

REDCap Survey Development and Features

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Introduction and Learning Objective

You will build a 'practice' survey and learn how to:

- Enable a data collection instrument as a survey at the project-level
- Define survey instrument settings
- Distribute surveys
- Use automated invitations and the survey queue
- Designate a participant email field in project setup page
- Define automated invitation and rules for scheduling
- Send survey reminders
- Build a survey invitation log
- Establish user-rights for survey management

REDCap Survey

- In REDCap, a survey is a version of a data form that is completed by a study participant without logging into the REDCap system
- REDCap offers two survey options: Public and Private.

Type of Survey	Is participant information linked to REDCap record?	Use
Public	NO	Responses are anonymous
Private	YES	Responses can be tracked and identified.

Public Survey

- Public survey must be the first form in your project.
- New record is created each time a survey is submitted.
- One survey link for all participants.
- Responses are anonymous
- Example use cases:
 - Opinion survey
 - Polling survey

Private Survey

- Survey does not need to be the first form of your project.
- Responses are linked to a participant's record where they can be tracked and identified.
- Survey links are specific for each participant.
- Record can be created before participant fills out the survey.
- Can use designated email field or participant list to send survey invitation.
- Example use cases:
 - Follow up survey
 - Health History survey

Training Project Design

1. A recruitment survey (public survey) will be used to recruit subjects in the study.
 - Public survey link
2. If a participant agrees to participate, a demographic survey (private survey) will be sent to the participant to fill out.
 - Automatic survey invitation
3. Based on the answer in the demographic survey, the participant will be asked to complete either a female or male survey.
 - Survey Queue

Set up Training Project and Enable Instruments as Surveys

Set up training project

1. URL for training: <https://training.redcap.yale.edu/>
2. To create a project for training:
 - Click **+New Project**
 - Select **Practice / Just for fun** for purpose
 - Choose **Use a template** and choose **Survey Training Template** from the project template list
 - Click **Create Project**
3. To enable the survey:
 - Go to **Project Setup** tab
 - Main Project Setting -> Click **Enable** next to **Use surveys in this project**

Enable a Data Collection Instrument as a Survey

1. Click the **Online Designer**.
2. Select **Enable** in the **Enabled as survey** column, beside the Recruitment Instrument name.
3. The survey setting page will open. You can customize the look, access and termination option in the survey setting page.
4. Repeat the process to enable all other forms as surveys.

Survey Settings

Setting	Description
Survey Title	Title to be displayed at the top of the survey page
Survey Instructions	Text displayed at top of survey after title. Can use the rich text editor to format the text
Logo	Optional, display an image above the survey title. If using logo, you can choose to hide survey title on survey page
Enhanced radio buttons and checkboxes	Larger buttons and checkboxes. Color will change when selected
Size of survey text	Normal, large, very large
Font of survey text	18 choices of fonts to choose from
Survey theme	11 themes to choose from. You can also create your own custom theme
Survey design preview	Preview your survey in the preview box. If using enhanced button, try clicking the buttons to see the color change

Survey Settings

Setting	Description
Question Numbering	<ul style="list-style-type: none">• <u>Auto numbered</u> – Question number automatically added to each question. Cannot be used if there is branching logic.• <u>Custom numbered</u> – REDCap will not add any question number but you can include the question number in the question label.
Question Display Format	All on one page or one section per page
Allow participants to download a PDF of their responses at end of survey	This option will not be available if the auto-continue or survey queue auto-start option is enabled
Survey-specific email invitation field	If using different email fields for sending different surveys, this setting can be used to specify which email field to use for each survey
For 'Required' fields, display the red 'must provide value' text on the survey page	Default is yes, option to suppress the display by choosing no

Survey Settings

Setting	Description
Allow survey respondents to view aggregate survey results after completing the survey	After completing the survey, participants can view ALL responses in aggregate graphical format and/or as descriptive statistics. Also, the individual respondent's answers will be highlighted in the results.
Text-To-Speech functionality	Allows text on survey page to be read audibly to participants.
Response Limit (optional)	Maximum number of responses to collect. Prevents respondents from starting the survey after a set number of responses have been collected.
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

Survey Settings

Setting	Description
Survey Expiration (optional)	Time after which the survey will become inactive.
Allow 'Save & Return Later' option for respondents?	Allow respondents to leave the survey and return later.
Auto-continue to next survey (Optional)	Automatically start the next survey instrument after finishing this survey
Redirect to a URL	Redirect to a webpage when survey is completed
Survey Completion Text	Displayed after survey is completed as 'thank you' text
e-Consent Framework	
Send confirmation email (optional)	Email the respondent when they complete the survey

