StAR-2 project update

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I. Objective

1) To update StAR-2 project.

II. Procedure for Sana mobiles

In this Progress Report, the status of StAR-2 project will be presented. The first task to be completed for this project is to create a customized procedure for Sana mobile Android application and upload the answers into the temporary OpenMRS server, demo.sana.csail.mit.edu/openmrs/module/sana/queue/v1/queue.form. A procedure is a set of questions regarding patient's education history, socio-economy, medical history, disease literacy, hypertension treatment, medication adherence, smoking information, alcohol, physical activity and finally the question about the short-message service (SMS), which were asked in StAR-1. The principle is quite similar to Google Form. The procedure is written in Java using Android Studios. In the past two weeks, I have completed regenerating the procedure once used in StAR-1 project, but the 'concept' are not uploaded to OpenMRS of the demo server. It used a different server previously. I am now waiting for the team to respond on any other questions to be added into this procedure.

Procedure writing starts by defining the element type, or the type of form to be used. In StAR-1 procedures which have been used as the base for StAR-2 procedure, 'Text', 'Radio', 'Multi_select', and 'Entry' are used. The next process is, to add the elements or concept to the OpenMRS dictionary. This is the detailed format of each question. We have to create the concept name, description of the question, the class (most of the time use 'Question'), datatype, and the acceptable range of the values (in case of numeric) which will be answered. The description needs to be simple as it will appear with the answers when viewing at the 'encounter view'. As we have 97 questions for StAR-1 questionnaires, 97 concepts have been added to the library of OpenMRS. There is also another branch from the answers using 'ShowIf' method. Each question also is assigned to a unique 'id'. Each question can be set as 'required' to answer and help text. Most of the format is quite similar to any online forms.

Both Nexus 5 API 19 emulator and Samsung GT-P5100 have been used to test and run this StAR-2 procedure. After logging into Sana mobile, the process starts by selecting/add the patient. Afterwards, the procedure title is selected, and the next 4-5 minutes will be used in answering the questionnaire as shown in Fig. 1. Finally, there is an option whether or not to upload the data to the server. Once uploading successful, the result would appear at OpenMRS under 'encounter queue' tab as shown in Fig. 2.

After clicking at API Test, the procedure name, all the results of the questionnaires can be accessed from OpenMRS as shown in Fig. 3.
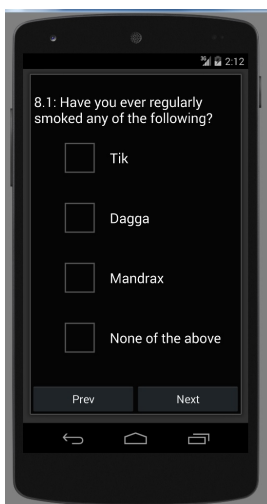

Fig. 1. Emulator to run Sana mobile app

Fig. 2. The procedure results have been uploaded to the OpenMRS server

III. Conclusion

From this result, the project leader, David Springer is quite satisfied with progress and will update soon when the server srvubusar001.uct.ac.za . From this trial run, I am quite confident on the additional tasks to be assigned for this StAR-2 project.

Fig. 3. Results of the questionnaire