



REDCap 101 Training

Introduction to building projects in REDCap

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Introduction and Learning Objective

- Learn how to set up a study account
- o Learn where to access training materials
- o Understand how to create a new REDCap project
- o Learn how to manage user rights
- Demonstrate how to export data to statistical packages



What is REDCap?

Web-based software used to create and manage research databases and participant surveys. Developed as a tool to help researchers collect and manage data effectively and responsibly.



How do I get set up in REDCap?



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

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

o Two REDCap implementations available at Yale:

REDCap at Yale University

Yale NewHaven **Health**



Yale Center for Clinical Investigation



REDCap@Yale

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

o How do I add users?

	Step 1	PI or primary contact requests someone be added as a user to REDCap@Yale (only if they do not have access already)
5	Step 2	New user activates REDCap account by logging in
	Step 3	PI or primary contact adds user to their REDCap project



REDCap@Yale

Yale NetID and password is required for login



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

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



QUESTIONS?



Training Resources: Within REDCap

Training Videos: 26 training videos currently available



Just Getting Started?

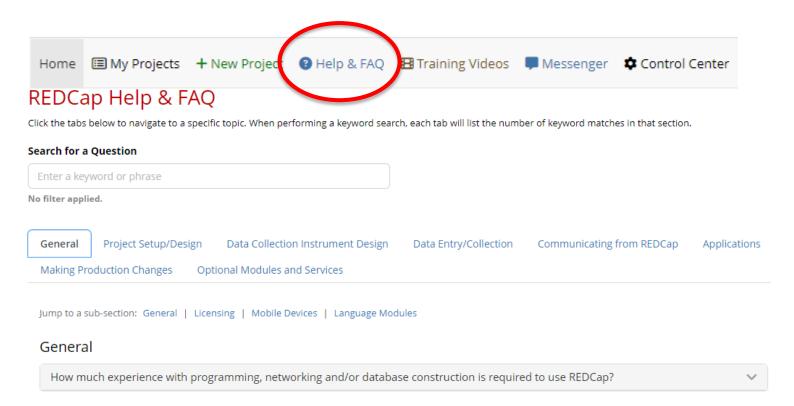
Explore these overviews of fundamental concepts and features.

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



Training Resources: Within REDCap

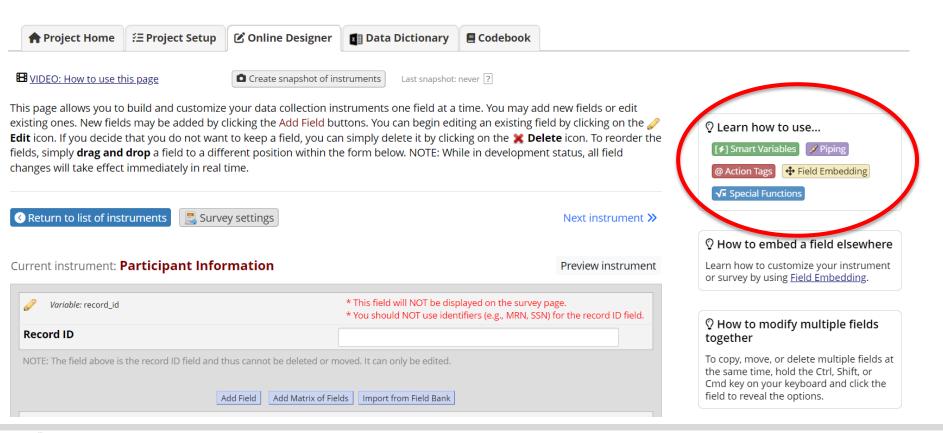
Help & FAQ: This is also a good place to look up syntax for calculated field, branching logics or piping.





Training Resources: Within REDCap

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





Training Resources: REDCap@Yale Website

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



Login to Login t	to Reset Request Study Reactivat	te Add Re	port a Need
REDCap I REDCap	p II Password Account User Acco	unt Users Pr	oblem Help?
1E GET HELP AB	BOUT US RESOURCES CONTACT US		
DME > RESOURCES > FA			
	Advad Onationa		
requently	Asked Questions		
ategories	Search Keyword	ADDLY	SHOW ALL
ategories		APPLY	SHOW ALL
ntegories - Any -	Search Keyword	APPLY	SHOW ALL
- Any - Project Design	Search Keyword	APPLY	SHOW ALL
- Any - roject Design	Search Keyword	APPLY	SHOW ALL
ategories - Any -	Search Keyword	APPLY	SHOW ALL
- Any - roject Design	Search Keyword	APPLY	SHOW ALL



How do I insert a video?

I want to include a video in the survey project I am using for eConsent.

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

To insert a video into a form/survey:

1. Within the 'Online Designer', add a new field to your form and select the 'Descriptive Text' field type.

Add New	rielu
	a new project field to this data collection instrument by completing
	en you add a new field, it will be added to the form on this page. For a
MOUL MON VIOL	witho 🕞 Eield Tupos video (4 min)
· · ·	w the B Field Types video (4 min).
· · ·	w the B Field Types video (4 min).



QUESTIONS?



VERY BRIEF TOUR



REDCap: Homepage



OUR MISSION

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

LINKS	

Check out our <u>portal website</u> REDCap@Yale <u>activity charts</u>

Welcome to REDCap!

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

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

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

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

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

REDCap Features

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

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

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

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

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

REDCap@Yale

REDCap: My Projects

REDCap	◆) PID Home	🗐 My Projects	+ New Project	Help & FAQ	🖽 Training Video	os 🗖 M	lessenger	🌣 Cor	ntrol Center	Logg bt24	ged in as L	e Profile	🕞 Log o
				Yale Unive	ersity REDCap								
	REDCap at Yale University REDCap@Yale												
	To promote ex	OUR MISSION To promote excellence through empowerment, on an informatics platform that encourages innovation and collaboration.					S <u>I website</u> i <u>ty charts</u>						
	Listed below are thus users still have acc					ect title to	o open the	project.	<u>Read more</u> T	o revie	w which		
	My Projects	🗲 Organize	Collapse All				Filter	projects	by title	×			
	Project Title					PID	Records	Fields	Instruments	Туре	Status		
	Project Title	Projects (5)				PID	Records	Fields	Instruments	Туре	Status		
		• • •				PID	Records	Fields	Instruments	Туре	Status		
	Unorganized	TS (1)				PID 2362	Records	Fields	Instruments	Type	Status		
	Unorganized	TS (1)											
	 Unorganized TEST PROJEC Test project I 	TS (1)											



