Repeating Data Collection in REDCap

The repeating instruments and events module is a REDCap feature useful for collecting data multiple times using the same instruments without set time points. There is also no limit to how many times a repeatable instrument or event is repeated for an individual record. This is useful for instances in which data will be collected using the same instrument multiple times, but the number of times will vary across participants. Repeatable instruments can be used in classic and longitudinal projects, while repeatable events are only for longitudinal projects.

Example Use Cases for Repeatable Instruments/Events

- Participants are asked to complete a form each time they are admitted to a facility, like a hospital
- Forms for tracking samples
- Contact logs, adverse event forms, or billing logs
- A parent is asked to complete a survey for each child they have

To set up repeating instruments and/or events:

1. On the “Project Setup” tab, select “Enable” next to “Repeatable instruments” in the “Enable optional modules and customizations” box.

2. A pop up will appear with a list of your instruments. Select which instruments you would like to be repeatable.
a. Custom label for repeating instruments – Variables can be piped here to customize what appears next to each repeated instance on an individual’s record dashboard.

b. If you have the longitudinal module enabled, this pop up will be organized by event name and you can select whether to repeat individual instruments or entire events.

3. To record a new instance of an event, go to “Add/Edit Records” and select the record needed. Click “+” or “+ Add New” on any repeating instrument or event to add a new instance. You can also add a new instance from within the instrument.
   a. Note that the blue circle next to the form means a mix of complete and incomplete instances.

Other important notes when using repeatable instruments and/or events:

- When a survey is enabled as a repeating instrument, the survey option “Allow respondents to repeat the survey” appears under “Survey Termination Options” in “Survey Settings.” Selecting
this will create a customizable repeat button for participants. If enabled, a green repeat arrow appears next to the instrument on “Online Designer.”

- Reports from a project with repeating instruments or events include a field called “redcap_repeat_instrument” and “redcap_repeat_instance” denoting the instrument the row of data belongs to and the instance, respectively. If you would like to exclude these fields from a report, uncheck the box that says “Include the repeating instance fields...” under “Additional Report Options.”

- When importing data into a repeating instance, it is important to notate the instance, instrument, and if applicable, event. See the Importing Data to REDCap document for more detailed information.

- Data from repeating instruments and events will export in a long format. You may need to reformat your data after it is exported. In the example below, records 1 and 2 have data for the repeating instrument “Practice Form” which contains the question “Does the pet have a vet?” while record 3 does not.

<table>
<thead>
<tr>
<th>Record ID</th>
<th>Repeat Instrument</th>
<th>Repeat Instance</th>
<th>Today's Date</th>
<th>Pet Name</th>
<th>Please select the option that best describes the origin of the pet's name:</th>
<th>Since taking the pet name survey, have you changed your pet's name?</th>
<th>Does the pet have a vet?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Practice Form</td>
<td>1</td>
<td>06-23-2021</td>
<td>Spot</td>
<td>Unknown/I did not name this pet (9)</td>
<td>No (0)</td>
<td>No (0)</td>
</tr>
<tr>
<td>1</td>
<td>Practice Form</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Practice Form</td>
<td>1</td>
<td>06-23-2021</td>
<td>Zuko</td>
<td>Fictional Character (1)</td>
<td>No (0)</td>
<td>No (0)</td>
</tr>
<tr>
<td>2</td>
<td>Practice Form</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Practice Form</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Practice Form</td>
<td>4</td>
<td></td>
<td>Scissors</td>
<td>Other (10)</td>
<td>Yes (1)</td>
<td></td>
</tr>
</tbody>
</table>

- There are some REDCap features that do not work well with repeating instruments and/or events:
  - Automated survey invitations will only send a single time when conditions for the first instance of a repeating instrument are met. Subsequent invites will not automatically send
or remind a participant to repeat the survey. To invite a participant to take a repeating survey again, you will need to manually send the invitation.

- Survey queues in repeating events will only work on the first instance of the event. Queues that contain repeating surveys may benefit from the use of the “Take this survey again” button, as long as the survey queue is not hidden to participants and the queue link is available to the participant for subsequent entries.

- Branching logic and calculations that reach across repeating instruments or events will always take data from the most recent instance unless specified with a smart variable. If you want to learn more about smart variables, click the green “Smart Variable” button that can be found on the “Project Setup” page or in “Online Designer” when developing an instrument.