

DATA MANAGEMENT WITH REDCap

: INSIGHTS FOR RESEARCHER

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What is REDCap? Research Electronic Data Capture (REDCap) developed by informatics teams at Vanderbilt University. It is a secure web application for building and managing online surveys and databases. The databases use instruments such as surveys and forms as research capture tools. Projects are self-sufficient and secure databases that can be used for normal data entry or for surveys across multiple distinct time points. It helps in collecting data and exporting it to statistical programs and other data analysis software.

Back up and archive. Data loss is a catastrophic for research projects. Effective data management includes regular data backups and archiving

Facilitates sharing of research data. In many fields, there is growing emphasis on sharing and open science. Effective data management will make it easier for collaboration to happened between institution and researcher. This promotes transparency and reproducibility in research

Prevent errors and increase the quality of analysis. High quality data will lead to a meaningful and trustworthy result.

Why it is important to have a good data management

Good data management not only about organizing and effectively storing the data but also about ensuring the quality, security and accessibility is at the top notch. It underpins the credibility and reliability of research and helps policy makers make inform decision based on data-driven insight.

Privacy, consent, intellectual property and security issue. Proper data management will include protocols for handling sensitive , confidential data. Consent from participant as well as address the security concerns to prevent data breaches or unauthorized access which might have legal implications

Saves time and resources in the long run. Researcher can quickly locate and access data when needed reducing the time spent searching or recreating data. This will improve the productivity.

Why choose REDCap over Excel or Access?

Minimize missing data and data entry error

Free to institutions belonging to the REDCap Consortium

Easy to export data to Excel,PDF,SPSS,STATA,R and SAS

No prior database experience is needed

Multi-site access, projects can be used by researchers from multiple sites and institutions.

Optimize for all type of studies (longitudinal, clinical trial, survey)

Flexibility in designing instruments

It has scheduling and randomization features which will helps a lot in cohort study and clinical trial.

Instrument Library. The verified instrument/tools questionnaire just waiting to be downloaded by user

REDCap Mobile App- For offline data entry/Collection. Can be used in phone/tablet

Security and regulatory compliance – HIPA

REDCap interface

Home My Projects + New Project Help & FAQ Training Videos Send-It Messenger

+ 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:

Project's purpose: How will it be used?

Project notes (optional): Description of the project's use or purpose (displayed on the My Projects page)

Project creation option:

Empty project (blank slate)

Upload a REDCap project XML file (CDISC ODM format) [?](#)

Use a template (choose one below)

★ Choose a project template

select template	Template title (sorted by title)	Template description
<input type="checkbox"/>	Basic Demography	Single data collection instrument to capture basic demographic information.
<input type="checkbox"/>	Classic Database	Six data entry forms, including forms for demography and baseline data, three monthly data forms, and concludes with a completion data form.
<input type="checkbox"/>	Field Embedding Example Project	Example of the Field Embedding feature.
<input type="checkbox"/>	Human Cancer Tissue Biobank	Five data entry forms for collecting and tracking information for cancer tissue.
<input type="checkbox"/>	Longitudinal Database (1 arm)	Nine data entry forms (beginning with a demography form) for collecting data longitudinally over eight different events.
<input type="checkbox"/>	Longitudinal Database (2 arms)	Nine data entry forms (beginning with a demography form) for collecting data on two different arms (Drug A and Drug B) with each arm containing eight different events.

Project setup checklist

- Provides a general to do list during project creation

- Select the main project setting either to do a survey or longitudinal project.

Not started

Main project settings

Enable Use surveys in this project? [?](#) [VIDEO: How to create and manage a survey](#)

Enable Use longitudinal data collection with defined events? [?](#)

Not started

✎ Design your data collection instruments

Add or edit fields on your data collection instruments. This may be done by either using the Online Designer (online method) or by uploading a Data Dictionary (offline method). Quick links: [Download PDF of all instruments](#) OR [Download the current Data Dictionary](#)

Go to or Explore the

Have you checked the [Check For Identifiers](#) page to ensure all identifier fields have been tagged?

Learn how to use

Optional

⚙️ Enable optional modules and customizations

Enable Repeatable instruments? [?](#)

Disable Auto-numbering for records? [?](#)

Enable Scheduling module (longitudinal only)? [?](#)

Enable Randomization module? [?](#)

Enable Designate an email field for communications (including survey invitations and alerts)? [?](#)

Enable Twilio SMS and Voice Call services for surveys and alerts? [?](#)

Optional

🔖 Set up project bookmarks (optional)

You may create custom bookmarks to webpages that exist inside or outside of REDCap. These bookmarks will be seen as links 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

Optional

👤 User Rights and Permissions

You may grant other users access to this project or edit 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 or

★ Choose a project template

Several default **templates** are available. Project can be modified once created.

Select template	Template title (sorted by title)	Template description
<input type="radio"/>	Basic Demography	Single data collection instrument to capture basic demographic info
<input type="radio"/>	Classic Database	Six data entry forms, including forms for demography and baseline data forms, and concludes with a completion data form.
<input type="radio"/>	Field Embedding Example Project	Example of the Field Embedding feature.
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Create Project

Cancel

Project setup is different between survey and longitudinal study. Longitudinal study has option to define the events.

Main project settings

Not started

Disable Use surveys in this project? [?](#)

VIDEO: How to create and manage a survey

Enable Use longitudinal data collection with defined events? [?](#)

I'm done!

Modify project title, purpose, etc.

Design your data collection instruments & enable your surveys

Not started

Add or edit fields on your data collection instruments (survey and forms). This may be done by either using the Online Designer (online method) or by uploading a Data Dictionary (offline method). You may then enable your instruments to be used as surveys in the Online Designer. Quick links: [Download PDF of all instruments](#) OR [Download the current Data Dictionary](#)

Go to [Online Designer](#) or [Data Dictionary](#) Explore the [REDCap Instrument Library](#)

Have you checked the [Check For Identifiers](#) page to ensure all identifier fields have been tagged?

Learn how to use [Smart Variables](#) [Piping](#) [Action Tags](#) [Field Embedding](#) [Special Functions](#)

I'm done!

Enable optional modules and customizations

Optional

Enable Repeatable instruments [?](#)

Disable Auto-numbering for records [?](#)

Enable Scheduling module (longitudinal only) [?](#)

Enable Randomization module [?](#)

Enable Designate an email field for communications (including survey invitations and alerts) [?](#)

Enable Twilio SMS and Voice Call services for surveys and alerts [?](#)

Additional customizations

I'm done!

Main project settings

Not started

Disable Use surveys in this project? [?](#)

VIDEO: How to create and manage a survey

Disable Use longitudinal data collection with defined events? [?](#)

I'm done!

Modify project title, purpose, etc.

Design your data collection instruments & enable your surveys

Not started

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I'm done!

Define your events and designate instruments for them

In progress

Create events for re-using data collection instruments and/or set up scheduling.

Go to [Define My Events](#) or [Designate Instruments for My Events](#)

I'm done!

Enable optional modules and customizations

Optional

Enable Repeatable instruments [?](#)

Disable Auto-numbering for records [?](#)

Enable Scheduling module (longitudinal only) [?](#)

Enable Randomization module [?](#)

Enable Designate an email field for communications (including survey invitations and alerts) [?](#)

Enable Twilio SMS and Voice Call services for surveys and alerts [?](#)

Additional customizations

I'm done!

Video recording for Data Management with REDCap is available. To access the video recording please reach us at cru_hsaas@upm.edu.my