Patient Safety Indicators

Technical Report

A Supplement to the

Hospital Performance Report

2023 Data

Health Care Quality Assessment

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* For inquiries, contact Markos Ezra, PhD, by phone at (609) 984-7334 or by email at Markos.Ezra@doh.nj.gov.

Executive Summary

This report presents findings resulting from the application of a statistical tool known as the Patient Safety Indicators (PSIs) module to the 2023 New Jersey hospital discharge data. These indicators serve as flags for potential quality problems (adverse events) rather than provide definitive measures of quality of care. The report presents adverse events during hospitalization in each of the 70 licensed hospitals that were operating in 2023. Statewide and national estimates are also provided to help compare hospital performance to the state and national rates.

Comparison of a hospital's rate to the statewide rate, presented in the top row of each of the PSI tables (Tables 1-11), is one way to assess how well that hospital performed among its peers in the state. A hospital's peers could be defined at many levels (e.g., teaching hospitals, urban hospitals, suburban hospitals, etc.). The Federal Agency for Healthcare Research and Quality (AHRQ) recommends that a hospital's performance be assessed by looking at its performance across the several PSI estimates presented in the PSI tables.

The 2023 New Jersey data shows that there are substantial variations in risk- adjusted rates of adverse events by hospital. Some hospitals exhibit significantly higher risk-adjusted rates than the corresponding statewide rates while others have significantly lower rates than the statewide rates.

Some Highlights

- Statewide, in 2023, there were a total of nine cases of "*retained surgical item or unretrieved device fragment*," formerly called "*foreign body left during procedure*." The nine events in 2023 were reported by seven hospitals. Table 1 shows the distribution of these adverse events by hospital. There were as high as 32 of these events in 2014 (see Table 12). Note that this is an event that should never happen.

- Overall, there were 61 cases of "*iatrogenic pneumothorax*" in 2023, for a risk-adjusted rate of 0.16 per 1,000 medical and surgical discharges. Hospital- specific rates for this indicator ranged from a low of 0.0 to a high of 0.77 per 1,000 medical and surgical discharges (Table 2).

- There were 99 cases of "*in hospital fall with hip fracture*" in 2023, for a risk- adjusted rate of 0.22 per 1,000 medical or surgical discharges. Hospital-specific rates for this indicator ranged from a low of 0.0 to a high of 1.20 per 1,000 medical or surgical discharges (Table 3).

- Statewide, there were eight cases of "*perioperative hemorrhage or hematoma*" in 2023, for a risk-adjusted rate of 3.34 per 1,000 surgical discharges. Hospital-

specific rates for this indicator ranged from a low of 0.0 to a high of 29.64 per 1,000 surgical discharges (Table 4).

- Statewide, there were 12 cases of "*perioperative pulmonary embolism (PE) or deep vein thrombosis (DVT)*'' in 2023, for a risk-adjusted rate of 4.48 per 1,000 surgical discharges. Hospital-specific rates for this indicator ranged from a low of 0.0 to a high of 68.49 per 1,000 surgical discharges (Table 5).

- Statewide, there were four cases of "*postoperative sepsis"* reported in 2023 for a risk-adjusted rate of 5.16 per 1,000 elective surgery discharges (Table 6).

- Statewide, there were 50 cases of "*postoperative wound dehiscence"* reported in 2023 for a risk-adjusted rate of 1.30 per 1,000 abdominopelvic surgical discharges (Table 7).

- Statewide, there were 84 cases of "*abdominopelvic accidental puncture or laceration"* reported by NJ hospitals in 2023. The statewide risk-adjusted rate for occurrence of this adverse event during procedure for the year was 8.93 per 1,000 discharges. Hospital-specific rates for this indicator ranged from a low of 0.0 to a high of 31.95 per 1,000 discharges (Table 8).

- There were 177 cases of "*birth trauma - injury to neonate"* reported statewide in 2023 for a rate of 1.90 per 1,000 live births (Table 9). Similarly, there were 441 cases of obstetric trauma among instrument-assisted vaginal deliveries (for a rate of 115.26 per 1,000 deliveries) (Table 10) and 1,003 cases of obstetric trauma among vaginal deliveries without instrument (for a rate of 16.77 per 1,000) (Table 11).

Table 12 Compares New Jersey's PSI estimates to the national estimated averages. Overall, New Jersey performed better than or equal to the national averages for most of the 10 PSIs that are measured using rates. As shown in Table 12, the only indicator where New Jersey performed slightly but persistently worse than the national averages is "*postoperative PE/DVT*." It is also important to note that the 2023 rates have shown some increase, which is due to changes in the AHRQ Module (Version 2024) as applied to the analysis of the 2023 data.

Introduction

The Office of Health Care Quality Assessment (HCQA) in the New Jersey Department of Health's (NJDOH) Office of Health Care Quality and Informatics assesses health care quality using qualitative and quantitative data reported by hospitals to support performance monitoring related to patient care and safety. Specifically, HCQA produces consumer reports on cardiac surgery, hospital performance, and hospital quality indicators; reviews confidential reports and root- cause analyses of reportable medical errors; and maintains several databases to support licensure requirements. To enhance the information that NJDOH provides to the public on hospital care, HCQA staff apply statistical tools developed by the Federal Agency for Healthcare Research and Quality (AHRQ) to the New Jersey hospital discharge data, known as Uniform Billing (UB) data.

The AHRQ Quality Indicators (QIs) are a set of quality indicators organized into four modules, each of which measures quality associated with patient care in outpatient or inpatient settings. These four modules are: Prevention Quality Indicators (PQIs); Inpatient Quality Indicators (IQIs); Patient Safety Indicators (PSIs); and Pediatric Quality Indicators (PDIs). Background information on the development of these modules and the primary purposes they are designed to serve can be found at: AHRQ QI: Quality Indicator Resources, AHRQ Quality Indicators.

This report presents findings resulting from the application of the Patient Safety Indicator (PSI) module to the 2023 New Jersey hospital discharge (UB) data. The PSI module currently contains 18 hospital-level indicators that reflect the quality of care provided by hospitals following the retirement of "*transfusion reaction*" indicator. These indicators serve as flags for potential quality problems (adverse events) rather than providing definitive measures of quality of care. According to the AHRQ, these indicators are selected based on their ability to screen out conditions present on admission from conditions that develop after admission, the potential preventability of the complication, and the ability of the indicator to identify medical error.

In 2009, legislation (S2471) was signed into law requiring that hospital-specific data on patient-safety performance, and serious medical errors be included in the annual New Jersey Hospital Performance Report. Incidentally, one of the 12 selected PSIs, namely "*transfusion reaction*," has been retired since 2016. AHRQ has declared that it can no longer be used as a quality indicator. Hence, information on only 11 PSIs is presented in this report since 2016.

Detailed explanation of the Patient Safety Indicators module, including interpretation of the PSI measures as well as technical definitions of individual indicators presented in subsequent sections are excerpted from the AHRQ's Guide and Software Documentation for Patient Safety Indicators.

The PSI tables in subsequent pages present volume of adverse events as well as occurrence rates during hospitalization in each of the hospitals in the state. Risk-adjusted rates are provided along with confidence intervals for seven PSIs to help make a statistical assessment of patient safety in the hospital. Only observed rates are

reported for the birth delivery related PSIs because the module does not risk-adjust these indicators. One indicator, "*retained surgical item or unretrieved device fragment,*" is reported in volume only because it is a very rare event, commonly referred to as 'never-event'. Statewide and national estimates are also provided to help compare hospital performance to the statewide or to the national average rates.

The Patient Safety Indicators (PSIs) Module

Patient safety has been an issue of national interest. Policy makers, providers, and consumers have made the safety of patients and the overall quality of care in U.S. hospitals a top priority. AHRQ states that the need to assess, monitor, track, and improve the safety of inpatient care became apparent with the publication of the Institute of Medicine's series of reports describing the problems of medical errors.

One way of detecting and reporting potentially preventable adverse events is to develop screening measures based on routinely collected UB data. UB data provide adequate information (data elements) about health care services delivered in hospitals on patients' diagnoses, procedures, age, gender, admission source, and discharge status. From these data elements, it is possible to construct a picture of the quality and safety of health care. Although quality assessments based on UB data cannot be definitive, they can be used to flag potential safety problems and success stories, which can then be further investigated. UB data can be used to identify indicators of potential problems that result from exposure to the health care system and are likely to be prevented if system-level changes are made to prevent evaluated and identified safety problems.

The PSI module was developed by AHRQ to assess the quality of care inside hospitals with a focus on potentially preventable and other iatrogenic events, resulting from exposure to the health care system. The PSIs module is a tool specifically designed to help health care system leaders identify potential adverse events occurring during hospitalization for surgeries, procedures, and childbirth. The PSIs (listed below) were developed after a comprehensive literature review, analysis of the International Classification of Diseases, 10th Revision, Clinical Modification, (ICD-10-CM) codes, review by a clinician panel, implementation of risk adjustment, and empirical analyses.

- Death in low-mortality diagnosis related groups (DRG) (PSI.02)
- Pressure ulcer (PSI.03)
- Death among surgical inpatients with serious treatable complications (PSI04)
- Retained surgical item or unretrieved device fragment - formerly called foreign body left in during procedure (PSI.05) *
- Iatrogenic pneumothorax (PSI.06) *
- Central venous catheter-related bloodstream infections (PSI.07)
- In hospital fall with hip fracture – formerly called postoperative hip fracture (PSI.08) *
- Perioperative hemorrhage or hematoma (PSI.09) *
- Postoperative acute kidney injury requiring dialysis – formerly called postoperative physiologic and metabolic derangements (PSI.10)

- Postoperative respiratory failure (PSI.11)
- Perioperative pulmonary embolism or deep vein thrombosis (PSI.12) *
- Postoperative sepsis (PSI.13) *
- Postoperative wound dehiscence (PSI.14) *
- Abdominopelvic accidental puncture or laceration (PSI.15) *
- Birth trauma - injury to neonate (PSI.17) *
- Obstetric trauma - vaginal delivery with instrument (PSI.18) *
- Obstetric trauma - vaginal delivery without instrument (PSI.19) *
- Patient safety and adverse events composite (PSI.90)

As stated earlier, this report focuses on the 11 PSIs, denoted by an asterisk in the list above, that are mandated for public reporting by the New Jersey legislature and provides comprehensive definitions for each along with their specific qualifications for their inclusion in the rate calculation module.

These indicators have been shown to have complication/adverse event rates that vary substantially across facilities and for which evidence suggests that high complication/adverse event rates may be associated with deficiencies in the quality of care.

It is important to note that PSIs are intended to measure the occurrence rate of adverse events from: i) complications of medical conditions after admission, ii) complications from surgical procedures, and iii) complications from obstetric procedures. Fourteen of the current 18 PSIs are related to surgical or medical discharges while three are for obstetric discharges. Six indicators (PSIs 03, 09, 10, 11, 12, 14), incorporate information about when procedures were performed (relative to the admission date), which is important in the risk-adjustment process. Admission type is used by four PSIs (PSIs 10, 11, 13, and 17) to identify elective surgeries and newborn admissions.

How Are PSI Rates Calculated?

Most of the AHRQ quality indicators are ratios or rates in which the numerator is a count of hospitalizations with the condition or outcome of interest and the denominator is an estimate of the number of people, or hospitalizations, at risk for that outcome over a period of one year. The PSIs SAS Software generates observed, expected, and risk-adjusted rates, as well as lower and upper 95% confidence limits for risk-adjusted rates, when applicable, for each indicator at a hospital level. Brief descriptions of these rates are given below.

> ***Observed rates*:** An observed rate is defined as the number of events of interest (numerator) divided by the population at risk (denominator). Observed rates may vary between hospitals due to several factors. Some hospitals provide exemplary care, while others provide sub-standard care. Some hospitals may serve people that are at higher risk for complications or exacerbations of their conditions, while others serve people that are at lower risk. Some hospitals may serve sicker patients

with more complex conditions, while others may serve a lower-risk case mix. For hospital-level observed rates, the populations at risk are derived from hospital discharge records. The AHRQ software program calculates observed PSI rates regardless of the number of cases available. It is recommended that performance measurement assessment based on fewer than 30 cases in the denominator should be interpreted with caution.

***Expected rates*:** Unlike observed rates, expected rates are derived from applying the average case of a reference population that reflects a large proportion of the U.S. hospitalized population. The expected rate is the rate a hospital would have if it performed the same as the reference population, given the hospital's actual case-mix (e.g., age, gender, modified DRG and comorbidities). In other words, the expected rate answers the question – "what rate of adverse events would we expect to see if this hospital provided the average level of care observed in the reference population, but provided it to the patients with the locally observed distribution of characteristics?" (i.e., average performance from the reference patient population applied to locally observed mix of patients with their local risk profiles). When the observed rate is smaller than the expected rate (or the observed/expected ratio is < 1), then there is reason to think that the hospital is performing better than average on this indicator given the local patient case mix. The expected rate is calculated only for risk-adjusted indicators.

***Risk-adjusted rates*:** A hospital's risk-adjusted rate is obtained after its observed rate is adjusted to account for the difference between the patient case-mix of the reference population and that of the hospital. Regression coefficients from a baseline database reflecting a large proportion of the U.S. population (based on State Inpatient Databases (SID) compiled from 49 participating states) are applied to observed rates for the purpose of performing risk-adjustments. The baseline file of regression coefficients representing the average case-mix of the U.S. population is provided as part of the PSI software. The risk-adjusted rates reflect the age, sex, DRG, and comorbidity distribution of the data in the baseline file rather than the distributions of patients in the hospital-level data. Thus, risk-adjusted rate is a comparative rate that incorporates information about the observed rate, expected rate, and a reference population that is not part of the hospital-level input dataset. The risk-adjusted rate is the ratio of the observed rate and expected rate multiplied by the reference population observed rate. Therefore, it answers the same question as the ratio of the observed and expected – i.e., "how does the rate of adverse events for this hospital compare to the rate we would expect to see if it provided the average level of care observed in the reference population, but provided it to the patients with the locally observed distribution of characteristics?" If the risk-adjusted rate is higher than the reference rate, the hospital is performing worse than an average hospital in the reference population in providing care to patients with the locally observed distribution of characteristics.

In short**,** the observed rate (raw indicator) is adjusted using a logistic regression to account for differences among hospitals in demographics. In addition to enabling comparison of hospitals within a state, risk-adjusted rates produced by various states can also be

compared directly to one another. The interpretation of risk-adjusted rates becomes clear when comparing risk-adjusted rates with the observed rates. Hospitals that exhibit large differences between their observed and risk-adjusted rates tend to have a more complex case-mix. More importantly, risk-adjustment in the PSI module includes an adjustment for the Present on Admission (POA) indicator. The POA indicator identifies instances in which a condition was present on admission (i.e., pre-existing condition) and those that occur during the hospital stay. The POA indicator enables conditions present on admission to be identified and excluded from the quality measures, when appropriate.

