WHO global (laboratory-based) survey on multidrug-resistant organisms (MDROs) in health care

DATA COLLECTION FORM

Duration of survey:

2014

Name of the acute health-care facility______________________________
Name of the laboratory ___________________________________________
City ___________________________________________________________
Postcode ______________________________________________________
Country _________________________________________________________

Laboratory staff member completing the survey
Surname (Capital letter)__________________________________________
First name (Capital letter)________________________________________
Email __________________________________________________________

Type of acute health-care facility
Public □ Private □ Not-for-profit □ General □ Teaching □
Other ...........................
Total number of acute care inpatient beds in the facility:
≤ 200 □ 201-500 □ 501-1000 □ ≥ 1000 □

Is the facility registered for WHO SAVE LIVES: Clean Your Hands? (http://www.who.int/gpsc/5may/en/index.html)?

YES □ NO □

Is a Clinical Microbiologist employed in the laboratory service?

YES □ NO □
CLINICAL LABORATORY ISOLATES FROM BLOOD AND URINE CULTURES OVER A ONE WEEK PERIOD

Instructions for completion

- Complete this form with data related to ONE CONTINUOUS WEEK between 1 March - 13 June 2014.
- Include only first isolate from inpatients during the study week.
- For urine, use both Midstream and Catheter Specimens (MSU, CSU).

Dates of survey period: from ………………. to ……………………………

Total no. of blood cultures set (aerobic & anaerobic) processed per year (approx.)………

Total no. of blood cultures set (aerobic & anaerobic) processed during the week of the survey …………

Total no. of inpatient urine specimens processed per year (approx.)…………………………

Total no. of inpatient urine specimens processed during the week of the survey …………

<table>
<thead>
<tr>
<th>Positive blood cultures (survey week)</th>
<th>Positive urine cultures (survey week)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total no. of all Gram positive microorganisms identified</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total no. of <em>Staphylococcus aureus</em></strong></td>
<td></td>
</tr>
<tr>
<td>No. of MRSA</td>
<td></td>
</tr>
<tr>
<td><strong>Total no. of Enterococci spp</strong></td>
<td></td>
</tr>
<tr>
<td>No. of VRE</td>
<td></td>
</tr>
<tr>
<td><strong>Total no. of all Gram negative microorganisms identified</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total no. of <em>Enterobacteriaceae spp</em></strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total no. of <em>E.coli</em></strong></td>
<td></td>
</tr>
<tr>
<td>No.of ESBL <em>E.coli</em></td>
<td></td>
</tr>
<tr>
<td>No.of CRE <em>E.coli</em></td>
<td></td>
</tr>
<tr>
<td><strong>Total no. of <em>Klebsiella spp</em></strong></td>
<td></td>
</tr>
<tr>
<td>No.of ESBL <em>Klebsiella spp</em></td>
<td></td>
</tr>
</tbody>
</table>
### LABORATORY IDENTIFICATION OF MDROs

#### Identification of *Staphylococcus aureus*

<table>
<thead>
<tr>
<th>Method</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gram stain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slide or Tube coagulase</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Non-automated method</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Automated method</td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>

If yes, state the method (API etc.): .................................................................

If yes, state the method (Vitek, Phoenix, MALDI-TOF etc): .........................................

Other identification methods: (molecular & non-molecular): ...........................................

#### Identification of *Enterococcus* spp

<table>
<thead>
<tr>
<th>Method</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gram stain</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Streptococcal Lancefield grouping</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Non-automated method</td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>
If yes, state the method (API etc.): .................................................................

Automated method                          YES □ NO □

If yes, state the method (Vitek, Phoenix, MALDI-TOF etc): ..............................................

Other identification methods: (molecular & non-molecular): ..............................................

Identification of Enterobacteriaceae spp

Gram stain                          YES □ NO □

Chromogenic Agar                          YES □ NO □

   If yes, manufacturer’s name .................................................................

Non-automated method                      YES □ NO □

   If yes, state the method (API etc.): .........................................................

Automated method                          YES □ NO □

   If yes, state the method (Vitek, Phoenix, MALDI-TOF etc): .............................

Other identification methods: (molecular & non-molecular): ..............................................

LABORATORY CONFIRMATION OF RESISTANCE

Which antibiotic interpretative criteria is used for disc diffusion, break point and MIC (Minimum Inhibitory Concentration) in your laboratory?

