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| **Indicatore** | **Descrizione** | **Numeratore** | **Denominatore**  Exclude cases: transferring to another short-term hospital OR DRG (pregnancy, childbirth, and puerperium) OR with missing discharge disposition, gender, age, quarter, year or principal diagnosis |
| **IN-HOSPITAL INDICATORS** | | | |
| IQI 08  Esophageal Resection Mortality Rate | In-hospital deaths per 1,000 discharges with esophageal resection for cancer, ages 18 years and older.  Excludes obstetric discharges and transfers to another hospital. | Number of deaths among cases meeting the inclusion and exclusion rules for the denominator. | Discharges, for patients ages **18** years and older, with either:   1. any-listed ICD-9-CM procedure codes for esophageal resection (PRESOPP\_IQI) and any-listed ICD-9-CM diagnosis codes for esophageal cancer (PRESOPD) 2. any-listed ICD-9-CM procedure codes for esophageal resection (PRESOPP\_IQI) and any-listed ICD-9-CM diagnosis codes for gastrointestinal-related cancer (PRESO2D) 3. any-listed ICD-9-CM procedure codes for total gastrectomy (PRESO2P) and any-listed ICD-9-CM diagnosis codes for esophageal cancer (PRESOPD) |
| IQI 09  Pancreatic Resection Mortality Rate | In-hospital deaths per 1,000 discharges with pancreatic resection, ages 18 years and older. Includes metrics for discharges grouped by type of diagnosis and procedure. Excludes acute pancreatitis discharges, obstetric discharges, and transfers to another hospital. | Number of deaths among cases meeting the inclusion and exclusion rules for the denominator. | **Overall**  Discharges, for patients ages **18** years and older, with any-listed ICD-9-CM procedure codes for partial pancreatic resection or any-listed ICD-9-CM procedure codes for total pancreatic resection (PRPAN3P, PRPANCP).  **Exclude**   * with any-listed ICD-9-CM diagnosis code for acute pancreatitis (PRPAN2D)   **Stratum A: presence of pancreatic cancer**   * any-listed ICD-9-CM procedure codes for partial pancreatic resection (PRPAN3P) and any-listed ICD-9-CM diagnosis codes for pancreatic cancer (PRPANCD) * any-listed ICD-9-CM procedure codes for total pancreatic resection (PRPANCP) and any-listed ICD-9-CM diagnosis codes for pancreatic cancer (PRPANCD)   **Stratum B: absence of pancreatic cancer**   * any-listed ICD-9-CM procedure codes for partial pancreatic resection (PRPAN3P) without any-listed ICD-9-CM diagnosis codes for pancreatic cancer (PRPANCD) * any-listed ICD-9-CM procedure codes for total pancreatic resection (PRPANCP) without any-listed ICD-9-CM diagnosis codes for pancreatic cancer (PRPANCD) |
| IQI 11  Abdominal Aortic Aneurysm (AAA) Repair Mortality Rate | In-hospital deaths per 1,000 discharges with abdominal aortic aneurysm (AAA) repair, ages 18 years and older. Includes metrics for discharges grouped by type of diagnosis and procedure. Excludes obstetric discharges and transfers to another hospital. | Number of deaths among cases meeting the inclusion and exclusion rules for the denominator.  The indicator is stratified into four groups by:   1. type of AAA repair (open vs. endovascular); 2. AAA rupture status. | **Overall**  Discharges, for patients ages **18** years and older, with the following:   * any-listed ICD-9-CM diagnosis codes for ruptured AAA (PRAAARD) and any-listed ICD-9-CM procedure code for open AAA repair (PRAAARP) * any-listed ICD-9-CM diagnosis codes for unruptured AAA (PRAAA2D) and any-listed ICD-9-CM procedure codes for open AAA repair (PRAAARP) * any-listed ICD-9-CM diagnosis codes for ruptured AAA (PRAAARD) and any-listed ICD-10-CM procedure codes for endovascular AAA repair (PRAAA2P) * any-listed ICD-9-CM diagnosis codes for unruptured AAA (PRAAA2D) and any-listed ICD-9-CM procedure codes for endovascular AAA repair (PRAAA2P)   **Stratum A: Open repair of ruptured AAA**   * any-listed ICD-9-CM diagnosis codes for ruptured AAA (PRAAARD) and any-listed ICD-9-CM procedure code for open AAA repair (PRAAARP)   **Stratum B: Open repair of unruptured AAA**   * any-listed ICD-9-CM diagnosis codes for unruptured AAA (PRAAA2D) and any-listed ICD-9-CM procedure codes for open AAA repair (PRAAARP)   **Stratum C: Endovascular repair of ruptured AAA**   * any-listed ICD-9-CM diagnosis codes for ruptured AAA (PRAAARD) and any-listed ICD-10-CM procedure codes for endovascular AAA repair (PRAAA2P)   **Stratum D: Endovascular repair of unruptured AAA**   * any-listed ICD-9-CM diagnosis codes for unruptured AAA (PRAAA2D) and any-listed ICD-9-CM procedure codes for endovascular AAA repair (PRAAA2P) |
| IQI 12  Coronary Artery Bypass Graft (CABG) Mortality Rate | In-hospital deaths per 1,000 discharges with coronary artery bypass graft (CABG), ages 40 years and older. Excludes obstetric discharges and transfers to another hospital. | Number of deaths among cases meeting the inclusion and exclusion rules for the denominator. | Discharges, for patients ages **40** years and older, with any-listed ICD-9-CM procedure code for CABG (PRCABGP) |
| IQI 15  Acute Myocardial Infarction Mortality Rate | In-hospital deaths per 1,000 hospital discharges with acute myocardial infarction (AMI) as a principal diagnosis for patients ages 18 years and older. Excludes obstetric discharges and transfers to another hospital. | Number of deaths among cases meeting the inclusion and exclusion rules for the denominator. | Discharges, for patients ages **18** years and older, with a principal ICD-9-CM diagnosis code for AMI (MRTAMID) |
| IQI 16  Heart Failure Mortality Rate | In-hospital deaths per 1,000 hospital discharges with heart failure as a principal diagnosis for patients ages 18 years and older. Excludes obstetric discharges and transfers to another hospital. | Number of deaths among cases meeting the inclusion and exclusion rules for the denominator. | Discharges, for patients ages **18** years and older, with a principal ICD-9-CM diagnosis code for heart failure (MRTCHFD)  **Exclude**   * any procedure code for heart transplant (HEARTTRP) |
| IQI 17  Acute Stroke Mortality Rate | In-hospital deaths per 1,000 hospital discharges with acute stroke as a principal diagnosis for patients ages 18 years and older. Includes metrics for discharges grouped by type of stroke. Excludes obstetric discharges and transfers to another hospital. | Number of deaths among cases meeting the inclusion and exclusion rules for the denominator. | Discharges, for patients ages **18** years and older, with a principal ICD-9-CM diagnosis code for stroke (MRTCV2D)  **Stratum A: Subarachnoid hemorrhage**   * discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for subarachnoid hemorrhage (MRTCV2A)   **Stratum B: Intracerebral hemorrhage**   * Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for intracerebral hemorrhage stroke (MRTCV3D)   **Stratum C:Ischemic stroke**   * Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for ischemic stroke (MRTCV4D) |
| IQI 18  Gastrointestinal Hemorrhage Mortality Rate | In-hospital deaths per 1,000 hospital discharges with gastrointestinal hemorrhage as a principal diagnosis for patients age 18 years and older. Excludes obstetric discharges, procedure code for liver transplant, and transfers to another hospital. | Number of deaths among cases meeting the inclusion and exclusion rules for the denominator. | Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for gastrointestinal hemorrhage (MRTGIHD)  **Exclude**   * any procedure code for liver transplant (LIVERTRP) |
