

# ANNUAL REPORT

2022 COLORADO ALL PAYER CLAIMS DATABASE

FEBRUARY

2023



CENTER FOR IMPROVING  
VALUE IN HEALTH CARE

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# WELCOME

CIVHC's new CEO, Kristin Paulson, shares how this report differs from those in the past and where the CO APCD is going in the future.



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Dear Partner,

Welcome to the 2022 Colorado All Payer Claims Database (CO APCD) Annual Report. I'm Kristin Paulson, new Chief Executive Officer for the Center for Improving Value in Health Care (CIVHC), the organization that administers the CO APCD on behalf of the State of Colorado.

Every year, CIVHC reports on the ways we fulfill our charge to make health care claims data transparent and accessible to all Coloradans. This report details that work for the fiscal year starting July 1, 2021 and ending June 30, 2022 (FY 2021-2022).

CIVHC recognizes that data without information and background is not useful. Details about time, place, and circumstance as well as the people and populations involved are essential to create meaning. Data must be put in context to be valuable and must be provided in a way that is easily understood. We want you to understand CIVHC's role as a steward of the CO APCD and how that resource can help inform your health care decisions. In this report, you'll find explanations that will hopefully put context around technical discussions of health care claims data and will demonstrate how communities and organizations are using the CO APCD to improve the lives of Coloradans.

In FY 2021-2022, CIVHC celebrated both the 10th anniversary of the launch of the CO APCD and the retirement of long-time CEO, Ana English, by taking stock of where we came from and planning for the road ahead. New faces joined our team and brought with them new expertise and fresh ideas. We released the new flagship Affordability Dashboard on [civhc.org](http://civhc.org), and the CO APCD was written into five pieces of legislation – a single-year record. CIVHC's subject matter experts presented to national audiences, and we were repeatedly reminded how much Colorado is envied for having one of the strongest and most comprehensive sources of claims data and expertise in the country.

CIVHC will continue our drive to ensure excellence in the CO APCD as we move into our second decade. Our work to support data-driven decisions to benefit all Coloradans is central to our mission, and it will be further emphasized in the coming years. We believe that prioritizing health equity through partnership, collaboration, and community is a vital part of what we do and we will be making it a more prominent focus of our work.

At CIVHC, our discussions of the CO APCD often focus on the technical aspects of the data or analytic details. This meticulous approach is necessary for creating high quality data and analytics, but it misses the most important aspect of the CO APCD: that the database exists to serve its source – Coloradans. CIVHC is proud to support Coloradans helping Coloradans, and we're looking forward to strengthening and expanding the work we do with the CO APCD to make Colorado healthier for us all.



A handwritten signature in black ink that reads "Kristin Paulson".

Kristin Paulson, JD, MPH  
CEO and President  
Center for Improving Value in Health Care

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# COLORADO IN 2010

Detailing the origins of the CO APCD and the elements of CIVHC's stewardship that make it a national leader.



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## Background

### A Problem with Health Care Spending

In 2010 Colorado lawmakers grew frustrated with watching the people around them spend more and more money each year on health care without getting healthier. They decided it was time they understood what was going on behind the scenes of the health care system. The tricky part was figuring out what they needed and how to get it.

- They needed information about who was using health care in Colorado, why, how much, and what it cost.
- They also wanted to know more things about Colorado like what areas of the state had more patients than doctors, higher prices, or more people with chronic conditions.
- Finally, lawmakers wanted to make sure that Coloradans themselves had information they needed to make smart decisions about where to go for health care.

At that time, a handful of states across the nation had begun to collect processed health insurance claims to build resources called All Payer Claims Databases (APCD). Health insurance claims hold a lot of different information including what service was performed, where, and how much it cost. Gathering this type of data across many years, incorporating all kinds of health insurance, and covering an entire state could provide exactly the information the lawmakers needed. So [legislation](#) was passed, permitting the creation of the Colorado All Payer Claims Database (CO APCD).

## A Neutral Choice

Colorado lawmakers decided not to follow the lead of other states and build the CO APCD inside a State agency. Instead, they agreed that an outside organization should oversee the database on behalf of the Department of Health Care Policy and Financing (HCPF). The Executive Director of HCPF chose the Center for Improving Value in Health Care (CIVHC) as administrator. Then, like now, CIVHC was a non-partisan, objective non-profit committed to improving health care while lowering costs. With partners in every arena of the health care system – provider, payer, patient, researcher, State agency, employer, and community organization – we were a logical choice to run the CO APCD.

CIVHC began developing and building the CO APCD in 2010, with funding from both the Colorado Health Foundation and The Colorado Trust. A cross-sector Advisory Committee helped determine what pieces of data should be collected from what types of health insurance companies. By the fall of 2012, portions of the lawmakers' vision were already being realized as the CO APCD was launched and data was available to answer questions about how to lower costs and improve care.



**The lawmakers gave CIVHC a big job.**  
As administrator, we had three major responsibilities:



Design and build what would become one of the first APCDs in the United States.



Make sure the CO APCD contained the information lawmakers and Coloradans needed and could report on it.



Find funding to design and implement the database and then figure out how to make it sustainable.

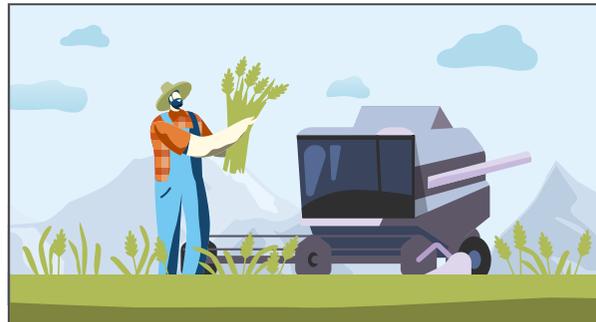
# Understanding How the CO APCD Works

Most explanations of how the CO APCD does what it does are very technical and can be difficult to follow. This illustration is intended to make the system a little easier to understand.



## 1. Sowing Seeds

When a Coloradan with insurance sees a doctor, their provider gets paid by sending a claim. These claims are like seeds of grain.



## 2. A Plentiful Harvest

Health insurance companies are similar to farmers. They harvest the grain and send it to be stored in a community silo, operated by CIVHC.



## 3. A Collective Resource

The silo represents the CO APCD. CIVHC oversees the silo while also milling the collected grain into flour for use by the community.



## 4. Guaranteeing Good Grain

CIVHC tests the grain to make sure it is good before processing, storing, or turning it into flour. Bakers, like CO APCD data users, need high quality ingredients.



## 5. Assisting Individual Efforts

When bakers want to bake a certain type of bread or pastry for their shops, they ask CIVHC to mill a specific type and amount of flour (or data).



## 6. Supporting the Community

CIVHC also uses the flour to make different kinds of baked goods. These feed the community at no cost, similar to public CO APCD data releases on [civhc.org](http://civhc.org).



## Collecting and Releasing CO APCD Data

Once CIVHC and the Advisory Committee decided on what data should be collected in the CO APCD, they had to determine how it would be submitted and how it would (and wouldn't) be released. There was a lot to figure out.

- Colorado has more health insurance payers than many other states. They each have different computer systems and ways they collect claims information that don't always match how others collect data.
- Personal information needs to be protected at all costs, and laws like the Health Information Portability and Accountability Act (HIPAA) have guidelines that need to be followed when collecting and releasing health care data.
- Health care billing is incredibly complicated, and many times there are errors on claims. This means the data has to be thoroughly checked before it can be incorporated into the database.
- CO APCD data must be available to help Coloradans, but there needs to be guidance about who should be able to access it, how, and for what purposes.

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Bringing in good files is just the beginning of CIVHC's process to ensure the best data possible. The following elements make up the defining components of data quality in the CO APCD.

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### Submission/Intake

The condition of the data submitted and evaluated during the intake and validation processes



### Processing

Business rules that make sense of the millions of claims submitted every month



### Accuracy

Quality checks throughout the analytic process to align outputs with expectations



### Completeness

How well the contents of the CO APCD reflect health care in Colorado



### Timeliness

Availability of the most current claims information possible



### Consistency

Ensuring all of the data in the CO APCD is processed under the same rules

## Ensuring the Best CO APCD Data Possible

Long before any files made it to the database, CIVHC worked to make sure the data in the CO APCD would be the best possible. In collaboration with data managers, first 3M and now Human Services Research Institute (HSRI), we created rules to govern how the data would be processed and what tests it would have to pass when submitted. Payers helped develop a Data Submission Guide, which is similar to a manual that shows what information should be sent to the CO APCD and how it should be formatted.

