

# **Quality Indicators for Assessment of Clinical Performance in Surgical Prophylaxis and Antibiotic Therapy**

Validation Study

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## Quality Indicators Workpackage 5 Participants:

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## **Surgical antibio-prophylaxis QIs:**

- 1. Prophylaxis given when indicated (by procedure)**
- 2. Appropriate drug choice for surgical intervention, by intervention (local guideline)**
- 3. Prophylaxis started preoperatively within 60 minutes before incision**
- 4. Prophylactic antibiotic discontinued within 24 hours after surgery end time**

**Selected procedures:** hip arthroplasty, colorectal surgery

## Therapy Quality Indicators:

***Staphylococcus aureus*** bacteremia

Community-acquired pneumonia

Sequential therapy IV-PO

## Therapy Quality Indicators:

### *S.aureus* bacteremia

1. patients with community-onset *S.aureus* bacteremia evaluated by echocardiography within 10 days
2. patients with MS-*S.aureus* bacteremia treated for more than 10 days with appropriate  $\beta$ -lactam therapy
3. patients with primary *S.aureus* bacteremia having their iv catheters removed within 10 days

## Therapy Quality Indicators:

### Community-acquired pneumonia

1. initial empiric AB therapy (according to local guidelines)
2. blood cultures within 24 h (according to IDSA 2007 guidelines)
3. Legionella urinary antigen testing within 48 h (IDSA 2007 guidelines)

### Sequential therapy IV-PO

Proportion avoidable IV therapy days for orally bio-equivalent antibacterial drugs (fluoroquinolones, clindamycin, metronidazole)

## **Operational definition of indicators & study protocols**

- Definition of numerator/ evaluation algorithm
- Definition of denominator/inclusion & exclusion criteria
- Stratification factors/categories for case-mix analysis
- Data source: screening for cases+ process assessment
- Retrospective (surgery, SAB, CAP) or concurrent assessment (IV-PO route)
- Observers' qualification
- Sample size: 40 cases per hospital

## **QI Feasibility Study: 8 to 10 hospitals** *parameters to be measured and pass level*

- **Feasibility** → **Completeness  $\geq 80\%$**
- **Workload** → **Hours/case collection**
- **Reliability** → **Inter-observer  $\kappa > 0.6$   
(25 % sub-sample)**
- **Sensitivity to improvement** → **“performance gap”**
- **Case-mix stability** → **QI association with age,  
sex, severity of illness,...**