PERFORMANCE ON
THE MASSACHUSETTS HEALTH CARE SYSTEM:
A FOCUS ON PROVIDER QUALITY

TECHNICAL APPENDIX

November 2015

CHIA.

center
for health
information
and analysis

Table of Contents

Metrics: The Leapfrog Group

Steward: The Leapfrog Group

CHIA Data Source: The Leapfrog Group Hospital Survey

Population: All Payers, All Ages

Set	Measure Name and ID	Description	Primary Data Source
The Leapfrog Group	NTSV Cesarean Section	Percent of cesarean sections for first-time pregnancy (nulliparous) that has reached 37th week or later (term) and consists of one fetus (singleton) in the head-down position (vertex).	Hospital Survey derived from health records
The Leapfrog Group	Elective Delivery Prior to 39 Completed Weeks Gestation	Elective Delivery Prior to 39 Completed Weeks Gestation	Hospital Survey derived from health records
The Leapfrog Group	Incidence of Episiotomy	Percent of vaginal deliveries in which an episiotomy was performed.	Hospital Survey derived from health records

Definition:

These measure scores were received from The Leapfrog Group as pre-calculated percentages. Participation in the Leapfrog survey is voluntary; where a hospital does not complete the survey or report on certain items in the survey, the data for that entity is also not included in the report.

Metric: Delivery Method, Statewide

CHIA Data Source: Hospital Discharge Database

Population: All Payers, All Ages

Set	Measure Name and ID	Description	Primary Data Source
None	Delivery Method, Statewide	Percent of births statewide that were cesarean sections	Administrative data derived from health records

Definition:

The following categories were used to identify vaginal and cesarean section delivery of a newborn.

Vaginal Deliveries were determined by the following MS-DRGs:

MS-DRG	MS-DRG Description
767	Vaginal delivery w sterilization &/or D&C

768	Vaginal delivery w O.R. proc except sterile &/or D&C
774	Vaginal delivery w complicating diagnoses
775	Vaginal delivery w/o complicating diagnoses

Cesarean Section Deliveries were determined by the following MS-DRGs:

MS-DRG	**MS-DRG Description**
765	Cesarean section w CC/MCC
766	Cesarean section w/o CC/MCC

More information on CHIA's hospital utilization analysis of Hospital Discharge Data can be found here:
http://www.chiamass.gov/assets/Uploads/fy2009-fy2012-utilization-tech-appendix.doc

Metrics: Prevention Quality Indicators (PQI)

Steward: Agency for Healthcare Research and Quality

CHIA Data Source: CHIA Hospital Discharge Database

Population: All Payers, Ages 18+

Set	Measure Name and ID	Description	Primary Data Source
PQI	Asthma in younger adults admission rate (PQI 15)	Admissions for a principal diagnosis of asthma per 100,000 population, ages 18 to 39 years.	Administrative data derived from health records
PQI	Chronic obstructive pulmonary disease (PQI 5)	Admissions with a principal diagnosis of chronic obstructive pulmonary disease (COPD) or asthma per 100,000 population, ages 40 years and older.	Administrative data derived from health records
PQI	Congestive Heart Failure Admission Rate (PQI 8)	Admissions with a principal diagnosis of heart failure per 100,000 population, ages 18 years and older.	Administrative data derived from health records
PQI	Diabetes Short-Term Complications Admission Rate (PQI 1)	Admissions for a principal diagnosis of diabetes with short-term complications (ketoacidosis, hyperosmolarity, or coma) per 100,000 population, ages 18 years and older.	Administrative data derived from health records

Definition:

The Prevention Quality Indicators were calculated according to the measure specifications from the Agency for Healthcare Research and Quality (AHRQ), using data from CHIA's Hospital Discharge Database (HDD) for two fiscal years (2012-2013 and 2013-2014) and AHRQ software version 5.0.

The PQIs was risk-adjusted according to AHRQ specifications.

