

ACI Symposium

REDCap 101

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Masters of Research (Medicine) (pending approval)

Presentation focus

- ▶ Is there a need for REDCap?
- ▶ What is REDCap?
- ▶ Tips and Tricks
- ▶ Live Demonstration

The MIGHTY Excel but

- ▶ Issues with changes
- ▶ People generally do not password protect
- ▶ Keep on USB
- ▶ Multiple versions running concurrently

REDCap – What is it?

- ▶ Web based data capturing system
- ▶ Designed as a self service system
- ▶ Easy to use
- ▶ Easy to set up
- ▶ Easy to export to common analysis tools
- ▶ Gives flexibility
(simple to sophisticated)



(NOTE: REDCap stands for Research Electronic Data Capture)

Accessible

Web-based access (Internet or Intranet access)

Direct data entry

Collaborative and Centralized Environment

Multi-site access for collaborations

Reliable and Accurate

Maintains consistent and accurate data entry


Exports to common stat packages (SPSS, SAS, Stata, R/S-Plus) and Excel (csv format)


Provides an Audit Trail

Makes it easy to determine if you are missing data

REDCap Audit trails

Accountability: Audit logging functionality to track modifications and delimit responsibilities

 **Logging**

 [Download entire logging record to Micro](#)

This module lists all changes made to this project, including data exports, data changes, and the creation or deletion of users.

Filter by event:

All event types (excluding page views) ▼

Filter by user name:

All users ▼

Filter by record:

All records ▼

Displaying events (by most recent):

1 - 45 ▼

Filter by time range from

to

Time / Date	Username	Action	List of Data Changes OR Fields Exported
07/08/2016 2:07pm	n	Manage/Design	Modify project settings
07/08/2016 1:51pm	n	Manage/Design	Modify project settings
07/08/2016 1:45pm	n	Updated Record (API) 9	data_complete = '2'
07/08/2016 1:45pm	n	Updated Record (API) 8	data_complete = '2'
07/08/2016 1:45pm	n	Updated Record (API) 7	data_complete = '2'
07/08/2016 1:45pm	n	Updated Record (API) 6	data_complete = '2'

