REDCap 101 Training

Introduction to building projects in REDCap

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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
What is REDCap?

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

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

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>
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:

Current instrument: Participant Information

- Variable: record_id
  - This field will NOT be displayed on the survey page.
  - You should NOT use identifiers (e.g., MRN, SSN) for the record ID field.

Record ID

Note: The field above is the record ID field and thus cannot be deleted or moved. It can only be edited.
Training Resources: REDCap@Yale Website

Library of step-by-step tutorials to address commonly asked questions from our Yale end-users:

Frequently Asked Questions

How do I insert a video?
I want to include a video in the survey project I am using for eConsent.

Videos can be inserted into a REDCap form or survey using the Descriptive Text field type and can appear within the form/survey page (inline) or in a separate window (popup). You must first obtain the URL (link) to the video that you want to insert. YouTube and Vimeo are compatible sources, but other video sources can be used as well.

To insert a video into a form/survey:
1. Within the 'Online Designer', add a new field to your form and select the 'Descriptive Text' field type.
QUESTIONS?
VERY BRIEF TOUR
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.

eConsent - 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>Project Title</th>
<th>PID</th>
<th>Records</th>
<th>Fields</th>
<th>Instruments</th>
<th>Type</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unorganized Projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEST PROJECTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test project Neuro QOL</td>
<td>2362</td>
<td>4</td>
<td>53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INSPIRE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PREDICT</td>
<td></td>
<td></td>
<td></td>
<td></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

Test project Neuro QOL

Main project settings
- Not started
  - Use 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 & 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.

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

Set up project bookmarks (optional)
- 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.

User Rights and Permissions
- Optional
  - 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 menu. Additional: If you wish to limit user access to certain features, you can
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: Use surveys in this project?
- Enable: Use longitudinal data collection with defined events?
- Enable: Use the MyCap participant-facing mobile app?

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
- Modify: Repeating 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)

Settings displayed to Administrators only:
- Enable: Twilio SMS and Voice Call services for surveys and alerts
- Enable: Mosio SMS services for surveys and alerts
- Enable: SendGrid Template email services for Alerts & Notifications
Project Setup: Enable Settings

If applicable:
- Enable survey setting
- Enable longitudinal setting
Project Setup: Build your Instruments

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](#)
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.
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)
Building Forms: Field Types

Matrix fields:

Please let us know your weekly schedule for the following:

<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

Enable auto naming of variable based upon its Field Label?

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)

Field Note (optional)
Small reminder text displayed underneath field

How do I manually code the choices?
Copy existing choices

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.
Building Forms: Smart Variables

<table>
<thead>
<tr>
<th>Name of Smart Variable</th>
<th>Description</th>
<th>Example of Usage</th>
<th>Example input</th>
<th>Example output</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>User</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[user-name]</td>
<td>The current user’s REDCap username.</td>
<td>[user-name]</td>
<td></td>
<td>jane.doe</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>
<td></td>
<td>Jane Doe</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>
<td></td>
<td><a href="mailto:jane.doe@example.edu">jane.doe@example.edu</a></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>
<td></td>
<td>vanderbilt_group</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>
<td></td>
<td>324</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>
<td></td>
<td>Vanderbilt Group</td>
</tr>
<tr>
<td><strong>Record</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[record-name]</td>
<td>The record name of the current record.</td>
<td>[record-name]</td>
<td></td>
<td>108</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>
<td></td>
<td>harvard_site</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>
<td></td>
<td>96</td>
</tr>
<tr>
<td><strong>Form</strong></td>
<td></td>
<td></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>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
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'
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:

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

- Variable: icecream_often
  - How often do you eat ice cream?
    - Once a week
    - Twice a week
    - Three times a week

Field Label:
- How often do you eat [ice_cream] ice cream?

