Chapter 6. Effectiveness of Care

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6.1. Cancer

6.1.1. Breast Cancer

Measure ID
NCDB_2, 60101011

Measure Title
Women with clinical Stage I-IIb breast cancer who received axillary node dissection or sentinel lymph node biopsy at the time of breast cancer surgery (lumpectomy or mastectomy).

Measure Source
Commission on Cancer (CoC), American College of Surgeons (ACoS) and American Cancer Society (ACS), National Cancer Data Base (NCDB)

Table Description
Geographic Representation: National, State
Population Subgroups: Activity limitation, age, education, health insurance, income, race/ethnicity, geographic location (residence)

Data Source
CoC, ACoS and ACS, NCDB

Denominator
Women age 18 and over with stage I/IIb breast cancer who were surgically treated by breast-conserving surgery or mastectomy

Numerator
The subset of the Denominator who received lymph node surgery (axillary node dissection or sentinel lymph node biopsy) at the time of their breast cancer surgery

Comments
There is not full agreement regarding the appropriate population (Denominator) for this measure. In the most current draft form during production of the NHQR and NHDR, the measure specification from the National Quality Forum included only women with stage I/II cancer. Women classified as having stage III disease during lymph node surgery (based on four or more positive nodes) were excluded if their stage prior to surgery (i.e., clinical stage) was not recorded. This may artificially lower the rates for this measure.
Measure ID
NCDB_1, 60101021

Measure Title
Radiation therapy is administered within 1 year (365 days) of diagnosis for women under age 70 receiving breast conserving surgery for breast cancer.

Measure Source
Commission on Cancer (CoC), American College of Surgeons (ACoS) and American Cancer Society (ACS), National Cancer Data Base (NCDB)

Table Description
Geographic Representation: National, State
Population Subgroups: Activity limitation, age, education, health insurance, income, race/ethnicity, geographic location (residence)

Data Source
CoC, ACoS and ACS, NCDB

Denominator
Women under age 70 with American Joint Committee on Cancer (AJCC) stage I, II, or III primary invasive epithelial breast cancer that was surgically treated by breast-conserving surgery. Breast cancer diagnoses are known or assumed first or only cancer diagnosis, and patients were known to be alive within 1 year of their diagnosis.

Numerator
Subset of Denominator for whom radiation therapy to the breast was initiated within 1 year of date of diagnosis

Comments
Breast-conserving surgery is defined for this measure as surgical excision less than mastectomy. Includes only women who received all or part of their first course of treatment at a facility with a CoC-accredited cancer program.
Measure ID
NVSS_2, 60101031

Measure Title
Breast cancer deaths per 100,000 female population per year

Measure Source
Healthy People 2020

Table Description
Geographic Representation: National, State
Population Subgroups: Activity limitation, age, education, health insurance, income, race/ethnicity, geographic location (residence)

Data Source
National and State: Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Vital Statistics System (NVSS)—Mortality

Denominator
U.S. female resident population

Numerator
Number of female deaths per year due to breast cancer

Comments
This measure is referred to as measure C-3 in Healthy People 2020 documentation. Respondents for whom age is not reported are excluded from Numerators.
6.1.3. Colorectal Cancer

Measure ID

NCDB_3, 60103011

Measure Title

At least 12 regional lymph nodes are removed and pathologically examined for resected colon cancer.

Measure Source

Commission on Cancer (CoC), American College of Surgeons (ACoS) and American Cancer Society (ACS), National Cancer Data Base (NCDB)

Table Description

Geographic Representation: National, State


Population Subgroups: Activity limitation, age, education, health insurance, income, race/ethnicity, geographic location (residence)

Data Source

CoC, ACoS and ACS, NCDB

Denominator

Adults age 18 and over with AJCC stage I, II, or III primary invasive epithelial colon cancer that underwent surgical resection (surgery more than local excision). Colon cancer diagnoses are known or assumed first or only cancer diagnosis.

Numerator

Subset of Denominator with 12 or more regional lymph nodes pathologically examined.

Comments

Staging describes the severity of a person’s cancer based on the extent of the original (primary) tumor and whether cancer has spread in the body. Higher numbers indicate more extensive disease. Stage I, II, and III cancers indicate a larger tumor size or spread of the cancer beyond the organ in which it first developed to nearby lymph nodes or organs adjacent to the location of the primary tumor.
Measure ID
NVSS_1, 60103021

Measure Title
Colorectal cancer deaths per 100,000 population

Measure Source
Healthy People 2020

Table Description
Geographic Representation: National, State


Population Subgroups: Activity limitation, age, education, health insurance, income, race/ethnicity, geographic location (residence)

Data Source
National and State: Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Vital Statistics System (NVSS)-Mortality

Denominator
U.S. resident population

Numerator
Number of deaths per year due to colorectal cancer

Comments
This measure is referred to as measure C-5 in Healthy People 2020 documentation. Estimates are age adjusted to the 2000 U.S. standard population. Respondents for whom age is not reported are not included in the age adjustment calculations and are excluded from Numerators.
6.1.4. Other Cancers

Measure ID
NVSS_3, 60104031

Measure Title
Lung cancer deaths per 100,000 population

Measure Source
Healthy People 2020

Table Description
Geographic Representation: National, State


Population Subgroups: Activity limitation, age, education, health insurance, income, race/ethnicity, geographic location (residence)

Data Source
National and State: Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Vital Statistics System (NVSS)—Mortality

Denominator
U.S. resident population

Numerator
Number of deaths per year due to lung cancer

Comments
This measure is referred to as measure C-2 in Healthy People 2020 documentation. Estimates are age adjusted to the 2000 U.S. standard population. Age data are unadjusted. Respondents for whom age is not reported are not included in the age adjustment calculations and are excluded from Numerators.
Measure ID

NVSS_4, 60104011

Measure Title

Cancer deaths per 100,000 population

Measure Source

Healthy People 2020

Table Description

Geographic Representation: National, State


Population Subgroups: Activity limitation, age, education, health insurance, income, race/ethnicity, geographic location (residence)

Data Source

National and State: Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Vital Statistics System (NVSS)-Mortality

Denominator

U.S. resident population

Numerator

Number of deaths per year due to cancer

Comments

This measure is referred to as measure C-1 in Healthy People 2020 documentation. Estimates are age adjusted to the 2000 U.S. standard population. Age data are unadjusted. Respondents for whom age is not reported are not included in the age adjustment calculations and are excluded from Numerators.
6.2. Cardiovascular Disease
6.2.1. Prevention of Heart Disease

Measure ID NHANES_2, 60201011

Measure Title
Adults with hypertension with blood pressure less than 140/90 mm/Hg

Measure Source
Healthy People 2020

Table Description
Geographic Representation: National
Population Subgroups: Age, education, sex, income, ethnicity

Data Source
Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Health and Nutrition Examination Survey (NHANES).

Denominator
U.S. civilian noninstitutionalized adults age 18 and over with high blood pressure/hypertension, excluding pregnant women

Numerator
Subset of Denominator whose mean systolic blood pressure is less than 140 mm Hg and mean diastolic blood pressure is less than 90 mm Hg

Comments
Controlled hypertension is defined as having an average blood pressure reading of < 140/90 mm/Hg. Percentages are age adjusted to the 2000 U.S. standard population, except where indicated, using three age groups: 18-39, 40-59, and 60 and over. This measure is referred to as measure HDS-12 in Healthy People 2020 documentation.
6.2.2. Treatment of Heart Attack

Measure ID

HCUP_26, 60202011

Measure Title

Deaths per 1,000 adult hospital admissions with acute myocardial infarction (AMI)

Measure Source

Agency for Healthcare Research and Quality (AHRQ), Centers for Delivery Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Inpatient Quality Indicators (IQIs)

Table Description

Geographic Representation: National, State


Population Subgroups: Age, gender, bed size of hospital, expected primary payer, location of hospital, location of residence, median income of patients zip code, control of hospital, region, teaching status of hospital

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

All hospital inpatient discharges among people age 18 and over with a principal diagnosis of AMI. Excluded from the Denominator are obstetric admissions and patients transferring to another short-term hospital or missing a discharge disposition

Numerator

Subset of the Denominator who died
Comments

Rates are adjusted by age, major diagnostic category (MDC), all patient refined-diagnosis related group (APR-DRG) risk of mortality score, and transfers to the hospital. When reporting is by age, the adjustment is by MDC, APR-DRG risk of mortality score, and transfers to the hospital. The AHRQ IQI software was modified to not use the present on admission (POA) indicators (or estimates of the likelihood of POA for secondary diagnosis). 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**

QIO_12 or AMI-7a, 60202031

**Measure Title**

Acute myocardial infarction (AMI) patients who received fibrinolytic medication within 30 minutes of hospital arrival

**Measure Source**

Centers for Medicare & Medicaid Services (CMS) Hospital Inpatient Quality Reporting (HIQR) Program

**Table Description**

Geographic Representation: National, State

Years Available: 2005 to 2015

Population Subgroups: Age, gender, race/ethnicity

**Data Source**

CMS Clinical Data Warehouse (CDW) for HIQR Program

**Denominator**

Discharged hospital patients 18 years of age or older with a principal diagnosis of acute myocardial infarction, an ST-segment elevation or LBBB on the ECG performed closest to hospital arrival and thrombolytic therapy within 6 hours after hospital arrival and is the primary reperfusion therapy.

