



Neonatal Quality Indicator 03 (NQI 03) Neonatal Blood Stream Infection Rate

August 2017

Provider-Level Indicator

Type of Score: Rate

Prepared by:

Agency for Healthcare Research and Quality

U.S. Department of Health and Human Services

www.qualityindicators.ahrq.gov

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 3 days and discharges with a principal diagnosis of 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 codes requiring a separate organism code and any secondary ICD-9-CM diagnosis codes for staphylococcal or Gram-negative bacterial infection

Other septicemia diagnosis codes: (BSI1DX)

03810	Staphylococ Septicem Nos	0388	Other Specified Septicemias
03811	Meth Susc Staph Aur Sept	3842	E Coli Septicemia
03812	Meth Res Staph Aur Sept	3843	Pseudomonas Septicemia
03819	Staphylococ Septicem Nec	3844	Serratia Septicemia
03840	Gram-neg Septicemia Nos	3849	Gram-neg Septicemia Nec
0382	Pneumococcal Septicemia [streptococcus Pneumoniae Septicemia]	1125	Disseminated Candidiasis

Newborn septicemia or bacteremia diagnosis codes: (BSI2DX)

77181	NB Septicemia [sepsis]	77183	Bacteremia Of Newborn
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Staphylococcal or Gram-negative bacterial infection diagnosis codes: (BSI3DX)

04104	Enterococcus Group D	0413	Klebsiella Pneumoniae
04110	Staphylococcus Unspcfied	0414	E. Coli Infect Nos
04111	Mth Sus Stph Aur Els/nos	0417	Pseudomonas Infect Nos
04112	Mth Res Staph Aur	04141	Shiga Toxin-prod E. Coli
04119	Other Staphylococcus	04142	Spec Shiga Toxin-prod E. Coli Oth
04149	Shiga Toxin-prod E. Coli Oth/uns	04143	Shiga Toxin-prod E. Coli Uns
		04185	Oth Gram Negatv Bacteria

DENOMINATOR

All newborns and outborns with either:

- a birth weight of 500 to 1,499 grams (Birth Weight Categories 2, 3, 4 and 5);
- any-listed ICD-9-CM diagnosis codes for gestational age between 24 and 30 weeks;
- a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and death (DISP=20);
- 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;
- 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;
- 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 (ATYPE = 4 and POINTOFORIGINNUB04 = 6)

[Appendix A – Operating Room Procedure Codes](#)

[Appendix I – Definitions of Neonate, Newborn, Normal Newborn, and Outborn](#)

[Appendix L – Low Birth Weight Categories](#)

Gestational age between 24 and 30 weeks diagnosis codes: (GESTCAT)

76522	24 Comp Weeks Gestation	76524	27-28 Comp Wks Gestation
76523	25-26 Comp Wks Gestation	76525	29-30 Comp Wks Gestation

Mechanical ventilation procedure codes: (MECHVCD)

9670	Con Inv Mec Ven-unsp Dur	9672	Cont Inv Mec Ven 96+ Hrs
9671	Cont Inv Mec Ven <96 Hrs		

DENOMINATOR EXCLUSIONS

Exclude cases:

- with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for sepsis, among patients otherwise qualifying for numerator
- with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for sepsis or bacteremia, among patients otherwise qualifying for numerator
- with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for staphylococcal or Gram-negative bacterial infection, among patients otherwise qualifying for numerator
- with birth weight less than 500 grams (Birth Weight Category 1)
- with length of stay less than 3 days
- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

Sepsis or bacteremia diagnosis codes: (BSI4DX)

1125	Disseminated Candidiasis	77183	Bacteremia Of Newborn
77181	Nb Septicemia [sepsis]	7907	Bacteremia

Sepsis diagnosis codes: (SEPTI2D) For discharges in Oct 1, 2011, and later

0380	Streptococcal Septicemia	03843	Pseudomonas
03810	Staphylococcal Septicemia, Unspecified	03844	Serratia
03811	Meth Susc Staph Aur Sept	03849	Septicemia Due To Other Gram-negative Organisms
03812	Mrsa Septicemia	0388	Other Specified Septicemias
03819	Other Staphylococcal Septicemia	0389	Unspecified Septicemia
0382	Pneumococcal Septicemia (streptococcus Pneumoniae Septicemia)	78552	Septic Shock
0383	Septicemia Due To Anaerobes	99591	Systemic Inflammatory Response Syndrome Due To Infectious
03840	Gram-negative Organism, Unspecified	99592	Systemic Inflammatory Response Syndrome Due To Infectious
03841	Hemophilus Influenzae	9980	Postoperative Shock /* Not Valid After October 1, 2011
03842	Escherichia Coli	99802	Shock Following Trauma Or Surgery, Septic

