Chapter 5. Care Coordination

5.1. Transitions of Care

Measure ID

HCAHPS_4, 50101021

Measure Title

Adult hospital patients who did not receive good communication about discharge information

Measure Source

Centers for Medicare & Medicaid Services (CMS), Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS).

Table Descriptions

Geographic Representation: National, State

Years Available: 2009-2016

Population Subgroups: Age, ethnicity, race, education, language spoken at home

Data Source

CMS, HCAHPS

Denominator

Adult hospital patients

Numerator

Subset of the Denominator who did not receive good communication about discharge information.

Measure ID

HCAHPS_5, 50101031

Measure Title

Adult hospital patients who strongly disagree or disagree that staff took their preferences and those of their family and caregiver into account when deciding what the patients discharge health care would be

Measure Source

Centers for Medicare & Medicaid Services (CMS), Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS).

Table Descriptions

Geographic Representation: National, State

Years Available: 2014-2016

Population Subgroups: Age, ethnicity, race, education, language spoken at home

Data Source

CMS, HCAHPS

Denominator

Adult hospital patients

Numerator

Subset of the Denominator who strongly disagree or disagree that staff took their preferences and those of their family and caregiver into account when deciding what the patients discharge health care would be.

5.2. Medication Information

Measure ID

MEPS_37, 50201011

Measure Title

People with a usual source of care whose health providers usually asks about prescription medications and treatments from other doctors

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Financing, Access, and Cost Trends (CFACT), Medical Expenditure Panel Survey (MEPS)

Table Description

Geographic Representation: National

Years Available: 2002 to 2015

Population Subgroups: age, gender, race, ethnicity, family income, education, employment status, health insurance, Medicaid/CHIP, residence location, language spoken at home, perceived health status, activity limitations, number of chronic conditions, U.S. born.

Data Source

AHRQ, CFACT, MEPS

Denominator

U.S. civilian noninstitutionalized population who had a usual source of care and a valid response to the question, "Does [respondent's usual care provider] usually ask about prescription medications and treatments other doctors may give you?"

Numerator

Subset of the Denominator who answered "Yes" to the question identified in the Denominator

Comments

Usual source of care is defined as a particular doctor's office, clinic, health center, or other health care facility to which an individual usually would go to obtain health care service.

5.3. Preventable Emergency Department Visits

Measure ID

HCUP_52, 50301022

Measure Title

Emergency department visits with a diagnosis related to mental health only per 100,000 population

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP)

Table Description

Geographic Representation: National

Years Available: 2007-2015

Population Subgroups: Age, gender, geographic location (residence), median household income of the patient's ZIP Code, region

Data Source

AHRQ, CDOM, HCUP, Nationwide Emergency Department Sample (NEDS)

Denominator

U.S. resident population age 18 and over

Numerator

Hospital admissions of adults that qualified to be in the Numerator with a diagnosis in one of the following AHRQ Clinical Classification Software (CCS) categories:

- CCS 650, Adjustment disorders
- CCS 651, Anxiety disorders
- CCS 652, Attention-deficit, conduct, and disruptive behavior disorders
- CCS 655, Disorders usually diagnosed in infancy, childhood, or adolescence
- CCS 656, Impulse control disorders, NEC
- CCS 657, Mood disorders
- CCS 658, Personality disorders
- CCS 659, Schizophrenia and other psychotic disorders
- CCS 662, Suicide and intentional self-inflicted injury
- CCS 670, Miscellaneous disorders

Comments

The AHRQ CCS categorizes ICD-9-CM diagnosis codes into a manageable number of clinically meaningful categories. This clinical grouper makes it easier to quickly understand patterns of diagnoses.

The HCUP Nationwide Emergency Department Sample (NEDS) was created to enable analyses of emergency department (ED) utilization patterns and is the largest all-payer ED database that is publicly available in the United States. The NEDS is a 20-percent stratified sample of hospital-owned EDs in the United States. The NEDS is drawn from statewide data organizations that provide HCUP with data from ED visits that may or may not have resulted in hospital admission. Weights are provided to calculate national estimates.

