REDCap 101 Training

Introduction to building projects in REDCap

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REDCap@Yale Team
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Introduction and Learning Objective

- Learn how to set up a study account
- Learn where to access training materials
- Understand how to create a new REDCap project
- Learn how to manage user rights
- Demonstrate how to export data to statistical packages
Web-based software used to create and manage research databases and participant surveys.

Developed as a tool to help researchers collect and manage data effectively and responsibly.
How do I get set up in REDCap?

To request a new account, select **Request Study Account** on the REDCap@Yale portal website:

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

- Two REDCap implementations available at Yale:
## REDCap@Yale

- **What is a REDCap@Yale study account?**
  - Principal Investigator (PI)
  - HIC # (if human subjects research)

- **How do I add users?**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td>PI or primary contact requests someone be added as a user to REDCap@Yale (only if they do not have access already)</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td>New user activates REDCap account by logging in</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td>PI or primary contact adds user to their REDCap project</td>
</tr>
</tbody>
</table>
Yale NetID and password is required for login

– You CANNOT reset password in REDCap. Reset your Yale NETID password through Yale ITS

Question: My project involves people outside Yale. How do they login?
Answer: You can provide a Yale NET ID. Refer to the ITS website on how to obtain sponsored NetID for external collaborators.
QUESTIONS?
Training Resources: Within REDCap

Training Videos: 26 training videos currently available

[Image of REDCap Training Videos]

Just Getting Started?
Explore these overviews of fundamental concepts and features.

<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
<th>Watch Video</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brief Overview</td>
<td>A quick summary of what REDCap is and what it can do.</td>
<td>4 minutes</td>
</tr>
<tr>
<td>Detailed Overview</td>
<td>This video provides an overview of basic functions and features within a REDCap project. It will serve as a starting point for learning about the basic concepts of REDCap, what REDCap projects are, how to create them, and how to use them.</td>
<td>14 minutes</td>
</tr>
<tr>
<td>Data Entry Overview</td>
<td>A focused exploration of basic data entry workflow. Suitable for training data entry staff.</td>
<td>19 minutes</td>
</tr>
</tbody>
</table>
Training Resources: Within REDCap

Help & FAQ: This is also a good place to look up syntax for calculated field, branching logics or piping.
Training Resources: Within REDCap

‘How to’ links throughout REDCap. For example, in online designer:

- [VIDEO: How to use this page]
- [Create snapshot of instruments]
- [Last snapshot: never]

This page allows you to build and customize your data collection instruments one field at a time. You may add new fields or edit existing ones. New fields may be added by clicking the Add Field buttons. You can begin editing an existing field by clicking on the Edit icon. If you decide that you do not want to keep a field, you can simply delete it by clicking on the Delete icon. To reorder the fields, simply drag and drop a field to a different position within the form below. NOTE: While in development status, all field changes will take effect immediately in real time.

- [Learn how to use...]
  - [Smart Variables]
  - [Piping]
  - [Action Tags]
  - [Field Embedding]
  - [Special Functions]

- [How to embed a field elsewhere]
  Learn how to customize your instrument or survey by using Field Embedding.

- [How to modify multiple fields together]
  To copy, move, or delete multiple fields at the same time, hold the Ctrl, Shift, or Cmd key on your keyboard and click the field to reveal the options.
Library of step-by-step tutorials to address commonly asked questions from our Yale end-users:

1. How do I insert an image?
2. How do I insert a video?
3. How do I customize the appearance of REDCap?
QUESTIONS?
VERY BRIEF TOUR
REDCap: Homepage

Welcome to REDCap!

REDCap is a secure web platform for building and managing online databases and surveys. REDCap's streamlined process for rapidly creating and designing projects offers a vast array of tools that can be tailored to virtually any data collection strategy.

REDCap provides automated export procedures for seamless data downloads to Excel and common statistical packages (SPSS, SAS, Stata, R), as well as a built-in project calendar, a scheduling module, ad hoc reporting tools, and advanced features, such as branching logic, file uploading, and calculated fields.

Learn more about REDCap by watching a brief summary video (4 min). If you would like to view other quick video tutorials of REDCap in action and an overview of its features, please see the Training Resources page.