Once submissions were established, CIVHC created a process to regularly update the CO APCD warehouse. Payers provide CIVHC with data monthly, and every two months we incorporate that data and re-process the entire CO APCD to fix or correct irregularities that may have existed with previous submissions. This also ensures that all data in the CO APCD is consistent and processed using the same rules. Since their files are the building blocks of the CO APCD, CIVHC is in constant contact with the payers to help them with any questions or challenges that may arise.

## CIVHC releases CO APCD data in two ways:



### Non-Public Data

For individuals or organizations to use to improve care for Coloradans.



### Public Data

For anyone to use to help make data-driven health decisions.



For public releases, the CO APCD Advisory Committee reviews all analyses and reports before they are published.

*CIVHC appreciates the volunteers who donate time to participate in the review processes; they are a vital part of the transparency and collaboration woven into the CO APCD.*

## Rules for Releasing CO APCD Data

The same cross-sector Advisory Committees that helped CIVHC design and build the CO APCD also offered us their expertise to help develop the rules and policies that direct how the data can be used and released. Privacy and security are two of the most important things that CIVHC does, and it is critical to be very careful about balancing what data is released and how, with making sure it's accessible to as many people as possible.

CIVHC checks every application for non-public CO APCD data to make sure it meets all of the criteria and requirements for release. If an application contains a request for protected health information (PHI), a Data Release and Review Committee (DRRC) made up of CIVHC partners from different areas of health care also evaluates the application. The DRRC considers all parts of these applications, including whether they meet the CO APCD requirements for release as well as whether they comply with HIPAA and federal regulations.

## Rules for Non-Public Releases

### Who can request data?

- Anyone

### What data can be released?

- Only the minimum amount needed for the intended use
- Protected Health Information (PHI) in very limited circumstances (requires additional approval process)

### How can the data be used?

- To improve care, lower costs, and make Colorado healthier
- It cannot be used for marketing directly to patients
- It cannot be re-sold or used by anyone other than the requestor

### What criteria must the release meet?

- Be consistent with the legislative purpose of the CO APCD – better care, better health, and lower costs
- Contribute to efforts to improve health care for Colorado residents
- Comply with the requirements of HIPAA and federal regulations
- Use recognized analytic methods

## How is the data released?

Based on the requestor's needs and comfort with using data, non-public releases come in different formats with various levels of custom information or PHI.

- Custom Report
- Custom Data Set
- Standard Report
- Standard Data Set

#### Custom Report

High customization,  
Low comfort with data

#### Custom Data Set

High customization,  
High comfort with data

#### Standard Report

Low customization,  
Low comfort with data

#### Standard Data Set

Low customization,  
High comfort with data

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## Rules for Public Releases

Data must be combined and summarized to protect patient identity according to HIPAA and follow all federal regulations.

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## Sustaining the CO APCD

In the beginning, there was no State money available to fund the CO APCD, and CIVHC was compelled to look for grants to pay for building and running the database. The Colorado Health Foundation and The Colorado Trust believed in the importance of the CO APCD and provided the necessary funding to get the effort on its way, but their support was never intended to be permanent. To move toward sustainability, CIVHC began licensing non-public CO APCD data to requestors.

Many foundations changed how they awarded funding during the early implementation years of the CO APCD. They moved from a strategy where they provided grants to operate an entire organization to one which provided money for single projects. This proved a challenging environment for CIVHC, though several foundations contributed to specific projects which helped keep the CO APCD operating.

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To move toward **sustainability**, CIVHC began **licensing non-public CO APCD to requestors**

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Over time, CIVHC became aware of opportunities to receive federal matched funding for the CO APCD through the Centers for Medicare & Medicaid Services (CMS). These opportunities required the State Medicaid department, HCPF, to provide a percentage of the total award, while CMS supplies the rest. The first matching award CIVHC received was a 50/50 split to fund Medicaid operations of the CO APCD. CIVHC continued to work with HCPF and was awarded additional ongoing State funding to sustain the CO APCD beginning in FY 2019-2020. As part of the contracts for the State and matching funding, CIVHC has specific projects to complete that support State agencies as well as requirements to continue improving the CO APCD.



More information about CIVHC's historical funding for the CO APCD in [Appendix A](#).



# Components of the CO APCD Budget

## DATA COMPLEXITY

CIVHC works to broaden the breadth and depth of the CO APCD by collecting data beyond medical and pharmacy claims from commercial, Medicaid, Medicare Advantage, and Medicare Fee-for-Service payers. The addition of new elements such as dental, vision, supplemental plans, Alternative Payment Models (APM), and Drug Rebates require corresponding intake resources and data quality staff.

## DATA QUALITY

The usability of the CO APCD and the ability to provide advanced analytics are directly tied to the credibility of the underlying data. Specialized quality analysts are vital to ensuring the data and outputs are as accurate as possible.

## PROCESSING AND HOUSING THE CO APCD

Payers submit claims for over 5 million lives to the CO APCD every month. The claims are then processed according to extensive business rules before being incorporated into the data warehouse. Because the database grows by 2 terabytes each year, the space and costs necessary to store it keep increasing.

## CO APCD DATA MANAGEMENT PARTNER

CIVHC's Data Manager, HSRI, has significantly improved the quality of CO APCD data and analytics by establishing rigorous processes and validations. They also regularly develop public and non-public analyses to supplement the internal CIVHC analyst team.

## CO APCD DATA COMPLIANCE

With the rise in releases of public and non-public CO APCD data, CIVHC strengthened data privacy and compliance processes and policies. A compliance team now reinforces the work of the Data Release and Review Committee to ensure that all releases of CO APCD data meet federal regulations, including HIPAA and anti-trust.

## THIRD-PARTY VENDOR ANALYTICS

Certain CO APCD analyses would not be possible without specialized analytics developed by third-party vendors, including our work in Low Value Care, Reference Based Pricing, and identification of prescription drugs by therapeutic class.

## REQUESTS FOR NON-PUBLIC DATA

CIVHC and the CO APCD are now one of the leading sources of claims data and analytics in the nation. The number of non-public requests for data has increased steadily since year one. These requests require resources to fulfill, from analysts to project managers to client-facing positions.

## COMMUNICATIONS AND PUBLIC REPORTING TEAM

The CO APCD enabling legislation states that Public Reporting is one of the key purposes of the database, and the number of public reports released grows annually. The public reporting team is made up of specialists to ensure the data is provided in a way that is easy to understand.

# CIVHC AND THE CO APCD IN 2022

Measuring the past year in data released and Change Agents served.



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# Contents of the CO APCD

Millions of claims are submitted to the CO APCD for processing by health insurance payers each month. CIVHC has been collecting data for the CO APCD since 2010, and the database now grows by approximately 2 terabytes (TB) each year. In June 2022, it was up to 13 TB.

Claims	Lives	Covered Lives
 <p><b>870 + Million</b> in the CO APCD</p>	 <p><b>5+ Million</b> (2021) Including 1M (50%) of self-insured individuals</p>	 <p><b>Nearly 70%</b> of the medically insured</p>

### How big is the CO APCD?

Hubble Space Telescope	CO APCD	Watson IBM's Supercomputer
 <p><b>10 terabytes</b> of new data created each year</p>	 <p><b>13 terabytes</b> (6/2022) Grows approximately 2TB every year</p> <p><a href="#">Source</a></p>	 <p><b>16 terabytes</b> (RAM) random-access-memory</p>

 More information about the contents of the CO APCD in FY 2021-2022 and self-insured employers is available in [Appendix B](#)

# Health Insurance Payers



Commercial, Medicare Advantage, Medicaid, Medicare - Fee for Service, Voluntarily - Submitted Employee Retirement Income Security Act (ERISA) self-funded employer plans\*, Mandated non-ERISA self-insured employer plans

# Health Insurance Payers Not Included



## Federal health insurance programs such as:

Veterans Administration, TRICARE, Federal Employees Health Benefits, Indian Health Services, Uninsured Coloradans

\*In 2016 the United States Supreme Court ruled that states cannot require self-insured ERISA plans to submit data to APCDs. Half of the total commercially insured lives in Colorado are thought to be self-insured. CIVHC estimates that the CO APCD currently contains approximately 25% of ERISA self-insured lives, and 50% of all self-insured lives.

## CO APCD Data Quality and Complexity

The CO APCD grows in scope and operations each year. As soon as it was built and running, CIVHC began working to make it better and more useful. Improving the CO APCD can mean bringing in new types of data files or new data sources to fill in different pictures of health care in Colorado. Analysts also review existing systems and policies to update them to be more effective and efficient. Incorporating new analytic tools or software is another way to increase the ways CO APCD data can be used. In FY 2021-2022, we did a bit of everything.