REDCap: Project Navigation Bar

REDCap
Logged in as bt24 Log out
My Projects or Control Center
REDCap Messenger
Contact REDCap administrator
View project as user: select a user
Enter PID to go to project
Project Home and Design
 ♠ Project Home · ﷺ Project Setup ☑ Designer · ☑ Dictionary · ☑ Codebook ● Project status: Development
Data Collection 🧧
Survey Distribution Tools Cate a public survey, link or build a participant list for inviting repondents Record Status Dashboard View data collection status of all records Add / Edit Records
- Create new records or edit/view existing ones
Show data collection instruments
Applications 📃
 Project Dashboards Alerts & Notifications Multi-Language Management Calendar Data Exports, Reports, and Stats Data Import Tool Data Comparison Tool Logging and Se Email Logging Field Comment Log File Repository User Rights and * DAGs Customize & Manage Locking/E-signatures Data Quality REDCap Mobile App
1) test
External Modules 🛛 Manage 🗄 View Logs 🥃
Help & Information
Help & FAQ Suggest a New Feature Contact REDCap administrator

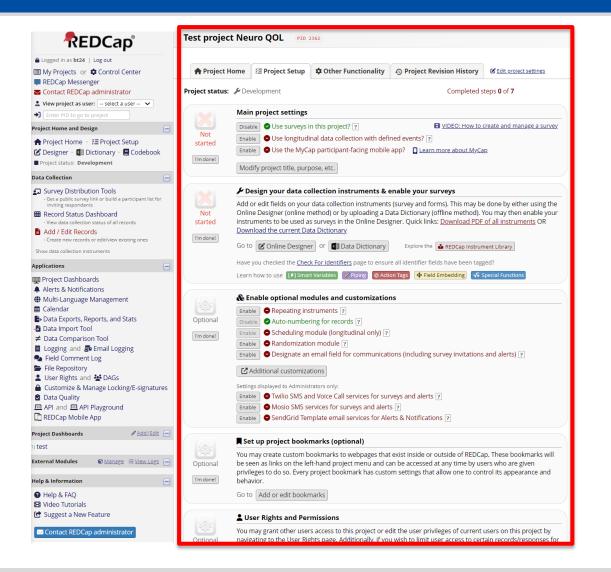
Access to most parts of REDCap:

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

Your Navigation Bar will vary based on your user rights



REDCap: Project Setup





SETTING UP YOUR PROJECT:

WHERE DO I BEGIN?



How do I create a new project in REDCap?



Click the '+New Project' tab, complete the form

- Remember to enter the PI and study information

Home	🗐 My Projects	+ New Project 3 Help & FAQ	🖪 Training Videos	P Messenger	Control Center
+ Cre	eate a new REDC	ap Project			
	y begin the creation of at the bottom.	a new REDCap project on your own by con	npleting the form below and	d clicking the Create F	Project
Project	title:	Title to be displayed on project webpage			
	e of this project: it be used?	Select One 🗸			
Comment	ts notes (optional): ts describing the project's use se that are displayed on the cts page.				
	roject from scratch n with a template?	Create an empty project (blank slate) Upload a REDCap project XML file (CI Use a template (choose one below)			

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



Big Picture Questions

What type of project is needed?

- Classic Database
 - Each form can only be completed at one time point
 - One record per subject.
- Longitudinal
 - Data collected multiple times per subject
 - Fixed number of collection points that correspond to pre-defined events (e.g. baseline, 3mo. follow-up, 6mo. follow-up, 1yr follow-up)
 - Optional scheduling via a project calendar
 - Can have multiple study arms



Big Picture Questions

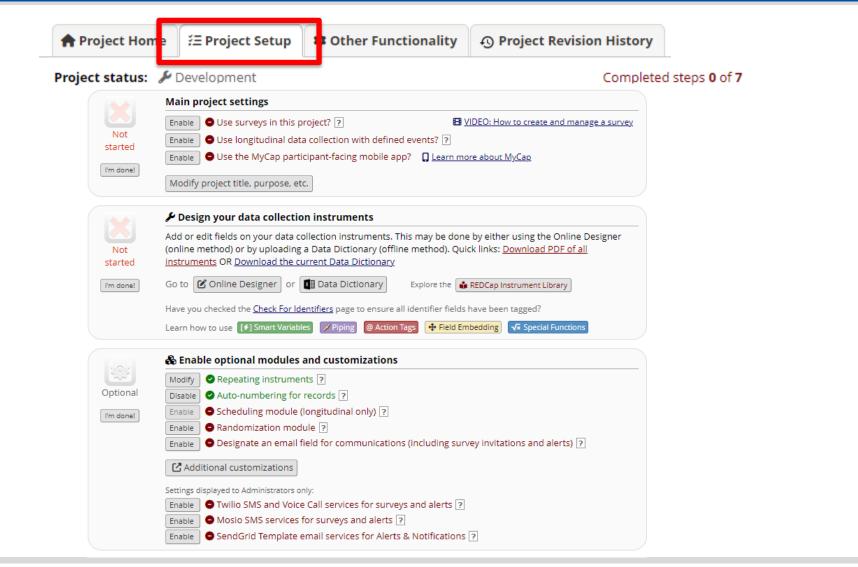
How will you collect the data?

- o Data Entry
 - Data entered by REDCap users (i.e. research staff)
 - Offline data collection available via mobile app
- o Survey
 - Online survey completed by participants
 - Participants do not need to have a Yale NetID

A project can have both surveys and data entry forms.



How to Set Up your Project

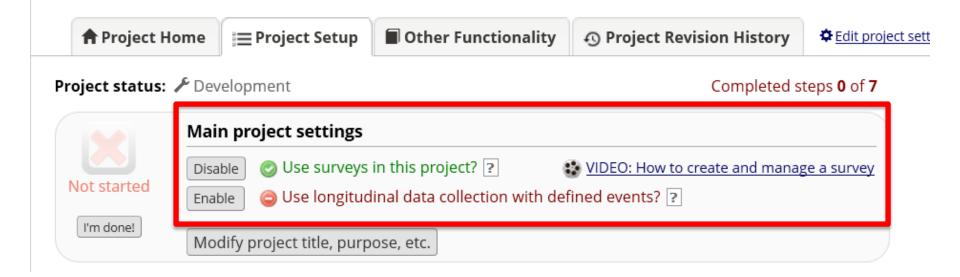




Project Setup: Enable Settings

If applicable:

- Enable survey setting
- Enable longitudinal setting





Project Setup: Build your Instruments

Design your project instruments

Method 1: Online Designer Method 2: Data Dictionary



🗲 Design your data collection instruments

Add or edit fields on your data collection instruments. This may be done by either using the Online Designer (online method) or by uploading a Data Dictionary (offline method). Quick links: <u>Download PDF of all</u> <u>instruments</u> OR <u>Download the current Data Dictionary</u>





Project Set Up: Building with the Online Designer

Online Designer

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

A Project Home	ੱΞ Project Setup	C Online Designer	Data Dictionary	E Codebook
UIDEO: How to use the test of test	<u>nis page</u>	Create snapshot of ins	Last snapshot:	never ?

