

PI003 Utilization Report: Methodological Notes

November 2017

Description of Utilization Measures

This report reflects medical and pharmacy service use for Colorado residents with health insurance represented in the Colorado All Payer Claims Database (CO APCD).

Utilization measures are reported as rates per 1,000 people, and reflect the number of people using the service out of 1,000 insured individuals. Included in this report are the following service utilization measures:

- (a) Unplanned Hospitalizations – unplanned acute care inpatient hospitalization stays; not including anticipated admissions with a primary discharge diagnosis for things such as pregnancy and delivery, newborn, or injuries (except for complications of surgical and medical care); also not including definitively planned admissions, such as admissions for rehabilitation services, chemotherapy, transplants, or potentially planned admissions, such as those for common surgical procedures (e.g., hip replacements), cardiovascular procedures, or other surgical treatments that have no indication of acute complications.
- (b) 30-Day Readmissions – admissions within 30 days after discharge for all causes (planned and unplanned) inpatient hospitalizations (calculated as the number of readmissions per 1,000 insured individuals, NOT per 1,000 inpatient admissions);
- (c) Emergency Room Visits – events defined as unique patient and date of service combinations that have at least one record with an emergency room revenue code, procedure code or place of service code, and are not precursors to subsequent inpatient hospital stays in the same period;
- (d) Observation Stays – events defined as unique patient and start date of service combinations that have at least one record with an observation stay revenue code or procedure code, when a person is kept for evaluation and medical services but not admitted to the hospital; excludes instances where observation services were part of Emergency Room visits or outpatient surgeries;
- (e) Outpatient Services – events defined as unique patient, provider and date of service combinations when patients receive services in a hospital outpatient setting (including dialysis at a hospital and free standing clinic) or ambulatory surgery centers.
- (f) Pharmacy Scripts – prescriptions filled for a generic or brand medication, including refill prescriptions;
- (g) Pharmacy Scripts for Generic Drugs – a subset of the overall pharmacy scripts category, these are prescriptions filled for a generic medication, including refill prescriptions.

Measures (a)-(c) were derived with the Johns Hopkins ACG grouping system.ⁱ



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Demographic Characteristics

Demographic characteristics reflect the information available in a person's most recent record in a calendar year. For example, if the most recent record is from March 2015, the person's demographic information—location of residence, gender, etc. —will reflect their status as of March 2015. The only exception to this is the age characteristic, which is calculated as of December 31st of the reporting year. Age groups available in this report are: 0 to 17 (“Child”), 18 to 34 (“Young Adult”), 35 to 64 (“Mature Adult”), 65 or older (“Senior Adult”).

Only residents of Colorado are reflected in the data. State resident status is also determined based on the most recent record, which indicates whether the person resides in a ZIP code within Colorado. The measures are displayed by rural and urban counties, a grouping based on the U.S. Office of Management and Budget county-level designation: counties that are part of a Metropolitan Statistical Area are considered “urban”; all other counties are considered “rural.”ⁱⁱ

Geographic Groupings

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

Payer Types

Payer type is created by assigning each person to an *annualized* payer type based on their primary medical insurance information during a reporting year, 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 annualized assignment 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.”

For more information on how the CO APCD Medicaid and the Colorado Department of Health Care Policy and Financing Medicaid reported costs differ, please [click here](#).

Comparison to Statewide and Ratio Benchmark

The statewide utilization rate is used to compare utilization rate of counties or HSRs. The ratio to statewide utilization rate is constructed by dividing each county or HSR utilization rate by the statewide utilization rate. The resulting ratio values can be interpreted as follows:

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

Data Suppression

Following privacy protection standards used by the Centers for Medicare & Medicaid Services (CMS), data are suppressed for values based on fewer than 11 insured-years or fewer than 11 service utilization units (e.g., 10 or fewer unplanned hospitalizations, 10 or fewer observation stays). 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 basis, and while every effort is made to address all known areas of concern for this report, some may remain.

Data for small population breakdowns or for rare events should be interpreted with caution, since they are prone to significant fluctuations. Colorado counties with small populations (fewer than 5,000 people overall) 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.

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- ⁱ The Johns Hopkins University Bloomberg School of Public Health (2014). The Johns Hopkins ACG System Technical User Guide, Version 11.0. Retrieved from https://www.healthpartners.com/ucm/groups/public/@hp/@public/documents/documents/cntrb_035024.pdf on October 14, 2016.
- ⁱⁱ 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.
- ⁱⁱⁱ <http://www.chd.dphe.state.co.us/HealthDisparitiesProfiles/dispHealthProfiles.aspx>