



# Data Release Application

## Limited and Identifiable Extracts

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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)
8/16/2023	V.01	Initial version drafted with client.	Mason Thaxton, Health Data Consultant
7/30/2024	V.02	Updates after feasibility meeting	Mason Thaxton, Health Data Consultant
8/20/2024	V.03	Edits from Brent Kious	Mason Thaxton, Health Data Consultant
9/4/2024	V.04	Application Version Update	Mason Thaxton, Health Data Consultant
	V.05		
	V.06		
	V.07		
	V.08		
	V.09		
	V.10		

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## Data Requestor Details

### General Project Details

Project Title:	23.72 Impact of a mobile phone crisis text messaging application on the spatiotemporal distribution of mental health outcomes among adolescents
Application Start Date:	5/9/2023
Requested Project Delivery Date:	9/30/2024
Client Organization (legal name):	University of Utah Department of Psychiatry
Client Organization Address:	501 Chipeta Way, Salt Lake City, UT 84108
To be completed by CIVHC staff	
CIVHC Contact (full name, complete title):	Mason Thaxton
Project Number:	23.72
Condensed Project Title:	Crisis Text Messaging

### Project Contacts

<b>Project Contact Name:</b>	Brent Kious, MD, PhD
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<b>Analytic Contact Name:</b>	Brent Kious, MD, PhD
Title:	Assistant Professor
Email:	Brent.kious@hsc.utah.edu
Phone Number:	801-585-1418

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<b>Invoice Contact Name:</b>	Erin Saunders
Title:	Manager, Accounting and Finance (Research)
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<b>Data Release Fee Signatory:</b>	Brent Brown
Title:	Director, Office of Sponsored Projects
Email:	Brent.brown@osp.utah.edu
Phone Number:	801-581-3003
<b>Data Use Agreement Signatory:</b>	Brent Brown
Title:	Director, Office of Sponsored Projects
Email:	Brent.brown@osp.utah.edu
Phone Number:	801-581-3003

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### Project Schedule and Purpose

Proposed Project Start Date <sup>1</sup> :	11/1/2024
Anticipated Project End Date:	10/31/2027
Proposed Publication or Release Date:	4/1/2028

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.

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<sup>1</sup> 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.

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Suicide was the second leading cause of death for teens and young adults (“youth”) in Utah and the U.S. generally from 2014-2019. Utah’s 2019 suicide rate among 15-24-year-olds was twice as high as the rest of the country.<sup>1</sup> It was the second leading cause of death for youth in Colorado.<sup>1</sup> Utah, Colorado, and the rest of the U.S. have experienced marked increases suicide risk among youth since 1999, emphasizing the need to identify and expand evidence-based approaches to suicide prevention. Suicide varies geographically in the U.S.,<sup>2,3</sup> however, and a variety of geographically-distributed factors have been associated with suicide risk, including rurality, population density, altitude, socioeconomic status, groundwater lithium levels, air pollution, the concentration of military veterans, substance use, community resources, and firearm ownership, among others.<sup>4-14</sup> Perhaps most importantly, access to mental health care in rural areas is also frequently limited.<sup>15-17</sup> Accordingly, new strategies to provide mental health care, including suicide prevention and crisis services, in areas with limited access are needed. In response the University of Utah with state government support, developed a statewide, smartphone-based text-message crisis system known as SafeUT.

To date, there is limited evidence that text-message crisis systems are effective with respect to reducing youth suicide or improving other mental health outcomes. There is also limited information regarding what determines the uptake of such services; many such factors are likely to be geographically distributed. **The overall goal of our study is, therefore, to evaluate whether SafeUT is effective with respect to key youth mental health outcomes, and to identify geographically-varying determinants of health that limit its reach and impact.** A thorough evaluation of SafeUT may also provide generalizable information that could impact similar national services, such as Crisis Text Line.<sup>21</sup>

To establish a robust comparator, we would like to use Colorado APCD hospitalization and ED visit data for youth, as Colorado has not implemented a program like SafeUT.

### *Individual research questions:*

- i. To identify sociodemographic and economic determinants of health that are associated with regional utilization of SafeUT in Utah from 2017-2022.
- ii. To examine potential associations between geographically-distributed utilization of SafeUT and utilization of other healthcare resources, including emergency room visits and psychiatric admission, among adolescents in Utah from 2012-2022, comparing changes in Utah to those observed in Colorado.
- iii. To examine bidirectional associations between geographically-distributed rates of utilization of SafeUT and geocoded deaths among youth in Utah from 2012-2022, including deaths coded as suicides, deaths due to overdose or poisoning, and deaths of undetermined cause.

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- iv.
- v.
- vi.
- vii.
- viii.

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.

