






Research Electronic Data Capture

REDCap Resources

Home My Projects Create New Project Training Resources Help & FAQ Control Center

REDCap Training Resources

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.	 78 minutes
Data Entry Overview	A focused exploration of basic data entry workflow. Suitable for training data entry staff.	 16 minutes

My Projects → Training Resources

One of the most impressive aspects of REDCap is the Training Resources and Frequently Asked Question Section.

- The first is a video resource that is split into 21 separate training videos and organized by subject matter.
- Almost everything we talk about today, can be found in these training videos.

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REDCap Resources

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ANNOUNCEMENTS:

The REDCap User Group Meeting for 2/12/2015 has been cancelled.

Regular REDCap Training Classes are posted here on the [CCTST calendar](#), please make sure to register if attending.

REDCap Help & FAQ

- General
 - Mobile Devices
 - Language Modules
- Project Setup / Design
 - Surveys
 - Longitudinal
 - Project Linking
 - Copy A Project
- Data Collect Instrument (DCI) Design
 - Online Designer / Data Dictionary
 - Field Types
 - Text Validation Types
 - Dates
 - Calculated Fields
 - Branching Logic
 - Matrix Fields
 - Copy / Share DCIs
- Data Entry / Collection
 - Surveys: Anonymous
 - Surveys: Invite Participants
 - Surveys: Automated Survey Invitations
 - Surveys: How to pre-fill survey questions
 - Double Data Entry

My Projects → Help and FAQ

Good for technical questions better suited for written instructions

- Syntax for calculate fields
- Syntax for branching logic
- Syntax for piping

REDCap Resources

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:

Field Label
What is your full name? [How to use Piping](#)

Variable Name (utilized during data export)
 Enable auto naming of variable based upon its Field Label?
ONLY letters, numbers, and underscores

Validation? (optional)

Required?* No Yes
* Prompt if field is blank

Project Home → On-Line Designer → Data Collection Instruments

REDCap is also excellent at sprinkling in various tutorials where skills are commonly needed.

Here, REDCap makes both a piping tutorial and a video about field types easily available for the users.

Structure of Today's Training

- Introduction of a scenario
- We'll go through how to build a survey which fits the scenario it in a step by step manner
- Touch on common issues and problem areas for current users

Quick Explanation of the various ways in which data is entered into REDCap

Project Home → Data Collection Heading → Add/Edit Records

Often, studies at CCHMC, will use REDCap to manually enter previously collected data into REDCap via Database Entry.

Some examples include:

- Entering paper surveys
- Entering records of visits
- Entering chart review information

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Creating a Public Link

Data Collection [Edit Instruments](#)

- Manage Survey Participants** - Get a public survey link or build a participant list for existing respondents
- Scheduling** - Generate schedules for the calendar using your defined events
- Record Status Dashboard** - View data collection status of all records
- Add / Edit Records** - Create new records or edit/view existing ones

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

Demographics [Resize font:](#)

Please complete the survey below.

Thank you!

- 1) What is your full name?
- 2) Maxx, What is your age? * must provide value
- 3) Maxx, When is your birthday? Today M-D-Y * must provide value
- 4) Maxx, are you completing this survey as a parent or as a child? Parent Child [reset](#)
- 5) Maxx, How happy, in general, would you say you are? Depressed OK I'm super [reset](#)
Click bar above and then drag to set response

[Submit](#)

<https://redcap.research.cchmc.org/surveys/?s=bjYfoAeW5t>

Project Home → Manage Survey Participants → Public Survey Link

It is also possible to send a survey electronically and have to participant enter the information.

One way to capture participants is to create a public link to the survey.

Anyone who has a link will be able to fill out the survey

E-mailing a Link to a Specific Person

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: [Initial survey] "Demographics" Remove all participants

Displaying 1 - 2 of 2 Add participants Compose Survey Invitations Export list

Email	Participant Identifier	Enable	Link	Invitation Scheduled?	Invitation Sent?	Responded?	Survey Queue
Dawn.Sherrill@cchmc.org	Disabled	<input type="checkbox"/>	Link	-	<input type="checkbox"/>	<input type="checkbox"/>	remove
Maxx.Somers@cchmc.org	Disabled	<input type="checkbox"/>	Link	-	<input type="checkbox"/>	<input type="checkbox"/>	remove

Project Home → Manage Survey Participants → Public Survey Link

It's possible to send a link to a survey via e-mail. Each e-mail contains an individual link and you track the following:

- Schedule an invitation to be sent out in advance
- Track if the invitation e-mail has been sent
- Track to see if the participant has responded

Training Scenario

- Your PI calls you into her office. She explains that she has just received a grant to study quality of life and happiness over time in various cultures that requires survey data collection to happen in a sophisticated manner. You have a discussion with her in which she lays out all the things she really needs an electronic survey to do. She asks, “Is this possible? And could you let me know soon?” You review your notes from the conversation and find the following requirements.