- CIVHC developed and launched the Submitter Quality Index (SQI). It is a tool to evaluate overall completeness and validity of submissions using common data fields. The SQI allows CIVHC to give payers custom feedback about their submissions and identify areas where they can improve.
- We worked with HCPF and payers to bring more data elements into the CO APCD by updating the Data Submission Guide in early 2022. The new data includes premium and deductible information (initially for Division of Insurance only), value-based pharmaceutical contract data, member language preference, therapeutic class for drugs, and data to support the Prescription Drug Affordability Board (PDAB).
- HSRI began flagging Substance Use Disorder claims when they enter the CO APCD to make sure they are protected according to government regulations – and to prepare CIVHC to identify them quickly should those regulations change in the future.
- CIVHC and HSRI teams learned how to use the CO APCD in combination with external data sources that rely on geography or location, such as the census. With this added information, we can analyze how the environment and circumstances in which people live impact health and access to treatment.



## Uses of CO APCD Data

The lawmakers who imagined the CO APCD believed that information is power and only by harnessing that power could real change happen in Colorado's health care system. CIVHC calls those who use CO APCD data Change Agents because they are individuals or organizations working to lower costs, improve care, and make Colorado healthier.



A list of the non-public data releases in FY 2021-2022 can be found in [Appendix C](#).



**Forty-five Change Agents received 121 releases of non-public CO APCD data in FY 2021-2022.**

## Total CO APCD Releases in FY 2021 - 2022



Non-Public Releases

**121**



Public Releases

**41**

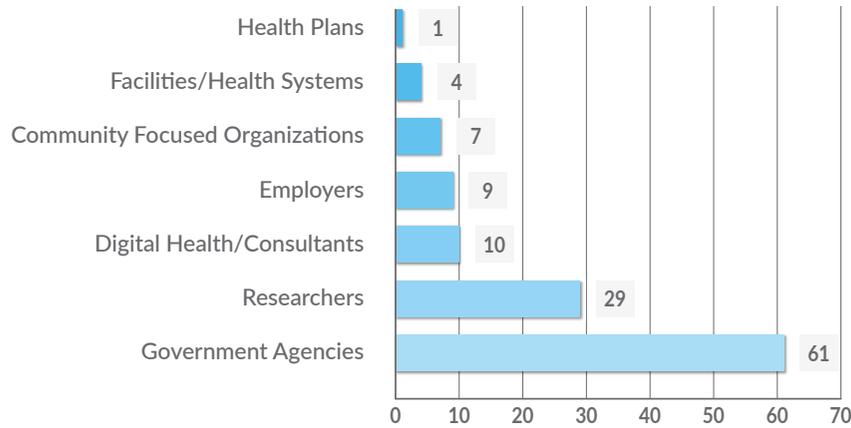
## Change Agents Using Non-Public CO APCD Data

They came from every area of health care including digital health, researchers, community-focused organizations, and hospitals. Some Change Agents were on a mission to lower costs, or make sure every patient had a provider, or find the best treatment for an illness. No matter the mission, each release has the potential to improve the lives of Coloradans.

Things to keep in mind when looking at non-public CO APCD release counts:

- CIVHC considers projects as well as organization. For example, requests from the School of Public Health and the School of Medicine at the University of Colorado are counted as separate Change Agents even though they are under one organization.
- One Change Agent may receive many releases in one year depending on the work they are doing.

Number of Non-Public CO APCD Data Releases by Change Agent Sector in FY 2021-2022



Number of Organizations That Received Non-Public CO APCD Data by Change Agent Sector in FY 2021-2022



Percentage of Change Agents by Sector Using Non-Public CO APCD Data from FY 2015-2016 through FY 2021-2022



# Selected Change Agents from FY 2021-2022



## DIGITAL HEALTH/CONSULTANT STANDARD DATA SET

Using CO APCD data, this Change Agent is developing an artificial intelligence-based solution to identify opioid abuse in Coloradans who are suffering from depression and help their primary care providers anticipate appropriate interventions.



## FACILITY/HEALTH SYSTEM LIMITED DATA SET

By comparing hospitalizations of high-risk COVID-19 patients who received monoclonal antibodies (MAb) versus those who received usual care, this Change Agent is evaluating the efficacy of MAb treatment.



## COMMUNITY FOCUSED ORGANIZATION CUSTOM REPORT

CO APCD data will help this Change Agent determine whether there is a correlation in increased incidence of certain diseases related to a specific location in metro Denver.



## GOVERNMENT AGENCY STATE DEVELOPMENT

CO APCD data will help this Change Agent learn where providers are serving patients across the state and where there are access to care shortfalls.



## RESEARCHER STANDARD DATA SET

Using CO APCD data, this Change Agent is investigating the impact of Colorado's 2020 cap on insulin prices by observing any potential changes in monthly insulin out-of-pocket payments, insulin consumption, and diabetes related emergency room hospitalizations between 2020 and 2018, considering various individual demographics, geographic characteristics and insurance types.



## EMPLOYER LIMITED DATA SET

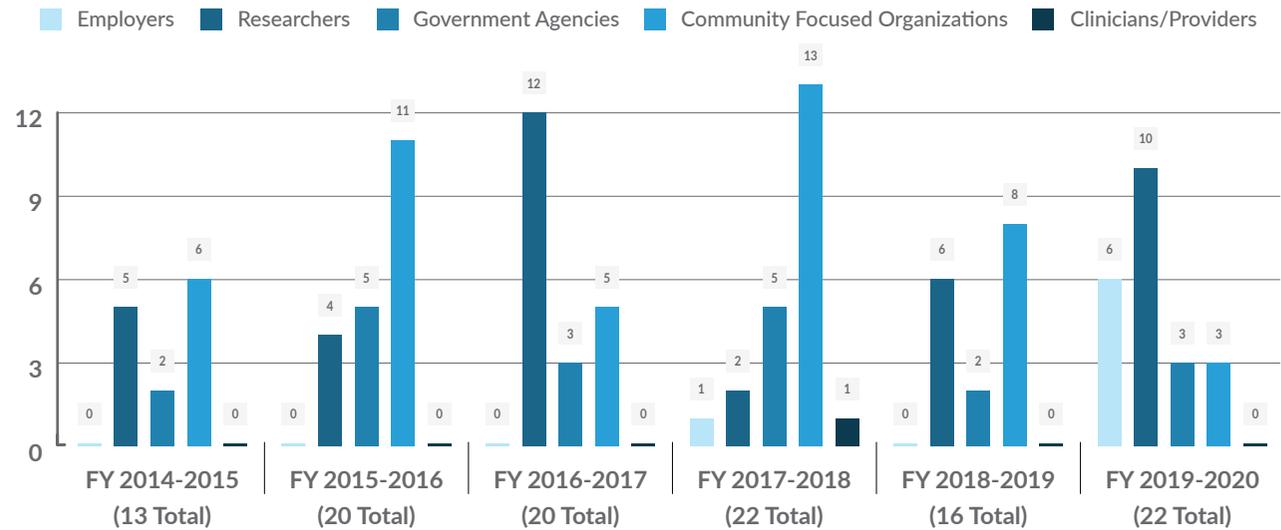
Cost data in the CO APCD is helping this employer alliance better understand, at the county level, the actual cost of providing care to people living in specific rural counties compared to Denver metro and surrounding urban counties.

# The CO APCD Scholarship

The State-funded CO APCD Scholarship helped Change Agents with limited resources access CO APCD data for projects to improve the lives of Coloradans. The fund started in 2014 and has supported over 100 projects from every health care sector for six years.

COVID-19 budget cuts eliminated the Scholarship from 2020 to 2022. In the 2022 legislative session, it was reinstated, allowing funding to begin to be distributed again beginning in July 2022.

# Change Agents Using the CO APCD Scholarship by Sector 2014-2020



## Change Agents Using Public Releases of CO APCD Data

CIVHC released 41 publications using CO APCD data in FY 2021-2022. They ranged from updates to flagship reports like Shop for Care to new tools like the Affordability Dashboard. A series called Data Dives was launched to look closely at one topic each month. For the first time, data sets were available for download for every interactive report, allowing Change Agents to dig deeper on their own.

