REDCap: Research Electronic Data Capture

All Purpose Data Tool

Mary Geda
Sui Tsang
January 24, 2024
Today’s Audience

How many years have you used REDCap?

- 0 yrs - I'm new to...
- < 1 yrs
- 1 - 3 yrs
- 4 - 5 yrs
- > 5 yrs
Introduction and Learning Objectives

• Learn about REDCap:
  – What it is
  – How to access it
  – Quality control and compliance functions
  – What steps are used to build projects
  – How you can get data into REDCap
  – Tools: reports, statistics, and exports
  – Resources to help you get started
  – [If time]: Advanced features
• Looking into moving an Access DB to Redcap and need all the info I can
• No, just trying to learn more. We are looking at converting our current database to Redcap
• Understanding what it is and how it benefits research and data collection
• I am looking to use Red Cap for a new study. Looking to understand the utilization of the resource.
• REDCap (Research Electronic Data Capture) is a secure web-based application for data capture and study management.
• Developed at Vanderbilt in 2004 by Paul A. Harris and colleagues
  • Clinical and Translational Science Award (CTSA) funding
• REDCap Consortium: >6,000 institutions in >150 countries around the world

https://projectredcap.org/about/
How does REDCap work?

- Direct data entry (i.e., form), survey, or data import
- Exports to Excel, CSV, SPSS, SAS, Stata and R, and CDISC ODM.
- Anyone can learn to use it
Advantages: User Friendly

REDCap Learning Curve

Knowledge/Capabilities

- Basic Features, Exports, User Rights
- Advanced Features, Customization, Imports, APIs
- Third party resources: libraries, external modules from repository
- Custom built software (external modules)

Time/Effort

1st build

- Where the hard stuff lives.
- Might work. Might not.

Do it yourself. Confidence Building.

Welcome to software development.
Advantages

Accessible

Organized

Secure

Quality & Accuracy

Cost Effective
1. Yale NETID credentials and multi-factor authentication

*Work in progress: InCommon®*

2. Secure servers behind an enterprise firewall, encrypted with TLS

3. Regulatory Requirements

   *HIPAA, FDA 21 Part 11, GDPR*

https://portal.redcap.yale.edu/resources/security-compliance
Navigating - How do I get access?

Research Project Data Triage Team (YCCI)

HIPAA

GDPR

21 PART 11

REDCap at Yale University
How do I contact data triage?

- Email: researchproject.data.triage@yale.edu
- Website: https://portal.redcap.yale.edu/
QUESTIONS or COMMENTS?

Next: Quality Control/Compliance Functions
Quality Control and Compliance

1. Logging: Audit trails
2. User Rights and Access
3. Data Quality
4. Field Level Controls

REDCap 201
Spring Session
Logging: Audit trails

This module lists all changes made to this project, including data exports, data changes, and the creation or deletion of users.

### Filters
- **Filter by event:** All event types (excluding page views)
- **Filter by user name:** All users
- **Filter by record:** All records
- **Filter by time range from**
- **Displaying events (by most recent):** 1 - 100 (Page 1 of 3)

