



Session 1: Build a project from scratch

Biostatistics Research and Support Unit (BRU)

IGTP

October, 2025

Introduction to REDCap

1. What is REDCap?
 2. Current situation
 3. Advantages
-

First access to REDCap

1. How to access REDCap
2. Global setup
3. Create your first project

Design of an Electronic Case Report Form

1. Project setup
2. Online designer
3. Identifier
4. Fields

Introduction to REDCap

Introduction to REDCap

1. What is REDCap?



Definition



Motivation

2. Current situation



Supply



In our current environment

3. Advantages



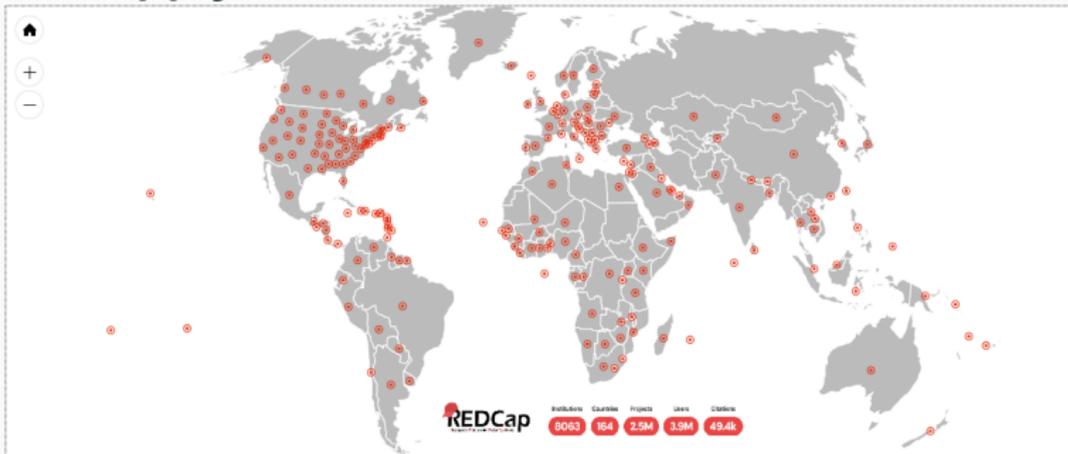
Definition

A web application for entering data in research studies.

- It was developed in 2004 by **Vanderbilt University** with the support of the United States National Institute of Health.
- It is distributed under a license agreement owned by Vanderbilt University with a non-commercial use agreement.

Current situation

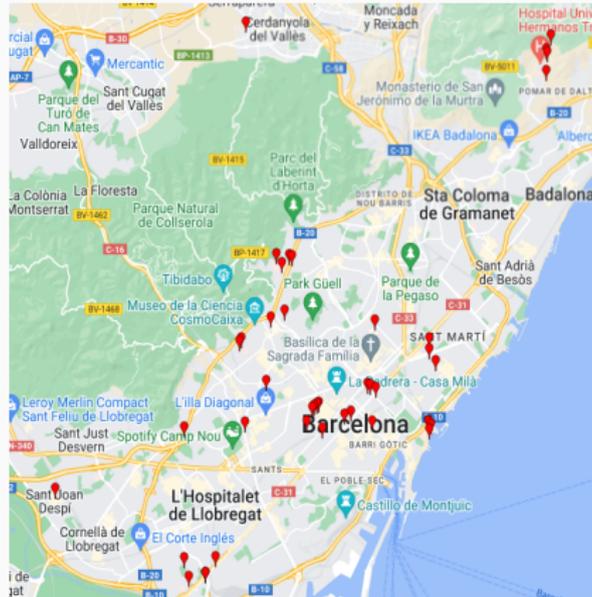
Supply



Current situation

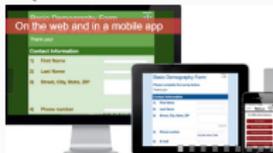


In our current environment



Advantages

1. **Web-based:** A web connection (with double authentication) from anywhere.



2. **Flexible:** You can personalize your questionnaire using programming.



3. **Multi-Access:**

- Several users/institutions can use it.
- It can be used on multiple devices (smartphones, tablets and computers).

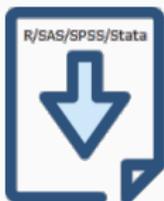


Advantages

4. **Traceability:** It keeps track of changes to data and user activity.



5. **Data Exports:** Export procedures to common statistical packages (R, SAS, SPSS and Stata).



6. Regulation:

REDCap complies with all the standards demanded by the United States Food and Drug Administration and other international bodies.

- 21 Code of Federal Regulation Part 11
- Federal Information Security Modernization (FISMA)
- Health Insurance Portability and Accountability Act (HIPAA)
- The EU general data protection regulation (GDPR)



Advantages

7. **Security:** It allows study data to be stored securely on server within your borders, in compliance with local legislation.
8. **Constant updates and improvements**

First access to REDCap

First access to REDCap

1. How to access REDCap



Access for a new user



Access to REDCap IGTP

2. Global setup



Definition



Functionalities

3. Create your first project



Project request



Access for a new user

[This message was automatically generated by REDCap]

A REDCap account has been created for you in which your REDCap username is [REDACTED]. Click the link below to set your new password and log in.

After logging in, please make sure to [set up your password recovery question](#), which will allow you to use the 'Forgot your password?' link on the login page without the need to contact the REDCap Administrator. You will be prompted to set your recovery question on the My Projects page, but you can also set it on your 'My Profile' page under 'Login-related options'.

[Set your new REDCap password](#)

Access to IGTP REDCap

- Link: <https://redcap.igtp.cat>
- Identifier: *COURSE_FIRSTLETTERNAMEsurname*
- Password: *Chosen by the user*



Log In

Please log in with your user name and password. If you are having trouble logging in, try clicking the "Forgot your password" link below.

Username:

Password:

Log In

[Forgot your password?](#)



Definition

The global setup displays your activity within the institution's REDCap



Functionalities

Home

- Welcome to REDCap!

My projects

- Visualise all your projects
- Organize them easily

+ New project

- Create a new project

Help & FAQ

- Find answers to your questions

Training Videos

- Tutorial videos.

The screenshot shows the REDCap user interface. At the top, there is a navigation bar with the REDCap logo and several menu items: Home, My Projects (selected), + New Project, Help & FAQ, Training Videos, and Messenger. On the right side of the navigation bar, it says 'Logged in as' followed by a redacted name and a 'More' dropdown arrow.

Below the navigation bar, there is a message: 'Listed below are the REDCap projects to which you currently have access. Click the project title to open the project. [Read more](#). To review which users still have access to your projects, visit the [User Access Dashboard](#).' Below this message are two buttons: 'Organize' (with a green plus icon) and 'Collapse All' (with a grey minus icon).

