

Data Query on Redcap: User Guide

CONTACT: ncov@isaric.org

Table of Contents

1. [Introduction \(Slide 3\)](#)
2. [User Rights \(Slide 4\)](#)
3. [Logging into REDCap \(Slide 5\)](#)
4. [Accessing your Project \(Slide 6\)](#)
5. [Data Query Navigation Panel \(Slide 7\)](#)
6. [Data Resolution Dashboard \(Slide 8\)](#)
7. [Data Query Resolution: Step 1 \(Slide 9\)](#)
8. [Data Query Resolution: Step 2 \(Slide 10\)](#)
9. [Data Query Resolution: Step 3 \(Slide 11\)](#)
10. [Data Query Resolution: Step 4 \(Slide 12\)](#)
11. [Data Query Resolution: Step 5 \(Slide 13\)](#)
12. [Data Query Resolution: Step 6 \(Slide 14\)](#)
13. [Data Query Raising: Step 1 \(Slide 15\)](#)
14. [Data Query Raising: Step 2 \(Slide 16\)](#)
15. [Accessing your data query export \(Slide 17\)](#)
16. [REDCap Messenger \(Slide 18\)](#)
17. [Additional information \(Slide 19\)](#)

Introduction

Data Validation

The process of ensuring data has undergone 'cleaning' to generate a data set that is of high quality, is correct, consistent and applicable.

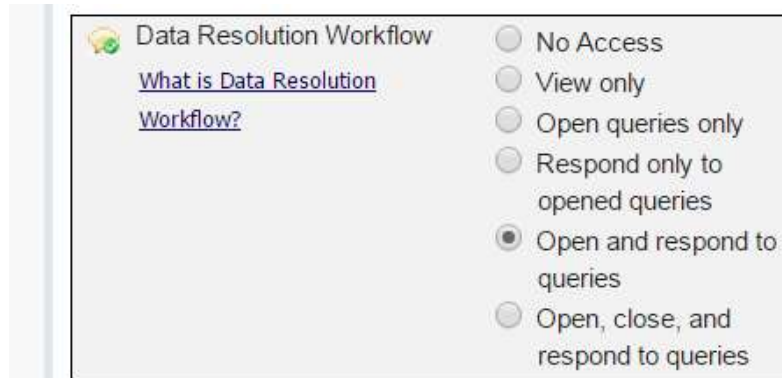


This is achieved by setting up quality/validation rules or edit checks, that check for accuracy, completeness and regularity. These checks can be automated or manual. In REDCap the Data Quality and Data Resolution Workflow module allows the Data Manager/Study Monitor to implement data quality rules (edit checks), raise queries and assign them to other project users. Users can respond to queries and mark the data item with a relevant response. Following review the Data Manager/Study Monitor can close the query. When there are no longer any open queries on an eCRF it can then be locked by the Data Manager/Study Monitor.

User Rights

User Accounts

Access to the REDCap Data Resolution module is controlled via individual user accounts setup by the University of Oxford . All Users are given the following ‘Open and respond to queries’ rights in **Figure 1**.



The screenshot shows a user rights configuration window for the 'Data Resolution Workflow'. On the left, there is a sidebar with a green icon and two links: 'What is Data Resolution Workflow?' and 'Workflow?'. The main area on the right contains a list of six radio button options for user permissions. The option 'Open and respond to queries' is selected, indicated by a filled radio button.