### Data Changes

<table>
<thead>
<tr>
<th>Time / Date</th>
<th>Username</th>
<th>Action</th>
<th>List of Data Changes OR Fields Exported</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/22/2021 2:52pm</td>
<td></td>
<td>Manage/Design</td>
<td>Copy project as PID=2139 (&quot;Copy of eConsent Scanned Image Demo&quot;)</td>
</tr>
<tr>
<td>09/14/2021 12:54pm</td>
<td></td>
<td>Manage/Design</td>
<td>Download instrument ZIP file</td>
</tr>
<tr>
<td>09/09/2021 12:11pm</td>
<td></td>
<td>Manage/Design</td>
<td>Download instrument ZIP file</td>
</tr>
<tr>
<td>09/09/2021 11:47am</td>
<td></td>
<td>Manage/Design</td>
<td>Download instrument ZIP file</td>
</tr>
<tr>
<td>07/08/2021 2:53pm</td>
<td></td>
<td>Manage/Design</td>
<td>Edit project field</td>
</tr>
<tr>
<td>07/08/2021 2:52pm</td>
<td></td>
<td>Manage/Design</td>
<td>Reorder project fields</td>
</tr>
<tr>
<td>05/04/2021 9:08pm</td>
<td>[survey respondee]</td>
<td>Updated Response 224</td>
<td>date_signed = '2021-05-04', fname = 'aaa', lname = 'bbb', participant_sign = '156712', participant_consent_v2_complete = '0'</td>
</tr>
<tr>
<td>05/04/2021 8:42pm</td>
<td>[survey respondee]</td>
<td>Updated Response 225</td>
<td>participant_sign = '156705'</td>
</tr>
<tr>
<td>05/04/2021 8:42pm</td>
<td>[survey respondee]</td>
<td>Updated Response 225</td>
<td>date_signed = '2021-05-04', fname = 'test', lname = 'test',</td>
</tr>
</tbody>
</table>
## User Rights & Access

### Basic Privileges

<table>
<thead>
<tr>
<th>Privilege</th>
<th>Access</th>
<th>Read Only</th>
<th>View &amp; Edit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expiration Date</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Design and Setup</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>User Rights</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Access Groups</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calendar</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Add/Edit/Organize Reports</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stats &amp; Charts</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Import Tool</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Comparison Tool</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Logging</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>File Repository</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Quality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is Data Quality?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Privileges for Viewing and Exporting Data

Data Viewing Rights pertain to a user's ability to view or edit data on pages in the project (e.g., data entry forms, reports). Users with 'No Access' Data Viewing Rights for a given instrument will not be able to view that instrument for any record, nor will they be able to view fields from that instrument on a report. Data Export Rights pertain to a user's ability to export data from the project, whether through the Data Exports page, API, Mobile App, or in PDFs of instruments containing record date. Note: Data Viewing Rights and Data Export Rights are completely separate and do not impact one another.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>No Access (Hidden)</th>
<th>Read Only</th>
<th>View &amp; Edit</th>
<th>No Access</th>
<th>De-Identified</th>
<th>Remove All Identifier Fields</th>
<th>Full Data Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening Form</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact Information Form</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consent Call Log</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consent Form</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview Call Log</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview Start</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESAS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Function: Activities Of Daily Living</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Activity: Leisure Time (Baseline)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
REDCap allows you to create rules that can be used to monitor and check data quality.

<table>
<thead>
<tr>
<th>Rule #</th>
<th>Rule Name</th>
<th>Rule Logic</th>
<th>Real-time execution</th>
<th>Total Discrepancies</th>
<th>View</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Missing values*</td>
<td>-</td>
<td></td>
<td>313</td>
<td>view</td>
</tr>
<tr>
<td>B</td>
<td>Missing values* (required fields only)</td>
<td>-</td>
<td></td>
<td>0</td>
<td>view</td>
</tr>
<tr>
<td>C</td>
<td>Field validation errors (incorrect data type)</td>
<td>-</td>
<td></td>
<td>0</td>
<td>view</td>
</tr>
<tr>
<td>D</td>
<td>Field validation errors (out of range)</td>
<td>-</td>
<td></td>
<td>0</td>
<td>view</td>
</tr>
<tr>
<td>E</td>
<td>Outliers for numerical fields (numbers, integers, sliders, calc fields)</td>
<td>-</td>
<td></td>
<td>0</td>
<td>view</td>
</tr>
<tr>
<td>F</td>
<td>Hidden fields that contain values**</td>
<td>-</td>
<td></td>
<td>0</td>
<td>view</td>
</tr>
<tr>
<td>G</td>
<td>Multiple choice fields with invalid values</td>
<td>-</td>
<td></td>
<td>0</td>
<td>view</td>
</tr>
<tr>
<td>H</td>
<td>Incorrect values for calculated fields</td>
<td>-</td>
<td></td>
<td>0</td>
<td>view</td>
</tr>
</tbody>
</table>
Field-Level Controls

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

Variable Name (utilized during data export)

Validation? (optional) ---- None ----

Enable searching within a biomedical ontology ?