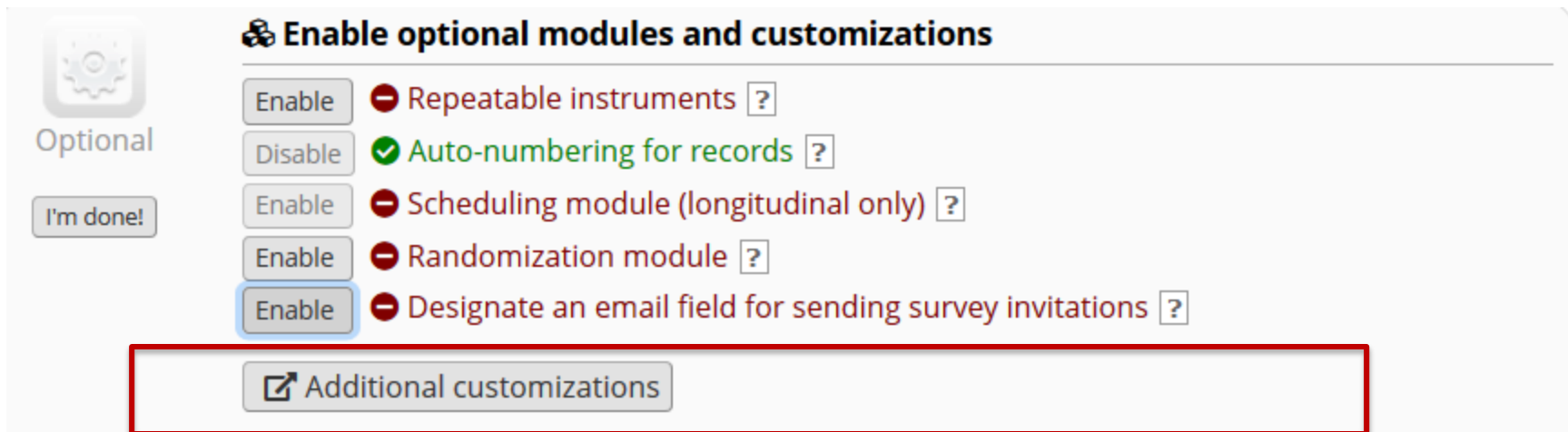
Survey Distribution

Automatic Survey Invitations (ASI)

Survey invitations can be scheduled to be sent automatically (i.e. without a person sending the invitation) based upon specific conditions such as if the participant completes another survey in your project or if certain data values for a record are fulfilled

Designate an Email Field for Automated Survey Invitations

- Project Setup -> Enable optional modules and customizations



Optional

I'm done!

⚙️ Enable optional modules and customizations

Enable	➖ Repeatable instruments ?
Disable	✔️ Auto-numbering for records ?
Enable	➖ Scheduling module (longitudinal only) ?
Enable	➖ Randomization module ?
Enable	➖ Designate an email field for sending survey invitations ?

➦ Additional customizations

Choose an email field to use for invitations to survey participants:

-- select a field --

You can capture email addresses for sending invitations to your survey participants by designating a field in your project. If a field is designated for that purpose, then any records in your project that have an email address captured for that particular field will have that email address show up as the participant's email address in the Participant List (unless an email address has already been entered for that participant in the Participant List directly).

Using the designated email address field can be especially valuable when your first data collection instrument is not enabled as a survey while one or more other instruments have been enabled as surveys. Since email addresses can only be entered into the Participant List directly for the first data collection instrument, the designated email field provides another opportunity to capture the email address of survey participants.

Please be aware that designating an email field means that survey responses can NEVER BE ANONYMOUS because of the fact that the participant's email address can be viewed on a data entry form, which means it is easy to identify the record/response to which the email address belongs.

NOTE: If the participant's email address has already been captured directly in the Participant List, then that email address will supersede the value of the email field here when survey invitations are sent to the participant. Also, if the email invitation field exists on multiple longitudinal events, on a repeating instrument, or on a repeating event, the field's value will be synchronized across all instances/events so that changing it in one location will change the value across all events/instances where the field appears.

Survey-specific email invitation field: While the email invitation field discussed here is a project-level setting, it is helpful to know that there also exists a survey-level email invitation field option that can be utilized for particular surveys in the project (whereas the project-level field would be applied to ALL surveys). A survey-specific email invitation field can be enabled for any given survey, in which you can designate any email field in your project to use for sending survey invitations for that particular survey. Thus, you can collect several email addresses (e.g., for a student, a parent, and a teacher) and utilize each email for a different survey in the project. Then you can send each person an invitation to their own survey, after which all the survey responses get stored as one single record in the project. See the 'Survey Settings' page in the Online Designer for this survey-level setting.

Automatic Survey Invitation of Demographic Survey in Training Project

Info

Survey title: Demographic

STEP 1: Compose message

From: (select any project user to be the 'Sender')

To: [All participants who meet the conditions defined]

Subject: Survey Training - Demographic Questionnaire

Compose

Preview

Send test email

Please take this survey.