To address these questions, we will utilize geolocation information from SafeUT encounters and geographically-labeled data regarding demographic variables, hospitalizations, outpatient visits, and ER visits across Utah. Relevant outcomes will be determined from unparalleled data sources available in Utah, including the Utah Population Database, a comprehensive data resource providing demographic, medical, and genealogical information for Utah residents, and the Utah State Office of the Medical Examiner, which curates state-wide death records. To establish a robust comparator, we will use Colorado APCD hospitalization and ED visit data for youth, as Colorado has not implemented a program like SafeUT. We are requesting 2012-present data to allow 5 years of lead time to establish pre-implementation trends in Utah and corresponding comparison in Colorado. We will apply a causal framework to interpret these four data streams. Specifically, we will adapt Bayesian spatio-temporal analysis methods, including Integrated Nested Laplace Approximation, to produce interrupted time series and difference-in-difference analyses that allow us to model SafeUT as a temporally- and spatially-distributed intervention."

3. Explain how this project will benefit Colorado and its residents.<sup>2</sup>

This project proposes to measure the impact of a crisis text-message app in Utah, using Colorado APCD data as a control condition. Our goal is to evaluate whether the outcomes of interest, such as youth ER visits for suicide attempts, changed more or differently in Utah during the study period than they did in Colorado. Nevertheless, the project promises important benefits for Colorado and its residents. First, the app--SafeUT--represents a highly generalizable approach to crisis care that could feasibly be adopted in other states, and promises greater benefits in states like Utah and Colorado that have relatively large rural populations with limited access to in-person mental health services. Indeed, SafeUT itself is potentially adaptable to other states and has recently been considered for adoption by four other states. Second, the project in question will evaluate how spatio-temporally distributed social determinants of health affect youth suicide

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<sup>2</sup> 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.

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rates, youth psychiatric hospitalization and psychiatric ER use, and use of other crisis resources. Findings from this component of the project could identify other modifiable social risk factors for youth suicide, suggesting additional interventions that could be implemented in Colorado as well as in Utah. Finally, with the widespread adoption of the national 988 suicide crisis line and its associated text-message services, which is also occurring in Colorado, it is critically important to evaluate the effectiveness of crisis lines and text-message crisis services generally in order to facilitate ongoing quality improvement efforts.

4. Describe how your project will improve health care quality, increase health care value, or improve health outcomes for Colorado residents.<sup>2</sup>

If successful, the project proposed will contributing to improving the health of populations and, potentially, reducing the per capita cost of health care. The central goal of the project is to determine whether crisis text messaging helps promote youth mental health and reduce youth suicide death. We have early evidence that since SafeUT was implemented, youth ER visits for suicidal ideation have increased in frequency, while ER visits for suicide attempts have fallen significantly. This tentatively suggests that SafeUT is encouraging youth to seek treatment for suicidal ideation before they make suicide attempts. Thus, demonstrating the effectiveness of SafeUT and, by extension, similar programs would increase the impetus for their adoption nationally. Conversely, if there is little evidence that SafeUT has changed key mental health outcomes in Utah compared to Colorado, this would raise important questions about its value.

Similarly, it is reasonable to expect that early intervention and increased access to mental health care will reduce long term costs of mental health care for youth and others. Thus, evaluating the effectiveness of SafeUT is central to efforts to improve the efficiency with which mental health care resources are distributed.



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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.

The SafeUT app is freely available and offers services at no cost. Evaluating the effectiveness of SafeUT, which is aimed specifically at increasing access to mental health services for persons in crisis, clearly supports the goal of ensuring that everyone has access to the care they need when they need it.

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.

We will publish results involving our analysis of CO APCD data, together with data from Utah, in a series of papers. We anticipate that we will submit for publication at least one paper comparing changing rates of outpatient, emergency room, and hospital use among the target age group between Utah and Colorado, but may break this larger paper up into several smaller ones. We will plan to submit our publication to a journal focused on psychiatric service delivery (such as Psychiatric Services or Crisis) or to journals focused on social geography, e.g., Social Science and Medicine). We may also report results of our research in the annual SafeUT Report (see, e.g., <https://safeut.org/sites/g/files/zrelqx271/files/media/documents/2023/2023-SafeUT-Annual-Report.pdf>), which describes the ongoing work of the SafeUT app and the SafeUT research program to key stakeholders in Utah, including the state legislature. Any publications derived from this research will include only aggregate and/or de-identified data. We will not release datasets derived from CO APCD data. We would happily give the CIVHC team the opportunity to review any publications before submission.

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## 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 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.

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### 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?
Who will perform the data linkage?
What identifying data elements will be used to perform the data linkage?
What non-CO APCD data elements will appear in the new linked file?

