Advanced REDCap Features

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UF | Clinical and Translational Science Institute
UNIVERSITY *of* FLORIDA

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Learning Objectives

- Introduce advanced REDCap terminology, settings, and functions

- Describe best practices for customizing a REDCap project

- Demonstrate advanced features in REDCap to manage study data

You Can Learn to Use REDCap!

REDCap Terminology

Project	• Study in REDCap
Record	• Subject in REDCap
Fields	▪ Capture each Data Point (Name, DOB, Glucose)
Instruments	▪ Multiple Fields make up an Instrument (Form: Source or CRFs) ▪ Can be enabled as a Survey (Questionnaire)
Event	▪ Each specific Timepoint (Study Visit)

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REDCap Terminology

Variable
- Unique name assigned to each Field

[Piping]
- Automatically inject already collected data into another instrument [Name, Pronouns, DOB]

{Embedding}
- Places a field in another spot on the same Instrument {Makes them look better!}

ASI
- Automatic Survey Invitations (REDCap send surveys for you)
- Twillio (Voice/Text Service for sending Surveys)

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REDCap Terminology

Branching Logic
- Streamlines Instruments (Only shows applicable Fields)

@Action Tags
- Customized Field Annotation (We'll get into it)

[Smart-Variables]
- [Like-Piping-and-Action-Tags-but-Different]

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REDCap Terminology

Special Functions
- Conditional Logic (If/Then, AND/OR)
- DateDiff (Calculate difference btwn 2 Dates)
- Sum, Mean, SD, Min/Max, Rounding

Alerts & Notifications
- REDCap can Automatically Alert Study Team/Subjects/Others

File Repository
- Keep your Current IRB Approved Documents in REDCap

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REDCap Terminology

Longitudinal Data Collection
- Allows for multiple Events (Visits) and ARMs

Scheduling
- Timing of each Event (Visit) 2 weeks (+/- 5 days)
- Track subject Events (Visits)

Calendar
- Calendar view of all Subjects' Events (Visits)
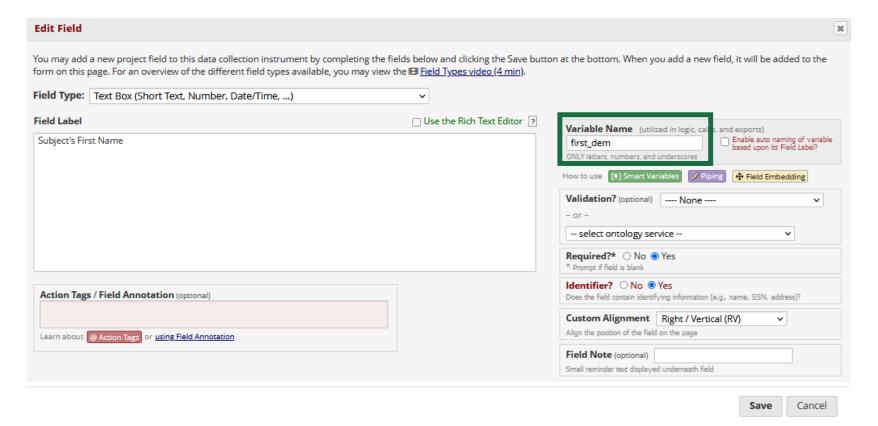- Can be used to track Study Team Meetings
- DSMB Meetings

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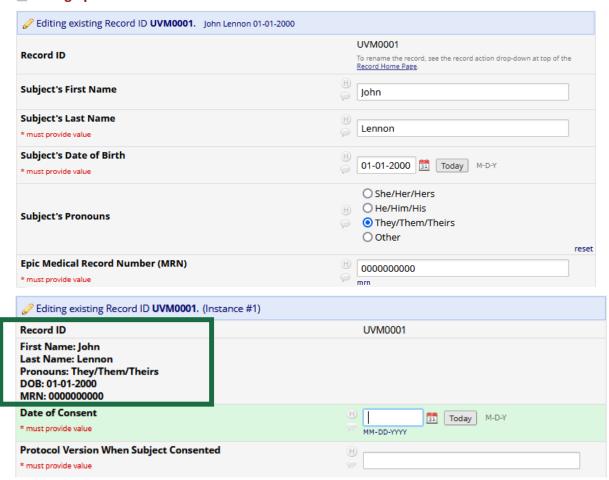
REDCap - Preparation

STUDY DESIGN AND SCHEDULE OF ASSESSMENTS

These are your events (visits).
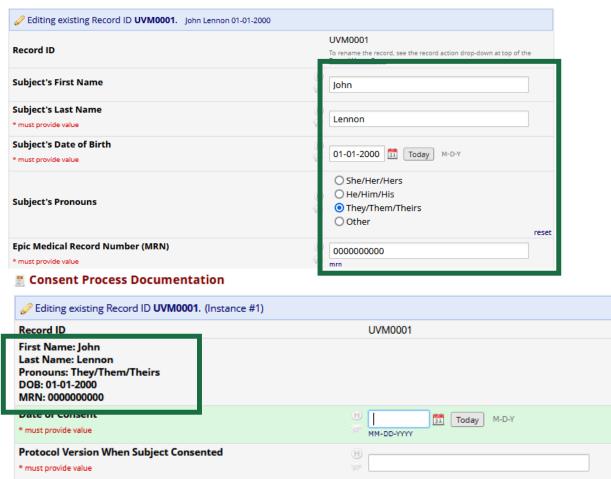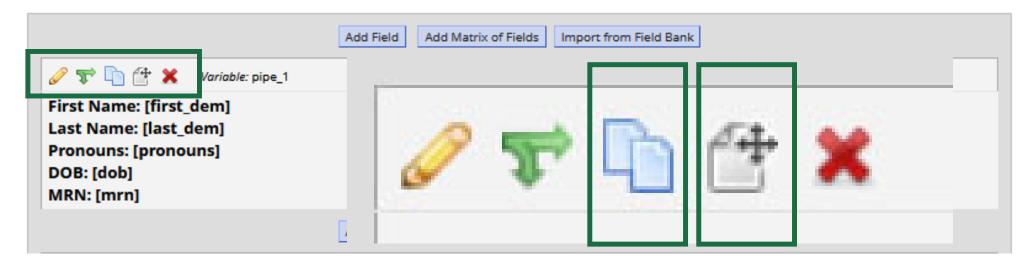
These are your instruments (forms/surveys). Some may be combined into one instrument

Assessment	Screening	Run-in	Baseline		Treatment			Follow-up		
Study Week	-2	-1	0	1	2	3	4	5	6	8
Informed Consent	x									
History	x									
Physical Exam.	x									x
Effectiveness										
primary variable	x	x	x	x	x	x	x	x	x	x
secondary variable	x	x	x	x		x			x	x
Safety										
Adverse events	x	x	x	x	x	x	x	x	x	x
Lab. tests	x		x	x			x		x	x
Body weight	x		x						x	x

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Piping

Piping

Piping

Piping

Copying and Moving Fields

Copying and Moving Fields

COPY FIELD? ✖

Do you wish to copy the field(s) "**pipe_1**"? The new field(s) will be added immediately after this one.
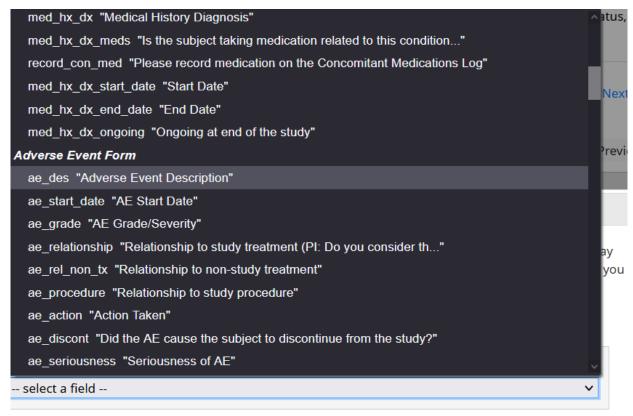
Copy field   Cancel

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Copying and Moving Fields

Copying and Moving Fields

Move field to another location ✖

You may move the field listed below to any location on the current data collection instrument, or you may move it to another instrument (if others exist). Choose from the drop-down below the location to which you wish to move this field.

