Getting Access to REDCap:
A Guide for Health Researchers in Manitoba

REDCap is a web-based system developed at Vanderbilt University for clinical research data management. To support University of Manitoba-affiliated health research, REDCap has been installed locally as a joint effort of the George & Fay Yee Centre for Healthcare Innovation (CHI) and MedIT, the Max Rady College of Medicine's IT support group. This document describes how you can gain access to REDCap in our installation.

Who Can Access REDCap?

If you're an investigator, staff, or trainee conducting health research approved by the University of Manitoba Health Research Ethics Board (HREB) or Biomedical Research Ethics Board (BREB), then you're eligible to use our implementation of REDCap. You may set up REDCap projects prior to receiving REB approval but data entry/collection using REDCap can only begin once you've received REB approval.

We've implemented REDCap locally using three different servers:
- Training Server
- Production Server, and
- Surveys Server

Depending on your project, you may end up using one, two, or all three of these servers.

The REDCap Training Server is available for you to learn about and gain experience with REDCap. As well, you may use it to develop a template for your project so long as you don't enter actual data.

Once you have REB approval, you'll be able to deploy your project on the REDCap Production and/or Surveys Server. If your team will be doing the data entry, you'll use the REDCap Production Server. This server is housed within the Max Rady College of Medicine Secure Research Environment (SRE), a virtualized system that you'll need to access.

Or if your project will be an online surveys-based project, where study participants will provide their survey responses online through their own computers, then you'll deploy your project on our REDCap Surveys Server.

Summary of Process for Getting Access to REDCap

STEP 1: Getting started - Training
- i) Attend a REDCap Overview & Demo session
- ii) Attend additional hands-on training sessions and/or view REDCap training videos
- iii) Obtain access to the REDCap Training Server

STEP 2: Set up and test your project template on the REDCap Training Server

STEP 3: Deploy your project on either the REDCap Production Server or Surveys Server
- i) Obtain PHIA training and certificate

STEP 3A: If your team will enter data (REDCap Production Server)
- i) Obtain access to the Secure Research Environment
- ii) Obtain access to the REDCap Production Server
- iii) Transfer your project template from Training Server to Production Server
- iv) Enter data on the Production Server

STEP 3B: If study participants will respond to online surveys (REDCap Surveys Server)
- i) Obtain access to the REDCap Surveys Server
- ii) Transfer your project template from Training Server to Surveys Server
- iii) Invite study participants and collect data on the Surveys Server

STEP 4: Once data entry/collection complete, export data securely out of REDCap for analysis

STEP 1: Getting started – Training

i) Attend a REDCap Overview & Demo session

Begin by attending or having at least one other member of your team attend our one-hour REDCap overview and demonstration session. We generally offer this session twice per month, and in it highlight some of the key features of REDCap and detail the process for gaining access to our REDCap installation. Although this session is primarily intended for PIs and Study Coordinators, other members of your team are also welcome to attend.

ii) Attend additional hands-on training sessions and/or view REDCap training videos

We offer other training opportunities in the form of scheduled hands-on workshops – REDCap 101, 102, and 103 – which incrementally develop REDCap skills needed by data entry personnel, project coordinators, and project developers respectively. Visit the CHI REDCap webpage (see link at end of document) for more information about our REDCap training options.

The developers (Vanderbilt University) also provide online training videos that can help you learn the basics. Videos are generally organized into short (<15 mins) modules, covering specific topics.

iii) Obtain access to the REDCap Training Server

The REDCap Training Server can be accessed at no charge with any commonly used computer/mobile device and web browser. Free accounts are provided on request if you've attended a CHI REDCap training session or are affiliated with the UM or WRHA. Complete and return the *"Application for Access to REDCap Servers"* on the CHI REDCap webpage.

You may use this server to become more familiar with REDCap as well as to set up your project template (see Step 2).

STEP 2: Set up and test your project template on the REDCap Training Server

Although not required, we highly recommend that you use our REDCap Training Server to design your REDCap project. You may do so at any stage of your study, even prior to REB submission. Doing so can help you determine how best to use REDCap, test different data entry/collection scenarios or even assess whether REDCap will be suitable for your research project.

You're welcome to use the REDCap Training Server to set up REDCap projects for ultimate deployment on the REDCap Production or Surveys Servers, as long as **NO ACTUAL DATA are entered** on the Training Server. If needed, CHI staff can transfer your project from the Training Server to the Production or Surveys Server but this is a relatively straightforward process that you should consider learning. Our document *"Using Data Dictionaries"* provides step-by-step instructions.

STEP 3: Deploy your project on either the REDCap Production Server or Surveys Server

i) Obtain PHIA training and certificate

To obtain access to either the REDCap Production or Surveys Server, you'll need to demonstrate that you've taken training in the handling of Personal Health Information (PHI). Specifically, we require that you take PHIA training offered by the UM Access and Privacy Office (APO) or have taken such training relatively recently (ideally within the last ten years). Training currently offered is delivered online through a PowerPoint slide set and accompanying quiz. Include a PDF copy of your UM PHIA certificate signed by the UM APO with your REDCap server application (see below). PHIA training certificates from other institutions are not sufficient, certificates must be issued through the UM.

http://umanitoba.ca/access_and_privacy/privacy_training.html

STEP 3A: If your team will enter data (REDCap Production Server)

The REDCap Production Server is where actual study data are entered and stored by research teams. In compliance with the UM and WRHA privacy offices, the REDCap Production Server is implemented within the Max Rady College of Medicine Secure Research Environment (SRE). Also known as the "virtual desktop", the SRE is intended to protect against external threats to data security. Hence, accessing the REDCap Production Server **requires access to the SRE.**

i) Obtain access to the Secure Research Environment

For details, please consult the document *"Getting Access to the Max Rady College of Medicine Secure Research Environment (SRE)"* available on the CHI REDCap webpage. The application form to request access to the SRE is also available on that webpage.