Permission Option	Selected
No Access	<input type="radio"/>
View only	<input type="radio"/>
Open queries only	<input type="radio"/>
Respond only to opened queries	<input type="radio"/>
Open and respond to queries	<input checked="" type="radio"/>
Open, close, and respond to queries	<input type="radio"/>

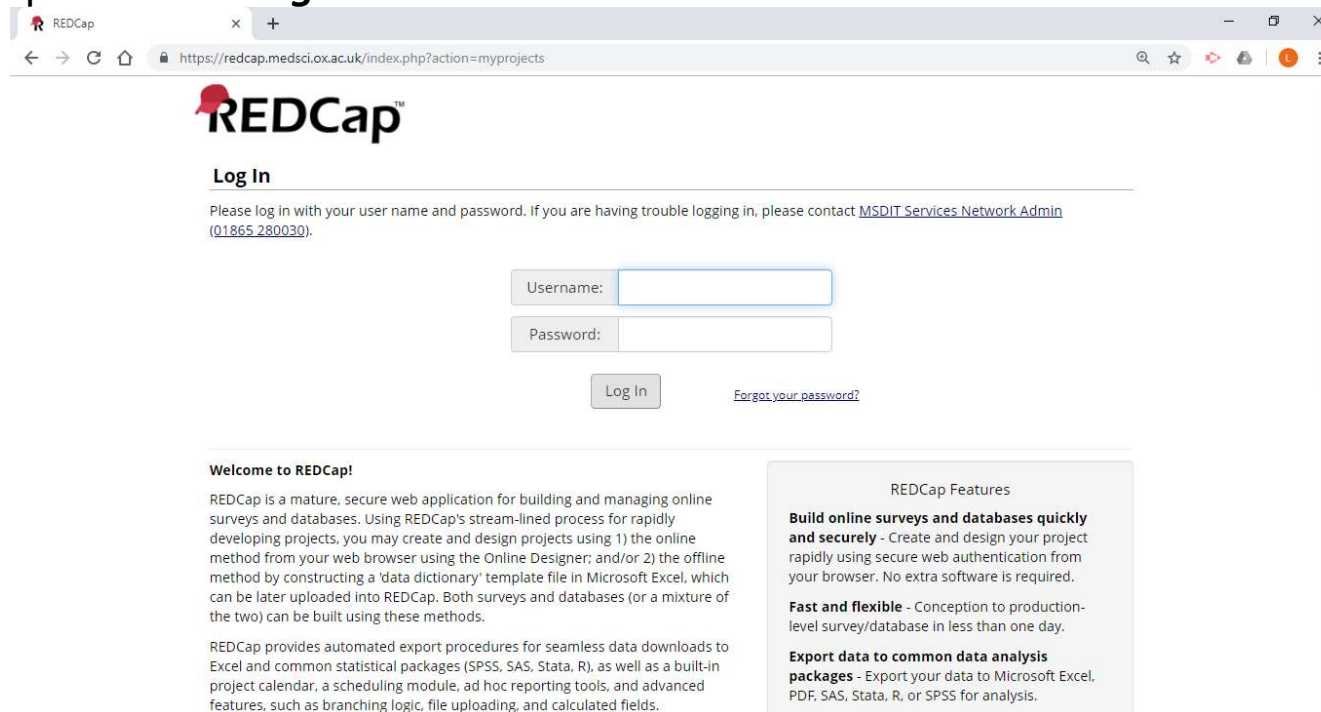
Figure 1

Users will need to respond to queries that have been opened by the Data Manager. We have also allowed Users to open/raise queries. Users can use the open/raise query function to annotate the data and add comments that may be useful to the monitor later.

Logging Into REDCap

Open a browser (Google Chrome recommended) and enter the following URL in the address line:

<https://ncov.medsci.ox.ac.uk/> Enter your username and password provided to you when you were given access to REDCap as seen in **Figure 2**.



The screenshot shows a web browser window with the REDCap login page. The browser's address bar displays the URL <https://redcap.medsci.ox.ac.uk/index.php?action=myprojects>. The page features the REDCap logo at the top, followed by a 'Log In' section. Below the logo, there is a message: 'Please log in with your user name and password. If you are having trouble logging in, please contact [MSDIT Services Network Admin \(01865 280030\)](#).' The login form consists of two input fields: 'Username:' and 'Password:'. Below these fields is a 'Log In' button and a link for '[Forgot your password?](#)'. At the bottom of the page, there is a 'Welcome to REDCap!' section with a detailed description of the application's capabilities, and a 'REDCap Features' box on the right side listing key features like 'Build online surveys and databases quickly and securely', 'Fast and flexible', and 'Export data to common data analysis packages'.

