AHRQ Quality Indicators[TM]

Comparison of Observed Rates of All Indicators between ICD-10-CM/PCS v2018 and v2019

Prepared for:

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Introduction

The data presented in this document are comparisons of nationwide observed rates for all Quality Indicators^TM (QIs) by module, comparing Agency for Healthcare Research and Quality (AHRQ) QI SAS® Software Version 2018 to Version 2019 for ICD-10-CM/PCS. The rates for v2018 and v2019 of the software are based on analysis States from AHRQ's 2016 Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID).[1]

HCUP is a family of powerful health care databases, software tools, and products for advancing research. Sponsored by the Agency for Healthcare Research and Quality (AHRQ), HCUP includes the largest all-payer encounter-level collection of longitudinal health care data (inpatient, ambulatory surgery, and emergency department) in the United States, beginning in 1988. HCUP is a Federal-State-Industry Partnership that brings together the data collection efforts of many organizations-such as State data organizations, hospital associations, private data organizations, and the Federal government-to create a national information resource.

The analytic dataset used to generate the tables in this document consists of the same hospital discharge records that comprise the reference population for Version 2019 of the AHRQ QI software. This reference population file was limited to community hospitals and also excludes rehabilitation and long-term acute care (LTAC) hospitals. Information on the type of hospital was obtained by the American Hospital Association (AHA) Annual Survey of Hospitals. The AHA defines community hospitals as "all non-Federal, short-term, general, and other specialty hospitals, excluding hospital units of institutions." Included among community hospitals are specialty hospitals such as obstetrics-gynecology, ear-nose-throat, orthopedic, and pediatric institutions. Also included are public hospitals and academic medical centers.

The 2016 HCUP SID includes information on all inpatient discharges from hospitals in 48 participating states.[2] In 2016, 45 of the SID include indicators of the diagnoses being present on

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[1] Reference: Healthcare Cost and Utilization Project (HCUP) 2016 State Inpatient Databases (SID). Agency for Healthcare Research and Quality, Rockville, MD.

[2] The AHRQ QI program would like to acknowledge the HCUP Partner organizations that participated in the HCUP SID: Alaska State Hospital and Nursing Home Association, Arizona Department of Health Services, Arkansas Department of Health, California Office of Statewide Health Planning and Development, Colorado Hospital Association, Connecticut Hospital Association, Delaware Division of Public Health, District of Columbia Hospital Association, District of Columbia Hospital Association, Florida Agency for Health Care Administration, Georgia Hospital Association, Hawaii Health Information Corporation, Illinois Department of Public Health, Indiana Hospital Association, Iowa Hospital Association, Kansas Hospital Association, Kentucky Cabinet for Health and Family Services, Louisiana Department of Health and Hospitals, Maine Health Data Organization, Maryland Health Services Cost Review Commission, Massachusetts Center for Health Information and Analysis, Michigan Health & Hospital Association, Minnesota Hospital Association (provides data for Minnesota and North Dakota), Mississippi Department of Health, Missouri Hospital Industry Data Institute, Montana MHA - An Association of Montana Health Care Providers, Nebraska Hospital Association, Nevada Department of Health and Human Services, New Hampshire Department of Health & Human Services, New Jersey Department of Health, New Mexico Department

admission (POA) and included the PRDAY data element.3 Edit checks on POA were developed during an HCUP evaluation of POA coding in the 2011 SID at hospitals that were required to report POA to CMS. The edits identify general patterns of suspect reporting of POA. The edits do not evaluate whether a valid POA value (e.g., Y or N) is appropriate for the specific diagnosis. There are three hospital-level edit checks:

1. Indication that a hospital has POA reported as Y on all diagnoses on all discharges
2. Indication that a hospital has POA reported as missing on all non-Medicare discharges
3. Indication that a hospital reported POA as missing on all nonexempt diagnoses for 15 percent or more of discharges. The cut-point of 15 percent was determined by 2 times the standard deviation plus the mean of the percentage for hospitals that are required to report POA to Centers for Medicare & Medicaid Services (CMS).

Additional information on the reference population and the risk adjustment process may be found in Quality Indicator Empirical Methods, available on the AHRQ QITM website (http://www.qualityindicators.ahrq.gov/modules/Default.aspx).

The QI observed rates for hospital-level indicators are scaled to the rate per 1,000 persons at risk and the area-level indicators are per 100,000 population. Volume and count indicator results are listed as simple counts with no scaling at all. Cell sizes less than 11 are suppressed due to confidentiality; and are designated by an asterisk (*). When only one datapoint in a series must be suppressed due to cell sizes, another datapoint is provided as a range to disallow calculation of the masked variable. In some cases, numerators, denominators or rates are not applicable for the category due to the exclusion criteria in the specification of the indicator, and are designated by dashes (--).

