Managing Data in REDCap

Reports and Data Import/Export

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2/15/2024
Introduction and Learning Objective

- Understand instrument-level data viewing and export rights
- Learn how to set up a custom data report in REDCap with filters
- Understand how to export data to statistical packages
- Know how to import data to a REDCap project
- Learn what an API is
Instrument Level Data Viewing and Export Rights
Instrument-level Data Export Rights

Options for data export rights for EACH data collection instrument:

→ Match a user's Data Exports Rights with their Data Viewing Rights!

→ Granular control of who can export data from your project.
Production Project:

• When adding a new form to a project *that’s been put into production*, no users will initially have access to data viewing and data export rights for that new instrument.

• Remember to give you AND your users rights to the new instrument after the production changes have been approved.
Questions?
Reports
Data Exports, Reports, and Stats

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

<table>
<thead>
<tr>
<th>Report Name</th>
<th>View/Export Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>All data (all records and fields)</td>
<td>View Report, Export Data, Stats &amp; Charts</td>
</tr>
<tr>
<td>Selected instruments and/or events (all records)</td>
<td>Make custom selections</td>
</tr>
<tr>
<td>Demographics</td>
<td>View Report, Export Data, Stats &amp; Charts</td>
</tr>
</tbody>
</table>
## Reports

### My Reports & Exports

<table>
<thead>
<tr>
<th>Report name</th>
<th>View/Export Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A All data (all records and fields)</strong></td>
<td><img src="view_report" alt="View Report" />, <img src="export_data" alt="Export Data" />, <img src="stats_charts" alt="Stats &amp; Charts" /></td>
</tr>
<tr>
<td>o Good for exporting all data</td>
<td></td>
</tr>
<tr>
<td>o Not good for projects with lots of data, events</td>
<td></td>
</tr>
</tbody>
</table>

| **B Selected instruments and/or events** | ![View Report](view_report), ![Export Data](export_data), ![Stats & Charts](stats_charts) |
| (all records)                          |                     |
| o Good for selecting subset of instruments and/or events |                     |
| o Good for further refinement          |                     |

Select one or more instruments/events below for all records.

**Instruments**

- -- All instruments --
- Screening Form
- Study Visit Form
- Blood Draw Form
- Day 1 Task

**Events**

- -- All events --
- Flu Clinic
- Day 1
- Day 2-4 Blood Draw
- Day 7 Blood Draw

- OR -
  - ![Create report](create_report) based on the selections above
How to create custom reports

1. Create New Report
2. User Access: Choose who can edit and view this report
   - View Access: Choose who sees this report on their left-hand side
     - All users
     - Custom user access
3. Edit Access: Choose who can edit, copy, or delete this report
   - All users
   - Custom user access
4. Fields to include in report
   + Quick Add
   - Add all fields from selected instrument:
     - Field 1: id "Participant ID code"
5. Filters (optional)
   - Type variable name or field label
6. Order the Results (optional)
   - First by: id "Participant ID code"
Custom Reports

Step 1: Naming and Access

**Name of Report:** Participants who have completed the study

**Set as “public”:** Enabling this feature below will auto-generate a public link for viewing the report without needing to log in to REDCap. 
- [ ] Report is publicly viewable by anyone with the public link

**Description (optional):** Displayed on page below report name

**STEP 1**

- **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
- [ ] Custom user access (Users in ANY groups selected below will have access)

**Selected user roles:**
- Data Management
- Site Teams

**Selected DAGs:**
- Rush
- Test
- TJU
- UCLA

**Edit Access:** Choose who can edit, copy, or delete this report (requires user to have ‘Add/Edit/Organize Reports’ privileges)
- [ ] All users
- [ ] Custom user access (Users in ANY groups selected below will have access)

**Selected user roles:**
- Data Management
- Site Teams

**Selected DAGs:**
- Rush
- Test
- TJU
- UCLA

View a list of users who will have access to this report based on the selections above: View user access list
Custom Reports

Step 2: Field Selection

Three ways to select fields to include in the report:
• Dropdown
• By instrument
• Quick Add
Custom Reports

Step 2: Field Selection....options

### Additional report options (optional)

- [ ] Include the Data Access Group name for each record (if record is in a group)?
- [ ] 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)
- [x] Include the repeating instance fields (redcap_repeat_instrument, redcap_repeat_instance) in the report and data export?
- [x] 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]
Custom Reports