Choices (one choice per line):
1. Once a week
2. Twice a week
3. Three times a week

How do I manually code the choices?
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><img src="s.png" alt="Image" /></td>
<td><img src="s.png" alt="Image" /></td>
<td><img src="s.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="s.png" alt="Image" /></td>
<td><img src="s.png" alt="Image" /></td>
<td><img src="s.png" alt="Image" /></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><img src="s.png" alt="Image" /></td>
<td><img src="s.png" alt="Image" /></td>
<td><img src="s.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="s.png" alt="Image" /></td>
<td><img src="s.png" alt="Image" /></td>
<td><img src="s.png" alt="Image" /></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><img src="s.png" alt="Image" /></td>
<td><img src="s.png" alt="Image" /></td>
<td><img src="s.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="s.png" alt="Image" /></td>
<td><img src="s.png" alt="Image" /></td>
<td><img src="s.png" alt="Image" /></td>
</tr>
</tbody>
</table>
QUESTIONS?
How to Set Up your Project

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

Modify project title, purpose, etc.

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

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

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

Go to Define My Events or Designate Instruments for My Events

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")

Additional customizations
How to Define Events

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

[Image of event definitions interface]

**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>

**Unique event name is auto-generated.**

This is where you will find the event names for use in branching logic.
How to Designate Instruments to Events

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

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening &amp; Enrollment Form</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone Interview</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood Draw Form</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Frailty Assessment</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study Withdrawal</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Genetic Data Repository Consent</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional Blood Draw Form (Non-Flu)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
SURVEYS
Surveys

Not enabled as a survey:

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

- **In the past 7 days**
  - I felt 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 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</td>
</tr>
<tr>
<td></td>
<td>- a little bit of time</td>
</tr>
<tr>
<td></td>
<td>- some of the time</td>
</tr>
<tr>
<td></td>
<td>- most of the time</td>
</tr>
<tr>
<td></td>
<td>- 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</td>
</tr>
<tr>
<td></td>
<td>- a little bit of time</td>
</tr>
<tr>
<td></td>
<td>- some of the time</td>
</tr>
<tr>
<td></td>
<td>- most of the time</td>
</tr>
<tr>
<td></td>
<td>- 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</td>
</tr>
<tr>
<td></td>
<td>- a little bit of time</td>
</tr>
<tr>
<td></td>
<td>- some of the time</td>
</tr>
<tr>
<td></td>
<td>- most of the time</td>
</tr>
<tr>
<td></td>
<td>- 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>Enable</td>
<td>Choose action</td>
<td></td>
</tr>
<tr>
<td>Prior Study Data</td>
<td>41</td>
<td><img src="PDF" alt="PDF" /></td>
<td>Enable</td>
<td>Choose action</td>
<td></td>
</tr>
<tr>
<td>Communication Log</td>
<td>17</td>
<td><img src="PDF" alt="PDF" /></td>
<td>Enable</td>
<td>Choose action</td>
<td></td>
</tr>
<tr>
<td>Consent Form</td>
<td>0</td>
<td><img src="PDF" alt="PDF" /></td>
<td>Yes</td>
<td>Choose action</td>
<td>![Survey settings]</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?
- Modify project title, purpose, etc.

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
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

Define your events and designate instruments for them
Create events for re-using data collection instruments and/or set up scheduling.
Go to Define My Events or Designate Instruments for My Events

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")

Additional customizations
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

This page may be used for granting users access to this project and for managing the user privileges of those users. You may also create roles to which you may assign users (optional). User roles are useful when you will have several users with the same privileges because they allow you to easily add many users to a role in a much faster manner than setting their user privileges individually. Roles are also a nice way to categorize users within a project. In the box below you may add/assign users or create new roles, and the table at the bottom allows you to make modifications to any existing user or role in the project, as well as view a glimpse of their user privileges.

Add new users: Give them custom user rights or assign them to a role.

- Add new user
- OR
- Assign new user

Create new roles: Add new user roles to which users may be assigned.