REDCap

Log In

Please log in with your user name and password. If you are having trouble logging in, please contact [MSDIT Services Network Admin \(01865 280030\)](#).

Username:

Password:

[Forgot your password?](#)

Welcome to REDCap!

REDCap is a mature, secure web application for building and managing online surveys and databases. Using REDCap's stream-lined process for rapidly developing projects, you may create and design projects using 1) the online method from your web browser using the Online Designer; and/or 2) the offline method by constructing a 'data dictionary' template file in Microsoft Excel, which can be later uploaded into REDCap. Both surveys and databases (or a mixture of the two) can be built using these methods.

REDCap provides automated export procedures for seamless data downloads to Excel and common statistical packages (SPSS, SAS, Stata, R), as well as a built-in project calendar, a scheduling module, ad hoc reporting tools, and advanced features, such as branching logic, file uploading, and calculated fields.

REDCap Features

Build online surveys and databases quickly and securely - Create and design your project rapidly using secure web authentication from your browser. No extra software is required.

Fast and flexible - Conception to production-level survey/database in less than one day.

Export data to common data analysis packages - Export your data to Microsoft Excel, PDF, SAS, Stata, R, or SPSS for analysis.

Figure 2

Accessing Your Project

From the REDCap Home Screen select the My Projects tab to see a list of projects you are authorized to access (**Figure 3**). Click on the link to the database for which you will be reviewing data queries. The screen displays database information (**Figure 3a**).

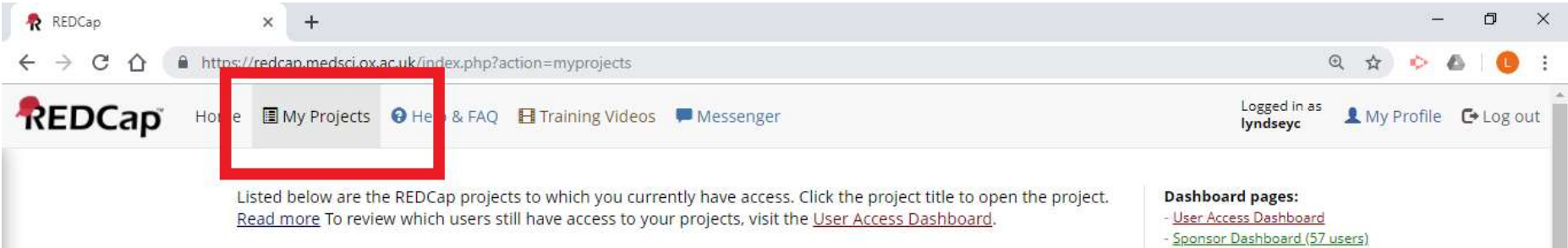


Figure 3

My Projects Organize						Filter projects by title
Project Title	Records	Fields	Instrument	Type	Status	
SPRINT-SARI-RAPID	3	49	7 forms			
SPRINT-SARI-CORE	4	282	12 forms			

Figure 3a

Data Query Navigation Panel


On the left hand panel/menu (**Figure 4**) under **Applications** select the '**Resolve Issues**'





Figure 4

Data Resolution Dashboard

You can view and access the data in the 'Resolves Issues' - 'Data Resolution Dashboard' (*Figure 5*).

 Resolve Issues 1

 Resolution Metrics

 [VIDEO: Data Resolution Workflow](#) or [Read introduction to Data Resolution Workflow](#)

This page displays all data queries that are currently unresolved or have already been resolved using the Data Resolution Workflow. Some issues may have been initiated by users on data collection instruments, and others may have been initiated after executing Data Quality rules on the Find Issues tab. The table lists the name of the record and the specific field or Data Quality rule to which the data query belongs, as well as the user assigned to the query (if applicable), the number of days the data query has been open, and a brief snippet of the query's first and last comment. The results in the table can be filtered by the query status type (e.g., open, closed), by certain fields or Data Quality rules, and also by users assigned to it. Each data query may be viewed by clicking the button to its left.