Field to be moved: **pipe_2** "First Name: [first_dem] Last Name: [last_dem] Pronouns: [pronouns] D...

Move the field above so that it will be located immediately *AFTER* the following field:
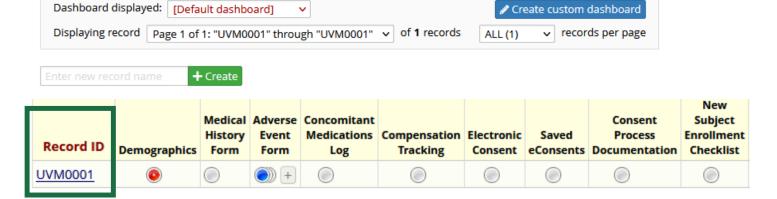
-- select a field -- ⌄

Move field   Cancel

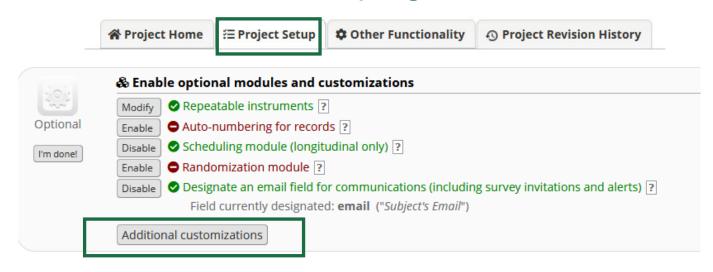# Copying and Moving Fields

Piping

Piping

Piping

Displaying: Instrument status only | Lock status only | All status types

Record ID	Demographics	Medical History Form	Adverse Event Form	Concomitant Medications Log	Compensation Tracking	Electronic Consent	Saved eConsents	Consent Process Documentation	New Subject Enrollment Checklist	Deviation Log	Notes to File	Study Status	End of Study Treatment Form	Eligibility Criteria	Data Entry Tracking Form
UVM0001	🔴	⚪	🔵 +	⚪	⚪	⚪	⚪	⚪	⚪	⚪	⚪	⚪	⚪	⚪	⚪

Record ID	Demographics	Medical History Form	Adverse Event Form	Concomitant Medications Log	Compensation Tracking	Electronic Consent	Saved eConsents	Consent Process Documentation	New Subject Enrollment Checklist	Deviation Log	Notes to File	Study Status	End of Study Treatment Form
UVM0001 John Lennon 01-01-2000	🔴	⚪	🔵 +	⚪	⚪	⚪	⚪	⚪	⚪	⚪	⚪	⚪	⚪
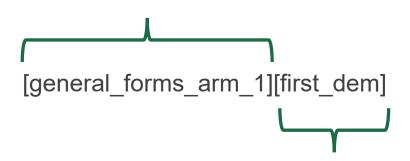
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Piping

Piping

Piping

Event Name

[general_forms_arm_1][first_dem]
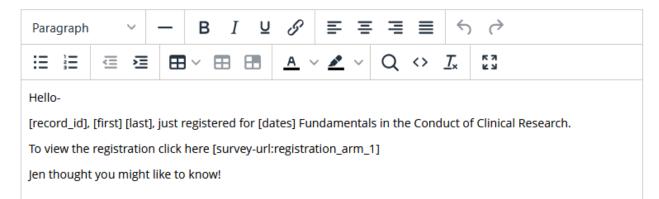
Variable Name

Dear [general_forms_arm_1][first_dem],

Dear John,

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Piping

NEW Fundamentals in the Conduct of Clinical Research Registration

Paragraph | — | B I U 𝒮 | ☰ ☰ ☰ ☰ | ↶ ↷

☰ ☰ | ⇤ ⇥ | ⊞ ⊞ ⊞ | A ∨ 🖊 ∨ | Q ⟨⟩ 𝐓ₓ | ⤢

Hello-

[record_id], [first] [last], just registered for [dates] Fundamentals in the Conduct of Clinical Research.

To view the registration click here [survey-url:registration_arm_1]

Jen thought you might like to know!

NEW Fundamentals in the Conduct of Clinical Research Registration

HJ   Jennifer.Holmes@uvmhealth.org   ↩ Reply   ↩ Reply All   → Forward   ...
      To Holmes, Jennifer C.   Thu 4/7/2022 12:48 PM

Hello-

4, Jennifer Holmes, just registered for November (02, 04, 09, 11) 2021, 2:00pm-4:30pm (Zoom) Fundamentals in the Conduct of Clinical Research.

To view the registration click here https://redcap.med.uvm.edu/surveys/?s=8kqe5bSUQMPt373o

Jen thought you might like to know!

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Piping

CERTIFICATE OF COMPLETION - Fundamentals in the Conduct of Clinical Research

Dear [registration_arm_1][first],

Congratulations on your successful completion of the Fundamentals in the Conduct of Clinical Research training program.

```
<div style="width:800px; height:600px; padding:20px; text-align:center; border: 10px solid #787878"> <div style="width:750px; height:550px; padding:20px; text-align:center; border: 5px solid #787878">    <span style="font-size:50px; font-weight:bold">Certificate of Completion</span>    <br><br>    <span style="font-size:25px"><i>This is to certify that</i></span>    <br><br>    <span style="font-size:30px"> <b>[registration_arm_1][first] [registration_arm_1][last]</b></span><br/><br/>    <span style="font-size:25px"><i>has completed the course</i></span> <br/><br/>    <span style="font-size:30px">University of Vermont Larner College of Medicine Research Professionals Training<p><b>Fundamentals in the Conduct of Clinical Research Training Program </b></span> <br/><br/>         <span style="font-size:25px"> <i>session</i></span>    <br><br>    <span style="font-size:30px"><b>[registration_arm_1][dates] </b></span><br/><br/>

<p><span style="font-size:16px"><i>Attendance at this program has been approved for <b>10 contact hours</b> of research specific continuing education on applications for Maintenance of ACRP's CCRC<sup>®</sup>, CCRA<sup>®</sup>, CPI<sup>®</sup>, or ACRP-CP<sup>®</sup> certification designations.</i></span><br></div> </div>
```

KIMBERLY LUEBBERS
ASSISTANT DEAN FOR CLINICAL RESEARCH
DIRECTOR – OFFICE OF CLINICAL TRIALS RESEARCH
UNIVERSITY OF VERMONT