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.

Da	ata Collection Instruments		options:	, , , , , , , , , , , , , , , , ,	Survey options:		
+ Create a new instrument from scratch Import a new instrument from the official <u>REDCap Instrument Library</u> Lupload instrument ZIP file from another project/user or <u>external libraries</u>				Form Display Lo		vQueue Auto Invitation options - Survey Login	
	Instrument name	Fields	View PDF	Enabled as survey	Instrument actions	Survey related options	
	Form 1	1	PDF	Enable	Choose action \bigtriangledown		



Project Set Up: Building with the Online Designer

A Project Home	ž∃ Project Setup	C Online Designer	🛯 Data Dictionary	E Codebook	
B <u>VIDEO: How to use thi</u>	<u>s page</u>	Create snapshot of in:	struments Last snapshot:	never ?	
existing ones. New fields Edit icon. If you decide t	s may be added by o hat you do not wan drop a field to a diff	clicking the Add Field bu It to keep a field, you cai ferent position within th	struments one field at a Ittons. You can begin edi n simply delete it by click e form below. NOTE: Wh	ting an existing fi king on the 💥 De	eld by clicking on the 🌽 lete icon. To reorder th
	uments				Next instrument 》
Current instrument: F	orm 1				Preview instrument
🥜 Variable: record_id					

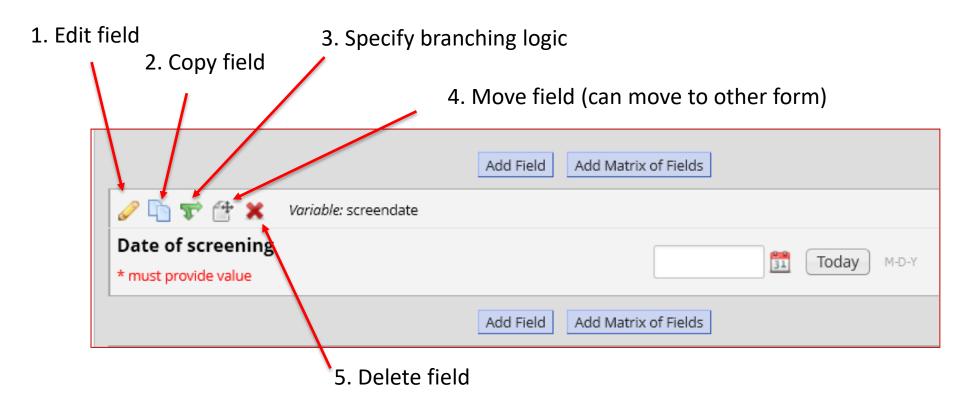
Add Field Add Matrix of Fields Import from Field Bank

This field's value can be auto-assigned by REDCap

(Project Setup \rightarrow Enable optional modules \rightarrow Enable auto-numbering for records)

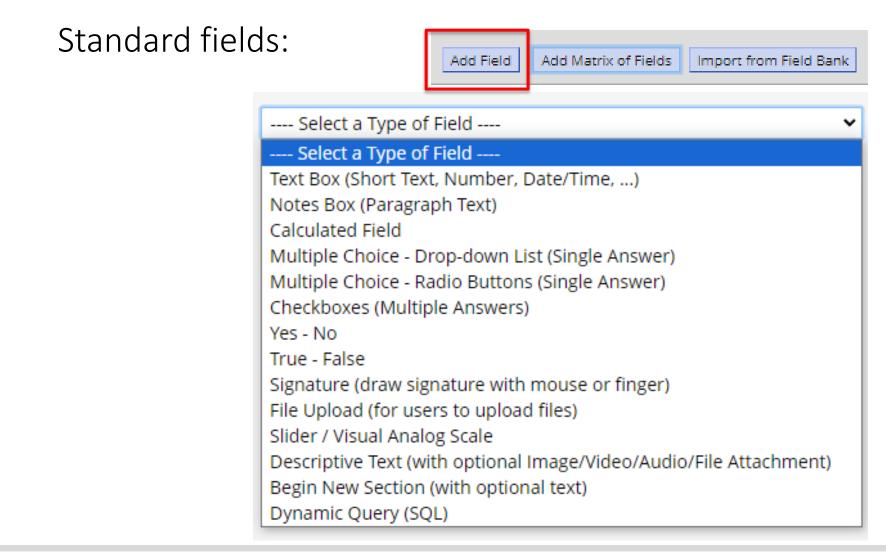


Project Set Up: Building with the Online Designer





Building Forms: Field Types





Building Forms: Field Types

Matrix fields:



Plea	Please let us know your weekly schedule for the following:									
		Monday	Tuesday	Wednesday	Thursday	Friday				
6)	Gym (Weight Training)									
7)	Aerobics									
8)	Eat Out (Dinner/Lunch)									
9)	Drink (Alcoholic Beverages)									



Building Forms: Field Name

• Each field name must be:

- Unique
- Lowercase
- Contain fewer than 26 characters
- Contain only letters, numbers, and underscores

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

Instead of 'demographics_q1' or 'what_was_your_sex_at_birth', use 'birth_sex'!



Building Forms: Drop Down Field

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
-------	------

🛿 Multiple Choice - Drop-down List (Single Ansv 🗠

Field Labe	Fie	ld	La	be	2
------------	-----	----	----	----	---

Field Label	
Race	Variable Name (utilized in logic, calcs, and exports) race Enable auto naming of variable based upon its Field Label? ONLY letters, numbers, and underscores Field Label?
	How to use [] Smart Variables Piping
Choices (one choice per line) Copy existing choices	Required?* O No O Yes * Prompt if field is blank
1, White ^ 2, Black or African-American 3, Asian	Identifier? No OYes Does the field contain identifying information (e.g., name, SSN, address)?
4, American Indian or Alaskan Native 🗸	Custom Alignment Right / Vertical (RV)
Enable auto-complete for this drop-down ?	Align the position of the field on the page
How do I manually code the choices?	Field Note (optional) Small reminder text displayed underneath field
Action Tags / Field Annotation (optional) Learn about @ Action Tags or <u>using Field Annotation</u>	Small reminder text displayed underneath neid



×

Building Forms: Using Field Validation

Edi

Validation is an important tool that can be used to prevent errors. It also helps when exporting data to statistical packages.

