

REDCap Overview

Health Information Core (HIC)

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Email REDCap questions to REDCap-Help@einsteinmed.edu

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Montefiore

What is REDCap?

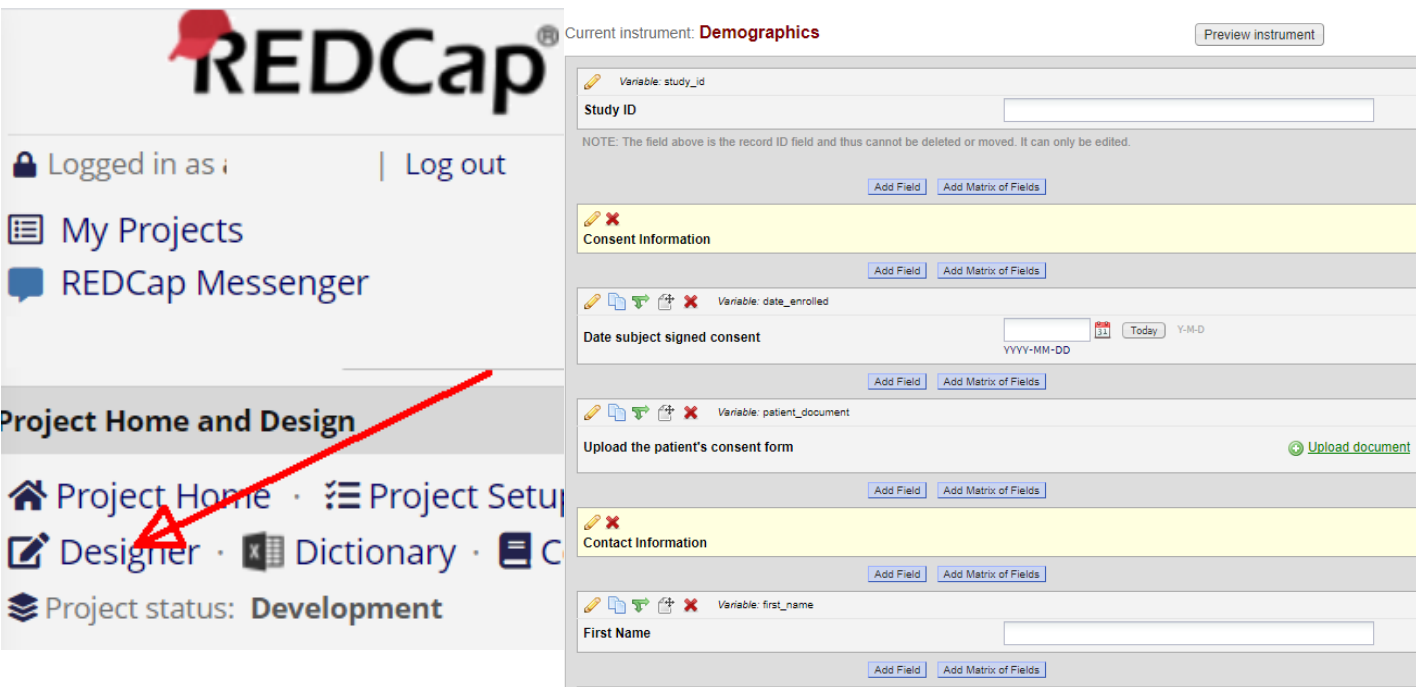
- REDCap = **R**esearch **E**lectronic **D**ata **C**apture
- Web-based Data Collection and Data Management Software
- Developed and maintained by Vanderbilt University
- Data Collection Options
 - Data Entry Forms
 - Entered from paper forms
 - Entered directly
 - Surveys
 - Completed by participants directly
 - Import Data from other sources

REDCap Major Features

- Data Collection Instruments
- Field Validation
- Programming features
- Surveys
- Longitudinal Study Design
- Data Export
- Simple Reports
- User Permissions
- Auditing
- Randomization Module
- Offline Data Collection using Mobile App

Data Collection Instruments

- Method 1: Create them with the Online Designer



REDCap

Logged in as | Log out

My Projects

REDCap Messenger

Project Home and Design

Project Home · Project Setup

Designer · Dictionary · Data Manager

Project status: Development

Current instrument: Demographics

Preview instrument

Variable: study_id

Study ID

NOTE: The field above is the record ID field and thus cannot be deleted or moved. It can only be edited.

Add Field Add Matrix of Fields

Consent Information

Add Field Add Matrix of Fields

Variable: date_enrolled

Date subject signed consent

YYYY-MM-DD Today Y-M-D

Add Field Add Matrix of Fields

Variable: patient_document

Upload the patient's consent form

Upload document

Add Field Add Matrix of Fields

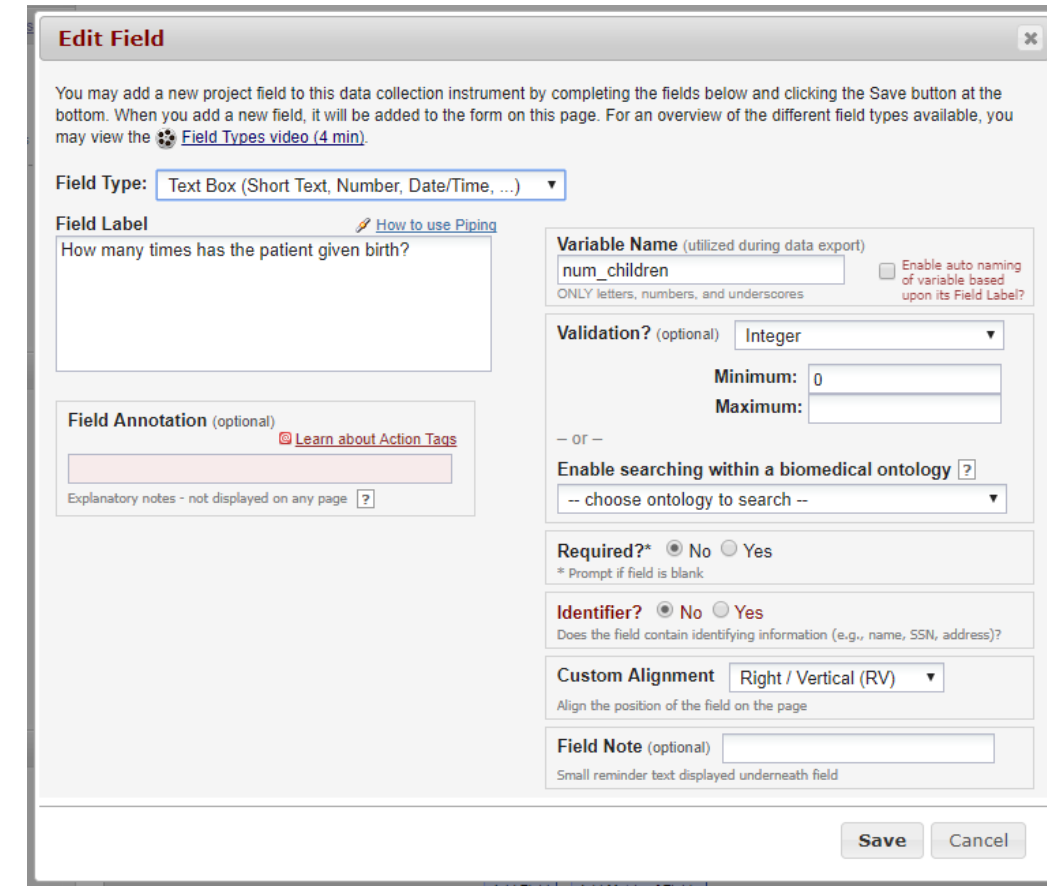
Contact Information

Add Field Add Matrix of Fields

Variable: first_name

First Name

Add Field Add Matrix of Fields



Edit 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: Text Box (Short Text, Number, Date/Time, ...)

Field Label: How many times has the patient given birth?

How to use Piping

Variable Name (utilized during data export): num_children

ONLY letters, numbers, and underscores

Enable auto naming of variable based upon its Field Label?

Validation? (optional): Integer

Minimum: 0

Maximum:

Field Annotation (optional):

Learn about Action Tags

Explanatory notes - not displayed on any page

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

Save Cancel

Data Collection Instruments (cont...)