NOTICE: If you are collecting data for the purposes of human subjects research, review and approval of the project is required by your Institutional Review Board.

If you require assistance or have any questions about REDCap, please contact the REDCap@Yale team.

REDCap Features

- **Build online surveys and databases quickly and securely in your browser** - Create and design your project using a secure login from any device. No extra software required. Access from anywhere, at any time.

- **Fast and flexible** - Go from project creation to starting data collection in less than one day. Customizations and changes are possible any time, even after data collection has begun.

- **Advanced instrument design features** - Auto-validation, calculated fields, file uploading, branching/skip logic, and survey stop actions.

- **e-Consent** - Perform informed consent electronically for participants via survey.

- **Diverse and flexible survey distribution options** - Use a list of email addresses or phone numbers for your survey respondents and automatically contact them with personalized messages, and track who has responded. Or
REDCap: My Projects

REDCap at Yale University
REDCap@Yale

OUR MISSION
To promote excellence through empowerment, on an informatics platform that encourages innovation and collaboration.

ADDITIONAL LINKS
Check out our portal website
REDCap@Yale activity charts

Listed below are the REDCap projects to which you currently have access. Click the project title to open the project. Read more To review which users still have access to your projects, visit the User Access Dashboard.

<table>
<thead>
<tr>
<th>My Projects</th>
<th>Organize</th>
<th>Collapse All</th>
</tr>
</thead>
<tbody>
<tr>
<td>PID</td>
<td>Records</td>
<td>Fields</td>
</tr>
<tr>
<td>Unorganized Projects (5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEST PROJECTS (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test project Neuro QOL</td>
<td>2362</td>
<td>4</td>
</tr>
<tr>
<td>INSPIRE (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>U19 (12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PREDICT (1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
RedCap: Project Navigation Bar

Access to most parts of RedCap:

- Project design pages
- Data Collection
- Applications
- Reports and Dashboards
- Help and Training

Your Navigation Bar will vary based on your user rights.
REDCap: Project Setup
SETTING UP YOUR PROJECT:

WHERE DO I BEGIN?
How do I create a new project in REDCap?

Click the ‘+New Project’ tab, complete the form
- Remember to enter the PI and study information

○ After we verify you have a study account, we will create the project and notify you via email within 1-2 business days.
Big Picture Questions

What type of project is needed?

- **Classic Database**
  - Each form can only be completed at one time point
  - One record per subject.

- **Longitudinal**
  - Data collected multiple times per subject
  - Fixed number of collection points that correspond to pre-defined events (e.g. baseline, 3mo. follow-up, 6mo. follow-up, 1yr follow-up)
  - Optional scheduling via a project calendar
  - Can have multiple study arms
Big Picture Questions

How will you collect the data?

- **Data Entry**
  - Data entered by REDCap users (i.e. research staff)
  - Offline data collection available via mobile app

- **Survey**
  - Online survey completed by participants
  - Participants do not need to have a Yale NetID

A project can have both surveys and data entry forms.
How to Set Up your Project

Main project settings
- Enable surveys in this project?
- Use longitudinal data collection with defined events?
- Use the MyCap participant-facing mobile app?
- 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 (online method) or by uploading a Data Dictionary (offline method). Quick links: Download PDF of all instruments or Download the current Data Dictionary.

Enable optional modules and customizations
- Repeating instruments
- Auto-numbering for records
- Scheduling module (longitudinal only)
- Randomization module
- Designate an email field for communications (including survey invitations and alerts)

Enable additional customizations
- Twilio SMS and Voice Call services for surveys and alerts
- Mosio SMS services for surveys and alerts
- SendGrid Template email services for Alerts & Notifications
Project Setup: Enable Settings

If applicable:
- Enable survey setting
- Enable longitudinal setting
Design your project instruments

Method 1: Online Designer
Method 2: Data Dictionary

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 Online Designer or Data Dictionary

Explore the REDCap Shared 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
Project Set Up: Building with the Online Designer

Online Designer

- Allows you to create/modify/delete data collection instruments and fields (questions) in your web browser.
- Changes are made in real time and available immediately for review and testing.

The Online Designer will allow you to make project modifications to fields and data collection instruments very easily using only your web browser. NOTE: While in development status, all field changes will take effect immediately in real time.

