Data Release Application Supplement

For Multiple-Use Case Projects

CIVHC
CENTER FOR IMPROVING VALUE IN HEALTH CARE

Project Tracking	
Client Organization (legal name):	Institute for Health Research, Kaiser Permanente Colorado
CIVHC Project Number:	25.07
Project Title:	APCD Master Agreement – KPCO IHR
Deliverable Type:	Limited Extract

Navigation

Supplement Instructions

To help clients get the most use of Colorado All Payer Claims Database (CO APCD) data, the Center for Improving Value in Health Care (CIVHC) may approve multiple use cases for a particular data extract. This form defines either of the following:

1. A new use case of a previously delivered extract
2. One of multiple planned use cases of and upcoming data delivery

The use case defined in this document may be for use of all data in the original extract or a further filtered subset of that data.

Use Case Conditions

This document serves only to define a single use case and does not represent the addition of data elements or changes to filtering from those components specified in the final version of Data Element Selection Form (DESF) approved for production and identified in the final version of the Data Release Application (DRA) of the project number above. All conditions of the Data Use Agreement (DUA) executed for the project number above apply to the use case defined in this document.

Supplement Revision History

The following reflects the history of changes made to this document prior to its final approval by CIVHC.

To be completed by CIVHC staff			
Date	New Version Number	Description of Change(s)	CIVHC Change Author (full name, complete title)
3/21/2025	V.01	Initial version drafted with client.	Lucía Sanders, Key Account Manager
4/21/2025	V.02	Added Data Sourcing/Use of APCD data information to Question #3	Heather Tavel, Sr. Manager of Research Operations
	V.03		
	V.04		
	V.05		
	V.06		
	V.07		
	V.08		
	V.09		
	V.10		

Data Release Application Supplement

For Multiple-Use Case Projects

CIVHC
CENTER FOR IMPROVING VALUE IN HEALTH CARE

Use Case Details

Use Case No.:	001
Use Case Title:	Quality Measures to Advance Suicide Prevention and Care Across Health Systems (SQM)
Use Case Start Date:	4/1/2025

1. Explain the purpose of this specific use case. If the use case is related to a previous project, also explain how this use case is related and whether the data or results of both projects will be combined.

Suicide prevention is a major public health concern and a top National Institute of Mental Health (NIMH) research priority. Suicide attempts (fatal and non-fatal) are preventable. Research conducted in our team's NIMH-funded Mental Health Research Network (MHRN) and by others demonstrates that there are effective tools for suicide risk screening, risk assessment, safety planning and follow-up care.

Many health systems in the US are now routinely using the Patient Health Questionnaire-9 (PHQ9), Columbia Suicide Severity Rating Scale (CSSRS), and safety planning to identify and prevent suicide attempts. There is an urgent need to determine the best way to measure suicide outcomes (attempts, deaths, change in ideation) and the degree to which these clinical processes, interventions, and workflows impact outcomes. This work is a logical next step in assessing quality of mental healthcare and suicide prevention on a population level. Implementation of new quality measures may contribute to better implementation and reduced suicide attempts and deaths nationally.

The ZS Implementation Study provided important evidence to support population-level ZS Model screening, risk assessment, safety planning and follow-up. Even before this evidence, starting in 2015, many health systems across the U.S. still made a commitment to reducing suicide by introducing the ZS Model following the approach originally developed by our team at Henry Ford Health in 2001. These efforts have also built upon research done in the MHRN testing the nine-item Patient Health Questionnaire (PHQ9) as a suicide risk screening tool and our development of machine learning models for suicide risk identification, which several health systems now routinely use for identification of risk. Further, the National Action Alliance released a "recommended minimum standard of care for suicide prevention," which also includes suicide risk assessment with the Columbia Suicide Severity Rating Scale (CSSRS), safety planning using the Stanley-Brown Safety Plan Intervention (SBSPI), and follow-up referral/treatment for specialty care in behavioral health services. Along with our research and widespread implementation efforts, new research is now needed to determine whether ZS Model screening, assessment, safety planning and follow-up can be used as quality measures for suicide prevention across health systems nationally. As health systems across the country embed these services in their systems, it is imperative to understand how to measure the quality of these approaches and their impact on suicide outcomes.

Importantly, there has already been some progress towards establishing an expert consensus recommended set of "minimum standards" for suicide prevention aligned with the ZS Model and the creation of initial quality measures for these approaches. The National Action Alliance for Suicide Prevention (NAASP) released a recommended minimum standard of care for suicide prevention in all health systems corresponding to elements of the ZS Model (including screening, suicide risk assessment, and safety planning/intervention). In addition, The Joint Commission (TJC) released National Patient Safety Goal 15.01.01 in 2019 'requiring' implementation of suicide risk screening and treatment for patients with behavioral health conditions in accredited healthcare facilities, and further 'recommended' screening and treatment for all patients in an earlier Sentinel Event Alert, using elements of the ZS Model. Similarly, the National Committee for Quality Assurance (NCQA) designed a HEDIS measure to examine 7-day and 30-day follow-up after inpatient hospitalization or emergency department visit for intentional self-harm. Alternatively, the US Preventive Services Task Force concluded that they should NOT recommend screening for suicide risk in primary care settings.

While the current quality measures represent major progress to support suicide prevention implementation in health systems, the current measures are not well designed, are often not very clear, and in some cases are contradictory. Several open questions about current measures include the following, which will be addressed via the corresponding Aims in this proposed study:

1) Outcome measures do not provide clear guidance on how to define a suicide attempt or death. A range of clinical coding combinations or self-report measures could be used to assess suicide attempt, which all yield different outcomes. A standard definition is needed to ensure adequate benchmarking (Aim 1a).

