DATA RELEASE APPLICATION

LIMITED AND IDENTIFIABLE EXTRACT

APPLICATION NAVIGATION

Data Release Application
Limited and Identifiable Extract

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
9/13/2023	V.01	Initial version drafted with client.	Mason Thaxton, Health Data Consultant
10/4/2023	V.02	Updated Draft after CSSI review	Mason Thaxton, Health Data Consultant
11/21/2023	V.03	Pre DRRC Meeting	Mason Thaxton, Health Data Consultant
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Data Release Application
Limited and Identifiable Extract

DATA REQUESTOR DETAILS

General Project Details

Project Title:	An Examination of the Determinants of Health Care Choice and Consumption
Application Start Date:	8/8/2023
Requested Project Delivery Date:	12/15/2023
Client Organization:	UC Irvine, Department of Economics
Client Organization Address:	3151 Social Sciences Plaza, Irvine, CA 92697-5100
To be completed by CIVHC staff	
CIVHC Contact:	Mason Thaxton
Project Number:	24.09
Condensed Project Title:	Healthcare Choice & Consumption

Project Contacts

Project Contact Name:	Marion Aouad
Title:	Assistant Professor of Economics
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Analytic Contact Name:	Marion Aouad
Title:	Assistant Professor of Economics
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Invoice Contact Name:	Laura Robledo-Vega
Title:	Economics Department Analyst
Email:	robledol@uci.edu
Phone Number:	(949) 824-4834

Data Release Fee Signatory

Name:	Laura Robledo-Vega
Title:	Economics Department Analyst
Email:	(949) 824-4834

Data Use Agreement Signatory

Name:	Marion Aouad
Title:	Assistant Professor of Economics
Email:	510-852-9851

PROJECT SCHEDULE AND PURPOSE

Proposed Project Start Date[1]:	3/1/2024
Anticipated Project End Date:	12/15/2028
Proposed Publication or Release Date:	12/15/2028

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

Understanding the factors influencing health insurance decisions, such as health plan selection, is of critical importance. This is because access to high-quality and/or affordable health care via one's insurance plan can have substantial impacts on health outcomes (e.g., Brot-Goldberg et al. 2017). However, little is known about how the types of health plans selected by individuals *varies over time*, and what factors may influence this variation, as many studies tend to focus on health plan selection at a single point in time. Thus, the research question posed in this study is: *how do the types of health plans held by individuals/families vary over time, particularly as macroeconomic and health shocks occur? Moreover, how does subsequent health care utilization vary with the health plan selected?[1]* To address these questions, this study will examine whether people continue to choose/hold the same health plan over time (i.e., examine if there is persistence in health plan selection) or do not, with a focus on how the presence of macroeconomic shocks or health shocks affects the types of health plan held. This study will also examine how health care utilization responds to the plan changes. Further, this study will examine how the presence of family/variation in family size affects these health plan decisions since the presence of family members may be a friction to health plan switching (e.g. Aouad 2023).

1. *How do the types of health plans held (by individuals/families) vary over time, particularly as macroeconomic and health shocks occur?*

2. *Moreover, how does subsequent health care utilization vary with the health plan selected?*

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.

This study will use a number of empirical methods, including difference-in-difference models as well as event-study models. The underlying premise behind these models is to follow the

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[1] After all required documents have been signed and the Data Release Review Committee has approved the project, 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.

individuals of interest (i.e. those exposed to the above-mentioned shocks) in the CO APCD before and after the shock occurs to see how their health care behaviors change in response to the shock. Control groups, formed from within the dataset, will also be used to construct the counterfactual (i.e. what would the behavioral responses be in the absence of the shock?) to better estimate causal effects. The health shocks to be examined include unexpected, medical events. Examples of unexpected, medical events include heart attacks, strokes, and cancer diagnoses.

Additionally, I am requesting ten years of data. The reason for this is that this study will follow individuals over time (before and after their shocks), where, in some instances, the shock will occur for different individuals in different years. As an example, a health shock may occur for individual 1 in 2013 vs. a health shock occurring in 2018 for individual 2. Thus, analyzing ten years of data ensures that there is sufficient time to observe individuals in the years before and after their shocks.

Moreover, ten years of data should ensure sufficient variability in the macroeconomic cycle so that there are enough macroeconomic shocks to analyze. Ten years of data should ensure this criteria is met since the average business cycle length, which includes economic expansions and contractions/recessions, is approximately 5.5 years. Thus, ten years of data allows for the observation of approximately two business cycles.