- Deliver an electronic survey to anywhere in the world.
 - Sometime we'd like to just create link that respondents can enter anonymously
 - Sometimes we would like to e-mail the survey to particular people
- After the participant provides their name, she would like the survey to address the participant by name in several places in the questionnaire. (piping)
- Deliver PEDSQL measures in English and Spanish (library)
- Deliver a parent or child PEDSQLs measure based on who the respondent is (branching logic)
- Calculate the PEDSQL score (calculated Fields)
- Ask about happiness with a graphical sliding bar or a matrix

- This survey will be repeated with the same participants over a matter of years (longitudinal format) in order to judge happiness and quality of life over the years.
- It would be good to have an electronic calendar that everyone on staff can see
- The undergraduate interns should be able to see the data but for goodness sakes don't let them have access to changing the data.
- Could we set up custom data reports filtered on 5 different variables before hand to save time?
- Frank (the stats guy) is probably going to need an SPSS or SAS output

Item 1: Deliver an Electronic Survey to Anywhere in the World.

Sometimes we'd like to just create link that respondents can enter anonymously
Sometimes we would like to e-mail the survey to particular people

Project Setup Online Designer Data Dictionary

VIDEO: How to use this page

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.

Survey options: Survey Queue Survey Notifications

Add new instrument: Create a new instrument from scratch Download a new instrument from the REDCap Shared Library

Instrument name	Fields	View PDF	Enabled as survey	Instrument actions	Survey-related options
Demographics	6		<input checked="" type="checkbox"/>	<input type="button" value="Rename"/> <input type="button" value="Delete"/>	<input type="button" value="Survey settings"/> <input type="button" value="+ Automated Invitations"/>
PedsQL v4.0 Child Report Ages 8-12	28		<input checked="" type="checkbox"/>	<input type="button" value="Rename"/> <input type="button" value="Delete"/>	<input type="button" value="Survey settings"/> <input type="button" value="+ Automated Invitations"/>
PedsQL v4.0 Parent Report For Children Ages 8-12	28		<input checked="" type="checkbox"/>	<input type="button" value="Rename"/> <input type="button" value="Delete"/>	<input type="button" value="Survey settings"/> <input type="button" value="+ Automated Invitations"/>
Scoring questions	0		<input type="button" value="Enable"/>	<input type="button" value="Rename"/> <input type="button" value="Delete"/>	

Project Home → Project Setup → On-line Designer → Enable As Survey

If we determine that we need to use either the link to survey or the e-mail survey to participants option, then we need to enable the instruments as a survey. This will allow us to get to the manage participants option.

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Item 1: Deliver an Electronic Survey to Anywhere in the World.
Sometimes we'd like to just create link that respondents can enter anonymously
Sometimes we would like to e-mail the survey to particular people

Manage Survey Participants

Public Survey Link Participant List Survey Invitation Log

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

To obtain the survey link, copy the URL below and paste it into the body of an email message in your own email client. Your email recipient(s) can then click the link to begin taking your survey. [Get shorter survey link](#) or [Get embed code to place link on a webpage](#).

Public Survey URL:

<https://redcap.research.cchmc.org/surveys/?s=bjYfoAeW5t>

Project Home → Manage Survey Participants → Public Survey Link

This option creates a link that you could then post or send to participants and they can then link to it and fill the survey out.

Disadvantage: You are not going to have the ability to monitor who has or has not filled out the questionnaire

Item 1: Deliver an Electronic Survey to Anywhere in the World.
 Sometimes we'd like to just create link that respondents can enter anonymously
Sometimes we would like to e-mail the survey to particular people

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 [Initial survey] "Demographics" Remove all participants

Displaying 1 - 2 of 2 Add participants Compose Survey Invitations Export list

Email	Participant Identifier	Enable	Link	Invitation Scheduled?	Invitation Sent?	Responded?	Survey Queue
Dawn.Sherrill@cchmc.org	Disabled	<input type="checkbox"/>		-	<input checked="" type="checkbox"/>		remove
Maxx.Somers@cchmc.org	Disabled	<input type="checkbox"/>		-	<input checked="" type="checkbox"/>		remove

Project Home → Manage Survey Participants → Public Survey Link

It's also possible to email a particular set of participants an invitation to complete a survey.

