CIVHC
CENTER FOR IMPROVING VALUE IN HEALTH CARE

SHOP FOR CARE METHODOLOGY

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As administrator of the Colorado All Payer Claims Database (CO APCD), the Center for Improving Value in Health Care (CIVHC) is required to make public price information available to consumers. The Shop for Care tool is available publicly at **https://www.civhc.org/shop-for-care/** and enables consumers, providers and others to compare prices and quality information on a named hospital and facility basis. The tool is updated annually as new years of data become available in the CO APCD. This document supplements the online **Frequently Asked Questions** resource and outlines more detailed methodology regarding the analytics behind the output in the tool.

The Shop for Care tool is broken down into two tabs: **Imaging Services** and **Other Procedures**. Each tab is built on different analytics as outlined below. A summary of CIVHC's Quality Control and Validation process is also available at the end of this document.

IMAGING SERVICES TAB

The Imaging Services tab provides users with estimates of the average (calculated as the median) payment that both health insurance plans and patients would pay combined at a particular facility for one of the imaging services available. A list of all imaging services available currently is provided below:

Imaging Services
• 70450 CT Scan Head or brain • 74177 CT Scan Abdomen and pelvis, with contrast • 74178 CT Scan Abdomen and pelvis, with/without contrast • 70551 MRI Scan Brain • 70553 MRI Scan Brain, with/without contrast • 72148 MRI Scan Spinal canal • 72197 MRI Scan Pelvis, with/without contrast • 73221 MRI Scan Arm joint • 73721 MRI Scan Leg joint • 76642 Ultrasound Breast (single) • 76700 Ultrasound Abdomen (complete) • 77080 Bone Density test of spine or hips • 78452 Heart vessel study using drugs or exercise • 72040 X-Ray Neck and spine 2-3 views • 72070 X-Ray Thoracic spine, 2 views • 72100 X-Ray L-S Spine 2-3 views • 72110 X-Ray L-2 spine 4 or more views • 72170 X-Ray Pelvis • 73030 X-Ray Shoulder • 73110 X-Ray Wrist • 73130 X-Ray Hand • 73562 X-Ray Knee • 73610 X-Ray Ankle

- 73630 X-Ray Foot
- 74022 X-Ray Abdomen

Average Prices are calculated based on the median payment (both the payer and patient portion combined) made to that particular provider for the facility only portion of the bill (no provider or other fees included) across all commercial payers in the CO APCD. For more information on the commercial payers submitting data to the CO APCD, visit: https://www.civhc.org/get-data/whats-in-the-co-apcd/

Price Range is calculated using the 25th to 75th percentile range of payments made by both the payer and the patient by all commercial payers. Providing the price range helps users understand the "typical" low and high end of payments for each facility while eliminating outliers on both ends. In some instances, the price range is the same as the "average price" listed which could indicate that the facility negotiates only one standard price regardless of the payer, or they may only have one payer represented in the CO APCD for commercial claims.

Inclusions/Selection Criteria

The CIVHC analytic team selects imaging services based on the volume of claims associated with imaging services so that there will be sufficient volume to be able to display provider/facility-level information (see below for suppression rules). In addition, claims were selected using the following criteria.

- Commercial only (Medicare Advantage claims are not included)
- Members of any age
- Payments provided by primary payers only
- Allowed amount greater than $1
- Services provided in outpatient facilities
- Professional claims with a modifier of "TC", which indicates that the cost corresponds to performing the test only, not the interpretation.
- Facility-only payments are included (no professional fees or additional services that may have occurred on the same day or visit are included in the price estimates)
- Claims with a service location in Colorado (services outside of the state are removed)

Extremely low or high payments **were not excluded** from the analysis since those types of payments are eliminated from the data displayed with the use of median and only 25th-75th percentile ranges.