For more information, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_53, 50301023

Measure Title

Emergency department visits with a diagnosis related to substance abuse only, per 100,000 population

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP)

Table Description

Geographic Representation: National

Years Available: 2007-2015

Population Subgroups: Age, gender, geographic location (residence), median household income of the patient's ZIP Code, region

Data Source

AHRQ, CDOM, HCUP, Nationwide Emergency Department Sample (NEDS)

Denominator

U.S. resident population age 18 and over

Numerator

Hospital admissions of adults that qualified to be in the Numerator with a diagnosis in one of the following AHRQ Clinical Classification Software (CCS) categories:

- CCS 660, Alcohol-related disorders
- CCS 661, Substance-related disorders

Comments

The AHRQ CCS categorizes ICD-9-CM diagnosis codes into a manageable number of clinically meaningful categories. This clinical grouper makes it easier to quickly understand patterns of diagnoses.

The HCUP Nationwide Emergency Department Sample (NEDS) was created to enable analyses of emergency department (ED) utilization patterns and is the largest all-payer ED database that is publicly available in the United States. The NEDS is a 20-percent stratified sample of hospital-owned EDs in the United States. The NEDS is drawn from statewide data organizations that provide HCUP with data from ED visits that may or may not have resulted in hospital admission. Weights are provided to calculate national estimates.

For more information, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_54, 50301024

Measure Title

Emergency department visits with a diagnosis related to co-occurring of mental health, alcohol and substance abuse, per 100,000 population

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP)

Table Description

Geographic Representation: National

Years Available: 2007-2015

Population Subgroups: Age, gender, geographic location (residence), median household income of the patient's ZIP Code, region of hospital

Data Source

AHRQ, CDOM, HCUP, Nationwide Emergency Department Sample (NEDS)

Denominator

U.S. resident population age 18 and over

Numerator

Emergency department visits of adults with a diagnosis in one of the following AHRQ Clinical Classification Software (CCS) categories for mental health and another diagnosis in one CCS for substance abuse:

Mental health CCS

- CCS 650, Adjustment disorders
- CCS 651, Anxiety disorders
- CCS 652, Attention-deficit, conduct, and disruptive behavior disorders
- CCS 655, Disorders usually diagnosed in infancy, childhood, or adolescence
- CCS 656, Impulse control disorders, NEC
- CCS 657, Mood disorders
- CCS 658, Personality disorders
- CCS 659, Schizophrenia and other psychotic disorders
- CCS 662, Suicide and intentional self-inflicted injury
- CCS 670, Miscellaneous disorders

Substance abuse CCS

- CCS 660, Alcohol-related disorders
- CCS 661, Substance-related disorders

Comments

The AHRQ CCS categorizes ICD-9-CM diagnosis codes into a manageable number of clinically meaningful categories. This clinical grouper makes it easier to quickly understand patterns of diagnoses.

The HCUP Nationwide Emergency Department Sample (NEDS) was created to enable analyses of emergency department (ED) utilization patterns and is the largest all-payer ED database that is publicly available in the United States. The NEDS is a 20-percent stratified sample of hospital-owned EDs in the United States. The NEDS is drawn from statewide data organizations that provide HCUP with data from ED visits that may or may not have resulted in hospital admission. Weights are provided to calculate national estimates.

For more information, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_55, 50301031

Measure Title

Emergency department visits with a principal diagnosis related to dental conditions per 100,000 population

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP)

Table Description

Geographic Representation: National

Years Available: 2009-2015

Population Subgroups: Age, gender, geographic location (residence), median household income of the patient's ZIP Code

Data Source

AHRQ, CDOM, HCUP, Nationwide Emergency Department Sample (NEDS)

Denominator

U.S. resident population, all ages

Numerator

Emergency department visits in the U.S. with a principal diagnosis related to dental conditions defined using ICD-9-CM diagnosis codes of 520-523.9

Comments

The HCUP Nationwide Emergency Department Sample (NEDS) was created to enable analyses of emergency department (ED) utilization patterns and is the largest all-payer ED database that is publicly available in the United States. The NEDS is a 20-percent stratified sample of hospital-owned EDs in the United States. The NEDS is drawn from statewide data organizations that provide HCUP with data from ED visits that may or may not have resulted in hospital admission. Weights are provided to calculate national estimates.