- Enter new role name
- Create role

(e.g., Project Manager, Data Entry Person)
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**

- **Participant Information** (survey)
  - [ ] No Access (Hidden)
  - [ ] Read Only
  - [ ] View & Edit
  - [ ] Edit survey responses

- **Consent** (survey)
  - [ ] No Access
  - [ ] De-identified*
  - [ ] Remove All Identifier Fields
  - [ ] Full Data Set

- **Neuro-QOL SF v1.0 - Fatigue** (survey)
  - [ ] No Access
  - [ ] De-identified*
  - [ ] Remove All Identifier Fields
  - [ ] Full Data Set

- **Tracking Form**
  - [ ] No Access
  - [ ] De-identified*
  - [ ] Remove All Identifier Fields
  - [ ] Full Data Set

*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

- [ ] 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.

![DAG Switcher: Enable multiple Data Access Groups for users](image)

Users assigned to Data Access Groups (DAGs) can optionally be assigned to multiple *potential* DAGs, in which they may be given the privilege of switching in and out of specific DAGs on their own whenever they wish. To assign a user to multiple DAGs, check the checkboxes below for that user. At least two DAGs must be checked for a user in order for them to use the DAG Switcher. NOTE: This does not override a user's current DAG assignment, as set above or on the User Rights page.
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><strong>A</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All data (all records and fields)</td>
<td><img src="image" alt="View Report" /> <img src="image" alt="Export Data" /> <img src="image" alt="Stats &amp; Charts" /></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>B</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected instruments and/or events (all records)</td>
<td><img src="image" alt="Make custom selections" /></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 test (copy)</td>
<td><img src="image" alt="View Report" /> <img src="image" alt="Export Data" /> <img src="image" alt="Stats &amp; Charts" /></td>
<td><img src="image" alt="Edit" /> <img src="image" alt="Copy" /> <img src="image" alt="Delete" /></td>
<td>1322</td>
</tr>
<tr>
<td>2 frailty assessment</td>
<td><img src="image" alt="View Report" /> <img src="image" alt="Export Data" /> <img src="image" alt="Stats &amp; Charts" /></td>
<td><img src="image" alt="Edit" /> <img src="image" alt="Copy" /> <img src="image" alt="Delete" /></td>
<td>2</td>
</tr>
</tbody>
</table>
Setting Up Reports in REDCap

Data Exports, Reports, and Stats

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

Any report can be used to export 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

<table>
<thead>
<tr>
<th>Gender</th>
<th>Total Count (N)</th>
<th>Missing</th>
<th>Unique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>19 (63.3%)</td>
<td>0 (0.0%)</td>
<td>2</td>
</tr>
<tr>
<td>Female</td>
<td>11 (36.7%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0 (0.0%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Stats and Charts

Report name

A. All data (all records and fields)

View/Export Options

- View Report
- Export Data

Stats & Charts

height < 150

DISPLAY OPTIONS

Optional: Select a record to overlay onto the plots below

- select record --

Viewing options:
- Show plots & stats
- Show plots only
- Show stats only

Height

<table>
<thead>
<tr>
<th>Total Count (N)</th>
<th>Missing</th>
<th>Unique</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>StdDev</th>
<th>Sum</th>
<th>0.05</th>
<th>0.10</th>
<th>0.25</th>
<th>0.50</th>
<th>Median</th>
<th>0.75</th>
<th>0.90</th>
<th>0.95</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>0 (0.0%)</td>
<td>8</td>
<td>120.00</td>
<td>140.00</td>
<td>135.70</td>
<td>10.13</td>
<td>1,357.00</td>
<td>121.35</td>
<td>122.00</td>
<td>127.25</td>
<td>137.00</td>
<td>144.50</td>
<td>145.30</td>
<td>146.65</td>
<td></td>
</tr>
</tbody>
</table>

Lowest values: 120, 123, 125, 134, 134

Highest values: 140, 143, 145, 146

Gender

<table>
<thead>
<tr>
<th>Total Count (N)</th>
<th>Missing</th>
<th>Unique</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>StdDev</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>0 (0.0%)</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Codebook is a ‘human’ readable, read-only version of the project data dictionary.