

DH REDCap Information and Best Practices

I. Prior to using REDCap

Please review and follow the below guidance PRIOR to beginning a REDCap database build.

- **If your project is DH IRB approved Research: consult with your PI and follow your IRB approved protocol** for any instructions on the use of REDCap in handling PHI.
 - Review what data elements you will collect (usually documented in a Research Data Request Form) and also whether you will share data with any teams outside DH.
- **Request REDCap accounts** for your team by emailing REDCap@hitchcock.org.
- **If your project has research collaborators outside DH who need DH REDCap accounts**, the PI must fill out paperwork to sponsor them. Contact REDCap@hitchcock.org.
- **Please consider a consult in Biostatistics via the SYNERGY website:** <https://synergy.dartmouth.edu/request-services-2/> The biostatistician can consult on research design and biostatistical analysis of your data. They may advise on how you structure your REDCap database to facilitate data analysis.

II. REDCap Training

Completing the necessary training and preparation will help your research team save time and avoid design errors or accidental loss of data once the project is collecting data.

There are two training tracks we recommend and are piloting at present (2026) as described below. (You can choose either, but should complete one or the other; please send feedback on what you like or dislike about the training, or which training you prefer, to Robyn.E.Mosher@hitchcock.org).

1. REDCap Basic Training

- Log into REDCap at this link: [REDCap](https://redcap.hitchcock.org) (redcap.hitchcock.org) and you will see **REDCap Training Videos** on the top right of your home page. Research Informatics strongly recommends that you watch several of these videos, which are typically only a few minutes, including the ones below.
 - Brief Overview (4 minutes)
 - Detailed Overview (14 minutes)
 - Types of Projects (3 minutes)
 - Single Survey Project (5 minutes)
 - If you plan a longitudinal project, or to use randomization, watch all the related videos as well.
- **Full Project Build** (75minutes) – this video explains step-by-step how to create a database, providing examples of how to add different types of data fields, how to begin work with surveys, and how to export data – this is strongly recommended for anyone who will be involved in REDCap design for the team. (For people doing REDCap data entry only, the basic videos will still help.)

2. REDCap Wake Forest Training

The REDCap international consortium, led by Vanderbilt University, has over 8000 institutions, and Wake Forest University's REDCap team offers an excellent (free) series of short training courses organized in five pathways: <https://ctsi.wakehealth.edu/service/data-and-design/redcap/redcap-training-modules>.

The recommended pathway for many DH users is the [Project Builder and Management](#) track, aimed at users who will set up and/or manage a REDCap project (including Clinical Research Coordinators and others). This track has courses at 3 levels. The first and second levels are highly recommended for all users as they cover topics used frequently in REDCap design at DH.

- **Foundational Level**

This set of courses is aimed at getting users started with minimal knowledge needed to set up and run a REDCap project: [Project Navigation](#), [Data Entry - Basic](#), [Form Design Overview](#), [Online Designer - Basic](#), [Branching logic - Basic](#), [Importing Overview](#), [Surveys - Basic](#), [Data Export - Basic](#)

- **200 Level**

This level teaches users how to set up more complex projects and utilize features like longitudinal, surveys and the data dictionary: [AI Tools- Basic](#), [Data Dictionary](#), [Data Entry - Longitudinal](#), [Survey Distribution - Basic](#), [Record Navigation](#), [Data Entry - Intermediate](#), [Data Export - Intermediate](#), [Longitudinal Setup](#), [Survey Settings](#), [User Rights](#), [Piping](#).

For the third level of the track above, and details on the other tracks please see the Wake Forest Training homepage link: <https://ctsi.wakehealth.edu/service/data-and-design/redcap/redcap-training-modules>

III. REDCap Design, Test, Review, Move to Production, Data Collection/Reporting

Once you have completed REDCap Training, you can begin design (and perhaps modification) of your REDCap database/project(s). In all the steps below, from Design to Test to Moving to Production and Data Collection and Reporting, the REDCap Administrator(s) can help REDCap users. We offer office hours and individual consults for users who cannot attend office hours (links on next page).