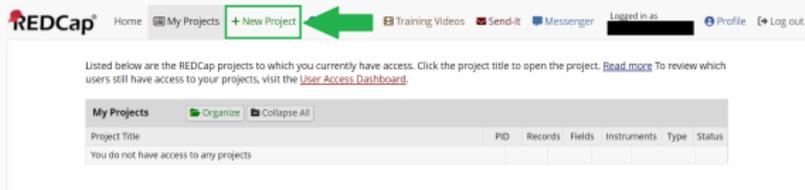
Below the buttons is a table with the following columns: Project Title, PID, Records, Fields, Instruments, Type, and Status. The table content is empty, and a message at the bottom of the table reads: 'You do not have access to any projects'.

Create your first project

Project request

1. Access the global setup.
2. Create a new project.

+ New project.



REDCap® Home My Projects **+ New Project** Training Videos Send-it Messenger Logged in as Profile Log out

Listed below are the REDCap projects to which you currently have access. Click the project title to open the project. [Read more](#) To review which users still have access to your projects, visit the [User Access Dashboard](#).

My Projects [Organize](#) [Collapse All](#)

Project Title	PID	Records	Fields	Instruments	Type	Status
You do not have access to any projects						

Create your first project

Project request

3. Required information

3.1. Project title

3.2. Purpose

3.3. Creation options

4. Optional information

4.1. Project folder

4.2. Project notes

+ Create a new REDCap Project

You may begin the creation of a new REDCap project on your own by completing the form below and clicking the Create Project button at the bottom.

Project title:

Project's purpose: How will it be used?

Project notes (optional): Description of the project's use or purpose (displayed on the My Projects page)

Project creation option:

- Empty project (blank slate) 
- Upload a REDCap project XML file (CDISC ODM format) [?](#)
- Use a template (choose one below)



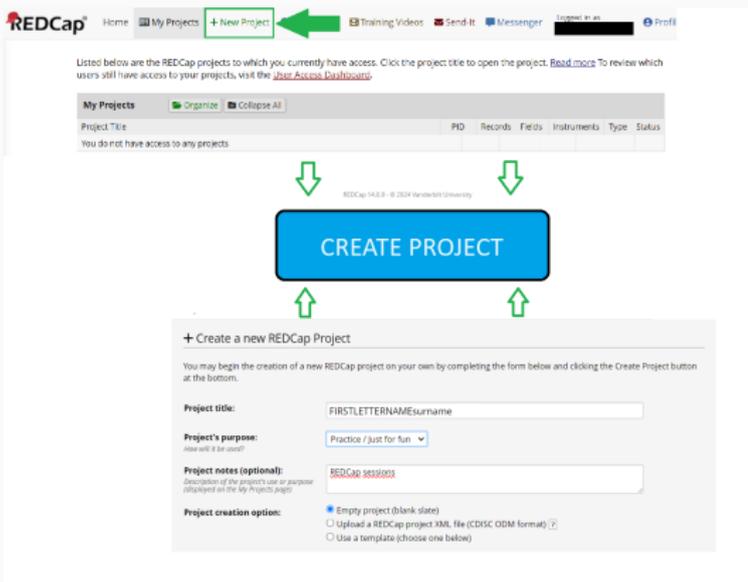
Remarks

- Access to the project will be available for one month.

Create your first project

Project request

4. Click + New project



REDCap® Home My Projects + New Project Training Videos Send It Messenger Logged in as [redacted] Profile

Listed below are the REDCap projects to which you currently have access. Click the project title to open the project. [Read more](#) To review which users still have access to your projects, visit the [User Access Dashboard](#).

My Projects Organize Collapse All

Project Title	PID	Records	Fields	Instruments	Type	Status
You do not have access to any projects						

REDCap 14.0.0 - © 2024 Vanderbilt University

CREATE PROJECT

+ Create a new REDCap Project

You may begin the creation of a new REDCap project on your own by completing the form below and clicking the Create Project button at the bottom.

Project title:

Project's purpose: How will it be used?

Project notes (optional): Description of the project's use or purpose (displayed on the My Projects page)

Project creation option:

- Empty project (blank slate)
- Upload a REDCap project XML file (CDISC ODM format)
- Use a template (choose one below)

5. The REDCap administrator must approve your request.

Designing an Electronic Case Report Form

Designing an Electronic Case Report Form

1. Project setup

 Definition

 Access

 Functionalities

2. Online Designer

 Definition

 Access

 Functionalities

 Activity

3. Identifier

 Definition

4. Fields

 Definition

 Creation

4.1. Unstructured fields

 Definition

 Activity

4.2. Structured fields

 Definition

 Activity

4.3. Special fields

 Definition

4.4. Self-calculated fields

 Activity

4.5. Descriptive fields

 Definition

 Activity

4.6. Matrix of fields

 Definition

 Properties

 Creation

 Activity



Definition

The global setup gives you access to all the configuration options and features within your project.



Access

Click on the project.

Listed below are the REDCap projects to which you currently have access. Click the project title to open the project. [Read more](#) To review which users still have access to your projects, visit the [User Access Dashboard](#).

Project Title	PID	Records	Fields	Instruments	Type	Status
REDCap	455	0	2	1 Formulario	■	🔧

Functionalities

On the left panel you will find:

Project Home and Design

Project design

Data collection

Data management

Applications

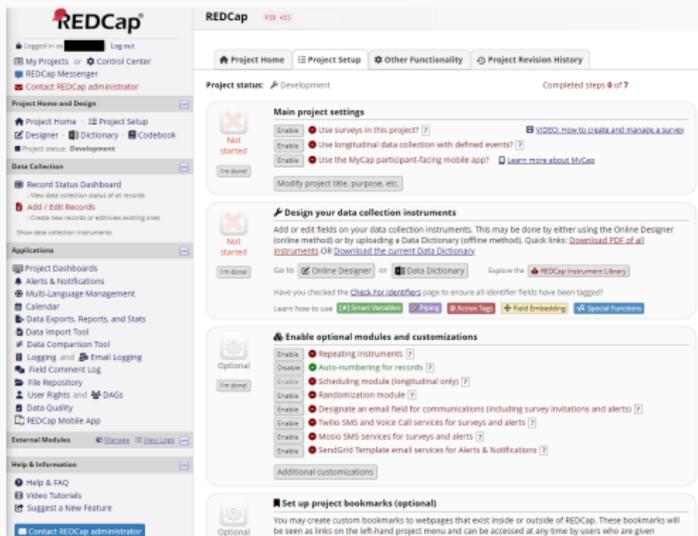
Applications and functionalities

External modules

Extra functionalities

Help & information

Contact the administrator



REDCap #23 455

Project Home | Project Setup | Other Functionality | Project Revision History

Project status: Development Completed steps 6 of 7

Main project settings

Enable Use surveys in this project? [?] **VIDEO: HOW TO CREATE AND MANAGE A SURVEY**

Not started **Enable** Use longitudinal data collection with defined events? [?]

