New NCCLS Interpretive Standards for *Streptococcus pneumoniae*

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The most recent recommendations (January 2002-M100-S12) from the National Committee for Clinical Laboratory Standards (NCCLS) included an important change regarding minimum inhibitory concentration (MIC) interpretations of cefepime, ceftriaxone and cefotaxime for *Streptococcus pneumoniae*. The new interpretations reflect clinical knowledge that therapeutic levels of these drugs are higher in peripheral tissues than in the central nervous system when using a standard dosing regimen. Two different interpretations will be used based on the reported source of the original specimen, i.e. cerebral spinal fluid (CSF) or non-CSF, such as sputum.

The revised interpretive standards for cefepime, ceftriaxone, and cefotaxime are:

CSF

< 0.5 μg/ml = susceptible (S)
1 μg/ml = intermediate (I)
> 2 μg/ml = resistant (R)

Non-CSF

< 1 μg/ml = susceptible (S)
2 μg/ml = intermediate (I)
> 4 μg/ml = resistant (R)

It is currently recommended that only the CSF interpretation be reported if the original source is from CSF. However, both interpretations should be reported if a non-CSF specimen is submitted in anticipation of the possible need to treat a secondary meningeal infection.

"Interpretive Standards"

In areas of the state where penicillinresistance is low (< 20% resistant), it is warranted and cost-effective to first test, by disk diffusion, for resistance to penicillin (using an oxacillin disk), erythromycin and trimethoprim/sulfamethoxazole if the isolate is from a respiratory source. If the isolate is resistant to penicillin, it is recommended that penicillin, ceftriaxone (or cefotaxime), meropenem, vancomycin, and an antipneumococcal fluoroquinolone (levofloxacin, gatifloxacin, or moxifloxacin) be tested by a reliable MIC method. However, in areas where penicillin resistance is high (~50% resistant), it is recommended that the oxacillin disk screen not be done, but instead, an MIC method be performed initially to test penicillin, ceftriaxone (or cefotaxime), meropenem, vancomycin and levofloxacin. Both erythromycin and trimethoprim/sulfamethoxazole can still be tested using a disk-diffusion method if desired. Only MIC values should be generated if a S. *pneumoniae* is isolated from the blood, CSF, or another sterile site. It is recommended that penicillin, ceftriaxone (or cefotaxime), meropenem, and vancomycin be reported for CSF isolates; whereas penicillin, ceftriaxone (or cefotaxime), meropenem, vancomycin, and an anti-pneumococcal fluoroquinolone be reported for isolates from blood or other sterile sites.