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

This project will benefit Colorado by providing insight into the determinants of health plan choice and health care utilization of Colorado residents. Understanding these choices is of critical importance for policy makers as it allows them to better understand the factors affecting plan choice, including the mitigating circumstances surrounding choices. With this knowledge, policy makers can better design socially optimal policy to affect groups who may be vulnerable/susceptible to inadequate health care coverage. For instance, if less generous health plans are selected during recessions (e.g. due to income loss), and subsequent health care utilization falls such that residents under-consume "high-value" health care, this could have negative impacts on the shorter- and longer-run health outcomes of Colorado residents.

Thus, with the knowledge gained from the proposed study, policy makers (e.g. state/local officials) will be better equipped to anticipate the above described risks before they materialize. As such, they can design policies and incentives, such as health care subsidies or income support to maintain adequate and continued access/consumption of necessary health care (e.g. annual vaccinations or check-ups), to mitigate the above described risks.

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[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.

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

> This project will help improve the health of populations. This is because this project seeks to understand the determinants of health plan choice and its subsequent effects on health care utilization. Specifically, with the knowledge gained from this study, policy makers can better design socially optimal policy to affect groups who may be vulnerable/susceptible to inadequate health care coverage and utilization. For instance, if we learn from this study that during recessions, people are *more likely to remain insured, but* opt for high deductible health plans (HDHPs) and reduce their health care consumption as a result of the higher associated medical costs, this implies that people are less likely to seek important medical care during recessions. The reduced health care utilization likely occurs because of reductions in (expected) income, but also because the real cost of care (through e.g. HDHPs) has increased.
> With the insights generated from this study, policy makers may consider policies that expand the eligibility requirements for Medicaid (which may provide more affordable and comprehensive insurance) or provide cash supplements targeted at easing the costs associated with health care utilization.

5. Health equity is 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 will help policy makers better understand the factors influencing health plan selection. This is relevant for understanding what factors may promote the selection of "sub-optimal" health plans (e.g. selecting a less generous health plan even though an individual/their family may have expensive upcoming medical needs). With this information, Colorado policymakers can better understand which groups to target for intervention (e.g. through health care subsidies) and around what times (e.g. during recessionary periods) in order to ensure high quality access to health care for all Colorado residents.

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. Answer the following:

Who will receive the Member Match File?
Please specify here.

What data elements will be required in the Member Match File?
Please specify here.

Control Group

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

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

☒ No
☐ Yes. Consult with your CIVHC Contact about completion of an additional Data Element Selection form for your 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)?
Please specify here.

Who will perform the data linkage?
Please specify here.

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What identifying data elements will be used to perform the data linkage?
Please specify here.

What non-CO APCD data elements will appear in the new linked file?
Please specify here.

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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

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 Census Tract	☐ Member County
☐ Member City	☒ Member Eligibility Date	☒ Employer Tax ID
☒ Member Dates of Service		
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 Geocoded Address	
Provide detailed justification for the inclusion of all PHI data selected above.[3]		

I am requesting the member 5-digit zip code in order to map the member location to local, geographic characteristics, such as the median income and racial composition of the geographic area. These statistics are reported by agencies such as the US Census Bureau. This information will be useful for heterogeneity analyses so as to understand if behavioral health responses vary along some of these local, geographic characteristics (e.g. capturing lower-income vs. higher-income responses).

I am requesting member eligibility date because the analysis will examine whether people change their health plans in response to shocks; therefore, it is necessary to know the dates in which individuals are enrolled in a specific health plan (i.e. the dates of their health plan eligibility). Thus, the member eligibility date will allow me to capture if/when people change health plans in response to shocks.

I am requesting the member dates of services because the analysis will examine when (and how much) health care is consumed in response to changes in the health plan selected. Therefore, it is critical to know the date that the health care is consumed, particularly as it relates to the date the health plan is held.

The employer tax id is a mediating variable. It is needed to examine whether people stay at the same firm/job after the health shock. This can help explain why people remain/do not remain with the same health plan after a shock is experienced.

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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.

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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[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	

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):
Please specify here.
Procedure(s) (list CPT, HCPCS, DRG, ICD, and/or CDT codes):
Please specify here.
Drug(s) (list pharmacy NDC and/or HCPCS codes):
Please specify here.
Facility Type(s):
Please specify here.
Facilities (list NPIs and/or Pharmacy IDs):
Please specify here.
Facilities within these geographical areas (list county, zip code, Census Tract, etc.):
Please specify here.
Provider Type(s):

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[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. Consult with your CIVHC Contact to find out what data is available at the time of your request.

Please specify here.
Provider(s) (list NPIs):
Please specify here.
Providers within these geographical areas (list county, zip code, Census Tract, etc.):
Please specify here.
Specific payers (minimum of five):
Please specify here.
Other claim specification:
Please specify here.

