

Database Theory and Applications for Biomedical Research and Practice (BMIN 502/EPID 635)
Spring 2019

Assignment 4: More advanced features: 1:M relationships and a simple survey in REDCap

PART 1

Scenario: You need to collect data on patients as they arrive in the clinic for their first visit. The amount of data you need is really fairly limited. This time you need to collect information about multiple diagnoses. The new field is highlighted below:

Field	Field type	Special instructions
Name	Text box	
Address	Text box	
City	Text box	
State	Radio button	
Zip code	Text box	Zip code validation
Insurance	Checkbox	
Other insurance type	Text box	Conditioned on Insurance="other"
Date of birth	Text box	MM/DD/YYYY validation
Race	Drop down	
Other race	Text box	Conditioned on Race="other"
Gender	Radio button	
Pregnant	Yes-No	Conditioned on Gender
Referring physician	Text box	
Date of enrollment	Text box	MM/DD/YYYY validation
Age at enrollment	Calculated field	Calculated and rounded to one decimal place
Multiple diagnoses	Text box	Use the ICD10CM option from the ontology list

- Edit the project you created for Assignment 3, accommodating the 1:M relationship that accommodates multiple diagnoses. This will involve creating a new instrument (call it Diagnosis), linking to the ICD10CM in the list of ontologies, and then enabling Repeatable instruments in Project Setup.
- Select an existing patient and enter 3-5 diagnoses as text, to see how the 1:M relationship works. Here are some you might try: Diabetes mellitus; Myocardial infarction; Hypertension; Chronic kidney disease; Diabetic retinopathy.

There's more! Please turn over this page to see Part 2.

PART 2

Scenario: You want to send out a survey to the patients you have registered in your intake system that you created for Assignment 3. This is a simple survey that is designed to capture patient's quality of life, using a previously validated instrument, the WHOQOL-BREF, which is available to you via the REDCap Shared Library. After registering a patient, REDCap will use the Email field in the Patient Intake instrument to send an invitation for the survey.

Here are the steps

1. Copy your project as Assignment 4, naming your new project as: **yourlastname_BMIN502_19_4**. Be sure to copy it with the data. This is accomplished on the Project Home tab, "Copy this project" button.
2. Add an email field to your Patient Intake instrument. Be sure to use the validation function to identify this as an email address! Make sure that the variable name is email_address. Enter YOUR email address in an existing record. This is for testing the logic in #7 below.
3. In your new project, create a new instrument, called WHOQOL by importing the questionnaire from the Shared Library.
4. Click on the Enable survey button in the Main project settings on the Project Setup tab, and click on the WHOQOL instrument to identify it as the survey.
5. In Project Setup, Enable optional modules, enable "Designate an email field to use for invitations".
6. Take all the defaults on the Survey settings page, but you do you want to enable section breaks, so select that from the Question Display Format item.
7. Click on the Automated invitations button next to the QOL instrument in Online Designer. Compose a nice subject line and email message (Step 1). Then, for Step 3, click on "OR" and the "When the following logic..." checkbox. Enter this expression into the box: [email_address]<>"". You will know you have entered the expression correctly if you see "valid" in green. You should also click on Test logic, selecting the record you added the email address to in #2 above. Click on "Send immediately" (Step 3) and then the Active button (Step 4). Then click on Save.
8. Add a new record, using my email address (jholmes@pennmedicine.upenn.edu). Mark the record as complete, and I will get your invitation to complete the survey.
9. It takes a while for me to get your invitation, but when I do, I will complete the survey. You can check to see if the invitation was sent by clicking on Manage Survey Participants in the Data Collection frame on the left side of the REDCap window, and then the Participant list tab. If I've been invited, the Invitation sent? icon will have a green check mark. If I've responded, the Responded? bullet will turn green.