For more information, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_13, 50301041

Measure Title

Emergency department encounters for asthma, adults ages 18-39

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Prevention Quality Indicators (PQIs)

Table Description

Geographic Representation: National

Years Available: 2008 - 2015

Population Subgroups: Age, gender, geographic location (residence), median household income of the patient's ZIP Code, region of the United States

Data Source

AHRQ, CDOM, HCUP, Nationwide Emergency Department Sample (NEDS) and AHRQ Quality Indicators, modified version 4.4

Denominator

U.S. resident population ages 18 to 39

Numerator

Number of emergency department visits with a first-listed diagnosis of asthma

Comments

Consistent with the AHRQ Prevention Quality Indicators (PQIs) software, asthma must be the first-listed diagnosis and the following cases are excluded: admissions with cystic fibrosis or anomalies of the respiratory system, and transfers from other institutions.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the U.S. standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP Nationwide Emergency Department Sample (NEDS) was created to enable analyses of emergency department (ED) utilization patterns and is the largest all-payer ED database that is publicly available in the United States. The NEDS is a 20-percent stratified sample of hospital-

owned EDs in the United States. The NEDS is drawn from statewide data organizations that provide HCUP with data from ED visits that may or may not have resulted in hospital admission. Weights are provided to calculate national estimates.

For more information, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_56, 50301042

Measure Title

Emergency department encounters for asthma, children ages 2-17

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Pediatric Quality Indicators (PDIs)

Table Description

Geographic Representation: National

Years Available: 2008-2015

Population Subgroups: Age, gender, geographic location (residence), Median income of patient's ZIP Code, region

Data Source

AHRQ, CDOM, HCUP, Nationwide Emergency Department Sample (NEDS), and AHRQ Quality Indicators, modified version 4.4

Denominator

U.S. resident population ages 2 to 17

Numerator

Emergency department visits in the U.S. with a first-listed diagnosis of asthma

Comments

Consistent with the AHRQ Pediatric Quality Indicators (PDIs) software, asthma must be the first-listed diagnosis and the following cases are excluded: admissions with cystic fibrosis or anomalies of the respiratory system, and transfers from other institutions.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the U.S. standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP Nationwide Emergency Department Sample (NEDS) was created to enable analyses of emergency department (ED) utilization patterns and is the largest all-payer ED database that is publicly available in the United States. The NEDS is a 20-percent stratified sample of hospital-owned EDs in the United States. The NEDS is drawn from statewide data organizations that provide HCUP with data from ED visits that may or may not have resulted in hospital admission. Weights are provided to calculate national estimates.

For more information, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

NHAMCS_13, 50301043

Measure Title

Children ages 2-19 with hospital emergency department for asthma.

Measure Source

Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Hospital Ambulatory Medical Care Survey (NAMCS)

Table Description

Geographic Representation: National

Years Available: 2006-2008 to 2012-2014

Population Subgroups: sex, race/ethnicity, health insurance status, geographic location (patient)

Data Source

CDC, NCHS, NAMCS

Denominator

U.S. civilian population ages 2-19.

Numerator

Number of visits to an emergency department with a first-listed diagnosis of asthma among child population in the age range.

Measure ID

NHAMCS_13, 50301044

Measure Title

Children ages 2-9 who visited emergency department for asthma

Measure Source

Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Hospital Ambulatory Medical Care Survey (NAMCS)

Table Description

Geographic Representation: National

Years Available: 2007-2009 to 2012-2014

Population Subgroups: sex, race/ethnicity, health insurance status, geographic location (patient)

Data Source

CDC, NCHS, NAMCS

Denominator

U.S. civilian population ages 2-9.

Numerator

Number of visits to an emergency department with a first-listed diagnosis of asthma among child population in the age range.

Measure ID

NHAMCS_13, 50301045

Measure Title

Children ages 10-19 who visited emergency department for asthma

Measure Source

Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Hospital Ambulatory Medical Care Survey (NAMCS)

Table Description

Geographic Representation: National

Years Available: 2007-2009 to 2012-2014

Population Subgroups: sex, race/ethnicity, health insurance status, geographic location (patient)

Data Source

CDC, NCHS, NAMCS

Denominator

U.S. civilian population ages 10-19.