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<img src="http://www.med.uvm.edu/docs/lcomlogo_uvmgreendabafee4b8896cc59be4ff0000359472/medical-communications-documents/logos/lcomlogo_uvmgreen.jpg?sfvrsn=9d339253_2" alt="http://www.med.uvm.edu/docs/lcomlogo_uvmgreendabafee4b8896cc59be4ff0000359472/medical-communications-documents/logos/lcomlogo_uvmgreen.jpg?sfvrsn=9d339253_2">
```

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Piping

Certificate of Completion

This is to certify that

Jennifer Holmes

has completed the course

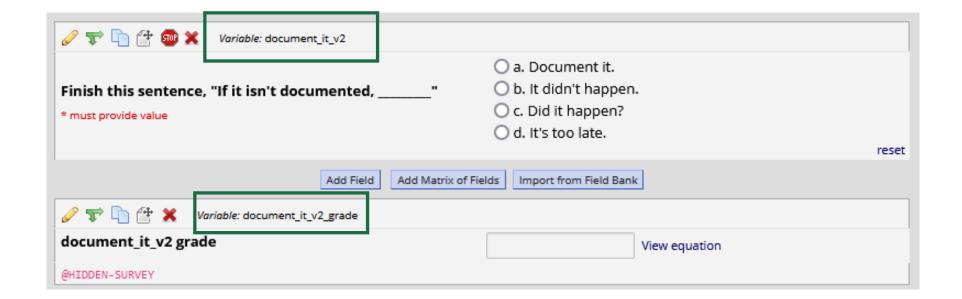University of Vermont Larner College of Medicine Research Professionals Training

Fundamentals in the Conduct of Clinical Research Training Program

session

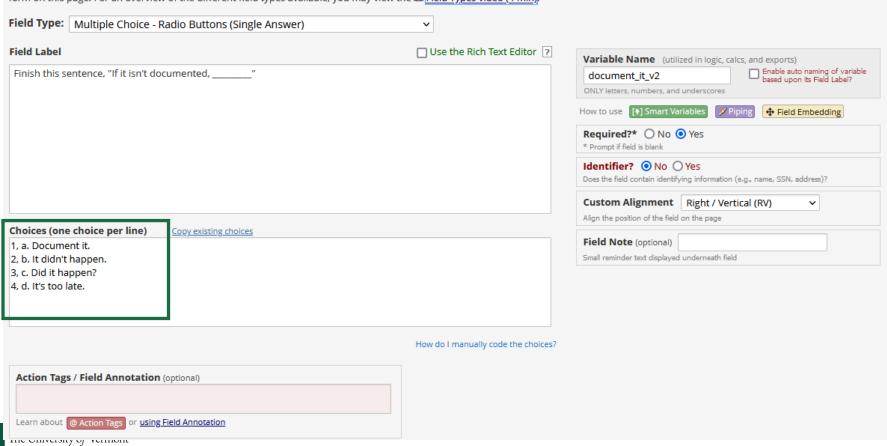## November (02, 04, 09, 11) 2021, 2:00pm-4:30pm (Zoom)

*Attendance at this program has been approved for **10 contact hours** of research specific continuing education on applications for Maintenance of ACRP's CCRC®, CCRA®, CPI®, or ACRP-CP® certification designations.*
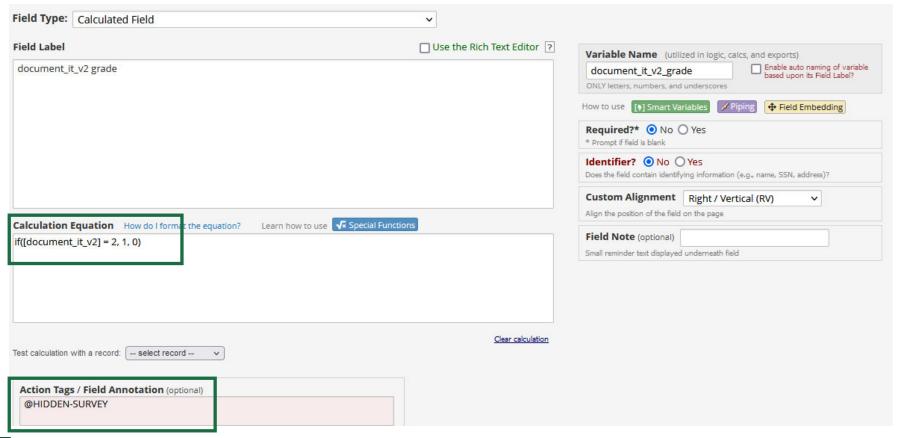
Scoring Surveys

Scoring Surveys

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 - Radio Buttons (Single Answer) ▾

Field Label   ☐ Use the Rich Text Editor ?

Finish this sentence, "If it isn't documented, _____"

Choices (one choice per line)   Copy existing choices

1, a. Document it.
2, b. It didn't happen.
3, c. Did it happen?
4, d. It's too late.

How do I manually code the choices?

Action Tags / Field Annotation (optional)

Learn about @ Action Tags or using Field Annotation

Variable Name (utilized in logic, calcs, and exports)

document_it_v2   ☐ Enable auto naming of variable based upon its Field Label?

ONLY letters, numbers, and underscores

How to use [⚡] Smart Variables   ✎ Piping   ✛ Field Embedding

Required?* ○ No ⦿ Yes
* Prompt if field is blank

Identifier? ⦿ No ○ Yes
Does the field contain identifying information (e.g., name, SSN, address)?

Custom Alignment Right / Vertical (RV) ▾
Align the position of the field on the page

Field Note (optional) [   ]
Small reminder text displayed underneath field

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Scoring Surveys

Scoring Surveys

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: Calculated Field

Field Label   ☐ Use the Rich Text Editor ?

Exam Grade

Variable Name (utilized in logic, calcs, and exports)

exam_grade   ☐ Enable auto naming of variable based upon its Field Label?

ONLY letters, numbers, and underscores

How to use [⚡] Smart Variables   ✏ Piping   ✛ Field Embedding

Required?* ⦿ No ○ Yes
* Prompt if field is blank

Identifier? ⦿ No ○ Yes
Does the field contain identifying information (e.g., name, SSN, address)?

Custom Alignment Right / Vertical (RV)
Align the position of the field on the page

Calculation Equation   How do I format the equation?   Learn how to use √x Special Functions

[registration_arm_1][ctgov_v2_grade]+[registration_arm_1][rpo_v2_grade]+[registration_arm_1]
[essential_doc_v2_grade]+[registration_arm_1][policies_v2_grade]+[registration_arm_1][financial_v2_grade]+
[registration_arm_1][billing_plan_v2_grade]+[registration_arm_1][pi_role_v2_grade]+[registration_arm_1]
[epic_v2_grade]+[registration_arm_1][compliance_v2_grade]+[registration_arm_1][ae_v2_grade]+[registration_arm_1]
[documentation_v2_grade]+[registration_arm_1][credentialing_v2_grade]+[registration_arm_1]
[commons_v2_grade]+[registration_arm_1][epic_kp_v2_grade]+[registration_arm_1][redcap_v2_grade]+
[registration_arm_1][reg_binder_v2_grade]+[registration_arm_1][document_it_v2_grade]+[registration_arm_1]

Clear calculation

Field Note (optional) [   ]
Small reminder text displayed underneath field

Test calculation with a record: -- select record --

Action Tags / Field Annotation (optional)

[   ]

Learn about @ Action Tags or using Field Annotation

Save   Cancel

Matrix Fields

Matrix Fields

Brief Problem Monitor - Youth Form

		Not True	Somewhat True	Very True
1)	**I act too young for my age** * must provide value	○	○	○
				reset
2)	**I argeu a lot** * must provide value	○	○	○
				reset
3)	**I fail to finish things I start** * must provide value	○	○	○
				reset
4)	**I have trouble concentrating or paying attention** * must provide value	○	○	○
				reset
5)	**I have trouble sitting still** * must provide value	○	○	○
				reset
6)	**I destroy things belonging to me** * must provide value	○	○	○
				reset
7)	**I disobey my parents** * must provide value	○	○	○
				reset
8)	**I disobey at school** * must provide value	○	○	○
				reset
9)	**I feel worthless or inferior** * must provide value	○	○	○
				reset
10)	**I act without stopping to think** * must provide value	○	○	○
				reset
11)	**I am too fearful or anxious** * must provide value	○	○	○
				reset
12)	**I feel too guilty** * must provide value	○	○	○
				reset
13)	**I am self-conscious or easily embarrassed** * must provide value	○	○	○
				reset
14)	**I am inattentive or easily distracted** * must provide value	○	○	○
				reset
15)	**I am stubborn** * must provide value	○	○	○
				reset