Step 3: Filters for Classic projects

Example 1: **Classic** project (non-longitudinal)

1. Data arranged by records, with one row per record.
2. Choose the field and specify the operator and value for the first filter.
3. Select And/Or for the next filter
4. Choose field and specify the operator and value for the next filter

**TIP:** Use [X-instance] Smart Variables to filter repeating data.
- Show only repeating instance data: [current-instance] <> ""
- Show only the first repeating instance: [current-instance] <> "" and [current-instance] = [first-instance]
Custom Reports

Step 3: Filters for Longitudinal projects

Example 2: **Longitudinal** project

1. Data arranged by events, with **one row per event**.
2. Choose the **event and the field** before specifying the operator and value for the first filter.
3. Optional: use advanced logic to set up more complex filters

![Filter Example](image-url)
Custom Reports

Step 3: Filters for Longitudinal projects

STEP 3
- Show data for all events for each record returned
- Convert filters to advanced logic format?

If you convert your existing report filters to the advanced logic format, please note that they CANNOT BE CONVERTED BACK TO THEIR ORIGINAL FORMAT afterward as separate fields. Do you still wish to convert to advanced logic format?

Preview of logic after conversion:

```
([flu_clinic_arm_1][consent] = "1") AND ([flu_clinic_arm_1][random_group] = "1") AND ([day_1_arm_1][day1_dt] <> "")
```

Advanced filter logic:

```
([flu_clinic_arm_1][consent] = "1") AND ([flu_clinic_arm_1][random_group] = "1") AND ([day_1_arm_1][day1_dt] <> "")
```

Switch format: Use simple logic (choose fields from list)
### Custom Reports

#### Step 3: Filters for Longitudinal projects

- **Show data for all events or repeating instruments for each record returned**

<table>
<thead>
<tr>
<th>Participant ID code</th>
<th>Event Name</th>
<th>Date of screening screendate</th>
<th>Did participant consent?</th>
<th>Sex at Birth dem_sex</th>
<th>Randomization Group random_group</th>
<th>Visit date day1_dt</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Flu Clinic</td>
<td>01-30-2022</td>
<td>Yes (1)</td>
<td>Female (0)</td>
<td>High dose quadrivalent (1)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Day 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>06-30-2022</td>
</tr>
<tr>
<td>15</td>
<td>Day 2-4 Blood Draw</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### RedCap @ Yale

**SLIDE 16**
Step 3: Filters for Repeating forms

Repeating form:

1. Use [X-instance] Smart Variables to filter repeating data
2. Show only the last repeating instance:
   \[ \text{[current-instance]} = \text{[last-instance]} \]
3. Show only repeating instance data: \[ \text{[current-instance]} \neq \text{""} \]

Example: Include only last instance of call log in the report
Custom Reports
Step 3: Filters for Repeating forms

Filter=[current-instance]==[last-instance]

<table>
<thead>
<tr>
<th>Record ID</th>
<th>Repeat Instrument</th>
<th>Repeat Instance</th>
<th>Contact Attempt Date</th>
<th>Contact Method</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>redcap_repeat_instrument</td>
<td>redcap_repeat_instance</td>
<td>cont_dt</td>
<td>cont_method</td>
<td>cont_outcome</td>
</tr>
<tr>
<td>1</td>
<td>Outreach Log</td>
<td>3</td>
<td>02-13-2024</td>
<td>Phone call (1)</td>
<td>Voicemail full (3)</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Outreach Log</td>
<td>2</td>
<td>11-29-2023</td>
<td>Phone call (1)</td>
<td>Left VM (2)</td>
</tr>
</tbody>
</table>

Filter=[current-instance]==[last-instance] and [current-instance]<> ""

<table>
<thead>
<tr>
<th>Record ID</th>
<th>Repeat Instrument</th>
<th>Repeat Instance</th>
<th>Contact Attempt Date</th>
<th>Contact Method</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>redcap_repeat_instrument</td>
<td>redcap_repeat_instance</td>
<td>cont_dt</td>
<td>cont_method</td>
<td>cont_outcome</td>
</tr>
<tr>
<td>1</td>
<td>Outreach Log</td>
<td>3</td>
<td>02-13-2024</td>
<td>Phone call (1)</td>
<td>Voicemail full (3)</td>
</tr>
<tr>
<td>6</td>
<td>Outreach Log</td>
<td>2</td>
<td>11-29-2023</td>
<td>Phone call (1)</td>
<td>Left VM (2)</td>
</tr>
<tr>
<td>10</td>
<td>Outreach Log</td>
<td>1</td>
<td>02-06-2024</td>
<td>Email (2)</td>
<td>Sent email (6)</td>
</tr>
</tbody>
</table>
Custom Reports: Live Filters