| IQI 19  Hip Fracture Mortality Rate | In-hospital deaths per 1,000 hospital discharges with hip fracture as a principal diagnosis for patients ages 65 years and older. Excludes periprosthetic fracture discharges, obstetric discharges, and transfers to another hospital. | Number of deaths among cases meeting the inclusion and exclusion rules for the denominator. | Discharges, for patients ages 65 years and older, with a principal ICD-9-CM diagnosis code for hip fracture (MTHIPFD)  **Exclude**   * any-listed ICD-9-CM diagnosis codes for periprosthetic fracture (MTHIP2D) |
| IQI 20  Pneumonia Mortality Rate | In-hospital deaths per 1,000 hospital discharges with pneumonia as a principal diagnosis for patients ages 18 years and older. Excludes obstetric discharges and transfers to another hospital. | Number of deaths among cases meeting the inclusion and exclusion rules for the denominator. | Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for pneumonia (MTPNEUD) |
| IQI 21  Cesarean Delivery Rate, Uncomplicated | Cesarean deliveries without a hysterotomy procedure per 1,000 deliveries. Excludes deliveries with complications (abnormal presentation, preterm delivery, fetal death, multiple gestation diagnoses, or breech procedure). | Number of Cesarean deliveries among cases meeting the inclusion and exclusion rules for the denominator.  Cesarean deliveries are identified by either:   1. by MS-DRG codes for Cesarean delivery (PRCSE2G) 2. any-listed ICD-9-CM procedure codes for Cesarean delivery (PRCSECP) without any-listed procedure codes for hysterotomy (PRCSE2P) | All deliveries, identified by MS-DRG codes (PRBRT2G)  **Exclude**   * with any-listed ICD-9-CM diagnosis codes for abnormal presentation, preterm, fetal death, or multiple gestation (PRCSECD) * with any-listed ICD-9-CM procedure codes for breech (PRCSE3P) |
| IQI 22  Vaginal Birth After Cesarean (VBAC) Delivery Rate, Uncomplicated | Vaginal births per 1,000 deliveries by patients with previous Cesarean deliveries. Excludes deliveries with complications (abnormal presentation, preterm delivery, fetal death, multiple gestation diagnoses, or breech procedure). | Vaginal deliveries, identified by MS-DRG codes (PRVAG2G) | All deliveries, identified by MS-DRG codes, with any-listed ICD-9-CM diagnosis codes for previous Cesarean delivery (PRBRT2G, PRVBACD)  **Exclude**   * with any-listed ICD-9-CM diagnosis codes for abnormal presentation, preterm, fetal death, or multiple gestation (PRCSECD) * with any-listed ICD-9-CM procedure codes for breech (PRCSE3P) |
| IQI 30  Percutaneous Coronary Intervention (PCI) Mortality Rate | In-hospital deaths per 1,000 percutaneous coronary intervention (PCI) discharges for patients 40 years and older. Excludes obstetric discharges and transfers to another hospital. | Number of deaths among cases meeting the inclusion and exclusion rules for the denominator. | Discharges, for patients ages **40** years and older, with any-listed ICD-9-CM procedure codes for PCI (PRPTCAP) |
| **PEDIATRIC INDICATORS** | | | |
| NQI 02  Neonatal Mortality Rate | In-hospital deaths per 1,000 neonates.  Excludes newborns weighing less than 500 grams; cases with anencephaly, polysystic kidney, trisomy 13 or trisomy 18; and transfers to another hospital. | Number of deaths among cases meeting the inclusion and exclusion rules for the denominator. | All newborn and outborn discharges (LIVEBND, V29D, LIVEB2D).  **Exclude**   * with any-listed ICD-9-CM diagnosis codes for anencephaly, polycystic kidney, trisomy 13, or trisomy 18 (NEOMTDX) * with birth weight less than 500 grams (Birth Weight Category 1) |
| NQI 03  Neonatal Blood Stream Infection Rate | Discharges with healthcare-associated bloodstream infection per 1,000 discharges for newborns and outborns with birth weight of 500 grams or more but less than 1,500 grams; with gestational age between 24 and 30 weeks; or with birth weight of 1,500 grams or more and death, an operating room procedure, mechanical ventilation, or transferring from another hospital within two days of birth. Excludes discharges with a length of stay less than 3 days and discharges with a principal diagnosis of sepsis or bacteremia, or newborn bacteremia. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with either:   * any secondary ICD-9-CM diagnosis codes for other septicemia (BSI1DX, SEPTI2D); * any secondary ICD-9-CM diagnosis codes for newborn septicemia or bacteremia codes requiring a separate organism code and any secondary ICD-9-CM diagnosis codes for staphylococcal or Gram-negative bacterial infection (BSI2DX, BSI3DX) | All newborns and outborns with either:   * a birth weight of 500 to 1,499 grams (Birth Weight Categories 2, 3, 4 and 5) * any-listed ICD-9-CM diagnosis codes for gestational age between 24 and 30 weeks (GESTCAT) * a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and death * a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and any-listed ICD-9-CM procedure codes for operating room procedure * a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and any-listed ICD-9-CM procedure codes for mechanical ventilation (MECHVCD) * a birth weight greater than or equal to 1,500 grams (Birth Weight Category 6, 7, 8, or 9) and transferring from another health care facility within two days of birth   **Exclude**   * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for sepsis, among patients otherwise qualifying for numerator * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for sepsis or bacteremia, among patients otherwise qualifying for numerator * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for staphylococcal or Gram-negative bacterial infection, among patients otherwise qualifying for numerator * with birth weight less than 500 grams (Birth Weight Category 1) * with length of stay less than 3 days |
| PDI 01  Accidental Puncture or Laceration Rate | Accidental punctures or lacerations (secondary diagnosis) during procedure per 1,000 discharges for patients ages 17 years and younger. Includes metrics for discharges grouped by risk category. Excludes obstetric discharges, spinal surgery discharges, discharges with accidental puncture or laceration as a principal diagnosis, discharges with accidental puncture or laceration as a secondary diagnosis that is present on admission, normal newborns, and neonates with birth weight less than 500 grams. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for accidental puncture or laceration during a procedure (TECHNID)   * **Risk Category 1**: Eye, ear, nose, mouth, throat, skin, breast and other low-risk procedures discharges (MDC = 2,3,9,19,22,23), among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for accidental puncture or laceration during a procedure * **Risk Category 2**: Thoracic, cardiovascular, and specified neoplastic procedures discharges (MDC =4,5,17), among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for accidental puncture or laceration during a procedure * **Risk Category 3**: Kidney, and male/female reproductive procedures discharges (MDC =11,12,13), among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for accidental puncture or laceration during a procedure * **Risk Category 4**: Infectious, immunological, hematological, and ungroupable procedures discharges (MDC = 0,16,18,25,99), among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for accidental puncture or laceration during a procedure * **Risk Category 5**: Trauma, orthopedic, and neurologic procedures discharges (MDC = 