

NATIONAL QUALITY FORUM

Measure Evaluation 4.1 December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the [evaluation criteria](#) are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized): Complete all **yellow highlighted** areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: If there is no TAP or workgroup, the SC also evaluates the subcriteria (**yellow highlighted areas**).

Steering Committee: Complete all **pink** highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met

C = Completely (unquestionably demonstrated to meet the criterion)

P = Partially (demonstrated to partially meet the criterion)

M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)

N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)

NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) NQF Review #: 0368	NQF Project: Surgery Endorsement Maintenance 2010
MEASURE DESCRIPTIVE INFORMATION	
De.1 Measure Title: Post operative Wound Dehiscence (PSI 14)	
De.2 Brief description of measure: Percentage of abdominopelvic surgery cases with reclosure of postoperative disruption of abdominal wall. Cases of reclosure of postoperative disruption of abdominal wall per 1,000 cases of abdominopelvic surgery. Excludes obstetric admissions.	
1.1-2 Type of Measure: Outcome	
De.3 If included in a composite or paired with another measure, please identify composite or paired measure Patient Safety for Selected Indicators composite (NQF #0531)	
De.4 National Priority Partners Priority Area: Population health, Safety	
De.5 IOM Quality Domain: Effectiveness	
De.6 Consumer Care Need: Getting better	

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	NQF Staff
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. <i>Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.</i> A.1 Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)? Yes A.2 Indicate if Proprietary Measure (as defined in measure steward agreement): A.3 Measure Steward Agreement: Government entity and in the public domain - no agreement necessary A.4 Measure Steward Agreement attached:	A Y <input checked="" type="radio"/> N <input type="radio"/>

B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	B Y● N●
C. The intended use of the measure includes <u>both</u> public reporting <u>and</u> quality improvement. ► Actual/Planned Use: Public Reporting, Quality Improvement (external benchmarking to organizations), Quality Improvement (Internal to the specific organization)	C Y● N●
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1 Testing: Yes, fully developed and tested D.2 Have NQF-endorsed measures been reviewed to identify if there are similar or related measures? Yes	D Y● N●
(for NQF staff use) Have all conditions for consideration been met? Staff Notes to Steward (if submission returned):	Met Y● N●
Staff Notes to Reviewers (issues or questions regarding any criteria):	
Staff Reviewer Name(s):	

Comment [KP]: 1a. The measure focus addresses:

- a specific national health goal/priority identified by NQF's National Priorities Partners; OR
- healthcare (e.g., affects large numbers, leading cause of morbidity/mortality, high resource use (current and/or future), severity of illness, and patient/societal consequences of poor quality).

Comment [KP]: 1b. Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating considerable variation, or overall poor performance, in the quality of care across providers and/or population groups (disparities in care).

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria. (evaluation criteria) (1a. High Impact)	Eval Rating
(for NQF staff use) Specific NPP goal:	
1a.1 Demonstrated High Impact Aspect of Healthcare: Patient/societal consequences of poor quality 1a.2 1a.3 Summary of Evidence of High Impact: Based on two-stage review of randomly selected deaths, Hannan et al. reported that cases with a secondary diagnosis of wound disruption were 3.0 times more likely to have received care that departed from professionally recognized standards than cases without that code (4.3% versus 1.7%), after adjusting for patient demographic, geographic, and hospital characteristics. [1] 1a.4 Citations for Evidence of High Impact: Updated citations will be presented in the May Steering Committee meeting [1] Hannan EL, Bernard HR, O'Donnell JF, Kilburn H, Jr. A methodology for targeting hospital cases for quality of care record reviews. Am J Public Health 1989;79(4):430-6.	1a C● P● M● N●
(1b. Opportunity for Improvement)	1b
1b.1 Benefits (improvements in quality) envisioned by use of this measure: Postoperative wound dehiscence can be easily and accurately measured using administrative data. Moreover, these cases often represent a significant deviation from normal standards of care. Identifying them can represent both a	C● P● M● N●

useful metric for measuring quality as well quality improvement.

1b.2 Summary of (data demonstrating performance gap) (variation or overall poor performance) across providers:

Adjusted per 1,000 rates by patient/hospital characteristics, 2007

Estimate	Standard error	Age: for conditions affecting any age
1.571	0.048	18-44
2.344	0.058	45-64
4.143	0.093	65 and over

Estimate	Standard error	Age: for conditions affecting elderly
3.314	0.164	65-69
4.416	0.187	70-74
5.044	0.213	75-79
4.107	0.249	80-84
3.903	0.264	85 and over

Estimate	Standard error	Gender
4.842	0.092	Male
1.539	0.037	Female

Estimate	Standard error	Median income of patient's ZIP code
2.784	0.073	First quartile (lowest income)
2.658	0.073	Second quartile
2.086	0.075	Third quartile
2.393	0.077	Fourth quartile (highest income)

Estimate	Standard error	Location of patient residence (NCHS)
2.371	0.072	Large central metropolitan
2.461	0.076	Large fringe metropolitan
2.691	0.083	Medium metropolitan
2.461	0.117	Small metropolitan
2.410	0.109	Micropolitan
2.612	0.137	Not metropolitan or micropolitan

Estimate	Standard error	Expected payment source
2.236	0.065	Private insurance
2.396	0.051	Medicare
4.096	0.153	Medicaid
3.011	0.216	Other insurance
3.054	0.188	Uninsured / self-pay / no charge

Estimate	Standard error	Hospital Ownership/control
2.509	0.043	Private, not-for-profit
2.180	0.108	Private, for-profit
2.643	0.101	Public

Estimate	Standard error	Teaching status
2.707	0.062	Teaching
2.364	0.047	Nonteaching

Estimate	Standard error	Location of hospital
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Comment [k]: 1 Examples of data on opportunity for improvement include, but are not limited to: prior studies, epidemiologic data, measure data from pilot testing or implementation. If data are not available, the measure focus is systematically assessed (e.g., expert panel rating) and judged to be a quality problem.

2.335	0.062	Large central metropolitan
2.493	0.088	Large fringe metropolitan
2.699	0.080	Medium metropolitan
2.457	0.107	Small metropolitan
2.478	0.121	Micropolitan
3.115	0.253	Not metropolitan or micropolitan

Estimate	Standard error	Bed size of hospital
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2.692	0.125	Less than 100
2.276	0.060	100 - 299
2.682	0.066	300 - 499
2.497	0.081	500 or more

1b.3 Citations for data on performance gap:

See the following report for a complete treatment of the methodology: "Methods: Applying AHRQ Quality Indicators to Healthcare Cost and Utilization Project (HCUP) Data for the National Healthcare Quality Report" [URL: <http://hcupnet.ahrq.gov/QI%20Methods.pdf?JS=Y>]

1b.4 Summary of Data on disparities by population group:

After adjusting for age, gender, race, diabetes, CVD, and cancer, compared with those without CKD, hospitalized patients with CKD were showed no difference in postoperative wound dehiscence (aRR = 1.12, 95% CI = 0.74 to 1.70, 0.600). [1]

Retrospective analysis of a nationally representative dataset using Nationwide Inpatient Sample (representative 20% sample from 37 states) for 5 years (2000 through 2004). Outcome = occurrence of at least one of the applicable PSIs on multiple logistic regression analysis, with confirmation by sensitivity analysis. [2]

Patients age 65 and older experienced significantly higher rates than younger patients for postoperative wound dehiscence. [3]

1b.5 Citations for data on Disparities:

Data for patients hospitalized in the Veteran's Health Administration during 2004 to 2005 was analyzed to conduct a cross-sectional study of Chronic Kidney Disease (CKD) and adverse safety events. We identified 315,213 Veterans Health Administration (VHA) patients with at least one acute hospitalization within the study period, CKD was present among 29% (n = 71,666) of the study population, and these patients were older; slightly less likely to be black; and more likely to have diabetes, cardiovascular disease (CVD), cancer, and length of stay (LOS) >3 d than those without CKD. [1]

A total of 1.35 million trauma patients were identified, with 19,338 patients (1.43%) experiencing at least one of the applicable PSIs. On multivariate analysis, controlling for injury severity and disease comorbidity, the adjusted odds ratios (ORs) for occurrence of at least 1 applicable PSI were noted to increase for patients who are 1) above age 35, 2) male gender (OR 1.25, 95% CI 1.19-1.31), and 3) black (OR 1.20 vs. whites, 95% CI 1.10-1.30) but not for any other racial groups. These results did not change significantly on sensitivity analysis. Patients who are above age 35, male gender, and black are associated with increased likelihood of experiencing a patient safety event in trauma care. When all else is equal, black patients are approximately 20% more likely than any other racial groups to experience a patient safety event, even after controlling for injury severity and disease comorbidity. [2]

HCUPnet generated statistics using data from the 2004 Nationwide Inpatient Sample (NIS), which contains all payer data on hospital inpatient stays from states participating in HCUP and is designed to approximate a 20% sample of U.S. community hospitals. As testimony to its size, the 2004 NIS contains data on approximately 8 million inpatient hospital discharge records. Statistical methods not specified. [3]

References

[1] Seliger Stephen L; Zhan Min; Hsu Van Doren; Walker Lori D; Fink Jeffrey C. Chronic kidney disease adversely influences patient safety. J Am Soc Nephrol. 2008 December; 19(12): 2414-2419. doi: 10.1681/ASN.2008010022.
 [2] Chang DC, Handly N, Abdullah F, Efron DT, Haut ER, Haider AH, Pronovost PJ, Cornwell EE. The occurrence of potential patient safety events among trauma patients: are they random? Ann Surg. 2008 Feb;247(2):327-34. PMID: 18216541
 [3] Thornlow DK. Increased risk for patient safety incidents in hospitalized older adults. MedSurg Nursing, 18, 5, 287(5)

1c. Outcome or Evidence to Support Measure Focus

1c.1 Relationship to Outcomes (For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population): Based on two-stage review of randomly selected deaths, Hannan et al. reported that cases with a secondary diagnosis of wound disruption were 3.0 times more likely to have received care that departed from professionally recognized standards than cases without that code (4.3% versus 1.7%), after adjusting for patient demographic, geographic, and hospital characteristics. [1]

References:

[1] Hannan EL, Bernard HR, O'Donnell JF, Kilburn H, Jr. A methodology for targeting hospital cases for quality of care record reviews. Am J Public Health 1989;79(4):430-6.