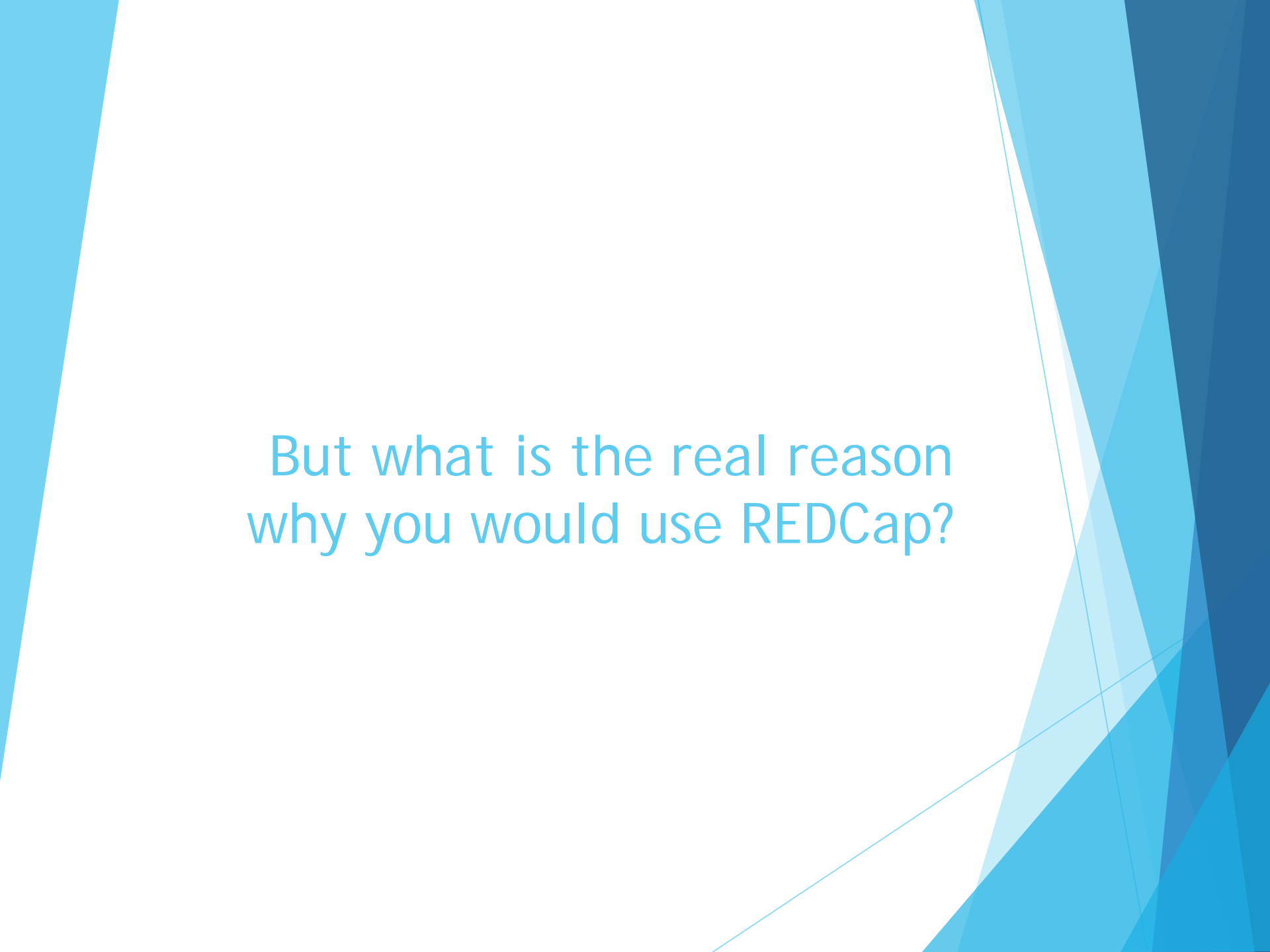
Good Data Quality

By using Quality checks at point of entry and Data Quality functionality to assure Higher Quality analysis

Data Quality Rules					
✓ Processing Complete! Execute rules: All All except A&B All custom Clear					
Apply to: -- All records -- ▼					
Rule #	Rule Name	Rule Logic (Show discrepancy only if...)	Real-time execution ?	Total Discrepancies	
A	Missing values*	-		313 view	
B	Missing values* (required fields only)	-		0 view	
C	Field validation errors (incorrect data type)	-		0 view	
D	Field validation errors (out of range)	-		0 view	
E	Outliers for numerical fields (numbers, integers, sliders, calc fields)	-		0 view	
F	Hidden fields that contain values**	-		0 view	
G	Multiple choice fields with invalid values	-		0 view	
H	Incorrect values for calculated fields	-		0 view	

Secure

- Locally installed within each Institution, under their own security environment
- Some security measures are password protected access, encrypted messages, access restricted to roles within each project
- Local support to end users includes training, support, troubleshooting and data storage
- Should have IM/IT support, including upgrades, regulatory documentation and backups

The background of the slide features abstract, overlapping geometric shapes in various shades of blue, ranging from light sky blue to deep navy blue. These shapes are primarily located on the left and right sides, framing the central text area.

But what is the real reason
why you would use REDCap?



SOURCE: <https://imgflip.com/memetemplate/126388784/Stop-Throwing-Away-Money>

REDCap

- ▶ How can it be free?????????



SOURCE: <https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcRTrr-VFoX0w6beStX63Jo6E4wZLI1BSpT2Gk6zJg-2F1X0OpvQg>

REDCap

- ▶ WHERE IS IT?
- ▶ You most likely will have a choice of a few REDCap installation to choose from
- ▶ Each institution will have it's own rules/ guidelines/ set up
- ▶ Data should be stored on who ever is acting as the SPONSOR

REDCAP – What can it be used for?