As noted before, with this option you can:

- Schedule an invitation to be sent out in advance
- Track if the invitation e-mail has been sent
- Track to see if the participant has responded

Item 2: After the participant provides their name, she would like the survey to address the participant by name in several places in the questionnaire. (piping)


The screenshot displays two question configuration panels in the REDCap Online Designer. The top panel shows a question with the label 'What is your full name?' and a variable name of 'name'. The bottom panel shows a question with the label '[name], What is your age?' and a variable name of 'age'. The variable name 'age' is set to a 'Number' type with a minimum of 0 and a maximum of 100. The field label and variable name for the second question are circled in green.

Project Setup → Online Designer → Select a Data Collection Instrument → Add new variable

To Pipe in a variable:

- Select the variable you want to pipe in
- Insert into your text the variable name inside square brackets

Item 3: Deliver PEDSQL measures to a parent or a child from the same survey (branching logic)



In progress

Design your data collection instruments & enable your surveys

Add or edit fields on your data collection instruments (survey and forms). This may be done by either using the Online Designer (online method) or by uploading a Data Dictionary (offline method), in which you may use either method or both. You may then enable your instruments to be used as surveys in the Online Designer. Quick links: [Download PDF of all data collection instruments](#) OR [Download the current Data Dictionary](#)

Go to or

You may also browse for pre-built data collection instruments in the

Have you checked the [Check For Identifiers](#) page to ensure all identifier fields have been tagged?

Project Setup → REDCap Shared Library

The REDCap Shared Library

- Holds user created instruments that you can bring into a survey
- You can also upload instruments that you feel are worth sharing to the REDCap library

Item 3: Deliver PEDSQL measures to a parent or a child from the same survey (branching logic)

Return to REDCap | Logged in as Maxx Somers (University of Cincinnati / Cincinnati Childrens Hospital Medical Center)

Keyword search: Search options: Minimum downloads: 0 Recent additions: show all Curated by REDLOC? show all

Search the library

Found 2 results matching your search

Title	Downloads
▶ PedsQL v4.0 Child Report Ages 8-12 ★	58
▶ PedsQL v4.0 Parent Report For Children Ages 8-12 ★	54

Didn't find what you were looking for? [Suggest a validated instrument for library inclusion.](#)

• The icon ★ indicates a REDLOC curated instrument.

Shared Library: Search, Library Metrics, My Activity, Institution Activity, Consortium Activity, REDLOC, REDLOC Login

Project Setup → REDCap Shared Library

The REDCap Shared Library

- You can search for the PEDSQL
- Select the survey and import each into our survey.

Item 3: Deliver PEDSQL measures to a parent or a child from the same survey (branching logic)

Project Setup Online Designer Data Dictionary

[VIDEO: How to use this page](#)

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Data Collection Instruments

Survey options: Survey Queue Survey Notifications

Add new instrument: Create a new instrument from scratch Download a new instrument from the REDCap Shared Library

Instrument name	Fields	View PDF	Enabled as survey	Instrument actions	Survey-related options
Demographics	6				
PedsQL v4.0 Child Report Ages 8-12	28				
PedsQL v4.0 Parent Report For Children Ages 8-12	28				
Scoring questions	0				

Project Setup → Online Designer

The Instruments are then Downloaded into the On-Line Designer

- It's ok that each is listed separately
- By changing some of the survey setting, we can make what the user will see appear seamless.

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Item 3: Deliver PEDSQL measures to a parent or a child from the same survey (branching logic)

Project Setup Online Designer Data Dictionary

[VIDEO: How to use this page](#)

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.

Data Collection Instruments

Survey options: **Survey Queue** Survey Notifications

Add new instrument:
 Create a new instrument from scratch
 Download a new instrument from the REDCap Shared Library

Instrument name	Fields	View PDF	Enabled as survey	Instrument actions	Survey-related options
Demographics	6			Rename Delete	Survey settings Automated Invitations
PedsQL v4.0 Child Report Ages 8-12	28			Rename Delete	Survey settings Automated Invitations
PedsQL v4.0 Parent Report For Children Ages 8-12	28			Rename Delete	Survey settings Automated Invitations
Scoring questions	0		Enable	Rename Delete	

Project Setup → Online Designer → Survey Queue

Survey Queue Allows you to

- Define the order of the Survey
- Define branching logic to like to

Item 3: Deliver PEDSQL measures to a parent or a child from the same survey (branching logic)

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](#)

NOTE: The first instrument survey is not displayed below because it does not have a survey that comes before it for which to set conditions.

