

# REDCap: Finding and Reusing CDEs for Making Data Interoperable

Paul Harris, PhD  
Vice President, Research Informatics  
*Professor, Biomedical Informatics*  
*Vanderbilt University Medical Center*

# Agenda

REDCap

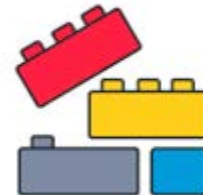
REDCap Consortium

# REDCap Platform



- A secure software platform designed to equip and empower clinical and translational researchers during the data collection planning, development, and deployment for clinical and translational research studies and trials.

- Is highly generalized and can be configured to support very diverse research use cases.

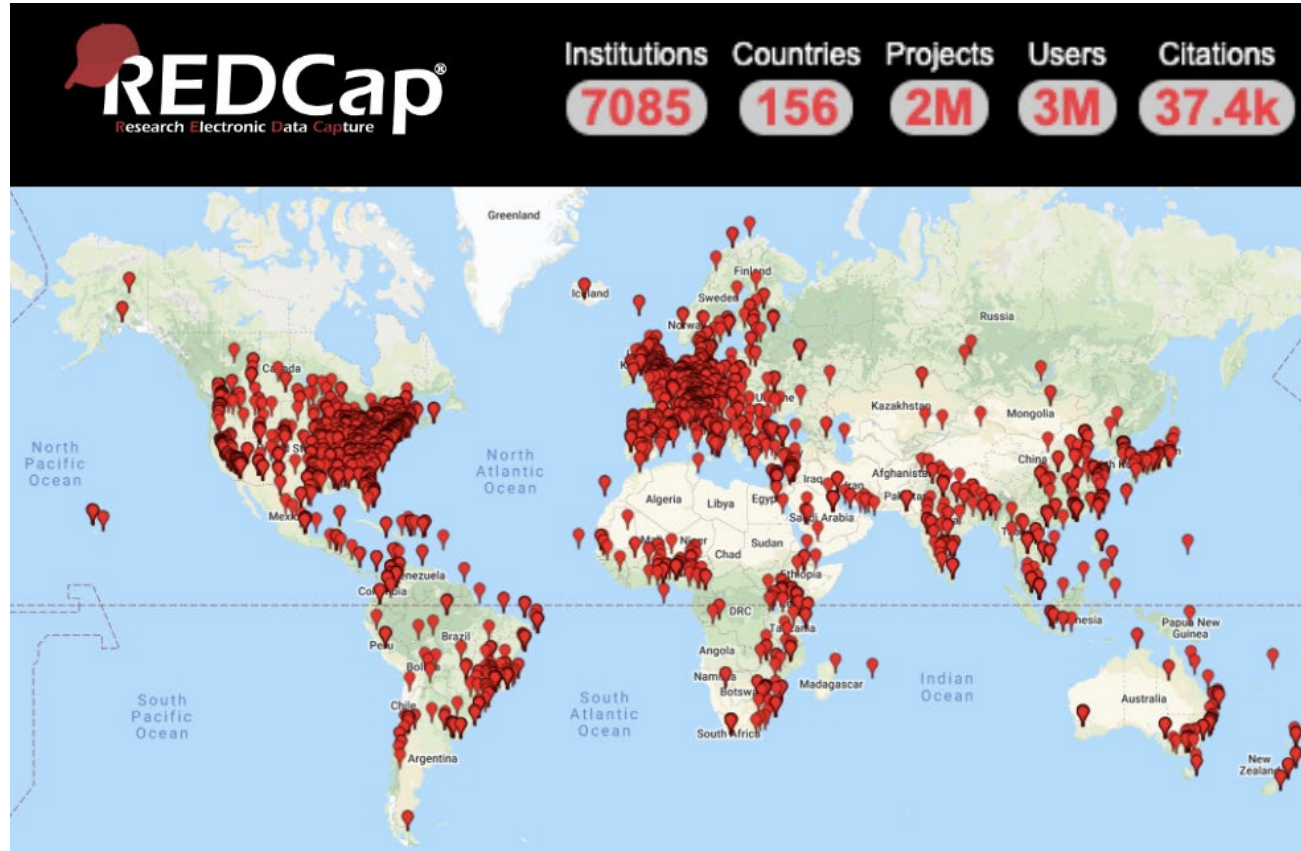


Baseline Data

Editing existing Study ID "1002" (,)

