



CENTER FOR IMPROVING
VALUE IN HEALTH CARE

Interactive CO APCD Quality Report: Methodology

12/12/2017

Quality Measures Description

The Institute of Medicine (2001) defines quality as "the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge." Using claims data from the Colorado All Payer Claims Database (CO APCD), CIVHC has produced a number of quality measures based on nationally endorsed specifications¹ and used by national and state-sponsored programs.

Preventive Measures

Preventive care is an important part of health care quality by helping populations remain healthy. The measures of preventive care included in this report are:

- **Breast Cancer screening**, calculated as the percentage of women 50 to 74 years old who had a mammogram to screen for breast cancer during the previous two years.
- **Cervical Cancer screening**, calculated as the percentage of women 21 to 64 years old with one or more screenings for cervical cancer. Appropriate screenings are defined by any one of the following criteria:
 - Cervical cytology (pap test) performed during the previous three years for women who are at least 21 years old at the time of the test, and/or
 - Cervical cytology/human papillomavirus (HPV) co-testing performed during the previous five years for women who are at least 30 years old at the time of the test.
- **Colorectal Cancer screening**, calculated as the percentage of patients 50 to 75 years old who had one or more of the following types of screening for colorectal cancer:
 - Fecal occult blood or Fecal immunological test during the previous year;
 - Flexible sigmoidoscopy during the previous five years; and/or
 - Colonoscopy during the previous ten years (the reporting dataset is limited to a retrospective period of three years).

Chronic Condition Management

This report also includes measures that indicate if a disease or condition is being managed according to current professional knowledge. Managing chronic conditions appropriately is an important part of health care quality because it prevents further complications in populations living with the condition. Condition management measures include:

- **Diabetes Hemoglobin A1c testing**, calculated as the percentage of patients 18 to 75 years old, with primary Diabetes Types I or II who received the HbA1c test in a clinical encounter during the previous year
- **Appropriate use of Asthma medications**, calculated as the percentage of patients 5 to 64 years old identified as having persistent asthma and appropriately prescribed medication (at least one asthma controller) during the previous year. The Appropriate Use of Asthma Medication measure is broken out into the following age groups: 5 to 11, 12 to 18, 19 to 50, 51 to 64, and an overall 5 to 64 age group.

¹ The quality measures used in this report are endorsed by the National Quality Forum – NQF (breast cancer screening NQF 2372; cervical cancer screening NQF 0032; colorectal cancer screening NQF 0034; Diabetes Hemoglobin A1c screening NQF 0057; appropriate Asthma treatment NQF 0036).

Demographic Characteristics

Demographic characteristics reflect the information available in the most recent record of a person in a calendar year. For example, if the most recent record is from the month of March 2015, then the person's location of residence, gender, and other demographic information will be as of March 2015. The only exception is for age, which is calculated as of December 31st of the reporting year.

Only residents of Colorado are included in the analysis, that is, persons whose most recent record indicates that the person resides in a ZIP code within the state of Colorado. The measures are also displayed by rural and urban populations, a grouping that is originally based on the U.S. Office of Management and Budget county-level designation: counties which are part of a Metropolitan Statistical Area are considered "urban", all other counties are considered "rural."²

Geographic Groupings

Geographic breakdowns available in the report include counties and Health Statistics Regions (HSRs). HSRs represent geographic areas assigned by the Colorado Department of Public Health and Environment in partnership with state and local public health officials³. Typically, an HSR represents a group of adjacent counties. Some HSRs, however, represent a single county.

Payer Types

Payer type is created by assigning each person to only one payer type per year based on their primary medical insurance information during a reporting year. One payer type will be assigned, regardless of whether the person had insurance for just a single month, the full year, or any number of months in between. For months with overlapping insurance for distinct payer types, a hierarchy is implemented, favoring the month-level assignment to Medicare Advantage first, Commercial second, Medicaid last. The assignment for the entire year is based on the payer type with the highest number of months with commercial, Medicaid or Medicare Advantage insurance, based on the initial month-level assignment. In the event of a tie in number of months with insurance for a particular payer type, a similar hierarchy is implemented. For example, a person with commercial insurance for six months and Medicare Advantage insurance for the other six will receive the Medicare Advantage payer type at the annual level. A person with just four months of insurance during a year, two of them commercial, two Medicare Advantage, will receive the same annualized payer type, i.e., Medicare Advantage.

Pharmacy and dental insurance eligibility information, or secondary insurance information, is not considered when assigning a payer type. Once a person is assigned a payer type, all medical and pharmacy claim records for that person are associated with that assignment, regardless of the insurance type information on the claim record.

The payer types available in this report are: Commercial, Medicaid, Medicare Advantage, and a combination of all three types labeled as "All Payers."

Comparison to Statewide and Ratio Benchmark

The statewide percentage is used to compare percentages of counties or HSRs⁴. The ratio to statewide is constructed by dividing each county or HSR percentages to statewide percentage. The resulting ratio values can be interpreted as follows:

- A ratio value below 1.0 means that the county / HSR percentage is lower than statewide percentage, for example a ratio of .85 reflects a county value that is 15% below the statewide percentage.
- A ratio value above 1.0 means that the county / HSR percentage is higher than statewide percentage, for example a ratio of 1.15 reflects a county percentage that is 15% above the statewide percentage.

² Colorado Rural Health Center (2016). *Colorado: County Designations, 2016*. Retrieved from <http://coruralhealth.wpengine.netdna-cdn.com/wp-content/uploads/2016/03/2016.CountyDesignations.pdf> on July 13, 2017.

³ <http://www.chd.dphe.state.co.us/HealthDisparitiesProfiles/dispHealthProfiles.aspx>

⁴ See Description of Quality Measure section above for more information on the percentage calculation.

- A ratio value of 1.0 means that the county / HSR percentage is equal to the statewide percentage.

Data Suppression

Following a privacy protection standard used by the Centers for Medicare & Medicaid Services, data are suppressed if the result represents fewer than 11 persons. Throughout the reports, a blank table cell or a data point not displayed in a chart indicates that data has been suppressed due to low volume.

Data Limitations

Data presented in this report are the result of a process that strives to ensure the high quality, reliability, and accuracy of the final product. Potential areas of concern are investigated and addressed accordingly, on a regular and ongoing basis, and while every effort was made to address all known areas of potential concern for this report, some may have escaped our scrutiny.

Results for counties with small populations (fewer than 5,000 people) or for rare medical events should be interpreted with caution since they are prone to larger than average variation over time. Counties with small populations in the state of Colorado include: Baca, Cheyenne, Costilla, Custer, Dolores, Gilpin, Hinsdale, Jackson, Kiowa, Lincoln, Mineral, Ouray, Phillips, San Juan, Sedgwick, Saguache, and Washington.

Data Vintage

Information regarding the payers and covered lives represented in this public report is available in the [Data Vintage](#) reference guide.

Terms & Conditions of Use

This report and any such data made available on or obtained through the civhc.org website is subject to the current Terms of Use and Privacy Policy.