<table>
<thead>
<tr>
<th>Instrument name</th>
<th>Fields</th>
<th>View PDF</th>
<th>Enabled as survey</th>
<th>Instrument actions</th>
<th>Survey related options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form 1</td>
<td>1</td>
<td>pdf</td>
<td>Enable</td>
<td>Choose action</td>
<td></td>
</tr>
</tbody>
</table>
This field’s value can be auto-assigned by REDCap

*(Project Setup ➔ Enable optional modules ➔ Enable auto-numbering for records)*
Project Set Up: Building with the Online Designer

1. Edit field
2. Copy field
3. Specify branching logic
4. Move field (can move to other form)
5. Delete field
Building Forms: Field Types

Standard fields:

- Text Box (Short Text, Number, Date/Time, ...)
- Notes Box (Paragraph Text)
- Calculated Field
- Multiple Choice - Drop-down List (Single Answer)
- Multiple Choice - Radio Buttons (Single Answer)
- checkboxes (Multiple Answers)
- Yes - No
- True - False
- Signature (draw signature with mouse or finger)
- File Upload (for users to upload files)
- Slider / Visual Analog Scale
- Descriptive Text (with optional Image/Video/Audio/File Attachment)
- Begin New Section (with optional text)
- Dynamic Query (SQL)
Matrix fields:

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Gym (Weight Training)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7</td>
<td>Aerobics</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8</td>
<td>Eat Out (Dinner/Lunch)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>9</td>
<td>Drink (Alcoholic Beverages)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Building Forms: Field Name

- Each field name must be:
  - Unique
  - Lowercase
  - Contain fewer than 26 characters
  - Contain only letters, numbers, and underscores

- In general, field names should be as short in length as possible and maintain meaning.

Instead of ‘demographics_q1’ or ‘what_was_your_sex_at_birth’, use ‘birth_sex’!
Building Forms: Drop Down Field

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: Multiple Choice - Drop-down List (Single Ansv)

Field Label
Race

Variable Name (utilized in logic, calcs, and exports)
race

Required?*  ○ No  ○ Yes
* Prompt if field is blank

Identifier?  ○ No  ○ Yes
Does the field contain identifying information (e.g., name, SSN, address)?

Custom Alignment  Right / Vertical (RV)
Align the position of the field on the page

Field Note (optional)
Small reminder text displayed underneath field

Action Tags / Field Annotation (optional)
Learn about [Action Tags] or using Field Annotation
Validation is an important tool that can be used to prevent errors. It also helps when exporting data to statistical packages.
Fields that constitute protected health information (PHI) can be marked as an “Identifier”

These fields can then be excluded on data export, allowing for analysis of “de-identified” data

Users can also be restricted in their ability to export Identifier fields based on access rights
QUESTIONS?
Action tags allow you to modify fields in very specific ways. Once applied, a corresponding action is performed.

In REDCap, action tags begin with the '@' sign and are placed inside a field’s “Action Tags/Field Annotation” box.
Building Forms: Smart Variables

Allow reference information other than data fields (e.g., event, repeat instance, DAG or users)

Example: Set the default value of a field to be the value of the previous event.

<table>
<thead>
<tr>
<th>Field Label</th>
<th>Event Name: <strong>Event 1</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>test1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Action Tags / Field Annotation</th>
<th>Event Name: <strong>Event 2</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>@DEFAULT='[previous-event-name][test1]'</td>
<td></td>
</tr>
</tbody>
</table>

Learn about [Action Tags](#) or [using Field Annotation](#)
## Building Forms: Smart Variables