**Numerator**

Subset of the Denominator who received thrombolytic therapy within 30 minutes of arrival

**Comments**

Estimates are calculated using hospital-level scores.
6.2.3. Treatment of Heart Failure

Measure ID
HCUP_27, 60203021

Measure Title
Hospital admissions for congestive heart failure (CHF) 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), Prevention Quality Indicators (PQIs)

Table Description
Geographic Representation: National, State

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 years and over

Numerator
Hospital admissions of adults age 18 and over with a principal diagnosis of CHF, excluding transfers from other institutions, and cases with cardiac procedure codes
Comments

Consistent with the AHRQ PQI software, heart failure must be the principal diagnosis and exclusions include the following: 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_28, 60203031

Measure Title
Deaths per 1,000 adult hospital admissions with 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), Inpatient Quality Indicators (IQIs)

Table Description
Geographic Representation: National, State


Population Subgroups: Age, gender, race/ethnicity, bed size of hospital, expected primary payer, location of hospital, location of residence, median income of patients zip code, control of hospital, region, teaching status of hospital

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
All discharges among people age 18 and over with principal diagnosis code of CHF, excluding transfers to another short-term hospital, obstetric admissions, and cases with a missing discharge disposition

Numerator
Subset of the Denominator who died
Comments

Rates are adjusted by age, gender, age-gender interactions, major diagnostic category (MDC), all patient refined-diagnosis related group (APR-DRG) risk of mortality score, and transfers to the hospital. When reporting is by age, the adjustment is by gender, MDC, APR-DRG risk of mortality score, and transfers to the hospital; when reporting is by gender, the adjustment is by age, MDC, APR-DRG risk of mortality score, and transfers to the hospital. The AHRQ IQI software was modified to not use the present on admission (POA) indicators (or estimates of the likelihood of POA for secondary diagnosis).

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).
6.2.4. Surgery for Heart and Vascular Disease

Measure ID

HCUP_29, 60204011

Measure Title

Deaths per 1,000 adult hospital admissions with abdominal aortic aneurysm (AAA) repair

Measure Source

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

Table Description

Geographic Representation: National, State


Population Subgroups: Age, gender, race/ethnicity, bed size of hospital, expected primary payer, location of hospital, location of residence, median income of patients zip code, control of hospital, region, teaching status of hospital

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

Discharges age 18 years and over with an AAA repair code in any procedure field and a diagnosis of AAA in any field, excluding obstetric admissions, transfers to another short-term hospital, and cases with a missing discharge disposition

Numerator

Subset of the Denominator who died
Comments

Rates are adjusted by age, gender, age-gender interactions, major diagnostic category (MDC), and all patient refined-diagnosis related group (APR-DRG) risk of mortality score. When reporting is by age, the adjustment is by gender, MDC, and APR-DRG risk of mortality score; when reporting is by gender, the adjustment is by age, MDC, and APR-DRG risk of mortality score. The AHRQ IQI software was modified to not use the present on admission (POA) indicators (or estimates of the likelihood of POA for secondary diagnosis).

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_30, 60204021

Measure Title
Deaths per 1,000 hospital admissions with coronary artery bypass graft surgery (CABG), 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), Inpatient Quality Indicators (IQIs)

Table Description
Geographic Representation: National, State


Population Subgroups: Age, gender, race/ethnicity, bed size of hospital, expected primary payer, location of hospital, location of residence, median income of patients’ zip code, control of hospital, region, teaching status

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
Hospital inpatient discharges, age 40 and over, with a CABG in any procedure field, excluding obstetric admissions and transfers to another hospital

Numerator
Subset of the Denominator who died
Comments

Rates are adjusted by age, gender, age-gender interactions, major diagnostic category (MDC), and all patient refined-diagnosis related group (APR-DRG) risk of mortality score. When reporting is by age, the adjustment is by gender, MDC, and APR-DRG risk of mortality score; when reporting is by gender, the adjustment is by age, MDC, and APR-DRG risk of mortality score. The AHRQ IQI software was modified to not use the present on admission (POA) indicators (or estimates of the likelihood of POA for secondary diagnosis).

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_31, 60204031

Measure Title
Deaths per 1,000 hospital admissions with percutaneous transluminal coronary angioplasty (PTCA), 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), Inpatient Quality Indicators (IQIs)

Table Description
Geographic Representation: National, State
Population Subgroups: Age, gender, race/ethnicity, bed size of hospital, expected primary payer, location of hospital, location of residence, median income of patients zip code, control of hospital, region, teaching status of hospital

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
Hospital inpatient discharges, age 40 and over, with PTCA in any procedure field, excluding obstetric admissions, transfers to another hospital, and cases with a missing discharge disposition

Numerator
Subset of the Denominator who died
Comments

Rates are adjusted by age, gender, age-gender interactions, major diagnostic category (MDC), all patient refined-diagnosis related group (APR-DRG) risk of mortality score, and transfers to the hospital. When reporting is by age, the adjustment is by gender, MDC, APR-DRG risk of mortality score, and transfers to the hospital; when reporting is by gender, the adjustment is by age, MDC, APR-DRG risk of mortality score, and transfers to the hospital. The AHRQ IQI software was modified to not use the present on admission (POA) indicators (or estimates of the likelihood of POA for secondary diagnosis).

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).
6.2.5 Stroke

Measure ID
QIO_18, 60205011

Measure Title
Stroke patients who received venous thromboembolism (VTE) prophylaxis

Measure Source
Centers for Medicare & Medicaid Services (CMS) Quality Improvement Organization (QIO) for Hospital Inpatient Quality Reporting (HIQR) Program

Table Description
Geographic Representation: National, State
Years Available: 2013 to 2015
Population Subgroups: Age, sex, race/ethnicity

Data Source
CMS, QIO Clinical Data Warehouse (CDW) for HIQR Program

Denominator
All stroke patients

Numerator
Stroke patients who received VTE prophylaxis

Comments
Further information on this and other stroke measures can be found at https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier3&cid=1228760666430.
Measure ID
QIO_16, 60205041

Measure Title
Acute stroke patients for whom IV thrombolytic therapy was initiated at hospital within 3 hours (less than or equal to 180 minutes) of time last known well

Measure Source
Centers for Medicare & Medicaid Services (CMS) Quality Improvement Organization (QIO) for Hospital Inpatient Quality Reporting (HIQR) Program

Table Description
Geographic Representation: National, State
Years Available: 2013 to 2015
Population Subgroups: Age, sex, race/ethnicity

Data Source
CMS, QIO Clinical Data Warehouse (CDW) for HIQR Program

Denominator
All Patients aged 18 years and older with a diagnosis of acute stroke whose time of arrival is within 3 hours (less than or equal to 180 minutes) of time last known well.