Metrics: Hospital-wide Adult All-Payer Readmissions

Steward: Centers for Medicare & Medicaid

CHIA Data Sources: CHIA Hospital Discharge Database

Populations: All Payers, Ages 18+

Set	Measure Name and ID	Description	Primary Data Source
Readmission Rates	Hospital-Wide All-Cause Unplanned Readmission Measure (HWR) (All-Payer Measure)	This measure estimates the hospital-wide, all-cause, unplanned 30-day readmission rate for all-payer patients aged 18 and older.	Administrative data derived from health records

Calculation/Definition:

The all-payer risk standardized readmission rates for patients 18+ years of age were calculated according to the measure specifications adopted from CMS, as submitted by the Center for Outcomes Research and Evaluation, Yale New Haven Health Services Corporation. CHIA's Hospital Discharge Database (HDD) was used for this analysis. The measure reports a single summary risk-standardized readmission rate (RSRR), derived from the volume-weighted results of five clinically defined cohorts: surgery/gynecology, general medicine, cardiorespiratory, cardiovascular, and neurology. The risk standardization procedure controls for patient case mix and hospital service mix.

For more details, please see http://www.chiamass.gov/hospital-wide-adult-all-payer-readmissions-in-massachusetts-2011-2013/

Metrics: Health Care-Associated Infections (HAI)

Measure Steward: Centers for Medicare & Medicaid Services

CHIA Data Source: CMS Hospital Compare

Populations: All Payers, All Ages

Set	Measure Name and ID	Description	Primary Data Source
HAI	Catheter-Associated Urinary Tract Infections (CAUTI)	Standardized Infection Ratio (SIR) of healthcare-associated, catheter-associated urinary tract infections (UTI) among patients	Health record

Set	Measure Name and ID	Description	Primary Data Source
		in bedded inpatient care locations, except level II or level III neonatal intensive care units (NICU.	
HAI	Central-Line Associated Bloodstream Infection (CLABSI)	Standardized Infection Ratio (SIR) of healthcare-associated, central line-associated bloodstream infections (CLABSI) among patients in bedded inpatient care locations.	Health record
HAI	Hospital-onset *C. difficile*	Standardized infection ratio (SIR) of hospital-onset CDI Laboratory-identified events (LabID events) among all inpatients in the facility, excluding well-baby nurseries and neonatal intensive care units (NICUs)	Health record
HAI	Hospital-onset MRSA	Standardized infection ratio (SIR) of hospital-onset unique blood source MRSA Laboratory-identified events (LabID events) among all inpatients in the facility	Health record
HAI	SSI Surgical Site Infection: SSI colon, SSI-abdominal hysterectomy	Facility adjusted Standardized Infection Ratio (SIR) of deep incisional and organ/space Surgical Site Infections (SSI) at the primary incision site among adult patients aged >= 18 years as reported through the CDC National Health and Safety Network (NHSN). This single prototype measure is applied to two operative procedures, colon surgeries and abdominal hysterectomies, and the measure yields separate SIRs for each procedure.	Health record

Definition:

Performance on these measures is reported as a Standard Infection Ratio (SIR), or the ratio of the observed number of infections to the expected number of infections at a particular facility. The CDC adjusts the SIR for risk factors associated with differences in a facility's infection rates, like hospital type, medical school affiliation, and bed size for CLABSI and CAUTI, and patient and procedural differences for SSI. The pre-calculated SIRs for health care-associated infections were retrieved from CMS Hospital Compare. Where a hospital's performance is not included on Hospital Compare because of small numbers, missing data, or because the measure does not apply, the data is not included in the report.

