



**AHRQ Quality Indicators™ (AHRQ QI™)
ICD-9-CM and ICD-10-CM/PCS
Specification Enhanced Version 5.0**

Neonatal Quality Indicators #3 (NQI #3)
Neonatal Blood Stream Infection Rate

**October 2015
Provider-Level Indicator
Type of Score: Rate**

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NQI #3 Neonatal Blood Stream Infection 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.]

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NUMERATOR			
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Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with either: <ul style="list-style-type: none"> • any secondary ICD-9-CM or ICD-10-CM diagnosis codes for other septicemia; or • any secondary ICD-9-CM or ICD-10-CM diagnosis codes for newborn septicemia or bacteremia and any secondary ICD-9-CM or ICD-10-CM diagnosis codes for staphylococcal or Gram-negative bacterial infection 			
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<i>Other septicemia diagnosis codes: (BSI1DX)</i>			
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ICD-9-CM	Description	ICD-10-CM	Description
3810	STAPHYLCOCC SEPTICEM NOS	<i>No codes for ICD-10-CM</i>	
3811	METH SUSC STAPH AUR SEPT		
3812	METH RES STAPH AUR SEPT		
3819	STAPHYLCOCC SEPTICEM NEC		
3840	GRAM-NEG SEPTICEMIA NOS		
3842	E COLI SEPTICEMIA		
3843	PSEUDOMONAS SEPTICEMIA		
3844	SERRATIA SEPTICEMIA		
3849	GRAM-NEG SEPTICEMIA NEC		
1125	DISSEMINATED CANDIDIASIS		

<i>Newborn septicemia or bacteremia diagnosis codes: (BSI2DX)</i>			
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ICD-9-CM	Description	ICD-10-CM	Description
77181	NB SEPTICEMIA [SEPSIS]	P3619	Sepsis of newborn due to other streptococci
77183	BACTEREMIA OF NEWBORN	P362	Sepsis of newborn due to Staphylococcus aureus
		P3630	Sepsis of newborn due to unspecified staphylococci
		P3639	Sepsis of newborn due to other staphylococci
		P364	Sepsis of newborn due to Escherichia coli
		P368	Other bacterial sepsis of newborn
		R7881	Bacteremia

Staphylococcal or Gram-negative bacterial infection diagnosis codes: (BSI3DX)			
ICD-9-CM	Description	ICD-10-CM	Description
4104	ENTEROCOCCUS GROUP D	B961	Klebsiella pneumoniae [K. pneumoniae] as the cause of diseases classified elsewhere
4110	STAPHYLOCOCCUS UNSPCFIED	B9620	Unspecified Escherichia coli [E. coli] as the cause of diseases classified elsewhere
4111	MTH SUS STPH AUR ELS/NOS	B9621	Shiga toxin-producing Escherichia coli [E. coli] (STEC) O157 as the cause of diseases classified elsewhere
4112	MTH RES STAPH AUR	B9622	Other specified Shiga toxin-producing Escherichia coli [E. coli] (STEC) as the cause of diseases classified elsewhere
4119	OTHER STAPHYLOCOCCUS	B9623	Unspecified Shiga toxin-producing Escherichia coli [E. coli] (STEC) as the cause of diseases classified elsewhere
4149	SHIGA TOXIN-PROD E. COLI OTH/UNS	B9629	Other Escherichia coli [E. coli] as the cause of diseases classified elsewhere
417	PSEUDOMONAS INFECT NOS	B965	Pseudomonas (aeruginosa) (mallei) (pseudomallei) as the cause of diseases classified elsewhere
413	KLEBSIELLA PNEUMONIAE	B9689	Other specified bacterial agents as the cause of diseases classified elsewhere
414	E. COLI INFECT NOS		
4141	SHIGA TOXIN-PROD E. COLI		
4142	SPEC SHIGA TOXIN-PROD E. COLI OTH		
4143	SHIGA TOXIN-PROD E. COLI UNS		
4185	OTH GRAM NEGATV BACTERIA		