- Dynamically filtering data in real time
- Fields that can be used for live filters: record id, multiple choice fields, events or data access group.
Custom Reports: Live Filters

('records' = total available data across all designated events)

<table>
<thead>
<tr>
<th>Subject ID</th>
<th>Event Name</th>
<th>Date of Insomnia Severity Index isi_date</th>
<th>1. Difficulty falling asleep isi1</th>
<th>2. Difficulty staying asleep isi2</th>
<th>3. Problems waking up too early isi3</th>
<th>4. How SATISFIED/DISSATISFIED are you with your CURRENT sleep pattern? isi4</th>
<th>5. How NOTICEABLE to others do you think your sleep problem is in t ... ring the quality of your life? isi5</th>
</tr>
</thead>
<tbody>
<tr>
<td>51</td>
<td>V0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>V1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>V2</td>
<td>09-14-2020</td>
<td>Mild (1)</td>
<td>Mild (1)</td>
<td>Mild (1)</td>
<td>Moderately Satisfied (2)</td>
<td>Somewhat (2)</td>
</tr>
<tr>
<td>51</td>
<td>V3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>V4</td>
<td>01-27-2021</td>
<td>None (0)</td>
<td>Mild (1)</td>
<td>None (0)</td>
<td>Very Satisfied (0)</td>
<td>A Little (1)</td>
</tr>
</tbody>
</table>
Custom Reports: Live Filters

('records' = total available data across all designated events)
Report execution time: 0 seconds

<table>
<thead>
<tr>
<th>Subject ID</th>
<th>Event Name</th>
<th>Date of Insomnia Severity Index</th>
<th>1. Difficulty falling asleep</th>
<th>2. Difficulty staying asleep</th>
<th>3. Problems waking up too early</th>
<th>4. How SATISFIED/DISSATISFIED are you with your CURRENT sleep pattern?</th>
<th>5. How NOTICABLE to others do you think your sleep problem is in terms of the quality of your life?</th>
</tr>
</thead>
<tbody>
<tr>
<td>51</td>
<td>V4</td>
<td>01-27-2021</td>
<td>None (0)</td>
<td>Mild (1)</td>
<td>None (0)</td>
<td>Very Satisfied (0)</td>
<td>A Little (1)</td>
</tr>
<tr>
<td>231</td>
<td>V4</td>
<td>05-10-2021</td>
<td>Moderate (2)</td>
<td>Moderate (2)</td>
<td>Moderate (2)</td>
<td>Satisfied (1)</td>
<td>Not at all Noticeable (0)</td>
</tr>
</tbody>
</table>
Questions?
Data Export
Data Export Formats

Data can be exported to Excel, SAS, R, SPSS, STATA, XML.

- Options to remove identifiers from data export.

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.

<table>
<thead>
<tr>
<th>Choose export format</th>
<th>De-identification options (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSV / Microsoft Excel (raw data)</td>
<td>The options below allow you to limit the amount of sensitive information that you are exporting out of the project. Check all that apply.</td>
</tr>
<tr>
<td>CSV / Microsoft Excel (labels)</td>
<td>Known Identifiers:</td>
</tr>
<tr>
<td>SPSS Statistical Software</td>
<td>- Remove all tagged Identifier fields (tagged in Data Dictionary)</td>
</tr>
<tr>
<td>SAS Statistical Software</td>
<td>- Hash the Record ID field (converts record name to an unrecognizable value)</td>
</tr>
<tr>
<td>R Statistical Software</td>
<td>Free-form text:</td>
</tr>
<tr>
<td>Stata Statistical Software</td>
<td>- Remove unvalidated Text fields (i.e. Text fields other than dates, numbers, etc.)</td>
</tr>
<tr>
<td>CDISC ODM (XML)</td>
<td>- Remove Notes/Essay box fields</td>
</tr>
</tbody>
</table>

**Advanced data formatting options**

- **CSV delimiter character**
  Set the delimiter used to separate values in the CSV data file (only valid for CSV Raw Data and CSV Labels export formats):
  
  | delimiter character | (comma) - default |

- **Force all numbers into a specified decimal format?**
  You may choose to force all data values containing a decimal to have a specified decimal character (comma or period/full stop). This will be applied to all calculations and number-validated text values in the export file.

  | Use fields’ native decimal format (default) |

**NOTE:** Your data formatting selections above will be remembered in the future and will be pre-selected upon your next export.
When exporting data to statistical program, REDCap will generate a syntax file and a CSV data file!