Metric: Serious Complications (Patient Safety Indicator composite, PSI 90)

Steward: Agency for Health Research and Quality (AHRQ)

CHIA Data Source: CHIA Hospital Discharge Database

Population: All Payers, Ages 18+

Set	Measure Name and ID	Description	Primary Data Source
Patient Safety Indicators	Patient Safety for Selected Indicators (PSI 90)	The weighted average of the reliability-adjusted observed-to-expected ratios (indirect standardization of the smoothed rates) for the following component indicators: • PSI 03 Pressure Ulcer Rate • PSI 06 Iatrogenic Pneumothorax Rate • PSI 07 Central Venous Catheter-Related Blood Stream Infection Rate • PSI 08 Postoperative Hip Fracture Rate • PSI 09 Perioperative Hemorrhage or Hematoma Rate • PSI 10 Postoperative Physiologic and Metabolic Derangement Rate • PSI 11 Postoperative Respiratory Failure Rate • PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate • PSI 13 Postoperative Sepsis Rate • PSI 14 Postoperative Wound Dehiscence Rate • PSI 15 Accidental Puncture or Laceration Rate	Administrative data derived from health records

Calculation:

The Serious Complications measure (PSI 90) is a weighted composite of eleven measures which are expressed as ratios of observed to expected rates. The composite was calculated according to AHRQ specifications, using data from CHIA's Hospital Discharge Database (HDD) for four fiscal years (2010-2011, 2011-2012, 2012-2013, and 2013-2014). The AHRQ software version 4.5A was used for 10/1/2010-9/30/13 and software version 5.0 was used to calculate performance in 10/1/13-9/30/14. Due to changes in the V.5.0 software, component weights, and risk adjustment, trending results across versions is not recommended.

Hospitals with fewer than 30 cases in the denominator were not reported.

Metric: Patient Safety Indicators (PSI)

Steward: Agency for Health Research and Quality (AHRQ)

CHIA Data Source: CHIA Hospital Discharge Database

Population: All Payers, Ages 18+

Set	Measure Name and ID	Description	Primary Data Source

Set	Measure Name and ID	Description	Primary Data Source
Patient Safety Indicators	Pressure Ulcer Rate (PSI 3)	Risk-adjusted rate of stage III or IV pressure ulcers (secondary diagnosis) per 1,000 discharges among patients ages 18 years and older.	Administrative data derived from health records
Patient Safety Indicators	Iatrogenic Pneumothorax (PSI 6)	Risk-adjusted rate of medical and surgical discharges, 18 years and older, with ICD-9-CM code of iatrogenic pneumothorax in any secondary diagnosis field.	Administrative data derived from health records
Patient Safety Indicators	Central Venous Catheter-Related Blood Stream Infection Rate (PSI 7)	Risk-adjusted rate of 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.	Administrative data derived from health records
Patient Safety Indicators	Postoperative Hip Fracture Rate (PSI 8)	Risk-adjusted rate of postoperative hip fracture (secondary diagnosis) per 1,000 surgical discharges for patients ages 18 years and older.	Administrative data derived from health records
Patient Safety Indicators	Postoperative Respiratory Failure Rate (PSI 11)	Risk-adjusted rate of postoperative respiratory failure (secondary diagnosis), mechanical ventilation, or reintubation cases per 1,000 elective surgical discharges for patients ages 18 years and older.	Administrative data derived from health records
Patient Safety Indicators	Postoperative Pulmonary Embolism or Deep Vein Thrombosis Rate (PSI 12)	Risk-adjusted rate of perioperative pulmonary embolism or deep vein thrombosis (secondary diagnosis) per 1,000 surgical discharges for patients ages 18 years and older.	Administrative data derived from health records
Patient Safety Indicators	Accidental Puncture or Laceration Rate (PSI 15)	Risk-adjusted rate of medical and surgical discharges, 18 years and older, with ICD-9-CM code denoting accidental cut, puncture, perforation, or laceration in any secondary diagnosis field.	Administrative data derived from health records
Patient Safety Indicators	Birth Trauma Rate - Injury to Neonate (PSI 17)	Rate of neonates with specific birth trauma per 1000 births. Exclude preterm infants with a birth weight less than 2,000 grams, infants with injury to skeleton and osteogenesis imperfecta, subdural or cerebral hemorrhage in preterm infant.	Administrative data derived from health records
Patient Safety Indicators	Obstetric Trauma Rate – Vaginal Delivery With Instrument (PSI 18)	Rate of third and fourth degree obstetric traumas per 1,000 instrument-assisted vaginal deliveries.	Administrative data derived from health records
Patient Safety Indicators	Obstetric Trauma Rate – Vaginal Delivery Without Instrument (PSI 19)	Rate of third and fourth degree obstetric traumas per 1,000 vaginal deliveries. Excludes cases with instrument-assisted delivery.	Administrative data derived from health records