### CO APCD Public Releases in FY 2021-2022

#### Data Bytes

- [Social Need Codes in the CO APCD](#)
- [Obstetrics Emergency Department Claims](#)
- [COVID-19 Testing Price Variation](#)

#### Issue Briefs

- [Low Value Care](#)
- [Drug Rebates](#)

#### Data Dives

- [Cervical Cancer](#)
- [Heart Disease](#)
- [Colorectal Cancer](#)
- [Pediatric Care in Colorado](#)
- [Mental Health Care in Colorado](#)
- [Mental Health Care for Children in Colorado](#)

#### Infographics

- [Shop for Care \(x2\)](#)
- [COVID-19 Testing Price Variation](#)
- [Low Value Care](#)
- [Drug Rebates](#)
- [Alternative Payment Models](#)
- [Cost of Care](#)
- [Telehealth Service Analysis](#)

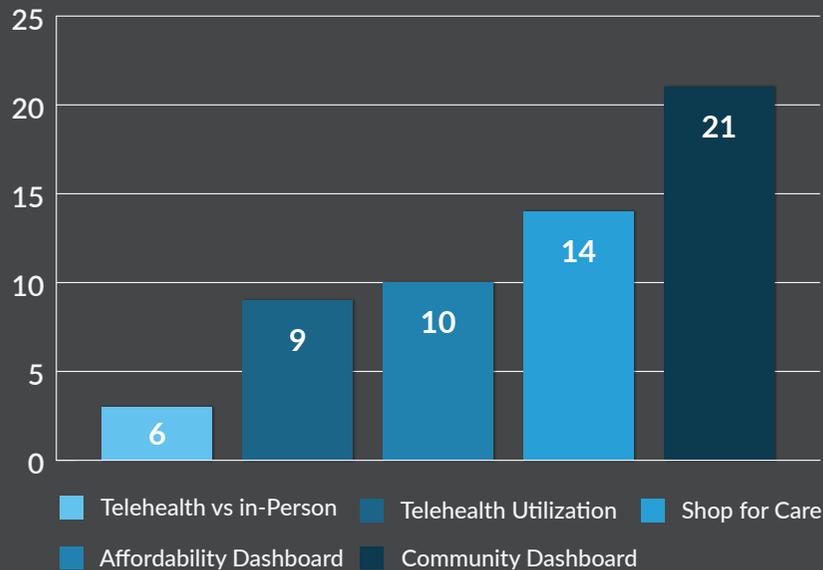
#### Interactive Reports and Data Sets

- [CO APCD Insights Dashboard \(updated twice\)](#)
  - [Telehealth vs. In-Person Utilization](#)
  - [Telehealth Service Analysis](#)
  - [Shop for Care](#)
  - [Community Dashboard](#)
  - [Affordability Dashboard \(multiple reports\)](#)
- Sections: Cost of care, Low value care, Alternative payment models, Drug Rebates: replaced by updated version later in the year

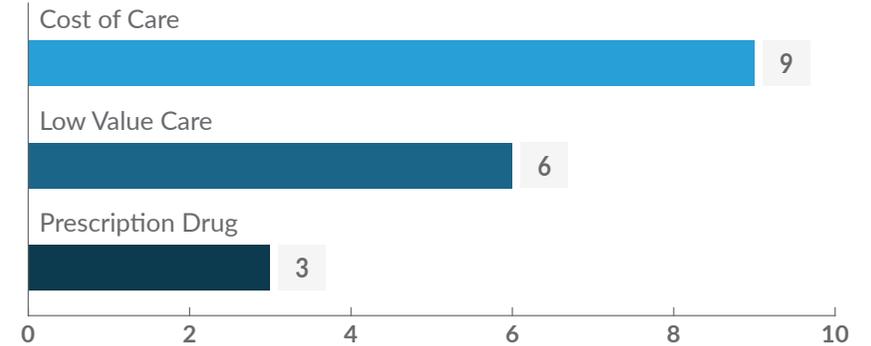
Offering data sets with public releases on civhc.org created an opportunity for CIVHC to learn about the Change Agents who wanted to use the information. In exchange for completing a survey to understand who is requesting the information and the intended use, they receive an Excel file with the underlying CO APCD data for the specified report.

Fifty-four different Change Agents received public data sets in FY 2021-2022. Eleven data sets were available, one for each interactive report on the website. The Affordability Dashboard has a data set for each tab, and requestors could specify one or more.

Downloads of Public CO APCD Data Sets by Report FY 2021-2022



Breakdown of Affordability Dashboard Data Sets Downloaded by Report FY 2021-2022



Public CO APCD Report Data Set Downloads by Change Agent Sector FY 2021-2022



## Change Agents Use Public CO APCD Data for Many Reasons

When CIVHC started asking requestors what they were going to do with the data sets, many use cases came to light.

### Affordability Dashboard

Analysis and comparison to New England markets

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Analyze prescription drug spending trends

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Researching long acting reversible contraception (LARC) usage in Colorado

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Determine if amounts billed to clients are in line with the database

### Community Dashboard

Create a snapshot of data on the topic of substance exposed newborns

---

Improve services to underserved Colorado communities

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Better understand cost/ utilization in Colorado to improve quality/reduce cost for CO based clients

---

Estimate number of lives covered by managed care Medicaid programs in Colorado, for dialysis or end-stage renal disease

### Shop for Care

Discuss with provider

---

To help leadership see how our facilities compare to others in the market

---

Help customers estimate how much money to set aside in health benefit accounts

---

Understand cost inflation; comparison analysis on cash rates vs. commercial rates vs. Medicare rates

### Telehealth Utilization & Telehealth vs In-Person

Inform upcoming community health assessment

---

Compare to telehealth encounter data that my organization has

---

Contribute to a quality of life indicators report for El Paso and Teller counties

---

Analysis of how telehealth and telemedicine can curb social disparities in health care access

# CO APCD Data Creating Change and CIVHC Innovation

It is impossible to change what cannot be understood. CO APCD data and CIVHC analytics are activating and sustaining positive change in Colorado's health care system. Lawmakers write the CO APCD into legislation as a source for data to help control costs or make sure Coloradans have access to the best possible care. CIVHC collaborates with community members to work on projects that solve specific problems while continuing to help Change Agents use CO APCD data.

## Additional CO APCD Analyses informing Policy in Recent Years

- [Free-standing Emergency Departments](#)
- [Anesthesiology, Radiology and Emergency Physician Payments](#)
- [Nurse Midwife Payment Evaluation](#)
- [Top 100 Brand and Generic Commercial Prescription Drugs](#)
- [Colon Cancer Screening and Colonoscopy Billing](#)
- [End Stage Renal Disease and Dialysis Dependence](#)
- [Populations at Risk for Serious Illness / Distribution of COVID-19 Vaccines](#)
- [Telehealth Services Analysis](#)
- [Impact of Temporary Cessation of Elective Procedures During COVID-19](#)
- [Low Birthweight and Birth Outcomes](#)
- [Medicaid Claims for Frostbite](#)

## CO APCD Data Supporting Policy

The CO APCD was written into five pieces of legislation in FY 2021-2022 - more than ever before.

CO APCD Role:  Ongoing Analytics Included  Informed Legislative Process

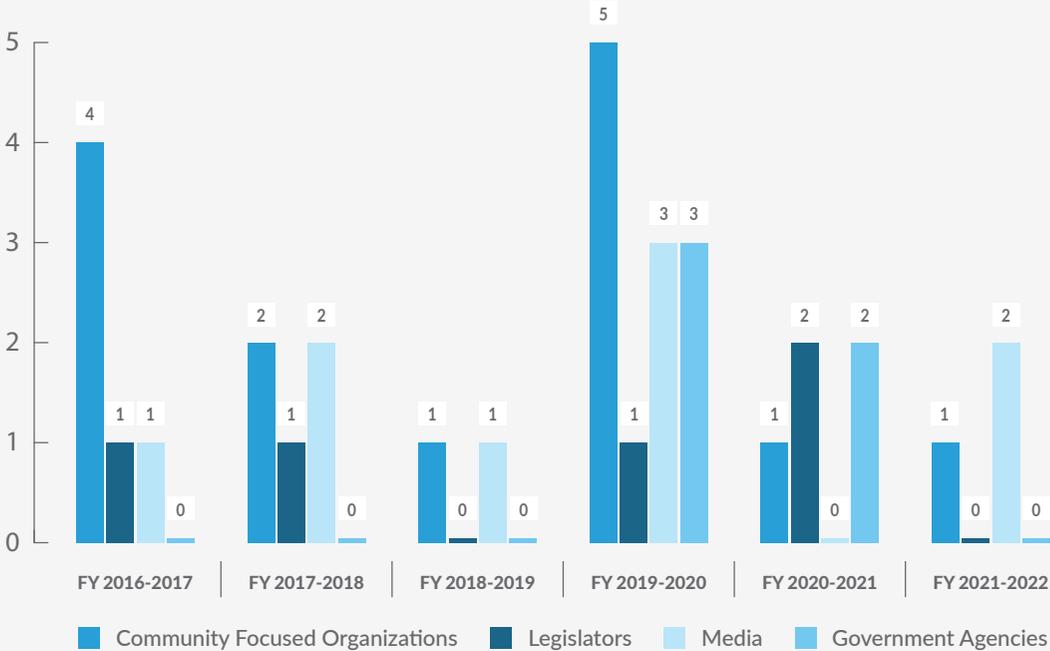
Year	Legislation Passed	Role
2022	<a href="#">Actuarial Reviews Health Insurance Mandate Legislation - SB 22-040</a>	<input checked="" type="checkbox"/>
2022	<a href="#">Behavioral Health Administration - HB 22-1278</a>	<input checked="" type="checkbox"/>
2022	<a href="#">Coverage Requirements for Health Care Products - HB 22-1370</a>	<input checked="" type="checkbox"/>
2022	<a href="#">Primary Care Alternative Payment Models - HB 22-1325</a>	<input checked="" type="checkbox"/>
2022	<a href="#">Provider Tool to View All-Payer Claims Database - SB 22-068</a>	<input checked="" type="checkbox"/>
2021	<a href="#">Standardized Health Benefit Plan Colorado Option - HB 21-1232</a>	<input checked="" type="checkbox"/>
2021	<a href="#">Colorado Prescription Drug Affordability Board - SB 21-175</a>	<input checked="" type="checkbox"/>
2019	<a href="#">Proposal for Affordable Health Coverage Option - HB 19-1004</a>	<input checked="" type="checkbox"/>
2019	<a href="#">Import Prescription Drugs from Canada - SB 19-005</a>	<input checked="" type="checkbox"/>
2019	<a href="#">Investments in Primary Care to Reduce Health Costs - HB 19-1233</a>	<input checked="" type="checkbox"/>
2019	<a href="#">State Innovation Waiver Reinsurance Program - HB 19-1168</a>	<input checked="" type="checkbox"/>
2019	<a href="#">Out-of-Network Health Care Services - HB 19-1174</a>	<input checked="" type="checkbox"/>
2018	<a href="#">Controlling Medicaid Costs - SB 18-266</a>	<input checked="" type="checkbox"/>



