National Voluntary Consensus Standards: Patient Safety – Complications Endorsement Maintenance: Phase I

TECHNICAL REPORT

April 2013

Contents

Patient Safety Measures – Complications Endorsement Maintenance: Phase I

TECHNICAL REPORT

Introduction

Americans are exposed to more preventable medical errors than patients in other industrialized nations. It's estimated that preventable errors cost the United States $17-$29 billion per year in healthcare expenses, lost worker productivity, and disability. The costs are passed on in a number of ways—premiums, taxes, lost work time and wages, and health threats, to name a few. Proactively addressing medical errors and unsafe care will protect patients from harm and lead to more affordable, effective, and equitable care.

The Patient Safety Measures - Complications Endorsement Maintenance project will be executed in two phases, each addressing a number of specific complication-related domains. The first phase focuses on medication safety, venous thromboembolism, surgery, and care coordination, while the second phase will focus on falls, pressure ulcers, healthcare associated infections, and mortality. The Complications project builds on the work an earlier Patient Safety Measures project launched in 2009, which focused on healthcare-associated infections and radiation safety, among other issues. Endorsement maintenance provides the opportunity to harmonize specifications and to ensure that an endorsed measure represents the best in class. Composite and outcome measures and measures sensitive to the needs of vulnerable populations, including racial/ethnic minorities and Medicaid populations, were a priority.

Measure Evaluation

On December 15-16, 2011, the Patient Safety - Complications Steering Committee evaluated one new measure and twenty four measures undergoing maintenance review against NQF's standard evaluation criteria. To facilitate the evaluation, the committee and candidate standards were divided into four workgroups for preliminary review of the measures against the evaluation sub-criteria prior to consideration by the entire Steering Committee. The Committee's discussion and ratings of the criteria are summarized in the evaluation tables beginning on page 5.

Patient Safety - Complications

	Maintenance	New	Total
Measures under consideration	27	0	27
Withdrawn from consideration	3	1	4
Recommended	16	0	16
Not recommended	7*	0	7
Reasons for Not Recommending	Importance – 5 Scientific Acceptability – 1 Overall – 1 Competing measure – 0		

* In previous versions of the report measure *0021* was noted as withdrawn. In a request by the developer, the measure has been moved to not recommended status, following the Steering Committee's recommendation.

Overarching Issues

During the Steering Committee's discussion of the measures, several overarching issues emerged that were factored into the Committee's ratings and recommendations for multiple measures and are not repeated in detail with each individual measure:

Current Evidence and Relationship to Outcomes

The Committee expressed its preference for measures that provide clear and direct evidence of the measure's proximity to an improved outcome. Ensuring that the evidence provided to support the measure is current was highlighted, particularly for measures undergoing maintenance. In addition, several of the measures were focused on processes of care and discussions centered on whether what was measured truly was proximal to outcomes. This concern is reflected in the evaluation and underlying rationale for supporting a measure or not.

Impact on Quality

The Committee suggested measure developers provide detail on how their measure(s) impact quality. The Committee considered such information important when deciding whether a measure should be endorsed.

Measure with a Limited Performance Gap

The Committee suggested that the two Transfusion Reaction measures, which are similar but focus on different patient populations, have been performing at such high levels that continued efforts to publicly report on performance may not be warranted. They agreed that these measures should be maintained in the NQF portfolio with 'Reserve Status' designation, as they continue to address a critical aspect of patient safety and quality that should be sustained. The measures also fully meet all endorsement criteria with the exception of importance (as long as failure to meet this criterion was due to a high level of performance). The Committee acknowledged that placing these measures in 'reserve' could lead to the unintended consequence of inattention to the relevant processes or outcomes and consequently to potentially reduced levels of performance and poor patient outcomes. However, Committee members agreed that the 'Reserve Status' measures should be reviewed and reassessed in subsequent endorsement cycles to ensure that the performance remains at consistently high levels.

Continuum of Care

The Committee noted gaps in care that could be improved by addressing the patient's treatment across multiple settings of care. Committee members noted that aspects of a patient's condition should be reassessed when they are admitted to other departments within a healthcare facility and upon each interaction with a provider in an outpatient setting. Several of the measures under review were limited in their scope to a specific setting. This limitation was due to the focus of the developer and data source but when viewed from a patient-centered approach they should be broadened. The Committee suggested that when measures undergo the next maintenance cycle, to the extent possible, developers should focus on expanding the measure's scope.

Counts versus Rates

The Committee debated the usefulness of reporting rare but serious events, specifically related to several measures submitted by the Agency for Healthcare Research and Quality (AHRQ), in the form of counts or rates. While counts provide a more detailed breakdown of the data, rates may be more applicable for comparisons across settings and more useful to consumers. The Committee recognized that in these circumstances healthcare facilities may have no safety events captured by the measures, but stressed that continued monitoring of performance is necessary to improve quality and encourage transparency.

Discussion on Patient Safety Indicators (PSIs) and Pediatric Safety Indicators (PDIs)

Because most of the corresponding PSIs and PDIs are identical except for the population covered, the Committee often discussed both together. The rationales and information provided only vary when there was a separate concern given the patient population.

Discussion of Related and Competing Measures

The Steering Committee reviewed a number of previously-endorsed measures (0097, 0554, and 0646) that had been identified as related to and potentially competing with measure 0419. In general, the Committee saw the measures as related but not competing, and agreed that in the future they would like to see a single medication reconciliation measure that applies across populations, settings, and care transitions.

Reconsideration Request

Two VTE-related measures (0371 and 0376) that were not initially recommended by the Steering Committee were the subject of a reconsideration request by The Joint Commission, the developer of those measures. In accordance with NQF policy, the reconsideration request was reviewed by the chair and co-chair of the Consensus Standards Approval Committee (CSAC), who decided that circumstances warranted additional input on the measures from the NQF membership. The two measures were released for a supplemental member vote, the results of which were reviewed by the full CSAC. Ultimately, the CSAC decided to approve measure 0371 but not measure 0376.

Recommendations for Future Measure Development

1. Wound care measures:

- Vascular screening for patients with existing leg ulcers
- Adequate venous compression for patients with existing venous leg ulcers
- Adequate offloading patients with diabetic foot ulcers
- Adequate support surface for patients with stage III-IV pressure ulcers

2. Obstetric measures:

- Induction and augmentation of labor
- Outcomes of neonatal birth injury

3. Infection measures:

- Clostridium difficile colitis is epidemic in US and should be measured.
- Vascular catheter infections in other settings including--dialysis catheters, home infusion, peripherally inserted central catheter lines; nursing home catheters

4. Equipment related injury:

- Monitoring of product related events

5. Information technology:

- EHR programming related errors

6. The expectation for physical mobility among hospitalized adults:

- The severity of the inactivity among people who are hospitalized was described in this article: Brown CJ, Redden DT, Flood KL, Allman RM. The under recognized epidemic of low mobility during hospitalization of older adults. *J Am Geriatr* Soc. 2009;57(9): 1660-1665 (see http://onlinelibrary.wiley.com/doi/10.1111/j.1532-5415.2009.02393.x/full). There are extensive adverse effects associated with prolonged bed rest and much of these adverse effects are preventable with daily activity.

Measures Recommended

Measures Recommended for Reserve Status

Measures Not Recommended

Measures Withdrawn

Measures Recommended

0022 Use of High Risk Medications in the Elderly
Measure Submission Form **Description:** a: Percentage of Medicare members 65 years of age and older who received at least one high-risk medication. b: Percentage of Medicare members 65 years of age and older who received at least two different high-risk medications. For both rates, a lower rate represents better performance. **Numerator Statement:** a: At least one prescription dispensed for any high-risk medication during the measurement year. b: At least two prescriptions dispensed for different high-risk medications during the measurement year. **Denominator Statement:** All patients ages 65 years and older as of December 31 of the measurement year. **Exclusions:** N/A **Adjustment/Stratification:** No risk adjustment or risk stratification N/A N/A **Level of Analysis:** Health Plan **Type of Measure:** Process **Data Source:** Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Pharmacy Healthcare Effectiveness Data and Information Set (HEDIS) **Measure Steward:** National Committee for Quality Assurance
STEERING COMMITTEE MEETING 12/15-16/2011 **1. Importance to Measure and Report**: **Y-19; N-3** (1a. High Impact: 1b. Performance Gap, 1c. Evidence) **1a.** Impact: **H-6; M-1; L1-; I-0**; **1b.** Performance Gap: **H-6; M-1; L-0; I-1** **1c.** Evidence Quantity: **H-5; M-1; L-1; I-1**; Quality: **H-4; M-2; L-1; I-1**; Consistency: **H-5; M-1; L-1; I-1** Rationale: The measure focuses on medications that are known to cause harm or lead to adverse events in the elderly. The literature cited, including the 2003 Beers criteria, provides further evidence for the measure's focus. The committee and developer acknowledged that the American Geriatrics Society is currently reviewing and updating the list of medications and the measure will be updated to reflect those changes when they are released.
2. Scientific Acceptability of Measure Properties: Y-22; N-0 (2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity) **2a.** Reliability: **H-5; M-3; L-0; I-0**; **2b.** Validity: **H-4; M-4; L0-; I-0** Rationale: The measure is well specified and the denominator is clear.
3. Usability: H-9; M-12; L-1; I-0 (*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)* **3a.** Public Reporting: **H-4; M-4; L-0; I-0** **3b.** QI: **H-4; M-4; L-0; I-0** Rationale: The measure will be useful for patient safety and provide valuable information to consumers.

0022 Use of High Risk Medications in the Elderly

4. Feasibility: H-8; M-13; L-1; I-0

(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)

4a. Byproduct of Care Processes: **H-5; M-1; L-1; I-0**

4b. Electronic data sources: **H-5; M-1; L-1; I-0**

4c. Suscep inaccuracies, consequences: **H-5; M-1; L-1; I-0**

4d. Data collection strategy: **H-5; M-1; L-1; I-0**

Rationale: The measure may need to be updated in the future to accommodate any changes in medication monitoring or remove any medications that are no longer available. The developer indicated that it would be reviewed frequently.

Steering Committee Recommendation for Endorsement: Y-20; N-2

Rationale: The measure would inform patient safety efforts and the consumer. It represents a major patient safety initiative.

Public and Member Comment

Comments included:

Requests for incorporation of the updated AGS Beers Criteria

- Request to delay incorporation of the updated Beers Criteria pending further expert review and public comment

  Developer response: Thank you for your feedback. This measure is currently under re-evaluation by NCQA and we have specified the measure to align with the updated 2012 Beers criteria developed by the American Geriatric Society. The measure has completed NCQA's public comment, and will be presented to the Committee on Performance Measurement in May 2012, for approval. If approved by CPM and the NCQA Board of Directors the measure will be included in HEDIS 2013. We will update the NQF measure specifications, accordingly.

Committee response:

The Steering Committee discussed its options with regard to recommendation of measure 0022 and decided to maintain its recommendation of the measure as currently written, with the assumption that the measure will be updated when NCQA has completed its approval process. At that time, it will be reconsidered by NQF as part of an annual update or ad hoc review.

CSAC Approved (May 14, 2012)

Board Endorsed (August 10, 2012)

0419 Documentation of Current Medications in the Medical Record

Measure Submission Form

Description: Percentage of patients aged 18 years and older with a list of current medications (includes prescription, over-the-counter, herbals, vitamin/mineral/dietary [nutritional] supplements) documented by the provider, including drug name, dosage, frequency and route

Numerator Statement: Current medications including name, dosage, frequency and route documented by the provider

Denominator Statement: All patients aged 18 years and older on date of patient encounter

Exclusions: Not Eligible – A patient is not eligible if one or more of the following condition(s) exist:

Patient refuses to participate

Patient is in an urgent or emergent medical situation where time is of the essence and to delay treatment would jeopardize the patient's health status

Patient cognitively impaired and no authorized representative available

Adjustment/Stratification: No risk adjustment or risk stratification. N/A No stratification. All eligible patients are subject to the same numerator criteria.

Level of Analysis: Clinician : Individual, Population : National

Type of Measure: Process

Data Source: Administrative claims, Electronic Clinical Data : Registry Medicare Part B claims data

Measure Steward: Centers for Medicare & Medicaid

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: **Y-19; N-2**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-6; M-0; L2-; I-0**; **1b.** Performance Gap: **H-6; M-0; L-2; I-0**

1c. Evidence Quantity: **H-1; M-3; L-3; I-1**; Quality: **H-1; M-3; L-3; I-1**; Consistency: **H-1; M-4; L-2; I-1**

Rationale: The Committee affirmed the importance of the measure's goals: to prompt discussions between physicians and patients, to increase knowledge of patients' medical histories, and to reduce adverse drug events. The Committee also discussed the importance of medication reconciliation in general. Since reporting on this measure is voluntary, the Committee noted that it is not possible to clearly define the performance gap but current rates demonstrate a gap for just documentation of current medications in the medical record.

2. Scientific Acceptability of Measure Properties: Y-15; N-5

(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)

2a. Reliability: **H-0; M-4; L-4; I-0**; **2b.** Validity: **H-0; M-5; L-3; I-0**

Rationale: The Committee had several concerns related to whether the specifications were precise and understandable and whether the results would be valid. The Committee was concerned that it would be difficult to effectively document a patient's vitamin and over-the-counter medication use. The Committee requested that the developer clarify language in the measure to focus on whether a medical history was taken and a patient's medications were documented rather than the creation of a current and complete medication list. Committee members suggested that the measure should be rewritten to more clearly reflect that providers are being measured on whether patients were asked about their medications on each visit. Concerns regarding the validity of the data were discussed. The measure currently asks the provider to report on whether they have current medications documented in the medical record but it is not known whether what is documented actually is what the patient is taking and if any were missed.

3. Usability: H-7; M-7; L-5; I-1

(*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)*

3a. Public Reporting: **H-1; M-4; L-3; I-0**

3b. QI: **H-1; M-4; L-2; I-0**

Rationale: Recognizing that the measure is currently being used in both public reporting and quality improvement programs, the Steering Committee agreed that the measure meets the usability criterion.

0419 Documentation of Current Medications in the Medical Record

4. Feasibility: H-2; M-11; L-6; I-1

(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)

4a. Byproduct of Care Processes: **H-3; M-3; L-2; I-0**

4b. Electronic data sources: **H-1; M-3; L-4; I-0**

4c. Suscep inaccuracies, consequences: **H-0; M-5; L-2; I-1**

4d. Data collection strategy: **H-1; M-4; L-2; I-0**

Rationale: The measure is currently being collected and no concerns with feasibility were raised.

Steering Committee Recommendation for Endorsement: Y-14; N-6

Rationale: The Steering Committee agreed that documentation of patients' current medications is an area where there is a great need and opportunity for improvement. Many Committee members stated that they would prefer an outcome measure in this area but acknowledged that no such measure existed, and agreed that in the absence of an outcome measure that correlates with reconciliation, this measure was a good starting point. The Steering Committee also reviewed a number of medication reconciliation measures (0097, 0554, and 0646) that had been identified as related and potentially competing with measure 0419. In general, the Committee saw the measures as related but not competing, and agreed that in the future they would like to see a single medication reconciliation measure that applies across populations, settings, and care transitions.

Public and Member Comment

Comments included:

- A request for clarification on the measure's applicability to hospitals
- A suggestion that the measure include patient acknowledgement of the medication list's accuracy

  Developer response: NQF Measure #0419 does not include the acute care (hospital) setting in the denominator and therefore, does not apply to hospitals. Quality Insights appreciates the suggestion made by the commenter regarding patient acknowledgement as a means to engage and empower the patient in developing a partnership with their health care provider. We will consider adding this language to the measure's description.

Committee response:

The Steering Committee considered the commenters' suggestions, but believed that the measure already implies confirmation of the medication list's accuracy with the patient. Moreover, Committee members agreed with the developer that requiring documentation of patient acknowledgement of the medication list's accuracy would reduce the measure's reliability. The Steering Committee agreed to maintain its recommendation of the measure as currently written.

Additional Committee Review

During the in-person meeting the Patient Safety Complications Steering Committee held a discussion of related and competing measures and determined that measure *#0419* was related but not competing with measures *0097*, *0554*, and *0646*. Subsequently, one additional related and competing measure, *#0553: Care for Older Adults – Medication Review,* was identified. As a result, the Care Coordination Steering Committee, which was in the process of reviewing *#0553,* evaluated both measures to determine if they were related or competing and whether one was "best in class". However, in their deliberations, the Care Coordination Steering Committee could not determine which (if either) measure was superior and instead recommended that the measures be combined or completely harmonized.

CSAC Approved (July 11, 2012)

The CSAC determined that neither measure was superior, and agreed to support the continued endorsement of both #0419 and #0553, with the stipulation that the developers work toward harmonization by making agreed upon modifications to their measures within six months.

Board Endorsed (August 10, 2012)

0371 Venous Thromboembolism Prophylaxis

Measure Submission Form

Description: This measure assesses the number of patients who received venous thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission. This measure is part of a set of six nationally implemented prevention and treatment measures that address VTE (VTE-2: ICU VTE Prophylaxis, VTE-3: VTE Patients with Anticoagulation Overlap Therapy, VTE-4: VTE Patients Receiving UFH with Dosages/Platelet Count Monitoring, VTE-5: VTE Warfarin Therapy Discharge Instructions and VTE-6: Incidence of Potentially-Preventable VTE) that are used in The Joint Commission's accreditation process.

Numerator Statement: Patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given:

•the day of or the day after hospital admission

•the day of or the day after surgery end date for surgeries that start the day of or the day after hospital admission

Denominator Statement: All discharged hospital inpatients

Exclusions:

•Patients less than 18 years of age

•Patients who have a length of stay (LOS) less than two days and greater than 120 days

•Patients with Comfort Measures Only documented on day of or day after hospital arrival

•Patients enrolled in clinical trials

•Patients who are direct admits to intensive care unit (ICU), or transferred to ICU the day of or the day after hospital admission with ICU LOS greater than or equal to one day

•Patients with ICD-9-CM Principal Diagnosis Code of Mental Disorders or Stroke as defined in Appendix A, Table 7.01, 8.1 or 8.2

•Patients with ICD-9-CM Principal or Other Diagnosis Codes of Obstetrics or VTE as defined in Appendix A, Table 7.02, 7.03 or 7.04

•Patients with ICD-9-CM Principal Procedure Code of Surgical Care Improvement Project (SCIP) VTE selected surgeries as defined in Appendix A, Tables 5.17, 5.19, 5.20, 5.21, 5.22, 5.23, 5.24

Adjustment/Stratification: No risk adjustment or risk stratification; Not applicable; Not Applicable, the measure is not stratified.

Level of Analysis: Facility, Population : National

Type of Measure: Process

Data Source: Administrative claims, Electronic Clinical Data : Electronic Health Record, Paper Records Each data element in the data dictionary includes suggested data sources.

The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed.

Measure Steward: The Joint Commission

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: **Y-20; N-1**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-8; M-1; L-0; I-0**; **1b.** Performance Gap: **H-8; M-1; L-0; I-0**

1c. Evidence Quantity: **H-8; M-1; L-0; I-0**; Quality: **H-8; M-1; L-0; I-0**; Consistency: **H-8; M-1; L-0; I-0**

Rationale: There is strong evidence to support the measure and recent reporting indicated a performance gap of 17%. However, the Committee stated that the measure has a limited ability to impact outcomes since it lacks a validated risk assessment model and remains vague. Yet, the Committee agreed that it would encourage hospitals to have standardized policies for VTE prophylaxis among inpatients.

0371 Venous Thromboembolism Prophylaxis
2. Scientific Acceptability of Measure Properties: Y-17; N- 4 (2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity) **2a.** Reliability: **H-5; M-4; L-0; I-0**; **2b.** Validity: **H-7; M-2; L-0; I-0** Rationale: The measure was considered a good starting point for examining whether patients were given prophylaxis. However, the Committee expressed concern about the measure's lack of specificity on how risk is assessed. Patients at low risk as well as certain other populations, such as renal patients and older patients, should not be given prophylaxis since it increases the risk of bleeding. The American College of Chest Physicians is expected to release new guidelines (ACCP-9) around VTE prophylaxis in February 2012; these guidelines may offer additional direction to providers. Additionally, the Committee expressed reservations regarding the lack of a definition for "effective prophylaxis". Hospitals may vary in their interpretation of this language; therefore, the measure may not be limited in its usefulness for comparison. It was suggested that in the future the measure could be further specified and improved. While there were concerns with the specificity of the measure, the measure as specified demonstrated reliable results and face validity was provided.
3. Usability: H-3; M-14; L-4; I-0 (*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)* **3a.** Public Reporting: **H-8; M-1; L-0; I-0** **3b.** QI: **H-8; M-1; L-0; I-0** Rationale: This measure is part of a VTE measure set that will be implemented nationally in January 2013. While the Committee questioned whether the measure alone will provide useful information to consumers, members agreed that measuring VTE prophylaxis will lead to quality improvement.
4. Feasibility: H-8; M-10; L-3; I-0 *(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)* **4a.** Byproduct of Care Processes: **H-8; M-1; L-0; I-0** **4b.** Electronic data sources: **H-3; M-2; L-3; I-0** **4c.** Suscep inaccuracies, consequences: **H-5; M-4; L-0; I-0** **4d.** Data collection strategy: **H-7; M-1; L-0; I-1** Rationale: Creating a risk assessment model would have made data collection more complicated, which would further limit feasibility. The measure will be reevaluated and updated every six months by the developer.
Steering Committee Recommendation for Endorsement: Y-17; N-4 **Rationale**: The measure recognizes that VTE prophylaxis is an important part of the process of care for a variety of diagnoses and treatment plans. While there are concerns about the implementation and usefulness of the measure, the Committee agreed that it continues to be a good starting point in the assessment of hospital performance related to VTE prophylaxis.

0371 Venous Thromboembolism Prophylaxis

Public and Member Comment

Comments included:

- A request for this measure to be split out to address surgical and non-surgical patients separately
- Suggestion to separate reporting of anticoagulation prophylaxis from reporting of mechanical prophylaxis
- Need greater discernment between adequate prophylaxis and any prophylaxis
- Should not encourage VTE prophylaxis in individuals whose risk of bleeding exceeds the risk of thrombosis
- Measure should reflect prophylaxis across the patient stay, rather than only upon admission to the hospital or transfer to the ICU

Developer response: Adequate prophylaxis is individualized for each patient scenario. Stratification treatment based on risk assessment is a consideration, however, consensus regarding a standard risk assessment tool or method has not yet been reached. This measure has been specified to collect data in the designated time frame to reduce abstractor burden. These current paper-based measures have been specified to collect data in the designated time frame in order to reduce abstractor burden. Electronic specifications for these measures have been developed and the measures have been included as clinical quality measures for Stage 1 of Meaningful Use.

Committee response:

The submitted comments prompted a Steering Committee discussion regarding "adequate" or "effective" prophylaxis, among other issues. A number of Committee members voiced concerns about the measure's acceptance of mechanical prophylaxis as a satisfactory means of VTE prevention. Many members stated that the evidence supported the use of mechanical prophylaxis only if pharmacological prophylaxis is contraindicated. Yet as currently specified, mechanical prophylaxis would satisfy measure 0371 even if pharmacological prophylaxis is not contraindicated, which some Committee members interpreted as being inconsistent with the most recent American College of Physicians (ACP) and American College of Chest Physicians (ACCP) guidelines. ACP and ACCP guidelines also recommend administration of prophylaxis only if the benefits outweigh the risks. Because there is currently no validated tool for VTE risk-assessment, some Committee members were hesitant to recommend a measure that may encourage VTE prophylaxis in lower-risk patients. For this reason, the Committee was more comfortable with measure 0372, which applies to the higher-risk population of patients in the ICU. In addition, some Committee members agreed that administration of prophylaxis should be measured across the patient stay, and that a single order or day of administration, which is how the measure is currently specified, was not necessarily reflective of quality care. In general, the Committee viewed the measure as being useful for internal quality improvement efforts, but were concerned that publicly-reported performance on the measure may not lead to valid judgments regarding the quality of care. The Steering Committee agreed to hold a reconsideration vote on the measure.

Vote Following Consideration of Public and Member Comments

1. **Importance to Measure and Report: Y-17; N-3**
2. **Scientific Acceptability of Measure Properties: Y-10; N-11**
3. **Usability: H-2; M-11; L-8; I-0**
4. **Feasibility: H-2; M-13; L-5; I-0**

Steering Committee Recommendation for Endorsement: Y-10; N-13

Rationale: The measure recognizes that VTE prophylaxis is an important part of the process of care for a variety of diagnoses and treatment plans. However, concerns about implementation issues and the usefulness of the measure, as well as questions about whether the measure truly reflects providers' quality of care, led the Committee to decide against recommending the measure for endorsement.

0371 Venous Thromboembolism Prophylaxis
CSAC Approved (June 11, 2012) Following the Public and Member commenting period, the Joint Commission requested reconsideration of measures #0371 and #0376 in a letter received on May 2, 2012. Due to the importance of the measures for patient care and the lack of similar measures in the NQF portfolio, the CSAC Chair and Vice Chair decided to ballot the measures in order to gain additional input from the NQF membership. Following a member vote, in which both measures were approved by the NQF membership, the measures were brought back to the CSAC for reconsideration. CSAC members noted that the measures address a high-impact clinical area with significant implications for patient care, and that there are no other similar measures addressing these issues within the NQF portfolio. The CSAC voted to approve measure #0371 on VTE prophylaxis but expressed concerns about measure #0376, noting that the measure is likely to have very small denominator size and may not accurately identify patients who should have had prophylaxis and did not.
Board Endorsed (August 10, 2012)

0372 Intensive Care Unit Venous Thromboembolism Prophylaxis

Measure Submission Form

Description: This measure assesses the number of patients who received venous thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after the initial admission (or transfer) to the Intensive Care Unit (ICU) or surgery end date for surgeries that start the day of or the day after ICU admission (or transfer). This measure is part of a set of six prevention and treatment measures that address VTE (VTE-1: VTE Prophylaxis, VTE-3: VTE Patients with Anticoagulation Overlap Therapy, VTE-4: VTE Patients Receiving UFH with Dosages/Platelet Count Monitoring by Protocol, VTE-5: VTE Warfarin Therapy Discharge Instructions and VTE-6: VTE Incidence of Potentially-Preventable VTE).

Numerator Statement: Patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given:

•the day of or the day after ICU admission (or transfer)

•the day of or the day after surgery end date for surgeries that start the day of or the day after ICU admission (or transfer)

Denominator Statement: Patients directly admitted or transferred to ICU

Exclusions:

•Patients less than 18 years of age

•Patients who have a hospital length of stay (LOS) less than two days and greater than 120 days

•Patients with Comfort Measures Only documented on day of or day after hospital arrival

•Patients enrolled in clinical trials

•Patients with ICU LOS less than one day without VTE prophylaxis administered and documentation for no VTE prophylaxis

•Patients with ICD-9-CM Principal or Other Diagnosis Code of Obstetrics or VTE as defined in Appendix A, Table 7.02, 7.03, or 7.04

•Patients with ICD-9-CM Principal Procedure Code of Surgical Care Improvement Project (SCIP) VTE selected surgeries as defined in Appendix A, Tables 5.17, 5.19, 5.20, 5.21, 5.22, 5.23, 5.24 that start the day of or the day after ICU admission or transfer

Adjustment/Stratification: No risk adjustment or risk stratification. Not applicable Not Applicable, the measure is not stratified.

Level of Analysis: Facility, Population : National

Type of Measure: Process

Data Source: Administrative claims, Electronic Clinical Data, Paper Records Each data element in the data dictionary includes suggested data sources.

The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed.

Measure Steward: The Joint Commission

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: **Y-21; N-0**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-8; M-1; L-0; I-0**; **1b.** Performance Gap: **H-7; M-2; L-0; I-0**

1c. Evidence Quantity: **H-7; M-2; L-0; I-0**; Quality: **H-7; M-2; L-0; I-0**; Consistency: **H-7; M-2; L0-; I-0**

Rationale: There is strong evidence for the measure given the population – patients in intensive care units (ICU) and the measure noted an aggregate performance rate of 87.9 %, indicating a potential performance gap of 12.1 %.. .

0372 Intensive Care Unit Venous Thromboembolism Prophylaxis
2. Scientific Acceptability of Measure Properties: Y-21; N-0 (2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity) **2a.** Reliability: **H-6; M-3; L-0; I-0**; **2b.** Validity: **H-7; M-2; L-0; I-0** Rationale: The specifications for this measure are similar to Measure #0371 but as was discussed with that measure, while there are limitations to the measure the measure addresses an important population and aspect of care. The populations for this measure and Measure #0371 differ since this measure looks at patients who are admitted to the ICU at any point during the hospitalization, ensuring that patients are assessed when they are at highest risk regardless of whether they were initially assessed at the time of admission (the focus for Measure #0371). In the future, the measure could be improved by also including patients who are transferred out of the ICU since that point in time is not currently captured in the measures under consideration. The measure as specified demonstrated reliable results and face validity was provided.
3. Usability: H-10; M-11; L-0; I-0 (*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)* **3a.** Public Reporting: **H-8; M-1; L-0; I-0** **3b.** QI: **H-8; M-1; L-0; I-0** Rationale: This measure is part of a VTE measure set that will be implemented nationally in January 2013. While the Committee questioned whether the measure alone will provide useful information to consumers, members agreed that measuring VTE prophylaxis will lead to quality improvement.
4. Feasibility: H-12; M-8; L-1; I-0 *(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)* **4a.** Byproduct of Care Processes: **H-8; M-1; L-0; I-0** **4b.** Electronic data sources: **H-2; M-6; L-1; I-0** **4c.** Suscep inaccuracies, consequences: **H-5; M-4; L-0; I-0** **4d.** Data collection strategy: **H-7; M-1; L-1; I-0** Rationale: Creating a risk assessment model would have made data collection more complicated, which would further limit feasibility. The measure will be reevaluated and updated every six months by the developer.
Steering Committee Recommendation for Endorsement: Y-21; N-0 **Rationale**: The measure recognizes that VTE prophylaxis is an important part of the process of care for a variety of diagnoses and treatment plans. While there are concerns about the implementation and usefulness of the measure, the Committee agreed that this measure addresses a very high risk population and room for improvement exists.

0372 Intensive Care Unit Venous Thromboembolism Prophylaxis

Public and Member Comment

Comments included:

- A request for this measure to be split out to address surgical and non-surgical patients separately
- Suggestion to separate reporting of anticoagulation prophylaxis from reporting of mechanical prophylaxis
- Need greater discernment between adequate prophylaxis and any prophylaxis
- Should not encourage VTE prophylaxis in individuals whose risk of bleeding exceeds the risk of thrombosis
- Measure should reflect prophylaxis across the patient stay, rather than only upon admission to the hospital or transfer to the ICU

Developer response: Adequate prophylaxis is individualized for each patient scenario. Stratification treatment based on risk assessment is a consideration, however, consensus regarding a standard risk assessment tool or method has not yet been reached. This measure has been specified to collect data in the designated time frame to reduce abstractor burden. These current paper-based measures have been specified to collect data in the designated time frame in order to reduce abstractor burden. Electronic specifications for these measures have been developed and the measures have been included as clinical quality measures for Stage 1 of Meaningful Use.

Committee response:

The submitted comments prompted a Steering Committee discussion regarding "adequate" or "effective" prophylaxis, among other issues. A number of Committee members voiced concerns about the measure's acceptance of mechanical prophylaxis as a satisfactory means of VTE prevention. Many members stated that the evidence supported the use of mechanical prophylaxis only if pharmacological prophylaxis is contraindicated. Yet as currently specified, mechanical prophylaxis would satisfy this measure even if pharmacological prophylaxis is not contraindicated, which some Committee members interpreted as being inconsistent with the most recent American College of Physicians (ACP) and American College of Chest Physicians (ACCP) guidelines. ACP and ACCP guidelines also recommend administration of prophylaxis only if the benefits outweigh the risks. Because there is currently no validated tool for VTE risk-assessment, some Committee members were hesitant to recommend a measure that may encourage VTE prophylaxis in lower-risk patients. For this reason, the Committee was more comfortable with measure 0372, which applies to the higher-risk population of patients in the ICU, than measure 0371. The Steering Committee agreed to hold a reconsideration vote on the measures.

Vote Following Consideration of Public and Member Comments

1. **Importance to Measure and Report: Y-17; N-4**
2. **Scientific Acceptability of Measure Properties: Y-14; N-7**
3. **Usability: H-5; M-8; L-8; I-0**
4. **Feasibility: H-6; M-8; L-9; I-0**

Steering Committee Recommendation for Endorsement: Y-13; N-10

Rationale: The measure recognizes that VTE prophylaxis is an important part of the process of care for a variety of diagnoses and treatment plans. While there are concerns about the implementation and usefulness of the measure, the Committee agreed that this measure addresses a very high risk population and room for improvement exists.

CSAC Approved (May 14, 2012)

Board Endorsed (June 18, 2012)

0373 Venous Thromboembolism Patients with Anticoagulant Overlap Therapy

Measure Submission Form

Description: This measure assesses the number of patients diagnosed with confirmed VTE who received an overlap of Parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation and warfarin therapy. For patients who received less than five days of overlap therapy, they should be discharged on both medications and have a Reason for Discontinuation of Overlap Therapy. Overlap therapy should be administered for at least five days with an international normalized ratio (INR) greater than or equal to 2 prior to discontinuation of the parenteral anticoagulation therapy, or INR less than 2 but discharged on both medications or have a Reason for Discontinuation of Overlap Therapy. This measure is part of a set of six prevention and treatment measures that address VTE (VTE-1: VTE Prophylaxis, VTE-2: ICU VTE Prophylaxis, VTE-4: VTE Patients Receiving UFH with Dosages/Platelet Count Monitoring, VTE-5: VTE Warfarin Therapy Discharge Instructions and VTE-6: Incidence of Potentially-Preventable VTE).

Numerator Statement: Patients who received overlap therapy:

Included Populations: Patients who received warfarin and parenteral anticoagulation:

•Five or more days, with an INR greater than or equal to 2 prior to discontinuation of parenteral therapy OR

•Five or more days, with an INR less than 2 and discharged on overlap therapy OR

•Less than five days and discharged on overlap therapy OR

•With documentation of reason for discontinuation of overlap therapy OR

•With documentation of a reason for no overlap therapy

Denominator Statement: Patients with confirmed VTE who received warfarin. The target population includes patients discharged with an ICD-9-CM Principal or Other Diagnosis Codes for VTE as defined in Table 7.03 or Table 7.04.

Exclusions:

•Patients less than 18 years of age

•Patients who have a length of stay greater than 120 days

•Patients with Comfort Measures Only documented

•Patients enrolled in clinical trials

•Patients discharged to a health care facility for hospice care

•Patients discharged to home for hospice care

•Patients who expired

•Patients who left against medical advice

•Patients discharged to another hospital

•Patients without warfarin therapy during hospitalization

•Patients without VTE confirmed by diagnostic testing

Adjustment/Stratification: No risk adjustment or risk stratification; Not Applicable; Not Applicable, the measure is not stratified.

Level of Analysis: Facility, Population : National

Type of Measure: Process

Data Source: Administrative claims, Electronic Clinical Data, Paper Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. Verification must be completed and passed before the vendor can offer the data collection tool to hospitals.

Measure Steward: The Joint Commission

0373 Venous Thromboembolism Patients with Anticoagulant Overlap Therapy
STEERING COMMITTEE MEETING 12/15-16/2011 **1. Importance to Measure and Report**: **Y-20; N-1** (1a. High Impact: 1b. Performance Gap, 1c. Evidence) **1a.** Impact: **H-9; M-0; L-0; I-0**; **1b.** Performance Gap: **H-9; M-0; L-0; I-0** **1c.** Evidence Quantity: **H-4; M-4; L-1; I-0**; Quality: **H-5; M-4; L-0; I-0**; Consistency: **H-7; M-2; L-0; I-0** Rationale: The measure is based on multiple guidelines, primarily from the American College of Chest Physicians (ACCP), that indicate overlap therapy of heparin and warfarin should be used to reduce a patient's risk of increased hypercoagulability. The body of evidence supports the measure's focus and a clear performance gap remains.
2. Scientific Acceptability of Measure Properties: Y-18; N-3 (2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity) **2a.** Reliability: **H-7; M-2; L-0; I-0**; **2b.** Validity: **H-7; M-1; L-1; I-0** Rationale: The Committee was concerned that the timeframes specified in the measure were complex but the testing demonstrated that the measure as specified was reliable and valid. The Committee agreed with the exclusion allowing a clinician to document an explicit reasoning for not discharging with overlap therapy. It was suggested that in the future the settings be expanded to include patients in the emergency room, since a number of patients are not admitted to the hospital.
3. Usability: H-7; M-9; L-5; I-0 (*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)* **3a.** Public Reporting: **H-8; M-1; L-0; I-0** **3b.** QI: **H-7; M-2; L-0; I-0** Rationale: The measure is part of a VTE measure set that will be nationally implemented in January 2013.
4. Feasibility: H-6; M-9; L-6; I-0 *(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)* **4a.** Byproduct of Care Processes: **H-8; M-1; L-0; I-0** **4b.** Electronic data sources: **H-3; M-4; L-2; I-0** **4c.** Suscep inaccuracies, consequences: **H-5; M-4; L0-; I-0** **4d.** Data collection strategy: **H-6; M-2; L-1; I-0** Rationale: Some members of the Committee expressed concern about how timeframes were defined within the measure and whether the data was feasible to collect. The developer explained that the measure scope and timeframe were specified to ensure that the data would be feasible to capture.
Steering Committee Recommendation for Endorsement: Y-18; N-3 **Rationale**: The measure will address a lack of knowledge regarding the importance of overlap therapy.

0373 Venous Thromboembolism Patients with Anticoagulant Overlap Therapy

Public and Member Comment

Comments included:

- Support of the measure
- Should not encourage VTE prophylaxis in individuals whose risk of bleeding exceeds the risk of thrombosis
- Concerns with feasibility of data collection

  Developer response: Electronic specifications for this measure have been developed and this measure has been included as a clinical quality measure for Stage 1 of Meaningful Use.

Committee response:

The Steering Committee agrees that ensuring adequate prophylaxis is important, but acknowledges the difficulty of defining what constitutes "adequate" prophylaxis in different patient scenarios. The Committee believed that concerns with the feasibility of data collection for the data elements for the measure would be addressed during the testing and implementation of the measure for electronic health records and brought to the NQF for consideration during a future review.

CSAC Approved (May 14, 2012)

Board Endorsed (June 18, 2012)

0450 Postoperative Pulmonary Embolism or Deep Vein Thrombosis Rate (PSI 12)

Measure Submission Form

Description: Percent of discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM codes for deep vein thrombosis or pulmonary embolism in any secondary diagnosis field.

Numerator Statement: Discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM codes for deep vein thrombosis or pulmonary embolism in any secondary diagnosis field.

Denominator Statement: All surgical discharges age 18 and older defined by specific DRGs or MS-DRGs and an ICD-9-CM code for an operating room procedure

Exclusions: Exclude cases:

- with principal diagnosis of deep vein thrombosis or pulmonary embolism or secondary diagnosis present on admission

- where a procedure for interruption of vena cava is the only operating room procedure

- where a procedure for interruption of vena cava occurs before or on the same day as the first operating room procedure

- MDC 14 (pregnancy, childbirth, and puerperium)

- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

Adjustment/Stratification: Statistical risk model. The predicted value for each case is computed using a hierarchical model (logistic regression with hospital random effect) and covariates for gender, age (in 5-year age groups), modified CMS DRG, and the AHRQ Comorbidity category. The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the years 2008, a database consisting of 42 states and approximately 30 million adult discharges. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., hospital). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate.

Age 18 to 24

Age 25 to 29

Age 30 to 34

Age 35 to 39

Age 40 to 44

0450 Postoperative Pulmonary Embolism or Deep Vein Thrombosis Rate (PSI 12)	
Age	45 to 49
Age	50 to 59
Age	65 to 74
Age	75 to 79
Age	80 to 84
Age	85+
MDRG	101
MDRG	102
MDRG	103
MDRG	104
MDRG	105
MDRG	107
MDRG	108
MDRG	401
MDRG	402
MDRG	502
MDRG	503
MDRG	505
MDRG	507
MDRG	508
MDRG	509
MDRG	511
MDRG	514
MDRG	519
MDRG	601
MDRG	602
MDRG	603
MDRG	604
MDRG	611
MDRG	701
MDRG	705
MDRG	801
MDRG	802
MDRG	804
MDRG	805
MDRG	806
MDRG	807
MDRG	808
MDRG	811
MDRG	815
MDRG	1001
MDRG	1003
MDRG	1006
MDRG	1101

0450 Postoperative Pulmonary Embolism or Deep Vein Thrombosis Rate (PSI 12)	
MDRG	1102
MDRG	1103
MDRG	1104
MDRG	1107
MDRG	1109
MDRG	1201
MDRG	1301
MDRG	1302
MDRG	1303
MDRG	1304
MDRG	1707
MDRG	1708
MDRG	1709
MDRG	1801
MDRG	1802
MDRG	2104
MDRG	2406
MDRG	2407
MDRG	2408
MDRG	2501
MDRG	7701
MDRG	7702
MDC	1
MDC	4
MDC	5
MDC	7
MDC	11
MDC	12
MDC	16
MDC	17
MDC	18
MDC	21
MDC	22
MDC	24
MDC	25
TRNSFER	Transfer-in
COMORB	CHF
COMORB	VALVE
COMORB	PULMCIRC
COMORB	PERIVASC
COMORB	HTN_C
COMORB	PARA
COMORB	NEURO
COMORB	CHRNLUNG

0450 Postoperative Pulmonary Embolism or Deep Vein Thrombosis Rate (PSI 12)	
COMORB	DM
COMORB	HYPOTHY
COMORB	RENLFAIL
COMORB	AIDS
COMORB	LYMPH
COMORB	METS
COMORB	TUMOR
COMORB	OBESE
COMORB	WGHTLOSS
COMORB	BLDLOSS
COMORB	ANEMDEF
COMORB	ALCOHOL
COMORB	DRUG
COMORB	PSYCH
COMORB	DEPRESS Not applicable

Level of Analysis: Facility

Type of Measure: Outcome

Data Source: Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD.