Numerator
Acute stroke patients for whom IV thrombolytic therapy was initiated at hospital within 3 hours (less than or equal to 180 minutes) of time last known well

Comments
Further information on this and other stroke measures can be found at https://www.qualitynet.org/dcs/ContentServer?c=Page&papagen=QnetPublic%2FPage%2FQnetTier3&cid=1228760666430.
**Measure ID**
QIO_17, 60205061

**Measure Title**
Stroke patients prescribed statin medication at hospital discharge

**Measure Source**
Centers for Medicare & Medicaid Services (CMS) Quality Improvement Organization (QIO) for Hospital Inpatient Quality Reporting (HIQR) Program

**Table Description**
Geographic Representation: National, State

Years Available: National: 2013 to 2015

Population Subgroups: Age, sex, race/ethnicity

**Data Source**
CMS, Quality Improvement Organization (QIO) Clinical Data Warehouse (CDW) for Hospital Inpatient Quality Reporting (HIQR) Program

**Denominator**
Patients with a principal diagnosis of stroke.

**Numerator**
Patients prescribed statin medication at hospital discharge.
Measure ID
QIO_19, 60205071

Measure Title
Stroke patients with documentation that they or their caregivers were given educational material addressing activation of emergency medical system, follow-up after discharge, educations prescribed at discharge, risk factors for stroke, warning signs and symptoms

Measure Source
Centers for Medicare & Medicaid Services (CMS) Quality Improvement Organization (QIO) for Hospital Inpatient Quality Reporting (HIQR) Program

Table Description
Geographic Representation: National, State
Years Available: 2013 to 2015
Population Subgroups: Age, sex, race/ethnicity

Data Source
CMS, QIO Clinical Data Warehouse (CDW) for HIQR Program

Denominator
Ischemic stroke or hemorrhagic stroke patients discharged home.

Numerator
Ischemic or hemorrhagic stroke patients with documentation that they or their caregivers were given educational material addressing all of the following:

1. Activation of emergency medical system
2. Follow-up after discharge
3. Medications prescribed at discharge
4. Risk factors for stroke
5. Warning signs and symptoms of stroke

Comments
Further information on this and other stroke measures can be found at https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier3&cid=1228760666430.
6.3. Chronic Kidney Disease

6.3.1. Chronic Care of End Stage Renal Disease

Measure ID
USRDS_1, 60301011

Measure Title
Adult end stage renal disease (ESRD) patients who saw a nephrologist at least 12 months prior to initiation of renal replacement therapy

Measure Source
National Institutes of Health (NIH), National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), US Renal Data System (USRDS)

Table Description
Geographic Representation: National, State
Years Available: State 2012 to 2015; National 2005 to 2015
Population Subgroups: Age, sex, race/ethnicity

Data Source
National & State: National Institutes of Health (NIH), National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), United States Renal Data System (USRDS)

Denominator
All incident ESRD patients, limited to those patients for whom it is known whether they saw a nephrologist prior to initiation of renal replacement therapy

Numerator
Subset of the Denominator who saw a nephrologist at least 12 months prior to initiation of renal replacement therapy

Comments
This measure is referred to as measure CKD-10 in Healthy People 2020 documentation. These analyses use data from the newest versions of the Medical Evidence form. The cohort includes incident ESRD patients, limited to those patients for whom it is known whether they saw a nephrologist prior to initiation.
Measure ID
UMKECC_2, 60301021

Measure Title
Hemodialysis patients with adequate dialysis
2009-2014: urea reduction ratio (URR) 65% or greater
2015-2016: Kt/V 1.2 or greater (K-dialyzer clearance of urea; t-dialysis time; V-patient’s total body water)

Measure Source
University of Michigan Kidney Epidemiology and Cost Center (UM-KECC), Dialysis Facility Report (DFR)

Table Description
Geographic Representation: National and State
Population Subgroups: Age, ESRD Cause, Ethnicity, Race, Sex

Data Source
UM-KECC, DFR

Denominator
Total number of hemodialysis patient-months with end-stage renal disease (ESRD) for more than 90 days, not indicating frequent dialysis, and assigned to the facility for the entire reporting month were included.

Numerator:
Kt/V: Patients with Kt/V 1.2 or higher among the Denominator population.

Comments
Patient-months with a missing or out of range Kt/V are included in the Denominator but not the Numerator. For more information, see the Guide to the Dialysis Facility Reports for Fiscal Year 2017 available at https://dialysisdata.org/sites/default/files/content/Methodology/FY2017_DFR_Guide.pdf.
Measure ID
UMKECC_1, 60301031

Measure Title
Standardized mortality ratio (SMR) for dialysis patients

Measure Source
University of Michigan Kidney Epidemiology and Cost Center (UM-KECC), Dialysis Facility Report (DFR)

Table Description
Geographic Representation: State
Years Available: 2000 - 2016

Data Source
UM-KECC, DFR

Denominator
Total number of expected deaths among dialysis patients in facilities in the state. The expected death count adjusts for calendar year, patient age, race, ethnicity, sex, diabetes, duration of end-stage renal disease (ESRD), nursing home status, patient comorbidities at incidence such as diabetes as a cause of end-stage renal disease (ESRD), body size of the patient (i.e., body mass index) at onset of ESRD, and age-adjusted state and population death rates.

Numerator
Total number of deaths among the population in the Denominator

Comments
This measure takes a state’s expected patient death rate and compares it to the actual death rate. The SMR estimates the relative death rate ratio for the facility, as compared to the national death rate in the same year, and indicates whether patients treated in the facility had higher or lower mortality given the characteristics of patients treated at the facility. Similarly, the degree to which the facility’s yearly SMR varies from 1.00 is the degree to which it differs from the national death rates that year for patients with the same characteristics as those in the facility. For more information, see the Guide to the Dialysis Facility Reports for Fiscal Year 2017 available at https://dialysisdata.org/sites/default/files/content/Methodology/FY2017_DFR_Guide.pdf

The methodology for the Medicare Dialysis Facility Compare measure, “patient death rate, “ is equivalent to the UM-KECC SMR. The SMR is a ratio, which is equal to the rate on DFC after converted from a ratio.
**Measure ID**
USRDS_2, 60301041

**Measure Title**
Dialysis patients who were registered on a waiting list for transplantation

**Measure Source**
Healthy People 2020

**Table Description**
Geographic Representation: National, State

Years Available: State 2000 to 2015; National 2000 to 2015

Population Subgroups: Age, sex, race/ethnicity

**Data Source**
National & State: National Institutes of Health (NIH), National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), United States Renal Data System (USRDS)

**Denominator**
All incident end stage renal disease (ESRD) patients who are under the age of 70 at the initiation of ESRD, without a living donor available (i.e. patients receiving a living donor transplant are excluded)

**Numerator**
Subset of the Denominator registered on the kidney transplant waiting list or have received a deceased-donor kidney within 1 year of their ESRD initiation date

**Comments**
This measure is referred to as measure CKD-12 in Healthy People 2020 documentation. The cohort includes incident ESRD patients who are younger than 70 at the initiation of ESRD, without a living donor available (i.e. patients receiving a living donor transplant are excluded). Patients are followed from ESRD certification to being placed on the deceased donor organ waiting list or receiving a deceased donor transplant, censoring at death or one year after initiation of ESRD. Percentages are calculated using the Kaplan-Meier methodology.
Measure ID
USRDS_3, 60301051

Measure Title
Patients with treated chronic kidney failure who received a transplant within 3 years of date of renal failure

Measure Source
Healthy People 2020

Table Description
Geographic Representation: National, State
Years Available: State 2000 to 2012; National 2000 to 2012
Population Subgroups: Age, sex, race/ethnicity

Data Source
National & State: National Institutes of Health (NIH), National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), United States Renal Data System (USRDS)

Denominator
All incident ESRD patients who are younger than 70 at the initiation of ESRD

Numerator
Subset of the Denominator that received a transplant within 3 years of renal failure

Comments
This measure is referred to as measure CKD-13.1 in Healthy People 2020 documentation. The cohort includes incident ESRD patients who are younger than 70 at the initiation of ESRD. Patients are followed from ESRD certification to transplant, censoring at death or three years after initiation of ESRD. Percentages are calculated using the Kaplan-Meier methodology.
Measure ID
UMKECC_3, 60301061

Measure Title
Percent of hemodialysis patients whose hemoglobin level is less than 10 g/dL

Measure Source
University of Michigan Kidney Epidemiology and Cost Center (UM-KECC), Dialysis Facility Report (DFR)

Table Description
Geographic Representation: National and State
Population Subgroups: Age, ESRD Cause, Ethnicity, Race, Sex

Data Source
UM-KECC, DFR

Denominator
Total number of hemodialysis patient-months with end-stage renal disease (ESRD) for more than 90 days, not indicating frequent dialysis, and assigned to the facility for the entire reporting month were included.