Edit Field	1				×
outton at the	l a new project field to this data collection inst e bottom. When you add a new field, it will be d types available, you may view the 🕵 <u>Field Ty</u>	added to the form on this		0	
ield Type:	Text Box (Short Text, Number, Date/Time,)	\sim			
ield Label					
Date of screening		Variable Name (utilized in logic, calcs, and exports) screendate Enable auto namin variable based upo Field Label? ONLY letters, numbers, and underscores Field Label?			
		How to use [+] Smart Vari	ables 🔗	Piping	
		Validation? (optional)	Date (M-	D-Y)	\sim
Action Tag	s / Field Annotation (optional)	Mir	None		
		Ma	Date (M-D)-Y)	
Learn about	@ Action Tags or using Field Annotation	– or –	Date (Y-M	1-D)	
		Enable searching wit	Datetime	(M-D-Y H:M)	
		choose ontology to	Datetime	(Y-M-D H:M)	
		- choose ontology to	Datetime	w/ seconds (M-D-Y H	:M:S)
		Required?* ONo 🖲	Datetime	w/ seconds (Y-M-D H	:M:S)
		* Prompt if field is blank	Email		
		Identifier? No O	Integer		
		Does the field contain identify	Letters on	ŀy	
		Custom Alignment	Number		
		Align the position of the field of	Number (1 decimal place)	
		Field Note (optional)	Number (2 decimal places)	
		Small reminder text displayed	Phone (No	orth America)	
			Social Sec	urity Number (U.S.)	
			Time (HH	:MM)	
			Time (MM	I:SS)	- 1



Building Forms: Tagging Identifiers

Fields that constitute protected health information (PHI) can be marked as an "Identifier"

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

Users can also be restricted in their ability to export Identifier fields based on access rights

Variable Name (utilized in logic, calcs, and exports) dob Enable auto naming of variable based upon its Field Label?
ONLY letters, numbers, and underscores
How to use [f] Smart Variables Piping 🕂 Field Embedding
Validation? (optional) Date (D-M-Y)
Minimum:
Maximum:
Tip for min/max limits: You may pipe a value from another field to set dynamic range limits - e.g., [visit_date] or [event_1_arm_1][age]. You may also use the word today or NOW (not wrapped in quotes) for date/time fields.
- or -
select ontology service 🗸
Required?* No OYes * Prompt if field is blank
Identifier? ONO Yes Does the field contain identifying information (e.g., name, SSN, address)?



QUESTIONS?

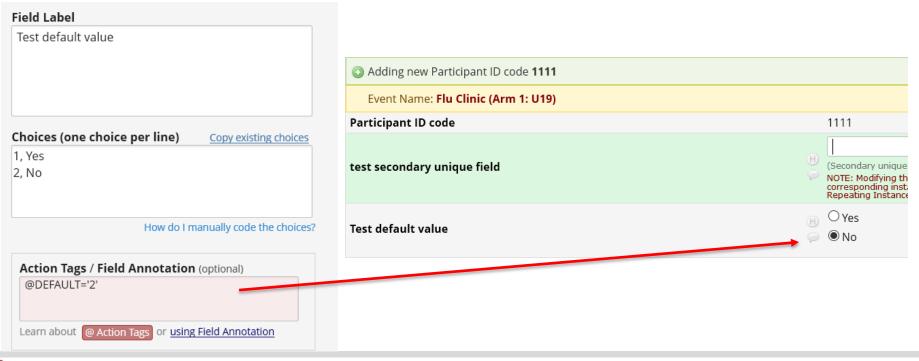


Building Forms: Action Tags



Action tags allow you to modify fields in very specific ways. Once applied, a corresponding action is performed.

In REDCap, action tags begin with the '@' sign and are placed inside a field's "Action Tags/Field Annotation" box.





Building Forms: Smart Variables

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

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

Field Label	Event Name: Event 1	
test1	Record ID	1 To rename <u>Record Ho</u>
	test1	0 0
	Editing existing Record ID 1	
Action Tags / Field Annotation (optional) @DEFAULT='[previous-event-name][test1]'	Event Name: Event 2	
	Record ID	1 To rename the record, see the <u>Record Home Page</u> .
	test1	H > [1
Learn about @ Action Tags or using Field Annotation		



Building Forms: Smart Variables

ame of Smart Variable	Description	Examp	le of Usage	
ame of Smart variable	Description	Example input	Example output	
lser			[9] Sm	art
iser-name]	The current user's REDCap username.	[user-name]	jane_doe	
ıser-fullname]	The current user's first and last name (as listed on their My Profile page).	[user-fullname]	Jane Doe	
ıser-email]	The current user's primary email address (as listed on their My Profile page).	[user-email]	jane.doe@example.edu	
ıser-dag-name]	The Data Access Group (the unique group name) to which the current user belongs (blank if not in a DAG).	[user-dag-name]	vanderbilt_group	
ıser-dag-id]	The group ID number of the Data Access Group to which the current user belongs (blank if not in a DAG).	[user-dag-id]	324	
ıser-dag-label]	The name/label of the Data Access Group to which the current user belongs (blank if not in a DAG).	[user-dag-label]	Vanderbilt Group	
ecord				
ecord-name]	The record name of the current record.	[record-name]	108	
ecord-dag-name]	The Data Access Group (the unique group name) to which the current record belongs (blank if not in a DAG).	[record-dag-name]	harvard_site	
ecord-dag-id]	The group ID number of the Data Access Group to which the current record belongs (blank if not in a DAG).	[record-dag-id]	96	
ecord-dag-label]	The name/label of the Data Access Group to which the current record belongs (blank if not in a DAG).	[record-dag-label]	Harvard Site	
orm				
s-form]	Detects if the current instrument is being viewed as a data entry form (returns 1 for True, 0 for False), as opposed to a survey.	[is-form]	1	~



Building Forms: Smart Variables Examples

Survey duration

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



Building Forms: Branching Logic

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

Show the field ONLY if		
[covid_yn] = '1'		
		<u>Clear log</u>

— OR —

Drag-N-Drop Logic Builder

sex = Female (1) sex = Male (2) age = (define criteria) pregnant = Yes (1) covid_yn = Yes (1) covid_yn = Yes (1) covid_yn = Yes (1) covid_yn = No (0) sts = (define criteria) weight = (define criteria)			Show the field ONLY if ALL below are true ANY below are true			choices from other fields a choice below to box on right)
age = (define criteria) Drag pregnant = Yes (1) Drop covid_yn = Yes (1) Drop covid_yn = No (0) Image: Covid_yn = No (0) sts = (define criteria) Image: Covid_yn = No (0)			covid_yn = Yes (1) 💥	\Rightarrow		= Female (1)
and Drop pregnant = Yes (1) Drop covid_yn = Yes (1) Image: Covid_yn = No (0) covid_yn = No (0) Image: Covid_yn = No (0) sts = (define criteria) Image: Covid_yn = No (0)					_	= Male (2)
pregnant = Yes (1) pregnant = No (0) covid_yn = Yes (1) covid_yn = No (0) sts = (define criteria) weight = (define criteria)						= (define criteria)
pregnant = No (0) covid_yn = Yes (1) covid_yn = No (0) sts = (define criteria) weight = (define criteria)						nant = Yes (1)
covid_yn = No (0) sts = (define criteria) weight = (define criteria)				Drop		nant = No (0)
sts = (define criteria) weight = (define criteria)						l_yn = Yes (1)
weight = (define criteria)				-		l_yn = No (0)
weight = (define criteria)						(define criteria)
Clea					•	ht = (define criteria)
	logic	<u>Clear logic</u>				

