Homework 3: Due Monday, March 5th, 2018

This homework assignment will use data from the Low Birthweight Study, a case-control study to identify risk factors for having a low birthweight baby conducted at Baystate Medical Center in Springfield, MA.

1. Download the file "lowbwt490kr.dta" from Moodle.

2. Using the codebook on the next page:

    2.a. Assign an appropriate label to each variable.

    2.b. Label the values of categorical variables as appropriate.

    2.c. Produce a listing of the dataset contents using the "describe" command.

1. Create a new variable that group women's number of first trimester physician visits into the following categories: 0, 1, ≥2. Label this new variable and its values.

1. Create a new variable that represents whether or not women have a pre-existing "high risk" condition (either history of premature labor or hypertension) or not. Label this new variable and its values.

1. Calculate the mean age of the participants in the study.

    1.a. Report the overall mean and the mean age among women with a low birthweight baby and those without a low birthweight baby.

    1.b. Test if there is a statistically significant difference in mean age between mothers of low birthweight babies and those of normal weight babies. Interpret your results.

1. Determine the distribution of race in the study population.

    1.a. Cross-tabulate participant race by whether or not the woman had a low birthweight baby.

    1.b. Use a chi square test to determine if there is an association between race and low birthweight in this population. Interpret your results.

1. Calculate the odds ratio to evaluate the relationship between race and low birthweight. Be sure to separately compare Blacks and Other races to Whites. Interpret your results.

Codebook

Variabl	Description	Values
id	Participant ID number	continuous
low	Case/control status for having a low birthweight	0=Control (normal
age	Mother's age, years	continuous
race	Mother's race	0=White
smoke	Mother's smoking status	0=Non-smoker
ptl	Number of times had premature labor	continuous
ht	Hypertension	0=No
ftv	Number of first trimester physician visits	continuous