1c.2-3. Type of Evidence: Expert opinion, Systematic synthesis of research

1c.4 Summary of Evidence (as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome):

Based on two-stage review of randomly selected deaths, Hannan et al. reported that cases with a secondary diagnosis of wound disruption were 3.0 times more likely to have received care that departed from professionally recognized standards than cases without that code (4.3% versus 1.7%), after adjusting for patient demographic, geographic, and hospital characteristics. [1]

References:

[1] Hannan EL, Bernard HR, O'Donnell JF, Kilburn H, Jr. A methodology for targeting hospital cases for quality of care record reviews. Am J Public Health 1989;79(4):430-6.

1c.5 Rating of strength/quality of evidence (also provide narrative description of the rating and by whom):

Not Applicable.

Testing, rating, and review were conducted by the project team. A full report on the literature review and empirical evaluation can be found in Refinement of the HCUP Quality Indicators by the UCSF-Stanford EPC. Detailed coding information for each QI is provided in the document Prevention Quality Indicators Technical Specifications. Rating of performance on empirical evaluations, ranged from 0 to 26. The scores were intended as a guide for summarizing the performance of each indicator on four empirical tests of precision (signal variance, area-level share, signal ratio, and R-squared) and five tests of minimum bias (rank correlation, top and bottom decile movement, absolute change, and change over two deciles), as described in the previous section.

1c.6 Method for rating evidence: The project team conducted empirical analyses to explore the frequency and variation of the indicators, the potential bias, based on limited risk adjustment, and the relationship between indicators. The data sources used in the empirical analyses were the 1997 Florida State Inpatient Database (SID) for initial testing and development and the 1997 HCUP State Inpatient Database for 19 States (referred to in this guide as the HCUP SID) for the final empirical analyses.

All potential indicators were examined empirically by developing and conducting statistical tests for precision, bias, and relatedness of indicators. Three different estimates of hospital performance were calculated for each indicator:

1. The raw indicator rate was calculated using the number of adverse events in the numerator divided by the number of discharges in the population at risk by hospital.
 2. The raw indicator was adjusted to account for differences among hospitals in age, gender, modified DRG, and comorbidities.
- Adjacent DRG categories that were separated by the presence or absence of comorbidities or

1c
CO
PO
MO
NO

Comment [k]: 1c. The measure focus is:

- an outcome (e.g., morbidity, mortality, function, health-related quality of life) that is relevant to, or associated with, a national health goal/priority, the condition, population, and/or care being addressed;

OR

- if an intermediate outcome, process, structure, etc., there is evidence that supports the specific measure focus as follows:
 - o **Intermediate outcome** - evidence that the measured intermediate outcome (e.g., blood pressure, HbA1c) leads to improved health/avoidance of harm or cost/benefit.
 - o **Process** - evidence that the measured clinical or administrative process leads to improved

Comment [k]: 4 Clinical care processes typically include multiple steps: assess → identify problem/potential problem → choose/plan intervention (with patient input) → provide intervention → evaluate impact on health status. If the measure focus is one step in such a multi-step process, the step with the greatest effect on the desired outcome should be selected as the focus of measurement. For example, although assessment of immunization status and recommending immunization are necessary steps, they are not sufficient to achieve the desired impact on health status - patients must be vaccinated to achieve immunity. This does not preclude consideration of measures of preventive screening interventions where there is a strong link with desired outcomes (e.g., mammography) or measures for multiple

Comment [k]: 3 The strength of the body of evidence for the specific measure focus should be systematically assessed and rated (e.g., USPSTF grading system <http://www.ahrq.gov/clinic/uspstf07/methods/benefit.htm>). If the USPSTF grading system was not used, the grading system is explained including how it relates to the USPSTF grades or why it does not. However, evidence is not limited to quantitative studies and the best type of evidence depends upon the question being studied (e.g., randomized controlled trials appropriate for studying drug efficacy are not well suited for complex system changes). When qualitative studies are used, appropriate qualitative research criteria are used to judge the strength of the evidence.

complications were collapsed to avoid adjusting for the complication being measured. Most of the super-Major Diagnostic Category (MDC) DRG categories were excluded for the same reason.

- APR-DRG risk adjustment was not implemented because removing applicable complications from each indicator was beyond the scope of this project.
 - The ICD-9-CM codes used to define comorbidity categories were modified to exclude conditions likely to represent potentially preventable complications in certain settings.
 - “Acute on chronic” comorbidities were captured so that some patients with especially severe comorbidities would not be mislabeled as not having conditions of interest.
 - Comorbidities in obstetric patients were added.
 - 3. Multivariate signal extraction methods were applied to adjust for reliability by estimating the amount of “noise” (i.e., variation due to random error) relative to the amount of “signal” (i.e., systematic variation in hospital performance or reliability) for each indicator.
- Similar reliability adjustment has been used in the literature for similar purposes.^{40 41} The project team constructed a set of statistical tests to examine precision, bias, and relatedness of indicators for all accepted Provider-level Indicators, and precision and bias for all accepted Area-level Indicators. It should be noted that rates based on fewer than 30 cases in the numerator or the denominator are not reported. This exclusion rule serves two purposes:
- It eliminates unstable estimates based on too few cases.
 - It helps protect the identities of hospitals and patients.

1c.7 Summary of Controversy/Contradictory Evidence: See the following for a complete treatment of the topic: http://www.qualityindicators.ahrq.gov/downloads/psi/psi_guide_v31.pdf

Note: The Literature Review Findings column summarizes evidence specific to each potential concern on the link between the PQIs and quality of care, as described in step 3 above. A question mark (?) indicates that the concern is theoretical or suggested, but no specific evidence was found in the literature. A check mark indicates that the concern has been demonstrated in the literature.

1c.8 Citations for Evidence (other than guidelines): Updated citations will be presented in the May Steering Committee meeting

http://www.qualityindicators.ahrq.gov/downloads/psi/psi_guide_v31.pdf

1c.9 Quote the Specific guideline recommendation (including guideline number and/or page number): Not Applicable.

1c.10 Clinical Practice Guideline Citation: Not Applicable.

1c.11 National Guideline Clearinghouse or other URL: Not Applicable.

1c.12 Rating of strength of recommendation (also provide narrative description of the rating and by whom): Not Applicable.

1c.13 Method for rating strength of recommendation (If different from USPSTF system, also describe rating and how it relates to USPSTF): Not Applicable.

1c.14 Rationale for using this guideline over others: No competing measures found.

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for Importance to Measure and Report?

1

Steering Committee: Was the threshold criterion, Importance to Measure and Report, met? Rationale:

1

Y

N

2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

Comment [k]: USPSTF grading system <http://www.ahrq.gov/clinic/uspstf/grade.htm>: **A** - The USPSTF recommends the service. There is high certainty that the net benefit is substantial. **B** - The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial. **C** - The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is at least moderate certainty that the net benefit is small. Offer or provide this service only if other considerations support the offering or providing the service in an individual patient. **D** - The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. **I** - The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

Extent to which the measure, as <u>specified</u> , produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	Eval Rating
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? S.2 If yes, provide web page URL:	2a-specs
2a. Precisely Specified	CO PO MO NO
<p>2a.1 Numerator Statement (Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome): Discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM procedure code for reclosure of postoperative disruption of abdominal wall procedure.</p> <p>2a.2 Numerator Time Window (The time period in which cases are eligible for inclusion in the numerator): Time window can be determined by user, but is generally a calendar year.</p> <p>2a.3 Numerator Details (All information required to collect/calculate the numerator, including all codes, logic, and definitions): Discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code for reclosure of postoperative disruption of abdominal wall procedure.</p> <p>ICD-9-CM Reclosure procedure code: 5461 RECLOSURE OF POSTOPERATIVE DISRUPTION OF ABDOMINAL WALL</p> <p>2a.4 Denominator Statement (Brief, text description of the denominator - target population being measured): All abdominopelvic surgical discharges age 18 and older.</p> <p>2a.5 Target population gender: Female, Male 2a.6 Target population age range: 18 and older</p> <p>2a.7 Denominator Time Window (The time period in which cases are eligible for inclusion in the denominator): Time window can be determined by user, but is generally a calendar year.</p> <p>2a.8 Denominator Details (All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions): All abdominopelvic surgical discharges age 18 and older. ICD-9-CM Abdominopelvic procedure codes: 1731 LAPAROSCOPIC MULTIPLE SEGMENTAL RESECTION OF LARGE INTESTINE OCT08- 1732 LAPAROSCOPIC CECECTOMY OCT08- 1733 LAPAROSCOPIC RIGHT HEMICOLECTOMY OCT08- 1734 LAPAROSCOPIC RESECTION OF TRANSVERSE COLON OCT08- 1735 LAPAROSCOPIC LEFT HEMICOLECTOMY OCT08- 1736 LAPAROSCOPIC SIGMOIDECTOMY OCT08- 1739 OTHER LAPAROSCOPIC PARTIAL EXCISION OF LARGE INTESTINE OCT08- 3804 INCISION OF AORTA</p>	

Comment [KP]: 2a. The measure is well defined and precisely specified so that it can be implemented consistently within and across organizations and allow for comparability. The required data elements are of high quality as defined by NQF's Health Information Technology Expert Panel (HITEP).

