# Approach

For R we will use the following R packages: Base R, Tidyverse, Broom

For SAS we will use SAS/Stat 9.4 procedures GLM, REG, and LOGISTIC.

Our approach is to use documented and validated test cases from the SAS documentation website first. The data will be encapsulated in the R programs using a tribble() function similar to how SAS embeds its data with its examples.

After learning and evaluating the results from those test cases, we will move on to using mock clinical trial data supplied by PHUSE.

# Process

**Step 1**  
Compare R output to SAS Examples for selected GLM, REG, and LOGISTIC procedures from the SAS documentation website. The URLs are provided below.

GLM: <https://documentation.sas.com/?cdcId=pgmsascdc&cdcVersion=9.4_3.4&docsetId=statug&docsetTarget=statug_glm_toc.htm&locale=en>

REG: <https://documentation.sas.com/?cdcId=pgmsascdc&cdcVersion=9.4_3.4&docsetId=statug&docsetTarget=statug_reg_toc.htm&locale=en>

LOGISTIC: <https://documentation.sas.com/?cdcId=pgmsascdc&cdcVersion=9.4_3.4&docsetId=statug&docsetTarget=statug_logistic_overview.htm&locale=en>

**Step 2**  
Once we evaluate the results from comparing the output using the SAS examples, we define test cases using the mock clinical data