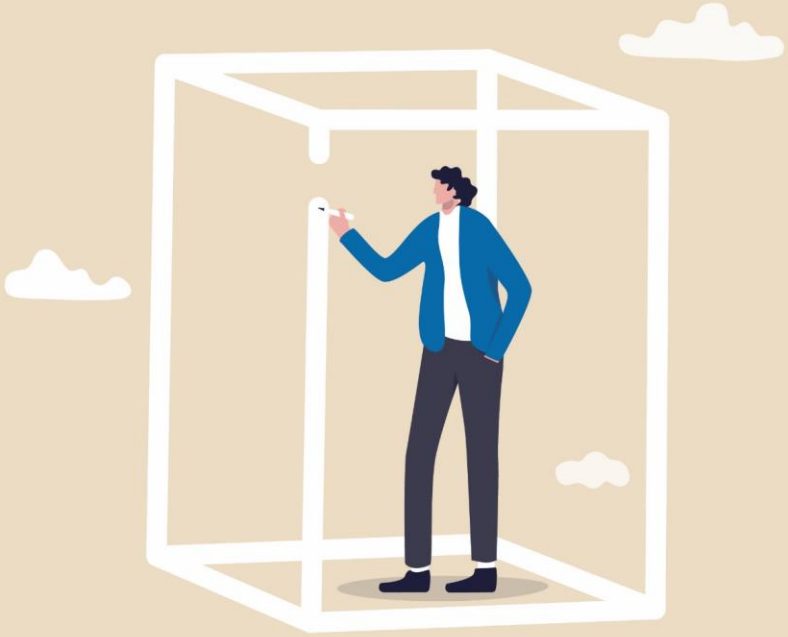

REDCAP IN THE WWAMI REGION

Courtney Howell
REDCap Manager

Gretchen Kuhn
REDCap Admin
University of Washington Medicine

Winter 2024 Virtual Mini-Conference for Research Coordinators

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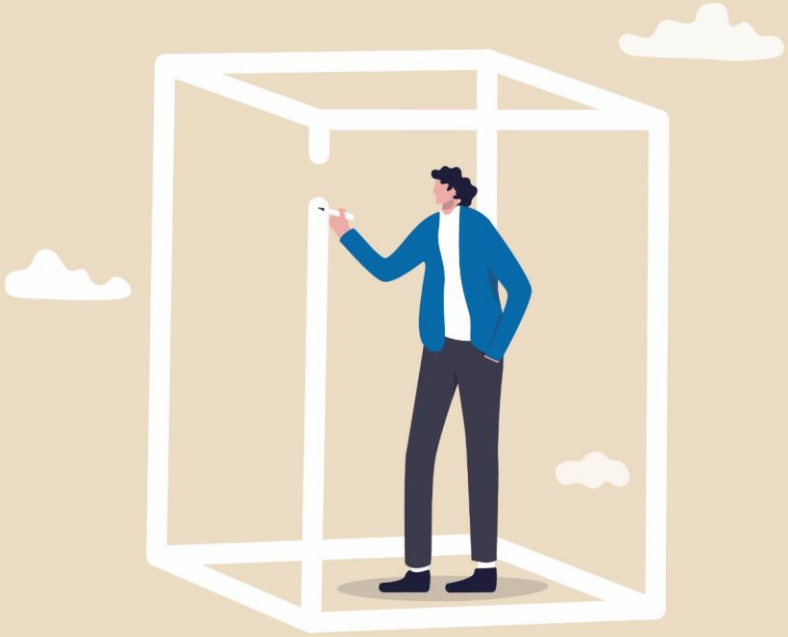


POLL

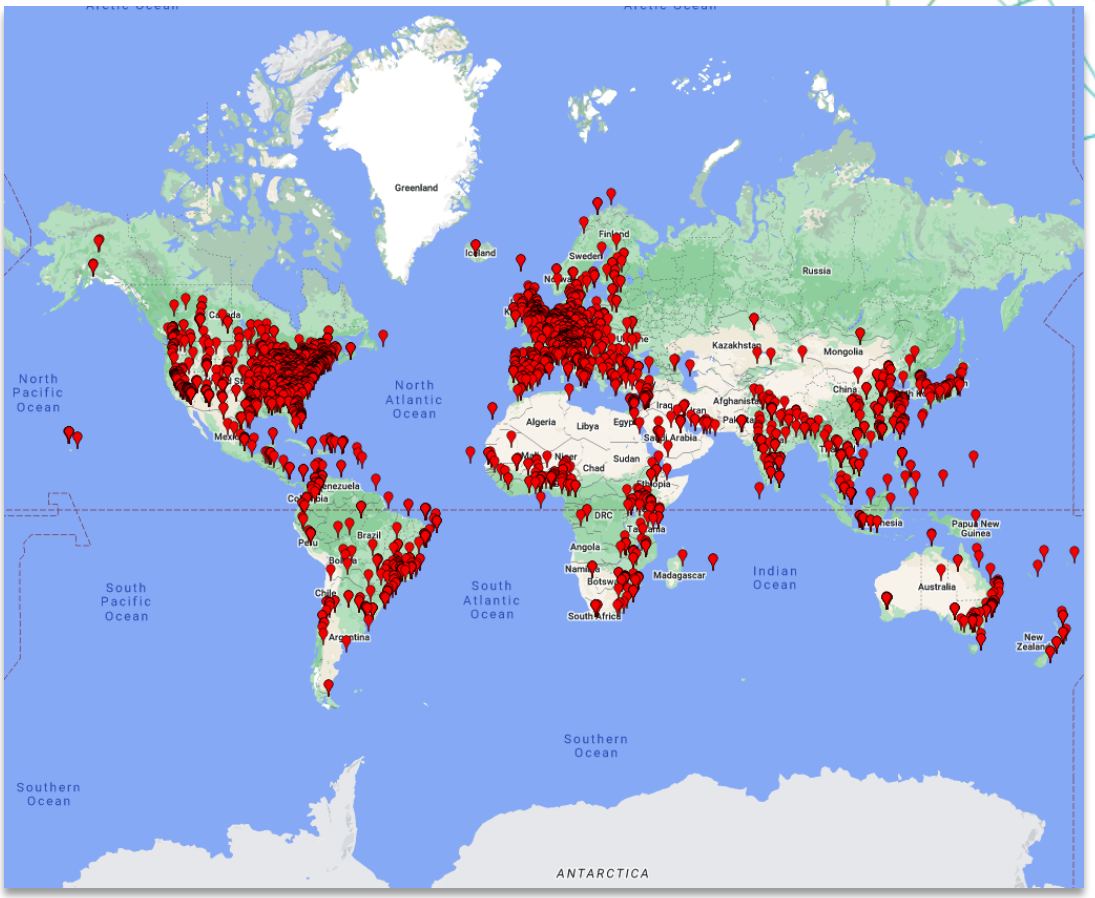
Have you heard of any of the following REDCap features? Send a thumbs-up!

DAGs (Data Access Groups)
REDCap Mobile App
MyCap
@CALCTEXT action tag
Custom Dashboards
API Playground

What is REDCap?

- Electronic Data Capture (EDC)
- Web-based
- Built for research
- HIPAA compliant
- User-friendly
- ITHS REDCap
  - Free to use
  - Highly secure

3 million active users and 6000+ installations worldwide



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Accessing REDCap

University of Washington NetID's

Use your UW NetID to login at:
https://redcap.iths.org
to create an account

Other University ID's

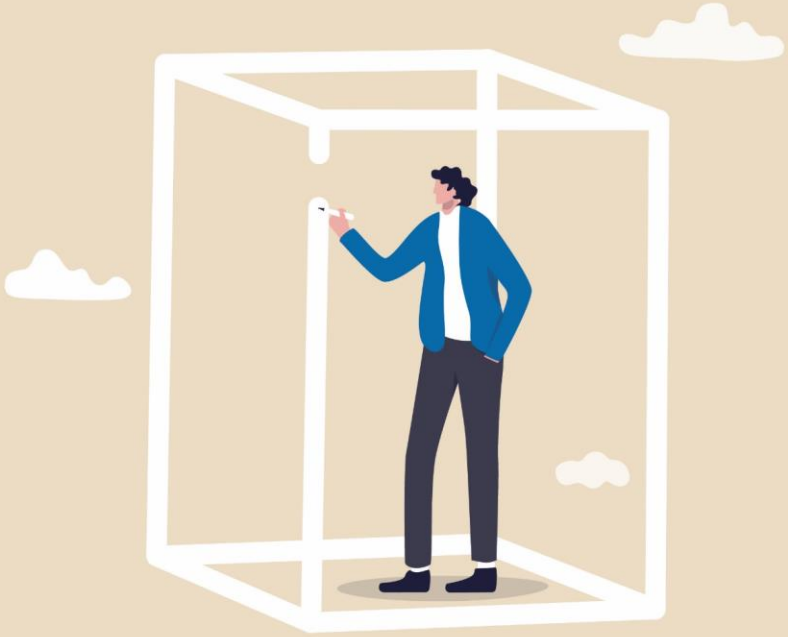
Select universities can log in with their IDs on REDCap

Partner Institutions

Fred Hutch, SCCA, Seattle Children's, PATH, and other WWAMI regional institutions can request IDs

Others

Use ITHS REDCap for free if affiliated with one of our partner institutions and have a sponsor fill out the **ITHS new outside user request form**



FOCUS POINT

Do you have any projects in which you're the only user?

Project Requests / Approvals

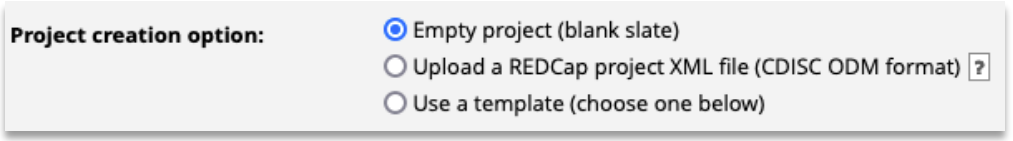
Project requests

Done within one business day

Needed information

- *Project title*
- *Purpose*
  - *If Research provide:*
    - *Principal investigator*
    - *IRB*
    - *Type of research*

Blank slate, XML files & Templates



User Rights

Adding users to your project

Anyone that has a user account on the ITHS REDCap server can be added to your project as a user with a custom set of rights.