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of Health, New York State Department of Health, North Carolina Department of Health and Human Services, North Dakota (data provided by the Minnesota Hospital Association), Ohio Hospital Association, Oklahoma State Department of Health, Oregon Association of Hospitals and Health Systems, Oregon Office of Health Analytics, Pennsylvania Health Care Cost Containment Council, Rhode Island Department of Health, South Carolina Revenue and Fiscal Affairs Office, South Dakota Association of Healthcare Organizations, Tennessee Hospital Association, Texas Department of State Health Services, Utah Department of Health, Vermont Association of Hospitals and Health Systems, Virginia Health Information, Washington State Department of Health, West Virginia Health Care Authority, Wisconsin Department of Health Services, Wyoming Hospital Association.

[3] States in the POA reference population for 2013 include: AK, AR, AZ, CA, CO, CT, DC, DE, FL, GA, HI, IA, IL, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MT, NC, ND, NE, NJ, NM, NV, NY, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY.

Table 1. Prevention Quality Indicators (PQIs) Comparison of Observed Rates: v2018 and v2019 for ICD-10-CM/PCS

INDICATOR	LABEL	RATIO OF OBSERVED RATES (v2019/v2018)	v2019 OBSERVED RATE PER 100,000	v2018 OBSERVED RATE PER 100,000
PQI 01	Diabetes Short-Term Complications Admission Rate	1.00	47.58	47.10
PQI 03	Diabetes Long-Term Complications Admission Rate	1.00	77.48	76.70
PQI 05	Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate	1.00	413.03	408.20
PQI 07	Hypertension Admission Rate	1.00	46.39	45.90
PQI 08	Heart Failure Admission Rate	1.00	365.14	361.30
PQI 11	Community-Acquired Pneumonia Admission Rate	1.00	201.17	199.10
PQI 12	Urinary Tract Infection Admission Rate	1.00	141.81	140.30
PQI 14	Uncontrolled Diabetes Admission Rate	1.00	41.60	41.20
PQI 15	Asthma in Younger Adults Admission Rate	1.00	30.62	30.40
PQI 16	Lower-Extremity Amputation among Patients with Diabetes Rate	1.00	24.36	24.10
PQI 90	Prevention Quality Overall Composite	1.00	1,200.39	1,187.80
PQI 91	Prevention Quality Acute Composite	1.00	342.96	339.40
PQI 92	Prevention Quality Chronic Composite	1.00	857.57	848.60
PQI 93	Prevention Quality Diabetes Composite	1.00	180.92	179.00

Note: 2018 Census population file was used in generating IQI observed rates

Table 2. Patient Safety Indicators (PSIs) Comparison of Observed Rates: v2018 and v2019 for ICD-10-CM/PCS

INDICATOR	LABEL	RATIO OF OBSERVED RATES (v2019/v2018)	v2019 OBSERVED RATE PER 1,000	v2018 OBSERVED RATE PER 1,000
PSI 02	Death Rate in Low-Mortality Diagnosis Related Groups (DRGs)	1.00	0.21	0.21
PSI 03	Pressure Ulcer Rate	1.00	0.51	0.51
PSI 04	Death Rate among Surgical Inpatients with Serious Treatable Complications	1.00	146.36	146.55
PSI 04_DVT_PE	Stratum: DVT_PE	0.99	43.55	43.81
PSI 04_PNEUMONIA	Stratum: PNEUMONIA	0.99	89.84	90.53
PSI 04_SEPSIS	Stratum: SEPSIS	1.01	223.59	221.88
PSI 04_SHOCK	Stratum: SHOCK	1.00	331.71	332.29
PSI 04_GIHEMORRHAGE	Stratum: GIHEMORRHAGE	1.00	88.18	88.40
PSI 05[a]	Retained Surgical Item or Unretrieved Device Fragment Count	1.00	694	694
PSI 06	Iatrogenic Pneumothorax Rate	1.00	0.21	0.21
PSI 07	Central Venous Catheter-Related Blood Stream Infection Rate	1.00	0.12	0.12
PSI 08	In Hospital Fall with Hip Fracture Rate	1.00	0.08	0.08
PSI 09	Perioperative Hemorrhage or Hematoma Rate	1.00	2.29	2.30
PSI 10	Postoperative Acute Kidney Injury Requiring Dialysis Rate	0.99	0.73	0.74
PSI 11	Postoperative Respiratory Failure Rate	1.00	5.53	5.55
PSI 12	Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate	1.00	3.45	3.45
PSI 13	Postoperative Sepsis Rate	1.00	4.05	4.04
PSI 14	Postoperative Wound Dehiscence Rate	0.99	0.69	0.70
PSI 14_OPEN	Stratum: OPEN	0.99	1.44	1.46
PSI 14_NONOPEN	Stratum: NONOPEN	1.00	0.04	0.04
PSI 15	Unrecognized Abdominopelvic Accidental Puncture or Laceration Rate	1.02	1.06	1.04
PSI 17	Birth Trauma Rate – Injury to Neonate	1.00	4.63	4.63

INDICATOR	LABEL	RATIO OF OBSERVED RATES (v2019/v2018)	v2019 OBSERVED RATE PER 1,000	v2018 OBSERVED RATE PER 1,000
PSI 18	Obstetric Trauma Rate – Vaginal Delivery with Instrument	1.00	109.90	109.9
PSI 19	Obstetric Trauma Rate – Vaginal Delivery without Instrument	1.00	17.30	17.30

a PSI 05 (Retained Surgical Item or Unretrieved Device Fragment Count) is a count, not a rate. Therefore, the observed values for PSI 05 are counts.