1. Download and save both files to a common location;
2. Follow the instructions on the data export page to add the location of the CSV data file to the syntax file;
3. Run the code to import the data to the statistical program

---

**SAS Statistical Software**

Download and save both files on the right to a common location. Double-click the syntax file to open it in SAS. In the syntax editor in SAS, enter the full path of the data CSV file on your computer into the second line of the .sas syntax file. For example, you will need to add something similar to the red text seen below. Your file name and folder path will look different from the example below. Once you have completed these steps, choose Run (or Run-->Submit) from the top menu options in SAS to load the data.

```sas
%let csv_file = 'MyProject_DATA_NOHDRS.csv';
The code above should be changed to something like the following:
%let csv_file = '/Users/JoeUser/Documents/MyProject_DATA_NOHDRS.csv';
OR
%let csv_file = 'C:\Users\JoeUser\Desktop\MyProject_DATA_NOHDRS.csv';
```
Data Export Files

Whenever an export is created, your export is saved in the File Repository.
Stats and Charts
Stats and Charts

Report name | View/Export Options
---|---
A | All data (all records and fields)

### Gender

<table>
<thead>
<tr>
<th>Total Count (N)</th>
<th>Missing</th>
<th>Unique</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>0 (0.0%)</td>
<td>2</td>
</tr>
</tbody>
</table>

Counts/frequency: Male (19, 63.3%), Female (11, 36.7%), Other (0, 0.0%)

### Height

<table>
<thead>
<tr>
<th>Total Count (N)</th>
<th>Missing</th>
<th>Unique</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>StdDev</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>0 (0.0%)</td>
<td>8</td>
<td>120.00</td>
<td>148.00</td>
<td>137.50</td>
<td>13.57</td>
<td>00</td>
</tr>
</tbody>
</table>

Lowest values: 120, 123, 125, 134, 134
Highest values: 140, 143, 145, 145, 145

Display Options
Optional: Select a record to overlay onto the plots below
--- select record ---

Viewing options: Show plots & stats, Show plots only, Show stats only

---

REDCap @ Yale
Using Aggregate Functions in Reports
# What are Aggregate Functions

<table>
<thead>
<tr>
<th>Name of Smart Variable</th>
<th>Description</th>
<th>Example of Usage</th>
<th>Example output</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aggregate Functions, Charts, and Tables</strong> (also known as Smart Functions, Smart Charts, and Smart Tables)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[<strong>aggregate-min</strong> : <strong>fields</strong> : <strong>parameters</strong>]</td>
<td>The minimum value of a field across all records in the project (including all events and/or repeating instances in all records). Multiple fields may be used and must be comma-separated.</td>
<td>[aggregate-min:age]</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[aggregate-min:age,participant_age,other_age]</td>
<td>7</td>
</tr>
<tr>
<td>[<strong>aggregate-max</strong> : <strong>fields</strong> : <strong>parameters</strong>]</td>
<td>The maximum value of a field across all records in the project (including all events and/or repeating instances in all records). Multiple fields may be used and must be comma-separated.</td>
<td>[aggregate-max:age]</td>
<td>95</td>
</tr>
<tr>
<td>[<strong>aggregate-mean</strong> : <strong>fields</strong> : <strong>parameters</strong>]</td>
<td>The mean/average value of a field across all records in the project (including all events and/or repeating instances in all records). Multiple fields may be used and must be comma-separated.</td>
<td>[aggregate-mean:age]</td>
<td>100.1</td>
</tr>
<tr>
<td>[<strong>aggregate-median</strong> : <strong>fields</strong> : <strong>parameters</strong>]</td>
<td>The median value of a field across all records in the project (including all events and/or repeating instances in all records). Multiple fields may be used and must be comma-separated.</td>
<td>[aggregate-median:age]</td>
<td>57</td>
</tr>
</tbody>
</table>
Using Aggregate Functions in Report