Interpretation of PSI Rates

The purpose of the data reader or user determines which rates to use in evaluating the performance of a hospital. If the primary interest is to focus on a particular hospital, to identify cases for further follow-up and quality improvement without comparisons made to other hospitals, then simply examine the observed rate. But, if the purpose is to compare the performance of a particular hospital with national, state, or regional averages or performances of other selected hospitals, then all rates (observed, expected and risk-adjusted) should be examined.

Hospitals can compare their expected rates to the population rate to see how their patient case-mix compares to the reference population. The population rate refers to the overall rate for the reference population. If the reference population rate is higher than the hospital's expected rate, then the hospital's case-mix is less severe than the reference population. If the reference population rate is lower than the hospital's expected rate, then the hospital's case-mix is more severe than the reference population.

Comparing the observed rate to the expected rate allows hospitals to see how far or how close they are from what is expected of them, based on the reference population. If the observed rate is higher than the expected rate for any given indicator (i.e., the ratio of observed/expected is greater than 1.0), then the implication is that the hospital performed worse than expected for that indicator. If the observed rate is lower than the expected rate (i.e., the ratio of observed/expected is less than 1.0), then the implication is that the hospital performed better than expected.

Comparing a hospital's risk-adjusted rate to its expected rate shows the effect of risk-adjustment on the patient safety indicator measurement. The risk-adjusted rate accounts for the difference between the case-mix of the reference population and the hospital's case-mix. For that reason, risk-adjusted rates should be used for better hospital-to-hospital comparisons. Risk-adjusted rates are given along with their respective 95% confidence intervals.

- Even in the best hospital, some patients will experience complications either after a surgery/procedure or because of other care factors. The rates in this report are calculated by comparing the number of complications (adverse events) expected in a particular hospital (based on the number of surgeries/procedures performed or

patients they see, usually after adjusting for how old and how sick their patients are) and how many patients experienced the adverse events (i.e., complications).

- Confidence intervals are used to identify which hospitals had statistically significantly more or fewer complications than expected given the risk factors of their patients. Hospitals with significantly higher rates than expected, after adjusting for risk factors, are those where the confidence interval range falls entirely above the statewide risk-adjusted complication rate. Hospitals with statistically significantly lower rates than expected have their confidence interval range entirely below the statewide risk-adjusted complication rate.

- Comparison of a hospital's rate to the statewide rate, presented in the top row of each PSI Table, is one way to assess how well that hospital performed among its peers in the state. A hospital's peers could be defined at many levels (e.g., teaching hospitals, urban hospitals, suburban hospitals, etc.). It is suggested that a hospital's performance be assessed by looking at its performance across the 11 PSI estimates presented in the tables.

How to Read the Tables:

- A hospital's rate is statistically significantly above the statewide rate, denoted by double asterisks (**), if the statewide rate falls completely below the hospital's 95% confidence interval.

- By comparison, a hospital's rate is significantly below the statewide rate, denoted by a single asterisk (*), if the statewide rate falls completely above the hospital's 95% confidence interval for that indicator.

- Some rates that appear large are not marked as statistically significantly higher than the statewide rate while others that appear small are not marked as statistically lower than the statewide rate because rates calculated from small numbers of events tend to have wider confidence intervals that make the statewide rate fall within the interval, giving the appearance of good performance by those hospitals compared to hospitals with rates based on large numbers of events. For example, the risk-adjusted rate for "abdominopelvic accidental puncture or laceration" (Table 8) for Capital Health Medical Center- Hopewell is 35.5 per 1,000 surgical discharges. This rate of 35.5 per 1,000 which is derived from three cases out of 1,555 surgical discharges, has a 95% confidence interval of 29.8 – 41.1 and is considered statistically significantly higher than the statewide rate of 8.9 per 1,000 because the confidence interval range is completely above the statewide average. By comparison, Hackensack University Medical Center's rate of 10.2 per 1,000, which is derived from four cases out of 5,474 surgeries, has a 95% confidence interval of 7.7 – 12.8, and is not statistically significantly different from the statewide rate of 8.9 per 1,000 because the statewide average falls within the confidence interval range of the hospital's rate.

In general, PSIs are not intended as definitive quality measures because quality of performance may be influenced by several other factors. However, there is strong evidence that PSI measures indicate differences in hospital performance, which are potentially clinically important. In fact, PSIs as quality indicators do measure differences in a hospitals' ability to reduce severe complications and adverse events that are potentially preventable. However, performance on a single PSI often cannot reliably indicate actual quality differences. AHRQ recommends that examining all the indicators together is a better way of producing a more complete picture of overall quality of care (AHRQ PSI Resources).

Limitations of PSI Measures

The PSI rates should only be seen as a starting point for examining the quality of care at a particular hospital. They should not be used to make strong conclusions. There are a few issues to keep in mind when looking at these measures.

- The PSIs do not address all aspects of quality. For example, they do not include information on what patients say about their care in the hospital, or information on whether hospitals consistently follow steps known to lead to better results.

- One obvious limitation is that many important quality concerns, including adverse drug events, cannot be monitored using UB data because these data are unlikely to capture all cases of patient complications. The indicators in the PSI module contain a large proportion of surgical indicators rather than medical or psychiatric indicators because medical complications are often difficult to distinguish from comorbidities that are present on admission. In addition, patients with medical conditions tend to be more heterogeneous than surgical patients, especially elective surgical patients, making it more difficult to account for case-mix.

- The ability of administrative data to distinguish between adverse events, in which no error occurred, from true medical errors is limited. Several factors such as heterogeneity of clinical conditions included in some codes; lack of information about event timing available in these data sets; and limited clinical detail for risk adjustment contribute to the difficulty in identifying complications that represent medical error or may at least be in some part preventable.

- Questions about the clinical accuracy of discharge-based diagnosis coding leads to concerns about the interpretation of reported diagnoses that may represent safety problems. Specifically, UB data are unlikely to capture all cases of a complication, regardless of the preventability, without false positives and false negatives (sensitivity and specificity). Also, when the codes are accurate in defining an event, the clinical vagueness inherent in the description of the code itself (e.g., "hypotension") may lead to a highly heterogeneous pool of clinical states represented by that code.

Patient Safety Indicator Estimates for New Jersey

As indicated earlier, this report is based on an application of the AHRQ PSIs module to the New Jersey hospital discharge data. This section provides an abbreviated description or definition for each of the 11 indicators used, followed by a table showing the numbers of adverse events, total hospital discharges, and the corresponding observed, expected and risk-adjusted rates, along with 95% confidence intervals, when applicable. A "." indicates that the hospital did not perform that procedure, or it did less than three procedures. Risk-adjusted rate is not computed when the denominator is less than three.

Comparison of a specific hospital-level PSI rate to the statewide average for the same indicator is one appropriate way to see how well a hospital performs compared to others. Following AHRQ's recommendation, hospital rates were compared against statewide rates to assess performance.

PSI.05 - Retained surgical item or unretrieved device fragment

- This indicator is measured using volume – not a rate**.** It gives the number of patients who had a "retained surgical item or unretrieved device fragment" during surgical or medical procedures. It is considered a "never- event" and occurs very rarely. All cases with pre-existing conditions are excluded from the measure.

- The measure refers to discharges (i.e., patients) 18 years of age or older; or obstetric patients (MDC 14 - pregnancy, childbirth, and puerperium), with ICD- 10-CM codes for a "retained surgical item or unretrieved device fragment" in any secondary diagnosis field of medical and surgical discharges defined by specific DRGs or MS-DRGs.

- Patients with ICD-10-CM codes for a "retained surgical item or unretrieved device fragment" in the principal diagnosis field or secondary diagnosis that were present on admission (POA) are excluded from the measure.

- Table 1 shows that in 2023, there were 9 cases of "retained surgical item or unretrieved device fragment" in New Jersey.

Table 1. Retained surgical item or unretrieved device fragment (formerly foreign body left during procedure)

Hospital	# of cases
Statewide	**9**
AtlantiCare Regional MC-Mainland Campus	1
Cooper University Hospital	2
Hackensack University Medical Center	1
Jersey City Medical Center	2
St. Joseph's University Medical Center	1
Valley Hospital	1
Virtua Mount Holly Hospital	1

Source: New Jersey numbers are derived from the **2023 NJ UB Data** using the AHRQ SAS Software, Version v2024_1

Note - 'Retained Surgical Item or Unretrieved Device Fragment' is reported in volume or count, not rate.

PSI.06 - Iatrogenic pneumothorax

- This indicator flags cases of "iatrogenic pneumothorax" (i.e., patients who had air leaking out of their lungs due to an accidental puncture during a medical or surgical procedure) occurring in a facility. The rate, which is risk-adjusted by age, sex, DRG, and comorbidity categories, is defined as the number of "iatrogenic pneumothorax" cases per 1,000 discharges for both surgical and medical discharges.

- The numerator refers to the number of discharges with any secondary ICD- 10-CM diagnosis codes for "iatrogenic pneumothorax" meeting the inclusion and exclusion rules for the denominator.

- The denominator refers to all medical and surgical discharges for patients 18 years of age or older defined by specific DRGs.

- The following cases are excluded from the denominator or from the rate calculation:

    - cases with a principal ICD-10-CM diagnosis code (or secondary diagnosis present on admission) for "iatrogenic pneumothorax," if known,

    - cases with ICD-10-CM diagnosis codes for specified chest trauma (rib fractures, traumatic pneumothorax and related chest wall injuries),

    - cases with any listed ICD-10-CM diagnosis codes for pleural effusion,

    - cases with any listed ICD-10-PCS procedure codes for thoracic surgery,

    - cases with any listed ICD-10-PCS procedure codes for cardiac procedure; and

    - obstetric cases (MDC 14 - pregnancy, childbirth, and puerperium).

- Table 2 shows the number of "iatrogenic pneumothorax" cases by hospital, as well as the observed, expected and risk-adjusted rates with their corresponding 95% confidence intervals. Statewide, there were 61 cases of "iatrogenic pneumothorax" out of 578,902 eligible discharges reported in 2023 for a risk-adjusted rate of 0.20 per 1,000 discharges.

Table 2. Iatrogenic pneumothorax (per 1,000 medical and surgical discharges)

Hospital	# of cases	# of discharges	Obs. rate	Exp. Rate Δ	Risk-adjusted rate	95% Confidence interval
Statewide	**61**	**578,902**	**0.1**	**0.1**	**0.2**	**0.1 - 0.2**
AtlantiCare Regional MC-City Campus	0	7,899	0.0	0.1	0.0	0.0 - 0.4
AtlantiCare Regional MC-Mainland Campus	0	11,845	0.0	0.1	0.0	0.0 - 0.3
Bayshore Medical Center	0	6,407	0.0	0.1	0.0	0.0 - 0.4
Bergen New Bridge Medical Center	0	3,644	0.0	0.1	0.0	0.0 - 0.6
Cape Regional Medical Center	0	5,040	0.0	0.1	0.0	0.0 - 0.5
Capital Health Medical Center-Hopewell	1	6,659	0.2	0.1	0.2	0.0 - 0.7
Capital Health Regional Medical Center	1	6,995	0.1	0.1	0.2	0.0 - 0.7
CarePoint Health-Bayonne Medical Center	2	3,712	0.5	0.1	0.8	0.2 - 1.3
CarePoint Health-Christ Hospital	0	4,718	0.0	0.1	0.0	0.0 - 0.6
CarePoint Health-Hoboken University MC	1	1,912	0.5	0.1	0.8	0.0 - 1.6
Carewell Health Medical Center-East Orange	0	4,012	0.0	0.1	0.0	0.0 - 0.6
CentraState Medical Center	2	9,289	0.2	0.1	0.3	0.0 - 0.7
Chilton Memorial Hospital	1	6,585	0.2	0.1	0.2	0.0 - 0.6
Clara Maass Medical Center	0	1,121	0.0	0.1	0.0	0.0 - 1.1
Community Medical Center	0	18,119	0.0	0.1	0.0	0.0 - 0.3
Cooper University Hospital	5	21,967	0.2	0.1	0.3	0.1 - 0.5
Cooperman Barnabas Medical Center	1	18,070	0.1	0.1	0.1	0.0 - 0.3
Deborah Heart and Lung Center	0	2,920	0.0	0.1	0.0	0.0 - 0.6
Englewood Hospital and Medical Center	1	10,871	0.1	0.1	0.1	0.0 - 0.4
Hackensack Meridian Health, Mountainside MC	3	7,209	0.4	0.1	0.7	0.2 - 1.1
Hackensack Meridian Health-Pascack Valley MC	0	2,614	0.0	0.1	0.0	0.0 - 0.7
Hackensack University Medical Center	2	24,217	0.1	0.1	0.1	0.0 - 0.3
Hackettstown Medical Center	1	3,471	0.3	0.1	0.5	0.0 - 1.1
Holy Name Medical Center	0	8,662	0.0	0.1	0.0	0.0 - 0.4
Hudson Regional Hospital	0	1,993	0.0	0.1	0.0	0.0 - 0.8
Hunterdon Medical Center	0	5,977	0.0	0.1	0.0	0.0 - 0.4
Inspira Medical Center Elmer	0	1,400	0.0	0.1	0.0	0.0 - 0.9
Inspira Medical Center Mullica Hill	1	9,096	0.1	0.1	0.2	0.0 - 0.5
Inspira Medical Center Vineland	0	10,371	0.0	0.1	0.0	0.0 - 0.3
Jefferson Cherry Hill Hospital	0	6,062	0.0	0.1	0.0	0.0 - 0.5
Jefferson Stratford Hospital	0	5,000	0.0	0.1	0.0	0.0 - 0.5
Jefferson Washington Township Hospital	3	10,479	0.3	0.1	0.4	0.1 - 0.8
Jersey City Medical Center	0	10,342	0.0	0.1	0.0	0.0 - 0.3
Jersey Shore University Medical Center	0	19,155	0.0	0.1	0.0	0.0 - 0.2
JFK University Medical Center	1	15,571	0.1	0.1	0.1	0.0 - 0.4
Monmouth Medical Center	1	6,128	0.2	0.1	0.3	0.0 - 0.7
Monmouth Medical Center-Southern Campus	0	575	0.0	0.1	0.0	0.0 - 1.7
Morristown Medical Center	5	25,291	0.2	0.1	0.3	0.1 - 0.5
Newark Beth Israel Medical Center	1	10,049	0.1	0.1	0.2	0.0 - 0.6