Form rights

Hide forms completely, View-only mode or full access

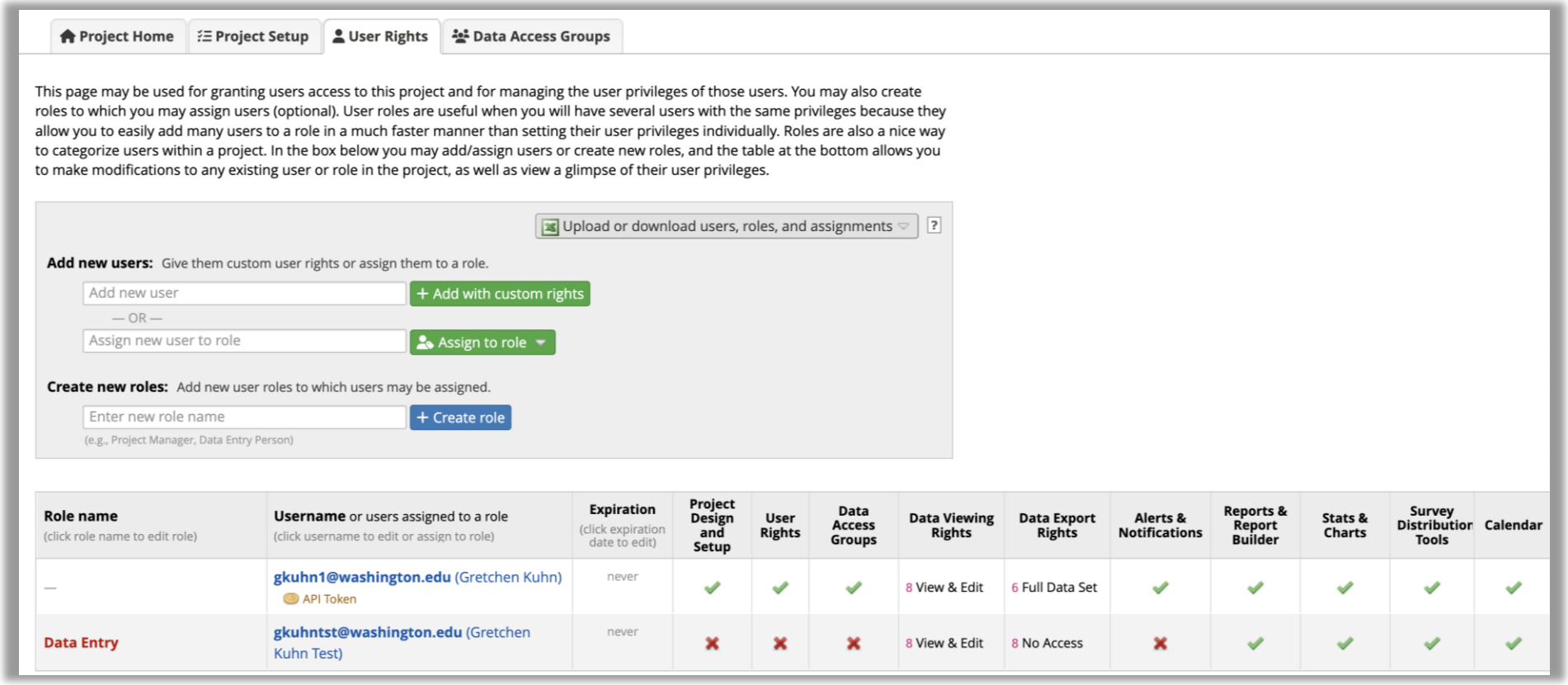
Application rights

Give users only access to applications they need

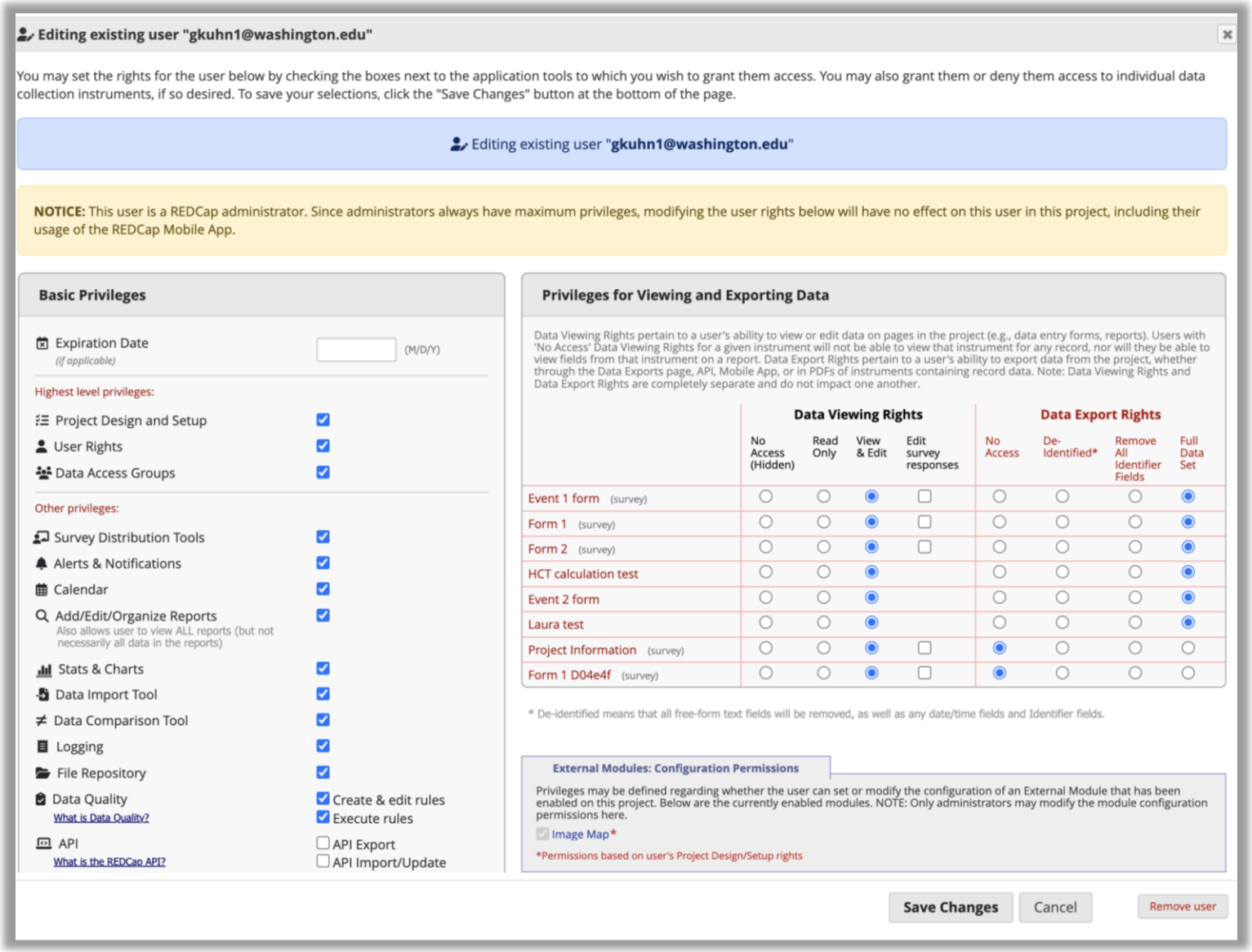
User roles

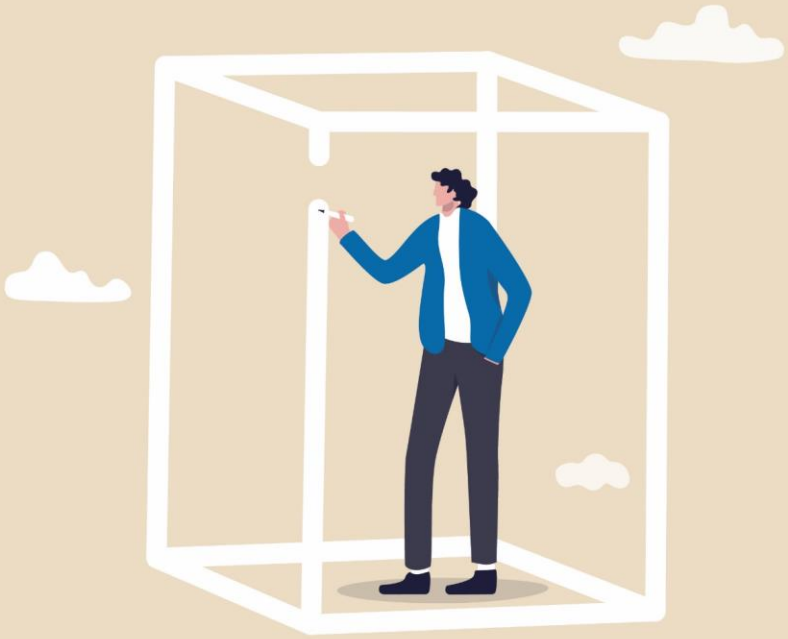
Useful for when you need to add a lot of users with the same rights quickly

User Rights Page



User Rights


Editing existing user "gkuhn1@washington.edu"
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 "gkuhn1@washington.edu"
NOTICE: This user is a REDCap administrator. Since administrators always have maximum privileges, modifying the user rights below will have no effect on this user in this project, including their usage of the REDCap Mobile App.
Basic Privileges
Expiration Date (if applicable)
(M/D/Y)
Highest level privileges:
Project Design and Setup
User Rights
Data Access Groups
Other privileges:
Survey Distribution Tools
Alerts & Notifications
Calendar
Add/Edit/Organize Reports
Also allows user to view ALL reports (but not necessarily all data in the reports)
Stats & Charts
Data Import Tool
Data Comparison Tool
Logging
File Repository
Data Quality
What is Data Quality?
Create & edit rules
Execute rules
API
What is the REDCap API?
API Export
API Import/Update
Privileges for Viewing and Exporting Data
Data Viewing Rights pertain to a user's ability to view or edit data on pages in the project (e.g., data entry forms, reports). Users with 'No Access' Data Viewing Rights for a given instrument will not be able to view that instrument for any record, nor will they be able to view fields from that instrument on a report. Data Export Rights pertain to a user's ability to export data from the project, whether through the Data Exports page, API, Mobile App, or in PDFs of instruments containing record data. Note: Data Viewing Rights and Data Export Rights are completely separate and do not impact one another.
Data Viewing Rights
No Access (Hidden)
Read Only
View & Edit
Edit survey responses
Data Export Rights
No Access
De-identified*
Remove All Identifier Fields
Full Data Set
Event 1 form (survey)
Form 1 (survey)
Form 2 (survey)
HCT calculation test
Event 2 form
Laura test
Project Information (survey)
Form 1 D04e4f (survey)
* De-identified means that all free-form text fields will be removed, as well as any date/time fields and Identifier fields.
External Modules: Configuration Permissions
Privileges may be defined regarding whether the user can set or modify the configuration of an External Module that has been enabled on this project. Below are the currently enabled modules. NOTE: Only administrators may modify the module configuration permissions here.
Image Map*
*Permissions based on user's Project Design/Setup rights
Save Changes
Cancel
Remove user



POLL

Does your research project partner with other groups? These may include:

Partner Institution(s)
Community Partners
Multiple project sites

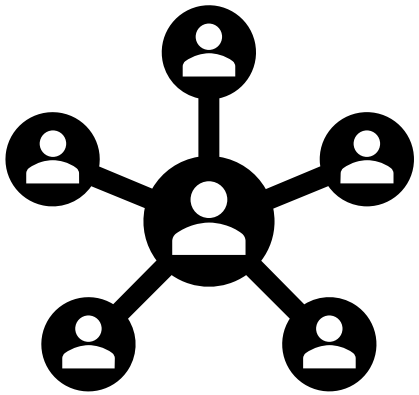
User rights management

Uses / Reasons why?

Roles

Suspending users

Data Access Groups



Uses / Reasons why?