Not started **Enable** Use the MyCap participant-facing mobile app? [Learn more about MyCap](#)

[Modify project title, purpose, etc.](#)

Design your data collection instruments

Add or edit fields on your data collection instruments. This may be done by either using the Online Designer (online method) or by uploading a Data Dictionary (offline method). Quick links: [Download FDE of all instruments](#) OR [Download the current Data Dictionary](#)

Not started Go to [Online Designer](#) or [Data Dictionary](#) Explore the [REDCap Instrument Library](#)

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

Learn how to use: [\[?\] Smart Variables](#) [\[?\] Triggers](#) [\[?\] Access Tags](#) [\[+\] Field Embedding](#) [\[+\] Special Functions](#)

Enable optional modules and customizations

Optional **Enable** [Repeating instruments](#) [?]

Not started **Disable** [Auto-numbering for records](#) [?]

Not started **Disable** [Scheduling module \(longitudinal only\)](#) [?]

Not started **Enable** [Randomization module](#) [?]

Not started **Enable** [Designate an email field for communications \(including survey invitations and alerts\)](#) [?]

Not started **Enable** [Voice SMS and Voice Call services for surveys and alerts](#) [?]

Not started **Enable** [Voice SMS services for surveys and alerts](#) [?]

Not started **Enable** [SendGrid Template email services for Alerts & Notifications](#) [?]

[Additional customizations](#)

Set up project bookmarks (optional)

Optional You may create custom bookmarks to webpages that exist inside or outside of REDCap. These bookmarks will be seen as links on the left-hand project menu and can be accessed at any time by users who are given

Functionalities

On the right panel you will find:

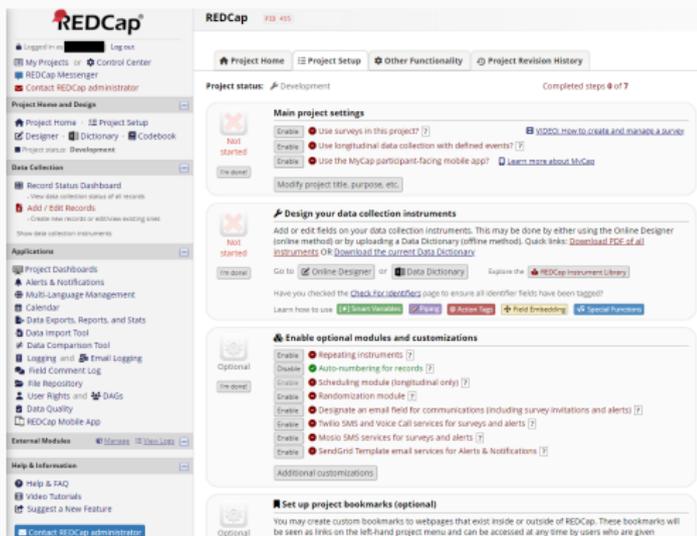
Project Home

Global setup

Project Setup

Other Functionality

Project Revision History



The screenshot shows the REDCap Project Setup interface. The left sidebar contains navigation links: Project Home, Global setup, Project Setup, Other Functionality, and Project Revision History. The main content area is titled 'Project Setup' and includes sections for 'Main project settings', 'Design your data collection instruments', 'Enable optional modules and customizations', and 'Set up project bookmarks (optional)'. Each section contains a list of settings with 'Enable' or 'Disable' buttons and descriptive text.

Project Setup #23 455

Project Home | Project Setup | Other Functionality | Project Revision History

Project status: Development Completed steps 6 of 7

Main project settings

Enable Use surveys in this project? [VIDEO: HOW TO CREATE AND MANAGE A SURVEY](#)

Enable Use longitudinal data collection with defined events? [Learn more about MyCap](#)

Enable Use the MyCap participant-facing mobile app? [Learn more about MyCap](#)

[Modify project title, purpose, etc.](#)

Design your data collection instruments

Add or edit fields on your data collection instruments. This may be done by either using the Online Designer (online method) or by uploading a Data Dictionary (offline method). Quick links: [Download FDE of all instruments](#) OR [Download the current Data Dictionary](#)

Go to [Online Designer](#) or [Data Dictionary](#) Explore the [REDCap Instrument Library](#)

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

Learn how to use [Smart Variables](#) [Phone](#) [Access Tags](#) [Field Embedding](#) [Special Functions](#)

Enable optional modules and customizations

Enable [Repeating instruments](#) [?](#)

Disable [Auto-numbering for records](#) [?](#)

Enable [Scheduling module \(longitudinal only\)](#) [?](#)

Enable [Randomization module](#) [?](#)

Enable [Designate an email field for communications \(including survey invitations and alerts\)](#) [?](#)

Enable [Twilio SMS and Voice Call services for surveys and alerts](#) [?](#)

Enable [Twilio SMS services for surveys and alerts](#) [?](#)

Enable [SendGrid Template email services for Alerts & Notifications](#) [?](#)

[Additional customizations](#)

Set up project bookmarks (optional)

You may create custom bookmarks to webpages that exist inside or outside of REDCap. These bookmarks will be seen as links on the left-hand project menu and can be accessed at any time by users who are given



Definition

The **Online Designer** is used for instrument management.

An **instrument** is a form or survey used to collect data through its **fields**.

- **Data entry:** project users
- **Accessibility:** <https://redcap.igtp.cat>
- **Visualization:** standard



There are two ways to access the Online Designer:

1. Project Home and Design
2. Project Setup

A screenshot of the REDCap Online Designer interface. The left sidebar shows navigation options: 'Project Home and Design' (with 'Designer' highlighted and a green arrow pointing to it), 'Data Collection', and 'Applications'. The main content area has tabs for 'Project Home', 'Project Setup', 'Other Functionality', and 'Project Revision History'. Under 'Project Home', there are sections for 'Main project settings' and 'Design your data collection instruments'. In the 'Design your data collection instruments' section, 'Online Designer' is highlighted with a green arrow. The interface includes various status indicators like 'Not started' and 'No data', and links to help resources and project settings.