- **Design Support:** Users may design a simple survey but don't remember how to send it out. Others have advanced longitudinal studies with questions about an Event Grid or Randomization. Some users want help with logic or a calculation for a formula such as calculating a date difference, BMI, or more complex calculation. Some people inherit projects created by previous REDCap design staff who didn't document their design work, which can be challenging. Occasionally the user has a complex question, and if we cannot immediately answer, we can reach out to the greater REDCap consortium and get a quick answer (in most cases). On occasion a user wants to do something that REDCap software just cannot do, which we regret, but can at least answer and help the user with a workaround.

REDCap Office hours – every Wednesday 8-9:30am. Click this link anytime during that time and we can help you with questions on design, testing, moving to production, data reporting, and any REDCap troubleshooting (WebEx meeting link):

<https://dhvideo.webex.com/dhvideo/j.php?MTID=m346f02dc093f121606df6bb85d0607af>

REDCap Individual Consultation – for more detailed consults, or if you cannot make it to office hours, please fill out the [REDCap Consult Request Form](#).

- **Test, Test and more Testing** – This is a very important step. Sometimes a user designs a survey and thinks, “this looks great – we’re ready to send it out!” Then they may (a) realize there were errors, which result in data loss; (b) have to notify users they made a mistake, which is embarrassing; and (c) have to ditch the first design and start over, which is time-wasting! In my REDCap designs and in helping others with testing - I have never failed to find *some* technical flaw (however small) in the design that is revealed and fixed by testing, and/or content that needs revision. “An ounce of prevention is worth a pound of cure” applies here.

Test Process – The purpose of Testing is for the REDCap designer to “see and verify” the entire project workflow from the view of subjects taking surveys, and staff members entering data manually. In office hours I often invite the user to set up 2 test subjects – (themselves and me)– and we run through every single instrument and survey in the project – this can take a short time for a simple survey, or longer for longitudinal studies, but is very important. Branching logic errors are very common and easy to fix. Sometimes the wrong field type has been chosen or a survey is not linked to emails. Sometimes we need to define an “other” choice for a multiple-choice question but forgot to put in an “other” text entry box. All easy to fix.

- **Review by Project Team** – Once testing has worked out all technical bugs in the design – I recommend sharing the design with senior team members, PI, etc. They may have feedback on the design or content after seeing it all laid out. Test again if you make changes.
- **Data Downloading and Reporting** – Often I recommend that users download their test data, before proceeding to Production, so they can see what their output data will look like. REDCap can output to .CSV/Excel or various statistical packages. It’s also a good idea to download and save data regularly to a secure location such as a shared DH drive, once you collect data. While DH REDCap does backups every night, it is time and labor consuming to restore the data from an individual user project if it gets lost. See Data Export, Reports and Stats. Finally:
- **Move the Project to Production** – Moving the project to production is a critical step before collecting data, and at this step you can choose to remove all the test cases. Production Mode provides safeguards so that users cannot accidentally delete data, and keeps all your data much more secure. After this step you can proceed to the main goal of the project:
- **Data Collection!** 😊
- **Making Backups** – At present, it is time consuming for REDCap admins to recover a single project’s data from the REDCap nightly backups. We advise you to make regular backups at your discretion once you are collecting data, and store them someplace safe like a team shared drive

on the DH system. This can be done by (a) making a backup copy of the full project in Designer; (b) making an XML file backup of the full project (with or without data) under the Other Functionality Tab next to the Project Settings; (c) using Data Reports, Exports and Stats to download your raw data to .csv/Excel or stats packages and (d) Other backup options found on the Data Exports, Reports and Stats page – Other Export Options tab.

- **Making Changes after Project is in Production** - It is preferable not to make changes once in Production, but sometimes changes may be necessary. Contact your REDCap administrator for help on this. Back up the project (see steps above) before making changes.
 - You are allowed (by present DH REDCap settings) to put the project back in Draft mode to make simple changes. You can add variables for example, without resulting in loss of your data. NOTE: Your data analysis will have to account for any new data element not having been collected since project inception, as the original variables have been.
 - You may NOT delete variables, fields, or events without loss of data. You cannot rename a variable without data loss. Once you are in Production, REDCap will warn you if you do anything that will cause data loss, with a note that a REDCap administrator is required to make this change for you – at which point a REDCap admin will check with you to confirm that you really want such a deletion, after you have been advised of the potential data loss, and (if applicable) the admin will advise you to back up the data you initially collected, for extra security.

Robyn Mosher, MS
DH REDCap Administrator
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