16)	**I have a hot temper** * must provide value	○	○	○
				reset
17)	**I threaten to hurt people** * must provide value	○	○	○
				reset
18)	**I am unhappy, sad, or depressed** * must provide value	○	○	○
				reset
19)	**I worry a lot** * must provide value	○	○	○
				reset

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Field Embedding

Field Embedding

Field Type: Multiple Choice - Radio Buttons (Single Answer)

Field Label   ☐ Use the Rich Text Editor ?

What is your role?

Choices (one choice per line)   Copy existing choices
1, Principal Investigator
2, Research Coordinator
3, Research Nurse
4, Other   {role_other}

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Field Embedding

Field Embedding

Field Embedding

Field Embedding

Field Embedding

Name:	Jennifer Holmes	DOB:			M-D-Y
Role:	Clinical Research Monitor	SSN (last 4):			
Organization:	Other Company				
Organization Address:					
Street					
City					
State					
Zip Code:					
Work Phone:					
Work Email:	jennifer.holmes@med.uvm.edu				
Home Address:					
Street					
City					
State					
Zip Code:					
Supervisor Name:					
Supervisor Phone:					
Supervisor Email:					
Reason for Request:	○ Epic Access for external research monitor reset				

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Repeating Instruments and Events

Repeating Instruments and Events

Repeating Instruments and Events

Repeating Instruments and Events

Repeating Instruments and Events

Repeating Instruments and Events

Repeating Instruments and Events

AE Report

Record ID record_id	Repeat Instrument redcap_repeat_instrument	Repeat Instance redcap_repeat_instance	Adverse Event Description ae_des	AE Start Date ae_start_date	AE Grade/Severity ae_grade	Relationship to study treatment (PI: Do you consider that there ... he investigational product?) ae_relationship	Relationship to non-study treatment ae_rel_non_tx	Relationship to study procedure ae_procedure	Action Taken ae_action	Did the AE cause the subject to discontinue from the study? ae_discont	Seriousness of AE ae_seriousness	AE Outcome (Resolved/or end of study) ae_outcome	If Recovered / resolved with sequelae, please specify sequelae: ae_sequelae	AE Stop Date ae_stop_date
UVM0001														
UVM0001	Adverse Event Form	1	Anemia	04-03-2022 10:58	Severe (Grade 3) (3)	Related (1)	Related (1)	Related (1)	Drug withdrawal (2)	No (0)	Not Serious (AE) (1)	Recovered / resolved (2)		04-06-2022 10:59
UVM0001	Adverse Event Form	2	Hypertension	04-04-2022 11:03	Severe (Grade 3) (3)	Related (1)	Not Related (2)	Not Related (2)	Dose not changed (1)	No (0)	Serious (SAE) (2)	Not recovered / not resolved (1)		04-06-2022 11:04

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Scheduling

Arm name: **Arm 1**

	Event #	Days Offset	Offset Range Min / Max	Event Name
🖉 ✖	1	-1	-15/+0	General Forms
🖉 ✖	2	0	-14/+0	Day 1 - Visit
🖉 ✖	3	7	-3/+3	Day 8 - Phone Call
🖉 ✖	4	28	-3/+3	Day 29 - Visit
🖉 ✖	5	35	-3/+3	Day 36 - Phone Call
🖉 ✖	6	56	-3/+3	Day 57 - Visit
🖉 ✖	7	89	-5/+5	Day 90 - Visit
🖉 ✖	8	179	-10/+10	Day 180 - Visit
🖉 ✖	9	359	-15/+15	Day 360 - Visit
🖉 ✖	10	729	-30/+30	Day 730 - Visit
🖉 ✖	11	730	-0/+0	Unscheduled Visit
🖉 ✖	12	731	-0/+0	Miscellaneous Forms

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Scheduling
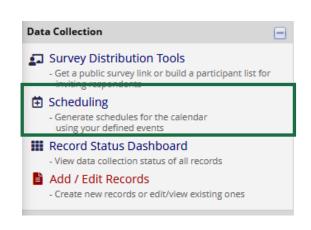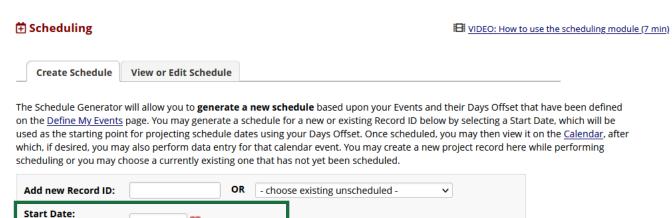
Scheduling

Projected Schedule for "004" (NOTE: The dates below have NOT yet been scheduled.)

The projected schedule below was automatically generated for **Record ID "004"** based on your pre-defined Events for **Arm 1**. You may change the value of any dates generated below simply by clicking inside the date box and selecting a new date. Any dates generated below that fall on weekends will be listed in red. Click the *Create Schedule* button to finalize this schedule, which will then be added to the Calendar.

	Time (optional)	**Date / Day of Week**	**Event Name**
✖		03/23/2022 Wednesday Range min: 03/08/2022	General Forms
✖		03/24/2022 Thursday Range min: 03/10/2022	Day 1 - Visit
✖		03/31/2022 Thursday Range: 03/28/2022 - 04/03/2022	Day 8 - Phone Call
✖		04/21/2022 Thursday Range: 04/18/2022 - 04/24/2022	Day 29 - Visit
✖		04/28/2022 Thursday Range: 04/25/2022 - 05/01/2022	Day 36 - Phone Call
✖		05/19/2022 Thursday Range: 05/16/2022 - 05/22/2022	Day 57 - Visit
✖		06/21/2022 Tuesday Range: 06/16/2022 - 06/26/2022	Day 90 - Visit
✖		09/19/2022 Monday Range: 09/09/2022 - 09/29/2022	Day 180 - Visit
✖		03/18/2023 Saturday Range: 03/02/2023 - 04/02/2023	Day 360 - Visit
✖		03/22/2024 Friday Range: 02/20/2024 - 04/21/2024	Day 730 - Visit
✖		03/23/2024 Saturday	Unscheduled Visit
✖		03/24/2024 Sunday	Miscellaneous Forms

Create Schedule   Cancel

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Calendar

Calendar

Multi-Language Management

Multi-Language Management

On this page you can create and configure multiple display languages for your project (for surveys, data entry forms, alerts, survey invitations, etc.) or alternatively export and import translations using a file. Do not forget to **save your changes** (keyboard shortcut: CTRL-S) at any time on this page when you are done editing. NOTE: This page will not auto-translate your text for you, but provides tools so that you may easily translate them yourself. Learn more.