1,8,21,24), among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for accidental puncture or laceration during a procedure * **Risk Category 6**: Gastrointestinal, hepatobiliary, and endocrine procedures discharges (MDC = 6,7,10), among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for accidental puncture or laceration during a procedure * **Risk Category 9**: Other discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for accidental puncture or laceration during a procedure | Surgical and medical discharges, for patients ages 17 years and younger. Surgical and medical discharges are defined by specific MS-DRG codes   * **Risk Category 1**: Patients otherwise qualifying for overall denominator, with either MDC 2 (eye), MDC 3 (ear, nose, mouth, and throat), MDC 9 (skin, subcutaneous tissue, and breast), MDC 19 (mental diseases and disorders), MDC 22 (burns), or MDC 23 (factors influencing health status). * **Risk Category 2**: Patients otherwise qualifying for overall denominator, with either MDC 4 (respiratory system), MDC 5 (circulatory system), or MDC 17 (myeloproliferative diseases and disorders [poorly differentiated neoplasms]). * **Risk Category 3**: Patients otherwise qualifying for overall denominator, with either MDC 11 (kidney and urinary tract), MDC 12 (male reproductive system), or MDC 13 (female reproductive system). * **Risk Category 4**: Patients otherwise qualifying for overall denominator, with either MDC 0/99 (ungroupable), MDC 16 (blood and blood forming organs and immunological disorders), MDC 18 (infectious and parasitic diseases and disorders), or MDC 25 (human immunodeficiency virus infection). * **Risk Category 5**: Patients otherwise qualifying for overall denominator, with either MDC 1 (nervous system), MDC 8 (musculoskeletal system and connective tissue), MDC 21 (injuries, poison, and toxic effect of drugs), or MDC 24 (multiple significant trauma). * **Risk Category 6**: Patient otherwise qualifying for overall denominator, Surgical and medical discharges, for patients ages 17 years and younger, with either MDC 6 (digestive system), MDC 7 (hepatobiliary system and pancreas), or MDC 10 (endocrine, nutritional, and metabolic system). * **Risk Category 9**: Patients otherwise qualifying for overall denominator, that do not meet the inclusion rules for Risk Category 1 through Risk Category 6.   **Exclude**   * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for accidental puncture or laceration during a procedure * with any-listed ICD-9-PCS procedure codes for spine surgery (SPINEP) * normal newborn * neonate with birth weight less than 500 grams (Birth Weight Category 1) |
| PDI 05  Iatrogenic Pneumothorax Rate | Iatrogenic pneumothorax cases (secondary diagnosis) per 1,000 surgical or medical discharges for patients ages 17 years and younger. Excludes normal newborns; neonates with a birth weight less than 2,500 grams; cases with specified chest trauma (rib fractures, traumatic pneumothorax and related chest wall injuries), pleural effusion, thoracic surgery, lung or pleural biopsy, diaphragmatic surgery repair or cardiac surgery; cases with a principal diagnosis of iatrogenic pneumothorax; cases with a secondary diagnosis of iatrogenic pneumothorax present on admission; and obstetric cases. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for iatrogenic pneumothorax | Surgical or medical discharges, for patients ages 17 years and younger. Surgical and medical discharges are defined by specific MS-DRG codes.  **Exclude**   * neonates with birth weight less than 2,500 grams (Birth Weight Categories 1 to 8) * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for iatrogenic pneumothorax, among patients otherwise qualifying for numerator * with any-listed ICD-9-CM diagnosis codes for specified chest trauma (rib fractures, traumatic pneumothorax and related chest wall injuries) (CTRAUMD) * with any-listed ICD-9-CM diagnosis codes for pleural effusion (PLEURAD) * with any-listed ICD-9-CM procedure codes for thoracic surgery (THORAIP) * with any-listed ICD-9-CM procedure codes for lung or pleural biopsy (LUNGBIP) * with any-listed ICD-9-CM procedure codes for diaphragmatic surgery repair (DIAPHRP) * with any-listed ICD-9-CM procedure codes for cardiac surgery (CARDSIP) * normal newborn |
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| **PREVENTION INDICATORS** | | | |
| PQI 01  Diabetes Short-Term Complications Admission Rate | Admissions for a principal diagnosis of diabetes with short-term complications (ketoacidosis, hyperosmolarity, or coma) per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions. | Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for diabetes short-term complications (ketoacidosis, hyperosmolarity, or coma)  **Exclude**   * transfer from a hospital (different facility) * transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) * transfer from another health care facility | Population ages 18 years and older in the metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. May be combined with uncontrolled diabetes as a single indicator as a simple sum of the rates to form the Healthy People 2010 indicator |
| PQI 03  Diabetes Long-Term Complications Admission Rate | Admissions for a principal diagnosis of diabetes with long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified) per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions. | Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for diabetes with long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified)  **Exclude**   * transfer from a hospital (different facility) * transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) * transfer from another health care facility | Population ages 18 years and older in metropolitan area† or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county where the hospital discharge occurred. |
| PQI 05  Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate | Admissions with a principal diagnosis of chronic obstructive pulmonary disease (COPD) or asthma per 100,000 population, ages 40 years and older. Excludes obstetric admissions and transfers from other institutions. | Discharges, for patients ages 40 years and older, with either   * a principal ICD-9-CM diagnosis code for COPD (ACCOPDD) * a principal ICD-9-CM diagnosis code for asthma (ACSASTD)   **Exclude**   * with any-listed ICD-9-CM diagnosis codes for cystic fibrosis and anomalies of the respiratory system (RESPAN) | Population ages 40 years and older in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. |
| PQI 07  Hypertension Admission Rate | Admissions with a principal diagnosis of hypertension per 100,000 population, ages 18 years and older. Excludes kidney disease combined with dialysis access procedure admissions, cardiac procedure admissions, obstetric admissions, and transfers from other institutions. | Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for hypertension (ACSHYPD)  **Exclude**   * with any-listed ICD-9-CM procedure codes for cardiac procedure (ACSCARP) * with any-listed ICD-9-CM diagnosis codes of Stage I-IV kidney disease, only if accompanied by any-listed ICD-9-CM procedure codes for dialysis access (ACSHY2D, ACSHYPP) * transfer from a hospital (different facility) * transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) * transfer from another health care facility | Population ages 18 years and older in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. |