Numerator
Patients whose hemoglobin level is less than 10 g/dL among the Denominator population

Comments
For more information, see the Guide to the Dialysis Facility Reports for Fiscal Year 2017 available at https://dialysisdata.org/sites/default/files/content/Methodology/FY2017_DFR_Guide.pdf.
Measure ID
USRDS_5, 60301071

Measure Title
Adult hemodialysis patients who use arteriovenous fistulas as the primary mode of vascular access

Measure Source
National Institutes of Health (NIH), National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), United States Renal Data System (USRDS)

Table Description
Geographic Representation: National, State
Years Available: National 2012 to 2015; State 2012 to 2015
Population Subgroups: Age, sex, race/ethnicity

Data Source
National & State: NIH, NIDDK, USRDS

Denominator
Prevalent HD patients with a valid ESRD Medical Evidence CMS-2728 form, who are aged 18 and older

Numerator
Subset of Denominator who use arteriovenous fistulas as the primary mode of vascular access

Comments
This measure is referred to as measure CKD-11.1 in Healthy People 2020 documentation. These analyses use data from CROWNWeb. The cohort includes prevalent HD patients with a valid ESRD Medical Evidence CMS 2728 form, who are aged 18 and older. Access type represents the last access type used in the year, according to CROWNWeb data.
6.4. Diabetes

6.4.1. Management of Diabetes

Measure ID

MEPS_65, 60401011

Measure Title

Adults age 40 and over with diagnosed diabetes who received all four recommended services for diabetes in the calendar year (two or more hemoglobin A1c measurement, dilated eye examination, foot examination, and flu vaccination)

Measure Source

National Diabetes Quality Improvement Alliance

Table Description

Geographic Representation: National

Years Available: 2008 to 2015

Population Subgroups: Age, gender, race, ethnicity, family income, health insurance, Medicaid/CHIP, residence location, Language spoken at home, Perceived health status, CSHCN(children with special health care needs), U.S. born

Data Source

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

Denominator

U.S. civilian noninstitutionalized adults age 40 and over with diabetes and a positive Diabetes Care Survey weight, excluding records with missing values

Numerator

Subset of the Denominator who responded “Yes” to each of the four items related to receipt of diabetes services: (1) received two or more HbA1c measurements, (2) received dilated eye exam, (3) received foot exam, and (4) received flu shot

Comments

Nonrespondents and “Don’t Know” responses to the DCS question were excluded from the analysis. Estimates are age-adjusted to the 2000 U.S. standard population with two age groups, 40-59 and 60 and over.
Measure ID
MEPS_66, 60401021

Measure Title
Adults age 40 and over with diagnosed diabetes who received at least two hemoglobin A1c measurements in the calendar year

Measure Source
Healthy People 2020

Table Description
Geographic Representation: National, State

Years Available: National, 2002 to 2015; State, 2001 to 2009

Population Subgroups: Age, gender, race, ethnicity, family income, health insurance, Medicaid/CHIP, residence location, Language spoken at home, Perceived health status, CSHCN(children with special health care needs), U.S. born

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

State: Centers for Disease Control and Prevention (CDC), Behavioral Risk Factor Surveillance System (BRFSS)

National Denominator
U.S. civilian noninstitutionalized adults age 40 and over with diabetes who had a positive Diabetes Care Survey (DCS) weight and who responded to the DCS question, “How many times did a doctor, nurse, or other health professional check for glycosylated hemoglobin or ‘hemoglobin A-one-C’?”

National Numerator
Subset of the Denominator who had a positive DCS weight and who had a hemoglobin A1c test at least twice in the last calendar year

State Denominator
Adults age 40 and over with diabetes
**State Numerator**

Adults with diabetes who had at least two hemoglobin A1c test in the survey year

**Comments**

The MEPS method for defining the Numerator and Denominator for this measure changed beginning with the 2008 edition of the reports; rates may not be comparable with those reported in earlier editions. The MEPS entry in the Data Sources appendix provides more information on the DCS and MEPS panels.

Nonrespondents and “Don’t Know” responses to the DCS question were excluded from the analysis.

Estimates are age-adjusted to the 2000 U.S. standard population with two age groups, 40-59 and 60 and over.

This measure is referred to as measure D-11 in Healthy People 2020 documentation.

**Measure ID**

MEPS_67, 60401031

**Measure Title**

Adults age 40 and over with diagnosed diabetes who received a dilated eye examination in the calendar year

**Measure Source**

Healthy People 2020

**Table Description**

Geographic Representation: National, State

Years Available: National: 2002 to 2015; State: 2001 to 2010

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 Sources**

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

State: Centers for Disease Control and Prevention (CDC), Behavioral Risk Factor Surveillance System (BRFSS)
National Denominator
U.S. civilian noninstitutionalized adults age 40 and over with diabetes who responded to the Diabetes Care Survey (DCS) question: “When was the last time you had an eye exam in which the pupils were dilated? This would have made you temporarily sensitive to light”

National Numerator
Subset of Denominator who indicated they had at least one retinal eye examination in the calendar year

State Denominator
Adults age 40 and over with diabetes

State Numerator
Adults with diabetes who had at least one retinal eye examination in the survey year

Comments
Nonrespondents and “Don’t Know” responses to the DCS question were excluded from the analysis.

Estimates are age-adjusted to the 2000 U.S. standard population with two age groups, 40-59 and 60 and over.

This measure is referred to as measure D-10 in Healthy People 2020 documentation.

Measure ID
MEPS_68, 60401041

Measure Title
Adults age 40 and over with diagnosed diabetes who had their feet checked for sores or irritation in the calendar year

Measure Source
Healthy People 2020

Table Description
Geographic Representation: National, State

Years Available: National: 2002 to 2015; State: 2001 to 2010
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 Sources

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

State: Centers for Disease Control and Prevention (CDC), Behavioral Risk Factor Surveillance System (BRFSS)

National Denominator

U.S. civilian noninstitutionalized adults age 40 and over with diabetes who responded to the question: “How many times did a health professional check your feet for any sores or irritations?”

National Numerator

Subset of Denominator who had a foot examination one or more times in the calendar year

State Denominator

Adults age 40 and over with diabetes

State Numerator

Subset of Denominator who had one or more foot examinations in the survey year

Comments

Nonrespondents and “Don’t Know” responses to the DCS question were excluded from the analysis.

Estimates are age-adjusted to the 2000 U.S. standard population with two age groups, 40-59 and 60 and over.

This measure is referred to as measure D-9 in Healthy People 2020 documentation.
Measure ID

MEPS_69, 60401051

Measure Title

Adults age 40 and over with diagnosed diabetes who received a flu vaccination in the calendar year

Measure Source

National Diabetes Quality Improvement Alliance, National Quality Forum

Table Description

Geographic Representation: National, State

Years Available: National: 2008 to 2015; State: 2009 to 2010

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 Sources

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

State: Centers for Disease Control and Prevention (CDC), Behavioral Risk Factor Surveillance System (BRFSS)

National Denominator

U.S. civilian noninstitutionalized adults age 40 and over with diabetes who responded to the question: “How long since you had a flu shot?” Nonrespondents and “Don’t Know” responses were excluded

National Numerator

Subset of the Denominator who had an influenza immunization in the calendar year

State Denominator

Adults age 40 and over with diabetes

State Numerator

Subset of the Denominator who had an influenza immunization in the survey year
Comments

Nonrespondents and “Don’t Know” responses to the DCS question were excluded from the analysis.

Estimates are age-adjusted to the 2000 U.S. standard population with two age groups, 40-59 and 60 and over.