Data Resolution Dashboard

Filters:

Open / unresolved issues (1) ▼

All fields and rules ▼

User assigned (all users) or not assigned ▼

 Export


Click button to view data query	Record	Data Quality rule and/or Field	User Assigned	Days Open	First Update	Last Up
<div> 1 comment</div>	004-0005	Field: symptoms_ieorres_fever (3.1 A history of feverishness or measured fever of ? 38 de...)	lyndseyc	0	lyndseycgmail (28/05/2019 3:47pm): "At least one of the three inclusion criteria need to be yes. Please check and amend accordingly."	[same a

Figure 6

Figure 5

Data Query Resolution: Step 1

- 1. Ensure the filters are set as the following options.
- 2. Read over what the query/problem is.
- 3. Click on the Participant ID to view the eCRF (*Figure 6*).

Data Quality

Resolve Issues 1

Resolution Metrics

VIDEO: Data Resolution Workflow

 or

Read introduction to Data Resolution Workflow

This page displays all data queries that are currently unresolved or have already been resolved using the Data Resolution Workflow. Some issues may have been initiated by users on data collection instruments, and others may have been initiated after executing Data Quality rules on the Find Issues tab. The table lists the name of the record and the specific field or Data Quality rule to which the data query belongs, as well as the user assigned to the query (if applicable), the number of days the data query has been open, and a brief snippet of the query's first and last comment. The results in the table can be filtered by the query status type (e.g., open, closed), by certain fields or Data Quality rules, and also by users assigned to it. Each data query may be viewed by clicking the button to its left.

Data Resolution Dashboard

Export

Filters:

Open / unresolved issues (1)

All fields and rules

User assigned (all users) or not assigned

Click button to view data query	Record	Data Quality rule and/or Field	User Assigned	Days Open	First Update	
<div>3 comments</div>	<div>004-0005</div>	Field: symptoms_jeorres_fever (3.1 A history of feverishness or measured fever of ? 38 de...)	lyndseyc	1.7	lyndseycgmail (28/05/2019 3:47pm): "At least one of the three inclusion criteria need to be yes. Please check and amend accordingly."	<div>1</div>

Figure 6

Data Query Resolution: Step 2

With the eCRF now open review data query question and complete the following:

1. Check the data recorded on the eCRF against the source/original documents/records (**Figure7**).
2. Discuss with appropriate study staff member or Clinician.
3. Check the eCRF data with medical record data

Inclusion Criteria

Editing existing Participant Identification Number (PIN): 1

Event Name: Day 1

Participant Identification Number (PIN): 1
To rename the record, see the record action drop-down at top of the Record Home Page.

Date of Enrolment
* must provide value
17-01-2020 Today D-M-Y

Site name
* must provide value
Lister Hospital

Country
* must provide value
United Arab Emirates

INCLUSION CRITERIA

1. Suspected or proven acute novel Coronavirus (nCoV) infection as main cause for admission:
* must provide value
Yes No reset

EPIDEMIOLOGICAL FACTORS - In the 14 days before onset of illness had any of the following:

	YES	NO	Not known
2.A history of travel to an area with documented cases of novel coronavirus infection * must provide value	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Does the eCRF record match the patient medical record?

