CIVHC
CENTER FOR IMPROVING
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Data Release Application

Limited and Identifiable Extracts

Navigation

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Client Application Revision History

The following reflects the history of changes made to this document during the application process prior to project production. Once in production, any further changes to the application may result in additional cost and production delays.

To be completed by CIVHC staff			
Date	New Version Number	Description of Change(s)	CIVHC Change Author (full name, complete title)
12/3/2024	V.01	Initial version drafted with client.	Tamara Davis, CDPHE
12/4/2023	V.02	Revise narrative, update PHI justifications	Amanda Kim, CIVHC
12/9/2024	V.03	Add project schedule, revise data elements, add PHI justifications	Tamara Davis, CDPHE
12/10/2024	V.04	Remove paid date from PHI	Amanda Kim, CIVHC
12/16/2024	V.05	Add linkage detail	Tamara Davis, CDPHE
12/18/2024	V.06	Add historic project context	Amanda Kim, CIVHC
	V.07		
	V.08		
	V.09		
	V.10		

Data Release Application

Limited and Identifiable Extracts

Data Requestor Details

General Project Details

Project Title:	State Rational Services Areas Model Innovation
Application Start Date:	12/3/2024
Requested Project Delivery Date:	
Client Organization (legal name):	Colorado Department of Public Health and Environment – Primary Care Office
Client Organization Address:	4300 Cherry Creek Drive South Denver CO 80246
CIVHC can publicly share the Client Organization's name in its Change Agent Index.	☒ Yes ☐ No
To be completed by CIVHC staff	
CIVHC Contact (full name, complete title):	Amanda Kim
Project Number:	25.107.10
Condensed Project Title:	State Rational Services Areas

Project Contacts

Project Contact Name:	**Steve Holloway**
Title:	PCO Director
Email:	Steve.holloway@state.co.us
Phone Number:	303-246-5116
Analytic Contact Name:	**Tamara Davis**
Title:	PCO Program Manager
Email:	Tamara.davis@state.co.us
Phone Number:	720.998.7612

Invoice Contact Name:	**Tamara Davis**
Title:	PCO Program Manager
Email:	Tamara.davis@state.co.us
Phone Number:	720.998.7612
Data Release Fee Signatory:	**Chelsea Gilbertson**
Title:	Director of Procurement and Contracts
Email:	chelsea.gilbertson@state.co.us
Phone Number:	
Data Use Agreement Signatory:	**Joni Koenig**
Title:	CDPHE Privacy Officer
Email:	joni.koenig@state.co.us
Phone Number:	

Project Schedule and Purpose

Proposed Project Start Date[1]:	4/1/2025
Anticipated Project End Date:	12/31/2026
Proposed Publication or Release Date:	6/15/2026

1. Detail the specific research question(s) you are trying to answer or problem(s) you are trying to solve with this data request. Please list and number the individual questions.

This request is the next phase of 23.107.10 Development of State Rational Service Areas, reviewed by DRRC 12/7/22.

Individual research questions:

1. How can analysis of large claims datasets, examining the geographic origins (residence) and destination (points of service) of care, reveal access to care patterns which indicate "rational service areas" for primary, oral, behavioral, and perinatal health services?
2. Can this origin-destination analysis be used to more deeply elucidate factors (e.g., care intensity per capita, distance to care, topography, transportation, and rurality) that influence access to care patterns across different regions?
3. Can replicating this origin-destination analysis process for discrete population demographic subsets (e.g., race/ethnicity, income, Medicaid eligibility, and other social determinants of health) reveal new insights into access to care disparities at the rational service area level?
4. Can rational service area level analysis of ambulatory care sensitive conditions, social deprivation, and population health statistics (e.g., birth outcomes, age adjusted mortality, etc.) more deeply and precisely characterize the need for public investment in specific rational service areas as defined by this origin-destination model.
5. Can rational service area level analysis of SUD conditions, MAT treatment, and access to behavioral health care more deeply and precisely characterize the need for public investment in specific rational service sareas as defined by this origin-desination model.

[1] After all required documents have been signed, typical production time is 30-60 days for a Limited or Identifiable Extract. Anticipate a longer production period for projects including a Finder File or creation of a Member Match File.

2. Describe your methodology or how you will be using data from the Colorado All Payer Claims Database (CO APCD) to answer your research questions.

