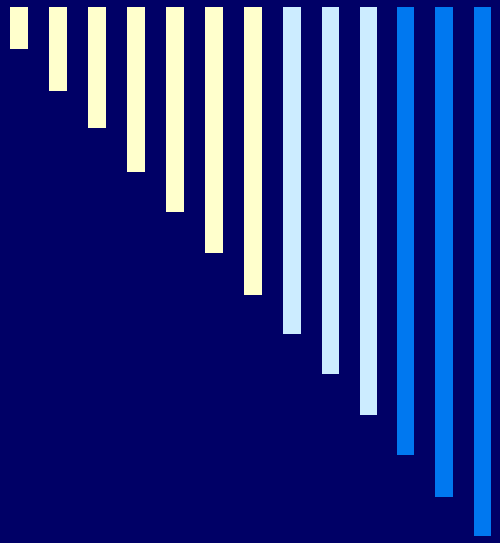


# Questions & Answers

**Jenny Andrews**

**Secretary of the BSAC Working Party on Susceptibility Testing**

# Reporting mecillinam for ESBLs & AmpC producers.

Question:

Isolates of *E. coli* & *Klebsiella* sp. that produce ESBLs often appear sensitive to mecillinam *in vitro* but clinical efficacy against these organisms is unproven. What therefore is the correct way for reporting mecillinam these organisms?

Answer:

Susceptibility is affected by inoculum. Avoid reporting because there is no clinical data to support its use.

# Use of cefoxitin 30 μg disc for AmpC screening

Question:

BSAC has recommended screening for AmpC producers using a cefoxitin 30 μg disc on 1st line urine sensitivity screens. BSAC has given a zone size of ≥ 23 mm as sensitive, but no resistant criteria. Do we have to do a confirmatory test if the organism is cefoxitin R and what is the test?

Answer:

A confirmatory test is needed because resistance may be attributed to permeability not AmpC. Confirmatory test would David like to answer?

# BSAC guidelines for trimethoprim for systemic infections

Question:

- Why are there only UTI recommendations for Enterobacteriaceae and not for systemic infections?

Answer:

- EUCAST found that there was insufficient evidence that the species in question is a good target for therapy with the drug.

# Ampicillin 2 μg discs for α-haemolytic streptococci

Question:

Can ampicillin 2 μg discs be used for the interpretation of amoxicillin against α-haemolytic streptococci ?

Answer:

The recommendations are for amoxicillin.

# Reporting of augmentin 30 μg for CNS from urines

Question:

If a CNS is cefoxitin sensitive, but penicillin-resistant, how would augmentin 30 μg be reported on the urine bench?

Answer:

In version 10 there are no recommendations for a augmentin 30 μg disc. In the heading to table 10 for staphylococci it states that "*Isolates positive for β-lactamase and susceptible to cefoxitin are susceptible penicillin- β-lactamase inhibitor combinations*"

# Vancomycin v staphylococci

Question:

How should we test staphylococci.

Answer:

"Tricky " to test. Disc testing unreliable. City data on organisms provided by Cardiff, only 50% of VISAs detected by VITEK, 90% detected by Etest & M.I.C.E.

(Method: MH, 0.5 McFarland, 35-37$^0$C for 18-20h)

Control target values currently being determined by ISO broth method (European standard method using MH).

Organisms with vancomycin MICs > 2mg/L are considered resistant – daptomycin or linezolid should be used for treatment.

Methods are unreliable for detecting hVISAs. If a patient is not responding send organism for population studies.

# Errors in Version 10 of the guidelines

- Meropenem/imipenem v Enterobacteriaceae
- Chloramphenicol v *H. influenzae*
- α-Haemolytic streptococci v erythromycin
- MIC BP for *Pseudomonas* spp. v colistin

# Disc testing *E. coli* to co-amoxiclav

- For UTIs historically there was a 2:1 ratio MIC BP of 32 mg/L amoxicillin 16 mg/L clavulanate
- In version 8 (2009) the EUCAST co-amoxiclav BP of 8/16 mg/L was implemented so MICs of 16 mg/L or “I” = S for UTIs.
- Version 9 (2010) the “I” category removed and the systemic co-amoxiclav MIC BP of 8 mg/L was implemented
- Version 10 (2011) the “S” zone diameter BP raised from 15 mm to 21 mm because 17% of organisms with co-amoxiclav MICs of 16 mg/L were reported falsely susceptible.