Exclusions

- Inpatient claims are not included in the imaging service results.
- Any services with less than 11 claims for commercial payers at a particular facility are removed due to privacy laws and suppression guidelines established by the Centers for Medicaid & Medicare Services (CMS).
- Results are isolated to the facility portion only of the imaging CPT code and do not include professional fees or additional services that may have occurred on the same day or visit

Data Source

Data for the current version of the imaging services is based on data in the CO APCD with service dates from January 1, 2018 to December 31, 2018. Data was pulled using the May 2020 data refresh.

OTHER PROCEDURES TAB (PROMETHEUS EPISODE PRICES)

The "Other Procedures" tab provides users with estimates of the average (calculated as the median) payment that both health insurance plans and patients would pay combined at a particular facility. The procedures on this tab typically have multiple costs involved before, during and after the procedure, such as a delivery or

knee surgery. To provide the most comprehensive estimate of the total cost, CIVHC provides the full "episode" cost based on PROMETHEUS analytics. A list of all PROMETHEUS-based services that are available on the website currently is provided below:

PROMETHEUS Episode Procedures
• Breast Biopsy • Cataract Surgery • Colonoscopy • C-Section • Gall Bladder Surgery • Hip Replacement & Hip Revision • Knee Arthroscopy • Knee Replacement & Knee Revision • Tonsillectomy • Upper GI Endoscopy • Vaginal birth • Bariatric Surgery • CABG &/or Valve Procedures • Colorectal Resection • Coronary Angioplasty • Hysterectomy • Lumbar Laminectomy • Lumbar Spine Fusion • Lung Resection • Mastectomy • Pacemaker/Defibrillator • Prostatectomy • Shoulder Replacement • Transurethral resection prostate

The PROMETHEUS model packages payments around a comprehensive episode of medical care that covers all patient services related to a single illness, condition, or procedure - before, during and after the main medical event (e.g., surgical procedure, delivery) is provided. Covered services are based on commonly accepted clinical guidelines or expert opinions that define the best methods for treating a given condition from beginning to end. The payments of all treatments are tallied to generate an Evidence-informed Case Rate™ (ECR). ECRs include all covered services bundled across all providers that would typically treat a patient for the given condition (hospital, physicians, laboratory, pharmacy, rehabilitation facility, etc.).

For more information about Prometheus Episode definitions, and for details regarding specific episodes, please contact **info@civhc.org**.

Average Prices reflect median total payments (both the payer and patient portion combined) made for the entire episode when the trigger event, or actual procedure, occurred at the facility listed. Data represents all payments included in a particular episode (lab tests, doctor visits, procedure costs, surgeon fees, follow-up visits, physical therapy, meds, etc.) across all commercial payers in the CO APCD. For more information on the commercial payers submitting data to the CO APCD, visit **https://www.civhc.org/get-data/whats-in-the-co-apcd/**.

Price Range is calculated using the 25th to 75th percentile range of payments made by both the payer and the patient by all commercial payers. Providing the price range helps users understand the "typical" low and high end of payments for each facility while eliminating outliers on both ends. In some instances, the price range is the same as the "average price" listed which could indicate that the facility negotiates only one standard price regardless of the payer, or they may only have one payer represented in the CO APCD for commercial claims.

Inclusions/Selection Criteria

The CIVHC analytic team selects Prometheus episode types with sufficient volume to be able to display provider/facility-level information (see below for suppression rules). In addition, episodes of care are selected using the following criteria.

- Commercial only claims (no Medicare Advantage claims are included)
- Main medical procedure dates 10/2017 – 9/2018
- Member ages 18-64

Exclusions

- Children 17 and under, and adults 65+
- Episodes with $0 total cost
- Total episode costs that are below the 1st percentile or above the 99th percentile
- Procedural orphans– in other words, all procedural episodes are required to include a facility claim. Any episode triggered by a professional claim only are excluded as these would not include all of the associated episode costs.
- Incomplete episodes– most procedural episodes include a 30-day lookback and a 90-day look forward period. If the index event occurs at the very beginning or the very end of the dataset and there is not enough runout to include the entire episode window then it is excluded. These are excluded because they would not include all utilization/cost.

