

Patient Safety Indicators: What They Are, Why They Matter, and How CDI Can Make Meaningful Impact



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Patient Safety Indicators (PSI) are a subset of Quality Indicators (QI) developed and maintained by the Agency for Healthcare Research and Quality (AHRQ) on behalf of the U.S. Department of Health and Human Services.

Per the [AHRQ Quality Indicators website](#), “QIs are standardized, evidence-based measures of health care quality that can be used with readily available hospital administrative data to measure and track clinical performance and outcomes.” PSIs, meanwhile, “provide information on potentially avoidable safety events that represent opportunities for improvement in the delivery of care.”

Specifications pertaining to the PSIs are updated annually. Although there are currently 16 active discrete PSI measures, those receiving the greatest attention are

typically the measures comprising PSI 90, the Patient Safety and Adverse Events Composite. PSI 90 is publicly reported through highly visible entities such as [Care Compare public reporting](#) and impacts quality scoring as well as reimbursement through select value-based programs, including the [CMS Hospital-Acquired Condition Reduction Program](#).

PSI 90 uses a weighted average, based on event volume and harm associated with the adverse event, of the AHRQ observed-to-expected ratios for the PSIs below. Although hospitals should recognize and appreciate the significance of all PSIs, special emphasis may be placed on PSI 03, PSI 11, PSI 12, and PSI 13 as they currently account for nearly 80% of the composite score.

AHRQ QI ICD-10-CM/PCS Specification v2025 Patient Safety Indicator 90 (PSI 90)
qualityindicators.ahrq.gov

Table 1: Composite Weights for PSI 90 v2025

Indicator	Harm Weight	Volume Weight	Component Weight
PSI 03 Pressure Ulcer Rate	0.3080	0.1429	0.2186
PSI 06 Iatrogenic Pneumothorax Rate	0.1381	0.0513	0.0352
PSI 08 In-Hospital Fall-Associated Fracture Rate	0.1441	0.0708	0.0506
PSI 09 Postoperative Hemorrhage or Hematoma Rate	0.0570	0.1192	0.0338
PSI 10 Postoperative Acute Kidney Injury Requiring Dialysis Rate	0.3584	0.0285	0.0507
PSI 11 Postoperative Respiratory Failure Rate	0.2219	0.1952	0.2152
PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate	0.1557	0.2083	0.1611
PSI 13 Postoperative Sepsis Rate	0.3102	0.1243	0.1915
PSI 14 Postoperative Wound Dehiscence Rate	0.1441	0.0237	0.0169
PSI 15 Abdominopelvic Accidental Puncture or Laceration Rate	0.1474	0.0359	0.0263

Source: 2020, 2021, and 2022 State Inpatient Database (SID), Healthcare Cost and Utilization Program Agency for Healthcare Research and Quality. 2012-2013 Medicare Fee-for-Service claims data.

Before we explore how CDI can make significant impact, one should keep in mind the stated intent of these PSIs: to identify potentially avoidable patient harm and use that to inform clinical patient care opportunities. As a CDI team, our impact can be substantial, but we should not strive toward the concept of “getting out of” a PSI. Rather, we should recognize the opportunity to review codes placed (and DRGs assigned) for clinical validity and ensure that clinically appropriate diagnoses are captured that legitimately exclude a given PSI. Further, assurance of accurate present-on-admission (POA) status cannot be over-emphasized; it is a critical part of avoiding, as AHRQ describes, “false positive” PSIs. Correct POA assignments are vital in a myriad of other publicly reported outcomes as well, so much so that organizations that support CDI and coding reconciliation on final coding assignment should consider incorporating POA accuracy into process workflows supporting the larger bucket of risk adjustment integrity.

Each PSI has an associated description that explains the patient population included and excluded, a general list of exclusions by diagnosis, and other caveats incorporated into the measure. The description is followed by definitions of the numerator and denominator for the PSI, with appendices for operative procedure codes and surgical discharge MS-DRGs included in the denominator.

This is then followed by extensive lists of grouped ICD-10-CM and procedural codes serving as exclusions.

CDI can serve as a valuable partner to quality and coding colleagues in understanding the technical details of these PSIs, which have a tangible impact on reputation, quality metrics, and financial outcomes. Of note, verifying the appropriate admission type assignment based on documentation and direction of the UB-04 is an additional way for CDI to help ensure that PSIs are attributed correctly. Incorporating physician and advanced practice provider advisors into the process may also help bridge gaps between providers and CDI, coding, and quality; these advisors can additionally serve as subject matter experts.

In conclusion, CDI should not focus on helping institutions “get out of” PSIs. We as a team can support the process as we always do—by ensuring that diagnoses are complete, accurate, and clinically valid, and by going the extra mile to make sure that legitimate exclusions are captured via thorough chart review and, when needed, provider queries. This helps PSI reporting more accurately reflect the care provided.

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