Missouri Transparency Initiative
PRICE AND QUALITY MEASURE TECHNICAL MANUAL

HEALTHIER POPULATIONS
better health care
VALUE

MHA
MISSOURI HOSPITAL ASSOCIATION

Table of Contents

INTRODUCTION

The Price and Quality Measure Technical Manual provides specifications for Missouri price and quality measures that are included in the Missouri Hospital Association's transparency initiative. This set of indicators tracks outcomes related to the cost and quality of patient care throughout the health care continuum. The price measures were chosen by the MHA Price Transparency Workgroup. The quality measures were selected by MHA's Strategic Quality Initiatives Advisory Council after a comprehensive review of criteria, such as financial implications, regulatory impact and current state-aggregate performance.

The majority of quality measures presented in this manual are synchronized with national stewards, such as the Centers for Medicare & Medicaid Services, the National Healthcare Surveillance Network and the

Agency for Healthcare Research and Quality. To ensure your facility has the most current information, refer to the national steward's website or resources; live links are provided on each measure page. Questions about quality should be directed to Stephen Njenga, Director of Performance Measurement Compliance at MHA, at snjenga@mhanet.com or 573/893-3700, ext. 1325. To learn more about the GEM ICD-10 process, please read the HIDI ICD-10 Transitional Strategy.

Price data included in this manual represent inpatient emergency department and outpatient procedure codes based on a clinical classification system. On the Focus on Hospitals website, www.focusonhospitals.com, diagnosis-related groups are translated into layman's language and grouped into categories similar to medical diagnosis categories.

Questions related to pricing should be directed to Mary Becker, Senior Vice President of Strategic Partnerships and Communications at MHA, at mbecker@mhanet.com or 573/893-3700, ext. 1303.

Managing Chronic Diseases

MANAGEMENT OF DIABETES: SHORT-TERM COMPLICATIONS

Data Steward
Agency for Healthcare Research and Quality

Measure Description
Admissions for principal diagnosis with short-term complications per 100,000 population, ages 18 and older. All payors.

Measure Specifications
Prevention Quality Indicators #1 (PQI 1)

Data Source
Discharge claims data

Risk Adjustment
Age group and sex

MANAGEMENT OF DIABETES: LONG-TERM COMPLICATIONS

Data Steward
Agency for Healthcare Research and Quality

Measure Description
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. All payors.

Measure Specifications
Prevention Quality Indicators #3 (PQI 3)

Data Source
Discharge claims data

Risk Adjustment
Age group and sex

MANAGEMENT OF DIABETES: UNCONTROLLED

Data Steward
Agency for Healthcare Research and Quality

Measure Description
Admissions for principal diagnosis without mention of short- or long-term complications per 100,000 population, ages 18 and older. All payors.

Measure Specifications
Prevention Quality Indicators #14 (PQI 14)

Data Source
Discharge claims data

Risk Adjustment
Age group and sex

MANAGEMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Data Steward
Agency for Healthcare Research and Quality

Measure Description
Admissions for principal diagnosis of chronic obstructive pulmonary disease or asthma per 100,000 population, ages 40 and older. All payors.

Measure Specifications
Prevention Quality Indicators #5 (PQI 5)

Data Source
Discharge claims data

Risk Adjustment
Age group and sex

MANAGEMENT OF HYPERTENSION

Data Steward
Agency for Healthcare Research and Quality

Measure Description
Admissions with a principal diagnosis of hypertension per 100,000 population, ages 18 and older. Excludes kidney disease combined with dialysis access procedure admissions, cardiac procedure admissions, obstetric admissions and transfers from other institutions. All payors.

Measure Specifications
Prevention Quality Indicators #7 (PQI 7)

Data Source
Discharge claims data

Risk Adjustment
Age group and sex

MANAGEMENT OF CONGESTIVE HEART FAILURE

Data Steward
Agency for Healthcare Research and Quality

Measure Description
Admissions with a principal diagnosis of heart failure per 100,000 population, ages 18 and older. Excludes cardiac procedure admissions, obstetric admissions and transfers from other institutions. All payors.

Measure Specifications
Prevention Quality Indicators #8 (PQI 8)

Data Source
Discharge claims data

Risk Adjustment
Age group and sex

Preventing Infections

CATHETER-ASSOCIATED URINARY TRACT INFECTION

Data Steward
CDC NHSN

Measure Description
Catheter-associated urinary tract standardized infection ratio (SIR). ICUs and other inpatient units.