Calculation:

Patient safety measures were calculated according to the measure specifications from the Agency for Healthcare Research and Quality (AHRQ), using data from CHIA's Hospital Discharge Database (HDD) for four fiscal years (2010-2011, 2011-2012, 2012-2013, and 2013-2014). The AHRQ software version 4.5A was used for 10/1/2010-9/30/13 and software version 5.0 was used to calculate performance in 10/1/13-9/30/14.

Except for "Birth Trauma Rate – Injury to Neonate," "Obstetric Trauma Rate – Vaginal Delivery with Instrument," and "Obstetric Trauma Rate – Vaginal Delivery without Instrument," the reported PSIs were risk-adjusted according to AHRQ specifications to remove the confounding effect of patient case mix. If a hospital had fewer than 30 cases in the denominator the PSI rates were not reported.

Metrics: Consumer Assessment of Healthcare Providers and Systems Clinician and Group Patient Centered Medical Home Survey (CAHPS) – Primary Care (Adult and Pediatrics)

Steward: Agency for Healthcare Research and Quality

CHIA Data Source: Massachusetts Health Quality Partners, 2014 Patient Experience Survey (PES)

Population: Commercially insured patients from the five largest health plans in Massachusetts (Blue Cross Blue Shield of Massachusetts, Tufts Health Plan, Harvard Pilgrim Health Care, Fallon Community Health Plan, and Health New England), Ages 18+

Adult Primary Care and Pediatric Patient Experience Survey Measures

Set	Measure Name and ID	Description	Primary Data Source
Patient Experience Survey	Organizational Access	Survey respondents' scoring of satisfaction with their ability to get timely appointments, care, and information.	Patient Reported Data/Survey
Patient Experience Survey	Office Staff	Survey respondents' scoring of their interactions with office staff.	Patient Reported Data/Survey
Patient Experience Survey	Integration of Care	Survey respondents' scoring of their satisfaction with their providers' coordination of their care.	Patient Reported Data/Survey
Patient Experience Survey	Communication	Survey respondents' scoring of their satisfaction with their patient-providers' communication.	Patient Reported Data/Survey
Patient Experience Survey	Knowledge of Patient	Survey respondents' scoring of their satisfaction with how well doctors know them.	Patient Reported Data/Survey

Set	Measure Name and ID	Description	Primary Data Source
Patient Experience Survey	Willingness to Recommend	Survey respondents reported YES, they would definitely recommend their doctor to family and friends.	Patient Reported Data/Survey

All scores for measures of patient experience in medical groups were pre-calculated by and received from the Massachusetts Health Quality Partners (MHQP).

Patient Experience measures scores are rated on a scale from 0 to 100. Each survey response is converted to numeric format, with 100 as the most favorable response. Related questions are averaged to create a respondent-level score for each measure. The respondents' measure scores are then case mix adjusted before aggregating to the medical group level and a statewide score.