Measure ID

NHANES_8, 60401061

Measure Title

Adults age 40 and over with diabetes whose condition was diagnosed

Measure Source

National Diabetes Quality Improvement Alliance, National Quality Forum

Table Description

Geographic Representation: National


Population Subgroups: Age, education, sex, income, ethnicity

Data Source

Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Health and Nutrition Examination Survey (NHANES)

Denominator

Adults age 40 and over with diabetes

Numerator

Subset of the Denominator with diagnosed diabetes

Comments

The criteria for selecting the diabetes population from NHANES have changed; reported rates may not be comparable with those found in prior years’ editions of the NHQR and NHDR. Estimates are age adjusted to the 2000 U.S. standard population using two age groups: 40-59 and 60 and over.
6.4.2. Control of Diabetes

Measure ID

NHANES_3, 60402011

Measure Title

Adults age 40 and over with diagnosed diabetes with hemoglobin A1c less than 8.0% (optimal control)

Measure Source

Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Health and Nutrition Examination Survey (NHANES)

Table Description

Geographic Representation: National


Population Subgroups: Age, education, sex, income, ethnicity

Data Source

Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Health and Nutrition Examination Survey (NHANES)

Denominator

Adults age 40 and over with diagnosed diabetes

Numerator

Subset of the Denominator who had hemoglobin A1c level less than 8% at examination

Comments

Optimal control is defined as having an HbA1c less than 8%.

Estimates are age adjusted to the 2000 U.S. standard population using two age groups, 40-59 and 60 and over. The criteria for selecting the diabetes population from NHANES have changed; reported rates may not be comparable with those found in prior years’ editions of the NHQR and NHDR.
Measure ID
NHANES_10, 60402013

Measure Title
Adults age 18 and over with diagnosed diabetes with hemoglobin A1c more than 9.0%

Measure Source
Healthy people 2020 D-5.1

Table Description
Geographic Representation: National
Years Available: 2005-2008 to 2011-2014
Population Subgroups: Age, education, sex, income, ethnicity

Data Source
Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Health and Nutrition Examination Survey (NHANES)

Denominator
Adults age 18 and over who report that they have ever been diagnosed with diabetes

Numerator
Adults age 18 and over with doctor diagnosed diabetes and with HbA1c values higher than 9%

Comments
Persons are considered to have diagnosed diabetes if they respond “yes” to ever being told by a doctor or health professional that they have diabetes or sugar diabetes. Those who respond borderline are counted as ‘no’. Women who report that the only time they have been diagnosed with diabetes was during pregnancy (gestational diabetes) are excluded. Women who are pregnant at the time of the exam are also excluded.

Estimates are age adjusted to the 2000 U.S. standard population. See Healthy People D-5.1 methodology for more information - https://www.healthypeople.gov/node/4123/data_details.
**Measure ID**

NHANES_4, 60402023

**Measure Title**

Adults age 18 and over with diagnosed diabetes whose LDL cholesterol is under control

**Measure Source**

National Diabetes Quality Improvement Alliance, National Quality Forum

**Table Description**

Geographic Representation: National

Years Available: 2005-2008 to 2009 to 2012

Population Subgroups: Age, education, sex, income, ethnicity

**Data Source**

Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Health and Nutrition Examination Survey (NHANES)

**Denominator**

Number of adults aged 18 years and over who report that they have ever been diagnosed with diabetes

**Numerator**

Number of persons aged 18 years and over with doctor diagnosed diabetes and with LDL cholesterol value <100 mg/dl

**Comments**

LDL cholesterol data from NHANES are calculated from measured values of total cholesterol, triglycerides, and HDL cholesterol using the Friedewald calculation. This calculation is valid for triglycerides less than or equal to 400mg/dl.

Persons are considered to have diagnosed diabetes if they respond “yes” to ever being told by a doctor or health professional that they have diabetes or sugar diabetes. Those who respond borderline are counted as “no.” Women who report that the only time they have been diagnosed with diabetes was during pregnancy (gestational diabetes) are also excluded.

For more information, see Healthy People 2020 definition available at https://www.healthypeople.gov/node/4125/data_details.
Measure ID

NHANES_9, 60402031

Measure Title

Adults age 40 and over with diagnosed diabetes with blood pressure less than 130/80mm Hg

Measure Source

National Diabetes Quality Improvement Alliance, National Quality Forum

Table Description

Geographic Representation: National


Population Subgroups: Age, education, sex, income, ethnicity

Data Source

Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Health and Nutrition Examination Survey (NHANES)

Denominator

Adults age 40 and over with diabetes

Numerator

Subset of the Denominator with diagnosed diabetes

Comments

The criteria for selecting the diabetes population from NHANES have changed; reported rates may not be comparable with those found in prior years’ editions of the NHQR and NHDR. Estimates are age adjusted to the 2000 U.S. standard population using two age groups: 40-59 and 60 and over.
6.4.3. Hospitalization for Diabetes

Measure ID
USRDS_4, 60403061

Measure Title
Adjusted incident rates of end stage renal disease (ESRD) due to diabetes per million population

Measure Source
National Institutes of Health (NIH), National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), United States Renal Data System (USRDS)

Table Description
Geographic Representation: National
Years Available: National 2001 to 2015
Population Subgroups: Age, sex, race/ethnicity

Data Source
National & State: NIH, NIDDK, USRDS

Denominator
U.S. Census intercensal population estimates in million

Numerator
The number of incident ESRD patients with diabetes as the primary cause of ESRD

Comments
This measure is referred to as measure CKD-9.1 in Healthy People 2020 documentation. Kidney failure due to diabetes in this document is expressed as a rate (number/million population/year). The Numerator in this rate is the number of incident ESRD patients with diabetes as the primary cause of ESRD. These rates are adjusted to a reference population using the direct method: this means the adjusted rate assumes a constant reference population, thus permitting meaningful comparison across years. The direct method of adjustment involves stratification of the population by the adjustment variables (i.e. overall rates are adjusted for age, sex, and race) and calculation of a weighted average of stratum-specific rates, where the weights are the numbers of persons in a strata of a “standard population,” which is 2012 in this analysis. Each standardized (adjusted) rate for a specific group or year is interpreted as the expected (crude) rate if that group or year had exhibited the age-gender-race distribution of the standard population.
Measure ID
USRDS_6, 60403063

Measure Title
Kidney failure due to diabetes among persons with diabetes

Measure Source
National Institutes of Health (NIH), National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), United States Renal Data System (USRDS)

Table Description
Geographic Representation: National
Years Available: 2015
Population Subgroups: Age, sex, race/ethnicity

Data Source
National & State: NIH, NIDDK, USRDS

Denominator
Estimate of U.S. population with diabetes (using U.S. Census intercensal population estimates, and National Health Interview Survey estimated prevalence of diabetes)

Numerator
The number of incident ESRD patients with diabetes as the primary cause of ESRD

Comments
Kidney failure due to diabetes among persons with diabetes in this document is expressed as a rate (number/million population/year). Data comes from the National Health Interview Survey; all ages are included. Three-year data are used to estimate the prevalence of diabetes in the middle year, and the size of the population with diabetes is based on U.S. census data. The incident rate per million of ESRD caused by diabetes is calculated as the number of incident ESRD patients with a primary cause of ESRD of diabetes, divided by the size of the population with diabetes in that group. These rates are adjusted to a reference population using the direct method, which involves stratification of the population by the adjustment variables (i.e. overall rates are adjusted for age, sex, and race) and calculation of a weighted average of stratum-specific rates, where the weights are the numbers of persons in a strata of a “standard population,” which is 2012 in this analysis.
**Measure ID**

UMKECC_5, 60403071

**Measure Title**

Percent of dialysis patients with end stage renal disease due to diabetes

**Measure Source**

University of Michigan Kidney Epidemiology and Cost Center (UM-KECC), Dialysis Facility Report (DFR)

**Table Description**

Geographic Representation: National and State

Years Available: 2009 - 2016

Population Subgroups: Age, ESRD Cause, Ethnicity, Race, Sex

**Data Source**

UM-KECC, DFR

**Denominator**

All dialysis patients treated on December 31 of each year. Dialysis patients were included in a facility once they reached day 91 of ESRD and were treated by the facility for at least 60 days.

**Numerator**

ESRD caused by diabetes among in the Denominator population.

**Comments**

The percentages in the national table are the distribution of ESRD caused by diabetes between subgroups within each demographic category.

