PN-3b: Blood Cultures Performed in the Emergency Department Prior to Initial Antibiotic Received in Hospital

**Numerator:** Number of pneumonia patients whose initial ED blood culture was performed prior to the administration of the first hospital dose of antibiotics.

**Denominator:** Pneumonia patients 18 years of age and older who have initial blood culture collected in the ED.

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### Variable Key:
- Antibiotic Timing
- Blood Culture Timing
- Blood Culture Collection Day
- Duration of Stay
- Initial Antibiotic Date
- Initial Antibiotic Time

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### Diagram:

- **START**
- Run cases that are included in the PN Initial Patient Population and pass the edits defined in the Data Processing Flow through this measure.
- **ICD-9-CM Other Diagnosis Codes**
- On Table 3.4
- **Chest X-Ray**
- = 2, 3, 4
- **Comfort Measures Only**
- = 1
- **Clinical Trial**
- = Y
- **Variable Key:**
- Antibiotic Timing
- Blood Culture Timing
- Blood Culture Collection Day
- Duration of Stay
- Initial Antibiotic Date
- Initial Antibiotic Time

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Specifications Manual for National Hospital Inpatient Quality Measures

**PN-3b-4**

Discharges 10-01-08 (4Q08) through 03-31-09 (1Q09)
Non-UTD time for the antibiotic considered the Initial Antibiotic Date

<table>
<thead>
<tr>
<th>Antibiotic Name</th>
<th>Antibiotic Grid Not Populated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PN-3b X</td>
</tr>
</tbody>
</table>

On table 2.1 for at least one antibiotic

<table>
<thead>
<tr>
<th>Antibiotic Administration Date</th>
<th>Non-UTD Value for at least one antibiotic dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>~UTD for all antibiotic doses</td>
<td>PN-3b D</td>
</tr>
</tbody>
</table>

Note: Proceed only with Antibiotics that have an associated non-UTD Antibiotic Administration Date

Initial Antibiotic Date = The Antibiotic Administration Date that corresponds to the initial antibiotic dose.

Note: The initial antibiotic dose is the earliest antibiotic dose administered that is on Table 2.1.
- If there is more than one antibiotic on the earliest date, select the one having the earliest non-UTD Antibiotic Administration Time.
- If there is only one antibiotic on the earliest date retain that earliest antibiotic as the Initial Antibiotic Dose.

Note: Proceed only with antibiotics that are on Table 2.1

<table>
<thead>
<tr>
<th>Initial Blood Culture Collection Date</th>
<th>Antibiotic Grid Not Populated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missing</td>
<td>PN-3b X</td>
</tr>
</tbody>
</table>

Blood Culture Collection Day (in days) = Initial Antibiotic Date minus Initial Blood Culture Collection Date

<table>
<thead>
<tr>
<th>Blood Culture Collection Day</th>
<th>Antibiotic Grid Not Populated</th>
</tr>
</thead>
<tbody>
<tr>
<td>~0 days</td>
<td>PN-3b E</td>
</tr>
</tbody>
</table>

<= 0 days

<table>
<thead>
<tr>
<th>Antibiotic Administration Time</th>
<th>Antibiotic Grid Not Populated</th>
</tr>
</thead>
<tbody>
<tr>
<td>~UTD for the antibiotic considered the Initial Antibiotic Date</td>
<td>PN-3b D</td>
</tr>
</tbody>
</table>

Non-UTD time for the antibiotic considered the Initial Antibiotic Date

Note: The front-end edits reject cases containing invalid data and/or an incomplete Antibiotic Grid. A complete Antibiotic Grid requires all data elements in the row to contain either a valid value and/or 'UTD'.
Initial Antibiotic Time = The Antibiotic Administration Time that corresponds to the initial antibiotic dose.

Antibiotic Timing = Initial Antibiotic Date and Initial Antibiotic Time minus Arrival Date and Arrival Time (in minutes)

Blood Culture Timing = Initial Antibiotic Date and Initial Antibiotic Time minus Initial Blood Culture Collection Date and Initial Blood Culture Collection Time (in minutes)

Case Will Be Rejected

Initial Blood Culture Collection Time

UTD

Non-UTD Value

Antibiotic Timing ≤ -15 minutes

Antibiotic Timing > or = -15 minutes

Blood Culture Timing ≤ 0 minutes

Blood Culture Timing > 0 minutes

In Numerator Population

In Measure Population

Stop