Measure Steward: Agency for Healthcare Research and Quality

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: **Y-20; N-2**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-8; M-1; L-0; I-0**; **1b.** Performance Gap: **H-6; M-3; L-0; I-0**

1c. Evidence Quantity: **H-3; M-2; L-1; I-1**; Quality: **H-3; M-2; L-1; I-1**; Consistency: **H-3; M-2; L-1; I-1**

Rationale: The measure was considered important due to its high impact and opportunity for improvement.

2. Scientific Acceptability of Measure Properties: Y-20; N-1

(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)

2a. Reliability: **H-6; M-2; L-1; I-0**; **2b.** Validity: **H-4; M-2; L-3; I-0**

Rationale: The Committee discussed the measure in light of new studies provided by AHRQ representatives further indicating the scientific acceptability of the measure. The evidence demonstrated that changes in the ICD-9 codes and present-on-admission information reduced the number of false positives captured by the measure. The Committee accepted that the data provided from the studies reflected a decrease in false positives that would be indicative of a larger body of evidence.

3. Usability: H-8; M-12; L-1; I-0

(*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)*

3a. Public Reporting: **H-6; M-2; L-1; I-0**

3b. QI: **H-6; M-2; L-1; I-0**

Rationale:

0450 Postoperative Pulmonary Embolism or Deep Vein Thrombosis Rate (PSI 12)

4. Feasibility: H-13; M-7; L-1; I-0

(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)

4a. Byproduct of Care Processes: **H-9; M-0; L-0; I-0**

4b. Electronic data sources: **H-8; M-1; L-0; I-0**

4c. Suscep inaccuracies, consequences: **H-7; M-1; L-1; I-0**

4d. Data collection strategy: **H-8; M-1; L-0; I-0**

Rationale:

Steering Committee Recommendation for Endorsement: Y-20; N-1

Rationale: The measure indicated an opportunity for improvement and was proven to be scientifically acceptable through new studies, which demonstrated a reduction in the number of false positives captured by the measure.

Public and Member Comment

Comments included:

- Only pulmonary embolism and lower extremity DVT should be included
- Concern that use of the present on admission indicator could exclude patients who acquired VTE as a result of a previous hospital admission
- Request for consideration of other risk factors for DVT (such as dementia, frailty, or high risk for falls)
- Request for harmonization with measure 0376

Developer response: 0450 excludes cases from the denominator "with principal diagnosis of deep vein thrombosis or pulmonary embolism or secondary diagnosis present on admission." New ICD-9-CM codes implemented in FY 2010 capture superficial, upper extremity, and chronic venous thromboses; such cases are no longer included in the numerator. The POA data and new coding increased the positive predictive value (PPV) for this measure as confirmed in medical record review; these results were shared with the Steering Committee.

We agree that using linked discharged data may result in improved sensitivity of this measure. We appreciate these suggestions and will consider them in future development. We also agree that combined process-outcome composite measure might be useful for quality improvement; providers would focus on prophylaxis to the degree that there is a performance gap, while retaining an outcomes focus on other dimensions of performance.

The risk adjustment model does include a broad set of conditions and comorbidities as covariates. Those risk factors that had explanatory power where included in the model. However, we appreciate the input and will review the existing model for potential refinements. There is a separate measure for postoperative hemorrhage or hematoma (PSI #9) that might capture how well providers address this tradeoff.

Committee response:

Regarding harmonization, The Joint Commission clarified for the Steering Committee that measure 0376 should properly be understood as a process measure – the measure looks retrospectively at the care of patients who have developed VTE and determines whether prophylaxis was provided in those cases. In contrast, measure 0450 is an outcome measure, measuring providers' rates of PE or DVT. For this reason, the Steering Committee does not believe that harmonization of these measures is required.

The Committee did not agree that dementia, frailty, and falls were risk factors for DVT, so did not think that those factors needed to be incorporated into the measure. Committee members were satisfied with the developer's assurances that the measure is limited to acute lower extremity DVT and PE.

The Committee acknowledged that the potential exclusion of patients who acquired VTE as the result of a previous admission was a limitation of the measure, but did not feel that this warranted reversal of the Committee's recommendation of the measure for endorsement.

CSAC Approved (May 14, 2012)

Board Endorsed (June 18, 2012)

0267 Wrong Site, Wrong Side, Wrong Patient, Wrong Procedure, Wrong Implant

Measure Submission Form

Description: Percentage of ASC admissions experiencing a wrong site, wrong side, wrong patient, wrong procedure, or wrong implant event.

Numerator Statement: ASC admissions experiencing a wrong site, wrong side, wrong patient, wrong procedure, or wrong implant

Denominator Statement: All ASC admissions

Exclusions: None

Adjustment/Stratification: No risk adjustment or risk stratification Not applicable The measure is not stratified

Level of Analysis: Facility

Type of Measure: Outcome

Data Source: Paper Records ASC medical records, as well as incident/occurrence reports, and variance reports may serve as data sources. No specific collection instrument is required although the ASC Quality Collaboration has developed a sample data collection instrument that may be used as desired. Facilities may use any collection instrument that allows tracking of all wrong site, wrong side, wrong patient, wrong procedure, and wrong implant events.

Measure Steward: Ambulatory Surgical Center Quality Collaboration

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: **Y-22; N-0**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-6; M-1; L-0; I-0**; **1b.** Performance Gap: **H-5; M-2; L-0; I-0**

1c. Evidence Quantity: **H-4; M-2; L-1; I-0**; Quality: **H-3; M-3; L-1; I-0**; Consistency: **H-3; M-4; L-0; I-0**

Rationale: The measure provides a way to collect information on a serious reportable event and will improve ambulatory surgical care. The rate for surgeries involving the wrong site, side, patient, procedure or implant ranged from a minimum of 0.00% to a maximum of 0.31%.

2. Scientific Acceptability of Measure Properties: Y-21; N-1

(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)

2a. Reliability: **H-5; M-1; L-1; I-0**; **2b.** Validity: **H-5; M-2; L-0; I-0**

Rationale: The measure is reported in the ambulatory care setting, increasing the monitoring of wrong site, wrong side procedures beyond the in-patient setting. The Committee suggested that in the future the measure be stratified by procedure and reported as a count to keep it consistent with hospitals' current monitoring practices. Reliability and validity of the measure as specified was demonstrated.

3. Usability: H-15; M-6; L-1; I-0

(*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)*

3a. Public Reporting: **H-6; M-1; L-0; I-0**

3b. QI: **H-6; M-1; L-0; I-0**

Rationale: The measure is currently being collected on a voluntary basis and will be included in CMS' mandatory reporting program beginning October 1, 2012. It is reported on a publicly available website, and in the future the developer will be able to report statistics based on demographics, procedure and state.

4. Feasibility: H-12; M-9; L-0; I-0

(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)

4a. Byproduct of Care Processes: **H-5; M-1; L-1; I-0**

4b. Electronic data sources: **H-2; M-3; L-2; I-0**

4c. Suscep inaccuracies, consequences: **H-4; M-3; L-0; I-0**

4d. Data collection strategy: **H-6; M-1; L-0; I-0**

Rationale: The measure is effectively collected from manual reviews of paper records.

0267 Wrong Site, Wrong Side, Wrong Patient, Wrong Procedure, Wrong Implant

Steering Committee Recommendation for Endorsement: Y-21; N-1

Rationale: The measure is used to track wrong site, wrong side surgeries in the ambulatory surgery setting b for mandatory reporting on a serious reportable event. The gap in care demonstrates an opportunity for improvement with a maximum rate for surgeries involving the wrong site, side, patient, procedure or implant of 0.31%.

Public and Member Comment

Comments included:

- Support for the measure

Comments did not require further Steering Committee action.

CSAC Approved (May 14, 2012)

Board Endorsed (June 18, 2012)

0344 Accidental Puncture or Laceration Rate (PDI 1)

Measure Submission Form

Description: Percent of discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code denoting accidental cut, puncture, perforation, or laceration during a procedure in any secondary diagnosis field.

Numerator Statement: Discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code denoting accidental cut, puncture, perforation, or laceration during a procedure in any secondary diagnosis field.

Denominator Statement: All surgical and medical discharges under age 18 defined by specific DRGs or MS-DRGs.

Exclusions: Exclude cases:

- with principal diagnosis denoting accidental cut, puncture, perforation, or laceration or secondary diagnosis present on admission

- normal newborn

- neonate with birth weight less than 500 grams (Birth Weight Category 1)

- MDC 14 (pregnancy, childbirth, and puerperium)

- with ICD-9-CM code for spine surgery

- with missing discharge gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

See Pediatric Quality Indicators Appendices:

- Appendix I – Definitions of, Neonate, Newborn, Normal Newborn, and Outborn

- Appendix L – Low Birth Weight Categories

Adjustment/Stratification: Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with hospital random effect) and covariates for gender, birthweight (500g groups), age in days (29-60, 61-90, 91+), age in years (in 5-year age groups), modified CMS DRG and AHRQ CCS comorbities. The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the years 2008, a database consisting of 43 states and approximately 6 million pediatric discharges. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., hospital). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate.

Covariates used in this measures:

MDC 5

MDC 6

MDC 8

0344 Accidental Puncture or Laceration Rate (PDI 1)
MDC 11 MDC 15 MDC OTHER Procedure Type 2 Procedure Type 3 Procedure Type 4 to 5 Procedure Type 6 Procedure Type 7 *** Risk adjust by risk category (Procedure Type) 1. No therapeutic procedure with any or no diagnostic procedures 2. Only minor therapeutic procedure with any or no diagnostic procedures 3. One major therapeutic without diagnostic procedure 4. One major therapeutic with only minor diagnostic procedure(s) 5. One major therapeutic with major diagnostic procedure(s) 6. Two major therapeutic procedures with any or no diagnostic procedures 7. Three or more major therapeutic procedures with any or no diagnostic procedures; Clinical categories for PDI 1 are based on Major Diagnostic Categories (MDC). Stratum 1. Eye, ear, nose, mouth, throat, skin, breast, and other low-risk procedures (MDC 2, 3, 9, 19, 22, 23) Stratum 2. Thoracic, cardiovascular, and specified neoplastic procedures (MDC 4, 5, 17) Stratum 3. Kidney, and male/female reproductive procedures MDC 11, 12, 13) Stratum 4. Infectious, immunological, hematological, and ungroupable procedures (MDC 0/99, 16, 18, 25) Stratum 5. Trauma, orthopedic, and neurologic procedures (MDC 1, 8, 21, 24) Stratum 6. Gastrointestinal, hepatobiliary, and endocrine procedures (MDC 6, 7, 10) **Level of Analysis:** Facility **Type of Measure:** Outcome **Data Source:** Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD. **Measure Steward:** Agency for Healthcare Research and Quality
STEERING COMMITTEE MEETING 12/15-16/2011 **1. Importance to Measure and Report**: **Y-18; N-3** (1a. High Impact: 1b. Performance Gap, 1c. Evidence) **1a.** Impact: **H-3; M-2; L-1; I-0**; **1b.** Performance Gap: **H-2; M-1; L-3; I-0** **1c.** Evidence Quantity: **H-0; M-3; L-3; I-0**; Quality: **H-1; M-4; L-1; I-0**; Consistency: **H-1; M-2; L-3; I-0** Rationale: The Committee recognized that the measure affects small numbers of patients. They agreed that the key problem with accidental lacerations is those that occur without detection, resulting in a complication.

0344 Accidental Puncture or Laceration Rate (PDI 1)

2. Scientific Acceptability of Measure Properties: Y-18; N- 3

(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)

2a. Reliability: **H-2; M-3; L-1; I-0**; **2b.** Validity: **H-;1 M-3; L-2; I-0**

Rationale: The Committee noted that the risk adjustment could include additional factors, such as specialty or body part and that the measure's validity was impacted by the reliance on administrative data. The developer stated that work continues to determine if data from laboratories, electronic health records, and other sources could be incorporated into the measure to increase its validity. Coding updates and refinements are continuously made to address the issue and it has improved since the measure was initially developed.

3. Usability: H-3; M-13; L-4; I-0

(*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)*

3a. Public Reporting: **H-0; M-4; L-1; I-0**

3b. QI: **H-1; M-4; L-0; I-0**

Rationale: The Committee stated that the measure has been publicly reported for several years.

4. Feasibility: H-8; M-10; L-2; I-0

(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)

4a. Byproduct of Care Processes: **H-5; M-1; L-0; I-0**

4b. Electronic data sources: **H-4; M-1; L-1; I-0**

4c. Suscep inaccuracies, consequences: **H-3; M-3; L-0; I-0**

4d. Data collection strategy: **H-5; M-1; L-0; I-0**

Rationale: Given its reliance on administrative data, the measure is feasible as specified.

Steering Committee Recommendation for Endorsement: Y-19 ; N-2

Rationale: The measure is a useful indicator of quality by monitoring rates of accidental cuts, punctures, perforations, or lacerations among pediatric patients.

Public and Member Comment

Comments included:

- Support for the measure

Comments did not require further Steering Committee action.

CSAC Approved (May 14, 2012)

Board Endorsed (June 18, 2012)

0345 Accidental Puncture or Laceration Rate (PSI 15)

Measure Submission Form

Description: Percent of discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code denoting accidental cut, puncture, perforation, or laceration during a procedure in any secondary diagnosis field.

Numerator Statement: Discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code denoting accidental cut, puncture, perforation, or laceration during a procedure in any secondary diagnosis field.

Denominator Statement: All surgical and medical discharges age 18 years and older defined by specific DRGs or MS-DRGs.

Exclusions: Exclude cases:

- with principal diagnosis denoting accidental cut, puncture, perforation, or laceration or secondary diagnosis present on

admission

- MDC 14 (pregnancy, childbirth, and puerperium)

- with ICD-9-CM code for spine surgery

- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

Adjustment/Stratification: Statistical risk model. The predicted value for each case is computed using a hierarchical model (logistic regression with hospital random effect) and covariates for gender, age, modified CMS DRG, transfer status, procedure day availability, and the AHRQ Comorbidity category. The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the years 2008, a database consisting of 42 states and approximately 30 million adult discharges. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., hospital). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate.

Covariates used in this measures:

Sex	Female
Age	18 to 24
Age	25 to 29
Age	30 to 59
MDRG	101
MDRG	103
MDRG	107
MDRG	302
MDRG	401
MDRG	402
MDRG	416
MDRG	502
MDRG	503
MDRG	504
MDRG	505
MDRG	506
MDRG	507
MDRG	508
MDRG	510
MDRG	511
MDRG	513
MDRG	514
MDRG	519
MDRG	520
MDRG	522
MDRG	601
MDRG	602
MDRG	603
MDRG	604
MDRG	606
MDRG	609

0345 Accidental Puncture or Laceration Rate (PSI 15)
MDRG 610
MDRG 611
MDRG 621
MDRG 701
MDRG 702
MDRG 703
MDRG 704
MDRG 705
MDRG 712
MDRG 806
MDRG 807
MDRG 815
MDRG 816
MDRG 1001
MDRG 1003
MDRG 1005
MDRG 1006
MDRG 1101
MDRG 1102
MDRG 1103
MDRG 1104
MDRG 1105
MDRG 1107
MDRG 1109
MDRG 1201
MDRG 1204
MDRG 1301
MDRG 1302
MDRG 1303
MDRG 1304
MDRG 1305
MDRG 1306
MDRG 1307
MDRG 1308
MDRG 1707
MDRG 1709
MDRG 1801
MDRG 1802
MDRG 2104
MDRG 2108
MDRG 2408
MDRG 7702
MDC 3
MDC 4

0345 Accidental Puncture or Laceration Rate (PSI 15)
MDC 5 MDC 6 MDC 7 MDC 8 MDC 9 MDC 11 MDC 12 MDC 13 MDC 16 MDC 17 MDC 18 MDC 21 MDC 24 MDC Other TRNSFER Transfer-in NOPRDAY Procedure Days Data Not Available COMORB PERIVASC COMORB DM COMORB DMCX COMORB RENLFAIL COMORB OBESE COMORB WGHTLOSS COMORB BLDLOSS COMORB ANEMDEF Not applicable **Level of Analysis:** Facility **Type of Measure:** Outcome **Data Source:** Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD. **Measure Steward:** Agency for Healthcare Research and Quality
STEERING COMMITTEE MEETING 12/15-16/2011 **1. Importance to Measure and Report**: **Y-20; N-2** (1a. High Impact: 1b. Performance Gap, 1c. Evidence) **1a.** Impact: **H-4; M-2; L-0; I-0**; **1b.** Performance Gap: **H-4; M-1; L-1; I-0** **1c.** Evidence Quantity: **H-;2 M-3; L-1; I-0**; Quality: **H-3; M-3; L-0; I-0**; Consistency: **H-2; M-3; L-1; I-0** Rationale: The Committee recognized that the measure affects small numbers of patients. They agreed that the key problem with accidental lacerations is those that occur without detection, resulting in a complication.
2. Scientific Acceptability of Measure Properties: Y-20; N-2 (2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity) **2a.** Reliability: **H-;2 M-3; L-1; I-0**; **2b.** Validity: **H-2; M-3; L-1; I-0** Rationale: The Committee noted that the risk adjustment could include additional factors, such as specialty or body part and that the measure's validity was impacted by the reliance on administrative data. The developer stated that work continues to determine if data from laboratories, electronic health records, and other sources could be incorporated into the measure to increase its validity. Coding updates and refinements are continuously made to address the issue and it has improved since the measure was initially developed.
3. Usability: H-3; M-16; L-3; I-0

0345 Accidental Puncture or Laceration Rate (PSI 15)

(*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)*

3a. Public Reporting: **H-3; M-2; L-1; I-0**

3b. QI: **H-4; M-0; L-2; I-0**

Rationale: The Committee stated that the measure has been publicly reported for several years.

4. Feasibility: H-9; M-11; L-2; I-0

(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)

4a. Byproduct of Care Processes: **H-5; M-1; L-0; I-0**

4b. Electronic data sources: **H-5; M-0; L-1; I-0**

4c. Suscep inaccuracies, consequences: **H-4; M-2; L-0; I-0**

4d. Data collection strategy: **H-5; M-1; L-0; I-0**

Rationale: Given its reliance on administrative data, the measure is feasible as specified.

Steering Committee Recommendation for Endorsement: Y-20 ; N-2

Rationale: The measure is a useful indicator of quality by monitoring rates of accidental cuts, punctures, perforations, or lacerations among adult patients.

Public and Member Comment

Comments included:

- Support for the measure

Comments did not require further Steering Committee action.

CSAC Approved (May 14, 2012)

Board Endorsed (June 18, 2012)

0362 Foreign Body left after procedure (PDI 3)

Measure Submission Form

Description: Count of discharges with foreign body left in during procedure in medical and surgical discharges among patients less than 18 years and not MDC 14 (pregnancy, childbirth, and puerperium)

Numerator Statement: Discharges under age 18 with ICD-9-CM codes for foreign body left in during procedure in any secondary diagnosis field of medical and surgical discharges defined by specific DRGs or MS-DRGs where several exclusions are applied to the numerator. (Details of the numerator, medical and surgical discharges DRGs and MS-DRGs, and exclusions appear in 2a1.3).

Denominator Statement: Not applicable

Exclusions: Not applicable

Adjustment/Stratification: No risk adjustment or risk stratification Not applicable Not applicable

Level of Analysis: Facility

Type of Measure: Outcome

Data Source: Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD.

Measure Steward: Agency for Healthcare Research and Quality

0362 Foreign Body left after procedure (PDI 3)

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: **Y-22; N-0**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-4; M-1; L-0; I-0**; **1b.** Performance Gap: **H-4; M-1; L-0; I-0**

1c. Evidence Quantity: **H-3; M-1; L-0; I-0**; Quality: **H-3; M-1; L-0; I-0**; Consistency: **H-3; M-1; L-0; I-0**

Rationale: All agreed that this measure continues to address an important patient safety area. The Committee discussed the incidence of foreign bodies being retained after a procedure and noted that once the statistics were further broken down to exclude foreign bodies left behind intentionally, there appeared to be a much lower rate of occurrence. They also suggested that the measure name could be changed to reduce confusion based on objects that were intentionally retained.

2. Scientific Acceptability of Measure Properties: Y-15; N- 7

(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)

2a. Reliability: **H-3; M-1; L-1; I-0**; **2b.** Validity: **H-;2 M-2; L-1; I-0**

Rationale: The Committee debated at what point a foreign body would be considered "left after procedure" – i.e., at what point the surgical procedure officially ends – and noted the differences between a foreign body being left intentionally after surgery versus a foreign body left accidentally. Foreign bodies that affect the care management of a patient are counted in the measure and AHRQ confirmed that the definitions and time windows are consistent with the definitions for the similar serious reportable event (SRE). The Committee noted that device fragments may be left intentionally to reduce the potential for further injury inflicted by retrieval and stated that this would be coded as a "foreign body" within the measure as currently specified. The Committee requested that future versions of the measure be stratified by intended retained bodies, unintended retained bodies, and device malfunctions. The developer indicated it would be possible to capture this information through ICD-10 codes in the future.

3. Usability: H-2; M-12; L-8; I-0

(*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)*

3a. Public Reporting: **H-1; M-3; L-1; I-0**

3b. QI: **H-3; M-1; L-1; I-0**

Rationale: The Committee questioned how the measure would improve quality and whether capturing the data would lead to a decrease in foreign bodies left after a procedure but agreed that it continued to be useful for both consumers and providers.

4. Feasibility: H-6; M-11; L-5; I-0

(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)

4a. Byproduct of Care Processes: **H-5; M-0; L-0; I-0**

4b. Electronic data sources: **H-5; M-0; L-0; I-0**

4c. Suscep inaccuracies, consequences: **H-3; M-1; L-1; I-0**

4d. Data collection strategy: **H-3; M-1; L-1; I-0**

Rationale: They encouraged the developer to utilize codes in the future that would reflect irretrievable device fragments, to differentiate between types of foreign bodies left after a procedure, which will hopefully be achieved when ICD10 is implemented. Because this measure is collected using administrative data, it was considered feasible.

Steering Committee Recommendation for Endorsement: Y- 17; N-4

Rationale: The Committee agreed the measure was important and encouraged the developer to further differentiate between types of foreign bodies left after procedure in future iterations.

0362 Foreign Body left after procedure (PDI 3)

Public and Member Comment

Comments included:

- Request to combine this measure with measure 0363 to increase the denominator population
- Clarification on why two separate rates are needed for the pediatric and adult populations

Developer response: Thank you for the comments. In addition to the ICD-10 specification, note also that in v4.5 of the AHRQ QI software then intention is to rename the measures "Retained surgical item or un-retrieved device fragment." The indicator is reported as a count, rather than a rate, so reliability in the sense discussed in the CMS study is not an issue. Note also that the measure requires data on present on admission (POA) to address false positives due to a foreign body from a previous encounter. Technically there is no denominator for these indicators as they are expressed as counts. The original rationale for reporting the counts separately for adult and pediatric populations was to increase the focus on the pediatric population.

Committee response:

The Steering Committee inquired as to the possibility of combining some of the pediatric and adult safety indicators into single measures stratified by age. The developer indicated that this could be a possibility in the future, but noted that in some cases there are differences in the risk adjustment models of the pediatric and adult safety indicators. The Committee agreed that it was appropriate to have the measures remain separate.

CSAC Approved (May 14, 2012)

Board Endorsed (June 18, 2012)

0363 Foreign Body Left During Procedure (PSI 5)

Measure Submission Form

Description: Count of discharges with foreign body left in during procedure in medical and surgical discharges among patients 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium)

Numerator Statement: Discharges, 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium), with ICD-9-CM codes for foreign body left in during procedure in any secondary diagnosis field of medical and surgical discharges defined by specific DRGs or MS-DRGs. (Details of medical and surgical discharges defined by specific DRGs or MS-DRGs and exclusions noted in 2a1.3).

Denominator Statement: Not applicable

Exclusions: Not applicable

Adjustment/Stratification: No risk adjustment or risk stratification Not applicable Not applicable

Level of Analysis: Facility

Type of Measure: Outcome

Data Source: Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD.

Measure Steward: Agency for Healthcare Research and Quality

0363 Foreign Body Left During Procedure (PSI 5)

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: **Y-22; N-0**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-4; M-1; L-0; I-0**; **1b.** Performance Gap: **H-4; M-1; L-0; I-0**

1c. Evidence Quantity: **H-3; M-1; L-0; I-0**; Quality: **H-3; M-1; L-0; I-0**; Consistency: **H-3; M-1; L-0; I-0**

Rationale: All agreed that this measure continues to address an important patient safety area. The Committee discussed the incidence of foreign bodies being retained after a procedure and noted that once the statistics were further broken down to exclude foreign bodies left behind intentionally, there appeared to be a much lower rate of occurrence. They also suggested that the measure name could be changed to reduce confusion based on objects that were intentionally retained.

2. Scientific Acceptability of Measure Properties: Y-15; N- 7

(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)

2a. Reliability: **H-3; M-1; L-1; I-0**; **2b.** Validity: **H-;2 M-2; L-1; I-0**

Rationale: Rationale: The Committee debated at what point a foreign body would be considered "left after procedure" – i.e., at what point the surgical procedure officially ends – and noted the differences between a foreign body being left intentionally after surgery versus a foreign body left accidentally. Foreign bodies that affect the care management of a patient are counted in the measure and AHRQ confirmed that the definitions and time windows are consistent with the definitions for the similar serious reportable event (SRE). The Committee noted that device fragments may be left intentionally to reduce the potential for further injury inflicted by retrieval and stated that this would be coded as a "foreign body" within the measure as currently specified. The Committee requested that future versions of the measure be stratified by intended retained bodies, unintended retained bodies, and device malfunctions. The developer indicated it would be possible to capture this information through ICD-10 codes in the future.

3. Usability: H-2; M-12; L-8; I-0

(*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)*

3a. Public Reporting: **H-1; M-3; L-1; I-0**

3b. QI: **H-3; M-1; L-1; I-0**

Rationale: The Committee questioned how the measure would improve quality and whether capturing the data would lead to a decrease in foreign bodies left after a procedure but agreed that it continued to be useful for both consumers and providers.

4. Feasibility: H-6; M-11; L-5; I-0

(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)

4a. Byproduct of Care Processes: **H-5; M-0; L-0; I-0**

4b. Electronic data sources: **H-5; M-0; L-0; I-0**

4c. Suscep inaccuracies, consequences: **H-3; M-1; L-1; I-0**

4d. Data collection strategy: **H-3; M-1; L-1; I-0**

Rationale: They encouraged the developer to utilize codes in the future that would reflect irretrievable device fragments, to differentiate between types of foreign bodies left after a procedure, which will hopefully be achieved when ICD10 is implemented. Because this measure is collected using administrative data, it was considered feasible.

Steering Committee Recommendation for Endorsement: Y- 17; N-4

Rationale: The Committee agreed the measure was important and encouraged the developer to further differentiate between types of foreign bodies left after procedure in future iterations.

0363 Foreign Body Left During Procedure (PSI 5)

Public and Member Comment

Comments included:

- Concern about the measure's sensitivity to different categories of foreign bodies left during procedures
- Concern about the measure's reliability
- Request to combine this measure with measure 0362 to increase the denominator population
- Clarification on why two separate rates are needed for the pediatric and adult populations

Developer response: Thank you for the comments. In addition to the ICD-10 specification, note also that in v4.5 of the AHRQ QI software then intention is to rename the measures "Retained surgical item or un-retrieved device fragment." The indicator is reported as a count, rather than a rate, so reliability in the sense discussed in the CMS study is not an issue. Note also that the measure requires data on present on admission (POA) to address false positives due to a foreign body from a previous encounter. Technically there is no denominator for these indicators as they are expressed as counts. The original rationale for reporting the counts separately for adult and pediatric populations was to increase the focus on the pediatric population.

Committee response:

As noted, the Steering Committee recognized the need for enhancing this measure's sensitivity to different categories of foreign bodies left during procedures. The Committee urged the developer to consider updating the measure to account for these different categories in the future. Regarding the measure's reliability, the Committee was satisfied with the developer's response. The Steering Committee inquired as to the possibility of combining some of the pediatric and adult safety indicators into single measures stratified by age. The developer indicated that this could be a possibility in the future, but noted that in some cases there are differences in the risk adjustment models of the pediatric and adult safety indicators. The Committee agreed that it was appropriate to have the measures remain separate.

CSAC Approved (May 14, 2012)

Board Endorsed (June 18, 2012)

0263 Patient Burn

Measure Submission Form

Description: Percentage of ASC admissions experiencing a burn prior to discharge

Numerator Statement: Ambulatory surgical center (ASC) admissions experiencing a burn prior to discharge.

Denominator Statement: All ASC admissions.

Exclusions: None

Adjustment/Stratification: No risk adjustment or risk stratification. None. This measure is not stratified.

Level of Analysis: Facility

Type of Measure: Outcome

Data Source: Paper Records ASC medical records, as well as incident/occurrence reports, and variance reports may serve as data sources. No specific collection instrument is required although the ASC Quality Collaboration has developed a sample data collection instrument that may be used as desired. Facilities may use any collection instrument that allows tracking of all burns prior to discharge.

Measure Steward: Ambulatory Surgical Center Quality Collaboration

0263 Patient Burn

Measure Submission Form

Description: Percentage of ASC admissions experiencing a burn prior to discharge

Numerator Statement: Ambulatory surgical center (ASC) admissions experiencing a burn prior to discharge.

Denominator Statement: All ASC admissions.

Exclusions: None

Adjustment/Stratification: No risk adjustment or risk stratification. None. This measure is not stratified.

Level of Analysis: Facility

Type of Measure: Outcome

Data Source: Paper Records ASC medical records, as well as incident/occurrence reports, and variance reports may serve as data sources. No specific collection instrument is required although the ASC Quality Collaboration has developed a sample data collection instrument that may be used as desired. Facilities may use any collection instrument that allows tracking of all burns prior to discharge.

Measure Steward: Ambulatory Surgical Center Quality Collaboration

STEERING COMMITTEE MEETING 12/15-16/2011

Importance to Measure and Report: **Y-22; N-0**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-4; M-1; L-1; I-0**; **1b.** Performance Gap: **H-2; M-3; L-1; I-0**

1c. Evidence Quantity: **H-2; M-1; L-2; I-0**; Quality: **H-1; M-2; L-2; I-0**; Consistency: **H-2; M-2; L-1-; I-0**

Rationale: The Committee agreed that while a patient burn is a rare event, it could lead to serious consequences for both the patient and hospital staff. This measure would provide an avenue for ambulatory surgical centers to collect data on a serious reportable event.

2. Scientific Acceptability of Measure Properties: Y-21; N-1

(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)

2a. Reliability: **H-4; M-2; L-0; I-0**; **2b.** Validity: **H-3; M-3; L-0; I-0**

Rationale: The measure provides a precise definition of burns, which is designed to capture the variety of ways a patient could be injured.

3. Usability: H-15; M-5; L-0; I-0

(*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)*

3a. Public Reporting: **H-5; M-0; L-0; I-1**

3b. QI: **H-5; M-0; L-0; I-1**

Rationale: The measure will lead to public reporting and quality improvement of a serious reportable event in the ambulatory setting.

4. Feasibility: H-18; M-5; L-0; I-0

(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)

4a. Byproduct of Care Processes: **H-2; M-2; L-0; I-1**

4b. Electronic data sources: **H-1; M-1; L-2; I-1**

4c. Suscep inaccuracies, consequences: **H-2; M-1; L-1; I-1**

4d. Data collection strategy: **H-3; M-0; L-1; I-1**

Rationale: The Committee expressed concern that some burns may not be captured due to a patient's short length of stay, but acknowledged that these events were already being voluntarily reported

Steering Committee Recommendation for Endorsement: Y- 22; N-0

Rationale: While patient burns are a rare event, they can lead to serious consequences. The measure will raise awareness about the varying types of burns that may result in patient injury.

0263 Patient Burn

Measure Submission Form

Description: Percentage of ASC admissions experiencing a burn prior to discharge

Numerator Statement: Ambulatory surgical center (ASC) admissions experiencing a burn prior to discharge.

Denominator Statement: All ASC admissions.

Exclusions: None

Adjustment/Stratification: No risk adjustment or risk stratification. None. This measure is not stratified.

Level of Analysis: Facility

Type of Measure: Outcome

Data Source: Paper Records ASC medical records, as well as incident/occurrence reports, and variance reports may serve as data sources. No specific collection instrument is required although the ASC Quality Collaboration has developed a sample data collection instrument that may be used as desired. Facilities may use any collection instrument that allows tracking of all burns prior to discharge.

Measure Steward: Ambulatory Surgical Center Quality Collaboration

Public and Member Comment

Comments included:

- Support for the measure
- Request that the measure's methodology be consistent with the inpatient burn measure

  Developer response: We thank the commenter for their support of the use of ASC standards. We are not aware of a related inpatient measure of burns.

NQF staff note: NQF has not endorsed an inpatient burn measure.

CSAC Approved (May 14, 2012)

Board Endorsed (June 18, 2012)

0346 Iatrogenic Pneumothorax Rate (PSI 6)

Measure Submission Form

Description: Percent of discharges with ICD-9-CM code for iatrogenic pneumothorax in any secondary diagnosis field among cases meeting the inclusion and exclusion rules for the denominator

Numerator Statement: Discharges with ICD-9-CM code for iatrogenic pneumothorax in any secondary diagnosis field among cases meeting the inclusion and exclusion rules for the denominator.

Denominator Statement: All surgical and medical discharges age 18 years and older defined by specific DRGs or MS-DRGs.

Exclusions: Exclude cases:

- with principal diagnosis of iatrogenic pneumothorax or secondary diagnosis present on admission

- MDC 14 (pregnancy, childbirth, and puerperium)

- with any diagnosis code of chest trauma or pleural effusion

- with a code of diaphragmatic surgery repair in any procedure field

- with any code indicating thoracic procedure, lung or pleural biopsy, or cardiac procedure

- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

Adjustment/Stratification: Statistical risk model. The predicted value for each case is computed using a hierarchical model (logistic regression with hospital random effect) and covariates for gender, age (in 5-year age groups), modified CMS DRG, and the AHRQ Comorbidity category. The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the years 2008, a database consisting of

0346 Iatrogenic Pneumothorax Rate (PSI 6)

42 states and approximately 30 million adult discharges. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., hospital). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate.

Sex	Female
Age	65 to 85+
MDRG	416
MDRG	504
MDRG	510
MDRG	601
MDRG	602
MDRG	1103
MDRG	1801
MDRG	1807
MDC	1
MDC	6
MDC	8
MDC	25
NOPRDAY	Procedure Days Data Not Available
COMORB	HTN_C
COMORB	NEURO
COMORB	CHRNLUNG
COMORB	DM
COMORB	DMCX
COMORB	METS
COMORB	OBESE
COMORB	WGHTLOSS
COMORB	DRUG Not applicable

Level of Analysis: Facility

Type of Measure: Outcome

Data Source: Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD.

Measure Steward: Agency for Healthcare Research and Quality

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: **Y-18; N-1**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-2; M-2; L-0; I-0**; **1b.** Performance Gap: **H-3; M-1; L-0; I-0**

1c. Evidence Quantity: **H-1; M-2; L-1; I-0**; Quality: **H-2; M-1; L-1; I-0**; Consistency: **H-1; M-2; L-1; I-0**

Rationale: The measure indicates a small performance gap, but focuses on an event which is relatively common. Additionally, it may be difficult to detect differences in performance between hospitals based on low volumes of iatrogenic pneumothoraxes. However, the Committee felt that it was important to capture these serious adverse events, many of which are preventable.

0346 Iatrogenic Pneumothorax Rate (PSI 6)
2. Scientific Acceptability of Measure Properties: Y-17; N-2 (2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity) **2a.** Reliability: **H-3; M-1; L-0; I-0**; **2b.** Validity: **H-4; M-0; L-0; I-0** Rationale: The measure is derived from administrative claims data, which has been shown to be consistent and reliable. The Committee noted that the measure had a number of exclusions but agreed that they were necessary and reasonable. The Committee encouraged the developer to continue work on appropriate validation studies. The positive predictive values both for the adult and pediatric measures were low but determined to be acceptable.
3. Usability: H-6; M-12; L-1; I-0 (*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)* **3a.** Public Reporting: **H-3; M-1; L-0; I-0** **3b.** QI: **H-3; M-1; L-0; I-0** Rationale: The Committee stated that the measure has been reported in the public domain and has led to quality improvement.
4. Feasibility: H-9; M-9; L-1; I-0 *(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)* **4a.** Byproduct of Care Processes: **H-3; M-1; L-0; I-0** **4b.** Electronic data sources: **H-3; M-1; L-0; I-0** **4c.** Suscep inaccuracies, consequences: **H-3; M-1; L-0; I-0** **4d.** Data collection strategy: **H-3; M-1; L-0; I-0** Rationale: The measure has been updated to reduce the likelihood of inaccuracies and appropriately capture the iatrogenic pneumothorax rate. Because this measure is collected using administrative data, it was considered feasible..
Steering Committee Recommendation for Endorsement: Y- 18; N-1 **Rationale**: The measure continues to provide information on an event that may be preventable and facilitates quality improvement.
Public and Member Comment **Comments included:** • Support for the measure Comments did not require further Steering Committee action.
CSAC Approved (May 14, 2012)
Board Review (June 18, 2012)

0348 Iatrogenic Pneumothorax Rate (PDI 5)

Measure Submission Form

Description: Percent of discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code of iatrogenic pneumothorax in any secondary diagnosis field

Numerator Statement: Discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code of iatrogenic pneumothorax in any secondary diagnosis field

Denominator Statement: Discharges, age under 18 years, defined by specific surgical and medical DRGs

Exclusions: Exclude cases:

- neonates with birth weight less than 2500 grams (Birth Weight Category 1-8)

- with principal diagnosis of iatrogenic pneumothorax or secondary diagnosis present on admission

- with any diagnosis code of chest trauma or pleural effusion

- with an ICD-9-CM procedure code of thoracic surgery, lung or pleural biopsy, diaphragmatic surgery repair, OR cardiac surgery

- normal newborn

- MDC 14 (pregnancy, childbirth, and puerperium)

- with missing discharge gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

Adjustment/Stratification: Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with hospital random effect) and covariates for gender, birthweight (500g groups), age in days (29-60, 61-90, 91+), age in years (in 5-year age groups), modified CMS DRG and AHRQ CCS comorbities. The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the years 2008, a database consisting of 43 states and approximately 6 million pediatric discharges. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., hospital). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate.

Age in Years 13 to 18

Age in Years 1 to 13 Not applicable

Level of Analysis: Facility

Type of Measure: Outcome

Data Source: Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD.

Measure Steward: Agency for Healthcare Research and Quality

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: **Y-18; N-1**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-2; M-2; L-0; I-0**; **1b.** Performance Gap: **H-3; M-1; L-0; I-0**

1c. Evidence Quantity: **H-1; M-2; L-1; I-0**; Quality: **H-2; M-1; L-1; I-0**; Consistency: **H-1; M-2; L-1; I-0**

Rationale: The Committee noted that the performance gap had decreased on the measure over time. However, a continued reduction in the prevalence of these events shows that the performance gap can still be improved.

2. Scientific Acceptability of Measure Properties: Y-17; N-2

(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)

2a. Reliability: **H-3; M-1; L-0; I-0**; **2b.** Validity: **H-4; M-0; L-0; I-0**

Rationale: The measure is derived from administrative claims data, which has been shown to be consistent and reliable. The Committee noted that the measure had a number of exclusions but agreed that they were necessary and reasonable. The Committee noted that the developer should continue to work on appropriate validation studies. The positive predictive values both for the adult and pediatric measures were low but determined to be acceptable.