Numerator

Number of visits to an emergency department with a first-listed diagnosis of asthma among child population in the age range.

5.4. Preventable Hospitalizations

Measure ID

HCUP_32, 50401011

Measure Title

Hospital admissions for uncontrolled diabetes without complications per 100,000 population, adults

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Prevention Quality Indicators (PQIs)

Table Descriptions

Geographic Representation: National, State

Years Available: National - 2000-2015; State - 2011-2015

Population Subgroups: Age, gender, race/ethnicity, median income of patient's Zip Code , location of residence, region

Data Sources

National: AHRQ, CDOM, HCUP Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

State: AHRQ, CDOM, HCUP, State Inpatient Databases (SID) and AHRQ Quality Indicators, modified version 4.4

Denominator

National and State: U.S. resident population, age 18 years and over.

Numerator

Hospital admissions of adults age 18 and over with discharges with a principal diagnosis of uncontrolled diabetes and without mention of short-term or long-term complications

Comments

Short-term complications include ketoacidosis, hyperosmolarity, and coma. Long-term complications include renal, eye, neurologic, circulatory, and other unspecified. Obstetric admissions and transfers from other institutions are excluded.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_33, 50401021

Measure Title

Hospital admissions for short-term complications of diabetes per 100,000 population, adults

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Prevention Quality Indicators (PQIs)

Table Descriptions

Geographic Representation: National, State

Years Available: National - 2000-2015

State - 2011-2015

Population Subgroups: Age, gender, Median income of patient's Zip Code, location of residence, region

Data Sources

National: AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

State: AHRQ, CDOM, HCUP, State Inpatient Databases (SID) and AHRQ Quality Indicators, modified version 4.4

Denominator

U.S. resident population age 18 and over

Numerator

Adult discharges age 18 and over with a principal diagnosis of diabetes with short-term complications.

Comments

Consistent with the AHRQ PQI software, diabetes must be the principal diagnosis and short-term complications include ketoacidosis, hyperosmolarity, and coma. Transfers from other institutions are excluded.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_34, 50401022

Measure Title

Hospital admissions for short-term complications of diabetes per 100,000 population, children ages 6-17

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Pediatric Quality Indicators (PDIs)

Table Descriptions

Geographic Representation: National, State

Years Available: National - 2000-2015; State - 2011-2015

Population Subgroups: Age, gender, Median income of patient's Zip Code, location of residence, region

Data Sources

National: AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

State: AHRQ, CDOM, HCUP, State Inpatient Databases (SID) and AHRQ Quality Indicators, modified version 4.4

Denominator

U.S. resident population ages 6-17

Numerator

Pediatric discharges ages 6-17 with a principal diagnosis of diabetes with short-term complications. Consistent with the AHRQ PDI software, diabetes must be the principal diagnosis and short-term complications include ketoacidosis, hyperosmolarity, and coma. Transfers from other institutions are excluded.

Comments

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_35, 50401031

Measure Title

Hospital admissions for long-term complications of diabetes per 100,000 population, adults

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Prevention Quality Indicators (PQIs)

Table Descriptions

Geographic Representation: National, State

Years Available: National - 2000-2015; State - 2011-2015

Population Subgroups: Age, gender, Median income of patient's Zip Code, location of residence, region

Data Sources

National: AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

State: AHRQ, CDOM, HCUP, State Inpatient Databases (SID) and AHRQ Quality Indicators, modified version 4.4

Denominator

U.S. resident population age 18 and over

Numerator

Hospitalization of adults age 18 and over with hospital inpatient discharges with a principal diagnosis code for diabetes with long-term complications.

Comments

Consistent with the AHRQ PQI software, diabetes must be the principal diagnosis and long-term complications include renal, eye, neurologic, circulatory, and other unspecified complications. Transfers from other institutions and obstetric admissions are excluded.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_43, 50401041

Measure Title

Hospital admissions for lower extremity amputations among admissions for diabetes per 100,00 population, age 18 and over

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Prevention Quality Indicators (PQIs).