State Rational Service Areas (RSA) are defined by the Health Resources and Services Administration (HRSA) as a group of census tracks, county subdivisions, whole county or multiple whole counties creating a service area, with a population of less than 250,000 where the service area considers geography within 30 minutes of the population center, including drive time. RSA's can be limited by physical barriers, socioeconomic differences, established neighborhoods, or defined by attributes such as race, language or recent immigration status and overutilization of health care services.

This project seeks to refine and improve existing state RSAs and Health Professional Shortage Area (HPSA) models with data origin-destination modeling of travel patterns of Coloradoans as they acquire health care services. This will facilitate the discernment of "natural" boundaries of proposed RSAs. APCD data will provide required data points, specifically relating to patient's home address (origin) and addresses where they receive care (destination). Both data points will allow the PCO to determine how patients access primary health care services. Having race, ethnicity, age, and gender data will allow comparisons of travel patterns based on a variety of demographic factors. In addition, insurance information requested will be used to determine how patients of differing insurance will access care.

3. Explain how this project will benefit Colorado and its residents.[2]

Every Coloradan should be able to access the healthcare services they need within a reasonable distance from their home. For low-income, publicly insured, uninsured, and geographically isolated populations, additional public investment may be necessary to ensure adequate access to care that can protect and restore health. As stewards of these resources, the Primary Care Office has a responsibility to efficiently and effectively allocate funding in ways that maximize access, especially for underserved communities and taxpayers. This origin-destination analysis markedly improves how resource allocation decisions are made for more than $10 million in annual investments. Additionally, the Primary Care Office is obligated to share research findings with the public, academic institutions, and research partners like CIVHC. This collaboration is crucial for developing strategies that address social determinants of health, identify inefficiencies, and improve overall access to care.

4. Describe how your project will improve health care quality, increase health care value, or improve health outcomes for Colorado residents.[2]

[2] It is a statutory requirement for all non-public releases of CO APCD data to benefit Colorado or its residents. Contributions to generalizable knowledge alone are not sufficient to satisfy this requirement.

This project will inform policy decisions to improve the health of populations, with a focus on medically underserved and geographically isolated Coloradans.

Safety net clinic entities that employ clinicians may benefit from the state RSA plan in that their provider recruitment and retention costs will be reduced when clinicians receive incentives to practice in State-Designated Health Professional Shortage Areas (sHPSA) where their agencies are located. In excess of 5,000 health care sites could conceivably receive some direct or indirect benefit of RSA plan. Entities that employ clinicians in RSAs may experience reduced costs of clinical provider recruitment and retention. The magnitude of this effect is not precisely known but could be substantial in aggregate across all eligible safety net clinic sites.

Organizations that promote better access to health services for medically underserved populations may benefit from the assessment of need and the promotion of improved access for underserved people. Perhaps 15 to 20 organizations and advocacy groups may benefit from this plan in this way. Other state and local governments may benefit if Colorado is better able to assess and address access needs.

Costs associated with recruiting health care professionals to underserved Colorado communities can be substantial (in excess of $120,000 for certain physician specialties for example). Most Colorado Health Service Corps (CHSC) clinicians report that loan repayment had a meaningful effect on their decision on where to practice (program evaluation, 2017). Current CHSC employers report that loan repayment is an important component of their recruitment and retention strategy. Having an accurate state RSA plan will ensure that limited loan repayment recourses are directed to areas of the state with the greatest impact on the health of Coloradoans.

State financed practice incentives can lower employer retention costs. This is true even for those clinicians who do not ultimately receive a CHSC award but were motivated to apply for qualified employment for the prospect of educational loan repayment.

5. Health equity is defined as the state in which everyone has a fair and just opportunity to attain their highest level of health. Explain how your project addresses health equity.

This project advances health equity by analyzing travel patterns of individuals seeking primary, behavioral, and oral health care and using that data to inform policies that enhance access for underserved Colorado communities. By identifying where access is limited, we help direct resources to safety net providers and prioritize areas that need more workforce capacity, making it easier for patients to receive timely, quality care.

As these communities gain improved access, publicly insured patients may initially increase the demand for care and public financing. However, these costs are expected to be offset by preventing more expensive, complex health problems down the line. In other words, supporting equitable, early access pays off in better health outcomes and overall lower costs.