0348 Iatrogenic Pneumothorax Rate (PDI 5)
3. Usability: H-6; M-12; L-1; I-0 (*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)* **3a.** Public Reporting: **H-3; M-1; L-0; I-0** **3b.** QI: **H-3; M-1; L-0; I-0** Rationale: The Committee stated that the measure has been reported in the public domain and led to quality improvement.
4. Feasibility: H-9; M-9; L-1; I-0 *(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)* **4a.** Byproduct of Care Processes: **H-3; M-1; L-0; I-0** **4b.** Electronic data sources: **H-3; M-1; L-0; I-0** **4c.** Suscep inaccuracies, consequences: **H-3; M-1; L-0; I-0** **4d.** Data collection strategy: **H-3; M-1; L-0; I-0** Rationale: The measure has been updated to reduce the likelihood of inaccuracies and appropriately capture the iatrogenic pneumothorax rate. Because this measure is collected using administrative data, it was considered feasible..
Steering Committee Recommendation for Endorsement: Y- 18; N-1 **Rationale**: The measure continues to provide information on an event that may be preventable and facilitates quality improvement.
Public and Member Comment **Comments included:** • Support for the measure • Question regarding the age range covered by the measure **Developer response:** The target population includes all surgical and medical discharges under age 18 defined by specific DRGs or MS-DRGs. **Committee response:** The Steering Committee was satisfied with the developer's clarification.
CSAC Approved (May 14, 2012)
Board Review (June 18, 2012)

Measures Recommended For Reserve Status

0349 Transfusion Reaction (PSI 16)

Measure Submission Form

Description: The count of medical and surgical discharges for patients age greater than or equal to 18 or in MDC 14 with ICD-9-CM code for transfusion reaction in any secondary diagnosis field.

Numerator Statement: Discharges 18 years and older or in MDC 14 with ICD-9-CM codes for transfusion reaction in any secondary diagnosis field of all medical and surgical discharges defined by specific DRGs or MS-DRGs

See Patient Safety Indicators Appendices:

- Appendix B – Medical Discharge DRGs
- Appendix C – Medical Discharge MS-DRGs
- Appendix D – Surgical Discharge DRGs
- Appendix E – Surgical Discharge MS-DRGs

Link to PSI appendices: http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/TechnicalSpecifications/PSI%20Appendices.pdf

Exclude cases:

-with principal diagnosis of transfusion reaction or secondary diagnosis present on admission

-with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

Denominator Statement: Not applicable

Exclusions: Not applicable

Adjustment/Stratification: No risk adjustment or risk stratification Not applicable Not applicable

Level of Analysis: Facility

Type of Measure: Outcome

Data Source: Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD.

Measure Steward: Agency for Healthcare Research and Quality

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: **Y-6; N-15**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-2; M-2; L-0; I-1**; **1b.** Performance Gap: **H-2; M-1; L-2; I-0**

1c. Evidence Quantity: **H-2; M-2; L-1; I-0**; Quality: **H-2; M-2; L-1; I-0**; Consistency:

Rationale: The Committee questioned whether the measure would reduce transfusion reactions as the performance rate is currently low. However, the Committee agreed that collecting data on transfusion reactions may be used to reduce events in the future. The Committee also suggested that the measure's title may be wrongly interpreted to indicate a patient being given the wrong blood, when it collects data on a variety of transfusion reactions, such as reactions to antigens. The Committee affirmed that the low number of events provides evidence of industry success at managing transfusions and still meets two of the three criteria – high impact and evidence.

2. Scientific Acceptability of Measure Properties: Y-19; N- 2

(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)

2a. Reliability: **H-3; M-1; L-0; I-1**; **2b.** Validity: **H-3; M-1; L-0; I-1**

Rationale: The Committee stated that the measure provides precise specifications to count a variety of transfusion events and is used to monitor a serious reportable event.

0349 Transfusion Reaction (PSI 16)
3. Usability: H-5; M-10; L-6; I- (*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)* **3a.** Public Reporting: **H-2; M-2; L-1; I-0** **3b.** QI: **H-2; M-1; L-2; I-0** Rationale: The Committee expressed concern about the value of publicly reporting transfusion reactions and whether it would affect quality improvement. However, they also noted the measure could be easily interpreted by the public.
4. Feasibility: H-14; M-;5 L-2; I- *(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)* **4a.** Byproduct of Care Processes: **H-4; M-1; L-0; I-0** **4b.** Electronic data sources: **H-4; M-1; L-0; I-0** **4c.** Suscep inaccuracies, consequences: **H-3; M-1; L-1; I-0** **4d.** Data collection strategy: **H-4; M-1; L-0; I-0** Rationale: The measure has been implemented for a number of years, using administrative data, indicating that it is feasible to collect.
Steering Committee Recommendation for Endorsement: Reserve Status Y- 19; N-1 **Rationale**: The measure provides important information to the industry and consumers, highlighting a small but important performance gap. The Committee was concerned of the implications if endorsement was removed and no longer reported because of the low performance gap. Based on the Committee's discussion and votes, the measure continues to meet all of the criteria with the exception of an opportunity for improvement. The Committee stressed that this achievement should be celebrated but also it should be monitored to ensure that this event continues to be low; thus, they recommend that the measure be endorsed with reserve status.
Public and Member Comment **Comments included:** • Request for clarification regarding "reserve status" **Committee response:** The Committee determined that the measures continue to meet the guidance for recommending reserve status and did not change its recommendations. **NQF staff note:** The criteria for endorsement with reserve status are on the NQF web site and references to the information have been added on several web pages on the web site.
CSAC Approved (May 14, 2012)
Board Review (June 18, 2012)

0350 Transfusion Reaction (PDI 13)

Measure Submission Form

Description: The count of medical and surgical discharges for patients age less than 18 and not in MDC 14 with ICD-9-CM code for transfusion reaction in any secondary diagnosis field.

Numerator Statement: Discharges under age 18 with ICD-9-CM codes for transfusion reaction in any secondary diagnosis field of all medical and surgical discharges defined by specific DRGs or MS-DRGs with the exclusion of neonates, cases in MDC 14 and instances with the outcome of interest was present on admission.

See Pediatric Quality Indicators Appendices:

- Appendix B – Surgical DRGs
- Appendix C – Surgical MS-DRGs
- Appendix D – Medical DRGs
- Appendix E – Medical MS-DRGs
- Appendix I – Definitions of, Neonate, Newborn, Normal Newborn, and Outborn

Link to PDI appendices: http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/TechnicalSpecifications/PDI%20Appendices.pdf

Cases excluded with missing gender (SEX=missig, age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

Denominator Statement: Not applicable

Exclusions: Not applicable

Adjustment/Stratification: No risk adjustment or risk stratification Not applicable Not applicable

Level of Analysis: Facility

Type of Measure: Outcome

Data Source: Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD.

Measure Steward: Agency for Healthcare Research and Quality

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: **Y-6; N-15**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-3; M-1; L-0; I-1**; **1b.** Performance Gap: **H-1; M-2; L-2; I-0**

1c. Evidence Quantity: **H-1; M-3; L-1; I-0**; Quality: **H-1; M-3; L-1; I-0**; Consistency: **H-2; M-2; L-1; I-0**

Rationale: The Committee questioned whether the measure would reduce transfusion reactions as the performance rate is currently low. However, the Committee agreed that collecting data on transfusion reactions may be used to reduce events in the future. The Committee also suggested that the measure's title may be wrongly interpreted to indicate a patient being given the wrong blood, when it collects data on a variety of transfusion reactions, such as reactions to antigens. The Committee affirmed that the low number of events provides evidence of industry success at managing transfusions and still meets two of the three criteria – high impact and evidence.

2. Scientific Acceptability of Measure Properties: Y-19; N- 2

(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)

2a. Reliability: **H-3; M-1; L-0; I-1**; **2b.** Validity: **H-3; M-1; L-0; I-1**

Rationale: The Committee stated that the measure provides precise specifications to count a variety of transfusion events and is used to monitor a serious reportable event.

0350 Transfusion Reaction (PDI 13)
3. Usability: H-5; M-10; L-6; I- (*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)* **3a.** Public Reporting: **H-2; M-2; L-1; I-0** **3b.** QI: **H-2; M-1; L-2; I-0** Rationale: The Committee expressed concern about the value of publicly reporting transfusion reactions and whether it would affect quality improvement. However, they also noted the measure could be easily interpreted by the public.
4. Feasibility: H-14; M-;5 L-2; I- *(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)* **4a.** Byproduct of Care Processes: **H-4; M-1; L-0; I-0** **4b.** Electronic data sources: **H-4; M-1; L-0; I-0** **4c.** Suscep inaccuracies, consequences: **H-3; M-1; L-1; I-0** **4d.** Data collection strategy: **H-4; M-1; L-0; I-0** Rationale: The measure has been implemented for a number of years, using administrative data, indicating that it is feasible to collect.
Steering Committee Recommendation for Endorsement: Reserve Status Y- 19; N-1 **Rationale**: The measure provides important information to the industry and consumers, highlighting a small but important performance gap. The Committee was concerned of the implications if endorsement was removed and no longer reported because of the low performance gap. Based on the Committee's discussion and votes, the measure continues to meet all of the criteria with the exception of an opportunity for improvement. The Committee stressed that this achievement should be celebrated but also it should be monitored to ensure that this event continues to be low; thus, they recommend that the measure be endorsed with reserve status.
Public and Member Comment **Comments included:** • Request for clarification regarding "reserve status" **Committee response:** The Committee determined that the measures continue to meet the guidance for recommending reserve status and did not change its recommendations. **NQF staff note:** The criteria for endorsement with reserve status are on the NQF web site and references to the information have been added on several web pages on the web site.
CSAC Approved (May 14, 2012)
Board Review (June 18, 2012)

Measures Not Recommended

0021 Annual monitoring for patients on persistent medications
Measure Submission Form **Description:** The percentage of members 18 years of age and older who received at least 180 treatment days of ambulatory medication therapy for a select therapeutic agent during the measurement year and at least one therapeutic monitoring event for the therapeutic agent in the measurement year. For each product line, report each of the four rates separately and as a total rate. • Annual monitoring for members on angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARB) • Annual monitoring for members on digoxin

0021 Annual monitoring for patients on persistent medications

• Annual monitoring for members on diuretics
• Annual monitoring for members on anticonvulsants
• Total rate (the sum of the four numerators divided by the sum of the four denominators)

Numerator Statement: For annual monitoring for members on ACE inhibitors or ARBs, digoxin, and diuretics:
The number of patients with at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year.
For annual monitoring for members on anticonvulsants:
At least one drug serum concentration level monitoring test for the prescribed drug in the measurement year.
Sum of the 4 numerators.

Denominator Statement: Members on persistent medications—defined as members who received at least 180 treatment days of ambulatory medication in the measurement year.

Exclusions: For Annual Monitoring for Members on Anticonvulsants:
(optional) Members from each eligible population rate who had an inpatient (acute or nonacute) claim/encounter during the measurement year.

Adjustment/Stratification: No risk adjustment or risk stratification N/A N/A

Level of Analysis: Clinician : Group/Practice, Clinician : Individual, Clinician : Team, Health Plan

Type of Measure: Process

Data Source: Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Laboratory, Electronic Clinical Data : Pharmacy Healthcare Effectiveness Data Information Set (HEDIS)

Measure Steward: National Committee for Quality Assurance

STEERING COMMITTEE MEETING 12/15-16/2011

Importance to Measure and Report: **Y-5; N-17**
(1a. High Impact: 1b. Performance Gap, 1c. Evidence)
1a. Impact: **H-5; M-4; L-; I-0**; **1b.** Performance Gap: **H-4; M-5; L-0; I-0**
1c. Evidence Quantity: **H-1; M-5; L-2; I-1**; Quality: **H-2; M-4; L-2; I-1**; Consistency: **H-2; M-5; L-1; I-1**
Rationale: The Committee questioned the developer's rationale for including the list of medications cited for annual monitoring within the measure. The developer responded that the medications were highly utilized, and evaluating the annual monitoring could improve treatment. The Committee also noted that the Food and Drug Administration guidelines on medication monitoring were less strenuous than the measure. They stated that the age range included in the measure was 18 and above, while the majority of the evidence cited in the measure focuses on the elderly. Finally, the Committee noted the measure may be more effective if it focused on measuring whether medications were appropriately prescribed or the link between a failure to monitor medications and their resulting link to an adverse event.

2. Scientific Acceptability of Measure Properties: Y-; N-
(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)
2a. Reliability: **H-6; M-2; L-1; I-0** **2b.** Validity: **H-5; M-1; L-3; I-0**
Rationale:

3. Usability: H-; M-; L-; I-
(*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)*
3a. Public Reporting: **H-3; M-2; L-4; I-0**
3b. QI: **H-3; M-3; L-3; I-0**
Rationale:

4. Feasibility: H-; M-; L-; I-
(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)
4a. Byproduct of Care Processes: **H-6; M-2; L-1; I-0**
4b. Electronic data sources: **H-6; M-2; L-1; I-0**
4c. Suscep inaccuracies, consequences: **H-7; M-1; L-1; I-0**
4d. Data collection strategy: **H-7; M-1; L-1; I-0**
Rationale:

0021 Annual monitoring for patients on persistent medications

Steering Committee Recommendation for Endorsement: Did not pass the Importance to Measure criteria, which is required for endorsement.

Rationale: The Committee agreed that medication monitoring was reasonable but the measure could be improved in the future to provide a more comprehensive review of prescribing practices or the relationship between medication monitoring and adverse events.

0374 Venous Thromboembolism Patients Recieving Unfractionated Heparin with Dosages/Platelet Count Monitoring by Protocol or Nomogram

Measure Submission Form

Description: This measure assesses the number of patients diagnosed with confirmed venous thromboembolism (VTE) who received intravenous (IV) unfractionated heparin (UFH) therapy dosages AND had their platelet counts monitored using defined parameters such as a nomogram or protocol. This measure is part of a set of six prevention and treatment measures that address VTE (VTE-1: VTE Prophylaxis, VTE-2: ICU VTE Prophylaxis, VTE-3: VTE Patients with Anticoagulation Overlap Therapy, VTE-5: VTE Warfarin Therapy Discharge Instructions and VTE-6: Incidence of Potentially-Preventable VTE).

Numerator Statement: Patients who have their IV UFH therapy dosages AND platelet counts monitored according to defined parameters such as a nomogram or protocol.

Denominator Statement: Patients with confirmed VTE receiving IV UFH therapy. The target population includes patients discharged with an ICD-9-CM Principal or Other Diagnosis Codes for VTE as defined in Table 7.03 or Table 7.04.

Exclusions:

- Patients less than 18 years of age
- Patients who have a length of stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in clinical trials
- Patients discharged to a health care facility for hospice care
- Patients discharged to home for hospice care
- Patients who expired
- Patients who left against medical advice
- Patients discharged to another hospital
- Patients without UFH Therapy Administration
- Patients without VTE confirmed by diagnostic testing

Adjustment/Stratification: No risk adjustment or risk stratification Not applicable Not applicable

Level of Analysis: Facility, Population : National

Type of Measure: Process

Data Source: Administrative claims, Electronic Clinical Data, Paper Records. Each element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the specifications. The vendor may not offer the measure set to hospitals until verification has been passed.

Measure Steward: The Joint Commission

0374 Venous Thromboembolism Patients Recieving Unfractionated Heparin with Dosages/Platelet Count Monitoring by Protocol or Nomogram

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: **Y-10; N-11**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-8; M-1; L-0; I-0**; **1b.** Performance Gap: **H-4; M-2; L-1; I-1**

1c. Evidence Quantity: **H-5; M-4; L-0; I-0**; Quality: **H-5; M-4; L-0; I-0**; Consistency: **H-7; M-2; L-0; I-0**

Rationale: The Committee expressed concern that the measure focused only on the use of a nomogram, and not whether therapeutic range was achieved. There was evidence to support the measure focus and a gap exists. Because the vote on whether the measure passed importance to measure and report, the Committee continued discussions on the remaining criteria.

2. Scientific Acceptability of Measure Properties: Y-7; N-14

(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)

2a. Reliability: **H-4; M-5; L-0; I-0; 2b.** Validity: **H-5; M-4; L-0; I-0**

Rationale: The Committee was concerned that the measure only applied to a small number of patients. Additionally, the Committee stated that measuring the use of a nomogram was not a direct indication of improvement in patient care. There was concern related to the validity of the measure as it is not measuring what is of most interest – whether therapeutic range was achieved. Also, it was recommended that platelet monitoring should be its own measure rather than included here.

3. Usability: H-; M-; L-; I-

(*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)*

3a. Public Reporting: **H-9; M-0; L-0; I-0**

3b. QI: **H-9; M-0; L-0; I-0**

Rationale:

4. Feasibility: H-; M-; L-; I-

(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)

4a. Byproduct of Care Processes: **H-7; M-2; L-0; I-0**

4b. Electronic data sources: **H-6; M-3; L-0; I-0**

4c. Suscep inaccuracies, consequences: **H-6; M-3; L-1; I-0**

4d. Data collection strategy: **H-5; M-3; L-1; I-0**

Rationale:

Steering Committee Recommendation for Endorsement: Did not pass the Scientific Acceptability of Measure Properties criteria, which is required for endorsement.

Rationale: The goal of the measure is for a patient to be within the therapeutic range; however, measuring the use of a nomogram alone does not necessarily lead to an improvement in patient outcomes.

0374 Venous Thromboembolism Patients Recieving Unfractionated Heparin with Dosages/Platelet Count Monitoring by Protocol or Nomogram

Public and Member Comment

Comments included:

- Concern about the Steering Committee's decision not to recommend endorsement of this measure.

Committee response:

The Committee carefully considered the potential benefits of this measure, holding an extensive discussion on the importance of monitoring patients on unfractionated heparin. However, the Committee struggled with the relatively weak connection between the process being measured and the desired outcomes in this instance. Committee members emphasized that measuring whether or not a nomogram is used does not capture the more important question of whether a patient's partial thromboplastin time (PTT) is brought within a therapeutic range. Indeed, Committee members pointed out that use of a nomogram frequently does not lead to achievement of therapeutic range. The Committee expressed concern about burdening providers with implementation of measures that have not been shown to improve patient outcomes.

0375 Venous Thromoboembolism Warfarin Therapy Discharge Instructions

Measure Submission Form

Description: This measure assesses the number of patients diagnosed with confirmed VTE that

are discharged on warfarin to home, home with home health or home hospice with written discharge instructions that address all four criteria: compliance issues, dietary advice, follow-up monitoring, and information about the potential for adverse drug reactions/interactions. This measure is part of a set of six prevention and treatment measures that address VTE (VTE-1: VTE Prophylaxis, VTE-2: ICU VTE Prophylaxis, VTE-3: VTE Patients with Anticoagulation Overlap Therapy, VTE-4: VTE Patients Receiving UFH with Dosages/Platelet Count Monitoring by Protocol and VTE-6: Incidence of Potentially-Preventable VTE).

Numerator Statement: Patients with documentation that they or their caregivers were given

written discharge instructions or other educational material about warfarin that addressed all of the following:

1. compliance issues

2. dietary advice

3. follow-up monitoring

4. potential for adverse drug reactions and interactions

Denominator Statement: Patients with confirmed VTE discharged on warfarin therapy. The target population includes patients discharged with an ICD-9-CM Principal or Other Diagnosis Codes for VTE as defined in Table 7.03 or Table 7.04 that are discharged to home, homecare or court/law enforcement or home for hospice care.

Please note: The allowable values of the data element Discharge Disposition are used to designate which locations are included.

Exclusions: • Patients less than 18 years of age

• Patients who have a length of stay greater than 120 days

• Patients enrolled in clinical trials

• Patients without Warfarin Prescribed at Discharge

• Patients without VTE confirmed by diagnostic testing

Adjustment/Stratification: No risk adjustment or risk stratification. Not applicable Not applicable, the measure is not stratified.

Level of Analysis: Facility, Population : National

Type of Measure: Process

Data Source: Administrative claims, Electronic Clinical Data, Paper Records Each data element in the data dictionary includes suggested data sources.

The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed.

Measure Steward: The Joint Commission

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: **Y-10; N-11**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-7; M-2; L0-; I-0**; **1b.** Performance Gap: **H-6; M-3; L-0; I-0**

1c. Evidence Quantity: **H-1; M-7; L-1; I-0**; Quality: **H-0; M-4; L-4; I-0**; Consistency: **H-4; M-3; L-1; I-1**

Rationale: The measure documents whether patients were provided with written instructions for the use of warfarin therapy at discharge. However, the measure is limited in that it does not assess a patient's understanding of the discharge instructions nor the effectiveness of the education (i.e., improved compliance post discharge). An opportunity for improvement does continue to exist but it was not clear whether the measure's continued use would lead to further improvement in patient outcomes. Because the vote on whether the measure passed importance to measure and report, the Committee continued discussions on the remaining criteria.

0375 Venous Thromoboembolism Warfarin Therapy Discharge Instructions

2. Scientific Acceptability of Measure Properties: Y-4; N-17

(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)

2a. Reliability: **H-4; M-5; L-0; I-0**; **2b.** Validity: **H-2; M-;6 L-1; I-0**

Rationale: The Committee underscored the importance of patient education but noted that the measure instructions should be offered in a patient's native language to ensure understanding. They encouraged the developer to continue working on measures focused on patient education but to ensure that the measure uses validated educational materials. A Committee member suggested a 24 hour post-discharge follow-up phone call could be used to clarify how well instructions were adhered to by the patient. Because the measure did not pass scientific acceptability, the Committee did not discuss the remaining criteria.

3. Usability: H-; M-; L-; I-

(*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)*

3a. Public Reporting: **H-4; M-5; L-0; I-0**

3b. QI: **H-6; M-2; L-1; I-0**

Rationale:

4. Feasibility: H-; M-; L-; I-

(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)

4a. Byproduct of Care Processes: **H-6; M-2; L-1; I-0**

4b. Electronic data sources: **H-4; M-4; L-1; I-0**

4c. Suscep inaccuracies, consequences: **H-5; M-3; L-1; I-0**

4d. Data collection strategy: **H-6; M-2; L-1; I-0**

Rationale:

Steering Committee Recommendation for Endorsement: Did not pass the Importance to Measure and Report and the Scientific Acceptability of Measure Properties criteria, which are required for endorsement.

Rationale: The measure may not directly lead to an improvement in patient outcomes and lacks validated educational materials.

Public and Member Comment

Comments included:

- Concern about the Steering Committee's decision not to recommend endorsement of this measure.

Committee response:

The Committee carefully considered the potential benefits of this measure, holding an extensive discussion on the importance of communicating appropriate information to patients being discharged on Warfarin. However, the Committee struggled with the relatively weak connection between the process being measured and the desired outcome in this instance. Committee members emphasized that measuring whether patients receive discharge instructions for Warfarin therapy does not capture the quality of those instructions, nor does it capture whether patients comprehend the instructions and will make behavioral changes as a result. The Committee noted the lack of evidence showing a link between the provision of written instructions and improved outcomes, and expressed concern about burdening providers with implementation of measures that have not been shown to improve patient outcomes.

0376 Incidence of Potentially Preventable Venous Thromboembolism

Measure Submission Form

Description: This measure assesses the number of patients with confirmed venous thromboembolism (VTE) during hospitalization (not present at admission) who did not receive VTE prophylaxis between hospital admission and the day before the VTE diagnostic testing order date. This measure is part of a set of six prevention and treatment measures that address VTE (VTE-1: VTE Prophylaxis, VTE-2: ICU VTE Prophylaxis, VTE-3: VTE Patients with Anticoagulation Overlap Therapy, VTE-4: VTE Patients Receiving UFH with Dosages/Platelet Count Monitoring by Protocol, and VTE-5: VTE Warfarin Therapy Discharge Instructions).

Numerator Statement: Patients who received no VTE prophylaxis prior to the VTE diagnostic

test order date

Denominator Statement: Patients who developed confirmed VTE during hospitalization. The target population includes patients discharged with an ICD-9-CM Secondary Diagnosis Codes for VTE as defined in Table 7.03 or Table 7.04.

Exclusions: Patients less than 18 years of age

- Patients who have a length of stay greater than 120 days
- Patients with Comfort Measures Only documented
- Patients enrolled in clinical trials
- Patients with ICD-9-CM Principal Diagnosis Code of VTE as defined in Appendix A, Table 7.03 or 7.04
- Patients with VTE Present at Admission
- Patients with reasons for not administering mechanical and pharmacologic prophylaxis
- Patients without VTE confirmed by diagnostic testing

Adjustment/Stratification: No risk adjustment or risk stratification; No risk adjustment or risk stratification as intermediate outcome; Not Applicable

Level of Analysis: Facility, Population : National

Type of Measure: Outcome

Data Source: Administrative claims, Paper Records Each data element in the data dictionary includes suggested data sources.

The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. Verification must be completed and passed before the vendor can offer the data collection tool to hospitals.

Measure Steward: The Joint Commission

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: Y-20; N-2

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-8; M-0; L-0; I-1**; **1b.** Performance Gap: **H-6; M-2; L-0; I-1**

1c. Evidence Quantity: **H-6; M-2; L-0; I-0**; Quality: **H-6; M-1; L-1; I-0**; Consistency: **H-6; M-1; L-1; I-0**

Rationale: The measure is important because it indicates the adequacy of the hospital's risk assessment profile by reporting the rate at which patients acquired VTE *and* did not receive prophylaxis. The measure presented an aggregate performance gap of 13.2% and stated that the gap would ideally be reduced to 0%. However, the Committee expressed concern that the measure did not gauge the adequacy of the prophylaxis. They also recognized that patients receiving adequate prophylaxis could still develop adverse events regardless of the quality of the provider's care.

0376 Incidence of Potentially Preventable Venous Thromboembolism
2. Scientific Acceptability of Measure Properties: Y-20; N-1 (2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity) **2a.** Reliability: **H-7; M-1; L-1; I-0**; **2b.** Validity: **H-6; M-3; L-0; I-0** Rationale: The measure as specified includes the rate of patients who had a confirmed VTE that was not present on admission – the Committee was interested with the idea that while the measure focused on those patients who had a treatment failure (i.e., were not assessed and treated resulting in a VTE), the denominator itself also provided valuable information. Reliability and validity were demonstrated.
3. Usability: H-7; M-14; L-1; I-0 (*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)* **3a.** Public Reporting: **H-7; M-2; L-0; I-0** **3b.** QI: **H-7; M-2; L-0; I-0** Rationale: The measure will assist hospitals with quality improvement by reporting patients not risk-assessed for VTE.
4. Feasibility: H-7; M-13; L-1; I-0 *(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)* **4a.** Byproduct of Care Processes: **H-8; M-1; L-0; I-0** **4b.** Electronic data sources: **H-4; M-5; L-0; I-0** **4c.** Suscep inaccuracies, consequences: **H-5; M-3; L-1; I-0** **4d.** Data collection strategy: **H-6; M-2; L-1; I-0** Rationale: The measure is currently being collected and no concerns with feasibility were raised.
Steering Committee Recommendation for Endorsement: Y-20; N-2 **Rationale**: The measure indicates whether facilities are adequately assessing patients for their risk of developing VTE and provide important information on the incidence of VTEs that could have potentially been avoided through appropriate assessment and treatment.

0376 Incidence of Potentially Preventable Venous Thromboembolism

Public and Member Comment

Comments included:

- Measure should be restricted to non-surgical patients
- Concern that use of the present on admission indicator could exclude patients who acquired VTE as a result of a previous hospital admission
- "Potentially preventable" events should be restricted to those patients who received prophylaxis according to the institutional protocol in order to capture instances of inadequate prophylaxis
- Only pulmonary embolism and lower extremity DVT should be included

Developer response: Due to the fact that standardized risk assessment and standardized protocols for VTE Prophylaxis have not been widely endorsed, this measure evaluates the use of any prophylaxis used to be adequate, leaving the method of prophylaxis decision making up to the care provider. The population used for this measure consists of discharges with an ICD-9-CM Other Diagnosis Codes of VTE as defined in Appendix A, Table 7.03 or 7.04 [in the measure submission]. This includes all populations, including surgical patients that are not populated into the SCIP-VTE 1 measure. Without the use of an Electronic Health System, prior hospitalization data is not available to the present organization in question. The technical advisory panel felt that a greater population of potentially preventable VTE be included in this measure, as this provides valuable data on all VTEs for the organization to use in a process improvement plan.

This measure targets those patients who have developed VTE while hospitalized in order to assess whether VTE prophylaxis was instituted prior to the development of the VTE. Presumably, organizational performance assessment activities performed when investigating measure results would identify if VTE development was as a result of antecedent events immediately prior to hospitalization.

Committee response:

After reviewing the comments and the developer's response, the Steering Committee revisited its decision on this measure and held further discussion on the measure's strengths and weaknesses. Committee members agreed that identification of patients with hospital-acquired VTE was a good idea, and that looking back to determine whether adequate prophylaxis was given could be useful for internal quality improvement efforts. However, the Committee was concerned about use of the measure for accountability purposes as the measure looks retrospectively at the care of patients who have developed VTE and determines whether prophylaxis was provided in those cases. Committee members were not convinced that the measure reflects truly preventable events, and many believed that it would be better to have a risk-adjusted outcome measure. In addition, Committee members believed that the measure would be labor-intensive for providers and that it would be difficult to capture data in a consistent fashion given its reliance on the review of paper medical records. The Steering Committee decided to hold a reconsideration vote after the call; upon reconsideration, measure 0376 was not recommended for endorsement.

Vote Following Consideration of Public and Member Comments

1. **Importance to Measure and Report: Y-19; N-2**
2. **Scientific Acceptability of Measure Properties: Y-12; N-9**
3. **Usability: H-4; M-9; L-8; I-0**
4. **Feasibility: H-2; M-8; L-11; I-0**

Steering Committee Recommendation for Endorsement: Y-8; N-14

Rationale: The measure has the potential to indicate whether facilities are adequately assessing patients for their risk of developing VTE and to provide important information on the incidence of VTEs that could have been avoided through appropriate assessment and treatment. However, Committee members felt that the measure requires burdensome data collection efforts and were concerned that those efforts would not yield the intended results. The Committee expressed their preference for a risk-adjusted outcome measure over this kind of process measure.

0376 Incidence of Potentially Preventable Venous Thromboembolism

CSAC Not Approved (June 11, 2012)

Following the Public and Member commenting period, the Joint Commission requested reconsideration of measures #0371 and #0376 in a letter received on May 2, 2012. Due to the importance of the measures for patient care and the lack of similar measures in the NQF portfolio, the CSAC Chair and Vice Chair decided to ballot the measures in order to gain additional input from the NQF membership. Following a member vote, in which both measures were approved by the NQF membership, the measures were brought back to the CSAC for reconsideration. CSAC members noted that the measures address a high-impact clinical area with significant implications for patient care, and that there are no other similar measures addressing these issues within the NQF portfolio. The CSAC voted to approve measure #0371 on VTE prophylaxis but expressed concerns about measure #0376, noting that the measure is likely to have very small denominator size and may not accurately identify patients who should have had prophylaxis but did not. As a result, the measure may distort publicly-reported performance results and is unlikely to yield actionable information for improving patient safety. The measure developer provided additional information in support of the measure, but upon reconsideration, the CSAC did not find sufficient evidence to overturn the Patient Safety - Complications Steering Committee's initial decision on measure 0376.

0501 Confirmation of Endotracheal Tube Placement

Measure Submission Form

Description: Any time an endotracheal tube is placed into a patients airway in the Emergency Department (ED)or a patient arrives to the ED with an endotracheal tube already in place (via EMS or hospital transfer) there should be appropriate confirmation of ETT placement and documentation of its performance in the medical record.

Numerator Statement: Number of ED patients with an endotracheal tube(ETT) placed or assesed with an endotracheal already in place who had the ETT confirmation performed

Denominator Statement: Total number of endotracheal tubes evaluated including those patients who had an ETT´s placed in the ED and those patients who arruived to the ED with an ETT already in palce.

Exclusions: No exclusions

Adjustment/Stratification: No risk adjustment or risk stratification

Level of Analysis: Clinician : Group/Practice, Clinician : Individual, Facility, Integrated Delivery System, Population : Community

Type of Measure: Process

Data Source: Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Registry, Paper Records The data will need to be collected from each patient´s medical record. For those patients that are intubated in the Emergency Department, there will likely be a billed procedure for an endotracheal tube intubation. Other charts like patients who expired or patients who admitted to an ICU may be another source of identification of patients who had an endotracheal tube placed. If a surveillance mechanism is in place (i.e., airway registry)is in place to capture all patients who either arrived intubated or are intubated in the Emergency Department then the data can be collected from there.

Measure Steward: Cleveland Clinic

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: **Y-17; N-3**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-6; M-3; L-0; I-0**; **1b.** Performance Gap: **H-6; M-3; L-0; I-0**

1c. Evidence Quantity: **H-3; M-5; L-1; I-0**; Quality: **H-3; M-4; L-2; I-0**; Consistency: **H-3; M-4; L-2; I-0**

Rationale: The Committee acknowledged the performance gap and that was a strong correlation between an incorrect endotracheal tube placement and morbidity and mortality. They stated that providers may be unfamiliar with best practices and the appropriate methods for assessing endotracheal tube placement but there is evidence in support of specific methods.

0501 Confirmation of Endotracheal Tube Placement

2. Scientific Acceptability of Measure Properties: Y-6; N-14

(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)

2a. Reliability: **H-3; M-3; L-2; I-1**; **2b.** Validity: **H-4; M-4; L-1; I-0**

Rationale: The Committee noted that the specifications should include further definitions of what was considered appropriate confirmation, and were concerned about the variability of ET tube placement confirmation. In the future, the Committee encouraged the developer to expand the measure to additional care settings beyond the emergency department.

3. Usability: H-; M-; L-; I-

(*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)*

3a. Public Reporting: **H-5; M-4; L-0; I-0**

3b. QI: **H-5; M-4; L-0; I-0**

Rationale:

4. Feasibility: H-; M-; L-; I-

(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)

4a. Byproduct of Care Processes: **H-3; M-4; L-2; I-0**

4b. Electronic data sources: **H-2; M-3; L-4; I-0**

4c. Suscep inaccuracies, consequences: **H-3; M-4; L-2; I-0**

4d. Data collection strategy: **H-3; M-4; L-2; I-0**

Rationale:

Steering Committee Recommendation for Endorsement: Did not pass the Importance to Measure criteria, which is required for endorsement.

Rationale: The Committee agreed that the measure should be further specified in the future.

Public and Member Comment

No comments were submitted on this measure.

0523 Pain Assessment Conducted

Measure Submission Form

Description: Percentage of home health episodes of care in which the patient was assessed for pain, using a standardized pain assessment tool, at start/resumption of care.

Numerator Statement: Number of home health episodes of care in which the patient was assessed for pain, using a standardized pain assessment tool, at start/resumption of care.

Denominator Statement: Number of home health episodes of care ending during the reporting period, other than those covered by generic exclusions.

Exclusions: No measure specific exclusions. See details of generic exclusions in 2a1.9.

Adjustment/Stratification: No risk adjustment or risk stratification. N/A - process measure. N/A - measure not stratified

Level of Analysis: Facility

Type of Measure: Process

Data Source: Electronic Clinical Data OASIS-C

Measure Steward: Centers for Medicare & Medicaid

0523 Pain Assessment Conducted

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: **Y-8; N-11**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-1; M-4; L-; I-0**; **1b.** Performance Gap: **H-0; M-5; L-; I-0**

1c. Evidence Quantity: **H-3; M-1; L-1; I-0**; Quality: **H-2; M-1; L-2; I-0**; Consistency: **H-3; M-0; L-2; I-0**

Rationale: The Committee agreed that pain should be assessed across the continuum of care and during each visit for patients who are receiving home care but noted that there is little evidence that pain assessment alone does not improve outcomes. The Committee encouraged the developer to link the measure to an appropriate pain treatment plan in the future. Because the measure did not pass importance to measure and report, the Committee did not discuss the remaining criteria.

2. Scientific Acceptability of Measure Properties: Y-; N-

(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)

2a. Reliability: **H-3; M-0; L-1; I-1**; **2b.** Validity: **H-2; M-1; L-1; I-1**

Rationale:

3. Usability: H-; M-; L-; I-

(*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)*

3a. Public Reporting: **H-2; M-1; L-1; I-1**

3b. QI: **H-2; M-1; L-1; I-1**

Rationale:

4. Feasibility: H-; M-; L-; I-

(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)

4a. Byproduct of Care Processes: **H-3; M-0; L-1; I-1**

4b. Electronic data sources: **H-3; M-0; L-1; I-1**

4c. Suscep inaccuracies, consequences: **H-3; M-0; L-1; I-1**

4d. Data collection strategy: **H-3; M-0; L-1; I-1**

Rationale:

Steering Committee Recommendation for Endorsement: Did not pass the Importance to Measure criteria, which is required for endorsement.

Rationale: The evidence does not indicate that the assessment of pain alone will lead to an improvement in patient outcomes.

Public and Member Comment

Comments included:

- Support for the Steering Committee's decision not to recommend the measure for endorsement
- Request for continued endorsement of this measure
- Request for clarification on the proper scope of the Steering Committee's evaluation

Committee response:

As with measures 0374 and 0375, the Steering Committee had significant concerns about the proximity of the process being measured by 0523 and the relevant outcomes. Committee members again expressed their reluctance to burden providers with measures that are not directly linked to better patient outcomes and did not reconsider their initial decision to not recommend the measure.

NQF Staff Note: While this measure was previously endorsed as time-limited, it was included in this project to undergo a full endorsement maintenance review as it had been endorsed for two and a half years. As a result, the Committee was asked to and did complete evaluations of the measure against all of the measure evaluation criteria.

0524 Pain Interventions Implemented During Short Term Episodes Of Care

Measure Submission Form

Description: Percentage of short term home health episodes of care during which pain interventions were included in the physician-ordered plan of care and implemented.

Numerator Statement: Number of home health episodes of care during which pain interventions were included in the physician-ordered plan of care and implemented.

Denominator Statement: Number of home health episodes of care ending during the reporting period, other than those covered by generic or measure-specific exclusions.

Exclusions: Episodes in which the patient did not have pain since the last OASIS assessment, as evidenced by a formal assessment that indicated no pain. Long-term episodes (as indicated by the presence of a follow-up assessment between admission and transfer or discharge). Episodes ending in patient death.

Adjustment/Stratification: No risk adjustment or risk stratification. N/A - process measure. N/A measure not stratified.

Level of Analysis: Facility

Type of Measure: Process

Data Source: Electronic Clinical Data OASIS-C

Measure Steward: Centers for Medicare & Medicaid

STEERING COMMITTEE MEETING 12/15-16/2011

1. Importance to Measure and Report: **Y-7; N-12**

(1a. High Impact: 1b. Performance Gap, 1c. Evidence)

1a. Impact: **H-2; M-1; L-2; I-0**; **1b.** Performance Gap: **H-2; M-2; L-1; I-0**

1c. Evidence Quantity: **H-3; M-2; L-0; I-0**; Quality: **H-2; M-3; L-0-; I-0**; Consistency: **H-4; M-0; L-1; I-0**

Rationale: The Committee agreed that pain should be assessed across the continuum of care but noted that implementing a pain intervention does not necessarily improve a patient's outcome. The measure did not look at the quality of the intervention and was even more limited due to the fact that it only included patients who reported pain at the time of the OASIS assessment and not every visit. Because the measure did not pass importance to measure and report, the Committee did not discuss the remaining criteria.

2. Scientific Acceptability of Measure Properties: Y-; N-

(2a. Reliability – precise specifications, testing; 2b. Validity – testing, threats to validity)

2a. Reliability: **H-2; M-1; L-2; I-0**; **2b.** Validity: **H-2; M-1; L-2; I-0**

Rationale:

3. Usability: H-; M-; L-; I-

(*Meaningful, understandable, and useful to the intended audiences for 3a. Public Reporting/Accountability and 3b. Quality Improvement)*

3a. Public Reporting: **H-1; M-2; L-2; I-0**

3b. QI: **H-1; M-2; L-2; I-0**

Rationale:

4. Feasibility: H-; M-; L-; I-

(4a. Clinical data generated during care delivery; 4b. Electronic sources; 4c.Susceptibility to inaccuracies/ unintended consequences identified 4d. Data collection strategy can be implemented)

4a. Byproduct of Care Processes: **H-4; M-0; L-1; I-0**

4b. Electronic data sources: **H-3; M-1; L-1; I-0**

4c. Suscep inaccuracies, consequences: **H-2; M-2; L-1; I-0**

4d. Data collection strategy: **H-4; M-0; L-1; I-0**

Rationale:

0524 Pain Interventions Implemented During Short Term Episodes Of Care
Steering Committee Recommendation for Endorsement: Did not pass the Importance to Measure criteria, which is required for endorsement. **Rationale**: The evidence does not assess pain on every visit or consider the quality of the pain intervention.
Public and Member Comment **Comments included:** • Support for the Steering Committee's decision not to recommend the measure for endorsement • Request for continued endorsement of this measure • Request for clarification on the proper scope of the Steering Committee's evaluation **Committee response:** As with measures 0374 and 0375, the Steering Committee had significant concerns about the proximity of the process being measured by 0524 and the relevant outcomes. Committee members again expressed their reluctance to burden providers with measures that are not directly linked to better patient outcomes and did not reconsider their initial decision to not recommend the measure. **NQF Staff Note:** While this measure was previously endorsed as time-limited, it was included in this project to undergo a full endorsement maintenance review as it had been endorsed for two and a half years. As a result, the Committee was asked to and did complete evaluations of the measure against all of the measure evaluation criteria.

