



# Patient Safety Indicator 13 (PSI 13) Postoperative Sepsis Rate

## July 2024

### Hospital-Level Indicator

#### Type of Score: Rate

#### Prepared by:

Agency for Healthcare Research and Quality

U.S. Department of Health and Human Services

[qualityindicators.ahrq.gov](http://qualityindicators.ahrq.gov)

#### DESCRIPTION

Hospital discharges with postoperative sepsis (secondary diagnosis) per 1,000 elective surgical discharges for patients ages 18 years and older. Excludes discharges with a principal diagnosis of sepsis, or with a secondary diagnosis of sepsis present on admission; discharges with a principal diagnosis of infection, or with a secondary diagnosis of infection present on admission; discharges where the first operating room procedure occurs after or on the 10th day following admission; and obstetric discharges.

*[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-10-CM diagnosis code for sepsis (**SEPTI2D\***).

#### DENOMINATOR

Elective surgical discharges (**Appendix E: SURGI2R**) for patients ages 18 years and older with any listed ICD-10-PCS procedure code for an operating room procedure (**Appendix A: ORPROC**). Elective surgical discharges are defined by specific MS-DRG codes with admission type recorded as elective (SID ATYPE=3).

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

[Appendix E - Surgical Discharge MS-DRGs](#)

## DENOMINATOR EXCLUSIONS

Exclude discharges:

- with a principal ICD-10-CM diagnosis code (or secondary diagnosis present on admission) for sepsis (***SEPTI2D\****)
- with a principal ICD-10-CM diagnosis code (or secondary diagnosis present on admission) for infection (***Appendix F: INFECID***)
- where the first operating room procedure (***Appendix A: ORPROC***) occurs after or on the 10th day following admission
- with a principal ICD-10-CM diagnosis code assigned to MDC 14 Pregnancy, Childbirth & the Puerperium (***Appendix O: MDC14PRINDX***)
- with a principal ICD-10-CM diagnosis code assigned to MDC 15 Newborns & Other Neonates with Conditions Originating in Perinatal Period (***Appendix O: MDC15PRINDX***)
- with an ungroupable DRG (DRG=999)
- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing)
- with missing MDC (MDC=missing) when the user indicates that MDC is provided

[\*\*\*Appendix F - Infection Diagnosis Codes\*\*\*](#)

[\*\*\*Appendix O - MDC 14 and MDC 15 Principal Diagnosis Codes\*\*\*](#)

For risk adjustment, discharges are grouped by risk category based on the highest severity diagnosis or procedure affecting immune function. Risk categories are mutually exclusive. Discharges cannot qualify for more than one category. For risk category definitions, see Patient Safety Indicators (PSI) Parameter Estimates, v2024 on the AHRQ QI website.

\* See below for code list

***Sepsis diagnosis codes for PSI 13/PDI 10: (SEPTI2D)***

A021	Salmonella Sepsis	A4151	Sepsis due to escherichia coli [E. coli]
A227	Anthrax Sepsis	A4152	Sepsis due to pseudomonas
A267	Erysipelothrix Sepsis	A4153	Sepsis due to serratia
A327	Listerial Sepsis	A4154	Sepsis due to acinetobacter baumannii
A400	Sepsis due to streptococcus, group A	A4159	Other gram-negative Sepsis
A401	Sepsis due to streptococcus, group B	A4181	Sepsis due to enterococcus
A403	Sepsis due to streptococcus pneumoniae	A4189	Other specified Sepsis
A408	Other streptococcal Sepsis	A419	Sepsis, unspecified organism
A409	Streptococcal Sepsis, unspecified	A427	Actinomycotic Sepsis
A4101	Sepsis due to methicillin susceptible staphylococcus aureus	A5486	Gonococcal Sepsis
A4102	Sepsis due to methicillin resistant staphylococcus aureus	B377	Candidal Sepsis
A411	Sepsis due to other specified staphylococcus	R6520	Severe Sepsis without septic shock
A412	Sepsis due to unspecified staphylococcus	R6521	Severe Sepsis with septic shock
A413	Sepsis due to hemophilus influenzae	T8112XA	Postprocedural septic shock, initial encounter
A414	Sepsis due to anaerobes	T8144XA	Sepsis following a procedure, initial encounter
A4150	Gram-Negative Sepsis, unspecified		