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.
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. *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.* 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☐ N☐
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	**B** Y☐

every 3 years. Yes, information provided in contact section	N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement	**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):	

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.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 useful metric for measuring quality as well quality improvement. 1b.2 **Summary of data demonstrating performance gap (variation or overall poor performance) across**	**1b** C☐ P☐ M☐ N☐

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
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
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 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.

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• 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	
Extent to which the measure, as specified, 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. Precisely Specified**	**2a-specs** **C☐**

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 procuedure code for reclosure of postoperative disruption of abdominal wall procedure.

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.

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.

ICD-9-CM Reclosure procedure code:
5461
RECLOSURE OF POSTOPERATIVE DISRUPTION OF ABDOMINAL WALL

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured*):
All abdominopelvic surgical discharges age 18 and older.

2a.5 Target population gender: Female, Male
2a.6 Target population age range: 18 and older

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.

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
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

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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
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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
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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

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DILATION OF PYLORUS BY INCISION
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OTHER PYLOROPLASTY
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HIGH GASTRIC BYPASS
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SUTURE OF PEPTIC ULCER, NOS
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SUTURE OF GASTRIC ULCER SITE
4442
SUTURE OF DUODENAL ULCER SITE
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CLOSURE OF OTHER GASTRIC FISTULA
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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
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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
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OTHER FIXATION OF LARGE INTESTINE
4672
CLOSURE OF FISTULA OF DUODENUM
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CLOSURE OF FISTULA OF SMALL INTESTINE, EXCEPT DUODENUM
4676
CLOSURE OF FISTULA OF LARGE INTESTINE
4680
INTRA-ABDOMINAL MANIPULATION OF INTESTINE, NOS
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INTRA-ABDOMINAL MANIPULATION OF SMALL INTESTINE
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INTRA-ABDOMINAL MANIPULATION OF LARGE INTESTINE
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MYOTOMY OF SIGMOID COLON
4692
MYOTOMY OF OTHER PARTS OF COLON
4693
REVISION OF ANASTOMOSIS OF SMALL INTESTINE
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REVISION OF ANASTOMOSIS OF LARGE INTESTINE
4699
OTHER OPERATIONS ON INTESTINES
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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 PANCREATICODUODENECTOMY
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 REGECTED 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 UNLILATERAL 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-
261
NUTRITIONAL MARASMUS OCT05-
262
OTH SEVERE MALNUTRITION OCT05-
23873
HI GRDE MYELODYS 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 MYELODYS 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-

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 MAROW AND SPLEEN
4100
BONE MARROW TRNSPLNT NOS
4101
AUTO BONE MT W/O PURG
4102
ALO BONE MARROW TRNSPLNT
4103
ALLOGRFT BONE MARROW NOS
4104
AUTO HEM STEM CT 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
ALLOTRANSPLANTATION OF CELLS OF ISLETS OF LNGERHANS
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

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) 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

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.

2a.23 Sampling (Survey) Methodology *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)*:
Not applicable

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested***)**
Electronic administrative data/claims

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
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.

2a.26-28 Data source/data collection instrument reference web page URL or attachment: URL None
http://www.qualityindicators.ahrq.gov/software.htm

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

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Facility/Agency

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Hospital

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)
Clinicians: Physicians (MD/DO)

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)*: The PSIs were applied to all acute inpatient hospitalizations at Veterans Health Administration (VA) facilities in fiscal 2001. [2]

2b.2 Analytic Method *(type of reliability & rationale, method for testing)*:
AHRQ PSI's applied to 5,000 non-federal hospitals. [1]

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]

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, Shibei 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 Res Rev. 2008 Feb;65(1):67-87. PMID: 18184870.

2b C☐ P☐ M☐ N☐

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]

2c C☐ P☐ M☐ N☐

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]

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

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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 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

2e
C☐ P☐ M☐ N☐ NA☐

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)*:

5th	25th	Median	75th	95th
0.000699	0.001343	0.001981	0.002797	0.004314

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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.3 Testing Results *(e.g., correlation statistics, comparison of rankings)*:
Not applicable

2g
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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.

2h
C☐ P☐ M☐ N☐ NA

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?*

2

Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met?
Rationale:

2
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P ☐
M ☐
N ☐

3. USABILITY

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

3a. Meaningful, Understandable, and Useful Information

3a.1 Current Use: In use

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*)**:**
Illinois (state)
Illinois Hospital Report Card and Consumer Guide to Health Care
http://www.healthcarereportcard.illinois.gov/

Iowa (Iowa Healthcare Collaborative)
Iowa Healthcare Collaborative
http://www.ihconline.org/aspx/publicreporting/iowareport.aspx

Kentucky (Norton Healthcare, a hospital system)
Norton Healthcare Quality Report
http://www.nortonhealthcare.com/body.cfm?id=157

Kentucky (state hospital association)
Kentucky Hospital Association Quality Data
http://info.kyha.com/QualityData/IQISite/

Louisiana (state)
Louisiana Health Finder
http://www.healthfinderla.gov/default.aspx
Maine (state)
Maine Health Data Organization
http://gateway.maine.gov/mhdo2008Monahrq/home.html

Minnesota (Minnesota Community Measurement)
Minnesota Health Scores
www.mnhealthscores.org

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New Jersey (state)
Find and Compare Quality Care in NJ Hospitals
http://www.nj.gov/health/healthcarequality/

New York (health care coalition)
New York State Hospital Report Card
http://www.myhealthfinder.com/

Oklahoma (state)
Oklahoma Hospital Report
http://www.ok.gov/health/documents/08%20Hospital%20AR.pdf

Washington (health care coalition)
Washington State Hospital Report Card
http://www.myhealthfinder.com/wa09/index.php

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=AHRQ%20Quality%20Indicators

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.ord. 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 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): 3b.2 **Are the measure specifications harmonized? If not, why?**	**3b** C☐ P☐ M☐ N☐ NA ☐
3c. Distinctive or Additive Value 3c.1 **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** 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.	**3c** C☐ P☐ M☐ N☐ NA ☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
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.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	**4a** C☐ P☐ M☐

codes on claims, chart abstraction for quality measure or registry)	N☐
4b. Electronic Sources **4b.1 Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) Yes **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.**	**4b** C☐ P☐ M☐ N☐
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No **4c.2 If yes, provide justification.**	**4c** C☐ P☐ M☐ N☐ NA ☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **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.	**4d** C☐ 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** (*costs of data collection, fees associated with proprietary measures*)**:** 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.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	**4e** C☐ P☐ M☐ N☐
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, *Feasibility*, 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**

	☐
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y**☐ **N**☐ **A**☐

CONTACT INFORMATION

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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

Ad.10 Copyright statement/disclaimers: The AHRQ QI software is publicly available; no copyright disclaimers

Ad.11 -13 Additional Information web page URL or attachment:

Date of Submission (*MM/DD/YY*)**:** 04/05/2011