Measures Withdrawn From Consideration

Four measures previously endorsed by NQF have not been re-submitted or withdrawn from maintenance of endorsement. Two of these measures were withdrawn after initial submission. The following measures are being retired from endorsement:

Measure	Reason For Withdrawal
0019: Documentation of medication list in the outpatient record	Developer elected not to pursue maintenance of endorsement.
0020: Documentation of allergies and adverse reactions in the outpatient record	Developer elected not to pursue maintenance of endorsement.
0503: Anticoagulation for acute pulmonary embolus	This measure was moved to Phase II to provide the developer additional time to complete testing.

Appendix A: Measure Specifications

The following tables present the detailed specifications for the National Quality Forum (NQF)-endorsed® *National Voluntary Consensus Standards Patient Safety: Complications Endorsement Maintenance.* All information presented has been derived directly from measure sources/developers without modification or alteration (except when the measure developed agreed to such modification during the NQF Consensus Development Process) and is current as of February 17, 2012. All NQF-endorsed voluntary consensus standards are open source, meaning they are fully accessible and disclosed. Measures stewards include the Agency for Healthcare Research and Quality, Ambulatory Surgical Center Quality Collaboration, Centers for Medicare & Medicaid Services, National Committee for Quality Assurance, and The Joint Commission.

	0022 Use of High Risk Medications in the Elderly
Steward	National Committee for Quality Assurance
Description	a: Percentage of Medicare members 65 years of age and older who received at least one high-risk medication. b: Percentage of Medicare members 65 years of age and older who received at least two different high-risk medications. For both rates, a lower rate represents better performance.
Type	Process
Data Source	Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Pharmacy Healthcare Effectiveness Data and Information Set (HEDIS)
Level	Clinician : Group/Practice, Clinician : Individual, Health Plan, Integrated Delivery System
Setting	Ambulatory Care : Clinician Office, Pharmacy
Numerator Statement	a: At least one prescription dispensed for any high-risk medication during the measurement year. b: At least two prescriptions dispensed for different high-risk medications during the measurement year.
Numerator Details	**Time Window:** The measurement year. Antianxiety (includes combination drugs) aspirin-meprobamate and meprobamate Antiemetics scopolamine and trimethobenzamide Analgesics (includes combination drugs) acetaminophen-diphenhydramine, diphenhydramine-magnesium salicylate, and ketorolac Antihistamines (includes combination drugs) APAP/dextromethorphan/diphenhydramine, APAP/diphenhydramine/phenylephrine, APAP/diphenhydramine/pseudoephedrine, acetaminophen-diphenhydramine, atropine/CPM/hyoscyamine/PE/PPA/scopolamine, carbetapentane/diphenhydramine/phenylephrine , codeine/phenylephrine/promethazine, codeine-promethazine, cyproheptadine, dexchlorpheniramine, dexchlorpheniramine/dextromethorphan/PSE, dexchlorpheniramine/guaifenesin/PSE , dexchlorpheniramine/hydrocodone/phenylephrine , dexchlorpheniramine/methscopolamine/PSE, dexchlorpheniramine-pseudoephedrine, dextromethorphan-promethazine, diphenhydramine, diphenhydramine/hydrocodone/phenylephrine, diphenhydramine-magnesium salicylate, diphenhydramine-phenylephrine, diphenhydramine-pseudoephedrine, hydroxyzine hydrochloride, hydroxyzine pamoate, phenylephrine-promethazine, promethazine, tripelennamine Antipsychotic, typical mesoridazine and thioridazine Amphetamines amphetamine-dextroamphetamine, benzphetamine, dexmethylphenidate, dextroamphetamine, diethylpropion, methamphetamine, methylphenidate, pemoline, phendimetrazine, phentermine Barbiturates amobarbital, butabarbital, mephobarbital, pentobarbital, Phenobarbital, and secobarbital Long-acting benzodiazepines (includes combination drugs) amitriptyline-chlordiazepoxide, chlordiazepoxide, chlordiazepoxide-clidinium, diazepam, and flurazepam Calcium channel blockers nifedipine—short-acting only Gastrointestinal anti-spasmodics dicyclomine and propantheline

	0022 Use of High Risk Medications in the Elderly
	Belladonna alkaloids (includes combination drugs) atropine, atropine/CPM/hyoscyamine/PE/scopolamine, atropine/hyoscyamine/PB/scopolamine , atropine-difenoxin, atropine-diphenoxylate, atropine-edrophonium, belladonna, belladonna/caffeine/ergotamine/pentobarbital, belladonna/ergotamine/phenobarbital , butabarbital/hyoscyamine/phenazopyridine, digestive enzymes/hyoscyamine/ phenyltoloxamine, hyoscyamine, hyoscyamine/methenam/m-blue/phenyl salicyl, and hyoscyamine-phenobarbital Skeletal muscle relaxants (includes combination drugs) ASA/caffeine/orphenadrine, ASA/carisoprodol/codeine, aspirin-carisoprodol, aspirin-meprobamate, aspirin-methocarbamol, carisoprodol, chlorzoxazone, cyclobenzaprine, metaxalone, methocarbamol. orphenadrine Oral estrogens (includes combination drugs) conjugated estrogen, conjugated estrogen-medroxyprogesterone, esterified estrogen, esterified estrogen-methyltestosterone, estropipate Oral hypoglycemic: chlorpropamide Narcotics (includes combination drugs) ASA/caffeine/propoxyphene, acetaminophen-pentazocine, acetaminophen-propoxyphene, belladonna-opium, meperidine, meperidine-promethazine, naloxone-pentazocine, pentazocine, propoxyphene hydrochloride, and propoxyphene napsylate Vasodilators cyclandelate, dipyridamole—short-acting only, ergot mesyloid, isoxsuprine Others (including androgens and anabolic steroids, thyroid drugs, urinary anti-infectives) methyltestosterone, nitrofurantoin, nitrofurantoin macrocrystals, nitrofurantoin macrocrystals-monohydrate, thyroid desiccated
Denominator Statement	All patients ages 65 years and older as of December 31 of the measurement year.
Denominator Details	**Time Window:** December 31 of the measurement year Use administrative data for eligible population
Exclusions	N/A
Exclusion Details	N/A
Risk Adjustment	No risk adjustment or risk stratification N/A
Stratification	N/A
Type Score	Rate/proportion better quality = lower score
Algorithm	Step 1. Determine the eligible population. The eligible population is all members who satisfy all specified criteria, including any age, continuous enrollment, benefit, event, or anchor date enrollment requirement. Step 2. Search administrative systems to identify numerator events for all members in the eligible population. Step 3. If applicable, for members for whom administrative data do not show a positive numerator event, search administrative data for an exclusion to the service/procedure being measured. Note: This step applies only to measures for which optional exclusions are specified and for which the organization has chosen to search for exclusions. The organization is not required to search for optional exclusions. Step 4. Exclude from the eligible population members from step 3 for whom administrative system data identified an exclusion to the service/procedure being measured. Step 5. Calculate the rate.

	0022 Use of High Risk Medications in the Elderly
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	0263 Patient Burn
Steward	Ambulatory Surgical Center Quality Collaboration
Description	Percentage of ASC admissions experiencing a burn prior to discharge
Type	Outcome
Data Source	Paper Records ASC medical records, as well as incident/occurrence reports, and variance reports may serve as data sources. No specific collection instrument is required although the ASC Quality Collaboration has developed a sample data collection instrument that may be used as desired. Facilities may use any collection instrument that allows tracking of all burns prior to discharge. URL http://ascquality.org/documents/ASCQualityCollaborationImplementationGuide.pdf Not needed URL http://ascquality.org/documents/ASCQualityCollaborationImplementationGuide.pdf Not needed
Level	Facility
Setting	Ambulatory Care : Ambulatory Surgery Center (ASC)
Numerator Statement	Ambulatory surgical center (ASC) admissions experiencing a burn prior to discharge.
Numerator Details	**Time Window:** In-facility, prior to discharge DEFINITIONS: Admission: Completion of registration upon entry into the facility. Burn: Unintended tissue injury caused by any of the six recognized mechanisms: scalds, contact, fire, chemical, electrical, or radiation (e.g. warming devices, prep solutions, electrosurgical unit, or laser). Discharge: Occurs when the patient leaves the confines of the ASC.
Denominator Statement	All ASC admissions.
Denominator Details	**Time Window:** In-facility, prior to discharge DEFNITIONS: Admission: Completion of registration upon entry into the facility.
Exclusions	None
Exclusion Details	No denominator exclusions
Risk Adjustment	No risk adjustment or risk stratification None.
Stratification	This measure is not stratified
Type Score	Rate/proportion better quality = lower score

	0263 Patient Burn
Algorithm	The number of admissions experiencing a burn prior to discharge is divided by the number of ASC admissions during the reporting period, yielding the rate of burns prior to discharge for the reporting period.
Copyright	None

	0267 Wrong Site, Wrong Side, Wrong Patient, Wrong Procedure, Wrong Implant
Steward	Ambulatory Surgical Center Quality Collaboration
Description	Percentage of ASC admissions experiencing a wrong site, wrong side, wrong patient, wrong procedure, or wrong implant event.
Type	Outcome
Data Source	Paper Records ASC medical records, as well as incident/occurrence reports, and variance reports may serve as data sources. No specific collection instrument is required although the ASC Quality Collaboration has developed a sample data collection instrument that may be used as desired. Facilities may use any collection instrument that allows tracking of all wrong site, wrong side, wrong patient, wrong procedure, and wrong implant events. URL http://ascquality.org/documents/ASCQualityCollaborationImplementationGuide.pdf Not needed URL http://ascquality.org/documents/ASCQualityCollaborationImplementationGuide.pdf Not needed
Level	Facility
Setting	Ambulatory Care : Ambulatory Surgery Center (ASC)
Numerator Statement	ASC admissions experiencing a wrong site, wrong side, wrong patient, wrong procedure, or wrong implant
Numerator Details	**Time Window:** In-facility, prior to discharge DEFINITIONS: Admission: completion of registration upon entry into the facility Wrong: not in accordance with intended site, side, patient, procedure or implant
Denominator Statement	All ASC admissions
Denominator Details	**Time Window:** In-facility, prior to discharge DEFINITION: Admission: completion of registration upon entry into the facility
Exclusions	None
Exclusion Details	Not applicable
Risk Adjustment	No risk adjustment or risk stratification Not applicable
Stratification	The measure is not stratified
Type Score	Rate/proportion better quality = lower score
Algorithm	The number of admissions experiencing a wrong site, wrong side, wrong patient, wrong procedure, or wrong

	0267 Wrong Site, Wrong Side, Wrong Patient, Wrong Procedure, Wrong Implant
	implant event is divided by the number of ASC admissions during the reporting period, yielding the rate of wrong site, wrong side, wrong patient, wrong procedure, and wrong implant events for the reporting period.
Copyright	None

	0344 Accidental Puncture or Laceration Rate (PDI 1)
Steward	Agency for Healthcare Research and Quality
Description	Percent of discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code denoting accidental cut, puncture, perforation, or laceration during a procedure in any secondary diagnosis field.
Type	Outcome
Data Source	Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD. URL http://www.hcup-us.ahrq.gov/sidoverview.jsp Not applicable URL http://qualityindicators.ahrq.gov/Downloads/Software/WinQI/V43/AHRQ%20QI%20Software%20Instructions,%20WinQI.pdf Not applicable
Level	Facility
Setting	Hospital/Acute Care Facility
Numerator Statement	Discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code denoting accidental cut, puncture, perforation, or laceration during a procedure in any secondary diagnosis field.
Numerator Details	**Time Window:** User may specify the time window; generally one calendar year ICD-9-CM Accidental puncture or laceration diagnosis codes: E8700 SURGICAL OPERATION E8701 INFUSION OR TRANSFUSION E8702 KIDNEY DIALYSIS OR OTHER PERFUSION E8703 INJECTION OR VACCINATION E8704 ENDOSCOPIC EXAMINATION E8705 ASPIRATION OF FLUID OR TISSUE, PUNCTURE, AND CATHETERIZATION E8706 HEART CATHETERIZATION E8707 ADMINISTRATION OF ENEMA E8708

	0344 Accidental Puncture or Laceration Rate (PDI 1)
	OTHER SPECIFIED MEDICAL CARE E8709 UNSPECIFIED MEDICAL CARE 9982 ACCIDENTAL PUNCTURE OR LACERATION DURING A PROCEDURE
Denominator Statement	All surgical and medical discharges under age 18 defined by specific DRGs or MS-DRGs.
Denominator Details	**Time Window:** User may specify the time window; generally one calendar year See Pediatric Quality Indicators Appendices: - Appendix B – Surgical Discharge DRGs - Appendix C – Surgical Discharge MS-DRGs - Appendix D – Medical Discharge DRGs - Appendix E – Medical Discharge MS-DRGs Link to PDI appendices: http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/TechnicalSpecifications/PDI%20Appendices.pdf
Exclusions	Exclude cases: - with principal diagnosis denoting accidental cut, puncture, perforation, or laceration or secondary diagnosis present on admission - normal newborn - neonate with birth weight less than 500 grams (Birth Weight Category 1) - MDC 14 (pregnancy, childbirth, and puerperium) - with ICD-9-CM code for spine surgery - with missing discharge gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing) See Pediatric Quality Indicators Appendices: - Appendix I – Definitions of, Neonate, Newborn, Normal Newborn, and Outborn - Appendix L – Low Birth Weight Categories
Exclusion Details	ICD-9-CM Spine surgery procedure codes: 0301 REMOVAL OF FOREIGN BODY FROM SPINAL CANAL 0302 REOPENING OF LAMINECTOMY SITE 0309 OTHER EXPLORATION AND DECOMPRESSION OF SPINAL CANAL 0353 REPAIR OF VERTEBRAL FRACTURE 036 LYSIS OF ADHESIONS OF SPINAL CORD AND NERVE ROOTS 8053 REPAIR OF THE ANULUS FIBROSUS WITH GRAFT OR PROSTHESIS (OCT08) 8054

	0344 Accidental Puncture or Laceration Rate (PDI 1)
	OTHER AND UNSPECIFIED REPAIR OF THE ANULUS FIBROSUS (OCT08) 8100 SPINAL FUSION, NOT OTHERWISE SPECIFIED 8101 ATLAS-AXIS SPINAL FUSION 8102 OTHER CERVICAL FUSION, ANTERIOR TECHNIQUE 8103 OTHER CERVICAL FUSION, POSTERIOR TECHNIQUE 8104 DORSAL AND DORSOLUMBAR FUSION, ANTERIOR TECHNIQUE 8105 DORSAL AND DORSOLUMBAR FUSION, POSTERIOR TECHNIQUE 8106 LUMBAR AND LUMBOSACRAL FUSION, ANTERIOR TECHNIQUE 8107 LUMBAR AND LUMBOSACRAL FUSION, LATERAL TRANSVERSE PROCESS TECHNIQUE 8108 LUMBAR AND LUMBOSACRAL FUSION, POSTERIOR TECHNIQUE 8130 REFUSION OF SPINE, NOT OTHERWISE SPECIFIED 8131 REFUSION OF ATLAS-AXIS SPINE 8132 REFUSION OF OTHER CERVICAL SPINE, ANTERIOR TECHNIQUE 8133 REFUSION OF OTHER CERVICAL SPINE, POSTERIOR TECHNIQUE 8134 REFUSION OF DORSAL AND DORSOLUMBAR SPINE, ANTERIOR TECHNIQUE 8135 REFUSION OF DORSAL AND DORSOLUMBAR SPINE, POSTERIOR TECHNIQUE 8136 REFUSION OF LUMBAR AND LUMBOSACRAL SPINE, ANTERIOR TECHNIQUE 8137 REFUSION OF LUMBAR AND LUMBOSACRAL SPINE, LATERAL TRANSVERSE PROCESS TECHNIQUE 8138 REFUSION OF LUMBAR AND LUMBOSACRAL SPINE, POSTERIOR TECHNIQUE 8139 REFUSION OF SPINE, NOT ELSEWHERE CLASSIFIED 8162 FUSION OR REFUSION OF 2-3 VERTEBRAE* 8163 FUSION OR REFUSION OF 4-8 VERTEBRAE* 8164

	0344 Accidental Puncture or Laceration Rate (PDI 1)
	FUSION OR REFUSION OF 9 OR MORE VERTEBRAE* 8165 VERTEBROPLASTY 8166 KYPHOPLASTY 8451 INSERTION OF INTERBODY SPINAL FUSION DEVICE* 8452 INSERTION OF RECOMBINANT BONE MORPHOGENETIC PROTEIN* 8458 IMPLANTATION OF INTERSPINOUS PROCESS DECOMPRESSION DEVICE (PRIOR TO OCT 1, 2007) 8459 INSERTION OF OTHER SPINAL DEVICES 8460 INSERTION OF SPINAL DISC PROSTHESIS, NOT OTHERWISE SPECIFIED 8461 INSERTION OF PARTIAL SPINAL DISC PROSTHESIS, CERVICAL 8462 INSERTION OF TOTAL SPINAL DISC PROSTHESIS, CERVICAL 8463 INSERTION OF SPINAL DISC PROSTHESIS, THORACIC 8464 INSERTION OF PARTIAL SPINAL DISC PROSTHESIS, LUMBOSACRAL 8465 INSERTION OF TOTAL SPINAL DISC PROSTHESIS, LUMBOSACRAL 8466 REVISION OR REPLACEMENT OF ARTIFICIAL SPINAL DISC PROSTHESIS, CERVICAL 8467 REVISION OR REPLACEMENT OF ARTIFICIAL SPINAL DISC PROSTHESIS, THORACIC 8468 REVISION OR REPLACEMENT OF ARTIFICIAL SPINAL DISC PROSTHESIS, LUMBOSACRAL 8469 REVISION OR REPLACEMENT OF ARTIFICIAL SPINAL DISC PROSTHESIS, NOT OTHERWISE SPECIFIED 8480 INSERTION OR REPLACEMENT OF INTERSPINOUS PROCESS DEVICE(S) 8481 REVISION OF INTERSPINOUS PROCESS DEVICE(S) 8482 INSERTION OR REPLACEMENT OF PEDICLE-BASED DYNAMIC STABILIZATION DEVICE(S) 8483 REVISION OF PEDICLE-BASED DYNAMIC STABILIZATION DEVICE(S) 8485 REVISION OF FACET REPLACEMENT DEVICE(S) * code has "code also" instructions

	0344 Accidental Puncture or Laceration Rate (PDI 1)
	See Pediatric Quality Indicators Appendices: - Appendix I – Definitions of, Neonate, Newborn, Normal Newborn, and Outborn - Appendix L – Low Birth Weight Categories Link to PDI appendices: http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/TechnicalSpecifications/PDI%20Appendices.pdf
Risk Adjustment	Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with hospital random effect) and covariates for gender, birthweight (500g groups), age in days (29-60, 61-90, 91+), age in years (in 5-year age groups), modified CMS DRG and AHRQ CCS comorbities. The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the years 2008, a database consisting of 43 states and approximately 6 million pediatric discharges. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., hospital). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. Covariates used in this measures: MDC 5 MDC 6 MDC 8 MDC 11 MDC 15 MDC OTHER Procedure Type 2 Procedure Type 3 Procedure Type 4 to 5 Procedure Type 6 Procedure Type 7 *** Risk adjust by risk category (Procedure Type) 1. No therapeutic procedure with any or no diagnostic procedures 2. Only minor therapeutic procedure with any or no diagnostic procedures 3. One major therapeutic without diagnostic procedure 4. One major therapeutic with only minor diagnostic procedure(s) 5. One major therapeutic with major diagnostic procedure(s) 6. Two major therapeutic procedures with any or no diagnostic procedures 7. Three or more major therapeutic procedures with any or no diagnostic procedures; URL http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/Risk%20Adjustment%20Tables%20PDI%204.3.pdf Not applicable
Stratification	Clinical categories for PDI 1 are based on Major Diagnostic Categories (MDC). Stratum 1. Eye, ear, nose, mouth, throat, skin, breast, and other low-risk procedures (MDC 2, 3, 9, 19, 22, 23) Stratum 2. Thoracic, cardiovascular, and specified neoplastic procedures (MDC 4, 5, 17) Stratum 3. Kidney, and male/female reproductive procedures MDC 11, 12, 13)

	0344 Accidental Puncture or Laceration Rate (PDI 1)
	Stratum 4. Infectious, immunological, hematological, and ungroupable procedures (MDC 0/99, 16, 18, 25) Stratum 5. Trauma, orthopedic, and neurologic procedures (MDC 1, 8, 21, 24) Stratum 6. Gastrointestinal, hepatobiliary, and endocrine procedures (MDC 6, 7, 10)
Type Score	Rate/proportion better quality = lower score
Algorithm	Each indicator is expressed as a rate, is defined as outcome of interest / population at risk or numerator / denominator. The AHRQ Quality Indicators (AHRQ QI) software performs six steps to produce the rates. 1) Discharge-level data is used to mark inpatient records containing the outcome of interest and 2) the population at risk. For provider indicators, the population at risk is also derived from hospital discharge records; for area indicators, the population at risk is derived from U.S. Census data. 3) Calculate observed rates. Using output from steps 1 and 2, rates are calculated for user-specified combinations of stratifiers. 4) Calculate expected rates. Regression coefficients from a reference population database are applied to the discharge records and aggregated to the provider or area level. For indicators that are not risk-adjusted, this is the reference population rate. 5) Calculate risk-adjusted rate. Use the indirect standardization to account for case-mix. For indicators that are not risk-adjusted, this is the same as the observed rate. 6) Calculate smoothed rate. A Univariate shrinkage factor is applied to the risk-adjusted rates. The shrinkage estimate reflects a reliability adjustment unique to each indicator URL Not applicable http://qualityindicators.ahrq.gov/Downloads/Resources/Publications/2011/QI%20Empirical%20Methods%2005-03-11.pdf
Copyright	Not applicable

	0345 Accidental Puncture or Laceration Rate (PSI 15)
Steward	Agency for Healthcare Research and Quality
Description	Percent of discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code denoting accidental cut, puncture, perforation, or laceration during a procedure in any secondary diagnosis field.
Type	Outcome
Data Source	Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD. URL http://www.hcup-us.ahrq.gov/sidoverview.jsp Not applicable URL http://qualityindicators.ahrq.gov/Downloads/Software/WinQI/V43/AHRQ%20QI%20Software%20Instructions,%20WinQI.pdf Not applicable
Level	Facility
Setting	Hospital/Acute Care Facility
Numerator Statement	Discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code denoting accidental cut, puncture, perforation, or laceration during a procedure in any secondary diagnosis field.
Numerator Details	**Time Window:** User may specify the time window; generally one calendar year ICD-9-CM Accidental puncture or laceration diagnosis codes:

	0345 Accidental Puncture or Laceration Rate (PSI 15)
	E8700 SURGICAL OPERATION E8701 INFUSION OR TRANSFUSION E8702 KIDNEY DIALYSIS OR OTHER PERFUSION E8703 INJECTION OR VACCINATION E8704 ENDOSCOPIC EXAMINATION E8705 ASPIRATION OF FLUID OR TISSUE, PUNCTURE, AND CATHETERIZATION E8706 HEART CATHETERIZATION E8707 ADMINISTRATION OF ENEMA E8708 OTHER SPECIFIED MEDICAL CARE E8709 UNSPECIFIED MEDICAL CARE 9982 ACCIDENTAL PUNCTURE OR LACERATION DURING A PROCEDURE
Denominator Statement	All surgical and medical discharges age 18 years and older defined by specific DRGs or MS-DRGs.
Denominator Details	**Time Window:** User may specify the time window; generally one calendar year See Patient Safety Indicators Appendices: - Appendix B – Medical Discharge DRGs - Appendix C – Medical Discharge MS-DRGs - Appendix D – Surgical Discharge DRGs - Appendix E – Surgical Discharge MS-DRGs Link to PSI appendices: http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/TechnicalSpecifications/PSI%20Appendices.pdf
Exclusions	Exclude cases: - with principal diagnosis denoting accidental cut, puncture, perforation, or laceration or secondary diagnosis present on admission - MDC 14 (pregnancy, childbirth, and puerperium) - with ICD-9-CM code for spine surgery - with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)
Exclusion Details	ICD-9-CM Spine surgery procedure codes: 0301

	0345 Accidental Puncture or Laceration Rate (PSI 15)
	REMOVAL OF FOREIGN BODY FROM SPINAL CANAL 0302 REOPENING OF LAMINECTOMY SITE 0309 OTHER EXPLORATION AND DECOMPRESSION OF SPINAL CANAL 0353 REPAIR OF VERTEBRAL FRACTURE 036 LYSIS OF ADHESIONS OF SPINAL CORD AND NERVE ROOTS 8053 REPAIR OF THE ANULUS FIBROSUS WITH GRAFT OR PROSTHESIS (OCT08) 8054 OTHER AND UNSPECIFIED REPAIR OF THE ANULUS FIBROSUS (OCT08) 8100 SPINAL FUSION, NOT OTHERWISE SPECIFIED 8101 ATLAS-AXIS SPINAL FUSION 8102 OTHER CERVICAL FUSION, ANTERIOR TECHNIQUE 8103 OTHER CERVICAL FUSION, POSTERIOR TECHNIQUE 8104 DORSAL AND DORSOLUMBAR FUSION, ANTERIOR TECHNIQUE 8105 DORSAL AND DORSOLUMBAR FUSION, POSTERIOR TECHNIQUE 8106 LUMBAR AND LUMBOSACRAL FUSION, ANTERIOR TECHNIQUE 8107 LUMBAR AND LUMBOSACRAL FUSION, LATERAL TRANSVERSE PROCESS TECHNIQUE 8108 LUMBAR AND LUMBOSACRAL FUSION, POSTERIOR TECHNIQUE 8130 REFUSION OF SPINE, NOT OTHERWISE SPECIFIED 8131 REFUSION OF ATLAS-AXIS SPINE 8132 REFUSION OF OTHER CERVICAL SPINE, ANTERIOR TECHNIQUE 8133 REFUSION OF OTHER CERVICAL SPINE, POSTERIOR TECHNIQUE 8134 REFUSION OF DORSAL AND DORSOLUMBAR SPINE, ANTERIOR TECHNIQUE 8135 REFUSION OF DORSAL AND DORSOLUMBAR SPINE, POSTERIOR TECHNIQUE 8136

	0345 Accidental Puncture or Laceration Rate (PSI 15)
	REFUSION OF LUMBAR AND LUMBOSACRAL SPINE, ANTERIOR TECHNIQUE 8137 REFUSION OF LUMBAR AND LUMBOSACRAL SPINE, LATERAL TRANSVERSE PROCESS TECHNIQUE 8138 REFUSION OF LUMBAR AND LUMBOSACRAL SPINE, POSTERIOR TECHNIQUE 8139 REFUSION OF SPINE, NOT ELSEWHERE CLASSIFIED 8162 FUSION OR REFUSION OF 2-3 VERTEBRAE* 8163 FUSION OR REFUSION OF 4-8 VERTEBRAE* 8164 FUSION OR REFUSION OF 9 OR MORE VERTEBRAE* 8165 VERTEBROPLASTY 8166 KYPHOPLASTY 8451 INSERTION OF INTERBODY SPINAL FUSION DEVICE* 8452 INSERTION OF RECOMBINANT BONE MORPHOGENETIC PROTEIN* 8458 IMPLANTATION OF INTERSPINOUS PROCESS DECOMPRESSION DEVICE (ONLY BEFORE OCT 1, 2007) 8459 INSERTION OF OTHER SPINAL DEVICES 8460 INSERTION OF SPINAL DISC PROSTHESIS, NOT OTHERWISE SPECIFIED 8461 INSERTION OF PARTIAL SPINAL DISC PROSTHESIS, CERVICAL 8462 INSERTION OF TOTAL SPINAL DISC PROSTHESIS, CERVICAL 8463 INSERTION OF SPINAL DISC PROSTHESIS, THORACIC 8464 INSERTION OF PARTIAL SPINAL DISC PROSTHESIS, LUMBOSACRAL 8465 INSERTION OF TOTAL SPINAL DISC PROSTHESIS, LUMBOSACRAL 8466 REVISION OR REPLACEMENT OF ARTIFICIAL SPINAL DISC PROSTHESIS, CERVICAL 8467 REVISION OR REPLACEMENT OF ARTIFICIAL SPINAL DISC PROSTHESIS, THORACIC 8468 REVISION OR REPLACEMENT OF ARTIFICIAL SPINAL DISC PROSTHESIS, LUMBOSACRAL 8469

	0345 Accidental Puncture or Laceration Rate (PSI 15)
	REVISION OR REPLACEMENT OF ARTIFICIAL SPINAL DISC PROSTHESIS, NOT OTHERWISE SPECIFIED 8480 INSERTION OR REPLACEMENT OF INTERSPINOUS PROCESS DEVICE(S) 8481 REVISION OF INTERSPINOUS PROCESS DEVICE(S) 8482 INSERTION OR REPLACEMENT OF PEDICLE-BASED DYNAMIC STABILIZATION DEVICE(S) 8483 REVISION OF PEDICLE-BASED DYNAMIC STABILIZATION DEVICE(S) 8485 REVISION OF FACET REPLACEMENT DEVICE(S)
Risk Adjustment	Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with hospital random effect) and covariates for gender, age, modified CMS DRG, transfer status, procedure day availability, and the AHRQ Comorbidity category. The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the years 2008, a database consisting of 42 states and approximately 30 million adult discharges. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., hospital). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. Covariates used in this measures: Sex Female Age 18 to 24 Age 25 to 29 Age 30 to 59 MDRG 101 MDRG 103 MDRG 107 MDRG 302 MDRG 401 MDRG 402 MDRG 416 MDRG 502 MDRG 503 MDRG 504 MDRG 505 MDRG 506 MDRG 507 MDRG 508 MDRG 510 MDRG 511 MDRG 513 MDRG 514 MDRG 519

	0345 Accidental Puncture or Laceration Rate (PSI 15)
	MDRG 520 MDRG 522 MDRG 601 MDRG 602 MDRG 603 MDRG 604 MDRG 606 MDRG 609 MDRG 610 MDRG 611 MDRG 621 MDRG 701 MDRG 702 MDRG 703 MDRG 704 MDRG 705 MDRG 712 MDRG 806 MDRG 807 MDRG 815 MDRG 816 MDRG 1001 MDRG 1003 MDRG 1005 MDRG 1006 MDRG 1101 MDRG 1102 MDRG 1103 MDRG 1104 MDRG 1105 MDRG 1107 MDRG 1109 MDRG 1201 MDRG 1204 MDRG 1301 MDRG 1302 MDRG 1303 MDRG 1304 MDRG 1305 MDRG 1306 MDRG 1307 MDRG 1308 MDRG 1707 MDRG 1709

	0345 Accidental Puncture or Laceration Rate (PSI 15)
	MDRG 1801 MDRG 1802 MDRG 2104 MDRG 2108 MDRG 2408 MDRG 7702 MDC 3 MDC 4 MDC 5 MDC 6 MDC 7 MDC 8 MDC 9 MDC 11 MDC 12 MDC 13 MDC 16 MDC 17 MDC 18 MDC 21 MDC 24 MDC Other TRNSFER Transfer-in NOPRDAY Procedure Days Data Not Available COMORB PERIVASC COMORB DM COMORB DMCX COMORB RENLFAIL COMORB OBESE COMORB WGHTLOSS COMORB BLDLOSS COMORB ANEMDEF URL http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/Risk%20Adjustment%20Tables%20PSI%204.3.pdf Not applicable
Stratification	Not applicable
Type Score	Rate/proportion better quality = lower score
Algorithm	Each indicator is expressed as a rate, is defined as outcome of interest / population at risk or numerator / denominator. The AHRQ Quality Indicators (AHRQ QI) software performs six steps to produce the rates. 1) Discharge-level data is used to mark inpatient records containing the outcome of interest and 2) the population at risk. For provider indicators, the population at risk is also derived from hospital discharge records; for area indicators, the population at risk is derived from U.S. Census data. 3) Calculate observed rates. Using output from steps 1 and 2, rates are calculated for user-specified combinations of stratifiers. 4) Calculate expected rates. Regression coefficients from a reference population database are applied to the discharge records and aggregated to the provider or area level. For indicators that are not risk-adjusted, this is the reference

	0345 Accidental Puncture or Laceration Rate (PSI 15)
	population rate. 5) Calculate risk-adjusted rate. Use the indirect standardization to account for case-mix. For indicators that are not risk-adjusted, this is the same as the observed rate. 6) Calculate smoothed rate. A Univariate shrinkage factor is applied to the risk-adjusted rates. The shrinkage estimate reflects a reliability adjustment unique to each indicator URL Not applicable http://qualityindicators.ahrq.gov/Downloads/Resources/Publications/2011/QI%20Empirical%20Methods%2005-03-11.pdf
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	0346 Iatrogenic Pneumothorax Rate (PSI 6)
Steward	Agency for Healthcare Research and Quality
Description	Percent of discharges with ICD-9-CM code for iatrogenic pneumothorax in any secondary diagnosis field among cases meeting the inclusion and exclusion rules for the denominator
Type	Outcome
Data Source	Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD. URL http://www.hcup-us.ahrq.gov/sidoverview.jsp Not applicable URL http://qualityindicators.ahrq.gov/Downloads/Software/WinQI/V43/AHRQ%20QI%20Software%20Instructions,%20WinQI.pdf Not applicable
Level	Facility
Setting	Hospital/Acute Care Facility
Numerator Statement	Discharges with ICD-9-CM code for iatrogenic pneumothorax in any secondary diagnosis field among cases meeting the inclusion and exclusion rules for the denominator.
Numerator Details	**Time Window:** User may specify the time window; generally one calendar year ICD-9-CM Iatrogenic Pneumothorax diagnosis code: 5121 IATROGENIC PNEUMOTHORAX
Denominator Statement	All surgical and medical discharges age 18 years and older defined by specific DRGs or MS-DRGs.
Denominator Details	**Time Window:** User may specify the time window; generally one calendar year See Patient Safety Indicators Appendices: - Appendix B – Medical Discharge DRGs - Appendix C – Medical Discharge MS-DRGs - Appendix D – Surgical Discharge DRGs - Appendix E – Surgical Discharge MS-DRGs Link to PSI appendices: http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/TechnicalSpecifications/PSI%20Appendices.pdf
Exclusions	Exclude cases: - with principal diagnosis of iatrogenic pneumothorax or secondary diagnosis present on admission - MDC 14 (pregnancy, childbirth, and puerperium) - with any diagnosis code of chest trauma or pleural effusion - with a code of diaphragmatic surgery repair in any procedure field - with any code indicating thoracic procedure, lung or pleural biopsy, or cardiac procedure - with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)
Exclusion Details	ICD-9-CM Chest trauma diagnosis codes: 80700

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	FRACTURE RIB NOS-CLOSED 80701 FRACTURE ONE RIB-CLOSED 80702 FRACTURE TWO RIBS-CLOSED 80703 FRACTURE THREE RIBS-CLOS 80704 FRACTURE FOUR RIBS-CLOSE 80705 FRACTURE FIVE RIBS-CLOSE 80706 FRACTURE SIX RIBS-CLOSED 80707 FRACTURE SEVEN RIBS-CLOS 80708 FX EIGHT/MORE RIB-CLOSED 80709 FX MULT RIBS NOS-CLOSED 80710 FRACTURE RIB NOS-OPEN 80711 FRACTURE ONE RIB-OPEN 80712 FRACTURE TWO RIBS-OPEN 80713 FRACTURE THREE RIBS-OPEN 80714 FRACTURE FOUR RIBS-OPEN 80715 FRACTURE FIVE RIBS-OPEN 80716 FRACTURE SIX RIBS-OPEN 80717 FRACTURE SEVEN RIBS-OPEN 80718 FX EIGHT/MORE RIBS-OPEN 80719 FX MULT RIBS NOS-OPEN 8072 FRACTURE OF STERNUM-CLOS 8073 FRACTURE OF STERNUM-OPEN 8074

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	FLAIL CHEST 8075 FX LARYNX/TRACHEA-CLOSED 8076 FX LARYNX/TRACHEA-OPEN 8090 FRACTURE TRUNK BONE-CLOS 8091 FRACTURE TRUNK BONE-OPEN 8600 TRAUM PNEUMOTHORAX-CLOSE 8601 TRAUM PNEUMOTHORAX-OPEN 8602 TRAUM HEMOTHORAX-CLOSED 8603 TRAUM HEMOTHORAX-OPEN 8604 TRAUM PNEUMOHEMOTHOR-CL 8605 TRAUM PNEUMOHEMOTHOR-OPN 86100 HEART INJURY NOS-CLOSED 86101 HEART CONTUSION-CLOSED 86102 HEART LACERATION-CLOSED 86103 HEART CHAMBER LACERAT-CL 86110 HEART INJURY NOS-OPEN 86111 HEART CONTUSION-OPEN 86112 HEART LACERATION-OPEN 86113 HEART CHAMBER LACER-OPN 86120 LUNG INJURY NOS-CLOSED 86121 LUNG CONTUSION-CLOSED 86122 LUNG LACERATION-CLOSED 86130

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	LUNG INJURY NOS-OPEN 86131 LUNG CONTUSION-OPEN 86132 LUNG LACERATION-OPEN 8620 DIAPHRAGM INJURY-CLOSED 8621 DIAPHRAGM INJURY-OPEN 86221 BRONCHUS INJURY-CLOSED 86222 ESOPHAGUS INJURY-CLOSED 86229 INTRATHORACIC INJ NEC-CL 86231 BRONCHUS INJURY-OPEN 86232 ESOPHAGUS INJURY-OPEN 86239 INTRATHORAC INJ NEC-OPEN 8628 INTRATHORACIC INJ NOS-CL 8629 INTRATHORAC INJ NOS-OPEN 8750 OPEN WOUND OF CHEST 8751 OPEN WOUND CHEST-COMPL 8760 OPEN WOUND OF BACK 8761 OPEN WOUND BACK-COMPL 9010 INJURY THORACIC AORTA 9011 INJ INNOMIN/SUBCLAV ART 9012 INJ SUPERIOR VENA CAVA 9013 INJ INNOMIN/SUBCLAV VEIN 90140 INJ PULMONARY VESSEL NOS 90141

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	INJURY PULMONARY ARTERY 90142 INJURY PULMONARY VEIN 90181 INJ INTERCOSTAL ART/VEIN 90182 INJ INT MAMMARY ART/VEIN 90183 INJ MULT THORACIC VESSEL 90189 INJ THORACIC VESSEL NEC 9019 INJ THORACIC VESSEL NOS 9110 ABRASION TRUNK 9111 ABRASION TRUNK-INFECTED 9118 SUPERFIC INJU TRUNK NEC 9119 SUPERFIC INJU TRUNK NEC-INF 9220 CONTUSION OF BREAST 9221 CONTUSION OF CHEST WALL 9223 BACK CONTUSION 92231 BACK CONTUSION 92233 INTERSCPLR REG CONTUSION 9228 MULIPLE CONTUSION TRUNK 9229 CONTUSION OF TRUNK 92611 CRUSHING INJURY BACK 92619 CRUSHING INJ TRUNK NEC 9268 MULT CRUSHING INJ TRUNK 9269 CRUSHING INJ TRUNK NOS 9290

CRUSH INJ MULT SITE NEC
9299
CRUSHING INJURY NOS
9541
INJ SYMPA NERVE NEC
9548
INJURY TRUNK NERVE NEC
9549
INJURY TRUNK NERVE NOS
95911
INJURY OF CHEST WALL NEC
95919
TRUNK INJURY-SITES NEC
9599
INJURY-SITE NOS
ICD-9-CM Pleural effusion diagnosis codes:
0101
TUBERCULOUS PLEURISY IN PRIMARY PROGRESSIVE TUBERCULOSIS
01010
TUBERCULOUS PLEURISY IN PRIMARY PROGRESSIVE TUBERCULOSIS, UNSPECIFIED
01011
TPIPPT, BACTERIAL OR HISTOLOGICAL EXAM NOT DONE
01012
TPIPPT, BACTERIAL OR HISTOLOGICAL EXAM UNKNOWN
01013
TPIPPT, TUBERCLE BACILI FOUND BY MICROSCOPY
01014
TPIPPT, TUBERCLE BACILI NOT FOUND BY MICROSCOPY BUT BY BACTERIAL CULTURE
01015
TPIPPT, TUBERCLE BACILI NOT FOUND BY BACTERIOLOGICAL BUT CONFIRMED HISTOLOGICALLY
01016
TPIPPT, TUBERCLE BACILI NOT FOUND BY BACTERILOGICAL OR HISTOLOGICAL BUT CONFIRMED OTHER METHODS
0117
TUBRCULOUS PNEUMOTHORAX
01170
TUBRCULOUS PNEUMOTHORAX, UNSPECIFIED
01171
TPNEU, BACTERIAL OR HISTOLOGICAL EXAM NOT DONE
01172
TPNEU, BACTERIAL OR HISTOLOGICAL EXAM UNKNOWN
01173
TPNEU, TUBERCLE BACILI FOUND BY MICROSCOPY
01174