Table 2. Iatrogenic pneumothorax (per 1,000 medical and surgical discharges)

Hospital	# of cases	# of discharges	Obs. rate	Exp. Rate Δ	Risk-adjusted rate	95% Confidence interval
Statewide	**61**	**578,902**	**0.1**	**0.1**	**0.2**	**0.1 - 0.2**
Newton Medical Center	0	6,018	0.0	0.1	0.0	0.0 - 0.5
Ocean University Medical Center	1	13,403	0.1	0.1	0.1	0.0 - 0.4
Old Bridge Medical Center	1	5,429	0.2	0.1	0.3	0.0 - 0.8
Overlook Medical Center-Summit	3	14,580	0.2	0.1	0.3	0.0 - 0.6
Palisades Medical Center	1	4,621	0.2	0.2	0.3	0.0 - 0.7
Penn Medicine Princeton Medical Center	1	9,537	0.1	0.1	0.1	0.0 - 0.5
Raritan Bay Medical Center	0	4,705	0.0	0.1	0.0	0.0 - 0.6
Riverview Medical Center	0	8,060	0.0	0.1	0.0	0.0 - 0.4
Robert Wood Johnson University Hospital	3	22,176	0.1	0.1	0.2	0.0 - 0.4
Robert Wood Johnson University Hospital at Rahway	0	4,682	0.0	0.2	0.0	0.0 - 0.5
Robert Wood Johnson University Hospital Hamilton	1	6,281	0.2	0.1	0.2	0.0 - 0.7
Robert Wood Johnson University Hospital Somerset	2	10,956	0.2	0.1	0.3	0.0 - 0.6
Saint Clare's Hospital-Denville	1	4,185	0.2	0.1	0.3	0.0 - 0.8
Saint Clare's Hospital-Dover	0	3,326	0.0	0.1	0.0	0.0 - 0.6
Saint Michael's Medical Center	0	5,075	0.0	0.1	0.0	0.0 - 0.6
Saint Peter's University Hospital	1	8,302	0.1	0.1	0.2	0.0 - 0.6
Salem Medical Center	0	1,247	0.0	0.1	0.0	0.0 - 1.1
Shore Medical Center	1	6,107	0.2	0.1	0.3	0.0 - 0.7
Southern Ocean Medical Center	0	7,476	0.0	0.1	0.0	0.0 - 0.4
St. Joseph's University Medical Center	0	10,187	0.0	0.1	0.0	0.0 - 0.3
St. Joseph's Wayne Medical Center	0	3,249	0.0	0.1	0.0	0.0 - 0.6
St. Luke's Warren Hospital	0	3,750	0.0	0.1	0.0	0.0 - 0.6
St. Mary's General Hospital	0	4,687	0.0	0.1	0.0	0.0 - 0.5
Trinitas Regional Medical Center	2	5,431	0.4	0.1	0.6	0.1 - 1.0
University Hospital	0	12,766	0.0	0.1	0.0	0.0 - 0.3
Valley Hospital	0	13,152	0.0	0.1	0.0	0.0 - 0.3
Virtua Mount Holly Hospital-Burlington County	3	10,068	0.3	0.1	0.5	0.1 - 0.8
Virtua Our Lady of Lourdes Hospital-Camden	1	9,460	0.1	0.1	0.2	0.0 - 0.5
Virtua West Jersey Hospital-Marlton	2	6,961	0.3	0.1	0.4	0.0 - 0.9
Virtua West Jersey Hospital-Voorhees	3	13,513	0.2	0.1	0.4	0.1 - 0.7
Virtua Willingboro Hospital	1	4,064	0.2	0.1	0.5	0.0 - 1.1

Source: New Jersey numbers are derived from the **2023 NJ UB Data** using the AHRQ SAS Software, Version v2024.1

* = Statistically significantly below state average (i.e. better than average), ** = Statistically significantly above state average (i.e. worse than average).

Δ: Expected rate is the rate the hospital would have if it had the same case-mix (e.g., age, gender, DRG, and comorbidity categories) as the reference population. If the observed rate is higher than the expected rate (i.e., the ratio of observed to expected is greater than 1.0), it suggests that the hospital performed worse than the reference population on that indicator.

PSI.08 – In hospital fall with hip fracture

- This indicator intends to capture cases of “in hospital falls with hip fractures” and includes only secondary diagnosis codes to eliminate fractures that were present on admission. The rate, which is risk-adjusted for age, sex, DRG, and comorbidity categories, is defined as the number of cases of “in hospital fall with hip fracture” per 1,000 surgical discharges with an operating room procedure.

- The numerator refers to discharges with ICD-10-CM codes for hip fracture in any secondary diagnosis field among cases meeting the inclusion and exclusion rules for the denominator.

- The denominator refers to all surgical discharges for patients 18 years of age or older defined by specific DRGs and an ICD-10-CM codes for an operating room procedure.

- The following cases are excluded from the denominator and from rate calculation:

    - cases with ICD-10-CM code for hip fracture in the principal diagnosis field or secondary diagnosis present on admission, if known,

    - cases where the only operating room procedure is hip fracture repair; and where a procedure for hip fracture repair occurs before or on the same day as the first operating room procedure (if day of procedure is not available in the input data file, the rate may be slightly lower than if the information was available),

    - cases with diseases and disorders of the musculoskeletal system and connective tissue (MDC 8); and cases with principal diagnosis or secondary diagnosis (present on admission, if known) of seizure, syncope, stroke, coma, cardiac arrest, poisoning, trauma, delirium and other psychoses, or anoxic brain injury,

    - cases with any diagnosis of metastatic cancer, lymphoid malignancy or bone malignancy, or self-inflicted injury, and

    - MDC 14 (pregnancy, childbirth and the puerperium).

- Table 3 shows the number, by hospital, of patients who experienced” in-hospital fall with hip fracture” among all surgical discharges for patients 18 years of age or older, the observed rates, expected rates and risk-adjusted rates with their corresponding 95% confidence intervals. Statewide, there were 99 in hospital falls with hip fracture cases reported out of 598,253 eligible discharges in 2023.

Table 3. In hospital fall with hip fracture (per 1,000 medical and surgical discharges)

Hospital	# of cases	# of discharges	Obs. rate	Exp. Rate∆	Risk-adjusted rate	95% Confidence interval
Statewide	**99**	**598,253**	**0.2**	**0.2**	**0.2**	**0.0 - 0.1**
AtlantiCare Regional MC-City Campus	5	7,519	0.7	0.2	0.8	0.0 - 0.5
AtlantiCare Regional MC-Mainland Campus	1	12,380	0.1	0.2	0.1	0.0 - 0.3
Bayshore Medical Center	0	6,567	0.0	0.2	0.0	0.0 - 0.2
Bergen New Bridge Medical Center	1	3,672	0.3	0.1	0.5	0.0 - 0.9
Cape Regional Medical Center	2	5,030	0.4	0.2	0.6	0.0 - 0.4
Capital Health Medical Center-Hopewell	6	7,008	0.9	0.2	1.2	0.0 - 0.3
Capital Health Regional Medical Center	1	6,833	0.1	0.2	0.2	0.0 - 0.3
CarePoint Health-Bayonne Medical Center	0	3,817	0.0	0.2	0.0	0.0 - 0.4
CarePoint Health-Christ Hospital	0	4,889	0.0	0.2	0.0	0.0 - 0.4
CarePoint Health-Hoboken University MC	1	1,980	0.5	0.2	0.7	0.0 - 0.5
Carewell Health Medical Center-East Orange	0	4,022	0.0	0.2	0.0	0.0 - 0.5
CentraState Medical Center	5	9,483	0.5	0.2	0.6	0.0 - 0.4
Chilton Memorial Hospital	0	6,639	0.0	0.2	0.0	0.0 - 0.5
Clara Maass Medical Center	0	1,139	0.0	0.2	0.0	0.0 - 0.3
Community Medical Center	2	18,506	0.1	0.2	0.1	0.0 - 0.2
Cooper University Hospital	0	22,904	0.0	0.2	0.0	0.0 - 0.1
Cooperman Barnabas Medical Center	5	18,960	0.3	0.2	0.4	0.0 - 0.2
Deborah Heart and Lung Center	1	3,364	0.3	0.1	0.5	0.0 - 0.4
Englewood Hospital and Medical Center	0	11,456	0.0	0.2	0.0	0.0 - 0.3
Hackensack Meridian Health, Mountainside MC	1	7,451	0.1	0.2	0.2	0.0 - 0.3
Hackensack Meridian Health-Pascack Valley MC	1	2,587	0.4	0.2	0.5	0.0 - 0.4
Hackensack University Medical Center	2	26,203	0.1	0.2	0.1	0.0 - 0.2
Hackettstown Medical Center	0	3,464	0.0	0.2	0.0	0.0 - 0.4
Holy Name Medical Center	0	9,017	0.0	0.2	0.0	0.0 - 0.2
Hudson Regional Hospital	1	1,976	0.5	0.2	0.9	0.0 - 0.5
Hunterdon Medical Center	1	6,098	0.2	0.2	0.2	0.3 - 0.9
Inspira Medical Center Elmer	0	1,419	0.0	0.2	0.0	0.0 - 0.8
Inspira Medical Center Mullica Hill	3	9,566	0.3	0.2	0.5	0.0 - 0.3
Inspira Medical Center Vineland	3	10,788	0.3	0.2	0.4	0.0 - 0.2
Jefferson Cherry Hill Hospital	3	6184	0.5	0.2	0.7 **	0.6 - 1.3
Jefferson Stratford Hospital	0	5,186	0.0	0.2	0.0	0.0 - 0.4
Jefferson Washington Township Hospital	3	10,721	0.3	0.2	0.4	0.0 - 0.3
Jersey City Medical Center	0	10,390	0.0	0.2	0.0	0.0 - 0.2
Jersey Shore University Medical Center	4	20,206	0.2	0.2	0.2	0.0 - 0.1
JFK University Medical Center	1	16,027	0.1	0.2	0.1	0.0 - 0.2
Monmouth Medical Center	1	6,486	0.2	0.2	0.2	0.0 - 0.3
Monmouth Medical Center-Southern Campus	0	569	0.0	0.3	0.0	0.0 - 0.5
Morristown Medical Center	6	27,183	0.2	0.2	0.3	0.0 - 0.2
Newark Beth Israel Medical Center	0	10,742	0.0	0.2	0.0	0.0 - 0.3

Table 3. In hospital fall with hip fracture (per 1,000 medical and surgical discharges)

Hospital	# of cases	# of discharges	Obs. rate	Exp. Rate∆	Risk-adjusted rate	95% Confidence interval
Statewide	**99**	**598,253**	**0.2**	**0.2**	**0.2**	**0.0 - 0.1**
Newton Medical Center	0	6,165	0.0	0.2	0.0	0.0 - 0.3
Ocean University Medical Center	0	13,620	0.0	0.2	0.0	0.0 - 0.2
Old Bridge Medical Center	1	5,407	0.2	0.2	0.3	0.0 - 0.3
Overlook Medical Center-Summit	4	15,122	0.3	0.2	0.3	0.0 - 0.3
Palisades Medical Center	0	4,707	0.0	0.2	0.0	0.4 - 1.0
Penn Medicine Princeton Medical Center	0	9,596	0.0	0.2	0.0	0.0 - 0.2
Raritan Bay Medical Center	1	4,789	0.2	0.2	0.3 **	0.3 - 1.2
Riverview Medical Center	1	8,352	0.1	0.2	0.1	0.0 - 0.4
Robert Wood Johnson University Hospital	0	23,801	0.0	0.2	0.0	0.0 - 0.2
Robert Wood Johnson University Hospital at Rahway	1	4,669	0.2	0.2	0.3	0.1 - 0.7
Robert Wood Johnson University Hospital Hamilton	0	6,496	0.0	0.2	0.0	0.0 - 0.6
Robert Wood Johnson University Hospital Somerset	1	11,050	0.1	0.2	0.1	0.0 - 0.4
Saint Clare's Hospital-Denville	0	4,196	0.0	0.2	0.0	0.0 - 0.3
Saint Clare's Hospital-Dover	1	3,312	0.3	0.2	0.3	0.0 - 0.4
Saint Michael's Medical Center	1	5,245	0.2	0.2	0.3	0.0 - 0.4
Saint Peter's University Hospital	1	8,508	0.1	0.2	0.2	0.0 - 0.3
Salem Medical Center	0	1,260	0.0	0.2	0.0	0.0 - 0.7
Shore Medical Center	0	6,163	0.0	0.2	0.0	0.0 - 0.3
Southern Ocean Medical Center	1	7,576	0.1	0.2	0.2	0.0 - 0.3
St. Joseph's University Medical Center	7	10,477	0.7	0.2	0.8	0.0 - 0.4
St. Joseph's Wayne Medical Center	1	3,400	0.3	0.2	0.4	0.0 - 0.5
St. Luke's Warren Hospital	0	3,933	0.0	0.2	0.0	0.0 - 0.4
St. Mary's General Hospital	1	4,840	0.2	0.2	0.3	0.0 - 0.3
Trinitas Regional Medical Center	1	5,502	0.2	0.2	0.3	0.0 - 0.5
University Hospital	3	12,450	0.2	0.2	0.3	0.0 - 0.2
Valley Hospital	2	13,598	0.1	0.3	0.2	0.0 - 0.2
Virtua Mount Holly Hospital-Burlington Country	1	10,145	0.1	0.2	0.1	0.0 - 0.2
Virtua Our Lady of Lourdes Hospital-Camden	3	10,220	0.3	0.2	0.4	0.0 - 0.2
Virtua West Jersey Hospital-Marlton	0	7,532	0.0	0.2	0.0	0.0 - 0.3
Virtua West Jersey Hospital-Voorhees	4	13,520	0.3	0.2	0.4	0.0 - 0.4
Virtua Willingboro Hospital	3	4,170	0.7	0.2	0.8	0.0 0.5

Source: New Jersey numbers are derived from the **2023 NJ UB Data** using the AHRQ SAS Software, Version v2024.1

* = Statistically significantly below state average (i.e. better than average), ** = Statistically significantly above state average (i.e. worse than average).

∆: Expected rate is the rate the hospital would have if it had the same case-mix (e.g., age, gender, DRG, and comorbidity categories) as the reference population. If the observed rate is higher than the expected rate (i.e., the ratio of observed to expected is greater than 1.0), it suggests that the hospital performed worse than the reference population on that indicator.

