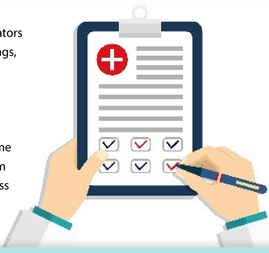
The Joint Commission
Journal on Quality and Patient Safety®

How Variation in the Reporting of Elective Surgeries Can Impact Patient Safety Indicators

Hospital safety is routinely measured by Patient Safety Indicators (PSIs), which can influence public perception, hospital rankings, and even reimbursement rates. But the coding of PSIs within hospitals depends on variable, sometimes opaque, criteria.

A study from the August 2022 issue of *The Joint Commission Journal on Quality and Patient Safety (JQPS)* suggests that some hospitals may classify admissions in a way that exempts them from elective-based PSI scores, a practice that may lead to less reliable PSIs.



PATIENT SAFETY INDICATORS

PSIs are largely calculated from inpatient claims data. All PSI measures based on surgical diagnosis-related groups (DRGs) include claims associated with elective admissions, but some exclude nonelective admission types such as urgent and emergency.

Elective-only PSIs include:

PSI 10
postoperative acute kidney injury requiring dialysis rate

PSI 11
postoperative respiratory failure rate

PSI 13
postoperative sepsis rate

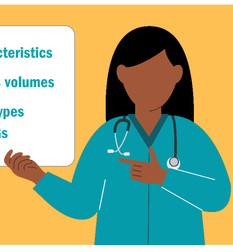
THE QUESTION

Can low percentages of elective admissions be explained by hospital characteristics, surgical claims volumes, or the numbers and types of surgical DRGs associated with claims? If not, variation in admission classification may be responsible.

THE STUDY

Multiple regression was combined with machine learning to analyze Medicare inpatient claims data reported by **3,484 hospitals** during the 2015–2017 PSI measurement period. The average percentage of elective (APE) admissions across DRGs was examined in relation to:

- Hospital characteristics
- Surgical claims volumes
- Numbers and types of surgical DRGs



THE TAKE-AWAYS

3,484 HOSPITALS WERE STUDIED

96 hospitals
were low APE outliers

72 hospitals
were high APE outliers

73.9% of variation in APE was explained

Key variables:
Surgical claims volume and 16 surgical DRGs

Low APE outliers were **disproportionately exempt** from elective-based PSI scores, suggesting that some hospitals may have classified admissions in a way that exempted them from elective-based PSI scores.*

Exempt from PSIs 10, 11 or 13

Non-outliers	6.1%
High outliers	6.9%
Low outliers	49.2%

Exempt from PSIs 10, 11 *AND* 13

Low outliers	45.9%

** 35 low APE outliers were excluded due to discrepant data*

The study shows that transparency into admission classification policies is needed to ensure fair and reliable use of PSIs when ranking hospitals and adjusting payments. Alternatively, PSIs may need modifications to rely on externally validated criteria.

To learn more about this study, visit: https://www.jointcommissionjournal.com/article/S1553-7250(22)00103-9/fulltext

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