### Smart Variables

<table>
<thead>
<tr>
<th>Name of Smart Variable</th>
<th>Description</th>
<th>Example of Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>User</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[user-name]</td>
<td>The current user’s REDCap username.</td>
<td>[user-name]</td>
</tr>
<tr>
<td>[user-fullname]</td>
<td>The current user’s first and last name (as listed on their My Profile page).</td>
<td>[user-fullname]</td>
</tr>
<tr>
<td>[user-email]</td>
<td>The current user’s primary email address (as listed on their My Profile page).</td>
<td>[user-email]</td>
</tr>
<tr>
<td>[user-dag-name]</td>
<td>The Data Access Group (the unique group name) to which the current user belongs (blank if not in a DAG).</td>
<td>[user-dag-name]</td>
</tr>
<tr>
<td>[user-dag-id]</td>
<td>The group ID number of the Data Access Group to which the current user belongs (blank if not in a DAG).</td>
<td>[user-dag-id]</td>
</tr>
<tr>
<td>[user-dag-label]</td>
<td>The name/label of the Data Access Group to which the current user belongs (blank if not in a DAG).</td>
<td>[user-dag-label]</td>
</tr>
<tr>
<td><strong>Record</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[record-name]</td>
<td>The record name of the current record.</td>
<td>[record-name]</td>
</tr>
<tr>
<td>[record-dag-name]</td>
<td>The Data Access Group (the unique group name) to which the current record belongs (blank if not in a DAG).</td>
<td>[record-dag-name]</td>
</tr>
<tr>
<td>[record-dag-id]</td>
<td>The group ID number of the Data Access Group to which the current record belongs (blank if not in a DAG).</td>
<td>[record-dag-id]</td>
</tr>
<tr>
<td>[record-dag-label]</td>
<td>The name/label of the Data Access Group to which the current record belongs (blank if not in a DAG).</td>
<td>[record-dag-label]</td>
</tr>
<tr>
<td><strong>Form</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[is-form]</td>
<td>Detects if the current instrument is being viewed as a data entry form (returns 1 for True, 0 for False), as opposed to a survey.</td>
<td>[is-form]</td>
</tr>
</tbody>
</table>

---

*REDCap* @ *Yale*
Building Forms: Smart Variables Examples

- Survey duration
  - [survey-duration-completed:demographics]
- Auto-capture user’s name
  - @DEFAULT='[user-name]'
- Branching logic based on event name
  - [event-name]='baseline_arm_1'
Building Forms: Branching Logic

Choose method below for the following field: longcovid yn - Long COVID?

- Advanced Branching Logic Syntax
  - How to use: Branching Logic, Smart Variables, Special Functions
  - Show the field ONLY if...
    - [covid yn] = '1'
  - Test logic with a record: -- select record --

--- OR ---

- Drag-N-Drop Logic Builder
  - Displaying field choices for the following data collection instrument:
    - Form 1
  - Field choices from other fields (drag a choice below to box on right)
    - sex = Female (1)
    - sex = Male (2)
    - age = (define criteria)
    - pregnant = Yes (1)
    - pregnant = No (0)
    - covid yn = Yes (1)
    - covid yn = No (0)
    - sts = (define criteria)
    - weight = (define criteria)
  - Show the field ONLY if...
    - ALL below are true
    - ANY below are true
    - covid yn = Yes (1)

You can use fields on the current data entry form OR other forms

If fields from different events are used in branching logic, the field name needs to be preceded by an event name, e.g. [screening_arm_1][field1]
Building Forms: Piping

Without Piping:

What kind of ice cream do you like?
- Chocolate
- Strawberry
- Vanilla

How often do you eat _____ ice cream?
- Once a week
- Twice a week
- Three times a week

With Piping:

What kind of ice cream do you like?
- Chocolate
- Strawberry
- Vanilla

How often do you eat Chocolate ice cream?
- Once a week
- Twice a week
- Three times a week
Building Forms: Piping

How to use piping:

![Diagram of REDCap form creation process](image)
Building Forms: Field Embedding

Without field embedding:

<table>
<thead>
<tr>
<th>Test Date 1</th>
<th>Test Result 1A</th>
<th>Test Result 1B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Date 2</th>
<th>Test Result 2A</th>
<th>Test Result 2B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

With field embedding:

<table>
<thead>
<tr>
<th>Date</th>
<th>Test Result A</th>
<th>Test Result B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Test Result A</th>
<th>Test Result B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
QUESTIONS?
How to Set Up your Project

Main project settings

Complete!

- Use surveys in this project?
- Use longitudinal data collection with defined events?

Not complete?

Modify project title, purpose, etc.

Design your data collection instruments & enable your surveys

Complete!

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

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

Define your events and designate instruments for them

Complete!