You may open the survey in your web browser by clicking the link below:
[survey-link]

If the link above does not work, try copying the link below into your web browser:

NOTE: You may modify or remove any text you wish in the Compose Message text box above. Make sure you include either [survey-link] or [survey-url] in the text or else the participant will not have a way to take the survey.

You may use HTML formatting in the email message: bold, <u> underline, <i> italics, link, etc.

[How to use Piping in the survey invitation](#)

STEP 2: Conditions

Specify conditions for sending invitations:

When the following survey is completed:

AND

When the following logic becomes true:

(e.g., [age] > 30 and [sex] = "1")

[How do I use special functions?](#)

Test logic with a record:

Ensure logic is still true before sending invitation?

[How to use 'stop logic' to disable an automated invite](#)

STEP 3: When to send invitations AFTER conditions are met

Send immediately

Send on next at time H:M

Send after lapse of time: days hours minutes

Send at exact date/time: M/D/Y H:M

OPTIONAL: Enable reminders

Re-send invitation as a reminder if participant has not responded by a specified time?

STEP 4: Activated?

Activate these automated invitations? In order for automated survey invitations to be sent using these specified conditions, it must be set to Active. You may make them Not Active (and vice versa) at any point in the future.

Active Not Active

Tips and Tricks for Setting Up ASI

1. Use piping to personalize the invitation message
2. If using study email address to send the invitation, add the email address as secondary email in your profile (link on top right of 'My Project' page). The email address will be available in the 'From' dropdown box on the ASI set up page.
3. If you delete the default text in the compose box, make sure you include the smart variables, [survey-link] or [survey-url], in the message that you compose.
4. You can format your message using HTML code
5. If applicable, add condition for stop logic
 - For example, if you would like the project to stop sending any scheduled invitation if the patient withdraws from the study, you can include in your condition [withdraw] <>1 and check the box 'Ensure logic is still true before sending invitation'.



Tips and Tricks for Setting Up ASI

6. How to test if the ASI logic is set up correctly?
 - You can test the ASI logic in the 'Data Quality' module. Add a custom quality rule with your ASI logic and check how many records do not fulfill the condition
7. If using DateDiff function in ASI logic, you do not need to include the dateformat parameter.
 - The syntax is `datediff ([date1], [date2], "units", returnSignedValue)`
 - This is different than using DateDiff on forms. You will need to include the dateformat parameter when doing date calculation on forms.
 - `datediff ([date1], [date2], "units", "dateformat", returnSignedValue)`
8. If using fields for date calculation, make sure the fields have been set up with date validation.

Survey Queue

- The Survey Queue displays a list of your surveys to a participant all on a single page.
- The queue lists all surveys that are to be completed (like a 'to-do' list) as well as the surveys that the participant has already completed.
- Surveys can be set to appear in the Survey Queue based upon 1) if the participant has completed a particular survey, and/or 2) if certain conditions are met (based upon data values).
- One link for all surveys in the survey queue.

Survey Queue for Female and Male Surveys in the Training Project

 <p>Activated</p> <p>Deactivate</p>	<h3>"Female Survey"</h3>	<p><input checked="" type="checkbox"/> When the following survey is completed: "Demographic" <input type="text" value="Demographic"/></p> <p>AND <input type="text" value="AND"/></p> <p><input checked="" type="checkbox"/> When the following logic becomes true: How to use this [sex]="2" (e.g., [age] > 30 and [sex] = "1")</p> <p>Test logic with a record: <input type="text" value="-- select record --"/></p>	<input type="checkbox"/>
 <p>Activated</p> <p>Deactivate</p>	<h3>"Male Survey"</h3>	<p><input checked="" type="checkbox"/> When the following survey is completed: "Demographic" <input type="text" value="Demographic"/></p> <p>AND <input type="text" value="AND"/></p> <p><input checked="" type="checkbox"/> When the following logic becomes true: How to use this [sex]="1" (e.g., [age] > 30 and [sex] = "1")</p> <p>Test logic with a record: <input type="text" value="-- select record --"/></p>	<input type="checkbox"/>

Survey Login

- Select field(s) that you wish to serve as the login fields for the respondent to enter.

