

Central Venous Catheter-Related Blood Stream Infection Rate

Technical Specifications

Pediatric Quality Indicators #12 (PDI #12)

AHRQ Quality Indicators™, Version 5.0

March 2015

Provider-Level Indicator

Type of Score: Rate

Description

Central venous catheter-related bloodstream infections (secondary diagnosis) per 1,000 medical and surgical discharges for patients ages 17 years and younger. Includes metrics for discharges grouped by risk category. Excludes cases with a principal diagnosis of a central venous catheter-related bloodstream infection, cases with a secondary diagnosis of a central venous catheter-related bloodstream infection present on admission, normal newborns, neonates with a birth weight of less than 500 grams, cases with stays less than two (2) days, and obstetric cases.

[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.]

[NOTE: To obtain stratified results, the user must run the PDSASG2.SAS program in the SAS QI Software Version 4.5 or choose to stratify by risk category in the Windows QI Software Version 4.5]

Numerator

Overall:

Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for selected infections.

For discharges prior to October 1, 2007, the selected infections are:

ICD-9-CM Hospital-associated infection diagnosis codes:

99662 REACT-OTH VASC DEV/GRAFT

9993 OTHER INFECTION (end 2007)

For discharges on or after October 1, 2007 but before October 1, 2011, the selected infection is:

ICD-9-CM Central venous catheter-related blood stream infection diagnosis code:

99931 OTH/UNS INF-CEN VEN CATH

For discharges on or after October 1, 2011, the selected infections are:

ICD-9-CM Central venous catheter-related blood stream infection diagnosis code:

99931 OTH/UNS INF-CEN VEN CATH 99932 BLOOD INF DT CEN VEN CTH

High Risk Category:

Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for selected infections (see above).

Intermediate Risk Category:

Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for selected infections (see above).

Low Risk Category:

Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for selected infections (see above).

Denominator

Overall:

Surgical and medical discharges, for patients ages 17 years and younger. Surgical and medical discharges are defined by specific DRG or MS-DRG codes.

See *Pediatric Quality Indicators Appendices*:

- Appendix B – Surgical DRGs
- Appendix C – Surgical MS-DRGs
- Appendix D – Medical DRGs
- Appendix E – Medical MS-DRGs

Exclude cases:

- with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for selected infections (as defined by the numerator, see above)
- normal newborns
- neonates with birth weight less than 500 grams (Birth Weight Category 1)
- with length of stay less than two (2) days
- MDC 14 (pregnancy, childbirth, and puerperium)
- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year

(YEAR=missing) or principal diagnosis (DX1=missing)

See *Pediatric Quality Indicators Appendices*:

- Appendix I – Definitions of, Neonate, Newborn, Normal Newborn, and Outborn
- Appendix L – Low Birth Weight Categories

High Risk Category:

Surgical and medical discharges, for patients ages 17 years and younger, with any-listed ICD-9-CM diagnosis codes for high-risk immunocompromised state or any-listed ICD-9-CM procedure codes for high-risk immunocompromised state (transplant) or any-listed ICD-9-CM diagnosis codes for cancer. Surgical and medical discharges are defined by specific DRG or MS-DRG codes.

See *Pediatric Quality Indicators Appendices*:

- Appendix B – Surgical DRGs
- Appendix C – Surgical MS-DRGs
- Appendix D – Medical DRGs
- Appendix E – Medical MS-DRGs
- Appendix F – High-Risk Immunocompromised States
- Appendix M – Cancer

Exclude cases:

- with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for selected infections (as defined by the numerator, see above)
- normal newborns
- neonates with birth weight less than 500 grams (Birth Weight Category 1)
- with length of stay less than two (2) days
- MDC 14 (pregnancy, childbirth, and puerperium)
- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

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Intermediate Risk Category:

Surgical and medical discharges, for patients ages 17 years and younger, with either:

- any-listed ICD-9-CM diagnosis codes for intermediate-risk immunocompromised state; or
- any-listed ICD-9-CM diagnosis codes for cirrhosis and hepatic failure; or
- any-listed ICD-9-CM diagnosis codes for cystic fibrosis; or
- any-listed ICD-9-CM diagnosis codes for hemophilia

Surgical and medical discharges are defined by specific DRG or MS-DRG codes.

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- Appendix G – Intermediate-Risk Immunocompromised States

ICD-9-CM Cirrhosis and hepatic failure diagnosis codes:

5712	ALCOHOLIC CIRRHOSIS OF LIVER	5722	HEPATIC COMA
5715	CIRRHOSIS OF LIVER WITHOUT MENTION OF ALCOHOL	5724	HEPATORENAL SYNDROME
5716	BILIARY CIRRHOSIS		

ICD-9-CM Cystic fibrosis diagnosis codes:

27700	CYSTIC FIBROS W/O ILEUS	27703	CYSTIC FIBROSIS W GI MAN
27701	CYSTIC FIBROS W ILEUS	27709	CYSTIC FIBROSIS NEC
27702	CYSTIC FIBROS W PUL MAN		

ICD-9-CM Hemophilia diagnosis codes:

2860	CONG FACTOR VIII DIORD	2863	CONG DEF CLOT FACTOR NEC
2861	CONG FACTOR IX DISORDER	2864	VON WILLEBRANDS DISEASE
2862	CONG FACTOR XI DISORDER		

Exclude cases:

- with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for selected infections (as defined by the numerator, see above)
- normal newborns
- neonates with birth weight less than 500 grams (Birth Weight Category 1)
- with length of stay less than two (2) days
- MDC 14 (pregnancy, childbirth, and puerperium)
- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

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Low Risk Category:

Surgical and medical discharges, for patients ages 17 years and younger, not meeting the inclusion criteria for the High Risk Category or the Intermediate Risk Category. Surgical and medical discharges are defined by specific DRG or MS-DRG codes.

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- Appendix C – Surgical MS-DRGs
- Appendix D – Medical DRGs
- Appendix E – Medical MS-DRGs

Exclude cases:

- with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for selected infections (as defined by the numerator, see above)
- normal newborns
- neonates with birth weight less than 500 grams (Birth Weight Category 1)
- with length of stay less than two (2) days
- MDC 14 (pregnancy, childbirth, and puerperium)
- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

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