Table 3. Inpatient Quality Indicators (IQIs) Comparison of Observed Rates: v2018 and v2019 for ICD-10-CM

INDICATOR	LABEL	RATIO OF OBSERVED RATES (v2019/v2018)	v2019 OBSERVED RATE PER 1,000	v2018 OBSERVED RATE PER 1,000
IQI 08	Esophageal Resection Mortality Rate	1.00	37.87	37.87
IQI 09	Pancreatic Resection Mortality Rate	1.00	24.14	24.14
IQI 09_WITH_CANCER	Stratum: WITH_CANCER	1.00	23.24	23.24
IQI 09_WITHOUT_CANCER	Stratum: WITHOUT_CANCER	1.00	25.19	25.19
IQI 11	Abdominal Aortic Aneurysm (AAA) Repair Mortality Rate	1.00	36.75	36.75
IQI 11_ OPEN_RUPTURED	Stratum: OPEN_RUPTURED	1.00	353.42	353.42
IQI 11_ OPEN_UNRUPTURED	Stratum: OPEN_UNRUPTURED	1.00	55.51	55.51
IQI 11_ ENDO_RUPTURED	Stratum: ENDO_RUPTURED	1.00	213.50	213.50
IQI 11_ ENDO_UNRUPTURED	Stratum: ENDO_UNRUPTURED	1.00	7.33	7.33
IQI 12	Coronary Artery Bypass Graft (CABG) Mortality Rate	1.00	23.85	23.85
IQI 15	Acute Myocardial Infarction (AMI) Mortality Rate	1.00	50.96	50.96
IQI 16	Heart Failure Mortality Rate	1.00	27.99	27.99
IQI 17	Acute Stroke Mortality Rate	1.00	74.04	74.04
IQI 17_ HEMSTROKE_SUBARACH	Stratum: HEMSTROKE_SUBARACH	1.00	203.37	203.37
IQI 17_ HEMSTROKE_INTRACER	Stratum: HEMSTROKE_INTRACER	1.00	201.79	201.79
IQI 17_ISCHEMSTROKE	Stratum: ISCHEMSTROKE	1.00	41.68	41.68
IQI 18	Gastrointestinal Hemorrhage Mortality Rate	1.00	23.76	23.76

INDICATOR	LABEL	RATIO OF OBSERVED RATES (v2019/v2018)	v2019 OBSERVED RATE PER 1,000	v2018 OBSERVED RATE PER 1,000
IQI 19	Hip Fracture Mortality Rate	1.00	21.63	21.63
IQI 20	Pneumonia Mortality Rate	1.00	27.14	27.14
IQI 21	Cesarean Delivery Rate, Uncomplicated	1.00	292.79	292.79
IQI 22	Vaginal Birth After Cesarean (VBAC) Delivery Rate, Uncomplicated	1.00	121.11	121.11
IQI 30	Percutaneous Coronary Intervention (PCI) Mortality Rate	1.00	28.10	28.10
IQI 31	Carotid Endarterectomy Mortality Rate	1.00	3.90	3.90
IQI 32	Acute Myocardial Infarction (AMI) Mortality Rate, Without Transfer Cases	1.00	51.48	51.48
IQI 33	Primary Cesarean Delivery Rate, Uncomplicated	1.00	166.48	166.48
IQI 34	Vaginal Birth After Cesarean (VBAC) Rate	1.00	120.06	120.06

Table 4. Pediatric Quality Indicators (PDIs) Comparison of Observed Rates: v2018 and v2019 for ICD-10-CM

INDICATOR	LABEL	RATIO OF OBSERVED RATES (v2019/v2018)	v2019 OBSERVED RATE PER 1,000	v2018 OBSERVED RATE PER 1,000
HOSPITAL-LEVEL INDICATORS				
NQI 03	Neonatal Blood Stream Infection Rate	1.00	15.62	15.62
PDI 01	Accidental Puncture or Laceration Rate	1.00	0.34	0.34
PDI 05	Iatrogenic Pneumothorax Rate	1.00	0.11	0.11
PDI 08	Perioperative Hemorrhage or Hematoma Rate	1.01	2.54	2.51
PDI 09	Postoperative Respiratory Failure Rate	1.00	12.35	12.30
PDI 10	Postoperative Sepsis Rate	1.00	7.70	7.71
PDI 12	Central Venous Catheter-Related Blood Stream Infection Rate	1.00	0.50	0.50
AREA-LEVEL INDICATORS				
PDI 14	Asthma Admission Rate	1.00	85.36	85.40
PDI 15	Diabetes Short-Term Complications Admission Rate	1.00	25.64	25.60
PDI 16	Gastroenteritis Admission Rate	1.00	34.63	34.60
PDI 18	Urinary Tract Infection Admission Rate	1.00	21.43	21.40
PDI 90	Pediatric Quality Overall Composite	1.00	115.39	115.40
PDI 91	Pediatric Quality Acute Composite	1.00	29.80	29.80
PDI 92	Pediatric Quality Chronic Composite	1.00	85.59	85.60