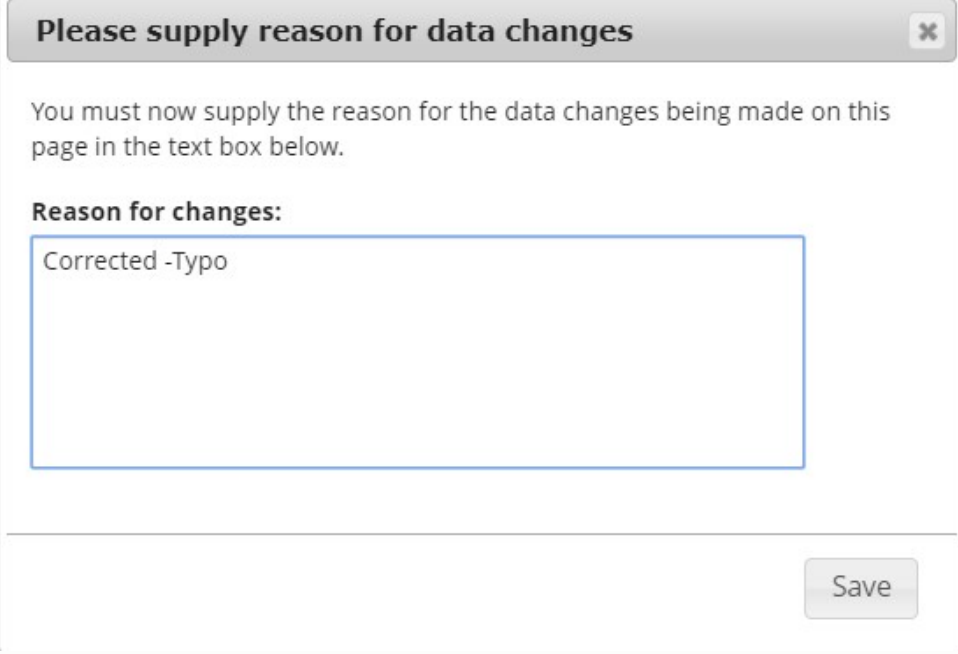
Figure 7

Data Query Resolution: Step 3

Staff member (with REDCap data entry role – view edit and open and respond to open queries rights) will resolve query by completing one of the following to the eCRF (**Figure 8**):

1. Amend to the correct value or information (due to typo errors or wrong source document used).
2. Add new or missing information.
3. Verify as correct information.

Figure 8



Please supply reason for data changes

You must now supply the reason for the data changes being made on this page in the text box below.

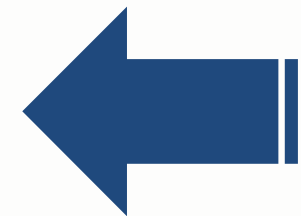
Reason for changes:

Corrected -Typo

Save

Supply the reason for change as one of the following (**Figure 8**):

- Corrected – Data missing
- Corrected – Typo
- Corrected - Wrong source used
- Verified – Correct information



Click on Save

Data Query Resolution: Step 4

Relocate the query in the **Data Resolution Dashboard (Slide 8)**. Ensure the filters are set as the following options. Then click on the comment button to view the query (**Figure 9**).

Resolve Issues **1**

Resolution Metrics

[VIDEO: Data Resolution Workflow](#) or [Read Introduction to Data Resolution Workflow](#)

This page displays all data queries that are currently unresolved or have already been resolved using the Data Resolution Workflow. Some issues may have been initiated by users on data collection instruments, and others may have been initiated after executing Data Quality rules on the Find Issues tab. The table lists the name of the record and the specific field or Data Quality rule to which the data query belongs, as well as the user assigned to the query (if applicable), the number of days the data query has been open, and a brief snippet of the query's first and last comment. The results in the table can be filtered by the query status type (e.g., open, closed), by certain fields or Data Quality rules, and also by users assigned to it. Each data query may be viewed by clicking the button to its left.

