Introduction to REDCap

REDCap is an Electronic Data Capture (EDC) Software built to collect and store data.

REDCap provides:
1) an intuitive interface for data entry (with data validation);
2) audit trails for tracking data manipulation and export procedures;
3) automated export procedures for seamless data downloads to common statistical packages (SPSS, SAS, Stata, R); and
4) procedures for importing data from external sources.

Advantages of REDCap

Availability
- Available at no direct cost for CCTST members.

Security
- Users access REDCap through a secure login page
- All traffic between the web browser and the application is encrypted
- Data is stored in the Cincinnati Children’s Hospital Division of Biomedical Informatics.
- Sophisticated user rights management give you control over what users can do in your project
- Audit trails provide accountability
- REDCap Messenger allows messages to be sent securely to other users and team members without having to use insecure email systems.

Ease of Use
- No prior database knowledge is required.
- Built-in training resources allow new users to learn as they go
- CCTST hosts regular training sessions

Speed of Implementation
- The user interface is intuitive allowing simple studies to be built in minutes

Autonomous utilization
- Research groups have complete autonomy and control to add new users.

Collaboration
- Multi-site access · REDCap projects can be used by researchers from multiple sites and institutions.
Because REDCap is web-based data entry can take place almost anywhere
REDCap supports collaborative studies through Data Access Groups (study sites)

Reliability

- REDCap is in use in over 4,500 institutions worldwide.
- Developed by a team at Vanderbilt University REDCap is supported locally by CCHMC staff who have access to an active user support community.
- REDCap is installed on sophisticated IT infrastructure and is backed up multiple times per day

Features

- REDCap supports a broad range of project types from simple surveys through complex longitudinal clinical trials.
- New functionality is added frequently

Enhanced Data Quality

- REDCap supports basic data quality features such as:
  - Structured data dictionary
  - Skip logic
  - Mandatory fields
  - Range checking
  - Form locking/unlocking
  - Missing value indicators
- The data quality module provides customized data quality checks
- Data resolution workflow allows for data queries to be raised and resolved.

Enhanced Output

- Simple reports and graphs can be generated directly in REDCap
- Data can be exported in a choice of formats to work with popular statistical packages such as SPSS, Stata, SAS and R. (You can also export data and work with it in Excel).

Advanced Functionality

- In addition to its standard support for data collection REDCap also includes support for:
  - Survey scheduling
  - Data quality workflows
  - Participant randomization
  - Data coding (through Biportal)
  - Text and voice messaging
  - Online consenting