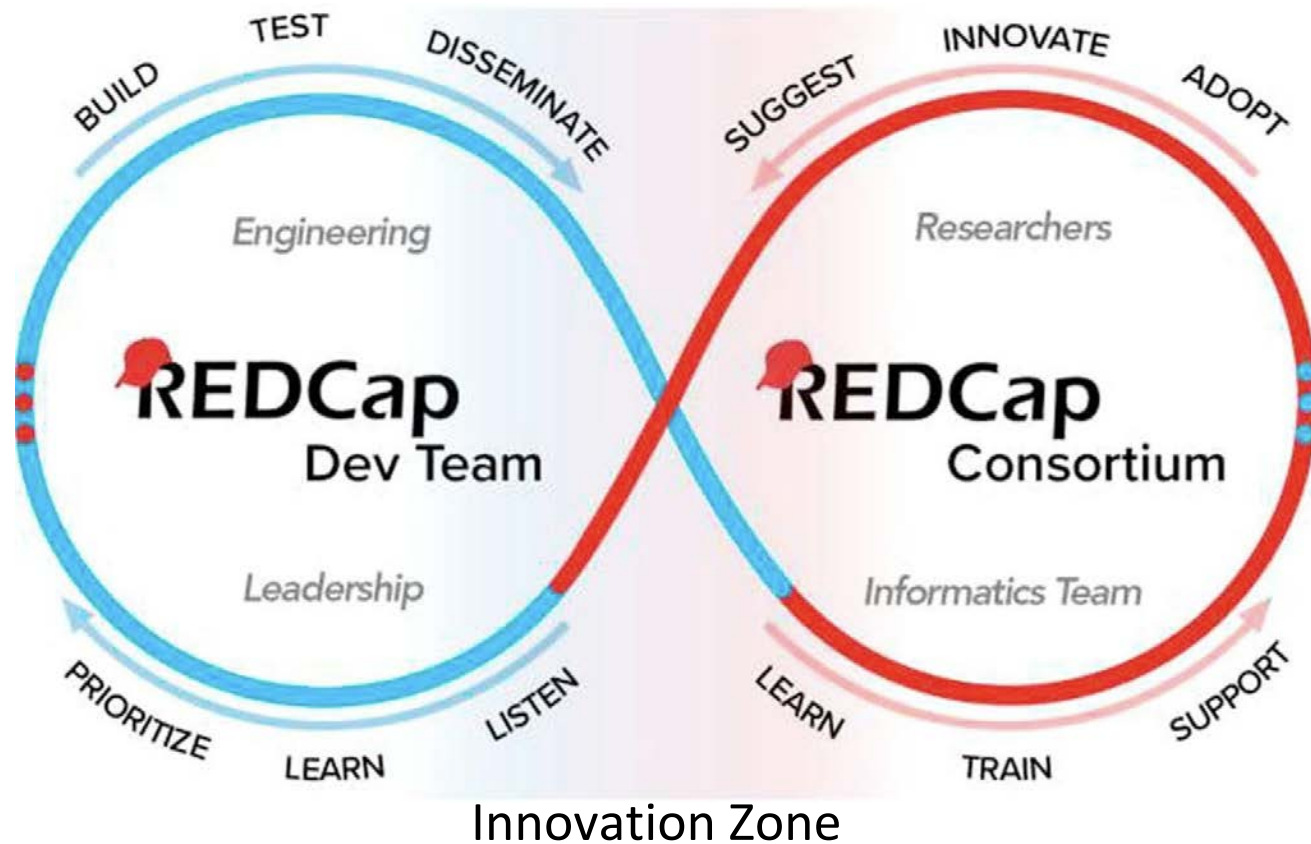
Study ID	1002
Baseline Measurements	
Date of baseline visit	2008-05-10
Date blood was drawn	2008-05-10
Serum Albumin (g/dL)	5
Serum Prealbumin (mg/dL)	30
Creatinine (mg/dL)	10
Normalized Protein Catabolic Rate (g/kg/d)	0.5
Cholesterol (mg/dL)	185
Transferrin (mg/dL)	240
cr/v	1.5
Dry weight (kilograms)	50
Collected Plasma 1?	Yes

