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# Biostatistics

Report 3 – 2nd Semester 2022/2023

Deadline: 28/05/2023

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**Description:** The data consist of 390 subjects who were interviewed in a study to understand the prevalence of obesity, diabetes, and other cardiovascular risk factors in central Virginia for African Americans. Notice that glycosolated hemoglobin  $\geq 7.0$  is usually taken as a positive diagnosis of diabetes and if there is nothing in a cell below, that means NA (not available) observation.

**Main objective:** To investigate the relationship between the glycosolated hemoglobin and the associated set of the observed risk factors.

Variable name	Description
ID	Subject Identification
CHOL	Total Cholesterol
SGLU	Stabilized Glucose
GHB	Glycosolated Hemoglobin
LOCATION	
AGE	(years)
GENDER	
HHT	height (inches)
WHT	weight (pounds)
FRAME	
SBP	First Systolic Blood Pressure
DSP	First Diastolic Blood Pressure
W	waist (inches)
H	hip (inches)

Perform a thorough statistical analysis of the data, selecting a gamma regression model and interpreting the associated results with respect to the study objectives.

**Data file:** DatasetC.txt

**Reference:** Schorling JB, Roach J, Siegel M, Baturka N, Hunt DE, Guterbock TM, Stewart HL (1997) A trial of church-based smoking cessation interventions for rural African Americans. Preventive Medicine 26:92-101.