CLSI                          YES □ NO □
EUCAST                          YES □ NO □
BSAC                          YES □ NO □

Other: ..............................................................................................................
**MRSA** (Methicillin-resistant *Staphylococcus aureus*)

<table>
<thead>
<tr>
<th>Method</th>
<th>YES □ NO □</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disc diffusion method</td>
<td></td>
</tr>
<tr>
<td>If Yes, which antibiotic disc is used?</td>
<td></td>
</tr>
<tr>
<td>Methicillin 10μg</td>
<td>YES □ NO □</td>
</tr>
<tr>
<td>Oxacillin 1μg</td>
<td>YES □ NO □</td>
</tr>
<tr>
<td>Cefoxitin 10μg</td>
<td>YES □ NO □</td>
</tr>
<tr>
<td>Cefoxitin 30μg</td>
<td>YES □ NO □</td>
</tr>
<tr>
<td>E test</td>
<td>YES □ NO □</td>
</tr>
<tr>
<td>MIC (Broth method or agar dilution)</td>
<td>YES □ NO □</td>
</tr>
<tr>
<td>Non-automated susceptibility testing method</td>
<td>YES □ NO □</td>
</tr>
<tr>
<td>If yes, state the method</td>
<td></td>
</tr>
<tr>
<td>Automated susceptibility testing method</td>
<td>YES □ NO □</td>
</tr>
<tr>
<td>If yes, state the method (Vitek, Phoenix etc.)</td>
<td></td>
</tr>
<tr>
<td>Other methods: (molecular &amp; non-molecular)</td>
<td></td>
</tr>
</tbody>
</table>

**VRE** (Vancomycin-resistant enterococci)

<table>
<thead>
<tr>
<th>Method</th>
<th>YES □ NO □</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disc diffusion method</td>
<td></td>
</tr>
<tr>
<td>If Yes, which antibiotic disc is used:</td>
<td></td>
</tr>
<tr>
<td>Vancomycin 5 μg</td>
<td>YES □ NO □</td>
</tr>
<tr>
<td>Vancomycin 30 μg</td>
<td>YES □ NO □</td>
</tr>
<tr>
<td>Teicoplanin 30 μg</td>
<td>YES □ NO □</td>
</tr>
</tbody>
</table>
E test

MIC (Broth method or agar dilution)

Non-automated susceptibility testing method

Automated susceptibility testing method

If yes, state the method ………………………….……….………

Automated susceptibility testing method

If yes, state the method (Vitek, Phoenix etc.)…………………………………….…..

Other methods: (molecular & non-molecular):………………………………………………

ESBL (Extended-Spectrum Beta-Lactamase)

Presence of an ESBL is confirmed by :

Chromogenic ESBL agar

If yes, manufacturer’s name ………………………………………………………

ESBL combi-discs

If yes, manufacturer’s name ……………………………………………………

Disc approximation

ESBL E-tests

MIC (Broth method or agar dilution) for 3rd generation cephalosporins

YES □ NO □

Non-automated susceptibility testing method

If yes, state the method …………………………………………………

Automated susceptibility testing method

YES □ NO □
If yes, state the method (Vitek, Phoenix etc.) .................................................

Other methods: (molecular & non-molecular): ....................................................

**CRE** (Carbapenem Resistant Enterobacteriaceae)

Presence of CPE is confirmed by:

- Chromogenic CPE agar
  - If YES, product and manufacturer’s name .............................................
  - YES □ NO □

- Modified Hodge Test
  - YES □ NO □

- MIC (Broth method or agar dilution) for Carbapenems
  - YES □ NO □

- Non-automated susceptibility testing method
  - If yes, state the method .................................................................
  - YES □ NO □

- Automated susceptibility testing method
  - If yes, state the method (Vitek, Phoenix etc.) ....................................
  - YES □ NO □

Other methods: (molecular & non-molecular): ................................................

**LABORATORY QUALITY CONTROL**

Agar plates used in the laboratory are:

- Purchased pre-poured media
  - YES □ NO □

- Prepared in the laboratory
  - YES □ NO □

- If prepared in the laboratory, do you quality control your media?
  - YES □ NO □
Quality control organisms used or susceptibility in your laboratory testing

MRSA
NO □ ATCC □ NCTC □ other □
If other, please specify.................................................................

VRE
NO □ ATCC □ NCTC □ other □
If other, please specify.................................................................

CRE
NO □ ATCC □ NCTC □ other □
If other, please specify.................................................................

ESBL
NO □ ATCC □ NCTC □ other □
If other, please specify.................................................................

Does your laboratory participate in the External Quality Control Scheme? YES □ NO □

Does your country have a Reference Laboratory to confirm CRE and other multidrug-resistant organisms? YES □ NO □ Don't know □

Additional comments

WHO thanks you very much for your contribution to this important global survey in support of the SAVE LIVES: Clean Your Hands 5 May 2014 call to action.