By Colorado, For Colorado

THE COLORADO ALL PAYER CLAIMS DATABASE IN 2024

CIVHC
CENTER FOR IMPROVING
VALUE IN HEALTH CARE

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Message from CIVHC's CEO

Welcome to the 2023-2024 Colorado All Payer Claims Database (CO APCD) Annual Report. Every year, the Center for Improving Value in Health Care (CIVHC) reports on how we fulfill our charge to administer the CO APCD for the State of Colorado.

Today's CO APCD reflects over a decade of work to make the CO APCD a trusted resource that provides information to improve health care access, affordability, and outcomes. The CO APCD's broad legislation with CIVHC's business model, comprehensive data processing, and innovative analyses have defined the standards of APCD quality and analytics nationwide.

This year, CIVHC used CO APCD data to address some of Colorado's most pressing health care issues. The Telehealth Equity Analysis shed light on gaps in access to virtual care, while the groundbreaking Firearm Injuries Report and Wildfire and Ozone Analysis explored social and environmental health impacts. These analyses give communities and policymakers tools to make informed, evidence-based decisions that improve care and address imbalances across the state.

The CO APCD also translates into measurable financial benefits for Coloradans. The Division of Insurance's Colorado Option Plans use CO APCD data to establish Medicare price-based rate limits and have reduced premiums by more than $100, even for non-Colorado Option plans. Peak Health Alliance, a Colorado Insurance Alliance, used CO APCD data to save employers over $16 million in premiums in just three years. Colorado Children's Hospital providers used CO APCD data to demonstrate cost savings and improved outcomes associated with novel management of medically complex children. The CO APCD supports many other state programs that work to lower costs for Coloradans, including prescription drug cost reduction efforts, Out-of-Network billing, the Reinsurance Program, the Primary Care Collaborative, and many more. These programs save millions of dollars and bring health within reach for tens of thousands of Coloradans.

CIVHC uses the CO APCD to address more than costs, however. The Health Equity Fund, launched in May 2024 with the Colorado Health Foundation, gives community-based organizations access to CO APCD data and analytics to reduce disparities and improve lives. Collaboration with the Behavioral Health Administration highlighted opportunities to increase access to behavioral health care, and work with the Department of Public Health and the Environment's Tribal Relations Division evaluated health coverage for Colorado's American Indian and Alaska Native populations.

At CIVHC, we don't just manage the CO APCD—we're part of it. My own family's health care journey and those of my colleagues, neighbors, and friends are all reflected in its data. At its heart, the data is the story of the people of Colorado. That's why we're dedicated to maintaining one of the strongest, safest, and most complete sources of claims data in the country. For us, every data point represents a person, and every analysis is aimed at improving their lives. CIVHC remains dedicated to strengthening a CO APCD built by Coloradans to serve Coloradans and to ensuring it delivers the insights and opportunities to create a healthier, more equitable future.

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

A Cornerstone for Change

Built by and for Coloradans, the CO APCD makes it possible for CIVHC to equip individuals, communities, and organizations with the information needed to lower costs, improve care outcomes, and create a more equitable health care system.

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Colorado lawmakers in the early 2000s grew increasingly concerned about trends developing across the state: health care costs kept rising, yet Coloradans weren't getting healthier. To correct course, they needed to understand what was driving these challenges.

Technological innovations, breakthroughs in research, and policy shifts had ushered in significant changes to how care was delivered, billed, and provided. These advances were groundbreaking, but they also introduced complexity. As a result, policymakers found themselves grappling with a fragmented and opaque health care system. Determined to make care more affordable and improve lives, lawmakers sought the necessary data to navigate these challenges, giving rise to the Colorado All Payer Claims Database (CO APCD).

📖 CO APCD **LEARN MORE**

◎ Why an APCD

◎ Understanding How the CO APCD Works

Administered by the Center for Improving Value in Health Care (CIVHC) and launched in 2012, the CO APCD is more than a database— it reflects the diverse health care experiences of Coloradans and is a cornerstone for health care improvement in the state. The CO APCD has grown significantly over the last decade. It was originally the fifth APCD in the nation and is now one of the most robust and impactful databases of its kind, setting industry standards for quality and analytics in health care claims data. Among the 22 APCDs currently operating, the CO APCD is widely recognized for its depth and breadth of information.

As the steward of the CO APCD, CIVHC is committed to strengthening and protecting this vital resource for all Coloradans. Built by and for the people of Colorado, the CO APCD captures the stories and data needed to create a healthier, more equitable future for us all.

Processing Claims into the CO APCD

Claims data, like that in the CO APCD, has limits. It is shaped by the complex insurance market, health care billing, and usage rules. As administrator of the CO APCD, CIVHC ensures the data meets the highest quality and compliance standards by carefully monitoring each step of the process, from submission to release. As CIVHC processes claims, we must consider and address several challenges:

- Colorado has more health insurance payers than most states. They all use different systems to collect claims information, and these systems do not always align with how others collect data.

- Health care billing is incredibly complicated, and errors in claims occur frequently. This means the data must be thoroughly checked before it can be incorporated into the database.

- Personal information must be protected at all costs. Laws like the Health Information Portability and Accountability Act (HIPAA) set rules for collecting and sharing health care data.

- CO APCD data must be available to help Coloradans, but rules govern who can access it, how, and for what purposes.

CIVHC analysts work with health insurance plans and CO APCD data manager Human Services Research Institute (HSRI) to make sure the information submitted is accurate and reliable while the files remain protected and secure. In addition to validation, CIVHC's Compliance Department collaborates with payers and requestors to ensure all submissions and releases meet state and federal regulations. CIVHC publishes release notes after each refresh, detailing updates, fixes, and additions to the CO APCD as part of our commitment to transparency and credibility.

