Making the Most of REDCap

All About Surveys

Presenter: Julissa Acevedo
Senior Systems Analyst / REDCap Administrator
What is REDCap?

Who is the CRI?

REDCap History
ACQUIRE DATA
Explore clinical data available for research and make a data request.

Clinical Research Data Warehouse
Cohort Discovery

ANALYZE DATA
We offer high-performance computing and advanced bioinformatics analysis for the most complex datasets.

Bioinformatics Core
High Performance Computing
Computing Resources

STORE DATA
Our storage is secure, standards-compliant, and backed up daily.

CRI Data Storage

MANAGE DATA
Manage studies, surveys, and databases for research.

REDCap
Clinical Trials Informatics

FIND A CUSTOM SOLUTION
Learn more about the CRI’s tailor-made research solutions.

Custom Applications

WEBSITE: cri.uchicago.edu
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.
REDCAP HISTORY

THEN
- 2004: Developed at Vanderbilt
- 2006: Global consortium
- 2010: University of Chicago
- 2011: Center for Research Informatics
- 2012: REDCap at UChicago

NOW
- Worldwide:
  - 4080 institutions
  - 137 countries
  - 888,000 projects
  - 1,200,000 users
- UChicago:
  - 6,100 projects
  - 6,018 users
SURVEY BASICS

What is a Survey?

Survey Respondents vs Project Users

Survey User Rights
WHAT IS A SURVEY?

A REDCap survey is a “public” version of a (form) instrument that is completed by a study participant without having to log into REDCap.

That same instrument can also be used by the study team as a data entry form when logged into REDCap.
SURVEY PARTICIPANTS vs PROJECT USERS

SURVEY PARTICIPANTS

People who submit data through a survey.

Can only submit data via survey links.

Can never see one another’s data.

PROJECT USERS

Must login to see what was submitted by participants.

Can send surveys links.

Can track who has or has not responded.
USER RIGHTS FOR MANAGING SURVEYS

To allow a study team member to manage surveys (add participants, send emails, etc), assign them the user right:

Manage Survey Participants
To allow a study team member to edit survey responses or delete surveys, assign them the user right called:

Edit Survey Responses
CREATING SURVEYS

- Creating a Survey
- Enabling the Survey
- Survey Settings
- Testing Surveys
- Multiple Surveys
- Longitudinal Surveys
CREATING AND ENABLING A SURVEY

1. Enable the survey feature (Project Setup tab).

2. Create the instrument.

3. Enable the instrument as a survey.
Set the status, title, and opening instructions.

<table>
<thead>
<tr>
<th>Survey Status</th>
<th>Survey Active</th>
<th>Survey Offline</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>This will not be able to take the survey.</td>
</tr>
</tbody>
</table>

**Basic Survey Options:**

- **Survey Title**
  - Screening Survey
  - Title to be displayed to participants at the top of the survey page

- **Survey Instructions**
  - (Displayed at top of survey after title)
  - Please complete the survey below.
  - Thank you!

*How to use Piping here*
SURVEY SETTINGS – DESIGN OPTIONS

Add a logo, customize the text and survey theme.

Survey Design Options:

- **Logo**
  (Optional: display an image above the survey title)
  Add new logo: [Browse...]
  (Images wider than 600 pixels will be downsized to fit page.)
  If using a logo, hide survey title on survey page?

- **Use enhanced radio buttons and checkboxes?**
  (Includes Yes/No and True/False fields)
  Standard radios and checkboxes
  [Show example]

- **Size of survey text**
  Large

- **Font of survey text**
  Open Sans

- **Survey theme**
  University of Chicago
  Customize

Survey design preview (sample survey):

```
This is the survey title

Your survey instructions will go here. The instructions can tell your survey participant about the purpose as well as what to expect once they have completed the survey. Below is a listing of various question types that can be displayed on your survey.

This is a section header to divide the survey page into sections.
```
SURVEY SETTINGS – CUSTOMIZATIONS

Select various survey customizations, as needed:

- **Survey Customizations:**
  - **Question Numbering**: Auto numbered
  - **Question Display Format**
    - All on one page
  - **Allow participants to download a PDF of their responses at end of survey?**
    - Display a button for the participant to download a PDF file of their responses for the survey they just completed.
  - **Survey-specific email invitation field**
    - Designate an email field for sending survey invitations for this survey only.
  - **For 'Required' fields, display the red 'must provide value' text on the survey page?**
    - Yes
  - **Allow survey respondents to view aggregate survey results after completing the survey?**
    - Disabled
  - **Text-To-Speech functionality**
    - Allows text on survey page to be read aloud to participants.