PSI.09 – Perioperative hemorrhage or hematoma

- This indicator is designed to capture perioperative hemorrhage or hematoma cases with control of perioperative hemorrhage, drainage of hematoma, or a miscellaneous hemorrhage- or hematoma-related procedure following surgery. The rate, which is risk-adjusted for age, sex, DRG, and comorbidity categories, is defined as the number of patients with perioperative hemorrhage (too much bleeding) or hematoma (drainage of hematoma) per 1,000 surgical discharges for patients 18 years of age or older.

- The numerator refers to the number of discharges with ICD-10-CM codes for perioperative hemorrhage or hematoma in any secondary diagnosis field or discharges with ICD-10-CM codes for perioperative control of hemorrhage or drainage of hematoma in any secondary procedure, while the denominator refers to all surgical discharges for patients 18 years of age or older defined by specific DRGs and an ICD-10-CM code for an operating room procedure.

- The following cases are excluded from the denominator or from rate calculation:

    - cases with a secondary diagnosis of perioperative hemorrhage or hematoma present on admission, if known,

    - cases with a diagnosis of coagulation disorder and cases with a principal diagnosis of perioperative hemorrhage or hematoma,

    - cases where the only operating room procedure is control of perioperative hemorrhage, drainage of hematoma, or a miscellaneous hemorrhage- or hematoma-related procedure,

    - cases where a procedure for perioperative control of hemorrhage or drainage of hematoma occurs before the first operating room procedure (i*f day of procedure is not available in the input data file, the rate may be slightly lower than if the information was available)*; and

    - obstetric cases (MDC 14 - pregnancy, childbirth and the puerperium).

- Table 4 shows the number of perioperative hemorrhage or hematoma cases by hospital, the number of eligible surgical discharges, observed rates, expected rates, and risk-adjusted rates along with their corresponding 95% confidence intervals. Statewide, there were eight perioperative hemorrhage or hematoma cases out of 2,408 eligible surgical discharges reported in 2023 for a statewide risk-adjusted rate of 3.30 per 1,000.

Table 4. Perioperative hemorrhage or hematoma (per 1,000 surgical discharges)

Hospital	# of cases	# of discharges	Obs. rate	Exp. Rate∆	Risk-adjusted rate	95% Confidence interval
Statewide	**8**	**2,408**	**3.3**	**2.3**	**3.3**	**1.4 - 5.3**
AtlantiCare Regional MC-City Campus	0	26	0.0	2.0	0.0	0.0 - 20.2
AtlantiCare Regional MC-Mainland Campus	0	19	0.0	2.6	0.0	0.0 - 20.5
Bayshore Medical Center	0	3	0.0	0.5	0.0	0.0 - 116.7
Bergen New Bridge Medical Center	0	5	0.0	1.5	0.0	0.0 - 52.0
Cape Regional Medical Center	0	1	0.0	.	.	. - .
Capital Health Medical Center-Hopewell	0	8	0.0	3.4	0.0	0.0 - 27.5
Capital Health Regional Medical Center	0	3	0.0	4.8	0.0	0.0 - 37.9
CarePoint Health-Bayonne Medical Center	0	23	0.0	1.8	0.0	0.0 - 22.3
CarePoint Health-Christ Hospital	0	6	0.0	2.8	0.0	0.0 - 34.8
CarePoint Health-Hoboken University MC	0	5	0.0	3.2	0.0	0.0 - 36.1
Carewell Health Medical Center-East Orange	0	129	0.0	2.0	0.0	0.0 - 9.1
CentraState Medical Center	0	23	0.0	2.3	0.0	0.0 - 19.9
Chilton Memorial Hospital	0	2	0.0	.	.	. - .
Clara Maass Medical Center	0	19	0.0	1.7	0.0	0.0 - 25.6
Community Medical Center	0	35	0.0	1.3	0.0	0.0 - 21.2
Cooper University Hospital	2	284	7.0	2.7	6.1	0.9 - 11.4
Cooperman Barnabas Medical Center	0	52	0.0	3.3	0.0	0.0 - 11.0
Deborah Heart and Lung Center	0	8	0.0	3.4	0.0	0.0 - 27.5
Englewood Hospital and Medical Center	0	65	0.0	2.7	0.0	0.0 - 10.8
Hackensack Meridian Health, Mountainside MC	.	.	.	.	.	. - .
Hackensack Meridian Health-Pascack Valley MC	0	1	0.0	.	.	. - .
Hackensack University Medical Center	0	86	0.0	2.9	0.0	0.0 - 9.1
Hackettstown Medical Center	0	1	0.0	.	.	. - .
Holy Name Medical Center	0	7	0.0	2.7	0.0	0.0 - 33.4
Hudson Regional Hospital	0	25	0.0	1.3	0.0	0.0 - 25.4
Hunterdon Medical Center	0	1	0.0	.	.	. - .
Inspira Medical Center Elmer	.	.	.	.	.	. - .
Inspira Medical Center Mullica Hill	0	22	0.0	1.9	0.0	0.0 - 22.5
Inspira Medical Center Vineland	0	4	0.0	2.6	0.0	0.0 - 44.8
Jefferson Cherry Hill Hospital	0	6	0.0	1.5	0.0	0.0 - 47.6
Jefferson Stratford Hospital	0	15	0.0	2.0	0.0	0.0 - 26.1
Jefferson Washington Township Hospital	0	10	0.0	2.2	0.0	0.0 - 30.4
Jersey City Medical Center	0	31	0.0	2.0	0.0	0.0 - 18.5
Jersey Shore University Medical Center	0	37	0.0	3.5	0.0	0.0 - 12.6
JFK University Medical Center	0	26	0.0	2.2	0.0	0.0 - 18.9
Monmouth Medical Center	0	16	0.0	1.7	0.0	0.0 - 27.3
Monmouth Medical Center-Southern Campus	0	4	0.0	2.1	0.0	0.0 - 49.7
Morristown Medical Center	1	84	11.9	3.2	8.7	0.0 - 17.4
Newark Beth Israel Medical Center	0	35	0.0	2.2	0.0	0.0 - 16.4

Table 4. Perioperative hemorrhage or hematoma (per 1,000 surgical discharges)

Hospital	# of cases	# of discharges	Obs. rate	Exp. Rate∆	Risk-adjusted rate	95% Confidence interval
Statewide	**8**	**2,408**	**3.3**	**2.3**	**3.3**	**1.4 - 5.3**
Newton Medical Center	0	11	0.0	1.9	0.0	0.0 - 31.1
Ocean University Medical Center	0	21	0.0	2.8	0.0	0.0 - 18.8
Old Bridge Medical Center	0	3	0.0	1.3	0.0	0.0 - 71.7
Overlook Medical Center-Summit	1	41	24.4	2.7	21.3 **	7.5 - 35.1
Palisades Medical Center	0	15	0.0	2.0	0.0	0.0 - 26.1
Penn Medicine Princeton Medical Center	0	13	0.0	1.5	0.0	0.0 - 32.4
Raritan Bay Medical Center	0	6	0.0	3.5	0.0	0.0 - 31.1
Riverview Medical Center	0	7	0.0	2.2	0.0	0.0 - 37.1
Robert Wood Johnson University Hospital	2	94	21.3	2.4	20.2 **	10.8 - 29.7
Robert Wood Johnson University Hospital at Rahway	0	9	0.0	1.3	0.0	0.0 - 42.2
Robert Wood Johnson University Hospital Hamilton	0	18	0.0	1.5	0.0	0.0 - 27.6
Robert Wood Johnson University Hospital Somerset	0	14	0.0	2.8	0.0	0.0 - 22.9
Saint Clare's Hospital-Denville	0	17	0.0	2.0	0.0	0.0 - 24.8
Saint Clare's Hospital-Dover	0	5	0.0	1.0	0.0	0.0 - 63.0
Saint Michael's Medical Center	0	24	0.0	2.6	0.0	0.0 - 18.1
Saint Peter's University Hospital	0	32	0.0	1.4	0.0	0.0 - 21.5
Salem Medical Center	.	.	.	.	.	. - .
Shore Medical Center	0	322	0.0	1.9	0.0	0.0 - 5.8
Southern Ocean Medical Center	0	4	0.0	9.5	0.0	0.0 - 23.2
St. Joseph's University Medical Center	1	247	4.0	2.1	4.5	0.0 - 10.9
St. Joseph's Wayne Medical Center	0	14	0.0	1.8	0.0	0.0 - 28.5
St. Luke's Warren Hospital	.	.	.	.	.	. - .
St. Mary's General Hospital	0	13	0.0	2.0	0.0	0.0 - 28.4
Trinitas Regional Medical Center	0	80	0.0	1.7	0.0	0.0 - 12.2
University Hospital	0	91	0.0	2.1	0.0	0.0 - 10.5
Valley Hospital	0	37	0.0	2.7	0.0	0.0 - 14.5
Virtua Mount Holly Hospital-Burlington County	0	38	0.0	2.2	0.0	0.0 - 15.6
Virtua Our Lady of Lourdes Hospital-Camden	0	50	0.0	4.0	0.0	0.0 - 10.1
Virtua West Jersey Hospital-Marlton	0	13	0.0	2.1	0.0	0.0 - 27.2
Virtua West Jersey Hospital-Voorhees	1	38	26.3	2.1	29.6 **	13.4 - 45.9
Virtua Willingboro Hospital	0	4	0.0	2.2	0.0	0.0 - 48.2

Source: New Jersey numbers are derived from the **2023 NJ UB Data** using SAS Software, Version v2024_1

* = Statistically significantly below state average (i.e. better than average), ** = Statistically significantly above state average (i.e. worse than average).

Missing (.) = Hospital did not perform the procedure during the year; or it performed less than 3 procedures (rate is not computed when the denominator is less than 3).

∆: Expected rate is the rate the hospital would have if it had the same case-mix (e.g., age, gender, DRG, and comorbidity categories) as the reference population. If the observed rate is higher than the expected rate (i.e., the ratio of observed to expected is greater than 1.0), it suggests that the hospital performed worse than the reference population on that indicator.

PSI.12- Perioperative pulmonary embolism (PE) or deep vein thrombosis (DVT)

- This indicator measures incidences of perioperative pulmonary embolism (blood clot in the lungs) or deep vein thrombosis (blood clot in a large vein) occurring during a surgical procedure. The rate, which is risk-adjusted for age, sex, DRG, and comorbidity, is defined as the number of perioperative pulmonary embolism (PE) or deep vein thrombosis (DVT) cases per 1,000 surgical discharges.

- The numerator includes patient discharges among cases meeting the inclusion and exclusion rules for the denominator, with a secondary ICD-10- CM diagnosis codes for deep vein thrombosis or pulmonary embolism.

- The denominator includes all surgical discharges for patients 18 years of age or older with ICD-10-CM procedure codes for an operating room procedure, defined by specific DRG or MS-DRG codes.

- The following are excluded from the denominator or from rate calculation:

    - cases with secondary diagnosis for pulmonary embolism or deep vein thrombosis, present on admission (pre-existing conditions);

    - cases with principal diagnosis for pulmonary embolism or deep vein thrombosis.

    - cases in which interruption of vena cava is the only operating room procedure or in which interruption of vena cava occurs before or on the same day as the first operating room procedure (*if day of procedure is not available in the input data file, the rate may be slightly lower than if the information was available);* and

    - obstetric discharges (MDC 14 - pregnancy, childbirth and the puerperium).

- Table 5 presents the number of perioperative pulmonary embolism or deep vein thrombosis cases among all surgical discharges by hospital, observed rates, expected rates, risk-adjusted rates, and the 95% confidence intervals computed for the risk-adjusted rates. Statewide, there were 12 cases of perioperative pulmonary embolism or deep vein thrombosis out of 2,484 eligible surgical discharges reported in 2023 for a statewide risk-adjusted rate of 3.30 per 1,000 surgical discharges.

Table 5. Perioperative pulmonary embolism (PE) or deep vein thrombosis (DVT) (per 1,000 surgical discharges)

Hospital	# of cases	# of discharges	Obs. rate	Exp. RateΔ	Risk-adjusted rate	95% Confidence interval
Statewide	**12**	**2,484**	**4.8**	**3.4**	**4.5**	**2.4 - 6.6**
AtlantiCare Regional MC-City Campus	0	26	0.0	4.7	0.0	0.0 - 17.5
AtlantiCare Regional MC-Mainland Campus	0	21	0.0	3.5	0.0	0.0 - 22.5
Bayshore Medical Center	0	3	0.0	2.7	0.0	0.0 - 67.5
Bergen New Bridge Medical Center	0	4	0.0	2.5	0.0	0.0 - 61.6
Cape Regional Medical Center	0	1	0.0	.	.	. - .
Capital Health Medical Center-Hopewell	0	7	0.0	2.2	0.0	0.0 - 49.0
Capital Health Regional Medical Center	0	3	0.0	3.3	0.0	0.0 - 61.3
CarePoint Health-Bayonne Medical Center	0	25	0.0	3.2	0.0	0.0 - 21.5
CarePoint Health-Christ Hospital	0	8	0.0	2.4	0.0	0.0 - 44.1
CarePoint Health-Hoboken University MC	0	5	0.0	2.1	0.0	0.0 - 59.5
Carewell Health Medical Center-East Orange	0	126	0.0	3.0	0.0	0.0 - 10.0
CentraState Medical Center	0	22	0.0	3.0	0.0	0.0 - 23.9
Chilton Memorial Hospital	0	3	0.0	5.4	0.0	0.0 - 47.8
Clara Maass Medical Center	0	21	0.0	3.1	0.0	0.0 - 24.1
Community Medical Center	0	35	0.0	3.2	0.0	0.0 - 18.3
Cooper University Hospital	1	291	3.4	4.2	2.6	0.0 - 8.1
Cooperman Barnabas Medical Center	0	51	0.0	3.8	0.0	0.0 - 13.9
Deborah Heart and Lung Center	0	11	0.0	2.8	0.0	0.0 - 35.2
Englewood Hospital and Medical Center	1	65	15.4	3.4	14.0	1.1 - 26.9
Hackensack Meridian Health, Mountainside MC	.	.	.	.	.	. - .
Hackensack Meridian Health-Pascack Valley MC	0	1	0.0	.	.	. - .
Hackensack University Medical Center	0	87	0.0	3.0	0.0	0.0 - 12.0
Hackettstown Medical Center	0	1	0.0	.	.	. - .
Holy Name Medical Center	0	7	0.0	3.3	0.0	0.0 - 40.2
Hudson Regional Hospital	0	25	0.0	3.1	0.0	0.0 - 22.2
Hunterdon Medical Center	0	1	0.0	.	.	. - .
Inspira Medical Center Elmer	.	.	.	.	.	. - .
Inspira Medical Center Mullica Hill	0	20	0.0	2.5	0.0	0.0 - 27.3
Inspira Medical Center Vineland	0	4	0.0	2.3	0.0	0.0 - 63.7
Jefferson Cherry Hill Hospital	0	8	0.0	3.7	0.0	0.0 - 35.6
Jefferson Stratford Hospital	0	13	0.0	3.8	0.0	0.0 - 27.6
Jefferson Washington Township Hospital	0	12	0.0	3.3	0.0	0.0 - 30.9
Jersey City Medical Center	1	36	27.8	3.6	24.0 **	7.1 - 41.0
Jersey Shore University Medical Center	0	37	0.0	4.7	0.0	0.0 - 14.6
JFK University Medical Center	0	25	0.0	2.5	0.0	0.0 - 24.7
Monmouth Medical Center	0	17	0.0	2.5	0.0	0.0 - 29.6
Monmouth Medical Center-Southern Campus	0	4	0.0	5.0	0.0	0.0 - 43.4
Morristown Medical Center	0	88	0.0	3.6	0.0	0.0 - 10.9
Newark Beth Israel Medical Center	2	46	43.5	2.5	54.1 **	36.1 - 72.1