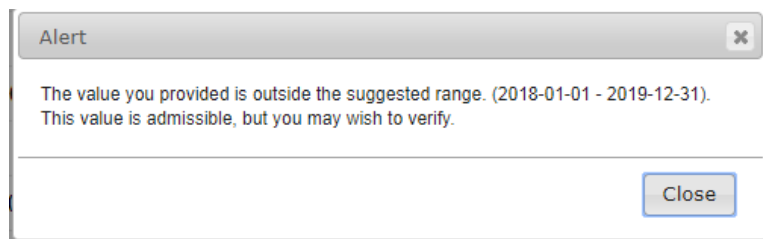
- Method 2: Edit the data dictionary directly as a CSV file
- Good for bulk editing
- Beware of Excel quirks!
 - If you save non-English or non-ASCII characters in Excel, they may not get encoded correctly
 - You might see strange characters in REDCap like this:
 - Save as CSV UTF-8 within Excel if possible or use Google Sheets, Open Office or LibreOffice instead.
 - <https://help.surveygizmo.com/help/encode-an-excel-file-to-utf-8-or-utf-16>
 - Excel may drop leading zeros in dictionaries or data files
 - Instead of double-clicking the file to open in Excel, import as text: Data->From Text/CSV, select "Do not detect data types"



Variable / Field Name	Form Name	Section Header	Field Type	Field Label	Choices, Calculations, OR Slider Labels	Field Note	Text Validation	Text Valid Identifier	Branching Logic (Show field only if. Re
study_id	demographics		text	Study ID					
date_enrolled	demographics	Consent Information	text	Date subject signed consent		YYYY-MM-DD date_ymd			
patient_document	demographics		file	Upload the patient's consent form					
first_name	demographics	Contact Information	text	First Name					Y
last_name	demographics		text	Last Name					Y
address	demographics		notes	Street, City, State, ZIP					Y
telephone_1	demographics		text	Phone number		Include Area phone			Y
email	demographics		text	E-mail		email			Y
dob	demographics		text	Date of birth		date_ymd			Y
age	demographics		calc	Age (years)	rounddown(datediff([dob], today, 'Y'))				
ethnicity	demographics		radio	Ethnicity	0, Hispanic or Latino 1, NOT Hispanic or Latino 2, Unknown / Not Reported				
race	demographics		dropdown	Race	0, American Indian/Alaska Native 1, Asian 2, Native Hawaiian or Other Pacific Islander 3, Black or African American 4, White 5, More				
sex	demographics		radio	Gender	0, Female 1, Male				
given_birth	demographics		yesno	Has the patient given birth before?					[sex] = "0"
num_children	demographics		text	How many times has the patient given birth?		integer	0		[sex] = "0" and [given_birth] = "1"
gym	demographics	Please provide the p	checkbox	Gym (Weight Tr	0, Monday 1, Tuesday 2, Wednesday 3, Thursday 4, Friday				
aerobics	demographics		checkbox	Aerobics	0, Monday 1, Tuesday 2, Wednesday 3, Thursday 4, Friday				
eat	demographics		checkbox	Eat Out (Dinner/	0, Monday 1, Tuesday 2, Wednesday 3, Thursday 4, Friday				
drink	demographics		checkbox	Drink (Alcoholic	0, Monday 1, Tuesday 2, Wednesday 3, Thursday 4, Friday				
specify_mood	demographics	Other information	slider	Specify the patie	Very sad Indifferent Very happy				
meds	demographics		checkbox	Is patient taking	1, Lexapro 2, Celexa 3, Prozac 4, Paxil 5, Zoloft				
height	demographics		text	Height (cm)		number	130	215	
weight	demographics		text	Weight (kilograms)		integer	35	200	
bmi	demographics		calc	BMI	round((weight*10000)/([height]^2),1)				
comments	demographics	General Comments	notes	Comments					
date_visit_b	baseline_data	Baseline Measurem	text	Date of baseline visit		date_ymd			
date_blood_b	baseline_data		text	Date blood was drawn		date_ymd			
alb_b	baseline_data		text	Serum Albumin (g/dL)		integer	3	5	
prealb_b	baseline_data		text	Serum Prealbumin (mg/dL)		number	10	40	
creat_b	baseline_data		text	Creatinine (mg/dL)		number	0.5	20	
npr_b	baseline_data		text	Normalized Protein Catabolic Rate (g/kg/d)		number	0.5	2	
chol_b	baseline_data		text	Cholesterol (mg/dL)		number	100	300	
transferrin_b	baseline_data		text	Transferrin (mg/dL)		number	100	300	
kt_v_b	baseline_data		text	Kt/V		number	0.9	3	
drywt_b	baseline_data		text	Dry weight (kilograms)		number	35	200	
plasma1_b	baseline_data		dropdown	Collected Plasm	0, No 1, Yes				
plasma2_b	baseline_data		dropdown	Collected Plasm	0, No 1, Yes				
plasma3_b	baseline_data		dropdown	Collected Plasm	0, No 1, Yes				
serum1_b	baseline_data		dropdown	Collected Serum	0, No 1, Yes				
serum2_b	baseline_data		dropdown	Collected Serum	0, No 1, Yes				

Field Validation

- Set sanity checks for your variables
 - Validate by type: integer, number, date, datetime, etc...
 - By precision: 1 decimal place, 2 decimals, etc...
 - By standard formats
 - Emails, Phone Number, Zip Code, SSN
 - Custom validation
 - Montefiore MRN
 - Can request a new custom validation
 - Min/max values
- Validation by type is a "hard check" – REDCap won't let you save an invalid response
- In REDCap, min/max are “soft” checks, and can be overridden:

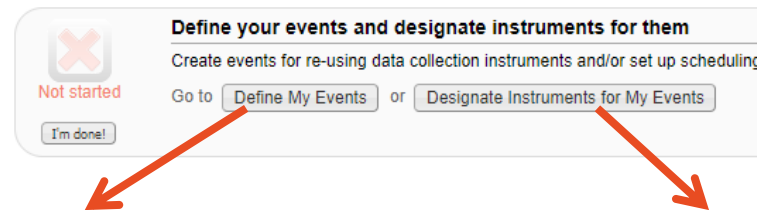


The 'Edit Field' dialog box in REDCap. It contains several sections: 'Field Type' (Text Box), 'Field Label' (Date of baseline visit), 'Field Annotation' (optional), 'Variable Name' (date_visit_b), 'Validation?' (Date (Y-M-D) with min/max values), 'Required?' (No), 'Identifier?' (No), 'Custom Alignment' (Right / Vertical (RV)), and 'Field Note' (optional). There are 'Save' and 'Cancel' buttons at the bottom right.

A dropdown menu for the 'Validation?' field. The menu is open, showing a list of validation options: 'None', '3 digits + 4 ALPHA + F/M', '3 digits or letters', '4 digits_2 digits', 'Date (D-M-Y)', 'Date (M-D-Y)', 'Date (Y-M-D)', 'Datetime (M-D-Y H:M)', 'Datetime (Y-M-D H:M)', 'Datetime w/ seconds (Y-M-D H:M:S)', 'Email', 'Integer', 'Medicaid ID', 'MRN', 'MRN (8 digits)', 'Number', 'Number (1 decimal place)', 'Number (2 decimal places)', 'Phone (North America)', and 'Social Security Number (U.S.)'. The 'Date (Y-M-D)' option is currently selected.

Longitudinal Study Design

















- Produce repeating forms by creating events (Ex: Visit 1, Visit 2, etc...) and designating the same instrument for multiple events
- Enable in the Main Project Settings and then define events and designate instruments
- Can also define "arms" to create separate schedules of events/instruments for different groups of participants



Arm 1: Drug A Arm 2: Drug B +Add New Arm

Arm name: Drug A

[Rename Arm 1](#) | [De](#)

	Event #	Days Offset	Offset Range Min / Max	Event Name	Unique event name (auto-generated)
 	1	0	-0/+0	Enrollment	enrollment_arm_1
 	2	1	-1/+1	Dose 1	dose_1_arm_1
 	3	3	-2/+2	Visit 1	visit_1_arm_1
 	4	8	-1/+1	Dose 2	dose_2_arm_1
 	5	10	-2/+2	Visit 2	visit_2_arm_1
 	6	15	-1/+1	Dose 3	dose_3_arm_1
 	7	17	-2/+2	Visit 3	visit_3_arm_1
 	8	30	-1/+1	Final visit	final_visit_arm_1
<div><div>Add new event</div><div><div>Days</div><div>-0+0</div><div>Convert from other units</div></div><div>Descriptive name for this event</div></div>					

Arm 1: Drug A Arm 2: Drug B

Arm name: Drug A

[Begin Editing](#)

[Save](#)

[Select All](#) | [Deselect All](#)

Data Collection Instrument	Enrollment (1)	Dose 1 (2)	Visit 1 (3)	Dose 2 (4)	Visit 2 (5)	Dose 3 (6)	Visit 3 (7)	Final visit (8)
Demographics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Info	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Baseline Data	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visit Lab Data	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Patient Morale Questionnaire	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Visit Blood Workup	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Visit Observed Behavior	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Completion Data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Completion Project Questionnaire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Longitudinal Study Design

- Scheduler feature to schedule participant visits
- Calendar feature to view appointments (can also be used for non-longitudinal studies)

Projected Schedule for "1" (NOTE: The dates below have NOT yet been scheduled.)