Additional settings:
- Minimum number of responses required before participants are allowed to view aggregate data (recommended = 10).
- Do not show plots for questions lacking diversity in response values?
- NOTICE: All text that is spoken is sent to a service hosted at Vanderbilt University that utilizes the IBM Watson Text-to-Speech API service. Be advised that if the survey utilizes piping for privacy concerns, data piped from Identifier fields will *not* be sent to the service with the rest of the text but will instead be redacted.
SURVEY SETTINGS – ACCESS

Set response limits, completion time limits, expiration date, and the Save&Return options.

<table>
<thead>
<tr>
<th>Survey Access:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Response Limit (optional)</strong></td>
</tr>
<tr>
<td>(Maximum number of responses to collect. Prevents respondents from starting the survey after a set number of responses have been collected.)</td>
</tr>
</tbody>
</table>
| (e.g., 150) If left blank, the response limit will not be enforced. Will include partial and completed responses
| Custom text to display to respondent on survey when limit is reached: |
| Thank you for your interest; however, the survey is closed because the maximum number of responses has been reached. |
| **Time Limit for Survey Completion (optional)** |
| (The amount of time that each respondent has to complete the survey based on when they were initially sent the survey invitation. Note: This feature excludes public survey links.) |
| days hours minutes |
| If the respondent loads the survey after this time has passed, it will not allow them to begin or continue the survey. (If all are left blank, the time limit will not be enforced.) |
| **Survey Expiration (optional)** |
| (Time after which the survey will become inactive.) |
| M/D/Y H:M |
| The time must be for the time zone America/Chicago, in which the current time is 07/10/2019 13:43. |
| **Allow ‘Save & Return Later’ option for respondents?** |
| (Allow respondents to leave the survey and return later.) |
| No |
| □ Allow respondents to return without needing a return code |
| □ Allow respondents to return and modify completed responses |
SURVEY SETTINGS – TERMINATION

Set what happens after survey is submitted.

- **Survey Termination Options:**
  - **(Optional) Auto-continue to next survey:** Automatically start the next survey instrument after finishing this survey.
  - **Redirect to a URL:** (Redirect to a webpage when survey is completed)
    - Provide a full URL, e.g. http://www.example.com/mypage.html
    - *How to use Piping here*
  - **Survey Completion Text:** (Displayed after survey is completed as ‘thank you’ text or as acknowledgement text)
    - Thank you for taking the survey.
    - Have a nice day!
    - *How to use Piping here*

- **PDF Auto-Archiver:**
  - Upon survey completion, a compact PDF copy of the survey response will be automatically stored in the project’s File Repository, from which the archived PDFs can be downloaded at any time.
  - *Disabled* or *Enabled*

- **Send confirmation email (optional):** (Email the respondent when they complete the survey)
  - *No*
Send an optional confirmation email.

From: jacevedo@bsd.uchicago.edu

Subject: Thank you for taking our survey!

We have received your information and will contact you shortly.

Attached is a copy of you completed survey.

Attachment: Browse...

Include PDF of completed survey as attachment

WARNING: Since email is not considered a secure form of communication, the PDF attachment option is NOT recommended if the survey contains questions asking for identifying information (e.g., PHI).
To edit your survey settings, click on **Survey Settings** under **Survey-related options**.

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.
• Testing is **CRITICAL**!

• To test your survey, send a link to yourself in the same method as you plan to send a link to a respondent.

• Take your survey a few times to make sure the instructions, format, and termination options work as needed.

• Export test data to check on data analysis, and modify survey questions if needed.

• Once testing is complete, request the project be moved to production.

• DO NOT send out survey until then!
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. (0 records)
- 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.

YES, Move to Production Status  Cancel
Create multiple surveys in the same project.

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.
LONGITUDINAL SURVEYS

Instead of creating the same survey as multiple instruments, the survey can be made repeatable.

1. Setup the survey instruments.

2. Enable the longitudinal feature.
LONGITUDINAL SURVEYS

3. Setup the events.

4. Assign the surveys to the events.
DISTRIBUTING SURVEYS

Public Survey Link vs Participant List

How to use the Public Survey Link

How to use the Participant List
PUBLIC SURVEY LINK

Participant emails unknown beforehand.

Participants all use the same survey link.