# REDCap Consortium



REDCap software is available at no cost to academic, non-profit, and government organizations

# REDCap Consortium - Empowerment → Innovation



# REDCap Consortium - Empowerment → Innovation



# REDCap Consortium - Scientific Impact

## Results

Citing Papers Referenced Papers

Influence Translation Citations

Roll over table headers for definitions; visit the [Global RCR Stats](#) page for percentile tables

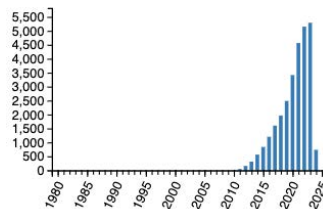
~ 1000 x average publication citation rate

Total Pubs	Pubs Per Year	Cites Per Year				Relative Citation Ratio (RCR)				Weighted RCR
		MAX	MEAN	SEM	MED	MAX	MEAN	SEM	MED	
1	1.00	1887.60	1887.60	0.00	1887.60	995.65	995.65	0.00	995.65	995.65

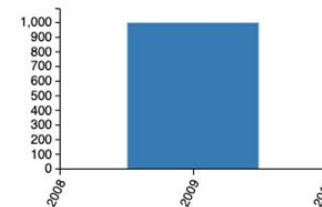
### Total Citations

28314

Total Citations by Year Cited



Weighted RCR by Year



### Customization

As you make changes below, the summary information and charts above are updated.

From 2009 To 2009  Only research articles  Only papers cited by clinical articles  Only clinical articles

Clear Filters

Total Pubs: 1

Export

PMID	Year	Title	Authors	Journal	NIH Percentile	RCR
<input checked="" type="checkbox"/> 18929686	2009	Research electronic data capture (REDCap)--a metadata-driven methodology and workflow proce	Paul A Harris, Robert Taylor, Robert Th	J Biomed Inform	100.0	995.65

# REDCap Consortium - Scientific Impact

Web of Science Categories

Clarivate

Web of Science™





# REDCap Consortium - Empowering Large Research Programs



THE NIA ALZHEIMER'S DISEASE RESEARCH CENTERS PROGRAM  
**National Alzheimer's Coordinating Center**



*An Initiative Funded by the National Institutes of Health*

**TRIAL INNOVATION NETWORK**



**ECHO**

Environmental influences  
on Child Health Outcomes

A program supported by the NIH



**H3Africa**  
Human Heredity & Health in Africa

# Agenda

REDCap CDE Workflow (Current State)

# REDCap NIH/NLM CDE Repository Project

## **2021 - Central Question**

Standardization of data elements is a necessary component of advancing interoperable datasets for research. Unfortunately, the problem with common data models is that there are so many and they are hard to find and implement. Can we build NLM CDE search features into REDCap to prompt or guide researchers to adopt common data element (CDE) standards during case report form creation?

## **Project Description**

We built a CDE library function within the REDCap project creation workflow that allows researchers to utilize NLM CDEs while building research case report forms and surveys.



## **Approach**

The CDE library within REDCap leverages the public application programming interface available from the NIH CDE Repository to search and retrieve metadata associated with NLM-curated CDEs.





## **Progress / Results**

We released the new “Field Bank” feature in REDCap in January, 2021. We cannot see context in REDCap installations, but have recorded 12,338 CDEs imported into projects at ~ 250 institutions.

# REDCap NIH/NLM CDE Repository Project





  **Contact Information and Demographics**

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

    *Variable: first\_name*





**First Name**

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

    *Variable: last\_name*

**Last Name**





[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

    *Variable: telephone\_1*

**Phone number**





Included Area Code

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

    *Variable: email*

**E-mail**





[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

    *Variable: ethnicity*

**Ethnicity**

Hispanic or Latino  NOT Hispanic or Latino  Unknown / Not Reported reset

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

    *Variable: race*

**Race**

# REDCap NIH/NLM CDE Repository Project

**Contact Information and Demographics**

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

*Variable: first\_name*

**First Name**

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

*Variable: last\_name*

**Last Name**

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

*Variable: telephone\_1*

**Phone number**

Include Area Code

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

*Variable: email*

**E-mail**

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

*Variable: ethnicity*

**Ethnicity**

Hispanic or Latino  NOT Hispanic or Latino  Unknown / Not Reported reset

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

*Variable: race*

**Race**

NIH CDE Repository U.S. National Library of Medicine

Select a catalog of fields to search:

**Search NIH-Endorsed CDEs**

**NLM Classifications List 15** (click to view all classifications)

- ➔ **AHRQ** Agency for Healthcare Research and Quality
- ➔ **External Forms** External Forms
- ➔ **GRDR** Global Rare Diseases Patient Registry Data Repository
- ➔ **NEI** National Eye Institute
- ➔ **NHLBI** National Heart, Lung and Blood Institute
- ➔ **NICHD** Eunice Kennedy Shriver National Institute of Child Health and Human Development
- ➔ **NIDA** National Institute on Drug Abuse

# REDCap NIH/NLM CDE Repository Project

**Contact Information and Demographics**

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

Variable: first\_name

**First Name**

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

Variable: last\_name

**Last Name**

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

Variable: telephone\_1

**Phone number**   
Include Area Code

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

Variable: email

**E-mail**

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

Variable: ethnicity

**Ethnicity**

Hispanic or Latino  NOT Hispanic or Latino  Unknown / Not Reported reset

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

Variable: race

**Race**

**Import from Field Bank**

Using the Field Bank, search for fields in various catalogs below by selecting a catalog and entering specific keyword. When reviewing the resultsup of your search, click the "Add Field" button for the field to add that field to the current data collection instrument.

Select a catalog to search: NIH CDE Repository U.S. National Library of Medicine

1 fields found for NIH CDE Repository → All Classifications - Keyword: date of birth 1 - 1 of 1

[Import from Field Bank](#)

**Date of Birth**

Choose alternative field label Date of Birth

Classification: Project 5 (COVID-19)  
Description: The month, day and year on which the person was born.

# REDCap NIH/NLM CDE Repository Project

**Contact Information and Demographics**

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

Variable: first\_name

**First Name**

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

Variable: last\_name

**Last Name**

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

Variable: telephone\_1

**Phone number**

Include Area Code

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

Variable: email

**E-mail**

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

Variable: date\_of\_birth

**Date of Birth**  Today M-D-Y

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

Variable: ethnicity

**Ethnicity**

Hispanic or Latino  NOT Hispanic or Latino  Unknown / Not Reported [reset](#)

[Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

Variable: race

**Race**

# REDCap NIH/NLM CDE Repository Project

### Edit Field

You may add a new project field to this data collection instrument by completing the fields below and clicking the Save button at the bottom. When you add a new field, it will be added to the form on this page. For an overview of the different field types available, you may view the [Field Types video \(4 min\)](#).

**Field Type:** Text Box (Short Text, Number, Date/Time, ...)

**Field Label:** Date of Birth  Use the Rich Text Editor

**Variable Name:** date\_of\_birth  Enable auto naming of variable based upon its Field Label?  
ONLY letters, numbers, and underscores.

How to use: [\[F\] Smart Variables](#) [Piping](#) [Field Embedding](#)

**Validation?** (optional) Date (M-D-Y)

**Minimum:**

**Maximum:**

Tip for min/max limits: You may pipe a value from another field to set dynamic range limits - e.g. [vis1\_date] or [event\_1\_arm\_1] [age]. You may also use the word today or now (not wrapped in quotes) for datetime fields.

-- select ontology service --

**Required?**  No  Yes  
\* Prompt if field is blank

**Identifier?**  No  Yes  
Does the field contain identifying information (e.g., name, SSN, address)?

**Custom Alignment:** Right / Vertical (RV)

Align the position of the field on the page

**Field Note** (optional):   
Small reminder text displayed underneath field

**Action Tags / Field Annotation** (optional): tinyid=wgPM2Ge1Fq

[Learn about Action Tags](#) or [using Field Annotation](#)

ON THIS PAGE

**CDE Summary**

Data Type Details

CDE Details

Other Names & Definitions

Concepts

Identifiers

Properties

Classification

Related Content

Submission Information

Status

## Date of Birth

### Question Text

Patient's Date of Birth

### Definition

The month, day and year on which the person was born.