6.5. HIV/AIDS
6.5.1. Management of HIV/AIDS

Measure ID
60501012

Measure Title
New HIV cases per 100,000 population age 13 and over

Measure Source
National Center for HIV, Viral Hepatitis, STD, and TB Prevention (NCHHSTP), Division of HIV/AIDS (DHAP), National HIV/AIDS Surveillance System (NHSS)

Table Description
Geographic Representation: National, State
Years Available: 2008 to 2014
Population Subgroups: Age, sex, race/ethnicity

Data Source
CDC, NCHHSTP, DHAP, NHSS, ATLAS Website

Denominator
U.S. population age 13 and over

Numerator
Reported new HIV cases among adolescents and adults age 13 and over in the calendar year

Comments
This measure is referred to as measure HIV-1 in Healthy People 2020 documentation. Data were downloaded from NCHHSTP AtlasPlus, https://www.cdc.gov/nchhstp/atlas/index.htm.
Measure ID
60501013

Measure Title
Persons living with HIV who know their serostatus

Measure Source
National Center for HIV, Viral Hepatitis, STD, and TB Prevention (NCHHSTP), Division of HIV/AIDS (DHAP), National HIV/AIDS Surveillance System (NHSS)

Table Description
Geographic Representation: National, State
Years Available: 2010-2014
Population Subgroups: Age, sex, race/ethnicity, and transmission category

Data Source
CDC, NCHHSTP, DHAP, NHSS

Denominator
Adolescents and adults age 13 and over

Numerator
Number of persons aged ≥13 years with diagnosed HIV infection

Comments
Measure ID
60501014

Measure Title
Persons living with diagnosed HIV who had at least two CD4 or viral load tests performed at least 3 months apart during the last year, among reporting jurisdictions

Measure Source
National Center for HIV, Viral Hepatitis, STD, and TB Prevention (NCHHSTP), Division of HIV/AIDS (DHAP), National HIV/AIDS Surveillance System (NHSS)

Table Description
Geographic Representation: National, State
Years Available: 2014
Population Subgroups: Age, sex, race/ethnicity, and transmission category

Data Source
CDC, NCHHSTP, DHAP, NHSS

Denominator
Number of adolescents and adults age 13 and over with HIV infection diagnosed by the end of previous year and alive at the end of current year.

Numerator
A subset of Numerator who had at least two CD4 or viral load tests performed at least 3 months apart during the last year.

Comments
Measure ID
60501016

Measure Title
Persons living with diagnosed HIV whose most recent viral load in the last 12 months was under 200 copies/mL

Measure Source
National Center for HIV, Viral Hepatitis, STD, and TB Prevention (NCHHSTP), Division of HIV/AIDS (DHAP), National HIV/AIDS Surveillance System (NHSS)

Table Description
Geographic Representation: National, State
Years Available: 2014
Population Subgroups: Age, sex, race/ethnicity, and transmission category

Data Source
CDC, NCHHSTP, DHAP, NHSS

Denominator
Number of persons age 13 and over with diagnosed HIV infection by the end of previous year and alive at the end of current year.

Numerator
Number of persons diagnosed with HIV with a viral load less than 200 copies/mL.

Comments
The data were downloaded from table 5a and table 5b in the “Monitoring Selected National HIV Prevention and Care Objectives by Using HIV Surveillance Data, United States and 6 Dependent Areas, 2015,” which is available at https://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-supplemental-report-vol-22-2.pdf. Data included 37 States and the District of Columbia.
Measure ID
NVSS_6, 60501061

Measure Title
HIV infection deaths per 100,000 population

Measure Source
Healthy People 2020

Table Description
Geographic Representation: National, State


Population Subgroups: Age, sex, location, race, ethnicity

Data Source
National and State: Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Vital Statistics System (NVSS)—Mortality

Denominator
U.S. resident population

Numerator
Number of deaths due to HIV infection

Comments
Estimates are age adjusted to the 2000 U.S. standard population. Age data are unadjusted. Respondents for whom age is not reported are not included in the age adjustment calculations and are excluded from Numerators. This measure is referred to as measure HIV-12 in Healthy People 2020 documentation.
6.7. Mental Health and Substance Abuse

6.7.1. Treatment of Depression

Measure ID

NSDUH_1, 60701011

Measure Title

Adults with a major depressive episode (MDE) in the last 12 months who received treatment for depression in the last 12 months

Measure Source

Substance Abuse and Mental Health Services Administration (SAMHSA)

Table Description

Geographic Representation: National, State
Years Available: National - 2008 to 2015; State - 2012-2015
Population Subgroups: Age, education, income, race, ethnicity, sex, location of residence

Data Source

SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health (NSDUH)

Denominator

People age 18 and over with a major depressive episode in the past year

Numerator

Subset of the Denominator who received treatment or counseling for depression in the past year

Comments

An MDE is defined as a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of the symptoms for depression as described in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).

Treatment is defined as seeing or talking to a medical doctor or other professional or using prescription medication for depression in the past year. Respondents with unknown data for past year MDE measures or unknown treatment data were excluded.

Data prior to 2008 are dropped because they are not appropriate for trend analysis due to survey and questionnaire changes.
Measure ID
NSDUH_2, 60701021

Measure Title
Children ages 12-17 with a major depressive episode in the last 12 months who received treatment for depression in the last 12 months

Measure Source
Substance Abuse and Mental Health Services Administration (SAMHSA)

Table Description
Geographic Representation: National, State
Population Subgroups: Age, education, income, race, ethnicity, sex, location of residence

Data Source
SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health (NSDUH)

Denominator
Children ages 12-17 with a major depressive episode in the past year

Numerator
Subset of the Denominator who received treatment for depression in the past year

Comments
An MDE is defined as a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of the symptoms for depression as described in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).

Treatment is defined as seeing or talking to a medical doctor or other professional or using prescription medication for depression in the past year. Respondents with unknown data for past year MDE measures or unknown treatment data were excluded.

Data prior to 2008 are dropped because they are not appropriate for trend analysis due to survey and questionnaire changes.
Measure ID
NVSS_7, 60701041

Measure Title
Suicide deaths per 100,000 population age 12 and over

Measure Source
Healthy People 2020

Table Description
Geographic Representation: National, State
Population Subgroups: Age, sex, race, ethnicity, location of residence

Data Source
National and State: Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Vital Statistics System (NVSS)—Mortality

Denominator
U.S. resident population age 12 and over

Numerator
Subset of the Denominator who died from suicide

Comments
Suicides may be undercounted because of difficulty in the determination of suicidal intent by the coroner or medical examiner. Estimates are age adjusted to the 2000 U.S. standard population. Age data are unadjusted. Respondents for whom age is not reported are not included in the age adjustment calculations and are excluded from Numerators. This measure is referred to as measure MHMD-1 in Healthy People 2020 documentation.
6.7.2. Treatment of Substance Abuse

Measure ID
NSDUH_3, 60702011

Measure Title
People age 12 and over who needed treatment for illicit drug use or an alcohol problem and who received such treatment at a specialty facility in the last 12 months

Measure Source
Substance Abuse and Mental Health Services Administration (SAMHSA)

Table Description:
Geographic Representation: National, State
Years Available: 2015
Population Subgroups: Age, sex, race, ethnicity, location of residence, education, income

Data Source
SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health (NSDUH)

Denominator
US civilian noninstitutionalized population age 12 and over who needed treatment for any illicit drug use or alcohol problem

Numerator
Subset of the Denominator who received treatment for illicit drug use or alcohol problem at a specialty facility in the past year

Comments
Respondents were classified as needing treatment for an illicit drug or alcohol problem if they met at least one of three criteria during the past year:

1. Were dependent on illicit drugs or alcohol;
2. Abused illicit drugs or alcohol; or
3. Received treatment for an illicit drug or alcohol problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities), hospital (inpatient only), or a mental health center.

Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics (nonmedical use) (based on data from original questions), not including methamphetamine items added in 2005 and 2006.
Estimates include people who received treatment specifically for illicit drugs or alcohol, as well as people who received treatment but did not specify for which substances they were treated.

Data prior to 2015 are dropped because they are not appropriate for trend analysis due to survey and questionnaire changes.