| PQI 08  Heart Failure Admission Rate | Admissions with a principal diagnosis of heart failure per 100,000 population, ages 18 years and older. Excludes cardiac procedure admissions, obstetric admissions, and transfers from other institutions. | Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for heart failure (MRTCHFD)  **Exclude**   * with any-listed ICD-9-CM procedure codes for cardiac procedure (ACSCARP) * transfer from a hospital (different facility) * transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) * transfer from another health care facility | Population ages 18 years and older in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. |
| PQI 11  Bacterial Pneumonia Admission Rate | Admissions with a principal diagnosis of bacterial pneumonia per 100,000 population, ages 18 years and older. Excludes sickle cell or hemoglobin-S admissions, other indications of immunocompromised state admissions, obstetric admissions, and transfers from other institutions. | Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for bacterial pneumonia (ACSBACD)  **Exclude**   * transfer from a hospital (different facility) * transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) * transfer from another health care facility * with any-listed ICD-9-CM diagnosis codes for sickle cell anemia or HB-S disease (ACSBA2D) * with any-listed ICD-9-CM diagnosis codes or any-listed ICD-9-CM procedure codes for immunocompromised state (IMMUNIP) | Population ages 18 years and older in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. |
| PQI 12  Urinary Tract Infection Admission Rate | Admissions with a principal diagnosis of urinary tract infection per 100,000 population, ages 18 years and older. Excludes kidney or urinary tract disorder admissions, other indications of immunocompromised state admissions, obstetric admissions, and transfers from other institutions. | Discharges, for patients ages 18 years and older, with a principal ICD-09-CM diagnosis code for urinary tract infection (ACSUTID).  **Exclude**   * transfer from a hospital (different facility) * transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) * transfer from another health care facility * with any-listed ICD-09-CM diagnosis codes for kidney/urinary tract disorder (KIDNEY) * with any-listed ICD-09-CM diagnosis codes or any-listed ICD-09-CM procedure codes for immunocompromised state (IMMUNIP) | Population ages 18 years and older in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. |
| PQI 14  Uncontrolled Diabetes Admission Rate | Admissions for a principal diagnosis of diabetes without mention of short-term (ketoacidosis, hyperosmolarity, or coma) or long-term (renal, eye, neurological, circulatory, or other unspecified) complications per 100,000 population, ages 18 years and older. Excludes obstetric admissions and transfers from other institutions. | Discharges, for patients ages 18 years and older, with a principal ICD-9-CM diagnosis code for uncontrolled diabetes without mention of a short-term or long-term complication (ACDIAUD).  **Exclude**   * transfer from a hospital (different facility) * transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) * transfer from another health care facility | Population ages 18 years and older in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. |
| PQI 15  Asthma in Younger Adults Admission Rate | Admissions for a principal diagnosis of asthma per 100,000 population, ages 18 to 39 years. Excludes admissions with an indication of cystic fibrosis or anomalies of the respiratory system, obstetric admissions, and transfers from other institutions. | Discharges, for patients ages 18 through 39 years, with a principal ICD-09-CM diagnosis code for asthma (ACSASTD).  **Exclude**   * transfer from a hospital (different facility) * transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) * transfer from another health care facility * with any-listed ICD-9-CM diagnosis codes for cystic fibrosis and anomalies of the respiratory system (RESPAN) | Population ages 18 through 39 years and older in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. |
| PQI 16  Lower-Extremity Amputation Among Patients with Diabetes Rate | Admissions for any-listed diagnosis of diabetes and any-listed procedure of lower-extremity amputation (except toe amputations) per 100,000 population, ages 18 years and older. Excludes any-listed diagnosis of traumatic lower-extremity amputation admissions, obstetric admissions, and transfers from other institutions. | Discharges, for patients ages 18 years and older, with any-listed ICD-09-CM procedure codes for lower-extremity amputation (ACSLEAP) and any-listed ICD-09-CM diagnosis codes for diabetes (ACSLEAD).  **Exclude**   * with any-listed ICD-09-CM diagnosis codes for traumatic amputation of the lower extremity (ACLEA2D) * transfer from a hospital (different facility) * transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) * transfer from another health care facility   with any-listed ICD-9-CM diagnosis codes for cystic fibrosis and anomalies of the respiratory system (RESPAN) | Population ages 18 years and older in metropolitan area or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred. |
| **PATIENT SAFETY INDICATORS** | | | |
| PSI 02  Death Rate in Low-Mortality Diagnosis Related Groups (DRGs) | In-hospital deaths per 1,000 discharges for low mortality (< 0.5%) Diagnosis Related Groups (DRGs) among patients ages 18 years and older or obstetric patients. Excludes cases with trauma, cases with cancer, cases with an immunocompromised state, and transfers to an acute care facility. | Number of deaths among cases meeting the inclusion and exclusion rules for the denominator. | Discharges, for patients ages 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium), with a low-mortality (less than 0.5% mortality) MS-DRG code. If an MS-DRG is divided into “without/with (major) complications and comorbidities,” both codes without complications/comorbidities and codes with (major) complications/comorbidities must have mortality rates below 0.5% in the reference population to qualify for inclusion.  **Exclude**   * with any-listed ICD-9-CM diagnosis codes for trauma (TRAUMID) * with any-listed ICD-9-CM diagnosis codes for cancer (CANCEID) * with any-listed ICD-9-CM diagnosis codes or any-listed ICD-9-CM procedure codes for immunocompromised state (IMMUNID, IMMUNIP) * transfer to an acute care facility |
