**EPI 5143 Winter 2023 QUIZ 1**

**Due Friday February 10th, 5pm via Github**

**Answer all the questions by writing the necessary SAS code and producing any output from SAS procedures used. Provide both the SAS code file, the SAS log file and requested SAS output with your quiz solutions.**

***You are expected to do your own coding and submit your own independent work—no copying/collaboration is permitted for quizzes and exams, we will be monitoring this closely.***

1. Save the quiz1 data (quiz1\_data.sas7bdat) on your computer in your course data folder.

Make it read only so you don't accidentally change it.

(this is a suggestion not for marks).

2. Create a new permanent SAS library called quiz1 that points to the folder on your computer where you saved your quiz1 dataset.

(ie so to reference this dataset in SAS it would be quiz1.quiz1\_data).

3. Use PROC CONTENTS to find out some information about this dataset. How many observations does the dataset have? How many variables does the dataset have?

Observations: 1000

Variables: 6

4. Use PROC FREQ to provide information about the variable diabetes. If this variable represents those individuals in the dataset with diabetes, what proportion of people in the dataset have diabetes? (provide the frequency table with your answers).

2.2% of people have diabetes

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5. Use PROC UNIVARIATE to provide information about the variable X1.

a) What are the mean and standard deviation of X1?

Mean: 0.987

SD: 0.972

b) Produce a frequency histogram of X1 (provide with your answers).

Chart, histogram

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6. Create a temporary copy of the quiz1 dataset called work.quiz1.

The remainder of the questions involve working with the work.quiz1 dataset.

7. a) Create a new variable called mean\_V1 that is the mean of X1, X2 and X3 using mathematical operators.

b) Create a new variable called mean\_V2 that is the mean of X1, X2 and X3 using a SAS function.

8. Consult\_dt and Surgery\_dt are SAS dates. Create a new variable called wait\_time that calculates the time in days between consult and surgery.

9. Create a new variable called X2\_high which has a value of 1 if X2 is greater than or equal to the mean of X2 and 0 otherwise (you can find the mean of X2 using PROC UNIVARIATE). you calculated.

10. a) Use PROC UNIVARIATE to find out the mean values of the variables of mean\_V1, and mean\_V2, and the median, minimum and maximum values for wait\_time.

Mean of mean\_V1: 11.98

Mean of mean\_V2: 11.98

Wait\_time:

* Median: 49
* Min: 0
* Max: 99

b) Use PROC FREQ to create a 2x2 frequency table for X2\_high vs. diabetes. (provide frequency table with your answers).

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