<table>
<thead>
<tr>
<th>Name of Report:</th>
<th>Demographic Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set as &quot;public&quot;:</td>
<td>Enabling this feature below will auto-generate a public link for viewing the report without needing to log in to REDCap.</td>
</tr>
<tr>
<td></td>
<td>Report is publicly viewable by anyone with the public link</td>
</tr>
</tbody>
</table>

**Description (optional):**

<table>
<thead>
<tr>
<th>Description (optional):</th>
<th>Number of patients: [aggregate-count:record_id]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean age: [aggregate-mean:age]</td>
</tr>
<tr>
<td></td>
<td>[stats-table:age]</td>
</tr>
</tbody>
</table>
Using Aggregate Functions in Report

Demographic Report

Number of patients: 8
Mean age: 46.67

<table>
<thead>
<tr>
<th>Age</th>
<th>Count</th>
<th>Missing</th>
<th>Unique</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Median</th>
<th>StDev</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>30</td>
<td>60</td>
<td>46.67</td>
<td>50</td>
<td>13.66</td>
<td>280</td>
</tr>
</tbody>
</table>

Contact Method (Check all that apply)

<table>
<thead>
<tr>
<th>Record ID</th>
<th>Event Name</th>
<th>Age</th>
<th>Gender</th>
<th>Race</th>
<th>Contact Method</th>
<th>Email</th>
<th>Mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Event 1</td>
<td>30</td>
<td>Female</td>
<td>White</td>
<td>Checked (1)</td>
<td>Checked (1)</td>
<td>Checked (1)</td>
</tr>
<tr>
<td>2</td>
<td>Event 1</td>
<td>30</td>
<td>Male</td>
<td>Black or African American</td>
<td>Checked (1)</td>
<td>Checked (1)</td>
<td>Unchecked (0)</td>
</tr>
<tr>
<td>3</td>
<td>Event 1</td>
<td>50</td>
<td>Female</td>
<td>Native Hawaiian or Other Pacific Islander</td>
<td>Checked (1)</td>
<td>Checked (1)</td>
<td>Checked (1)</td>
</tr>
<tr>
<td>4</td>
<td>Event 1</td>
<td>60</td>
<td>Male</td>
<td>Asian</td>
<td>Checked (1)</td>
<td>Checked (1)</td>
<td>Checked (1)</td>
</tr>
<tr>
<td>5</td>
<td>Event 1</td>
<td></td>
<td>Female</td>
<td>American Indian/Alaska Native</td>
<td>Checked (1)</td>
<td>Checked (1)</td>
<td>Checked (1)</td>
</tr>
<tr>
<td>6</td>
<td>Event 1</td>
<td></td>
<td>Male</td>
<td>Asian</td>
<td>Unchecked (0)</td>
<td>Checked (1)</td>
<td>Checked (1)</td>
</tr>
<tr>
<td>7</td>
<td>Event 1</td>
<td>50</td>
<td>Female</td>
<td>Native Hawaiian or Other Pacific Islander</td>
<td>Checked (1)</td>
<td>Checked (1)</td>
<td>Checked (1)</td>
</tr>
<tr>
<td>8</td>
<td>Event 1</td>
<td>60</td>
<td>Male</td>
<td>Asian</td>
<td>Checked (1)</td>
<td>Checked (1)</td>
<td>Checked (1)</td>
</tr>
</tbody>
</table>
QUESTIONS?
Data Import

1. Download data import template from the data import page.
How to import data to project

2. Insert the data for each record that you wish to import into the template. Once all your data has been added, save the file.

→ All multiple-choice fields (e.g., dropdown, radio) must have the raw coded value (rather than the choice label)

→ Checkbox fields
How to import data to project

3. Delete any empty columns or rows to save processing time.
4. Follow the instructions to upload the file.
5. Once the file is uploaded, the data will be displayed and checked for errors before it is imported.

Instructions for Data Review

The data you uploaded from the file is displayed in the Data Display Table below. Please inspect it carefully to ensure that it is all correct. After reviewing it, click the 'Import Data' button at the bottom of this page to import this data into the project.

<table>
<thead>
<tr>
<th>DATA DISPLAY TABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>record_id</td>
</tr>
<tr>
<td>6 (new record)</td>
</tr>
</tbody>
</table>

Do you wish to import the new data (displayed above) into the project? (Click the button below to import the data.)