This approach also brings economic benefits. Communities gain new clinical and non-clinical jobs, and local spending on care remains in the community. Beyond direct health improvements, such as better mental health and reduced substance abuse, this project supports coordinated efforts with NGOs, advocacy groups, state agencies, and local governments. It provides the data and feedback loops communities need to guide decisions, evaluate outcomes, and maintain long-term, equitable health access.

By using data-driven strategies to remove barriers, our project ensures that everyone regardless of location, insurance status, or economic means can access the care they need, reinforcing both individual well-being and community health equity.

6. Describe any publication you plan to develop based on your use of CO APCD data, its intended audience, and whether it will be made publicly available.

Publicly available maps, primary care needs assessment, peer reviewed journals.

Data Matching and Linkage

Finder File

A Finder File is a file you submit to CIVHC with information about a pre-selected cohort for matching to CO APCD data. Ask your CIVHC Contact for more information about this process and requirements for Finder File submission.

Will you provide CIVHC with a Finder File as part of this project?

- ☒ No
- ☐ Yes

Member Match File

A Member Match File is a file that CIVHC creates on your behalf to send to a registry or other outside entity to create a crosswalk connecting data from the CO APCD to the other entity's data.

Does this project require the creation of a Member Match File?

- ☒ No
- ☐ Yes. Consult with your CIVHC Contact about completing a separate Data Element Selection Form specifying the data elements that should be used to create the Member Match File.

  Answer the following:

Who will receive the Member Match File?

Control Group

A Control Group is a group of individuals who can be used to compare against the cohort identified in the Finder File.

Will you need CIVHC to create a Control Group as part of this project?

- ☒ No
- ☐ Yes. Consult with your CIVHC Contact about completing a separate Control Group Data Element Selection Form specifying the data elements that should be used to define the Control Group.

Linkage

Data Linkage is a method of joining data from different sources together to create a new data set.

Will the CO APCD data be linked to another data source?

☐ No
☒ Yes. Answer the following:

What is/are the other data source/s?
Colorado Health Systems Directory Melissa https://www.melissa.com/company/about Amecian Community Survey and other Vital Statistics CO APCD data set- appending to data previously received from CIVHC
Who will perform the data linkage?
PCO staff
What identifying data elements will be used to perform the data linkage?
Colorado Health Systems Directory: Clinician NPI; Clinician Name; Clinicain DOB to determine clinican home address to excluce home addresses from the Health Systems Directory. Melissa (https://www.melissa.com/company/about/); to call race/ethnicity, we need complete birthdate, full name, and home address. Only those PII will be sent in the call. No other data is needed or will be used for this purpose. Demographic data returned from Melissa will be appended to our dataset. We would like to apply this same process to this data request and amend our use permissions for the 2021 data set to allow this process. ACS and other vital statistics will be analysed in relationship to the SRSAs we create as an output of this process. We do not anticipate any analysis that would directly link ACS to the requested dataset. Demographic data returned from Melissa, that are specifically of interest to SDoH, will be linked to individual records in this dataset. This will be essential for analysis of demographic variation in access. We are open to discussing more advanced privacy/confidentiality protections to access and use given the potential for this kind of linkage.

What non-CO APCD data elements will appear in the new linked file?
Append race/ ethnicity/ gender data to clinician records to analyze concordance of race/ethnicity/ gender between patient and clinician. https://www.melissa.com/company/about/ Demographic data returned from Melissa will be appended to our dataset. We would like to apply this same process to this data request and amend our use permissions for the 2021 data set to allow this process. ACS and other vital statistics will be analysed in relationship to the SRSAs we create as an output of this process. We do not anticipate any analysis that would directly link ACS to the requested dataset. Demographic data returned from Melissa, that are specifically of interest to SDoH, will be linked to individual records in this dataset. This will be essential for analysis of demographic variation in access. We are open to discussing more advanced privacy/confidentiality protections to access and use given the potential for this kind of linkage.

Data Inclusion Criteria

Make selections in the following sections based on what data you want to have included in this extract. If you will be creating a Control Group, complete this section for your study population and not the Control Group.