# Data Bytes to Increase Access to Information

CIVHC created the Data Byte program in FY 2016-2017 to provide CO APCD data to partners who needed a small analysis and did not have resources for a non-public release. Data Bytes are reviewed by the CO APCD Advisory Committee and published by CIVHC.

Data Byte Requestors by Change Agent Sector FY 2021-2022



Since launch of the program, 33 Data Bytes have been published at no cost to the requestor.

## New CIVHC Analytic Capabilities

### High Value Care at End of Life

End of life is a difficult time for patients and their loved ones. This project is using CO APCD data to look at the different treatment options available for people at the end of life or who are coping with a serious illness and helps find ways to lower costs while improving the quality of care. CIVHC also hopes that the study will encourage more people to use hospice and palliative care services that can ease the way for patients, families, and caregivers.

### Orange Flag Project

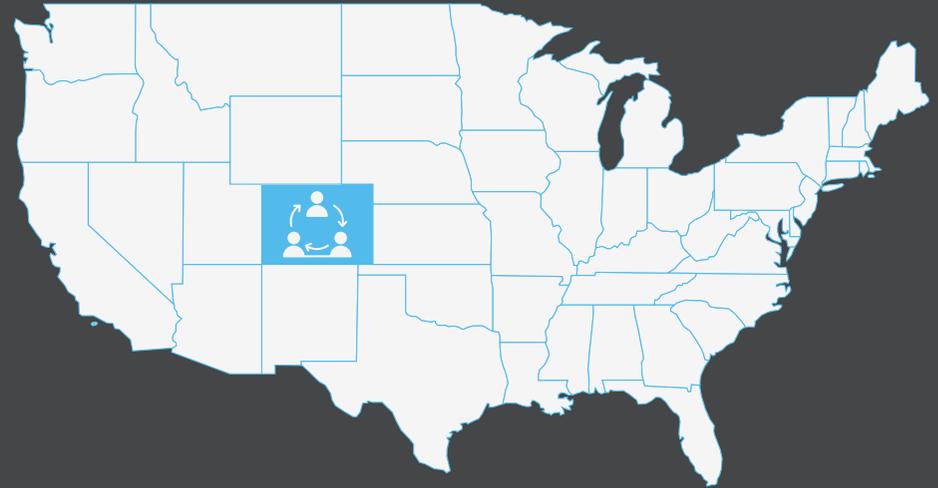
The Orange Flag project will help people in the Denver metro area who tend to use more medical services and can frequently end up at the emergency department. It can be difficult to support this group of people because they may go to many different facilities. CO APCD data will help the organizations in this project “flag” the records of people who fit these criteria and show providers at a hospital that their patient may need extra care and help.

### Data Mart

The Data Mart is a secure portal that contains certain custom CO APCD data sets. Users with permission can produce basic data visualizations, analyze health care and do geographic analyses. The Data Mart is available to analysts at HCPF and the Division of Insurance with specific use cases. CIVHC updates the Data Mart with new data sets regularly and approves new use cases.

## Data-Driven Engagement

CIVHC collaborates with partners across the state to innovate with CO APCD data and works to find solutions to problems that touch all Coloradans.



In FY 2021-2022, those projects included end of life care, emergency department use, and improving a tool used by State agencies to access CO APCD data.

## CO APCD Sustainability

CIVHC worked throughout FY 2021-2022 to gain financial ground lost during the COVID-19 pandemic. CMS matching funds awarded in 2021 allowed CIVHC to hire staff and make significant progress on sustaining CO APCD operations and continue progress on analytic and quality initiatives. HCPF and CIVHC also built on existing CMS contracts to expand and extend the matching funding to better support Medicaid members.

In spring 2022, the General Assembly reinstated the full amount of dollars originally allocated toward CO APCD operations and analytics as well as the CO APCD Scholarship funding. This funding had been reduced, and, in the case of the Scholarship, eliminated, during previous years due to budget shortfalls caused by the pandemic.

In addition, the AcademyHealth and Robert Wood Johnson Foundation (RWJF) Health Data for Action program awarded CO APCD data sets to two different research projects. Health Data for Action allowed researchers to apply for a data set from a select list of national organizations with funding from RWJF and AcademyHealth.



Licensing fees are associated with every non-public release of CO APCD data. The FY 2021-2022 fee schedule can be found in [Appendix D](#).

CIVHC Revenue and Expenses in FY 2021-2022		
<b>Contributions, Gifts, Grants and Other Similar</b>		
Government grants (contributions)	\$6,437,071	- State General Fund - State CMS Matching Funds
All other contributions, gifts, grants	\$106,500	Robert Wood Johnson Foundation: - Health Data for Action Grant - Staff Fellowships (2)
<b>Subtotal</b>	<b>\$6,543,571</b>	
<b>Program Service Revenue</b>		
CO APCD Data Licensing	\$1,296,269	Direct data licensing fees
<b>Total</b>	<b>\$7,839,840</b>	
<b>Expenses</b>		
CO APCD Program/Operations	\$7,027,033	
<b>Net Income</b>	<b>\$812,807</b>	

# 10 YEARS OF TRANSPARENCY

Affirming CIVHC's commitment to the CO APCD  
and, most of all, Colorado.



CENTER FOR IMPROVING  
**VALUE** IN HEALTH CARE

## Colorado lawmakers set out to get answers. CIVHC set out to build a database.

These simple goals lit a spark that burns brighter in 2023 than it did in 2010. Through hard work and collaboration-centered stewardship, CIVHC and the CO APCD are now one of the [leading sources](#) of claims data and analytics in the nation. CO APCD data is known as some of the cleanest, easiest to use and most useful to work with. CIVHC is frequently consulted by other states about the systems, processes, and policies that are necessary for creating, maintaining, and fully using a claims database the size of the CO APCD.

CIVHC's commitment to the CO APCD and improving the lives of Coloradans has only deepened in the last decade. We are proud to be not only the administrator of the database, but a committed steward dedicated to focusing on the needs of individuals, organizations, and communities across Colorado.

## Appendix A:

### History of Funding for the CO APCD

In 2010, when the General Assembly mandated the creation of the CO APCD, the Colorado legislature didn't include a fiscal note to fund the database. The Colorado Health Foundation and The Colorado Trust provided essential funding to CIVHC to implement and develop the CO APCD. The foundations were very clear from the beginning that their financial support would be short term and CIVHC would need to sustain the CO APCD without relying on their grant dollars. From 2012 on, CIVHC has worked to bolster funding with income from licensing CO APCD data to requestors as well as through grant-seeking and other funding mechanisms.