Import Data  Cancel
Longitudinal projects

- Must include 'redcap_event_name' field in your data import file. A list of unique event names can be found on the define my event page.
- redcap_event_name can be found on the ‘Define My Events’ page
Data Import: Repeating forms

Repeating forms

- Must include ‘redcap_repeat_instrument’ and ‘redcap_repeat_instance’ fields in the import file.
- Repeat instrument name can be found in the codebook and the repeat instance is the instance number of your data.

<table>
<thead>
<tr>
<th>#</th>
<th>Variable / Field Name</th>
<th>Field Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>record_id</td>
<td>Record ID</td>
</tr>
</tbody>
</table>

Codebook:

CSV file to be imported:
If importing repeating instances for a repeating event or repeating instrument, you may auto-number the instances by providing a value of 'new' for the 'redcap_repeat_instance' field in the dataset you are importing.

– This is useful because it allows you to import such data without the need to determine how many instances already exist for a given repeating event/instance prior to the import.
Data Access Groups

When importing new record, you can assign data access groups to your records. Include the ‘redcap_data_access_group’ field with your data import. A list of data access group names can be found on the data access group page.
QUESTIONS?
REDCap API
(Application Programming Interface)

- REDCap API is an interface that allows external applications to connect to REDCap remotely.
- Can be used for automated data imports/exports from a specified REDCap project.
- API Token
  - Rather than using username/passwords, the REDCap API uses tokens as a means of secure authentication.
  - A token must be included in every API request.
  - Each user will have a different token for each REDCap project to which they have access.
  - Enable API Export/Import rights before requesting API token.
The API playground is an interface that lets you experiment with the REDCap API without writing code.

- You can explore all the different API methods and their various options to customize a given API request

- You may even execute a real API request and see the exact response that REDCap returns from the request

- Example codes can be downloaded from API documentation page
Resources on REDCap@Yale Website

https://portal.redcap.yale.edu/resources/frequently-asked-questions

Features-Advanced

› Alerts and Notifications

› API

What is REDCap API?
How do I set up an API to export data to SAS?
How do I set up an API to export data to R?
How do I request an API Token?
QUESTIONS?
REDCap@Yale Team

Top Row
Denise Acampora
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Thank You!

Further Questions: Contact us at REDCap@yale.edu
Extra Slides
Other Export Options

• Export entire project as REDCap XML file (containing metadata & data)
• ZIP file of uploaded files (all records)
• PDF of data collection instruments containing saved data (all records)
Below are some additional export options that are available for your project. Instructions for each type of export are provided. You may click the corresponding icon on the right to download the file for each.

**Export entire project as REDCap XML file (containing metadata & data)**

The entire project (all records, events, arms, instruments, fields, and project attributes) can be downloaded as a single XML file, which is in CDISC ODM format (ODM version 1.3.1). This XML file can be used to create a clone of the project (including its data, optionally) on this REDCap server or on another REDCap server (it can be uploaded on the Create New Project page). Because it is in CDISC ODM format, it can also be used to import the project into another ODM-compatible system.

**ZIP file of uploaded files (all records)**

Uploaded files for all records in this project may be downloaded in a single ZIP file. This file contains any files uploaded for ‘File Upload’ fields/questions on a survey or data entry form. The ZIP file will contain a folder of all the files organized by record name and variable/field name and also contains an index.html file that serves as a table of contents for all the files. After downloading the ZIP file, extract all the files/folders to a directory on your local computer, after which you may double-click the index.html file inside to view a listing of the files using your web browser, or you may view the files directly by looking in the ‘documents’ folder. Click the icon to the right to begin downloading the ZIP file.

*Note: if your project has a large amount of ‘File Upload’ fields/questions or records/responses, the resulting ZIP file may be very large in file size. Please be patient if the file takes time to download.*

**PDF of data collection instruments containing saved data (all records)**

The data for all records in this project may be downloaded in a single PDF file. This file contains the actual page format as you would see it on the data entry page or survey and includes all data for all records for all data collection instruments. Click the icon to the right to begin downloading the file. Also, you may optionally click the Compact option to download a PDF that excludes fields that have no data saved and excludes unselected multiple choice options. (Note: Section headers and descriptive fields will still be included.)

*Note: if your project has a large amount of fields/questions or records/responses, the resulting PDF file may be very large both in file size and in page length. Please be patient if the file takes time to*