📖 CO APCD **LEARN MORE**

- ◎ Information Available in the CO APCD
- ◎ Understanding How Data is Extracted from the CO APCD
- ◎ Rules for Releasing CO APCD Data

🔍 Need a More **DETAILED DIVE?**

- ◎ Understanding the Data Submission Guide (DSG) and Data Submission Validation
- ◎ Data Refreshes, Intake, and the Submitter Quality Index (SQI)
- ◎ In Warehouse Quality Checks and Data Processing

CO APCD Data Submission Cycle

Submission Cycles

Data is submitted monthly and incorporated into the warehouse every two months. On average, claims are available for request three months after being paid.

Submission

Payers submit data monthly based on the Data Submission Guide (DSG), which specifies what data to submit and the required format. They also comply with the CO APCD Rule and federal laws.

Intake Validation

Over 300 intake and validation checks ensure that data meets strict criteria before being incorporated into the CO APCD. Files that do not meet the standards are rejected and must be corrected and resubmitted by the payer.

Processing

Claims are processed using complex rules and logic that define how they should be organized, structured, or checked.

Quality Assurance

Quality checks throughout operations in the warehouse confirm that the data is as accurate as possible and ensure that the outputs make sense based on expectations and benchmarks.

Refreshes

The data warehouse is refreshed every two months so all files—new and historic—are processed according to the same rules.

CO APCD Data Quality

Over the years, CIVHC has observed that 'data quality' is the term most frequently used when providing feedback about CO APCD data. While technically accurate, the term lacks the specificity needed to guide meaningful improvements. To address this, the Data Operations team developed a framework of six elements of CO APCD data quality. This framework is used to investigate potential data challenges and set targeted goals for enhancing the CO APCD.

Element	Definition	Recent CIVHC Efforts
Completeness	How well the contents of the CO APCD reflect health care in Colorado.	Annual updates to the Data Submission Guide (DSG) follow the HCPF Executive Rule Change Process and allow CIVHC to propose new data submission requirements such as alternative payment model and prescription drug rebate information. CIVHC geocoded, or tagged, each person and provider represented in the CO APCD with latitude and longitude coordinates. This allows CIVHC analysts to overlay external data sets that provide information about social factors that can impact health such as demographics, socio-economic status, with health outcomes.
Readiness	Whether the data complies with submission and validation criteria.	The Submitter Quality Index (SQI) helps CIVHC assess the readiness of the data submitted by individual payers and provides feedback. It also evaluates the overall health of all data submitted to the CO APCD and allows CIVHC to track continued progress to enhance the quality of the entire database.

Element	Definition	Recent CIVHC Efforts
Utility	Suitability of the data for complex analyses of Colorado's health care system.	Inclusion of "value-add" fields to the data by HSRI expand the analytic capabilities of the CO APCD by quickly linking claims to types of information that make performing analyses more efficient. For example, these fields may be used to flag emergency department or other types of claims (medical, pharmacy, vision, or dental), or add classification information, such as Colorado Division of Insurance (DOI) regions. HSRI also applies third-party analytic tools to enhance utility such as data groupers (ACGs, MS-DRGs) and drug reference files.
Accuracy	Outputs align with expectations, verified through checks in the data warehouse.	Data manager, HSRI, conducts a number of validation checks to ensure the accuracy of the database including verifying that current payer submissions are in alignment with historic submissions in terms of members and claims volume. Updates to two important indices are also conducted that help identify whether submissions reflect the number of unique people and providers as expected. These identifiers also help with the utility of the data by enabling tracking of patients and providers longitudinally over time. **Master Patient Index and Master Provider Dictionary**– Provides a mechanism to safely identify and link unique people and unique providers in the CO APCD
Consistency	Uniform processing of all CO APCD data under the same rules at any given time.	While the bi-monthly refreshes ensure that data in the CO APCD remains both timely and consistent and is continually being improved, they also mean that data sets and analytics based on the database will not be 100% replicable in the future. In essence, each refresh creates a wholly new, and improved, CO APCD every time.

Element	Definition	Recent CIVHC Efforts
Timeliness	The degree to which the information in the CO APCD is current.	Claims data is, by nature, retroactive. Claims are filed following health care services, then processed and adjudicated by the insurance companies. If all goes well, the claim will move through the system quickly and get submitted to the CO APCD. If the claim is disputed, the process can take longer. CIVHC makes the data available as soon as possible, through our systematic bi-monthly processing approach.

🔍 Need a More **DETAILED DIVE?**

- ◉ [Behavioral Health and Substance Use Disorder Claims in the CO APCD](#)
- ◉ [Race, Ethnicity, and Demographic Data in the CO APCD](#)
- ◉ [Non-Claims Data in the CO APCD](#)

Compliance and the CO APCD

Compliance is often defined as 'following the rules,' but at CIVHC, it encompasses a more nuanced and sophisticated approach. The Compliance Department ensures that the Protected Health Information (PHI) for millions of individuals is not only securely maintained but also used in accordance with all applicable laws, regulations, and ethical standards. This critical work enables CIVHC to support innovation while safeguarding data security and trust.

Each month, the Compliance Department meets to discuss requests for non-public CO APCD data that include PHI. This is done with the Data Release Review Committee (DRRC), which is made up of volunteers from different organizations. Before each meeting, they review data requests to assess compliance with HIPAA, CMS rules, and the CO APCD Rule, which requires that non-public requests align with the purpose of the CO APCD and benefit Colorado.

The multi-sector CO APCD Advisory Committee fills a similar role for public releases. Before any analysis is published, members have the opportunity to review the data and provide feedback to CIVHC. The Committee works with CIVHC to identify topics for public analyses, ensuring they reflect the diverse needs of Colorado's communities.

Compliance Considerations

☑ Safeguarding Data Privacy

Protecting sensitive data, including information on substance use disorders is vital. Compliance with HIPAA and 42 CFR Part 2 reinforces confidentiality while promoting the ethical use of CO APCD data.