Table Descriptions

Geographic Representation: National, State

Years Available: National: 2000-2015; State: 2011-2015

Population Subgroups: Age, gender, race/ethnicity, expected primary payer, median household income of the patient's ZIP Code, urbanized location, region of the United States, bed size of hospital, teaching status of hospital

Data Source

National: AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

State: AHRQ, CDOM, HCUP, State Inpatient Databases (SID) and AHRQ Quality Indicators, modified version 4.4

Denominator

U.S. resident population of adults age 18 and older

Numerator

Hospitalizations of adults with a procedure for lower-extremity amputation and a diagnosis of diabetes.

Comments

Consistent with the AHRQ PQI software, a procedure code for lower-extremity amputation and a diagnosis of diabetes must be present. Exclusions include admissions for toe amputation or traumatic amputations of the lower extremity, obstetric discharges, and transfers from other institutions.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private expected primary payer, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_39, 50401071

Measure Title

Hospital admissions for asthma per 100,000 population, ages 18-39

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Prevention Quality Indicators (PQIs)

Table Descriptions

Geographic Representation: National, State

Years Available: National - 2000-2015

State - 2011-2015

Population Subgroups: Age, gender, race/ethnicity, location of residence, median income of patient's ZIP code, region

Data Sources

National: AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

State: AHRQ, CDOM, HCUP, State Inpatient Databases (SID) and AHRQ Quality Indicators, modified version 4.4

Denominator

U.S. resident population of adults age 18 to 39

Numerator

Hospitalization of adults ages 18-39 with hospital inpatient discharges with a principal diagnosis code of asthma

Comments

Consistent with the AHRQ PQI software, asthma must be the principal diagnosis on admissions ages 18 to 39 years old, and the following cases are excluded: admissions with cystic fibrosis or anomalies of the respiratory system and transfers from other institutions.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_59, 50401072

Measure Title

Hospital admissions for asthma per 100,000 population, ages 2-17

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Pediatric Quality Indicators (PDIs)

Table Descriptions

Geographic Representation: National, State

Years Available: National - 2000-2015; State - 2011 - 2015

Population Subgroups: Age, gender, race/ethnicity, expected primary payer, median household income of the patient's ZIP Code, urbanized location, region of the United States, bed size of hospital, teaching status of hospital

Data Source

AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

Denominator

U.S. resident population of adults ages 2 to 17

Numerator

Hospitalization of children ages 2-17 with a principal diagnosis code of asthma

Comments

Consistent with the AHRQ PDI software, asthma must be the principal diagnosis and the following cases are excluded: admissions with cystic fibrosis or anomalies of the respiratory system, transfers from other institutions, and obstetric admissions.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Agency for Healthcare Research and Quality

Measure ID

HCUP_17, 50501031

Measure Title

Hospitalizations and emergency department encounters for congestive heart failure (CHF)

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Prevention Quality Indicators (PQIs)

Table Description

Geographic Representation: National

Years Available: 2008 - 2015

Population Subgroups: Age, gender, median household income of the patient's ZIP Code, urbanized location, and region of the United States

Data Source

AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and Nationwide Emergency Department Sample (NEDS)

Denominator

U.S. resident population age 18 and over

Numerator

Number of hospitalizations or emergency department visits for congestive heart failure

Comments

Consistent with the AHRQ PQI software, CHF must be the principal diagnosis and the following are excluded: admissions with cardiac procedures and transfers from other institutions.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set

of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

The HCUP Nationwide Emergency Department Sample (NEDS) was created to enable analyses of emergency department (ED) utilization patterns and is the largest all-payer ED database that is publicly available in the United States. The NEDS is a 20-percent stratified sample of hospital-owned EDs in the United States. The NEDS is drawn from statewide data organizations that provide HCUP with data from ED visits that may or may not have resulted in hospital admission. Weights are provided to calculate national estimates.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

5.6. Potentially Harmful Services Without Benefit

Measure ID

HCUP_18, 50601011

Measure Title

Perforated appendixes per 1,000 admissions with appendicitis

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Prevention Quality Indicators (PQIs)

Table Description

Geographic Representation: National

Years Available: National - 2000-2015

Population Subgroups: Age, gender, race/ethnicity, expected primary payer, median household income of the patient's ZIP Code, urbanized location, region of the United States, bed size of hospital, teaching status of hospital, persons served by the Indian Health Service (IHS)

Data Source

National: AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

State: AHRQ, CDOM, HCUP, State Inpatient Database (SID) and AHRQ Quality Indicators, modified version 4.4

Denominator

Nonmaternal discharges with principal or secondary diagnosis of appendicitis, excluding transfers from other institutions

Numerator

Subset of the Denominator with principal or secondary diagnosis code for perforation or abscess of appendix

Comments

Consistent with the AHRQ PQI software, transfers from other institutions are excluded.