3806
 INCISION OF ABDOMINAL ARTERIES
 3807
 INCISION OF ABDOMINAL VEINS
 3814
 ENDARTERECTOMY OF AORTA
 3816
 ENDARTERECTOMY OF ABDOMINAL ARTERIES
 3834
 RESECTION OF AORTA W/ ANASTOMOSIS
 3836
 RESECTION OF ABDOMINAL ARTERIES W/ ANASTOMOSIS
 3837
 RESECTION OF ABDOMINAL VEINS W/ ANASTOMOSIS
 3844
 RESECTION OF AORTA, ABDOMINAL W/ REPLACEMENT
 3846
 RESECTION OF ABDOMINAL ARTERIES W/ REPLACEMENT
 3847
 RESECTION OF ABDOMINAL VEINS W/ REPLACEMENT
 3857
 LIGATION AND STRIPPING OF VARICOSE VEINS, ABDOMINAL VEINS
 3864
 OTHER EXCISION OF AORTA, ABDOMINAL
 3866
 OTHER EXCISION OF ABDOMINAL ARTERIES
 3867
 OTHER EXCISION OF ABDOMINAL VEINS
 3884
 OTHER SURGICAL OCCLUSION OF AORTA, ABDOMINAL
 3886
 OTHER SURGICAL OCCLUSION OF ABDOMINAL ARTERIES
 3887
 OTHER SURGICAL OCCLUSION OF ABDOMINAL VEINS
 391
 INTRA-ABDOMINAL VENOUS SHUNT
 3924
 AORTA-RENAL BYPASS
 3925
 AORTA-ILIAC-FEMORAL BYPASS
 3926
 OTHER INTRA-ABDOMINAL VASCULAR SHUNT OR BYPASS
 4052
 RADICAL EXCISION OF PERIAORTIC LYMPH NODES
 AHRQ Quality Indicators Web Site: <http://www.qualityindicators.ahrq.gov>
 Patient Safety Indicators Technical Specifications Version 4.2 - 2010
 PSI #14 Postoperative Wound Dehiscence Page 2
 4053
 RADICAL EXCISION OF ILIAC LYMPH NODES
 412
 SPLENOTOMY
 4133
 OPEN BIOPSY OF SPLEEN
 4141
 MARSUPIALIZATION OF SPLENIC CYST
 4142
 EXCISION OF LESION OR TISSUE OF SPLEEN

4143
 PARTIAL SPLENECTOMY
 415
 TOTAL SPLENECTOMY
 4193
 EXCISION OF ACCESSORY SPLEEN
 4194
 TRANSPLANTATION OF SPLEEN
 4195
 REPAIR AND PLASTIC OPERATIONS ON SPLEEN
 4199
 OTHER OPERATIONS ON SPLEEN
 4240
 ESOPHAGECTOMY, NOS
 4241
 PARTIAL ESOPHAGECTOMY
 4242
 TOTAL ESOPHAGECTOMY
 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
 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
 4291
 LIGATION OF ESOPHAGEAL VARICES
 430
 GASTROTOMY
 433
 PYLOROMYOTOMY
 4342
 LOCAL EXCISION OF OTHER LESION OR TISSUE OF STOMACH
 4349
 OTHER DESTRUCTION OF LESION OR TISSUE OF STOMACH
 435
 PARTIAL GASTRECTOMY W/ ANASTOMOSIS TO ESOPHAGUS
 436
 PARTIAL GASTRECTOMY W/ ANASTOMOSIS TO DUODENUM
 437
 PARTIAL GASTRECTOMY W/ ANASTOMOSIS TO JEJUNUM
 4381
 PARTIAL GASTRECTOMY W/ JEJUNA TRANSPOSITION
 4389
 OTHER PARTIAL GASTRECTOMY
 4391
 TOTAL GASTRECTOMY W/ INTESTINAL INTERPOSITION
 4399

OTHER TOTAL GASTRECTOMY
 4400
 VAGOTOMY, NOS
 4401
 TRUNCAL VAGOTOMY
 4402
 HIGHLY SELECTIVE VAGOTOMY
 4403
 OTHER SELECTIVE VAGOTOMY
 4411
 TRANSABDOMINAL GASTROSCOPY
 4415
 OPEN BIOPSY OF STOMACH
 4421
 DILATION OF PYLORUS BY INCISION
 4429
 OTHER PYLOROPLASTY
 4431
 HIGH GASTRIC BYPASS
 4439
 OTHER GASTROENTEROSTOMY
 4440
 SUTURE OF PEPTIC ULCER, NOS
 4441
 SUTURE OF GASTRIC ULCER SITE
 4442
 SUTURE OF DUODENAL ULCER SITE
 445
 REVISION OF GASTRIC ANASTOMOSIS
 4461
 SUTURE OF LACERATION OF STOMACH
 4463
 CLOSURE OF OTHER GASTRIC FISTULA
 4464
 GASTROPEXY
 4465
 ESOPHAGOGASTROPLASTY
 4466
 OTHER PROCEDURES FOR CREATION OF ESOPHAGOGASTRIC SPHINCTERIC COMPETENCE
 4469
 OTHER REPAIR OF STOMACH
 4491
 LIGATION OF GASTRIC VARICES
 4492
 INTRAOPERATIVE MANIPULATION OF STOMACH
 4499
 GASTRIC OPERATION NEC OCT04-
 4500
 INCISION OF INTESTINE, NOS
 4501
 INCISION OF DUODENUM
 4502
 OTHER INCISION OF SMALL INTESTINE
 4503
 INCISION OF LARGE INTESTINE
 4531
 OTHER LOCAL EXCISION OF LESION OF DUODENUM

4532
 OTHER DESTRUCTION OF LESION OF DUODENUM
 4533
 LOCAL EXCISION OF LESION OR TISSUE OF SMALL INTESTINE, EXCEPT DUODENUM
 4534
 OTHER DESTRUCTION OF LESION OF SMALL INTESTINE, EXCEPT DUODENUM
 4541
 EXCISION OF LESION OR TISSUE OF LARGE INTESTINE
 4549
 OTHER DESTRUCTION OF LESION OF LARGE INTESTINE
 4550
 ISOLATION OF INTESTINAL SEGMENT, NOS
 4551
 ISOLATION OF SEGMENT OF SMALL INTESTINE
 4552
 ISOLATION OF SEGMENT OF LARGE INTESTINE
 4561
 MULTIPLE SEGMENTAL RESECTION OF SMALL INTESTINE
 4562
 OTHER PARTIAL RESECTION OF SMALL INTESTINE
 4563
 TOTAL REMOVAL OF SMALL INTESTINE
 4571
 MULTIPLE SEGMENTAL RESECTION OF LARGE INTESTINE
 4572
 CESECTOMY
 4573
 RIGHT HEMICOLECTOMY
 4574
 RESECTION OF TRANSVERSE COLON
 4575
 LEFT HEMICOLECTOMY
 4576
 SIGMOIDECTOMY
 4579
 OTHER PARTIAL EXCISION OF LARGE INTESTINE
 458
 TOTAL INTRA-ABDOMINAL COLECTOMY
 4581
 LAPAROSCOPIC TOTAL INTRA-ABDOMINAL COLECTOMY OCT08-
 4582
 OPEN TOTAL INTRA-ABDOMINAL COLECTOMY OCT08-
 4583
 OTHER AND UNSPECIFIED TOTAL INTRA-ABDOMINAL COLECTOMY OCT08-
 4590
 INTESTINAL ANASTOMOSIS, NOS
 4591
 SMALL-TO-SMALL INTESTINAL ANASTOMOSIS
 4592
 ANASTOMOSIS OF SMALL INTESTINE TO RECTAL STUMP
 4593
 OTHER SMALL-TO-LARGE INTESTINAL ANASTOMOSIS
 4594
 LARGE-TO-LARGE INTESTINAL ANASTOMOSIS
 4595
 ANASTOMOSIS TO ANUS
 4601

EXTERIORIZATION OF SMALL INTESTINE
 4603
 EXTERIORIZATION OF LARGE INTESTINE
 4610
 COLOSTOMY, NOS
 4611
 TEMPORARY COLOSTOMY
 4613
 PERMANENT COLOSTOMY
 4620
 ILEOSTOMY, NOS
 4621
 TEMPORARY ILESOSTOMY
 4622
 CONTINENT ILEOSTOMY
 4623
 OTHER PERMANENT ILEOSTOMY
 4640
 REVISION OF INTESTINA STOMA, NOS
 4641
 REVISION OF STOMA OF SMALL INTESTINE
 4642
 REPAIR OF PERICOLOSTOMY HERNIA
 4643
 OTHER REVISION OF STOMA OF LARGE INTESTINE
 4650
 CLOSURE OF INTESTINAL STOMA, NOS
 4651
 CLOSURE OF STOMA OF SMALL INTESTINE
 4652
 CLOSURE OF STOMA OF LARGE INTESTINE
 4660
 FIXATION OF INTESTINE, NOS
 4661
 FIXATION OF SMALL INTESTINE TO ABDOMINAL WALL
 4662
 OTHER FIXATION OF SMALL INTESTINE
 4663
 FIXATION OF LARGE INTESTINE TO ABDOMINAL WALL
 4664
 OTHER FIXATION OF LARGE INTESTINE
 4672
 CLOSURE OF FISTULA OF DUODENUM
 4674
 CLOSURE OF FISTULA OF SMALL INTESTINE, EXCEPT DUODENUM
 4676
 CLOSURE OF FISTULA OF LARGE INTESTINE
 4680
 INTRA-ABDOMINAL MANIPULATION OF INTESTINE, NOS
 4681
 INTRA-ABDOMINAL MANIPULATION OF SMALL INTESTINE
 4682
 INTRA-ABDOMINAL MANIPULATION OF LARGE INTESTINE
 4691
 MYOTOMY OF SIGMOID COLON
 4692
 MYOTOMY OF OTHER PARTS OF COLON

4693
 REVISION OF ANASTOMOSIS OF SMALL INTESTINE
 4694
 REVISION OF ANASTOMOSIS OF LARGE INTESTINE
 4699
 OTHER OPERATIONS ON INTESTINES
 4709
 OTHER APPENDECTOMY
 4719
 OTHER INCIDENTAL APPENDECTOMY
 472
 DRAINAGE OF APPENDICEAL ABSCESS
 4791
 APPENDECTOMY
 4792
 CLOSURE OF APPENDICEAL FISTULA
 4799
 OTHER OPERATIONS ON APPENDIX, OTHER
 4840
 PULL-THROUGH RESECTION OF RECTUM, NOT OTHERWISE SPECIFIED OCT08-
 4841
 SUBMUCOSAL RESECTION OF RECTUM
 4843
 OPEN PULL-THROUGH RESECTION OF RECTUM OCT08-
 4849
 OTHER PULL-THROUGH RESECTION OF RECTUM
 4850
 ABDOMINOPERINEAL RESECTION OF THE RECTUM, NOS OCT08-
 4852
 OPEN ABDOMINOPERINEAL RESECTION OF THE RECTUM OCT08-
 4859
 OTHER ABDOMINOPERINEAL RESECTION OF THE RECTUM OCT08-
 4875
 ABDOMINAL PROCTOPEXY
 500
 HEPATOTOMY
 5012
 OPEN BIOPSY OF LIVER
 5021
 MARSUPIALIZATION OF LESION OF LIVER
 5022
 PARTIAL HEPATECTOMY
 5023
 OPN ABLTN LIVER LES/TISS OCT06-
 5026
 ABLTN LIVER LES/TISS NEC OCT06-
 5029
 OTHER DESTRUCTION OF LESION OF LIVER
 503
 LOBECTOMY OF LIVER
 504
 TOTAL HEPATECTOMY
 5051
 AUXILIARY LIVER TRANSPLANT
 5059
 OTHER TRANSPLANT OF LIVER
 5069