⊕ Languages   **⚙ Settings**   — 🖫 Save Changes

Manage the available languages in this project using the table and options below by following these steps:

1. Create your default language (i.e., used when creating your fields, instruments, etc.). This will serve as the reference for the other languages.
2. Add other languages that you wish to offer as a translation of the default language.
3. Translate your default text into different languages by clicking the tabs above or the icons to the right of each language below.
4. Test your translations by switching back and forth between languages on your data entry forms and/or surveys. Note that only active languages will be available for selection on those places.
5. Learn how to implement some language-related action tags, such as @LANGUAGE-SET, if desired. Learn about them here: @ Action Tags

+ Add a new language

Currently, there are no languages set up in this project.

(Optional) For surveys, designate a field for storing a participant's language preference
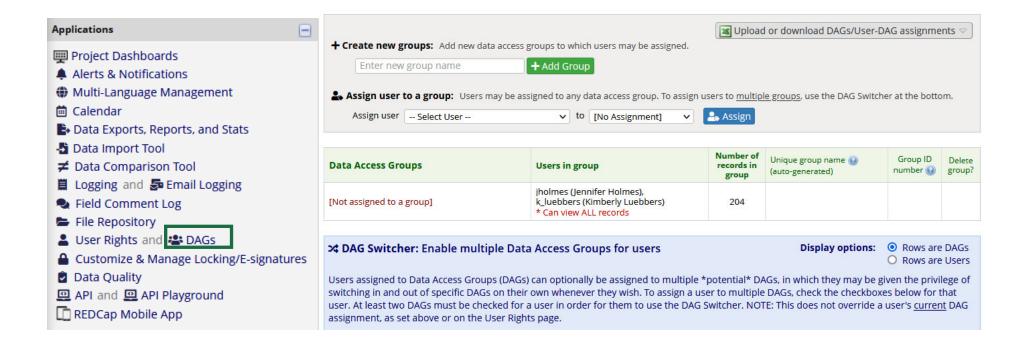
Use this feature to set a source for a participant's language preference (their initial language setting). This must be a radio or dropdown field with choices matching the language ID you have defined for each language above, or a text box field with no field validation. The value of this field can be set manually through data entry/data import or with the @LANGUAGE-CURRENT-FORM/SURVEY action tags. The value of this setting will dictate the language used for rendering Automated Survey Invitations, Alerts, and PDFs. Text box fields are denoted with [T] while radio and dropdown fields are denoted with [R] and, in case they include all language keys, are highlighted with a green background.

A⊡ Language preference field: `-- Select a field --` ⌄

NOTE: Similar to a designated email field, when this field exists on multiple events in longitudinal projects, on a repeating instrument, or on a repeating event, the field's value will be synchronized across all instances/events so that changing it in one location will change the value across all events/instances where the field appears.

Multi-Center Study – Data Access Groups (DAGs)

Automated Survey Invitations (ASIs)

ASIs are used to have invitations sent to your survey participants, but rather than scheduling them manually, the invitations can be scheduled to be **sent automatically** by REDCap **based upon specific conditions**, such as if the participant completes another survey in your project or if certain data values for a record are fulfilled.
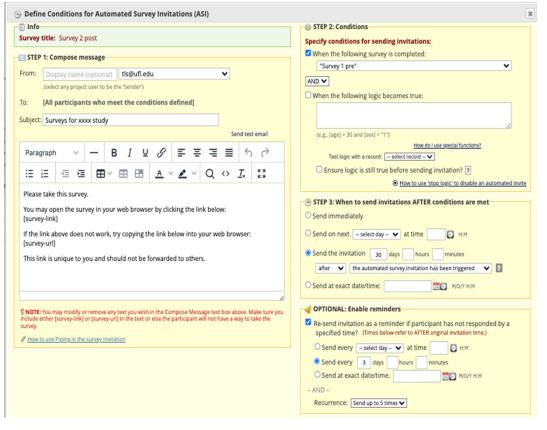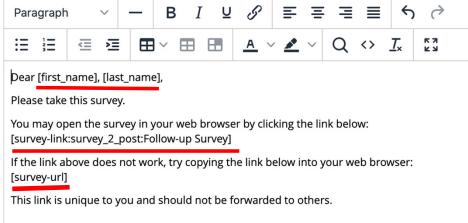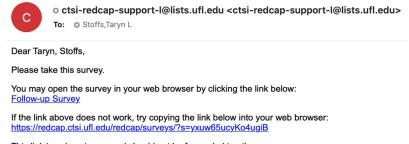
Automated Survey Invitations (ASIs) Setup

Customize ASI emails with **piping or smart variables**
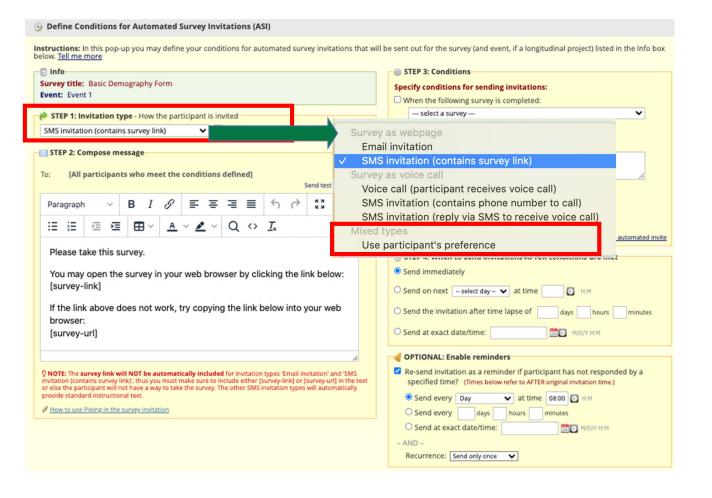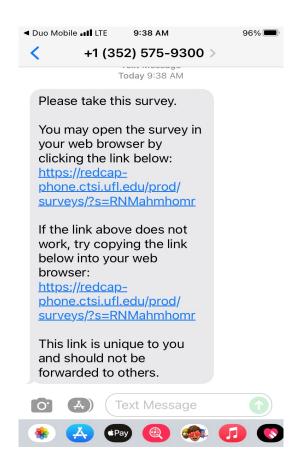
Automated Survey Invitations (ASIs) Using Twilio (SMS)

REDCap has the capability to make voice calls and send **SMS text messages for surveys** by using a third-party web service named Twilio (www.twilio.com).

Automated Survey Invitations (ASIs) Using Twilio (SMS)

Action Tags

Action Tags are a way to **customize** the data entry experience for surveys and data entry forms.
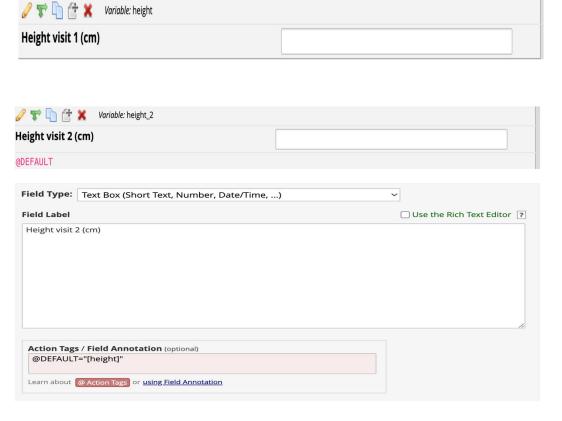
Action Tags are special terms that begin with the '@' sign that can be placed inside a field's **Field Annotation** box when working in the Online Designer.

You may add a new project field to this data collection instrument by completing the fields below and clicking the Save butto
form on this page. For an overview of the different field types available, you may view the ⊞ Field Types video (4 min).

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

Field Label   ☐ Use the Rich Text Editor ?

Today's date

Action Tags / Field Annotation (opti nal
@READONLY-SURVEY @TODAY

Learn about @ Action Tags or using Field Annotation

@TODAY – fills in the date of when the survey was accessed.
@READONLY-SURVEY – the value cannot be changed by the survey taker, it can only be viewed.

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@DEFAULT

Variable: height

Height visit 1 (cm)

Height visit 1 (cm) 78

Variable: height_2

Height visit 2 (cm)

@DEFAULT

Height visit 2 (cm) 78

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

Field Label ☐ Use the Rich Text Editor [?]

Height visit 2 (cm)

Action Tags / Field Annotation (optional)
```
@DEFAULT="[height]"
```
Learn about [@ Action Tags] or using Field Annotation

@DEFAULT="[first_name] [last_name]"

For multiple choice fields:
@DEFAULT="[field_name:**value**]"
@DEAFULT="[race:value]"

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@HIDECHOICE

Name of Physician

- ○ Dr. Kruger
- ○ Dr. Vorhees
- ○ Dr. Giggles
- ○ Dr. Myers
- ○ Dr. Sawyer
- ○ Dr. Lovecraft
- ○ Dr. Bates
- ○ Dr. Feelgood

Choices (one choice per line)   Copy existing choices