Table 5. Perioperative pulmonary embolism (PE) or deep vein thrombosis (DVT) (per 1,000 surgical discharges)

Hospital	# of cases	# of discharges	Obs. rate	Exp. RateΔ	Risk-adjusted rate	95% Confidence interval
Statewide	**12**	**2,484**	**4.8**	**3.4**	**4.5**	**2.4 - 6.6**
Newton Medical Center	0	12	0.0	5.6	0.0	0.0 - 23.4
Ocean University Medical Center	0	22	0.0	3.2	0.0	0.0 - 23.1
Old Bridge Medical Center	0	1	0.0	.	.	. - .
Overlook Medical Center-Summit	1	42	23.8	4.0	18.8 **	3.8 - 33.8
Palisades Medical Center	0	15	0.0	2.4	0.0	0.0 - 32.3
Penn Medicine Princeton Medical Center	0	14	0.0	4.7	0.0	0.0 - 23.9
Raritan Bay Medical Center	0	7	0.0	2.2	0.0	0.0 - 49.5
Riverview Medical Center	0	8	0.0	3.5	0.0	0.0 - 36.8
Robert Wood Johnson University Hospital	2	95	21.1	3.6	18.1 **	7.7 - 28.5
Robert Wood Johnson University Hospital at Rahway	0	10	0.0	3.2	0.0	0.0 - 34.2
Robert Wood Johnson University Hospital Hamilton	1	20	50.0	2.3	68.5 **	39.8 - 97.1
Robert Wood Johnson University Hospital Somerset	0	14	0.0	3.8	0.0	0.0 - 26.7
Saint Clare's Hospital-Denville	0	19	0.0	4.2	0.0	0.0 - 21.7
Saint Clare's Hospital-Dover	0	5	0.0	1.0	0.0	0.0 - 86.4
Saint Michael's Medical Center	0	23	0.0	3.3	0.0	0.0 - 22.3
Saint Peter's University Hospital	0	32	0.0	2.3	0.0	0.0 - 22.8
Salem Medical Center	.	.	.	.	.	. - .
Shore Medical Center	1	346	2.9	2.9	3.1	0.0 - 9.2
Southern Ocean Medical Center	0	5	0.0	10.3	0.0	0.0 - 26.8
St. Joseph's University Medical Center	1	240	4.2	2.9	4.6	0.0 - 11.9
St. Joseph's Wayne Medical Center	0	14	0.0	3.5	0.0	0.0 - 27.7
St. Luke's Warren Hospital	.	.	.	.	.	. - .
St. Mary's General Hospital	0	14	0.0	3.2	0.0	0.0 - 28.8
Trinitas Regional Medical Center	0	77	0.0	2.3	0.0	0.0 - 14.4
University Hospital	0	102	0.0	3.8	0.0	0.0 - 9.8
Valley Hospital	0	38	0.0	5.3	0.0	0.0 - 13.6
Virtua Mount Holly Hospital-Burlington County	0	38	0.0	3.6	0.0	0.0 - 16.6
Virtua Our Lady of Lourdes Hospital-Camden	1	52	19.2	3.9	15.5	1.9 - 29.1
Virtua West Jersey Hospital-Marlton	0	14	0.0	3.7	0.0	0.0 - 26.9
Virtua West Jersey Hospital-Voorhees	0	42	0.0	3.7	0.0	0.0 - 15.5
Virtua Willingboro Hospital	0	3	0.0	1.9	0.0	0.0 - 80.6

Source: New Jersey numbers are derived from the **2022 NJ UB Data** using SAS Software, Version v2024_1

* = Statistically significantly below state average (i.e. better than average), ** = Statistically significantly above state average (i.e. worse than average)., Missing (.) = Hospital did not perform the procedure during the year; or it performed less than 3 procedures (rate is not computed when the denominator is less than 3).

Δ: Expected rate is the rate the hospital would have if it had the same case-mix (e.g., age, gender, DRG, and comorbidity categories) as the reference or statewide population. If the observed rate is higher than the expected rate (i.e., the ratio of observed to expected is greater than 1.0), it suggests that the hospital performed worse than the reference population on that indicator.

PSI.13 – Postoperative sepsis

- This indicator flags how often hospitalized patients get a serious bloodstream infection (nosocomial postoperative sepsis). A serious infection of the bloodstream caused by toxin-producing bacteria, known as sepsis, can occur after surgery. The rate, which is risk-adjusted for age, sex, DRG, and comorbidity categories, is defined as the number of sepsis cases per 1,000 elective surgery patients with an operating room procedure.

- The numerator includes discharges with secondary ICD-10-CM diagnosis codes for sepsis while the denominator includes all elective surgical discharges (18 years or older) defined by specific DRG or MS-DRG codes with admission type recorded as elective.

- The following cases are excluded from the denominator or from rate calculation:
    - cases with a principal ICD-10-CM diagnosis code (or secondary diagnosis present on admission) for sepsis,
    - cases with a principal ICD-10-CM diagnosis code (or secondary diagnosis present on admission) for infection,
    - cases with any listed ICD-10-CM diagnosis codes or any listed ICD-10- CM procedure codes for immunocompromised state,
    - with an ungroupable DRG (DRG=999),
    - with missing MDC (MDC=missing) when the user indicates that MDC is provided,
    - with a principal ICD-10-CM diagnosis code assigned to MDC 14 Pregnancy, Childbirth & the Puerperium,
    - with a principal ICD-10-CM diagnosis code assigned to MDC 15 Newborns & Other Neonates with Conditions Originating in Perinatal Period,
    - cases with any listed ICD-10-CM diagnosis codes for cancer, and
    - MDC 14 (pregnancy, childbirth, and puerperium).

- Table 6 shows the number of postoperative sepsis cases among elective surgery patients by hospital, as well as the observed, expected and risk- adjusted rates along with their corresponding 95% confidence intervals. Statewide, there were four postoperative sepsis cases out 674 eligible patients reported in 2023 for a statewide risk-adjusted rate of 5.20 per 1,000 elective discharges.

Table 6. Postoperative sepsis (per 1,000 elective surgical discharges)

Hospital	# of cases	# of discharges	Obs. rate	Exp. Rate Δ	Risk-adjusted rate	95% Confidence interval
Statewide	**4**	**674**	**5.9**	**4.8**	**5.2**	**0.7 - 9.6**
AtlantiCare Regional MC-City Campus	0	3	0.0	4.4	0.0	0.0 - 71.3
AtlantiCare Regional MC-Mainland Campus	0	4	0.0	3.0	0.0	0.0 - 75.1
Bayshore Medical Center	0	1	0.0	.	.	. - .
Bergen New Bridge Medical Center	0	1	0.0	.	.	. - .
Cape Regional Medical Center	.	.	.	.	.	. - .
Capital Health Medical Center-Hopewell	0	7	0.0	0.7	0.0	0.0 - 114.2
Capital Health Regional Medical Center	0	1	0.0	.	.	. - .
CarePoint Health-Bayonne Medical Center	0	2	0.0	.	.	. - .
CarePoint Health-Christ Hospital	0	1	0.0	.	.	. - .
CarePoint Health-Hoboken University MC	.	.	.	.	.	. - .
Carewell Health Medical Center-East Orange	0	13	0.0	1.8	0.0	0.0 - 53.3
CentraState Medical Center	0	6	0.0	2.5	0.0	0.0 - 67.0
Chilton Memorial Hospital	0	2	0.0	.	.	. - .
Clara Maass Medical Center	0	3	0.0	1.9	0.0	0.0 - 108.0
Community Medical Center	0	3	0.0	0.8	0.0	0.0 - 172.1
Cooper University Hospital	1	133	7.5	7.1	4.4	0.0 - 12.7
Cooperman Barnabas Medical Center	1	16	62.5	4.1	63.1**	31.5 - 94.8
Deborah Heart and Lung Center	0	1	0.0	.	.	. - .
Englewood Hospital and Medical Center	1	35	28.6	5.7	20.8	2.7 - 38.9
Hackensack Meridian Health, Mountainside MC	.	.	.	.	.	. - .
Hackensack Meridian Health-Pascack Valley MC	0	1	0.0	.	.	. - .
Hackensack University Medical Center	0	23	0.0	2.4	0.0	0.0 - 35.0
Hackettstown Medical Center	.	.	.	.	.	. - .
Holy Name Medical Center	0	1	0.0	.	.	. - .
Hudson Regional Hospital	0	20	0.0	1.4	0.0	0.0 - 49.1
Hunterdon Medical Center	.	.	.	.	.	. - .
Inspira Medical Center Elmer	.	.	.	.	.	. - .
Inspira Medical Center Mullica Hill	0	4	0.0	0.8	0.0	0.0 -144.7
Inspira Medical Center Vineland	.	.	.	.	.	. - .
Jefferson Cherry Hill Hospital	0	1	0.0	.	.	. - .
Jefferson Stratford Hospital	0	4	0.0	4.4	0.0	0.0 - 61.7
Jefferson Washington Township Hospital	0	4	0.0	3.7	0.0	0.0 - 67.5
Jersey City Medical Center	0	6	0.0	3.4	0.0	0.0 - 57.6
Jersey Shore University Medical Center	1	14	71.4	4.9	60.8 **	29.6 - 91.9
JFK University Medical Center	0	6	0.0	10.4	0.0	0.0 - 32.1
Monmouth Medical Center	0	6	0.0	5.1	0.0	0.0 - 46.9
Monmouth Medical Center-Southern Campus	.	.	.	.	.	. - .
Morristown Medical Center	0	34	0.0	3.9	0.0	0.0 - 22.4
Newark Beth Israel Medical Center	0	6	0.0	6.8	0.0	0.0 - 40.0

Table 6. Postoperative sepsis (per 1,000 elective surgical discharges)

Hospital	# of cases	# of discharges	Obs. rate	Exp. Rate Δ	Risk-adjusted rate	95% Confidence interval
Statewide	**4**	**674**	**5.9**	**4.8**	**5.2**	**0.7 - 9.6**
Newton Medical Center	0	1	0.0	.	.	. - .
Ocean University Medical Center	0	3	0.0	3.2	0.0	0.0 - 83.5
Old Bridge Medical Center	.	.	.	.	.	. - .
Overlook Medical Center-Summit	0	17	0.0	3.8	0.0	0.0 - 31.9
Palisades Medical Center	0	4	0.0	0.6	0.0	0.0 - 161.1
Penn Medicine Princeton Medical Center	0	1	0.0	.	.	. - .
Raritan Bay Medical Center	0	1	0.0	.	.	. - .
Riverview Medical Center	0	3	0.0	8.6	0.0	0.0 - 50.4
Robert Wood Johnson University Hospital	0	27	0.0	5.4	0.0	0.0 - 21.3
Robert Wood Johnson University Hospital at Rahway	0	2	0.0	.	.	. - .
Robert Wood Johnson University Hospital Hamilton	0	2	0.0	.	.	. - .
Robert Wood Johnson University Hospital Somerset	0	6	0.0	2.3	0.0	0.0 - 69.2
Saint Clare's Hospital-Denville	0	7	0.0	5.1	0.0	0.0 - 43.1
Saint Clare's Hospital-Dover	.	.	.	.	.	. - .
Saint Michael's Medical Center	0	4	0.0	2.1	0.0	0.0 - 90.3
Saint Peter's University Hospital	0	11	0.0	6.1	0.0	0.0 - 31.0
Salem Medical Center	.	.	.	.	.	. - .
Shore Medical Center	0	91	0.0	3.6	0.0	0.0 - 14.2
Southern Ocean Medical Center	0	1	0.0	.	.	. - .
St. Joseph's University Medical Center	0	63	0.0	3.4	0.0	0.0 - 17.6
St. Joseph's Wayne Medical Center	0	3	0.0	1.9	0.0	0.0 - 107.3
St. Luke's Warren Hospital	.	.	.	.	.	. - .
St. Mary's General Hospital	0	2	0.0	.	.	. - .
Trinitas Regional Medical Center	0	5	0.0	2.8	0.0	0.0 - 68.6
University Hospital	0	15	0.0	5.3	0.0	0.0 - 28.9
Valley Hospital	0	9	0.0	8.3	0.0	0.0 - 29.8
Virtua Mount Holly Hospital-Burlington County	0	7	0.0	5.5	0.0	0.0 - 41.3
Virtua Our Lady of Lourdes Hospital-Camden	0	15	0.0	3.7	0.0	0.0 - 34.7
Virtua West Jersey Hospital-Marlton	0	6	0.0	5.3	0.0	0.0 - 45.9
Virtua West Jersey Hospital-Voorhess	0	6	0.0	26.5	0.0	0.0 - 19.2
Virtua Willingboro Hospital	.	.	.	.	.	. - .

Source: New Jersey numbers are derived from the **2023 NJ UB Data** using SAS Software, Version 2024_1.

* = Statistically significantly below state average (i.e. better than average), ** = Statistically significantly above state average (i.e. worse than average).

Missing (.) = Hospital did not perform the procedure during the year; or it performed less than 3 procedures (rate is not computed when the denominator is less than 3)., ^ = Rates are based on denominators less than 30 and should be taken with caution.

Δ: Expected rate is the rate the hospital would have if it had the same case-mix (e.g., age, gender, DRG, and comorbidity categories) as the reference or statewide population. If the observed rate is higher than the expected rate (i.e., the ratio of observed to expected is greater than 1.0), it suggests that the hospital performed worse than the reference population on that indicator.

PSI.14 – Postoperative wound dehiscence

- This indicator flags cases of wound dehiscence (i.e., when surgical wound in the stomach or pelvic area is split open after an operation) in patients who have undergone abdominal and pelvic surgery. Some or all of these complications may require treatment with another major surgery to fix the wound. Wound dehiscence following surgery is a medical error that can be avoided. The rate, which is risk-adjusted for age, sex, DRG, and comorbidity categories, is defined as the number of cases of re-closure of postoperative disruption of abdominal wall per 1,000 cases of abdominopelvic surgery.