**Data Type:** Date

**Steward:** Project 5 (COVID-19)

**Origin:**

### Data Type Details

**Data Type:** Date

**Precision:**

Day

### CDE Details

#### Other Names & Definitions

**Name:** Date of Birth

**Tags:**

**Name:** Patient's Date of Birth

**Tags:** Preferred Question Text

### Definitions

**Definition:** The month, day and year on which the person was born.

**Tags:**

### Concepts

	Concept Name	Concept Source	Concept ID
Data Element Concept	Person	NCI Thesaurus	C25190
Data Element Concept	Birth Date	NCI Thesaurus	C68615

### Identifiers

Source	Id	Version
NLM	wgPM2Ge1Fq	



# Agenda

REDCap CDE 2.0 Brainstorming

# REDCap Shared Library



## Procurement of shared data instruments for Research Electronic Data Capture (REDCap)

Jihad S. Obeid<sup>\*,†</sup>, Catherine A. McGraw<sup>‡</sup>, Brenda L. Minor<sup>§</sup>, José G. Conde<sup>¶</sup>, Robert Pawluk<sup>||</sup>, Michael Lin<sup>¶</sup>, Janey Wang<sup>¶</sup>, Sean R. Banks<sup>¶</sup>, Sheree A. Hemphill<sup>¶</sup>, Rob Taylor<sup>¶</sup>, Paul A. Harris<sup>¶</sup>

<sup>\*</sup>South Carolina Translational Research Institute, Biomedical Informatics Program, Medical University of South Carolina, 55 Bevi St., MSC 200, Charleston, SC 29425, United States  
<sup>†</sup>Center for Clinical and Translational Research, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, United States  
<sup>‡</sup>Yonkers Hill Institute for Clinical and Translational Research, Yonkers Hill University, Nashville, TN, United States  
<sup>§</sup>School of Medicine, University of Puerto Rico Medical Sciences Campus, San Juan, PR, United States  
<sup>¶</sup>Center for Translational Science Activities, Mayo Clinic, Rochester, MN, United States  
<sup>||</sup>Population Research Center, University of Texas at Austin, Austin, TX, United States  
<sup>¶</sup>Clinical & Translational Science Collaborative, Case Western Reserve University, Cleveland, OH, United States

### ARTICLE INFO

Article history:  
Received 10 August 2012  
Accepted 20 October 2012  
Available online 10 November 2012

Keywords:  
Validated instruments  
Data collection  
Data sharing  
Informatics  
Translational research  
REDCap

### ABSTRACT

REDCap (Research Electronic Data Capture) is a web-based software solution and tool set that allows biomedical researchers to create secure online forms for data capture, management and analysis with minimal effort and training. The Shared Data Instrument Library (SDIL) is a relatively new component of REDCap that allows sharing of commonly used data collection instruments for immediate study use by research teams. Objectives of the SDIL project include: (1) facilitating reuse of data dictionaries and reducing duplication of effort; (2) promoting the use of validated data collection instruments, data standards and best practices; and (3) promoting research collaboration and data sharing. Instruments submitted to the library are reviewed by a library oversight committee with rotating membership from multiple institutions, which ensures quality, relevance and legality of shared instruments. The design allows researchers to download the instruments in a consumable electronic format in the REDCap environment. At the time of this writing, the SDIL contains over 128 data collection instruments. Over 2500 instances of instruments have been downloaded by researchers at multiple institutions. In this paper we describe the library platform, provide detail about experience gained during the first 25 months of sharing public domain instruments and provide evidence of impact for the SDIL across the REDCap consortium research community. We postulate that the shared library of instruments reduces the burden of adhering to sound data collection principles while promoting best practices.

© 2012 Elsevier Inc. All rights reserved.

## Metrics (Q3, 2023)

- Total Instruments: 3,738
- Total Downloads: 201,504

The screenshot displays the REDCap Shared Library search interface. At the top, a search bar contains the keyword "depression" and a "Search the library" button. Search options include "Minimum downloads: 0", "Recent additions: show all", and "Curated by REDLOC? show all". A sidebar on the right shows the user is logged in as Jihad Obeid and lists navigation options like "Search", "Library Metrics", and "Approval History".