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	TPNEU, TUBERCLE BACILI NOT FOUND BY MICROSCOPY BUT BY BACTERIAL CULTURE 01175 TPNEU, TUBERCLE BACILI NOT FOUND BY BACTERIOLOGICAL BUT CONFIRMED HISTOLOGICALLY 01176 TPENU, TUBERCLE BACILI NOT FOUND BY BACTERILOGICAL OR HISTOLOGICAL BUT CONFIRMED OTHER METHODS 0120 TUBERCULOUS PLEURISY 01200 TUBERCULOUS PLEURISY, UNSPECIFIED 01201 TP, BACTERIAL OR HISTOLOGICAL EXAM NOT DONE 01202 TP, BACTERIAL OR HISTOLOGICAL EXAM UNKNOWN 01203 TP, TUBERCLE BACILI FOUND BY MICROSCOPY 01204 TP, TUBERCLE BACILI NOT FOUND BY MICROSCOPY BUT BY BACTERIAL CULTURE 01205 TP, TUBERCLE BACILI NOT FOUND BY BACTERIOLOGICAL BUT CONFIRMED HISTOLOGICALLY 01206 TP, TUBERCLE BACILI NOT FOUND BY BACTERILOGICAL OR HISTOLOGICAL BUT CONFIRMED OTHER METHODS 1972 SECOND MALIG NEO PLEURA ICD9-CM Diaphragmatic surgery repair codes: 537 ABD REPAIR-DIAPHR HERNIA 5371 LAPAROSCOPIC REPAIR OF DIAPHRAGMATIC HERNIA, ABDOMINAL APPROACH (OCT08) 5372 OTHER AND OPEN REPAIR OF DIAPHRAGMATIC HERNIA, ABDOMINAL APPROACH (OCT08) 5375 REPAIR OF DIAPHRAGMATIC HERNIA, ABDOMINAL APPROACH, NOS (OCT08) 5380 THOR REP-DIAPH HERN NOS 5381 DIAPHRAGMATIC PLICATION 5382 PARASTERN HERNIA REPAIR 5583 LAPAROSCOPIC REPAIR OF DIAPHRAGMATIC HERNIA, WITH THORACIC APPROACH (OCT08) 5584 OTHER AND OPEN REPAIR OF DIAPHRAGMATIC HERNIA, WITH THORACIC APPROACH (OCT08) ICD-9-CM Thoracic surgery procedure codes:

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	0522 SYMPATHECTOMY CERVICAL 0523 SYMPATHECTOMY LUMBAR 0529 OTHER SYMPATHECTOMY AND GANGLIONECTOMY 0780 THYMECTOMY, NOT OTHERWISE SPECIFIED 0781 OTHER PARTIAL EXCISION OF THYMUS 0782 OTHER TOTAL EXCISION OF THYMUS 0783 THORACOSCOPIC PARTIAL EXCISION OF THYMUS 0784 THORACOSCOPIC TOTAL EXCISION OF THYMUS 3121 MEDIASTINAL TRACHEOSTOMY 3145 OPEN BIOPSY OF LARYNX OR TRACHEA 3173 CLOSURE OF OTHER FISTULA OF TRACHEA 3179 OTHER REPAIR AND PLASTIC OPERATIONS ON TRACHEA 3199 OTHER OPERATIONS ON TRACHEA 3209 OTHER LOCAL EXCISION OR DESTRUCTION OF LESION OR TISSUE OF BRONCHUS 321 OTHER EXCISION OF BRONCHUS 3220 THORAC EXC LUNG LESION Local excision or destruction of lesion or tissue of lung 3221 PLICATION OF EMPHYSEMATIOUS BLEB 3222 LUNG VOLUME REDUCTION SURGERY 3223 OPEN ABLTN LUNG LES/TISS (OCT06) 3224 PERC ABLTN LUNG LES/TISS (OCT06) 3225 THOR ABLTN LUNG LES/TISS (OCT06) 3226

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	ABLTN LUNG TISS NEC/NOS (OCT06) 3227 BRNC THRMPLSTY, ABLT MSCL 3228 ENDOSCOPIC EXCISION OR DESTRUCTION OF LESION OR TISSUE OF LUNG 3229 OTHER LOCAL EXCISION OR DESTRUCTION OF LESION OR TISSUE OF LUNG 323 SEGMENTAL RESECTION OF LUNG 3230 THORAC SEG LUNG RESECT 3239 OTH SEG LUNG RESECT NOS 324 LOBECTOMY OF LUNG 3241 THORAC LOBECTOMY LUNG 3249 OTHER LOBECTOMY OF LUNG 325 COMPLETE PNEUMONECTOMY 3250 THORACOSPC PNEUMONECTOMY 3259 OTHER PNEUMONECTOMY NOS 326 RADICAL DISSECTION OF THORACIC STRUCTURES 329 OTHER EXCISION OF LUNG 330 INCISION OF BRONCHUS 331 INCISION OF LUNG 3320 THORACOSCOPC LUNG BIOPSY 3325 OPEN BIOPSY OF BRONCHUS 3327 CLOSED ENDOSCOPIC BIOPSY OF LUNG 3331 DESTRUCTION OF PHRENIC NERVE FOR COLLAPSE OF LUNG (NO LONGER PERFORMED) 3332 ARTIFICIAL PNEUMOTHORAX FOR COLLAPSE OF LUNG 3334

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	THORACOPLASTY 3339 OTHER SURGICAL COLLAPSE OF LUNG Repair and plastic operation on lung and bronchus 3341 SUTURE OF LACERATION OF BRONCHUS 3342 CLOSURE OF BRONCHIAL FISTULA 3343 CLOSURE OF LACERATION OF LUNG 3348 OTHER REPAIR AND PLASTIC OPERATIONS ON BRONCHUS 3349 OTHER REPAIR AND PLASTIC OPERATIONS ON LUNG Lung transplant 335 LUNG TRANSPLANTATION 3350 LUNG TRANSPLANTATION, NOS 3351 UNILATERAL LUNG TRANSPLANTATION 3352 BILATERAL LUNG TRANSPLANTATION 336 COMBINED HEART-LUNG TRANSPLANTATION 3392 LIGATION OF BRONCHUS 3393 PUNCTURE OF LUNG 3398 OTHER OPERATIONS ON BRONCHUS 3399 OTHER OPERATIONS ON LUNG 3329 OTHER DIAGNOSTIC PROCEDURE ON LUNG AND BRONCHUS 3333 PNEUMOPERITONEUM FOR COLLAPSE OF LUNG 3401 INCISION OF CHEST WALL 3402 EXPLORATORY THORACOTOMY 3403 REOPENING OF RECENT THORACOTOMY SITE 3405

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	CREATION OF PLEUROPERITONEAL SHUNT 3409 OTHER INCISION OF PLEURA 341 INCISION OF MEDIASTINUM Diagnostic procedures on chest wall, pleura, mediastinum, and diaphragm 3420 THORACOSCOPIC PLEURAL BX 3421 TRANSPLEURAL THORACOSOCOPY 3422 MEDIASTINOSCOPY 3423 BIOPSY OF CHEST WALL 3425 CLOSED [PERCUTANEOUS][NEEDLE] BIOPSY OF MEDIASTINUM 3426 OPEN BIOPSY OF MEDIASTINUM 3427 BIOPSY OF DIAPHRAGM 3428 OTHER DIAGNOSTIC PROCEDURES ON CHEST WALL, PLEURA, AND DIAPHRAGM 3429 OTHER DIAGNOSTIC PROCEDURES ON MEDIASTINUM 343 EXCISION OR DESTRUCTION OF LESION OR TISSUE OF MEDIASTINUM 344 EXCISION OR DESTRUCTION OF LESION OF CHEST WALL 3451 DECORTICATION OF LUNG 3452 THORACOSCOPC DECORT LUNG 3459 OTHER EXCISION OF PLEURA Repair of chest wall 3471 SUTURE OF LACERATION OF CHEST WALL 3472 CLOSURE OF THORACOSTOMY 3473 CLOSURE OF OTHER FISTULA OF THORAX 3474 REPAIR OF PECTUS DEFORMITY 3479

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	OTHER REPAIR OF CHEST WALL Operations on diaphragm 3481 EXCISION OF LESION OR TISSUE OF DIAPHRAGM 3482 SUTURE OF LACERATION OF DIAPHRAGM 3483 CLOSURE OF FISTULA OF DIAPHRAGM 3484 OTHER REPAIR OF DIAPHRAGM 3485 IMPLANTATION OF DIAPHRAGMATIC PACEMAKER 3489 OTHER OPERATIONS ON DIAPHRAGM 3493 REPAIR OF PLEURA 3499 OTHER OPERATIONS ON THORAX, OTHER Operations on thoracic duct 4061 CANNULATION OF THORACIC DUCT 4062 FISTULIZATION OF THORACIC DUCT 4063 CLOSURE OF FISTULA OF THORACIC DUCT 4064 LIGATION OF THORACIC DUCT 4069 OTHER OPERATIONS ON THORACIC DUCT Esophagotomy 4201 INCISION OF ESOPHAGEAL WEB 4209 OTHER INCISION OF ESOPHAGUS 4210 ESOPHAGOSTOMY, NOS 4211 CERVICAL ESOPHAGOSTOMY 4212 EXTERIORIZATION OF ESOPHAGEAL POUCH 4219 OTHER EXTERNAL FISTULIZATION OF ESOPHAGUS 4221 OPERATIVE ESOPHAGOSCOPY BY INCISION

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	4225 OPEN BIOPSY OF ESOPHAGUS 4231 LOCAL EXCISION OF ESOPHAGEAL DIVERTICULUM 4232 LOCAL EXCISION OF OTHER LESION OR TISSUE OF ESOPHAGUS Excision of esophagus 4239 OTHER DESTRUCTION OF LESION OR TISSUE OF ESOPHAGUS 4240 ESOPHAGECTOMY, NOS 4241 PARTIAL ESOPHAGECTOMY 4242 TOTAL ESOPHAGECTOMY Intrathoracic anastomosis of exophagus 4251 INTRATHORACIC ESOPHAGOESOPHAGOSTOMY 4252 INTRATHORACIC ESOPHAGOGASTROSTOMY 4253 INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF SMALL BOWEL 4254 OTHER INTRATHORACIC ESOPHAGOENTEROSTOMY 4255 INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF COLON 4256 OTHER INTRATHORACIC ESOPHAGOCOLOSTOMY 4258 INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ OTHER INTERPOSITION 4259 OTHER INTRATHORACIC ANASTOMOSIS OF ESOPHAGUS Antesternal anastomosis 4261 ANTESTERNAL ESOPHAGOESOPHAGOSTOMY 4262 ANTESTERNAL ESOPHAGOGASTROSTOMY 4263 ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF SMALL BOWEL 4264 OTHER ANTESTERNAL ESOPHAGOENTEROSTOMY 4265 ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF COLON 4266

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	OTHER ANTESTERNAL ESOPHAGOCOLOSTOMY 4268 OTHER ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION 4269 OTHER ANTESTERNAL ANASTOMOSIS OF ESOPHAGUS Other repair of esophagus 427 ESOPHAGOMYOTOMY 4281 INSERTION OF PERMANENT TUBE INTO ESOPHAGUS 4282 SUTURE OF LACERATION OF ESOPHAGUS 4283 CLOSURE OF ESOPHAGOSTOMY 4284 REPAIR OF ESOPHAGEAL FISTULA, NEC 4285 REPAIR OF ESOPHAGEAL STRICTURE 4286 PRODUCTION OF SUBCUTANEOUS TUNNEL W/O ESOPHAGEAL ANASTOMOSIS 4287 OTHER GRAFT OF ESOPHAGUS 4289 OTHER REPAIR OF ESOPHAGUS 435 PROXIMAL GASTRECTOMY 4399 TOTAL GASTRECTOMY NEC 4465 ESOPHAGOGASTROPLASTY 4466 OTHER PROCEDURES FOR CREATION OF ESOPHAGOGASTRIC SPHINCTERIC COMPETENCE 4467 LAP CREAT ESOPH SPHINCT 7781 OTH CHEST CAGE OSTECTOMY 7791 TOT CHEST CAGE OSTECTOMY 8104 DORSAL AND DORSO-LUMBAR FUSION, ANTERIOR TECHNIQUE 8134 REFUSION OF DORSAL AND DORSOLUMBAR SPINE, ANTERIOR TECHNIQUE ICD-9-CM Lung or pleural biopsy procedure codes: 3326

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	CLOSED [PERCUTANEOUS] [NEEDLE] BIOPSY OF LUNG 3328 OPEN BIOPSY OF LUNG 3424 PLEURAL BIOPSY ICD9-CM Cardiac procedure codes: 3510 OPEN HEART VALVULOPLASTY WITHOUT REPLACEMENT, UNSPECIFIED VALVE 3511 OPEN HEART VALVULOPLASTY OF AORTIC VALVE WITHOUT REPLACEMENT 3512 OPEN HEART VALVULOPLASTY OF MITRAL VALVE WITHOUT REPLACEMENT 3513 OPEN HEART VALVULOPLASTY OF PULMONARY VALVE WITHOUT REPLACEMENT 3514 OPEN HEART VALVULOPLASTY OF TRICUSPID VALVE WITHOUT REPLACEMENT 3520 REPLACEMENT OF UNSPECIFIED HEART VALVE 3521 REPLACEMENT OF AORTIC VALVE WITH TISSUE GRAFT 3522 OTHER REPLACEMENT OF AORTIC VALVE 3523 REPLACEMENT OF MITRAL VALVE WITH TISSUE GRAFT 3524 OTHER REPLACEMENT OF MITRAL VALVE 3525 REPLACEMENT OF PULMONARY VALVE WITH TISSUE GRAFT 3526 OTHER REPLACEMENT OF PULMONARY VALVE 3527 REPLACEMENT OF TRICUSPID VALVE WITH TISSUE GRAFT 3528 OTHER REPLACEMENT OF TRICUSPID VALVE 3531 OPERATIONS ON PAPILLARY MUSCLE 3532 OPERATIONS ON CHORDAE TENDINEAE 3533 ANNULOPLASTY 3534 INFUNDIBULECTOMY 3535 OPERATIONS ON TRABECULAE CARNEAE CORDIS

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	3539 OPERATIONS ON OTHER STRUCTURES ADJACENT TO VALVES OF HEART 3550 REPAIR OF UNSPECIFIED SEPTAL DEFECT OF HEART WITH PROSTHESIS 3551 REPAIR OF ATRIAL SEPTAL DEFECT WITH PROSTHESIS, OPEN TECHNIQUE 3553 REPAIR OF VENTRICULAR SEPTAL DEFECT WITH PROSTHESIS, OPEN TECHNIQUE 3554 REPAIR OF ENDOCARDIAL CUSHION DEFECT WITH PROSTHESIS 3560 REPAIR OF UNSPECIFIED SEPTAL DEFECT OF HEART WITH TISSUE GRAFT 3561 REPAIR OF ATRIAL SEPTAL DEFECT WITH TISSUE GRAFT 3562 REPAIR OF VENTRICULAR SEPTAL DEFECT WITH TISSUE GRAFT 3563 REPAIR OF ENDOCARDIAL CUSHION DEFECT WITH TISSUE GRAFT 3570 OTHER AND UNSPECIFIED REPAIR OF UNSPECIFIED SEPTAL DEFECT OF HEART 3571 OTHER AND UNSPECIFIED REPAIR OF ATRIAL SEPTAL DEFECT 3572 OTHER AND UNSPECIFIED REPAIR OF VENTRICULAR SEPTAL DEFECT 3573 OTHER AND UNSPECIFIED REPAIR OF ENDOCARDIAL CUSHION DEFECT 3581 TOTAL REPAIR OF TETRALOGY OF FALLOT 3582 TOTAL REPAIR OF TOTAL ANOMALOUS PULMONARY VENOUS CONNECTION 3583 TOTAL REPAIR OF TRUNCUS ARTERIOSUS 3584 TOTAL CORRECTION OF TRANSPOSITION OF GREAT VESSELS, NOT ELSEWHERE CLASSIFIED 3591 INTERATRIAL TRANSPOSITION OF VENOUS RETURN 3592 CREATION OF CONDUIT BETWEEN RIGHT VENTRICLE AND PULMONARY ARTERY 3593 CREATION OF CONDUIT BETWEEN LEFT VENTRICLE AND AORTA 3594 CREATION OF CONDUIT BETWEEN ATRIUM AND PULMONARY ARTERY 3595 REVISION OF CORRECTIVE PROCEDURE ON HEART

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	3597 PERC MTRL VLV REPR W IMP 3598 OTHER OPERATIONS ON SEPTA OF HEART 3599 OTHER OPERATIONS ON VALVES OF HEART 3603 OPEN CHEST CORONARY ARTERY ANGIOPLASTY 3610 AORTOCORONARY BYPASS FOR HEART REVASCULARIZATION, NOT OTHERWISE SPECIFIED 3611 (AORTO)CORONARY BYPASS OF ONE CORONARY ARTERY 3612 (AORTO)CORONARY BYPASS OF TWO CORONARY ARTERIES 3613 (AORTO)CORONARY BYPASS OF THREE CORONARY ARTERIES 3614 (AORTO)CORONARY BYPASS OF FOUR OR MORE CORONARY ARTERIES 3615 SINGLE INTERNAL MAMMARY-CORONARY ARTERY BYPASS 3616 DOUBLE INTERNAL MAMMARY-CORONARY ARTERY BYPASS 3617 ABDOMINAL -CORONARY ARTERY BYPASS 3619 OTHER BYPASS ANASTOMOSIS FOR HEART REVASCULARIZATION 362 HEART REVASCULARIZATION BY ARTERIAL IMPLANT 3631 OPEN CHEST TRANSMYOCARDIAL REVASCULARIZATION 3632 OTHER TRANSMYOCARDIAL REVASCULARIZATION 3639 OTHER HEART REVASCULARIZATION 3691 REPAIR OF ANEURYSM OF CORONARY VESSEL 3699 OTHER OPERATIONS ON VESSELS OF HEART 370 PERICARDIOCENTESIS 3710 INCISION OF HEART, NOT OTHERWISE SPECIFIED 3711 CARDIOTOMY

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	3712 PERICARDIOTOMY 3731 PERICARDIECTOMY 3732 EXCISION OF ANEURYSM OF HEART 3733 EXCISION OR DESTRUCTION OF OTHER LESION OR TISSUE OF HEART, OPEN APPROACH 3735 PARTIAL VENTRICULECTOMY 3736 EXCISION OR DESTRUCTION OF LEFT ATRIAL APPENDAGE (LAA) (OCT08) 3737 EXC/DEST HRT LES, THRSPC 3741 IMPLANTATION OF PROSTHETIC CARDIAC SUPPORT DEVICE AROUND THE HEART 3749 OTHER REPAIR OF HEART AND PERICARDIUM 3751 HEART TRANSPLANTATION 3752 IMPLANTATION OF TOTAL REPLACEMENT HEART SYSTEM 3753 REPLACEMENT OF REPAIR OF THORACIC UNIT OF TOTAL REPLACEMENT HEART SYSTEM 3754 REPLACEMENT OR REPAIR OF OTHER IMPLANTABLE COMPONENT OF TOTAL REPLACEMENT HEART SYSTEM 3755 REMOVAL OF INTERNAL BIVENTRICULAR HEART REPLACEMENT SYSTEM (OCT08) 3760 IMPLANTATION OR INSERTION OF BIVENTRICULAR EXTERNAL HEART ASSIST SYSTEM (OCT08) 3761 IMPLANT OF PULSATION BALLOON 3762 INSERTION OF NON-IMPLANTABLE HEART ASSIST SYSTEM 3763 REPAIR OF HEART ASSIST SYSTEM 3764 REMOVAL OF HEART ASSIST SYSTEM 3765 IMPLANT OF EXTERNAL HEART ASSIST SYSTEM 3766 INSERTION OF IMPLANTABLE HEART ASSIST SYSTEM 3767 IMPLANTATION OF CARDIOMYOSTIMULATION SYSTEM

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	3791 OPEN CHEST CARDIAC MASSAGE 3804 INCISION OF VESSEL, AORTA 3805 INCISION OF VESSEL, OTHER THORACIC 3844 RESECTION OF ABDOMINAL AORTA WITH GRAFT REPLACEMENT 3845 RESECTION OF THORACIC VESSEL WITH GRAFT REPLACEMENT 3864 EXCISION OF LESION OF AORTA 3865 EXCISION OF LESION OTHER THORACIC VESSEL 3884 LIGATION , DIVISION OF AORTA 3885 LIGATION, DIVISION OF OTHER THORACIC VESSELS 390 SYSTEMIC TO PULMONARY ARTERY SHUNT 3921 CAVAL-PULMONARY ARTERY ANASTOMOSIS 3922 AORTA-SUBCLAVIAN-CAROTID BYPASS 3923 OTHER INTRATHORACIC VASCULAR SHUNT OR BYPASS
Risk Adjustment	Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with hospital random effect) and covariates for gender, age (in 5-year age groups), modified CMS DRG, and the AHRQ Comorbidity category. The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the years 2008, a database consisting of 42 states and approximately 30 million adult discharges. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., hospital). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. Sex Female Age 65 to 85+ MDRG 416 MDRG 504 MDRG 510 MDRG 601 MDRG 602 MDRG 1103 MDRG 1801

	0346 Iatrogenic Pneumothorax Rate (PSI 6)
	MDRG 1807 MDC 1 MDC 6 MDC 8 MDC 25 NOPRDAY Procedure Days Data Not Available COMORB HTN_C COMORB NEURO COMORB CHRNLUNG COMORB DM COMORB DMCX COMORB METS COMORB OBESE COMORB WGHTLOSS COMORB DRUG URL http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/Risk%20Adjustment%20Tables%20PSI%204.3.pdf Not applicable
Stratification	Not applicable
Type Score	Rate/proportion better quality = lower score
Algorithm	Each indicator is expressed as a rate, is defined as outcome of interest / population at risk or numerator / denominator. The AHRQ Quality Indicators (AHRQ QI) software performs six steps to produce the rates. 1) Discharge-level data is used to mark inpatient records containing the outcome of interest and 2) the population at risk. For provider indicators, the population at risk is also derived from hospital discharge records; for area indicators, the population at risk is derived from U.S. Census data. 3) Calculate observed rates. Using output from steps 1 and 2, rates are calculated for user-specified combinations of stratifiers. 4) Calculate expected rates. Regression coefficients from a reference population database are applied to the discharge records and aggregated to the provider or area level. For indicators that are not risk-adjusted, this is the reference population rate. 5) Calculate risk-adjusted rate. Use the indirect standardization to account for case-mix. For indicators that are not risk-adjusted, this is the same as the observed rate. 6) Calculate smoothed rate. A Univariate shrinkage factor is applied to the risk-adjusted rates. The shrinkage estimate reflects a reliability adjustment unique to each indicator URL Not applicable http://qualityindicators.ahrq.gov/Downloads/Resources/Publications/2011/QI%20Empirical%20Methods%2005-03-11.pdf
Copyright	Not applicable

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
Steward	Agency for Healthcare Research and Quality
Description	Percent of discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code of iatrogenic pneumothorax in any secondary diagnosis field
Type	Outcome
Data Source	Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD.

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	URL http://www.hcup-us.ahrq.gov/sidoverview.jsp Not applicable URL http://qualityindicators.ahrq.gov/Downloads/Software/WinQI/V43/AHRQ%20QI%20Software%20Instructions,%20WinQI.pdf Not applicable
Level	Facility
Setting	Hospital/Acute Care Facility
Numerator Statement	Discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code of iatrogenic pneumothorax in any secondary diagnosis field
Numerator Details	**Time Window:** User may specify the time window; generally one calendar year ICD-9-CM Iatrogenic pneumothorax diagnosis code: 5121 IATROGENIC PNEUMOTHORAX
Denominator Statement	Discharges, age under 18 years, defined by specific surgical and medical DRGs
Denominator Details	**Time Window:** All surgical and medical discharges under age 18 defined by specific DRGs or MS-DRGs See Pediatric Quality Indicators Appendices: - Appendix B – Surgical Discharge DRGs - Appendix C – Surgical Discharge MS-DRGs - Appendix D – Medical Discharge DRGs - Appendix E – Medical Discharge MS-DRGs Link to PDI appendices: http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/TechnicalSpecifications/PDI%20Appendices.pdf
Exclusions	Exclude cases: - neonates with birth weight less than 2500 grams (Birth Weight Category 1-8) - with principal diagnosis of iatrogenic pneumothorax or secondary diagnosis present on admission - with any diagnosis code of chest trauma or pleural effusion - with an ICD-9-CM procedure code of thoracic surgery, lung or pleural biopsy, diaphragmatic surgery repair, OR cardiac surgery - normal newborn - MDC 14 (pregnancy, childbirth, and puerperium) - with missing discharge gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)
Exclusion Details	See Pediatric Quality Indicators Appendices: - Appendix I – Definitions of Neonate, Newborn, Normal Newborn, and Outborn - Appendix L- Low Birth Weight Categories Link to PDI appendices: http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/TechnicalSpecifications/PDI%20Appendices.pdf ICD-9-CM Chest trauma diagnosis codes: 80700 FRACTURE RIB NOS-CLOSED

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	80701 FRACTURE ONE RIB-CLOSED 80702 FRACTURE TWO RIBS-CLOSED 80703 FRACTURE THREE RIBS-CLOS 80704 FRACTURE FOUR RIBS-CLOSE 80705 FRACTURE FIVE RIBS-CLOSE 80706 FRACTURE SIX RIBS-CLOSED 80707 FRACTURE SEVEN RIBS-CLOS 80708 FX EIGHT/MORE RIB-CLOSED 80709 FX MULT RIBS NOS-CLOSED 80710 FRACTURE RIB NOS-OPEN 80711 FRACTURE ONE RIB-OPEN 80712 FRACTURE TWO RIBS-OPEN 80713 FRACTURE THREE RIBS-OPEN 80714 FRACTURE FOUR RIBS-OPEN 80715 FRACTURE FIVE RIBS-OPEN 80716 FRACTURE SIX RIBS-OPEN 80717 FRACTURE SEVEN RIBS-OPEN 80718 FX EIGHT/MORE RIBS-OPEN 80719 FX MULT RIBS NOS-OPEN 8072 FRACTURE OF STERNUM-CLOS 8073 FRACTURE OF STERNUM-OPEN 8074 FLAIL CHEST

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	8075 FX LARYNX/TRACHEA-CLOSED 8076 FX LARYNX/TRACHEA-OPEN 8090 FRACTURE TRUNK BONE-CLOS 8091 FRACTURE TRUNK BONE-OPEN 8600 TRAUM PNEUMOTHORAX-CLOSE 8601 TRAUM PNEUMOTHORAX-OPEN 8602 TRAUM HEMOTHORAX-CLOSED 8603 TRAUM HEMOTHORAX-OPEN 8604 TRAUM PNEUMOHEMOTHOR-CL 8605 TRAUM PNEUMOHEMOTHOR-OPN 86100 HEART INJURY NOS-CLOSED 86101 HEART CONTUSION-CLOSED 86102 HEART LACERATION-CLOSED 86103 HEART CHAMBER LACERAT-CL 86110 HEART INJURY NOS-OPEN 86111 HEART CONTUSION-OPEN 86112 HEART LACERATION-OPEN 86113 HEART CHAMBER LACER-OPN 86120 LUNG INJURY NOS-CLOSED 86121 LUNG CONTUSION-CLOSED 86122 LUNG LACERATION-CLOSED 86130 LUNG INJURY NOS-OPEN

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	86131 LUNG CONTUSION-OPEN 86132 LUNG LACERATION-OPEN 8620 DIAPHRAGM INJURY-CLOSED 8621 DIAPHRAGM INJURY-OPEN 86221 BRONCHUS INJURY-CLOSED 86222 ESOPHAGUS INJURY-CLOSED 86229 INTRATHORACIC INJ NEC-CL 86231 BRONCHUS INJURY-OPEN 86232 ESOPHAGUS INJURY-OPEN 86239 INTRATHORAC INJ NEC-OPEN 8628 INTRATHORACIC INJ NOS-CL 8629 INTRATHORAC INJ NOS-OPEN 8750 OPEN WOUND OF CHEST 8751 OPEN WOUND CHEST-COMPL 8760 OPEN WOUND OF BACK 8761 OPEN WOUND BACK-COMPL 9010 INJURY THORACIC AORTA 9011 INJ INNOMIN/SUBCLAV ART 9012 INJ SUPERIOR VENA CAVA 9013 INJ INNOMIN/SUBCLAV VEIN 90140 INJ PULMONARY VESSEL NOS 90141 INJURY PULMONARY ARTERY

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	90142 INJURY PULMONARY VEIN 90181 INJ INTERCOSTAL ART/VEIN 90182 INJ INT MAMMARY ART/VEIN 90183 INJ MULT THORACIC VESSEL 90189 INJ THORACIC VESSEL NEC 9019 INJ THORACIC VESSEL NOS 9110 ABRASION TRUNK 9111 ABRASION TRUNK-INFECTED 9118 SUPERFIC INJU TRUNK NEC 9119 SUPERFIC INJU TRUNK NEC-INF 9220 CONTUSION OF BREAST 9221 CONTUSION OF CHEST WALL 9223 BACK CONTUSION 92231 BACK CONTUSION 92233 INTERSCPLR REG CONTUSION 9228 MULIPLE CONTUSION TRUNK 9229 CONTUSION OF TRUNK 92611 CRUSHING INJURY BACK 92619 CRUSHING INJ TRUNK NEC 9268 MULT CRUSHING INJ TRUNK 9269 CRUSHING INJ TRUNK NOS 9290 CRUSH INJ MULT SITE NEC

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	9299 CRUSHING INJURY NOS 9541 INJ SYMPA NERVE NEC 9548 INJURY TRUNK NERVE NEC 9549 INJURY TRUNK NERVE NOS 95911 INJURY OF CHEST WALL NEC 95919 TRUNK INJURY-SITES NEC 9599 INJURY-SITE NOS ICD-9-CM Pleural effusion diagnosis codes: 0101 TUBERCULOUS PLEURISY IN PRIMARY PROGRESSIVE TUBERCULOSIS 01010 TUBERCULOUS PLEURISY IN PRIMARY PROGRESSIVE TUBERCULOSIS, UNSPECIFIED 01011 TPIPPT, BACTERIAL OR HISTOLOGICAL EXAM NOT DONE 01012 TPIPPT, BACTERIAL OR HISTOLOGICAL EXAM UNKNOWN 01013 TPIPPT, TUBERCLE BACILI FOUND BY MICROSCOPY 01014 TPIPPT, TUBERCLE BACILI NOT FOUND BY MICROSCOPY BUT BY BACTERIAL CULTURE 01015 TPIPPT, TUBERCLE BACILI NOT FOUND BY BACTERIOLOGICAL BUT CONFIRMED HISTOLOGICALLY 01016 TPIPPT, TUBERCLE BACILI NOT FOUND BY BACTERILOGICAL OR HISTOLOGICAL BUT CONFIRMED OTHER METHODS 0117 TUBRCULOUS PNEUMOTHORAX 01170 TUBRCULOUS PNEUMOTHORAX, UNSPECIFIED 01171 TPNEU, BACTERIAL OR HISTOLOGICAL EXAM NOT DONE 01172 TPNEU, BACTERIAL OR HISTOLOGICAL EXAM UNKNOWN 01173 TPNEU, TUBERCLE BACILI FOUND BY MICROSCOPY 01174 TPNEU, TUBERCLE BACILI NOT FOUND BY MICROSCOPY BUT BY BACTERIAL CULTURE

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	01175 TPNEU, TUBERCLE BACILI NOT FOUND BY BACTERIOLOGICAL BUT CONFIRMED HISTOLOGICALLY 01176 TPENU, TUBERCLE BACILI NOT FOUND BY BACTERILOGICAL OR HISTOLOGICAL BUT CONFIRMED OTHER METHODS 0120 TUBERCULOUS PLEURISY 01200 TUBERCULOUS PLEURISY, UNSPECIFIED 01201 TP, BACTERIAL OR HISTOLOGICAL EXAM NOT DONE 01202 TP, BACTERIAL OR HISTOLOGICAL EXAM UNKNOWN 01203 TP, TUBERCLE BACILI FOUND BY MICROSCOPY 01204 TP, TUBERCLE BACILI NOT FOUND BY MICROSCOPY BUT BY BACTERIAL CULTURE 01205 TP, TUBERCLE BACILI NOT FOUND BY BACTERIOLOGICAL BUT CONFIRMED HISTOLOGICALLY 01206 TP, TUBERCLE BACILI NOT FOUND BY BACTERILOGICAL OR HISTOLOGICAL BUT CONFIRMED OTHER METHODS 1972 SECOND MALIG NEO PLEURA 5111 WITH EFUSION, WITH MENTION OF A BACTERIAL CAUSE OTHER THAN TUBERCULOSIS 5118 OTHER SPECIFIED FORM OF EFFUSION, EXCEPT TUBERCULOUS 51181 MALIGNANT PLEURAL EFFUSION (OCT08) 51189 OTHER SPECIFIED FORMS OF EFFUSION, EXCEPT TUBERCULOSIS (OCT08) 5119 UNSPECIFIED PLEURAL EFFUSION ICD-9-CM Thoracic surgery procedure codes: 0522 SYMPATHECTOMY CERVICAL 0523 SYMPATHECTOMY LUMBAR 0529 OTHER SYMPATHECTOMY AND GANGLIONECTOMY 0780 THYMECTOMY, NOT OTHERWISE SPECIFIED 0781 OTHER PARTIAL EXCISION OF THYMUS

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	0782 OTHER TOTAL EXCISION OF THYMUS 0783 THORACOSCOPIC PARTIAL EXCISION OF THYMUS 0784 THORACOSCOPIC TOTAL EXCISION OF THYMUS 3121 MEDIASTINAL TRACHEOSTOMY 3145 OPEN BIOPSY OF LARYNX OR TRACHEA 3173 CLOSURE OF OTHER FISTULA OF TRACHEA 3179 OTHER REPAIR AND PLASTIC OPERATIONS ON TRACHEA 3199 OTHER OPERATIONS ON TRACHEA 3209 OTHER LOCAL EXCISION OR DESTRUCTION OF LESION OR TISSUE OF BRONCHUS 321 OTHER EXCISION OF BRONCHUS 3220 THORAC EXC LUNG LESION Local excision or destruction of lesion or tissue of lung 3221 PLICATION OF EMPHYSEMATIOUS BLEB 3222 LUNG VOLUME REDUCTION SURGERY 3223 OPEN ABLTN LUNG LES/TISS (OCT06) 3224 PERC ABLTN LUNG LES/TISS (OCT06) 3225 THOR ABLTN LUNG LES/TISS (OCT06) 3226 ABLTN LUNG TISS NEC/NOS (OCT06) 3227 BRNC THRMPLSTY, ABLT MSCL 3228 ENDOSCOPIC EXCISION OR DESTRUCTION OF LESION OR TISSUE OF LUNG 3229 OTHER LOCAL EXCISION OR DESTRUCTION OF LESION OR TISSUE OF LUNG 323 SEGMENTAL RESECTION OF LUNG 3230

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	THORAC SEG LUNG RESECT 3239 OTH SEG LUNG RESECT NOS 324 LOBECTOMY OF LUNG 3241 THORAC LOBECTOMY LUNG 3249 OTHER LOBECTOMY OF LUNG 325 COMPLETE PNEUMONECTOMY 3250 THORACOSPC PNEUMONECTOMY 3259 OTHER PNEUMONECTOMY NOS 326 RADICAL DISSECTION OF THORACIC STRUCTURES 329 OTHER EXCISION OF LUNG 330 INCISION OF BRONCHUS 331 INCISION OF LUNG 3320 THORACOSCOPC LUNG BIOPSY 3325 OPEN BIOPSY OF BRONCHUS 3327 CLOSED ENDOSCOPIC BIOPSY OF LUNG 3328 OPEN BIOPSY OF LUNG 3331 DESTRUCTION OF PHRENIC NERVE FOR COLLAPSE OF LUNG (NO LONGER PERFORMED) 3332 ARTIFICIAL PNEUMOTHORAX FOR COLLAPSE OF LUNG 3334 THORACOPLASTY 3339 OTHER SURGICAL COLLAPSE OF LUNG Repair and plastic operation on lung and bronchus 3341 SUTURE OF LACERATION OF BRONCHUS 3342 CLOSURE OF BRONCHIAL FISTULA

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	3343 CLOSURE OF LACERATION OF LUNG 3348 OTHER REPAIR AND PLASTIC OPERATIONS ON BRONCHUS 3349 OTHER REPAIR AND PLASTIC OPERATIONS ON LUNG Lung transplant 335 LUNG TRANSPLANTATION 3350 LUNG TRANSPLANTATION, NOS 3351 UNILATERAL LUNG TRANSPLANTATION 3352 BILATERAL LUNG TRANSPLANTATION 336 COMBINED HEART-LUNG TRANSPLANTATION 3392 LIGATION OF BRONCHUS 3393 PUNCTURE OF LUNG 3398 OTHER OPERATIONS ON BRONCHUS 3399 OTHER OPERATIONS ON LUNG 3329 OTHER DIAGNOSTIC PROCEDURE ON LUNG AND BRONCHUS 3333 PNEUMOPERITONEUM FOR COLLAPSE OF LUNG 3401 INCISION OF CHEST WALL 3402 EXPLORATORY THORACOTOMY 3403 REOPENING OF RECENT THORACOTOMY SITE 3405 CREATION OF PLEUROPERITONEAL SHUNT 3409 OTHER INCISION OF PLEURA 341 INCISION OF MEDIASTINUM Diagnostic procedures on chest wall, pleura, mediastinum, and diaphragm 3420 THORACOSCOPIC PLEURAL BX

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	3421 TRANSPLEURAL THORACOSOCOPY 3422 MEDIASTINOSCOPY 3423 BIOPSY OF CHEST WALL 3425 CLOSED [PERCUTANEOUS][NEEDLE] BIOPSY OF MEDIASTINUM 3426 OPEN BIOPSY OF MEDIASTINUM 3427 BIOPSY OF DIAPHRAGM 3428 OTHER DIAGNOSTIC PROCEDURES ON CHEST WALL, PLEURA, AND DIAPHRAGM 3429 OTHER DIAGNOSTIC PROCEDURES ON MEDIASTINUM 343 EXCISION OR DESTRUCTION OF LESION OR TISSUE OF MEDIASTINUM 344 EXCISION OR DESTRUCTION OF LESION OF CHEST WALL 3451 DECORTICATION OF LUNG 3452 THORACOSCOPC DECORT LUNG 3459 OTHER EXCISION OF PLEURA Repair of chest wall 3471 SUTURE OF LACERATION OF CHEST WALL 3472 CLOSURE OF THORACOSTOMY 3473 CLOSURE OF OTHER FISTULA OF THORAX 3474 REPAIR OF PECTUS DEFORMITY 3479 OTHER REPAIR OF CHEST WALL Operations on diaphragm 3481 EXCISION OF LESION OR TISSUE OF DIAPHRAGM 3482 SUTURE OF LACERATION OF DIAPHRAGM 3483 CLOSURE OF FISTULA OF DIAPHRAGM

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	3484 OTHER REPAIR OF DIAPHRAGM 3485 IMPLANTATION OF DIAPHRAGMATIC PACEMAKER 3489 OTHER OPERATIONS ON DIAPHRAGM 3493 REPAIR OF PLEURA 3499 OTHER OPERATIONS ON THORAX, OTHER Operations on thoracic duct 4061 CANNULATION OF THORACIC DUCT 4062 FISTULIZATION OF THORACIC DUCT 4063 CLOSURE OF FISTULA OF THORACIC DUCT 4064 LIGATION OF THORACIC DUCT 4069 OTHER OPERATIONS ON THORACIC DUCT Esophagotomy 4201 INCISION OF ESOPHAGEAL WEB 4209 OTHER INCISION OF ESOPHAGUS 4210 ESOPHAGOSTOMY, NOS 4211 CERVICAL ESOPHAGOSTOMY 4212 EXTERIORIZATION OF ESOPHAGEAL POUCH 4219 OTHER EXTERNAL FISTULIZATION OF ESOPHAGUS 4221 OPERATIVE ESOPHAGOSCOPY BY INCISION 4225 OPEN BIOPSY OF ESOPHAGUS 4231 LOCAL EXCISION OF ESOPHAGEAL DIVERTICULUM 4232 LOCAL EXCISION OF OTHER LESION OR TISSUE OF ESOPHAGUS Excision of esophagus 4239