Data Resolution Dashboard

Export

Filters:

Open / unresolved issues (1) ▼

All fields and rules ▼


User assigned (all users) or not assigned ▼

Click button to view data query	Record	Data Quality rule and/or Field	User Assigned	Days Open	First Update	Last Up
<div> 1 comment</div>	004-0005	Field: symptoms_jeorres_fever (3.1 A history of feverishness or measured fever of ? 38 de...)	lyndseyc	0	lyndseycgmail (28/05/2019 3:47pm): "At least one of the three inclusion criteria need to be yes. Please check and amend accordingly."	[same a

Figure 9

Data Query Resolution: Step 5

Select the relevant query response from the drop down menu (*Figure 10*) and confirm descriptive response in comments box. Finally click on ‘Respond to query’

 [VIDEO: Data Resolution Workflow](#)

This pop-up displays the Data Resolution Workflow for the specified record for a given field and/or Data Quality rule. Users with appropriate user privileges may open data queries to begin a documented process of resolving an issue with the data. Opened data queries may thus be responded to by users with appropriate privileges, and then they may be closed once the issue has been resolved. All data queries can also be viewed on the Resolve Issues page in this project.

Participant Identification Number:: [004-0005](#)

Field: **symptoms_ieorres_fever** ("3.1 A history of feverishness or measured fever of ? 38 deg C")

Status: 🟡 **Open / Unresolved** (unresponded)

Date/Time	User	Comments and Details
28/05/2019 3:46pm	lyndseycgmail	Data Changes Made: symptoms_ieorres_fever = 'NO (2)'
28/05/2019 3:47pm	lyndseycgmail	Action: Opened query Assigned to user: lyndseyc (Lyndsey Castle) Comment: "At least one of the three inclusion criteria need to be yes. Please check and amend accordingly."
30/05/2019 10:07am	lyndseycgmail	<div><div>Reply with response:</div><div>Upload file (optional):</div><div>Comment:</div></div> <div><div>-- choose response --</div><div>-- choose response --</div><div>Corrected - Data missing</div><div>Corrected - Typographical error</div><div>Corrected - Wrong source used</div><div>Verified - Confirmed correct (no error)</div><div>Other</div></div>

Respond to query

Cancel





Figure 10

Data Query Resolution: Step 6

Once you have completed entering the query response information, you will be returned to the Data Resolution Dashboard (**Figure 11**).

Query Status is identified by the color of the Comment ! =Responses given !=Pending Responses

 [VIDEO: Data Resolution Workflow](#) or [Read introduction to Data Resolution Workflow](#)

This page displays all data queries that are currently unresolved or have already been resolved using the Data Resolution Workflow. Some issues may have been initiated by users on data collection instruments, and others may have been initiated after executing Data Quality rules on the Find Issues tab. The table lists the name of the record and the specific field or Data Quality rule to which the data query belongs, as well as the user assigned to the query (if applicable), the number of days the data query has been open, and a brief snippet of the query's first and last comment. The results in the table can be filtered by the query status type (e.g., open, closed), by certain fields or Data Quality rules, and also by users assigned to it. Each data query may be viewed by clicking the button to its left.


Data Resolution Dashboard

Filters:

Open / unresolved issues (1) ▼

All fields and rules ▼

User assigned (all users) or not assigned ▼

 Export


Click button to view data query	Record	Data Quality rule and/or Field	User Assigned	Days Open	First Update	Last Up
 2 comments	004-0005	Field: symptoms_jeorres_fever (3.1 A history of feverishness or measured fever of ? 38 de...)	lyndseyc	0	lyndseycgmail (28/05/2019 3:47pm): "At least one of the three inclusion criteria need to be yes. Please check and amend accordingly."	lyndseyc "Questi yes."

Figure 11

Data queries can also be raised during data entry of eCRFs or whilst reviewing eCRFs e.g. during source data verification (these are manual data queries). All Site Users have rights to do this and manual queries can be raised in the following way:

Data Query Raising: Step 1

Click on the comment button to raise the query (**Figure 12**).