OTHER REPAIR OF LIVER
 5103
 OTHER CHOLECYSTOSTOMY
 5104
 OTHER CHOLECYSTOTOMY
 5113
 OPEN BIOPSY OF GALLBLADDER OR BILE DUCTS
 5121
 OTHER PARTIAL CHOLECYSTECTOMY
 5122
 CHOLECYSTECTOMY
 5131
 ANASTOMOSIS OF GALLBLADDER TO HEPATIC DUCTS
 5132
 ANASTOMOSIS OF GALLBLADDER TO INTESTINE
 5133
 ANASTOMOSIS OF GALLBLADDER TO PANCREAS
 5134
 ANASTOMOSIS OF GALLBLADDER TO STOMACH
 5135
 OTHER GALLBLADDER ANASTOMOSIS
 5136
 CHOLEDOCHOENTEROSTOMY
 5137
 ANASTOMOSIS OF HEPATIC DUCT TO GASTROINTESTINAL TRACT
 5139
 OTHER BILE DUCT ANASTOMOSIS
 5141
 COMMON DUCT EXPLORATION FOR REMOVAL OF CALCULUS
 5142
 COMMON DUCT EXPLORATION FOR RELIEF OF OTHER OBSTRUCTION
 5143
 INSERTION OF CHOLEDOCHOHEPATIC TUBE FOR DECOMPRESSION
 5149
 INCISION OF OTHER BILE DUCTS FOR RELIEF OF OBSTRUCTION
 5151
 EXPLORATION OF COMMON DUCT
 5159
 INCISION OF OTHER BILE DUCT
 5161
 EXCISION OF CYSTIC DUCT REMNANT
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 5162
 EXCISION OF AMPULLA OF VATER W/ REIMPLANTATION OF COMMON DUCT
 5163
 OTHER EXCISION OF COMMON DUCT
 5169
 EXCISION OF OTHER BILE DUCT
 5171
 SIMPLE SUTURE OF COMMON BILE DUCT
 5172
 CHOLEDOCHOPLASTY
 5179
 REPAIR OF OTHER BILE DUCTS
 5181

DILATION OF SPHINCTER OF ODDI
 5182
 PANCREATIC SPHINCTEROTOMY
 5183
 PANCREATIC SPHINCTEROPLASTY
 5189
 OTHER OPERATIONS ON SPHINCTER OF ODDI
 5192
 CLOSURE OF CHOLECYSTOSTOMY
 5193
 CLOSURE OF OTHER BILIARY FISTULA
 5194
 REVISION OF ANASTOMOSIS OF BILIARY TRACT
 5195
 REMOVAL OF PROSTHETIC DEVICE FROM BILE DUCT
 5199
 OTHER OPERATIONS ON BILIARY TRACT
 5201
 DRAINAGE OF PANCREATIC CYST BY CATHETER
 5209
 OTHER PANCREATOTOMY
 5212
 OPEN BIOPSY OF PANCREAS
 5222
 OTHER EXCISION OR DESTRUCTION OF LESION OR TISSUE OF PANCREAS OR PANCREATIC DUCT
 523
 MARSUPIALIZATION OF PANCREATIC CYST
 524
 INTERNAL DRAINAGE OF PANCREATIC CYST
 5251
 PROXIMAL PANCREATECTOMY
 5252
 DISTAL PANCREATECTOMY
 5253
 RADICAL SUBTOTAL PANCREATECTOMY
 5259
 OTHER PARTIAL PANCREATECTOMY
 526
 TOTAL PANCREATECTOMY
 527
 RADICAL PANCREATODUODENECTOMY
 5280
 PANCREATIC TRANSPLANT, NOS
 5281
 REIMPLANTATION
 5282
 HOMOTRANSPLANT OF PANCREAS
 5283
 HETEROTRANSPLANT OF PANCREAS
 5292
 CANNULATION OF PANCREATIC DUCT
 5295
 OTHER REPAIR OF PANCREAS
 5296
 ANASTOMOSIS OF PANCREAS
 5299
 OTHER OPERATIONS ON PANCREAS

5300
 UNILATERAL REPAIR OF INGUINAL HERNIA, NOS
 5301
 REPAIR OF DIRECT INGUINAL HERNIA
 5302
 REPAIR OF INDIRECT INGUINAL HERNIA
 5303
 REPAIR OF DIRECT INGUINAL HERNIA W/ GRAFT OR PROSTHESIS
 5304
 REPAIR OF INDIRECT INGUINAL HERNIA W/ GRAFT OR PROSTHESIS
 5305
 REPAIR OF INGUINAL HERNIA W/ GRAFT OR PROSTHESIS, NOS
 5310
 BILATERAL REPAIR OF INGUINAL HERNIA, NOS
 5311
 BILATERAL REPAIR OF DIRECT INGUINAL HERNIA
 5312
 BILATERAL REPAIR OF INDIRECT INGUINAL HERNIA
 5313
 BILATERAL REPAIR OF INGUINAL HERNIA, ONE DIRECT AND ONE INDIRECT
 5314
 BILATERAL REPAIR OF DIRECT INGUINAL HERNIA W/ GRAFT OR PROSTHESIS
 5315
 BILATERAL REPAIR OF INDIRECT INGUINAL HERNIA W/ GRAFT OR PROSTHESIS
 5316
 BILATERAL REPAIR OF INGUINAL HERNIA, ONE DIRECT AND ONE INDIRECT, W/ GRAFT OR PROSTHESIS
 5317
 BILATERAL INGUINAL HERNIA REPAIR W/ GRAFT OR PROSTHESIS, NOS
 5321
 UNILATERAL REPAIR OF FEMORAL HERNIA
 5329
 OTHER UNILATERAL FEMORAL HERNIORRHAPHY
 5331
 BILATERAL REPAIR OF FEMORAL HERNIA W/ GRAFT OR PROSTHESIS
 5339
 OTHER BILATERAL FEMORAL HERNIORRHAPHY
 5341
 REPAIR OF UMBILICAL HERNIA W/ PROSTHESIS
 5349
 OTHER UMBILICAL HERNIORRHAPHY
 5351
 INCISIONAL HERNIA REPAIR
 5359
 REPAIR OF OTHER HERNIA OF ANTERIOR ABDOMINAL WALL
 5361
 INCISIONAL HERNIA REPAIR W/ PROSTHESIS
 5369
 REPAIR OF OTHER HERNIA OF ANTERIOR ABDOMINAL WALL W/ PROSTHESIS
 537
 REPAIR OF DIAPHRAGMATIC HERNIA, ABDOMINAL APPROACH
 5375
 REPAIR OF DIAPHRAGMATIC HERNIA, ABDOMINAL APPROACH, NOS OCT08-
 540
 INCISION OF ABDOMINAL WALL
 5411
 EXPLORATORY LAPAROTOMY
 5419

OTHER LAPAROTOMY
 5422
 BIOPSY OF ABDOMINAL WALL OR UMBILICUS
 5423
 BIOPSY OF ABDOMINAL WALL OR UMBILICUS
 543
 EXCISION OR DESTRUCTION OF LESION OR TISSUE OF ABDOMINAL WALL OR UMBILICUS
 544
 EXCISION OR DESTRUCTION OF PERITONEAL TISSUE
 5459
 OTHER LYSIS OF PERITONEAL ADHESIONS
 5463
 OTHER SUTURE OF ABDOMINAL WALL
 5464
 SUTURE OF PERITONEUM
 5471
 REPAIR OF GASTROSCHISIS
 5472
 OTHER REPAIR OF ABDOMINAL WALLS
 5473
 OTHER REPAIR OF PERITONEUM
 5474
 OTHER REPAIR OF OMENTUM
 5475
 OTHER REPAIR OF MESENTERY
 5492
 REMOVAL OF FOREIGN BODY FROM PERITONEAL CAVITY
 5493
 CREATION OF CUTANEOPERITONEAL FISTULA
 5494
 CREATION OF PERITONEOVASCULAR SHUNT
 5495
 INCISION OF PERITONEUM
 5532
 OPN ABLTN RENAL LES/TISS OCT06-
 5535
 ABLTN RENAL LES/TISS NEC OCT06-
 5551
 NEPHROURETERECTOMY
 5552
 NEPHRECTOMY OF REMAINING KIDNEY
 5553
 REMOVAL OF TRANSPLANTED OR REJECTED KIDNEY
 5554
 BILATERAL NEPHRECTOMY
 5561
 RENAL AUTOTRANSPLANTATION
 5569
 OTHER KIDNEY TRANSPLANTATION
 557
 NEPHROPEXY
 5583
 CLOSURE OF OTHER FISTULA OF KIDNEY
 5584
 REDUCTION OF TORSION OF RENAL
 5585
 SYMPHYSIOTOMY FOR HORESHOE KIDNEY

5586
 ANASTOMOSIS OF KIDNEY
 5587
 CORRECTION OF URETEROPELVIC JUNCTION
 5591
 DECAPSULATION OF KIDNEY
 5597
 IMPLANTATION OR REPLACEMENT OF MECHANICAL KIDNEY
 5598
 REMOVAL OF MECHANICAL KIDNEY
 5651
 FORMATION OF CUTANEOUS URETERO-ILEOSTOMY
 5652
 REVISION OF CUTANEOUS URETERO-ILEOSTOMY
 5661
 FORMATION OF OTHER CUTANEOUS URETEROSTOMY
 5662
 REVISION OF OTHER CUTANEOUS URETEROSTOMY
 5671
 URINARY DIVERSION TO INTESTINE
 5672
 REVISION OF URETEROINTESTINAL ANASTOMOSIS
 5673
 NEPHROCYSTANASTOMOSIS, NOS
 5674
 URETERONEOXYSTOSTOMY
 5675
 TRANSURETEROURETEROSTOMY
 5683
 CLOSURE OF URETEROSTOMY
 5684
 CLOSURE OF OTHER FISTULA OF URETER
 5685
 URETEROPEXY
 5686
 REMOVAL OF LIGATURE FROM URETER
 5689
 OTHER REPAIR OF URETER
 5695
 LIGATION OF URETER
 5771
 RADICAL CYSTECTOMY
 5779
 OTHER TOTAL CYSTECTOMY
 5782
 CLOSURE OF CYSTOSTOMY
 5787
 RECONSTRUCTION OF URINARY BLADDER
 5900
 RETROPERITONEAL DISSECTION, NOS
 5902
 OTHER LYSIS OF PERIRENAL OR PERIURETERAL ADHESIONS
 5909
 OTHER INCISION OF PERIRENAL OR PERIURETERAL TISSUE
 6012
 OPEN BIOPSY OF PROSTATE
 6014