| PSI 03  Pressure Ulcer Rate | Stage III or IV pressure ulcers or unstageable (secondary diagnosis) per 1,000 discharges among surgical or medical patients ages 18 years and older. Excludes stays less than 3 days; cases with a principal diagnosis of pressure ulcer; cases with a secondary diagnosis of Stage III or IV pressure ulcer or unstageable that is present on admission; obstetric cases; and transfers from another facility. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for pressure ulcer and any secondary ICD-9-CM diagnosis codes for pressure ulcer stage III or IV (or unstageable) (DECUBID).  Prior to October 1, 2008, pressure ulcer stage codes are not available, and discharges with a pressure ulcer code prior to this date are included regardless of stage (DECUBVD). | Surgical or medical discharges, for patients ages 18 years and older. Surgical and medical discharges are defined by specific MS-DRG codes (MEDIC2R, SURGI2R).  **Exclude**   * with length of stay of less than 3 days * with a principal ICD-9-CM diagnosis code for pressure ulcer * with any secondary ICD-9-CM diagnosis codes for pressure ulcer present on admission (ICD-9) * among patients otherwise qualifying for numerator * any secondary ICD-9-CM or diagnosis codes for pressure ulcer stage III or IV (or unstageable) present on admission. If more than one pressure ulcer is reported, all pressure * ulcers must be present on admission for the record to be excluded, and any secondary ICD-9-CM diagnosis codes for pressure ulcer present on admission (ICD-9) * with any-listed ICD-9-CM diagnosis codes for hemiplegia, paraplegia, or quadriplegia (ICD-9) (HEMIPID\_PSI) * with any-listed ICD-9-CM diagnosis codes for spina bifida or anoxic brain damage (ICD-9) (SPINABD) * with any-listed ICD-9-CM procedure codes for debridement or pedicle graft before or on the same day as the major operating room procedure (ICD-9) (DEBRIDP) * with a ICD-9-CM principal procedure codes for debridement or pedicle graft (ICD-9) • with any-listed ICD-9-CM procedure codes for debridement or pedicle graft as the only major operating room procedure (ICD-9) (DEBRIDP) * Transfer from a hospital (ICD-9) * Transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF) (ICD-9) * Transfer from another health care facility (ICD-9) * with a principal or any secondary ICD-9-CM diagnosis codes present on admission for major skin disorders (ICD-9) (SKINDISD) * MDC 14 (pregnancy, childbirth, and puerperium) |
| PSI 04  Death Rate among Surgical Inpatients with Serious Treatable Complications | In-hospital deaths per 1,000 elective surgical discharges, among patients ages 18 through 89 years or obstetric patients, with serious treatable complications (deep vein thrombosis/ pulmonary embolism, pneumonia, sepsis, shock/cardiac arrest, or gastrointestinal hemorrhage/acute ulcer). Includes metrics for the number of discharges for each type of complication. Excludes cases transferred to an acute care facility. A risk adjusted rate is available. PSI 04 uses stratum specific risk models which are integrated to calculate an overall risk adjusted rate. | Overall  STRATUM\_DVT: DEEP VEIN THROMBOSIS/PULMONARY EMBOLISM (DVT/PE) (FTR2DX, FTR2DXB)  STRATUM\_PNEUMONIA: PNEUMONIA  STRATUM\_SEPSIS: SEPSIS  STRATUM\_SHOCK: SHOCK/CARDIAC ARREST  STRATUM\_GI\_HEM: GASTROINTESTINAL (GI) HEMORRHAGE/ACUTE ULCER  Number of deaths among cases meeting the inclusion and exclusion rules for the denominator. | Surgical discharges, for patients ages 18 through 89 years or MDC 14 (pregnancy, childbirth, and puerperium), with all of the following:   * any-listed ICD-9-CM procedure codes for an operating room procedure (ORPROC\_PSI); and * the principal procedure occurring within 2 days of admission (ICD9) or an admission type of elective (ATYPE=3); and * with any secondary ICD-9-CM diagnosis codes for pressure ulcer present on admission (ICD-9) * meet the inclusion and exclusion criteria for STRATUM\_DVT (deep vein thrombosis or pulmonary embolism), STRATUM\_PNEUMONIA (pneumonia), STRATUM\_SEPSIS (sepsis), STRATUM\_SHOCK (shock or cardiac arrest), or STRATUM\_GI\_HEM (gastrointestinal hemorrhage or acute ulcer).   **Exclude**   * transferred to an acute care facility   In the event that a discharge record meets the denominator criteria for several strata, the software assigns the record to the one (and only one) candidate stratum that has the highest risk of the outcome (i.e., observed mortality rate in the AHRQ QI POA reference population). In other words, if a record meets the criteria to be in the denominator for both STRATUM\_SEPSIS and STRATUM\_SHOCK, and if shock and cardiac arrest has a higher observed mortality rate in the reference population data, then the software would assign the record to STRATUM\_SHOCK, and would not assign it to STRATUM\_SEPSIS.  For PSI 04, prioritization to ensure mutual exclusivity for the strata is as follows:   1. STRATUM\_SHOCK 2. STRATUM\_SEPSIS 3. STRATUM\_PNEUMONIA 4. STRATUM\_DVT 5. STRATUM\_GI\_HEM   **DENOMINATOR STRATUM\_DVT**  Surgical discharges, for patients ages 18 through 89 years or MDC 14 (pregnancy, childbirth, and puerperium), with all of the following:   * any-listed ICD-9-CM procedure codes for an operating room procedure; and * the principal procedure occurring within 2 days of admission (ICD9) with an admission type of elective (ATYPE=3); and * any secondary ICD-9-CM diagnosis codes for deep vein thrombosis or pulmonary embolism (FTR2DXB, FTR2DX).   **DENOMINATOR EXCLUSIONS STRATUM\_DVT**   * with a principal ICD-9-CM diagnosis code for deep vein thrombosis or pulmonary embolism (OBEMBOL) * with a principal ICD-9-CM diagnosis code for abortion-related or postpartum obstetric pulmonary embolism (OBEMBOL) * transferred to an acute care facility   **DENOMINATOR STRATUM\_PNEUMONIA**  Surgical discharges, for patients ages 18 through 89 years or MDC 14 (pregnancy, childbirth, and puerperium), with all of the following:   * any-listed ICD-9-CM procedure codes for an operating room procedure; and * the principal procedure occurring within 2 days of admission (ICD9) with an admission type of elective (ATYPE=3); and * any secondary ICD-9-CM diagnosis codes for pneumonia (FTR3DX)   **DENOMINATOR EXCLUSIONS STRATUM\_PNEUMONIA**   * with a principal ICD-9-CM diagnosis code for pneumonia * with a principal ICD-9-CM diagnosis code for respiratory complications (FTR3EXA) * with any-listed ICD-9-CM diagnosis codes for viral pneumonia or influenza (FTR3EXB) * any-listed ICD-9-CM diagnosis codes for immunocompromised state * any-listed ICD-9-CM procedure codes for immunocompromised state * with any-listed ICD-9-CM procedure codes for lung cancer (LUNGCIP) * MDC 4 (diseases/disorders of respiratory system) * transferred to an acute care facility   **DENOMINATOR STRATUM\_SEPSIS**  Surgical discharges, for patients ages 18 through 89 years or MDC 14 (pregnancy, childbirth, and puerperium), with all of the following:   * any-listed ICD-9-CM procedure codes for an operating room procedure; and * the principal procedure occurring within 2 days of admission (ICD9) with an admission type of elective; and * any secondary ICD-9-CM diagnosis codes for sepsis (FTR4DX)   **DENOMINATOR EXCLUSIONS STRATUM\_SEPSIS**   * with a principal ICD-9-CM diagnosis code for sepsis * with a principal ICD-9-CM diagnosis code for infection * any-listed ICD-9-CM diagnosis codes for immunocompromised state * any-listed ICD-9-CM procedure codes for immunocompromised state * with a length of stay of less than 4 days * with a length of stay of less than 4 days * transferred to an acute care facility   **DENOMINATOR STRATUM\_SHOCK**  Surgical discharges, for patients ages 18 through 89 years or MDC 14 (pregnancy, childbirth, and puerperium), with all of the following:   * any- any-listed ICD-9-CM procedure codes for an operating room procedure; and * the principal procedure occurring within 2 days of admission (ICD9) with an admission type of elective; and * any secondary ICD-9-CM diagnosis codes or any-listed ICD-9-CM procedure codes for shock or cardiac arrest (FTR5DX, FTR5PR)   **DENOMINATOR EXCLUSIONS STRATUM\_SHOCK**   * with a principal ICD-9-CM diagnosis code for shock or cardiac arrest * with a principal ICD-9-CM diagnosis code for trauma * with a principal ICD-9-CM diagnosis code for hemorrhage (HEMORID) * with a principal ICD-9-CM diagnosis code for gastrointestinal hemorrhage (GASTRID) * with a principal ICD-9-CM diagnosis code for abortion-related shock (FTR5EX) * MDC 4 (diseases/disorders of respiratory system) * MDC 5 (diseases/disorders of circulatory system) * transferred to an acute care facility   **DENOMINATOR STRATUM\_GI\_HEM**  Surgical discharges, for patients ages 18 through 89 years or MDC 14 (pregnancy, childbirth, and puerperium), with all of the following:   * any any-listed ICD-9-CM procedure codes for an operating room procedure; and * the principal procedure occurring within 2 days of admission (ICD9) with an admission type of elective (ATYPE=3); and * any secondary ICD-9-CM diagnosis codes for gastrointestinal hemorrhage or acute ulcer (FTR6DX).   **DENOMINATOR EXCLUSIONS STRATUM\_GI\_HEM**   * with a principal ICD-9-CM diagnosis code for gastrointestinal hemorrhage or acute ulcer * with a principal ICD-9-CM diagnosis code for trauma (TRAUMID) * with a principal ICD-9-CM diagnosis code for alcoholism (ALCHLSM) * with a principal ICD-9-CM diagnosis code for anemia (FTR6EX) * MDC 6 (diseases and disorders of the digestive system) * MDC 7 (diseases and disorders of the hepatobiliary system and pancreas) * transferred to an acute care facility |
