

Neonatal Blood Stream Infection Rate Technical Specifications

Neonatal Quality Indicators #3 (NQI #3)

AHRQ Quality Indicators™, Version 5.0

March 2015

Provider-Level Indicator

Type of Score: Rate

Description

Discharges with healthcare-associated bloodstream infection per 1,000 discharges for newborns and outborns with birth weight of 500 grams or more but less than 1,500 grams; with gestational age between 24 and 30 weeks; or with birth weight of 1,500 grams or more and death, an operating room procedure, mechanical ventilation, or transferring from another hospital within two days of birth. Excludes discharges with a length of stay less than 7 days and discharges with a principal diagnosis of sepsis, sepsis or bacteremia, or newborn bacteremia.

[NOTE: The software provides the rate per hospital discharge. However, common practice reports the measure as per 1,000 discharges. The user must multiply the rate obtained from the software by 1,000 to report events per 1,000 hospital discharges.]

Numerator

Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with either:

- any secondary ICD-9-CM diagnosis codes for other septicemia; or
- any secondary ICD-9-CM diagnosis codes for newborn septicemia or bacteremia and any secondary ICD-9-CM diagnosis codes for staphylococcal or Gram-negative bacterial infection

ICD-9-CM Other septicemia diagnosis codes:

03810	STAPHYLCOCC SEPTICEM NOS	03842	E COLI SEPTICEMIA
03811	METH SUSC STAPH AUR SEPT	03843	PSEUDOMONAS SEPTICEMIA
03812	METH RES STAPH AUR SEPT	03844	SERRATIA SEPTICEMIA
03819	STAPHYLCOCC SEPTICEM NEC	03849	GRAM-NEG SEPTICEMIA NEC
03840	GRAM-NEG SEPTICEMIA NOS	1125	DISSEMINATED CANDIDIASIS

ICD-9-CM Newborn septicemia or bacteremia diagnosis codes:

77181	NB SEPTICEMIA [SEPSIS	77183	BACTEREMIA OF NEWBORN
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ICD-9-CM Staphylococcal or Gram-negative bacterial infection diagnosis codes:

04104	ENTEROCOCCUS GROUP D	0413	KLEBSIELLA PNEUMONIAE
04110	STAPHYLOCOCCUS UNSPCFIED	0414	E. COLI INFECT NOS
04111	MTH SUS STPH AUR ELS/NOS	04141	SHIGA TOXIN-PROD E. COLI
04112	MTH RES STAPH AUR	04142	SPEC SHIGA TOXIN-PROD E. COLI OTH
04119	OTHER STAPHYLOCOCCUS	04143	SHIGA TOXIN-PROD E. COLI UNS
04149	SHIGA TOXIN-PROD E. COLI OTH/UNS	04185	OTH GRAM NEGATV BACTERIA
0417	PSEUDOMONAS INFECT NOS		

Denominator

All newborns and outborns with either:

- a birth weight of 500 to 1,499 grams (Birth Weight Categories 2, 3, 4 and 5); or
- any-listed ICD-9-CM diagnosis codes for gestational age between 24 and 30 weeks; or
- a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and death (DISP=20); or
- a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and any-listed ICD-9-CM procedure codes for operating room procedure; or
- a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and any-listed ICD-9-CM procedure codes for mechanical ventilation; or
- a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and transferring from another health care facility within two days of birth

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 Gestational age between 24 and 30 weeks diagnosis codes:

76522	24 COMP WEEKS GESTATION	76524	27-28 COMP WKS GESTATION
76523	25-26 COMP WKS GESTATION	76525	29-30 COMP WKS GESTATION

ICD-9-CM Mechanical ventilation procedure codes:

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9670 CON INV MEC VEN-UNSP DUR
9671 CONT INV MEC VEN <96 HRS

9672 CONT INV MEC VEN 96+ HRS

Exclude cases:

- with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission[†]) for sepsis
- with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission[†]) for sepsis or bacteremia
- with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission[†]) for staphylococcal or Gram-negative bacterial infection (see above)
- with birth weight less than 500 grams (Birth Weight Category 1)
- with length of stay less than 7 days
- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

ICD-9-CM Sepsis or bacteremia diagnosis codes:

1125 DISSEMINATED CANDIDIASIS
77181 SEPTICEMIA OF NEWBORN

77183 BACT OF NEWBORN
7907 BACTERMIA

[†] Only for cases that otherwise qualify for the numerator.