### Data Vendor Transition to Improve Quality of CO APCD

In response to data intake and processing concerns and driven by the goal to continually improve and enhance the overall value of the underlying data, CIVHC converted to a new data vendor starting in July 2016 with completion in July 2017. The CIVHC board finance committee decided to allocate reserves to fund the one-year transition which required payment to not just one, but two vendors. CIVHC worked to secure additional funding streams throughout the vendor transition and in May 2017, became aware of the opportunity to receive federal funds to support the Medicaid portion of CO APCD operations through the Centers for Medicare & Medicaid Services (CMS) 50/50 matching program.

### 50/50 CMS Matching Funds

CIVHC began receiving matching funds from CMS in 2018. In order to be eligible for the 50/50 opportunity, CIVHC and HCPF were required to obtain half of the requested dollars in State funding. To this end, CIVHC worked with HCPF, the Joint Budget Committee, and legislators to pass [House Bill 18-1327](#), which allowed the CO APCD to receive funding from the General Assembly, and allocated the first State funding to support the CO APCD. The annual State funding covers the State share of the 50/50 matching funds to support the Medicaid portion of the CO APCD (approximately 35% of operational costs). This bill also formalized the grant/scholarship fund to offset data licensing fees for qualifying entities.

### Program Related Investment From the Colorado Health Foundation

The ongoing support provided by the CMS 50/50 matching funds was a significant step toward full sustainability for the CO APCD, though it only offset the Medicaid portion of the CO APCD operations and did not cover the cost to intake, process, and house commercial and Medicare data, or any of CIVHC's mandatory reporting obligations for the CO APCD. Additionally, delays in disbursement of the initial CMS 50/50 payments from late 2017 until mid-2018, coupled with challenges regarding data availability and the data vendor transition, created an immediate and short-term need for cash flow in early FY 2018-2019. Through a gracious \$2M program-related impact loan from the Colorado Health Foundation, CIVHC was able to sustain operations and restore reserve funds until the state and federal

payments were disbursed. The use of these funds not only allowed for stable operations, but they also ensured the continuation of many valuable, innovative programs and resources.

## Support From the Colorado General Assembly

To make up the gap in funding for the commercial and Medicare portions of the CO APCD, CIVHC undertook a multipronged approach, 1) continue to license CO APCD data to requestors; 2) continue applying for local and national grants; and 3) work with HCPF to secure additional operational funds from the State. As a result of the work with HCPF, the CO APCD was included in the State FY 2019-20 Long Bill Budget, providing funding for core operating expenses and analytic services for State agencies in FY 2019-2020, in addition to the 50/50 funding. The combination of CMS 50/50 funding and generous support from the Colorado General Assembly succeeded in replacing historical operating grants and now covers a good portion of the CO APCD operating costs.

## 90/10 CMS Matching Funds

In 2020, CIVHC and HCPF began working on a new proposal for the CO APCD to receive additional matching funds from CMS to support expanded Medicaid deliverables and tools. In this case, the match was 90/10, with 90 percent coming from CMS and 10 percent from the state. The funds from the 90/10 contract can only be used to support direct Medicaid operations. CIVHC and HCPF learned in fall 2020 that CMS had approved the 90/10 proposal and the contract began January 1, 2021.

## COVID-19

The economic downturn caused by the COVID-19 pandemic resulted in a state budget shortfall for Colorado of over \$3 billion in fiscal year 2020-2021. Funding for the CO APCD Scholarship was eliminated (\$500,000), and the Joint Budget Committee (JBC) voted to reduce operational funding for the CO APCD. In response, CIVHC adjusted internal resource allocations, implemented a hiring freeze, and managed to a reduced budget in order to retain all staff members. CIVHC also received a federal Paycheck Protection Program loan for just over \$450,000. The loan was forgiven in spring of 2021.

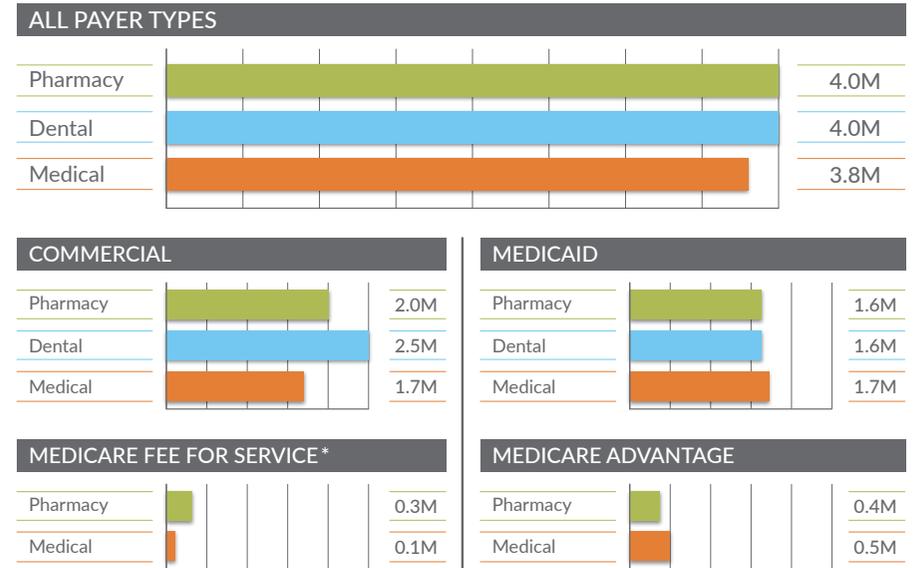
## Appendix B: Contents of the CO APCD

The CO APCD is a state-mandated, secure health care claims database compliant with all federal privacy and antitrust laws. It is the only claims repository in the state that represents the vast majority of insured lives in Colorado, with more than ten years of data from commercial health insurance payers, Medicaid, and Medicare.

The CO APCD currently contains over 870 million claims for approximately 70% of insured lives in Colorado (over 5 million unique individuals), with information from commercial health insurance plans, voluntarily-submitted Employee Retirement Income Security Act (ERISA) self-funded and mandated non-ERISA self-insured employer plans, Medicare Advantage, Medicare Fee-for-Service (FFS), and Medicaid. The CO APCD does not contain claims for people covered by Federal health insurance programs such as the Veterans Administration, TRICARE, Federal Employees Health Benefits, or Indian Health Services, and does not include information for uninsured Coloradans.

Due to a 2016 ruling by the United States Supreme Court, states cannot mandate submission of claims data from self-insured Employee Retirement Income Security Act (ERISA) plans to APCDs. Self-insured claims are estimated to represent half of the total commercially insured lives in Colorado and CIVHC estimates that the CO APCD currently contains approximately 25% of ERISA self-insured lives, and 50% of all self-insured lives.

## Unique Lives in the CO APCD by Claim Type and Payer 2021



\*Medicare FFS for 2021 is not complete and only shows claims data from supplemental plans.



The [CO APCD Insights Dashboard](#) can help users understand the types of claims that are available and the percentage of the population that is represented in the CO APCD by county and across the state.

Over 200 million claims from 2009-2011 have been archived and are not available for release from the CO APCD. CIVHC no longer includes the archived data in total CO APCD volumes in this report or in the online CO APCD Insights Dashboard.

## Limitations on Self-Insured Employer Submissions

In 2015, CIVHC and HCPF collaborated to change the CO APCD submission rules to include self-insured employers. Just as the first claims began to make their way to the database, the local effort was overridden at the federal level. The Supreme Court of the United States determined that states could not mandate the submission of health care claims from ERISA-based self-insured employers to APCDs. The ruling caused great confusion in Colorado and most self-funded employers stopped submitting to the CO APCD completely – despite the decision only pertaining to ERISA-covered self-funded employers. Non-ERISA employers were (and still are) required to submit to the CO APCD.

The [Gobeille vs. Liberty Mutual](#) case held that the differing APCD submission requirements across states could create an excessive administrative burden to employee welfare benefit plans under ERISA and because of that, the state's submission requirements were pre-empted. While the Supreme Court pre-empted states' ability to mandate claims submission for ERISA-based self-insured plans, it also left the door open for a uniform national solution that could overcome the administrative burden argument. The decision indicates that a uniform reporting format developed by the Department of Labor could eliminate the issues that prompted the state law pre-emption.

The December 2020 Consolidated Appropriations Act included the second round of federal COVID-19 relief funding and also included the No Surprises Act legislation. This legislation was designed, in part, to provide patients with protection from surprise medical bills. [Section 115](#) of the No Surprises Act directs that the US Department of Labor create a standardized data format for the collection of medical, pharmacy, and dental claims as well as eligibility and provider files. While there was no explicit mention of the Gobeille ruling in the No Surprises Act, the creation of a common data layout by the Department of Labor would be the first step in overcoming the administrative burden concern central to that case. These incremental steps taken in the No Surprises Act begin the journey of moving toward more comprehensive collection of ERISA-covered self-insured employer claims in APCDs across the nation. The process is likely to be slow and will necessitate collaboration with payers as well as the Department of Labor to complete and finalize a standardized data format.

