



EUCAST : FOLLOW UP WHAT'S NEW ? WHAT WILL HAPPEN IN 2009 ?

Pierrette Melin, CHU of Liege

**Coordinator of the SBIMC-BVIKM/EUCAST microbiology
working party**



- **Introduction – Summary May 2006**
- **News from EUCAST**
 - **Available MIC breakpoints**
 - **Interpretative criteria for disk diffusion**
- **Belgian “EUCAST” Website**
- **EUCAST NAC in Belgium**
- **News from CLSI and the 2009 update**
- **Which interpretative criteria in 2009**
- **Summary**

Evolution of antimicrobial breakpoints : a need

- **Evolving therapeutic indications and practices**
- **New resistance mechanisms**
- **Changing dosages**
- **New pharmacokinetic-pharmacodynamic knowledge**
- **Clinical outcome data**
- **MIC distribution for wild-type populations**

**EUCAST interpretative criteria:
the European answer**

Introduction

News from EUCAST

Website

EUCAST NAC

News from CLSI

Criteria in 2009

Summary

Switch to EUCAST breakpoints : painful ?



Technologist



Infectious disease physician



Lab computer Team



Pharmacist

Switch to EUCAST breakpoints : painful ?

- **Update of a multitude of documents**
- **Update of automated systems and LIS**
- **Update and development by manufacturers of AST devices**
- **To update education of clinicians, of students, and laboratory personnel**
- **Rates of antimicrobial resistance in surveillance programs affected**
- **Impact for pharmacy**

Summary May 2008

- **Convincing arguments for switching to EUCAST interpretative criteria**
- **Technical limiting factors**
- **Expected role of antimicrobial testing committees & role of SBIMC-BVIKM**
 - **EUCAST working groups**
- **Conditional deadlines**
 - **Diagnostic companies and AST devices**
 - **Automated systems : ready by end-2008 to mid-2009**
 - **ATB expression : ready by end-2008 or mid-2009**
 - **Neosensitabs diffusion : ready by end-2008**
 - **Disk diffusion : No deadline as long as no EUCAST breakpoints criteria for this method**

Introduction

News from EUCAST

Website

EUCAST NAC

News from CLSI

Criteria in 2009

Summary

Evolution of antimicrobial breakpoints : a need

**Conclusion of the Symposium of the
SBIMC-BVIKM the 26th of May 2008**

**Implementation of EUCAST interpretative
criteria for AST
the 1st January 2010
in all Belgian labs**

News from EUCAST

Clinical MIC breakpoints

Antimicrobial Agents (first or revised versions)

- **Penicillins** (June 2008)
- **Cephalosporins** (March 2006)
- **Carbapenems** (June 2008)
- **Monibactams** (June 2008)
- **Fluoroquinolones** (June 2008)
- **Aminoglycosides** (June 2008)
- **Glycopeptides** (June 2006)
- **Macrolides, Lincosamides, Streptogramins** (June 2008)
- **Tetracyclines** (June 2008)
- **Miscellaneous** (June 2008)

Other harmonisation process finalised during 2008

- **Subcommittee on antifungals**
 - Flu- and voriconazole (July 2008)
- **Subcommittee on anaerobes**
 - Finalised breakpoints in 2008
- **Subcommittee on antimycobacterials**
 - Start work in 2008
- **Subcommittee on Expert Rules**
 - Finalised in 2008 (CMI 2009)



European disk test to be available late 2009

European disk test based on MH-medium & A confluent inoculum

- MH medium for non-fastidious organisms
- MH + 5% Horse blood + b-NAD for streptococci, H.influenzae and fastidious organisms (+ana)

Disk strengths- most will be the same as for CLSI
QC strains, same as for CLSI and ISO document

EUCAST Disk Testing

**For end 2009, EUCAST own criteria
to match its clinical breakpoints**

Development of EUCAST disk testing criteria

- **for non-fastidious organisms**
 - **Possibility to use CLSI regression analysis**
 - **For some drug/bug combinations**
- **for streptococci, H.influenzae and fastidious organisms**
 - **New medium, everything to be done from beginning**

- **On the BVIKM-SBIMC website**
 - **Some practical issues to be solved**

- **End 2008 - 2009**
 - **Relevant documents from EUCAST website**
 - **Translation according to Belgian practice**
 - **Follow-up and news from EUCAST**
 - **Follow-up of level of preparation in Belgium**
 - **Slide sets**
 - **? Forum with questions ?**

ESCMID/EUCAST/ECDC initiative 2008-2009

To encourage European countries to identify or form NACs and to tie these to EUCAST

Role:

- To provide national expertise, consensus and education
- Consultation for EUCAST
- EUCAST link to national microbiology in European countries
 - As partners for developing, testing and implementing new methodology

A core group of BVIKM-SBIMC members: to appoint

News from CLSI (major) update for 2009

- **New look for CLSI document M100 (M2+M7)**
- **Revision of breakpoints according to**
 - **PK/PD data**
 - **Monte Carlo simulations**
 - **Resistance mechanisms knowledge**
 - **Etc.**
 - **To increase likelihood of clinical success without further testing**
- **Advertising for EUCAST**
 - **Specifically expert rules**

News from CLSI (major) update for 2009

- **No more disk diffusion for vancomycin and Staphylococci**
- **Cephalosporins, piperacillin/tazobactam and enterobacteriaceae**
 - **New reduced breakpoints**
- **Carbapenems and enterobacteriaceae**
 - **New reduced breakpoints**
- **Penicillin and S.pneumoniae in non-meningitis indication**
 - **Increased breakpoints**

Which criteria for AST

- **CLSI**
 - Interpretative criteria used in Belgian labs
- **Variation in implementation of annual updates**
 - Discrepancies between labs
 - Usually minor changes
 - Not done in every lab every year
- **2009 Update**
 - **Major changes**
 - Similarities with EUCAST criteria
- **Automated systems (Vitek, Phoenix)**
 - Update: available first semester?

Which criteria for AST

- **CLSI revised criteria as well as EUCAST ones**
 - To improve management of patients
 - To increase likelihood of clinical success when a bug is declared Susceptible to an antimicrobial agent
- **Quality Assurance in laboratories**
 - To implement new interpretative criteria
 - Report: to mention which reference criteria were used
- **No reliable epidemiological comparisons within Europe, even within Belgium**

Summary

- **Implementation of EUCAST criteria, deadline:**
 - **Still 1st January 2009**
- **Availability of EUCAST MIC clinical bkpts for all classes of antimicrobial agents**
- **Availability of EUCAST disk diffusion criteria (end 2009)**
 - **SOP//CLSI except media for fastidious**
- **EUCAST Belgian website (end 2008-2009)**
- **To form EUCAST Belgian NAC**
- **Major revision of CLSI criteria for 2009**
- **2009: difficult transition year for AST and clinical use of results**