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NUMERATOR EXCLUSIONS
<i>Not Applicable</i>

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DENOMINATOR
<p>All newborns and outborns with either:</p> <ul style="list-style-type: none"> • a birth weight of 500 to 1,499 grams (Birth Weight Categories 2, 3, 4 and 5); or • any-listed ICD-9-CM or ICD-10-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 or ICD-10-PCS 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 or ICD-10-PCS 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

[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)			
ICD-9-CM	Description	ICD-10-CM	Description
76522	24 COMP WEEKS GESTATION		<i>No equivalent codes for ICD-10-CM</i>
76523	25-26 COMP WKS GESTATION		
76524	27-28 COMP WKS GESTATION		
76525	29-30 COMP WKS GESTATION		

Mechanical ventilation procedure codes: (MECHVCD)			
ICD-9-CM	Description	ICD-10 PCS	Description
9670	CON INV MEC VEN-UNSP DUR	5A1935Z	Respiratory Ventilation, Less than 24 Consecutive Hours

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9671	CONT INV MEC VEN <96 HRS	5A1945Z	Respiratory Ventilation, 24-96 Consecutive Hours
9672	CONT INV MEC VEN 96+ HRS	5A1955Z	Respiratory Ventilation, Greater than 96 Consecutive Hours

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DENOMINATOR EXCLUSIONS

Exclude cases:

- with a principal ICD-9-CM or ICD-10-CM diagnosis code (or secondary diagnosis present on admission†) for sepsis
- with a principal ICD-9-CM or ICD-10-CM diagnosis code (or secondary diagnosis present on admission†) for sepsis or bacteremia
- with a principal ICD-9-CM or ICD-10-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)

† Only for cases that otherwise qualify for the numerator.

Sepsis or bacteremia diagnosis codes: (BSI4DX)

ICD-9-CM	Description	ICD-10-CM	Description
1125	DISSEMINATED CANDIDIASIS	A021	Salmonella sepsis
77181	SEPTICEMIA OF NEWBORN	A227	Anthrax sepsis
77183	BACT OF NEWBORN	A267	Erysipelothrix sepsis
7907	BACTERMIA	A327	Listerial sepsis
		A400	Sepsis due to streptococcus, group A
		A401	Sepsis due to streptococcus, group B
		A403	Sepsis due to Streptococcus pneumoniae
		A408	Other streptococcal sepsis
		A409	Streptococcal sepsis, unspecified
		A4101	Sepsis due to Methicillin susceptible Staphylococcus aureus
		A4102	Sepsis due to Methicillin resistant Staphylococcus aureus
		A411	Sepsis due to other specified staphylococcus

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A412	Sepsis due to unspecified staphylococcus
A413	Sepsis due to Hemophilus influenzae
A414	Sepsis due to anaerobes
A4150	Gram-negative sepsis, unspecified
A4151	Sepsis due to Escherichia coli [E. coli]
A4152	Sepsis due to Pseudomonas
A4153	Sepsis due to Serratia
A4159	Other Gram-negative sepsis
A4181	Sepsis due to Enterococcus
A4189	Other specified sepsis
A419	Sepsis, unspecified organism
A427	Actinomycotic sepsis
A5486	Gonococcal sepsis
B377	Candidal sepsis
P360	Sepsis of newborn due to streptococcus, group B
P3610	Sepsis of newborn due to unspecified streptococci
P3619	Sepsis of newborn due to other streptococci
P362	Sepsis of newborn due to Staphylococcus aureus
P3630	Sepsis of newborn due to unspecified staphylococci
P3639	Sepsis of newborn due to other staphylococci
P364	Sepsis of newborn due to Escherichia coli
P365	Sepsis of newborn due to anaerobes
P368	Other bacterial sepsis of newborn
P369	Bacterial sepsis of newborn, unspecified
R6520	Severe sepsis without septic shock
R6521	Severe sepsis with septic shock
R7881	Bacteremia
T8112XA	Postprocedural septic shock, initial encounter