**Measure ID**

NSDUH_4, 60702021

**Measure Title**

People age 12 and over who needed treatment for illicit drug use and who received such treatment at a specialty facility in the last 12 months

**Measure Source**

Substance Abuse and Mental Health Services Administration (SAMHSA)

**Table Description**

Geographic Representation: National, State

Years Available: 2015

Population Subgroups: Age, sex, race, ethnicity, location of residence, education, income

**Data Source**

SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health (NSDUH)

**Denominator**

U.S. civilian noninstitutionalized population age 12 and over who needed treatment for any illicit drug use

**Numerator**

Subset of the Denominator who received treatment for illicit drug use at a specialty facility in the past year

**Comments**

Receipt of any illicit drug treatment at a specialty facility refers to treatment received at a hospital (inpatient), a rehabilitation facility (inpatient or outpatient), or mental health center to reduce or stop drug use or for medical problems associated with drug use.
Respondents were classified as needing treatment for an illicit drug problem if they met at least one of three criteria during the past year:

1. Were dependent on any illicit drug or;
2. Abused any illicit drug; or
3. Received treatment for an illicit drug problem at a specialty facility, i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals (inpatient only), or mental health centers.

Illicit drugs include marijuana/hashish, cocaine (including crack), inhalants, hallucinogens, heroin, or prescription-type psychotherapeutic medications (nonmedical use) (based on data from original questions), not including methamphetamine items added in 2005 and 2006.

Data prior to 2015 are dropped because they are not appropriate for trend analysis due to survey and questionnaire changes.

**Measure ID**

NSDUH_5, 60702031

**Measure Title**

Adolescents and adults who needed treatment for an alcohol problem who received such treatment at a specialty facility in the last 12 months

**Measure Source**

Substance Abuse and Mental Health Services Administration (SAMHSA)

**Table Description:**

Geographic Representation: National, State

Years Available: 2015

Population Subgroups: Age, sex, race, ethnicity, location of residence, education, income

**Data Source**

SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health (NSDUH)

**National Denominator**

U.S. civilian noninstitutionalized population age 12 and over who needed treatment for an alcohol problem

**National Numerator**

Subset of the Denominator who received treatment for an alcohol problem at a specialty facility in the last 12 months
Comments

Receipt of alcohol treatment at a specialty facility refers to treatment received at a hospital (inpatient), a rehabilitation facility (inpatient or outpatient), or a mental health center in order to reduce or stop alcohol use or for medical problems associated with alcohol use.

Respondents were classified as needing treatment for an alcohol problem if they met at least one of three criteria during the past year--(1) were dependent on alcohol, (2) abused alcohol, or (3) received treatment for alcohol use at a specialty facility.

Data prior to 2008 are dropped because they are not appropriate for trend analysis due to survey and questionnaire changes.

Measure ID

TEDS_1, 60702041

Measure Title

Adolescents and adults treated for substance abuse who completed treatment course

Measure Source

Substance Abuse and Mental Health Services Administration (SAMHSA)

Table Description

Geographic Representation: National, State

Years Available: State - 2008 to 2012; National - 2005 to 2012

Population Subgroups: Age, education, sex

Data Source

National & State: SAMHSA, Center for Behavioral Health Statistics and Quality, Substance Abuse Treatment Episode Data Set (TEDS)

Denominator

Discharges from substance abuse treatment aged 12 and over

Numerator

Subset of the Denominator who completed treatment

Comments

These data include primarily discharges from publicly funded substance abuse treatment facilities.
Measure Sub-ID: 60702051

Measure Title
Hospital inpatient stays involving opioid-related diagnoses 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, State
Years Available: 2005-2015
Population Subgroups: Age, gender, community-level income, location of patient residence

Data Sources
National: AHRQ, CDOM, HCUP, Nationwide Inpatient Sample (NIS) and AHRQ Quality Indicators, modified version 4.4
State: AHRQ, CDOM, HCUP, State Inpatient Databases (SID)

Denominator
U.S. resident population

Numerator
Number of hospital discharges that are related to the opioid use stemming from illicit opioids such as heroin, illegal use of prescription opioids, and the use of opioids as prescribed.

Comments
The data were exported from HCUP Fast Stats, Opioid-Related Hospital Use (http://www.hcup-us.ahrq.gov/faststats/OpioidUseServlet).

The Data Notes & Methods worksheet contains the same data notes and methods viewed on the HCUP Fast Stats page for your reference.

On October 1, 2015, the United States transitioned from ICD-9-CM1 to ICD-10-CM/PCS2. The 2015 data for the NHQDR include three quarters of information based on ICD-9-CM coding.
Opioid-related emergency department and hospital use are identified by any diagnosis (all-listed) in the following ranges of ICD-10-CM and ICD-9-CM codes:

ICD-9-CM codes prior to October 1, 2015

- 304.00 - 304.02: Opioid type dependence (unspecified; continuous; episodic)
- 304.70 - 304.72: Combinations of opioid type drug with any other drug dependence (unspecified; continuous; episodic)
- 305.50 - 305.52: Opioid abuse (unspecified; continuous; episodic)
- 965.00 - 965.02; 965.09: Poisoning by opium (alkaloids), unspecified; heroin; methadone; other opiates and related narcotics
- 970.1: Poisoning by opiate antagonists
- E850.0 - E850.2: Accidental poisoning by heroin; methadone; other opiates and related narcotics
- E935.0 - E935.2: Heroin, methadone, other opiates and related narcotics causing adverse effects in therapeutic use
- E940.1: Opiate antagonists causing adverse effects in therapeutic use.

ICD-10-CM codes starting October 1, 2015

- F11 series: Opioid-related disorders (except F11.21)
- T40 series: Poisoning by, adverse effect of, and underdosing of narcotics and psychodysleptics [hallucinogens]; includes poisoning accidental, undetermined, and adverse effect (except heroin); with a seventh digit indicating initial, subsequent encounter, sequela
- 0X1, 0X4, 0X5: Opium
- 1X1, 1X4: Heroin
- 2X1, 2X4, 2X5: Other opioids
- 3X1, 3X4, 3X5: Methadone
- 4X1, 4X4, 4X5: Other synthetic narcotics
- 601, 604, 605: Unspecified narcotics
- 691, 694, 695: Other narcotics

These codes include opioid-related use stemming from illicit opioids such as heroin, illegal use of prescription opioids, and the use of opioids as prescribed. Each type of opioid use is important for understanding and addressing the opioid epidemic in the United States. While there may be interest in examining how much each type of opioid use contributes to the overall opioid problem, many of the opioid-related codes under the ICD-9-CM clinical coding system do not allow heroin-related cases to be explicitly identified (e.g., in the 304.0x series, heroin is not distinguished from other opioids). In addition, the codes do not distinguish between illegal use of prescription drugs and their use as prescribed.

It should be noted that ICD-10-CM and ICD-9-CM diagnosis codes related to opioid dependence or abuse “in remission” are not used to identify opioid-related hospital use because remission does not indicate active use of opioids. Codes indicating opioid-related use for intentional self-harm or assault also are not included.
Measure Sub-ID
60702061

Measure Title
Emergency department visits involving opioid-related diagnoses 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, State

Years Available: 2005-2015

Population Subgroups: Age, gender, community-level income, location of patient residence

Data Sources
National: AHRQ, CDOM, HCUP, Nationwide Inpatient Sample and Nationwide Emergency Department Sample, and AHRQ Quality Indicators, version of 4.4.

State: AHRQ, CDOM, HCUP, State Inpatient Databases (SID)

Denominator
U.S. resident population

Numerator
Total number of emergency department visits that are related to the opioid use stemming from illicit opioids such as heroin, illegal use of prescription opioids, and the use of opioids as prescribed.

Comments
These data were exported from HCUP Fast Stats, Opioid-Related Hospital Use (www.hcup-us.ahrq.gov/faststats/OpioidUseServlet).