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

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



Building Forms: Piping

Without Piping:

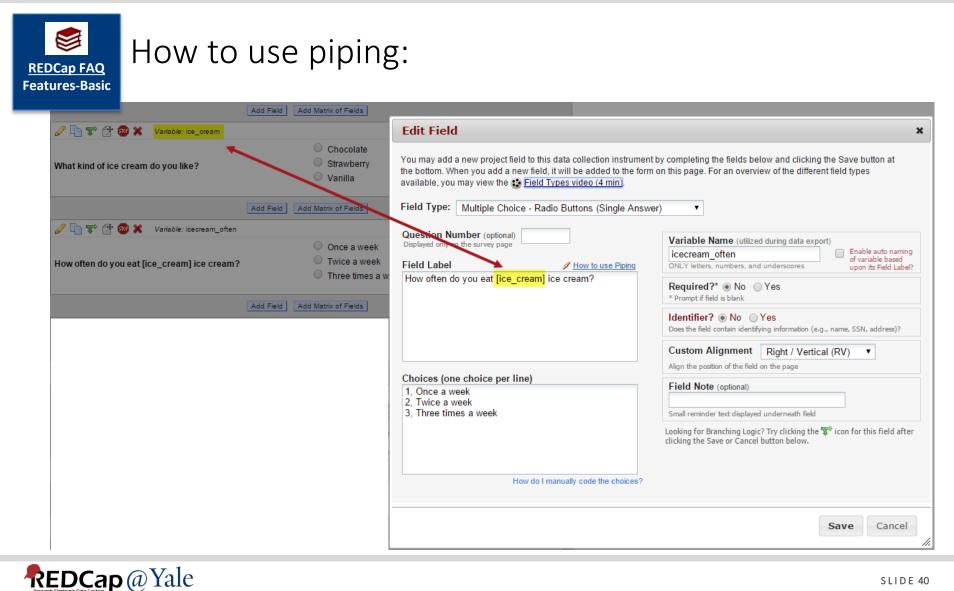
What kind of ice cream do you like?	Chocolate Chocolate Strawberry Vanilla reset
How often do you eat ice cream?	 Once a week Twice a week Three times a week

With Piping:

What kind of ice cream do you like?	 Chocolate Strawberry Vanilla
How often do you eat Chocolate ice cream?	Once a week Once a week Twice a week Three times a week reset



Building Forms: Piping



Building Forms: Field Embedding

Without field embedding:

Test Date 1	H Today M-D-Y	Field Embedding
Test Result 1A		
Test Result 1B		
Test Date 2	H Today M-D-Y	
Test Result 2A		
Test Result 2B		

With field embedding:

Date	Test Result A	Test Result B
Today M-D-Y		
Today M-D-Y		



QUESTIONS?



How to Set Up your Project

	Main project settings
	Disable Olse surveys in this project? ?
Complete!	Disable 🖉 Use longitudinal data collection with defined events? ?
Not complete?	Modify project title, purpose, etc.
	Design your data collection instruments & enable your surveys
Complete!	Add or edit fields on your data collection instruments (survey and forms). This may be done by either using the Online Designer (online method) or by uploading a Data Dictionary (offline method). You may then enable your instruments to be used as surveys in the Online Designer. Quick links: <u>Download PDF of all instruments</u> OR <u>Download the current Data Dictionary</u>
	Go to 📴 Online Designer or 📧 Data Dictionary Explore the 🖪 REDCap Shared Library
	Have you checked the Check For Identifiers page to ensure all identifier fields have been tagged?
	Learn how to use [+] Smart Variables / Piping @ Action Tags
<u> </u>	
	Define your events and designate instruments for them
	Define your events and designate instruments for them Create events for re-using data collection instruments and/or set up scheduling.
Complete!	
Complete!	Create events for re-using data collection instruments and/or set up scheduling.
	Create events for re-using data collection instruments and/or set up scheduling. Go to Define My Events or Designate Instruments for My Events
	Create events for re-using data collection instruments and/or set up scheduling. Go to Define My Events or Designate Instruments for My Events Enable optional modules and customizations
Not complete?	Create events for re-using data collection instruments and/or set up scheduling. Go to Define My Events or Designate Instruments for My Events Enable optional modules and customizations Modify © Repeatable instruments and events ?
	Create events for re-using data collection instruments and/or set up scheduling. Go to Define My Events or Designate Instruments for My Events Enable optional modules and customizations Modify © Repeatable instruments and events ? Enable © Auto-numbering for records ?
Not complete?	Create events for re-using data collection instruments and/or set up scheduling. Go to Define My Events or Designate Instruments for My Events Enable optional modules and customizations Modify © Repeatable instruments and events ? Enable © Auto-numbering for records ? Disable © Scheduling module (longitudinal only) ?
Not complete?	Create events for re-using data collection instruments and/or set up scheduling. Go to Define My Events or Designate Instruments for My Events Enable optional modules and customizations Modify © Repeatable instruments and events ? Enable © Auto-numbering for records ? Disable © Scheduling module (longitudinal only) ? Disable © Randomization module ?
Not complete?	Create events for re-using data collection instruments and/or set up scheduling. Go to Define My Events or Designate Instruments for My Events Enable optional modules and customizations Modify © Repeatable instruments and events ? Enable © Auto-numbering for records ? Disable © Scheduling module (longitudinal only) ?