These measures reflect the experience of the adult or a parent or caregiver of a child who received care and who is a commercially insured member of one of the five largest commercial carriers in the Commonwealth: BCBSMA, Fallon Community Health Plan, Harvard Pilgrim Health Care, Health New England, and Tufts Health Plan. This sample represents approximately 80% of the commercial population. The nine Provider Group Networks measured are those serving the five carriers' commercial members. These groups are: Atrius Health, Inc., Baycare Health Partners, Berkshire Health Systems, Beth Israel Deaconess Care Organization LLC, Lahey Hospital and Medical Center, New England Quality Care Alliance, Partners Community Health Care, Steward Health Care Network, and UMass Memorial Health Care, Inc.

MHQP does not report scores for practices or groups with insufficient sample size, but individuals from these small practices or groups are counted at more aggregated levels, once sufficient sample size is reached.

The survey was administered in April, May and June 2014 and asks respondents to consider care they received in the past 12 months.

Metrics: Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)

Steward: Agency for Healthcare Research and Quality

CHIA Data Source: CMS Hospital Compare

Populations: All Payers, Ages 18+

Set	Measure Name and ID	Description	Primary Data Source

Set	Measure Name and ID	Description	Primary Data Source
HCAHPS	Room Was "Always" Clean	The percentage of patients responding to the HCAHPS survey who reported that their room and bathroom were "Always" clean.	Patient Reported Data/Survey
HCAHPS	Hospital Staff "Always" Explained Medicines	The percentage of patients responding to the HCAHPS survey who reported that staff "Always" explained about medicines before giving it to them.	Patient Reported Data/Survey
HCAHPS	Doctors "Always" Communicated Well	The percentage of patients responding to the HCAHPS survey who reported that their doctors "Always" communicated well.	Patient Reported Data/Survey
HCAHPS	Nurses "Always" Communicated Well	The percentage of patients responding to the HCAHPS survey who reported that their nurses "Always" communicated well.	Patient Reported Data/Survey
HCAHPS	Recovery Information was Given	The percentage of patients responding to the HCAHPS survey at each hospital who reported that YES, they were given information about what to do during their recovery at home.	Patient Reported Data/Survey
HCAHPS	Patient Rating of Hospital Based on Recent Admission	The percentage of patients responding to the HCAHPS survey who gave their hospital a rating of 9 or 10 on a scale from 0 (lowest) to 10 (highest).	Patient Reported Data/Survey
HCAHPS	Patient Would Definitely Recommend the Hospital	Percentage of patients who reported YES, they would definitely recommend the hospital.	Patient Reported Data/Survey
HCAHPS	Pain was "Always" Well Controlled	The percentage of patients responding to the HCAHPS survey who reported that their pain was "Always" well controlled.	Patient Reported Data/Survey
HCAHPS	Room was "Always" Quiet at Night	The percentage of patients responding to the HCAHPS survey who reported that the area around their room was "Always" quiet at night.	Patient Reported Data/Survey
HCAHPS	Patient "Always" received Help When Wanted	The percentage of patients responding to the HCAHPS survey who reported that they "Always" received help as soon as they wanted.	Patient Reported Data/Survey
HCAHPS	Patient "Strongly Agrees" he/she Understood Care At Discharge	The percentage of patients responding to the HCAHPS survey who reported that they "Strongly Agreed" they understood their care instructions at discharge.	Patient Reported Data/Survey

Definition:

All HCAHPS scores were retrieved from CMS Hospital Compare as pre-calculated percentages. Where a hospital's performance is not included on Hospital Compare because of small numbers, missing data, or because the measure does not apply, the measure is also not included in the report.

Metrics: Hospital-Based Inpatient Psychiatric Services

Measure Steward: Centers for Medicare & Medicaid Services

CHIA Data Source: CMS Hospital Compare

Populations: All payer, all ages

Set	Measure Name and ID	Description	Primary Data Source
HBIPS	Post-discharge continuing care plan created	The percentage of patients discharged from a hospital-based inpatient psychiatric setting with a continuing care plan created.	Health record
HBIPS	Post-discharge continuing care plan transmitted	The percentage of patients discharged from a hospital-based inpatient psychiatric setting with a continuing care plan created.	Health record
HBIPS	Patients discharged on multiple antipsychotic medications	The percentage of patients discharged from a hospital-based inpatient psychiatric setting on multiple antipsychotic medications.	Health record

All HBIPS scores were retrieved from CMS Hospital Compare as pre-calculated percentages. Where a hospital's performance is not included on Hospital Compare because of small numbers, missing data, or because the measure does not apply, the data is not included in the report.