- Compliance
  - HIPAA
- Data Quality
  - Blinding groups of users
- Control your own dataset
  - Exports
- Prevent ”too many cooks in the kitchen"
- Relieving your training burden

User rights management

Uses / Reasons why?

Roles

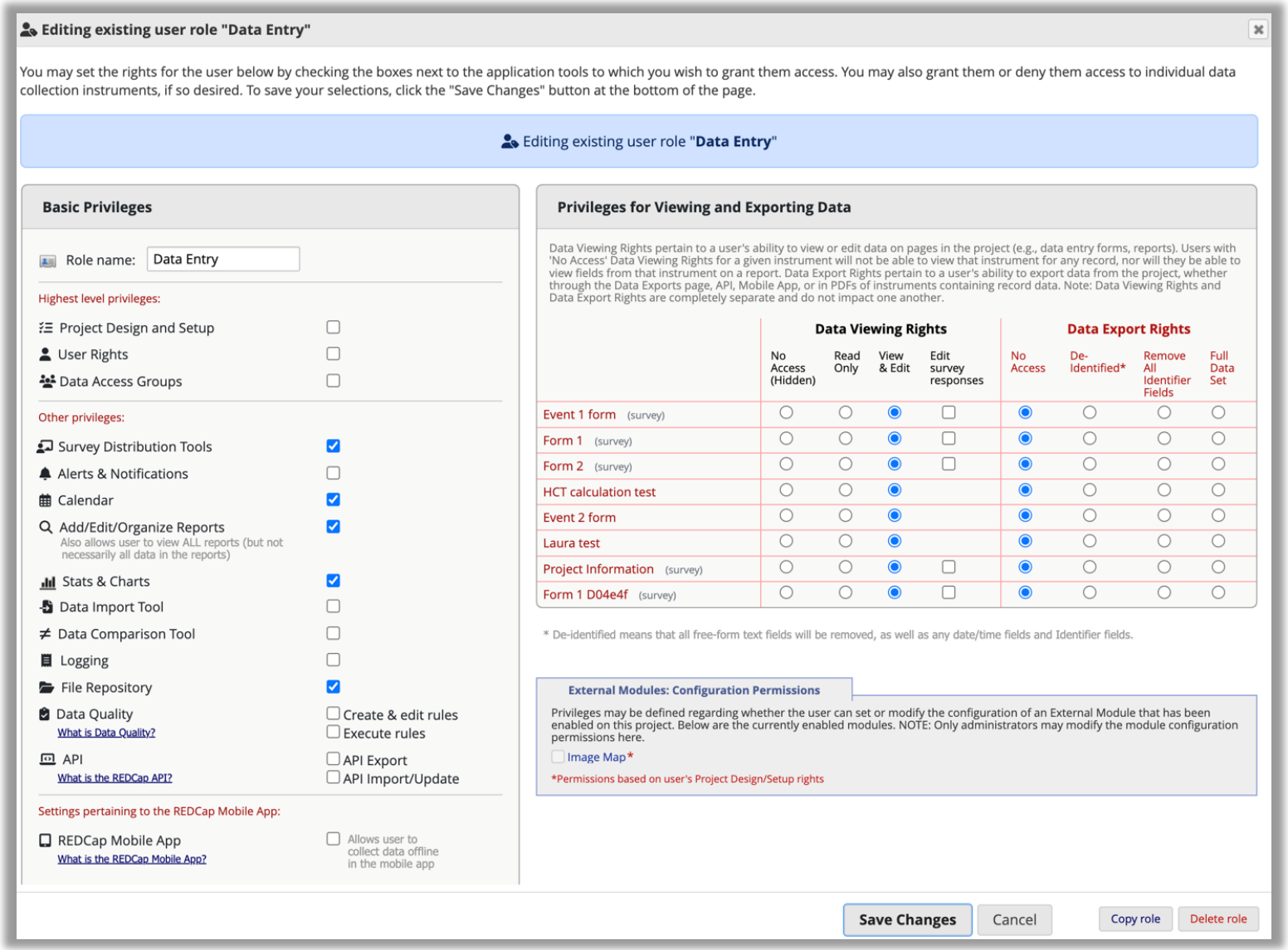
Suspending users

Data Access Groups

User roles

- Allows for quick assignment of previously established rights
  - e.g., Temporary users like medical students
- Forces you to think about who does what
- Examples of common roles:
  - Data entry
  - Project manager/PI
  - User manager
  - Design manager
  - Statistician
  - Research Coordinator

User Roles


Editing existing user role "Data Entry"
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 role "Data Entry"
Basic Privileges
Role name: Data Entry
Highest level privileges:
Project Design and Setup
User Rights
Data Access Groups
Other privileges:
Survey Distribution Tools
Alerts & Notifications
Calendar
Add/Edit/Organize Reports
Also allows user to view ALL reports (but not necessarily all data in the reports)
Stats & Charts
Data Import Tool
Data Comparison Tool
Logging
File Repository
Data Quality
What is Data Quality?
Create & edit rules
Execute rules
API
What is the REDCap API?
API Export
API Import/Update
Settings pertaining to the REDCap Mobile App:
REDCap Mobile App
What is the REDCap Mobile App?
Allows user to collect data offline in the mobile app
Privileges for Viewing and Exporting Data
Data Viewing Rights pertain to a user's ability to view or edit data on pages in the project (e.g., data entry forms, reports). Users with 'No Access' Data Viewing Rights for a given instrument will not be able to view that instrument for any record, nor will they be able to view fields from that instrument on a report. Data Export Rights pertain to a user's ability to export data from the project, whether through the Data Exports page, API, Mobile App, or in PDFs of instruments containing record data. Note: Data Viewing Rights and Data Export Rights are completely separate and do not impact one another.
Data Viewing Rights
No Access (Hidden)
Read Only
View & Edit
Edit survey responses
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No Access
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Remove All Identifier Fields
Full Data Set
Event 1 form (survey)
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HCT calculation test
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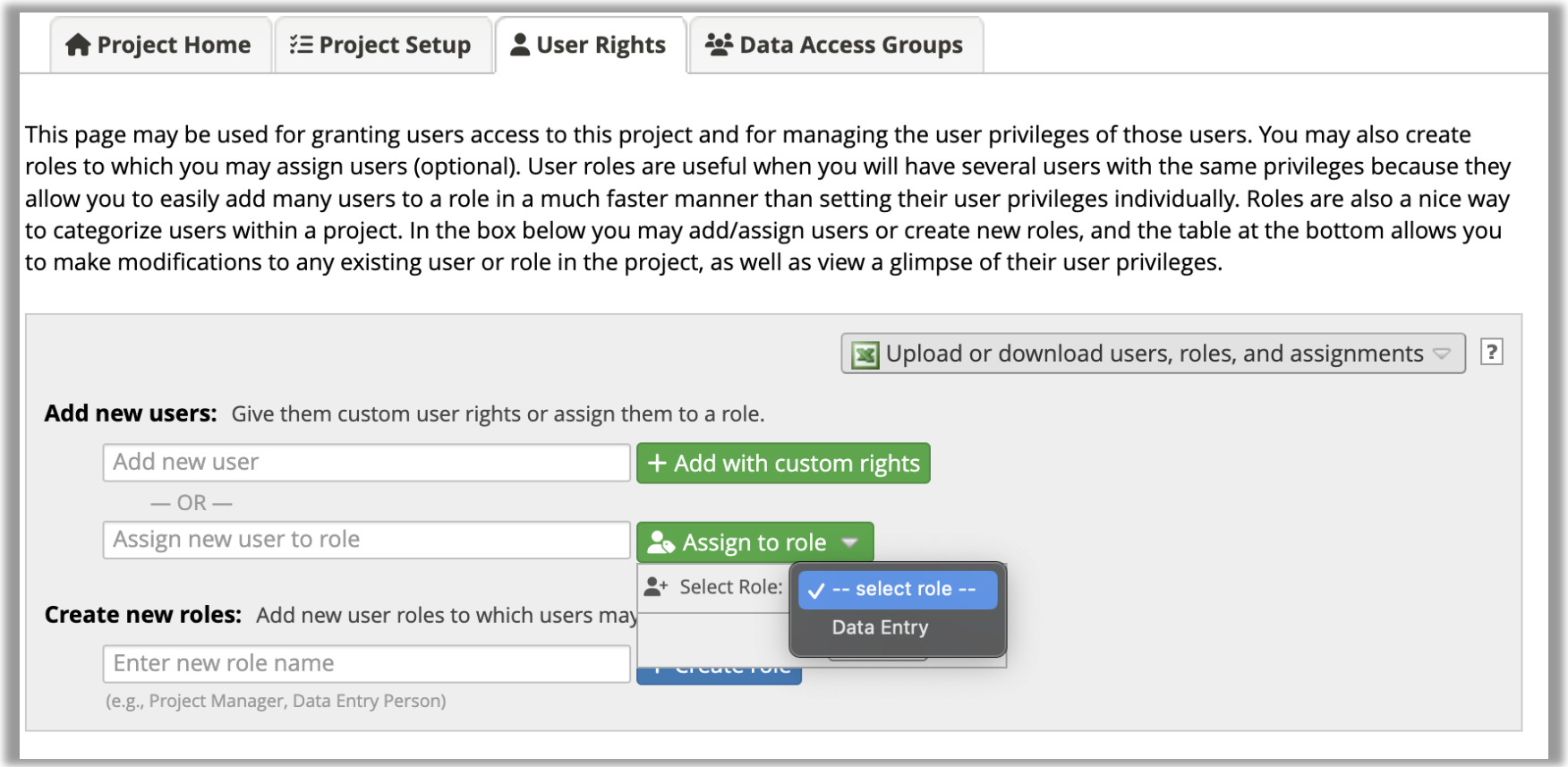
Image Map*
*Permissions based on user's Project Design/Setup rights
Save Changes
Cancel
Copy role
Delete role

Assigning User Roles



User rights management

Uses / Reasons why?