Measure Specifications
NHSN Measure Specifications

Numerator Statement
Number of observed infections

Denominator Statement
Number of predicted infections

Exclusions
None noted

Data Source
CDC NHSN. Hospital abstracted.

Risk Adjustment
Type of patient care location, hospital affiliation with medical school, bed size of the patient care location.

CENTRAL VENOUS CATHETER-RELATED BLOODSTREAM INFECTION

Data Steward
CDC NHSN

Measure Description
Central line-associated bloodstream infection standardized infection ratio (SIR). ICUs and other inpatient units.

Measure Specifications
NHSN Measure Specifications

Numerator Statement
Number of observed infections

Denominator Statement
Number of predicted infections

Exclusions
None noted

Data Source
CDC NHSN. Hospital abstracted.

Risk Adjustment
Type of patient care location, hospital affiliation with medical school, bed size of the patient care location.

POSTOPERATIVE SEPSIS

Data Steward
Agency for Healthcare Research and Quality

Measure Description
Postoperative sepsis cases (secondary diagnosis) per 1,000 elective surgical discharges for patients ages 18 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), cases with an immunocompromised state, cases with cancer, obstetric discharges, and cases with stays less than four days. All payors.

Measure Specifications
Patient Safety Indicators #13 (PSI 13)

Data Source
Discharge claims data

Risk Adjustment
Age group, sex and medical condition

SURGICAL SITE INFECTION: COLON SURGERY

Data Steward
CDC NHSN

Measure Description
Surgical site infection ratio - colon surgeries

Measure Specifications
NHSN Measure Specifications

Numerator Statement
Number of observed infections

Denominator Statement
Number of predicted infections

Exclusions
None noted

Data Source
CDC NHSN. Hospital abstracted

Risk Adjustment
Duration of surgery, surgical wound class, use of endoscopes, re-operation status, patient age, patient assessment at time of anesthesiology.

SURGICAL SITE INFECTION: ABDOMINAL HYSTERECTOMY

Data Steward
CDC NHSN

Measure Description
Surgical site infection standardized infection ratio - abdominal hysterectomies

Measure Specifications
NHSN Measure Specifications

Numerator Statement
Number of observed infections

Denominator Statement
Number of predicted infections

Exclusions
None noted

Data Source
CDC NHSN. Hospital abstracted.

Risk Adjustment
Duration of surgery, surgical wound class, use of endoscopes, re-operation status, patient age, patient assessment at time of anesthesiology.

CLOSTRIDIUM DIFFICILE

Data Steward
CDC NHSN

Measure Description
C. Diff standardized infection ratio

Measure Specifications
NHSN Measure Specifications

Numerator Statement
Number of observed infections

Denominator Statement
Number of predicted infections

Exclusions
None noted

Data Source
CDC NHSN. Hospital abstracted.

Risk Adjustment
Medical school affiliation, facility bedsize, CDI test type, facility type and state.

METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS INFECTION

Data Steward
CDC NHSN

Measure Description
MRSA standardized infection ratio

Measure Specifications
NHSN Measure Specifications

Numerator Statement
Number of observed infections

Denominator Statement
Number of predicted infections

Exclusions
None noted

Data Source
CDC NHSN. Hospital abstracted.

Risk Adjustment
Medical school affiliation, facility bedsize, facility type and state.

Preventing Infections Using Rates - only applies to critical access hospitals

CATHETER-ASSOCIATED URINARY TRACT INFECTION

Data Steward
CDC NHSN

Measure Description
An infection of the bladder caused by germs that enter through a patient's urine tube, used to drain their bladder. Rate per 1,000 urinary catheter days.

Measure Specifications
NHSN Measure Specifications

Numerator Statement
Total number of observed healthcare-associated CAUTI among patients in bedded inpatient care locations.

Denominator Statement
Total number of indwelling urinary catheter days for each location under surveillance for CAUTI during the data period.

Exclusions
None noted

Data Source
CDC NHSN. Hospital abstracted.

