Sepsis Data Collection Fact Sheet

Postoperative Sepsis Rate (HIIN-SEPSIS-1a)

Measure Definition	Postoperative sepsis cases (secondary diagnosis) per 1,000 elective surgical discharges for patients ages 18 and older.
Numerator	• Discharges among cases meeting the inclusion and exclusion rules for the denominator, with any AHRQ designated secondary ICD-9-CM or ICD-10 diagnosis codes for sepsis. o See AHRQ PSI-13 for sepsis diagnosis codes, which include codes for septic shock.
Denominator	• Elective surgical discharges, for patients ages 18 years and older, with any-listed ICD-9-CM or ICD-10-PCS procedure codes for an operating room procedure. o Elective surgical discharges are defined by specific DRG or MS-DRG codes with admission type recorded as elective.
Numerator Exclusions (refer to the AHRQ specification for more details, these are summarized)	• Cases with a primary diagnosis of sepsis, pressure ulcer or infection. • Cases with sepsis present on admission. • Cases with a secondary diagnosis of infection present on admission (only if they also have a secondary diagnosis of sepsis). • Immunocompromised patients. • Patients with cancer. • Patients discharged from OB (pregnancy, childbirth, and puerperium). • Cases with stays fewer than four days.
Data Sources	• Administrative Claims Data
Tools	• Please share useful tools on the Sepsis ListServ: http://www.hret-hiin.org/engage/listserv.shtml.

Hospital-Onset Sepsis Mortality Rate (HIIN-SEPSIS-1c)

Measure Definition	In-hospital deaths per 1,000 discharges, among patients ages 18 through 89 years or obstetric patients, with hospital-onset sepsis / septic shock.
Numerator	• Number of in-hospital deaths due to hospital-onset severe sepsis and septic shock. Note: For specific diagnosis codes identifying severe sepsis / septic shock, refer to the numerator specifications for AHRQ PSI-13.
Denominator	• Number of patients with hospital-onset severe sepsis/septic shock. Note: Generally, hospital-onset is defined as an infection that appears 48 hours or more after admission. However, to reduce data collection burden, the "present on admission" variable may be used to identify patients where the infection was not "hospital onset."
Data Sources	• Administrative claims, medical records.

Overall Sepsis Mortality Rate (HIIN-SEPSIS-1d)

Measure Definition	• In-hospital deaths per 1,000 discharges, among patients ages 18 through 89 years or obstetric patients, with sepsis.
Numerator	• Number of in-hospital deaths due to severe sepsis and septic shock. Note: For specific diagnosis codes identifying severe sepsis / septic shock, refer to the numerator specifications for AHRQ PSI-13.
Denominator	• Number of patients with severe sepsis/septic shock. Note: This measure includes hospital-onset sepsis cases, post-operative sepsis cases, AND any cases that present with sepsis to the hospital (for example, those cases coming in as transfers, or presenting in the emergency department). This measure focuses on measuring the management of sepsis patients once they are identified.
Data Sources	• Administrative claims, medical records.
Tools	• Please share useful tools on the Sepsis ListServ: http://www.hret-hiin.org/engage/listserv.shtml.

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Frequently Asked Questions	Q: Is the hospital-onset mortality measure limited to surgical discharges? A: No, this measure includes all patients ages 18 through 89 years, including obstetric patients. The reference to the post-operative sepsis measure specifications is solely for the purposes of providing a listing of severe sepsis/septic shock diagnosis codes. Q: Are the mortality measures the same as PSI-4 or PSI-13? A: No. However, PSI-4 and PSI-13 use the same ICD 9/10 codes for sepsis. PSI- 4 and PSI-13 include only surgical discharges while this measure includes both surgical and non-surgical patients. Q: Do I have to do chart review to confirm the 48-hour timeframe for "hospital-onset?" A: No, extensive chart review is not needed to capture hospital-onset. It is sufficient to exclude cases where severe sepsis/septic shock was present on admission (POA). Q: How do these measures align with the CMS SEP-1 requirements? A: The SEP-1 measure is a process measure. Its denominator includes "discharges age 18 and over with an ICD-10-CM Principal or Other Diagnosis Code of Sepsis, Severe Sepsis, or Septic Shock," which aligns with the denominator for this measure. Q: Should we exclude the same populations as the CMS SEP-1 requirements? A: Yes, to facilitate alignment, the same exclusions are applied. Q: What is the difference between these measures and the CMS SEP-1 measure? A: All measures focus on assessing the management of sepsis patients once these patients are identified. SEP-1 is a process measure; these measures are outcome measures. Q: Do we include just severe sepsis/septic shock, or all sepsis codes in the mortality measures? A: Generally speaking, include all the codes if possible, especially in the rural / CAH / small hospital setting, as this will provide larger volume of cases. The inclusion of all codes may also help align with the new sepsis-3 definitions. The sepsis-3 definitions eliminate the "severe sepsis" term yet the ICD-10 code is still present and the CMS core measure utilizes the term "severe sepsis". As an intermediate strategy, hospitals can begin including sepsis along with severe sepsis & septic shock (to begin to align with the new definitions) in their HIIN metric as we wait for the coding changes to occur. It is most important to ensure consistency in how the data is collected. Q: How are the mortality measures different than the AHRQ PSI-4 measure? A: PSI-4 includes only surgical discharges; the mortality measures includes both surgical and non-surgical patients.

	Q: What is the difference between these two sepsis mortality measures? A: The hospital-onset sepsis mortality measure is a subset of the overall sepsis mortality measure. Q: Are hospice, end-of-life, and/or palliative care patients excluded from the mortality measures? A: The HRET HIIN measure specifications for overall and hospital-onset sepsis mortality do not specifically exclude these patients, as the ability to do so may vary across hospitals. For the HRET HIIN, we encourage consistency in data collection and reporting throughout the program. Hospitals wishing to exclude these patients should refer to the measure specifications for NQF 500, which provide guidance for exclusions.