



CENTER FOR IMPROVING  
VALUE IN HEALTH CARE

## Medicare Reference Based Price Report - Affordability Dashboard Methodology

Fall 2022

### Background

Many cost reduction strategies have been implemented and tested to address rising health care costs both locally and nationally. One model in particular – negotiating rates using Medicare payments as a reference – has proven effective in reducing health care spending. This analysis, part of Center for Improving Value in Health Care’s (CIVHC) [Affordability Dashboard](#), shows commercial health insurance company payments for hospitals for inpatient (IP) and outpatient (OP) services as a percent of Medicare, along with patient experience, overall hospital quality rating, and comparisons from the previous year. **This report is based on a [RAND Corporation analysis](#) of commercial health insurance payments submitted by health insurance payers to the Colorado All Payer Claims Database (CO APCD) from 2018 to 2020. The previous report analyzed data from 2017 to 2019.**

The data represents hospital-based claims for the majority of fully insured and small group covered lives in Colorado, and approximately 50% of self-insured covered lives (see [CO APCD Insights Dashboard](#) for more information).

Percent Medicare payments are calculated for each individual hospital by comparing commercial health insurance payments (total allowed amounts) to what Medicare Fee-for-Service would have paid that hospital for the same service. The result is a percent above or below Medicare prices, with Medicare equal to 100%. For example, a hospital with a 200% of Medicare result for inpatient services means they received two times the Medicare rate for inpatient services across the commercial plans evaluated.

For additional value for communities across Colorado, in the Affordability Dashboard, CIVHC provides a deeper view into the RAND hospital report and calculated prices and quality by Division of Insurance Region and county. More information on CIVHC’s methodology for geographic and quality reporting is included below.

### **Division of Insurance (DOI) percent of Medicare methodology**

1. Categorized hospital data from [RAND Excel public file](#) by DOI.
2. Summed the following fields for Inpatient Services only, Outpatient Services only, and Inpatient Services and Outpatient Services combined:
  - Total private commercial insurance allowed amount (payer and patient combined)
  - Simulated Medicare allowed amount

3. Divided the sum of total private allowed amount by the total simulated Medicare allowed amount.
4. Calculations:

| Measure  | Numerator                                       | Denominator                                 | Calculation  |
|--|---|---|--|
| <b>DOI Inpatient (IP) % of Medicare</b>                              | Total private allowed amount IP                 | Total Simulated Medicare IP                 | Total private allowed amount IP ÷ Total Simulated Medicare IP allowed amount                                 |
| <b>DOI Outpatient (OP) % of Medicare</b>                             | Total private allowed amount OP                 | Total Simulated Medicare OP                 | Total private allowed amount OP ÷ Total Simulated Medicare OP allowed amount                                 |
| <b>DOI Inpatient (IP) and Outpatient (OP) Combined % of Medicare</b> | Total private allowed amount IP and OP Combined | Total Simulated Medicare IP and OP Combined | Total private allowed amount IP and OP combined ÷ Total Simulated Medicare IP and OP combined allowed amount |

**County percent of Medicare methodology:**

1. Categorized hospital data from [RAND Excel public file](#) by County.
2. Summed the following fields for Inpatient Services only, Outpatient Services only, and Inpatient Services and Outpatient Services combined:
  - Total private commercial insurance allowed amount (payer and patient combined)
  - Simulated Medicare allowed amount
3. Divided the sum of total private allowed amount by the total simulated Medicare allowed amount.
4. Calculation:

| Measure   | Numerator                                       | Denominator                                 | Calculation  |
|---|---|---|--|
| <b>County Inpatient (IP) % of Medicare</b>                              | Total private allowed amount IP                 | Total Simulated Medicare IP                 | Total private allowed amount IP ÷ Total Simulated Medicare IP allowed amount                                 |
| <b>County Outpatient (OP) % of Medicare</b>                             | Total private allowed amount OP                 | Total Simulated Medicare OP                 | Total private allowed amount OP ÷ Total Simulated Medicare OP allowed amount                                 |
| <b>County Inpatient (IP) and Outpatient (OP) Combined % of Medicare</b> | Total private allowed amount IP and OP Combined | Total Simulated Medicare IP and OP Combined | Total private allowed amount IP and OP combined ÷ Total Simulated Medicare IP and OP combined allowed amount |