Roles

Suspending users

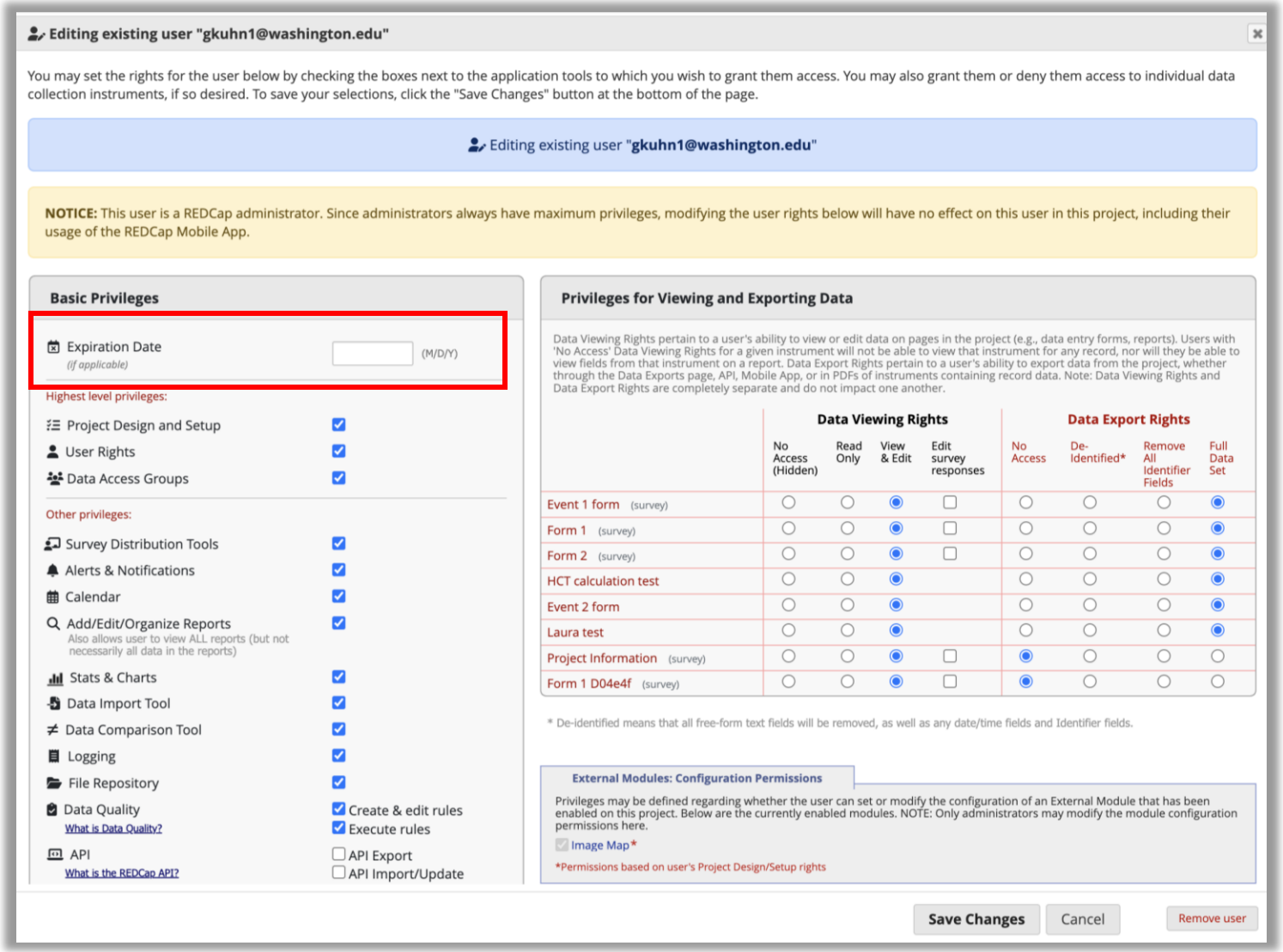
Data Access Groups

Suspending users

Two options:

- Global suspension (all projects)
  - Done by an admin
  - Great for suspending for a ton of projects at the same time
  - Usually done for people leaving an organization
- Project-specific suspension
  - Can set pre-determined suspension date
  - Good for temporary users
  - Done by user rights enabled user

Setting User Suspension Date



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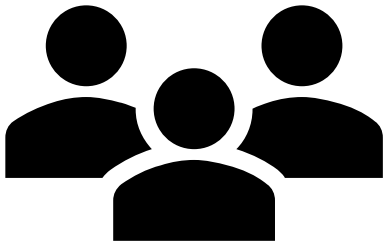
User rights management

Uses / Reasons why?

Roles

Suspending users

Data Access Groups

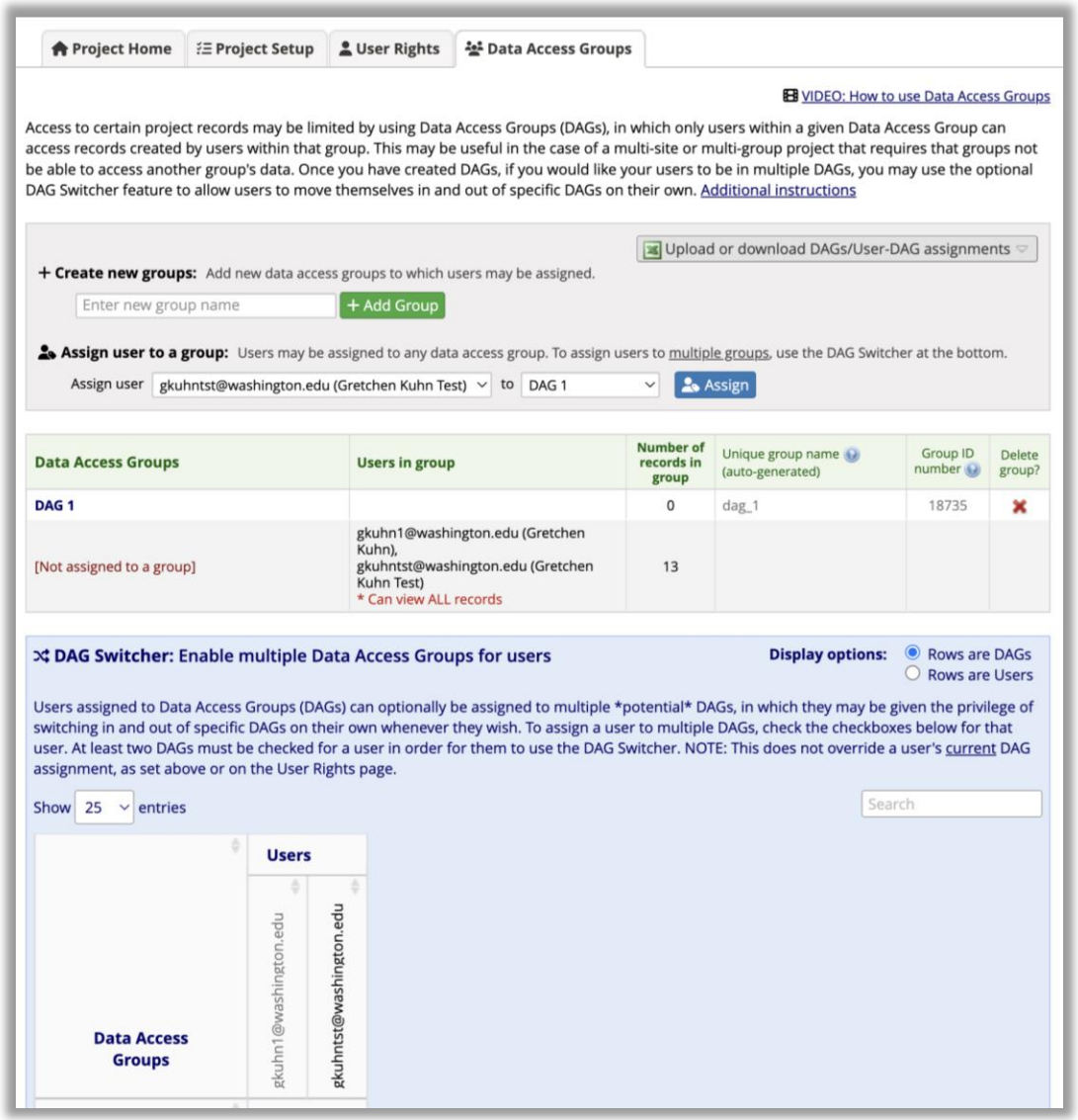


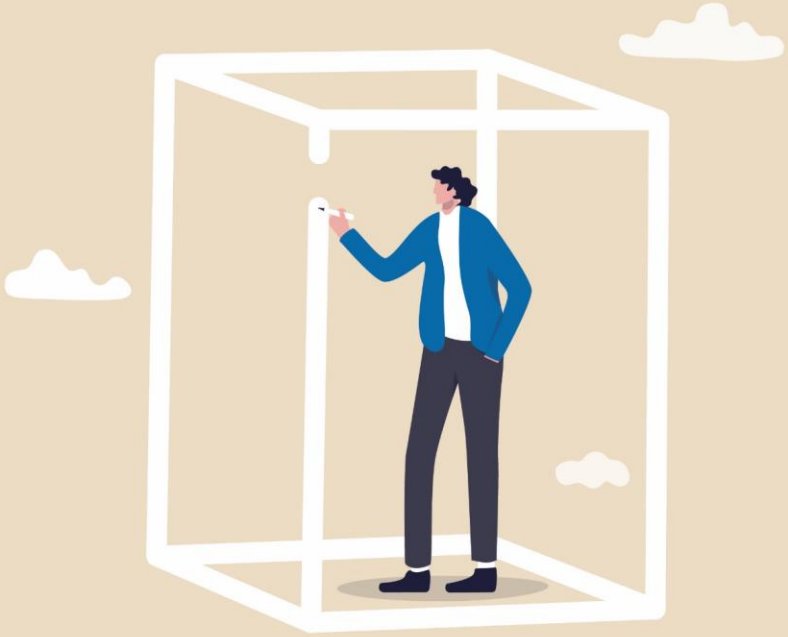
Data Access Groups (DAG)

Separate records by group:

- Users in a DAG can only see records assigned to their group
- Records created by a user in a DAG automatically get assigned to that DAG
- Records can be re-assigned
  - Via the record home page
  - Via data import
- Users not in any DAG can see all records.
- DAG's are independent of user rights
  - Set both for new users

Adding DAGs


Project Home
Project Setup
User Rights
Data Access Groups
VIDEO: How to use Data Access Groups
Access to certain project records may be limited by using Data Access Groups (DAGs), in which only users within a given Data Access Group can access records created by users within that group. This may be useful in the case of a multi-site or multi-group project that requires that groups not be able to access another group's data. Once you have created DAGs, if you would like your users to be in multiple DAGs, you may use the optional DAG Switcher feature to allow users to move themselves in and out of specific DAGs on their own. Additional instructions
Upload or download DAGs/User-DAG assignments
+ Create new groups: Add new data access groups to which users may be assigned.
Enter new group name
+ Add Group
Assign user to a group: Users may be assigned to any data access group. To assign users to multiple groups, use the DAG Switcher at the bottom.
Assign user
gkuhntst@washington.edu (Gretchen Kuhn Test)
to
DAG 1
Assign
Data Access Groups
Users in group
Number of records in group
Unique group name (auto-generated)
Group ID number
Delete group?
DAG 1
0
dag_1
18735
[Not assigned to a group]
gkuhn1@washington.edu (Gretchen Kuhn),
gkuhntst@washington.edu (Gretchen Kuhn Test)
* Can view ALL records
13
DAG Switcher: Enable multiple Data Access Groups for users
Display options:
Rows are DAGs
Rows are Users
Users assigned to Data Access Groups (DAGs) can optionally be assigned to multiple *potential* DAGs, in which they may be given the privilege of switching in and out of specific DAGs on their own whenever they wish. To assign a user to multiple DAGs, check the checkboxes below for that user. At least two DAGs must be checked for a user in order for them to use the DAG Switcher. NOTE: This does not override a user's current DAG assignment, as set above or on the User Rights page.
Show 25 entries
Search
Users
gkuhn1@washington.edu
gkuhntst@washington.edu
Data Access Groups



POLL

Do you send reports to any of the following?