How to Define Events

WARNING: Deleting any events below will result in data loss. Please proceed with caution. 🛛 Upload or download arms/events 🖓 Unique event Arm 1: U19 Arm 2: IMAGIN +Add New Arm name is auto-Rename Arm 1 Delete Arm 1 Arm name: U19 generated. Custom Offset Days Event Unique event name 🚱 Event # Event Name Range Offset Label 😡 (auto-generated) Min / Max (optional) This is where you 🦉 🗙 0 -0/+0 Flu Clinic 1 flu_clinic_arm_1 2 2 -0/+2 Day 2-4 Blood Draw day 24 blood draw arm 1 will find the event 3 7 -0/+0 Day 7 Blood Draw day_7_blood_draw_arm_1 names for use in Day 28 Blood Draw 4 28 -0/+0 day_28_blood_draw_arm_1 branching logic. Day 70 Blood Draw 5 70 -0/+0 day_70_blood_draw_arm_1 nonflu_blood_draw_arm_1 6 100 -0/+0 Non-Flu Blood Draw Days - 0 + 0 Add new event Convert from Descriptive name for this event Custom other units Event Label (optional) Example: [visit date], [weight] kg

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SLIDE 44

How to Designate Instruments to Events

🔟 Upload or download instrument mappings 🗢								
Arm 1: U19 Arm 2: IMAGIN								
m name: U19 Degin Editing Save Select All Deselect All								
Data Collection Instrument	Flu Clinic	Day 2-4 Blood Draw	Day 7 Blood Draw	Day 28 Blood Draw (4)	Day 70 Blood Draw	Non-Flu Blood Draw (6)		
Screening & Enrollment Form	\checkmark							
Phone Interview	\checkmark							
Blood Draw Form	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark			
railty Assessment	\checkmark							
Study Withdrawal	\checkmark							
Genetic Data Repository Consent	\checkmark							
Additional Blood Draw Form (Non-Flu)								

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



Α

SURVEYS



Surveys

Not enabled as a survey:

 My Projects or Control Center REDCap Messenger Contact REDCap administrator View project as user: select a user V 	Neuro-QOL SF v1.0 - Fatigue	Invitation status: 🖂	Survey options 🗢
Enter PID to go to project	Editing existing Record ID 3.		
Project Home and Design	Record ID	3	
 ♠ Project Home · ﷺ Project Setup ☑ Designer · ☑ Dictionary · ☐ Codebook ● Project status: Development □ Data Collection 	In the past 7 days I felt tired	 O none of the time O a little bit of time O some of the time O most of the time O all of the time 	
 Survey Distribution Tools 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 	In the past 7 days I had trouble starting things because I was too tired	 none of the time a little bit of time some of the time most of the time all of the time 	reset
 Record ID 3 Select other record Data Collection Instruments: Form 1 Consent Neuro-QOL SF v1.0 - Fatigue Tracking Form 	In the past 7 days I had trouble finishing things because I was too tired	 none of the time a little bit of time some of the time most of the time all of the time 	reset



Enabled as a survey

Thank you! In the past 7 days none of the time a little bit of time some of the time all of the time all of the time all title bit of time all of the time all title bit of time all of the time all title bit of time all of the time all title bit of time all of the time all title bit of time all of the time all of the time all of the time In the past 7 days none of the time all of the time all of the time all of the time 	Neuro-QOL SF v1.0 - Fatigue		AA ● <u>English</u>
In the past 7 days I felt tired Onone of the time Onone of the ti	Please complete the survey below.		
I felt tired a little bit of time Some of the time some of the time most of the time all of the time In the past 7 days none of the time I had trouble starting things because I was too tired a little bit of time Some of the time a little bit of time In the past 7 days none of the time In the past 7 days onone of the time In the past 7 days onone of the time In the past 7 days onone of the time In the past 7 days onone of the time I had trouble finishing things because I was too tired onone of the time I had trouble finishing things because I was too tired onone of the time I had trouble finishing things because I was too tired onone of the time I had trouble finishing things because I was too tired onone of the time I had trouble finishing things because I was too tired onone of the time I had trouble finishing things because I was too tired onone of the time I had trouble finishing things because I was too tired onone of the time I had trouble finishing things because I was too tired onone of the time	Thank you!		
In the past 7 days I had trouble starting things because I was too tired I had trouble starting things because I was too tired In the past 7 days I had trouble finishing things because I was too tired I had trouble finishing things because I was too	In the past 7 days I felt tired	 a little bit of time some of the time most of the time 	
 I had trouble starting things because I was too tired a little bit of time some of the time most of the time all of the time all of the time a little bit of time a little bit of the time a little bit of the time 		\bigcirc all of the time	n
In the past 7 days I had trouble finishing things because I was too tired I had trouble finishing things because I was to	In the past 7 days I had trouble starting things because I was too tired	-	
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I had trouble finishing things because I was too tired O a little bit of time O some of the time O most of the time			
I had trouble finishing things because I was too tired O a little bit of time O some of the time O most of the time			re
\odot most of the time	In the past 7 days I had trouble finishing things because I was too tired		
		\odot most of the time	
		\bigcirc all of the time	re



How to Set Up a Survey

Enable any form as a survey in Online Designer

- Open survey setting; configure the survey

Instrument name	Fields	View PDF	Enabled as survey	Instrument actions	Survey related options
Participant Information	17	PDF	Enable	Choose action \bigtriangledown	
Prior Study Data	41	PDF	Enable	Choose action \bigtriangledown	
Communication Log	17	PDF	Enable	Choose action 🗢	
Consent Form	0	PDF	٧	Choose action \bigtriangledown	Survey settings + Automated Invitations

Survey features:

- Schedule automated survey invitations
- Set up a survey queue
- Create unique login code for survey respondents
- Set up researcher notifications upon survey completion



How to Send Surveys to Participants



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

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

REDCap has many advanced features that can be used for setting up surveys. This will be covered in the survey development training.



How to Set Up your Project

	Main project settings				
	Disable Output Use surveys in this project? ? UIDEO: How to create and manage a survey				
Complete!	Disable Our Use longitudinal data collection with defined events? ?				
Not complete?	Modify project title, purpose, etc.				
	Design your data collection instruments & enable your surveys				
Complete!	Add or edit fields on your data collection instruments (survey and forms). This may be done by either using the Online Designer (online method) or by uploading a Data Dictionary (offline method). You may then enable your instruments to be used as surveys in the Online Designer. Quick links: <u>Download PDF of all instruments</u> OR <u>Download the current Data Dictionary</u>				
	Go to 📴 Online Designer or 📧 Data Dictionary Explore the EREDCap Shared Library				
	Have you checked the Check For Identifiers page to ensure all identifier fields have been tagged?				
	Learn how to use [+] Smart Variables / Piping @ Action Tags				
	Define your events and designate instruments for them				
	Create events for re-using data collection instruments and/or set up scheduling.				
Complete!	Go to Define My Events or Designate Instruments for My Events				
Not complete?					
101	Enable optional modules and customizations				
Optional	Modify Seperatable instruments and events ?				
	Disable Scheduling module (longitudinal only) ?				
I'm done!	Disable Standomization module ?				
	Disable O Designate an email field for sending survey invitations ?				
	Field currently designated: testemail (" <i>Test email</i> ")				
	Additional customizations				



QUESTIONS?