☑ Adhering to Regulatory Standards

Conformance to Colorado state laws, Centers for Medicare & Medicaid Services (CMS) guidelines, and Data Use Agreements provide for responsible and secure data handling. Policies like the CMS Cell Size Suppression preserve privacy in public and non-public reporting, maintaining data integrity.

☑ Upholding Legal and Ethical Standards

Following state and federal antitrust laws prevent misuse or anti-competitive practices, promoting transparency and fair competition within the health care system.

☑ Balancing Security and Innovation

Through robust encryption, strict access controls, and comprehensive security protocols, compliance enables innovative analyses while protecting data and aligning with the highest legal and ethical standards.

The Teams Behind the CO APCD

A mill requires many hands to function—so does the CO APCD. This illustration shows the teams behind CIVHC's leadership in claims data and analytics.

Receivers

Much like mill receivers inspecting grain deliveries, the Intake and Submission team confirms all data entering the CO APCD meets strict standards, ensuring only reliable information moves forward.

Graders and Cleaners

Just as mill graders removes grain with impurities, Data Manager HSRI meticulously reviews CO APCD data to confirm it is accurate, complete, and ready for the next step.

Millers

Millers transform grain into flour; similarly, the Analytics and Reporting team converts CO APCD data into tools and insights that enable informed health care improvements across Colorado.

Product Inspectors

Before outputs leave the mill, inspectors test their quality. The QC team carefully verifies CO APCD data for accuracy, consistency, and usability before it is shared.

Overseers

Mill overseers uphold rules and standards. The Compliance team protects privacy, ensures legal obligations are met, and manages ethical use of CO APCD data at every stage.

Packaging, Delivery, and Logistics

Packaging and logistics teams deliver flour and baked goods to communities. CIVHC's teams connect CO APCD data to Change Agents, driving health care improvements across Colorado.

Contents of the CO APCD As of June 2024

Health insurance payers submit millions of claims to the CO APCD each month. This adds roughly one terabyte (TB) a year to the size of the database. In June 2024, the CO APCD contained 16 TB of data and over 1.1 billion claims.

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.

1,189,458,090
Claims (2013–2023)

Approximately 74% of Covered Lives
with medical insurance

5.6M Unique lives in 2023
Including 1M (50%) of self-insured

44 Payers in 2023
Including commercial payers, Medicare Fee for Service (FFS), Medicare Advantage, Medicaid, Non-ERISA-covered self-insured employer plans, and voluntarily submitted ERISA-covered self-insured employer plans*

Payers Not Included
Federal health insurance programs such as:

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

Coloradans Helping Coloradans

The CO APCD reflects the diverse health care experiences of millions of Coloradans from communities across the state. CIVHC helps Change Agents explore the power of this data, helping them answer critical questions and make informed decisions to improve lives.

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Who Used the CO APCD in 2024

They came from across Colorado—from Routt to Denver County, from Grand Junction to Boulder. They came from across the country and even from around the world. In 2024, Change Agents turned to the CO APCD to tackle rising health care costs, address access disparities, evaluate the effectiveness of quality programs, and gain insights that drive evidence-based decisions to benefit every Coloradan.

At CIVHC, we call individuals, communities and organizations who use CO APCD data Change Agents because they are working to lower costs, improve care, and make Colorado healthier for all of us.

CIVHC Releases CO APCD Data In Two Ways

Non-Public: For individuals or organizations to use to improve care for Coloradans.

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

Total CO APCD Releases in FY 2023-2024

81 Non-public Releases

25 Public Releases

Change Agents
Using Non-Public CO APCD Data

In FY 2023-2024, CIVHC provided 81 releases of non-public CO APCD data to 43 different organizations. In some cases, requesting organizations were schools or state agencies where different departments requested projects. It's also important to note that some requestors have projects requiring multiple releases throughout the year, so the number of releases will be higher than the number of requesting organizations.

43 Change Agents received 81 releases of non-public CO APCD data in FY 2023–2024.

Government agencies requested non-public CO APCD data more than any other Change Agent. These agencies include the Office of Saving People Money on Health Care, the Colorado Division of Insurance (DOI), and the Behavioral Health Administration. After government agencies, researchers, digital health consultants, and community-based organizations requested the most CO APCD data.

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

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

Number of CO APCD Data Releases by Sector in FY 2023-2024

Government Agencies	42
Researchers	23
Employers	2
Digital Health/Consultants	6
Community Based Organizations	6
Health Plans	2

Number of Organizations That Received Non-Public CO APCD Data by Change Agent Sector in FY 2023-2024

Government Agencies	21
Researchers	6
Employers	2
Digital Health/Consultants	6
Community Based Organizations	6
Health Plans	2

CO APCD Scholarship Fund

Twenty-five projects from 15 Change Agents received funding from the General Assembly through the CO APCD Scholarship Fund in FY 2023-2024. This fund was created in 2014 to help state agencies researchers and non-profits with limited resources access CO APCD data. COVID-19 budget cuts eliminated the Scholarship in 2021 and 2022. It was reinstated in 2022, and funds became available again in FY 2022–2023.

Details of the ways the Scholarship is used and how it improves the lives of Coloradans are available online in the Change Agent Index.