Protected Health Information (PHI)

Indicate which Protected Health Information data elements you require for your project purpose:

Available for Limited and Identifiable extracts:		
☒ Member 5-Digit Zip Code	☐ Member County	☒ Member City
☒ Member Dates of Service	☒ Member Eligibility Dates	☐ Claim Paid Dates
☐ Employer Name	☒ Member Census Tract	☐ Member Census Block
☐ Member Census Block Group		
Available for Identifiable extracts only (see also Identifiable Data Use Approval):		
☒ Member Name	☒ Member Date of Birth (if requesting more than year only)	
☒ Member Street Address	☒ Member Latitude and Longitude	

Provide detailed justification for the inclusion of all PHI data selected above, and explain how its inclusion meets the Minimum Necessary Requirement.[3]
COMPLETE ADDRESS (Street, City, ZIP): The origin component of the origin-destination model is most effective and insightful when a specific geographic location is applied. MEMBER LAT/LONG and Census Track: The origin component of the origin-destination mode is most effective and insightful when a specific geographic location is applied; in addition-geocoding addresses and obtaining census tracks after receiving the file takes months to complete, this will accelerate the process. We use lat/long to create the origin/destination model. Residential street address is necessary for our call to Melissa for demographic data. If we have to choose one or the other, we would prefer a street address/city/state/zip. DATE OF BIRTH: When associated with a full name, the date of birth enables the reliable identification and analysis of a range of demographic data that are or are linked to certain social determinants of health, such as race/ethnicity, income, education level, and employment status. Additionally, this information facilitates the study of access characteristics associated with specific age groups, including pediatric and geriatric access. FULL NAME: When combined with the date of birth, a full name allows for the reliable identification and analysis of demographic data connected to social determinants of health. This process will require use of a third-party data vendor under contract with the Primary Care Office. DATES OF SERVICE: Utilizing dates of service will allow for analysis of origin-destination over time. This variable will be utilized to determine travel patterns that occur for care across time and research seasonality of travel patterns.

Line(s) of Business

- ☒ Commercial Payers
- ☒ Health First Colorado (Colorado's Medicaid and CHP+ programs)[4]
- ☒ Medicare Advantage
- ☒ Medicare Fee for Service (FFS)[5]

Year(s) of Data

☐ 2012	☐ 2013	☐ 2014	☐ 2015	☐ 2016	☐ 2017
☐ 2018	☐ 2019	☐ 2020	☐ 2021	☒ 2022	☒ 2023
☐ 2024[6]					

Claim Type(s)

- ☐ Inpatient Facility
- ☒ Outpatient Facility
- ☒ Professional
- ☒ Pharmacy
- ☒ Dental

Financial Detail by Line Item

- ☐ Charged Amount
- ☐ Allowed Amount
- ☐ Plan Paid Amount
- ☐ Plan Pre-Paid Amount
- ☐ Member Copay
- ☐ Member Deductible
- ☐ Member Coinsurance
- ☐ Total Member Liability

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[3] Limited and Identifiable extracts must adhere to the Minimum Necessary Requirement under the HIPAA Privacy Rule; only that data required to answer the project purpose can be included in the request.

[4] Medicaid-only data requests must be approved by the Colorado Department of Health Care Policy and Financing.
[5] Medicare FFS data are not available for all requests and must go through a separate approval process.
[6] This year's data is incomplete and not fully adjudicated. Consult with your CIVHC Contact to find out what data is available at the time of your request.

Filter Criteria – Services, Providers, Facilities

If you need data for specific services, providers and/or facilities, specify that filter criteria below (ask your CIVHC Contact about including an additional file with this application for large code lists):

ICD Diagnosis Code(s):
Procedure(s) (list CPT, HCPCS, DRG, ICD, and/or CDT codes):
Drug(s) (list pharmacy NDC and/or HCPCS codes):
Facility Type(s):
All outpatient
Facilities (list NPIs and/or Pharmacy IDs):
Facilities within these geographical areas (list county, zip code, Census Tract, etc.):
Provider Type(s):
All
Provider(s) (list NPIs):
Providers within these geographical areas (list county, zip code, Census Tract, etc.):
Specific payers (minimum of five):

Other claim specification:

Filter Criteria – Members/Patients

If you need data for specific member/patient groups, specify that filter criteria below (ask your CIVHC Contact about including an additional file with this application for large code lists):

Ages:		
☐ At the time of service	☐ At year end	☐ By another anchor date: *Specify here*
With these ICD Diagnosis Code(s):		
Who have had the following procedure(s) (list CPT, HCPCS, DRG, ICD, and/or CDT codes):		
Within these geographical areas (list county, zip code, Census Tract, etc.):		

Value-Add Data Elements

- ☐ Medicare Severity Diagnosis Related Group Codes (MS-DRGs)
- ☐ 3M All Patient Refined Diagnosis Related Group Codes (3M APR DRGs)
- ☐ Medicare Repricer (available at the claim line level)
- ☐ Fields from the American Community Survey (available at the Census Tract level):

Specify here

Additional Documentation

Data Element Selection Form (DESF)

The Data Release Application must be accompanied by a completed Data Element Selection Form. Ask your CIVHC Contact for more information about completing this form.