FINAL STEPS BEFORE IMPLEMENTATION:

USER RIGHTS AND TESTING

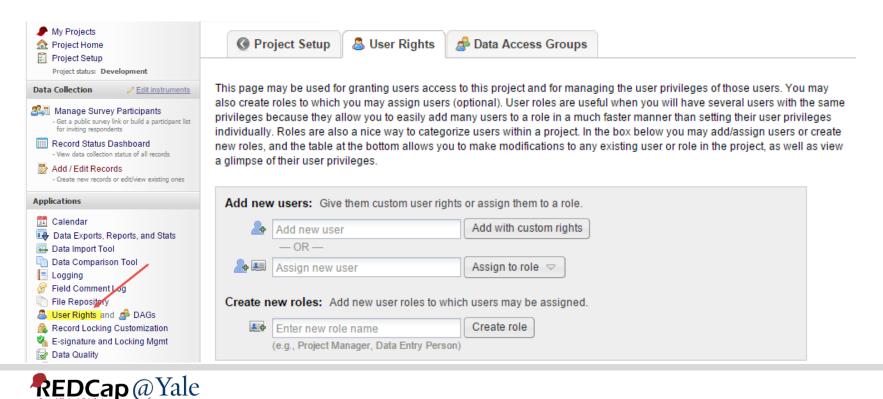


Granting User Rights in REDCap: Individual Users



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

Best Practice: "Role Based" access



Granting User Rights in REDCap: Individual Users and User Roles

Basic Rights: Access to the Project

Basic Privileges

Expiration Date	(M/D/Y)
Highest level privileges:	
🚝 Project Design and Setup	
Luser Rights	
🚰 Data Access Groups	
Other privileges:	
Survey Distribution Tools	
Alerts & Notifications	
🛱 Calendar	
Q Add/Edit/Organize Reports Also allows user to view ALL reports (but not necessarily all data in the reports)	
III Stats & Charts	
-5 Data Import Tool	
≠ Data Comparison Tool	
E Logging	
File Repository	
Data Quality What is Data Quality?	✓ Create & edit rules ✓ Execute rules

Viewing and Exporting Data: Access to Individual Forms

Privileges for Viewing and Exporting Data

Data Viewing Rights pertain to a user's ability to view or edit data on pages in the project (e.g., data entry forms, reports). Users with 'No Access' Data Viewing Rights for a given instrument will not be able to view that instrument for any record, nor will they be able to view fields from that instrument on a report. Data Export Rights pertain to a user's ability to export data from the project, whether through the Data Export Rights and Data Export Rights containing record data. Note: Data Viewing Rights and Data Export Rights and Rig

	Data Viewing Rights				Data Export Rights			
	No Access (Hidden)	Read Only	View & Edit	Edit survey responses	No Access	De- Identified*	Remove All Identifier Fields	Full Data Set
Participant Information (survey)	0	\bigcirc	۲		0	\bigcirc	\bigcirc	
Consent (survey)	0	\bigcirc	۲		0	0	\bigcirc	
Neuro-QOL SF v1.0 - Fatigue (survey)	0	0	۲		0	\bigcirc	0	
Tracking Form	0	\bigcirc	۲		0	\bigcirc	\bigcirc	۲

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

External Modules: Configuration Permissions

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

Simple Ontology Module*

*Permissions based on user's Project Design/Setup rights

Cancel

Remove user



Granting User Rights in REDCap: Data Access Groups (DAGs)



"Data Access Group" is an advanced feature that is useful for multi-center trials and collaborations, especially for HIPAA compliance.

 Users in a particular Data Access Group can only see records entered by other users in that Data Access Group

Data Access Groups	Users in group	Number of records in group	Unique group name 🚯 (auto-generated)	Group ID number 😡	Delete group?
test		5	test	42	×
test2		1	test2	1823	×
[Not assigned to a group]	* Can view ALL records	134			



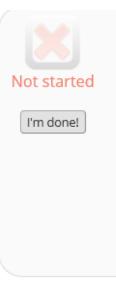
Granting User Rights in REDCap: Assigning Users to multiple DAGs

Users can be assigned to more than one DAG using the DAG Switcher setting.

☆ DAG Switcher: Enable n	nultiple	Data A	ccess Groups for users	Display option	ns: Rows are DAGs Rows are Users		
Users assigned to Data Access Groups (DAGs) can optionally be assigned to multiple *potential* DAGs, in which they may be given the privilege of switching in and out of specific DAGs on their own whenever they wish. To assign a user to multiple DAGs, check the checkboxes below for that user. At least two DAGs must be checked for a user in order for them to use the DAG Switcher. NOTE: This does not override a user's <u>current</u> DAG assignment, as set above or on the User Rights page.							
Show 25 🖌 entries					Search		
¢	Users	;					
Data Access Groups	\$	÷	_				
¢	¢	¢					
[No Assignment]							
test1		\checkmark					
test2		\checkmark					



TEST YOUR PROJECT!



Test your project thoroughly

It is important to test the essential components of your project before moving it into production. Try creating a few test records and entering some data for each to ensure that your data collection instruments look and behave how you expect, especially branching logic and calculations. Then review your test data by creating reports and exporting your data to view in Excel or a statistical analysis package. If you have surveys, complete the surveys as if you were a participant by using the Public Survey Link or Participant List by sending a survey invitation to yourself. If other project modules will be used regularly, test them out a bit too. The best way to test your project is to use it as if you were entering real production data, and it is always helpful to have colleagues (especially team members) take a look at your project to get a fresh set of eyes looking at it.

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



Moving your Project to Production



Move your project to production status

Move the project to production status so that real data may be collected. Once in production, you will not be able to edit the project fields in real time anymore. However, you can make edits in Draft Mode, which will be auto-approved or else might need to be approved by a REDCap administrator before taking effect.

Go to Move project to production

Move Project To Production Status?

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

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

Keep existing data or delete?

- O Keep ALL data saved so far.
- O 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.

Cancel



×

QUESTIONS?



Using Data Exports, Reports and Stats



Exporting Data



You can export the entire dataset or select forms/fields

Data Exports, Reports, and Stats

🗱 VIDEO: How to use Data Exports, Reports, and Stats

💠 Create New Report

뒂 My Reports & Exports

🔋 Other Export Options

This module allows you to easily view reports of your data, inspect plots and descriptive statistics of your data, as well as export your data to Microsoft Excel, SAS, Stata, R, or SPSS for analysis (if you have such privileges). If you wish to export your *entire* data set or view it as a report, then Report A is the best and quickest way. However, if you want to view or export data from only specific instruments (or events) on the fly, then Report B is the best choice. You may also create your own custom reports below (if you have such privileges) in which you can filter the report to specific fields, records, or events using a vast array of filtering tools to make sure you get the exact data you want. Once you have created a report, you may view it as a webpage, export it out of REDCap in a specified format (Excel, SAS, Stata, SPSS, R), or view the plots and descriptive statistics for that report.

