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REDCap for Research: Part II

Watch a recording of the session here

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Michael G. DeGroote SCHOOL OF MEDICINE

McMaster University

Family Medicine

DFM Research Knowledge and Skill Builder

November 26 2019

Presented by Steve Dragos & Ric Angeles

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Learning Objectives

1. Understand the basics of REDCap and its general capabilities
2. Learn some of the advanced features of REDCap

What is REDCap?

Research Electronic Data Capture (REDCap)

- Secure, web-based application for building and managing online databases and surveys
- Online and offline data collection e-forms
- Built-in ability to export data downloads to Excel, SPSS, SAS
- Advanced features:
  - survey development
  - longitudinal data collection
  - ad-hoc reporting tools (reports and stats)
  - mobile access (online and offline)

Using REDCap – Part I

- Consortium
- REDCap at DFM
- Overview of general features
- Demonstration:
  - Interface
  - Project creation
  - Instruments
  - Field types
  - Data Entry
  - Reports

Using REDCap – Part II

- Survey Module
- Longitudinal Data Collection
- User Rights & Data Access Groups
- Mobile App
- Randomization Module

REDCap Resources

- Web site: https://projectredcap.org/
- Instructional videos: https://projectredcap.org/resources/videos/
- University of California San Francisco REDCap Knowledge Bank or FAQ: https://wiki.library.ucsf.edu/display/RKB/REDCap+Frequently+Asked+Questions
- Brief Intro to REDCap Slide Deck. Paul Harris, Vanderbilt CTSA https://studylib.net/doc/5546088/brief-introduction-to-redcap
- Harris, P. A., Taylor, R., Minor, B. L., Elliott, V., Fernandez, M., O'Neal, L., ... & Duda, S. N. (2019). The REDCap consortium: Building an international community of software platform partners. *Journal of biomedical informatics*, *95*, 103208.
- DFM REDCap Project Creation SOP: dfmresearch>Systems and Processes>REDCap

Survey Module

- **REDCap Creating Surveys**
  - https://www.youtube.com/watch?v=Okmw-cOIfrM

- **REDCap Participant List / Open Survey**
  - https://www.youtube.com/watch?v=iWzZvkhXDmc

Survey Module

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

Scheduling Module	schedules based on a series of events or timepoints. Used with the calendar module, this tool greatly streamlines longitudinal data entry.	7 minutes
Data Access Groups for multi-site projects	The Data Access Groups feature assigns users to groups. Any user in a Data Access Group may only access their group's records. Each group is blinded to all other data/records. Users not in a group can access all data across all groups. This feature is especially useful for multi-site projects because each data collection site must usually be restricted from viewing other sites' records.	7 minutes

Types of REDCap Projects

There are several flavors of REDCap projects to choose from as you begin thinking about building your own project. Each type of project has its advantages and disadvantages, and may fit the specific needs better of one type of project over another. Please review the different types below, and you may even view a live example of each project type in action or view a short video about it.

Project Type	Description	Watch Video
Types of Projects	This video describes two major decisions that must be made when building a REDCap project. It also briefly illustrates how these decisions affect which type of project is used.	3 minutes
Traditional Project (classic model with data entry forms)	The traditional project is used for basic data collection. All data is entered directly in REDCap by users who log in. Multiple data collection instruments are often defined. This project type is suitable for most data collection needs. It can capture longitudinal data, including adverse event reporting or other collection that does not have a pre-defined schedule or end-point.	3 minutes
Single Survey Project	The Survey module allows a REDCap instrument to be completed by survey respondents who do not log in. Data can also still be entered by REDCap users (who do log in). This video explores all the major features of the survey module, including survey distribution. A single survey project has only one data collection instrument, which is used as a survey.	5 minutes
Longitudinal Project (multi-use data entry forms, abstract time-points)	The Longitudinal module allows any data collection instrument(s) to be completed multiple times for each record. The same data may be captured repeatedly. The module uses an event grid to define clear timepoints used for data collection. The longitudinal module is best suited to very structured studies which do NOT last indefinitely. Clinical trials frequently use this project type.	3 minutes
	This project type uses two modules. The Longitudinal module allows any data collection	

Longitudinal Data Collection

- REDCap Longitudinal Model
  - https://www.youtube.com/watch?v=MnR5E3GmZwk
  - https://www.youtube.com/watch?v=GaKbI36x95s

User rights/permissions and Data Access Groups

- Link demonstrating step-by step video: https://www.youtube.com/watch?v=0Br9OJ-LUb8
- More Video Links:
  - User rights: https://www.youtube.com/watch?v=I1x6H106_5o
  - Data Access Groups: https://redcap.vanderbilt.edu/consortium/videoplayer.php?video=data_access_groups02.mp4&title=Data%20Access%20Groups&referer=dfmgp.mcmaster.ca

User rights/permissions

- Allows managers to assign rights or permissions to different users such as:
  - To design and manage the database
  - To view only OR add/edit OR delete data in the database
  - To import/export data
  - To allow database access to the mobile app
  - To assign which forms in the database they can access

Data Access Groups

- Within the same database, you can group users' access to data only within their group
- Useful for multi-site study where you want each site to only view data from their own site

Mobile App

- Overview video: https://redcap.vanderbilt.edu/consortium/videoplayer.php?video=app_overview_01.mp4&title=REDCap%20Mobile%20App&referer=dfmgp.mcmaster.ca
- Step-by-step video: https://www.youtube.com/watch?v=2u5GNV_i8Sc

Mobile App

- Only for data collection, not for database management
- Main Advantages:
  - Allows for off-line data capture and syncing of data when Wi-Fi is available
  - User interface is very intuitive and easy to use
- Main Disadvantage:
  - A bit tricky when you have a multi-site study, can occasionally over-write data if not properly managed

Randomization module

- Step-by-step instructions: https://www.ctsi.ufl.edu/files/2018/12/Setting-Up-the-Randomization-Module-in-REDCap.pdf
- Step-by-step video: https://www.youtube.com/watch?v=8oL62GeQO28

Randomization Module

- Ideal database set-up:

Questions?

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