Data Collection and Management with REDCap

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What is REDCap?

• A secure web application for building and managing online surveys and databases

• Although it can be used to collect many types of data, it is designed to support data capture for research studies

• REDCap was developed at Vanderbilt University and there currently are over 1,700 active institutional partners in the REDCap Consortium
When should REDCap not be used?

- Research that requires 21 CFR Part 11 compliance
- Research that involves an investigational new drug or device
- Research that is tracked for billing compliance

For more information:
http://uresearch.miami.edu/research-resources/redcap
Advantages of using REDCap

• **Web-based.** Your project can be accessed from anywhere (including mobile devices)

• **Shared projects.** No need to send Excel files through email.

• **Automatic back ups.** Peace of mind.

• **Data protection.** Your data will be stored on secured servers.

• **Data quality checks.** Ensure that your project is not compromised by incorrect data inputs.

• **User management.** Give the right access to the right people.

• **Active and growing user base.** IT support. DPH/CTSI support.
REDCap Features Walkthrough
Creating a project

• http://redcap.med.miami.edu

• After creating REDCap username, you will be able to request to open a project

• IT must approve your request, then your project will be open and you will be the administrator

• You may add other users to your project (this will be covered later on)
Creating instruments

• Instruments are forms that are used to collect data

• Multiple instruments may be added to a project

• Each instrument should serve one purpose. Example:
  • Demographics
  • Baseline
  • Followup
Adding fields to instruments

• Many types of fields can be added to an instrument:
  • Text
  • Date
  • Drop-down list
  • Radio buttons
  • Checkboxes
  • True/False
  • Etc...

• Always favor multiple choice fields over text entry fields when possible to prevent errors
Editing field properties

• Fields can be edited to best capture the data that you are collecting

• Use **descriptive labels** and field annotations to help the user understand the question

• Use **easy-to-read variable names** to make your life easier when analyzing the data
Using identifiers and required fields

• Always mark a field as required if the user should not leave it blank

• Marking a field as “identifier” can be used to protect sensitive information such as names, MRNs, and birth dates
Using data validation

• Data validation can be used to ensure that the right kind of data is being collected

• Examples of text validation:
  • Email
  • MRN (10 digits)
  • Phone Number
  • SSN
  • Time/Date

You may specify a Minimum/Maximum for numbers
Entering data: Inside REDCap

- Data can be **entered or edited** in REDCap by an administrator, or by a user who has been granted the proper access privileges.
Managing users and access privileges

- Administrators may add other REDCap users to their project

- Once added to the project, users may be granted specific privileges so that they may make changes to the project
Surveys can be used to collect data from users who do not have a REDCap login

They can be completed anonymously via a public survey link

Or, participants can be tracked using the participant list:
Exporting data

- Data can be exported at any time to be viewed in Excel, or any statistical software package

- Data may be exported with or without identified fields to protect patients

- Data may be filtered for analysis using custom reports
Stats and charts

- Data can also be viewed for quick analysis inside of REDCap using the "Stats and charts" feature.
Using pre-built instruments

• The REDCap Shared Library has a collection of pre-built instruments that can be imported into any project

• It is possible to search through these instruments with a keyword search

• Not all instruments can be edited after they are imported

- Adolescent Outcomes Questionnaire Parent Reported
- Adolescent Outcomes Questionnaire Self Reported
- Agitated Behavior Scale
- APACHE II Severity of Disease Classification System (version1)
- Apache II Severity Of Disease Classification System (with scoring)
- Autism Parenting Stress Index (APS1)
- Barriers To Diabetes Adherence
- Barriers To Diabetes Adherence Scored
- Barthel Index
REDCap video tutorials

- There are great tutorial videos available online on the official REDCap site
REDCap mobile app

• The REDCap app is available for Android and iOS
• With the app, you may collect data while not connected to the internet
Contact information

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