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	OTHER DESTRUCTION OF LESION OR TISSUE OF ESOPHAGUS 4240 ESOPHAGECTOMY, NOS 4241 PARTIAL ESOPHAGECTOMY 4242 TOTAL ESOPHAGECTOMY Intrathoracic anastomosis of exophagus 4251 INTRATHORACIC ESOPHAGOESOPHAGOSTOMY 4252 INTRATHORACIC ESOPHAGOGASTROSTOMY 4253 INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF SMALL BOWEL 4254 OTHER INTRATHORACIC ESOPHAGOENTEROSTOMY 4255 INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF COLON 4256 OTHER INTRATHORACIC ESOPHAGOCOLOSTOMY 4258 INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ OTHER INTERPOSITION 4259 OTHER INTRATHORACIC ANASTOMOSIS OF ESOPHAGUS Antesternal anastomosis 4261 ANTESTERNAL ESOPHAGOESOPHAGOSTOMY 4262 ANTESTERNAL ESOPHAGOGASTROSTOMY 4263 ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF SMALL BOWEL 4264 OTHER ANTESTERNAL ESOPHAGOENTEROSTOMY 4265 ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF COLON 4266 OTHER ANTESTERNAL ESOPHAGOCOLOSTOMY 4268 OTHER ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION 4269 OTHER ANTESTERNAL ANASTOMOSIS OF ESOPHAGUS Other repair of esophagus 427 ESOPHAGOMYOTOMY

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	4281 INSERTION OF PERMANENT TUBE INTO ESOPHAGUS 4282 SUTURE OF LACERATION OF ESOPHAGUS 4283 CLOSURE OF ESOPHAGOSTOMY 4284 REPAIR OF ESOPHAGEAL FISTULA, NEC 4285 REPAIR OF ESOPHAGEAL STRICTURE 4286 PRODUCTION OF SUBCUTANEOUS TUNNEL W/O ESOPHAGEAL ANASTOMOSIS 4287 OTHER GRAFT OF ESOPHAGUS 4289 OTHER REPAIR OF ESOPHAGUS 435 PROXIMAL GASTRECTOMY 4399 TOTAL GASTRECTOMY NEC 4465 ESOPHAGOGASTROPLASTY 4466 OTHER PROCEDURES FOR CREATION OF ESOPHAGOGASTRIC SPHINCTERIC COMPETENCE 4467 LAP CREAT ESOPH SPHINCT 7781 OTH CHEST CAGE OSTECTOMY 7791 TOT CHEST CAGE OSTECTOMY 8104 DORSAL AND DORSO-LUMBAR FUSION, ANTERIOR TECHNIQUE 8134 REFUSION OF DORSAL AND DORSOLUMBAR SPINE, ANTERIOR TECHNIQUE ICD-9-CM Lung or pleural biopsy procedure codes: 3326 CLOSED [PERCUTANEOUS] [NEEDLE] BIOPSY OF LUNG 3328 OPEN BIOPSY OF LUNG 3424 PLEURAL BIOPSY ICD9-CM Diaphragmatic surgery repair codes: 537 ABD REPAIR-DIAPHR HERNIA

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	5371 LAPAROSCOPIC REPAIR OF DIAPHRAGMATIC HERNIA, ABDOMINAL APPROACH (OCT08) 5372 OTHER AND OPEN REPAIR OF DIAPHRAGMATIC HERNIA, ABDOMINAL APPROACH (OCT08) 5375 REPAIR OF DIAPHRAGMATIC HERNIA, ABDOMINAL APPROACH, NOS (OCT08) 5380 THOR REP-DIAPH HERN NOS 5381 DIAPHRAGMATIC PLICATION 5382 PARASTERN HERNIA REPAIR 5583 LAPAROSCOPIC REPAIR OF DIAPHRAGMATIC HERNIA, WITH THORACIC APPROACH (OCT08) 5584 OTHER AND OPEN REPAIR OF DIAPHRAGMATIC HERNIA, WITH THORACIC APPROACH (OCT08) ICD9-CM Cardiac procedure codes: 3510 OPEN HEART VALVULOPLASTY WITHOUT REPLACEMENT, UNSPECIFIED VALVE 3511 OPEN HEART VALVULOPLASTY OF AORTIC VALVE WITHOUT REPLACEMENT 3512 OPEN HEART VALVULOPLASTY OF MITRAL VALVE WITHOUT REPLACEMENT 3513 OPEN HEART VALVULOPLASTY OF PULMONARY VALVE WITHOUT REPLACEMENT 3514 OPEN HEART VALVULOPLASTY OF TRICUSPID VALVE WITHOUT REPLACEMENT 3520 REPLACEMENT OF UNSPECIFIED HEART VALVE 3521 REPLACEMENT OF AORTIC VALVE WITH TISSUE GRAFT 3522 OTHER REPLACEMENT OF AORTIC VALVE 3523 REPLACEMENT OF MITRAL VALVE WITH TISSUE GRAFT 3524 OTHER REPLACEMENT OF MITRAL VALVE 3525 REPLACEMENT OF PULMONARY VALVE WITH TISSUE GRAFT 3526 OTHER REPLACEMENT OF PULMONARY VALVE 3527 REPLACEMENT OF TRICUSPID VALVE WITH TISSUE GRAFT 3528

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	OTHER REPLACEMENT OF TRICUSPID VALVE 3531 OPERATIONS ON PAPILLARY MUSCLE 3532 OPERATIONS ON CHORDAE TENDINEAE 3533 ANNULOPLASTY 3534 INFUNDIBULECTOMY 3535 OPERATIONS ON TRABECULAE CARNEAE CORDIS 3539 OPERATIONS ON OTHER STRUCTURES ADJACENT TO VALVES OF HEART 3550 REPAIR OF UNSPECIFIED SEPTAL DEFECT OF HEART WITH PROSTHESIS 3551 REPAIR OF ATRIAL SEPTAL DEFECT WITH PROSTHESIS, OPEN TECHNIQUE 3553 REPAIR OF VENTRICULAR SEPTAL DEFECT WITH PROSTHESIS, OPEN TECHNIQUE 3554 REPAIR OF ENDOCARDIAL CUSHION DEFECT WITH PROSTHESIS 3560 REPAIR OF UNSPECIFIED SEPTAL DEFECT OF HEART WITH TISSUE GRAFT 3561 REPAIR OF ATRIAL SEPTAL DEFECT WITH TISSUE GRAFT 3562 REPAIR OF VENTRICULAR SEPTAL DEFECT WITH TISSUE GRAFT 3563 REPAIR OF ENDOCARDIAL CUSHION DEFECT WITH TISSUE GRAFT 3570 OTHER AND UNSPECIFIED REPAIR OF UNSPECIFIED SEPTAL DEFECT OF HEART 3571 OTHER AND UNSPECIFIED REPAIR OF ATRIAL SEPTAL DEFECT 3572 OTHER AND UNSPECIFIED REPAIR OF VENTRICULAR SEPTAL DEFECT 3573 OTHER AND UNSPECIFIED REPAIR OF ENDOCARDIAL CUSHION DEFECT 3581 TOTAL REPAIR OF TETRALOGY OF FALLOT 3582 TOTAL REPAIR OF TOTAL ANOMALOUS PULMONARY VENOUS CONNECTION 3583 TOTAL REPAIR OF TRUNCUS ARTERIOSUS 3584

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	TOTAL CORRECTION OF TRANSPOSITION OF GREAT VESSELS, NOT ELSEWHERE CLASSIFIED 3591 INTERATRIAL TRANSPOSITION OF VENOUS RETURN 3592 CREATION OF CONDUIT BETWEEN RIGHT VENTRICLE AND PULMONARY ARTERY 3593 CREATION OF CONDUIT BETWEEN LEFT VENTRICLE AND AORTA 3594 CREATION OF CONDUIT BETWEEN ATRIUM AND PULMONARY ARTERY 3595 REVISION OF CORRECTIVE PROCEDURE ON HEART 3597 PERC MTRL VLV REPR W IMP 3598 OTHER OPERATIONS ON SEPTA OF HEART 3599 OTHER OPERATIONS ON VALVES OF HEART 3603 OPEN CHEST CORONARY ARTERY ANGIOPLASTY 3610 AORTOCORONARY BYPASS FOR HEART REVASCULARIZATION, NOT OTHERWISE SPECIFIED 3611 (AORTO)CORONARY BYPASS OF ONE CORONARY ARTERY 3612 (AORTO)CORONARY BYPASS OF TWO CORONARY ARTERIES 3613 (AORTO)CORONARY BYPASS OF THREE CORONARY ARTERIES 3614 (AORTO)CORONARY BYPASS OF FOUR OR MORE CORONARY ARTERIES 3615 SINGLE INTERNAL MAMMARY-CORONARY ARTERY BYPASS 3616 DOUBLE INTERNAL MAMMARY-CORONARY ARTERY BYPASS 3617 ABDOMINAL -CORONARY ARTERY BYPASS 3619 OTHER BYPASS ANASTOMOSIS FOR HEART REVASCULARIZATION 362 HEART REVASCULARIZATION BY ARTERIAL IMPLANT 3631 OPEN CHEST TRANSMYOCARDIAL REVASCULARIZATION 3632 OTHER TRANSMYOCARDIAL REVASCULARIZATION 3639

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	OTHER HEART REVASCULARIZATION 3691 REPAIR OF ANEURYSM OF CORONARY VESSEL 3699 OTHER OPERATIONS ON VESSELS OF HEART 370 PERICARDIOCENTESIS 3710 INCISION OF HEART, NOT OTHERWISE SPECIFIED 3711 CARDIOTOMY 3712 PERICARDIOTOMY 3731 PERICARDIECTOMY 3732 EXCISION OF ANEURYSM OF HEART 3733 EXCISION OR DESTRUCTION OF OTHER LESION OR TISSUE OF HEART, OPEN APPROACH 3735 PARTIAL VENTRICULECTOMY 3736 EXCISION OR DESTRUCTION OF LEFT ATRIAL APPENDAGE (LAA) (OCT08) 3737 EXC/DEST HRT LES, THRSPC 3741 IMPLANTATION OF PROSTHETIC CARDIAC SUPPORT DEVICE AROUND THE HEART 3749 OTHER REPAIR OF HEART AND PERICARDIUM 3751 HEART TRANSPLANTATION 3752 IMPLANTATION OF TOTAL REPLACEMENT HEART SYSTEM 3753 REPLACEMENT OF REPAIR OF THORACIC UNIT OF TOTAL REPLACEMENT HEART SYSTEM 3754 REPLACEMENT OR REPAIR OF OTHER IMPLANTABLE COMPONENT OF TOTAL REPLACEMENT HEART SYSTEM 3755 REMOVAL OF INTERNAL BIVENTRICULAR HEART REPLACEMENT SYSTEM (OCT08) 3760 IMPLANTATION OR INSERTION OF BIVENTRICULAR EXTERNAL HEART ASSIST SYSTEM (OCT08) 3761 IMPLANT OF PULSATION BALLOON 3762

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	INSERTION OF NON-IMPLANTABLE HEART ASSIST SYSTEM 3763 REPAIR OF HEART ASSIST SYSTEM 3764 REMOVAL OF HEART ASSIST SYSTEM 3765 IMPLANT OF EXTERNAL HEART ASSIST SYSTEM 3766 INSERTION OF IMPLANTABLE HEART ASSIST SYSTEM 3767 IMPLANTATION OF CARDIOMYOSTIMULATION SYSTEM 3791 OPEN CHEST CARDIAC MASSAGE 3804 INCISION OF VESSEL, AORTA 3805 INCISION OF VESSEL, OTHER THORACIC 3844 RESECTION OF ABDOMINAL AORTA WITH GRAFT REPLACEMENT 3845 RESECTION OF THORACIC VESSEL WITH GRAFT REPLACEMENT 3864 EXCISION OF LESION OF AORTA 3865 EXCISION OF LESION OTHER THORACIC VESSEL 3884 LIGATION, DIVISION OF AORTA 3885 LIGATION, DIVISION OF OTHER THORACIC VESSELS 390 SYSTEMIC TO PULMONARY ARTERY SHUNT 3921 CAVAL-PULMONARY ARTERY ANASTOMOSIS 3922 AORTA-SUBCLAVIAN-CAROTID BYPASS 3923 OTHER INTRATHORACIC VASCULAR SHUNT OR BYPASS
Risk Adjustment	Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with hospital random effect) and covariates for gender, birthweight (500g groups), age in days (29-60, 61-90, 91+), age in years (in 5-year age groups), modified CMS DRG and AHRQ CCS comorbities. The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the years 2008, a database consisting of 43 states and approximately 6 million pediatric discharges. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for

	0348 Iatrogenic Pneumothorax Rate (PDI 5)
	the unit of analysis of interest (i.e., hospital). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. Age in Years 13 to 18 Age in Years 1 to 13 URL http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/Risk%20Adjustment%20Tables%20PDI%204.3.pdf Not applicable
Stratification	Not applicable
Type Score	Rate/proportion better quality = lower score
Algorithm	Each indicator is expressed as a rate, is defined as outcome of interest / population at risk or numerator / denominator. The AHRQ Quality Indicators (AHRQ QI) software performs six steps to produce the rates. 1) Discharge-level data is used to mark inpatient records containing the outcome of interest and 2) the population at risk. For provider indicators, the population at risk is also derived from hospital discharge records; for area indicators, the population at risk is derived from U.S. Census data. 3) Calculate observed rates. Using output from steps 1 and 2, rates are calculated for user-specified combinations of stratifiers. 4) Calculate expected rates. Regression coefficients from a reference population database are applied to the discharge records and aggregated to the provider or area level. For indicators that are not risk-adjusted, this is the reference population rate. 5) Calculate risk-adjusted rate. Use the indirect standardization to account for case-mix. For indicators that are not risk-adjusted, this is the same as the observed rate. 6) Calculate smoothed rate. A Univariate shrinkage factor is applied to the risk-adjusted rates. The shrinkage estimate reflects a reliability adjustment unique to each indicator URL Not applicable http://qualityindicators.ahrq.gov/Downloads/Resources/Publications/2011/QI%20Empirical%20Methods%2005-03-11.pdf
Copyright	Not applicable

	0349 Transfusion Reaction (PSI 16)
Steward	Agency for Healthcare Research and Quality
Description	The count of medical and surgical discharges for patients age greater than or equal to 18 or in MDC 14 with ICD-9-CM code for transfusion reaction in any secondary diagnosis field.
Type	Outcome
Data Source	Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD. URL http://www.hcup-us.ahrq.gov/sidoverview.jsp Not applicable URL http://qualityindicators.ahrq.gov/Downloads/Software/WinQI/V43/AHRQ%20QI%20Software%20Instructions,%20WinQI.pdf Not applicable
Level	Facility
Setting	Hospital/Acute Care Facility
Numerator Statement	Discharges 18 years and older or in MDC 14 with ICD-9-CM codes for transfusion reaction in any secondary diagnosis field of all medical and surgical discharges defined by specific DRGs or MS-DRGs See Patient Safety Indicators Appendices: - Appendix B – Medical Discharge DRGs - Appendix C – Medical Discharge MS-DRGs - Appendix D – Surgical Discharge DRGs

	0349 Transfusion Reaction (PSI 16)
	- Appendix E – Surgical Discharge MS-DRGs Link to PSI appendices: http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/TechnicalSpecifications/PSI%20Appendices.pdf Exclude cases: -with principal diagnosis of transfusion reaction or secondary diagnosis present on admission -with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)
Numerator Details	**Time Window:** User may specify the time window; generally one calendar year ICD-9-CM Transfusion reaction diagnosis codes: 9996 ABO INCOMPATIBILITY REACTION 99960 ABO INCOMPATIBILITY REACTION NOS 99961 ABO INCOMP/HTR NEC 99962 ABO INCOMPAT/ACUTE HTR 99963 ABO INCOMPAT/DELAY HTR 99969 ABO INCOMPAT REACTN NEC 9997 RH INCOMPATIBILITY REACTION 99970 RH INCOMPAT REACTION NOS 99971 RH INCOMP/HTR NEC 99972 RH INCOMPAT/ACUTE HTR 99973 RH INCOMPAT/DELAY HTR 99974 RH INCOMPAT REACTION NEC E8760 MISMATCHED BLOOD IN TRANSFUSION
Denominator Statement	Not applicable
Denominator Details	**Time Window:** Not applicable Not applicable
Exclusions	Not applicable

	0349 Transfusion Reaction (PSI 16)
Exclusion Details	Not applicable
Risk Adjustment	No risk adjustment or risk stratification Not applicable
Stratification	Not applicable
Type Score	Count better quality = lower score
Algorithm	Identify cases meeting the target outcome. Exclude cases meeting the exclusion criteria. Count the number of case at the hospital level. URL Not applicable http://qualityindicators.ahrq.gov/Downloads/Resources/Publications/2011/QI%20Empirical%20Methods%2005-03-11.pdf
Copyright	Not applicable

	0350 Transfusion Reaction (PDI 13)
Steward	Agency for Healthcare Research and Quality
Description	The count of medical and surgical discharges for patients age less than 18 and not in MDC 14 with ICD-9-CM code for transfusion reaction in any secondary diagnosis field.
Type	Outcome
Data Source	Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD. URL http://www.hcup-us.ahrq.gov/sidoverview.jsp Not applicable URL http://qualityindicators.ahrq.gov/Downloads/Software/WinQI/V43/AHRQ%20QI%20Software%20Instructions,%20WinQI.pdf Not applicable
Level	Facility
Setting	Hospital/Acute Care Facility
Numerator Statement	Discharges under age 18 with ICD-9-CM codes for transfusion reaction in any secondary diagnosis field of all medical and surgical discharges defined by specific DRGs or MS-DRGs with the exclusion of neonates, cases in MDC 14 and instances with the outcome of interest was present on admission. See Pediatric Quality Indicators Appendices: - Appendix B – Surgical DRGs - Appendix C – Surgical MS-DRGs - Appendix D – Medical DRGs - Appendix E – Medical MS-DRGs - Appendix I – Definitions of, Neonate, Newborn, Normal Newborn, and Outborn Link to PDI appendices: http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/TechnicalSpecifications/PDI%20Appendices.pdf Cases excluded with missing gender (SEX=missig, age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)
Numerator Details	**Time Window:** User may specify the time window; generally one calendar year

	0350 Transfusion Reaction (PDI 13)
	ICD-9-CM Transfusion reaction diagnosis codes: 9996 ABO INCOMPATIBILITY REACTION 99960 ABO INCOMPATIBILITY REACTION 99961 ABO INCOMP/HTR NEC 99962 ABO INCOMPAT/ACUTE HTR 99963 ABO INCOMPAT/DELAY HTR 99969 ABO INCOMPAT REACTN NEC 9997 RH INCOMPATIBILITY REACTION 99970 RH INCOMPATIBILITY REACTION 99971 RH INCOM/HTR NEC 99972 RH INCOMPAT/ACUTE HTR 99973 RH INCOMPAT/DELAY HTR 99974 RH INCOMPAT REACTION NEC E8760 MISMATCHED BLOOD IN TRANSFUSION
Denominator Statement	Not applicable
Denominator Details	**Time Window:** Not applicable Not applicable
Exclusions	Not applicable
Exclusion Details	Not applicable
Risk Adjustment	No risk adjustment or risk stratification Not applicable
Stratification	Not applicable
Type Score	Count better quality = lower score
Algorithm	Identify cases meeting the target outcome. Exclude cases meeting the exclusion criteria. Count the number of case at the hospital level. URL Not applicable http://qualityindicators.ahrq.gov/Downloads/Resources/Publications/2011/QI%20Empirical%20Met

	0350 Transfusion Reaction (PDI 13)
	hods%2005-03-11.pdf
Copyright	Not applicable

	0362 Foreign Body left after procedure (PDI 3)
Steward	Agency for Healthcare Research and Quality
Description	Count of discharges with foreign body left in during procedure in medical and surgical discharges among patients less than 18 years and not MDC 14 (pregnancy, childbirth, and puerperium)
Type	Outcome
Data Source	Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD. URL http://www.hcup-us.ahrq.gov/sidoverview.jsp Not applicable URL http://qualityindicators.ahrq.gov/Downloads/Software/WinQI/V43/AHRQ%20QI%20Software%20Instructions,%20WinQI.pdf Not applicable
Level	Facility
Setting	Hospital/Acute Care Facility
Numerator Statement	Discharges under age 18 with ICD-9-CM codes for foreign body left in during procedure in any secondary diagnosis field of medical and surgical discharges defined by specific DRGs or MS-DRGs where several exclusions are applied to the numerator. (Details of the numerator, medical and surgical discharges DRGs and MS-DRGs, and exclusions appear in 2a1.3).
Numerator Details	**Time Window:** User may specify the time window; generally one calendar year ICD-9-CM Foreign body left in during procedure diagnosis codes: 9984 FOREIGN BODY ACCIDENTALLY LEFT DURING A PROCEDURE 9987 ACUTE REACTIONS TO FOREIGN SUBSTANCE ACCIDENTALLY LEFT DURING A PROCEDURE Foreign body left in during: E8710 SURGICAL OPERATION E8711 INFUSION OR TRANSFUSION E8712 KIDNEY DIALYSIS OR OTHER PERFUSION E8713 INJECTION OR VACCINATION E8714 ENDOSCOPIC EXAMINATION E8715 ASPIRATION OF FLUID OR TISSUE, PUNCTURE, AND CATHETERIZATION E8716

	0362 Foreign Body left after procedure (PDI 3)
	HEART CATHETERIZATION E8717 REMOVAL OF CATHETER OR PACKING E8718 OTHER SPECIFIED PROCEDURES E8719 UNSPECIFIED PROCEDURE See Pediatric Quality Indicators Appendices: - Appendix B – Surgical DRGs - Appendix C – Surgical MS-DRGs - Appendix D – Medical DRGs - Appendix E – Medical MS-DRGs Numerator exclusions: - with ICD-9-CM codes for foreign body left in during procedure in the principal diagnosis field or secondary diagnosis field if present on admission - normal newborn - newborns weighing less than 500 grams (Birth Weight Category 1) - MDC 14 (pregnancy, childbirth, and puerperium) - with missing discharge gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing) See Pediatric Quality Indicators Appendices: - Appendix I – Definitions of Neonate, Newborn, Normal Newborn, and Outborn - Appendix L – Low Birth Weight Categories Link to PDI appendices: http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/TechnicalSpecifications/PDI%20Appendices.pdf
Denominator Statement	Not applicable
Denominator Details	**Time Window:** Not applicable Not applicable
Exclusions	Not applicable
Exclusion Details	Not applicable
Risk Adjustment	No risk adjustment or risk stratification Not applicable
Stratification	Not applicable
Type Score	Count better quality = lower score
Algorithm	Identify cases meeting the target outcome. Exclude cases meeting the exclusion criteria. Count the number of case at the hospital level. URL Not applicable http://qualityindicators.ahrq.gov/Downloads/Resources/Publications/2011/QI%20Empirical%20Methods%2005-03-11.pdf

	0362 Foreign Body left after procedure (PDI 3)
Copyright	Not applicable

	0363 Foreign Body Left During Procedure (PSI 5)
Steward	Agency for Healthcare Research and Quality
Description	Count of discharges with foreign body left in during procedure in medical and surgical discharges among patients 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium)
Type	Outcome
Data Source	Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD. URL http://www.hcup-us.ahrq.gov/sidoverview.jsp Not applicable URL http://qualityindicators.ahrq.gov/Downloads/Software/WinQI/V43/AHRQ%20QI%20Software%20Instructions,%20WinQI.pdf Not applicable
Level	Facility
Setting	Hospital/Acute Care Facility
Numerator Statement	Discharges, 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium), with ICD-9-CM codes for foreign body left in during procedure in any secondary diagnosis field of medical and surgical discharges defined by specific DRGs or MS-DRGs. (Details of medical and surgical discharges defined by specific DRGs or MS-DRGs and exclusions noted in 2a1.3).

	0363 Foreign Body Left During Procedure (PSI 5)
Numerator Details	**Time Window:** User may specify the time window; generally one calendar year ICD-9-CM Foreign body left in during procedure diagnosis codes: 9984 FOREIGN BODY ACCIDENTALLY LEFT DURING A PROCEDURE 9987 ACUTE REACTIONS TO FOREIGN SUBSTANCE ACCIDENTALLY LEFT DURING A PROCEDURE Foreign body left in during: E8710 SURGICAL OPERATION E8711 INFUSION OR TRANSFUSION E8712 KIDNEY DIALYSIS OR OTHER PERFUSION E8713 INJECTION OR VACCINATION E8714 ENDOSCOPIC EXAMINATION E8715 ASPIRATION OF FLUID OR TISSUE, PUNCTURE, AND CATHETERIZATION E8716 HEART CATHETERIZATION E8717 REMOVAL OF CATHETER OR PACKING E8718 OTHER SPECIFIED PROCEDURES E8719 UNSPECIFIED PROCEDURE See Patient Safety Indicators Appendices: - Appendix B – Medical Discharge DRGs - Appendix C – Medical Discharge MS-DRGs - Appendix D – Surgical Discharge DRGs - Appendix E – Surgical Discharge MS-DRGs Link to PSI appendices: http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/TechnicalSpecifications/PSI%20Appendices.pdf Numerator exclusions include: - cases with the outcome of interest noted as present on admission - cases with the following missing variables: gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)
Denominator Statement	Not applicable

	0363 Foreign Body Left During Procedure (PSI 5)
Denominator Details	**Time Window:** Not applicable Not applicable
Exclusions	Not applicable
Exclusion Details	Not applicable
Risk Adjustment	No risk adjustment or risk stratification Not applicable
Stratification	Not applicable
Type Score	Count better quality = lower score
Algorithm	Identify cases meeting the target outcome. Exclude cases meeting the exclusion criteria. Count the number of case at the hospital level. URL Not applicable http://qualityindicators.ahrq.gov/Downloads/Resources/Publications/2011/QI%20Empirical%20Methods%2005-03-11.pdf
Copyright	Not applicable

	0371 Venous Thromboembolism Prophylaxis
Steward	The Joint Commission
Description	This measure assesses the number of patients who received venous thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission. This measure is part of a set of six nationally implemented prevention and treatment measures that address VTE (VTE-2: ICU VTE Prophylaxis, VTE-3: VTE Patients with Anticoagulation Overlap Therapy, VTE-4: VTE Patients Receiving UFH with Dosages/Platelet Count Monitoring, VTE-5: VTE Warfarin Therapy Discharge Instructions and VTE-6: Incidence of Potentially-Preventable VTE) that are used in The Joint Commission's accreditation process.
Type	Process
Data Source	Administrative claims, Electronic Clinical Data : Electronic Health Record, Paper Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed. Attachment VTE 4.0 ManuaLF-634469565251741848.pdf
Level	Facility, Population : National
Setting	Hospital/Acute Care Facility
Numerator Statement	Patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given: • the day of or the day after hospital admission • the day of or the day after surgery end date for surgeries that start the day of or the day after hospital admission
Numerator	**Time Window:** Episode of Care

	0371 Venous Thromboembolism Prophylaxis
Details	Five data elements are used to calculate the numerator: 1. Reason for No VTE Prophylaxis – Hospital Admission - Documentation why mechanical or pharmacologic VTE prophylaxis was not administered at hospital admission. Allowable values: Yes or No/UTD. 2. Surgery End Date - The date the surgical procedure ended after hospital admission. 3. Surgical Procedure - A surgical procedure was performed using general or neuraxial anesthesia the day of or the day after hospital admission. Allowable values: Yes or No/UTD 4. VTE Prophylaxis - The type of venous thromboembolism (VTE) prophylaxis documented in the medical record. Allowable values: 1 - 7 or A - None of the above, not documented or UTD. 5. VTE Prophylaxis Date - The month, day, and year that the initial VTE prophylaxis (mechanical and/or pharmacologic) was administered after hospital admission.
Denominator Statement	All discharged hospital inpatients
Denominator Details	**Time Window:** Episode of care Eleven data elements are used to calculate the denominator: 1. Admission Date – The month, day and year of admission to acute inpatient care. 2. Birthdate - The month, day and year the patient was born. 3. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with VTE were being studied. Allowable values: Yes or No/UTD 4. Comfort Measures Only - Physician/advanced practice nurse/physician assistant (physician/APN/PA) documentation of comfort measures only. Commonly referred to as “palliative care” in the medical community and “comfort care” by the general public. Palliative care includes attention to the psychological and spiritual needs of the patient and support for the dying patient and the patient´s family. Comfort Measures Only are not equivalent to the following: Do Not Resuscitate (DNR), living will, no code, no heroic measure. Allowable values represent the earliest physician/APN/PA documentation: Day 0 or 1, Day 2 or after, Timing unclear or Not Documented/UTD. 5. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay. 6. ICD-9-CM Other Diagnosis Codes - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes associated with the diagnosis for this hospitalization. 7. ICD-9-CM Principal Diagnosis Code - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. 8. ICD-9-CM Principal Procedure Code - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication. 9. ICU Admission Date - The day, month and year that the order was written for the patient to be directly admitted or transferred (from a lower level of care) to the intensive care unit (ICU). 10. ICU Admission or Transfer - Documentation that the patient was admitted or transferred to the intensive care unit (ICU) at this hospital. The definition of an ICU for the purpose of the measures noted above is that used by the CDC in the NHSN Patient Safety Project. An intensive care unit can be defined as a nursing care area that provides intensive observation, diagnosis, and therapeutic procedures for adults and/or children who are critically ill. An ICU excludes nursing areas that provide step-down, intermediate care or telemetry only and specialty care areas. 11. ICU Discharge Date - The day, month and year that the order was written to discharge the patient

	0371 Venous Thromboembolism Prophylaxis
	from the intensive care unit (ICU), left against medical advice (AMA) or expired.
Exclusions	• Patients less than 18 years of age • Patients who have a length of stay (LOS) less than two days and greater than 120 days • Patients with Comfort Measures Only documented on day of or day after hospital arrival • Patients enrolled in clinical trials • Patients who are direct admits to intensive care unit (ICU), or transferred to ICU the day of or the day after hospital admission with ICU LOS greater than or equal to one day • Patients with ICD-9-CM Principal Diagnosis Code of Mental Disorders or Stroke as defined in Appendix A, Table 7.01, 8.1 or 8.2 • Patients with ICD-9-CM Principal or Other Diagnosis Codes of Obstetrics or VTE as defined in Appendix A, Table 7.02, 7.03 or 7.04 • Patients with ICD-9-CM Principal Procedure Code of Surgical Care Improvement Project (SCIP) VTE selected surgeries as defined in Appendix A, Tables 5.17, 5.19, 5.20, 5.21, 5.22, 5.23, 5.24
Exclusion Details	• The patient age in years is equal to the Admission Date minus the Birthdate. Patients less than 18 years are excluded. • Length of stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days or equal to or less than 2 days, the patient is excluded. • Patients with Comfort Measures Only allowable value of 1 (Day 0 or 1) are excluded. • Patients are excluded if "Yes" is selected for Clinical Trial. • The data element ICU Admission or Transfer is used to determine if the patient was admitted to the ICU. If "Yes" is selected, the case flows to the ICU Admission Date. If the ICU Admission Date is equal to the hospital admission or the ICU Admission Date is the day after the hospital admission date, the ICU Admission and ICU Discharge Date are used to determine if the patient was in the ICU for one or more days. If the LOS is less than one day, the patient is excluded from VTE-1. In addition, if the patient's ICU Admission Date is prior to the hospital admission day, the patient is excluded (direct admit to ICU). • Patients with ICD-9-CM Principal Diagnosis Code of Mental Disorders or Stroke are excluded. • Patients with ICD-9-CM Principal or Other Diagnosis Codes of Obstetrics or VTE are excluded. • Patients with ICD-9-CM Principal Procedure Code of Surgical Care Improvement Project (SCIP) VTE selected surgeries are excluded.
Risk Adjustment	No risk adjustment or risk stratification Not applicable
Stratification	Not Applicable, the measure is not stratified.
Type Score	Rate/proportion better quality = higher score
Algorithm	1. Start processing. Run cases that are included in the VTE Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure. 2. Calculate Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date. 3. Check Length of Stay a. If Length of Stay is less than 2 days, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. b. If Length of Stay is greater than or equal to 2 days, continue processing and proceed to ICD-9-CM Principal Diagnosis Code. 4. Check ICD-9-CM Principal Diagnosis Code a. If the ICD-9-CM Principal Diagnosis Code is on Table 7.01, 8.1, or 8.2, the case will proceed to a

Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

b. If the ICD-9-CM Principal Diagnosis Code is not on Table 7.01, 8.1, or 8.2, continue processing and proceed to ICD-9-CM Principal or Other Diagnosis Code.

5. Check ICD-9-CM Principal or Other Diagnosis Code

a. If at least one of the ICD-9-CM Principal or Other Diagnosis Code is on Table 7.02, 7.03, or 7.04, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

b. If none of the ICD-9-CM Principal or Other Diagnosis Code is on Table 7.02, 7.03, or 7.04, continue processing and proceed to ICD-9-CM Principal Procedure Code.

6. Check ICD-9-CM Principal Procedure Code

a. If the ICD-9-CM Principal Procedure Code is on Table 5.17, 5.19, 5.20, 5.21, 5.22, 5.23, or 5.24, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

b. If the ICD-9-CM Principal Procedure Code is missing or not on Table 5.17, 5.19, 5.20, 5.21, 5.22, 5.23, or 5.24, continue processing and proceed to Comfort Measures Only.

7. Check Comfort Measures Only

a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If Comfort Measures Only equals 1, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.

c. If Comfort Measures Only equals 2, 3, or 4, continue processing and proceed to Clinical Trial.

8. Check Clinical Trial

a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.

c. If Clinical Trial equals No, continue processing and proceed to VTE Prophylaxis.

9. Check ICU Admission or Transfer

a. If ICU Admission or Transfer is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If ICU Admission or Transfer is equal to 2 or 3, the case will proceed to VTE Prophylaxis.

c. If ICU Admission or Transfer is equal to 1, continue processing and proceed to ICU Admission Date.

10. Check ICU Admission Date

a. If ICU Admission Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If ICU Admission Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

c. If ICU Admission Date equals a Non Unable to Determine Value, continue processing and proceed to the Initial ICU Day calculation.

11. Calculate Initial ICU Day. Initial ICU Day, in days, is equal to ICU Admission Date minus Admission Date.

12. Check Initial ICU Day

a. If the Initial Day is less than 0 days, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.

b. If the Initial Day is equal to 0 days or 1 day, the case will proceed to ICU Discharge Date.

c. If the Initial Day is greater than or equal to 2 days, continue processing and proceed to VTE

Prophylaxis.

13. Check ICU Discharge Date only if Initial ICU Day is less than or equal to 1 day

a. If the ICU Discharge Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If the ICU Discharge Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

c. If the ICU Discharge Date equals a Non Unable to Determine Value, continue processing and proceed to the ICU LOS calculation.

14. Calculate ICU LOS. ICU LOS is equal to ICU Discharge Date minus ICU Admission Date.

15. Check ICU LOS

a. If ICU LOS is less than zero days, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If ICU LOS is greater than or equal to 1 day, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

c. If ICU LOS is equal to zero days, the case will proceed to VTE Prophylaxis.

16. Check VTE Prophylaxis

a. If VTE Prophylaxis is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If VTE Prophylaxis is equal to A, continue processing and proceed to check Reason for No VTE Prophylaxis – Hospital Admission.

1. If Reason for No VTE Prophylaxis - Hospital Admission is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

2. If Reason for No VTE Prophylaxis – Hospital Admission equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

3. If Reason for No VTE Prophylaxis - Hospital Admission equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

c. If VTE Prophylaxis is equal to 1,2,3,4,5,6,7 and not equal to A, continue processing and proceed to VTE Prophylaxis Date.

17. Check VTE Prophylaxis Date

a. If the VTE Prophylaxis Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If the VTE Prophylaxis Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

c. If the VTE Prophylaxis Date equals a Non Unable to Determine Value, continue processing and proceed to the Initial Prophylaxis Day calculation.

18. Calculate Initial Prophylaxis Day. Initial Prophylaxis Day, in days, is equal to the VTE Prophylaxis Date minus the Admission Date.

19. Check Initial Prophylaxis Day

a. If Initial Prophylaxis Day is less than zero days, the case will proceed to a Measure category Assignment of X and will be rejected. Stop processing.

b. If Initial Prophylaxis Day is equal to zero days or 1 day, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

c. If Initial Prophylaxis Day is greater than or equal to 2 days, continue processing and proceed to Surgical Procedure.

20. Check Surgical Procedure

a. If Surgical Procedure is missing, the case will proceed to a Measure Category Assignment of X and will

	be rejected. Stop processing. b. If Surgical Procedure equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. c. If Surgical Procedure equals Yes, continue processing and proceed to Surgery End Date. 21. Check Surgery End Date a. If the Surgery End Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If the Surgery End Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. c. If the Surgery End Date equals a Non Unable to Determine Value, continue processing and proceed to the Initial Surgical Prophylaxis Day calculation. 22. Calculate Initial Surgical Prophylaxis Day. Initial Surgical Prophylaxis Day, in days, is equal to the VTE Prophylaxis Date minus Surgery End Date. 23. Check Initial Surgical Prophylaxis Day a. If the Initial Surgical Prophylaxis Day is greater than or equal to 2 days, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. If the Initial Surgical Prophylaxis Day is equal to zero days or 1 day, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing. Attachment 2zq_VTE1.pdf
Copyright	The Specifications Manual for National Hospital Inpatient Quality Measures (Specifications Manual) is the result of the collaborative efforts of the Centers for Medicare & Medicaid Services (CMS) and The Joint Commission to publish a uniform set of national hospital quality measures. A primary objective of this collaborative effort is to promote and enhance the utility of these measures for all hospitals. No royalty or use fee is required for copying or reprinting this manual, but the following are required as a condition of usage: 1) disclosure that the Specifications Manual is periodically updated, and that the version being copied or reprinted may not be up-to-date when used unless the copier or printer has verified the version to be up-to-date and affirms that, and 2) users participating in the QIO supported initiatives, the Hospital Inpatient Quality Reporting Program, and Joint Commission accreditation; including performance measures systems; are required to update their software and associated documentation based on the published manual production timelines. Example Acknowledgement: The Specifications Manual for National Hospital Inpatient Quality Measures [Version xx, Month, Year] is the collaborative work of the Centers for Medicare & Medicaid Services and The Joint Commission. The Specifications Manual is periodically updated by the Centers for Medicare & Medicaid Services and The Joint Commission. Users of the Specifications Manual for National Hospital Inpatient Quality Measures must update their software and associated documentation based on the published manual production timelines.

	0372 Intensive Care Unit Venous Thromboembolism Prophylaxis
Steward	The Joint Commission
Description	This measure assesses the number of patients who received venous thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after the initial admission (or transfer) to the Intensive Care Unit (ICU) or surgery end date for surgeries that start the day of or the day after ICU admission (or transfer). This measure is part of a set of six prevention and treatment measures that address VTE (VTE-1: VTE Prophylaxis, VTE-3: VTE Patients with Anticoagulation Overlap Therapy, VTE-4: VTE Patients Receiving UFH with Dosages/Platelet Count Monitoring by Protocol, VTE-5: VTE Warfarin Therapy Discharge Instructions and VTE-6: VTE Incidence of Potentially-Preventable VTE).
Type	Process
Data Source	Administrative claims, Electronic Clinical Data, Paper Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. The vendor may not offer the measure set to hospitals until verification has been passed. Attachment VTE 4.0 ManuaLF-634469622988616848.pdf
Level	Facility, Population : National
Setting	Hospital/Acute Care Facility
Numerator Statement	Patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given: • the day of or the day after ICU admission (or transfer) • the day of or the day after surgery end date for surgeries that start the day of or the day after ICU admission (or transfer)
Numerator Details	**Time Window:** Episode of Care Six data elements are used to calculate the numerator: 1. Anesthesia Start Date The date the anesthesia for the procedure started. 2. ICU VTE Prophylaxis The type of venous thromboembolism (VTE) prophylaxis that was initially administered in the ICU. Allowable values: 1 - 7 or A – None of the above, not documented or UTD. 3. ICU VTE Prophylaxis Date The day, month and year that the initial VTE prophylaxis (mechanical and/or pharmacologic) option was administered after admission/transfer to the intensive care unit (ICU). 4. Reason for No VTE Prophylaxis – ICU Admission Documentation why mechanical or pharmacologic VTE prophylaxis was not administered at ICU admission/transfer. Allowable values: Yes or No/UTD. 5. Surgery End Date – ICU Admission The date the surgical procedure ended after ICU admission or transfer. 6. Surgical Procedure – ICU Admission A surgical procedure was performed using general or neuraxial anesthesia the day of or the day after ICU admission or transfer. Allowable values: Yes or No/UTD
Denominator Statement	Patients directly admitted or transferred to ICU

	0372 Intensive Care Unit Venous Thromboembolism Prophylaxis
Denominator Details	**Time Window:** Episode of care Eleven data elements are used to calculate the denominator: 1. Admission Date – The month, day and year of admission to acute inpatient care. 2. Birthdate - The month, day and year the patient was born. 3. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied. Allowable values: Yes or No/UTD 4. Comfort Measures Only - Physician/advanced practice nurse/physician assistant (physician/APN/PA) documentation of comfort measures only. Commonly referred to as “palliative care” in the medical community and “comfort care” by the general public. Palliative care includes attention to the psychological and spiritual needs of the patient and support for the dying patient and the patient´s family. Comfort Measures Only are not equivalent to the following: Do Not Resuscitate (DNR), living will, no code, no heroic measure. Allowable values represent the earliest physician/APN/PA documentation: Day 0 or 1, Day 2 or after, Timing unclear or Not Documented/UTD. 5. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay. 6. ICD-9-CM Other Diagnosis Codes - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes associated with the diagnosis for this hospitalization. 7. ICD-9-CM Principal Diagnosis Code - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. 8. ICD-9-CM Principal Procedure Code - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code that identifies the principal procedure performed during this hospitalization. The principal procedure is the procedure performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to take care of a complication. 9. ICU Admission Date - The day, month and year that the order was written for the patient to be directly admitted or transferred (from a lower level of care) to the intensive care unit (ICU). 10. ICU Admission or Transfer - Documentation that the patient was admitted or transferred to the intensive care unit (ICU) at this hospital. The definition of an ICU for the purpose of the measures noted above is that used by the CDC in the NHSN Patient Safety Project. An intensive care unit can be defined as a nursing care area that provides intensive observation, diagnosis, and therapeutic procedures for adults and/or children who are critically ill. An ICU excludes nursing areas that provide step-down, intermediate care or telemetry only and specialty care areas. 11. ICU Discharge Date - The day, month and year that the order was written to discharge the patient from the intensive care unit (ICU), left against medical advice (AMA) or expired. Please note: The majority of general data elements that are missing data cause the EOC record to be rejected.