CO APCD Scholarship Recipients FY 2023–2024

- Cobalt
- Colorado Behavioral Health Administration
- Colorado Department of Public Health and the Environment
- Colorado Ovarian Cancer Alliance (Carol's Wish)
- Colorado Legislature
- Colorado State Governor's Office
- DARTNet Institute
- Denver Regional Council of Governments
- HealthPrice Partners
- Local First
- Michigan State University
- Peak Health Alliance
- University of California Irvine
- University of Colorado
- University of Minnesota

Change Agents Using the CO APCD Scholarship by Sector in FY 2023-2024

🏛	Government Agencies	5
🔍	Researchers	4
👥	Community Based Organizations	6

📖 CO APCD **LEARN MORE**

- Full list of Non-Public CO APCD Data Releases in FY 2023-2024

Change Agents Using the CO APCD Scholarship by Sector FY 2014–2015 Through FY 2023–2024

	FY 2014-2015	FY 2015-2016	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021*	FY 2021-2022*	FY 2022-2023	FY 2023-2024
Clinicians/Providers	0	0	0	1	0	0			0	0
Community Based Organizations	6	11	5	13	8	3			3	6
Digital Health/Consultants	0	0	0	0	0	0			1	0
Employers	0	0	0	1	0	6			5	0
Facilities/Health Systems	0	0	0	0	2	0			1	0
Government Agencies	2	5	3	5	2	3			8	8
Researchers	5	4	12	2	6	10			4	11
Total	13	20	20	22	16	22			22	25

Due to state budget cuts, the Scholarship was not available in FY 2020-2021 or FY 2021-2022.

Examples of Change Agent Uses of CO APCD Data in FY 2023–2024

Community Based Organization

Product Type: Limited Data Set

Scholarship: ☑ Yes ☐ No

Project Purpose: Understand service and access gaps in rural health care to guide local policy decisions in the region.

Digital Health/ Consultant

Product Type: De-Identified Data Set

Scholarship: ☐ Yes ☑ No

Project Purpose: Investigate how cancer treatment costs and use vary across payer types and patient demographics to make cancer treatment more affordable.

Employer

Product Type: Custom Report

Scholarship: ☑ Yes ☐ No

Project Purpose: Study outmigration patterns to improve local access to care.

Government Agency

Product Type: Custom Report

Scholarship: ☑ Yes ☐ No

Project Purpose: Drive decisions regarding a mobile health unit to improve outreach and services for marginalized populations.

Health Plan

Product Type: Limited Data Set

Scholarship: ☐ Yes ☑ No

Project Purpose: Understand how insurance loss or change impacts a person's insurance coverage and health outcomes.

Researcher

Product Type: Fully Identifiable Data Set

Scholarship: ☑ Yes ☐ No

Project Purpose: Study use and costs of hearing health services (hearing aids, cochlear implants) to understand access across demographics and improve care equity.

Change Agents
Using Public CO APCD Data

In support of Change Agents and the entire state of Colorado, CIVHC published 18 reports using CO APCD data in FY 2023 – 2024, including 11 interactive reports. Some of these releases were significant updates to flagship reports such as the Shop for Care tool, with the addition of over 200 new services, or to the Medicare Reference Based Pricing report which used new methodology to capture more claims and increase accuracy.

Many of the interactive report releases included companion infographics and publicly available downloadable data sets. These data-driven materials are designed to help everyday users understand and apply the data in the reports.

11 Interactive Reports

6 Infographics

8 Public Data Sets

CO APCD Public Releases in FY 2023-2024

Report	Data Set	Infographic	Interactive or Static
Telehealth Equity Analysis	☑	☑	☑
Provider Payment Tool	☐	☑	☑
Medicare Reference Based Pricing	☑	☑	☑
Community Dashboard	☑	☑	☑
Prescription Drug Rebates	☑	☐	☑
Shop for Care	☑	☑	☑
CO APCD Insights Dashboard	☑	☐	☑
Telehealth vs. In-Person Payments & Claims Denials Summary	☐	☑	☑
Social Needs Codes Update	☑	☐	☐
Race & Ethnicity Update	☑	☐	☐
Shop for Care Spanish Translation	☐	☐	☑
Top 15 Drugs Rebated	☑	☐	☐
Wildfire/Ozone Impact on Health	☑	☐	☐
Firearm Related Injuries	☑	☑	☐

New Reports in FY 2023-2024

- The Telehealth Equity Analysis, created in partnership with the Office of eHealth Innovation (OeHI), shows the relationship between social determinants and telehealth vs. in-person health care used to shed light on telehealth equity and access.

- The Firearms Analysis shows the rate and costs associated with firearm injuries by Colorado county and across age groups and sex.

- The Wildfire and Ozone Analysis shows the impact of wildfires and ozone spike events on ED visits for respiratory and circulatory diseases, giving a picture of the health impact of poor air quality in Colorado.

CIVHC offers downloadable data sets for most public releases of CO APCD data. In exchange for completing a survey asking basic organization and data use questions, those interested can receive an Excel file with the underlying data for the majority reports on civhc.org.

Public CO APCD Data Set Requests by Change Agent Sector FY 2023–2024

🏛	Consumer / Other	15
🔍	Researchers	40
📄	Digital Health/Consultants	27
👥	Community Based Organizations	14
❤	Clinicians / Providers	8
🏛	Government Agencies	13
📋	Health Plans	14

Change Agents requested public data sets a combined 131 times in FY 2023–2024.

☑ CIVHC received almost the same number of requests from Colorado-based requestors as out of state, demonstrating the unique impact of the CO APCD across a wide audience.

☑ Coloradans requesting the data increased by 25% from FY 2022–2023, indicating that awareness and interest in CO APCD data as a useful resource continues to grow.

Number of Change Agents Requesting Public CO APCD Data Sets by Location FY 2023–2024

76	75	6
National	Colorado	International

Example Public Data Use Cases by Change Agent Sector

Each year, individuals and organizations request public CO APCD data for different reasons. Some use it to shop for care, others to benchmark performance or inform local policy, all working to address unique challenges and drive meaningful improvements in health care. The variety of these requests demonstrates the CO APCD's value as a resource for addressing Colorado's health care needs.