Risk Adjustment
None

CENTRAL VENOUS CATHETER-RELATED BLOODSTREAM INFECTION

Data Steward
CDC NHSN

Measure Description
Central line bloodstream infections are an infection in the blood caused by germs that entered the body through a line placed in a vein. Rate per 1,000 Central line days.

Measure Specifications
NHSN Measure Specifications

Numerator Statement
Total number of observed healthcare-associated CLABSI among patients in bedded inpatient care locations.

Denominator Statement
Total number of central line days for each location under surveillance for CLABSI during the data period.

Exclusions
None noted

Data Source
CDC NHSN. Hospital abstracted.

Risk Adjustment
None

POSTOPERATIVE SEPSIS

Data Steward
Agency for Healthcare Research and Quality

Measure Description
Postoperative sepsis cases (secondary diagnosis) per 1,000 elective surgical discharges for patients ages 18 and older. All payors.

Measure Specifications
Patient Safety Indicators #13 (PSI 13)

Exclusions
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), cases with an immunocompromised state, cases with cancer, obstetric discharges, and cases with stays less than four days.

Data Source
Discharge claims data

Risk Adjustment
Age group, sex and medical condition

CLOSTRIDIUM DIFFICILE

Data Steward
CDC NHSN

Measure Description
Clostridium difficile is a bacterium that causes symptoms such as diarrhea. Rate of healthcare- associated CDI as the number of cases per 10,000 patient days.

Measure Specifications
NHSN Measure Specifications

Numerator Statement
Total number of observed hospital-onset C. Difficile lab identified events among all inpatients in the facility.

Denominator Statement
Patient days (facility-wide)

Exclusions
Exclude well-baby nurseries and NICU's

Data Source
CDC NHSN. Hospital abstracted.

Risk Adjustment
None

METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS INFECTION

Data Steward
CDC NHSN

Measure Description
Methicillin-resistant Staphylococcus aureus (MRSA) infection is caused by a bacteria that lives on the skin. Rate of healthcare-associated MRSA bacteremia events per 1,000 patient days

Measure Specifications
NHSN Measure Specifications

Numerator Statement
MRSA Bacteremia events

Denominator Statement
Patient days (facility-wide)

Exclusions
None noted

Data Source
CDC NHSN. Hospital abstracted.

Risk Adjustment
None

PreventingHarm

FALLS (INJURIES FROM FALLS AND TRAUMA)

Data Steward
Hospital Acquired Condition. The Centers for Medicare & Medicaid Services Centers for Medicare & Medicaid Services

Measure Description
All inpatients who had an injury from a fall or trauma. All payors.

Numerator Statement
Patients with an occurrence of the following corresponding complication or comorbidity diagnosis codes as a secondary diagnosis (2-25 on the claim) with a POA code of "N" or "U."

Here is a link to the ICD-10 codes for Falls and Trauma

Denominator Statement
All acute inpatient discharges

Exclusions
' diagnosis was present at time of inpatient admission
' clinically undetermined (provider unable to clinically determine whether the condition was present at the time of inpatient admission)

Data Source
Discharge claims data

VENOUS THROMBOEMBOLISM (POST-OP PE OR DVT)

Data Steward
Agency for Healthcare Research and Quality

Measure Description
Perioperative pulmonary embolism or deep vein thrombosis (secondary diagnosis) per 1,000 surgical discharges for patients ages 18 and older. All payors.

Measure Specifications
Patient Safety Indicator #12 (PSI 12)

Data Source
Discharge claims data

Risk Adjustment
Age group, sex and medical condition

MORTALITY: ALL CONDITIONS COMPOSITE

Data Steward
Agency for Healthcare Research and Quality

Measure Description
In-hospital deaths per 1,000 discharges for low mortality (less than 0.5%) DRG among patients ages 18 and older, or obstetric patients. Excludes cases with trauma, cases with cancer, cases with an immunocompromised state and transfers to an acute care facility.

Measure Specifications
Patient Safety Indicator #2 (PSI 02)

Data Source
Discharge claims data

Risk Adjustment
Age group, sex and medical condition

PRESSURE ULCERS

Data Steward
Agency for Healthcare Research and Quality

Measure Description
Stage III or IV pressure ulcers (secondary diagnosis) per 1,000 discharges among patients ages 18 and older. All payors.

