Belgische vereniging voor infectiologie en klinische microbiologie

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

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- 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

## Switch to EUCAST breakpoints: painful?



**Technologist** 



**Lab computer Team** 



Infectious disease physician



## 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

### Evolution of antimicrobial breakpoints: a need

Conclusion of the Symposium of the SBIMC-BVIKM the 26<sup>th</sup> of May 2008

Implementation of EUCAST interpretative criteria for AST the 1<sup>st</sup> 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)

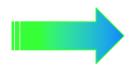
Miscellaneous (June 2008)

Summary

#### News from EUCAST

### 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

Summary

#### **EUCAST Disk Testing**

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 begining

#### EUCAST Belgian website

- 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 ?

#### **EUCAST NAC**

#### National Antimicrobial Committee

#### **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

### 2009 in Belgium 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?

### 2009 in Belgium 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