OPEN BIOPSY OF SEMINAL VESICLES
 6015
 BIOPSY OF PERIPROSTATIC TISSUE
 603
 SUPRAPUBIC PROSTATECTOMY
 604
 RETROPUBIC PROSTATECTOMY
 605
 RADICAL PROSTATECTOMY
 6061
 LOCAL EXCISION OF LESION OF PROSTATE
 6072
 INCISION OF SEMINAL VESICLE
 6073
 EXCISION OF SEMINAL VESICLE
 6079
 OTHER OPERATIONS ON SEMINAL VESICLES
 6093
 REPAIR OF PROSTATE
 6509
 OTHER OOPHORECTOMY
 6512
 OTHER BIOPSY OF OVARY
 6521
 MARSUPIALIZATION OF OVARIAN CYST
 6522
 WEDGE RESECTION OF OVARY
 6529
 OTHER LOCAL EXCISION OR DESTRUCTION OF OVARY
 6539
 OTHER UNILATERAL OOPHORECTOMY
 6549
 OTHER UNILATERAL SALPINGOOPHORECTOMY
 6551
 OTHER REMOVAL OF BOTH OVARIES AT SAME OPERATIVE EPISODE
 6552
 OTHER REMOVAL OF REMAINING OVARY
 6561
 OTHER REMOVAL OF BOTH OVARIES AND TUBES AT SAME OPERATIVE EPISODE
 6562
 OTHER REMOVAL OF REMAINING OVARY AND TUBE
 6571
 OTHER SIMPLE SUTURE OF OVARY
 6572
 OTHER REIMPLANTATION OF OVARY
 6573
 OTHER SALPINGO OOPHOROPLASTY
 6579
 OTHER REPAIR OF OVARY
 6589
 OTHER LYSIS OF ADHESIONS OF OVARY AND FALLOPIAN TUBE
 6592
 TRANSPLANTATION OF OVARY
 6593
 MANUAL RUPTURE OF OVARIAN CYST
 6594
 OVARIAN DENERVATION

6595
 RELEASE OF TORSION OF OVARY
 6599
 OTHER OPERATIONS ON OVARY
 6601
 SALPINGOTOMY
 6602
 SALPINGOSTOMY
 6631
 OTHER BILATERAL LIGATION AND CRUSHING OF FALLOPIAN TUBES
 6632
 OTHER BILATERAL LIGATION AND DIVISION OF FALLOPIAN TUBES
 6639
 OTHER BILATERAL DESTRUCTION OR OCCLUSION OF FALLOPIAN TUBES
 664
 TOTAL UNILATERAL SALPINGECTOMY
 6651
 REMOVAL OF BOTH FALLOPIAN TUBES AT SAME OPERATIVE EPISODE
 6652
 REMOVAL OF REMAINING FALLOPIAN TUBE
 6661
 EXCISION OR DESTRUCTION OF LESION OF FALLOPIAN TUBE
 6662
 SALPINGECTOMY W/ REMOVAL OF TUBAL PREGNANCY
 6663
 BILATERAL PARTIAL SALPINGECTOMY, NOS
 6669
 OTHER PARTIAL SALPINGECTOMY
 6671
 SIMPLE SUTURE OF FALLOPIAN TUBE
 6672
 SALPINGO-OOPHOROSTOMY
 6673
 SALPINGO-SALPINGOSTOMY
 6674
 SALPINGO-UTEROSTOMY
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 6679
 OTHER REPAIR OF FALLOPIAN TUBE
 6692
 UNILATERAL DESTRUCTION OR OCCLUSION OF FALLOPIAN TUBE
 6697
 BURYING OF FIMBRIAE IN UTERINE WALL
 680
 OTHER INCISION AND EXCISION OF UTERUS
 6813
 OPEN BIOPSY OF UTERUS
 6814
 OPEN BIOPSY OF UTERINE LIGAMENTS
 683
 SUBTOTAL ABDOMINAL HYSTERECTOMY
 6839
 OTHER SUBTOTAL ABDOMINAL HYSTERECTOMY
 684
 TOTAL ABDOMINAL HYSTERECTOMY

6841
LAP TOTAL ABDOMINAL HYST OCT06-
6849
TOTAL ABD HYST NEC/NOS OCT06-
686
RADICAL ABDOMINAL HYSTERECTOMY
688
PELVIC EVISCERATION
6861
LAP RADICAL ABDOMNL HYST OCT06-
6869
RADICAL ABD HYST NEC/NOS OCT06-
6922
OTHER UTERINE SUSPENSION
693
PARACERVICAL UTERINE DENERVATION
6941
SUTURE OF LACERATION OF UTERUS
6942
CLOSURE OF FISTULA OF UTERUS
6949
OTHER REPAIR OF UTERUS

2a.9 Denominator Exclusions (Brief text description of exclusions from the target population): Exclude cases:

- where a procedure for reclosure of postoperative disruption of abdominal wall occurs before or on the same day as the first abdominopelvic surgery procedure
Note: If day of procedure is not available in the input data file, the rate may be slightly lower than if the information was available
- where length of stay is less than 2 days
- with any diagnosis or procedure code for immunocompromised state
- MDC 14 (pregnancy, childbirth, and puerperium).

2a.10 Denominator Exclusion Details (All information required to collect exclusions to the denominator, including all codes, logic, and definitions):

Exclude cases:

- where a procedure for reclosure of postoperative disruption of abdominal wall occurs before or on the same day as the first abdominopelvic surgery procedure
Note: If day of procedure is not available in the input data file, the rate may be slightly lower than if the information was available
- where length of stay is less than 2 days
- with any diagnosis or procedure code for immunocompromised state
- MDC 14 (pregnancy, childbirth, and puerperium).

ICD-9-CM Immunocompromised States diagnosis codes:

042
HUMAN IMMUNODEFICIENCY VIRUS DISEASE
1363
PNEUMOCYSTOSIS
1992
MALIGNANT NEOPLASM ASSOCIATED WITH TRANSPLANTED ORGAN OCT08-
23877
NEOPLASM OF UNCERTAIN BEHAVIOR, POST-TRANSPLANT LYMPHOPROLIFERATIVE DISORDER (PTLD) OCT08-
23879
NEOPLASM OF UNCERTAIN BEHAVIOR, OTHER LYMPHATIC AND HEMATOPOIETIC TISSUES OCT08-
260
KWASHIORKOR OCT05-

Comment [k]: 11 Risk factors that influence outcomes should not be specified as exclusions.
12 Patient preference is not a clinical exception to eligibility and can be influenced by provider interventions.

261
 NUTRITIONAL MARASMUS OCT05-
 262
 OTH SEVERE MALNUTRITION OCT05-
 23873
 HI GRDE MYELOYDYS SYN LES OCT06-
 23876
 MYELOFI W MYELO METAPLAS OCT06
 27900
 HYPOGAMMAGLOBULINEM NOS
 27901
 SELECTIVE IGA IMMUNODEF
 27902
 SELECTIVE IGM IMMUNODEF
 27903
 SELECTIVE IG DEFIC NEC
 27904
 CONG HYPOGAMMAGLOBULINEM
 27905
 IMMUNODEFIC W HYPER-IGM
 27906
 COMMON VARIABL IMMUNODEF
 27909
 HUMORAL IMMUNITY DEF NEC
 27910
 IMMUNDEF T-CELL DEF NOS
 27911
 DIGEORGES SYNDROME
 27912
 WISKOTT-ALDRICH SYNDROME
 27913
 NEZELOFS SYNDROME
 27919
 DEFIC CELL IMMUNITY NOS
 27941
 AUTOIMMUNE LYMPHOPROLIFERATIVE SYNDROME ALPS OCT09-
 27949
 AUTOIMMUNE DISEASE, NOT ELSEWHERE CLASSIFIED OCT09-
 27950
 GRAFT-VERSUS-HOST DISEASE UNSPECIFIED OCT08-
 27951
 ACUTE GRAFT-VERSUS-HOST DISEASE OCT08-
 27952
 CHRONIC GRAFT-VERSUS-HOST DISEASE OCT08-
 27953
 ACUTE ON CHRONIC GRAFT-VERSUS-HOST DISEASE OCT08-
 2792
 COMBINED IMMUNITY DEFICIENCY
 2793
 UNSPECIFIED IMMUNITY DEFICIENCY
 2794
 AUTOIMMUNE DISEASE, NOT ELSEWHERE CLASSIFIED
 2798
 OTHER SPECIFIED DISORDERS INVOLVING THE IMMUNE MECHANISM
 2799
 UNSPECIFIED DISORDER OF IMMUNE MECHANISM
 28409

CONST APLASTC ANEMIA NEC OCT06-
 2841
 PANCYTOPENIA OCT06-
 2880
 AGRANULOCYTOSIS OCT05-
 28800
 NEUTROPENIA NOS OCT06-
 042
 HUMAN IMMUNODEFICIENCY VIRUS DISEASE
 1363
 PNEUMOCYSTOSIS
 1992
 MALIGNANT NEOPLASM ASSOCIATED WITH TRANSPLANTED ORGAN OCT08-
 23877
 NEOPLASM OF UNCERTAIN BEHAVIOR, POST-TRANSPLANT LYMPHOPROLIFERATIVE DISORDER (PTLD) OCT08-
 23879
 NEOPLASM OF UNCERTAIN BEHAVIOR, OTHER LYMPHATIC AND HEMATOPOIETIC TISSUES OCT08-
 260
 KWASHIORKOR OCT05-
 261
 NUTRITIONAL MARASMUS OCT05-
 262
 OTH SEVERE MALNUTRITION OCT05-
 23873
 HI GRDE MYELOYDYS SYN LES OCT06-
 23876
 MYELOFI W MYELO METAPLAS OCT06
 27900
 HYPOGAMMAGLOBULINEM NOS
 27901
 SELECTIVE IGA IMMUNODEF
 27902
 SELECTIVE IGM IMMUNODEF
 27903
 SELECTIVE IG DEFIC NEC
 27904
 CONG HYPOGAMMAGLOBULINEM
 27905
 IMMUNODEFIC W HYPER-IGM
 27906
 COMMON VARIABL IMMUNODEF
 27909
 HUMORAL IMMUNITY DEF NEC
 27910
 IMMUNDEF T-CELL DEF NOS
 27911
 DIGEORGES SYNDROME
 27912
 WISKOTT-ALDRICH SYNDROME
 27913
 NEZELOFS SYNDROME
 27919
 DEFIC CELL IMMUNITY NOS
 27941
 AUTOIMMUNE LYMPHOPROLIFERATIVE SYNDROME ALPS OCT09-
 27949
 AUTOIMMUNE DISEASE, NOT ELSEWHERE CLASSIFIED OCT09-