The projected schedule below was automatically generated for Study ID "1" based on your pre-defined Event value of any dates generated below simply by clicking inside the date box and selecting a new date. Any dates on weekends will be listed in red. Click the [Create Schedule](#) button to finalize this schedule, which will then be

	Time (optional)	Date / Day of Week	Event Name
✖	<input type="text"/>	09/05/2018 Wednesday	Enrollment
✖	<input type="text"/>	09/06/2018 Thursday Range: 09/05/2018 - 09/07/2018	Dose 1
✖	<input type="text"/>	09/08/2018 Saturday Range: 09/06/2018 - 09/10/2018	Visit 1
✖	<input type="text"/>	09/13/2018 Thursday Range: 09/12/2018 - 09/14/2018	Dose 2
✖	<input type="text"/>	09/15/2018 Saturday Range: 09/13/2018 - 09/17/2018	Visit 2
✖	<input type="text"/>	09/20/2018 Thursday Range: 09/19/2018 - 09/21/2018	Dose 3
✖	<input type="text"/>	09/22/2018 Saturday Range: 09/20/2018 - 09/24/2018	Visit 3
✖	<input type="text"/>	10/05/2018 Friday Range: 10/04/2018 - 10/06/2018	Final visit

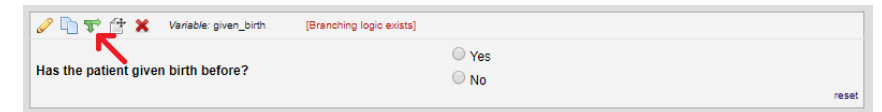
[Create Schedule](#) [Cancel](#)

NOTE: Clicking the [Create Schedule](#) button will additionally add "1" as a new Study ID.

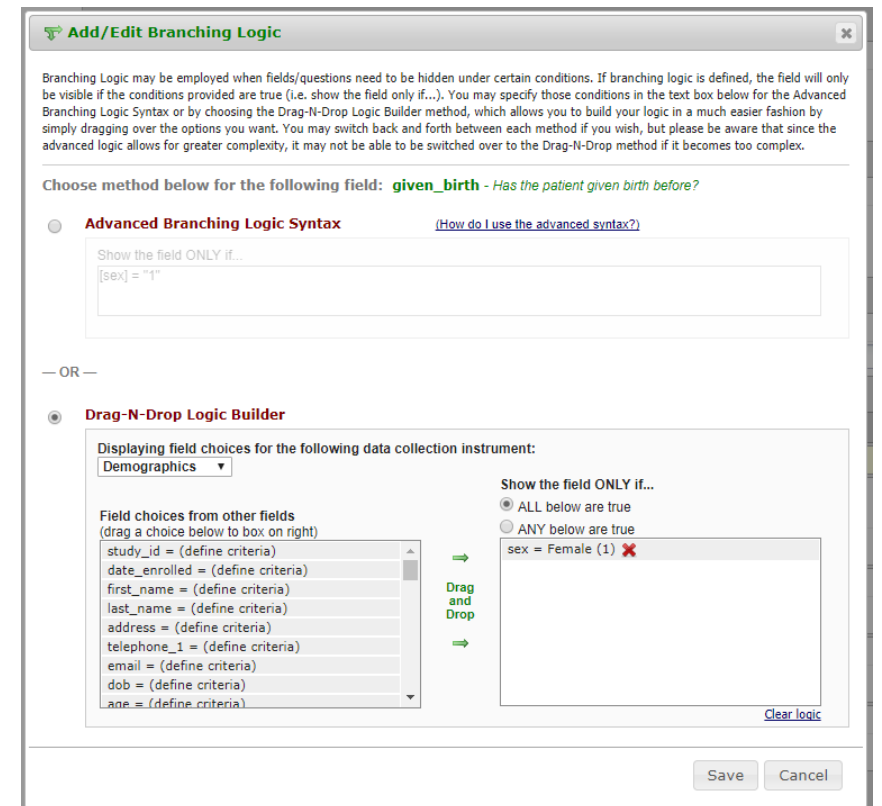
Day Week Month Agenda						
September 2018						
Print Calendar						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						+ New 1
+ New 2	+ New 3	+ New 4	+ New 5 ☆ 1 (Enrollment)	+ New 6 ☆ 1 (Dose 1)	+ New 7	+ New 8 ☆ 1 (Visit 1)
+ New 9	+ New 10	+ New 11	+ New 12	+ New 13 ☆ 1 (Dose 2)	+ New 14	+ New 15 ☆ 1 (Visit 2)
+ New 16	+ New 17	+ New 18	+ New 19	+ New 20 ☆ 1 (Dose 3)	+ New 21	+ New 22 ☆ 1 (Visit 3)
+ New 23	+ New 24	+ New 25	+ New 26	+ New 27	+ New 28	+ New 29
+ New 30						

Programming Features: Branching Logic

- Determines whether to show or hide a field during data entry
- In REDCap, "branching logic" is used to implement skip patterns
- Variables are referenced with brackets []
 - `[sex] = "1"` to show question if sex=Female
 - For longitudinal studies, you must also specify the event using the format `[event name][variable name]` e.g. `[enrollment_arm_1][sex] = "1"`
 - When testing for equality, enclose values with plain quotes (") instead of smart quotes ("). Use either single quotes or double quotes, but you can't mix the two. Ex: '6' is fine but '6" invalid



A screenshot of a REDCap form field. The field is titled "Has the patient given birth before?". Above the field, there is a label "Variable: given_birth" and a status "[Branching logic exists]". To the left of the field, there is a small icon of a person with a plus sign. To the right of the field, there are two radio buttons: "Yes" and "No". A red arrow points to the plus icon.



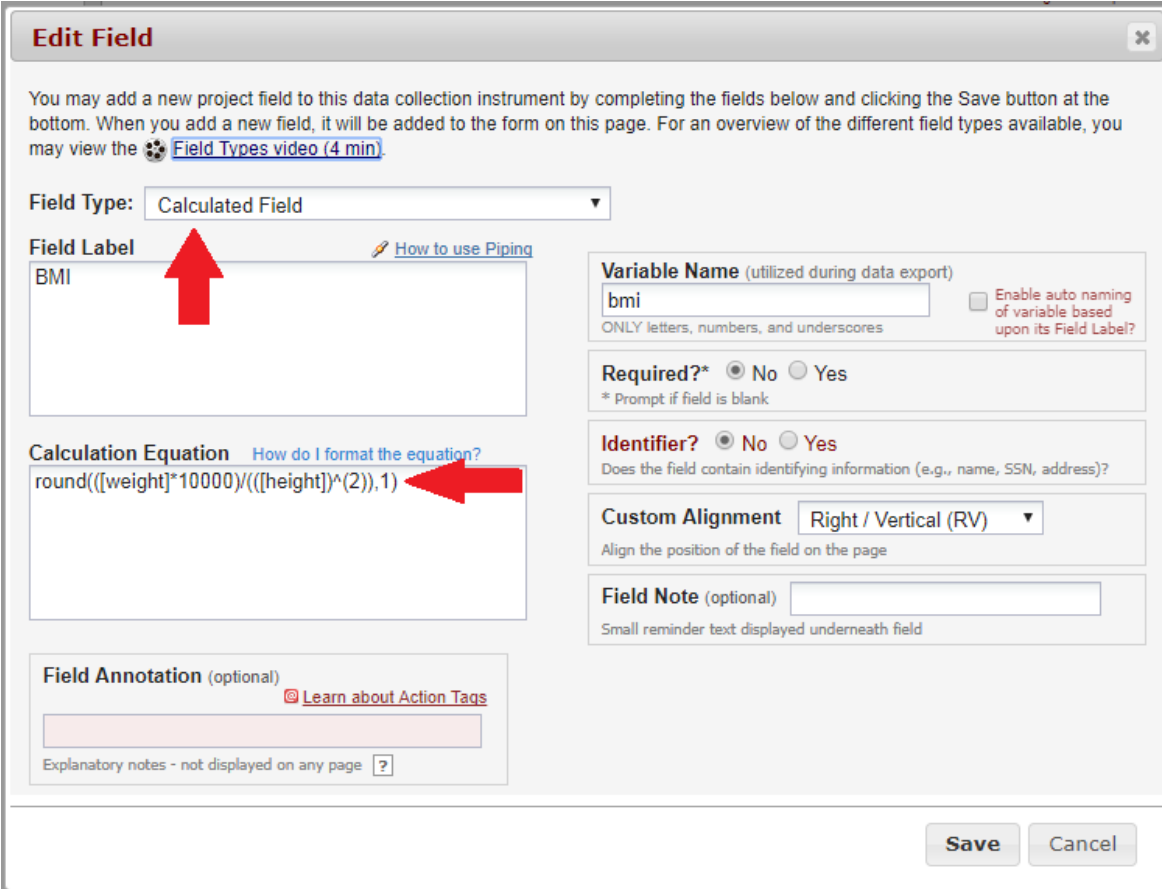
A screenshot of the "Add/Edit Branching Logic" dialog in REDCap. The dialog has a title bar "Add/Edit Branching Logic" and a close button. Below the title bar, there is a paragraph of text explaining branching logic. Below the text, there is a section "Choose method below for the following field: given_birth - Has the patient given birth before?". There are two radio buttons: "Advanced Branching Logic Syntax" and "Drag-N-Drop Logic Builder". The "Drag-N-Drop Logic Builder" is selected. Below the radio buttons, there is a section "Displaying field choices for the following data collection instrument: Demographics". This section contains a list of field choices from other fields, such as "study_id = (define criteria)", "date_enrolled = (define criteria)", "first_name = (define criteria)", "last_name = (define criteria)", "address = (define criteria)", "telephone_1 = (define criteria)", "email = (define criteria)", "dob = (define criteria)", and "ane = (define criteria)". To the right of this list, there is a "Show the field ONLY if..." section with two radio buttons: "ALL below are true" and "ANY below are true". The "ANY below are true" radio button is selected. Below the radio buttons, there is a text box containing the logic "sex = Female (1) X". At the bottom of the dialog, there are "Save" and "Cancel" buttons.