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

Activated?	Survey Title	Display survey in the Survey Queue when...	Auto start?
Event 1			
<input checked="" type="checkbox"/> Activated Deactivate	"PedsQL v4.0 Child Report Ages 8-12" - Event 1	<input checked="" type="checkbox"/> When the following survey is completed: "Demographics" - Event 1 AND <input checked="" type="checkbox"/> When the following logic becomes true: How to use this [parentorchild] = 2 (e.g., [enrollment_arm_1][age] > 30 and [enrollment_arm_1][gender] = "1")	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Activated Deactivate	"PedsQL v4.0 Parent Report For Children Ages 8-12" - Event 1	<input checked="" type="checkbox"/> When the following survey is completed: "Demographics" - Event 1 AND <input checked="" type="checkbox"/> When the following logic becomes true: How to use this [parentorchild] = 1 (e.g., [enrollment_arm_1][age] > 30 and [enrollment_arm_1][gender] = "1")	<input checked="" type="checkbox"/>

Project Setup → Online Designer → Survey Queue

Survey Queue

- Ability to set branching logic for each survey instrument
- Here I've asked each instrument to auto-start after demographics is complete
- If the respondent indicates that they are a child, the PEDSQL Child Report will launch
- For the PEDSQL parent version, I've set it to autostart when demographics is complete and the respondent indicates that they are a parent

Item 3: Deliver PEDSQL measures to a parent or a child from the same survey (branching logic)

● Drag-N-Drop Logic Builder

Displaying field choices for the following data collection instrument:
PedSQL v4.0 Child Report Ages 8-12

Field choices from other fields
(drag a choice below to box on right)

pedsql_c_ha_1 = Never0 (0)
pedsql_c_ha_1 = Almost Never1 (1)
pedsql_c_ha_1 = Sometimes2 (2)
pedsql_c_ha_1 = Often3 (3)
pedsql_c_ha_1 = Almost Always4 (4)
pedsql_c_ha_2 = Never0 (0)
pedsql_c_ha_2 = Almost Never1 (1)
pedsql_c_ha_2 = Sometimes2 (2)
pedsql_c_ha_2 = Often3 (3)

Drag and Drop

Show the field ONLY if...

ALL below are true
 ANY below are true

parentorchild = Child (2) ✖

[Clear logic](#)

Save Cancel

Project Setup → Online Designer → Select an Instrument

Branching Logic

- You can also do branching logic for individual questions.
- Here I've indicated in each question that it is not to be asked unless the answer to the question "ParentorChild = Child"
- By using branching logic, we can insure that our PI request of delivering the right questions to the right people is fulfilled

Item 4: Calculate PEDSQL Scores in the survey

Field Type:

Question Number (optional)
Displayed only on the survey page

Field Label [How to use Piping](#)
 Health and Activities Score

Calculation Equation [How do I format the equation?](#)
`[pedsql_c_ha_1] + [pedsql_c_ha_2] + [pedsql_c_ha_3]
 + [pedsql_c_ha_4] + [pedsql_c_ha_5] +
 [pedsql_c_ha_6] + [pedsql_c_ha_7] + [pedsql_c_ha_8]`

Project Setup → Online Designer → Select an Instrument → Select a Variable → Field Type = Calculated Field

How to Create Calculated Field Variables

- Variable names of what we would like to add in brackets (in this case the questions in the Health and Activity section).
- In-between bracketed variables place the mathematical notation you would like to use.
- It is possible to do more complicated calculations in this field.
- For further guidance, click on the, “How do I format the equation” section on the calculated field variable and check out the various possibilities.

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Item 5: Ask about happiness with a graphical sliding bar

5) Maxx, How happy, in general, would you say you are? Depressed OK I'm super

87 reset

Submit

Project Setup → Online Designer → Select an Instrument → Select a Variable → Field Type = Slider Visual Analogue Scale

Graphical Sliding Bar

- Another requirement from our PI was an unusual
- It's useful to familiarize yourself with the several different ways to display questions in REDCap
 - Check boxes
 - Drop down lists
 - Radio buttons
 - Yes – No
 - True False

Item 6: This survey will be repeated with the same participants over a matter of years (longitudinal format) in order to judge happiness and quality of life over the years.