The screenshot shows a web browser window with the URL `uk/redcap_v8.6.5/DataEntry/index.php?pid=95&id=004-0005&event_id=807&page=sprintsari_inclusion_criteria`. The form is titled "SPRINT-SARI-CORE | REDCap". It contains the following questions and options:

- 3.1 A history of feverishness or measured fever of ? 38 deg C
* must provide value
- 3.2 Cough
* must provide value
- 3.3 Dyspnoea (shortness of breath) OR Tachypnoea
* must provide value
- Alternate definition
- 4. Clinical suspicion of SARI despite not meeting criteria above
- Form Status
- Complete? Incomplete

Buttons at the bottom include "Save & Exit Form", "Save & ...", and "-- Cancel --". A red box highlights the comment icon (a speech bubble) next to question 3.2.

Figure 12

Data Query Raising: Step 2

1. Click on 'Open query' (**Figure 13**)
2. Select the User you would like to assign the query to
3. Confirm descriptive query response in the comments box
4. Click on 'Open query' button

by C x SPRINT-SARI-CORE | REDCap +

https://redcap.medsci.ox.ac.uk/redcap_v8.6.5/DataEntry/index.php?pid=95&id=004-0005&event_id=807&page=sprintsari_inclusion_c

Study Disease: NO

Data Resolution Workflow

[VIDEO: Data Resolution Workflow](#)

This pop-up displays the Data Resolution Workflow for the specified record for a given field and/or Data Quality rule. Users with appropriate user privileges may open data queries to begin a documented process of resolving an issue with the data. Opened data queries may thus be responded to by users with appropriate privileges, and then they may be closed once the issue has been resolved. All data queries can also be viewed on the Resolve Issues page in this project.

Participant Identification Number:: **004-0005**
 Field: **symptoms_jeorres_cough** ("3.2 Cough")
 Status: **Not Opened**

Date/Time	User	Comments and Details
28/05/2019 3:46pm	lyndseycgmail	Data Changes Made: symptoms_jeorres_cough = 'NO (2)'
28/05/2019 6:29pm	lyndseycgmail	<div> <input type="radio"/> Verified data value — OR — <input checked="" type="radio"/> Open query Assign query to a user (optional): <input type="text" value="srinivas_murthy (srinivas murthy)"/> </div> <div> Comment: <input type="text" value="At least one of the three inclusion criteria need to be yes. Please check and amend accordingly."/> </div>


4.



Figure 13


Accessing your data query export

Users can export all data queries from the nCov project(s) within the 'Resolve Issues' panel by clicking on the 'Export' button on the **Data Resolution Dashboard**. Data is exported as a CSV file (**Figure 14**).

SPRINT-SARI-CORE


 **Data Quality**

 **Resolve Issues** 1  **Resolution Metrics**

 [VIDEO: Data Resolution Workflow](#) or [Read introduction to Data Resolution Workflow](#)

This page displays all data queries that are currently unresolved or have already been resolved using the Data Resolution Workflow. Some issues may have been initiated by users on data collection instruments, and others may have been initiated after executing Data Quality rules on the Find Issues tab. The table lists the name of the record and the specific field or Data Quality rule to which the data query belongs, as well as the user assigned to the query (if applicable), the number of days the data query has been open, and a brief snippet of the query's first and last comment. The results in the table can be filtered by the query status type (e.g., open, closed), by certain fields or Data Quality rules, and also by users assigned to it. Each data query may be viewed by clicking the button to its left.

Data Resolution Dashboard Filters: Open / unresolved issues (1) ▼
All fields and rules ▼
User assigned (all users) or not assigned ▼

 Export


<small>Click button to view data query</small>	Record	Data Quality rule and/or Field	User Assigned	Days Open	First Update	Last Update
 3 comments	004-0005	Field: symptoms_jeorres_fever (3.1 A history of feverishness or measured fever of ? 38 de...)	lyndseyc	1.7	lyndseyc@gmail (28/05/2019 3:47pm): "At least one of the three inclusion criteria need to be yes. Please check and amend accordingly."	lyndseyc (29/05/2019 3:36pm): "Please review"

Figure 14

REDCap Messenger

A communication platform is built directly into REDCap, allowing users to communicate easily, efficiently, and securely with other users. REDCap Messenger is a chat application that supports one-on-one direct messages and group conversations, as well as project-linking, document and image sharing. Please feel free to use this should you require assistance (**Figure 15**).