SOURCE: https://institute.eib.org/wp-content/uploads/2018/02/researchpic_orig.jpg

REDCap - Features

- ▶ Build databases
- ▶ Build surveys
- ▶ Scheduling
- ▶ Manage surveys respondents
- ▶ Skip logic
- ▶ Validation fields
- ▶ Calculated fields
- ▶ Ease of Collaboration
- ▶ API capabilities

HINT.....

REDCap will help with compliance
and when you get audited



**NOT IF
BUT
WHEN**

SOURCE: <https://www.asalesguy.com/urgency-and-want-forecasting/>

TIPS and Tricks – NUMBER ONE!



SOURCE https://cdn-images-1.medium.com/max/1200/1*sHrzFMglZjOeBMTISOcgfg.jpeg

TIPS and Tricks

- ▶ Keep it simple
- ▶ Speak to a Statistician early
- ▶ Make REDCap work for you
- ▶ Set up roles in user rights
- ▶ Use it in real time
- ▶ There are 1000's of online resources - Use them
- ▶ Only capture information that is ethics approved.
- ▶ Use File Repository

TIPS and Tricks

- ▶ Keep it simple
- ▶ Speak to a Statistician early
- ▶ **Make REDCap work for you**
- ▶ Set up roles in user rights
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Make REDCap work for you

Create prompts

E-mail Address

No generic addresses are permitted!

This includes any private personal or private business or non employer related email

* must provide value

yfridgant@gmail.com

Provide an SLHD or other institutional address.

You have provided an @gmail, @hotmail or other non-permitted email address !

Your application will not be processed or approved unless an appropriate email address is provided from the institution in which you are employed.

If you are not applying as a student, please do not provide a student email address.
For SLHD staff a sswahs email is preferred.

Make REDCap work for you

Create prompts

17. I felt I wasn't worth much as a person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	reset
18. I felt that I was rather touchy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	reset
19. I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	reset
20. I felt scared without any good reason	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	reset
21. I felt that life was meaningless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	reset
Anxiety scale score	<input type="text" value="5"/>				
Depression scale score	<input type="text" value="4"/>				
Stress scale score	<input type="text" value="14"/>				
Patient is at Normal range on the Depression scale					
Patient is at Mild risk on the Anxiety scale					
Patient is at Severe risk on the Stress scale					

TIPS and Tricks

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Creating new role "Project Manager"

Creating new role "Project Manager"

Basic Rights

Highest level privileges:

- Project Design and Setup ☒
- User Rights ☒
- Data Access Groups ☐

Privileges for data exports (including PDFs and API exports, reports, and stats):

- Data Exports
 - ☐ No Access
 - ☒ De-identified*

* De-identified means that all free-form text fields will be removed, as well as any date/time fields and Identifier fields.
 - ☐ Remove all tagged Identifier fields
 - ☐ Full Data Set
- Add / Edit Reports ☒

Also allows user to view ALL reports (but not necessarily all data in the reports)
- Stats & Charts ☒

Other privileges:

- Manage Survey ☒
 - Participants
- Calendar ☒
- Data Import Tool ☐
- Data Comparison Tool ☐
- Logging ☐
- File Repository ☒
- Data Quality ☐
 - [What is Data Quality?](#)
 - ☐ Create & edit rules
 - ☐ Execute rules
- API ☐
 - [What is the REDCap API?](#)
 - ☐ API Export
 - ☐ API Import/Update

Settings pertaining to the REDCap Mobile App:

- REDCap Mobile App ☐
 - [What is the REDCap Mobile App?](#)
 - ☐ Allows user to collect data offline in the mobile app
- ☐ Allow user to download data for all records to the app?

