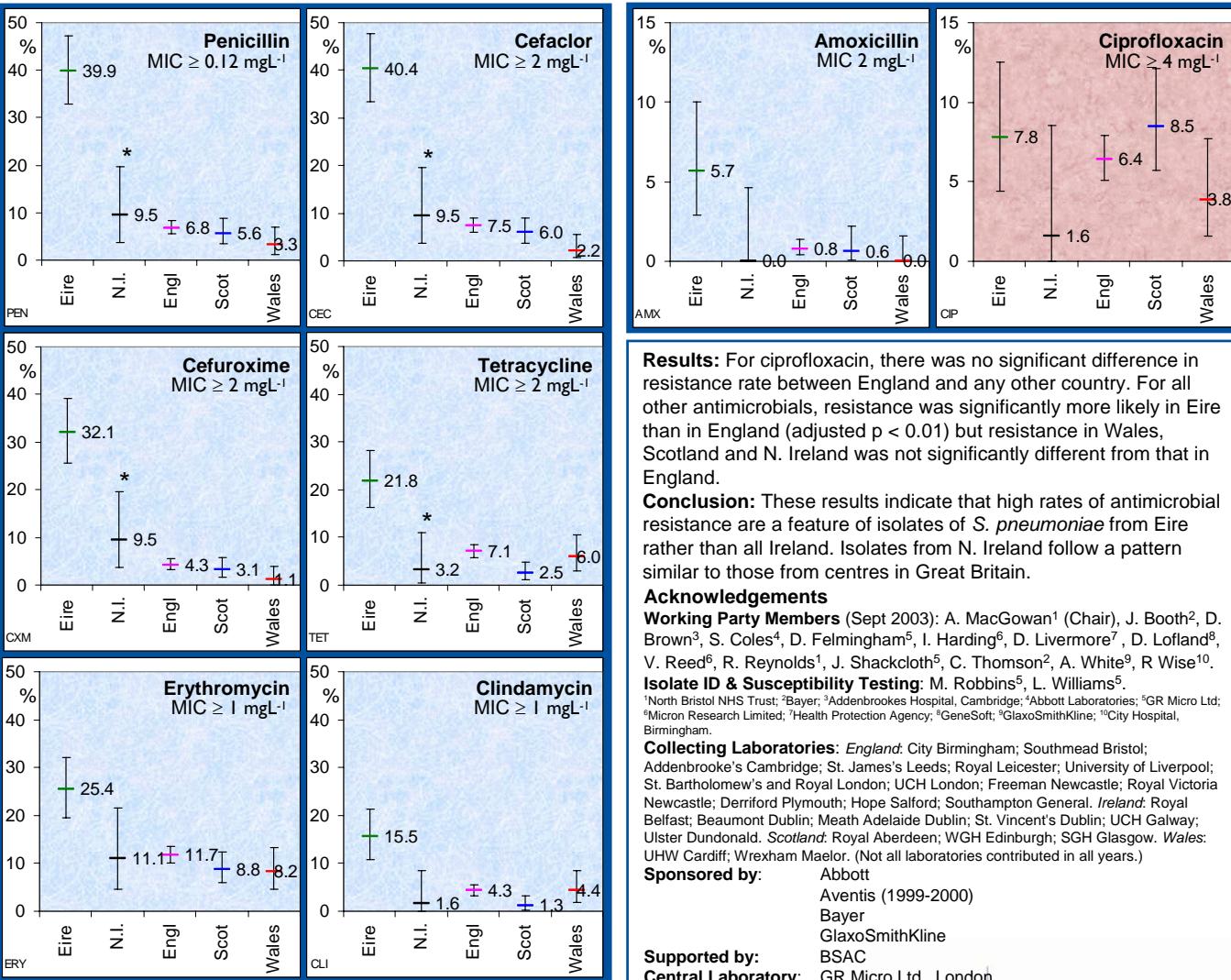
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**Background:** Previous studies have reported high prevalence of penicillin non-susceptible isolates of *S. pneumoniae* from all Ireland (N. Ireland and Eire) whilst in countries of Great Britain (England, Wales and Scotland) non-susceptible strains have been isolated less frequently. N. Ireland has not previously been studied separately: it is of particular interest as it is geographically close to Eire but has a National Health Service in common with Great Britain.

**Methods:** During 3 winter seasons (1999-2002), more than 20 laboratories throughout the UK (Great Britain and N. Ireland) and Eire collected a total of 2027 *S. pneumoniae* isolates from patients with community-acquired lower respiratory tract infections as part of the BSAC Resistance Surveillance Programme. MICs were determined and interpreted using BSAC methodology in a central laboratory. Resistance rates were compared by the exact binomial method, corrected for multiple tests.



**Results:** Resistance to moxifloxacin and cefotaxime was  $\leq 1\%$  and resistance to trimethoprim was 100% in all countries, so comparisons between countries were not possible for these agents. Resistance rates for other antimicrobials are shown in the graphs, with 95% confidence intervals.



## Number of isolates

England	1269
Wales	183
Scotland	319
N. Ireland	63
Eire	193

## Significant differences:

	Eire - England
	Eire - N. Ireland
	none

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**Results:** For ciprofloxacin, there was no significant difference in resistance rate between England and any other country. For all other antimicrobials, resistance was significantly more likely in Eire than in England (adjusted  $p < 0.01$ ) but resistance in Wales, Scotland and N. Ireland was not significantly different from that in England.

**Conclusion:** These results indicate that high rates of antimicrobial resistance are a feature of isolates of *S. pneumoniae* from Eire rather than all Ireland. Isolates from N. Ireland follow a pattern similar to those from centres in Great Britain.

## Acknowledgements

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**Isolate ID & Susceptibility Testing:** M. Robbins<sup>5</sup>, L. Williams<sup>5</sup>.  
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**Collecting Laboratories:** *England:* City Birmingham; Southmead Bristol; Addenbrooke's Cambridge; St. James's Leeds; Royal Leicester; University of Liverpool; St. Bartholomew's and Royal London; UCH London; Freeman Newcastle; Royal Victoria Newcastle; Derriford Plymouth; Hope Salford; Southampton General. *Ireland:* Royal Belfast; Beaumont Dublin; Meath Adelaide Dublin; St. Vincent's Dublin; UCH Galway; Ulster Dundonald. *Scotland:* Royal Aberdeen; WGH Edinburgh; SGH Glasgow. *Wales:* UHW Cardiff; Wrexham Maelor. (Not all laboratories contributed in all years.)

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