Data Source

Data for the current Shop for Care "Other Procedures" tab is based on claims with service dates between 10/2015 – 4/2019, and paid through 4/2019. The extract was pulled August 2019 using the July 2019 data warehouse refresh.

Validation and Quality Control Process

CIVHC takes all reasonable steps to ensure data is as accurate as possible. For imaging services, CIVHC conducts quality control checks after the initial pull by an analyst, after the provider name quality control is performed (see more below), and after uploading the data into Tableau. Through these steps, CIVHC ensures provider names match appropriately and are rolled up to a single entity and that the code and output are reasonable based on expectations from previous releases.

For the "Other Procedures" tab, CIVHC takes a multi-pronged approach to validating the PROMETHEUS data available on the Shop for Care tool that includes:

- CIVHC analysts pull extract and complete standard extract quality control
- Vendor receives data and runs their own validation process. This includes things like removing records with negative allowed amounts, invalid National Drug Codes (NDC), missing member dates of birth, etc.
    - 96% of medical claims and 92% of pharmacy claims in extract provided to develop the current Shop for Care tool met the vendor's validation criteria and were included in the episode grouper.

- CIVHC validates episodes created by vendor which included checks like comparing number of episodes created and average episode cost to the previous run.
- CIVHC creates Shop for Care report and conducts regular quality checks and provider names are quality checked (described below).
- CIVHC also conducts extensive summary, episode-level, and claim-level comparisons to the Medicaid episodes with the Department of Health Care Policy and Finance (HCPF) and have found no significant data quality issues. While this is for Medicaid only, CIVHC believes it's reasonable to assume that there would also be no major issues with the Commercial data.

For both imaging and PROMETHEUS, CIVHC provides a soft launch of the Shop for Care results 30 days prior to the full public launch during which **facilities have the opportunity to validate their own results.** Any discrepancies identified by facilities are reviewed with them individually, and in some cases, claim line level detail is reviewed to determine what is included. **See Provider Review section below.**

Provider Name Quality Control

For the Shop for Care report, CIVHC uses the business name of organizations, which does not always coincide with the organization name that comes from the CO APCD. CIVHC uses a crosswalk from the billing name to the business name to roll up providers by name. We also check that the providers included are not physician groups. Due to Colorado legislation, CIVHC is not able to publish costs for procedures or services for provider groups without an accompanying quality metric. This legislation impacts the display of imaging services much more than the procedures prices, as very few provider groups offer extensive procedures like hip or knee replacements, etc. Once the provider name review is finished, all providers that CIVHC cannot publish (physician groups) are deleted from the report.

Provider Preview and Validation Process

The Shop for Care tool is released in a soft launch 30 days prior to publishing publicly. Providers receive an email and access to the Tableau report and the spreadsheet with their data. They have 30 days to review and raise any questions about the prices for each of their attributed procedures or imaging tests. In the 2020 release, CIVHC received questions from a few providers. When providers have questions about the price displayed, CIVHC provides them with information for each single procedure included in the median amounts. Last year, CIVHC excluded a couple of procedures from one provider because they were paid a bundled amount for those specific procedures, and it was not providing an apples-to-apples comparison with their peers who were paid through fee-for-service.

Up to the 2019 release, the validation process included an additional step to conduct one-on-one meetings with most of the large systems (UCHealth, Centura, HealthOne, Children's Hospital) to review their data. CIVHC received positive feedback from the health systems, many of whom had no concerns with their data.

Because of the success of previous releases, CIVHC no longer meets individually with the health systems, but continues to offer one-on-one meetings with all facilities being displayed should they wish to have a more detailed review and discussion.

For any additional question related to the methodology used for the Shop for Care report, please contact us at civhc.org or visit our **Frequently Asked Questions**.