	0372 Intensive Care Unit Venous Thromboembolism Prophylaxis
Exclusions	• Patients less than 18 years of age • Patients who have a hospital length of stay (LOS) less than two days and greater than 120 days • Patients with Comfort Measures Only documented on day of or day after hospital arrival • Patients enrolled in clinical trials • Patients with ICU LOS less than one day without VTE prophylaxis administered and documentation for no VTE prophylaxis • Patients with ICD-9-CM Principal or Other Diagnosis Code of Obstetrics or VTE as defined in Appendix A, Table 7.02, 7.03, or 7.04 • Patients with ICD-9-CM Principal Procedure Code of Surgical Care Improvement Project (SCIP) VTE selected surgeries as defined in Appendix A, Tables 5.17, 5.19, 5.20, 5.21, 5.22, 5.23, 5.24 that start the day of or the day after ICU admission or transfer
Exclusion Details	• The patient age in years is equal to the Admission Date minus the Birthdate. The month and day portion of the admission date and birthdate are used to yield the most accurate age. Patients less than 18 years are excluded. • Length of stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days or equal to or less than 2 days, the patient is excluded. • Patients with Comfort Measures Only allowable value of 1 (Day 0 or 1) are excluded. • Patients are excluded if "Yes" is selected for Clinical Trial. • The data element ICU Admission or Transfer is used to determine if the patient was admitted to the ICU. If "Yes" is selected, the case flows to the ICU Admission Date and ICU Discharge Date. The ICU Admission and ICU Discharge Date are used to determine if the patient was in the ICU for one or more days. If the ICU LOS is less than one day, the patient is excluded from VTE-2. • Patients with ICD-9-CM Principal or Other Diagnosis Codes of Obstetrics or VTE are excluded. • Patients with ICD-9-CM Principal Procedure Code of Surgical Care Improvement Project (SCIP) VTE selected surgeries are excluded if the surgery started the day of or the day after ICU admission or transfer.
Risk Adjustment	No risk adjustment or risk stratification Not applicable
Stratification	Not Applicable, the measure is not stratified.
Type Score	Rate/proportion better quality = higher score
Algorithm	1. Start processing. Run cases that are included in the VTE Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure. 2. Calculate Length of Stay. Length of Stay, in days, is equal to the Discharge Date minus the Admission Date. 3. Check Length of Stay a. If Length of Stay is less than 2 days, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. b. If Length of Stay is greater than or equal to 2 days, continue processing and proceed to ICD-9-CM Principal or Other Diagnosis Code. 4. Check ICD-9-CM Principal or Other Diagnosis Code a. If at least one of the ICD-9-CM Principal or Other Diagnosis Code is on Table 7.02, 7.03, or 7.04, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing. b. If none of the ICD-9-CM Principal or Other Diagnosis Code is on Table 7.02, 7.03, or 7.04, continue processing and proceed to Comfort Measures Only. 5. Check Comfort Measures Only a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

	0372 Intensive Care Unit Venous Thromboembolism Prophylaxis
	b. If Comfort Measures Only equals 1, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. c. If Comfort Measures Only equals 2, 3, or 4, continue processing and proceed to Clinical Trial. 6. Check Clinical Trial a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. c. If Clinical Trial equals No, continue processing and proceed to ICU Admission or Transfer. 7. Check ICU Admission or Transfer a. If ICU Admission or Transfer is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If ICU Admission or Transfer is equal to 2 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. c. If ICU Admission or Transfer is equal to 1, continue processing and proceed to ICU Admission Date. 8. Check ICU Admission Date a. If ICU Admission Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If ICU Admission Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. c. If ICU Admission Date equals a Non Unable to Determine Value, continue processing and proceed to the ICD-9-CM Principal Procedure Code. 9. Check ICD-9-CM Principal Procedure Code a. If ICD-9-CM Principal Procedure Code is on Tables 5.17, 5.19, 5.20, 5.21, 5.22, 5.23, or 5.24, the case will proceed to Anesthesia Start Date. b. If ICD-9-CM Principal Procedure Code is missing or not on Tables 5.17, 5.19, 5.20, 5.21, 5.22, 5.23, or 5.24, the case will proceed to ICU Discharge Date. 10. Check Anesthesia Start Date only if ICD-9-CM Principal Procedure Code is on Tables 5.17, 5.19, 5.20, 5.21, 5.22, 5.23, or 5.24. a. If Anesthesia Start Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Anesthesia Start Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. c. If Anesthesia Start Date equals a Non Unable to Determine Value, continue processing and proceed to the ICU Initial Surgery Day calculation. 11. Calculate ICU Initial Surgery Day. ICU Initial Surgery Day, in days, is equal to the Anesthesia Start Date minus the ICU Admission Date. 12. Check ICU Initial Surgery Day a. If ICU Initial Surgery Day is less than or equal to 1 day, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing. b. If Initial Surgery Day is greater than or equal to 2 days, continue processing and proceed to ICU Discharge Date. 13. Check ICU Discharge Date a. If ICU Discharge Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If ICU Discharge Date equals Unable to Determine, the case will proceed to a Measure Category Assignment

of D and will be in the Measure Population. Stop processing.

c. If ICU Discharge Date equals a Non Unable to Determine Value, continue processing and proceed to the ICU VTE Prophylaxis.

14. Check ICU VTE Prophylaxis

a. If ICU VTE Prophylaxis is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If ICU VTE Prophylaxis is equal to A, continue processing and proceed to Reason for No VTE Prophylaxis – ICU Admission.

c. If ICU VTE Prophylaxis is equal to 1, 2, 3, 4, 5, 6, 7 and not equal to A, continue processing and proceed to ICU VTE Prophylaxis Date.

15. Check Reason for No VTE Prophylaxis – ICU Admission only if ICU VTE Prophylaxis is equal to A.

a. If Reason for No VTE Prophylaxis – ICU Admission is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If Reason for No VTE Prophylaxis – ICU Admission equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

c. If Reason for No VTE Prophylaxis – ICU Admission equals No, continue processing and proceed to the ICU LOS calculation.

16. Calculate ICU LOS. ICU LOS is equal to ICU Discharge Date minus ICU Admission Date.

17. Check ICU LOS

a. If ICU LOS is less than zero days, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If ICU LOS is equal to zero days, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

c. If ICU LOS is greater than or equal to 1 day, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

18. Check ICU VTE Prophylaxis Date

a. If ICU VTE Prophylaxis Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If ICU VTE Prophylaxis Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

c. If ICU VTE Prophylaxis Date equals a Non Unable to Determine Value, continue processing and proceed to the ICU Initial Prophylaxis Day calculation.

19. Calculate ICU Initial Prophylaxis Day. ICU Initial Prophylaxis Day, in days, is equal to ICU VTE Prophylaxis Date minus ICU Admission Date.

20. Check ICU Initial Prophylaxis Day

a. If ICU Initial Prophylaxis Day is less than zero days, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If ICU Initial Prophylaxis Day is equal to zero days or 1 day, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.

c. If ICU Initial Prophylaxis Day is greater than or equal to 2 days, continue processing and proceed to Surgical Procedure – ICU Admission.

21. Check Surgical Procedure – ICU Admission

a. If Surgical Procedure ICU Admission is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

	0372 Intensive Care Unit Venous Thromboembolism Prophylaxis
	b. If Surgical Procedure ICU Admission equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. c. If Surgical Procedure ICU Admission equals Yes, continue processing and proceed to Surgery End Date - ICU Admission. 22. Check Surgery End Date - ICU Admission a. If Surgery End Date - ICU Admission is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Surgery End Date - ICU Admission equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. c. If Surgery End Date - ICU Admission equals a Non Unable to Determine Value, continue processing and proceed to the ICU Initial Surgical Prophylaxis Day calculation. 23. Calculate ICU Initial Surgical Prophylaxis Day. ICU Initial Surgical Prophylaxis Day, in days, is equal to the ICU VTE Prophylaxis Date minus Surgery End Date - ICU Admission. 24. Check ICU Initial Surgical Prophylaxis Day a. If ICU Initial Surgical Prophylaxis Day is greater than or equal to 2 days, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. b. If ICU Initial Surgical Prophylaxis Day is equal to zero days or 1 day, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing. Attachment 2zr_VTE2.pdf
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	0373 Venous Thromboembolism Patients with Anticoagulant Overlap Therapy
Steward	The Joint Commission

	0373 Venous Thromboembolism Patients with Anticoagulant Overlap Therapy
Description	This measure assesses the number of patients diagnosed with confirmed VTE who received an overlap of Parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation and warfarin therapy. For patients who received less than five days of overlap therapy, they should be discharged on both medications and have a Reason for Discontinuation of Overlap Therapy. Overlap therapy should be administered for at least five days with an international normalized ratio (INR) greater than or equal to 2 prior to discontinuation of the parenteral anticoagulation therapy, or INR less than 2 but discharged on both medications or have a Reason for Discontinuation of Overlap Therapy. This measure is part of a set of six prevention and treatment measures that address VTE (VTE-1: VTE Prophylaxis, VTE-2: ICU VTE Prophylaxis, VTE-4: VTE Patients Receiving UFH with Dosages/Platelet Count Monitoring, VTE-5: VTE Warfarin Therapy Discharge Instructions and VTE-6: Incidence of Potentially-Preventable VTE).
Type	Process
Data Source	Administrative claims, Electronic Clinical Data, Paper Records Each data element in the data dictionary includes suggested data sources. The data are collected using contracted Performance Measurement Systems (vendors) that develop data collection tools based on the measure specifications. The tools are verified and tested by Joint Commission staff to confirm the accuracy and conformance of the data collection tool with the measure specifications. Verification must be completed and passed before the vendor can offer the data collection tool to hospitals. Attachment VTE 4.0 ManuaLF-634469519104709898.pdf
Level	Facility, Population : National
Setting	Hospital/Acute Care Facility
Numerator Statement	Patients who received overlap therapy: Included Populations: Patients who received warfarin and parenteral anticoagulation: • Five or more days, with an INR greater than or equal to 2 prior to discontinuation of parenteral therapy OR • Five or more days, with an INR less than 2 and discharged on overlap therapy OR • Less than five days and discharged on overlap therapy OR • With documentation of reason for discontinuation of overlap therapy OR • With documentation of a reason for no overlap therapy

	0373 Venous Thromboembolism Patients with Anticoagulant Overlap Therapy
Numerator Details	**Time Window:** Episode of care Six data elements are used to calculate the numerator: 1. INR Value - Documentation of an international normalized ratio (INR) value greater than or equal to 2 prior to discontinuation of the parenteral anticoagulation therapy. Allowable Value (AV): Yes or No/UTD 2. Overlap Therapy - Documentation that parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation therapy and warfarin were both administered on the same day or a reason is documented why overlap therapy was not initiated. Allowable Value: 1- There was documentation of overlap therapy; 2 -There is a reason for no overlap therapy; or 3- There was no overlap therapy and no reason/UTD. 3. Overlap Therapy Start Date - The first date that the parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation therapy and warfarin were administered. 4. Parenteral Anticoagulant End Date - The last date that a parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulant medication was administered. 5. Parenteral Anticoagulant Prescribed at Discharge - Documentation that a parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulant medication was prescribed at discharge. Allowable Value: Yes or No/UTD 6. Reason for Discontinuation of Overlap Therapy - Documentation of a reason for discontinuation of the overlap therapy by a physician/advanced practice nurse/physician assistant or pharmacist (physician/APN/PA or pharmacist). Allowable Value: Yes or No/UTD
Denominator Statement	Patients with confirmed VTE who received warfarin. The target population includes patients discharged with an ICD-9-CM Principal or Other Diagnosis Codes for VTE as defined in Table 7.03 or Table 7.04.

	0373 Venous Thromboembolism Patients with Anticoagulant Overlap Therapy
Denominator Details	**Time Window:** Episode of Care Eleven data elements are used to calculate the denominator: 1. Admission Date – The month, day and year of admission to acute inpatient care. 2. Birthdate - The month, day and year the patient was born. 3. Clinical Trial - Documentation that during this hospital stay the patient was enrolled in a clinical trial in which patients with the same condition as the measure set were being studied. Allowable values: Yes or No/UTD 4. Comfort Measures Only - Physician/advanced practice nurse/physician assistant (physician/APN/PA) documentation of comfort measures only. Commonly referred to as "palliative care" in the medical community and "comfort care" by the general public. Palliative care includes attention to the psychological and spiritual needs of the patient and support for the dying patient and the patient´s family. Comfort Measures Only are not equivalent to the following: Do Not Resuscitate (DNR), living will, no code, and no heroic measure. Allowable values represent the earliest physician/APN/PA documentation: (AV 1) Day 0 or 1, (AV 2) Day 2 or after, (AV 3) Timing unclear or (AV 4) Not Documented/UTD. 5. Discharge Date – The month day and year the patient was discharged from acute care, left against medical advice or expired during the stay. 6. Discharge Disposition - The final place or setting to which the patient was discharged on the day of discharge. Allowable values: 1-8. 7. ICD-9-CM Other Diagnosis Codes - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes associated with the secondary diagnoses for this hospitalization. 8. ICD-9-CM Principal Diagnosis Code - The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code associated with the diagnosis established after study to be chiefly responsible for occasioning the admission of the patient for this hospitalization. 9. VTE Confirmed – Documentation by a physician/advanced practice nurse/physician assistant (physician/APN/PA) that a diagnosis of VTE [deep vein thrombosis (DVT) and/or pulmonary embolism (PE)] was confirmed in a defined location. Allowable values: Yes or No/UTD 10. VTE Diagnostic Test – Documentation that a diagnostic test for VTE was performed. Allowable values: Yes or No/UTD 11. Warfarin Administration - Documentation that warfarin was administered during hospitalization. Allowable values: Yes or No/UTD.
Exclusions	• Patients less than 18 years of age • Patients who have a length of stay greater than 120 days • Patients with Comfort Measures Only documented • Patients enrolled in clinical trials • Patients discharged to a health care facility for hospice care • Patients discharged to home for hospice care • Patients who expired • Patients who left against medical advice • Patients discharged to another hospital • Patients without warfarin therapy during hospitalization • Patients without VTE confirmed by diagnostic testing

	0373 Venous Thromboembolism Patients with Anticoagulant Overlap Therapy
Exclusion Details	• Patient without a Principal or Other ICD-9-CM Diagnosis Code on Table 7.03 or 7.04 are excluded. • The patient age in years is equal to the Admission Date minus the Birthdate. Patients less than 18 years are excluded. • Length of stay (LOS) in days is equal to the Discharge Date minus the Admission Date. If the LOS is greater than 120 days, the patient is excluded. • Patients with AV 1,2 or 3 for Comfort Measures Only are excluded. • Patients are excluded if "Yes" is selected for Clinical Trial. • The allowable values (AV) 2, 3, 4, 6 and 7 for Discharge Disposition exclude patients who are discharged to a health care facility for hospice care, home to hospice care, expired, left against medical advice, or to another hospital. • Patients are excluded if "No" is selected for Warfarin Administration. • Patients are excluded if "No" is selected for VTE Diagnostic Test. • Patients are excluded if "No" is selected for VTE Confirmed.
Risk Adjustment	No risk adjustment or risk stratification Not Applicable
Stratification	Not Applicable, the measure is not stratified.
Type Score	Rate/proportion better quality = higher score
Algorithm	1. Start processing. Run cases that are included in the VTE Initial Patient Population and pass the edits defined in Transmission Data Processing Flow: Clinical through this measure. 2. Check ICD-9-CM Principal or Other Diagnosis Code a. If none of the ICD-9-CM Principal or Other Diagnosis Code is on Table 7.03 or 7.04 (VTE, Obstetrics-VTE), the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing. b. If at least one of the ICD-9-CM Principal or Other Diagnosis Code is on Table 7.03 or 7.04, continue processing and proceed to Comfort Measures Only. 3. Check Comfort Measures Only a. If Comfort Measures Only is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Comfort Measures Only equals 1, 2 or 3, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. c. If Comfort Measures Only equals 4, continue processing and proceed to Clinical Trial. 4. Check Clinical Trial a. If Clinical Trial is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Clinical Trial equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. c. If Clinical Trial equals No, continue processing and proceed to Discharge Disposition. 5. Check Discharge Disposition a. If Discharge Disposition equals 2, 3, 4, 6, 7, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing. b. If Discharge Disposition equals 1, 5, 8, continue processing and proceed to VTE Diagnostic Test. 6. Check VTE Diagnostic Test a. If VTE Diagnostic Test is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If VTE Diagnostic Test equals No, the case will proceed to a Measure Category Assignment of B and will

not be in the measure population. Stop processing.

c. If VTE Diagnostic Test equals Yes, continue processing and proceed to VTE Confirmed.

7. Check VTE Confirmed

a. If VTE Confirmed is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If VTE Confirmed equals No, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.

c. If VTE Confirmed equals Yes, continue processing and proceed to Warfarin Administration.

8. Check Warfarin Administration

a. If Warfarin Administration is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

If Warfarin Administration equals No, the case will proceed to a Measure Category Assignment of B and will not be in the measure population. Stop processing.

c. If Warfarin Administration equals Yes, continue processing and proceed to Overlap Therapy.

9. Check Overlap Therapy

a. If Overlap Therapy is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If Overlap Therapy equals 2, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

c. If Overlap Therapy equals 3, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

d. If Overlap Therapy equals 1, continue processing and proceed to the Overlap Therapy Start Date.

10. Check Overlap Therapy Start Date

a. If Overlap Therapy Start Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If the Overlap Therapy Start Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

c. If Overlap Therapy Start Date equals a Non Unable to Determine Value, continue processing and proceed to the Parenteral Anticoagulant End Date.

11. Check Parenteral Anticoagulant End Date

a. If Parenteral Anticoagulant End Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If the Parenteral Anticoagulant End Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

c. If Parenteral Anticoagulant End Date equals a Non Unable to Determine Value, continue processing and proceed to the Overlap Therapy Days calculation.

12. Calculate Overlap Therapy Days. Overlap Therapy Days, in days, is equal to Parenteral Anticoagulant End Date minus Overlap Therapy Start Date.

13. Check Overlap Therapy Days

a. If Overlap Therapy Days is less than 0 days, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.

b. If Overlap Therapy Days is greater than or equal to 4 days, continue processing and proceed to INR Value.

a. If INR Value is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

b. If INR Value equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the

	0373 Venous Thromboembolism Patients with Anticoagulant Overlap Therapy
	Numerator Population. Stop processing. c. If INR Value equals No, continue processing and proceed to Parenteral Anticoagulant Prescribed at Discharge. c. If Overlap Therapy Days is greater than or equal to zero days and less than 4 days, continue processing and proceed to Parenteral Anticoagulant Prescribed at Discharge. 14. Check Parenteral Anticoagulant Prescribed at Discharge a. If Parenteral Anticoagulant Prescribed at Discharge is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Parenteral Anticoagulant Prescribed at Discharge equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing. c. If Parenteral Anticoagulant Prescribed at Discharge equals No, continue processing and proceed to Reason for Discontinuation of Overlap Therapy. 15. Check Reason for Discontinuation of Overlap Therapy a. If Reason for Discontinuation of Overlap Therapy is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing. b. If Reason for Discontinuation of Overlap Therapy equals Yes, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing. c. If Reason for Discontinuation of Overlap Therapy equals No, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing. Attachment 2zs_VTE3.pdf
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	0419 Documentation of Current Medications in the Medical Record
Steward	Centers for Medicare & Medicaid Services
Description	Percentage of specified visits for patients aged 18 years and older for which the eligible professional attests to documenting a list of current medications to the best of his/her knowledge and ability. This list must include ALL prescriptions, over-the-counters, herbals, vitamin/mineral/dietary (nutritional) supplements AND must contain the medications' name, dosage, frequency and route
Type	Process

	0419 Documentation of Current Medications in the Medical Record
Data Source	Administrative claims, Electronic Clinical Data : Registry Medicare Part B claims data URL NQF 0419 Endorsement Summary 012312 zip file of supporting docuementation sent to H. Bossley & A. Lyzenga via email on 01/23/12 due to path submission error Attachment m130_attachment_partb_detail_line_item_format.pdf
Level	Clinician : Individual, Population : National
Setting	Ambulatory Care : Clinician Office, Behavioral Health/Psychiatric : Outpatient, Dialysis Facility, Home Health, Other, Post Acute/Long Term Care Facility : Nursing Home/Skilled Nursing Facility, Post Acute/Long Term Care Facility : Rehabilitation Clinic, Hospital outpatient
Numerator Statement	ALL MEASURE SPECIFICATION DETAILS REFERENCE THE 2012 PHYSICIAN QUALITY REPORTING SYSTEM MEASURE SPECIFICATION. Eligible professional attests to documenting a list of current medications to the best of his/her knowledge and ability. This list must include ALL prescriptions, over-the counters, herbals, vitamin/mineral/dietary (nutritional) supplements AND must contain the medications' name, dosages, frequency and route NUMERATOR NOTE: By reporting G8427, the eligible professional is attesting the documented current medication information is accurate and complete to the best of his/her knowledge and ability at the time of the patient encounter. This code may also be reported if there is documentation that no medications are currently being taken.
Numerator Details	**Time Window:** This measure is to be reported at each visit during the 12 month reporting period. Eligible professionals meet the intent of this measure by making a best effort to document a current, complete and accurate medication list during each encounter. There is For the purposes of calculating performance, the Numerator(A) is defined by providers reporting the clinical quality action was performed. For this measure, performing the clinical quality action is numerator HCPCS G8427. Current Medications with Name, Dosage, Frequency and Route Documented G8427: List of current medications (includes prescription, over-the-counter, herbals, vitamin/mineral/dietary [nutritional] supplements) documented by the provider, including drug name, dosage, frequency and route
Denominator Statement	ALL MEASURE SPECIFICATION DETAILS REFERENCE THE 2012 PHYSICIAN QUALITY REPORTING SYSTEM MEASURE SPECIFICATION. All visits occurring during the 12 month reporting period for patients aged 18 years and older at the time of the encounter where one or more denominator CPT or HCPCS codes AND any of the 3 numerator HCPCS codes are reported on the claims submission for the encounter. All discussed coding is listed in "2a1.7. Denominator Details" section below.
Denominator Details	**Time Window:** All visits occurring during the 12 month reporting period for patients aged 18 years and older at the time of the encounter. For the purposes of defining the denominator, the Performance Denominator(PD) is defined by the patient´s age, encounter date, denominator CPT or HCPCS codes and the provider reported numerator HCPCS codes described below (G8427, G8430 & G8428). Patients aged greater than or equal to 18 years on date of encounter AND Patient encounter during the reporting period (CPT or HCPCS): 90801, 90802, 90804, 90805, 90806, 90807, 90808, 90809, 90816, 90817, 90818, 90819, 90821, 90822, 90957, 90958, 90959, 90960, 90962, 90965, 90966, 92002, 92004, 92012, 92014, 92541, 92542, 92543, 92544, 92545, 92547, 92548, 92557, 92567, 92568, 92570, 92585, 92588, 92626, 96116, 96150, 96152, 97001, 97002, 97003, 97004, 97802, 97803, 97804, 98960, 98961, 98962, 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214,

	0419 Documentation of Current Medications in the Medical Record
	99215, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350, G0101, G0108, G0270, G0402, G0438, G0439 AND Patient encounters with the following numerator HCPCS Code G8427, G8430, G8428. Current Medications with Name, Dosage, Frequency and Route Documented G8427: List of current medications (includes prescription, over-the-counter, herbals, vitamin/mineral/dietary [nutritional] supplements) documented by the provider, including drug name, dosage, frequency and route Current Medications with Dosage not Documented, Patient not Eligible G8430: Provider documentation that patient is not eligible for medication assessment Current Medications with Name, Dosage, Frequency, Route not Documented, Reason not Specified G8428: Current medications (includes prescription, over-the-counter, herbals, vitamin/mineral/dietary [nutritional] supplements) with drug name, dosage, frequency and route not documented by the provider, reason not specified
Exclusions	ALL MEASURE SPECIFICATION DETAILS REFERENCE THE 2012 PHYSICIAN QUALITY REPORTING SYSTEM MEASURE SPECIFICATION. A patient is not eligible or excluded (B) from the performance denominator (PD) if one or more of the following reason(s) exist: 1. Patient refuses to participate 2. Patient is in an urgent or emergent medical situation where time is of the essence and to delay treatment would jeopardize the patient's health status 3. Patient cognitively impaired and no authorized representative(s), caregiver(s), and or other healthcare resources are available
Exclusion Details	For the purposes of identifying performance exclusions, Denominator Exclusions (B) are defined by providers reporting the exclusion clinical quality action. For this measure, the clinical exclusion code is numerator HCPCS G8430. Current Medications with Dosages not Documented, Patient not Eligible G8430: Provider documentation that patient is not eligible for medication assessment
Risk Adjustment	No risk adjustment or risk stratification N/A
Stratification	This measure is not stratified. All eligible patients are subject to the same numerator criteria.
Type Score	Rate/proportion better quality = higher score
Algorithm	This section provides details and formulas to calculate Performance and Denominator Exclusions. PERFORMANCE CALCULATION To calculate provider performance, complete a fraction with the following measure components: Numerator (A), Performance Denominator (PD) and Denominator Exclusions (B). Numerator (A): Number of patients meeting numerator criteria Performance Denominator (PD): Number of patients meeting criteria for denominator inclusion Denominator Exclusions (B): Number of patients with valid exclusions The method of performance calculation is determined by the following: 1) identify the patients who meet the eligibility criteria for the denominator (PD) which includes patients who are 18 years and older with encounters during the reporting period with any of denominator CPT or HCPCS codes and numerator HCPCS codes as listed in "2a1.7. Denominator Details". 2) identify which of those patients meet the numerator criteria (G8427) (A) 3) for those patients who do not meet the numerator criteria, determine whether an appropriate exclusion

	0419 Documentation of Current Medications in the Medical Record
	applies (G8430) (B) and subtract those patients from the denominator with the following calculation: Numerator (A)/[Performance Denominator (PD) - Denominator Exclusions (B)] DENOMINATOR EXCLUSIONS The Exclusion Calculation is: Denominator Exclusions (B)/Performance Denominator (PD) Attachment Calculation for Performance.docx
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	0450 Postoperative Pulmonary Embolism or Deep Vein Thrombosis Rate (PSI 12)
Steward	Agency for Healthcare Research and Quality
Description	Percent of discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM codes for deep vein thrombosis or pulmonary embolism in any secondary diagnosis field.
Type	Outcome
Data Source	Administrative claims HCUP State Inpatient Databases (SID). Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality, Rockville, MD. URL http://www.hcup-us.ahrq.gov/sidoverview.jsp Not applicable URL http://qualityindicators.ahrq.gov/Downloads/Software/WinQI/V43/AHRQ%20QI%20Software%20Instructions,%20WinQI.pdf Not applicable
Level	Facility
Setting	Hospital/Acute Care Facility
Numerator Statement	Discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM codes for deep vein thrombosis or pulmonary embolism in any secondary diagnosis field.
Numerator Details	**Time Window:** User may specify the time window; generally one calendar year ICD-9-CM Deep vein thrombosis diagnosis codes: 45111 PHLEBITIS AND THROMBOSIS OF FEMORAL VEIN (DEEP) (SUPERFICIAL) 45119 PHLEBITIS AND THROMBOPHLEBITIS OF DEEP VESSEL OF LOWER EXTREMITIES – OTHER 4512 PHLEBITIS AND THROMBOPHLEBITIS OF LOWER EXTREMITIES UNSPECIFIED* 45181 PHLEBITIS AND THROMBOPHLEBITIS OF ILIAC VEIN 4519 PHLEBITIS AND THROMBOPHLEBITIS OF OTHER SITES - OF UNSPECIFIED SITE* 45340

	0450 Postoperative Pulmonary Embolism or Deep Vein Thrombosis Rate (PSI 12)
	DVT-EMBLSM LOWER EXT NOS (OCT04) 45341 DVT-EMB PROX LOWER EXT (OCT04) 45342 DVT-EMB DISTAL LOWER EXT (OCT04) 4538 OTHER VENOUS EMBOLISM AND THROMBOSIS OF OTHER SPECIFIED VEINS* 4539 OTHER VENOUS EMBOLISM AND THROMBOSIS OF UNSPECIFIED SITE* * Does not apply on or after October 1, 2009. ICD-9-CM Pulmonary embolism diagnosis codes: 4151 PULMONARY EMBOLISM AND INFARCTION 41511 IATROGENIC PULMONARY EMBOLISM AND INFARCTION 41519 PULMONARY EMBOLISM AND INFARCTION, OTHER
Denominator Statement	All surgical discharges age 18 and older defined by specific DRGs or MS-DRGs and an ICD-9-CM code for an operating room procedure
Denominator Details	**Time Window:** User may specify the time window; generally one calendar year See Patient Safety Indicators Appendices: - Appendix A – Operating Room Procedure Codes - Appendix D – Surgical Discharge DRGs - Appendix E – Surgical Discharge MS-DRGs Link to PSI appendices: http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/TechnicalSpecifications/PSI%20Appendices.pdf
Exclusions	Exclude cases: - with principal diagnosis of deep vein thrombosis or pulmonary embolism or secondary diagnosis present on admission - where a procedure for interruption of vena cava is the only operating room procedure - where a procedure for interruption of vena cava occurs before or on the same day as the first operating room procedure - MDC 14 (pregnancy, childbirth, and puerperium) - with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)
Exclusion Details	ICD-9-CM Interruption of vena cava procedure code: 387 INTERRUPTION OF VENA CAVA
Risk Adjustment	Statistical risk model The predicted value for each case is computed using a hierarchical model (logistic regression with hospital random effect) and covariates for gender, age (in 5-year age groups), modified CMS DRG, and the AHRQ

	0450 Postoperative Pulmonary Embolism or Deep Vein Thrombosis Rate (PSI 12)
	Comorbidity category. The reference population used in the regression is the universe of discharges for states that participate in the HCUP State Inpatient Data (SID) for the years 2008, a database consisting of 42 states and approximately 30 million adult discharges. The expected rate is computed as the sum of the predicted value for each case divided by the number of cases for the unit of analysis of interest (i.e., hospital). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate. Age 18 to 24 Age 25 to 29 Age 30 to 34 Age 35 to 39 Age 40 to 44 Age 45 to 49 Age 50 to 59 Age 65 to 74 Age 75 to 79 Age 80 to 84 Age 85+ MDRG 101 MDRG 102 MDRG 103 MDRG 104 MDRG 105 MDRG 107 MDRG 108 MDRG 401 MDRG 402 MDRG 502 MDRG 503 MDRG 505 MDRG 507 MDRG 508 MDRG 509 MDRG 511 MDRG 514 MDRG 519 MDRG 601 MDRG 602 MDRG 603 MDRG 604 MDRG 611 MDRG 701 MDRG 705 MDRG 801 MDRG 802

	0450 Postoperative Pulmonary Embolism or Deep Vein Thrombosis Rate (PSI 12)
	MDRG 804 MDRG 805 MDRG 806 MDRG 807 MDRG 808 MDRG 811 MDRG 815 MDRG 1001 MDRG 1003 MDRG 1006 MDRG 1101 MDRG 1102 MDRG 1103 MDRG 1104 MDRG 1107 MDRG 1109 MDRG 1201 MDRG 1301 MDRG 1302 MDRG 1303 MDRG 1304 MDRG 1707 MDRG 1708 MDRG 1709 MDRG 1801 MDRG 1802 MDRG 2104 MDRG 2406 MDRG 2407 MDRG 2408 MDRG 2501 MDRG 7701 MDRG 7702 MDC 1 MDC 4 MDC 5 MDC 7 MDC 11 MDC 12 MDC 16 MDC 17 MDC 18 MDC 21 MDC 22

	0450 Postoperative Pulmonary Embolism or Deep Vein Thrombosis Rate (PSI 12)
	MDC 24 MDC 25 TRNSFER Transfer-in COMORB CHF COMORB VALVE COMORB PULMCIRC COMORB PERIVASC COMORB HTN_C COMORB PARA COMORB NEURO COMORB CHRNLUNG COMORB DM COMORB HYPOTHY COMORB RENLFAIL COMORB AIDS COMORB LYMPH COMORB METS COMORB TUMOR COMORB OBESE COMORB WGHTLOSS COMORB BLDLOSS COMORB ANEMDEF COMORB ALCOHOL COMORB DRUG COMORB PSYCH COMORB DEPRESS URL http://qualityindicators.ahrq.gov/Downloads/Software/SAS/V43/Risk%20Adjustment%20Tables%20PSI%204.3.pdf Not applicable
Stratification	Not applicable
Type Score	Rate/proportion better quality = lower score
Algorithm	Each indicator is expressed as a rate, is defined as outcome of interest / population at risk or numerator / denominator. The AHRQ Quality Indicators (AHRQ QI) software performs six steps to produce the rates. 1) Discharge-level data is used to mark inpatient records containing the outcome of interest and 2) the population at risk. For provider indicators, the population at risk is also derived from hospital discharge records; for area indicators, the population at risk is derived from U.S. Census data. 3) Calculate observed rates. Using output from steps 1 and 2, rates are calculated for user-specified combinations of stratifiers. 4) Calculate expected rates. Regression coefficients from a reference population database are applied to the discharge records and aggregated to the provider or area level. For indicators that are not risk-adjusted, this is the reference population rate. 5) Calculate risk-adjusted rate. Use the indirect standardization to account for case-mix. For indicators that are not risk-adjusted, this is the same as the observed rate. 6) Calculate smoothed rate. A Univariate shrinkage factor is applied to the risk-adjusted rates. The shrinkage estimate reflects a reliability adjustment unique to each indicator URL Not applicable http://qualityindicators.ahrq.gov/Downloads/Resources/Publications/2011/QI%20Empirical%20Methods%2005-03-11.pdf

	0450 Postoperative Pulmonary Embolism or Deep Vein Thrombosis Rate (PSI 12)
Copyright	Not applicable

Appendix B: Steering Committee

Patient Safety Measures: Complications Endorsement Maintenance Project

Pamela Cipriano, PhD, RN, NEA-BC, FAA (Co-Chair)
University of Virginia Health System, Charlottesville, VA

William Conway, MD (Co-Chair)
Henry Ford Health System, Detroit, MI

Jason Adelman, MD, MS
Montefiore Medical Center, Bronx, NY

Charlotte Alexander, MD
Memorial Hermann Healthcare System, Sugarland, TX

Bobbette Bond, BS, MPH
Nevada Healthcare Policy Group LLC, Las Vegas, NV

John Clarke, MD, FACS
Drexel University College of Medicine, Philadelphia, PA

Jean De Leon, MD
Baylor Specialty Hospital, Dallas, TX

Vallire Hooper, PhD, RN, CPAN, FAAN
Mission Hospital, Asheville, NC

Carol Kemper, PhD, RN, CPHQ
Children's Mercy Hospital, Kansas City, MO

Stephen Lawless, MD, MBA
Nemours Foundation, Wilmington, DE

Lisa McGiffert
Consumers Union, Austin, TX

Christina Michalek, BSc, PharmD, RPh, FASHP
Institute for Safe Medication Practices, Huntingdon Valley, PA

Susan Moffatt-Bruce, MD, PhD
The Ohio State University, Columbus, OH

Lisa Moores, MD
Uniformed Health Services University, Bethesda, MD

Marc Moote, MS, PA-C
University of Michigan Health System, Ann Arbor, MI

Janet Nagamine, MD, BSN
Permanente Medical Group, Aptos, CA

Louise Probst, MBA, BSN
St. Louis Area Business Health Coalition, St. Louis, MO

Gina Pugliese, MS, RN
Premier Healthcare Alliance, Charlotte, NC

Patricia Quigley, PhD, MPH, ARNP, FAAN
Department of Veterans Affairs, Washington, DC

Edward Septimus, MD, FIDSA, FACP, FSHEA
Hospital Corporation of Aemerica, Houston, TX

Mary Sieggreen, MSN, APRN
Detroit Medical Center, Detroit, MI

Jim Smith, PT, DPT
Utica College, Utica, NY

Iona Thraen, MSW
Utah Department of Health, Salt Lake City, Utah

Tracy Wang, MPH
WellPoint, Inc., Woodland Hills, CA

Saul Weingart, MD, PhD, MPP
Dana-Farber Cancer Institute, Boston, MA\

Richard White, MD
UC Davis, Sacramento, CA

NATIONAL QUALITY FORUM STAFF

Helen Burstin, MD, MPH
Senior Vice President, Performance Measures

Heidi Bossley, MSN, MBA
Vice President, Performance Measures

Melinda Murphy, RN, MS
Senior Director, Performance Measures

Andrew Lyzenga, MPP
Project Manager, Performance Measures

Jessica Weber, MPH
Project Analyst, Performance Measures

Appendix C: NQF-Endorsed® Patient Safety Measures

Measure Number and Title	Description
#0019: Documentation of medication list in the outpatient record	Percentage of patients having a medication list in the medical record.
#0020: Documentation of allergies and adverse reactions in the outpatient record	Percentage of patients having documentation of allergies and adverse reactions in the medical record.
#0021: Annual monitoring for patients on persistent medications	The percentage of members 18 years of age and older who received at least 180 treatment days of ambulatory medication therapy for a select therapeutic agent during the measurement year and at least one therapeutic monitoring event for the therapeutic agent in the measurement year. For each product line, report each of the four rates separately and as a total rate. • Annual monitoring for members on angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARB) • Annual monitoring for members on digoxin • Annual monitoring for members on diuretics • Annual monitoring for members on anticonvulsants • Total rate (the sum of the four numerators divided by the sum of the four denominators)
#0022: Use of High Risk Medications in the Elderly	a: Percentage of Medicare members 65 years of age and older who received at least one high-risk medication. b: Percentage of Medicare members 65 years of age and older who received at least two different high-risk medications. For both rates, a lower rate represents better performance.
#0035: Fall Risk Management	a) Discussing Fall Risk. The percentage of Medicare members 75 years of age and older, or 65–74 years of age with balance or walking problems or a fall in the past 12 months, who were seen by a practitioner in the past 12 months and who discussed falls or problems with balance or walking with their current practitioner. b) Managing Fall Risk. The percentage of Medicare members 65 years of age and older who had a fall or had problems with balance or walking in the past 12 months, who were seen by a practitioner in the past 12 months and who received fall risk intervention from their current practitioner.
#0097: Medication Reconciliation	Percentage of patients aged 65 years and older discharged from any inpatient facility (e.g. hospital, skilled nursing facility, or rehabilitation facility) and seen within 60 days following discharge in the office by the physician providing on-going care who had a reconciliation of the discharge medications with the current medication list in the medical record documented.
#0101: Falls: Screening for Future Fall Risk	Percentage of patients aged 65 years and older who were screened for fall risk (2 or more falls in the past year or any fall with injury in the past year) at least once within 12 months

Measure Number and Title	Description
#0130: Risk-Adjusted Deep Sternal Wound Infection Rate	Percent of patients aged 18 years and older undergoing isolated CABG who, within 30 days postoperatively, develop deep sternal wound infection involving muscle, bone, and/or mediastinum requiring operative intervention
#0136: Heart Failure (HF): Detailed discharge instructions	Percentage of heart failure patients discharged home with written instructions or educational material given to patient or caregiver at discharge or during the hospital stay addressing all of the following: activity level, diet, discharge medications, follow-up appointment, weight monitoring, and what to do if symptoms worsen.
#0138: Urinary catheter-associated urinary tract infection for intensive care unit (ICU) patients	Percentage of intensive care unit patients with urinary catheter-associated urinary tract infections
#0139: Central line catheter-associated blood stream infection rate for ICU and high-risk nursery (HRN) patients	Percentage of ICU and high-risk nursery patients, who over a certain amount of days acquired a central line catheter-associated blood stream infections over a specified amount of line-days
#0140: Ventilator-associated pneumonia for ICU and high-risk nursery (HRN) patients	Percentage of ICU and HRN patients who over a certain amoint of days have ventilator-associated pneumonia
#0141: Patient Fall Rate	All documented falls, with or without injury, experienced by patients on eligible unit types in a calendar quarter. Reported as Total Falls per 1,000 Patient Days and Unassisted Falls per 1000 Patient Days. (Total number of falls / Patient days) X 1000 Measure focus is safety. Target population is adult acute care inpatient and adult rehabilitation patients.
#0181: Increase in number of pressure ulcers	Percentage of patients who had an increase in the number of pressure ulcers
#0200: Death among surgical inpatients with treatable serious complications (failure to rescue)	Percentage of surgical inpatients with complications of care whose status is death
#0201: Pressure ulcer prevalence	The total number of patients that have hospital-acquired (nosocomial) stage II or greater pressure ulcers on the day of the prevalence study.
#0202: Falls with injury	All documented patient falls with an injury level of minor or greater on eligible unit types in a calendar quarter. Reported as Injury falls per 1000 Patient Days. (Total number of injury falls / Patient days) X 1000 Measure focus is safety. Target population is adult acute care inpatient and adult rehabilitation patients.