On October 1, 2015, the United States transitioned from ICD-9-CM1 to ICD-10-CM/PCS2. The 2015 data for the NHQDR include three quarters of information based on ICD-9-CM coding.
Opioid-related emergency department and hospital use is identified by any diagnosis (all-listed) in the following ranges of ICD-10-CM and ICD-9-CM codes:

ICD-9-CM codes prior to October 1, 2015

- 304.00 - 304.02: Opioid type dependence (unspecified; continuous; episodic)
- 304.70 - 304.72: Combinations of opioid type drug with any other drug dependence (unspecified; continuous; episodic)
- 305.50 - 305.52: Opioid abuse (unspecified; continuous; episodic)
- 965.00 - 965.02; 965.09: Poisoning by opium (alkaloids), unspecified; heroin; methadone; other opiates and related narcotics
- 970.1: Poisoning by opiate antagonists
- E850.0 - E850.2: Accidental poisoning by heroin; methadone; other opiates and related narcotics
- E935.0 - E935.2: Heroin, methadone, other opiates and related narcotics causing adverse effects in therapeutic use
- E940.1: Opiate antagonists causing adverse effects in therapeutic use.

ICD-10-CM codes starting October 1, 2015

- F11 series: Opioid-related disorders (except F11.21)
- T40 series: Poisoning by, adverse effect of, and underdosing of narcotics and psychodysleptics [hallucinogens]; includes poisoning accidental, undetermined, and adverse effect (except heroin); with a seventh digit indicating initial, subsequent encounter, sequela
- 0X1, 0X4, 0X5: Opium
- 1X1, 1X4: Heroin
- 2X1, 2X4, 2X5: Other opioids
- 3X1, 3X4, 3X5: Methadone
- 4X1, 4X4, 4X5: Other synthetic narcotics
- 601, 604, 605: Unspecified narcotics
- 691, 694, 695: Other narcotics

These codes include opioid-related use stemming from illicit opioids such as heroin, illegal use of prescription opioids, and the use of opioids as prescribed. Each type of opioid use is important for understanding and addressing the opioid epidemic in the United States. While there may be interest in examining how much each type of opioid use contributes to the overall opioid problem, many of the opioid-related codes under the ICD-9-CM clinical coding system do not allow heroin-related cases to be explicitly identified (e.g., in the 304.0x series, heroin is not distinguished from other opioids). In addition, the codes do not distinguish between illegal use of prescription drugs and their use as prescribed.
6.8. Musculoskeletal Disease

Measure ID

NHIS_7, 60801051

Measure Title

Adults with chronic joint symptoms who have seen a health care provider for their symptoms

Measure Source

Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Health Interview Survey (NHIS)

Table Description

Geographic Representation: National

Years Available: 2009-2014

Population Subgroups: Age, ethnicity, race, sex, income, insurance, location of residence, education, activity limitation

Data Source

CDC, NCHS, NHIS

Denominator

U.S. civilian noninstitutionalized population age 18 and over with chronic joint symptoms

Numerator

Subset of the Denominator: who reported they have ever seen a doctor or other health professional for joint symptoms

Comments

Estimates are age adjusted to the 2000 U.S. standard population.
6.9. Respiratory Diseases

6.9.1. Treatment of Respiratory Infections

Measure ID
NAMCS_NHAMCS_11, 60901011

Measure Title
Doctor’s office, emergency department, and outpatient department visits where antibiotics were prescribed for a diagnosis of common cold per 10,000 population

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

Table Description
Geographic Representation: National
Population Subgroups: age, sex, race/ethnicity, location (hospital)

Data Sources
CDC, NCHS, NAMCS and NHAMCS

Denominator
U.S. civilian noninstitutionalized population with doctor’s office, emergency department, or outpatient department visits.

Numerator
Number of visits in the Denominator with a sole diagnosis of common cold for which antibiotics were prescribed or continued.

Comments
Population used for calculation is U.S. Census Bureau estimated civilian noninstitutionalized population on July 1 each year. Ambulatory medical care visits include visits to office-based physicians, community health centers, hospital outpatient departments, and emergency departments. For consistency with previous years, visits to midlevel providers at community health centers were excluded.
Measure ID
HCUP_38, 60901031

Measure Title
Deaths per 1,000 adult hospital admissions with pneumonia

Measure Source
Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets (CDOM), Healthcare Cost and Utilization Project (HCUP), Inpatient Quality Indicators (IQIs)

Table Description
Geographic Representation: National, State


Population Subgroups: Age, gender, race/ethnicity, bed size of hospital, expected primary payer, location of hospital, location of residence, median income of patient’s ZIP code, control of hospital, region, teaching status

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 version 4.4

Denominator
All discharges age 18 and over with principal diagnosis code of pneumonia, excluding patients transferring to another short-term hospital, obstetric admissions, and cases with a missing discharge disposition

Numerator
Subset of the Denominator who died
Comments

Rates are adjusted by age, gender, age-gender interactions, major diagnostic category (MDC), all patient refined-diagnosis related group (APR-DRG) risk of mortality score, and transfers to the hospital. When reporting is by age, the adjustment is by gender, MDC, APR-DRG risk of mortality score, and transfers to the hospital; when reporting is by gender, the adjustment is by age, MDC, APR-DRG risk of mortality score, and transfers to the hospital. The AHRQ IQI software was modified to not use the present on admission (POA) indicators (or estimates of the likelihood of POA for secondary diagnosis).

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
60901041

Measure Title
Patients with tuberculosis who completed a curative course of treatment within 1 year of initiation of treatment

Measure Source
American Thoracic Society Centers for Disease Control and Prevention (CDC), Division of Tuberculosis Elimination

Table Description
Geographic Representation: National and State
Population Subgroups: Age, ethnicity, race

Data Source
CDC, National Tuberculosis Surveillance System (NTSS)

Denominator
U.S. resident population with verified tuberculosis who are eligible to complete therapy within 1 year

Numerator
Subset of the Denominator who completed therapy within 1 year

Comments
Race designations changed in 2003; estimates in 2003 and later differ slightly from estimates in previous reports.


6.9.3. Management of Asthma

Measure ID
MEPS_1, 60903011

Measure Title
People with current asthma who are now taking preventive medicine daily or almost daily (either oral or inhaler)

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: 2003 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 age 18 and over, number of chronic conditions, U.S. born.

Data Source
AHRQ, CFACT, MEPS

Denominator
U.S. civilian noninstitutionalized population who currently have active asthma

Numerator
Subset of the Denominator who are now taking preventive medicine daily or almost daily.

Comments
Estimates are age-adjusted to the 2000 U.S. standard population using four age groups: 0-17, 18-44, 45-64, and 65 and over. Excludes cases for which information on presence of asthma is missing.
Measure ID

NHIS_13, 60903041

Measure Title

People with asthma who received written asthma management plans from their health care provider

Measure Source

Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Health Interview Survey (NHIS)

Table Description

Geographic Representation: National

Years Available: 2009-2013

Population Subgroups: Activity limitation, age, education, health insurance, income, race, ethnicity, location of residence, sex

Data Source

CDC, NCHS, NHIS

Denominator

U.S. civilian noninstitutionalized population with asthma

Numerator

Subset of the Denominator: who report receiving written asthma management plans from their health provider

Comments

Estimates are age adjusted to the 2000 U.S. standard population. Age data and health insurance data for those aged 65 and over are unadjusted.
Measure ID

NHIS_24, 60903043

Measure Title

Persons with current asthma who received education about appropriate response to an asthma episode

Measure Source

Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Health Interview Survey (NHIS)

Table Description

Geographic Representation: National

Years Available: 2011-2013

Population Subgroups: Activity limitations, age, education, race/ethnicity, geographic location (residence), health insurance, income, race/ethnicity, sex

Data Source

CDC, NCHS, NHIS

Denominator

Persons with current asthma

Numerator

Subset of the Denominator: who reported they received appropriate response to an asthma episode

Comments

Estimates are not age adjusted.
Measure ID
NHIS_25, 60903044

Measure Title
Persons with current asthma who were advised to change things to reduce exposure to irritants

Measure Source
Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Health Interview Survey (NHIS)

Table Description
Geographic Representation: National

Years Available: 2011-2013

Population Subgroups: Activity limitations, age, education, race/ethnicity, geographic location (residence), health insurance, income, race/ethnicity, sex

Data Source
CDC, NCHS, NHIS

Denominator
Persons with current asthma

Numerator
Subset of the Denominator: who reported they were advised to change things to reduce exposure to irritants

Comments
Estimates are not age adjusted.