Briefly, to obtain access to the SRE you'll require:
- UM PHIA certificate (dated within last ten years)
- REB approval letter for your research project
- UMNetID (sponsored if you're not a UM staff or student)
- Security token (aka "fob") and SRE Account

Once you have authorization to use the SRE, you'll need one or possibly two free programs installed on your computer/device. Depending on the network you use, you may also have to work with your IT support team to ensure your network permits access to the SRE through its firewalls.

ii) Obtain access to the REDCap Production Server

In addition to obtaining access to the SRE, you'll need to apply for an account on the REDCap Production Server. Complete and return the *"Application for Access to REDCap Servers"* on the CHI REDCap webpage. Also include your UM PHIA certificate, demonstrating completion of the UM PHIA training course.

As well, the PI or Study Coordinator must send CHI current REB approval letters for the research studies for which the REDCap Production Server will be used.

After we receive all necessary documents, we should have your REDCap Production Server account set up within 3 working days.

iii) Transfer your project template from Training Server to Production Server

(If you chose not to set up a project template on the REDCap Training Server, you'll skip this section. We strongly recommend however that you set up your project template on the Training Server rather than on the Production Server.)

Using the Data Dictionary download/upload feature in REDCap, you'll transfer your project template from the Training Server to the Production Server. To do this, you'll first download the project from the Training Server to a USB drive, sign in to the SRE and REDCap Production Server, and upload the data dictionary from your USB drive to the Production Server. For more information, consult our handout *"Using Data Dictionaries"*.

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iv) Enter data on the Production Server

Once your project template is transferred to the REDCap Production Server, you may start entering data. Projects on the REDCap Production Server may be either in "Development" or "Production Status" (not to be confused with "Production Server"). Initially projects will be in "Development Status", enabling you to make changes to the definitions of your project's forms and fields. However, in order to protect against inadvertent changes to those definitions and use additional REDCap functions, your project eventually should be set to "Production Status".

Regardless of whether your project is in "Development" or "Production Status", you're allowed to enter real data on the Production Server. And since the Production Server is housed within the SRE, as long as your project has approval from the REB to collect and enter Personal Health Identifiers (PHI) such as name, address, and date of birth, you may store such data on the REDCap Production Server. Normally after a week or two of data entry on the Production Server though, you should set your project to "Production Status".

STEP 3B: If study participants will respond to online surveys (REDCap Surveys Server)

The REDCap Surveys Server is used for researchers who wish to invite study participants to directly complete online surveys/questionnaires. NOTE: Unlike the Production Server, you are not allowed to store personal/protected identifiers (e.g. name, address, date of birth) on the REDCap Surveys Server.

i) Obtain access to the REDCap Surveys Server

Access to the Secure Research Environment is not involved if you ONLY need access to the Surveys Server. Complete and return the *"Application for Access to REDCap Servers"* on the CHI REDCap webpage. Also include your UM PHIA certificate, demonstrating completion of the UM PHIA training course.

As well, the PI or Study Coordinator must send CHI current REB approval letters for the research studies for which the REDCap Surveys Server will be used.

After we receive all necessary documents, we should have your REDCap Surveys Server account set up within 3 working days.

ii) Transfer your project template from Training Server to Surveys Server

(If you chose not to set up a project template on the REDCap Training Server, you'll skip this section and instead set up your project directly on the Surveys Server. We recommend however that you set up your project template on the Training Server before using the Surveys Server, especially if you would like to get started setting up your project before you receive REB approval.)

Using the Data Dictionary download/upload feature in REDCap, you'll transfer your project template from the Training Server to the Surveys Server. To do this, you'll first download the project from the Training Server to a USB drive, sign in to the REDCap Surveys Server, and upload the data dictionary

from your USB drive to the Surveys Server. For more information, consult our handout *"Using Data Dictionaries"*.

iii) Invite study participants and collect data

As with the REDCap Production Server, projects on the REDCap Surveys Server may be either in "Development" or "Production Status" (not to be confused with "Production Server"). Initially projects will be in "Development Status", enabling you to make changes to the definitions of forms and fields. However, in order to protect against inadvertent changes to those definitions and use additional REDCap functions, your project eventually should be set to "Production Status".

Regardless of whether your project is in "Development" or "Production Status", you're allowed to start collecting real data on the Surveys Server. Remember though, you're not allowed to collect/store personal identifiers on this server. Normally after a week or two of data entry on the Surveys Server, you should set your project to "Production Status".

STEP 4: Export data securely out of REDCap

The PI and others designated by her/him may export data out of REDCap anytime. If the Production Server is being used, data may be transferred out of the SRE. REDCap allows limits to be placed on exporting data, including the ability to limit the exporting of PHI, in the case of data stored in the Production Server.

If you'll need to export PHI from REDCap, you must include this in your REB application (or amendment). Otherwise, the default will be to turn off PHI exporting for all users in the project, including the PI.

Teams intending to export data out of the SRE should use a hardware encrypted drive.

For more information, visit our REDCap webpage at http://chimb.ca/redcap or contact us at redcap@umanitoba.ca.

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