**Quality ratings:**

- The patient experience rating comes from a survey called the [Hospital Consumer Assessment of Healthcare Providers and Systems](#), or HCAHPS. The survey is given to adult patients between 48 hours and six weeks after leaving the hospital and includes all patients, not only Medicare patients. Overall patient experience is summarized into a single star rating for each hospital.
- The [overall hospital quality rating](#) comes from data hospitals report to the Centers for Medicare and Medicaid Services (CMS) for the Hospital Inpatient and Outpatient Quality Reporting programs. The data is summarized into a single star rating for each hospital. You can visit the CMS website for more information about the star ratings.

Note: Only certain facilities that serve a minimum number and type of patients are required to report quality data to CMS.

**Percent Change from Previous Reporting Year per Hospital:**

The online report provides a percent increase or decrease by hospital from the previous year’s report published in 2021 (data from 2017-2019) and this year’s report, published in 2022 (data from 2018-2020).

**Calculation:**

| Measure   | Numerator  | Denominator   | Calculation   |
|---|--|---|---|
| <b>% Change from Previous Reporting Year per hospital</b> | 2022 reporting year hospital % of Medicare –<br>2021 reporting year hospital % of Medicare | 2021 reporting year hospital % of Medicare reporting year | $(2022 \text{ reporting year hospital \% of Medicare} - 2021 \text{ reporting year hospital \% of Medicare}) \div 2021 \text{ reporting year hospital \% of Medicare reporting year}$ |

### 2020 Considerations

The following facilities that were included in last year’s report are no longer in this year’s RAND analysis:

- National Jewish Hospital
- Animas Surgical Hospital
- Orthocolorado Hospital

The following facility is new to the RAND analysis:

- UCHealth Longs Peak Hospital

### How RAND Simulated Medicare Prices

RAND simulated Medicare prices in two steps:

1. Grouping (i.e., assigning services to case-mix groups)
2. Pricing (i.e., assigning a price for each service based on the national base rate, then case-mix group, hospital-specific adjustments, and outlier adjustments)

For each service, RAND applied Medicare pricing algorithms to reprice to the amount Medicare would have paid for the same service and the same provider. The pricing algorithm reflects, to the extent possible, the details of Medicare’s payment formula.

### RAND Study Limitations:

- CO APCD data included in the study includes all fully insured Coloradans and approximately 50% of those with self-insured employer coverage, representing over 5 million lives or 70% of the medically covered lives in Colorado. The data does not include any federally covered lives in programs such as Tricare, VA or Indian Health Services.
- In order to be included in the study, both professional and hospital fees must be able to be matched for each claim at a particular facility. As a result, volume of procedures for hospitals does not always reflect actual number of cases for each hospital.
- To ensure patient confidentiality, reporting prices of fewer than 11 claims were suppressed.
- The analysis is not limited to in-network providers, and the prices reported are a mixture of negotiated contracted rates paid to in-network providers and allowed amounts for services provided by out-of-network providers.
- Medicare’s case mix–adjustment weights are based on relative costs measured among

Medicare beneficiaries, and those relative weights might not be appropriate for enrollees in employer-sponsored plans.

- The allowed amounts reported by private health plans in claims data do not include non claims-based payments to providers, such as risk-sharing payments and pay-for-performance bonuses.

Download the [complete RAND Excel file and methodology](#) to access CIVHC's full Excel data set for more information.

For additional questions, please contact us at [info@civhc.org](mailto:info@civhc.org).