Required? ☐ No ☑ Yes

Identifier? ☐ No ☑ Yes

Custom Alignment Right/Vertical (RV)

Field Note (optional)

Save Cancel
QUESTIONS or COMMENTS?

Next: Building a Project
Before You Start:
Decide What Type of Project Design is Needed

• Classic Database
• Longitudinal
Before you Start:
Decide How to Collect the Data

• Case Report Form/Data Collection Form
• Survey

REDCap projects can have both FORMS and SURVEYS.
Overview: How a project is built

Create a new REDCap Project

You may begin the creation of a new REDCap project on your own by completing the form below and clicking the Create Project button at the bottom.

Project title:  
Training Demo
Title to be displayed on project webpage

Purpose of this project:  
Practice / Just for fun

Assign project to a Project Folder?  

Project notes (optional):  
training

Start project from scratch or begin with a template?  
Circle one  
Create an empty project (blank slate)  
Upload a REDCap project XML file (CDISC ODM format)  
Use a template (choose one below)

Choose a project template  
(check all that apply)

- [ ] Basic Demography
- [ ] Classic Database
- [ ] Human Cancer Tissue Biobank
- [ ] Longitudinal Database (1 arm)
- [ ] Longitudinal Database (2 arms)

Template title (sorted by title)  
Template description

Create Project  
Cancel

REDCap 101  
Fall Session
Setting up a Project: Step-by-Step

- **Main project settings**
  - Use longitudinal data collection with repeating forms?
  - Use surveys in this project?
  - Modify project title, purpose, etc.

- **Design your data collection instruments**
  - Add or edit fields on your data collection instruments. This may be done by either using the Online Designer (drag-and-drop) or by uploading a Data Dictionary (off-line method). In which you may use either method or both. Quick links: Download PDF of all data collection instruments OF Download the current Data Dictionary.
  - Go to [Online Designer](#) or [Data Dictionary](#).
  - You may also browse for pre-built data collection instruments in the REDCap Shared Library.
  - Have you checked the [Check For Identifiers](#) page to ensure all identifier fields have been tagged?

- **Enable optional modules and customizations**
  - Auto-numbering for records
  - Scheduling module (longitudinal only)
  - Randomization module
  - Designate an email field to use for invitations to survey participants
  - Additional customizations

- **Set up project bookmarks (optional)**
  - You may create custom bookmarks to web pages that exist inside or outside of REDCap. These bookmarks will be listed on the left hand project menu and can be accessed at any time by users who are given privileges to do so. Every project bookmark has custom settings that allow one to control its appearance and behavior.
  - Go to [Add or edit bookmarks](#).

- **User Rights and Permissions**
  - You may grant other users access to this project and/or the user privileges of current users on this project by navigating to the User Rights page. Additionally, if you wish to limit user access to certain records/responses for this project, you may want to use Data Access Groups, in which only users within a given Data Access Group can access records created by users within that group.
  - Go to [User Rights](#) or [Data Access Groups](#).

- **Test your project thoroughly**
  - It is important to test the essential components of your project before moving it into production. Try creating a few test records and entering some data for each to ensure that your data collection instruments look and behave as you expect. Especially, removing logic and calculations. Then review your test data by creating reports and exporting your data to View in Excel or a statistical analysis package. If you have surveys, complete the surveys as if you were a participant by using the Participant Link or Participant Test by sending a survey invitation to yourself. Other project modules will be used regularly, last them out a bit too. The best way to test your project is to use it as if you were entering real production data, and do it the way you think other people will do it. Have colleagues (especially team members) take a look at your project to get a fresh set of eyes looking at it.