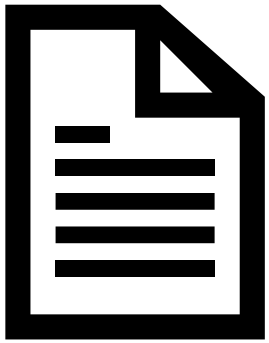
NIH/CDC/Other government agencies
Tribal governments
PIs/Internal staff
IRBs
Community Partners

Report building

Basic Steps

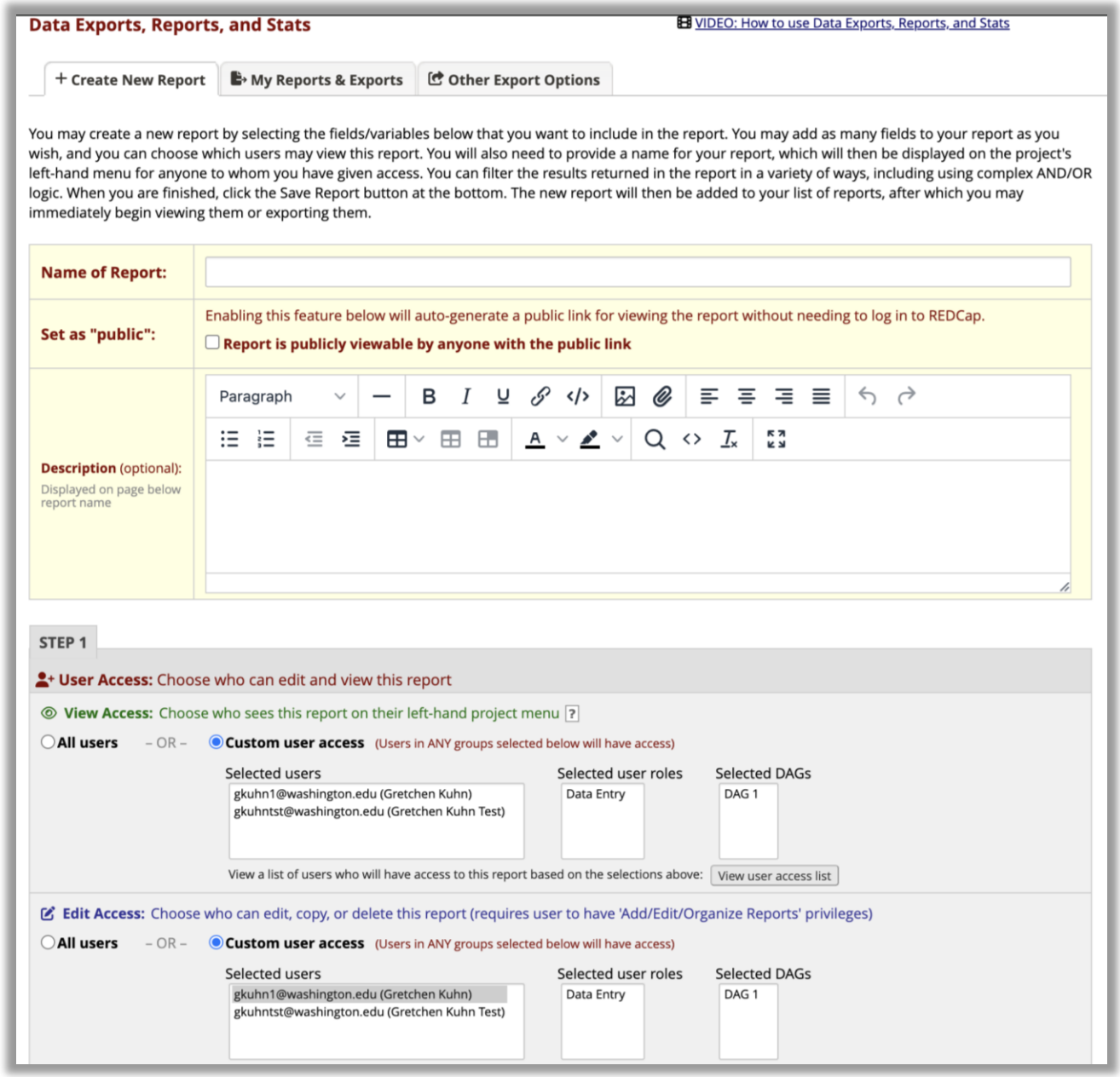
Use Case 1

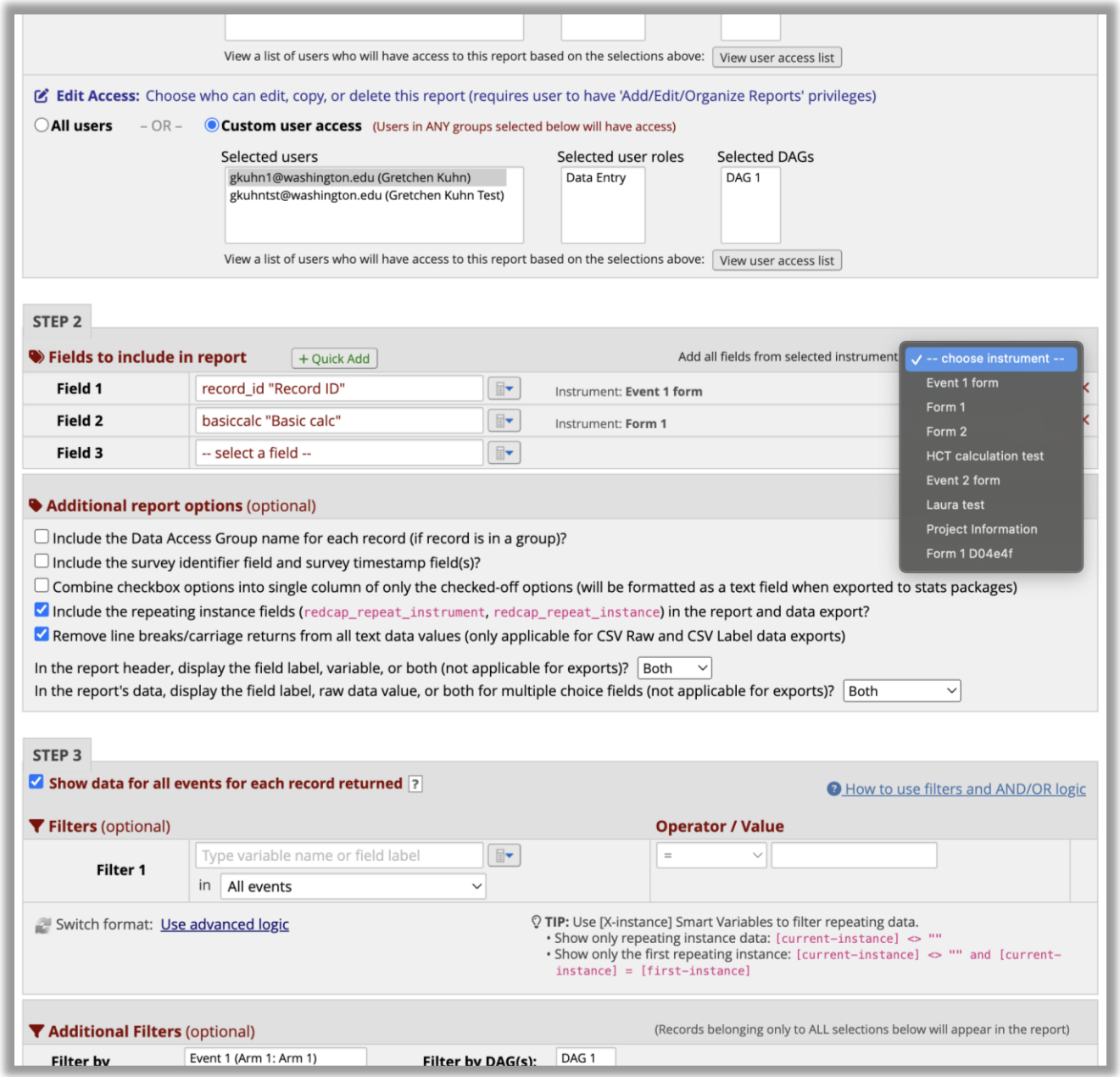
Use Case 2



Basics Steps

- Select who can view and edit the report
- Choose the variables you want to include
  - Can select specific variables or choose based on instrument or event
- Add filters
  - Based on specific values, event, DAG


Data Exports, Reports, and Stats
VIDEO: How to use Data Exports, Reports, and Stats
+ Create New Report
My Reports & Exports
Other Export Options
You may create a new report by selecting the fields/variables below that you want to include in the report. You may add as many fields to your report as you wish, and you can choose which users may view this report. You will also need to provide a name for your report, which will then be displayed on the project's left-hand menu for anyone to whom you have given access. You can filter the results returned in the report in a variety of ways, including using complex AND/OR logic. When you are finished, click the Save Report button at the bottom. The new report will then be added to your list of reports, after which you may immediately begin viewing them or exporting them.
Name of Report:
Set as "public":
Enabling this feature below will auto-generate a public link for viewing the report without needing to log in to REDCap.
Report is publicly viewable by anyone with the public link
Description (optional):
Displayed on page below report name
Paragraph
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
– OR –
Custom user access
(Users in ANY groups selected below will have access)
Selected users
gkuhn1@washington.edu (Gretchen Kuhn)
gkuhntst@washington.edu (Gretchen Kuhn Test)
Selected user roles
Data Entry
Selected DAGs
DAG 1
View a list of users who will have access to this report based on the selections above:
View user access list
Edit Access: Choose who can edit, copy, or delete this report (requires user to have 'Add/Edit/Organize Reports' privileges)
All users
– OR –
Custom user access
(Users in ANY groups selected below will have access)
Selected users
gkuhn1@washington.edu (Gretchen Kuhn)
gkuhntst@washington.edu (Gretchen Kuhn Test)
Selected user roles
Data Entry
Selected DAGs
DAG 1


View a list of users who will have access to this report based on the selections above: View user access list
Edit Access: Choose who can edit, copy, or delete this report (requires user to have 'Add/Edit/Organize Reports' privileges)
All users – OR – Custom user access (Users in ANY groups selected below will have access)
Selected users
gkuhn1@washington.edu (Gretchen Kuhn)
gkuhntst@washington.edu (Gretchen Kuhn Test)
Selected user roles
Data Entry
Selected DAGs
DAG 1
View a list of users who will have access to this report based on the selections above: View user access list
STEP 2
Fields to include in report
+ Quick Add
Add all fields from selected instrument:
-- choose instrument --
Event 1 form
Form 1
Form 2
HCT calculation test
Event 2 form
Laura test
Project Information
Form 1 D04e4f
Field 1
record_id "Record ID"
Instrument: Event 1 form
Field 2
basiccalc "Basic calc"
Instrument: Form 1
Field 3
-- select a field --
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)
Include the repeating instance fields (redcap_repeat_instrument, redcap_repeat_instance) in the report and data export?
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
STEP 3
Show data for all events for each record returned
How to use filters and AND/OR logic
Filters (optional)
Operator / Value
Filter 1
Type variable name or field label
in All events
=
Switch format: Use advanced logic
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]
Additional Filters (optional)
(Records belonging only to ALL selections below will appear in the report)
Filter by
Event 1 (Arm 1: Arm 1)
Filter by DAG(s):
DAG 1

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

STEP 3

Show data for all events for each record returned ?