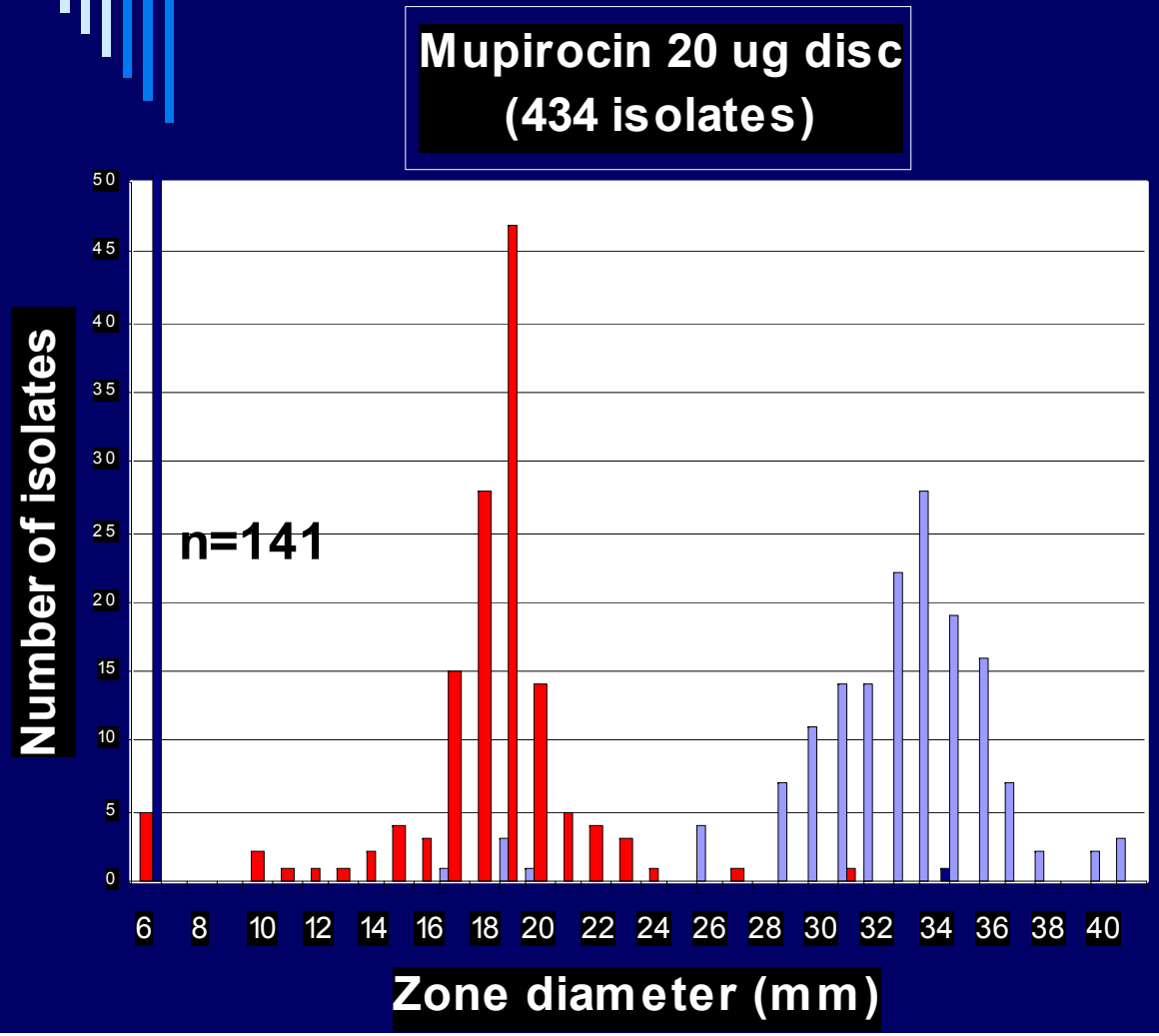
# Disc testing *E. coli* to co-amoxiclav

- The situation now is that 55% of UTI isolates are resistant to co-amoxiclav, yet susceptible to the 1st generation cephalosporins (data from David Livermore)
- Data from Sheffield (breakpoint method) using co-amoxiclav 32mg/L the resistance rate was 5% using the systemic MIC BP the resistance rate has increased to 50%
- Following last weeks meeting the BSAC WP will be reviewing clinical data and writing a case to EUCAST for a change in the MIC BP for UTIs.

# Testing of species that typically have inducible AmpC enzymes to inhibitor combinations

- Co-amoxiclav: Species that typically have inducible AmpC enzymes (e.g. *Enterobacter* spp., *Citrobacter* spp. & *Serratia* spp.) are intrinsically resistant to co-amoxiclav. (BSAC recommendations)
- The presence of inducible AmpC enzymes does not affect testing or interpretation of piperacillin-tazobactam or piperacillin. Resistance to these only arises if the AmpC becomes derepressed owing to mutation and (for unclear reasons) piperacillin-tazobactam seem to select this far less often than 3rd generation cephalosporins. (David Livermore)

# Disc testing *S. aureus* to mupirocin




Dark blue = > 256 mg/L
Red = 2-256 mg/L
Pale blue = ≤ 1 mg/L

# Confirmation that a 10μg cefoxitin disc can be used for testing coagulase negative staphylococci

*S. aureus*

- Interpretation

≤ 21 mm = R

≥ 22 mm = S

Coagulase negative staphylococci

- Interpretation

≤ 21 mm = R

≥ 27 mm = S

Zones of 22-26 mm PCR for *mecA* is needed to determine susceptibility

NB. Staphylococci exhibiting resistance to oxacillin/ cefoxitin should be regarded as resistant to all β-lactams

# Recommendations for testing topical agents

- Currently no recommendations.
- Breakpoints are difficult because it is unclear about the concentration of drug at the site of infection and some agents are given in combination.
- The only agent where there is clinical data and MIC correlation is for mupirocin.
- EUCAST/EMEA suggest that for topical agents the systemic BP can be used or if not available the epidemiological cut  off values (ECOFFs) can be used with a caveat that it is not a clinical breakpoint.
- BSAC intend to produce a table giving a combination of systemic and ECOFF breakpoints.