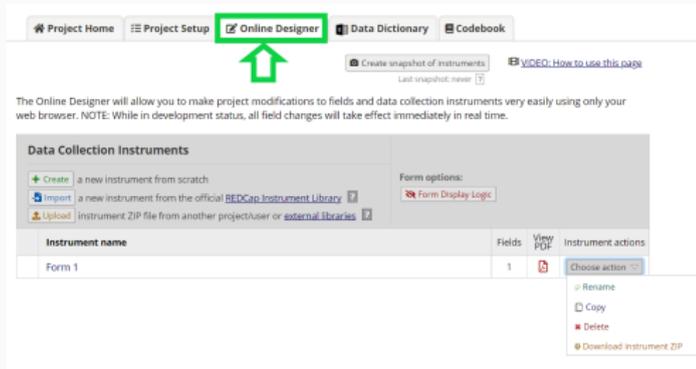
Functionalities

Add new instrument

- Create
- Import from the library or other projects

Instrument actions

- Rename
- Copy
- Delete
- Download the instrument in a ZIP file



Project Home Project Setup **Online Designer** Data Dictionary Codebook

Create snapshot of instruments [VIDEO: How to use this page](#)
Last snapshot: never

The Online Designer will allow you to make project modifications to fields and data collection instruments very easily using only your web browser. NOTE: While in development status, all field changes will take effect immediately in real time.

Data Collection Instruments

[Create](#) a new instrument from scratch Form options: [Form Display Logic](#)

[Import](#) a new instrument from the official [BEDCap Instrument Library](#)

[Upload](#) instrument ZIP file from another project/user or [external libraries](#)

Instrument name	Fields	View PDF	Instrument actions
Form 1	1		Choose action <ul style="list-style-type: none">• Rename• Copy• Delete• Download instrument ZIP



Remarks

- Every project must include at least one instrument.
- Every project must include at least one field.
- The number of instruments is unlimited.



By default, when you create a project in REDCap, it includes an instrument called *Form 1*.

Data Collection Instruments

[+ Create](#) a new instrument from scratch

[+ Import](#) a new instrument from the official [REDCap Instrument Library](#) ?

[+ Upload](#) instrument ZIP file from another project/user or [external libraries](#) ?

Form options:

[Form Display Logic](#)

Instrument name	Fields	View PDF	Instrument actions
Form 1	1		Choose action ▾

Activity: Online Designer

1. Change the name of *Form 1* to *Demographic*.
2. Delete *Form 1* (now *Demographic*).
3. Explore *Form 1* (now *Demographic*), what does it contain?

Solution

1. **Change the name of *Form 1* to *Demographic*:**
Instrument actions » Chose actions » Rename » "Demographic"
2. **Delete *Demographic*:**
Instrument actions » Chose actions » Delete

 **You can not delete *Demographic*!!!**

REDCap requires that all projects include at least one instrument.

WARNING: Cannot delete only instrument! 

You are not allowed to delete all your data collection instruments. You must keep at least one instrument. Since you only have one instrument in your project, you may thus not delete it. If you wish to replace the instrument, then you should add a new instrument, and then afterward delete this one.

Close

Solution

3. Explore *Demographic* instrument, what does it contain?

Current instrument: **Demographic** [Preview instrument](#)

 Field Name: record_id

Record ID

NOTE: The field above is the record ID field and thus cannot be deleted or moved. It can only be edited.

The *Demographic* instrument (former known *Form1*) contains **the identifier**.



Definition

The identifier stores the unique names of the project records.

By default REDCap automatically generates sequential (correlative) identifiers.



Definition

- **Properties:**

- ✗ Cannot be deleted.
- ✗ Cannot be moved: must remain the first field in the project.
- ✓ The field label can be changed.
- ✓ The field name can be changed.
- ✓ The identifier can be entered by the user (name/text) instead of automatic:



Warning

- Do not enter personal data: Names, addresses, NIF, CIP, etc.



Definition

A **field** is a unique piece of information within a record (such as, age). A database is composed of multiple fields.



- REDCap uses the term **field** ("Field") because it is a database term, whereas "variable" is a term used in data analysis.
- You have already seen the first and obligatory field: the identifier.



Definition

- **Properties:** They can be created, deleted or added to the project.
- **Limitations:** There is no technical limitation, it is not recommended to create projects with more than 1000 fields.

Creation

1. Enter the instrument.
2. Add a field (Add field)

Current instrument: **Demographic** Preview instrument

 Field Name: *record_id*

Record ID

NOTE: The field above is the record ID field and thus cannot be deleted or moved. It can only be edited.

 [Add Field](#) [Add Matrix of Fields](#) [Import from Field Bank](#)

Creation

3. Select the field **type**: Select the type of field you want to create. Field types can be categorized into four groups:

Unstructured

Texts

Comments

Dates, numbers, etc...

Structured

Limited answers

Pre-defined

Specials and self-calculated

Upload files

Automatic calculations

Descriptives

Plain text, HTML, video, audio, images, files, etc.

Add New Field

You may add a new project field to this data collection instrument by completing the fields below a form on this page. For an overview of the different field types available, you may view the [Field T](#)

Field Type:

- Select a Type of Field ----
- Text Box (Short Text, Number, Date/Time, ...)
- Notes Box (Paragraph Text)
- Calculated Field
- Multiple Choice - Drop-down List (Single Answer)
- Multiple Choice - Radio Buttons (Single Answer)
- Checkboxes (Multiple Answers)
- Yes - No
- True - False
- Signature (draw signature with mouse or finger)
- File Upload (for users to upload files)
- Slider / Visual Analog Scale
- Descriptive Text (with optional Image/Video/Audio/File Attachment)
- Begin New Section (with optional text)
- Dynamic Query (SQL)



Creation

4. Define attributes:

Required

Field type

Field label

Variable Name

Conditions

Validation

Maximum-minimum

Ontology lookup

Others

Required

Footnote to the field

Personalise alignment

Action tags

Add New Field

You may add a new project field to this data collection instrument by completing the fields below and clicking the Save button at the bottom. When you add a new field, it will be added to the form on this page. For an overview of the different field types available, you may view the [Field Types video \(8 min\)](#).

Field Type:

Field Label Use the Rich Text Editor

Action Tags / Field Annotation (optional)

[Learn about Action Tags](#) or [Learn Field Annotation](#)

Variable Name (advised in logic, cases, and exports)
 Enable auto numbering of name based upon its Field Label?

ONLY letters, numbers, and underscores

How to use: [Smart Variables](#) [Flags](#) [Field Embedding](#)

Validation? (optional)

-- OR --

-- select ontology service --

Required* No Yes
* Prompt if field is blank

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

Custom Alignment:

Align the position of the field on the page

Field Note (optional)

Small reminder text displayed underneath field

Unstructured fields

1. Texts:

Field type: Text Box

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

Utilities: Free text

Validation

- Dates, numbers, electronic mails, phone numbers, etc.
 - Maximum-minimum
 - Bio-medical ontologies
-

2. Comments:

Field types: Notes Box

Field Type: Notes Box (Paragraph Text) ▾

Utilities: Clinical notes, descriptions...