Since you have defined multiple events on the [Define My Events](#) page, you may now select which data collection instruments that you wish to utilize for each event by using the table below. This allows you to enter data on any data collection form multiple times for any given project record. Any and all data collection instruments can thus be used for any event defined.

Click the *Begin Editing* button to change the relationships below by designating which forms you wish to utilize for which events. When you are finished making changes, click the *Save* button to finalize your changes.

Data Collection Instrument	Event 1 (1)	1 Year (2)	2 Year (3)	3 Year (4)	4 Year (5)	5 Years (6)	6 years (7)
Demographics (survey)	✓	✓	✓	✓	✓	✓	✓
PedsQL v4.0 Child Report Ages 8-12 (survey)	✓	✓	✓	✓	✓	✓	✓
PedsQL v4.0 Parent Report For Children Ages 8-12 (survey)	✓	✓	✓	✓	✓	✓	✓

To define as longitudinal data collection with repeating forms:

Project Setup → Main Project settings → Enable longitudinal data collection

To define events over the course of data collection:

Project Setup → Define your events and designate instruments for them → Define My Events

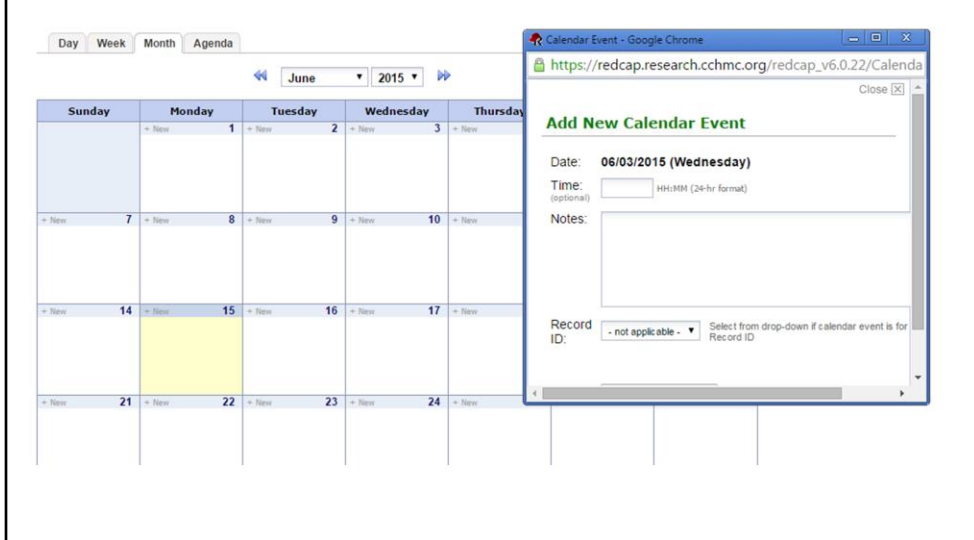
To define which instruments are asked at each event:

Project Setup → Define your events and designate instruments for them → Define My Events

Longitudinal Survey

- Enable longitudinal data collection option
- Define the events you want to appear
- Designate the various instruments you would like to give at each time point

Item 7: It would be good to have an electronic calendar that everyone on staff can see



Project Home → Application Side Bar → Calendar → Generate a Schedule

Electronic Calendar

- REDCap has it's own calendar system
- Useful for multisite studies in which researchers are at different institutions.
- You can add new events manually
- You can generate a schedule by going to:
 - Project Home → Application Side Bar → Calendar → Generate a Schedule

Item 8: The high school students should be able to see the data but don't let them have access to changing the data.

Editing existing user "SOMJI3"

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.

Editing existing user "SOMJI3"

Basic Rights

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

Highest level privileges:

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

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

Data Exports

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

No Access

De-Identified*

Remove all tagged Identifier fields

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 checked="" type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
PedsQL v4.0 Child Report Ages 8-12 (survey)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
PedsQL v4.0 Parent Report For Children Ages 8-12 (survey)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="checkbox"/>

Project Home → Applications Side Bar → User Rights

User Rights

- As each person is added to the survey, specific user rights options are presented
- Here is a user rights profile that will only allow this person to view and edit responses.
- In this case, given how concerned our PI is, students should probably only have Read Only access.