How to use filters and AND/OR logic

Filters (optional)

		Operator / Value
Filter 1	Type variable name or field label in All events	=

Switch format: Use advanced logic

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]`

Additional Filters (optional)

(Records belonging only to ALL selections below will appear in the report)

Filter by event(s):	Event 1 (Arm 1: Arm 1) Event 2 (Arm 1: Arm 1) Pre-screener (Arm 2: Arm 2)	**Filter by DAG(s):**	DAG 1

Live Filters (optional)

Live Filters can be selected on the report page for dynamically filtering data in real time. With the exception of the Record ID field, only multiple choice fields can be used as Live Filters (as well as Events, if longitudinal, and Data Access Groups, if any exist).

Live Filter 1	-- select a field --
Live Filter 2	-- select a field --
Live Filter 3	-- select a field --

STEP 4

Order the Results (optional)

First by	record_id "Record ID"	Ascending order
Then by	Type variable name or field label	Ascending order
Then by	Type variable name or field label	Ascending order

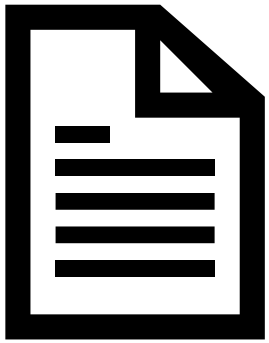
Save Report Cancel

Report building

Basic Steps

Use Case 1

Use Case 2



Use Case 1 – "To Contact" List

You need to reach out to participants who have consented but haven't completed their baseline survey

- Variables:
  - Participant name
  - Participant contact preference
  - Participant email and phone number
- Filters:
  - Consent is complete
  - Baseline survey is not complete

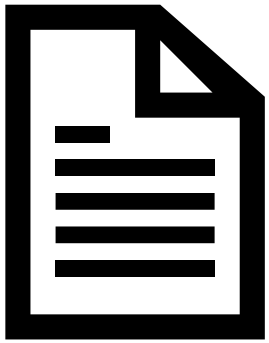
Bonus: Add filter logic to not include participants who you mark as "contacted"

Report building

Basic Steps

Use Case 1

Use Case 2



Use Case 2 – Participants who have consented by site

You need to send a report that breaks down participant enrollment by study site to send to your PI and study sponsor.

- Variables:
  - Participant ID
  - Enrollment site
  - Enrollment date
- Filters:
  - Enrollment survey is complete
- Optional: Live filters
  - Filter based on DAG

Improving overview / workflow

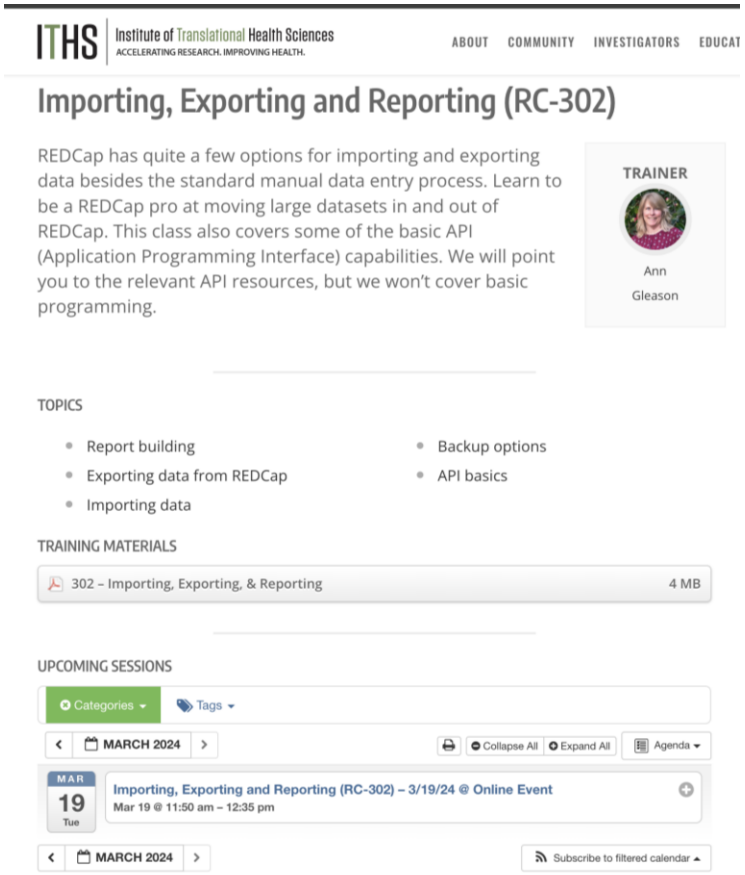
Creative report uses

Creative report uses

- You can build as many reports as you want
- REDCap runs the report every time you access it – “real-time” data
- Useful options
  - Filter logic
  - Live filters
  - Sorting
- Other uses:
  - To do lists
  - Data quality

Report Building Class

Offered every 2 months – see iths.org for more information



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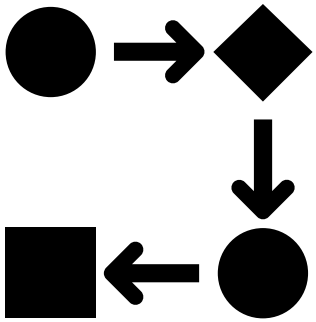
Improving overview / workflow

Custom dashboards



Custom dashboards

- Need "project design/setup" rights to setup
- Found in the "Record Status Dashboard"
- Filter based on:
  - Branching logic
  - Completion status
  - Events
  - Forms
- Assorted display options available

Record Status Dashboard (all records)

Displayed below is a table listing all existing records/responses and their status for every data collection instrument (and if longitudinal, for every event). You may click any of the colored buttons in the table to open a new tab/window in your browser to view that record on that particular data collection instrument. Please note that if your form-level user privileges are restricted for certain data collection instruments, you will only be able to view those instruments, and if you belong to a Data Access Group, you will only be able to view records that belong to your group.

Legend for status icons:
Incomplete | Incomplete (no data saved) [?]
Unverified | Partial Survey Response
Complete | Completed Survey Response

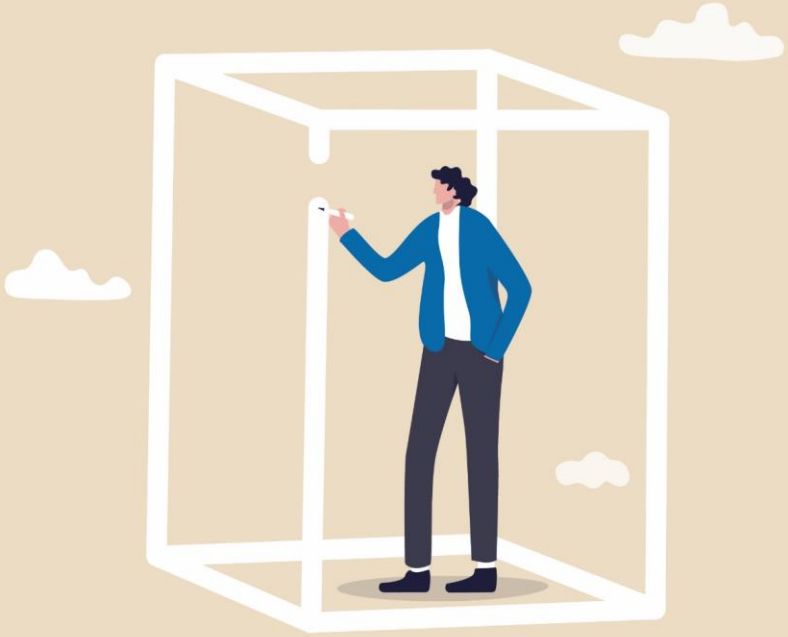
Dashboard displayed: [Default dashboard] — Create custom dashboard
Displaying Data Access Group: -- ALL --
Displaying record: Page 1 of 1: "2" through "14" of **12** records — ALL (12) records per page

+ Add new record for this arm

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

Arm 1: Arm 1 | **Arm 2:** Arm 2

Record ID	Event 1				Event 2		
	Form 1	HCT calculation test	Laura test	Project Information	Form 1	Event 2 form	Project Information
2	Complete	Incomplete			Incomplete		
3	Complete	Incomplete					
4	Complete	Incomplete					
5	Complete	Incomplete					
6	Complete	Incomplete					
7	Incomplete						
8	Complete						
9	Incomplete						
10	Incomplete						
11	Incomplete						
12	Incomplete						
14	Incomplete	Incomplete			Complete		



POLL

Does your project do outreach in rural communities or areas with limited internet access?

REDCap Mobile App

- Offline data collection
- Study devices used by study staff

MyCap

- Offline and internet connected data collection
- Participants' devices, used directly by participants