- **Move your project to production status**
  - Move the project to production status so that real data may be collected. Once in production, you will not be able to edit the project files in real-time anymore. However, you can make edits in Draft Mode, which will then need to be approved by a REDCap administrator before taking effect.
  - Go to [Move project to production](#).
Example of a Build: Field Bank

Using the Field Bank, search for fields in various catalogs below by selecting a catalog and entering specific keyword. When reviewing the results 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/NLM Catalog U.S. National Library of Medicine

61 fields found for NIH/NLM Catalog → All Classifications - Keyword: race

Race OMB.1997

Choose alternative field label [ ] Race OMB.1997

Classification: NLM
Description: The race of a person based on the Office of Management and Budget (OMB), Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity (Oct. 30, 1997).
Example of a Build: Creating Fields

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

Variable Name (utilized during data export)

Validation? (optional) ---- None ----

Enable searching within a biomedical ontology

Required? No Yes

Identifier? No Yes

Does the field contain identifying information (e.g., name, SSN, address)?

Custom Alignment Right/Vertical (RV)

Field Note (optional)

Explanatory notes - not displayed on any page

Save Cancel
Example of a Build: Uploading Metadata

Data Dictionary

- The Data Dictionary is a formatted spreadsheet in CSV (comma separated format) containing the metadata used to construct data collection instruments and fields.

This is recommended for advanced users.
QUESTIONS or COMMENTS?

Next: Collecting Data
Collecting Data: How Data is Captured

- Chart abstractions
- Telephone interviews
- Face-to-face interviews
- Transcriptions from paper forms

Data Sources:
- Third-party cloud data (e.g., Fitbit)
- Third-party API

Data Entry Methods:
- Direct entry
- Off-line entry (mobile app)
- Self-completed online surveys

Data Exports:
- Data exports (e.g., JDAT)

Data Warehouse:
- Data warehouse (e.g., Epic)

API:
- Application Programming Interface
- JDAT: Joint Data Analytics Team
- FHIR: Fast Healthcare Interoperability Resources

Concurrency:
- REDCap API
- REDCap push
- REDCap pull

Open Standards Data Layer:
- OPEN STANDARDS DATA LAYER

External Application:
- EXTERNAL APPLICATION
Example of Case Report Form
Data Collection Form

Data Entry Form – completed by study staff
Example of Data Collection Form: Surveys

Survey – completed by a participant
QUESTIONS or COMMENTS?

Next: Data Management Tools
Advanced Overview: Data Management

**STATISTICAL SOFTWARE** (e.g., SAS, SPSS, R, STATA)

**PROJECT ARCHIVE** (CDISC-ODM)

**OFFLINE STORAGE**

**DATA SHARING**

**TRANSFER TO OTHER INSTITUTION**

**TRANSFER TO OTHER DBMS**

Reports and Data Import/Export

**REDCap**

**DATA EXPORT**

**GENERATED CODE**

**STATISTICAL SOFTWARE**

(e.g., SAS, SPSS, R, STATA)

**EXTERNAL DATABASE**

**EXTERNAL APPLICATION**

**SPECIALIZED SAS PROGRAM**

**MANUAL DATAMART**

**AUTOMATED DATAMART**

**DE-IDENTIFIED DATAMART**

**API** Application Programming Interface

**CDISC** Clinical Data Interchange Standards Consortium

**ODM** Operational Data Model

**DBMS** Database Management System

**DATAMART** A read-only, deidentified snapshot of the database, in a format compatible with statistical software. Used for conduct-of-study reporting, analyses and quality control.

**REDCap API**

**CODEBOOKS**

**PRINTED FORMS**

**STATISTICS and DATA VISUALIZATIONS**

**USER-DEFINED REPORTS**
Data Management Tools: Reporting

Reports can be used to facilitate data management, interim results and analysis.