My	My Reports & Exports							
		Report name	View/Export Options	Management Options	Report ID 😡 (auto-generated)			
	A	All data (all records and fields)	View Report 🛛 📌 Export Data 🚮 Stats & Charts					
	В	Selected instruments and/or events (all records)	□ Make custom selections					
	1	test (copy)	View Report 🕹 Export Data	Zedit Copy Copy	1322			
	2	frailty assessment	View Report 🔶 Export Data 🕼 Stats & Charts	🖉 Edit 🔲 Copy 🗶 Delete	2			

REDCap @ Yale

Setting Up Reports in REDCap

Data Exports, Reports, and Stats

B VIDEO: How to use Data Exports, Reports, and Stats

+ Create New Report H My Reports & Exports C Other Export Options

You may create a new report by selecting the fields/variables below that you want to include in the report. You may add as many fields to your report as you wish, and you can choose which users may view this report. You will also need to provide a name for your report, which will then be displayed on the project's left-hand menu for anyone to whom you have given access. You can filter the results returned in the report in a variety of ways, including using complex AND/OR logic. When you are finished, click the Save Report button at the bottom. The new report will then be added to your list of reports, after which you may immediately begin viewing them or exporting them.

Name of Report:						
Set as "public":	Enabling this feature below will auto-generate a public link for viewing the report without needing to log in to REDCap.					
	$Paragraph \lor - \mathbf{B} I \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $					
Description (optional): Displayed on page below report name						

STEP 1

Let User Access: Choose who can edit and view this report
 ♦ View Access: Choose who sees this report on their left-hand project menu ? ● All users - OR - O Custom user access (Choose specific users, roles, or data access groups who will have access)
 Edit Access: Choose who can edit, copy, or delete this report (requires user to have 'Add/Edit/Organize Reports' privileges) All users - OR - Ocustom user access (Choose specific users, roles, or data access groups who will have access)
STEP 2

Fields to inclu	Ide in report + Quick Add	Add all fields from selected instrument: choose instrument	~	
Field 1	record_id "Record ID"	Instrument: Participant Information		×
Field 2	Type variable name or field label	Instrument:		

Additional report options (optional)

- Include the survey identifier field and survey timestamp field(s)?
- Combine checkbox options into single column of only the checked-off options (will be formatted as a text field when exported to stats packages)
- Include the repeating instance fields (redcap_repeat_instrument, redcap_repeat_instance) in the report and data export?
- Z Remove line breaks/carriage returns from all text data values (only applicable for CSV Raw and CSV Label data exports)

In the report header, display the field label, variable, or both (not applicable for exports)? Both 🗸

In the report's data, display the field label, raw data value, or both for multiple choice fields (not applicable for exports)? | Both 🗸

Steps:

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

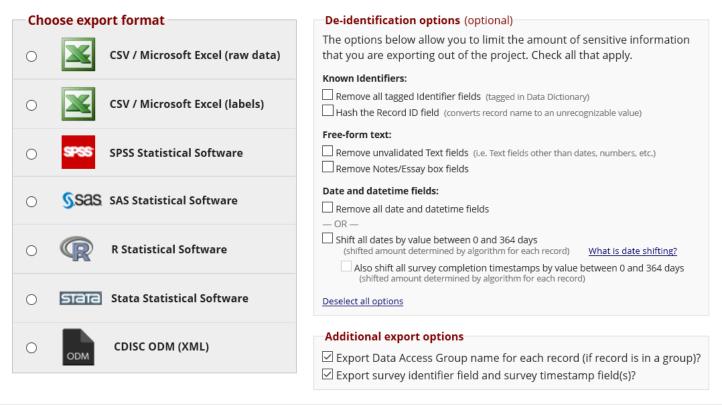
Any report can be used to export data

REDCap @ Yale

Exporting Data

Exporting "All data (all records and fields)"

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



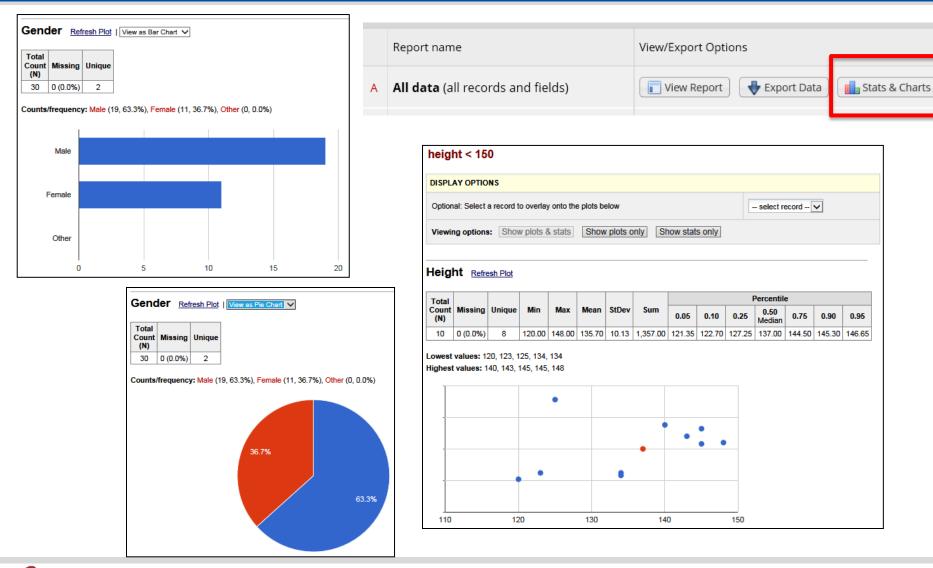
Export Data

Cancel

×



Stats and Charts





Data Dictionary Codebook

The Codebook is a 'human' readable, read-only version of the project data dictionary.

Project Home and Design 📃							
 Project Home · E Project Setup Designer · Dictionary Codebook Project status: Development 		Print page Data Dictionary Codebook					
		Variable / Field Name	Field Label Field Note	Field Attributes (Field Type, Validation, Choices, Calculations, etc.)			
	nstr	ument: Demographics (demogr	aphics)				
Data Collection 📃	1	subjid	Subject ID	text (integer, Min: 8000, Max: 8999), Required			
C Supray Distribution Tools	2	demo_date	Date Completed Demographics Form	text (date_mdy), Required			
Survey Distribution Tools	3	demo_init	Staff Initial	text, Required			
 Get a public survey link or build a participant list for inviting respondents 	4	age	Section Header: Demographics Form Age	text (integer, Min: 40), Required			
 Record Status Dashboard View data collection status of all records Add / Edit Records 	5	sex	Gender	radio, Required 1 Male 0 Female			
- Create new records or edit/view existing ones	6	ethnic	Ethnicity	radio, Required 1 Hispanic or Latino 2 Not Hispanic or Latino 3 Unknown 4 Declined to answer			
	7	race	Race	radio, Required 1 American Indian or Alaskan Native 2 Asian 3 Black or African American 4 Native Hawaiian or Pacific Islander 5 White 6 Mixed race 7 Linknown			