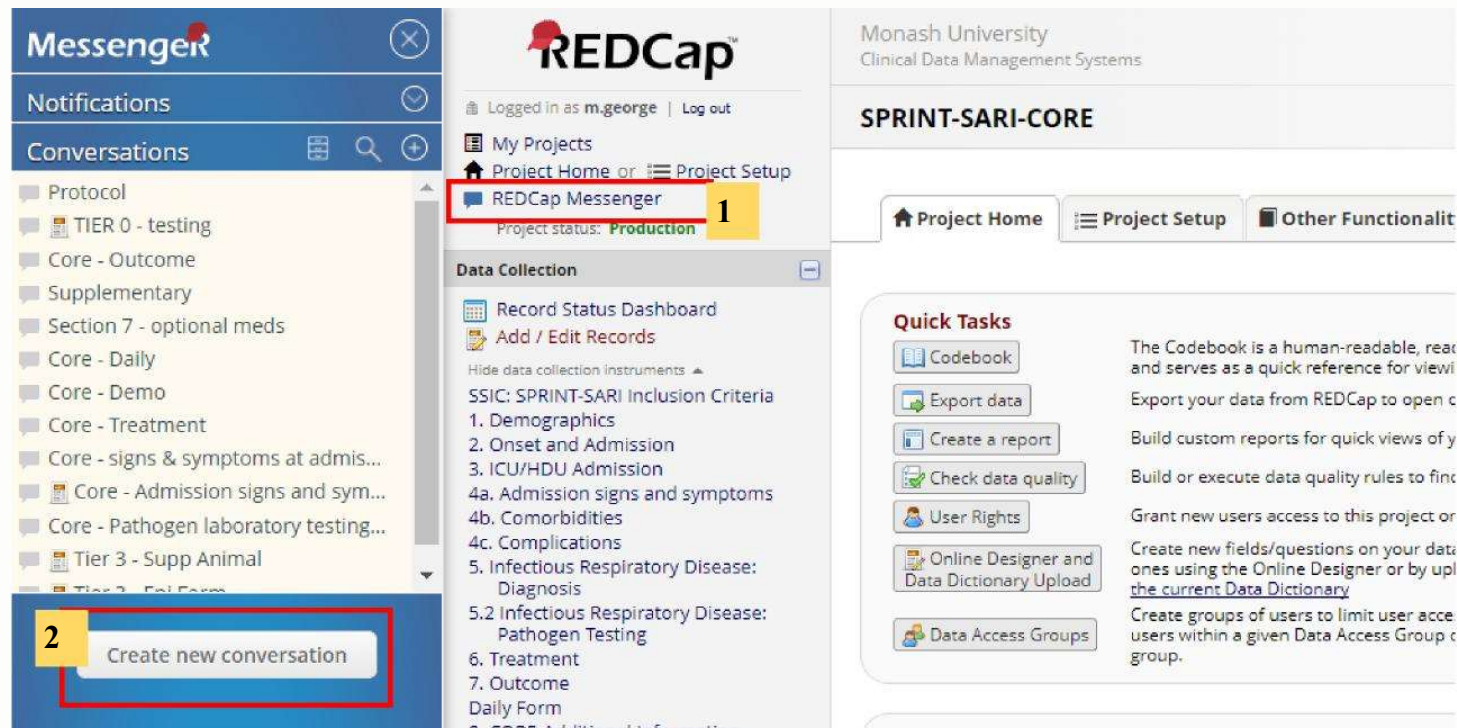


Figure 15

Where can I get REDCap training?

REDCap offers video training online.

These are a must for anyone beginning to use REDCap for the first time.

Training videos are available at <http://projectredcap.org/resources/videos/>



What if I need further information or support?

Direct all data enquiries to :

ncov@isaric.org