Data Exports, Reports, and Stats

This module allows you to easily view reports of your data, inspect plots and descriptive statistics of your data, as well as export your data to Microsoft Excel, SAS, Stata, R, or SPSS for analysis (if you have such privileges). If you wish to export your “entire” data set or view it as a report, then Report A is the best and quickest way. However, if you want to view or export data from only specific instruments (or events) on the fly, then Report B is the best choice. You may also create your own custom reports below (if you have such privileges) in which you can filter the report to specific fields, records, or events using a vast array of filtering tools to make sure you get the exact data you want. Once you have created a report, you may view it as a webpage, export it out of REDCap in a specified format (Excel, SAS, Stata, SPSS, R), or view the plots and descriptive statistics for that report.

My Reports & Exports

<table>
<thead>
<tr>
<th>Report name</th>
<th>View/Export Options</th>
<th>Management Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>A All data (all records and fields)</td>
<td>View Report</td>
<td>Edit</td>
</tr>
<tr>
<td>B Selected instruments (all records)</td>
<td>Make custom selections</td>
<td>Copy</td>
</tr>
</tbody>
</table>

- 1 All active participants
- 2 Only >200 cm height
- 3 Female participants

Help & Information

- Help & FAQ
- Video Tutorials
- Suggest a New Feature
Data Management Tools: Statistics and Graphs/Charts

- **Gender**
  - Total Count (N): 30
  - Missing: 0 (0.0%)
  - Unique: 2
  - Counts/Frequency: Male (19, 63.3%), Female (11, 36.7%), Other (0, 0.0%)

- **Height < 150**
  - Display Options
  - Viewing options: Show plots & stats, Show plots only, Show stats only
  - Counts/Frequency: Male (19, 63.3%), Female (11, 36.7%), Other (0, 0.0%)
Data Management Tools: Exports

Choose export format:
- CSV / Microsoft Excel (raw data)
- CSV / Microsoft Excel (labels)
- SPSS Statistical Software
- SAS Statistical Software
- R Statistical Software
- Stata Statistical Software
- CDISC ODM (XML)

De-identification options (optional):
The options below allow you to limit the amount of sensitive information that you are exporting out of the project. Check all that apply.

Known Identifiers:
- Remove all tagged Identifier fields (tagged in Data Dictionary)
- Hash the Record ID field (converts record name to an unrecognizable value)

Free-form text:
- Remove unvalidated Text fields (i.e. Text fields other than dates, numbers, etc.)
- Remove Notes/Essay box fields

Date and datetime fields:
- Remove all date and datetime fields
- Shift all dates by value between 0 and 364 days (shifted amount determined by algorithm for each record)

What is date shifting?

Re-select all options

Export Data
Cancel
The Data Dictionary Codebook is a ‘human’ readable, read-only version of the project data dictionary.

<table>
<thead>
<tr>
<th>#</th>
<th>Variable / Field Name</th>
<th>Field Label / Field Note</th>
<th>Field Attributes (Field Type, Validation, Choices, Calculations, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>subj</td>
<td>Subject ID</td>
<td>text (integer, Min: 8000, Max: 8999), Required</td>
</tr>
<tr>
<td>2</td>
<td>demo_date</td>
<td>Date Completed Demographics Form</td>
<td>text (date_mdy), Required</td>
</tr>
<tr>
<td>3</td>
<td>demo_init</td>
<td>Staff Initial</td>
<td>text, Required</td>
</tr>
<tr>
<td>4</td>
<td>age</td>
<td>Section Header: Demographics Form, Age</td>
<td>text (integer, Min: 40), Required</td>
</tr>
<tr>
<td>5</td>
<td>sex</td>
<td>Gender</td>
<td>radio, Required</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 Male</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0 Female</td>
</tr>
<tr>
<td>6</td>
<td>#ethnic</td>
<td>Ethnicity</td>
<td>radio, Required</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 Hispanic or Latino</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 Not Hispanic or Latino</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 Unknown</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 Declined to answer</td>
</tr>
<tr>
<td>7</td>
<td>race</td>
<td>Race</td>
<td>radio, Required</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 American Indian or Alaskan Native</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 Asian</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 Black or African American</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 Native Hawaiian or Pacific Islander</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5 White</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6 Mixed race</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7 Unknown</td>
</tr>
</tbody>
</table>
QUESTIONS or COMMENTS?