Programming Features: Branching Logic (cont...)

- Can create complex conditions with **and**, **or** operators
 - `[sex] = "1" and [age] > 25`
 - `[smokes] = "1" or [drinks_alcohol]="1"`
- You can also test for inequality:
 - `[language] != "1"` => testing that language is "not equal" to English
 - `[language] <> "1"` => this test is also testing for "not equal" to English
=> `<>` and `!=` are equivalent in REDCap
- It's also possible to test for the absence of a value:
 - `[age] = "" or [sex] = ""` => testing if either age or sex is blank

Programming Features: Calculated Fields

- Calculate a numeric field by referencing other fields
- Can use arithmetic operators: + - * / ^
- Useful built-in functions:
 - Round, roundup, rounddown, mean, median, sum, etc... – see Help Menu
- Supports if-then-else logic:
 - if (CONDITION, VALUE if condition is TRUE, VALUE if condition is FALSE)
 - To create a categorical variable for "Age greater than 25", set calculation to:
 - If([age] > 25,1,0)
 - Can nest if statements. For "Age 25-64":
 - If([age] >= 25,(if([age] <= 64,1,0),0)



The screenshot shows the 'Edit Field' dialog box with the following configuration:

- Field Type:** Calculated Field
- Field Label:** BMI
- Variable Name:** bmi
- Required?***: No
- Identifier?**: No
- Custom Alignment:** Right / Vertical (RV)
- Field Note (optional)**: (empty)
- Field Annotation (optional)**: (empty)

The **Calculation Equation** field contains the formula: `round((([weight]*10000)/(([height])^(2)),1)`. A red arrow points to this field.

At the bottom right, there are **Save** and **Cancel** buttons.

Programming Features: Piping

- Insert the contents of a variable into display text
- Can be used with question text, field labels, survey instructions, etc...

Setup:

Survey Termination Options:	
<input type="radio"/> Redirect to a URL (Redirect to a webpage when survey is completed)	<input type="text"/> <small>Provide a full URL, e.g. http://www.example.com/mypage.html</small>
— OR —	
<input checked="" type="radio"/> Survey Acknowledgement Text (Displayed after survey is completed)	[first_name], thank you for taking the survey. Have a nice day!

Before:

What is your first name?	<input type="text" value="John"/>
--------------------------	-----------------------------------

After:

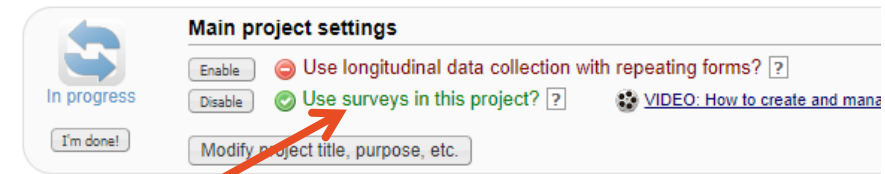
<input type="button" value="Close survey"/>
John, thank you for taking the survey.
Have a nice day!

Programming Features: API

- REDCap has an API (Application Program Interface) for interacting with the back-end database directly
 - Requires permission to use (an API token)
 - Can use any programming language capable of issuing HTTPS requests:
 - Ex: PHP, JavaScript, Java, Python, R, SAS, etc...
 - Can import/export records, files, events, etc...
 - API use will be monitored because excessive/improper use can negatively impact server performance

REDCap Surveys

- Surveys can be enabled for any project and any data collection instrument can be converted to a survey
- When taking a survey, the REDCap menu system is not visible
- Participants don't need a REDCap login
- Dissemination Options:
 - Public URL
 - Email a unique link
 - Send a unique link via text (Twilio)
 - Clinical settings: Open the survey on a tablet or laptop and hand it to respondent



Instrument name	Fields	View PDF	Enabled as survey	Instrument actions	Survey-related options
Demographics	25			Choose action	Survey settings + Automated Invitations
Baseline Data	18		Enable	Choose action	
Month 1 Data	19		Enable	Choose action	

Demographics

Please complete the survey below.

Thank you!

Consent Information

Date subject signed consent Today Y-M-D
YYYY-MM-DD

Upload the patient's consent form [Upload document](#)

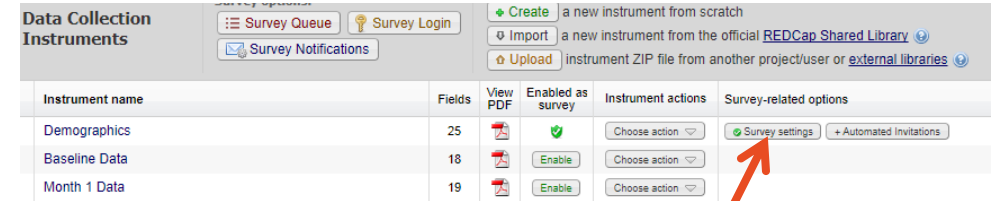
Contact Information

First Name

Last Name

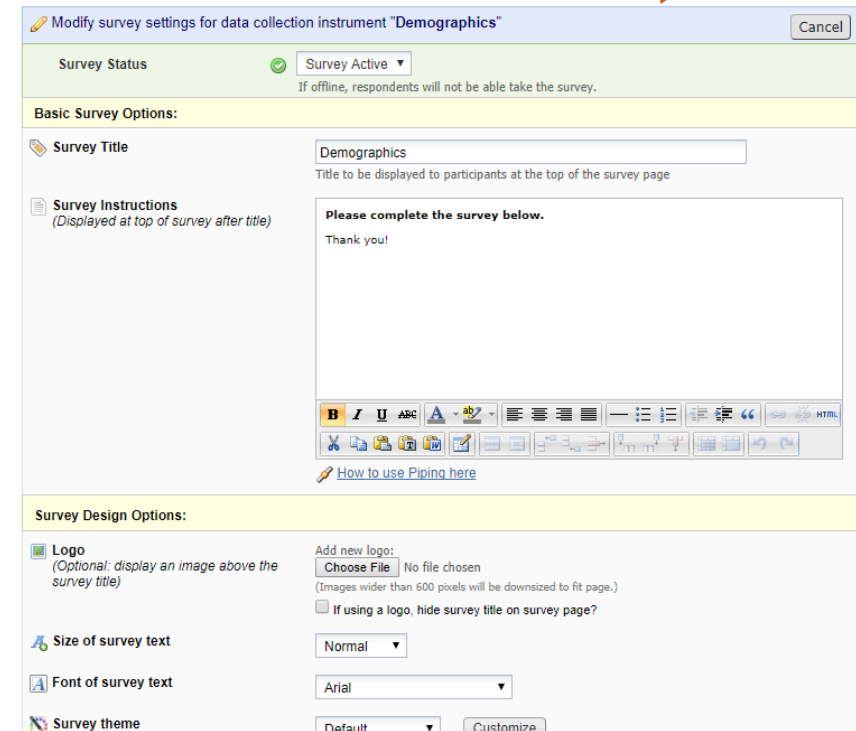
REDCap Surveys: Survey Settings

- Define Instrument-level settings in “Survey Settings”
 - Status (Active or Offline)
 - Title & Instructions
 - Logo, font, style template
 - Single page vs. multiple
 - Allow “Save and Return Later”
 - Auto-continue to next survey
 - Survey completion text / Thank you



Instrument name	Fields	View PDF	Enabled as survey	Instrument actions	Survey-related options
Demographics	25			Choose action	Survey settings + Automated Invitations
Baseline Data	18		Enable	Choose action	
Month 1 Data	19		Enable	Choose action	

You may edit the survey's basic information by modifying the fields below and clicking the Save Changes button.