Rates are adjusted by age and gender using U.S. hospitalizations for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_60, 50601031

Measure Title

Hospital admissions for perforated appendix per 1,000 admissions with appendicitis, children

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Pediatric Quality Indicators (PDIs)

Table Description

Geographic Representation: National

Years Available: 2000-2015

Population Subgroups: Age, gender, race/ethnicity, expected primary payer, median household income of the patient's ZIP Code, urbanized location, region of the United States, bed size of hospital, teaching status of hospital

Data Source

AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

Denominator

Discharges ages 1-17 with principal or secondary diagnosis of appendicitis, excluding obstetric admissions and transfers from other institutions

Numerator

Subset of the Denominator with principal or secondary diagnosis code for perforation or abscess of appendix

Comments

Consistent with the AHRQ PDI software, exclusions include transfers from other institutions and obstetric admissions.

Rates are adjusted by age and gender using U.S. hospitalizations for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

5.7 Supportive & Palliative Care

Measure ID

HHCAHPS_5, 50701041

Measure Title

Adults who reported that home health providers always seem informed and up-to-date about all the cares or treatments they got at home in the last 2 months of care

Measure Source

Centers for Medicare & Medicaid Services (CMS), Home Health Consumer Assessment of Healthcare Providers and Systems (HHCAHPS).

Table Descriptions

Geographic Representation: National, State

Years Available: 2012-2016

Population Subgroups: Age, ethnicity/race, education, language spoken at home

Data Source

CMS, HHCAHPS

Denominator

Adult home health patients age 18 and over who provided a valid response to the question, "In the last 2 months of care, how often did home health providers from this agency seem informed and up-to-date about all the care or treatment you got at home?", excluding nonrespondents and respondents indicating "only had one provider in the last 2 months of care."

Numerator

Subset of the Denominator who responded "always" to the above question.

5.8. Potentially Avoidable Admissions

Measure ID

HCUP_22, 50801011

Measure Title

Hospital admissions for hypertension per 100,000 population, adults age 18 and over

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Prevention Quality Indicators (PQIs)

Table Descriptions

Geographic Representation: National, State

Years Available: National - 2000 – 2015; State - 2011 - 2015

Population Subgroups: Age, gender, median household income of the patient's ZIP Code, urbanized location, and region of the United States

Data Sources

National: AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

State: AHRQ, CDOM, HCUP, State Inpatient Databases (SID) and AHRQ Quality Indicators, modified version 4.4

Denominator

U.S. resident population age 18 and over

Numerator

Number of hospitalizations with principal diagnosis of hypertension, excluding patients with cardiac procedures, obstetric admissions, and transfers from other institutions

Comments

Consistent with the AHRQ PQI software, hypertension must be the principal diagnosis. Excluded from this measure are admissions for kidney disease access procedures, admissions with cardiac procedures, and transfers from other institutions.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_44, 50801012

Measure Title

Hospital admissions for dehydration per 100,000 population, adults age 18 and over

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Prevention Quality Indicators (PQIs).

Table Descriptions

Geographic Representation: National, State

Years Available: National: 2000-2015; State: 2011-2015

Population Subgroups: Age, gender, race/ethnicity, expected primary payer, median household income of the patient's ZIP Code, urbanized location, region of the United States, bed size of hospital, teaching status of hospital

Data Source

National: AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

State: AHRQ, CDOM, HCUP, State Inpatient Databases (SID) and AHRQ Quality Indicators, modified version 4.4

Denominator

U.S. resident population of adults age 18 and older

Numerator

Hospital admissions of adults with a principal diagnosis of dehydration.