- The numerator includes patient discharges with ICD-10-CM code for re- closure of postoperative disruption of abdominal wall in any procedure field, while the denominator includes all patients 18 years of age or older with any listed ICD- 10-CM procedure codes for abdominopelvic surgery.

- The following cases are excluded from the denominator or from rate calculation:

    - cases where a procedure for re-closure of postoperative disruption of abdominal wall occurs before or on the same day as the first abdominopelvic surgery procedure (*if day of procedure is not available in the input data file, the rate may be slightly lower than if the information was available*),

    - with any listed ICD-10-CM diagnosis or procedure codes for immunocompromised state,

    - cases where length of stay is less than two days, and

    - MDC 14 (pregnancy, childbirth, and puerperium).

- Table 7 shows the number of postoperative wound dehiscence cases among patients who have undergone abdominal and pelvic surgery by hospital, observed rates, expected rates, and risk-adjusted rates along with their corresponding 95% confidence intervals. Statewide, there were 50 postoperative wound dehiscence cases reported in 2023 for a statewide risk- adjusted rate of 1.30 per 1,000 abdominopelvic surgical discharges.

Table 7. Postoperative wound dehiscence (per 1,000 abdominopelvic surgical discharges)

Hospital	# of cases	# of discharges	Obs. rate	Exp. Rate Δ	Risk-adjusted rate	95% Confidence interval
Statewide	**50**	**35,200**	**1.4**	**1.7**	**1.3**	**0.9 - 1.7**
AtlantiCare Regional MC-City Campus	0	378	0.0	1.9	0.0	0.0 - 3.6
AtlantiCare Regional MC-Mainland Campus	0	392	0.0	1.9	0.0	0.0 - 3.5
Bayshore Medical Center	0	351	0.0	1.6	0.0	0.0 - 4.1
Bergen New Bridge Medical Center	0	25	0.0	1.8	0.0	0.0 - 14.4
Cape Regional Medical Center	0	120	0.0	2.3	0.0	0.0 - 5.8
Capital Health Medical Center-Hopewell	0	604	0.0	1.4	0.0	0.0 - 3.3
Capital Health Regional Medical Center	0	197	0.0	2.5	0.0	0.0 - 4.4
CarePoint Health-Bayonne Medical Center	1	111	9.0	2.2	6.5	0.2 - 12.8
CarePoint Health-Christ Hospital	1	188	5.3	1.3	6.3	0.1 - 12.5
CarePoint Health-Hoboken University MC	1	114	8.8	1.3	11.0 **	2.9 - 19.2
Carewell Health Medical Center-East Orange	0	94	0.0	1.5	0.0	0.0 - 8.2
CentraState Medical Center	2	579	3.5	2.1	2.6	0.0 - 5.4
Chilton Memorial Hospital	1	281	3.6	2.0	2.8	0.0 - 7.0
Clara Maass Medical Center	0	412	0.0	0.9	0.0	0.0 - 5.0
Community Medical Center	0	1,016	0.0	1.6	0.0	0.0 - 2.4
Cooper University Hospital	4	1,932	2.1	2.5	1.3	0.0 - 2.7
Cooperman Barnabas Medical Center	2	1,713	1.2	1.3	1.4	0.0 - 3.5
Deborah Heart and Lung Center	0	40	0.0	4.3	0.0	0.0 - 7.5
Englewood Hospital and Medical Center	0	987	0.0	0.9	0.0	0.0 - 3.2
Hackensack Meridian Health, Mountainside MC	0	610	0.0	0.9	0.0	0.0 - 4.1
Hackensack Meridian Health-Pascack Valley MC	0	310	0.0	0.8	0.0	0.0 - 6.4
Hackensack University Medical Center	2	1,937	1.0	1.7	0.9	0.0 - 2.6
Hackettstown Medical Center	0	126	0.0	2.3	0.0	0.0 - 5.7
Holy Name Medical Center	1	564	1.8	1.8	1.5	0.0 - 4.6
Hudson Regional Hospital	0	425	0.0	0.6	0.0	0.0 - 6.1
Hunterdon Medical Center	0	241	0.0	2.1	0.0	0.0 - 4.4
Inspira Medical Center Elmer	0	47	0.0	2.4	0.0	0.0 - 9.3
Inspira Medical Center Mullica Hill	1	505	2.0	2.4	1.3	0.0 - 4.2
Inspira Medical Center Vineland	1	529	1.9	1.8	1.7	0.0 - 4.9
Jefferson Cherry Hill Hospital	0	138	0.0	2.1	0.0	0.0 - 5.8
Jefferson Stratford Hospital	0	241	0.0	1.3	0.0	0.0 - 5.6
Jefferson Washington Township Hospital	0	483	0.0	1.5	0.0	0.0 - 3.6
Jersey City Medical Center	0	431	0.0	1.7	0.0	0.0 - 3.6
Jersey Shore University Medical Center	0	1,246	0.0	2.3	0.0	0.0 - 1.8
JFK University Medical Center	1	809	1.2	1.7	1.2	0.0 - 3.8
Monmouth Medical Center	0	569	0.0	1.2	0.0	0.0 - 3.8
Monmouth Medical Center-Southern Campus	1	94	10.6	1.2	13.9 **	4.7 - 23.1
Morristown Medical Center	5	2,588	1.9	1.7	1.8	0.3 - 3.3
Newark Beth Israel Medical Center	1	387	2.6	1.4	2.8	0.0 - 7.0
Newton Medical Center	1	235	4.3	2.2	3.1	0.0 - 7.5
Ocean University Medical Center	0	799	0.0	2.4	0.0	0.0 - 2.2
Old Bridge Medical Center	1	273	3.7	2.0	3.0	0.0 - 7.2

Table 7. Postoperative wound dehiscence (per 1,000 abdominopelvic surgical discharges)

Hospital	# of cases	# of discharges	Obs. rate	Exp. Rate Δ	Risk-adjusted rate	95% Confidence interval
Statewide	**50**	**35,200**	**1.4**	**1.7**	**1.3**	**0.9 - 1.7**
Overlook Medical Center-Summit	3	1,150	2.6	1.8	2.3	0.2 - 4.5
Palisades Medical Center	0	192	0.0	1.3	0.0	0.0 - 6.2
Penn Medicine Princeton Medical Center	2	542	3.7	1.4	4.0	0.5 - 7.5
Raritan Bay Medical Center	0	283	0.0	0.8	0.0	0.0 - 6.4
Riverview Medical Center	2	493	4.1	2.1	3.1	0.0 - 6.1
Robert Wood Johnson University Hospital	6	1,644	3.6	1.6	3.6 **	1.7 - 5.4
Robert Wood Johnson University Hospital at Rahway	0	168	0.0	1.5	0.0	0.0 - 6.2
Robert Wood Johnson University Hospital Hamilton	0	369	0.0	2.2	0.0	0.0 - 3.5
Robert Wood Johnson University Hospital Somerset	0	410	0.0	1.6	0.0	0.0 - 3.9
Saint Clare's Hospital-Denville	0	238	0.0	2.4	0.0	0.0 - 4.1
Saint Clare's Hospital-Dover	0	93	0.0	2.7	0.0	0.0 - 6.2
Saint Michael's Medical Center	0	178	0.0	2.2	0.0	0.0 - 4.9
Saint Peter's University Hospital	0	570	0.0	1.3	0.0	0.0 - 3.6
Salem Medical Center	0	20	0.0	1.4	0.0	0.0 - 18.7
Shore Medical Center	0	284	0.0	1.7	0.0	0.0 - 4.4
Southern Ocean Medical Center	1	293	3.4	1.8	3.0	0.0 - 7.3
St. Joseph's University Medical Center	0	639	0.0	1.6	0.0	0.0 - 3.1
St. Joseph's Wayne Medical Center	0	156	0.0	1.3	0.0	0.0 - 6.8
St. Luke's Warren Hospital	0	126	0.0	3.1	0.0	0.0 - 4.9
St. Mary's General Hospital	0	175	0.0	1.8	0.0	0.0 - 5.5
Trinitas Regional Medical Center	0	189	0.0	1.8	0.0	0.0 - 5.3
University Hospital	0	628	0.0	2.1	0.0	0.0 - 2.7
Valley Hospital	2	801	2.5	1.6	2.5	0.0 - 5.3
Virtua Mount Holly Hospital-Burlington County	3	577	5.2	1.9	4.4 **	1.4 - 7.4
Virtua Our Lady of Lourdes Hospital-Camden	2	465	4.3	1.7	4.0	0.5 - 7.4
Virtua West Jersey Hospital-Marlton	0	418	0.0	1.8	0.0	0.0 - 3.5
Virtua West Jersey Hospital-Voorhees	2	899	2.2	1.5	2.3	0.0 - 4.9
Virtua Willingboro Hospital	0	73	0.0	2.6	0.0	0.0 - 7.1

Source: New Jersey numbers are derived from the **2023 NJ UB Data** using SAS Software, Version v2024_1.

* = Statistically significantly below state average (i.e. better than average), ** = Statistically significantly above state average (i.e. worse than average).

Missing (.) = Hospital did not perform the procedure during the year; or it performed less than 3 procedures (rate is not computed when the denominator is less than 3).

^ = Rates are based on denominators less than 30 and should be taken with caution.

Δ: Expected rate is the rate the hospital would have if it had the same case-mix (e.g., age, gender, DRG, and comorbidity categories) as the reference or statewide population. If the observed rate is higher than the expected rate (i.e., the ratio of observed to expected is greater than 1.0), it suggests that the hospital performed worse than the reference population on that indicator.

PSI.15 - Abdominopelvic accidental puncture or laceration

- This indicator measures the occurrence of complications that arise due to technical difficulties in medical care, specifically, those involving an accidental puncture or laceration. The rate, which is risk-adjusted for age, sex, DRG, and comorbidity categories, is defined as the number of patients who had an accidental cut or laceration (secondary diagnosis) during a medical procedure per 1,000 discharges.

- The numerator refers to all discharges with any secondary ICD-10-CM code denoting technical difficulty (e.g., accidental cut, puncture, perforation, or laceration) during a procedure.

- The denominator refers to all medical and surgical discharges for patients 18 years of age or older defined by specific DRG or MS-DRG codes, excluding cases:

    - with a principal ICD-10-CM diagnosis code (or secondary diagnosis present on admission) for accidental puncture or laceration during a procedure,

    - with any listed ICD-10-CM procedure codes for spine surgery, and

    - MDC 14 (pregnancy, childbirth, and puerperium).

- Table 8 shows the number of cases of accidental puncture or laceration among all discharges with ICD-10-CM code denoting technical difficulty (e.g., accidental cut, puncture, perforation, or laceration) in any secondary diagnosis field by hospital along with observed and expected rates as well as risk- adjusted rates with their corresponding 95% confidence intervals. Statewide, there were 84 cases of accidental punctures or lacerations out of 115498 eligible patients reported in 2023 for a risk-adjusted rate of 8.90 per 1,000 discharges.

Table 8. Abdominopelvic accidental puncture or laceration (per 1,000 medical and surgical discharges)

Hospital	# of cases	# of discharges	Obs. rate	Exp. RateΔ	Risk-adjusted rate	95% Confidence interval
Statewide	**84**	**115,498**	**0.7**	**0.1**	**8.9**	**8.4 - 9.5**
AtlantiCare Regional MC-City Campus	3	1,693	1.8	0.0	27.7 **	22.7 - 32.7
AtlantiCare Regional MC-Mainland Campus	0	1,646	0.0	0.1	0.0 *	0.0 - 4.6
Bayshore Medical Center	0	1,243	0.0	0.0	0.0 *	0.0 - 5.8
Bergen New Bridge Medical Center	0	239	0.0	0.0	0.0	0.0 - 14.8
Cape Regional Medical Center	0	681	0.0	0.0	0.0	0.0 - 8.0
Capital Health Medical Center-Hopewell	3	1,555	1.9	0.0	35.5 **	29.8 - 41.1
Capital Health Regional Medical Center	1	848	1.2	0.0	18.4 **	11.4 - 25.5
CarePoint Health-Bayonne Medical Center	0	524	0.0	0.1	0.0 *	0.0 - 8.4
CarePoint Health-Christ Hospital	1	781	1.3	0.1	17.4 **	10.6 - 24.3
CarePoint Health-Hoboken University MC	0	326	0.0	0.0	0.0	0.0 - 11.5
Carewell Health Medical Center-East Orange	0	302	0.0	0.3	0.0 *	0.0 - 4.4
CentraState Medical Center	0	1,784	0.0	0.1	0.0 *	0.0 - 4.3
Chilton Memorial Hospital	0	1,158	0.0	0.0	0.0 *	0.0 - 5.8
Clara Maass Medical Center	1	200	5.0	0.1	44.8 **	33.8 - 55.7
Community Medical Center	1	3,343	0.3	0.1	3.9 *	0.7 - 7.1
Cooper University Hospital	8	5,143	1.6	0.1	12.8 **	10.7 - 14.9
Cooperman Barnabas Medical Center	6	4,790	1.3	0.0	19.4 **	16.5 - 22.4
Deborah Heart and Lung Center	0	311	0.0	0.0	0.0	0.0 - 11.5
Englewood Hospital and Medical Center	2	2,605	0.8	0.1	10.3	6.6 - 14.0
Hackensack Meridian Health, Mountainside MC	3	1,680	1.8	0.0	32.8 **	27.4 - 38.2
Hackensack Meridian Health-Pascack Valley MC	0	569	0.0	0.0	0.0	0.0 - 10.2
Hackensack University Medical Center	4	5,474	0.7	0.0	10.2	7.6 - 12.8
Hackettstown Medical Center	0	470	0.0	0.1	0.0 *	0.0 - 8.4
Holy Name Medical Center	1	1,746	0.6	0.0	8.3	3.6 - 13.0
Hudson Regional Hospital	0	722	0.0	0.0	0.0	0.0 - 9.2
Hunterdon Medical Center	0	877	0.0	0.0	0.0 *	0.0 - 6.8
Inspira Medical Center Elmer	0	163	0.0	0.0	0.0	0.0 - 15.1
Inspira Medical Center Mullica Hill	1	1,940	0.5	0.0	7.8	3.2 - 12.3
Inspira Medical Center Vineland	0	1,938	0.0	0.0	0.0 *	0.0 - 4.7
Jefferson Cherry Hill Hospital	0	823	0.0	0.1	0.0 *	0.0 - 6.5
Jefferson Stratford Hospital	1	895	1.1	0.1	14.2	8.0 - 20.3
Jefferson Washington Township Hospital	0	1,667	0.0	0.0	0.0 *	0.0 - 4.8
Jersey City Medical Center	0	1,668	0.0	0.1	0.0 *	0.0 - 4.6
Jersey Shore University Medical Center	0	3,685	0.0	0.1	0.0 *	0.0 - 2.8
JFK University Medical Center	1	2,978	0.3	0.0	5.1 *	1.4 - 8.8
Monmouth Medical Center	0	1,532	0.0	0.0	0.0 *	0.0 - 5.0
Monmouth Medical Center-Southern Campus	0	48	0.0	0.1	0.0	0.0 - 26.7
Morristown Medical Center	4	6,319	0.6	0.1	8.8	6.4 - 11.2