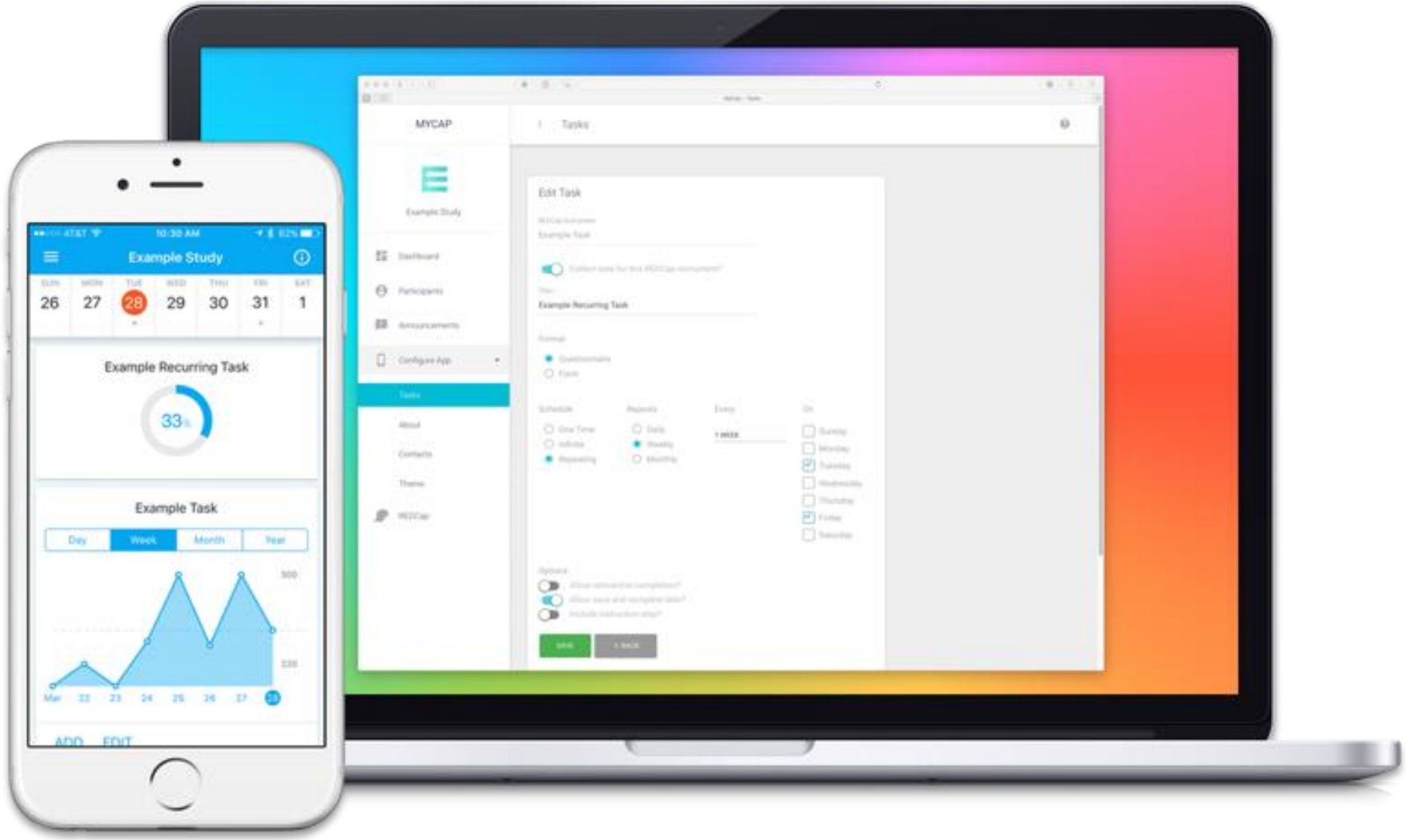
Mobile App Uses

- Tablets used by study staff to collect participant data

- Offline data collection option
  - Community outreach events
  - Participant home visits
  - International studies with unreliable internet

- Sync data back to REDCap servers once internet is established

MyCap



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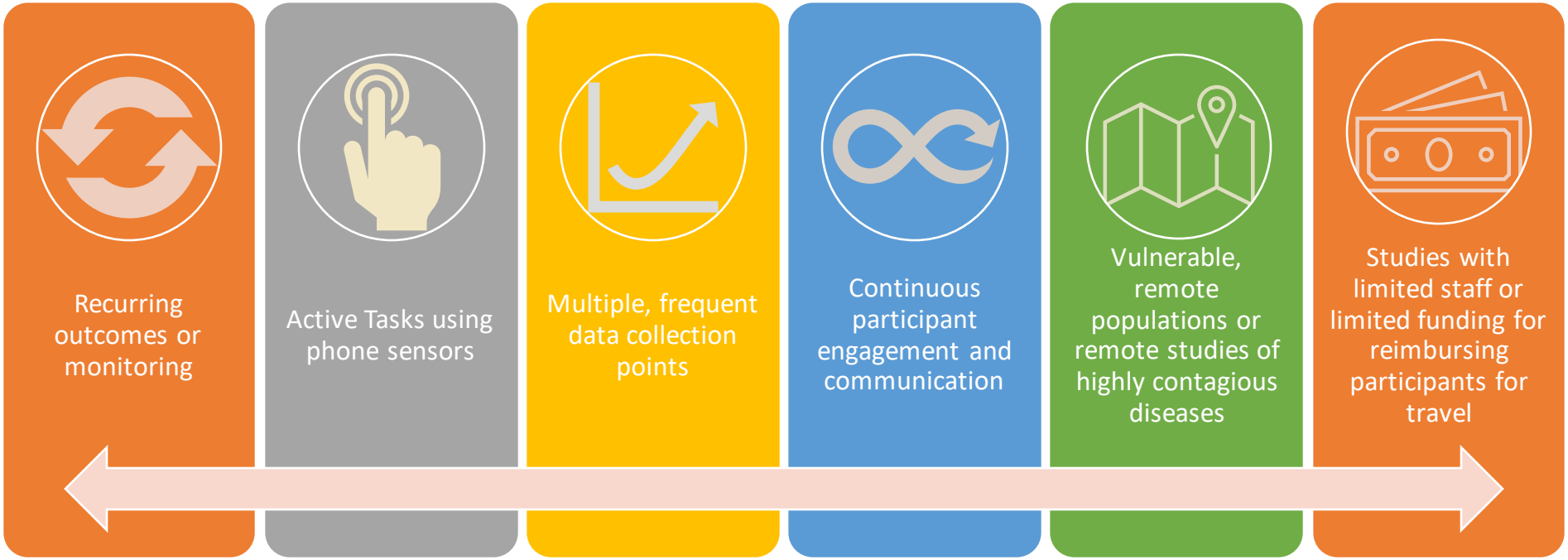
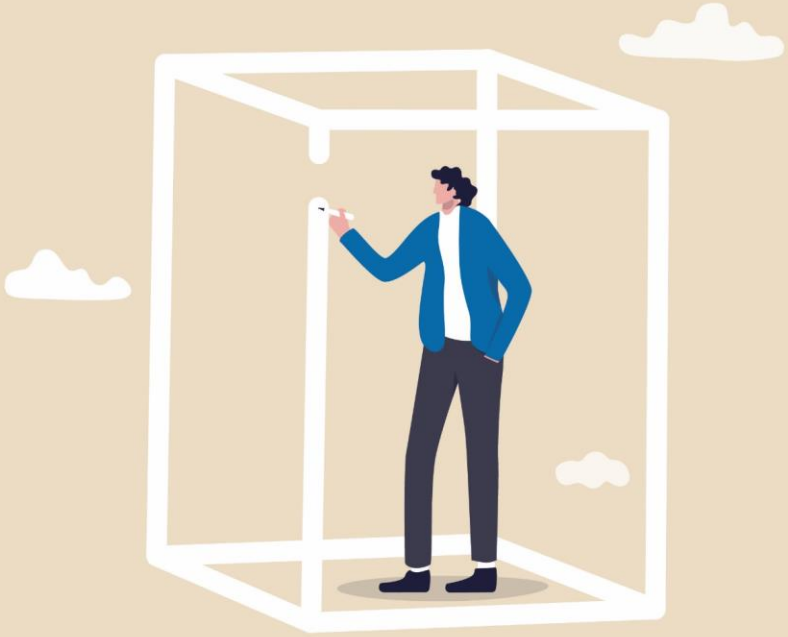
MyCap


Recurring outcomes or monitoring
Active Tasks using phone sensors
Multiple, frequent data collection points
Continuous participant engagement and communication
Vulnerable, remote populations or remote studies of highly contagious diseases
Studies with limited staff or limited funding for reimbursing participants for travel



POLL

Does your project use any of the following for study recruitment:

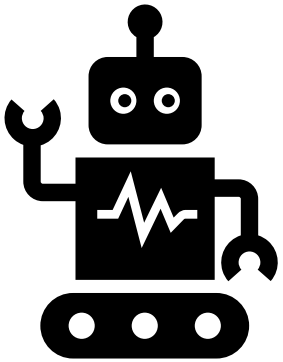
Social media
QR codes
Website posts
Another type of online recruitment

Preventing Bots & Fraudulent Participation

Frauds

Solutions

- ReCAPTCHA
- Honeypot Question
- eConsent



Potential Frauds

- Human
  - Eligible individuals completing study twice presumably without malicious intent
  - Taking study repeatedly for incentive
  - Ineligible individuals
- Bots
  - Software application programmed to perform tasks