Comments

Consistent with the AHRQ PQI software, dehydration may be a principal diagnosis or a secondary diagnosis with a principal diagnosis of hyperosmolality and/or hypernatremia, gastroenteritis, or acute kidney injury. Exclusions include the following: admissions with a diagnosis code for chronic renal failure and transfers from other institutions.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_45, 50801021

Measure Title

Hospital admissions for angina per 100,000 population, adults age 18 and over

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Prevention Quality Indicators (PQIs)

Table Descriptions

Geographic Representation: National, State

Years Available: National - 2000 – 2015; State -2011 - 2015

Population Subgroups: age, gender, race/ethnicity, median household income of the patient's ZIP Code, urbanized location, and region of the United States

Data Sources

National: AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

State: AHRQ, CDOM, HCUP, State Inpatient Databases (SID) and AHRQ Quality Indicators, modified version 4.4

Denominator

U.S. resident population age 18 and over

Numerator

Adult hospital admissions with principal diagnosis of angina, excluding patients with cardiac procedures, obstetric admissions, and transfers from other institutions

Comments

Consistent with the AHRQ PQI software, angina must be the principal diagnosis, and exclusions include admissions with cardiac procedures and transfers from other institutions.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_24, 50801031

Measure Title

Hospital admissions for chronic obstructive pulmonary disease or asthma per 100,000 population, adults age 40 and over

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Prevention Quality Indicators (PQIs)

Table Descriptions

Geographic Representation: National, State

Years Available: National-2005- 2015; State-2011 - 2015

Population Subgroups: age, gender, race/ethnicity, median household income of the patient's ZIP Code, urbanized location, and region of the United States

Data Sources

National: AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

State: AHRQ, CDOM, HCUP, State Inpatient Databases (SID), and AHRQ Quality Indicators, modified version 4.4

Denominator

U.S. resident population age 40 and over

Numerator

Adults age 40 and over with hospital admissions and principal diagnosis of COPD, asthma, or acute bronchitis with COPD as a secondary diagnosis

Comments

Consistent with the AHRQ PQI software, the principal diagnosis must be COPD, asthma, or acute bronchitis with COPD as a secondary diagnosis. Transfers from other institutions are excluded. Rates prior to 2005 are not reported because of International Classification of Diseases, Ninth Revision coding changes.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_25, 50801041

Measure Title

Hospital admissions for bacterial pneumonia per 100,000 population, adults age 18 and over

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Prevention Quality Indicators (PQIs)

Table Descriptions

Geographic Representation: National, State

Years Available: National -2000 – 2015; State-2011 - 2015

Population Subgroups: age, gender, race/ethnicity, median household income of the patient's ZIP Code, urbanized location, and region of the United States

Data Sources

National: AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

State: AHRQ, CDOM, HCUP, State Inpatient Databases (SID), and AHRQ Quality Indicators, modified version 4.4

Denominator

U.S. resident population age 18 and over

Numerator

Adults age 18 and over with hospital admissions and with a principal diagnosis of bacterial pneumonia, excluding sickle cell or hemoglobin-S conditions, and transfers from other institutions

Comments

Consistent with the AHRQ PQI software, bacterial pneumonia must be the principal diagnosis. Admissions for sickle cell disease or HB-S disease, admissions in an immunocompromised state, and transfers from other institutions are excluded.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_46, 50801051

Measure Title

Admissions for urinary tract infection (UTI) per 100,000 population, age 18 and over

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Prevention Quality Indicators (PQIs).

Table Description

Geographic Representation: National

Years Available: 2000-2015

Population Subgroups: Age, gender, race/ethnicity, expected primary payer, median household income of the patient's ZIP Code, urbanized location, region of the United States, bed size of hospital, teaching status of hospital

Data Source

National: AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

State: AHRQ, CDOM, HCUP, State Inpatient Databases (SID) and AHRQ Quality Indicators, modified version 4.4

Denominator

U.S. resident population of adults age 18 and older

Numerator

Hospital admissions of adults with a principal diagnosis of UTI.