Modify survey settings for data collection instrument "Demographics" Cancel

Survey Status Survey Active ▼
If offline, respondents will not be able take the survey.

Basic Survey Options:

Survey Title Demographics
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!

Survey Design Options:

Logo
(Optional: display an image above the survey title)
Add new logo: Choose File No file chosen
(Images wider than 600 pixels will be downsized to fit page.)
☐ If using a logo, hide survey title on survey page?

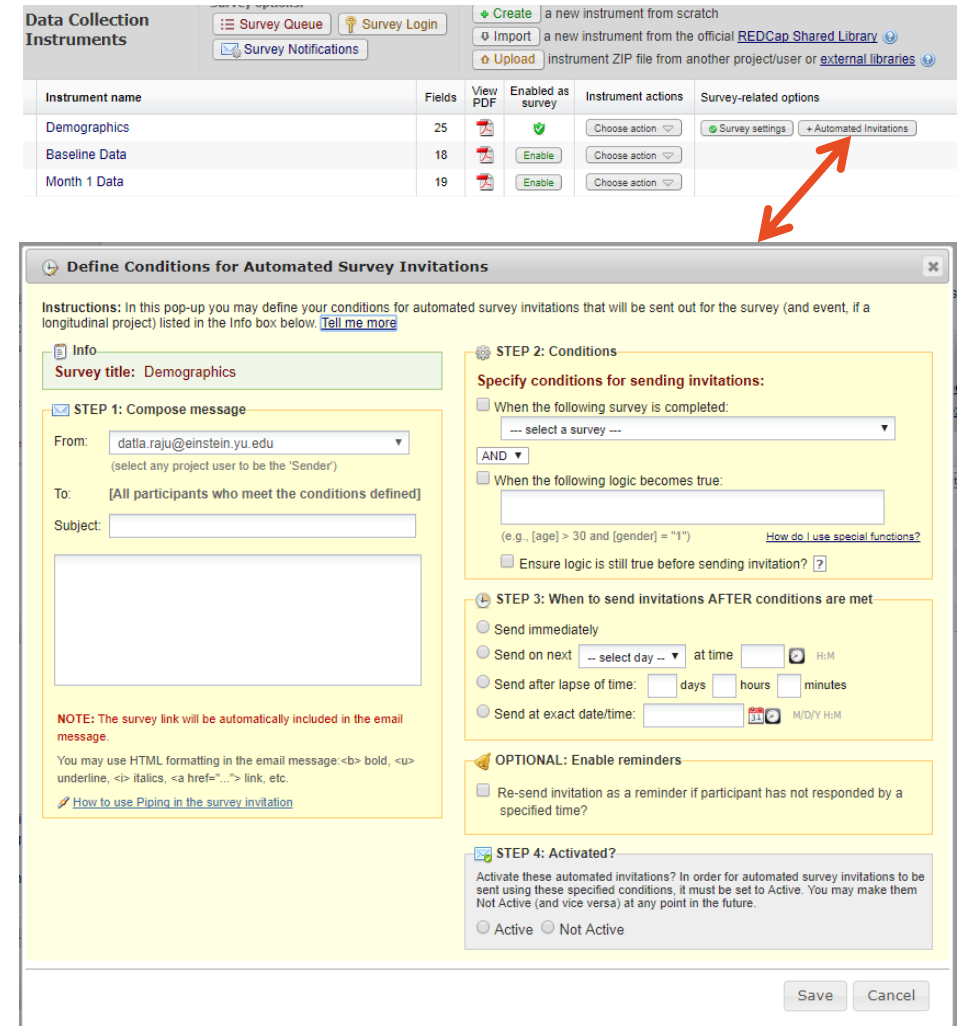
Size of survey text Normal ▼

Font of survey text Arial ▼

Survey theme Default ▼ Customize

REDCap Surveys: Automated Invitations

- Program your email/text invitations in advance
- Use filtering logic to target the invitations
 - Ex: Send to all men age 25-44 that had a migraine headache in the past month
- More options for setting the time
 - Ex: Send invitation for Part 2 of the survey the next Monday at 9am after Part 1 was completed
 - Ex: Send invitations to PTID 1-100 at 9am, send to PTID 101-200 at 10am, etc...
- Make sure you test your invitations thoroughly



The screenshot shows the REDCap interface. At the top, there's a 'Data Collection Instruments' table. A red arrow points from the '+ Automated Invitations' button in the 'Survey-related options' column of the 'Demographics' row to the 'Define Conditions for Automated Survey Invitations' dialog box.

Data Collection Instruments Table:

Instrument name	Fields	View PDF	Enabled as survey	Instrument actions	Survey-related options
Demographics	25			Choose action	Survey settings + Automated Invitations
Baseline Data	18		Enable	Choose action	
Month 1 Data	19		Enable	Choose action	

Define Conditions for Automated Survey Invitations Dialog Box:

Info
Survey title: Demographics

STEP 1: Compose message

From: data.raju@einstein.yu.edu (select any project user to be the 'Sender')

To: [All participants who meet the conditions defined]

Subject: [Empty text box]

NOTE: The survey link will be automatically included in the email message.
You may use HTML formatting in the email message: bold, <i> italic, link, etc.
[How to use Piping in the survey invitation](#)

STEP 2: Conditions
Specify conditions for sending invitations:

☐ When the following survey is completed:
--- select a survey ---

AND

☐ When the following logic becomes true:
[Empty logic box]
(e.g., [age] > 30 and [gender] = "1") [How do I use special functions?](#)

☐ Ensure logic is still true before sending invitation? [?](#)

STEP 3: When to send invitations AFTER conditions are met

☐ Send immediately

☐ Send on next -- select day -- 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

Save Cancel

REDCap Surveys: Manual Invitations

- Send “manual” invitations using “Manage Survey Participants”
- Compose and send immediately or schedule for a later time
- Can select individual participants from a list
- Or send to entire categories of people
 - Ex: Not sent to previously, yet to respond, etc...
- Can optionally pre-program reminders

Send a Survey Invitation to Participants

Info
Survey title: **Demographics**

When should the emails be sent?
☒ Immediately
☐ At specified time: M/D/Y H:M
The time must be for the time zone America/New_York, in which the current time is 09/05/2018 10:55.

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

Compose message
From:
To:
Subject:

Hello {first_name},
Please use the below link to complete our Health Eating Survey. It should only take 5-10 minutes of your time.
Thank you very much!
Survey Team

NOTE: The survey link will be automatically included in the email message. You may use HTML formatting in the email message: bold, <u> underline, <i> italics, link, etc. [How to use Piping in the survey invitation](#)

Participant List
(those who have not responded completely)
Actions:

Email	Participant Identifier	Scheduled?	Sent?	Responded?
<input checked="" type="checkbox"/> jane.doe@test.com (ID 2)		-	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> john.doe@test.com (ID 1)		-	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> sam.doe@test.com (ID 3)		-	<input type="checkbox"/>	<input type="checkbox"/>

Data Collection [Edit instruments](#)

Manage Survey Participants
- Get a public survey link or build a participant list for inviting respondents

Record Status Dashboard
- View data collection status of all records

Add / Edit Records
- Create new records or edit/view existing ones

Manage Survey Participants

☒ Public Survey Link ☒ Participant List ☐ Survey Invitation Log

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). Unless an Identifier is used, all survey responses collected are considered anonymous. [More details](#)