2) It is unclear whether change in suicidal ideation can be used as an outcome or proxy measure for suicide. For instance, it remains unclear whether change in CSSRS scores over time represent actual change in risk of suicidal behavior. Severity of first response and changes in scores over time are frequently used in clinical practice as indicators of treatment need/response, but it's not clear whether they should be (Aims 1b, 2b).

3) Requirements for implementation of screening and treatment do not specify consensus screening thresholds nor the type of treatment options that are considered satisfactory. Furthermore, current TJC guidance requires screening and treatment for those with behavioral health conditions and recommends them for individuals without those conditions. But, the US Preventive Services Task Force does not recommend screening at all. These rulings are contradictory and deserve further research and guidance (Aim 2a).

4) TJC goal focuses screening on those with behavioral health conditions. However, behavioral health conditions are not defined, such that those with substance use disorders are frequently excluded in practice despite being associated with exceedingly high suicide rates (even compared to other mental health conditions). Data-driven guidance is needed to support definitions of key variables (Aim 2a).

5) Time frames for process and outcome measures are arbitrarily defined. For example, 7- and 30-day HEDIS follow up after emergency visits and hospitalization measures were meant to correspond to time frames designed for depression but were never specified for response to suicide risk. It's possible (and even likely) that those are not the optimal time frames for follow up after a suicide attempt (Aim 2d).

6) Current measures are not available for many recommended practices, including several recommended minimum standard practices. Metrics do not address suicide risk assessment after a positive screen, safety planning for those at identified risk, or time to outpatient behavioral health services treatment after identification in primary care or other settings. Calculation of these important process measures should be created and benchmarked based on their impact on suicide outcomes (Aim 2b, 2c, 2d).

This project falls under the master subscription agreement, related to the following research aims presented there:

(i) Full capture of outcomes and exposures for all members, mitigating research bias, for KP members that utilize external providers, as well as evaluation of processes of care, outcomes and value of care for KPCO patients with chronic health conditions. This is foundation in accurate and valid research and operational questions.

(vi) Validating Quality Measures of care that involves KPCO and external providers.

(x) Understand prior utilization of services to better identify patients that will benefit from more intensive medical management

2. Detail the specific project aims, research question(s) you are trying to answer, or problem(s) you are trying to solve with this use case.

Aim 1: Develop and test a set of suicide ideation and behavior outcome measures:

a) Health system-level suicide attempt and death rates (i.e., fatal & non-fatal suicide attempt).

b) Outcome assessment of acute suicidality and change in risk with the C-SSRS

Aim 2: To develop and test suicide care process measures to determine their impact on outcomes.

a) Screening: Visit based and annual suicide risk screening with item 9 of the PHQ9.

b) Assessment: baseline suicide risk assessment via the C-SSRS for members who screen positive

c) Safety planning: documented safety plans for members with an elevated suicide risk on the assessment

d) Follow-up: timely outpatient visits for patients with an emergency visit or inpatient stay following a suicide

e) attempt or positive screen and after identification of risk in outpatient primary care or behavioral healthcare.

These measures will be disseminated and optimized via consensus meetings with NCQA, TJC, other professional organizations, and patient and health system stakeholders.

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

Data Sourcing/Use of APCD Data: The cohort for this use case has been selected from patients enrolled in the KPCO health plan at the time of study entry, using the KPCO research data warehouse. APCD data will be provided according to our data management plan, where a small data coordinating team will provide APCD data for the cohort members for a specified lookback and followup period, both of which may fall outside of the membership period.

Statistical Methods: Statistical methodologies will be dependent on each aim, and the use of the APCD data is primarily to ensure we have a full set of outcomes for all members to minimize misclassification bias. We will be linking behavioral health patients at KPCO to claims data to find all claims with indication of attempted suicide, hospitalization due to suicide attempt or death from suicide before any statistical modeling occurs. Methodologies to be used include, but are not limited to step-wise model fitting and cox proportional hazards regression models.

4. Explain how this use case will benefit Colorado and its residents.[1]

The intent of this use case is to better identify patients at varying levels of suicide risk and pair with appropriate interventions. This research informs better coordinated care provided when faced with suicide risk and reduce associated harms and costs for Colorado and its residents.

5. Describe how this use case will improve health care quality, increase health care value, or improve health outcomes for Colorado residents.[2]

By attaining these data for claims outside of the KPCO health system, we will gain a better understanding of the rates of suicidality which would improve the recommendations made to The Joint Commission and the National Committee for Quality Assurance which will create a standardized approach for national accrediting bodies and quality organizations to measure and benchmark suicide prevention care.

[1] 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.

Protected Health Information (PHI)

If Protected Health Information data elements will be used, indicate what elements are available in the original CO APCD data extract and which of those are needed for this use case:

Available in the Extract	Use Case Need	Data Element
☒	☒	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
☐	☐	Member Name
☐	☐	Member Date of Birth (if requesting more than year only)
☐	☐	Member Street Address
☐	☐	Member Latitude and Longitude
☐	☐	Employer Tax ID

Provide detailed justification for the inclusion of all PHI data selected above to carry out this use case, and explain how its inclusion meets the Minimum Necessary Requirement.[2]

Dates of service and eligibility dates are needed to verify enrollment dates and identify the timing of study outcomes (suicide attempts and completions).

Census variables and zip code are necessary to link to census and location-based socioeconomic (such as ACS or ADI) measures used as covariates in models.

[2] 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.