**Feasibility Analysis of CDIC App**

**Context**

Mild cases of depression are hard for doctors to detect and IMH wants to conduct a study to detect such cases so that early intervention can prevent the mild cases from worsening further. The World Health Organization (WHO) has an algorithm in SAS to calculate a score that can be compared with a table to diagnose whether an individual has depression, along with the severity of the depression.

**About Project**

To develop an app/software with a questionnaire form to receive inputs which will be used in a WHO algorithm to calculate a depression risk score. The risk score will be displayed after the questionnaire is submitted and the inputs and risk score are sent to a central database. The app will be used by doctors when diagnosing a patient.

**Requirements and Analysis**

Questionnaire Form (DONE):

* 88 Questions with sub-questions
* Single-select questions, questions with custom input
* Only show questions that are required, determined based on the input of the previous question

Analysis:

Using UI form creators like FormSG and Google Forms is time-consuming due to the large pool of questions, and the intricacies of setting the rules to show/hide questions. However, Google Forms is banned on Synapxe intranet. Alternatively, Excel or a Website is feasible as the app can be customizable. Website is preferred due to its dynamic nature of having no constraints and ease of use compared to Excel VBA UserForm.

Chosen: Website. Completed a POC questionnaire running on HTML, CSS, JS that prepares the data in CSV and JSON format. There is still a bug with Text OR Radiobox option.

WHO Algorithm:

* Provided in SAS language
* Requires async/parallel processing of 2 scripts at once

Analysis:

Need to convert SAS code to JavaScript logic to integrate with the POC app. Alternatively, there is SASjs Framework that allows SAS code to be run directly but requires a server.

Storing records:

Need more clarification on how it needs to be stored. Could either get the doctor to download the file and store it in the computer’s file directory, or host a cloud database and get the website to send the record into database API after each diagnosis.