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

Go to Define My Events or Designate Instruments for My Events

Enable optional modules and customizations

Optional

Modify Repeatable instruments and events
Enable Auto-numbering for records
Disable Scheduling module (longitudinal only)
Disable Randomization module
Disable Designate an email field for sending survey invitations

Field currently designated: testemail ("Test email")

Additional customizations
How to Define Events

**WARNING:**
Deleting any events below will result in data loss. Please proceed with caution.

Unique event name is auto-generated.

This is where you will find the event names for use in branching logic.

**Arm 1:** U19  **Arm 2:** IMAGIN  **Add New Arm**

Arm name: **U19**

<table>
<thead>
<tr>
<th>Event #</th>
<th>Days Offset</th>
<th>Offset Range Min / Max</th>
<th>Event Name</th>
<th>Custom Event Label (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>-0/+0</td>
<td>Flu Clinic</td>
<td>flu_clinic_arm_1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>0/+2</td>
<td>Day 2-4 Blood Draw</td>
<td>day_24_blood_draw_arm_1</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>-0/+0</td>
<td>Day 7 Blood Draw</td>
<td>day_7_blood_draw_arm_1</td>
</tr>
<tr>
<td>4</td>
<td>28</td>
<td>-0/+0</td>
<td>Day 28 Blood Draw</td>
<td>day_28_blood_draw_arm_1</td>
</tr>
<tr>
<td>5</td>
<td>70</td>
<td>-0/+0</td>
<td>Day 70 Blood Draw</td>
<td>day_70_blood_draw_arm_1</td>
</tr>
<tr>
<td>6</td>
<td>100</td>
<td>-0/+0</td>
<td>Non-Flu Blood Draw</td>
<td>nonflu_blood_draw_arm_1</td>
</tr>
</tbody>
</table>

**Add new event**
- **Convert from other units**
- **Descriptive name for this event**
- **Custom Event Label (optional)**
  - Example: [visit_date], [weight] kg
How to Designate Instruments to Events

The event list and instrument mappings can be downloaded from one project and uploaded to another project.
SURVEYS
Surveys

Not enabled as a survey:

**Neuro-QOL SF v1.0 - Fatigue**

<table>
<thead>
<tr>
<th>Record ID</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the past 7 days I felt tired</td>
<td></td>
</tr>
<tr>
<td>none of the time</td>
<td>a little bit of time</td>
</tr>
</tbody>
</table>

| In the past 7 days I had trouble starting things because I was too tired |
| none of the time | a little bit of time | some of the time | most of the time | all of the time |

| In the past 7 days I had trouble finishing things because I was too tired |
| none of the time | a little bit of time | some of the time | most of the time | all of the time |
Enabled as a survey

**Neuro-QOL SF v1.0 - Fatigue**

Please complete the survey below.

Thank you!

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the past 7 days I felt tired</td>
<td>none of the time, a little bit of time, some of the time, most of the time, all of the time</td>
</tr>
<tr>
<td>In the past 7 days I had trouble starting things because I was too tired</td>
<td>none of the time, a little bit of time, some of the time, most of the time, all of the time</td>
</tr>
<tr>
<td>In the past 7 days I had trouble finishing things because I was too tired</td>
<td>none of the time, a little bit of time, some of the time, most of the time, all of the time</td>
</tr>
</tbody>
</table>
How to Set Up a Survey

Enable any form as a survey in Online Designer
  – Open survey setting; configure the survey

<table>
<thead>
<tr>
<th>Instrument name</th>
<th>Fields</th>
<th>View PDF</th>
<th>Enabled as survey</th>
<th>Instrument actions</th>
<th>Survey related options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant Information</td>
<td>17</td>
<td><img src="pdf" alt="PDF" /></td>
<td><strong>Enable</strong></td>
<td>Choose action ▼</td>
<td><a href="#">Survey settings</a> <a href="#">Automated Invitations</a></td>
</tr>
<tr>
<td>Prior Study Data</td>
<td>41</td>
<td><img src="pdf" alt="PDF" /></td>
<td><strong>Enable</strong></td>
<td>Choose action ▼</td>
<td><a href="#">Survey settings</a> <a href="#">Automated Invitations</a></td>
</tr>
<tr>
<td>Communication Log</td>
<td>17</td>
<td><img src="pdf" alt="PDF" /></td>
<td><strong>Enable</strong></td>
<td>Choose action ▼</td>
<td><a href="#">Survey settings</a> <a href="#">Automated Invitations</a></td>
</tr>
<tr>
<td>Consent Form</td>
<td>0</td>
<td><img src="pdf" alt="PDF" /></td>
<td><strong>Enable</strong></td>
<td>Choose action ▼</td>
<td><a href="#">Survey settings</a> <a href="#">Automated Invitations</a></td>
</tr>
</tbody>
</table>

