

## 5. Respiratory Tract Infections

Question	Answer
How should laboratories interpret the susceptibility of <i>S. pneumoniae</i> to penicillin?	Organisms with penicillin MICs $\leq 1$ mg/L are considered susceptible to $\beta$ -lactam antibiotics except in infections of the central nervous system. Cefotaxime or ceftriaxone MIC determination is advised for strains isolated from meningitis or other invasive infections.
Why are there no disc diffusion test recommendations for <i>S. pneumoniae</i> with trimethoprim?	The trimethoprim MIC <sub>50</sub> and MIC <sub>90</sub> for <i>S. pneumoniae</i> are 8 mg/L and >128 mg/L respectively. The MIC breakpoint is 0.5 mg/L and therefore this organism would not be considered susceptible.
Why are <i>H. influenzae</i> resistant to cefaclor by BSAC disc methodology?	See Appendix 2 version 6, " <i>Efficacy of cefaclor in the treatment of respiratory infections caused by H. influenzae</i> " The conclusion was that <u>the</u> pharmacodynamic data indicate that cefaclor has borderline activity against <i>H. influenzae</i> , even for community use. The outcome of infection will be difficult to predict and susceptibility testing is likely to be of limited value.
How should we deal with borderline results for <i>H. influenzae</i> with ampicillin, amoxicillin, co-amoxiclav and cefuroxime? Zone diameters are often very close to the breakpoint, which means that organisms can be interpreted as susceptible to ampicillin or amoxicillin yet resistant to co-amoxiclav.	This is inevitable when the tail of the susceptible population is very close to the zone diameter breakpoint. Isolates susceptible to ampicillin and amoxicillin will be susceptible to co-amoxiclav.