```
1, Dr. Kruger
2. Dr. Vorhees
3, Dr. Giggles
4, Dr. Myers
5. Dr. Sawyer
6. Dr. Lovecraft
7. Dr. Bates
```

Action Tags / Field Annotation (optional)

@HIDECHOICE='3,6'

Learn about @ Action Tags or using Field Annotation

Name of Physician

- ○ Dr. Kruger
- ○ Dr. Vorhees
- ○ Dr. Myers
- ○ Dr. Sawyer
- ○ Dr. Bates
- ○ Dr. Feelgood

@CALCDATE

@NONEOFTHEABOVE=98

@MAXCHECKED=3

Smart Variables

Smart Variables are similar to Action tags, except they allow you to reference information **other than data fields** (aka metadata).

Smart variables can be referenced in **branching logic, Alerts & Notifications, in descriptive text fields, inside of data fields, and conditional logic for ASIs**.

Smart Variables can be used in conjunction with Action Tags.

Smart Variables are easily distinguishable from field variable names because Smart Variables will have **dashes** (-) and **colons** (:) whereas variable names cannot.

Most Popular Smart Variables

Branching Logic

[user-name] = "tls"

[user-role-label] = "Admin"

[record-dag-name] = "UF"

[event-name] = "baseline_arm_1"

Repeating forms or events

[previous-instance][height]

[previous-event-name][heart_rate]

Alerts & Notifications

[form-url:instrument]

[form-url:health_questionnaire]

Health Questionnaire

[form-link:instrument:Custom Text]

[form-link:demographics:Click here to view the Demographics form]

Click here to view the Demographics form

[smart-variables] + @ACTION TAGS

@DEFAULT="[previous-instance][height]"
@DEFAULT="[user-name]"

Alerts & Notifications
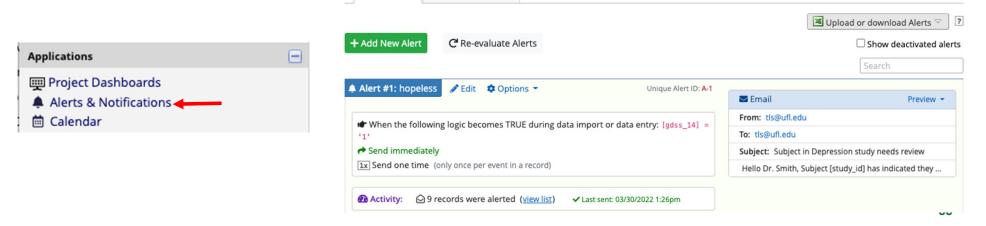
The Alerts & Notifications feature allows you to construct alerts and send **customized** emails (or text messages) **to study participants or members of the study team**. These notifications may be sent to **one or more recipients** and can be triggered or scheduled when a form/survey is saved and/or based on conditional logic whenever data is saved or imported.

Notifications can include separate attachments and/or include attachments from File Upload fields from a record.
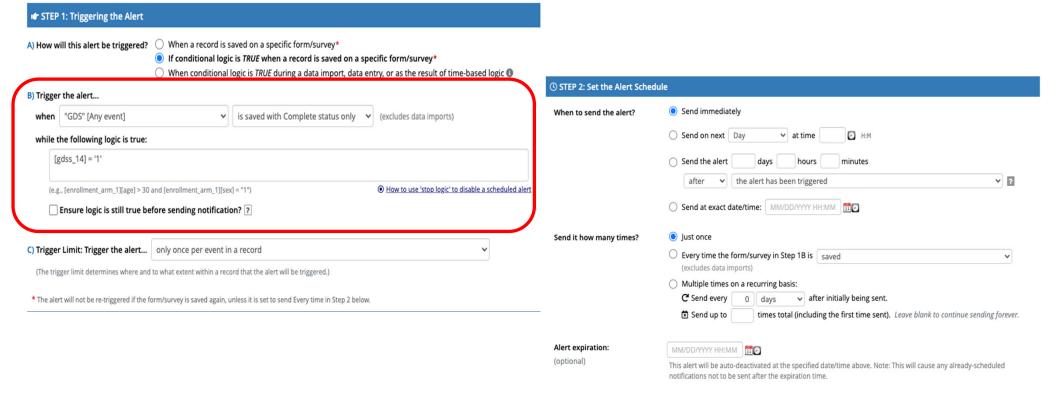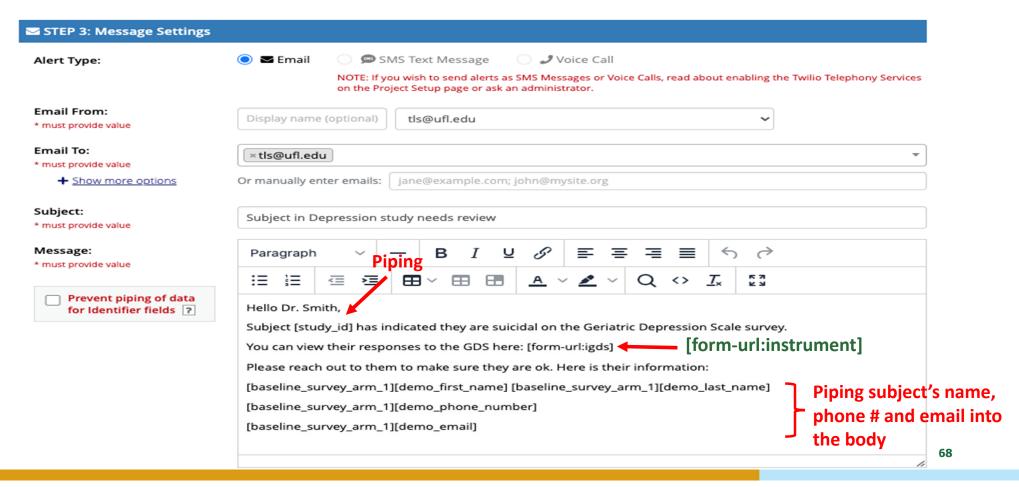
Alerts & Notifications

STEP 1: Triggering the Alert

A) How will this alert be triggered?
- ○ When a record is saved on a specific form/survey *
- ● If conditional logic is *TRUE* when a record is saved on a specific form/survey *
- ○ When conditional logic is *TRUE* during a data import, data entry, or as the result of time-based logic ⓘ

B) Trigger the alert...

when   "GDS" [Any event]   ▾   is saved with Complete status only ▾   (excludes data imports)

while the following logic is true:

[gdss_14] = '1'

(e.g., [enrollment_arm_1][age] > 30 and [enrollment_arm_1][sex] = "1")   ⊙ How to use 'stop logic' to disable a scheduled alert

☐ Ensure logic is still true before sending notification? ?

C) Trigger Limit: Trigger the alert...   only once per event in a record   ▾

(The trigger limit determines where and to what extent within a record that the alert will be triggered.)

* The alert will not be re-triggered if the form/survey is saved again, unless it is set to send Every time in Step 2 below.

STEP 2: Set the Alert Schedule

When to send the alert?
- ● Send immediately
- ○ Send on next [Day ▾] at time [____] H:M
- ○ Send the alert [____] days [____] hours [____] minutes
  [after ▾] [the alert has been triggered ▾] ?
- ○ Send at exact date/time: [MM/DD/YYYY HH:MM] 📅

Send it how many times?
- ● Just once
- ○ Every time the form/survey in Step 1B is [saved ▾]
  (excludes data imports)
- ○ Multiple times on a recurring basis:
  ↻ Send every [0] [days ▾] after initially being sent.
  📅 Send up to [____] times total (including the first time sent). *Leave blank to continue sending forever.*

Alert expiration:
(optional)   [MM/DD/YYYY HH:MM] 📅