Comments

Consistent with the AHRQ PQI software, UTI must be the principal diagnosis and exclusions include the following: admissions with kidney or urinary tract disorders, admissions in an immunocompromised state, and transfers from other institutions.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_61, 50801052

Measure Title

Admissions for urinary tract infection (UTI) per 100,000 population, ages 3 months to 17 years

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Pediatric Quality Indicators (PDIs)

Table Description

Geographic Representation: National

Years Available: 2000-2015

Population Subgroups: Age, gender, race/ethnicity, expected primary payer, median household income of the patient's ZIP Code, urbanized location, region of the United States, bed size of hospital, teaching status of hospital

Data Source

AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

Denominator

U.S. resident population of children ages 3 months to 17 years

Numerator

Hospital inpatient discharges with a principal diagnosis of UTI in the Denominator.

Comments

Consistent with the AHRQ PDI software, UTI must be the principal diagnosis and the following cases are excluded: kidney or urinary tract disorders, admissions in a immunocompromised state, admissions with hepatic failure consisting of any diagnosis or cirrhosis and hepatic come or hepatorenal syndrome, neonates is age in days is missing, obstetric admissions, and transfers from other institutions.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).

Measure ID

HCUP_62, 50801061

Measure Title

Admissions for pediatric gastroenteritis per 100,000 population, ages 3 months to 17 years

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Pediatric Quality Indicators (PDIs)

Table Description

Geographic Representation: National

Years Available: 2000-2015

Population Subgroups: Age, gender, race/ethnicity, expected primary payer, median household income of the patient's ZIP Code, urbanized location, region of the United States, bed size of hospital, teaching status of hospital

Data Source

AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS), State Inpatient Databases (SID) weighted to provide national estimates using the same methodology as the NIS prior to 2012, and AHRQ Quality Indicators, modified version 4.4

Denominator

U.S. resident population of children ages 3 months to 17 years

Numerator

Hospital inpatient discharges of children ages 3 months to 17 years with a principal diagnosis or a secondary diagnosis with a principal diagnosis of dehydration.

Comments

Consistent with the AHRQ PDI software, gastroenteritis must be the principal diagnosis or a secondary diagnosis with a principal diagnosis of dehydration. Exclusions include admissions with gastrointestinal abnormalities or bacterial gastroenteritis, transfers from other institutions, neonates if age in days is missing, and obstetric admissions.

Rates are adjusted by age and gender using the total U.S. resident population for 2010 as the standard population; when reporting is by age, the adjustment is by gender only; when reporting is by gender, the adjustment is by age only.

The HCUP State Inpatient Databases (SID) include a powerful set of hospital databases from HCUP Partner organizations in 47 States and the District of Columbia. Together, the SID encompasses about 97 percent of all U.S. community hospital discharges. SID contains a core set of clinical and nonclinical information on all patients, regardless of payer, including people covered by Medicare, Medicaid, and private insurance, as well as uninsured people. In addition to the core set of uniform data elements common to all SID, some databases within SID include other elements, such as the patient's race. The SID are used to create the HCUP National (Nationwide) Inpatient Sample.

For national QI estimates prior to 2012, the HCUP Nationwide Inpatient Sample (NIS) was used to calculate national QI estimates for all level of reporting except by race/ethnicity. The NIS was not used for reporting QI estimates by race/ethnicity because the availability of race/ethnicity information varied across States and hospitals within States. In addition, the 20 percent sample of the hospitals in the NIS did not provide enough statistical power to detect differences in QI estimates between whites and the other specific racial groups. To facilitate analyses by race/ethnicity, a separate nationally weighted analysis file was constructed from the SID and hospitals with good reporting of race/ethnicity using a sampling and weighting strategy similar to the NIS.

For national QI estimates for data years 2012 forward, the HCUP National Inpatient Sample (NIS) was not used because the database had been redesigned into a sample of discharges (instead of hospitals) with a revised definition for the target universe that excluded acute long-term care facilities. For consistent QI estimates before and after data year 2012, nationally weighted analysis files were constructed from the SID using a sampling and weighting strategy similar to the 2000-2011 NIS. In 2012, two analysis files were constructed, one for national estimates not reported by race/ethnicity and a second for reporting by race/ethnicity. In 2013 and 2014, only one nationally weighted analysis file was created.

For more information on the sampling approach and included States by data year, see the HCUP Methods Series Report on Methods Applying AHRQ Quality Indicators to HCUP Data (https://www.hcup-us.ahrq.gov/reports/methods/methods.jsp).