Below the search bar, a table lists 10 results matching the search. The table has columns for "Title" and "Downloads".

Title	Downloads
Center for Epidemiologic Studies Depression Scale (CES-D), NIMH *	90
Cognitive and Affective Mindfulness Scale-Revised (CAMS-R) *	17
Geriatric Depression Scale GDS Long Form *	15
Geriatric Depression Scale GDS Short Form *	27
Hamilton Depression Rating Scale (HAM-D) *	44
ICD10 MDI Major Depression Inventory *	20
Patient Health Questionnaire 9 *	62

The "Patient Health Questionnaire 9" entry is expanded to show details. It includes a "Viewing instrument as web page" window with a Likert scale for "Howing or speaking so slowly that other people could have noticed? Or the opposite ... being so fast and so restless that you have been moving around a lot more than usual". The scale ranges from 0 (Not at all) to 3 (Nearly every day). Below this is a "Confidential" section for "Patient Health Questionnaire 9" with fields for Date, First Name, and Last Name. A "Project Setup" window is also visible, showing options for "Online Designer" and "Upload Data Dictionary".

# REDCap Shared Library - PROMIS<sub>(API)</sub> + PhenX External



**Keyword search:**

**Search options:**

Language:

Type:

Minimum downloads:

Recent additions:

**Shared Library**

Search

**Library Metrics**

Consortium Activity

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 >>

Found 1869 results matching your search [Didn't find what you were looking for? Suggest a validated instrument for library inclusion](#)

Title	Downloads
▶ PROMIS-29+2 Profile/Battery v2.1 (PROPr) <a href="#">[Battery]</a>	204
▶ PROMIS - 29 Profile/Battery v2.0 <a href="#">[Battery]</a>	499
▶ PROMIS - 43 Profile v2.0 (Spanish)	15
▶ PROMIS - 43 Profile/Battery v2.0 <a href="#">[Battery]</a>	36
▶ PROMIS - 57 Profile v2.0 (Spanish)	19
▶ PROMIS - 57 Profile/Battery v2.0 <a href="#">[Battery]</a>	62
▶ PROMIS Item Bank v1.0 - Trastornos del Sueño - Cuestionario Abreviado 6a	6
▶ PROMIS Item Bank v1.0 - Trastornos del Sueño - Cuestionario Abreviado 8a	4
▶ PROMIS Item Bank v1.1 - Trastorno Emocional - Enojo	6
▶ PROMIS Item Bank v1.1- Efectos del Dolor	16
▶ PROMIS Item Bank v1.2 - Capacidad de Funcionamiento Físico	15
▶ PROMIS - Ca Bank v1.0 - Anxiety <a href="#">[Adaptive instrument]</a>	211
▶ PROMIS - Ca Bank v1.0 - Depression <a href="#">[Adaptive instrument]</a>	206
▶ PROMIS - Ca Bank v1.0 - Fatigue <a href="#">[Adaptive instrument]</a>	136
▶ PROMIS - Ca Bank v1.1 - Pain Interference <a href="#">[Adaptive instrument]</a>	200
▶ PROMIS - Ca Bank v1.1 - Physical Function <a href="#">[Adaptive instrument]</a>	183
▶ PROMIS Banco - Versión Padres v1.0 - Actividad física <a href="#">[Adaptive instrument]</a>	28
▶ PROMIS Banco - Versión Padres v1.0 - Alteraciones relacionadas con el sueño <a href="#">[Adaptive instrument]</a>	10



**Keyword search:**

**Search options:**

Language:

Type:

Minimum downloads:

Recent additions:

**Shared Library**

Search

**Library Metrics**

Consortium Activity

Found 1 results matching your search [Didn't find what you were looking for? Suggest a validated instrument for library inclusion](#)

**Title**

PhenX Toolkit [\[External Instrument Library\]](#)

**Downloads**

**Details:**

**Institution:** REDLOC

**Description:** The PhenX Toolkit provides standard measures related to complex diseases, phenotypic traits and environmental exposures. Use of PhenX measures facilitates combining data from a variety of studies, and makes it easy for investigators to expand a study design beyond the primary research focus. REDCap Instrument ZIP files are provided by the RTI PhenX team to enable use of PhenX measures on other resources is so review [PhenX Toolkit](#) <https://www.phenxtoolkit.org/>