This alert will be auto-deactivated at the specified date/time above. Note: This will cause any already-scheduled notifications not to be sent after the expiration time.

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Alerts & Notifications - example alert to study team member

Alerts & Notifications – example alert

Subject in Depression study needs review

tls@ufl.edu

To: Stoffs,Taryn L

Hello Dr. Smith,

Subject 101068 has indicated they are suicidal on the Geriatric Depression Scale survey.

You can view their responses to the GDS here: https://redcap.ctsi.ufl.edu/redcap/redcap_v11.3.4/DataEntry/index.php?pid=267&page=gds&id=101068&event_id=1867&instance=1

Please reach out to them to make sure they are ok. Here is their information:

John Doe

(352) 265-0111

tls@ufl.edu
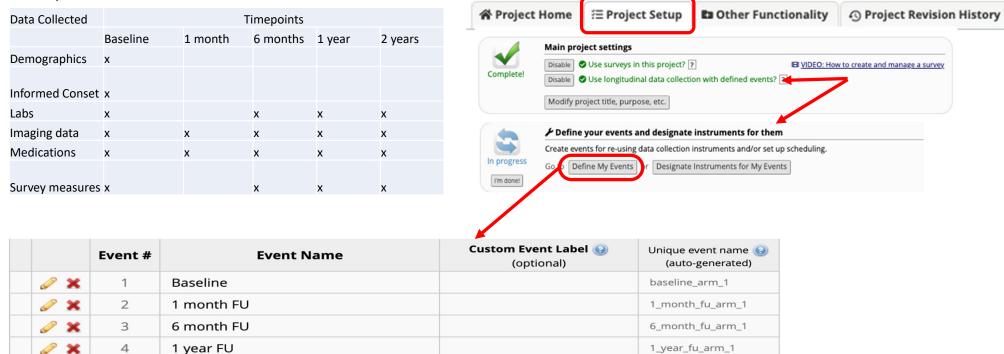
Longitudinal Studies

Longitudinal studies collect data on a subject over **multiple time points/visits**. Many times, the same data collection forms/surveys are used at multiple time points.

Study Protocol

Data Collected	Timepoints				
	Baseline	1 month	6 months	1 year	2 years
Demographics	x				
Informed Conset	x				
Labs	x		x	x	x
Imaging data	x	x	x	x	x
Medications	x	x	x	x	x
Survey measures	x		x	x	x

		Event #	Event Name	Custom Event Label (optional)	Unique event name (auto-generated)
✏	✖	1	Baseline		baseline_arm_1
✏	✖	2	1 month FU		1_month_fu_arm_1
✏	✖	3	6 month FU		6_month_fu_arm_1
✏	✖	4	1 year FU		1_year_fu_arm_1
✏	✖	5	2 year FU		2_year_fu_arm_1

Project Setup | **Define My Events** | **Designate Instruments for My Events**

Data Collection Instrument	Baseline (1)	1 month FU (2)	6 month FU (3)	1 year FU (4)	2 year FU (5)
Informed Consent	✔				
Demographics (survey)	✔				
Labs	✔		✔	✔	✔
Concomitant Medications	✔	✔	✔		
Imaging	✔	✔	✔	✔	✔
GDS (survey)	⬇		⬇	⬇	⬇
GCSI (survey)	⬇		⬇	⬇	⬇
PHQ 9	✔		✔	✔	✔
PROMIS Bank v1.0 - Anxiety (survey)	✔		✔	✔	✔
PROMIS Bank v1.1 - Pain Interference (survey)	✔		✔	✔	✔

Event Name	Custom Event Label (optional)	Unique event name (auto-generated)
Baseline		baseline_arm_1
1 month FU		1_month_fu_arm_1
6 month FU		6_month_fu_arm_1
1 year FU		1_year_fu_arm_1
2 year FU		2_year_fu_arm_1
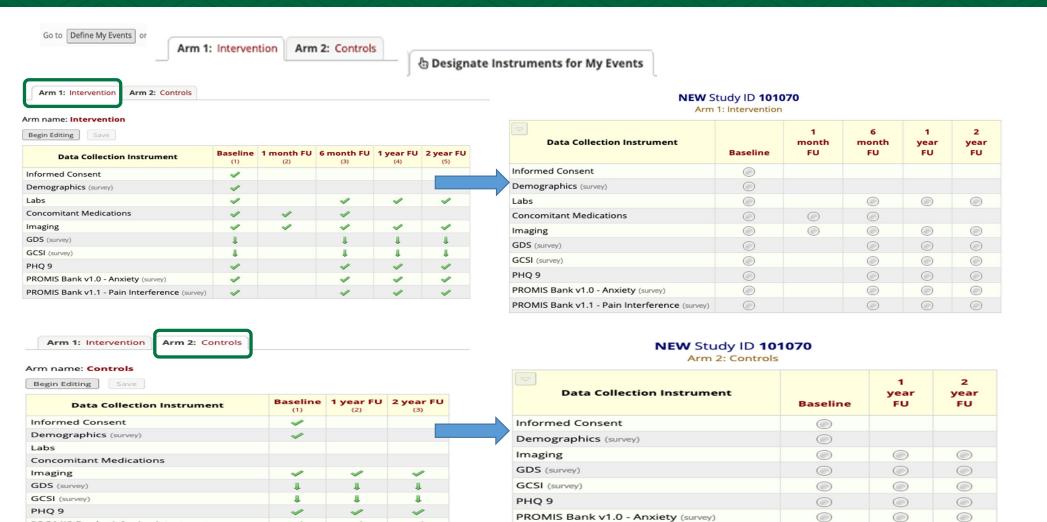
Record Home page

Data Collection Instrument	Baseline	1 month FU	6 month FU	1 year FU	2 year FU
Informed Consent	○				
Demographics (survey)	○				
Labs	○		○	○	○
Concomitant Medications	○	○	○		
Imaging	○	○	○	○	○
GDS (survey)	○		○	○	○
GCSI (survey)	○		○	○	○
PHQ 9	○		○	○	○
PROMIS Bank v1.0 - Anxiety (survey)	○		○	○	○
PROMIS Bank v1.1 - Pain Interference (survey)	○		○	○	○

Data Collected	Timepoints				
	Baseline	1 month	6 months	1 year	2 years
Demographics	x				
Informed Consent	x				
Labs	x		x	x	x
Imaging data	x	x	x	x	x
Medications	x	x	x	x	x
Survey measures	x		x	x	x

Multiple Arms

For longitudinal studies, you may want to create multiple arms if the study has **two (or more) different types of participants**, such as a treatment and a control group, where the two groups will have **different study time points** or **different data collection forms** that need to be filled out.

Each arm can have as many events as you wish.

Go to Define My Events or

Arm 1: Intervention   Arm 2: Controls

👆 Designate Instruments for My Events

Arm 1: Intervention   Arm 2: Controls

Arm name: **Intervention**

Begin Editing   Save

Data Collection Instrument	Baseline (1)	1 month FU (2)	6 month FU (3)	1 year FU (4)	2 year FU (5)
Informed Consent	✔				
Demographics (survey)	✔				
Labs	✔		✔	✔	✔
Concomitant Medications	✔	✔	✔		
Imaging	✔	✔	✔	✔	✔
GDS (survey)	⬇		⬇	⬇	⬇
GCSI (survey)	⬇		⬇	⬇	⬇
PHQ 9	✔		✔	✔	✔
PROMIS Bank v1.0 - Anxiety (survey)	✔		✔	✔	✔
PROMIS Bank v1.1 - Pain Interference (survey)	✔		✔	✔	✔

NEW Study ID **101070**
Arm 1: Intervention

Data Collection Instrument	Baseline	1 month FU	6 month FU	1 year FU	2 year FU
Informed Consent	◎				