Next: Resources to help you get started
REDCap Support

DIY

+ 

Training Sessions
Consultations
25+ training video tutorials
Help & FAQ

Embedded text and videos throughout.
For example, in the online designer:
Yale’s Do-It-Yourself Resources

https://portal.redcap.yale.edu/resources/

FAQ Library: Step-by-step instructions

How do I build an eConsent?
[Copy & Paste or Type Content]

There are two ways to build an electronic consent document (eConsent) using REDCap. These instructions explain how to copy and paste (or type) content into REDCap. To build an eConsent by scanning an image of the consent form, please refer to FAQ: Build an eConsent [Scanned Image].

Other Videos & Libraries
Upcoming Spring Trainings

- Managing Data in REDCap: Reports, Import, Export
- REDCap 201
- Survey Development
- REDCap 301
- Yale Study Support Suite (YES3): Exporter

Fall Training: REDCap 101, Survey Development, New Features, Multi Language Management
Trainings & Audience
https://portal.redcap.yale.edu/resources/training

How many years have you used REDCap?

0 yrs - I'm new to...

< 1 yrs

1 - 3 yrs

4 - 5 yrs

> 5 yrs

REDCap: All Purpose Data Tool

REDCap 101
Survey Development

REDCap 201
Multi Language Management

YES3 Exporter
Reports & Data Import/Export
REDCap 301

New Features
Consultations and Services

QUESTIONS or COMMENTS?
EXTRA CONTENT

Next: Advanced Data Management Tools
Individual packages of software that extend REDCap's functionality.

Repository of External Modules

The REDCap Repo is a centralized repository of curated External Modules that can be downloaded and installed in REDCap by a REDCap administrator. External Modules are add-on packages of software that can extend REDCap's current functionality, as well as provide customizations and enhancements for REDCap's existing behavior and appearance, either at the system level or project level. The modules provided here were created and submitted by software developers at various REDCap institutions around the world.

If you have created a module and wish to submit it to be listed in the REDCap Repo, please complete the Module Submission Survey. Updated versions must also be submitted via the survey. To learn more about the REDCap Repo module review process, you may download the Module Review Guidelines (PDF).

You may search below for available modules. If you got to this site directly, you will be able to view information about each module, but you will not be able to download modules from this page unless you arrived here from the REDCap application and are a REDCap administrator. If you have questions or are experiencing issues, please contact redcap@vumc.org.

Disclaimer: The modules listed in the REDCap Repo have gone through a process of testing, validation, and curation by the Vanderbilt REDCap Team with help from trusted individuals in the REDCap Consortium. It should not be assumed that all modules are bug-free or perfect, so please be aware that the entire risk as to the quality and performance of the module as it is used in your REDCap installation is borne by the REDCap administrators who download and install the modules.

<table>
<thead>
<tr>
<th>Module title and description</th>
<th>First Submitted</th>
<th>Most Recent Update</th>
<th>Downloads (installs only; excludes updates)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES3 Exporter (yes3_exporter_v1.0.2)</td>
<td>2022-08-24</td>
<td>2022-08-24</td>
<td>5</td>
</tr>
<tr>
<td>Description: Specialized data export module for datamart integrations and data sharing</td>
<td>Author: Peter Charpentier</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yale Second Language extension (ylsclib_second_language_v1.1.2)</td>
<td>2020-10-06</td>
<td>2021-10-21</td>
<td>82</td>
</tr>
<tr>
<td>Description: Basic multilanguage support for REDCap forms</td>
<td>Author: Peter Charpentier (Yale University)</td>
<td>You must be a REDCap administrator logged in to REDCap to download modules.</td>
<td></td>
</tr>
</tbody>
</table>
External Modules (EMs)

