Neonatal Blood Stream Infection Rate

Neonatal Quality Indicators #3
Technical Specifications
Provider-Level Indicator
AHRQ Quality Indicators, Version 4.3, August 2011
(Revised September 1, 2011)

Numerator

Discharges with selected infections defined by specific ICD-9-CM codes in any secondary diagnosis field among cases meeting the inclusion and exclusion rules for the denominator. Any secondary diagnosis ICD-9-CM code for:

03810 STAPHYLOCOCC SEPTICEM NOS
03811 METH SUSC STAPH AUR SEPT
03819 STAPHYLOCOCC SEPTICEM NEC
03840 GRAM-NEG SEPTICEMIA NOS
03842 E COLI SEPTICEMIA

-----------------------------------------------------------------
OR
-----------------------------------------------------------------

Patients with one or more of the following secondary diagnosis ICD-9-CM codes:

77181 NB SEPTICEMIA [SEPSIS]
77183 BACTEREMIA OF NEWBORN

-----------------------------------------------------------------
and-------------------------------------------------------------------

One of the following secondary diagnosis ICD-9-CM codes among cases meeting the inclusion and exclusion rules for the denominator:

04104 ENTEROCOCCUS GROUP D
04110 STAPHYLOCOCCUS UNSPCFIED
04111 MTH SUS STPH AUR ELS/NOS
04119 OTHER STAPHYLOCOCCUS

0413 KLEBSIELLA INFECT N
0414 E. COLI INFECT NOS
0417 PSEUDOMONAS INFECT NOS
04185 OTH GRAM NEGATV BACTERIA

Denominator

All newborns and outborns with a birth weight 500 to 1499 g (Birth Weight Categories 2, 3, 4 and 5) OR gestational age between 24 and 30 weeks, except exclusions (see below).

Include also newborns and outborns with a birth weight greater than or equal to 1500 g (Birth Weight Category 6, 7, 8, or 9), if the infant experienced death (DISP=20), major surgery, mechanical ventilation, or transfer to an acute care facility (DISP=2), except exclusions (see below).

See Pediatric Quality Indicators Appendices:
- Appendix A – Operating Room Procedure Codes
- Appendix I – Definitions of Neonate, Newborn, Normal Newborn, and Outborn
- Appendix L – Low Birth Weight Categories

ICD-9-CM Gestation age between 24 and 30 weeks diagnosis codes:

76522 24 COMPLETED WEEKS OF GESTATION
## Neonatal Quality Indicators #3, Technical Specifications

### Neonatal Blood Stream Infection Rate

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>76523</td>
<td>25-26 COMPLETED WEEKS OF GESTATION</td>
<td>76525</td>
<td>29-30 COMPLETED WEEKS OF GESTATION</td>
</tr>
<tr>
<td>76524</td>
<td>27-28 COMPLETED WEEKS OF GESTATION</td>
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<td></td>
</tr>
</tbody>
</table>

### ICD-9-CM Mechanical ventilation procedure codes:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9670</td>
<td>CONTINUOUS MECHANICAL VENTILATION OF UNSPEC DURATION</td>
</tr>
<tr>
<td>9671</td>
<td>CONTINUOUS MECHANICAL VENTILATION FOR LESS THAN 96 HOURS OR MORE</td>
</tr>
<tr>
<td>9672</td>
<td>CONTINUOUS MECHANICAL VENTILATION FOR 96 CONSECUTIVE HOURS OR MORE</td>
</tr>
</tbody>
</table>

Exclude cases:
- with principal diagnosis of sepsis or infection (Appendix H) or secondary diagnosis present on admission
- with birth weight less than 500 grams (Birth Weight Category 1)
- with length of stay less than 2 days
- with missing discharge gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

See *Pediatric Quality Indicators Appendices*:
- Appendix L – Low Birth Weight Categories

### ICD-9-CM Sepsis diagnosis codes:

<table>
<thead>
<tr>
<th>Code</th>
<th>Diagnosis</th>
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</tr>
</thead>
<tbody>
<tr>
<td>0380</td>
<td>STREPTOCOCCAL SEPTICEMIA</td>
<td>03840</td>
<td>GRAM-NEGATIVE ORGANISM, UNSPECIFIED</td>
</tr>
<tr>
<td>0381</td>
<td>STAPHYLOCOCCAL SEPTICEMIA</td>
<td>03841</td>
<td>HEMOPHILUS INFLUENZAE</td>
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<tr>
<td>03810</td>
<td>STAPHYLOCOCCAL SEPTICEMIA, UNSPECIFIED</td>
<td>03842</td>
<td>ESCHERICHIA COLI</td>
</tr>
<tr>
<td>03811</td>
<td>METHICILLIN SUSCEPTIBLE STAPHYLOCOCCUS AUREUS SEPTICEMIA (OCT08)</td>
<td>03843</td>
<td>PSEUDOMONAS</td>
</tr>
<tr>
<td>03812</td>
<td>METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS SEPTICEMIA (OCT08)</td>
<td>03844</td>
<td>SERRATIA</td>
</tr>
<tr>
<td>03819</td>
<td>OTHER STAPHYLOCOCCAL SEPTICEMIA</td>
<td>03849</td>
<td>SEPTICEMIA DUE TO OTHER GRAM-NEGATIVE ORGANISMS</td>
</tr>
<tr>
<td>0382</td>
<td>PNEUMOCOCCAL SEPTICEMIA (STREPTOCOCCUS PNEUMONIAE SEPTICEMIA)</td>
<td>0388</td>
<td>OTHER SPECIFIED SEPTICEMIAS</td>
</tr>
<tr>
<td>0383</td>
<td>SEPTICEMIA DUE TO ANAEROBES</td>
<td>0389</td>
<td>UNSPECIFIED SEPTICEMIA</td>
</tr>
<tr>
<td>78552</td>
<td>SEPTIC SHOCK</td>
<td>99591</td>
<td>SYSTEMIC INFLAMMATORY RESPONSE SYNDROME DUE TO INFECTIOUS PROCESS W/O ORGAN DYSFUNCTION</td>
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<tr>
<td>78559*</td>
<td>SHOCK WITHOUT MENTION OF TRAUMA, OTHER</td>
<td>99592</td>
<td>SYSTEMIC INFLAMMATORY RESPONSE SYNDROME DUE TO INFECTIOUS PROCESS W/ ORGAN DYSFUNCTION</td>
</tr>
<tr>
<td>9980</td>
<td>POSTOPERATIVE SHOCK</td>
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</tbody>
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*Not valid for discharges effective October 1, 2004

See *Pediatric Quality Indicators Appendices*:
- Appendix H – Infection Diagnosis Codes