☒ By checking this box, the Client Organization confirms that the Data Element Selection Form has been completed.

☐ If applicable, by checking this box the Client Organization confirms that a separate Member Match File Data Element Selection Form has been completed.

☐ If applicable, by checking this box the Client Organization confirms that a separate Control Group Data Element Selection Form has been completed.

Identifiable Data Use Approval

If you are requesting Identifiable information, approval from an Institutional Review Board (IRB) or a Privacy Board is required before such data can be released.

☐ Not applicable; the Client Organization is requesting a Limited Extract.

Approval Type

☐ IRB Approval

☐ Privacy Board Approval

Approval Type

☐ Approval request not yet submitted.
Anticipated submission date:

☐ Approval request submitted and under review.
Anticipated project approval date:

☐ Approval already received.

Approval Documentation

☐ By checking this box, the Client Organization confirms that the IRB or Privacy Board **application and approval documents** have been provided to CIVHC.

Data Management Plan

An organization requesting CO APCD data must submit an organizational Data Management Plan to CIVHC outlining the organization's data security and data management policies and procedures to safeguard the data. This Data Management Plan must be approved by CIVHC prior to any data release.

Date Submitted to CIVHC:	
Date Approved by CIVHC:	

Client Acknowledgements and Signatures

Report or Product Distribution

If your project results in the production of a report for public distribution in any format (print, electronic, lecture, slides, etc.), including peer-reviewed publication, it must be submitted to CIVHC for review prior to public release. CIVHC will assess compliance with CMS Cell Size Suppression Policy, risk of inferential identification, CIVHC and CO APCD citations, and consistency with the purpose and methodology described in this Data Release Application. CIVHC will not assess the accuracy of the study results or attempt to recreate results.

This requirement is further defined in the Data Use Agreement. Failure to pursue and obtain CIVHC approval prior to publication will be a violation of the Data Use Agreement and may put the organization's future access to data from the CO APCD at risk.

☒ By checking this box, the Client Organization acknowledges this requirement.

Data Destruction Period

All data must be destroyed within 30 days of the project end date. If your project end date changes from this application, please reach out to your CIVHC Contact for a project extension request form.

☒ By checking this box, the Client Organization acknowledges that CIVHC's Data Destruction Certificate[7] must be completed and returned to DataCompliance@CIVHC.org by 1/31/2027 based on the Anticipated Project End Date.

[7] Available on the Data Release Application and Documents page of CIVHC's website under *Privacy, Security, and Regulatory Information*.

Data Users

List any individuals that will be working with the data. The Data Use Agreement must be updated through your CIVHC Contact every time individuals are granted access to the data during the course of the project.

Full Name	Title/Role	Organization
Tamara Davis	Program Manager	CDPHE
Stephen Holloway	Branch Manager	CDPHE
Holly Mask	HPSA Analyst	CDPHE
Devon Cochenour	President	CCITec
Darren Steinbach	Developer	CCITec

Data Release Application Version Approvals

The Client Organization has reviewed and confirms that the final version number of the Data Release Application reflected below correctly represents the project objectives.

Version	Checkpoint
V.04	Presented at CIVHC Application Review
V.05	Presented to the Data Release Review Committee (DRRC)
V.00	Final version approved for production

CIVHC Sign-Off		Receiving Organization Sign-Off	
Signature:		Signature:	
Name:		Name:	
Title:		Title:	
Date:		Date:	

Data Element Selection Form Version Approvals

The Client Organization has reviewed and confirms that the final version number of the Data Element Selection Form reflected below correctly represents the data specifications needed to meet the project objectives.

Version	Checkpoint
V.05	Presented at CIVHC Application Review
V.05	Presented to the Data Release Review Committee (DRRC)
V.00	Final version approved for production

CIVHC Sign-Off		Receiving Organization Sign-Off	
Signature:		Signature:	
Name:		Name:	
Title:		Title:	
Date:		Date:	