STEP 3 [How to use filters and AND/OR logic](#)

Filters (optional) **Operator / Value**

Filter 1	parentorchild [name], are you completing	in	All events	=	Parent	X
AND						
Filter 2	happy [name], How happy, in general, wo	in	All events	<	50	X
AND						
Filter 3	pedsql_c_ha_1 "1. It is hard for me to walk	in	All events	=	Never0	X
AND						
Filter 4	pedsql_c_ha_4 "4. It is hard for me to lift sc	in	All events	=	Never0	X
AND						
Filter 5	pedsql_c_ha_3 "3. It is hard for me to do s	in	All events	=	Never0	X
AND						
Filter 6	-- select a field --	in	All events	=		

Switch format: [Use advanced logic](#)

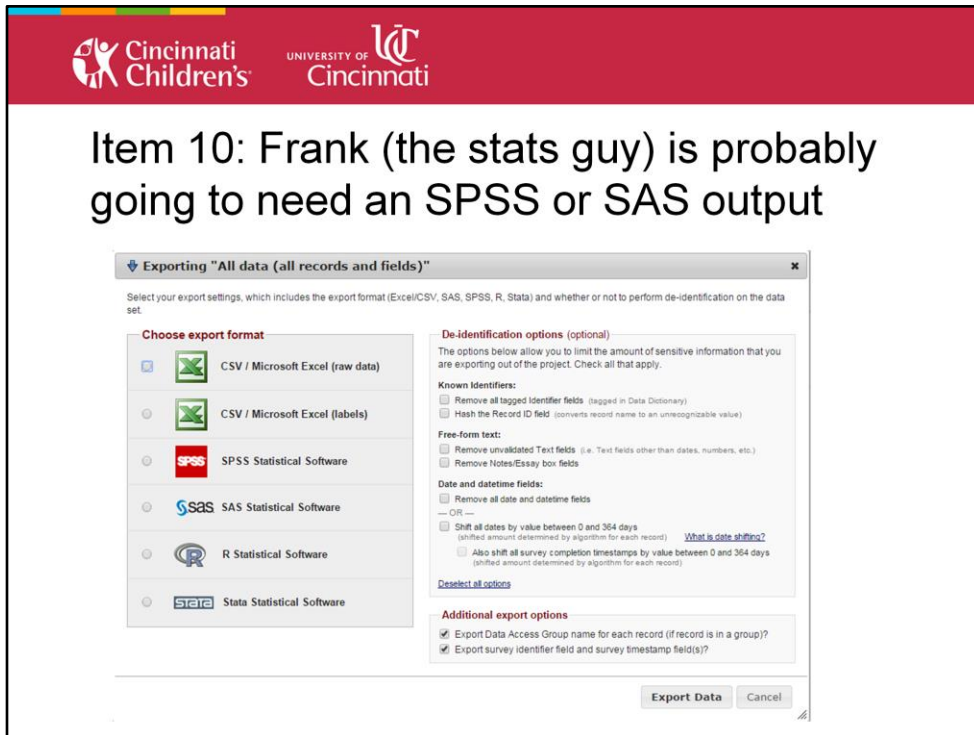
Item 9: Could we set up custom data reports filtered on 5 different variables before hand to save time?

Project Home → Quick Tasks → Create a Report → Create New Report

Overview of the reports function

- Reports are used to create outputs of selected date
- Reports are flexible and will allow you to drill down to what ever data you are trying to find
- Reports do this by giving you options concerning which fields (or variables) to select
- Reports also allow to select multiple filters
- You can filter by event or time period
- You can order the results by any variable you choose

Item 10: Frank (the stats guy) is probably going to need an SPSS or SAS output

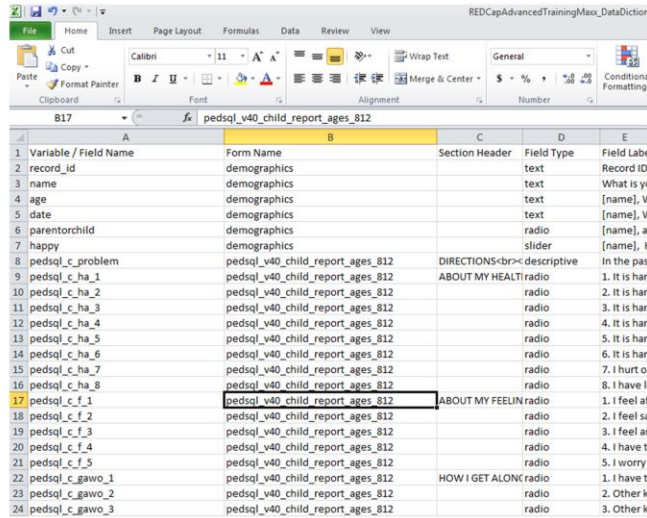


Project Home → Applications Side Menu → Data Exports, Reports, and Stats

Exporting data to various data analytic software packages in REDCap

- There are various export formats that are available
- There are also several different options for de-indentification