- Commonly used external modules
  - Form Render Skip Logic
    - Show and hide forms based on branching logics
  - Image Map
    - User can click on image regions to select field options, e.g. pain map
  - Cross-project piping
    - Pipe data from one project to another project
  - Auto Complete Form Status Based on Required Fields

*Contact us for suitability of external modules for your project*
YES3 External Modules

REDCap@Yale team secures NIH funding to support REDCap External Modules

October 5, 2021

Coming Soon:

Powerful REDCap software tools to support your research.

We are happy to announce that the REDCap@Yale team has secured funding through a NIH NOSI award along with two Development Projects under the Yale OAIC Pepper Center to make components of the Yale Study Support Suite (YES3), a Dashboard EM and a Study Portal EM, widely available.

As part of our 2021-2022 NIH award for the Yale Study Support Suite (YES3), we are sponsoring two internships.

Click the link below for more information.

External link: https://medicine.yale.edu/news-article/yale-program-on-...
First Release: The YES3 Exporter

FEATURES
- A "horizontal" layout for longitudinal studies.
- Optimized for datamart integrations.
- Speed - good performance on large exports.
- Can write directly to host file system
- Daily activity summary emails
- Audit logs

YES3 Exporter Training
Spring Session
QUESTIONS from the audience

How do users choose between REDCap and Qualtrics?
# REDCap versus Qualtrics

<table>
<thead>
<tr>
<th>Feature</th>
<th>Qualtrics</th>
<th>REDCap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expense/Cost</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Learning Curve</td>
<td>Easy</td>
<td>Moderate</td>
</tr>
<tr>
<td>Classic or Longitudinal Design</td>
<td>Classic</td>
<td>Both</td>
</tr>
<tr>
<td>Randomization</td>
<td>Yes (limited)</td>
<td>Yes</td>
</tr>
<tr>
<td>Instrument type (survey, direct data entry)</td>
<td>Survey</td>
<td>Both</td>
</tr>
<tr>
<td>Editable look-and-feel (graphic customization)</td>
<td>Yes</td>
<td>Yes (limited)</td>
</tr>
<tr>
<td>Data Quality Checks</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>File uploads- scans, images, documents</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>API integration</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Data Dictionary format</td>
<td>None (.qsf/JSON file)</td>
<td>Excel/CSV</td>
</tr>
<tr>
<td>Ability to import datasets</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Automated survey invitations and email alerts</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Data Export Types</td>
<td>SPSS, CSV, TSV, Excel, XML</td>
<td>SPSS, Stata, R, SAS, Excel, CSV, CDISC-ODM</td>
</tr>
</tbody>
</table>
REDCap Advantages
Features not available in Qualtrics

- Export to SAS, STATA, R, SPSS, .csv
- Data quality rules
- Longitudinal or repeated measures
- Audit trails in logins
- Automated Survey Invitation and email alert options
- Ability to use a survey as both a survey and a case report form
- eConsent frameworks in Survey Settings

Qualtrics Advantages: Features not available in REDCap

- Export to .tsv
- Flexibility to graphically customize survey forms, web browser format (e.g., page at a time), and mobile device format (e.g., one question at a time)
- Nice library of pre-built surveys, blocks, and questions
- Survey flow features not available in REDCap: Question Randomizer, Web Service, authenticator, embedded data, table of contents
- Additional survey question types: Side by Side, Constant Sum, Hot Spot, Drill down, Gap Analysis, Timing, Pick Group Rank, Heat Map, Graphic Slider, record browser information
  - Some of these additional field types may be supported by REDCap external modules
- Additional survey applications: Survey Scoring