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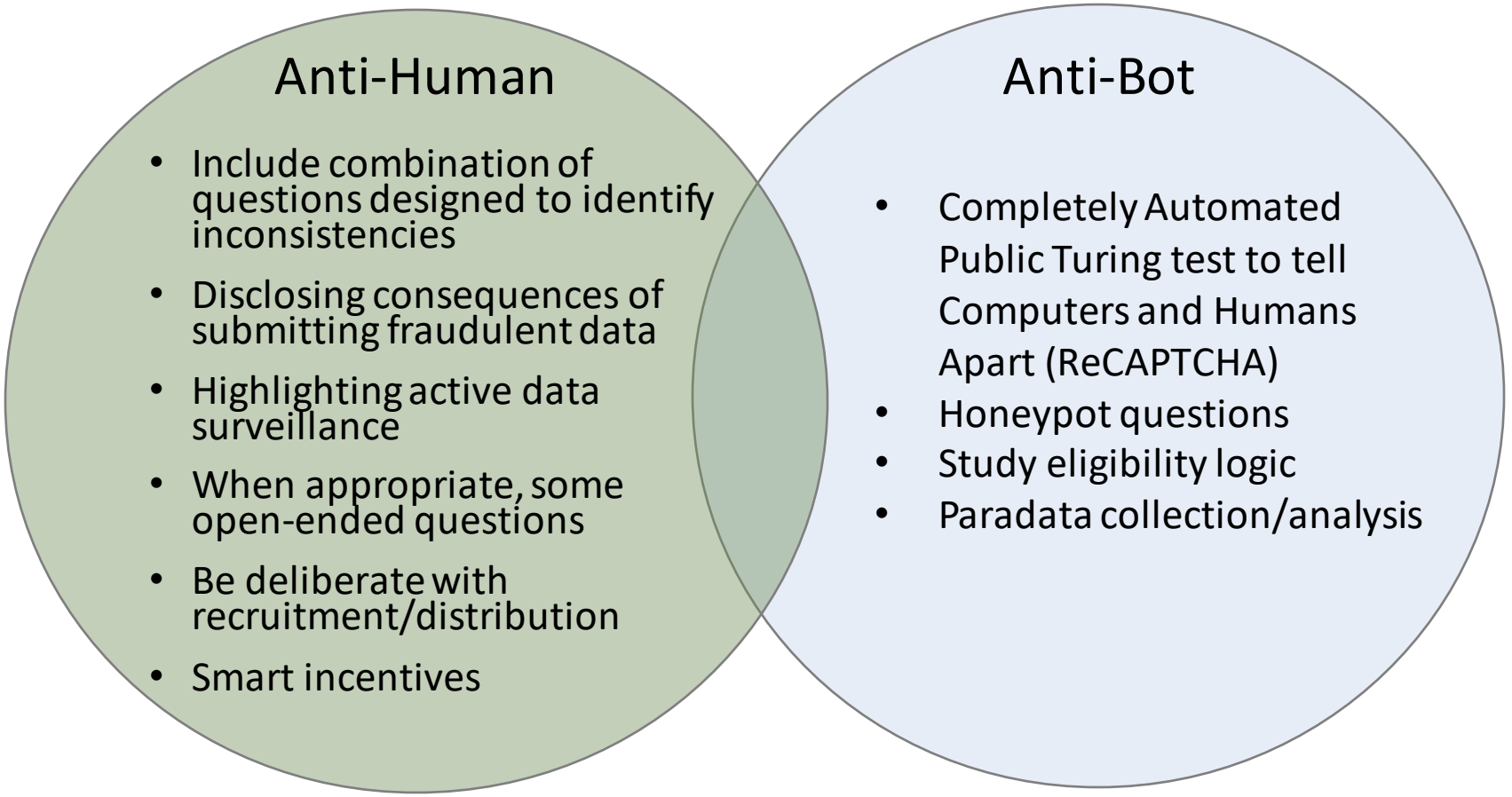
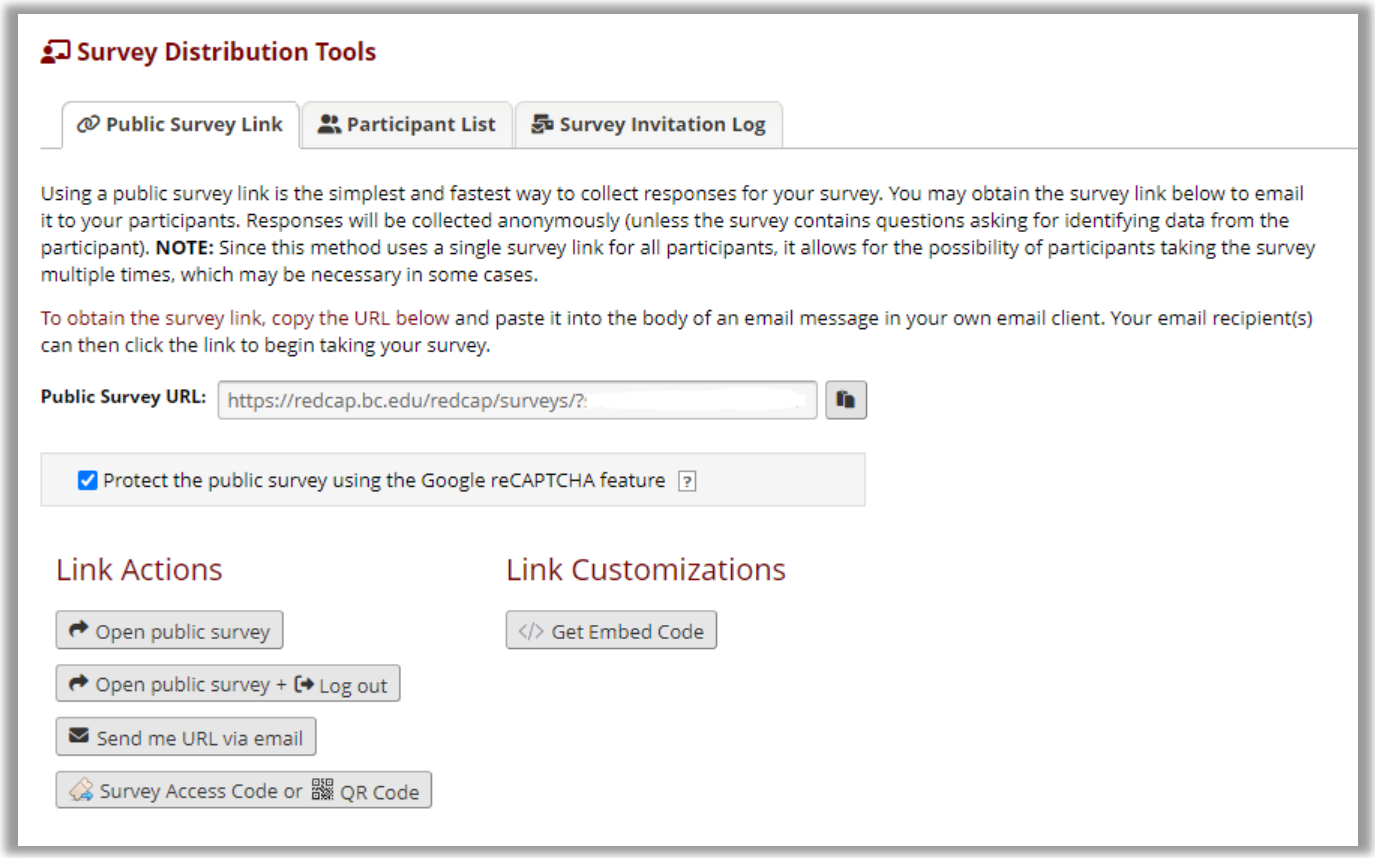
Credit: Viktoriya Babicheva, MPH, Boston College Connell School of Nursing

Solutions

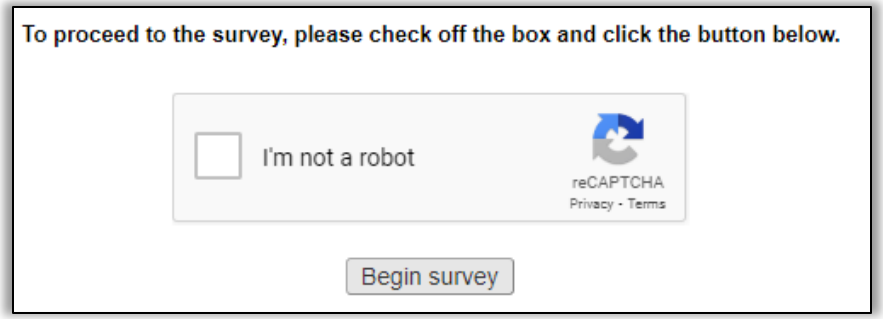


Credit: Viktoriya Babicheva, MPH, Boston College Connell School of Nursing

ReCAPTCHA


Survey Distribution Tools
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.
Public Survey URL:
https://redcap.bc.edu/redcap/surveys/?
Protect the public survey using the Google reCAPTCHA feature
Link Actions
Open public survey
Open public survey + Log out
Send me URL via email
Survey Access Code or QR Code
Link Customizations
Get Embed Code

ReCAPTCHA


To proceed to the survey, please check off the box and click the button below.
I'm not a robot
reCAPTCHA
Privacy - Terms
Begin survey

Select all images with
bicycles
VERIFY

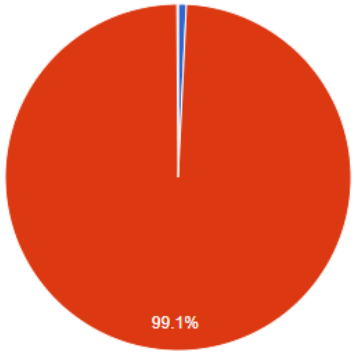
Honeypot Question

238	[hon]	Do you love donuts?	radio, Required 1 Yes 2 No Field Annotation: @HIDDEN-SURVEY

What is the sum of eleven and twenty-two? *(hon1)* Refre

Total Count (N)	Missing*	Unique
912	548 (37.5%)	3

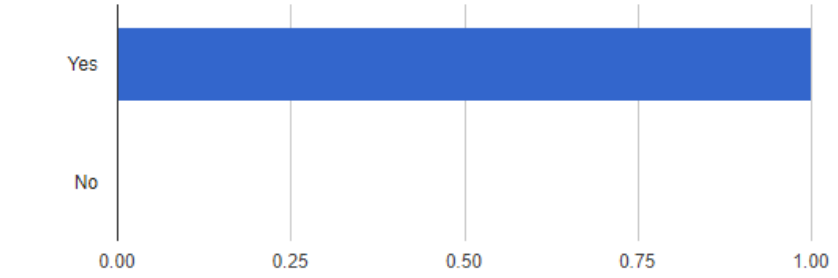
Counts/frequency: eleven (7, 0.8%), 33 (904, 99.1%), bot (1, 0.1%), 0 (0, 0.0%)



Do you love donuts? *(hon)* Refresh Plot | View as Bar Chart

Total Count (N)	Missing*	Unique
1	1459 (99.9%)	1

Counts/frequency: Yes (1, 100.0%), No (0, 0.0%)



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eConsent

File Repository

The File Repository allows users to store, organize, and share files used for this project. Folders and sub-folders can be created, and there is no limit to number of folders that can be created or the number of files that can be stored within them. If you are using Data Access Groups or user roles in the project, you may limit access to a new folder so that it is DAG-restricted and/or role-restricted. All deleted files will go to the Recycle Bin where they can be restored/undeleted for up to 30 days, after which they will be permanently deleted.

NOTE: Since Data Access Groups exist in this project, please be aware that any files uploaded here will be available to ALL project users unless the files have been uploaded into a DAG-restricted folder.

Show 25 entries Search in current folder

0 MB of 150 MB used (0%)

All Files / **PDF Survey Archive** Download all (zip)

Name	Record	Survey	Survey Completion Time	Identifier (Name, DOB)	IP Address	Version
Paper_Rock_pid29869_formConsent_Form_id3_2022-12-05_100629.pdf	3	Consent Form (Baseline (Arm 1: First Year)) #1	12/05/2022 10:06am	Paper Rock	97.113.114.104	1
Paper_Paper_pid29869_formConsent_Form_id14_2022-08-17_130739.pdf	14	Consent Form (Baseline (Arm 1: First Year)) #1	08/17/2022 1:07pm	Paper Paper	97.113.107.212	1

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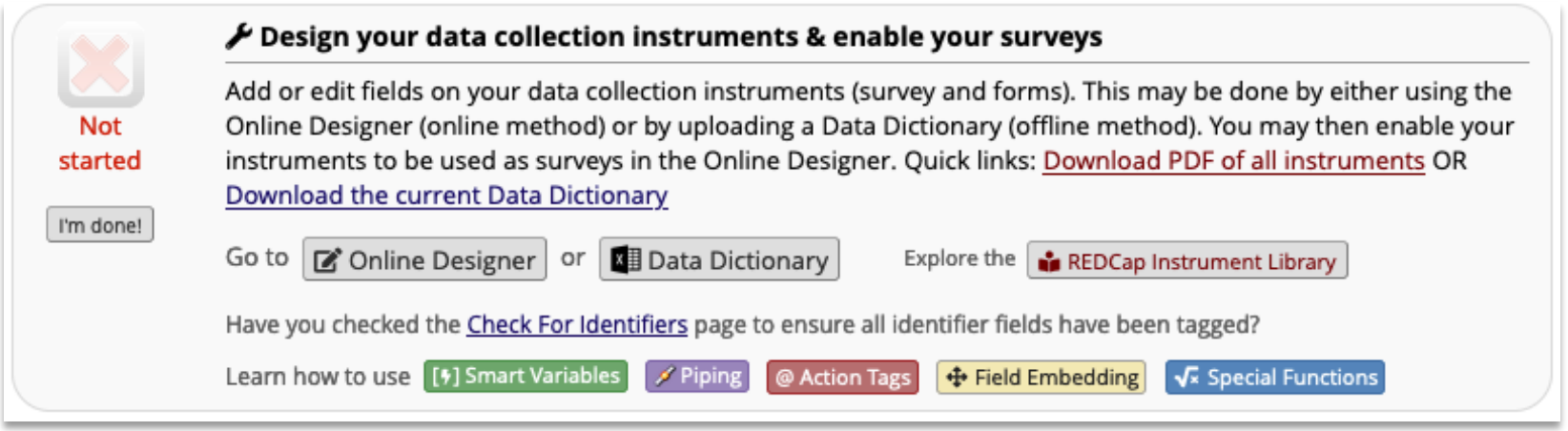
Getting Help

- REDCap has built in help on the Project Setup page and when building forms through Online Designer
- Click on the Contact REDCap administrator link at the top or bottom of the left menu to send a question
- Find more classes on the ITHS web page
- Information on our weekly office hours is located at the top of the My Projects page.



Questions?