Coding Guidelines for REDLOC Curated Forms and Instruments

After instruments have been suggested by researchers, reviewed by REDLOC librarians and recommended for inclusion by REDLOC members, the forms must then be translated into REDCap format. At this time, REDLOC members are involved in this process on a rotating basis. In order to assist in forms translation and encourage consistency throughout the instruments, REDLOC has developed the following guidelines for library forms developers.

Instrument Name
- If possible, use full instrument name, abbreviated name and version number. If the name is too long, be as descriptive as possible while still staying within the size limitation. For example, the full instrument name is *Infant Behavior Questionnaire Revised - (IBQ-R).* But *Pelvic Organ Prolapse/Urinary Incontinence Sexual Function Questionnaire (PISQ) is PISQ.*

Variable Names
- Variable/field names should begin with a brief representation of the instrument. For example, the field label "patient" in the "Agitated Behavior Scale" is coded as variable name "abs_patient".

- Variable/field names for numbered questions should be coded with instrument abbreviation and the question number, such as "abs_1".

Coding Values for Categorical Fields
- If variable codes are provided in the original instrument documentation, use as described. Example: BRFSS 2009 Section 20: HIV-AIDS Question 20.1 responses –

  - 1, Yes

  - 2, No

  - 7, Don't know / Not sure

  - 9, Refused

- If variable codes are not provided, here are some suggestions:

  - Binary responses should be coded 0/1. Examples:

    - No=0, Yes=1

    - False=0, True=1

    - Male=0, Female=1

  - Response sets with more than two options should begin with 1.

- Code responses that represent an unknown type value with a number that is obviously out of normal range for any variable code or text response that makes sense or is missing. Example:

    - Has the patient tested his/her blood sugar levels every day this week?

        ☐ Yes
        ☐ No
        ☐ Don't know
        ☐ Refused
        ☐ Missing

    Might be coded as:

    1, Yes
    0, No
    7777, Don't know
    8888, Refused
    9999, Missing

Reverse Coding
- If questions have reverse scoring, code the selections according to the value unless otherwise specified. Here is an example, where #4 is coded normally and #5 is reversed:

    - 4. Made me need someone to reposition me.

        - 0, Never true for me

        - 1, Rarely true for me

        - 2, Sometimes true for me

        - 3, Often true for me

        - 4, Very often true for me

    - 5. Helped me keep my muscles exercised.

        - 4, Never true for me

        - 3, Rarely true for me

        - 2, Sometimes true for me

        - 1, Often true for me

        - 0, Very often true for me

- A note ***must*** be included in the instrument header that says the equivalent of "Reverse coding has already been applied for scoring purposes."

- Reverse coding breaks up a matrix.

Text Fields

- If questions have text field responses, use field validation whenever possible (date, phone, email, integer, number, or other available field types). Example: (field label) *Today's Date* – (possible response) *3/20/12* (Validation? – *Date(M-D-Y)*)

- If number or integer validation is applicable, define the minimum/maximum range as much as possible. Example for data collected in a study on children 6-12: (field label) *Age of child:* (possible response) *12* (Validation? *Integer* /Minimum: *6* – Maximum: *12*)
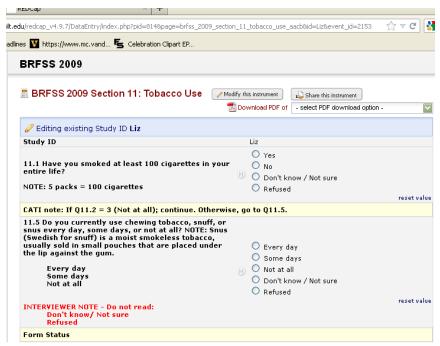

Form Layout

- Include instructions in the header when available. Example for PedMIDAS instrument: *Headache Disability: The following questions try to assess how much the headaches are affecting day-to-day activity. Your answers should be based on the last three months. There are no "right" or "wrong" answers so please put down your best guess.*

- Structure REDCap form to resemble the original instrument as closely as possible. For response area, take advantage of *Custom Alignment* options such as Left/Horizontal (LH) (applied below); Left/Vertical (LV); Right Vertical (RV); Right/Horizontal (RH).

- Typos and grammatical errors may be corrected as long as the intent is not affected. Example: "Do you worry a lot about **you** health?" is okay to change to "Do you worry a lot about **your** health?"

- Slight wording changes may be implemented if needed because of the document format change from paper to electronic. Example: "**Circle** the correct response" becomes "**Choose** the correct response".

- Simple HTML may be implemented in field labels to make it more closely resemble the original instrument. It may also be used to clarify or highlight information as long as the intent is not affected. Examples: <u>text</u> for underline, <i>text</i> for italicize, <div><span style='color:red;'>text</div> to color red and highlight the interviewer instructions.

- For data entry forms, dropdown fields are preferred to radio button fields, but use your judgment as to what is most suitable.

- For surveys, use radio buttons for short lists, dropdowns for longer lists. Again, use your judgment as to what is most appropriate for the form.

- Use the Descriptive Text field type to attach scoring information or stats package coding if available. See **Interpersonal Reactivity Index** instrument.

- Mark *Identifiers*. To be HIPAA-compliant there are 18 pieces of information that must be marked as *Identifiers* in a REDCap data dictionary.

    1. Name
    2. Fax number
    3. Phone number
    4. E-mail address
    5. Account numbers
    6. Social Security number
    7. Medical Record number

8. Health Plan number
9. Certificate/license numbers
10. URL
11. IP address
12. Vehicle identifiers
13. Device ID
14. Biometric ID
15. Full face/identifying photo
16. Other unique identifying number, characteristic, or code
17. Postal address (geographic subdivisions smaller than state)
18. Date precision beyond year

- Use branching logic, unless the document layout dictates otherwise. Example: BRFSS has questions that would branch based on answers from different forms; but since the library provides each form individually, the branching logic would not work/be applicable.