**NOTE:** This is not an instrument distributed on their website. The organization is not for the veracity of the font their website (<https://www.vanderbilt.edu/phenx/>)

**PhenX Toolkit**

Home Protocols COVID-19 Search Resources News Help About Cite PhenX Contact

PhenX is collaborating with REDCap to make PhenX protocols available as REDCap instruments zip files that can be uploaded directly to REDCap. More, coming soon. Click on a protocol name below to download the REDCap Zip File. [Click here for REDCap "Instrument ZIP" feature.](#)

Showing 1 to 50 of 861 protocols

- Abdominal Aortic Aneurysm
- Access to Health Services
- Access to Health Technology
- Access to Lethal Means
- Activities of Daily Living (ADLs)
- Acute Subjective Response to Substances - Current - General
- Acute Subjective Response to Substances - Current - Specific - Alcohol
- Acute Subjective Response to Substances - Current - Specific - Drugs
- Acute Subjective Response to Substances - Current - Specific - Tobacco
- Acute Subjective Responses to Substances - Retrospective - Alcohol
- Acute Subjective Responses to Substances - Retrospective - Tobacco
- Addiction Severity Index
- Adequacy of Prenatal Care
- Adherence to Medication Regimens

# REDCap Shared Library - CDASH Instruments



Cheng AC, et al. Creating and Disseminating CDASH Harmonization Electronic Case Report Forms on the REDCap Shared Data Instrument Library. *Journal of the Society for Clinical Data Management*. 2022; 2(1): 7, pp.1-5. DOI: <https://doi.org/10.47912/jscdm.172>

## ORIGINAL RESEARCH

## Creating and Disseminating CDASH Harmonization Electronic Case Report Forms on the REDCap Shared Data Instrument Library

Alex C. Cheng\*, Rhonda Facile†, John Owen†, Richard Marshall†, Kathleen Mellars†, Nan Kennedy\*, Brenda L. Minor\*, Kyle McGuffin\* and Paul Harris\*

**Introduction:** A guiding principle behind the development and deployment of the REDCap data management platform has always included attention to workflow design that allows easy implementation of best practices for clinical and translational researchers. CDISC standards such as CDASH have helped the clinical research community improve the efficiency, actionability, and quality of their clinical trials data, but have had limited uptake among the academic institutions.

**Objective:** To create a scalable methodology to convert CDISC CDASH electronic case report forms (eCRFs) instrument metadata into REDCap data dictionaries for the purpose of simplifying adoption and use of CDASH instruments by research teams across the REDCap Consortium.

**Implementation:** We have used our replicable methods to translate metadata from 34 CDASH Foundational eCRFs and 20 CDASH Crohn's Disease eCRFs into REDCap eCRF metadata and have made these instruments available in the REDCap Shared Data Instrument Library for widespread sharing and uptake across the REDCap Consortium. Users can import the standardized eCRFs directly into their REDCap projects for immediate use in clinical trial data collection.

**Conclusion:** Disseminating CDISC standards through the REDCap community will increase the accessibility of these standards for academic medical centers. Having academic clinical researchers using CDISC standards may lead to more research datasets that interoperate with pharmaceutical sponsored trials, and more discoveries from secondary use of clinical research data.

Keyword search:

Search options:

Language:

Type:

Minimum downloads:

Recent additions:

Shared Library  
Search  
Library Metrics  
Consortium Activity

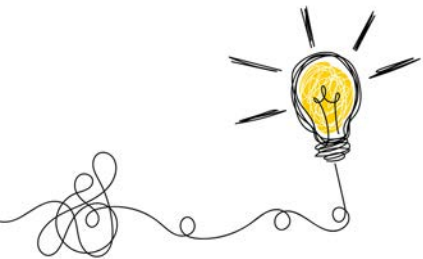
1 2 3 >>

Found 54 results matching your search [Didn't find what you were looking for? Suggest a validated instrument for library inclusion](#)

