



# BSAC

british society for antimicrobial chemotherapy

## Susceptibility testing *Haemophilus influenzae* to $\beta$ -lactam antibiotics by BSAC standardized methodology

During the last year, users of the BSAC standardized disc susceptibility testing method have informed the BSAC Standardized Method Development Centre (SMDC) about problems they have encountered when testing clinical isolates of *Haemophilus influenzae* to  $\beta$ -lactam antibiotics. Of particular concern was testing co-amoxycylav where many  $\beta$ -lactamase positive isolates had zone diameters 1-2mm smaller than the zone diameter breakpoint of 20 mm and therefore were interpreted as resistant.

The problem was further highlighted by the susceptibility testing returns for NEQAS specimen 5853. This was an organism described as a  $\beta$ -lactamase positive *H. influenzae* isolated from a blood culture with a co-amoxycylav MIC of 0.5 mg/L (MICs were determined at the PHLS Cambridge and the Antimicrobial Chemotherapy Laboratory, City Hospital NHS Trust, Birmingham). Amongst the 47 laboratories that incorrectly interpreted this organism resistant to co-amoxycylav were centres using the BSAC method, and these obtained zone diameters of 18-19mm for the organism.

These results motivated the Working Party to review the zone diameter breakpoints for ampicillin, amoxycillin, co-amoxycylav and cefuroxime. From the results of this study the recommendations for the interpretation of susceptibility of *H. influenzae* are as follows:

### ***Interpretation of zone diameters (mm)***

Antibiotic	Disc content( $\mu$ g)	R	S
Cefuroxime	5	$\leq 16$	$\geq 17$
Ampicillin	2	$\leq 17$	$\geq 18$
Amoxycillin	2	$\leq 16$	$\geq 17$
Co-amoxycylav	3	$\leq 16$	$\geq 17$

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