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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 (PHI)

Indicate which [Protected Health Information](#) data elements you require for your project purpose:

Available for Limited and Identifiable extracts:		
<input checked="" type="checkbox"/> Member 5-Digit Zip Code	<input type="checkbox"/> Member County	<input type="checkbox"/> Member City
<input checked="" type="checkbox"/> Member Dates of Service	<input type="checkbox"/> Member Eligibility Dates	<input type="checkbox"/> Employer Name
<input type="checkbox"/> Member <a href="#">Census Tract</a>	<input type="checkbox"/> Member <a href="#">Census Block</a>	<input type="checkbox"/> Member <a href="#">Census Block Group</a>
Available for Identifiable extracts only (see also <a href="#">Identifiable Data Use Approval</a> ):		
<input type="checkbox"/> Member Name	<input type="checkbox"/> Member Date of Birth (if requesting more than year only)	
<input type="checkbox"/> Member Street Address	<input type="checkbox"/> Member Latitude and Longitude	
<input type="checkbox"/> Employer Tax ID		
Provide detailed justification for the inclusion of all PHI data selected above, and explain how its inclusion meets the <a href="#">Minimum Necessary Requirement</a> . <sup>3</sup>		
<p>Member 5-digit Zip: To asses difference in access based up geography. This allows for comparison to like regions in Utah.</p> <p>Dates of Service: To assess differences in access over time. This allows comparison to like regions in Utah over designated timeframes.</p>		

<sup>3</sup> 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)<sup>4</sup>
- ☐ Medicare Advantage
- ☐ Medicare Fee for Service (FFS)<sup>5</sup>

### Year(s) of Data

- |  |  |  |  |  |   |
|--|--|--|--|--|---|
| <input checked="" type="checkbox"/> 2012 | <input checked="" type="checkbox"/> 2013 | <input checked="" type="checkbox"/> 2014 | <input checked="" type="checkbox"/> 2015 | <input checked="" type="checkbox"/> 2016 | <input checked="" type="checkbox"/> 2017              |
| <input checked="" type="checkbox"/> 2018 | <input checked="" type="checkbox"/> 2019 | <input checked="" type="checkbox"/> 2020 | <input checked="" type="checkbox"/> 2021 | <input checked="" type="checkbox"/> 2022 | <input checked="" type="checkbox"/> 2023 <sup>6</sup> |

### Claim Type(s)

- |  |   |  |
|--|---|--|
| <input checked="" type="checkbox"/> Inpatient Facility | <input checked="" type="checkbox"/> Outpatient Facility | <input checked="" type="checkbox"/> Professional |
| <input type="checkbox"/> Pharmacy                      | <input type="checkbox"/> Dental                         |  |

### Financial Detail by Line Item

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Charged Amount       | <input type="checkbox"/> Allowed Amount         | <input type="checkbox"/> Plan Paid Amount  |
| <input type="checkbox"/> Plan Pre-Paid Amount | <input type="checkbox"/> Member Copay           | <input type="checkbox"/> Member Deductible |
| <input type="checkbox"/> Member Coinsurance   | <input type="checkbox"/> Total Member Liability |  |

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<sup>4</sup> Medicaid-only data requests must be approved by the Colorado Department of Health Care Policy and Financing.

<sup>5</sup> Medicare FFS data are not available for all requests and must go through a separate approval process.

<sup>6</sup> This year's data is not fully adjudicated.

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### 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):
Facilities (list NPIs and/or Pharmacy IDs):
Facilities within these geographical areas (list county, zip code, <a href="#">Census Tract</a> , etc.):
Provider Type(s):
Provider(s) (list NPIs):
Providers within these geographical areas (list county, zip code, <a href="#">Census Tract</a> , etc.):
Specific payers (minimum of five):

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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:		
10 to 18 years old		
<input checked="" type="checkbox"/> At the time of service	<input type="checkbox"/> At year end	<input type="checkbox"/> By another anchor date: <i>Specify here</i>
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, <a href="#">Census Tract</a> , 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):

<i>Specify here</i>
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## 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.



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### 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:	8/12/2024
Date Approved by CIVHC:	12/20/2023

## 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 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](#)<sup>7</sup> must be completed and returned to [DataCompliance@CIVHC.org](mailto:DataCompliance@CIVHC.org) by 5/31/2028 based on the [Anticipated Project End Date](#).

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### 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
Brent Kious, MD, PhD	Associate Professor	University of Utah Department of Psychiatry
Amanda Bakian, PhD	Associate Professor	University of Utah Department of Psychiatry
Richard Medina, PhD	Associate Professor	University of Utah School of Environment, Society, and Sustainability (Geography)
Simon Brewer, PhD	Associate Professor	University of Utah School of Environment, Society, and Sustainability (Geography)
Douglas Tharp, PhD	Postdoctoral Fellow	University of Utah Department of Psychiatry

<sup>7</sup> Available on the [Data Release Application and Documents](#) page of CIVHC's website under *Privacy, Security, and Regulatory Information*.

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### 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.03	Presented at CIVHC Application Review
V.04	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:	

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### 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.04	Presented at CIVHC Application Review
V.04	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:	