Clinicians / Providers

- ☑ Understand oncology utilization (Medicare Reference Based Pricing)
- ☑ Examine trends in mental health access with a focus on marginalized communities (Community Dashboard)
- ☑ Expand access to GI endoscopy procedures (Shop for Care)

Community Based Organizations

- ☑ Cost analysis and price setting (Insights Dashboard)
- ☑ Understand drug rebate pricing to reduce cost burden (Prescription Drug Rebate Analysis)
- ☑ Inform rural vs. urban in person vs. telehealth rates for a 2025 Snapshot (Telehealth Equity Analysis)

Consumers / Others

- ☑ Complete a litigation analysis (CO APCD Insights Dashboard)
- ☑ Write a white paper on CO APCDs (Community Dashboard)
- ☑ Shopping for an MRI (Shop for Care)

Digital Health / Consultants

- ☑ Explore the possibility of creating a mobile app to connect patients to providers. (Shop for Care)
- ☑ See trends to identify possible intervention strategies (ED Use for Mental Health and Potential Self-Harm)
- ☑ Inform strategy for mental health within primary care offices (ED Use for Mental Health and Potential Self-Harm)

Government Agencies

- ☑ Determine access to insurance on a county level (Community Dashboard)
- ☑ Inform trends in injury-by-firearm for a Health Determinants Report (Firearm Related Injuries)
- ☑ Inform work on a Public Improvements Advisory Committee (Shop for Care)

Researchers

- ☑ Complete an academic project (Telehealth Services Analysis)
- ☑ Analyze how patient medical costs impact household income (Community Dashboard)
- ☑ Write a health policy brief (ED Use for Mental Health and Potential Self-Harm)

Innovation, Engagement, and Impact

A decade in, CIVHC continues to strengthen the CO APCD's ability to identify Colorado's most pressing health care challenges, while also expanding our team's expertise to address them. Through innovations in data quality and analytics, new and deepening partnerships, and analyses to support policy, we ensure the CO APCD remains a trusted resource for improving health care access, affordability, and outcomes.

Data Analytic and Quality Innovations

Not only does the CO APCD grow in volume each year, CIVHC is constantly seeking ways to expand its scope and capability. This can take many forms, and in 2024 improvements to the CO APCD included initiatives focused on capturing additional information about how care is paid for in Colorado as well as understanding organizational structures within the health care system.

CIVHC Analysts developed a Hospital System crosswalk to link hospital offsite outpatient clinics or facilities to their affiliated hospital. Understanding these affiliations will allow for more comprehensive pricing information for hospital systems, offering a more accurate view of health care pricing and utilization.

CIVHC collaborated with payers and HCPF to update the DSG, introducing two significant data elements: vision and wholly denied claims. Starting in 2025, these additions will provide a more complete picture of health care in Colorado.

Research, Partnership, and Innovation

FY 2023-2024 marked the first full year of CIVHC's Department of Research, Partnership, and Innovation (RPI). This new department works with community organizations and leaders across Colorado to build partnerships that address critical health care challenges. By focusing on evaluation, health equity, and analytics, RPI helps communities use CO APCD data to find solutions and improve lives.

RPI Partners for Analyses and Evaluations Using CO APCD Data

- The Colorado Health Foundation
- The Colorado Gynecologic Cancer Alliance (Carol's Wish)
- Colorado Department of Public Health & the Environment & Denver Indian Health & Family Services
- Contexture
- CU Department of Community & Behavioral Health

RPI-Conducted Analysis

Effects of COVID-19 on Health Care Costs at End-of-Life in Colorado, investigating the demographic disparities in end-of-life care.

📖 CO APCD **LEARN MORE**

- ◉ RPI projects are included in the Full list of Non-Public CO APCD Data Releases in FY 2023-2024

Health Equity Fund

CIVHC and the Colorado Health Foundation launched the Health Equity Fund in spring of 2024. An initiative to improve health equity in Colorado, it provides $250,000 per year for four years ($1 million total). The funds help community-based non-profits access CO APCD data to reduce disparities and improve lives. At the close of the year, projects using the Fund were already in development.

Accessibility

In the last two years, CIVHC has incorporated accessibility protocols into our publication processes. It is now standard for CO APCD public releases, including graphics, reports, and data sets, to be designed so they can be easily understood and usable by all. By focusing on color contrast, clear design, and adaptable formats, we work to make CO APCD data accessible to everyone, regardless of ability. This includes ensuring reports can be navigated with screen readers and that downloadable data sets are provided in formats that accommodate a range of user needs.

📖 CO APCD **LEARN MORE**

◎ CO APCD Data Supporting Policy

Evidence Based Impact

Informed decision-making starts with understanding. The CO APCD gives policymakers trusted data while helping them evaluate issues, explore solutions, and craft evidence-based policies. CIVHC often gets requests from legislators seeking to understand complex problems and find ways to fix them. These data releases play a vital role in supporting policies that improve health care in Colorado.

- The **Division of Insurance's** Reinsurance Program is projected to save Coloradans $493 million on premiums in 2025, while the Colorado Option continues to lower costs for families across the state. Both programs rely on CO APCD data to assess their impact and guide key decisions. Together, these initiatives have brought $1.49 billion in federal pass-through funds to Colorado since 2020. These funds can be used to implement new ways to make care more affordable and easier to access.

- A first of its kind partnership with **Veteran Affairs** analyzed whether increased outreach following a Crisis Line call reduces the risk of suicide and other adverse outcomes, providing insights that could improve crisis response strategies. This is a first of its kind partnership with the VA.

- **CDPHE's Tribal Relations Division** worked with CIVHC's new Program Evaluation team to use CO APCD data to assess health care coverage and payer types for American Indian and Alaska Native populations across Colorado. The insights will help guide funding and outreach efforts for better service delivery in underserved areas.

CO APCD
Sustainability

CO APCD Sustainability

In FY 2023-2024, CIVHC focused on sustaining progress made in previous years while managing to a lean budget and keeping expenses lower than anticipated. The build-out of the Finance Department coupled with enhanced financial tracking and processes allowed CIVHC to more effectively steward resources and ensure funds were allocated to priority initiatives.

CIVHC's net income for the year reflects strategic resource management, including partial forgiveness of a program loan from the Colorado Health Foundation. These funds support the development of new initiatives while ensuring sufficient cash reserves are maintained to address anticipated costs for technology and database management in the future.