Title	Downloads
▶ CDISC CDASHIG v2.1 Adverse Events	123
▶ CDISC CDASHIG v2.1 Clinical Events	48
▶ CDISC CDASHIG v2.1 Concomitant Medications	103
▶ CDISC CDASHIG v2.1 Death Details	42
▶ CDISC CDASHIG v2.1 Demographics	182
▶ CDISC CDASHIG v2.1 Disposition	56
▶ CDISC CDASHIG v2.1 Drug Accountability Horizontal - Dispensed Amount	25
▶ CDISC CDASHIG v2.1 Drug Accountability Horizontal - Returned Amount	19
▶ CDISC CDASHIG v2.1 Drug Accountability Vertical	25
▶ CDISC CDASHIG v2.1 ECG Test Results - Central Reading	26
▶ CDISC CDASHIG v2.1 ECG Test Results - Local Reading	31
▶ CDISC CDASHIG v2.1 Exposure as Collected	36
▶ CDISC CDASHIG v2.1 Findings About Events or Interventions	29
▶ CDISC CDASHIG v2.1 Healthcare Encounters	36
▶ CDISC CDASHIG v2.1 Inclusion/Exclusion Criteria	85
▶ CDISC CDASHIG v2.1 Laboratory Test Results - Central Processing	41
▶ CDISC CDASHIG v2.1 Laboratory Test Results - Local Processing	51
▶ CDISC CDASHIG v2.1 Log Form Prompt	29
▶ CDISC CDASHIG v2.1 Medical History	93
▶ CDISC CDASHIG v2.1 Microbiology Specimen Central Processing	18

1 2 3 >>

# REDCap CDE 2.0 Brainstorming



## + CDE Collections

NATIONAL CANCER INSTITUTE  
Center for Biomedical Informatics  
& Information Technology

Manage View Collaborate Data Interchange Personalize

>>Favorites>>NCI Standard CRFs

Display Values View - Delivery Options - Add to Guest User Cart

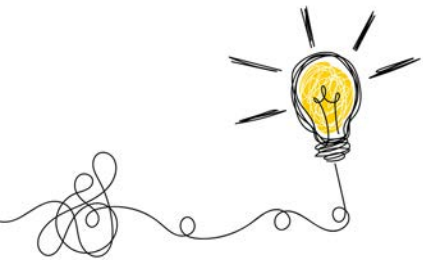
Template Rows 1..130 of 130 1 Request

View	Form Name	Public ID	Version	Owned By
	Adverse Event/Serious Adverse Event CTCAE v3 NCI Standard Template	2748814	3.00	NCI Standards
	Adverse Event/Serious Adverse Event CTCAE v4 NCI Standard Template	3265657	3.00	NCI Standards
	Adverse Event/Serious Adverse Event CTCAE v4.0 CDISC Aligned NCI Standard Template	6988567	1.00	NCI Standards
	Adverse Event/Serious Adverse Event CTCAE v5.0 CDISC Aligned NCI Standard Template	6984728	1.00	NCI Standards
	Adverse Event/Serious Adverse Event CTCAE v5.0 NCI Standard Template	6081561	1.00	NCI Standards
	Brief Pain Inventory-BPI CDISC Aligned NCI Standard Template	7093187	2.00	NCI Standards
	Concomitant Medication CDISC Aligned NCI Standard Template	6984232	1.00	NCI Standards
	Concomitant Medication NCI Standard Template	2867231	2.00	NCI Standards
	Consent CDISC Aligned NCI Standard Template	6936999	1.00	NCI Standards



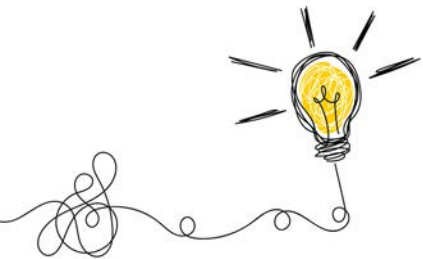
Shared  
Library

# REDCap CDE 2.0 Brainstorming



Shared  
Library

# REDCap CDE 2.0 Brainstorming



 NIH CDE  
Repository  
+ Future CDE  
Collections



Case Report Form  
+ Survey Creation  
Workflow Prompts

Thank You