Table 8. Abdominopelvic accidental puncture or laceration (per 1,000 medical and surgical discharges)

Hospital	# of cases	# of discharges	Obs. rate	Exp. RateΔ	Risk-adjusted rate	95% Confidence interval
Statewide	**84**	**115,498**	**0.7**	**0.1**	**8.9**	**8.4 - 9.5**
Newark Beth Israel Medical Center	3	2,002	1.5	0.1	20.7 **	16.4 - 25.0
Newton Medical Center	2	938	2.1	0.1	26.7 **	20.8 - 32.7
Ocean University Medical Center	1	2,901	0.3	0.1	3.8 *	0.6 - 7.0
Old Bridge Medical Center	0	879	0.0	0.1	0.0 *	0.0 - 6.3
Overlook Medical Center-Summit	9	3,871	2.3	0.1	32.0 **	28.9 - 35.0
Palisades Medical Center	0	653	0.0	0.0	0.0 *	0.0 - 7.6
Penn Medicine Princeton Medical Center	0	1,755	0.0	0.1	0.0 *	0.0 - 4.6
Raritan Bay Medical Center	0	746	0.0	0.0	0.0 *	0.0 - 7.4
Riverview Medical Center	2	1,580	1.3	0.1	15.7 **	11.1 - 20.3
Robert Wood Johnson University Hospital	7	5,660	1.2	0.0	17.4 **	14.9 - 20.0
Robert Wood Johnson University Hospital at Rahway	0	682	0.0	0.1	0.0 *	0.0 - 5.7
Robert Wood Johnson University Hospital Hamilton	0	1,176	0.0	0.0	0.0 *	0.0 - 5.8
Robert Wood Johnson University Hospital Somerset	0	1,809	0.0	0.1	0.0 *	0.0 - 4.0
Saint Clare's Hospital-Denville	0	690	0.0	0.1	0.0 *	0.0 - 6.6
Saint Clare's Hospital-Dover	0	474	0.0	0.0	0.0	0.0 - 9.9
Saint Michael's Medical Center	0	791	0.0	0.1	0.0 *	0.0 - 6.6
Saint Peter's University Hospital	0	1,687	0.0	0.1	0.0 *	0.0 - 4.4
Salem Medical Center	0	96	0.0	0.0	0.0	0.0 - 27.6
Shore Medical Center	1	1,144	0.9	0.2	3.0 *	0.2 - 5.8
Southern Ocean Medical Center	0	1,360	0.0	0.0	0.0 *	0.0 - 5.3
St. Joseph's University Medical Center	4	2,338	1.7	0.1	11.8	9.0 - 14.6
St. Joseph's Wayne Medical Center	0	613	0.0	0.1	0.0 *	0.0 - 7.3
St. Luke's Warren Hospital	0	790	0.0	0.0	0.0 *	0.0 - 7.1
St. Mary's General Hospital	0	944	0.0	0.0	0.0 *	0.0 - 6.7
Trinitas Regional Medical Center	0	1,024	0.0	0.1	0.0 *	0.0 - 4.3
University Hospital	5	2,625	1.9	0.1	20.2 **	17.0 - 23.5
Valley Hospital	0	2,736	0.0	0.1	0.0 *	0.0 - 3.5
Virtua Mount Holly Hospital-Burlington County	2	2,465	0.8	0.0	11.9	8.0 - 15.9
Virtua Our Lady of Lourdes Hospital-Camden	5	1,905	2.6	0.1	26.9 **	23.1 - 30.7
Virtua West Jersey Hospital-Marlton	0	1,496	0.0	0.0	0.0 *	0.0 - 5.0
Virtua West Jersey Hospital-Voorhees	2	2,871	0.7	0.1	7.3	4.2 - 10.4
Virtua Willingboro Hospital	0	430	0.0	0.1	0.0 *	0.0 - 8.7

Source: New Jersey numbers are derived from the **2023 NJ UB Data** using SAS Software, Version v2024_1.

* = Statistically significantly below state average (i.e. better than average), ** = Statistically significantly above state average (i.e. worse than average); Missing (.) = Hospital did not perform the procedure during the year; or it performed less than 3 procedures (rate is not computed when the denominator is less than 3).

Δ: Expected rate is the rate the hospital would have if it had the same case-mix (e.g., age, gender, DRG, and comorbidity categories) as the reference or statewide population. If the observed rate is higher than the expected rate (i.e., the ratio of observed to expected is greater than 1.0), it suggests that the hospital performed worse than the reference population on that indicator.

PSI.17 - Birth trauma - injury to neonate

- This indicator flags cases of birth trauma among all newborns in a hospital. Birth trauma is caused by medical complications during labor and delivery. The rate is defined as the number of cases of birth trauma per 1,000 live births. No risk-adjustment is made to this indicator and no significance tests are performed as a result. Rates for PSI 17 (Birth Trauma - injury to neonate), PSI 18 (Obstetric Birth trauma – vaginal w/instrument) and PSI 19 (Obstetric Birth trauma – vaginal w/o instrument) are not risk-adjusted because important risk factors (e.g., whether the mother is nulliparous or multiparous or the size of the infant) are not available in the UB data.

- The numerator includes discharges with ICD-10-CM code for birth trauma in any diagnosis field excluding infants with a subdural or cerebral hemorrhage and any diagnosis code of pre-term infant (i.e., births with birth weight of <2,000 grams and <37 gestation weeks or ≤34 gestation weeks). It also excludes infants with diagnosis code of osteogenesis imperfecta.

- The denominator includes all live births (newborns).

- Table 9 shows the number of 'birth trauma - injury to neonate' cases among infants born alive and the observed rates by hospital. The 2023 report shows a total of 177 cases of 'birth trauma - injury to neonate' among 93,078 live births in New Jersey, for an observed rate of 1.90 per 1,000 newborns/live births.

Table 9. Birth trauma - injury to neonate (per 1,000 livebirths)

Hospital	# of cases	# of live births	Observed rate
Statewide	**177**	**93,078**	**1.9**
AtlantiCare Regional MC-Mainland Campus	5	1,997	2.5
Capital Health Medical Center-Hopewell	5	3651	1.4
CarePoint Health-Hoboken University MC	7	716	9.8
CentraState Medical Center	0	728	0.0
Chilton Memorial Hospital	1	661	1.5
Clara Maass Medical Center	2	1,683	1.2
Community Medical Center	2	1,741	1.1
Cooper University Hospital	3	1,798	1.7
Cooperman Barnabas Medical Center	4	6,080	0.7
Englewood Hospital and Medical Center	1	2,870	0.3
Hackensack Meridian Health, Mountainside MC	4	636	6.3
Hackensack Meridian Health-Pascack Valley MC	1	977	1.0
Hackensack University Medical Center	18	4,651	3.9
Holy Name Medical Center	2	1,382	1.4
Hudson Regional Hospital	1	41	24.4
Hunterdon Medical Center	0	911	0.0
Inspira Medical Center Elmer	1	175	5.7
Inspira Medical Center Mullica Hill	4	1,226	3.3
Inspira Medical Center Vineland	6	1,347	4.5
Jefferson Cherry Hill Hospital	0	1	0.0
Jefferson Washington Township Hospital	2	718	2.8
Jersey City Medical Center	5	2,030	2.5
Jersey Shore University Medical Center	9	3,371	2.7
JFK University Medical Center	0	1,458	0.0
Monmouth Medical Center	12	6,432	1.9
Morristown Medical Center	1	5,269	0.2
Newark Beth Israel Medical Center	23	2,524	9.1
Newton Medical Center	2	499	4.0
Ocean University Medical Center	0	1,089	0.0
Overlook Medical Center-Summit	3	2,238	1.3
Palisades Medical Center	0	813	0.0
Penn Medicine Princeton Medical Center	0	1,981	0.0
Raritan Bay Medical Center	0	918	0.0
Riverview Medical Center	3	1,363	2.2
Robert Wood Johnson University Hospital	5	2,363	2.1
Robert Wood Johnson University Hospital Somerset	1	793	1.3
Saint Clare's Hospital-Denville	2	1,121	1.8
Saint Peter's University Hospital	16	5,394	3.0
Shore Medical Center	2	1,029	1.9

Table 9. Birth trauma - injury to neonate (per 1,000 livebirths)

Hospital	# of cases	# of live births	Observed rate
Statewide	**177**	**93,078**	**1.9**
Southern Ocean Medical Center	0	381	0.0
St. Joseph's University Medical Center	2	2,841	0.7
St. Mary's General Hospital	0	554	0.0
Trinitas Regional Medical Center	2	1,120	1.8
University Hospital	3	1,251	2.4
Valley Hospital	5	3,491	1.4
Virtua Mount Holly Hospital-Burlington County	2	1,889	1.1
Virtua Our Lady of Lourdes Hospital	0	599	0.0
Virtua West Jersey Hospital-Voorhees	10	6,277	1.6

Source: New Jersey numbers are derived from the **2023 NJ UB Data** using SAS Software, Version v2024_1.

Missing (.) indicates that the hospital did not perform the procedure during the year in question.

Note that this indicator is measured using observed rate only. Risk-adjustment is no longer calculatedfor this indicator.

Newborn or livebirth is defined as any neonate with either 1) an ICD-10-CM diagnosis code for an in-hospital live-born birth or 2) an admission type of newborn (ATYPE=4), age in days at admission equaling zero, and not an ICD-10-CM diagnosis code for an out-of-hospital birth. A neonate is defined as any discharge with age in days at admission between zero and 28 days (inclusive). If age in days is missing, then a neonate is defined as any DRG in MDC 15, an admission type of newborn (ATYPE=4), or an ICD-10-CM diagnosis code for an in-hospital live-born birth.)

Birth trauma injuries per 1,000 newborns (as a quality indicator) excludes preterm infants with a birth weight less than 2,000 grams, and cases with osteogenesis imperfecta. Exclude cases: • with any listed ICD-10-CM diagnosis codes for preterm infant with a birth weight less than 2,000 grams (PRETEID*) • with any listed ICD-10-CM diagnosis codes for osteogenesis imperfecta (OSTEOID*) • with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), or principal diagnosis (DX1=missing).

PSI.18 - Obstetric trauma - vaginal delivery with instrument

- This indicator flags potentially preventable trauma cases during instrument-assisted vaginal delivery. The rate is defined as the number of obstetric trauma cases (third- or fourth-degree lacerations, other obstetric lacerations) per 1,000 instrument-assisted vaginal deliveries.

- The numerator refers to the number of cases of obstetric trauma on births with instrument-assisted vaginal deliveries.

- The denominator includes all vaginal delivery discharges with any listed ICD- 10-CM procedure code for instrument-assisted delivery.

- Table 10 shows the number of obstetric trauma cases (obstetric trauma – vaginal delivery with instrument) among instrument-assisted vaginal delivery discharges and their corresponding observed rates, by hospital. Statewide, there were 441 cases of obstetric trauma among instrument-assisted vaginal deliveries reported in 2023 yielding a rate of 115.26 per 1,000 instrument- assisted vaginal delivery discharges.

Table 10. Obstetric trauma - vaginal delivery with instrument (per 1,000 instrument-assisted vaginal deliveries)

Hospital	# of cases	# of discharges	Observed rate
Statewide	**441**	**3,826**	**115.3**
AtlantiCare Regional MC-Mainland Campus	1	33	30.3 ^
Capital Health Medical Center-Hopewell	13	106	122.64
CarePoint Health-Hoboken University MC	3	13	230.8 ^
CentraState Medical Center	3	23	130.4 ^
Chilton Memorial Hospital	4	40	100.0
Clara Maass Medical Center	1	56	17.9
Community Medical Center	9	90	100
Cooper University Hospital	10	93	107.53
Cooperman Barnabas Medical Center	49	297	165.0
Englewood Hospital and Medical Center	18	155	116.1
Hackensack Meridian Health, Mountainside MC	4	103	38.8
Hackensack Meridian Health-Pascack Valley MC	5	79	63.29
Hackensack University Medical Center	33	349	94.6
Holy Name Medical Center	5	36	138.9 ^
Hudson Regional Hospital	0	1	0.0 ^
Hunterdon Medical Center	5	33	151.5 ^
Inspira Medical Center Elmer	2	3	666.7 ^
Inspira Medical Center Mullica Hill	3	51	58.8
Inspira Medical Center Vineland	3	66	45.5
Jefferson Washington Township Hospital	1	19	52.6 ^
Jersey City Medical Center	10	65	153.9
Jersey Shore University Medical Center	19	115	165.22
JFK University Medical Center	10	63	158.7
Monmouth Medical Center	29	318	91.19
Morristown Medical Center	49	178	275.3
Newark Beth Israel Medical Center	5	78	64.1
Newton Medical Center	1	31	32.3 ^
Ocean University Medical Center	2	19	105.3 ^
Overlook Medical Center-Summit	9	71	126.8
Palisades Medical Center	2	36	55.6 ^
Penn Medicine Princeton Medical Center	18	101	178.22
Raritan Bay Medical Center	0	21	0.0 ^
Riverview Medical Center	11	67	164.2
Robert Wood Johnson University Hospital	6	113	53.1

Table 10. Obstetric trauma - vaginal delivery with instrument (per 1,000 instrument-assisted vaginal deliveries)

Hospital	# of cases	# of discharges	Observed rate
Statewide	**441**	**3,826**	**115.3**
Robert Wood Johnson University Hospital Somerset	8	76	105.3
Saint Clare's Hospital-Denville	11	58	189.66
Saint Peter's University Hospital	18	154	116.9
Shore Medical Center	0	15	0.0 ^
Southern Ocean Medical Center	0	11	0.0 ^
St. Joseph's University Medical Center	1	104	9.6
St. Mary's General Hospital	2	18	111.1 ^
Trinitas Regional Medical Center	2	26	76.92
University Hospital	3	31	96.8
Valley Hospital	10	111	90.1
Virtua Mount Holly Hospital-Burlington County	4	49	81.6
Virtua Our Lady of Lourdes Hospital-Camden	0	12	0.0 ^
Virtua West Jersey Hospital-Voorhees	39	239	163.2

Source: New Jersey numbers are derived from the **2023 NJ UB Data** using the AHRQ SAS Software, Version v2024_1.