Enable Survey Login?	Disabled <input type="button" value="v"/>
Fields to display on the survey login form	
Login field #1 Add another login field	fname "<div class="rich-text-field-label"><p>f <input type="button" value="v"/>
Customizations for survey login	
Minimum number of fields above that are required for login	1 <input type="button" value="v"/>
Apply the survey login to all surveys in project?	All surveys <input type="button" value="v"/>
Custom error message: Provide a custom error message that will be displayed on the survey login form for when the user experiences issues, such as not being able to log in successfully, so that they may contact you for help. EXAMPLE: "If you have any trouble logging in to the survey, please contact survey_admin@myinstitution.edu for help."	<div style="border: 1px solid gray; height: 100px;"></div> <p>HTML may be used in order to add links or to add style to text.</p>
Security settings for survey login (optional)	
Number of failed login attempts before respondent is locked out for a specified amount of time, which is set below.	<input type="text"/> 0 = Disabled
Amount of time respondent will be locked out after having failed login attempts exceeding the limit set above.	<input type="text"/> Minutes, 0 = Disabled

Survey Notifications

✉ Email notifications for survey responses




If you or other users wish to be notified via email every time a participant completes a survey, select the users to be notified under each survey listed below by selecting their email address in the user's drop-down list, which may contain each user's primary, secondary, or tertiary email address for their REDCap account. To remove a user as a recipient for the survey notifications, change their email drop-down option to 'not selected', after which they will no longer receive notification emails for that survey.

Recruitment	✉ Recipient email address	Notifications Enabled
██████ (Sui Tsang)	-- not selected --	<input type="radio"/>
Demographic	✉ Recipient email address	Notifications Enabled
██████ (Sui Tsang)	-- not selected --	<input type="radio"/>
Female Survey	✉ Recipient email address	Notifications Enabled
██████ (Sui Tsang)	-- not selected --	<input type="radio"/>
Male Survey	✉ Recipient email address	Notifications Enabled
██████ (Sui Tsang)	-- not selected --	<input type="radio"/>

Project Testing

Project Testing

1. Open the recruitment survey using the public survey link

 Public Survey Link

 Participant List

 Survey Invitation Log

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:






Protect the public survey using the Google reCAPTCHA feature [?](#)

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

Project Testing

2. After the recruitment survey is submitted, an automatic survey invitation for Demographic Questionnaire will be sent to the email address entered on the recruitment survey.

Please take this survey.

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

[Demographic](#)

If the link above does not work, try copying the link below into your web browser:

<https://poa-redcap.med.yale.edu/surveys/?s=x7eBk7nMdc>

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

3. Click the link in the invitation email to open the Demographic Questionnaire.
4. After the Demographic Questionnaire is completed, the survey queue will be shown for the next survey based on the data entered on the Demographic Questionnaire.

Close survey

Thank you for taking the survey.

Have a nice day!

Survey Queue

Get link to my survey queue

Listed below is your survey queue, which lists any other surveys that you have not yet completed. To begin the next survey, click the 'Begin survey' button next to the title.

Status	Survey Title
Begin survey	Male Survey

Begin survey

Male Survey

Survey queue is shown after the Demographic Survey is completed



Survey Queue

Get link to my survey queue

Listed below is your survey queue, which lists any other surveys that you have not yet completed. To begin the next survey, click the 'Begin survey' button next to the title.

Status	Survey Title
Completed	Male Survey

Completed

Male Survey

After the survey is completed, the status is updated on the survey queue



How to track survey
responses?

Survey Distribution Tools

- Participant List
 - Choose the survey from the drop down box
 - List of participants for the selected survey will be shown
 - You can track who responded to your survey
 - You can send customized email to anyone on the list
 - You can click the links in the record and responded column to access the record
- Survey Invitation Log
 - View past or future invitations (Default view is future invitations)
 - Log can be filtered by invitation types, surveys, records or response status
 - You can view the invitation email itself by clicking the icon in the 'View Email' column
 - Option to delete scheduled invitations

User Rights

User Rights

Basic Rights

📅 Expiration Date (M/D/Y)
(if applicable)

Highest level privileges:

- ☑ Project Design and Setup
- ☑ User Rights
- ☑ Data Access Groups

Privileges for data exports (including PDFs and API exports), reports, and stats:

📄 Data Exports No Access
 De-Identified*
 Remove all tagged 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.

🔍 Add/Edit/Organize Reports
Also allows user to view ALL reports (but not necessarily all data in the reports)

📊 Stats & Charts

Other privileges:

- ☑ Survey Distribution Tools
- ☑ Calendar
- ☑ Data Import Tool
- ☑ Data Comparison Tool
- ☑ Logging

Survey Distribution Tools right must be enabled in the user right page in order to access participant log and survey invitation log

User Rights

Data Entry Rights

*NOTE: The data entry rights *only* pertain to a user's ability to view or edit data on a web page in REDCap (e.g., data entry forms, reports). It has no effect on data imports or data exports.*

	No Access	Read Only	View & Edit	Edit survey responses
Recruitment (survey)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
Demographic (survey)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
Female Questions (survey)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
Male Questions (survey)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>

Enable the 'Edit survey response' right if you need to edit data on completed survey.

QUESTIONS?

Thank You!

Further Questions:

Contact us at

REDCap@yale.edu