Metric: CMS Hospital Effective Care Processes

Measure Steward: Centers for Medicare & Medicaid Services

CHIA Data Source: CMS Hospital Compare

Populations: All Payers, Ages 18+

Set	Measure Name and ID	Description	Primary Data Source
Hospital Process	Aspirin prescribed at discharge for AMI (AMI 2)	Percentage of acute myocardial infarction (AMI) patients who are prescribed aspirin at hospital discharge.	Claims and health record
Hospital Process	Fibrinolytic therapy received within 30 minutes of hospital arrival (AMI 7a)	Percentage of acute myocardial infarction (AMI) patients with ST-segment elevation or LBBB on the ECG closest to arrival time receiving fibrinolytic therapy during the hospital stay and having a time from hospital arrival to fibrinolysis of 30 minutes or less.	Claims and health record

Set	Measure Name and ID	Description	Primary Data Source
Hospital Process	Primary percutaneous coronary intervention (PCI) received within 90 minutes of hospital arrival (AMI 8a)	Percentage of acute myocardial infarction (AMI) patients with ST-segment elevation or LBBB on the ECG closest to arrival time receiving primary percutaneous coronary intervention (PCI) during the hospital stay with a time from hospital arrival to PCI of 90 minutes or less.	Claims and health record
Hospital Process	Statin Prescribed at Discharge (AMI 10)	Percent of acute myocardial infarction (AMI) patients who are prescribed a statin at hospital discharge.	Claims and health record
Hospital Process	Detailed Discharge Instructions (HF 1)	Percent of health failure patients who received detailed instructions at discharge.	Claims and health record
Hospital Process	Heart failure patients given an evaluation of left ventricular systolic function (LVS) (HF 2)	Percentage of heart failure patients with documentation in the hospital record that left ventricular systolic (LVS) function was evaluated before arrival, during hospitalization, or is planned for after discharge.	Claims and health record
Hospital Process	Pneumonia patients given the most appropriate initial antibiotic(s) (PN 6)	Percentage of pneumonia patients 18 years of age or older selected for initial receipts of antibiotics for community-acquired pneumonia (CAP).	Claims and health record
Surgical Care Improvement Project	Prophylactic antibiotic received within 1 hour prior to surgical incision (SCIP-Inf-1a)	Surgical patients with prophylactic antibiotics initiated within one hour prior to surgical incision. Patients who received vancomycin or a fluoroquinolone for prophylactic antibiotics should have the antibiotics initiated within two hours prior to surgical incision. The extended window is due to the longer infusion time required for these antibiotics.	Claims and health record
Surgical Care Improvement Project	Prophylactic antibiotic selection for surgical patients (SCIP-Inf-2a)	Surgical patients who received prophylactic antibiotics consistent with current guidelines (specific to each type of surgical procedure).	Claims and health record
Surgical Care Improvement Project	Prophylactic antibiotics discontinued within 24 hours after surgery end time (SCIP-Inf-3a)	Surgical patients whose prophylactic antibiotics were discontinued within 24 hours after Anesthesia End Time. The Society of Thoracic Surgeons (STS) Practice Guideline for Antibiotic Prophylaxis in Cardiac Surgery (2006) indicates that there is no reason to extend antibiotics beyond 48 hours for cardiac surgery and very explicitly states that antibiotics should not be extended beyond 48 hours even with tubes and drains in place for cardiac surgery.	Claims and health record