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:		
Please specify here.		
☒ At the time of service.	☐ At year end	☐ By another anchor date: Please specify here.
With these ICD Diagnosis Code(s):		
Please specify here.		
Who have had the following procedure(s) (list CPT, HCPCS, DRG, ICD, and/or CDT codes):		
Please specify here.		
Within these geographical areas (list county, zip code, Census Tract, etc., in keeping you're your selected Protected Health Information):		
Please specify here.		

Value-Add Data Elements

Indicate which (if any) of the following value-add options you would like included with this extract:

☐ Medicare Severity Diagnosis Related Group Codes (MS-DRGs)
☐ 3M All Patient Refined Diagnosis Related Group Codes (3M APR DRGs)
☐ Medicare Repricer
☐ Fields from the American Community Survey:

Please specify here.

ADDITIONAL DOCUMENTATION

Data Element Selection Form

The Data Release Application must be accompanied by a completed Data Element Selection Form to be reviewed internally and by the Data Release Review Committee. Ask your CIVHC Contact for more information about completing this form.

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☐ By checking this box, the Client Organization confirms that the 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

State of Approval

☒ Approval request not yet submitted.
    Anticipated submission date: 12/15/2023

☐ Approval request submitted and under review.
    Anticipated project approval date: Click or tap to enter a 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.

☐ Submitted to CIVHC on Click or tap to enter a date.
☐ Approved by CIVHC on Click or tap to enter a date.

CLIENT ACKNOWLEDGEMENTS AND SIGNATURES

Change Agent Index

CIVHC can publicly share the Client Organization's name in its Change Agent Index.

☐ Yes   ☐ No

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 suppression rules, 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 Click or tap to enter a date based on the Anticipated Project End Date.

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.

Name	Role	Organization
Marion Aouad	Assistant Professor of Economics	University of California Irvine
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[7] Available on the Data Release Application and Documents page of CIVHC's website under *Privacy, Security, and Regulatory Information*.

Data Release Application Version Approvals

Checkpoint 1: Preparation for CIVHC's internal Application Review Meeting

The Client Organization has reviewed and confirms that V.02 of this Data Release Application represents the correct details to meet the project objectives.

CIVHC Sign-Off		Receiving Organization Sign-Off	
Initials:	MT	Initials:	MA
Name:	Mason Thaxton	Name:	Marion Aouad
Title:	Health Data Consultant	Title:	Assistant Professor of Economics
Date:	10/4/2023	Date:	10/4/2023

Checkpoint 2: Preparation for presentation to the Data Release Review Committee

The Client Organization has reviewed and confirms that V.   of this Data Release Application represents the correct details to meet the project objectives.

CIVHC Sign-Off		Receiving Organization Sign-Off	
Initials:	MT	Initials:	MA
Name:	Mason Thaxton	Name:	Marion Aouad
Title:	Health Data Consultant	Title:	Assistant Professor of Economics
Date:	11/27/2023	Date:	11/27/2023

Checkpoint 3: Final approval to begin project production

The Client Organization has reviewed and confirms that V.   of this Data Release Application represents the correct details to meet the project objectives.

CIVHC Sign-Off		Receiving Organization Sign-Off	
Signature:		Signature:	
Name:	Click or tap here to enter text.	Name:	Click or tap here to enter text.
Title:	Click or tap here to enter text.	Title:	Click or tap here to enter text.
Date:	Click or tap to enter a date.	Date:	Click or tap to enter a date.

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Data Element Selection Form Version Approvals

Checkpoint 1: Preparation for CIVHC's internal Application Review Meeting

The Client Organization has reviewed and confirms that V.   of the Data Element Selection Form represents the correct details to meet the project objectives.

CIVHC Sign-Off		Receiving Organization Sign-Off	
Initials:	MT	Initials:	MA
Name:	Mason Thaxton	Name:	Marion Aouad
Title:	Health Data Consultant	Title:	Assistant Professor of Economics
Date:	11/1/2023	Date:	10/4/2023

Checkpoint 2: Preparation for presentation to the Data Release Review Committee

The Client Organization has reviewed and confirms that V.   of the Data Element Selection Form represents the correct details to meet the project objectives.

CIVHC Sign-Off		Receiving Organization Sign-Off	
Initials:	MT	Initials:	MA
Name:	Mason Thaxton	Name:	Marion Aouad
Title:	Health Data Consultant	Title:	Assistant Professor of Economics
Date:	11/27/2023	Date:	11/27/2023

Checkpoint 3: Final approval to begin production

The Client Organization has reviewed and confirms that V.   of the Data Element Selection Form represents the correct details to meet the project objectives.

CIVHC Sign-Off		Receiving Organization Sign-Off	
Signature:		Signature:	
Name:	Click or tap here to enter text.	Name:	Click or tap here to enter text.
Title:	Click or tap here to enter text.	Title:	Click or tap here to enter text.
Date:	Click or tap to enter a date.	Date:	Click or tap to enter a date.