| PSI 05  Retained Surgical Item or Unretrieved Device Fragment Count | The number of hospital discharges with a retained surgical item or unretrieved device fragment (secondary diagnosis) among surgical and medical patients ages 18 years and older or obstetric patients. Excludes cases with principal diagnosis of retained surgical item or unretrieved device fragment and cases with a secondary diagnosis of retained surgical item or unretrieved device fragment present on admission. | Surgical and medical discharges, for patients ages 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium), with any secondary ICD-9-CM diagnosis codes for retained surgical item or unretrieved device fragment (FOREIID). Surgical and medical discharges are defined by specific MS-DRG codes  **Exclude**   * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for retained surgical item or unretrieved device fragment | *N.A.* |
| PSI 06  Iatrogenic Pneumothorax Rate | Iatrogenic pneumothorax cases (secondary diagnosis) per 1,000 surgical and medical discharges for patients ages 18 years and older. Excludes cases with chest trauma, pleural effusion, thoracic surgery, lung or pleural biopsy, diaphragmatic repair, or cardiac procedures; cases with a principal diagnosis of iatrogenic pneumothorax; cases with a secondary diagnosis of iatrogenic pneumothorax present on admission; and obstetric cases. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for iatrogenic pneumothorax (IATROID). | Surgical and medical discharges, for patients ages 18 years and older. Surgical and medical discharges are defined by specific MS-DRG codes.  **Exclude**   * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for iatrogenic pneumothorax (see above), and among patients otherwise qualifying for numerator * with any-listed ICD-9-CM diagnosis codes for specified chest trauma (rib fractures, traumatic pneumothorax and related chest wall injuries) (CTRAUMD) * with any-listed ICD-9-CM diagnosis codes for pleural effusion (PLEURAD) * with any-listed ICD-9-CM procedure codes for thoracic surgery (THORAIP) * with any-listed ICD-9-CM procedure codes for lung or pleural biopsy (LUNGBIP) * with any-listed ICD-9-CM procedure codes for diaphragmatic repair (DIAPHRP) * with any-listed ICD-9-CM procedure codes for cardiac procedure (CARDSIP)) * MDC 14 (pregnancy, childbirth, and puerperium) |
| PSI 07  Central Venous Catheter-Related Blood Stream Infection Rate | Central venous catheter-related bloodstream infections (secondary diagnosis) per 1,000 medical and surgical discharges for patients ages 18 years and older or obstetric cases. Excludes cases with a principal diagnosis of a central venous catheter-related bloodstream infection, cases with a secondary diagnosis of a central venous catheter-related bloodstream infection present on admission, cases with stays less than 2 days, cases with an immunocompromised state, and cases with cancer. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for central venous catheter-related bloodstream infections (IDTMC2D, IDTMC3D\_PSI) | Surgical and medical discharges, for patients ages 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium). Surgical and medical discharges are defined by specific MS-DRG codes.  **Exclude**   * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for central venous catheter-related bloodstream infection among patients otherwise qualifying for numerator (IDTMC2D, IDTMC3D\_PSI) * with length of stay less than 2 days * with any-listed ICD-9-CM diagnosis codes for cancer (CANCEID) * with any-listed ICD-9-CM diagnosis codes or any-listed ICD-9-CM procedure codes for immunocompromised state (IMMUNID, IMMUNIP) |
| PSI 08  In Hospital Fall with Hip Fracture Rate | In hospital fall with hip fracture (secondary diagnosis) per 1,000 discharges for patients ages 18 years and older. Excludes cases that were admitted because of conditions that make them susceptible to falling (seizure disorder, syncope, stroke, occlusion of arteries, coma, cardiac arrest, poisoning, trauma, delirium or other psychoses, anoxic brain injury), have conditions associated with fragile bone ( metastatic cancer, lymphoid malignancy, bone malignancy, cases with a principal diagnosis of hip fracture, cases with a secondary diagnosis of hip fracture present on admission, and obstetric cases. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for hip fracture (HIPFXID). | Discharges, ages 18 years and older, in a medical MS-DRG or in a surgical MS-DRG with any-listed ICD-9-CM codes for an operating room procedure (ORPROC\_PSI, MEDIC2R, SURGI2R).  **Exclude**   * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for hip fracture (see above) among patients otherwise qualifying for numerator• where the only operating room procedure is hip fracture repair * with a principal ICD-9-CM diagnosis code for seizure (SEIZUID) * with a principal ICD-9-CM diagnosis code for syncope (SYNCOID) * with a principal ICD-9-CM diagnosis code for stroke and occlusion of arteries (STROKID) * with a principal ICD-9-CM diagnosis code for coma (COMAID) * with a principal ICD-9-CM diagnosis code for cardiac arrest (CARDIID) * with a principal ICD-9-CM diagnosis code for poisoning (POISOID) * with a principal ICD-9-CM diagnosis code for trauma (TRAUMID) * with a principal ICD-9-CM diagnosis code for delirium and other psychoses (DELIRID) * with a principal ICD-9-CM diagnosis code for anoxic brain injury (ANOXIID) * with any-listed ICD-9-CM diagnosis codes for metastatic cancer (METACID) * with any-listed ICD-9-CM diagnosis codes for lymphoid malignancy (LYMPHID) * with any-listed ICD-9-CM diagnosis codes for bone malignancy (BONEMID) * with any-listed ICD-9-CM diagnosis codes for self-inflicted injury (SELFIID) * MDC 8 (diseases and disorders of the musculoskeletal system and connective tissue) * MDC14 (pregnancy, childbirth, and puerperium) |