Emails sent via Outlook, not within REDCap.

Great for listservs or posting on flyers or websites.

PARTICIPANT LIST

Participants emails known beforehand.

Each participant receives unique, one time use link.

Emails sent through REDCap to participant email address.

Can track who has or has not responded.
The **Public Survey Link** is the simplest and fastest way to collect survey responses.

**Public Survey Link**

Using a public survey link is the simplest and fastest way to collect responses for your survey. You may obtain the survey link below to email it to your participants. Responses will be collected anonymously (unless the survey contains questions asking for identifying data from the participant). **NOTE:** Since this method uses a single survey link for all participants, it allows for the possibility of participants taking the survey multiple times, which may be necessary in some cases.

To obtain the survey link, copy the URL below and paste it into the body of an email message in your own email client. Your email recipient(s) can then click the link to begin taking your survey.

**Public Survey URL:** https://redcap.uchicago.edu/surveys/?s=DF8FKXHHW3

**Link Actions**
- Open public survey
- Open public survey + Log out
- Send me URL via email
- Survey Access Code or QR Code

**Link Customizations**
- Get Short Survey Link
- Create Custom Survey Link
- Get Embed Code
The **Participant List** allows for emailing the survey to your participants, and keeping track of responses.

The Participant List option allows you to **send a customized email** to anyone in your list and **track who responds to your survey**. It is also possible to identify an individual's survey answers, if desired, by providing an Identifier for each participant (this feature must first be enabled by clicking the 'Enable' button in the table below). Note: All survey responses collected are considered anonymous unless you 1) are using Participant Identifiers or 2) have enabled the designated email field for invitations. [More details](#)
PARTICIPANT IDENTIFIERS

- To keep the survey anonymous, don’t enable the Participant Identifier feature.
- To make the survey non-anonymous, enable the Participant Identifier feature.
- The Participant Identifier may be the participant's name, an ID number, or whatever you would like.
- It is not the same as the project’s main primary identifier (Record Number, Record ID, Study ID, MRN).
- The Participant Identifier is can be exported along with the data.
There are different ways of adding participants’ email addresses to the Participant List:

1. For few participants, manually type in.
2. For many participants, cut-and-paste in.
DESIGNATE AN EMAIL FIELD

1. Setup the email field with email validation.

2. Enable the feature on the Project Setup tab.
COMPOSE SURVEY INVITATIONS

1. Specify when emails should be sent.
2. Enable reminders for non-responses.
3. Compose the email message.
4. Select participants from the list.
5. Send the invitations.
A section for the unique survey link will be appended to the end of your email message:

```
Survey
jacevedo@bsd.uchicago.edu
Sent: Tue 7/9/2019 12:40 PM
To: Acevedo, Julissa [CRI]

Please take this survey.

You may open the survey in your web browser by clicking the link below:
Diabetes Survey

If the link above does not work, try copying the link below into your web browser:
https://redcap.uchicago.edu/surveys/?s=SAMPLE_LINK

This link is unique to you and should not be forwarded to others.
```

**NOTE:** You may modify or remove any text you wish above but make sure you include [survey-link] and [survey-url] in the text or else the participant will not have a way to take the survey.
**NON-RESPONSE REMINDERS**

- Survey reminders can only be setup while composing survey invitations.
- They cannot be setup after invitations have been sent.
- They can be sent on specific days of the week, or every X days, or at an exact date/time.
- Up to 2-5 reminders can be scheduled.

![Enable reminders](image)
FIELD PIPING

The Piping feature allows you to pipe previously collected data to customize the survey invitation greeting...

...or the survey completion text.
Tracking Surveys

- Participant List
- Survey Log
- Partial Responses
- Editing Responses
- Survey Timestamps
TRACKING SURVEYS VIA THE PARTICIPANT LIST

Surveys responses can be tracked on the Participant List according to:

- **Complete** – participant submitted the survey
- **Incomplete** – participant started but hasn’t submitted the survey
- **No Action** – participant has not started the survey
The **Survey Invitation Log** lists survey invitations that have already been sent or have been scheduled to be sent to survey participants.

You may even view the invitation email itself by clicking the icon in the 'View Email' column.
PARTIAL RESPONSES

For **Partial Responses**, you can use **Compose Survey Invitations** from the **Participant List** to send them a reminder email.