Validation: Does not apply



Activity: Creation of unstructured variables

Demographic form				
	Label	Name	Units	Remarks
	Record ID	record_id		
	Weight	weight	kg	Limitations: [45;150]
	Height	height	cm	Limitations: [145;240]
	Birth date	date_birth	D-M-Y	

Solution: Weight

Solution steps:

1. Enter to instrument Demographic
2. Add a new field (Add field)

Unstructured fields

Solution: Weight

- To create the weight variable select the **field type**: *Text Box*
- Select the attributes:

Mandatory:

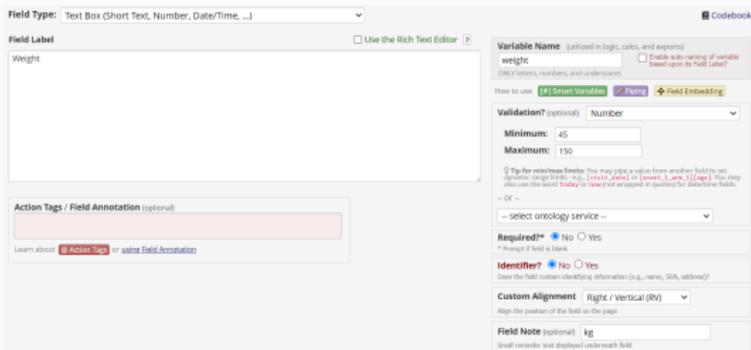
- Field type: *Text Box*
- Field label: Weight
- Variable name: weight

Conditions:

- Validation: Number
- Minimum: 45 - Maximum: 150

Others:

- Field note: kg



The screenshot shows the configuration interface for a new field in REDCap. The field type is set to 'Text Box (Short Text, Number, Date/Time, ...)'. The field label is 'Weight'. The variable name is 'weight'. The validation is set to 'Number'. The minimum value is 45 and the maximum value is 150. The field note is 'kg'. The interface also shows options for 'Action Tags / Field Annotation', 'Required?' (set to No), 'Identifier?' (set to No), and 'Custom Alignment' (set to Right / Vertical (Rv)).



Remarks

- Names of the fields: without accents, spaces, capital letters, special characters, etc.
- REDCap does not recommend field names with more than 26 characters.

Unstructured fields

Solution: Height

1. To create the height variable select the **field type**: *Text Box*
2. Select the attributes:

Mandatory:

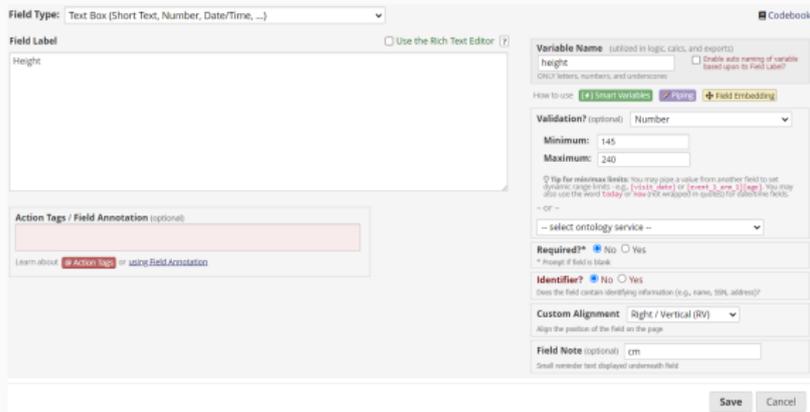
- Field type: *Text Box*
- Field label: Height
- Variable name: height

Conditions:

- Validation: Number
- Minimum: 145 - Maximum: 240

Others

- Field note: cm



The screenshot shows a configuration panel for a field. At the top, the 'Field Type' is set to 'Text Box (Short Text, Number, Date/Time, ...)'. Below this, the 'Field Label' is 'Height'. To the right of the label is a checkbox for 'Use the Rich Text Editor' which is unchecked. The main area contains a text input field with the text 'Height'. Below the text field is a section for 'Action Tags / Field Annotation (optional)' which is currently empty. At the bottom left of this section is a link that says 'Learn about Action tags or using Field Annotation'. On the right side of the panel, there are several settings sections: 'Variable Name' is 'height' with a checkbox for 'Enable auto naming of variable based upon its field label?'; 'How to use' has three options: 'Smart Variables', 'Plain' (selected), and 'Field Embedding'; 'Validation?' is set to 'Number'; 'Minimum' is '145' and 'Maximum' is '240'; there is a note about 'Tip for minimum limits' and a dropdown for 'select ontology service'; 'Required?' is 'No'; 'Identifier?' is 'No'; 'Custom Alignment' is 'Right / Vertical (RV)'; and 'Field Note' is 'cm'. At the bottom right are 'Save' and 'Cancel' buttons.

Solution: Date of birth

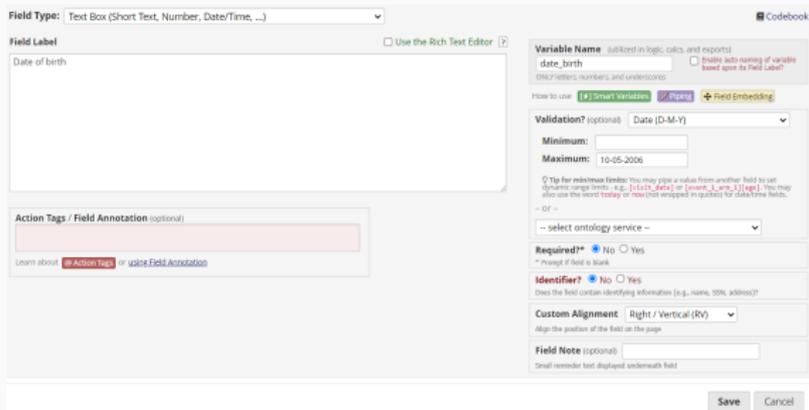
1. To create the birth date variable select the **field type**: *Text Box*
2. Select the attributes:

Mandatory:

- Field type: *Text Box*
- Field label: Date of birth
- Field name: d_birth

Conditions:

- Validation: Date (D - M - Y)



The screenshot shows a configuration panel for a variable. At the top, the 'Field Type' is set to 'Text Box (Short Text, Number, Date/Time, ...)'. Below this, the 'Field Label' is 'Date of birth' and the 'Field Name' is 'date_birth'. The 'Validation?' dropdown is set to 'Date (D-M-Y)'. The 'Minimum' and 'Maximum' fields are empty. The 'Required*' checkbox is checked. The 'Identifier?' checkbox is unchecked. The 'Custom Alignment' dropdown is set to 'Right / Vertical (Rv)'. The 'Field Note' field is empty. At the bottom right, there are 'Save' and 'Cancel' buttons.