Settings pertaining to project records: [Explain these settings](#)

- Create Records ☒
- Rename Records ☐
- Delete Records ☐

Settings pertaining to record locking and E-signatures:

- Record Locking ☐
- Customization ☐
- Lock/Unlock Records ☒ Disabled

Data Entry Rights

*NOTE: The data entry rights *only* pertain to a user's ability to view or edit data on a web page in REDCap (e.g., data entry forms, reports). It has no effect on data imports or data exports.*

	No Access	Read Only	View & Edit	Edit survey responses
Pre-Screening Survey (survey)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
Participant Info Survey (survey)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
Participant Morale Questionnaire (survey)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
Completion Data (to be entered by study personnel only)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="checkbox"/>

Create role

Cancel

Logged in as **crofe** | Log out

[My Projects](#) or [Control Center](#)
[Project Home](#) or [Project Setup](#)
[REDCap Messenger](#)
 Project status: **Development**

Data Collection [Edit Instruments](#)

Manage Survey Participants
 - Get a public survey link or build a participant list for inviting respondents
Record Status Dashboard
 - View data collection status of all records
Add / Edit Records
 - Create new records or edit/view existing ones

Applications

[Calendar](#)
[Data Exports, Reports, and Stats](#)
[Data Import Tool](#)
[Data Comparison Tool](#)
[Logging](#)
[Field Comment Log](#)
[File Repository](#)
[User Rights and DAGs](#)
[Record Locking Customization](#)
[E-signature and Locking Mgmt](#)
[Data Quality](#)
[API and API Playground](#)
[REDCap Mobile App](#)
[External Modules](#)

Help & Information

[Help & FAQ](#)
[Video Tutorials](#)
[Suggest a New Feature](#)
[Contact REDCap administrator](#)

test

[Project Home](#)
[Project Setup](#)
[User Rights](#)
[Data Access Groups](#)

This page may be used for granting users access to this project and for managing the user privileges of those users. You can create roles to which you may assign users (optional). User roles are useful when you will have several users with the same privileges because they allow you to easily add many users to a role in a much faster manner than setting their user privileges individually. Roles are also a nice way to categorize users within a project. In the box below you may add/assign users or create roles, and the table at the bottom allows you to make modifications to any existing user or role in the project, as well as view a glimpse of their user privileges.

Add new users: Give them custom user rights or assign them to a role.

— OR —

Create new roles: Add new user roles to which users may be assigned.

(e.g., Project Manager, Data Entry Person)

Role name (click role name to edit role)	Username or users assigned to a role (click username to edit or assign to role)	Expiration (click expiration to edit)	Project Design and Setup	User Rights	Data Access Groups
—	crofe (Christopher Rofe)	never	✓	✓	✓
Investigator	[No users assigned]		✗	✗	✗
Project Manager	[No users assigned]		✗	✓	✓
Study Coordinator	[No users assigned]		✗	✗	✗

TIPS and Tricks

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Logged in as **crofe** | [Log out](#)

[My Projects](#) or [Control Center](#)

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[REDCap Messenger](#)

Project status: **Development**

Data Collection

[Edit Instruments](#)



Manage Survey Participants

- Get a public survey link or build a participant list for inviting respondents



Record Status Dashboard

- View data collection status of all records



Add / Edit Records

- Create new records or edit/view existing ones

Applications



Calendar



Data Exports, Reports, and Stats



Data Import Tool



Data Comparison Tool



Logging



Field Comment Log



File Repository



User Rights and DAGs



Record Locking Customization



E-signature and Locking Mgmt



Data Quality

test

File Repository

This page may be used for storing and retrieving files and documents used for this project. You may upload files for retrieval later, or you may download previously uploaded files in the file list below. Whenever a data export is generated, the resulting data and syntax files are stored here also.



User Files



Data Export Files



Upload New File



No files have been uploaded yet

TIPS and Tricks – NUMBER ONE!