Demographics (survey)	◎				
Labs	◎		◎	◎	◎
Concomitant Medications	◎	◎	◎		
Imaging	◎	◎	◎	◎	◎
GDS (survey)	◎		◎	◎	◎
GCSI (survey)	◎		◎	◎	◎
PHQ 9	◎		◎	◎	◎
PROMIS Bank v1.0 - Anxiety (survey)	◎		◎	◎	◎
PROMIS Bank v1.1 - Pain Interference (survey)	◎		◎	◎	◎

Arm 1: Intervention   Arm 2: Controls

Arm name: **Controls**

Begin Editing   Save

Data Collection Instrument	Baseline (1)	1 year FU (2)	2 year FU (3)
Informed Consent	✔		
Demographics (survey)	✔		
Labs			
Concomitant Medications			
Imaging	✔	✔	✔
GDS (survey)	⬇	⬇	⬇
GCSI (survey)	⬇	⬇	⬇
PHQ 9	✔	✔	✔
PROMIS Bank v1.0 - Anxiety (survey)	✔	✔	✔
PROMIS Bank v1.1 - Pain Interference (survey)	✔	✔	✔

NEW Study ID **101070**
Arm 2: Controls

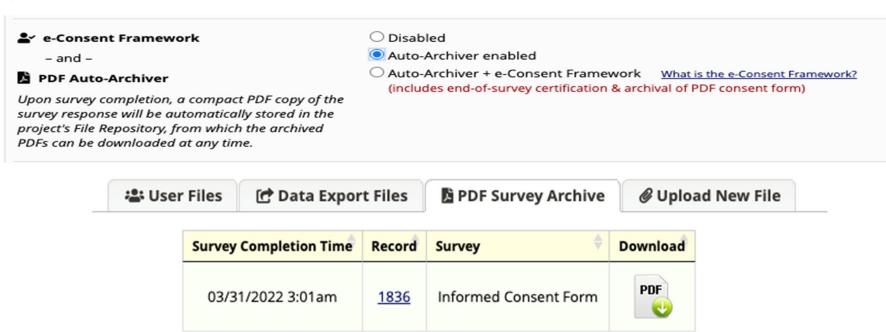| Data Collection Instrument	Baseline	1 year FU	2 year FU
Informed Consent	◎		
Demographics (survey)	◎		
Imaging	◎	◎	◎
GDS (survey)	◎	◎	◎
GCSI (survey)	◎	◎	◎
PHQ 9	◎	◎	◎
PROMIS Bank v1.0 - Anxiety (survey)	◎	◎	◎
PROMIS Bank v1.1 - Pain Interference (survey)	◎	◎	◎

eConsent Framework

Version control

Automatic storage of PDF copy of the completed survey in the File Repository
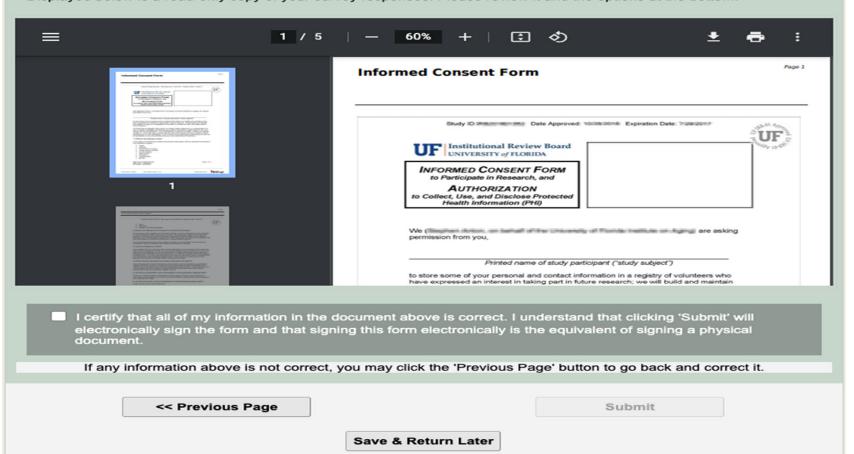
Can be used for *any* survey

Additional REDCap Resources

Videos on the REDCap Consortium site: https://projectredcap.org/resources/videos/

Feature-specific videos can be found throughout REDCap, i.e., a video on how to create a report is found on the Report Builder page and a video on how to create Project Dashboards is on the Project Dashboard page.

YouTube (search for "REDCap" or a specific REDCap topic like "REDCap Double Data Entry")

REDCapU: https://www.gotostage.com/channel/redcapu

User guides and videos publicly posted on other institutions' websites (**Google** is your friend!)

"**Data Management for Clinical Research**" – online, free Coursera course, offered by Vanderbilt University (https://www.coursera.org/learn/clinical-data-management?)

Ask your **REDCap Admin** to search the **Training Materials Repository** on the REDCap Consortium site for guides and videos, which only they have access to.

Other Helpful Tips

Reach out to your REDCap Admin!
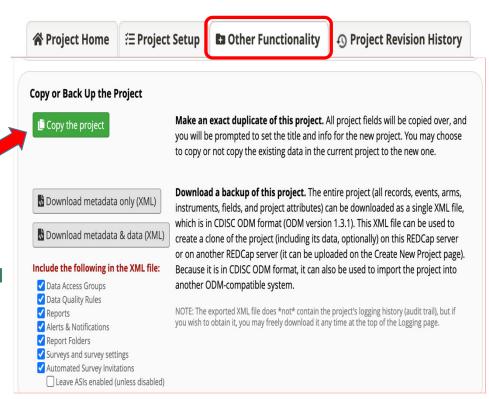
*Be *very specific* with your questions/needs

*Have the project built/configured as much as possible beforehand

*Provide screenshots of error messages!

Make a **copy of your project** for testing major post-production form changes or modifying survey conditions (triggers)

Have a **test record in your production project** to test small changes such as adding branching logic or calculations.

Test your **surveys as surveys**, not as data entry forms. *Survey flows and data entry flows are not the same*.

University of Vermont ~ REDCap Resources

Obtain a UVM REDCap Account   UVM REDCap LOGIN

REDCap Administrator: redcap.administrator@med.uvm.edu

Research Navigator: research.navigator@med.uvm.edu

Commons Page - REDCap Resources

University of Florida ~ REDCap Resources

Introduction to REDCap class (GatorLink account required to access video):
https://mediasite.video.ufl.edu/Mediasite/Play/ee8877f9d00e441d84f80fee824ac7851d

REDCap User Guides: https://www.ctsi.ufl.edu/research/study-design-and-analysis/redcap/redcap-user-guides/

UF REDCap Help Desk: https://redcap.ctsi.ufl.edu/redcap/surveys/?s=DUPrXGmx3L

UF CTSI Data Management Team (informatics): ctsit@ctsi.ufl.edu

UF CTSI Research Design and Data Coordinating Center (study design & statistical analysis):
https://www.ctsi.ufl.edu/research/research-design-and-data-coordinating-center/

UF | Clinical and Translational Science Institute
UNIVERSITY *of* FLORIDA

Boston University ~ REDCap Resources

Access: https://www.bu.edu/ctsi/tools/

REDCap Support: rchelp@bu.edu

Medical University of SC~ REDCap Resources

Request a REDCap consult via SPARCRequest: https://sparc.musc.edu