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

Field Label: Date of birth

Field Name: date_birth

Validation?: Date (D-M-Y)

Minimum:

Maximum: 10-05-2006

Required* No Yes

Identifier? No Yes

Custom Alignment: Right / Vertical (Rv)

Field Note (optional):

Save Cancel



Definition

Structured field type:

1. Single answer
2. Multiple answers



Structured fields

1. Single answer:

Field type: Drop down

Visualization: Fold-out list

Field Type: Multiple Choice - Drop-down List (Single Answer) ▾

Field type: Radio Buttons

Visualization: Buttons

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

Field type: Yes-No

Visualization: Predefined Buttons

Field Type: Yes - No ▾

Structured fields

1. Single answer:

Field type: True-False

Visualization: Predefined Buttons

Field Type: True - False

Field type: Slider

Visualization: Likert Scale of 0-
?
Slider bar

Field Type: Slider / Visual Analog Scale

2. Multiple answers:

Field type: Checkboxes

Field Type:

Visualization: Check



Remarks

- Creating a new checkbox category generates a new field in the database.
- If the category has been checked, it is saved as "Checked".
- If the category has not been checked, it is saved as a "Unchecked".



Activity: Structured fields

Demographic form				
	Label	Name	Remarks	Categories
...
	Sex	sex	Radio Buttons (single answer)	0, Female 1, Male
	Medication	medication	Checkboxes (Multiple Choice)	0, Statins 1, Anticoagulants 2, Antidiabetics

Structured fields

Solution: Sex

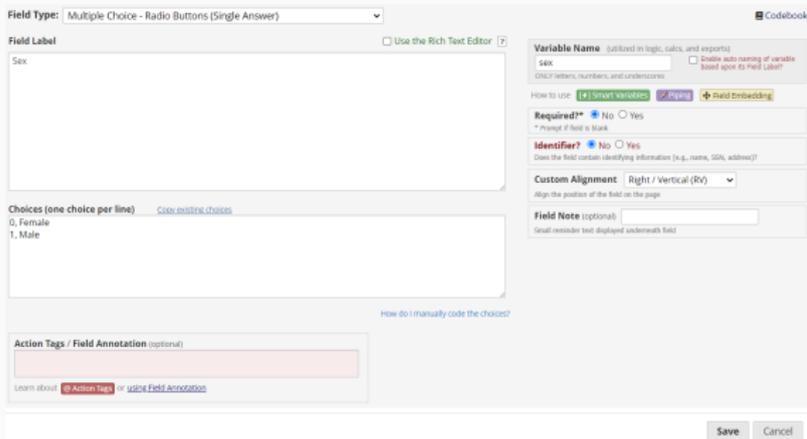
1. To create the variable sex select *Radio Buttons*
2. Select the attributes:

Mandatory:

- Field type: *Radio Buttons*
- Field label: Sex
- Variable name: sex

Conditions:

- Choices:
0, Female
1, Male



The screenshot shows a configuration panel for a variable named 'sex'. The 'Field Type' is set to 'Multiple Choice - Radio Buttons (Single Answer)'. The 'Field Label' is 'Sex'. The 'Variable Name' is 'sex'. The 'Required?' checkbox is checked. The 'Identifier?' checkbox is unchecked. The 'Custom Alignment' is set to 'Right / Vertical (Rv)'. The 'Field Note' is empty. The 'Choices' section shows '0, Female' and '1, Male'. The 'Action Tags / Field Annotation' section is empty. The 'Save' and 'Cancel' buttons are at the bottom right.

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

Field Label: Sex Use the Rich Text Editor

Variable Name: sex Enable auto naming of variable based upon its Field Label?

ONLY letters, numbers, and underscores

How to use: [Smart variables](#) [Flags](#) [Field breeding](#)

Required? No Yes
* Prerequisite 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

Choices (one choice per line) [Copy existing choices](#)

0, Female
1, Male

How do I manually code the choices?

Action Tags / Field Annotation (optional)

[Learn about Action Tags](#) or [using Field Annotation](#)

Save Cancel

Solution: Medication

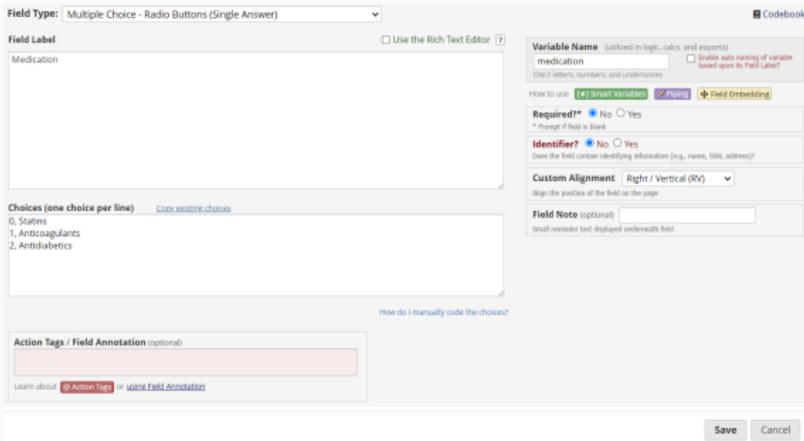
1. To create the variable medication select *Checkbox*
2. Select the attributes:

Mandatory:

- Field type: *Checkbox*
- Field label: Medication
- Variable name: medication

Conditions:

- Choices:
 - 0, Statins
 - 1, Anticoagulants
 - 2, Antidiabetics



The screenshot shows a configuration interface for a form field. The 'Field Type' is set to 'Multiple Choice - Radio Buttons (Single Answer)'. The 'Field Label' is 'Medication'. The 'Variable Name' is 'medication'. The 'Required?' checkbox is checked. The 'Identifier?' checkbox is checked. The 'Custom Alignment' is set to 'Right / Vertical (RV)'. The 'Field Note' is empty. The 'Choices' section lists: 0, Statins; 1, Anticoagulants; 2, Antidiabetics. The 'Action Tags / Field Annotation' section is empty. The 'Save' and 'Cancel' buttons are at the bottom right.

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

Field Label: Medication Use the Rich Text Editor ?

Variable Name: medication Enable Auto-removal of variable based upon its Field Label

How to use: [Smart variables](#) [Plain](#) [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

Choices (one choice per line) [Copy existing choices](#)

0, Statins
1, Anticoagulants
2, Antidiabetics

How do I manually code the choices?

