What can REDCap do for you?
Objectives

• What has REDCap done for teams?
• What can REDCap do for you?
• Avoid *biggest* mistakes
  – Tips for building a better project
• Features you may have not used
• New(er) features
• Future features
REDCap @ Duke

- HIPAA compliant web-based Electronic Data Collection Tool
- Developed by Vanderbilt University through CTSA funds and licensed at no charge
  - Over 2000 institutional partners
- Two functions:
  - Database / Data Entry Forms
  - Survey
- Suitable for research projects with low to medium-low complexity data collection requirements
- Targeting researchers currently using Excel spreadsheets or MS Access to store data
What has REDCap done for teams?

• Susan Natoli
  – Associate Director

• Laura Roe
  – Project Manager/Program Administration

• Christine Deeter
  – Operations Coordinator
What can REDCap do for you?

• Streamline Process
  – Collection to analysis

• Easy Access/Use
  – Templates

• Multi-purpose tool
  – Research & administrative use
Why do we use REDCap?

- HIPAA compliant
- Web based access
- Data stored behind Duke firewall
- Nightly backups
- Audit trail
- Mid-study modifications
- Data dictionary
- Easily copy existing projects

- **Auto-validation**
- Branching logic
- Calculated fields*
- Custom data exports
  - Deidentified or full
  - Raw data and syntax files for SAS, Stata, R, SPSS, or .csv
- Data import tool
- Custom user rights
- Simple reports and graphs
## Avoid Mistakes

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*My Mother Doris Smith who lives at 123 Fake St. & I eat at the C&W Cafeteria every Tuesday from 11:00 to 11:30.*
Avoid Mistakes – Record Identifier

• First field in the first data collection instrument
  – Must be unique
    • Manual
    • Automatic
    • Validate as numeric when possible
      – Include min/max ranges

• Must NOT contain PHI
Avoid Mistakes – Numeric Values

• VALIDATE
  – Integer (whole number)
  – Number (allows decimals)
    • Up to 4 decimal places
• Include Minimum/Maximum validation
  – Able to enter values outside range
• Allow specific permissible ranges
  – 0-2, 3-5, 6-8, More than 9
Avoid Mistakes – Radio/Dropdown

• Use Radio buttons/Dropdown lists instead of text fields
• Know when to use Radio/Dropdown (single select) vs. Checkbox (multi-select)
• Eliminates data cleaning
• List of permissible values only
  – Other (free text)
Avoid Common Mistakes

• Use notes fields
  – Units
  – Instructions

• Consistent coding
  – 1=Yes, 0=No

• Likert scales
  – Validated instruments

• Validate
  – Dates, Time, Numeric (min/max), Phone, Zip, etc.
Avoid Common Mistakes – cont.

• **Variable naming**
  – Do NOT enable auto naming of variable

• **Mark Fields Required**
  – Eligibility criteria
  – Answers research question

• **Mark Identifiers**
  – Use Check For Identifiers

• **Use Branching logic**
  – Preceding questions
  – Only display questions when fields meet certain conditions
Features you may have not used

- Set a custom record label
  
  ![Set a custom record label](image1)

  You may append other data and/or static text to any record name (e.g., Study ID) as the record is displayed on your data collection instruments, such as inside the drop-down lists when choosing a record and at the top of the page after being selected. Simply provide the text you wish to display below, and place any variable names inside square brackets [ ] after which the data collected for those variables for that record will replace the variable in the text. **NOTE:** Since multiple events are defined for this project (i.e., it is longitudinal), the data will only be pulled from the first Event of the currently selected Arm.

  Custom record label:  [last_name], [first_name]

  Example: if ([last_name], [first_name]) were entered, then for record '102' it would display 'Ooo, Jon'.

- Require a 'reason' when making changes to existing record
  
  ![Require a 'reason' when making changes to existing records?](image2)

  Require users to enter a reason (200 character max) in a text box when making any data changes to an already existing record on a data collection instrument. The prompt is triggered when clicking the Save button on the page. Any 'reasons' entered can then be viewed anytime afterward on the Logging page.
Features you may have not used – cont.

- **Bookmarks**

- **Project Folders**
Features you may have not used – cont.

- **Email Notification**

- **Piping**
  - Inject previously collected data into text on a data collection form or survey
    - [variable_name]
Features you may have not used – cont.

- **Action Tags**
  - @HIDDEN, @READONLY, @TODAY, etc.
New(er) Features

• Themes

• Auto-complete (Dropdown)
New(er) Features – cont.

- Continue Survey

- Survey Queue
New(er) Features – cont.

- Biomedical Ontology
  – over 400 biomedical ontologies
Future Features

• Enhanced radio buttons & checkboxes for surveys

• New Action Tags
  – @DEFAULT
    • Sets a field's initial value
  – @HIDEBUTTON
    • Hides 'Now' or 'Today' button
Future Features – cont.

• Live Filters (Reports)
• Vertical Sliders
• Repeating Events & Forms
REDCap Services @ Duke

• Office hours
  – Tuesdays 11:00am – 12:00pm, Hock Plaza, 9047 & 1st Thursday of the month DMP.2W96
  – Meet with programmers for questions and guidance
• One-on-one REDCap demonstrations and free consultations with PIs and study teams
• Full service contract builds or DIY projects
• https://redcap.dtmi.duke.edu/redcap/
• redcap-docr@duke.edu
• Training videos available at http://projectredcap.org
• http://docr.som.duke.edu/

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