Survey features:
  – Schedule automated survey invitations
  – Set up a survey queue
  – Create unique login code for survey respondents
  – Set up researcher notifications upon survey completion
How to Send Surveys to Participants

- Anonymous: Use the public survey link. Survey must be the first form; record will be created as each survey is completed.

- Non-anonymous: Designate an email field for sending survey (recommended method).

REDCap has many advanced features that can be used for setting up surveys. This will be covered in the survey development training.
How to Set Up your Project

**Main project settings**
- Use surveys in this project?
- Use longitudinal data collection with defined events?

**Design your data collection instruments & enable your surveys**
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.

Have you checked the Check For Identifiers page to ensure all identifier fields have been tagged?

**Define your events and designate instruments for them**
Create events for re-using data collection instruments and/or set up scheduling.

**Enable optional modules and customizations**
- Repeatable instruments and events
- Auto-numbering for records
- Scheduling module (longitudinal only)
- Randomization module
- Designate an email field for sending survey invitations

Field currently designated: testemail ("Test email")
QUESTIONS?
FINAL STEPS BEFORE IMPLEMENTATION:

USER RIGHTS AND TESTING
Granting User Rights in REDCap:
Individual Users

User access can be set up by “Custom Right” or “Role Based” access

- Best Practice: “Role Based” access
Granting User Rights in REDCap: Individual Users and User Roles

**Basic Rights:** Access to the Project

**Viewing and Exporting Data:** Access to Individual Forms

### Basic Privileges
- Expiration Date (if applicable)
- Project Design and Setup
- User Rights
- Data Access Groups
- Survey Distribution Tools
- Alerts & Notifications
- Calendar
- Add/Edit/Organize Reports
- Stats & Charts
- Data Import Tool
- Data Comparison Tool
- Logging
- File Repository
- Data Quality
- Create & edit rules
- Execute rules

### 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 data. Note: Data Viewing Rights and Data Export Rights are completely separate and do not impact one another.

<table>
<thead>
<tr>
<th>Data Viewing Rights</th>
<th>Data Export Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Access (Hidden)</td>
<td>No Access</td>
</tr>
<tr>
<td>Read Only</td>
<td>De-identified*</td>
</tr>
<tr>
<td>View &amp; Edit</td>
<td>Remove All Identifier Fields</td>
</tr>
<tr>
<td>Edit survey responses</td>
<td>Full Data Set</td>
</tr>
</tbody>
</table>

- Participant Information (survey)
- Consent (survey)
- Neuro-QOL SF v1.0 - Fatigue (survey)
- Tracking Form

* De-identified means that all free-form text fields will be removed, as well as any date/time fields and Identifier fields.

### External Modules: Configuration Permissions

Privileges may be defined regarding whether the user can set or modify the configuration of an External Module that has been enabled on this project. Below are the currently enabled modules. NOTE: Only administrators may modify the module configuration permissions here.

- Announcement Banner*
- Simple Ontology Module*

*Permissions based on user’s Project Design/Setup rights
“Data Access Group” is an advanced feature that is useful for multi-center trials and collaborations, especially for HIPAA compliance.

- Users in a particular Data Access Group can only see records entered by other users in that Data Access Group.
Granting User Rights in REDCap: Assigning Users to multiple DAGs

Users can be assigned to more than one DAG using the DAG Switcher setting.
TEST YOUR PROJECT!

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 how you expect, especially branching 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 Public Survey Link or Participant List by sending a survey invitation to yourself. If other project modules will be used regularly, test 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 it is always helpful to have colleagues (especially team members) take a look at your project to get a fresh set of eyes looking at it.