Measure Specifications
Patient Safety Indicator #3 (PSI 03)

Data Source
Discharge claims data

Risk Adjustment
Age group, sex and medical condition

Preventing Infections Using Rates - only applies to pediatric hospitals

CATHETER-ASSOCIATED URINARY TRACT INFECTION

Data Steward
CDC NHSN

Measure Description
An infection of the bladder caused by germs that enter through a patient's urine tube, used to drain their bladder. Rate per 1,000 urinary catheter days.

Measure Specifications
NHSN Measure Specifications

Numerator Statement
Total number of observed healthcare-associated CAUTI among patients in bedded inpatient care locations.

Denominator Statement
Total number of indwelling urinary catheter days for each location under surveillance for CAUTI during the data period.

Exclusions
None noted

Data Source
CDC NHSN. Hospital abstracted.

Risk Adjustment
None

CENTRAL VENOUS CATHETER-RELATED BLOODSTREAM INFECTION

Data Steward
CDC NHSN

Measure Description
Central line bloodstream infections are an infection in the blood caused by germs that entered the body through a line placed in a vein. Rate per 1,000 Central line days.

Measure Specifications
NHSN Measure Specifications

Numerator Statement
Total number of observed healthcare-associated CLABSI among patients in bedded inpatient care locations.

Denominator Statement
Total number of central line days for each location under surveillance for CLABSI during the data period.

Exclusions
None noted

Data Source
CDC NHSN. Hospital abstracted.

Risk Adjustment
None

CLOSTRIDIUM   DIFFICILE

Data Steward
CDC NHSN

Measure Description
Clostridium difficile is a bacterium that causes symptoms such as diarrhea. Rate of healthcare- associated CDI as the number of cases per 10,000 patient days.

Measure Specifications
NHSN Measure Specifications

Numerator Statement
Total number of observed hospital-onset C. Difficile lab identified events among all inpatients in the facility.

Denominator Statement
Patient days (facility-wide)

Exclusions
Exclude well-baby nurseries and NICU's

Data Source
CDC NHSN. Hospital abstracted.

Risk Adjustment
None

METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS INFECTION

Data Steward
CDC NHSN

Measure Description
Methicillin-resistant Staphylococcus aureus (MRSA) infection is caused by a bacteria that lives on the skin. Rate of healthcare-associated MRSA bacteremia events per 1,000 patient days

Measure Specifications
NHSN Measure Specifications

Numerator Statement
MRSA Bacteremia events

Denominator Statement
Patient days (facility-wide)

Exclusions
None noted

Data Source
CDC NHSN. Hospital abstracted.

Risk Adjustment
None

Managing Readmissions

For readmission technical specifications, including measure description, numerator and denominator statements, and specific and ICD-10 codes, please see the HIDI Readmission Measure Specifications.

For Pediatric ALL-Condition Readmission Measure specification, click here.

Price

Hospital pricing and medical billing can be complicated. The Focus on Hospitals website, www.focusonhospitals.com, allows health care consumers to compare information about the most common inpatient medical procedures and emergency department services at Missouri hospitals.

The selected pricing data categories and methodology were researched, discussed and piloted before approval by the MHA Price Transparency Work Group. The price measures are separated into two categories — Inpatient and Emergency — and include common medical procedures and services. The Inpatient data includes the 100 most prevalent statewide diagnosis related groups and is categorized using consumer-friendly terminology. Because each patient and case is unique, pricing data is displayed in ranges.

Inpatient Categories

- Nervous System
- Ear, Nose, Mouth and Throat
- Respiratory System
- Circulatory System
- Digestive System
- Hepatobiliary System/Pancreas
- Musculoskeletal/Connective Tissue
- Skin/Subcutaneous Tissue/Breast
- Endocrine/Nutritional/Metabolic
- Kidney/Urinary Tract

- Female Reproductive
- Pregnancy/Childbirth/Newborn and Other Neonates
- Blood/Related
- Neoplasms/Related
- Infection/Parasites
- Mental Disorders
- Substance Abuse
- Injury/Poisoning
- Other Factors

Median/Maximum/Minimum Charges

Charges, calculated after removing outliers from the data set

Discharge Statement
Number of discharges, calculated prior to removing outliers from the data set

Exclusions
Outliers, identified as records that fall outside of the state minimum and maximum charges, are removed from the hospital-specific data set.

Data Source
HIDI Discharge Claims Data