| PSI 09  Perioperative Hemorrhage or Hematoma Rate | Perioperative hemorrhage or hematoma cases involving a procedure to treat the hemorrhage or hematoma, following surgery per 1,000 surgical discharges for patients ages 18 years and older. Excludes cases with a diagnosis of coagulation disorder; cases with a principal diagnosis of perioperative hemorrhage or hematoma; cases with a secondary diagnosis of perioperative hemorrhage or hematoma present on admission; cases where the only operating room procedure is for treatment of perioperative hemorrhage or hematoma; obstetric cases. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for perioperative hemorrhage or hematoma (POHMRI2D) and any-listed ICD-9-CM procedure codes for treatment of hemorrhage or hematoma (HEMOTH2P) | Surgical discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for an operating room procedure. Surgical discharges are defined by specific MS-DRG codes (ORPROC\_PSI, SURGI2R).  **Exclude**   * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission\*) for perioperative hemorrhage or postoperative hematoma among patients otherwise qualifying for numerator * where the only operating room procedure is for treatment of perioperative hemorrhage or hematoma, and with any secondary ICD-9-CM or ICD-10-CM diagnosis codes for perioperative hemorrhage or hematoma * with any secondary ICD-9-CM diagnosis codes for perioperative hemorrhage or hematoma and any-listed ICD-9-CM procedure codes for treatment of perioperative hemorrhage or hematoma occurring before the first operating room procedure\*\* * with any-listed ICD-9-CM diagnosis codes for coagulation disorder (COAGDID) * MDC 14 (pregnancy, childbirth, and puerperium)   \*Only for cases that otherwise qualify for the numerator.  \*\*If day of procedure is not available in the input data file, the rate may be slightly lower than if the information were |
| PSI 10  Postoperative Acute Kidney Injury Requiring Dialysis Rate | Postoperative acute kidney failure requiring dialysis per 1,000 elective surgical discharges for patients ages 18 years and older. Excludes cases with principal diagnosis of acute kidney failure; cases with secondary diagnosis of acute kidney failure present on admission; cases with secondary diagnosis of acute kidney failure and dialysis or a dialysis access procedure before or on the same day as the first operating room procedure; cases with acute kidney failure and cardiac arrhythmia, cardiac arrest, severe cardiac dysrhythmia, cardiac shock, urinary tract obstruction or chronic kidney failure; a principal diagnosis of urinary tract obstruction and obstetric cases. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator with any secondary ICD-9-CM diagnosis codes for acute kidney failure and any-listed ICD-9-CM procedure codes for dialysis (PHYSIDB). | Elective surgical discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for an operating room procedure. Elective surgical discharges are defined by specific MS-DRG codes with admission type recorded as elective (ORPROC\_PSI, SURGI2R).  **Exclude**   * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for acute kidney failure, (among patients otherwise qualifying for numerator) * with any dialysis procedure or dialysis access procedure occuring before or on the same day as the first operating room procedure\*\* (ICD-9) (DIALYIDP) * with a secondary diagnosis of acute kidney failure (PHYSIDB) * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for cardiac arrest (CARDIID) * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for cardiac arrhythmia (CARDRID) * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for shock (SHOCKID) * with a principal ICD-9-CM diagnosis code for urinary tract obstruction (URINARYOBSID) * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for chronic kidney failure (CRENLFD) * MDC 14 (pregnancy, childbirth and the puerperium) |
| PSI 11  Postoperative Respiratory Failure Rate | Postoperative respiratory failure (secondary diagnosis), prolonged mechanical ventilation, or reintubation cases per 1,000 elective surgical discharges for patients ages 18 years and older. Excludes cases with principal diagnosis for acute respiratory failure; cases with secondary diagnosis for acute respiratory failure present on admission; cases in which tracheostomy is the only operating room procedure or in which tracheostomy occurs before the first operating room procedure; cases with neuromuscular disorders; cases with laryngeal, oropharyngeal or craniofacial surgery involving significant risk of airway compromise; craniofacial anomalies that had a procedure for the face, esophageal resection (ICD-9 only), lung cancer, lung transplant or degenerative neurological disorders; cases with respiratory or circulatory diseases; and obstetric discharges. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with either:   * any secondary ICD-9-CM diagnosis code for acute respiratory failure (ACURF2D, ACURFID); or * any secondary ICD-9-CM procedure codes for a mechanical ventilation for 96 consecutive hours or more that occurs zero or more days after the first major operating room procedure code (based on days from admission to procedure) (PR9672P); or * any secondary ICD-9-CM procedure codes for a mechanical ventilation for less than 96 consecutive hours (or undetermined) that occurs two or more days after the first major operating room procedure code (based on days from admission to procedure) (PR9670P, PR9671P); or * any secondary ICD-9-CM procedure codes for a reintubation that occurs one or more days after the first major operating room procedure code (based on days from admission to procedure) (PR9604P) | Elective surgical discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for an operating room procedure. Elective surgical discharges are defined by specific MS-DRG codes with admission type recorded as elective (ORPROC\_PSI, SURGI2R).  **Exclude**   * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for acute respiratory failure (see below) (ACURF3D) * where the only operating room procedure is tracheostomy (TRACHIP) * where a procedure for tracheostomy occurs before the first operating room procedure† (TRACHIP) * with any-listed ICD-9-CM diagnosis codes for neuromuscular disorder (NEUROMD) * with any-listed ICD-9-CM procedure codes for laryngeal or pharyngeal, nose, mouth, pharynx or facial surgery (NUCRANP) * with any listed ICD-9-CM procedure codes involving the face and any listed ICD-9-CM diagnosis codes for craniofacial anomalies (CRANI2P\_PSI, CRANIID) * with any-listed ICD-9-CM procedure codes for esophageal resection (PRESOPP, PRESO2P) * with any-listed ICD-9-CM procedure codes for lung cancer (LUNGCIP) * any-listed ICD-9-CM diagnosis codes for degenerative neurological disorder (DGNEUID) * with any-listed ICD-9-CM procedure codes for lung transplant (LUNGTRANSP) * MDC 4 (diseases/disorders of respiratory system) * MDC 5 (diseases/disorders of circulatory system) * MDC 14 (pregnancy, childbirth, and puerperium)   † If day of procedure is not available in the input data file, the rate may be slightly lower than if the information was available. |
| PSI 12  Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate | Perioperative pulmonary embolism or proximal deep vein thrombosis (secondary diagnosis) per 1,000 surgical discharges for patients ages 18 years and older. Excludes cases with principal diagnosis for pulmonary embolism or proximal deep vein thrombosis; cases with secondary diagnosis for pulmonary embolism or proximal deep vein thrombosis present on admission; cases in which interruption of vena cava occurs before or on the same day as the first operating room procedure; and obstetric discharges. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with a secondary ICD-9-CM diagnosis code for proximal deep vein thrombosis or a secondary ICD-9-CM diagnosis code for pulmonary embolism (DEEPVID, DEEPVIB, PULMOID). | Surgical discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for an operating room procedure. Surgical discharges are defined by specific MS-DRG codes (ORPROC\_PSI, SURGI2R).  **Exclude**   * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for proximal deep vein thrombosis among patients otherwise qualifying for the numerator * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for pulmonary embolism among patients otherwise qualifying for the numerator * with a principal procedure for interruption of vena cava or pulmonary arterial thrombectomy (VENACIP) * where a procedure for interruption of vena cava occurs before or on the same day as the first operating room procedure1 * any-listed ICD-9-CM procedure code for extracorporeal membrane oxygenation (ECMO) (ECMOP) * any-listed ICD-9-CM diagnosis code for acute brain or spinal injury present on admission (NEURTRAD) * MDC 14 (pregnancy, childbirth, and puerperium)   1 If day of procedure is not available in the input data file, the rate may be slightly lower than if the information was available. |