Participant List belonging to

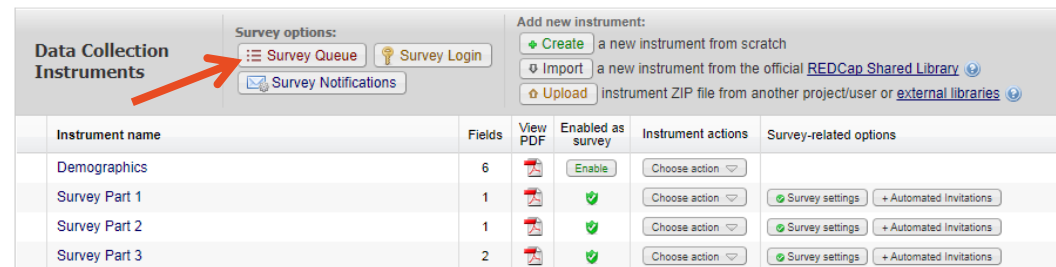
Displaying 1 - 3 of 3

Email	Participant Identifier	<input type="button" value="Enable"/>	Responded?	Invitation Scheduled?	Invitation Sent?	Link	Survey Access Code and QR Code
jane.doe@test.com (ID 2)	Disabled		<input type="checkbox"/>	-	<input type="checkbox"/>	Link	
john.doe@test.com (ID 1)	Disabled		<input type="checkbox"/>	-	<input type="checkbox"/>	Link	
sam.doe@test.com (ID 3)	Disabled		<input type="checkbox"/>	-	<input type="checkbox"/>	Link	

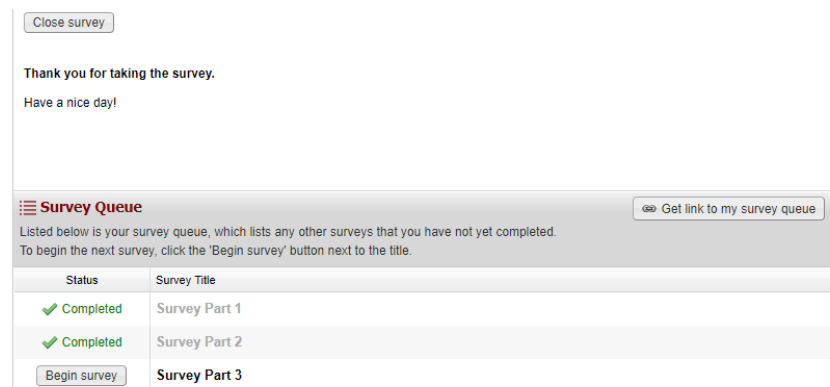
REDCap Surveys: Survey Queue

- Use the Survey Queue to create a list of surveys for the participant to complete
 - Can use conditional logic to ensure a specific sequence or skip surveys under certain conditions
 - Can optionally display the list to the participant by leaving "Auto start?" unchecked
- The Auto-continue feature (see Survey Settings) is an alternative to the Survey Queue for defining a sequence of surveys where the next survey opens automatically. However, you cannot determine the next survey dynamically with branching logic as you can with the Survey Queue.

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.



Instrument name	Fields	View PDF	Enabled as survey	Instrument actions	Survey-related options
Demographics	6			Choose action	
Survey Part 1	1			Choose action	Survey settings + Automated Invitations
Survey Part 2	1			Choose action	Survey settings + Automated Invitations
Survey Part 3	2			Choose action	Survey settings + Automated Invitations



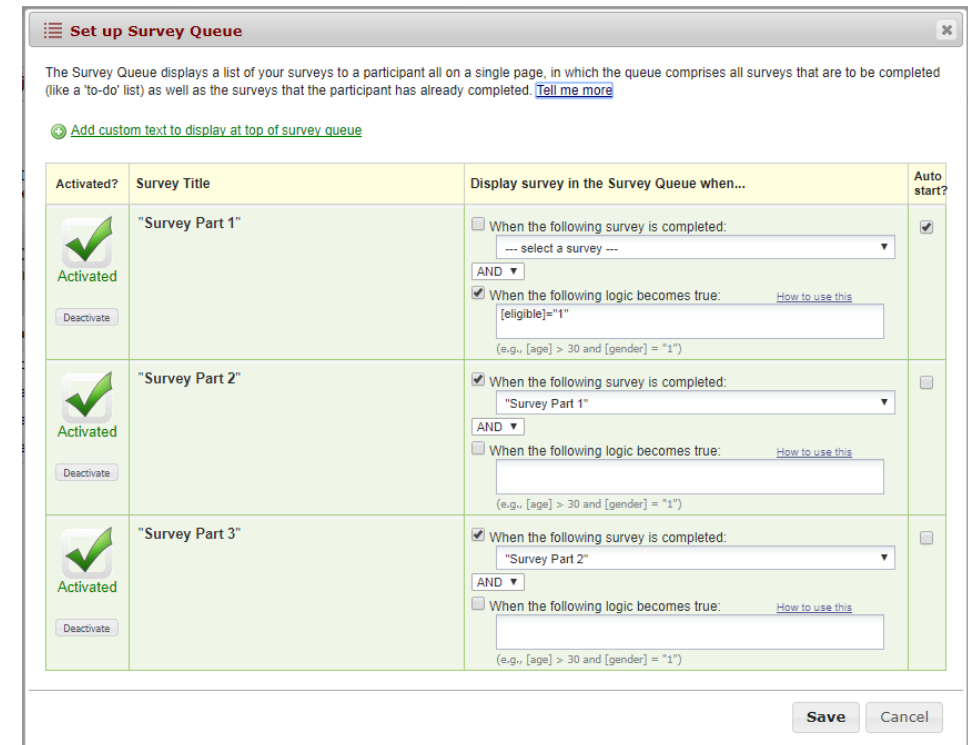
Close survey

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
Completed	Survey Part 1
Completed	Survey Part 2
Begin survey	Survey Part 3



Set up Survey Queue

The Survey Queue displays a list of your surveys to a participant all on a single page, in which the queue comprises all surveys that are to be completed (like a 'to-do' list) as well as the surveys that the participant has already completed. [Tell me more](#)

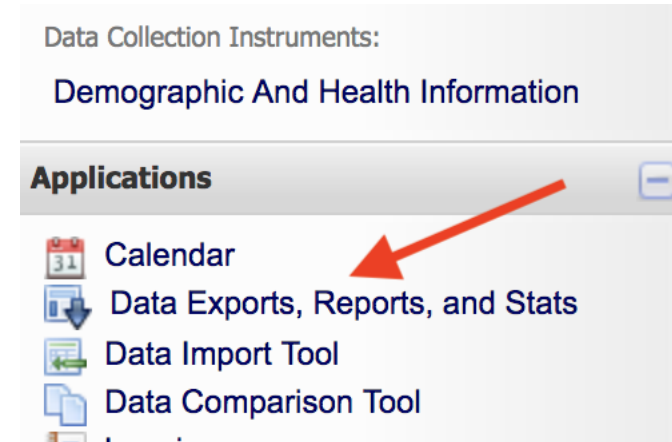
[Add custom text to display at top of survey queue](#)

Activated?	Survey Title	Display survey in the Survey Queue when...	Auto start?
Activated Deactivate	"Survey Part 1"	<input type="checkbox"/> When the following survey is completed: --- select a survey --- AND <input checked="" type="checkbox"/> When the following logic becomes true: How to use this [eligible]="1" (e.g., [age] > 30 and [gender] = "1")	<input checked="" type="checkbox"/>
Activated Deactivate	"Survey Part 2"	<input checked="" type="checkbox"/> When the following survey is completed: "Survey Part 1" AND <input type="checkbox"/> When the following logic becomes true: How to use this (e.g., [age] > 30 and [gender] = "1")	<input type="checkbox"/>
Activated Deactivate	"Survey Part 3"	<input checked="" type="checkbox"/> When the following survey is completed: "Survey Part 2" AND <input type="checkbox"/> When the following logic becomes true: How to use this (e.g., [age] > 30 and [gender] = "1")	<input type="checkbox"/>

[Save](#) [Cancel](#)

Data Export

- Users who have been granted permission can export data with a variety of options
- Export data as CSV or XML files
- Export to stats packages: R, SAS, SPSS, Stata
- Can exclude identifiers
- Can filter by forms, variables, etc...
- Can export instruments as PDFs with data values filled – see "Other Export Options" tab



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

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 data exported out of the project. Check all that apply.

Known Identifiers:

- ☐ Remove all tagged identifier fields (tagged)
- ☐ Hash the Record ID field (converts record ID to a hash)

Free-form text:

- ☐ Remove unvalidated Text fields (i.e. Text fields with no value)
- ☐ Remove Notes/Essay box fields

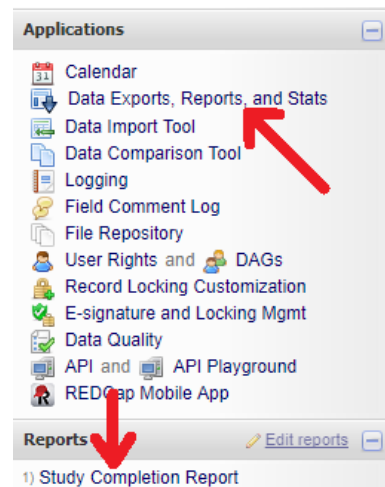
Date and datetime fields:

- ☐ Remove all date and datetime fields
- OR –
- ☐ Shift all dates by value between 0 and 364 (shifted amount determined by algorithm for each date)

[Deselect all options](#)

Create Simple Reports

- Create and save simple reports – lists of cases matching certain criteria
- Can restrict each report to certain users
- Provides some descriptive stats and plots (min/max, SD, outliers, bar charts, etc...)
- More complex reports with summary statistics, subtotals, etc... are not possible in REDCap



STEP 1

User Access: Choose who sees this report on their left-hand project menu ?