If participants don’t remember their **Save-and-Return code**, you can retrieve it from their survey record.
EDITING RESPONSES

1. User must have **Edit Survey Responses** user rights.
2. To edit a response, open record and click **Edit Response** at top of survey.
3. Make the changes, and **save** the record.
Survey responses get timestamped when the survey’s **Submit** button is clicked on by the participant. Timestamps appear on the record selector. As well as the survey record.

They also be included in exports and reports.
Inactivate a Survey
Inactivate a Project
INACTIVATE A SURVEY

1. At **Online Designer**, click on **Survey Settings**.

2. At **Survey Status**, set to **Survey Offline**.
INACTIVATE OR ARCHIVE A PROJECT

Go to Other Functionality tab, and either:

• Move to inactive status – data collection over, remains visible
• Archive the project – entire study is over, remains hidden
ADVANCED FEATURES

- Stop Actions
- Notifications
- Action Tags
- Automated Surveys
- Survey Queue
- Survey Logins
- Survey Wizard
Stop Actions prompt the participant to end the survey when certain field choices are selected. Only selection fields have this option. Click the **Stop Sign icon** and select the stop choice.
1. Go to Online Designer and click on Survey Notifications.

2. Select the survey and select the email address.
Action Tags are special terms that begin with the '@' sign that can be placed inside a field's Field Annotation to add special functionality.
AUTOMATED SURVEY INVITATIONS

ASIs are similar to composing email invitations, but instead the invites are sent automatically when:

- An earlier survey is completed -or-
- A condition is met
The **Survey Queue** is a survey packaging option. It allows for chaining together multiple surveys like a to-do list (using optional logic too).
The **Survey Login** requires participants to log into the survey before viewing it and completing it.
The Survey Wizard is located under the Applications menu. This survey is designed to help you work through the steps of setting up and selecting the right distribution model of survey.
REDCap is compatible with tablets and smart phone (iOS and Android).

Simply navigate to https://redcap.uchicago.edu/
MOBILE APP

Offline Data Collection
(no/poor internet connectivity)

REDCap

App Store

Google play
MOBILE APP - PROCESS

Create Project (in REDCap)

Download App (onto Device)

Collect Data (in App)

Download Project (into App)

Sync Data (App to REDCap)

Update Project (in App)
MOBILE APP - SETUP

Demo Project

REDCap Mobile App

- Set Up Project
- Dashboard
- All App Activity
- App Data Dumps
- App Logs

VIDEO: Mobile App Overview
VIDEO: Mobile App Project Setup
VIDEO: Installing the Mobile App

What is the REDCap Mobile App?

The REDCap Mobile App is an app that can be installed on an Android or iOS tablet or mobile device so that data may then be collected in an offline fashion on that device. At some point later on, it may then be synced back to this project on the REDCap server. The app is most useful when data collection will be performed where there is no Internet service (e.g., no WiFi or cellular service) or where there is unreliable Internet service.

Once a user in this project is given 'REDCap Mobile App' privileges, they can navigate to the mobile app page on the left-hand menu and use it to set up this project inside the mobile app on their device. Once the mobile project is set up on the device, the user can collect data (which is stored locally on the device), and then at some point, sync that data back to this project on the REDCap server.

STEP 1: Download the app on your device

You must first download the REDCap Mobile App on your iOS, Android, or BlueStacks (Android emulator) device by clicking the appropriate icon below, or alternatively, if you are not currently on a mobile device, you can search the App Store or Google Play Store for 'REDCap' on your mobile device to find the app there to download. The app is available for the following platforms: iOS 6.0 or later (iPhone 4 and up, iPad 2 and up) and Android 4.3 or later (phones and tablets).
NEW FEATURES

- Alerts & Notifications
- Missing Data Codes
- Rich Text Editor
Alerts & Notifications

The Alerts & Notifications feature allows you to construct alerts and send customized email notifications. These notifications may be sent to one or more recipients and can be triggered or scheduled when a form/survey is saved and/or based on conditional logic whenever data is saved or imported. When adding/editing an alert, you will need to 1) set how the alert gets triggered, 2) define when the notification should be sent (including how many times), and 3) specify the recipient, sender, message text, and other settings for the notification. For the message, you may utilize customized options such as rich text, the piping of field variables (including Smart Variables), and uploading multiple file attachments.

While similar in many respects to Automated Survey Invitations, Alerts & Notifications allow for greater complexity and have more capabilities. For example, alerts apply to both data entry forms and surveys, and they also allow for more options regarding who can be the recipient of a notification (project users, survey participants, etc.).