Data Dictionary



Variable / Field Name	Form Name	Section Header	Field Type	Field Label
record_id	demographics		text	Record ID
name	demographics		text	What is yc
age	demographics		text	[name], VA
date	demographics		text	[name], VA
parentorchild	demographics		radio	[name], AI
happy	demographics		slider	[name], H
pedsq_c_problem	pedsq_v40_child_report_ages_812	DIRECTIONS descriptive		In the past
pedsq_c_ha_1	pedsq_v40_child_report_ages_812	ABOUT MY HEALTH	radio	1. It is han
pedsq_c_ha_2	pedsq_v40_child_report_ages_812		radio	2. It is han
pedsq_c_ha_3	pedsq_v40_child_report_ages_812		radio	3. It is han
pedsq_c_ha_4	pedsq_v40_child_report_ages_812		radio	4. It is han
pedsq_c_ha_5	pedsq_v40_child_report_ages_812		radio	5. It is han
pedsq_c_ha_6	pedsq_v40_child_report_ages_812		radio	6. It is han
pedsq_c_ha_7	pedsq_v40_child_report_ages_812		radio	7. I hurt or
pedsq_c_ha_8	pedsq_v40_child_report_ages_812		radio	8. I have li
pedsq_c_f_1	pedsq_v40_child_report_ages_812	ABOUT MY FEELIN	radio	1. I feel af
pedsq_c_f_2	pedsq_v40_child_report_ages_812		radio	2. I feel sa
pedsq_c_f_3	pedsq_v40_child_report_ages_812		radio	3. I feel ar
pedsq_c_f_4	pedsq_v40_child_report_ages_812		radio	4. I have ti
pedsq_c_f_5	pedsq_v40_child_report_ages_812		radio	5. I worry
pedsq_c_gawo_1	pedsq_v40_child_report_ages_812	HOW I GET ALON	radio	1. I have ti
pedsq_c_gawo_2	pedsq_v40_child_report_ages_812		radio	2. Other k
pedsq_c_gawo_3	pedsq_v40_child_report_ages_812		radio	3. Other k

Project Home → Quick Tasks → Download the current Data Dictionary

The Data Dictionary is:

- Is a spreadsheet defining the structure of your project
- Each question on every data collection instrument occupies a row in the spreadsheet
- The spreadsheet can be downloaded, modified outside of REDCap, and then uploaded back into REDCap to change the project structure
- The data dictionary is the fastest and easiest way to copy several fields at once

Consider watching the training video on the data dictionary for more information

In Conclusion

- Remember to utilize the video's and well placed help articles to help you do what you are trying to accomplish
- Help-REDCap@bmi.cchmc.org is a good place to start when you get stumped.
- The process for creating new projects starts at the CCTST <http://cctst.uc.edu>



Class Structure

- Recap of Introductory class content
- Advanced Features
 - Project Design:
 - Project types
 - Calendar and scheduling modules
 - Data access groups
 - User rights
 - Data exports, reports & stats
 - API
 - Integration with statistical programs
 - Database Design:
 - Branching logic
 - Calculated & matrix fields
 - Enhanced text
 - Data quality rules
 - Data resolution workflow
- Continued Support
- Q&A

Recap of Introductory Class content

- How to request REDCap and access support
- Basic database setup using online designer or data dictionary
- User account management
- Data entry: add/edit
- Importing/exporting data
- reports

Project Type - Surveys

- Public links to REDCap instruments that can be sent worldwide
- Respondents can securely send data to REDCap without ever logging in
- Surveys can be set up as anonymous data collection forms, or they can be sent to specific participants via email addresses
- Multiple surveys can exist within the same project



3 Minutes

Project Type - Longitudinal

- Reuse of data collection instruments across multiple events
- Enables builder to define events and designate instruments for those events and add additional study arms
- Event grid displays events and associated instruments
- Best suited for structured studies which do not last indefinitely

Calendar and Scheduling Modules

- Calendar tool organized your study by tracking upcoming milestones and events
- Can add ad hoc events to calendar
- Scheduling tool is an optional feature in longitudinal projects which generates record-specific schedules based defined events
- Can be used independently from data collection or in conjunction

Calendar tool organized your study by tracking upcoming milestones and events

Can add ad hoc events to calendar – ad hoc events dates don't update when defined event dates are modified

Scheduling tool is an optional feature in longitudinal projects which generates record-specific schedules based defined events – only for Longitudinal studies.