☐ All users – OR – ☒ Custom user access (Users in ANY groups selected below will have access)

Selected users

draju (Vishnu Raju)

View a list of users who will have access to this report based on the selections above: [View user access list](#)

STEP 2

Fields to include in report [Quick Add](#) Add all fields from selected instrument: -- choose instrument --

Field	Field Label	Instrument	Action
Field 1	study_id "Study ID"	Demographics	✕
Field 2	complete_study "Has patient completed study"	Completion Data	✕
Field 3	withdraw_date "Put a date if patient withdrew"	Completion Data	✕
Field 4	withdraw_reason "Reason patient withdrew"	Completion Data	✕
Field 5	complete_study_date "Date of study completion"	Completion Data	✕
Field 6	study_comments "Comments"	Completion Data	✕
Field 7	completion_data_complete "Complete?"	Completion Data	✕
Field 8	Type variable name or field label		

STEP 3

Filters (optional) [How to use filters and AND/OR logic](#)

Operator / Value

Filter 1: date_enrolled "Date subject signed consent" > 2018-09-01 Y-M-D ✕

AND

Filter 2: ...

Study Completion Report

Study ID (study_id)	Has patient completed study? (complete_study)	Put a date if patient withdrew study (withdraw_date)	Reason patient withdrew from study (withdraw_reason)	Date of study completion (complete_study_date)	Comments (study_comments)	Complete? (completion_data_complete)
<u>1</u>	Yes (1)			2018-09-04		Incomplete (0)
<u>2</u>	Yes (1)			2018-09-02		Incomplete (0)
<u>3</u>	No (0)	2018-09-03	Did not wish to continue in study (1)			Incomplete (0)

User Rights

- Add users to your projects and set individual permissions or assign a role
- Set project wide permissions
 - Design & Setup
 - Reports, Exports, Logging
 - Record Locking
 - Create/Rename/Delete Records
- Set form specific permissions
 - No Access, Read-only, View & Edit

Applications

- Calendar
- Data Exports, Reports, and Stats
- Data Import Tool
- Data Comparison Tool
- Logging
- Field Comment Log
- File Repository
- User Rights and DAGs
- Record Locking Customization
- E-signature and Locking Mgmt
- Data Quality
- API and API Playground
- REDCap Mobile App

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

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

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

Editing existing user "draju"

You may set the rights for the user below by checking the boxes next to the application tools to which you wish to grant them access. You may also grant them or deny them access to individual data collection instruments, if so desired. To save your selections, click the "Save Changes" button at the bottom of the page.

Basic Rights

Expiration Date (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

☒ Add / Edit Reports

☒ Stats & Charts

Other privileges:

- ☒ Manage Survey Participants
- ☒ Calendar
- ☒ Data Import Tool
- ☒ Data Comparison Tool
- ☒ Logging
- ☒ File Repository
- ☒ Data Quality
- ☒ API

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.

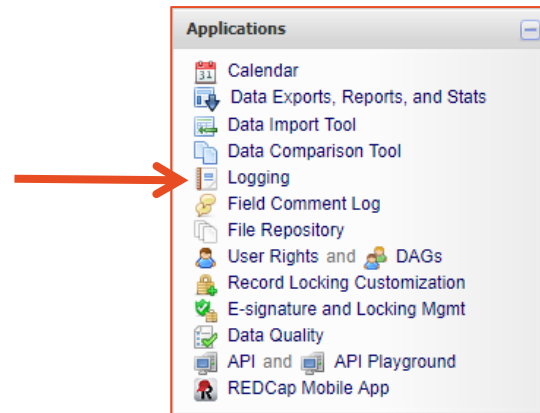
	No Access	Read Only	View & Edit	Edit survey responses
Demographics (survey)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
Baseline Data	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Month 1 Data	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Month 2 Data	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Month 3 Data	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Completion Data	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	

Form Level Permissions

Project Level Permissions

Auditing: Logging

- Logging feature provides an audit trail for:
 - Create/Update/Delete actions
 - Data Exports
 - Design changes
 - Page Views
- Filter by user, record, date, type
- Can export log to CSV



Logging [Download entire logging record to Microsoft Excel \(CSV\)](#)

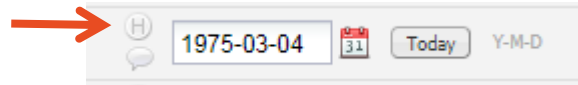
This module lists all changes made to this project, including data exports, data changes, and the creation or deletion of users.

Filter by event: All event types (excluding page views) ▼
Filter by user name: All users ▼
Filter by record: All records ▼
Displaying events (by most recent): 1 - 17 ▼
Filter by time range from [] to []

Time / Date	Username	Action	List of Data Changes OR Fields Exported
09/04/2018 1:56pm	draju	Manage/Design	Set up survey
09/04/2018 1:54pm	draju	Manage/Design	Modify project settings
09/04/2018 1:42pm	draju	Updated Record 2	date_enrolled = '2018-09-04'
09/04/2018 1:41pm	draju	Updated Record 3	date_enrolled = '2018-09-04', demographics_complete = '0'
09/04/2018 1:41pm	draju	Updated Record 2	date_enrolled = '2018-09-01', demographics_complete = '0'
09/04/2018 1:40pm	draju	Manage/Design	Create report
09/04/2018 1:37pm	draju	Created Record 3	complete_study = '0', withdraw_date = '2018-09-03', withdraw_reason = '1', completion_data_complete = '0', study_id = '3'
09/04/2018 1:36pm	draju	Created Record 2	complete_study = '1', complete_study_date = '2018-09-02', completion_data_complete = '0', study_id = '2'
09/04/2018 1:36pm	draju	Updated Record 1	complete_study = '1', complete_study_date = '2018-09-04', completion_data_complete = '0'
09/04/2018 1:35pm	draju	Created Record 1	date_enrolled = '2018-09-04', first_name = 'John', last_name = 'Doe', address = '123 Main St, New York, NY 10001', telephone_1 = '(444) 555-6666', email = 'test@test.com', dob = '1975-01-01', age = '43', ethnicity = '0', race = '4', sex = '2', gym(0) = checked, gym(2) = checked, aerobics(1) = checked, eat(1) = checked, eat(4) = checked, drink(2) = checked, specify_mood = '100', height = '185', weight = '74', bmi = '21.6',

Auditing: Field History and Comments

- Field Level History



Data History for variable "dob" for record "3"

Listed below is the history of all data entered for the variable "dob" for Study ID "3". The data history results are sorted from earliest to most recent.

Date/Time of Change	User	Data Changes Made
09/05/2018 7:55am	draju	1975-04-03
09/05/2018 8:00am (most recent data change)	draju	1975-03-04

Close

- Field Level Comments



- can disable at project level
- can export comments to CSV



Field Comment Log

This pop-up displays all the field comments for the record and field specified below. Users with access to data entry forms may leave one or more comments on any field on a data collection instrument, after which the balloon icon will stay lit up to signify that comments exist for that field for this record. All field comments for all records/fields can also be viewed, keyword searched, and filtered on the [Field Comment Log](#) page in this project. NOTE: If you wish to prevent all users in this project from editing or deleting field comments below, see the Additional Customizations popup on the Project Setup page.

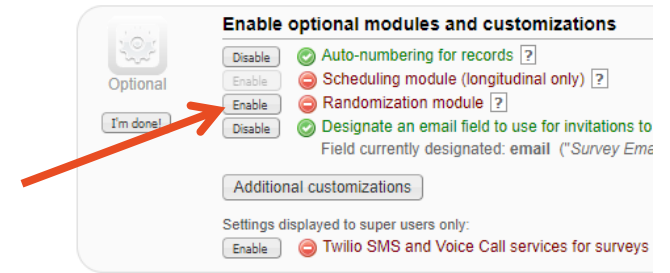
Study ID: 2
Field: address ("Street, City, State, ZIP")

	Date/Time	User	Comments
	09/05/2018 8:06am	draju	She is temporarily staying at this address - her father's. Update on next visit
	09/05/2018 8:07am	draju	

Comment Cancel

Randomization Module

- REDCap can randomly assign participants to specific groups
- Step 1: Define your randomization model and create the required variables:
 - Stratification factors (optional)
 - Group/site (optional)
 - Randomization field to store the result
 - These should all be single response categorical variables
- Step 2: Download template file
 - REDCap can be used to generate a template
 - The actual allocation table should be generated outside of REDCap using statistical software



Setup Dashboard

STEP 1: Define your randomization model

This step will allow you to define the randomization model you will be implementing and all its parameters, which includes defining strata (if applicable) and optionally randomizing subjects per group/site (if a multi-site study).