TEST IT – Make sure it does what you intend it to do



SOURCE https://cdn-images-1.medium.com/max/1200/1*sHrzFMglZjOeBMTISOcgfg.jpeg

Scenario #1

You are involved in a research study where you need to collect a questionnaire every 2 months for a year. You are hoping to recruit 100 participants and the questionnaire takes about 10 minutes to fill out.

A photograph of a turtle with a brown and tan patterned shell, resting on a black skateboard with white wheels. The turtle is positioned on the left side of the frame, facing right. The background is a plain, light-colored surface.

Work Smarter-

Not Harder...

HINT...

Use REDCap to your advantage

SOURCE: <http://www.ogroup.com.au/one-simple-way-work-smarter-not-harder/>



Resize font:
🔍 | 🗨

Research Week REDCap Registration

Thank you for your interest in the REDCap Workshops for Research Week to be held on Wednesday the 12th September.

The Workshops will occur in the e-learning labs in the Cator Building (ground level).

The workshop session outlines and times will be confirmed and adjusted depending on the requests below.

If you have specific questions, make sure you indicate below.

First Name

Surname

Email Address

Contact Number

Which department are involved with?

Which session would you be available?

- ☐ 14:00 - 14:55
☐ 15:00 - 15:55
☐ Other

[Tick All that slots that you would be available](#)

What is your current experience with REDCap?

- ☐ I have never used REDCap before
☐ I have limited experience
☐ I have some experience with REDCap
☐ I am proficient at using REDCap

[reset](#)

Scenario #2

Build an online survey

Scenario #2

You have an meeting with your supervisor/ colleague and they are interested in a specific aspect of your study. They ask for data on it.

Scenario #2

Build a custom report








My Reports & Exports		
	Report name	View/Export Options
A	All data (all records and fields)	View Report Export Data Stats & Charts
B	Selected instruments and/or events (all records)	Make custom selections
1	AE Log	View Report Export Data Stats & Charts
2	PSA updated	View Report Export Data Stats & Charts
3	QLQ-C30 - questions 6-28 (Past week section)	View Report Export Data Stats & Charts
4	BPI - q 3 & 5	View Report Export Data Stats & Charts
5	Xeqols- 1 to 14	View Report Export Data Stats & Charts
6	weight	View Report Export Data Stats & Charts
	+ Create New Report	

Exporting a Report

Exporting "Test"

Select your export settings, which includes the export format (Excel/CSV, SAS, SPSS, R, Stata) and if you wish to perform de-identification on the data set.

Choose export format

- ☐  CSV / Microsoft Excel (raw data)
- ☐  CSV / Microsoft Excel (labels)
- ☐  SPSS Statistical Software
- ☐  SAS Statistical Software
- ☐  R Statistical Software
- ☐  Stata Statistical Software
- ☐  CDISC ODM (XML)

De-identification options (optional)

The options below allow you to limit the amount of sensitive information that you are exporting out of the project. Check all that apply.

Known Identifiers:

- ☐ Remove all tagged Identifier fields (tagged in Data Dictionary)
- ☐ Hash the Record ID field (converts record name to an unrecognizable value)

Free-form text:

- ☐ Remove unvalidated Text fields (i.e. Text fields other than dates, numbers, etc.)
- ☐ Remove Notes/Essay box fields

Date and datetime fields:

- ☐ Remove all date and datetime fields
- OR —
- ☐ Shift all dates by value between 0 and 364 days
(shifted amount determined by algorithm for each record) [What is date shifting?](#)

[Deselect all options](#)

Export Data

Cancel

Live Demo:

What could go wrong?

<https://redcap.stvincents.com.au>

Take home points

REDCap is easy to use and improves data security

Allows you to work smarter

Be confident – you will be able to use it!

Acknowledgement:

Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap)--a metadata-driven methodology and workflow process for providing translational research informatics support. *J Biomed Inform.* 2009;42(2):377-381. doi:10.1016/j.jbi.2008.08.010

Thank you – Final
Questions?



For more information, email me
on
christopher.rofe@svha.org.au



The
Kinghorn
Cancer
Centre