Action Tags / Field Annotation (optional):

Learn about [@ Action Tags](#) or [using Field Annotation](#)

Save Cancel



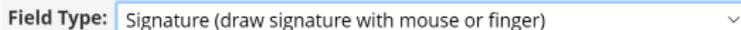
Definition

Types of special fields:

1. Signature
2. Upload files

1. Signature:

Field type: Signature

A screenshot of a form field configuration interface. It shows a label 'Field Type:' followed by a dropdown menu. The dropdown menu is open, showing the selected option 'Signature (draw signature with mouse or finger)' and a small downward-pointing arrow on the right side of the menu box.

Field Type: Signature (draw signature with mouse or finger) ▾

Utilities: Allows users to provide a digital signature.

Properties:

- Capture a small JPEG image file.
- Works on both computers and touchscreen devices.

2. Upload files:

Field type: File Upload

Field Type:

Utilities: Allows users to upload files in any format.

Properties:

- REDCap only stores the file.
- Maximum upload size of 25 MB per file.



Warning

- Data and images cannot be downloaded together.
- Images must not contain any personal identification data.

Self-calculated fields

1. Self-calculated:

Field type: Calculated Field

Field Type:

Utilities:

- Simple calculations (e.g. Body Mass Index - BMI)
- Scores

Properties: Limited to fields within the same record.

Standard functions: +, -, /, *, ^

Special functions:

- `datediff()` (It calculates the difference between two dates)
- `sum()`
- `mean()`
- `if()`
- Complete list [Learn how to use Special Functions](#)

√* Compose a basic equation

- The result is a number.
- To compose it, you need to define the following elements:
 - Field(s): To use a REDCap field, enclose the field in the same square brackets (not its label). E.g. `[age]`
 - Functions/Operators: E.g. `+` or `datediff()`
 - Equation: E.g. `[weight] + [height]`



Activity: Self-calculated fields

Demographic form			
	Label	Name	Calculation

	BMI	bmi	<code>[weight]/([height]/100)^2</code>
	Age	age	<code>rounddown(datediff("today",[date_birth],"y"))</code>
	Age > 65	age_65	<code>if([age] > 65,1,0)</code>

Self-calculated fields

Solution: BMI

$$BMI = \frac{Weight (kg)}{(Height (cm)/100)^2}$$

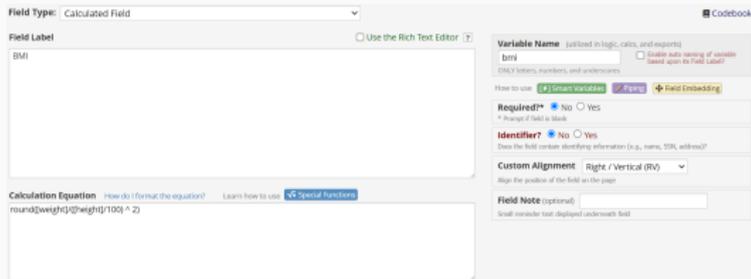
1. To create the variable bmi select *Calculated Field*
2. Select the attributes:

Mandatory:

- Field type: *Calculated Field*
- Field label: BMI
- Variable name: bmi

Equation:

- $[weight]/([height]/100)^2$



The screenshot shows a configuration interface for a calculated field. The 'Field Type' is set to 'Calculated Field'. The 'Field Label' is 'BMI'. The 'Calculation Equation' is $\text{round}(\text{weight})/(\text{height}/100)^2$. The 'Variable Name' is 'bmi'. The 'Required' checkbox is checked. The 'Identifier' checkbox is checked. The 'Custom Alignment' is set to 'Right / Vertical (RV)'. The 'Field Note' is optional and currently empty.

Self-calculated fields

Solution: Age as of Today

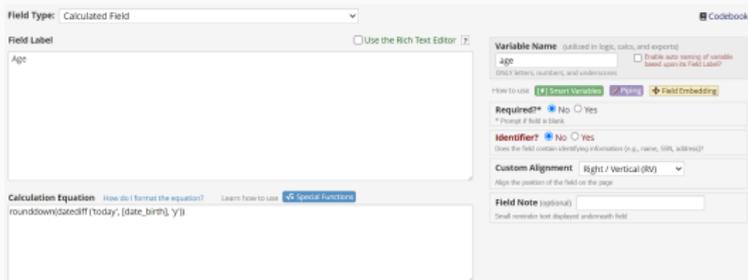
1. To create the variable age today select *Calculated Field*
2. Select the attributes:

Mandatory:

- Field type: *Calculated Field*
- Field label: Age
- Variable name: age

Equation:

- $\text{rounddown}(\text{datediff}(\text{"today"}, [\text{date_birth}], \text{"y"}))$



The screenshot shows a configuration interface for a calculated field. The 'Field Type' is set to 'Calculated Field'. The 'Field Label' is 'Age'. The 'Variable Name' is 'age'. The 'Calculation Equation' is $\text{rounddown}(\text{datediff}(\text{"today"}, [\text{date_birth}], \text{"y"}))$. The 'Required?' checkbox is checked. The 'Identifier?' checkbox is checked. The 'Custom Alignment' is set to 'Right / Vertical (RV)'. The 'Field Note' is empty.



Remarks

- The argument *today* returns the current day.
- The function *round()* rounds the result to the nearest integer.
- The *age* value will be updated automatically each time the form is filled in.
- The function *datediff()* takes the more recent date as the first argument and the older date as the second.

Self-calculated fields

Solution: person over 65 years of age

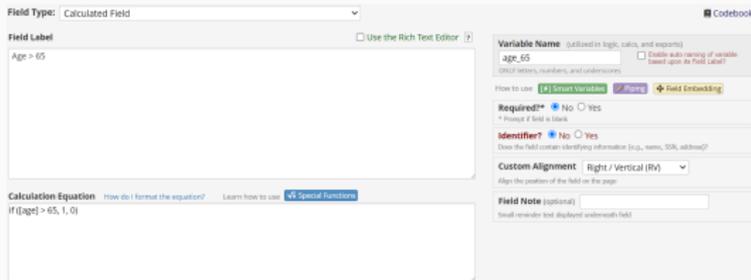
1. To create the variable `age_65` select *Calculated Field*
2. Select the attributes:

Mandatory:

- Field type: *Calculated Field*
- Field label: `Age > 65`
- Field name: `age_65`

Equation:

- `if([age] > 65,1,0)`



The screenshot shows the configuration interface for a calculated field. The 'Field Type' is set to 'Calculated Field'. The 'Field Label' is 'Age > 65'. The 'Calculation Equation' is `if([age] > 65,1,0)`. The 'Variable Name' is 'age_65'. The 'Required' checkbox is checked. The 'Identifier' checkbox is checked. The 'Custom Alignment' is set to 'Right / Vertical (Rv)'. The 'Field Note' is empty.