Set	Measure Name and ID	Description	Primary Data Source
Surgical Care Improvement Project	Urinary catheter removed on Postoperative Day 1 (POD1) or Postoperative Day 2 (POD2) with day of surgery being day zero (SCIP-Inf-9)	Surgical patients with urinary catheter removed on Postoperative Day 1 or Postoperative Day 2 with day of surgery being day zero.	Claims and health record
Surgical Care Improvement Project	Surgery patients who received appropriate venous thromboembolism prophylaxis within 24 hours prior to surgery to 24 hours after surgery (SCIP-VTE-2)	Surgery patients who received appropriate venous thromboembolism (VTE) prophylaxis within 24 hours prior to Surgical Incision Time to 24 hours after Surgery End Time.	Claims and health record
Surgical Care Improvement Project	Surgery patients on beta-blocker therapy prior to arrival who received a beta-blocker during the perioperative period (SCIP-Card-2)	Surgery patients on beta-blocker therapy prior to admission who received a beta-blocker during the perioperative period. The perioperative period for the SCIP Cardiac measures is defined as 24 hours prior to surgical incision through discharge from post-anesthesia care/recovery area.	Claims and health record
Surgical Care Improvement Project	Cardiac Surgery Patients with Controlled Postoperative Blood Glucose (SCIP-Inf-4)	Cardiac surgery patients with controlled postoperative blood glucose (less than or equal to 180 mg/dL) in the timeframe of 18 to 24 hours after Anesthesia End Time.	Claims and health record

Definition:

All process measure scores were retrieved from CMS Hospital Compare as pre-calculated percentages. Where a hospital's performance is not included on Hospital Compare because of small numbers, missing data, or because the measure does not apply, the data is not included in the report.

Metrics: CMS 30-Day Condition-Specific Mortality Rates

Measure Steward: Centers for Medicare & Medicaid Services

CHIA Data Source: CMS Hospital Compare

Populations: Medicare FFS, Ages 65+

Set	Measure Name and ID	Description	Primary Data Source

Set	Measure Name and ID	Description	Primary Data Source
CMS	Stroke 30-day mortality rate	The percentage of patients discharged from the hospital with a principal diagnosis of stroke that died for any cause within 30 days after the date of the index admission.	Claims and health record
CMS	Pneumonia 30-day mortality rate	The percentage of patients discharged from the hospital with a principal diagnosis of pneumonia that died for any cause within 30 days after the date of the index admission.	Claims and health record
CMS	Heart failure 30-day mortality rate	The percentage of patients discharged from the hospital with a principal diagnosis of heart failure that died for any cause within 30 days after the date of the index admission.	Claims and health record
CMS	COPD 30-day mortality rate	The percentage of patients discharged from the hospital with a principal diagnosis of chronic obstructive pulmonary disease that died for any cause within 30 days after the date of the index admission.	Claims and health record
CMS	Acute myocardial infarction 30-day mortality rate	The percentage of patients discharged from the hospital with a principal diagnosis of acute myocardial infarction that died for any cause within 30 days after the date of the index admission.	Claims and health record

Definition:

All process measure scores were retrieved from CMS Hospital Compare as pre-calculated percentages. Where a hospital's performance is not included on Hospital Compare because of small numbers, missing data, or because the measure does not apply, the hospital is also not included in the report.

These measures include hospitalizations for Medicare beneficiaries 65 or older who were enrolled in Medicare for the entire 12 months prior to their hospital admission. The heart attack, heart failure, and pneumonia mortality measures also include patients 65 or older who were admitted to Veterans Health Administration (VA) hospitals. Medicare managed care plan enrollees are not included.