- Make sure you test your project thoroughly by entering test data.
- Have other users enter data or complete surveys.
- Export the test data to make sure the format can be used for data analysis.
Moving your Project to Production

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 fields in real time anymore. However, you can make edits in Draft Mode, which will be auto-approved or else might need to be approved by a REDCap administrator before taking effect.

Go to Move project to production

Move Project To Production Status?

Are you sure you wish to leave the DEVELOPMENT stage? If you proceed, the project will be moved to PRODUCTION status so that real data may be collected. If you select the 'Delete ALL data' option below, all current collected data, calendar events, and uploaded documents will be deleted, otherwise all will remain untouched as the project is moved to production.

🌟 Have you checked the Check For Identifiers page to ensure all identifier fields have been tagged?

Keep existing data or delete?

- Keep ALL data saved so far.
- Delete ALL data, calendar events, documents uploaded for records/responses, survey responses (if applicable), and any logging events pertaining to data collection.

Once in production, you will not be able to edit the project fields in real time anymore. However, you can make edits in Draft Mode, which will be auto-approved or else might need to be approved by a REDCap administrator before taking effect.
QUESTIONS?
Using Data Exports, Reports and Stats
Exporting Data

You can export the entire dataset or select forms/fields

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.

<table>
<thead>
<tr>
<th>My Reports &amp; Exports</th>
<th>View/Export Options</th>
<th>Management Options</th>
<th>Report ID (auto-generated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A All data (all records and fields)</td>
<td>✸ View Report ✸ Export Data ✸ Stats &amp; Charts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Selected instruments and/or events (all records)</td>
<td>✸ Make custom selections</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 test (copy)</td>
<td>✸ View Report ✸ Export Data ✸ Stats &amp; Charts</td>
<td>✸ Edit ✸ Copy ✸ Delete</td>
<td>1322</td>
</tr>
<tr>
<td>2 frailty assessment</td>
<td>✸ View Report ✸ Export Data ✸ Stats &amp; Charts</td>
<td>✸ Edit ✸ Copy ✸ Delete</td>
<td>2</td>
</tr>
</tbody>
</table>
Setting Up Reports in REDCap

Steps:
- Set user access
- Add fields
- Filter data
- Order results

Any report can be used to export data
Exporting Data

Exporting "All data (all records and fields)"

Select your export settings, which includes the export format (Excel/CSV, SAS, SPSS, R, Stata) and if you wish to perform de-identification on the data set.

### 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
  - OR —
  - Shift all dates by value between 0 and 364 days (shifted amount determined by algorithm for each record)
  - Also shift all survey completion timestamps by value between 0 and 364 days (shifted amount determined by algorithm for each record)

### Additional export options
- Export Data Access Group name for each record (if record is in a group)?
- Export survey identifier field and survey timestamp field(s)?

---

**Export Data**  **Cancel**
Stats and Charts

**Gender**

- **Total Count (N):** 30
- **Missing:** 0
- **Unique:** 2

Counts/frequency: Male (19, 63.3%), Female (11, 36.7%), Other (0, 0.0%)

**height < 150**

- **Optional:** Select a record to overlay onto the plots below
- **Viewing options:** Show plots & stats, Show plots only, Show stats only

**Height**

- **Total Count (N):** 10
- **Missing:** 0
- **Unique:** 8
- **Min:** 120.00
- **Max:** 149.70
- **Mean:** 135.70
- **StDev:** 13.5700
- **Sum:** 1231.25

- **Percentile**
  - 0.05: 120.00
  - 0.10: 120.00
  - 0.25: 120.00
  - 0.50: Median: 130.00
  - 0.75: 144.50
  - 0.90: 149.30
  - 0.95: 149.65

Lowest values: 120, 123, 125, 134, 140
Highest values: 140, 143, 145, 146
Data Dictionary Codebook

The Codebook is a ‘human’ readable, read-only version of the project data dictionary.
But wait, there’s more!

- Survey development training
  1pm October 18 (waitlist only; pre-work required)

- New Features REDCap Version 13
  11am November 7

- Multi-Language Management
  1pm December 5

Further Questions? Contact us at REDCap@yale.edu