📖 CO APCD **LEARN MORE**

- ◎ History of CO APCD Funding and Sustainability
- ◎ CO APCD Non-Public Data Licensing Fee Schedule

FY 2023-2024 Income

Income		
Grants Total		$8,344,575
State General Fund	$1,635,115	
CO APCD Scholarship	$498,313	
State CMS 50-50	$1,630,323	
Federal CMS 50-50	$1,403,609	
State 90-10	$2,970,501	
Robert Wood Johnson Foundation: Health Data for Action Grant	$10,000	
Earned Revenue Total		$957,368
CO APCD Data Licensing	$957,368	
Total		$8,608,299
Expenses		
CO APCD Program/Operations		$7,632,340
Net Income		
FY 2022-2023 Net Income		$975,959

One Billion Stories

Every data point in the CO APCD represents a real person—someone who sought care, managed a chronic condition, or worked to improve their health. These one billion claims tell the stories of Coloradans across every community, capturing the realities of health care in our state.

But these claims are more than stories from the past—they form the foundation for stories yet to be told. Stories where everyone has the opportunity to be healthy and access equitable, affordable, high-quality care.

As steward, CIVHC's role is to ensure the CO APCD continues to tell the true story of health care in Colorado. Our goal is rise to the challenges, support our partners, and help write the stories of a healthier future for Coloradans.

Appendix A: FY 2023-2024 CO APCD Data Requestors and Project Purposes

Change Agent Sector	Scholarship	Project Purpose	Product Type
Community-Based Organizations	No	This project examines end-of-life health care utilization and costs during the COVID-19 pandemic. By understanding the impact of the pandemic on medical and pharmacy costs, the findings can help shape future health care planning.	Custom Report
Community-Based Organizations	Yes	In preparation for a 2024 ballot initiative on reproductive rights, this project uses CO APCD data to estimate how many individuals on Medicaid and state-funded insurance could be impacted by the proposed constitutional amendment.	Custom Report
Community-Based Organizations	Yes	By analyzing health care costs for ovarian cancer patients, this study will quantify the financial benefits of a support program. The goal is to sustain funding and explore new models for delivering care to cancer patients in need.	Custom Report
Community-Based Organizations	No	This study evaluates the return on investment for providers participating in Health Information Exchange (HIE) services by comparing patient outcomes, helping to determine the value of these services for both patients and providers.	Evaluation / Research
Community-Based Organizations	Yes	A proof-of-concept evaluation for community health care services, this project looks at the gaps and strengths in rural health care delivery. By identifying mismatches between health care needs and available services, the findings will guide local policy decisions.	Limited Data Set
Community-Based Organizations	No	Aiming to improve access to care, this project evaluates whether a capital investment has led to an increase in primary care visits and reduced travel distances for patients in marginalized communities.	Evaluation / Research
Digital Health / Consultants	No	Aiming to better understand cancer treatment costs and utilization in Colorado, this initiative analyzes how different payer types and demographic factors impact cancer care. The findings will help make cancer treatment more affordable across the state.	De-Identified Data Set
Digital Health / Consultants	No	This analysis measures hospital mortality and complication rates by diagnosis and procedure, providing transparency to help patients and employers make better-informed health care choices and enabling hospitals to improve quality.	Limited Data Set

Change Agent Sector	Scholarship	Project Purpose	Product Type
Digital Health / Consultants	Yes	The project seeks to solve challenges around price transparency tools for consumers. By analyzing out-of-pocket spending, the initiative aims to build a more user-friendly tool to help Coloradans compare health care prices and save on medical costs.	Custom Report
Digital Health / Consultants	No	Supporting Accountable Care Organizations (ACOs) in managing value-based contracts, this project uses CO APCD data to help ACOs reduce medical costs, manage financial risk, and improve care quality across Colorado.	De-Identified Data Set
Digital Health / Consultants	No	This project analyzes gaps in behavioral health networks for Colorado Medicaid members, aiming to improve access by identifying network inadequacies and ensuring that more providers deliver services to those in need.	Limited Data Set
Digital Health / Consultants	No	This study evaluates the potential costs and benefits of offering doula services in the commercial insurance market in Colorado, aiming to understand how this addition could impact premiums, health outcomes, and economic factors.	Limited Data Set
Employer	Yes	By analyzing care-seeking patterns for residents of eight counties in Colorado, this project helps refine health plan design and improve access to local care, ultimately reducing travel and improving health outcomes for these communities.	Custom Report
Employer	No	By analyzing health care costs and utilization in their region, this employer alliance seeks to reduce the cost of health insurance and identify ways to provide care locally, avoiding the need for residents to travel to urban centers.	De-Identified Data Set
Government Agencies	Yes	With a focus on mental health services, this project looks at access disparities and ways to improve the overall patient experience for individuals across Colorado.	Custom Report
Government Agencies	No	This project supports Accountable Care Organizations (ACOs) in Colorado by providing data for value-based contracts. By analyzing risk, costs, and quality improvements, the project helps ACOs manage financial risks while improving patient care.	Limited Data Set
Government Agencies	No	This project analyzes prescription drug costs for pediatric patients, focusing on the top four commercial payers. By examining outpatient claims for a specific drug, the study evaluates changes in allowed amounts from 2018 to 2022 to support pricing transparency.	Custom Report

