**Question: Are people who eat out more often more likely to have health issues?**

**Question: Are people who consume alcohol more likely to have health issues?**

**Question: Are people with health insurance healthier?**

**Question: Eating habits and health insurance effect on health status --**

**Is the effect on health status the same with healthy eating habits without insurance and unhealthy eating habits with insurance?**

**Datasets:**

**2015-2016 Demographic Variables and Sample Weights**

**Variables:**

**SEQN - Respondent sequence number**

**RIAGENDR – Gender**

**RIDAGEYR - Age in years at screening**

**DMDEDUC2 - Education level - Adults 20+**

**DMDMARTL - Marital status**

**INDFMPIR - Ratio of family income to poverty**

**2015-2016 Current Health Status**

**Variables:**

**SEQN - Respondent sequence number**

**HSD010 - General health condition**

**2015-2016 Health Insurance**

**Variables:**

**SEQN - Respondent sequence number**

**HIQ011 - Covered by health insurance**

**2015-2016 Dietary Interview - Individual Foods, First Day**

**2015-2016 Dietary Interview - Individual Foods, Second Day**

**Variables:**

**SEQN - Respondent sequence number**

**DR1IALCO - Alcohol (gm)**

**Methods:**

**Logistic Model**

**Regression**

**‘Current Health Status’ as response variable**

**Programming:**

**Python, R, and Stata**

**Model with insurance interaction term:**

**Where: insurance is 0 or 1. X are the variables that we choose in the total nutrient intake dataset.**

**Consider formula like this:**

1. **B1 \* X + B2 \* insurance \* X**
2. **B1 \* Insurance \* X + B2 \* (1 - insurance) \* X**

**So, if we choose to build model (1), we will use (B1 + B2) as the margin effect on people with insurance, and use B1 as the effect on people without insurance;**

**if we choose to build model (2), we will use B1 as the margin effect on people with insurance, and use B2 as the effect on people without insurance;**

**In our project, we would like to build a model like (2).**