Remarks

- The first argument is the logical condition to be evaluated.
- The second argument is the value assigned **if** the condition is true.
- The third argument is the value assigned **if** the condition is false.



Definition

Types of descriptive fields:

1. Descriptive field
2. Section header

1. Descriptive field:

Field type: Descriptive Text

Field Type:

Utilities: It displays online content such as files and allows file downloads, or shows informative text.

Properties:

- Texts, videos from online platforms, audios, images, files, etc.
- File size limit of 25 MB.

2. Section header:

Field type: Begin New Section

Field Type: ▾

Utilities:

- Enhancement and to separate groups of fields.
- It can be used in surveys to create separate pages.

Activity

- Attach the header "Demographic Fields" at the beginning of the instrument.
- Customize the header style to your preference.

Solution

1. **Attach the header "Demographic Fields" at the beginning of the instrument**

Mandatory:

- Field type: *Begin New Section*
- Field label: Demographic Fields



The screenshot shows a configuration window for a field. At the top, there is a dropdown menu labeled "Field Type:" with the selected option "Begin New Section (with optional text)". Below this is a section labeled "Field Label" with a checkbox "Use the Rich Text Editor" and a question mark icon. The main area is a text editor containing the text "Demographic Fields" in red.



Remarks

- It cannot be added before the identifier.
- It cannot be created if there is no field following it.

Solution

2. Customize the header style to your preference.



Use *Use the Rich Text Editor* to change the style by means of panels.

Field Type:

Field Label Use the Rich Text Editor [?](#)

Paragraph **B** *I* U **A**

Demographic Fields



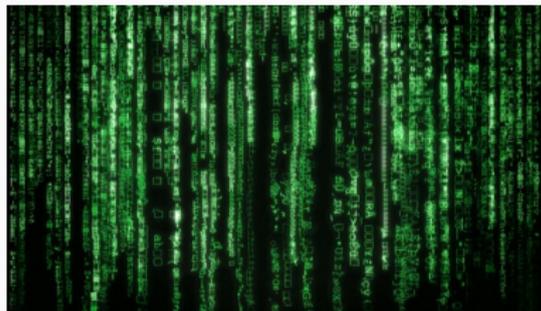
Remarks

- It can be used to modify the label of all types of fields.
- It supports HTML code.
- It allows you to create tables and insert images, just like a standard text editor.



Definition

A matrix groups together a set of **fields** that share the same set of possible answers.





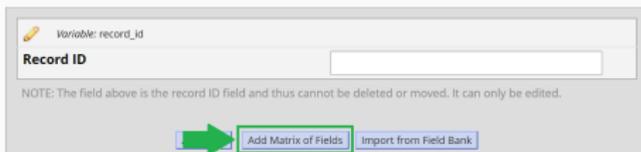
Definition

- **Properties:**

1. They can be created, deleted and stored in the project.
2. Used for structured fields such as single-choice or multiple-choice questions.
3. Two fields in the matrix can not have the same selected value for a given column (select only 1 option per column).
4. Rows represent the questions/fields, and columns represent the possible answer options.

Creation

1. Add a matrix (*Add Matrix of Fields*).



The screenshot shows a form with a grey background. At the top left, there is a yellow pencil icon followed by the text "Variable: record_id". Below this is a label "Record ID" and an empty white text input field. Underneath the input field is a note: "NOTE: The field above is the record ID field and thus cannot be deleted or moved. It can only be edited." At the bottom of the form, there are two buttons: "Add Matrix of Fields" and "Import from Field Bank". A green arrow points to the "Add Matrix of Fields" button, which is also highlighted with a green rectangular border.

Matrix of fields

Creation

2. Choose the attributes: When adding a new matrix, you can specify the attributes of the Matrix of Fields in REDCap:

Mandatory

Fields label

Fields name

Matrix name

Options (choices)

Others

Matrix header

Required

Ranking

Add Matrix of Fields

You may add or edit a matrix (i.e. grid) of project fields on this data collection instrument by completing the fields below. By providing all necessary info below and clicking Save, the new matrix of fields will be added to the form on this page. A Field Label and Variable name must be provided for each field in the matrix, and you must also set the Choices (i.e. matrix column headers) and answer format (Single Answer vs. Multiple Answers) for the entire matrix. [View a matrix example](#) or [Read more about matrix fields on the Help & FAQ](#).

Matrix Header Text (optional)

Expand

Matrix Rows Enable auto naming of variable based upon its Field Label?
Each row represents a different field with its own label and variable name.

Field Label	Variable Name <small>ONLY letters, numbers, and underscores</small>	Required**Field Annotation ?
<input type="text"/>	<input type="text"/>	<input type="checkbox"/>

Add another row

Matrix Column Choices [Copy existing choices](#)

Choices (one choice per line)

How do I manually code the choices?

Other Matrix Info

Answer Format:
Single Answer (Radio Buttons)

Ranking: [What is a ranked matrix of fields?](#)
 Allow only 1 choice to be selected per column (radio buttons only)

Matrix group name: ONLY letters, numbers, and underscores
 [What is a matrix group name?](#)

Save Cancel

Activity: Matrix of fields (comorbidities)

Demographic form			
	Label	Name	Remarks

	Hypertension	hta	0, No 1, Yes
	EPOC	epoc	0, No 1, Yes
	Diabetes mellitus	dm	0, No 1, Yes

Matrix of fields

Solution: Matrix of comorbidities

1. To create the comorbidities select *Add Matrix of Fields*.
2. Select the attributes:

Mandatory:

- Label/Field name:
 - Hypertension / hta
 - EPOC / epoc
 - Diabetes mellitus / dm
- Matrix name: comorbidities
- Options:
 - Choices:
 - 0, No
 - 1, Yes

Matrix Header Text (optional)

Expand

Matrix Rows Enable auto naming of variable based upon its Field Label?

Each row represents a different field with its own label and variable name.

Field Label	Variable Name	ONLY letters, numbers, and underscores	Required*	Field Annotation ?
<input type="text" value="Hypertension"/>	<input type="text" value="hta"/>	<input type="checkbox"/>	<input type="text"/>	✘
<input type="text" value="COPD"/>	<input type="text" value="copd"/>	<input type="checkbox"/>	<input type="text"/>	✘
<input type="text" value="Diabetis mellitus"/>	<input type="text" value="dm"/>	<input type="checkbox"/>	<input type="text"/>	✘

Matrix Column Choices

Choices (one choice per line) [Copy existing choices](#)

[How do I manually code the choices?](#)

Other Matrix Info

Answer Format:

Ranking: Allow only 1 choice to be selected per column (radio buttons only) [What is a ranked matrix of fields?](#)

Matrix group name: ONLY letters, numbers, and underscores
 [What is a matrix group name?](#)

**Thank you and see you
tomorrow!**