Change Agent Sector	Scholarship	Project Purpose	Product Type
Government Agencies	No	This analysis reviews hospital pricing practices across Colorado for a range of services, helping to identify how market factors influence health care costs and informing efforts to improve price transparency statewide.	Limited Data Set
Government Agencies	No	This annual report summarizes health care costs and claim volumes for commercial, Medicaid, and Medicare Advantage plans in Colorado. The data helps evaluate insurance payers and support health care cost regulation.	State Developement
Government Agencies	No	By examining inpatient hospital payments and case-mix data, this study supports efforts to understand acute care hospital payment variations across Colorado. The findings aim to improve e hospital payment models and cost efficiency.	State Developement
Government Agencies	No	This analysis identifies gaps in access to care across Colorado, providing insights into where providers are serving patients and where shortfalls exist. The findings help inform decisions to improve health care access in underserved areas.	State Developement
Government Agencies	No	Focused on prescription drug use, this report investigates high-volume drugs by payer, helping to identify trends in medication utilization and support cost control efforts across Colorado.	State Developement
Government Agencies	No	This analysis looks at key utilization metrics in Colorado, including admissions, discharges, and emergency department visits. The data helps policymakers understand health care service trends and guide future planning.	State Developement
Government Agencies	No	This project generates a report on Medicaid disenrollment and enrollment activities following the Public Health Emergency, helping to assess Medicaid program changes and support future budget decisions.	State Developement
Government Agencies	No	By summarizing costs for prescription drugs coded in commercial claims, this report supports efforts to evaluate drug pricing for potential importation and control medication costs for Colorado residents.	State Developement
Government Agencies	No	As part of the Value-Based Purchasing Contracts initiative, this project collects data on drug rebates and spending, helping to assess the financial impact of these contracts and improve pricing transparency in Colorado's health care system.	State Developement

Change Agent Sector	Scholarship	Project Purpose	Product Type
Government Agencies	No	This project supports a State of Colorado initiative to assess value-based payment models in primary care, pediatric, and maternity services. The findings will help evaluate how these payment models impact care quality and efficiency.	Limited Data Set
Government Agencies	No	Through access to the Data Mart, this project enables state analysts to review health care data across multiple payers, helping to ensure data quality and support a range of state-level health care initiatives, including rate reviews and parity checks.	State Developement
Government Agencies	No	This project produces reports on utilization, cost, and quality indicators to support improvements in care for safety-net populations, helping to enhance health outcomes for vulnerable groups across Colorado.	State Developement
Government Agencies	No	Data from this analysis supports the implementation of legislation governing out-of-network service reimbursement, helping to ensure fair compensation for providers and protect patients from excessive costs.	State Developement
Government Agencies	No	Focused on prescription drug use, this report investigates high-volume drugs by payer, helping to identify trends in medication utilization and support cost control efforts across Colorado.	State Developement
Government Agencies	No	This project focuses on the implementation of federal regulations requiring health care facilities to make price information public. The data will help evaluate the impact of these regulations on pricing transparency.	State Developement
Government Agencies	No	Collaborating with other state agencies, this initiative supports the development of rules for alternative payment models in primary care services. The findings will help improve care quality while controlling costs through innovative payment structures.	State Developement
Government Agencies	Yes	As part of a broader effort to improve outreach for marginalized populations, this analysis will inform decisions for a mobile health unit, using data on insurance coverage by race and ethnicity in each county to enhance service delivery.	Custom Report
Government Agencies	No	This report dives into health care coverage and payer types for American Indian and Alaska Native populations across Colorado. The insights will help guide funding and outreach efforts for better service delivery in underserved areas.	Evaluation / Research

Change Agent Sector	Scholarship	Project Purpose	Product Type
Government Agencies	No	This analysis reviews primary care spending as a percentage of total medical expenses, taking into account payments made through alternative payment models. The findings will support efforts to improve cost efficiency in primary care services across Colorado.	Custom Report
Government Agencies	No	By supporting the Prescription Drug Affordability Review Board, this project analyzes prescription drug costs with the goal of lowering prices for Colorado residents. The data will help inform policy decisions aimed at making medications more affordable.	Custom Report
Government Agencies	No	This project focuses on supporting actuarial reviews required by legislation, helping to assess medical expenditures and guide regulatory decisions regarding the pricing of health care services across the state.	Limited Data Set
Government Agencies	Yes	Looking at the burden of Long COVID, this study aims to estimate its prevalence in Colorado and associated health care costs. By identifying vulnerable populations, the project hopes to address disparities and improve support for those most affected.	Limited Data Set
Government Agencies	No	This project evaluates a digital health solution designed to help older adults maintain independence by preventing falls. By analyzing fall-related claims and costs, the project aims to highlight the effectiveness of the program and support future funding.	Limited Data Set
Government Agencies	No	This project evaluates whether increased health care contact following a Crisis Line call reduces the risk of suicide and other adverse outcomes, providing insights that could improve crisis response strategies.	Limited Data Set
Health Plans	No	Focused on increasing transparency, this analysis of medical costs and health care utilization in the commercial market will help identify areas to improve the affordability and quality of care for Colorado residents.	De-Identified Data Set
Health Plans	No	By linking CO APCD data with internal health plan data, this project tracks patients over time to understand how health outcomes and coverage evolve after individuals lose or change insurance, helping to improve continuity of care.	Limited Data Set
Researchers	No	By comparing utilization patterns and costs across both public and private health systems, this project looks at the effects of policies like COVID-19 measures and telehealth expansion. The goal is to highlight how different systems impact patient care and outcomes.	Limited Data Set