Metrics: Children's Asthma Care

Measure Steward: Centers for Medicare & Medicaid Services

CHIA Data Source: CMS Hospital Compare

Populations: All payer, ages 2-17

Set	Measure Name and ID	Description	Primary Data Source
CAC	Systemic corticosteroids for inpatient asthma	Children who received system corticosteroids medication (oral and IV medication that reduces inflammation and controls symptoms) while hospitalized for asthma	Claims and health record
CAC	Relievers for inpatient asthma	Children who received reliever medication while hospitalized for asthma	Claims and health record
CAC	Home management plan of care document given to patient/caregiver	Children and their caregivers who received a home management plan of care document while hospitalized for asthma.	Claims and health record

Definition:

All process measure scores were retrieved from CMS Hospital Compare as pre-calculated percentages. Where a hospital's performance is not included on Hospital Compare because of small numbers, missing data, or because the measure does not apply, the hospital is not included in the report.

Metrics: Home Health Care

Measure Steward: Centers for Medicare & Medicaid Services

CHIA Data Source: CMS Home Health Compare

Populations:

> **Administrative Claims Measures:** Medicare Part A and B beneficiaries

> **Clinical Measures:** Medicare, Medicaid, and Medicare or Medicaid Managed Care patients, All Ages

Set	Measure Name and ID	Description	Primary Data Source
OASIS	Acute Care Hospitalization During the First 60 Days of Home Health	Percentage of home health cases in which patients were admitted to an acute care hospital during the 60 days following the start of home health services.	Claims

Set	Measure Name and ID	Description	Primary Data Source
OASIS	Emergency Department Use without Hospitalization During the First 60 Days of Home Health	Percentage of home health cases in which patients used the emergency department but were not admitted to the hospital during the 60 days following the start of home health services.	Claims
OASIS	Timely Initiation of Care	Percentage of home health episodes of care in which the start or resumption of care date was either on the physician-specified date or within 2 days of the referral date or inpatient discharge date, whichever is later.	Health records

Definition:

All HHA scores were retrieved from CMS Home Health Compare as pre-calculated percentages. Where an agency's performance is not included on Home Health Compare because of small numbers, missing data, or because the measure does not apply, the agency is also not included in the report.

The measures for HHAs reflect the experience of Medicare and Medicaid patients only and are drawn from the Outcome and Assessment Information Set (OASIS) and combine process and outcome measures.

Metrics: Skilled Nursing Facilities

Steward: Centers for Medicare & Medicaid Services

CHIA Data Source: CMS Nursing Home Compare

Population: All Payers, All Ages

Set	Measure Name and ID	Description	Primary Data Source
CMS – Minimum Data Set (MDS)	Percent of Residents Who Self-Report Moderate to Severe Pain (Short-Stay)	This measure captures the percentage of short stay residents, with at least one episode of moderate/severe pain or horrible/excruciating pain of any frequency, in the last 5 days.	Electronic clinical data
CMS– Minimum Data Set (MDS)	Percent of Residents Who Self-Report Moderate to Severe Pain (Long-Stay)	This measure captures the percentage of long-stay residents who report either (1) almost constant or frequent moderate to severe pain in the last 5 days or (2) any very severe/horrible pain in the last 5 days.	Electronic clinical data

Set	Measure Name and ID	Description	Primary Data Source
CMS– Minimum Data Set (MDS)	Percent of Residents with Pressure Ulcers That Are New or Worsened (Short-Stay)	This measure captures the percentage of short-stay residents with new or worsening Stage II-IV pressure ulcers.	Electronic clinical data
CMS– Minimum Data Set (MDS)	Percent of High Risk Residents with Pressure Ulcers (Long Stay)	This measure captures the percentage of long-stay, high-risk residents with Stage II-IV pressure ulcers.	Electronic clinical data

Definition:

All SNF scores were retrieved from CMS Nursing Home Compare as pre-calculated percentages. Where a facility's performance is not included on Nursing Home Compare because of small numbers, missing data, or because the measure does not apply, the facility is also not included in the report.

The measures for SNFs reflect the experience of all residents in Medicare or Medicaid certified facilities and are used by providers to create care plans*.*