27950
 GRAFT-VERSUS-HOST DISEASE UNSPECIFIED OCT08-
 27951
 ACUTE GRAFT-VERSUS-HOST DISEASE OCT08-
 27952
 CHRONIC GRAFT-VERSUS-HOST DISEASE OCT08-
 27953
 ACUTE ON CHRONIC GRAFT-VERSUS-HOST DISEASE OCT08-
 2792
 COMBINED IMMUNITY DEFICIENCY
 2793
 UNSPECIFIED IMMUNITY DEFICIENCY
 2794
 AUTOIMMUNE DISEASE, NOT ELSEWHERE CLASSIFIED
 2798
 OTHER SPECIFIED DISORDERS INVOLVING THE IMMUNE MECHANISM
 2799
 UNSPECIFIED DISORDER OF IMMUNE MECHANISM
 28409
 CONST APLASTIC ANEMIA NEC OCT06-
 2841
 PANCYTOPENIA OCT06-
 2880
 AGRANULOCYTOSIS OCT05-
 28800
 NEUTROPENIA NOS OCT06-

 ICD-9-CM Immunocompromised States procedure codes:
 0018
 INFUS IMMUNOSUP ANTIBODY
 335
 LUNG TRANSPLANT
 3350
 LUNG TRANSPLANT NOS
 3351
 UNILAT LUNG TRANSPLANT
 3352
 BILAT LUNG TRANSPLANT
 336
 COMBINED HEART-LUNG TRANSPLANTATION
 375
 HEART TRANSPLANTATION
 3751
 HEART TRANSPLANTATION
 410
 OPERATIONS ON BONE MARROW AND SPLEEN
 4100
 BONE MARROW TRANSPLANT NOS
 4101
 AUTO BONE MARROW TRANSPLANT W/O PURG
 4102
 ALO BONE MARROW TRANSPLANT
 4103
 ALLOGRAFT BONE MARROW NOS
 4104
 AUTO HEM STEM CELL TRANSPLANT W/O PUR
 4105

ALLO HEM STEM CT W/O PUR
 4106
 CORD BLD STEM CELL TRANS
 4107
 AUTO HEM STEM CT W PURG
 4108
 ALLO HEM STEM CT W PURG
 4109
 AUTO BONE MT W PURGING
 5051
 AUXILIARY LIVER TRANSPL
 5059
 LIVER TRANSPLANT NEC
 5280
 PANCREATIC TRANSPLANT, NOS
 5281
 REIMPLANTATION OF PANCREATIC TISSUE
 5282
 REIMPLANTATION OF PANCREATIC TISSUE
 5283
 HETEROTRANSPLANT OF PANCREAS
 5285
 ALLOTTRANSPLANTATION OF CELLS OF ISLETS OF LINGERHANS
 5286
 TRANSPLANTATION OF CELLS OF ISLETS OF LANGERHANS, NOS
 5569
 OTHER KIDNEY TRANSPLANTATION

2a.11 Stratification Details/Variables (All information required to stratify the measure including the stratification variables, all codes, logic, and definitions):

The user has the option to stratify by gender, birth weight, age in days, age in years (5-year age groups), race / ethnicity, primary payer, and custom stratifiers.

2a.12-13 Risk Adjustment Type: Risk adjustment method widely or commercially available

2a.14 Risk Adjustment Methodology/Variables (List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method):

The predicted value for each case is computed using a hierarchical model (logistic regression with hospital random effect) and covariates for gender, birth weight (500g groups), age in days (29-60, 61-90, 91+), age in years (in 5-year age groups), modified CMS DRG and AHRQ CCS comorbidities. The reference population used in the model is the universe of discharges for states that participate in the HCUP State Inpatient Databases (SID) for the year 2007 (updated annually), 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, state, and region). The risk adjusted rate is computed using indirect standardization as the observed rate divided by the expected rate, multiplied by the reference population rate.

Required data elements: CMS Diagnosis Related Group (DRG); CMS Major Diagnostic Category (MDC); patient gender; age in years at admission; International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) principal and secondary diagnosis codes.

2a.15-17 Detailed risk model available Web page URL or attachment: URL None

[http://qualityindicators.ahrq.gov/downloads/pd/PDI_Risk_Adjustment_Tables_\(Version_4_2\).pdf](http://qualityindicators.ahrq.gov/downloads/pd/PDI_Risk_Adjustment_Tables_(Version_4_2).pdf)

2a.18-19 Type of Score: Rate/proportion

2a.20 Interpretation of Score: Better quality = Lower score

2a.21 Calculation Algorithm (Describe the calculation of the measure as a flowchart or series of steps):

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 five steps to produce the rates. 1)

<p>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. 5) Calculate risk-adjusted rate. Use the indirect standardization to account for case-mix. 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. Full information on calculation algorithms and specifications can be found at http://qualityindicators.ahrq.gov/PDI_download.htm</p>	
<p>2a.22 Describe the method for discriminating performance (e.g., significance testing): Significance testing is not prescribed by the software. Users may calculate a confidence interval for the risk-adjusted rates and a posterior probability interval for the smoothed rates at a 95% or 99% level. Users may define the relevant benchmark and the methods of discriminating performance according to their application.</p>	
<p>2a.23 Sampling (Survey) Methodology <i>If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate):</i> Not applicable</p>	
<p>2a.24 Data Source <i>(Check the source(s) for which the measure is specified and tested)</i> Claims</p>	
<p>2a.25 Data source/data collection instrument <i>(Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.):</i> The data source is hospital discharge data such as the HCUP State Inpatient Databases (SID) or equivalent using UB-04 coding standards. The data collection instrument is public-use AHRQ QI software available in SAS or Windows versions.</p>	
<p>2a.26-28 Data source/data collection instrument reference web page URL or attachment: URL None http://www.qualityindicators.ahrq.gov/software.htm</p>	
<p>2a.29-31 Data dictionary/code table web page URL or attachment: URL None http://www.qualityindicators.ahrq.gov/downloads/winqi/AHRQ_QI_Windows_Software_Documentation_V41a.pdf</p>	
<p>2a.32-35 Level of Measurement/Analysis <i>(Check the level(s) for which the measure is specified and tested)</i> Facility</p>	
<p>2a.36-37 Care Settings <i>(Check the setting(s) for which the measure is specified and tested)</i> Inpatient/Hospital</p>	
<p>2a.38-41 Clinical Services <i>(Healthcare services being measured, check all that apply)</i> Clinicians: Physicians (MD/DO)</p>	
TESTING/ANALYSIS	
<p>2b. Reliability testing</p>	
<p>2b.1 Data/sample <i>(description of data/sample and size):</i> The PSIs were applied to all acute inpatient hospitalizations at Veterans Health Administration (VA) facilities in fiscal 2001. [2]</p>	
<p>2b.2 Analytic Method <i>(type of reliability) & rationale, method for testing):</i> AHRQ PSI's applied to 5,000 non-federal hospitals. [1]</p>	2b
<p>Two methods-regression analysis and multivariable case matching- were used independently to control for patient and facility characteristics while predicting the effect of the PSI on each outcome. [2]</p>	CO PO MO NO

Comment [KP]: 2b. Reliability testing demonstrates the measure results are repeatable, producing the same results a high proportion of the time when assessed in the same population in the same time period.

Comment [k]: 8 Examples of reliability testing include, but are not limited to: inter-rater/abstractor or intra-rater/abstractor studies; internal consistency for multi-item scales; test-retest for survey items. Reliability testing may address the data items or final measure score.

We used propensity score matching and multivariate regression analyses to predict expenditures and outcomes attributable to the 14 PSIs. [5]

2b.3 Testing Results (*reliability statistics, assessment of adequacy in the context of norms for the test conducted*):

The authors found statistically significant ($p < .0001$) excess mortality, LOS, and cost in all groups with PSIs. The three PSIs that occurred least often-- dehiscence (disruption of the wound) were associated with the greatest excess mortality, LOS, and cost. [2]

References

[2] Rivard PE, Luther SL, Christiansen CL, Shibe Zhao, Loveland S, Elixhauser A, Romano PS, Rosen AK. Using patient safety indicators to estimate the impact of potential adverse events on outcomes. *Med Care Rev.* 2008 Feb;65(1):67-87. PMID: 18184870.

2c. Validity testing

2c.1 Data/sample (*description of data/sample and size*): We carried out a retrospective cross-sectional study on all hospital inpatients discharged in 2005 (including deaths) from the three Mayo Clinic Rochester hospitals (n = 60 599) to assess adverse events. [2]

The Agency for Healthcare Research and Quality (AHRQ) Patient Safety Indicators (PSIs) were used to identify medical injuries in 7.45 million hospital discharge abstracts from 994 acute-care hospitals across 28 states in 2000 in the AHRQ Healthcare Cost and Utilization Project Nationwide Inpatient Sample database. [3]

2c.2 Analytic Method (*type of validity*) & *rationale, method for testing*):

Routine hospitalization-related administrative data from seven countries were analyzed. Using algorithms adapted to the diagnosis and procedure coding systems in place in each country, authorities in each of the participating countries reported summaries of the distribution of hospital-level and overall (national) rates for each AHRQ Patient Safety Indicator to the OECD project secretariat. [1]

Adverse events were identified through multiple methods: (i) Agency for Healthcare Research and Quality-defined patient safety indicators (PSIs) using ICD-9 diagnosis codes from administrative discharge abstracts, (ii) provider-reported events, and (iii) Institute for Healthcare Improvement Global Trigger Tool with physician confirmation. PSIs were adjusted to exclude patient conditions present at admission. [2]

We matched each identified medical injury case with up to 4 controls from the same hospitals and with the same DRG, sex, white or nonwhite race, and age within 10 years. We further matched cases without any comorbidity with controls without any comorbidity and matched cases and controls with comorbidities within a 1% difference in risk of death due to comorbidities. The matching algorithm first selects controls that meet the matching criteria and then randomly selects 4 controls if more than 4 eligible controls are found. We also computed linear and logistic regressions to estimate excess outcomes attributable to medical injuries to provide comparisons with matching analyses. [3]

Retrospective analysis using diagnoses and procedures to derive annual rates and standard errors for 13 PSIs. For either hospitals or hospital networks (Veterans Integrated Service Networks [VISNs]), we calculated the percentages whose PSI rates were consistently high or low across years, as well as 1-year lagged correlations, for each PSI. We related our findings to the average annual number of adverse events that each PSI represents. We also assessed time trends for the entire VA, by VISN, and by hospital. [4]

Two methods-regression analysis and multivariable case matching- were used independently to control for patient and facility characteristics while predicting the effect of the PSI on each outcome. [5]

We used bivariate and multivariate techniques to examine the relationship between PSI performance and quality scores from the Hospital Quality Alliance program, risk-adjusted mortality rates, and selection as a top hospital by US News & World Report. [6]

2c
CO
PO
MO
NO

Comment [KP]: 2c. Validity testing demonstrates that the measure reflects the quality of care provided, adequately distinguishing good and poor quality. If face validity is the only validity addressed, it is systematically assessed.