Change Agent Sector	Scholarship	Project Purpose	Product Type
Researchers	No	Focused on patients with type II diabetes, this evaluation will measure the impact of community health workers on health outcomes and cost savings over time. The analysis will help assess the effectiveness of these interventions across various risk groups.	Evaluation / Research
Researchers	No	By evaluating how primary care providers use a medication price transparency tool, this study will explore how price awareness at the point of prescribing affects clinical outcomes, medication adherence, and out-of-pocket costs for patients.	Fully-Identifiable Data Set
Researchers	No	This project analyzes the effects of hospital price transparency policies in Colorado, comparing changes in pricing practices before and after key policy implementations. The findings aim to provide insight into price fairness across health systems.	Fully-Identifiable Data Set
Researchers	No	Focused on the use of real-time benefit tools (RTBTs), this study examines how providing patients with out-of-pocket cost information influences their medication choices, adherence, and overall health care spending. The project will also explore the impact of these tools on the use of preventive care.	Limited Data Set
Researchers	No	This study evaluates the impact of reinsurance policies on the individual health insurance market in Colorado, focusing on how these policies affect competition, insurer behavior, and insurance affordability across the state.	Limited Data Set
Researchers	No	Aiming to understand how patients value different health plans, this study looks at the effects of network adequacy regulations on premiums and patient choices, helping to shape policies that improve health plan accessibility and value.	Limited Data Set
Researchers	No	This project uses machine learning to study wait times for surgical procedures, examining how different insurance plan characteristics, such as network size and utilization reviews, affect access to timely care for Coloradans.	Limited Data Set
Researchers	No	This analysis will shed light on out-of-pocket costs and balance billing in Colorado, helping to understand the financial burden on patients and how surprise billing laws impact both in-network and out-of-network health care spending.	Limited Data Set
Researchers	No	As part of an ongoing hospital price transparency study, this project analyzes pricing data from 2020-2022, providing insights into how COVID-19 impacted hospital costs and contributing to broader efforts to improve price transparency.	Limited Data Set

Change Agent Sector	Scholarship	Project Purpose	Product Type
Researchers	Yes	This retrospective study investigates pediatric emergency department visits for dental conditions in Colorado, analyzing factors like costs, frequency, and treatment types to understand the scale of this issue and guide future care improvements.	De-Identified Data Set
Researchers	Yes	This project explores the timeline and accuracy of PTSD diagnoses in Colorado, aiming to improve diagnostic processes by identifying how long it takes to diagnose PTSD and the associated costs of misdiagnosis or delayed diagnosis.	De-Identified Data Set
Researchers	Yes	By examining the utilization and costs of hearing health care services, such as cochlear implants and hearing aids, this study identifies disparities in access based on payer type, race, and geography, helping to improve care equity.	Fully-Identifiable Data Set
Researchers	Yes	This study assesses whether social vulnerability correlates with complications in surgical patients across Colorado, with the goal of improving health equity and ensuring fair access to quality surgical care.	Limited Data Set
Researchers	Yes	By using Colorado as a baseline, this project explores the effects of abortion bans on maternal health conditions in other states, helping to understand the potential health consequences of restricted access to reproductive care.	Limited Data Set
Researchers	Yes	This project investigates the causes and effects of pharmacy closures in Colorado, evaluating how closures impact patient access, out-of-pocket costs, and travel time to ensure residents have equitable access to pharmacy services.	Fully-Identifiable Data Set
Researchers	No	This project will analyze the impact of insurance company mergers with primary care providers on health care costs and patient outcomes in Colorado. Using CO APCD data, the study will assess changes in preventive care, referrals, and access to care.	Limited Data Set
Researchers	Yes	This project explores how health insurance plan choices evolve over time, particularly during economic or health-related disruptions, and investigates how these choices impact health care utilization.	Limited Data Set
Researchers	No	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.	Fully-Identifiable Data Set

Change Agent Sector	Scholarship	Project Purpose	Product Type
Researchers	No	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.	Fully-Identifiable Data Set
Researchers	No	Aiming to publish new research, this project will explore trends in health care spending and utilization in Colorado. It will examine how spending varies across income levels and insurance types, and whether insurance plan design plays a role in these differences.	Limited Data Set
Researchers	Yes	By studying trends in autism diagnoses and related health care needs, this analysis will provide insights into the prevalence of autism, health care costs, and the impact of insurance transitions at key points in a patient's life.	Fully-Identifiable Data Set
Researchers	No	This project looks at pediatric polypharmacy in Colorado, examining how often children are prescribed five or more medications and the associated health care costs, with the goal of improving medication safety for young patients.	Limited Data Set
Researchers	No	This project looks at private claims data from 2021-2023 to assess how Colorado Option standardized plans affect emergency services. It will compare patient presentation patterns between individuals with Colorado Option plans and those enrolled in non-standardized plans.	Limited Data Set

The CO APCD Supporting Policy

Appendix B: The CO APCD in Legislation

Year	Report	Mentioned in Legislation	Ongoing Analytics Included
2023	Limits on Hospital Facility Fees - HB23-1215*	☑	☐
2022	Actuarial Reviews Health Insurance Mandate Legislation - SB 22-040	☐	☑
2022	Behavioral Health Administration - HB 22-1278	☐	☑
2022	Hospital Nurse Staffing Standards - HB22-1401 (Long COVID Analysis)	☐	☑
2022	Coverage Requirements for Health Care Products - HB 22-1370*	☑	☑
2022	Primary Care Alternative Payment Models - HB 22-1325	☑	☑
2022	Provider Tool to View All-Payer Claims Database - SB 22-068	☑	☑
2021	Standardized Health Benefit Plan Colorado Option - HB 21-1232	☑	☑
2021	Colorado Prescription Drug Affordability Board - SB 21-175	☑	☑
2019	Investments in Primary Care to Reduce Health Costs - HB 19-1233	☑	☑
2019	Out-of-Network Health Care Services - HB 19-1174*	☑	☑
2018	Controlling Medicaid Costs - SB 18-266	☐	☐

Funding rolled into contracts or agency expenses.

Analyses Supporting Policy in Recent Years

🔓 Public Releases

ED for Mental Health Services

Evaluation of Top CPT Codes by Volume

Firearm Injury Analysis

Free Standing Emergency Departments

Ozone and Wildfire Impact on Health

🔒 Non-Public Releases

HB 23-1136 - Prosthetic Devices for Recreational Activity

Adverse Reactions to Vaccinations

End Stage Renal Disease and Dialysis Dependence, and Dialysis Facilities

Low Birthweight and Birth Outcomes

Opiate Physical Therapy

Rates of Youth Psychotropic Drug Prescriptions in Different Populations

Top 25 CPT Codes

Use of Mandatory Coverage of Behavioral Health Wellness Visits