Measure Number and Title	Description
#0203: Restraint prevalence (vest and limb only)	Total number of patients that have vest and/or limb restraint (upper or lower body or both) on the day of the prevalence study.
#0239: Venous Thromboembolism (VTE) Prophylaxis	Percentage of patients aged 18 years and older undergoing procedures for which VTE prophylaxis is indicated in all patients, who had an order for Low Molecular Weight Heparin (LMWH), Low-Dose Unfractionated Heparin (LDUH), adjusted-dose warfarin, fondaparinux or mechanical prophylaxis to be given within 24 hours prior to incision time or within 24 hours after surgery end time.
#0263: Patient Burn	Percentage of ASC admissions experiencing a burn prior to discharge
#0266: Patient Fall	Percentage of ASC admissions experiencing a fall in the ASC.
#0267: Wrong Site, Wrong Side, Wrong Patient, Wrong Procedure, Wrong Implant	Percentage of ASC admissions experiencing a wrong site, wrong side, wrong patient, wrong procedure, or wrong implant event.
#0281: Urinary infections (PQI 12)	This measure is used to assess the number of admissions for urinary tract infection per 100,000 population. See Notes.
#0293: Medication Information	Percentage of patients transferred to another acute hospitals whose medical record documentation indicated that medication information was communicated to the receiving hospital within 60 minutes of departure
#0298: Central Line Bundle Compliance	Percentage of intensive care patients with central lines for whom all elements of the central line bundle are documented and in place. The central line bundle elements include: •Hand hygiene , •Maximal barrier precautions upon insertion •Chlorhexidine skin antisepsis •Optimal catheter site selection, with subclavian vein as the preferred site for non-tunneled catheters in patients 18 years and older •Daily review of line necessity with prompt removal of unnecessary lines
#0299: Surgical Site Infection Rate	Percentage of surgical site infections occurring within thirty days after the operative procedure if no implant is left in place or with one year if an implant is in place in patients who had an NHSN operative procedure performed during a specified time period and the infection appears to be related to the operative procedure.
#0301: Surgery patients with appropriate hair removal	Percentage of surgery patients with surgical hair site removal with clippers or depilatory or no surgical site hair removal.

Measure Number and Title	Description
#0302: Ventilator Bundle	Percentage of intensive care unit patients on mechanical ventilation at time of survey for whom all four elements of the ventilator bundle are documented and in place. The ventilator bundle elements are: •Head of bed (HOB) elevation 30 degrees or greater (unless medically contraindicated); noted on 2 different shifts within a 24 hour period •Daily ""sedation interruption" and daily assessment of readiness to extubate; process includes interrupting sedation until patient follow commands and patient is assessed for discontinuation of mechanical ventilation; Parameters of discontinuation include: resolution of reason for intubation; inspired oxygen content roughly 40%; assessment of patients ability to defend airway after extubation due to heavy sedation; minute ventilation less than equal to 15 liters/minute; and respiratory rate/tidal volume less than or equal to 105/min/L(RR/TV< 105) •SUD (peptic ulcer disease) prophylaxis •DVT (deep venous thrombosis) prophylaxis
#0303: Late sepsis or meningitis in neonates (risk-adjusted)	Percentage of infants born at the hospital, whose birth weight is between 401 and 1500 grams OR whose gestational age is between 22 weeks 0 days and 29 weeks 6 days with late sepsis or meningitis with one or more of the following criteria: Bacterial Pathogen, Coagulase Negative Staphylococcus, Fungal Infection
#0304: Late sepsis or meningitis in Very Low Birth Weight (VLBW) neonates (risk-adjusted)	Percentage of infants born at the hospital, whose birth weight is between 401 and 1500 grams OR whose gestational age is between 22 weeks 0 days and 29 weeks 6 days, who have late sepsis or meningitis, with one or more of the following criteria: Bacterial Pathogen, Coagulase Negative Staphylococcus, Fungal Infection
#0329: All-Cause Readmission Index (risk adjusted)	Overall inpatient 30-day hospital readmission rate.
#0337: Pressure Ulcer Rate (PDI 2)	Percent of discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code of pressure ulcer in any secondary diagnosis field and ICD-9-CM code of pressure ulcer stage III or IV (or unstagable) in any secondary diagnosis field
#0330: Hospital 30-day, all-cause, risk-standardized readmission rate following heart failure hospitalization for patients 18 and older	The measure estimates a hospital 30-day risk-standardized readmission rate (RSRR), defined as readmission for any cause within 30 days after the date of discharge of the index admission for patients 18 and older discharged from the hospital with a principal diagnosis of heart failure (HF).
#0335: PICU Unplanned Readmission Rate	The total number of patients requiring unscheduled readmission to the ICU within 24 hours of discharge or transfer.
#0336: Review of Unplanned PICU Readmissions	Periodic clinical review of unplanned readmissions to the PICU that occurred within 24 hours of discharge or transfer from the PICU.
#0344: Accidental Puncture or Laceration Rate (PDI 1)	Percent of discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code denoting accidental cut, puncture, perforation, or laceration during a procedure in any secondary diagnosis field.
Measure Number and Title	**Description**
#0345: Accidental Puncture or Laceration Rate (PSI 15)	Percent of discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code denoting accidental cut, puncture, perforation, or laceration during a procedure in any secondary diagnosis field.
#0346: Iatrogenic	Percent of discharges with ICD-9-CM code for iatrogenic pneumothorax in any

Pneumothorax Rate (PSI 6)	secondary diagnosis field among cases meeting the inclusion and exclusion rules for the denominator
#0347: Death Rate in Low-Mortality Diagnosis Related Groups (PSI 2)	Percent of discharges with disposition of “deceased” (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator
#0348: Iatrogenic Pneumothorax Rate (PDI 5)	Percent of discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code of iatrogenic pneumothorax in any secondary diagnosis field
#0349: Transfusion Reaction (PSI 16)	The count of medical and surgical discharges for patients age greater than or equal to 18 or in MDC 14 with ICD-9-CM code for transfusion reaction in any secondary diagnosis field.
#0350: Transfusion Reaction (PDI 13)	The count of medical and surgical discharges for patients age less than 18 and not in MDC 14 with ICD-9-CM code for transfusion reaction in any secondary diagnosis field.
#351: Death among surgical inpatients with serious, treatable complications (PSI 4)	Percentage of cases having developed specified complications of care with an in-hospital death.
#0352: Failure to Rescue In-Hospital Mortality (risk adjusted)	Percentage of patients who died with a complications in the hospital.
#0353: Failure to Rescue 30-Day Mortality (risk adjusted)	Percentage of patients who died with a complication within 30 days from admission.
#0362: Foreign Body left after procedure (PDI 3)	Count of discharges with foreign body left in during procedure in medical and surgical discharges among patients less than 18 years and not MDC 14 (pregnancy, childbirth, and puerperium)
#0363: Foreign Body Left During Procedure (PSI 5)	Count of discharges with foreign body left in during procedure in medical and surgical discharges among patients 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium)
#0367: Post operative Wound Dehiscence (PDI 11)	Percentage of abdominopelvic surgery cases with reclosure of postoperative disruption of abdominal wall.
#0368: Post operative Wound Dehiscence (PSI 14)	Percentage of abdominopelvic surgery cases with reclosure of postoperative disruption of abdominal wall.

Measure Number and Title	Description
#0371: Venous Thromboembolism Prophylaxis	This measure assesses the number of patients who received venous thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission. This measure is part of a set of six nationally implemented prevention and treatment measures that address VTE (VTE-2: ICU VTE Prophylaxis, VTE-3: VTE Patients with Anticoagulation Overlap Therapy, VTE-4: VTE Patients Receiving UFH with Dosages/Platelet Count Monitoring, VTE-5: VTE Warfarin Therapy Discharge Instructions and VTE-6: Incidence of Potentially-Preventable VTE) that are used in The Joint Commission's accreditation process.
#0372: Intensive Care Unit Venous Thromboembolism Prophylaxis	This measure assesses the number of patients who received venous thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after the initial admission (or transfer) to the Intensive Care Unit (ICU) or surgery end date for surgeries that start the day of or the day after ICU admission (or transfer). This measure is part of a set of six prevention and treatment measures that address VTE (VTE-1: VTE Prophylaxis, VTE-3: VTE Patients with Anticoagulation Overlap Therapy, VTE-4: VTE Patients Receiving UFH with Dosages/Platelet Count Monitoring by Protocol, VTE-5: VTE Warfarin Therapy Discharge Instructions and VTE-6: VTE Incidence of Potentially-Preventable VTE).
#0373: Venous Thromboembolism Patients with Anticoagulant Overlap Therapy	This measure assesses the number of patients diagnosed with confirmed VTE who received an overlap of Parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation and warfarin therapy. For patients who received less than five days of overlap therapy, they should be discharged on both medications and have a Reason for Discontinuation of Overlap Therapy. Overlap therapy should be administered for at least five days with an international normalized ratio (INR) greater than or equal to 2 prior to discontinuation of the parenteral anticoagulation therapy, or INR less than 2 but discharged on both medications or have a Reason for Discontinuation of Overlap Therapy. This measure is part of a set of six prevention and treatment measures that address VTE (VTE-1: VTE Prophylaxis, VTE-2: ICU VTE Prophylaxis, VTE-4: VTE Patients Receiving UFH with Dosages/Platelet Count Monitoring, VTE-5: VTE Warfarin Therapy Discharge Instructions and VTE-6: Incidence of Potentially-Preventable VTE).
#0374: Venous Thromboembolism Patients Recieving Unfractionated Heparin with Dosages/Platelet Count Monitoring by Protocol or Nomogram	This measure assesses the number of patients diagnosed with confirmed venous thromboembolism (VTE) who received intravenous (IV) unfractionated heparin (UFH) therapy dosages AND had their platelet counts monitored using defined parameters such as a nomogram or protocol. This measure is part of a set of six prevention and treatment measures that address VTE (VTE-1: VTE Prophylaxis, VTE-2: ICU VTE Prophylaxis, VTE-3: VTE Patients with Anticoagulation Overlap Therapy, VTE-5: VTE Warfarin Therapy Discharge Instructions and VTE-6: Incidence of Potentially-Preventable VTE).

Measure Number and Title	Description
#0375: Venous Thrmoboembolism Warfarin Therapy Discharge Instructions	This measure assesses the number of patients diagnosed with confirmed VTE that are discharged on warfarin to home, home with home health or home hospice with written discharge instructions that address all four criteria: compliance issues, dietary advice, follow-up monitoring, and information about the potential for adverse drug reactions/interactions. This measure is part of a set of six prevention and treatment measures that address VTE (VTE-1: VTE Prophylaxis, VTE-2: ICU VTE Prophylaxis, VTE-3: VTE Patients with Anticoagulation Overlap Therapy, VTE-4: VTE Patients Receiving UFH with Dosages/Platelet Count Monitoring by Protocol and VTE-6: Incidence of Potentially-Preventable VTE).
#0376: Incidence of Potentially Preventable Venous Thromboembolism	This measure assesses the number of patients with confirmed venous thromboembolism (VTE) during hospitalization (not present at admission) who did not receive VTE prophylaxis between hospital admission and the day before the VTE diagnostic testing order date. This measure is part of a set of six prevention and treatment measures that address VTE (VTE-1: VTE Prophylaxis, VTE-2: ICU VTE Prophylaxis, VTE-3: VTE Patients with Anticoagulation Overlap Therapy, VTE-4: VTE Patients Receiving UFH with Dosages/Platelet Count Monitoring by Protocol, and VTE-5: VTE Warfarin Therapy Discharge Instructions).
#0382: Oncology: Radiation Dose Limits to Normal Tissues	Percentage of patients with a diagnosis of cancer receiving 3D conformal radiation therapy with documentation in medical record that normal tissue dose constraints were established within five treatment days for a minimum of one tissue
#0389: Prostate Cancer: Avoidance of Overuse Measure – Isotope Bone Scan for Staging Low-Risk Patients	Percentage of patients with a diagnosis of prostate cancer, at low risk of recurrence, receiving interstitial prostate brachytherapy, OR external beam radiotherapy to the prostate, OR radical prostatectomy, OR cryotherapy who did not have a bone scan performed at any time since diagnosis of prostate cancer
#0419: Documentation of Current Medications in the Medical Record	Percentage of patients aged 18 years and older with a list of current medications (includes prescription, over-the-counter, herbals, vitamin/mineral/dietary [nutritional] supplements) documented by the provider, including drug name, dosage, frequency and route
#0450: Postoperative Pulmonary Embolism or Deep Vein Thrombosis Rate (PSI 12)	Percent of discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM codes for deep vein thrombosis or pulmonary embolism in any secondary diagnosis field.
#0464: Anesthesiology and Critical Care: Prevention of Catheter-Related Bloodstream Infections (CRBSI) – Central Venous Catheter (CVC) Insertion Protocol	Percentage of patients who undergo CVC insertion for whom CVC was inserted with all elements of maximal sterile barrier technique (cap AND mask AND sterile gown AND sterile gloves AND a large sterile sheet AND hand hygiene AND 2% chlorhexidine for cutaneous antisepsis) followed

Measure Number and Title	Description
#0478: Nosocomial Blood Stream Infections in Neonates (NQI #3)	Percentage of qualifying neonates with selected bacterial blood stream infections
#0500: Severe Sepsis and Septic Shock: Management Bundle	Initial steps in the management of the patient presenting with infection (severe sepsis or septic shock)
#0501: Confirmation of Endotracheal Tube Placement	Any time an endotracheal tube is placed into an airway in the Emergency Department or an endotraceal tube is placed by an outside provider and that patient arrives already intubated (EMS or hospital transfer) or when an airway is placed after patients arrives to the ED there should be some method attempted to confirm ETT placement
#0503: Anticoagulation for acute pulmonary embolus patients	Number of acute embolus patients who have orders for anticoagulation (heparin or low-molecular weight heparin) for pulmonary embolus while in the ED.
#0504: Pediatric Weight Documented in Kilograms	Percent of emergency department patients < 18 years of age with a current weight in kilograms documented in the ED record
#505: Thirty-day all-cause risk standardized readmission rate following acute myocardial infarction (AMI) hospitalization.	Hospital-specific 30-day all-cause risk standardized readmission rate following hospitalization for AMI among Medicare beneficiaries aged 65 years or older at the time of index hospitalization.
#506: Thirty-day all-cause risk standardized readmission rate following pneumonia hospitalization.	Hospital-specific 30-day all-cause risk standardized readmission rate following hospitalization for pneumonia among Medicare beneficiaries aged 65 years or older at the time of index hospitalization
#0510: Exposure time reported for procedures using fluoroscopy	Percentage of final reports for procedures using fluoroscopy that include documentation of radiation exposure or exposure time
#0515: Ambulatory surgery patients with appropriate method of hair removal	Percentage of ASC admissions with appropriate surgical site hair removal.
#0520: Drug Education on All Medications Provided to Patient/Caregiver During Episode	Percent of patients or caregivers who were instructed during their episode of home health care on how to monitor the effectiveness of drug therapy, how to recognize potential adverse effects, and how and when to report problems
#0523: Pain Assessment Conducted	Percentage of home health episodes of care in which the patient was assessed for pain, using a standardized pain assessment tool, at start/resumption of care.
#0524: Pain Interventions Implemented During Short Term Episodes Of Care	Percentage of short term home health episodes of care during which pain interventions were included in the physician-ordered plan of care and implemented.
#0526: Timely Initiation of Care	Percent of patients with timely start or resumption of home health care
#0530: Mortality for Selected Conditions	A composite measure of in-hospital mortality indicators for selected conditions.

Measure Number and Title	Description
#0531: Patient Safety for Selected Indicators	A composite measure of potentially preventable adverse events for selected indicators
#0532: Pediatric Patient Safety for Selected Indicators	A composite measure of potentially preventable adverse events for selected pediatric indicators
#0537: Multifactor Fall Risk Assessment Conducted in Patients 65 and Older	Percentage of home health episodes of care in which patients 65 and older had a multi-factor fall risk assessment at start/resumption of care.
#0538: Pressure Ulcer Prevention Included in Plan of Care	Percentage of home health episodes of care in which the physician-ordered plan of care includes interventions to prevent pressure ulcers.
#0539: Pressure Ulcer Prevention Implemented during Short Term Episodes of Care	Percentage of short term home health episodes of care during which interventions to prevent pressure ulcers were included in the physician-ordered plan of care and implemented.
#0540: Pressure Ulcer Risk Assessment Conducted	Percentage of home health episodes of care in which the patient was assessed for risk of developing pressure ulcers at start/resumption of care.
#0541: Proportion of Days Covered (PDC): 5 Rates by Therapeutic Category	The percentage of patients 18 years and older who met the proportion of days covered (PDC) threshold of 80% during the measurement year. A performance rate is calculated seperately for the following medication categories: Beta-Blockers (BB), Angiotensin-Converting Enzyme Inhibitor/Angiotensin-Receptor Blocker (ACEI/ARB), Calcium-Channel Blockers (CCB), Diabetes Medication, Statins. The full detailed measure specifications have also been submitted as a separate attachment.
#0542: Adherence to Chronic Medications	Medication Possession Ratio (MPR) for chronic medications for individuals over 18 years of age
#0553: Care for Older Adults – Medication Review (COA)	Percentage of adults 65 years and older who had a medication review
#0554: Medication Reconciliation Post-Discharge (MRP)	Percentage of discharges from January 1 to December 1 of the measurement year for patients 65 years of age and older for whom medications were reconciled on or within 30 days of discharge.
#0555: Monthly INR Monitoring for Beneficiaries on Warfarin	Average percentage of monthly intervals in which Part D beneficiaries with claims for warfarin do not receive an INR test during the measurement period
#0556: INR for Beneficiaries Taking Warfarin and Interacting Anti-Infective Medications	Percentage of episodes with an INR test performed 3 to 7 days after a newly-started interacting anti-infective medication for Part D beneficiaries receiving warfarin

Measure Number and Title	Description
#0564: Complications within 30 Days Following Cataract Surgery Requiring Additional Surgical Procedures	Percentage of patients aged 18 years and older with a diagnosis of uncomplicated cataract who had cataract surgery and had any of a specified list of surgical procedures in the 30 days following cataract surgery which would indicate the occurrence of any of the following major complications: retained nuclear fragments, endophthalmitis, dislocated or wrong power IOL, retinal detachment, or wound dehiscence.
#0581: Deep Vein Thrombosis Anticoagulation >= 3 Months	This measure identifies patients with deep vein thrombosis (DVT) on anticoagulation for at least 3 months after the diagnosis
#0582: Diabetes and Pregnancy: Avoidance of Oral Hypoglycemic Agents	This measure identifies pregnant women with diabetes who are not taking an oral hypoglycemic agent.
#0586: Warfarin_PT/ INR Test	This measure identifies the percentage of patients taking warfarin during the measurement year who had at least one PT/INR test within 30 days after the first warfarin prescription in the measurement year
#0593: Pulmonary Embolism Anticoagulation >= 3 Months	This measure identifies patients with pulmonary embolism (PE) on anticoagulation for at least 3 months after the diagnosis.
#0612: Warfarin - INR Monitoring	Percentage of patients taking warfarin with PT/INR monitoring
#0646: Reconciled Medication List Received by Discharged Patients (Inpatient Discharges to Home/Self Care or Any Other Site of Care)	Percentage of patients, regardless of age, discharged from an inpatient facility to home or any other site of care, or their caregiver(s), who received a reconciled medication list at the time of discharge including, at a minimum, medications in the specified categories
#0655: Otitis Media with Effusion: Antihistamines or decongestants – Avoidance of inappropriate use	Percentage of patients aged 2 months through 12 years with a diagnosis of OME were not prescribed or recommended to receive either antihistamines or decongestants
#0656: Otitis Media with Effusion: Systemic corticosteroids – Avoidance of inappropriate use	Percentage of patients aged 2 months through 12 years with a diagnosis of OME who were not prescribed systemic corticosteroids
#0657: Otitis Media with Effusion: Systemic antimicrobials – Avoidance of inappropriate use	Percentage of patients aged 2 months through 12 years with a diagnosis of OME who were not prescribed systemic antimicrobials

Measure Number and Title	Description
#0667: Pulmonary CT Imaging for Patients at Low Risk for Pulmonary Embolism	Percent of patients undergoing CT pulmonary angiogram for the evaluation of possible PE who are at low-risk for PE consistent with guidelines(1) prior to CT imaging. (1) Torbicki A, Perrier A, Konstantinides S, et al. Guidelines on the diagnosis and management of acute pulmonary embolism: the Task Force for the Diagnosis and Management of Acute Pulmonary Embolism of the European Society of Cardiology (ESC). Eur Heart J. 2008 Sep;29(18):2276-315
#0674: Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay)	This measure is based on data from all non-admission MDS 3.0 assessments of long-stay nursing facility residents which may be annual, quarterly, significant change, significant correction, or discharge assessment. It reports the percent of residents who experienced one or more falls with major injury (e.g., bone fractures, joint dislocations, closed head injuries with altered consciousness, and subdural hematoma) in the last year (12-month period). The measure is based on MDS 3.0 item J1900C, which indicates whether any falls that occurred were associated with major injury.
#0675: The Percentage of Residents on a Scheduled Pain Medication Regimen on Admission Who Self-Report a Decrease in Pain Intensity or Frequency (Short-stay)	This measure is based on data from the MDS 3.0 assessment of short-stay nursing facility residents and reports the percentage of those short-stay residents who can self-report and who are on a scheduled pain medication regimen at admission (5-day PPS MDS assessment) and who report lower levels of pain on their discharge MDS 3.0 assessment or their 14-day PPS MDS assessment (whichever comes first) when compared with the 5-day PPS MDS assessment.
#0676: Percent of Residents Who Self-Report Moderate to Severe Pain (Short-Stay)	This measure updates CMS' current QM on pain severity for short-stay residents (people who are discharged within 100 days of admission). This updated measure is based on data from the Minimum Data Set (MDS 3.0) 14-day PPS assessments. This measure reports the percentage of short-stay residents with a 14-day PPS assessment during a selected quarter (3 months) who have reported almost constant or frequent pain and at least one episode of moderate to severe pain, or any severe or horrible pain, in the 5 days prior to the 14-day PPS assessment.
#0677: Percent of Residents Who Self-Report Moderate to Severe Pain (Long-Stay)	The proposed long-stay pain measure reports the percent of long-stay residents of all ages in a nursing facility who reported almost constant or frequent pain and at least one episode of moderate to severe pain or any severe or horrible pain in the 5 days prior to the MDS assessment (which may be an annual, quarterly, significant change or significant correction MDS) during the selected quarter. Long-stay residents are those who have had at least 100 days of nursing facility care. This measure is restricted to the long stay population because a separate measure has been submitted for the short-stay residents (those who are discharged within 100 days of admission).

Measure Number and Title	Description
#0678: Percent of Residents with Pressure Ulcers That Are New or Worsened (Short-Stay)	This measure updates CMS' current QM pressure ulcer measure which currently includes Stage 1 ulcers. The measure is based on data from the MDS 3.0 assessment of short-stay nursing facility residents and reports the percentage of residents who have Stage 2-4 pressure ulcers that are new or have worsened. The measure is calculated by comparing the Stage 2-4 pressure ulcer items on the discharge assessment and the previous MDS assessment (which may be an OBRA admission or 5-day PPS assessment). The quality measure is restricted to the short-stay population defined as those who are discharged within 100 days of admission. The quality measure does not include the long-stay residents who have been in the nursing facility for longer than 100 days. A separate measure has been submitted for them.
#0679: Percent of High Risk Residents with Pressure Ulcers (Long Stay)	CMS currently has this measure in their QMs but it is based on data from MDS 2.0 assessments and it includes Stage 1 ulcers. This proposed measure will be based on data from MDS 3.0 assessments of long-stay nursing facility residents and will exclude Stage 1 ulcers from the definition. The measure reports the percentage of all long-stay residents in a nursing facility with an annual, quarterly, significant change or significant correction MDS assessment during the selected quarter (3-month period) who were identified as high risk and who have one or more Stage 2-4 pressure ulcer(s). High risk populations are those who are comatose, or impaired in bed mobility or transfer, or suffering from malnutrition. Long-stay residents are those who have been in nursing facility care for more than 100 days. This measure is restricted to the population that has long-term needs; a separate pressure ulcer measure is being submitted for short-stay populations. These are defined as having a stay that ends with a discharge within the first 100 days.
#0687: Percent of Residents Who Were Physically Restrained (Long Stay)	The measure is based on data from the MDS 3.0 assessment of long-stay nursing facility residents and reports the percentage of all long-stay residents who were physically restrained. The measure reports the percentage of all long-stay residents in nursing facilities with an annual, quarterly, significant change, or significant correction MDS 3.0 assessment during the selected quarter (3-month period) who were physically restrained daily during the 7 days prior to the MDS assessment (which may be annual, quarterly, significant change, or significant correction MDS 3.0 assessment).

Measure Number and Title	Description
#0689: Percent of Residents Who Lose Too Much Weight (Long-Stay)	This measure updates CMS' current QM on patients who lose too much weight. This measure captures the percentage of long-stay residents who had a weight loss of 5% or more in the last month or 10% or more in the last 6 months who were not on a physician-prescribed weight-loss regimen noted on an MDS assessment (which may be an annual, quarterly, significant change or significant correction MDS assessment) during the selected quarter (3-month period). In order to address seasonal variation, the proposed measure uses a two-quarter average for the facility. Long-stay residents are those who have been in nursing care at least 100 days. The measure is restricted to this population, which has long-term care needs, rather than the short-stay population who are discharged within 100 days of admission.
#0695: Hospital 30-Day Risk-Standardized Readmission Rates following Percutaneous Coronary Intervention (PCI)	This measure estimates hospital risk-standardized 30-day readmission rates following PCI in patients at least 65 years of age. As PCI patients may be readmitted electively for staged revascularization procedures, we will exclude such elective readmissions from the measure. The measure uses clinical data available in the National Cardiovascular Disease Registry (NCDR) CathPCI Registry for risk adjustment that has been linked with the administrative claims data used to identify readmissions.

Measure Number and Title	Description
#0704: Proportion of Patients Hospitalized with AMI that have a Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period)	Percent of adult population aged 18 – 65 years who were admitted to a hospital with acute myocardial infarction (AMI), were followed for one-month after discharge, and had one or more potentially avoidable complications (PACs). PACs may occur during the index stay or during the 30-day post discharge period (Please reference attached document labeled NQF_AMI_PACs_Risk_Adjustment_2.16.10.xls, tabs labeled CIP_Index PAC_Stays and CIP_PAC_Readmission). We define PACs during each time period as one of three types: (A) PACs during the Index Stay (Hospitalization): (1) PACs related to the anchor condition: The index stay is regarded as having a PAC if during the index hospitalization the patient develops one or more complications such as cardiac arrest, ventricular fibrillation, cardiogenic shock, stroke, coma, acute post-hemorrhagic anemia etc. that may result directly due to AMI or its management. (2) PACs due to Comorbidities: The index stay is also regarded as having a PAC if one or more of the patient's controlled comorbid conditions is exacerbated during the hospitalization (i.e. it was not present on admission). Examples of these PACs are diabetic emergency with hypo- or hyperglycemia, tracheostomy, mechanical ventilation, pneumonia, lung complications gastritis, ulcer, GI hemorrhage etc. (3) PACs suggesting Patient Safety Failures: The index stay is regarded as having a PAC if there are one or more complications related to patient safety issues. Examples of these PACs are septicemia, meningitis, other infections, phlebitis, deep vein thrombosis, pulmonary embolism or any of the CMS-defined hospital acquired conditions (HACs). (B) PACs during the 30-day post discharge period: (1) PACs related to the anchor condition: Readmissions and emergency room visits during the 30-day post discharge period after an AMI are considered as PACs if they are for angina, chest pain, another AMI, stroke, coma, heart failure etc. (2) PACs due to Comorbidities: Readmissions and emergency room visits during the 30-day post discharge period are also considered PACs if they are due to an exacerbation of one or more of the patient's comorbid conditions, such as a diabetic emergency with hypo- or hyperglycemia, pneumonia, lung complications, tracheostomy, mechanical ventilation etc. (3) PACs suggesting Patient Safety Failures: Readmissions or emergency room visits during the 30-day post discharge period are considered PACs if they are due to sepsis, infections, phlebitis, deep vein thrombosis, or for any of the CMS-defined hospital acquired conditions (HACs). The enclosed workbook labeled NQF_AMI_PACs_Risk_Adjustment_2.16.10.xls, gives the frequency and costs associated with each of these types of PACs during the index hospitalization (tab labeled CIP_Index PAC_Stays) and for readmissions and emergency room visits during the 30-day post-discharge period (tab labeled CIP_PAC_Readmission). The information is based on a two-year national commercially insured population (CIP) claims database. The database had 4.7 million covered lives and $95 billion in "allowed amounts" for claims costs. The database was an administrative claims database with medical as well as pharmacy claims. The two tabs demonstrate the most common PACs that occurred in patients hospitalized with AMI.

Measure Number and Title	Description
#0705: Proportion of Patients Hospitalized with Pneumonia that have a Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period)	Percent of adult population aged 18 – 65 years who were admitted to a hospital with Pneumonia, were followed for one-month after discharge, and had one or more potentially avoidable complications (PACs). PACs may occur during the index stay or during the 30-day post discharge period (Please reference attached document labeled NQF Pneumonia PACs Risk Adjustment 2.16.10.xls, tabs labeled CIP_Index PAC_Stays and CIP_PAC_Readmission). We define PACs during each time period as one of three types: (A) PACs during the Index Stay (Hospitalization): (1) PACs related to the anchor condition: The index stay is regarded as having a PAC if during the index hospitalization the patient develops one or more of the avoidable complications that can result from pneumonia, such as respiratory failure, respiratory insufficiency, pneumothorax, pulmonary collapse, or requires respiratory intubation and mechanical ventilation, incision of pleura, thoracocentesis, chest drainage, tracheostomy etc. (2) PACs due to Comorbidities: The index stay is also regarded as having a PAC if one or more of the patient's controlled comorbid conditions is exacerbated during the hospitalization (i.e. it was not present on admission). Examples of these PACs are diabetic emergency with hypo- or hyperglycemia, stroke, coma, gastritis, ulcer, GI hemorrhage, acute renal failure etc. (3) PACs suggesting Patient Safety Failures: The index stay is regarded as having a PAC if there is one or more complication related to patient safety issues. Examples of these PACs are infections, sepsis, phlebitis, deep vein thrombosis, pulmonary embolism or any of the CMS-defined hospital acquired conditions (HACs). (B) PACs during the 30-day post discharge period: (1) PACs related to the anchor condition: Readmissions and emergency room visits during the 30-day post discharge period are considered PACs if they are for potentially avoidable complications of pneumonia such as respiratory failure, respiratory insufficiency, pneumonia, respiratory intubation, mechanical ventilation, etc. (2) PACs due to Comorbidities: Readmissions and emergency room visits during the 30-day post discharge period are also considered PACs if they are due to an exacerbation of one or more of the patient's comorbid conditions, such as a diabetic emergency with hypo- or hyperglycemia, stroke, coma, gastritis, ulcer, GI hemorrhage, acute renal failure etc. (3) PACs suggesting Patient Safety Failures: Readmissions or emergency room visits during the 30-day post discharge period are considered PACs if they are due to sepsis, infections, phlebitis, deep vein thrombosis, or for any of the CMS-defined hospital acquired conditions (HACs). The enclosed workbook labeled NQF Pneumonia PACs Risk Adjustment 2.16.10.xls, gives the frequency and costs associated with each of these types of PACs during the index hospitalization (tab labeled CIP_Index PAC_Stays) and for readmissions and emergency room visits during the 30-day post-discharge period (tab labeled CIP_PAC_Readmission). The information is based on a two-year national commercially insured population (CIP) claims database. The database had 4.7 million covered lives and $95 billion in "allowed amounts" for claims costs. The database was an administrative claims database with medical as well as pharmacy claims. The two tabs demonstrate the most common PACs that occurred in patients hospitalized with pneumonia.

Measure Number and Title	Description
#0709: Proportion of patients with a chronic condition that have a potentially avoidable complication during a calendar year.	Percent of adult population aged 18 – 65 years who were identified as having at least one of the following six chronic conditions: Diabetes Mellitus (DM), Congestive Heart Failure (CHF), Coronary Artery Disease (CAD), Hypertension (HTN), Chronic Obstructive Pulmonary Disease (COPD) or Asthma, were followed for one-year, and had one or more potentially avoidable complications (PACs). A Potentially Avoidable Complication is any event that negatively impacts the patient and is potentially controllable by the physicians and hospitals that manage and co-manage the patient. Generally, any hospitalization related to the patient's core chronic condition or any co-morbidity is considered a potentially avoidable complication, unless that hospitalization is considered to be a typical service for a patient with that condition. Additional PACs that can occur during the calendar year include those related to emergency room visits, as well as other professional or ancillary services tied to a potentially avoidable complication. (Please reference attached document labeled NQF_Chronic_Care_PACs_Risk_Adjustment_2.9.10.xls). We define PAC hospitalizations and PAC professional and other services as one of three types: (A) PAC-related Hospitalizations: (1) Hospitalizations related to the anchor condition: Hospitalizations due to acute exacerbations of the anchor condition are considered PACs. For example, a hospitalization for a diabetic emergency in a diabetic patient, or a hospitalization for an acute pulmonary edema in a CHF patient. Note that for patients with CAD, many hospitalizations are part of typical care and not considered PACs. (2) Hospitalizations due to Comorbidities: Hospitalizations due to any of the patient's comorbid conditions are considered PACs. For example, a diabetic emergency or pneumonia hospitalization for a patient with heart failure. Note that hospitalizations for a major surgical procedure (such as joint replacement, CABG, etc.) are not counted as PACs. (3) Hospitalizations suggesting Patient Safety Failures: Hospitalizations for major infections, deep vein thrombosis, adverse drug events, and other patient safety-related events are considered PACs. (B) Other PACs during the calendar year studied: (1) PACs related to the anchor condition: Emergency room visits, professional and ancillary services related to the anchor condition are considered PACs if they are due to an acute exacerbation of the anchor condition such as acute exacerbation of COPD in patients with lung disease, or acute heart failure in patients with CHF. (2) PACs due to Comorbidities: Emergency room visits, professional and ancillary services are considered PACs if they are due to an exacerbation of one or more of the patient's comorbid conditions, such as an acute exacerbation of COPD or acute heart failure in patients with diabetes. (3) PACs suggesting Patient Safety Failures: Emergency room visits, professional and ancillary services for major infections, deep vein thrombosis, adverse drug events, and other patient safety-related events are considered PACs. The summary tab in the enclosed workbook labeled NQF_Chronic_Care_PACs_Risk_Adjustment_2.9.10.xls gives the overview of the frequency and costs associated with each of these types of PACs for each of the six chronic conditions. Detailed drill-down tabs (e.g. DM IP Stay and DM Prof + OP fac) are also provided in the same workbook for each of the six chronic conditions to highlight high-frequency PACs. The information is based on a two-year, national, commercially insured population (CIP), claims database. The database had 4.7 million covered lives and

Measure Number and Title	Description
	$95 billion in “allowed amounts” for claims costs. The database was an administrative claims database with medical as well as pharmacy claims. It is important to note that while the overall frequency of PAC hospitalizations are low (for all chronic care conditions summed together, PAC frequency was 6.32% of all PAC occurrences), they amount to over 58% of the PAC medical costs.

Measure Number and Title	Description
#0715: Standardized adverse event ratio for children and adults undergoing cardiac catheterization for congenital heart disease	Ratio of observed to expected clinically important preventable and possibly preventable adverse events, risk-adjusted
#0739: Radiation Dose of Computed Tomography (CT)	The measure has two components. Part A is an outcome measure; Part B is a process measure. Both would work together towards improving quality and allowing hospitals and imaging facilities to conduct ongoing quality improvement. Part A: radiation dose associated with computed tomography (CT) examinations of the head, neck, chest, abdomen/pelvis and lumbar spine, obtained in children and adults. Part B: The proportion of CT examinations where a measure of dose is included in the final medical report
#0740: Participation in a Systematic National Dose Index Registry	Participation in a multi-center, standardized data collection and feedback program that will establish national dose index benchmarks for designated examinations. The registry will eventually provide a comparison of practice or facility dose indices such as CTDIvol and DLP for specified examinations relative to national and regional benchmarks. Data is captured electronically from the images of CT examinations using Digital Imaging and Communications in Medicine (DICOM) standards and the Integrating the Healthcare Enterprise (IHE) Radiation Exposure Monitoring (REM) profile.
#0751: Risk Adjusted Urinary Tract Infection Outcome Measure After Surgery	Risk adjusted, case mix adjusted urinary tract infection outcome measure of adults 18+ years after surgical procedure.

Measure Number and Title	Description
#0752: National Healthcare Safety Network (NHSN) Catheter-associated Urinary Tract Infection (CAUTI) Outcome Measure	Standardized Infection Ratio (SIR) of healthcare-associated, catheter-associated urinary tract infections (CAUTI) will be calculated among patients in the following patient care locations: • Intensive Care Units (ICUs) (excluding patients in neonatal ICUs [NICUs: Level II/III and Level III nurseries]) • Specialty Care Areas (SCAs) - adult and pediatric: long term acute care, bone marrow transplant, acute dialysis, hematology/oncology, and solid organ transplant locations • other inpatient locations (excluding Level I and Level II nurseries). Data from these locations are reported from acute care general hospitals (including specialty hospitals), freestanding long term acute care hospitals, rehabilitation hospitals, and behavioral health hospitals. Only locations where patients reside overnight are included, i.e., inpatient locations. De.3. If included in a composite, please identify the composite measure (title and NQF number if endorsed).
#0753: American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure	Prototype measure for the facility adjusted Standardized Infection Ratio (SIR) of deep incisional and organ/space Surgical Site Infections (SSI) at the primary incision site among adult patients aged >= 18 years as reported through the ACS National Surgical Quality Improvement Program (ACS-NSQIP) or CDC National Health and Safety Network (NHSN). Prototype also includes a systematic, retrospective sampling of operative procedures in healthcare facilities. This prototype measure is intended for time-limited use and is proposed as a first step toward a more comprehensive SSI measure or set of SSI measures that include additional surgical procedure categories and expanded SSI risk-adjustment by procedure type. This single prototype measure is applied to two operative procedures, colon surgeries and abdominal hysterectomies, and the measure yields separate SIRs for each procedure.
#0754: National Healthcare Safety Network (NHSN) Central line-associated Bloodstream Infection (CLABSI) Outcome Measure	Standardized Infection Ratio (SIR) of healthcare-associated, central line-associated bloodstream infections (CLABSI) will be calculated among patients in the following patient care locations: • Intensive Care Units (ICUs) • Specialty Care Areas (SCAs) - adult and pediatric: long term acute care, bone marrow transplant, acute dialysis, hematology/oncology, and solid organ transplant locations • other inpatient locations. (Data from these locations are reported from acute care general hospitals (including specialty hospitals), freestanding long term acute care hospitals, rehabilitation hospitals, and behavioral health hospitals. Only locations where patients reside overnight are included, i.e., inpatient locations.