Comment [k]: 9 Examples of validity testing include, but are not limited to: determining if measure scores adequately distinguish between providers known to have good or poor quality assessed by another valid method; correlation of measure scores with another valid indicator of quality for the specific topic; ability of measure scores to predict scores on some other related valid measure; content validity for multi-item scales/tests. Face validity is a subjective assessment by experts of whether the measure reflects the quality of care (e.g., whether the proportion of patients with BP < 140/90 is a marker of quality). If face validity is the only validity addressed, it is systematically assessed (e.g., ratings by relevant stakeholders) and the measure is judged to represent quality care for the specific topic and that the measure focus is the most important aspect of quality for the specific topic.

Hospital discharges from Mayo Clinic Rochester hospitals in 2005 (N = 60,599). All hospital inpatients including surgical, medical, pediatric, maternity, psychiatric, and rehabilitation patients. About 33% of patients traveled more than 120 miles for care. [7]

2c.3 Testing Results (statistical results, assessment of adequacy in the context of norms for the test conducted):

About 4% (2401) of hospital discharges had an adverse event identified by at least one method. Around 38% (922) of identified events were provider-reported events. Nearly 43% of provider-reported adverse events were skin integrity events, 23% medication events, 21% falls, 1.8% equipment events and 37% miscellaneous events. Patients with adverse events identified by one method were not usually identified using another method. Only 97 (6.2%) of hospitalizations with a PSI also had a provider-reported event and only 10.5% of provider-reported events had a PSI. Different detection methods identified different adverse events. Discharges with PSI: PO wound dehiscence = 38; Discharges with corresponding provider-reported adverse event = 0 (0%) [2]

PSI #14 - Postoperative Wound Dehiscence: Significant differences between cases and controls in LOS, charges, and mortality (P < .001). [3]

References

[2] Naessens JM; Campbell CR; Huddleston JM; Berg PB; Lefante JJ; Williams AR; and Culbertson RA. A Comparison of Hospital Adverse Events Identified by Three Widely Used Detection Methods. International Journal for Quality in Health Care. 2009;21(4):301-307. PMID: 19617381.

[3] Zhan C, and Miller MR. Excess Length of Stay, Charges, and Mortality Attributable to Medical Injuries During Hospitalization. JAMA. 2003;290(14):1868-1874. doi: 10.1001/jama.290.14.1868.

2d. Exclusions Justified

2d.1 Summary of Evidence supporting exclusion(s):

Exclusions remove cases where the outcome of interest is less likely to be preventable or more likely to be preventable or with no or very low risk

2d.2 Citations for Evidence:

Updated citations will be presented in the May Steering Committee meeting

Measures of Pediatric Health Care Quality Based on Hospital Administrative Data, The Pediatric Quality Indicators. Ver 3.1 March 2007

http://qualityindicators.ahrq.gov/downloads/pdi/pdi_measures_v31.pdf

2d.3 Data/sample (description of data/sample and size): AHRQ 2007 State Inpatient Databases (SID) with 3,500 hospitals and 6 million pediatric discharges

2d.4 Analytic Method (type analysis & rationale):

Expert panel

2d.5 Testing Results (e.g., frequency, variability, sensitivity analyses):

Measures of Pediatric Health Care Quality Based on Hospital Administrative Data, The Pediatric Quality Indicators. Ver 3.1 March 2007

http://qualityindicators.ahrq.gov/downloads/pdi/pdi_measures_v31.pdf

2e. Risk Adjustment for Outcomes/ Resource Use Measures

2e.1 Data/sample (description of data/sample and size): AHRQ 2007 State Inpatient Databases (SID) with 3,500 hospitals and 6 million pediatric discharges

2e.2 Analytic Method (type of risk adjustment, analysis, & rationale):

Risk-adjustment models use a standard set of categories based on readily available classification systems for demographics, severity of illness and comorbidities. Within each category, covariates are initially selected

Comment [KP]: 2d. Clinically necessary measure exclusions are identified and must be:

- supported by evidence of sufficient frequency of occurrence so that results are distorted without the exclusion;

AND

- a clinically appropriate exception (e.g., contraindication) to eligibility for the measure focus;

AND

- precisely defined and specified:
 - if there is substantial variability in exclusions across providers, the measure is specified so that exclusions are computable and the effect on the measure is transparent (i.e., impact clearly delineated, such as number of cases excluded, exclusion rates by type of exclusion);
- if patient preference (e.g., informed decision-making) is a basis for exclusion, there must be evidence that it strongly impacts performance on the measure and the measure must be specified so that the information about patient preference and the effect on the measure is transparent (e.g., numerator category computed separately, denominator exclusion category computed separately).

Comment [k]: 10 Examples of evidence that an exclusion distorts measure results include, but are not limited to: frequency of occurrence, sensitivity analyses with and without the exclusion, and variability of exclusions across providers.

Comment [KP]: 2e. For outcome measures and other measures (e.g., resource use) when indicated:

- an evidence-based risk-adjustment strategy (e.g., risk models, risk stratification) is specified and is based on patient clinical factors that influence the measured outcome (but not disparities in care) and are present at start of care;

OR
rationale/data support no risk adjustment.

Comment [k]: 13 Risk models should not obscure disparities in care for populations by including factors that are associated with differences/inequalities in care such as race, socioeconomic status, gender (e.g., poorer treatment outcomes of African American men with prostate cancer, inequalities in treatment for CVD risk factors between men and women). It is preferable to stratify measures by race and socioeconomic status rather than adjusting out differences.

2d
CO
PO
MO
NO
NAO

2e
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NO
NAO

based on a minimum of 30 cases in the outcome of interest. Then a stepwise regression process on a development sample is used to select a parsimonious set of covariates where $p<.05$. Model is then tested on a validation sample	
2e.3 Testing Results (risk model performance metrics): c 0.832	
2e.4 If outcome or resource use measure is not risk adjusted, provide rationale: Not applicable	
2f. Identification of Meaningful Differences in Performance	
2f.1 Data/sample from Testing or Current Use (description of data/sample and size): AHRQ 2007 State Inpatient Databases (SID) with 3,500 hospitals and 6 million pediatric discharges	
2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance (type of analysis & rationale): Posterior probability distribution parameterized using the Gamma distribution	
2f.3 Provide Measure Scores from Testing or Current Use (description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance):	2f CO PO MO NO
5th 25th Median 75th 95th 0.000699 0.001343 0.001981 0.002797 0.004314	
2g. Comparability of Multiple Data Sources/Methods	
2g.1 Data/sample (description of data/sample and size): Not applicable	
2g.2 Analytic Method (type of analysis & rationale): Not applicable	2g CO PO MO NO NAO
2g.3 Testing Results (e.g., correlation statistics, comparison of rankings): Not applicable	
2h. Disparities in Care	
2h.1 If measure is stratified, provide stratified results (scores by stratified categories/cohorts): [1] Although we did find overall disparities in care, we found that indicators for blacks, Hispanics, and Asians were not statistically worse than corresponding quality indicators for whites in the same hospital. Only a few hospitals provide lower quality of care to minorities than to whites.	
References [1] Darrell J. Gaskin, Christine S. Spencer, Patrick Richard, Gerard F. Anderson, Neil R. Powe and Thomas A. LaVeist. Do Hospitals Provide Lower-Quality Care To Minorities Than To Whites? Health Affairs, 27, no. 2 (2008): 518-527 doi: 10.1377/hlthaff.27.2.518	
2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans: Users may stratify based on gender and race/ethnicity	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for Scientific Acceptability of Measure Properties?	
Steering Committee: Overall, to what extent was the criterion, Scientific Acceptability of Measure Properties, met? Rationale:	
3. USABILITY	

Comment [KP]: 2f. Data analysis demonstrates that methods for scoring and analysis of the specified measure allow for identification of statistically significant and practically/clinically meaningful differences in performance.

Comment [k]: 14 With large enough sample sizes, small differences that are statistically significant may or may not be practically or clinically meaningful. The substantive question may be, for example, whether a statistically significant difference of one percentage point in the percentage of patients who received smoking cessation counseling (e.g., 74% v. 75%) is clinically meaningful; or whether a statistically significant difference of \$25 in cost for an episode of care (e.g., \$5,000 v. \$5,025) is practically meaningful. Measures with overall poor performance may not demonstrate much variability across providers.

Comment [KP]: 2g. If multiple data sources/methods are allowed, there is demonstration they produce comparable results.

Comment [KP]: 2h. If disparities in care have been identified, measure specifications, scoring, and analysis allow for identification of disparities through stratification of results (e.g., by race, ethnicity, socioeconomic status, gender); OR rationale/data justifies why stratification is not necessary or not feasible.