To get started with creating alerts, click the ‘Add New Alert’ button to view all the settings that must be defined for a given alert. Once an alert has been created, it immediately becomes active and may be triggered at any time thereafter. If you would like to remove or stop using an alert, see the Options>Deactivate Alert setting, which will prevent the alert from being triggered anymore. It may also be re-enabled at any time, in which case it becomes immediately active again. To view all notifications that have already been sent or will be sent in the future, you may view the Notification Log tab.

need project setup rights
MISSING DATA CODES

Project Setup > Enable optional modules > Additional Customizations

Additional customizations

Missing Data Codes: Set up your missing data codes for this project

Fields that have a blank/missing value may be marked with a custom 'Missing Data Code' to note why the value is blank. These missing codes may be used to aid in data analysis by specifying why a field lacks a value. To enable this feature below, enter both the codes AND their labels for all the categories of missing data that you wish to use in this project. The missing codes should be coded just like the choices of a multiple choice field with code + comma + label, in which the codes can only have letters, numbers, dots, dashes, and underscores (e.g., '-999, Not asked' or 'UNK, Unknown'). If no codes are entered, this feature will remain disabled.

Read more detailed instructions.

Missing Data Codes

- NI, No information

Add code from standardized list of missing data codes (optional suggestions):

- Add NI No information
- Add INV Invalid
- Add UNK Unknown
- Add NASK Not asked
- Add ASKU Asked but unknown
- Add NAV Temporarily unavailable

choose and add codes
Previously...

You may add a new project field to this data collection instrument by completing bottom. When you add a new field, it will be added to the form on this page. For you may view the Field Types video (4 min).

Field Type: Multiple Choice - Radio Buttons (Single Answ)

Question Number (optional)
Displayed only on the survey page

Field Label
I encourage my child to look forward to the meal.

<em><font color="green">Animo a mi hijo(a) para que este emocionada para la comida.</font></em>

<em><font color="blue">J'encourage mon enfant à attendre avec impatience le repas.</font></em>

HTML needed

Today...

You may add a new project field to this data collection instrument by completing bottom. When you add a new field, it will be added to the form on this page. For you may view the Field Types video (4 min).

Field Type: Multiple Choice - Radio Buttons (Single Answ)

Question Number (optional)
Displayed only on the survey page

Field Label
I encourage my child to look forward to the meal.

<em>Animo a mi hijo(a) para que esté emocionada para la comida.</em>

<em>J'encourage mon enfant à attendre avec impatience le repas.</em>

no HTML needed
WRAP UP

Response Rates
Help Resources
RESPONSE RATE ADVICE

• TEST, TEST, TEST!
• Keep it short!
• Keep instructions simple!
• Keep your wording brief!
• Include “who to contact”!
• Guarantee confidentiality (if de-identified)!
• Limit demographic questions (if identified)!
• Limit open-ended text questions!
• Use radio buttons vs drop-downs!
• Use graphs, pictures, videos!
• Use Save-and-Return option!
• Use survey reminders!
• Offer incentives!
HELP RESOURCES

redcap@rt.cri.uchicago.edu
ADDITIONAL HELP

http://cri.uchicago.edu/redcap/

The CRI is proud to offer REDCap, a self-managed, secure, web-based solution designed to support data collection strategies for research studies.

QUICK LINKS
- About REDCap
- Where to Start
- Accounts & Passwords
- Training
- Request Help
- Grant & Cite Language
- News Archive

NEWS

Announcing REDCap Office Hours

Want to discuss if REDCap is right for your study or project?
Want another set of eyes to look over your project design?
Need technical help with field or form problem?
The CRI offers an array of online resources to help you use REDCap better.

Here you'll find:

- training videos
- training manuals
- advanced features
- quick tips
- frequently asked questions

NEED ADDITIONAL HELP?

If you have any further questions about using REDCap's features or are still unsure how best to design your project, the CRI's REDCap Administrator will gladly schedule an office hours session with you, free of charge.

OFFICE HOURS
OFFICE HOURS

Wednesdays, 12-3pm, N161, redcap@rt.cri.uchicago.edu

The CRI's offices in Peck are located in suite N161.

This suite is in the N corridor on the first floor of the Medical Center. If you are coming from the Wyler entrance, take the C corridor to head toward N; if you enter from Ellis, take the P corridor.

When you enter the N corridor, walk straight until you reach a glass door.

Once you go through the glass door, you'll find the door to the CRI suite to your left.