^ = Rate is based on a denominator less than 30 and should be taken with caution.

Missing (.) indicates that the hospital did not perform the procedure during the year in question.

Note that this indicator is measured using observed rate only. Risk-adjustment is no longer calculated for on this indicator because materially important risk factors (e.g., whether the mother is nulliparous or multiparous or the size of the infant) are not available in the Healthcare Cost and Utilization Project (HCUP) State Inpatient Database (SID), which is used for standardization in the AHRQ modules.

PSI.19 - Obstetric trauma - vaginal delivery without instrument

- This indicator flags cases of potentially preventable obstetric trauma during a vaginal delivery without assistance of medical instrument. The rate is defined as the number of obstetric trauma cases (third and fourth degree lacerations) per 1,000 vaginal deliveries that occurred without assistance of medical instrument.

- The numerator includes all discharges with ICD-10-CM code for obstetric trauma in any diagnosis or procedure field (excluding instrument-assisted delivery).

- The denominator includes all vaginal delivery discharges identified by DRG or MS-DRG codes excluding cases with any listed ICD-10-CM procedure codes for instrument-assisted delivery.

- Table 11 shows the number of cases of obstetric trauma - vaginal delivery without instrument among all vaginal deliveries by hospital. Statewide, there were 1,003 cases reported for obstetric trauma - vaginal delivery without instrument in 2023. The statewide rate for this indicator was 16.77 per 1,000 vaginal deliveries.

Table 11. Obstetric trauma - vaginal deliveries without instrument (per 1,000 vaginal delivery discharges)

Hospital	# of cases	# of discharges	Observed rate
Statewide	**1,003**	**59,795**	**16.8**
AtlantiCare Regional MC-Mainland Campus	11	1322	8.321
Capital Health Medical Center-Hopewell	36	2453	14.7
CarePoint Health-Hoboken University MC	13	363	35.8
CentraState Medical Center	6	427	14.1
Chilton Memorial Hospital	1	395	2.5
Clara Maass Medical Center	8	958	8.4
Community Medical Center	13	1188	10.9
Cooper University Hospital	19	1214	15.7
Cooperman Barnabas Medical Center	91	3625	25.1
Englewood Hospital and Medical Center	30	1843	16.3
Hackensack Meridian Health, Mountainside MC	8	514	15.6
Hackensack Meridian Health-Pascack Valley MC	12	551	21.8
Hackensack University Medical Center	43	2739	15.699
Holy Name Medical Center	17	836	20.3
Hudson Regional Hospital	0	25	0.0
Hunterdon Medical Center	15	571	26.3
Inspira Medical Center Elmer	4	145	27.6
Inspira Medical Center Mullica Hill	26	806	32.3
Inspira Medical Center Vineland	12	993	12.1
Jefferson Cherry Hill Hospital	0	3	0.0 Ω
Jefferson Stratford Hospital	0	2	0.0 Ω
Jefferson Washington Township Hospital	2	485	4.1
Jersey City Medical Center	24	1193	20.1
Jersey Shore University Medical Center	47	2362	19.9
JFK University Medical Center	14	909	15.4
Monmouth Medical Center	55	5049	10.9
Morristown Medical Center	81	3246	25.0
Newark Beth Israel Medical Center	9	1588	5.7
Newton Medical Center	6	334	18.0
Ocean University Medical Center	3	796	3.8
Overlook Medical Center-Summit	25	1358	18.4
Palisades Medical Center	2	523	3.8

Table 11. Obstetric trauma - vaginal deliveries without instrument (per 1,000 vaginal delivery discharges)

Hospital	# of cases	# of discharges	Observed rate
Statewide	**1,003**	**59,795**	**16.8**
Penn Medicine Princeton Medical Center	44	1213	36.3
Raritan Bay Medical Center	1	565	1.8
Riverview Medical Center	13	777	16.7
Robert Wood Johnson University Hospital	15	1517	9.9
Robert Wood Johnson University Hospital Somerset	3	480	6.3
Saint Clare's Hospital-Denville	13	687	18.9
Saint Peter's University Hospital	101	3431	29.4
Shore Medical Center	8	620	12.9
Southern Ocean Medical Center	5	225	22.2
St. Joseph's University Medical Center	7	1597	4.4
St. Mary's General Hospital	3	310	9.7
Trinitas Regional Medical Center	11	722	15.2
University Hospital	25	924	27.1
Valley Hospital	37	2065	17.9
Virtua Mount Holly Hospital-Burlington County	20	1209	16.5
Virtua Our Lady of Lourdes Hospital-Camden	3	444	6.8
Virtua West Jersey Hospital-Voorhees	61	4193	14.5

Source: New Jersey numbers are derived from the **2023 NJ UB Data** using the AHRQ SAS Software, Version v2024_1.

^ = Rate is based on a denominator less than 30 and should be taken with caution.

Missing (.) indicates that the hospital did not perform the procedure during the year in question.

Ω - Could be a coding error

Note that this indicator is measured using observed rate only. Risk-adjustment is no longer calculated for this indicator because materially important risk factors (e.g., whether the mother is nulliparous or multiparous or the size of the infant) are not available in the Healthcare Cost and Utilization Project (HCUP) State Inpatient Database (SID), which is used for standardization in the AHRQ modules.

Statewide PSI Average Rates Compared to National Rates

The Quality Indicators (QIs) developed by the Agency for Healthcare Research and Quality (AHRQ) are standardized, evidence-based measures of health care quality that can be used with readily available hospital inpatient administrative data to measure and track clinical performance and outcomes.

As stated earlier, the New Jersey statewide estimates are derived from the NJ UB data using the Quality Indicators (QIs) SAS Software for PSIs. It is important to note that NJ's PSI estimates for 2016 to 2023 are calculated using the QIs SAS Software (i.e., Versions 2019 to 2024), These versions are based on the ICD-10-CM/PCS Diagnosis and Procedure Codes, while the previous estimates (i.e., 2013 to 2015), which are based on ICD-9-CM codes are calculated using earlier versions of the software. Table 12 below shows national PSI estimates for 2012 to 2021 (estimates for 2014 and 2015 are not available) and New Jersey's statewide estimates for the years 2013 through 2023. The national estimates come from AHRQ's National Comparative Data derived from the Nationwide Inpatient Sample (NIS) data, which in turn is extracted from the State Inpatient Data (SID) that comes from all participating states nationwide, including New Jersey. A federal agency called Healthcare Cost & Utilization Project (HCUP) compiles and manages UB datasets that come from participating states. Currently,49 states and the District of Columbia are participating in the HCUP database programs.

HCUP is the nation's most comprehensive source of hospital data, including information on inpatient care, ambulatory care, and emergency department visits. HCUP enables researchers, insurers, policymakers, and others to study health care delivery and patient outcomes over time, and at the national, regional, state, and community levels.

Table 12. Comparing New Jersey's Statewide PSI Rates with National Rates (per 1,000 medical and surgical discharges)

Patient Safety Indicators (PSIs)		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Retained surgical item or unretrieved device fragment (Ω)	National	852	-	-	694	619	629			524	NA	NA
	NJ	28	32	23	13	16	17	13	10	11	10	9
Iatrogenic pneumothorax	National	0.32	-	-	0.21	0.19	0.19			0.17	NA	NA
	NJ	0.27	0.28	0.23	0.19	0.17	0.15	0.14	0.17	0.13	0.10	0.16
In hospital fall with hip fracture	National	0.08	-	-	0.08	0.07	0.07			0.27	NA	NA
	NJ	0.02	0.03	0.03	0.04	0.06	0.05	0.06	0.07	0.07	0.07	0.22
Postoperative hemorrhage or hematoma	National	4.52	-	-	2.29	2.25	2.39			2.33	NA	NA
	NJ	5.31	4.85	4.41	2.39	2.12	2.33	2.22	2.20	2.16	1.90	3.34
Postoperative PE or DVT	National	3.72	-	-	3.45	3.37	3.41			3.13	NA	NA
	NJ	6.74	6.11	5.48	3.99	4.05	4.02	3.42	3.75	3.35	3.01	4.48
Postoperative sepsis	National	4.26	-	-	4.05	3.97	4.09			4.18	NA	NA
	NJ	9.11	10.42	8.09	3.79	3.73	3.24	3.45	3.80	3.76	2.87	5.16
Postoperative wound dehiscence	National	1.71	-	-	0.69	0.67	0.80			1.58	NA	NA
	NJ	1.49	1.45	1.24	0.53	0.58	0.59	0.31	0.63	0.91	0.98	1.30
Abdominopelvic accidental puncture/laceration	National	0.73	-	-	1.06	1.04	1.04			0.69	NA	NA
	NJ	1.63	1.37	1.05	0.94	0.90	0.85	0.92	0.84	0.97	1.04	8.93
Birth trauma - injury to neonate	National	1.97	-	-	4.63	4.77	4.48			4.68	NA	NA
	NJ	1.54	1.55	1.98	2.45	2.19	2.41	1.87	2.44	3.16	2.62	1.90
Obstetric trauma - vaginal delivery with instrument	National	127.87	-	-	109.90	115.42	116.01			116.75	NA	NA
	NJ	124.05	112.58	96.00	82.96	109.38	112.11	117.33	114.68	106.45	106.72	115.26
Obstetric trauma - vaginal delivery without instrument	National	19.97	-	-	17.30	17.63	17.44			17.31	NA	NA
	NJ	17.30	16.44	13.33	14.80	14.62	14.43	14.59	14.79	15.85	16.10	16.10

New Jersey's rates are derived from the NJ UB database, while the national numbers come from AHRQ's Benchmark Data Tables derived from analysis of the HCUP - State Inpatient Database (SID). National Rates for 2014 and 2015 - not available. National rates for the period 2019 to 2021 are calculated from a combined three years datasets and the rates shown are three year averages. Data for 2022 and 2023 are Not Available (NA) yet.

Ω - Indicator reported in volume instead of rate, because it is a rare event.

'Retained Surgical Item or Unretrieved Device Fragment' was formerly called 'foreign body left in during procedure'

Some Highlights from Table 12:

NJ hospitals have shown considerable improvements since NJDOH started reporting on Patient Safety Indicators (PSIs) in its Hospital Performance Report. Some of the PSIs (i.e., state-level averages) that showed significant improvement over the last 10 years include:

- Retained Surgical Item or Unretrieved Device Fragment declined from 28 cases in 2013 to nine in 2023.
- Postoperative PE or DVT declined from 6.74 per 1,000 in 2013 to 3.01 in 2022 and 4.48 in 2023.
- Postoperative Sepsis fell from 9.11 per 1,000 in 2013 to 2.87 in 2022. The decrease could also be due to changes made on the indicator definitions when the transition from ICD-09 to ICD-10 was made in 2016. The 2023 rate has gone up to 5.16 per 1,000, which is due to changes made in the inclusion-exclusion criteria of the AHRQ Software version applied for the analysis of 2023 data.
- Postoperative Wound Dehiscence declined from 1.49 per 1,000 in 2013 to 0.98 in 2022 but rose up to 1.30 in 2023.
- Perioperative Hemorrhage or Hematoma declined from 5.31 per 1,000 in 2013 to 1.90 in 2022 and 3.34 in 2023.
- Birth Trauma - Injury to Neonate rate was between 1.54 to 1.98 per 1,000 for the period 2013 to 2015, but it increased to 2.45 per 1,000 in 2016 when the ICD-10-CM started and went up to 2.62 in 2022. The rate for 2023 is 1.90 per 1,000.
- Obstetric Trauma - Vaginal Delivery with Instrument declined from 124.05 per 1,000 in 2013 to 106.72 in 2022 and 115.26 in 2023.
- Obstetric Trauma - Vaginal Delivery without Instrument declined from 17.30 in 2013 to 13.33 in 2015, but increased gain from 14.80 in 2016 to 16.10 in 2022 and 16.10 in 2023.

Overall New Jersey performed better than or equal to the national averages for most of the 10 PSIs that are measured using rates. As shown in the table, the only indicator where New Jersey performed slightly but persistently worse than the national averages is Postoperative PE/DVT.

Summary of Findings

This report presents occurrences of adverse events (patient safety indicators) during hospitalization in each of New Jersey's hospitals. For 10 of the 11 PSIs, observed, expected and risk-adjusted occurrence rates are provided along with confidence intervals, where applicable, to help make a statistical assessment of patient safety in New Jersey hospitals. Statewide and national estimates are also provided to help compare hospital performance to state or national rates.

Comparison of a hospital's rate to the statewide rate (presented in the top row of a hospital-level PSI table) is one way to assess how well that hospital performed among its peers. A hospital's peers could be defined at many levels (e.g., teaching hospitals, urban hospitals, suburban hospitals, etc.). It is suggested that a hospital's performance be assessed by looking at its performance across the several PSI estimates presented in the 12 tables.

According to the 2023 New Jersey data, there are substantial variations by hospital in rates of adverse events. Some hospitals exhibit significantly higher adverse event rates than the corresponding statewide rates while others have significantly lower rates.

The performances of hospitals suggested by the patient safety indicators in this report may reflect factors that do not relate to hospital performance, such as patient or physician preference, stage of illness, age, other accompanying illnesses or conditions, or the availability of specialized equipment or doctors. While the data analysis method aims to adjust for many of these factors, it is often not possible to account for all of them through statistical analysis.

Consumers should remember that physicians direct and oversee the medical care that is delivered in hospitals, prescribe tests, and prescribe medications and treatments. This report does not separate the effect of the physician from the effect of the hospital. The quality of patient care provided in a hospital comes from how well its physicians, nurses, support staff and management work together as well as the technology and other resources available in the facility. This report is not designed to help consumers, and their families to choose treatment options but to help them discuss patient safety issues with their physicians.

References

AHRQ QI: Archived Software

AHRQ QI: Quality Indicators

AHRQ QI: Quality Indicator Resources

AHRQ QI: PSI Resources

AHRQ QI: PSI Technical Specifications Updates - Version v2024, September 2024

AHRQ Quality Indicator: Benchmark Data Tables for the PSI based on the Nationwide Inpatient Sample (NIS) - PSI Benchmark Data Tables, v2024

Department of Health | Health Care Quality Assessment | Patient Safety Indicators

For inquiries, contact the New Jersey Department of Health, Office of Health Care Quality Assessment: Call (800) 418-1397; E-mail Markos.Ezra@doh.nj.gov; Fax (609) 984-7633.