| PSI 13  Postoperative Sepsis Rate | Postoperative sepsis cases (secondary diagnosis) per 1,000 elective surgical discharges for patients ages 18 years and older. Excludes cases with a principal diagnosis of sepsis, cases with a secondary diagnosis of sepsis present on admission, cases with a principal diagnosis of infection, cases with a secondary diagnosis of infection present on admission (only if they also have a secondary diagnosis of sepsis), obstetric discharges, and cases with missing values as listed in denominator section. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for sepsis (SEPTI2D\_PSI). | Elective surgical discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for an operating room procedure. Elective surgical discharges are defined by specific MS-DRG codes with admission type recorded as elective (ORPROC\_PSI, SURGI2R).  **Exclude**   * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for sepsis among patients otherwise qualifying for numerator (see above) * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission1) for infection among patients otherwise qualifying for numerator * MDC 14 (pregnancy, childbirth, and puerperium) |
| PSI 14  Postoperative Wound Dehiscence Rate | Postoperative reclosures of the abdominal wall per 1,000 abdominopelvic surgery discharges for patients ages 18 years and older. Excludes cases in which the abdominal wall reclosure occurs on or before the day of the first abdominopelvic surgery, cases with an immunocompromised state, cases with stays less than two (2) days, and obstetric cases. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any-listed ICD-9-CM procedure codes for reclosure of postoperative disruption of the abdominal wall (RECLOIP). | Discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for abdominopelvic surgery (ABDOM14IP).  **Exclude**   * where the procedure for abdominal wall reclosure (see below) occurs on or before the day of the first abdominopelvic surgery procedure (see below)1 * with any-listed ICD-9-CM diagnosis codes or any-listed ICD-9-CM procedure codes for immunocompromised state (IMMUNID, IMMUNIP) * with an ICD-9-CM principal or secondary diagnosis code present on admission for disruption of internal operation wound (ABWALLCD) * with length of stay less than two (2) days * MDC 14 (pregnancy, childbirth, and puerperium)   1 If day of procedure is not available in the input data file, the rate may be slightly lower than if the information was available. |
| PSI 15  Unrecognized Abdominopelvic Accidental Puncture or Laceration Rate | Accidental punctures or lacerations (secondary diagnosis) during a procedure of the abdomen or pelvis per 1,000 discharges for patients ages 18 years and older that require a second abdominopelvic procedure one or more days after the index procedure. Excludes cases with accidental puncture or laceration as a principal diagnosis, cases with accidental puncture or laceration as a secondary diagnosis that is present on admission, and obstetric cases. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for "accidental puncture or laceration during a procedure" and second abdominopelvic procedure >=1 day after an index abdominopelvic procedure (TECHNID). | Surgical or medical discharges, Patients ages 18 years and older with any procedure code for an abdominopelvic procedure (ABDOM15IP).  **Exclude**   * with a principal ICD-9-CM diagnosis code (or secondary diagnosis present on admission) for accidental puncture or lacerations during a procedure among patients otherwise qualifying for the numerator (TECHNID) * MDC 14 (pregnancy, childbirth, and puerperium) |
| PSI 17  Birth Trauma Rate – Injury to Neonate | Birth trauma injuries per 1,000 newborns. Excludes preterm infants with a birth weight less than 2,000 grams, and cases with osteogenesis imperfecta. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any-listed ICD-9-CM diagnosis codes for birth trauma (BIRTHTRAUMACODE). | All newborns.  **Exclude**   * with any-listed ICD-9-CM diagnosis codes for preterm infant with a birth weight less than 2,000 grams * with any-listed ICD-9-CM diagnosis codes for osteogenesis imperfecta (icd9: 756, 75651) |
| PSI 18  Obstetric Trauma Rate – Vaginal Delivery With Instrument | Third and fourth degree obstetric traumas per 1,000 instrument-assisted vaginal deliveries. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any-listed ICD-9-CM diagnosis codes for third and fourth degree obstetric trauma (OBTRAID). | Vaginal deliveries, identified in ICD-9 by MS-DRG codes, with any-listed ICD-9-CM procedure codes for instrument-assisted delivery (PRVAG2G, INSTRIP). |
| PSI 19  Obstetric Trauma Rate – Vaginal Delivery Without Instrument | Third and fourth degree obstetric traumas per 1,000 vaginal deliveries. Excludes cases with instrument-assisted delivery. | Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any-listed ICD-9-CM diagnosis codes for third and fourth degree obstetric trauma (OBTRAID). | Vaginal deliveries, identified in ICD-9 by MS-DRG codes for outcome of delivery (PRVAG2G).  **Exclude**   * with any-listed ICD-9-CM procedure codes for instrument-assisted delivery (INSTRIP) |
| PSI 23  Central Venous Catheter-Related Blood Stream Infection Rate | Central venous catheter-related bloodstream infections per 100,000 population, ages 18 years and older. Excludes cases with an immunocompromised state and cases with cancer. | Surgical and medical discharges, for patients ages 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium), with any-listed ICD-9-CM diagnosis codes for selected infections. Surgical and medical discharges are defined by specific MS-DRG codes (IDTMC2D, IDTMC3D\_PSI).  **Exclude**   * with any-listed ICD-9-CM diagnosis codes for cancer (CANCEID) * with any-listed ICD-9-CM diagnosis codes or any-listed ICD-9-CM procedure codes for immunocompromised state (IMMUNID, IMMUNIP) | *N.A.* |
| PSI 24  Postoperative Wound Dehiscence Rate | Postoperative reclosures of the abdominal wall per 100,000 population, ages 18 years and older. Excludes cases with an immunocompromised state and obstetric cases. | Discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for reclosure of postoperative disruption of the abdominal wall. Discharges with any-listed ICD-9-PCS code for repair of abdominal wall with any-listed ICD-10-CM code for wound dehiscence (RECLOIP).  **Exclude**   * with any-listed ICD-9-CM diagnosis codes or any-listed ICD-9-CM procedure codes for immunocompromised state (IMMUNID, IMMUNIP) * MDC 14 (pregnancy, childbirth, and puerperium) | *N.A.* |