Planning your REDCap Project

Why is it a good idea to plan before you even open up REDCap?

Project requests need to be carefully considered before you even start up REDCap because without preparation you may end up with a poor design that may end up in poor quality data collection or you may find that REDCap may not be the best program for the data collection needed.

Taking time to carefully question and gather information about what the project requester is needing will equip you to plan the best method for data collection.

This will lead to a good project design which in turn should result in the accurate results and best responses from participants.

Questions to investigate:
Any data collection journey will begin with a thousand questions!

1. What is the purpose for the data collection?
   Research - is there a study protocol available or being written?
   Administrative - is this something to assist decision making processes?
   Regular operations - is it for regular operations support or a activities

2. Who are the project leads and other key players?
   Principal Investigators; Funders; Regulatory bodies; managers; co-ordinators; data capturers; data analysts; departments; participants etc.
   What resources are available? Money, staff, hardware, time, internet connectivity, computer skills

3. What data needs to be collected?
   Anonymous public survey data?
   Personal identifiers (will need special precautions especially in light of GDPR and POPI etc.)
   De-identified data will require a pre-determined participant identifier system to be decided for project
Quantitative or qualitative data?
If it is research study, what are the primary and secondary objectives?
What data variables are essential to meet the questions and purpose?
What data is required for just managing the project?

4. **When is the data to be collected?**
   Times; frequency; retrospective; around a specific event;
   For longitudinal clinical studies; preparing a visit schedule of activities and data to be collected is extremely helpful in setting up data collection forms and planning design.

5. **What type of data collection project will this be?**
   Once off anonymous survey (public URL link)
   Once off survey by invitation (data forms with identified participants and URL links)
   Data collection over time (longitudinal) one arm, multi-arm and/or randomised

6. **Where will data be collected and how?**
   Rural or urban settings - internet and cellphone connectivity
   Online
   1 country or different countries
   One site or multiple sites
   Language/s
   Mobile device - tablets or cellphones
   Phone calls
   Paper forms to computer
   Interviews / voice recordings

7. **Who/what is the data going to be collected from?**
   Data sources:
   Adults / children / what population?
   Laboratory results from a laboratory or lab results forms?
   Clinical health data from medical records or electronic health systems?
   Participant views or self-report?

8. **Who will capture the data, who has data access?**
   Participants themselves
   Staff on behalf of participants
   Staff dedicated to capture data from forms to computer
   Automated scripts or programs
   DAGs, roles
9. **Is there already data available to feed into project?**
   - Retrospective or pilot data
   - Participant details - for invitations to surveys
   - Format or data, how will you import it, what validation needs to take place to confirm import accurate.
   - Medical or laboratory results - how will these be entered in system?

10. **What are the expected and possible timelines?**
    - Forms development and planning - who will be involved?
    - Time to program REDCap
    - Deadlines
    - Testing
    - Data entry
    - Quality rules and reports to build
    - When should the project / survey / invitation go live?
    - Should it be deactivated at a predetermined time?
    - Schedule of events /visits

11. **What are data reporting and exporting expectations?**
    - Do reports need to be built in REDCap
    - Who should have access to the reports
    - Who will receive reports and for what purpose?
    - How will data be used /analysed?
    - What format is best for exporting?
    - What regular data exports should be maintained and established?

12. **What regulatory bodies need to be involved?**
    - Audit trails
    - Reporting
    - System validation and compliance

13. **What will happen in the event of design changes?**
    - Approval processes
    - SOPs
    - Data Management Plan
    - Versioning
    - Logs

**Build a draft project**

Don’t reinvent the wheel, use templates and build a repository of resources and establish standards and programming rules and data dictionaries to reference
Consult with your data analyst or statistician before coding, stick to a standard way of coding. Aim for structured data wherever possible.

Consider how data will be exported and in what format

Get other people to look at your draft
- Ask for feedback
- Implement as much data quality control as possible up front
- Test! Test! Test!

**Roll out to production**

Monitor initial project data collection very closely
Communicate with your project team
Implement data quality control and assurance activities
Maintain version control
Regular secure data exports