Postoperative Sepsis Rate
Technical Specifications

Patient Safety Indicators 13 (PSI 13)
AHRQ Quality Indicators™, Version 4.5a, July 2014
Provider-Level Indicator
Type of Score: Rate

Description

Postoperative sepsis cases (secondary diagnosis) per 1,000 elective surgical discharges for patients ages 18 years and older. Excludes cases with a principal diagnosis of sepsis, cases with a secondary diagnosis of sepsis present on admission, cases with a principal diagnosis of infection, cases with a secondary diagnosis of infection present on admission (only if they also have a secondary diagnosis of sepsis), cases with an immunocompromised state, cases with cancer, obstetric discharges, and cases with stays less than four (4) days.

[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 any secondary ICD-9-CM diagnosis codes for sepsis.

ICD-9-CM Sepsis diagnosis codes[1]:

0380	Streptococcal septicemia	99800	POSTOPERATIVE SHOCK, NOS
0381	*Staphylococcal septicemia (end 1997)*	99802	POSTOP SHOCK,SEPTIC
0380	Staphylococc septicem NOS	03840	Gram-negative SEPTICEMIA NOS
03811	METH SUSC STAPH AUR SEPT	03841	H. INFLUENAE SEPTICEMIA
03812	MRSA SEPTICEMIA	03842	E COLI SEPTICEMIA
03819	STAPHYLOCC SEPTICEM NEC	03843	PSEUDOMONAS SEPTICEMIA
0382	Pneumococcal septicemia	03844	Serratia SEPTICEMIA
0383	ANAEROBIC SEPTICEMIA	03849	GRAM-NEG SEPTICEMIA NEC
78552	SEPTIC SHOCK	0388	SEPTICEMIA NEC
78559	*Shock W/O TRAUMA NEC (used with data prior to FY 2005)*	0389	SEPTICEMIA NOS
		99591	SEPSIS
9980	*POSTOPERATIVE SHOCK*	99592	severe sepsis

[1] The procedure or diagnosis codes are continuously updated. The current list of ICD-9-CM codes is valid for October 2012 through September 2013. Italicized codes are either not active in Fiscal Year 2013 or no longer used in the algorithm beginning with ICD-9-CM version 27 (FY 2005 or October 1, 2004).
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Denominator

Elective surgical discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for an operating room procedure. Elective surgical discharges are defined by specific DRG or MS-DRG codes with admission type recorded as elective (SID ATYPE=3).

See *Patient Safety Indicators Appendices*:
- Appendix A – Operating Room Procedure Codes
- Appendix D – Surgical Discharge DRGs
- Appendix E – Surgical Discharge MS-DRGs

Exclude cases:
- with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for sepsis (see above)
- with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission[†]) for infection
- with any-listed ICD-9-CM diagnosis codes or any-listed ICD-9-CM procedure codes for immunocompromised state
- with any-listed ICD-9-CM diagnosis codes for cancer
- with length of stay of less than 4 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 *Patient Safety Indicators Appendices*:
- Appendix F – Infection Diagnosis Codes
- Appendix H – Cancer Diagnosis Codes
- Appendix I – Immunocompromised State Diagnosis and Procedure Codes

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