NOTE: This section is currently locked and uneditable because the randomization setup process has already been completed. If you wish to modify the randomization setup below, you will need to click the Erase Randomization Model button below.

A) Use stratified randomization? ☒

It is often necessary to ensure equal treatment among a number of factors. Stratified randomization is the solution to achieve balance within one or more subgroups, such as gender, race, diabetics/non-diabetics, etc. By choosing strata (criteria fields), you may then be able to ensure balance within those subgroups. [Tell me more](#)

Choose strata (criteria fields used for stratification; may specify up to 14 fields)

sex (Sex)

B) Randomize by group/site? ☒

If this is a multi-center/multi-site project (or something similar), you may want to stratify the randomization by each group/site. You can select an existing multiple choice field that represents the groups/sites, OR you can use Data Access Groups to stratify by group/site.

☒ Use Data Access Groups to designate each group/site (5 groups currently exist)

☐ Use an existing field to designate each group/site

- select a field -

C) Choose your randomization field

This is the field where the allocated randomization (treatment) group will be saved and stored, and is where the Randomize button will appear on your data collection form.

survey_group (Survey Group)

Save randomization model Erase randomization model

STEP 2: Download template allocation tables (as Excel/CSV files)

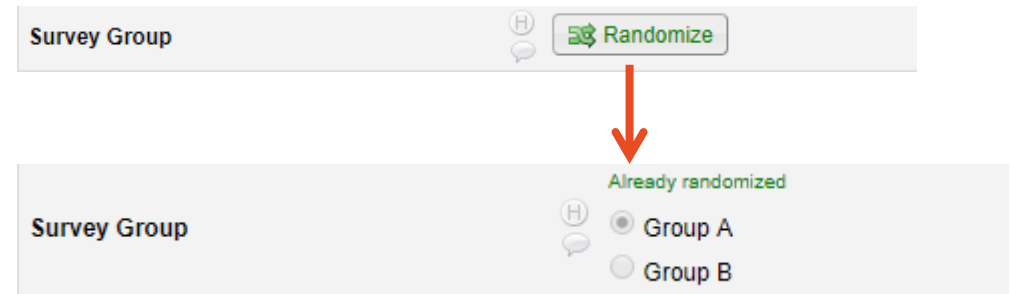
Below are some example files that you may download to get a general idea for how you may structure your own randomization table. You do not have to use any of these. In fact, we recommend that you NOT use these exact templates but instead recommend that you merely use them as an example or baseline to start from in order to create your own custom allocation file. After uploading your allocation table in Step 3 below, it will then be used as a lookup table to perform assignments when subjects are being randomized. **NOTE:** Record names (e.g., study ID) should NOT be included as a column in your allocation table, but only the fields listed in the example files below. [More details](#)

Example #1 (basic) Example #2 (all possible combos) Example #3 (5x all possible combos)

STEP 3: Upload your allocation table (CSV file)

Randomization Module (cont...)

- Step 3: Upload Allocation Table
 - Use different tables for development mode (testing) and production mode
 - Once in production, table is locked and can't be modified
- Press the “Randomize” button on form to assign a code and lock the variable
- Dashboard shows aggregated totals of used codes
- Can restrict access to randomization features:
 - Setup
 - Dashboard
 - Randomize button



Survey Group

Randomize

Already randomized

Group A

Group B

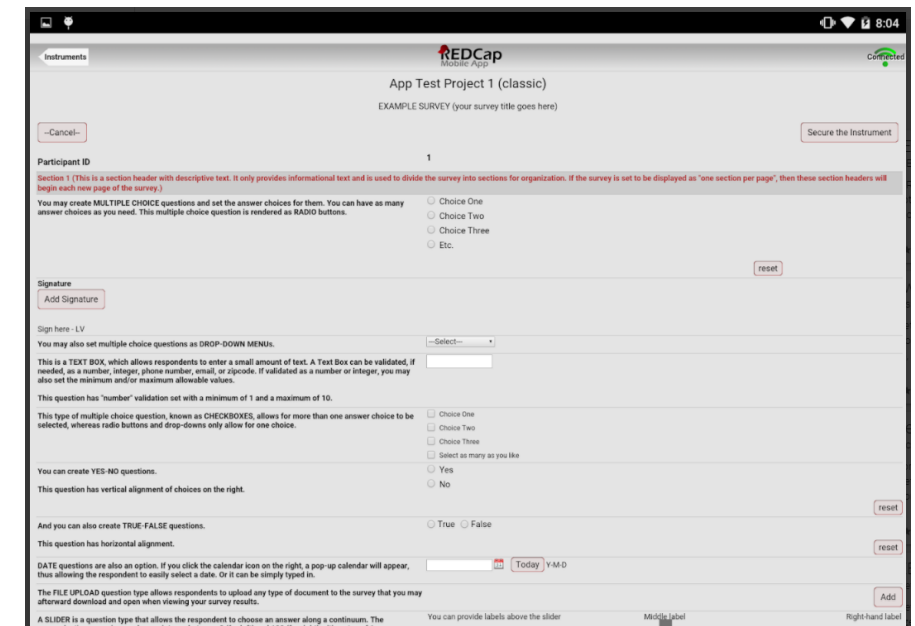
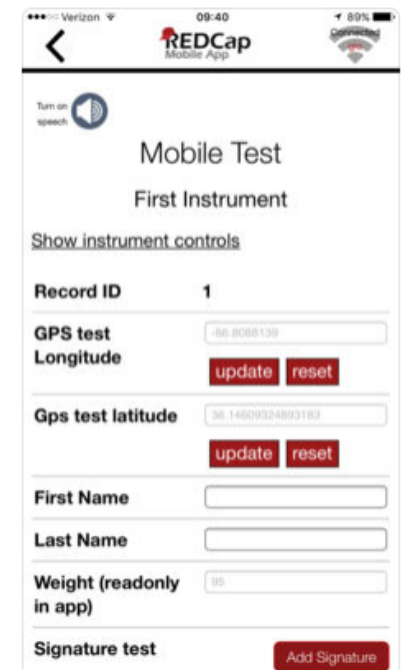
Setup Dashboard

The table below displays the allocation dashboard for use in DEVELOPMENT status. All assignments are grouped to show in aggregate the count of records that have been randomized for each row (i.e. combinations). Assignments that have been used will get counted in the 'Used' column while those that are still unallocated will get counted in the 'Not Used' column. Once all assignments have been used for a given row/combination, it will display a checkmark icon in its row. The headers in the table may be clicked to sort the table by that column either in ascending or descending order.

	Used	Not Used	Allocated records	Data Access Group	Survey Group (survey_group)	Sex (sex)
	0	5		Manhattan (821)	Group A (1)	Female (1)
	0	5		Manhattan (821)	Group A (1)	Male (2)
	0	5		Manhattan (821)	Group B (2)	Female (1)
	0	5		Manhattan (821)	Group B (2)	Male (2)
	0	5		Bronx (822)	Group A (1)	Female (1)
	1	4	5	Bronx (822)	Group A (1)	Male (2)
	0	5		Bronx (822)	Group B (2)	Female (1)
	0	5		Bronx (822)	Group B (2)	Male (2)
	1	4	6	Brooklyn (823)	Group A (1)	Female (1)
	0	5		Brooklyn (823)	Group A (1)	Male (2)
	0	5		Brooklyn (823)	Group B (2)	Female (1)

Mobile App

- Designed for offline data collection in areas with limited internet access
- Support for Android 4.3+ and iOS 9+ devices
- Designed for research staff to enter the data with a dedicated device - NOT for participants to enter information from their own smart phones.
- Data resides on the devices until it is synced to your web-based REDCap project
- Allow extra time for testing and plan for contingencies



New Features

- Repeatabile Instruments/Events
 - Great for recording ad-hoc events or for high frequency data collection, e.g. daily surveys
- Customizable Record Status Dashboard
- Smart Variables
 - Variables whose values depend on the current context, e.g. [user-name] or [previous-event]
- MyCap mobile app to allow participants to fill out surveys on their own devices
- External Modules extend REDCap features (e.g., Multilingual)