## Fully-Insured v Self-Insured

Fully-insured employers decide on health care coverage from an array of plans compiled by an insurance broker or company representative. Then, when an employee files a claim, it is sent to the insurance company for processing and payment.

Self-insured employers, generally large entities, pay their employees' health care claims out of pocket, as they occur. These employers usually have an administrative service organization (ASO) or third-party administrator (TPA) who handles processing the claims. ASOs and TPAs are frequently affiliated with health insurance companies.

## Appendix C:

# FY 2021-2022 CO APCD Data Requestors and Project Purposes

Change Agent Sector	Project Purpose	Product Type
Community Focused Organizations	CO APCD data will help this Change Agent determine whether there is a correlation between increased incidence of certain diseases and a certain geographical location in metro Denver.	Custom Report
Community Focused Organizations	CO APCD data is helping this Change Agent “flag” electronic medical records of high needs patients who use emergency departments frequently. These flags will help providers track the patients across the health system and get them the services they need.	Fully-Identifiable Data Set
Community Focused Organizations	This community-focused Change Agent plans to integrate data from the CO APCD into Community Health Centers’ Electronic Health Records data. The integrated data set would allow them to produce utilization, cost, and quality indicator reports to support making population health improvements for safety net populations.	Fully-Identifiable Data Set
Community Focused Organizations	By applying a statistical model to predict whether an individual identifies as Hispanic or Latino to CO APCD data, this Change Agent is investigating differences in mental health care utilization patterns and mental health outcomes, like depression diagnoses, among different racial and ethnic groups.	Limited Data Set
Community Focused Organizations	This Change Agent is using CO APCD data to understand emergency department utilization for dental procedures.	Custom Report
Digital Health/ Consultant	Using CO APCD data, this Change Agent is developing an artificial intelligence-based solution to identify opioid abuse in Coloradans who are suffering from depression and help their primary care providers anticipate appropriate interventions.	Standard Data Set
Digital Health/ Consultants	Assessment of primary care and health care utilization using CO APCD data enables this Change Agent to identify service gaps and determine if there are specific demographics or populations who are underserved in their region.	Standard Data Set
Digital Health/ Consultants	This Change Agent is analyzing the cost for physical therapy in a specific county in Colorado using CO APCD data. They are evaluating how much more it costs a patient to receive these services in this area compared to other areas across the state.	Limited Data Set

Change Agent Sector	Project Purpose	Product Type
Digital Health/ Consultants	Using the CO APCD, this Change Agent is gathering insights regarding individuals diagnosed with cancer who also have behavioral health diagnoses, including the treatments and medication administered, as well as observable underdiagnosis or undertreatment of behavioral health conditions.	Limited Data Set
Digital Health/ Consultants	With a cutting-edge blood testing platform, CO APCD data is helping this Change Agent reinvent disease management through early detection and precision intervention to equip all individuals and families with the tools they need to detect and treat cancer at its earliest and most manageable stages.	Standard Data Set
Digital Health/ Consultants	This Change Agent is using CO APCD data to conduct a study commissioned by the Agency for Healthcare Research and Quality (AHRQ). The study links CO APCD data to other administrative data sources to create a Physician and Physician Practice Research Database.	Limited Data Set
Digital Health/ Consultants	This Change Agent helps providers to develop and operate episode of care payment programs to improve clinical outcomes, lower costs and increase patient satisfaction. They are integrating CO APCD data into their Colorado-based initiatives to refine provider-level cost and quality metrics for episodes of care and establish benchmarks for comparison.	Limited Data Set
Digital Health/ Consultants	This Change Agent was part of a multi-payer initiative fostering collaboration between public and private health care payers to strengthen primary care.	Fully-Identifiable Data Set
Digital Health/ Consultants	This Change Agent requested CO APCD data to see whether claims can be used to help predict future substance use disorders.	Standard Data Set
Employers	This recipient received the Potentially Avoidable ED Visits report to help them understand how their employees are utilizing high cost emergency room visits and what services may be avoidable to reduce costs.	Standard Report
Employers	This recipient received the Top 5 Procedure Cost Analysis report to help them evaluate which facilities have the best prices and lowest potentially avoidable complications for high cost/high volume services and identify where there may be opportunities to reduce costs for those services (pre-procedure, procedure, or post-procedure).	Standard Report
Employers	This recipient received the Pharmacy Spending report to help them understand pharmacy spending across drug categories, the most expensive and frequently prescribed medications, and to identify cost-savings opportunities that may exist by switching from brand name to generic drugs.	Standard Report

Change Agent Sector	Project Purpose	Product Type
Employers	This recipient received the Low Value Care report to help them understand how much they are spending on low value care services that may actually be harmful to employees, how that care compares to other areas across the state, and identify the top services that are driving low value care.	Standard Report
Employers	This recipient received the Top Chronic Conditions Cost report to help them determine the prevalence and cost of the most common chronic conditions among their employees, with a specific focus on costs related to potentially avoidable complications (PACs), services that are associated with the greatest expenditures, and the variance in expenditures among employees with a single condition and those with co-morbidities.	Standard Report
Employers	This Cost Drivers report can help employers determine the services that contribute to the highest health care costs for their employees, identify where cost savings could exist, and aid in creating benefit designs that incentivize utilization of high quality, low cost facilities or development of education and wellness programs that are targeted towards high cost drivers.	Standard Report
Employers	This employer alliance is using CO APCD data to identify ways to reduce the cost of health insurance for residents and businesses in their region and determine mechanisms to provide all feasible care nearby rather than sending patients to larger urban centers.	Standard Data Set
Employers	Geographic cost data is helping this employer alliance better understand, at the county level, the actual cost of providing care to people living in specific rural counties compared to Denver metro and surrounding urban counties.	Limited Data Set
Facilities/ Health Systems	This health system is interested in assessing and better understanding the small group employer market and the associated covered lives in northern Colorado using CO APCD data.	Custom Report
Facilities/ Health Systems	This project used CO APCD data to understand the prevalence, outcomes, readmissions, and cost savings associated with patients with spinal cord injury or traumatic brain injury referred to long term acute care in contrast to those who were not.	Standard Data Set
Facilities/ Health Systems	By comparing hospitalizations of high-risk COVID-19 outpatients who received monoclonal antibodies (MAb) versus those who received usual care, this Change Agent is evaluating the efficacy of MAb treatment.	Limited Data Set
Government Agencies	Using CO APCD data, this government agency plans to validate a statewide condition registry, enhance demographic information, and determine if claims data could improve completeness and quality of the registry.	Fully-Identifiable Data Set

Change Agent Sector	Project Purpose	Product Type
Government Agencies	Colorado APCD data is being used to enhance this Change Agent's programs and enable them to identify and respond to emerging issues that could affect Colorado's public and environmental health.	Limited Data Set
Government Agencies	This project involves analyzing primary care spending as a percentage of total medical expenditures by line of business and payer. It includes claims payments and non-claims payments made through alternative payment models and is pursuant to SB 19-1233.	Custom Report
Government Agencies	By using CO APCD data, this government agency will gain a better understanding of how elective procedure utilization has changed post-COVID-19 compared to that of pre-pandemic years.	Custom Report
Government Agencies	Through this analysis, this Change Agent will evaluate provider rates in the small and individual insurance plan markets.	Custom Report
Government Agencies	By receiving data sets to support <a href="#">SB 21-175</a> , this analysis will help the Prescription Drug Affordability Review Board execute their charge to lower prescription drug costs.	Custom Report
Government Agencies	This Change Agent is using CO APCD data to determine the effectiveness of a program designed to reduce acute health care utilization and cost.	Fully-Identifiable Data Set
Government Agencies	This report will help this government agency evaluate health insurance payers by hospital in Colorado markets.	Custom Report
Government Agencies	This Change Agent is analyzing procedure-based episodes of care which breaks down cost for all aspects of an episode by hospital for Medicaid and commercially-insured members.	State Development
Government Agencies	This update to an existing report, analyzes spending and utilization rates for select procedures on a named provider and payer basis based on DOI geographic rating regions.	State Development
Government Agencies	This data provides inpatient hospital case-mix and payments across lines of business to support study of acute care hospital payment variation.	State Development
Government Agencies	This analysis provides information describing access to care that is being used to understand where providers are serving patients across the state and where there are access to care shortfalls.	State Development