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	Eval Rating
<p>3a. Meaningful, Understandable, and Useful Information</p> <p>3a.1 Current Use: In use</p> <p>3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large) (If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years):</p> <p>Illinois (state) Illinois Hospital Report Card and Consumer Guide to Health Care http://www.healthcarereportcard.illinois.gov/</p> <p>Iowa (Iowa Healthcare Collaborative) Iowa Healthcare Collaborative http://www.ihconline.org/asp/publicreporting/iowareport.aspx</p> <p>Kentucky (Norton Healthcare, a hospital system) Norton Healthcare Quality Report http://www.nortonhealthcare.com/body.cfm?id=157</p> <p>Kentucky (state hospital association) Kentucky Hospital Association Quality Data http://info.kyha.com/QualityData/IQISite/</p> <p>Louisiana (state) Louisiana Health Finder http://www.healthfinderla.gov/default.aspx</p> <p>Maine (state) Maine Health Data Organization http://gateway.maine.gov/mhdo2008Monahrq/home.html</p> <p>Minnesota (Minnesota Community Measurement) Minnesota Health Scores www.mnhealthscores.org</p> <p>New Jersey (state) Find and Compare Quality Care in NJ Hospitals http://www.nj.gov/health/healthcarequality/</p> <p>New York (health care coalition) New York State Hospital Report Card http://www.myhealthfinder.com/</p> <p>Oklahoma (state) Oklahoma Hospital Report http://www.ok.gov/health/documents/08%20Hospital%20AR.pdf</p> <p>Washington (health care coalition) Washington State Hospital Report Card http://www.myhealthfinder.com/wa09/index.php</p> <p>The measure is also reported on HCUPnet: http://hcupnet.ahrq.gov/HCUPnet.jsp?Id=EB57801381F71C41&Form=MAINSEL&JS=Y&Action=%3E%3ENext%3E%3E&_MAINSEL=AHQ%20Quality%20Indicators</p>	<p>3a C P M N</p>

Comment [KP]: 3a. Demonstration that information produced by the measure is meaningful, understandable, and useful to the intended audience(s) for both public reporting (e.g., focus group, cognitive testing) and informing quality improvement (e.g., quality improvement initiatives). An important outcome that may not have an identified improvement strategy still can be useful for informing quality improvement by identifying the need for and stimulating new approaches to improvement.

This measure is used in the MONAHRQ system that is provided for public reporting and quality improvement throughout the United States: <http://monahrq.ahrq.gov/>

3a.3 If used in other programs/initiatives (*If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years*):

University Healthcare Consortium - An alliance of 103 academic medical centers and 219 of their affiliated hospitals. Reporting the AHRQ QIs to their member hospitals. (see www.uhc.edu. Note: measure results reported to hospitals; not reported on site).

Dallas Fort Worth Hospital Council - Reporting on measure results to over 70 hospitals in Texas (see www.dfwhc.org. Note: measure results reported to hospitals; not reported on site).

Norton Healthcare - a multi-hospital system in Kentucky (see

http://www.nortonhealthcare.com/about/Our_Performance/index.aspx)

Ministry Health Care - a multi-hospital system in Wisconsin (see

<http://ministryhealth.org/display/router.aspx>. Note: measure results reported to hospitals; not reported on site).

Minnesota Hospital Association

<http://www.mnhospitals.org/> Note: measure used in quality improvement. Not reported publicly by the association)

Premier - Premier's "Quality Advisor" tool provides performance reports to approximately 650 hospitals for their use in monitoring and improving quality. Hospitals receive facility specific reports on this measure in Quality Advisor.

This measure is used in the MONAHRQ system that is provided for public reporting and quality improvement throughout the United States: <http://monahrq.ahrq.gov/>

Testing of Interpretability (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*)

3a.4 Data/sample (*description of data/sample and size*): AHRQ 2007 State Inpatient Databases (SID) with 4,000 hospitals and 30 million adult discharges

3a.5 Methods (*e.g., focus group, survey, QI project*):

A research team from the School of Public Affairs, Baruch College, under contracts with the Department of Public Health, Weill Medical College and Battelle, Inc., has developed a pair of Hospital Quality Model Reports at the request of the Agency for Healthcare Research & Quality (AHRQ). These reports are designed specifically to report comparative information on hospital performance based on the AHRQ Quality Indicators (QIs). The work was done in close collaboration with AHRQ staff and the AHRQ Quality Indicators team.

The Model Reports (discussed immediately above) are based on:

- Extensive search and analysis of the literature on hospital quality measurement and reporting, as well as public reporting on health care quality more broadly;
- Interviews with quality measurement and reporting experts, purchasers, staff of purchasing coalitions, and executives of integrated health care delivery systems who are responsible for quality in their facilities;
- Two focus groups with chief medical officers of hospitals and/or systems and two focus groups with quality managers from a broad mix of hospitals;
- Four focus groups with members of the public who had recently experienced a hospital admission; and
- Four rounds of cognitive interviews (a total of 62 interviews) to test draft versions of the two Model Reports with members of the public with recent hospital experience, basic computer literacy but widely varying levels of education.

3a.6 Results (*qualitative and/or quantitative results and conclusions*):

Given the above review of the literature and original research that was conducted, a Model report was the result that could help sponsors use the best evidence on public reports so they are most likely to have the

desired effects on quality	
3b/3c. Relation to other NQF-endorsed measures	
3b.1 NQF # and Title of similar or related measures:	
(for NQF staff use) Notes on similar/related endorsed or submitted measures:	
3b. Harmonization	3b
If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population):	CO
3b.2 Are the measure specifications harmonized ? If not, why?	PO
	MO
	NO
	NAO
3c. Distinctive or Additive Value	
3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:	3c
	CO
	PO
	MO
	NO
	NAO
5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality: No competing measure found.	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for <i>Usability</i> ?	3
Steering Committee: Overall, to what extent was the criterion, <i>Usability</i> , met?	3
Rationale:	CO
	PO
	MO
	NO
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	Eval Rating
4a. Data Generated as a Byproduct of Care Processes	4a
	CO
4a.1-2 How are the data elements that are needed to compute measure scores generated? Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)	PO
	MO
	NO
4b. Electronic Sources	
4b.1 Are all the data elements available electronically? (<i>elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims</i>) Yes	4b
	CO
	PO
	MO
	NO
4b.2 If not, specify the near-term path to achieve electronic capture by most providers.	
	NO
4c. Exclusions	
4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications? No	4c
	CO
	PO
	MO
	NO
	NAO
4c.2 If yes, provide justification.	
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences	4d
	CO

Comment [KP]: 3b. The measure specifications are harmonized with other measures, and are applicable to multiple levels and settings.

Comment [k]: 16 Measure harmonization refers to the standardization of specifications for similar measures on the same topic (e.g., *influenza immunization* of patients in hospitals or nursing homes), or related measures for the same target population (e.g., eye exam and HbA1c for *patients with diabetes*), or definitions applicable to

Comment [KP]: 3c. Review of existing endorsed measures and measure sets demonstrates that the measure provides a distinctive or additive value to existing NQF-endorsed measures (e.g., provides a more complete picture of quality for a particular condition or aspect of healthcare, is a more valid or efficient way to measure).

Comment [KP]: 4a. For clinical measures, required data elements are routinely generated concurrent with and as a byproduct of care processes during care delivery. (e.g., BP recorded in the electronic record, not abstracted from the record later by other personnel; patient self-assessment tools, e.g., depression scale; lab values, etc.)

Comment [KP]: 4b. The required data elements are available in electronic sources. If the required data are not in existing electronic sources, a credible, near-term path to electronic collection by most providers is specified and clinical data elements are specified for transition to the electronic health record.

Comment [KP]: 4c. Exclusions should not require additional data sources beyond what is required for scoring the measure (e.g., numerator and denominator) unless justified as supporting measure validity.

Comment [KP]: 4d. Susceptibility to inaccuracies, errors, or unintended consequences and the ability to audit the data items to detect such problems are identified.

4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results. Coding professionals follow detail guidelines, are subject to training and credentialing requirements, peer review and audit.	P M N
4e. Data Collection Strategy/Implementation	
4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues: Coding professionals follow detail guidelines, are subject to training and credentialing requirements, peer review and audit.	
4e.2 Costs to implement the measure (<i>costs of data collection, fees associated with proprietary measures</i>): Administrative data are collected as part of the routine operations. Some staff time is required to download and execute the software from the AHRQ webs site, which is available at no cost. The software for calculating the measure is available for free at: http://www.qualityindicators.ahrq.gov/software.htm	
4e.3 Evidence for costs: All data necessary to calculate this measure are routinely collected for hospital administrative purposes. The software for calculating the measure is available for free at: http://www.qualityindicators.ahrq.gov/software.htm	4e C P M N
4e.4 Business case documentation: All data necessary to calculate this measure are routinely collected for hospital administrative purposes. The software for calculating the measure is available for free at: http://www.qualityindicators.ahrq.gov/software.htm	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for Feasibility?	4
Steering Committee: Overall, to what extent was the criterion, <i>Feasibility</i> , met? Rationale:	4 C P M N
RECOMMENDATION	
(for NQF staff use) Check if measure is untested and only eligible for time-limited endorsement.	Time-limited O
Steering Committee: Do you recommend for endorsement? Comments:	Y N A
CONTACT INFORMATION	
Co.1 Measure Steward (Intellectual Property Owner) Co.1 <u>Organization</u> Agency for Healthcare Research and Quality, 540 Gaither Road, Rockville, Maryland, 20850	
Co.2 <u>Point of Contact</u> John, Bott, Contractor, AHRQ Quality Indicators Measure Expert Center for Delivery, Organization and Markets, John.Bott@ahrq.hhs.gov, 301-427-1317-	
Measure Developer If different from Measure Steward Co.3 <u>Organization</u> Agency for Healthcare Research and Quality, 540 Gaither Road, Rockville, Maryland, 20850	

Comment [KP]: 4e. Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, etc.) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use).

Co.4 Point of Contact John, Bott, MSSW, MBA, John.Bott@AHRQ.hhs.gov, 301-427-1317-
Co.5 Submitter If different from Measure Steward POC John, Bott, MSSW, MBA, John.Bott@AHRQ.hhs.gov, 301-427-1317-, Agency for Healthcare Research and Quality
Co.6 Additional organizations that sponsored/participated in measure development UC Davis, Stanford University, Battelle Memorial Institute
ADDITIONAL INFORMATION
Workgroup/Expert Panel involved in measure development Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development. None
Ad.2 If adapted, provide name of original measure: None Ad.3-5 If adapted, provide original specifications URL or attachment
Measure Developer/Steward Updates and Ongoing Maintenance Ad.6 Year the measure was first released: 2003 Ad.7 Month and Year of most recent revision: 10, 2010 Ad.8 What is your frequency for review/update of this measure? Annual Ad.9 When is the next scheduled review/update for this measure? 05, 2011
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