Can be used independently from data collection or in conjunction – if no instruments are assigned to events the scheduling module can be used just to project events and track visits. If instruments are added to events, data collection tools can be accessed directly from the calendar.

Data Access Groups

- Segments record access to users based on the group they are assigned
- Useful for multi-site trials
- Only one group assignment per user
- Omitting a group assignment allows a user to see all records

User rights

- Can set individual rights or define a role
- Access to modules
- Define record actions
 - [Create](#), [Rename](#) and/or [Delete](#) Records
 - [Locking](#) records
- Define instrument access
 - [No Access](#), [Read Only](#), [View & Edit](#), and [Edit survey responses](#) (if the instrument is a survey)

Data Exports and Reports

- Create a set of fields for export or reporting
- Define who has access to the reports by individuals, roles, or data access groups
- Select individual fields or grab an entire instrument's fields
- Filters allow you to pull based on:
 - Data values
 - Events
 - Data access groups

Integration with statistical programs

- Statistical program options when exporting a selected set of fields
 - SPSS Statistical Software
 - SAS Statistical Software
 - R Statistical Software
 - Stata Statistical Software
- Each export contains a program file for the selected program and a data file
- SPSS and SAS also provide a pathway mapper file for quickly modifying the program file with directory information

REDCap API

- An interface that allows external applications to connect remotely to REDCap
- Useful for automated data extraction or importing
- Uses a 32 character hexadecimal token to identify which project and user is accessing the data
- Returns data in multiple formats including:
 - CSV
 - JSON
 - XML

REQUIRES A PROGRAMMER!!

Branching Logic

- Show/Hide fields based on defined conditions
- Syntax for referencing fields in a longitudinal study across events:
 - Text fields or single option lists:
`[event_name_arm_name][field_name]`
 - Example of age greater than 18: `[baseline_arm_1][age]>18`
 - Checkboxes (0=unchecked; 1=checked):
`[event_name_arm_name][field_name(coded_value)]`
 - Example of race Caucasian coded as 5 and checked:
`[visit_1_arm_1][race(5)]=1`
 - Always put single/double quotes around values except when using < or > with numerical values.

Calculated and Matrix fields



4 Minutes

- Calculated field
 - Not to be used for complicated calculations
 - Basic math functions (+, -, /, *, ^) and advanced functions (datediff, if, etc – see help/FAQ page)
 - Result must be numeric
- Matrix of fields
 - Grouping fields with same response values together
 - Must be of type radio buttons or checkboxes
 - Define choices once and available for each field

Enhanced Text

- Piping
 - Insert references to fields in a header, field label and even in choice responses to have dynamically added text
 - Reference will be replaced by data entered into field
 - Syntax: `[event_name_arm_name][field_name]`
- HTML and CSS
 - Use HTML tags and inline CSS to enhance the look of text in labels
 - Example using div tag to set text color:
`<div style="color:blue">some text</div>`

Data Quality Rules

- Use prebuilt rules or build your own to test data for certain conditions
- Can run in real time on save of data collection instrument
- Can check across fields and events

Data Resolution Workflow



5 Minutes

- Generate queries on a field
- Use with data quality module to create system generated queries
- Requires additional user rights
- Users only see queries for their records

The Data Resolution Workflow, also known as Data Queries, is a process within REDCap to document the resolution of issues concerning the data values within a project. This workflow can be thought of as a change tracking process for data. The procedure allows you to mark a field that possesses issues, assign that issue to others for investigation or review, resolve the issue, record the status, and add a comment for each step in the workflow.

REDCap Support Provided

CCHMC Support Staff

- General Questions
- New Accounts
- Technical Support

Email: help-redcap@bmi.cchmc.org

Center for Clinical and Translational Science and Training (CCTST)

- Project Creation
- Study Design
- Data Management

Website: <http://cctst.uc.edu>

Questions