Change Agent Sector	Project Purpose	Product Type
Government Agencies	This analysis helps this government agency understand important utilization metrics in Colorado including: admissions, discharges, average length of stay, ED visits, and outpatient (non-ED) visits.	State Development
Government Agencies	This report is helping this government agency understand the commercial charge and reimbursement patterns for a specific set of Healthcare Common Procedure Coding System (HCPCS) codes and how the associated commercial charges compare to charges for the Medicaid population.	Custom Report
Government Agencies	Investigating price variation for prescription drugs between payers.	Custom Report
Government Agencies	Evaluating out of pocket spend for consumers for prescription drugs.	Custom Report
Government Agencies	Exploring payment and rebate methodology for prescription drugs.	Custom Report
Government Agencies	Analyzing price variation for prescription drugs before and after rebates.	Custom Report
Government Agencies	Investigating impact of health system acquisition of physician practices on costs.	Limited Data Set
Government Agencies	Exploration of potential prescription drugs for importation.	State Development
Government Agencies	Through the Data Mart, state agency analysts have access to multi-payer data to support multiple state use cases, including data quality and parity checks between state and CO APCD data, benchmarking, churn analyses, and rate reviews.	State Development
Government Agencies	This study aims to identify evidence-based opportunities to reduce costs, improve the quality of end-of-life care, and increase access to services such as hospice and palliative care that are known to improve quality of life for patients, families, and caregivers.	State Development

Change Agent Sector	Project Purpose	Product Type
Government Agencies	Payment information from this CO APCD analysis supports implementation of HB 19-1174, governing reimbursement for out-of-network services.	State Development
Government Agencies	This analysis helps explain the impact of drug rebates on pharmacy spending and spending growth.	State Development
Government Agencies	This data is helping employers understand how much they are spending on low value care services that may actually be harmful to employees, how that care compares to other areas across the state, and identify the top services that are driving low value care.	State Development
Government Agencies	Employers can use this information to understand how their employees are utilizing high cost emergency room visits and what services may be avoidable to reduce costs for the state of Colorado and their employees.	State Development
Government Agencies	Allows employers to evaluate which facilities have the best prices and lowest potentially avoidable complications for high cost/high volume services and identify where there may be opportunities to reduce costs for those services (pre-procedure, procedure, or post-procedure).	State Development
Government Agencies	Assists employers in determining the prevalence and cost of the most common chronic conditions among their employees, with a specific focus on costs related to potentially avoidable complications (PACs), services that are associated with the greatest expenditures, and the variance in expenditures among employees with a single condition and those with co-morbidities	State Development
Government Agencies	This report helps employers identify their pharmacy spending across drug categories, the most expensive and frequently prescribed medications, and to identify cost-savings opportunities that may exist by switching from brand name to generic drugs.	State Development
Government Agencies	This report can help employers determine the services that contribute to the highest health care costs for their employees, identify where cost savings could exist, and aid in creating benefit designs that incentivize utilization of high quality, low cost facilities or development of education and wellness programs that are targeted towards high cost drivers.	State Development
Government Agencies	Allows employers to compare the prices they are paying for certain aggregated health care services to the prices that would have been paid by Medicare for those same services.	State Development

Change Agent Sector	Project Purpose	Product Type
Government Agencies	Using CO APCD data, this Change Agent is understanding mental health and chronic condition prevalence in their region and how patients are accessing the health care system compared to neighboring regions and the state overall.	Standard Data Set
Health Plan	This Colorado payer is using CO APCD data to understand the affordability of health care services for the employers they serve and investigate patterns of care.	Standard Data Set
Researchers	The main goal of this project is to improve understanding of how health care is delivered to adolescents and young adults with intellectual or developmental disabilities, and the roles that health insurance and health care providers may play in the experience of gaps or in care quality.	Limited Data Set
Researchers	This project will develop and implement a Collaborative Improvement and Innovation Network aimed at testing and spreading innovative care delivery and payment models for children with medical complexity.	Limited Data Set
Researchers	These researchers used CO APCD data to determine if cost, utilization, and quality of telehealth services vary based on whether the provider has a physical location and/or a prior relationship with the patient.	Standard Data Set
Researchers	CO APCD data is helping this Change Agent investigate: 1) whether rates of Medicare and private insurance coverage among new end-stage kidney disease (ESKD) patients changed after alterations in federal policies; 2) what demographic characteristics are associated with transition to enrollment in Medicare during the 1st year following ESKD diagnosis; and 3) if a patient's health plan is related to a greater likelihood of home dialysis and overall payments for dialysis during year one of treatment.	Standard Data Set
Researchers	Given the high prevalence of Americans who will be impacted by seizures, these researchers requested CO APCD data to estimate the costs incurred and treatments received by patients with epilepsy and/or seizure.	Limited Data Set
Researchers	These researchers are using CO APCD data to study the compounding impacts of the Affordable Care Act on job mobility and the stability of the individual health insurance market.	Fully-Identifiable Data Set
Researchers	Type II diabetes is often treated with medication targeted at insulin in the body. CO APCD data is helping these researchers determine the safety of those medications and whether they have unwelcome side effects.	Limited Data Set

Change Agent Sector	Project Purpose	Product Type
Researchers	Using CO APCD data, these researchers are analyzing physician incentives in the context of physician administered treatments – specifically vaccines. They will measure how different incentives perform in increasing vaccine uptake in different populations.	Limited Data Set
Researchers	These researchers are using CO APCD data to understand long COVID-19 as well as the causes behind other increases in mortality during the pandemic.	Fully-Identifiable Data Set
Researchers	Using CO APCD data, this Change Agent is investigating the impact of Colorado’s 2020 cap on insulin prices by observing any potential changes in monthly insulin out-of-pocket payments, insulin consumption, and diabetes related emergency room hospitalizations between 2020 and 2018, considering various individual demographics, geographic characteristics and insurance types.	Standard Data Set
Researchers	This researcher is using CO APCD data to investigate maternity and post-natal care for homeless women and children.	Limited Data Set
Researchers	CO APCD data is helping this Change Agent research and evaluate the impact of the shift from nurse-led in-person to virtual care for health care services at specific facilities.	Limited Data Set
Researchers	These researchers are using CO APCD data to fill knowledge gaps in the realm of “treat to target” interventions for individuals with inflammatory bowel disease.	Limited Data Set
Researchers	The goal of this Change Agent's project is to develop an algorithm to determine the prevalence of diabetes types I and II among children and young adults.	Fully-Identifiable Data Set
Researchers	This Change Agent is using CO APCD data related to specific patients and linking that information to an existing health data warehouse containing information from other facilities. The data warehouse is then available for use by researchers to better serve high risk populations.	Limited Data Set
Researchers	Using the CO APCD, this researcher is examining differences in people who have strokes by various demographics (age/sex).	Custom Report

Change Agent Sector	Project Purpose	Product Type
Researchers	Researchers are using CO APCD data in conjunction with clinical data for Latino patients with advanced medical illness in both rural and urban areas to investigate whether an intervention with a patient navigator improved access to and utilization of palliative care while lowering costs for this underserved population.	Fully-Identifiable Data Set
Researchers	CO APCD data will help this Change Agent evaluate the impact of a novel community-based model of palliative care for people with Parkinson's disease and related disorders on patient, caregiver, and clinician outcomes as well as cost and utilization.	Limited Data Set
Researchers	By linking and evaluating CO APCD data with the Colorado Central Cancer Registry (CCCR) data, researchers are examining prescription and treatment patterns for cancer across health insurance, delivery systems and geographic location in Colorado. In FY 2021-2022, this project was expanded to include investigation of the impact of COVID-19 lockdowns.	Limited Data Set

## Appendix D: CO APCD Non-Public Data Licensing Fees

CIVHC works to increase access to data sets and standard/custom reports from the CO APCD to benefit Colorado. In order to do that, we use a data licensing fee formula that enables us to cover costs while providing high value, competitively priced data analytics.

### Estimated Pricing by Product Type FY 2021-2022

Product Type	Range of Fees*
Standard Reports	\$500 - \$7,000 (free for eligible employers)
Custom Reports	\$1,500 - \$20,000
Standard De-Identified Data Sets	\$13,000 - \$25,000
Custom De-Identified Data Sets	\$15,000 - \$30,000
Custom Limited Data Sets	\$20,000 - \$40,000
Custom Fully Identified Data Sets	\$30,000 - \$50,000

*\*This information represents estimated pricing and final fees are calculated based on a number of factors including those listed below.*

### Factors That Go into CO APCD Data Access Fees

Inclusion of Protected Health Information

Indirect costs (including legal fees)

Number of unique and specific data elements

Output type (Tableau, Excel, etc.)

Labor costs/time required (analysts, health care data consultants, project managers, etc.)

Have questions about the CO APCD or looking for data resources? Please contact us at [info@civhc.org](mailto:info@civhc.org).