Lab 11: Missing data

Data: mwr.csv (see the mwr.pdf file for data dictionary/useful information).

Practical objective: To gain familiarity with implementation of methods for missing data.

Scientific objective: To perform a principled analysis investigating predictors of willingness to assist patients having severe depression with an exemption to the Medicaid Work Requirements.

Noteworthy commands: Below is a list of Stata commands and options that will be helpful for this lab.

- `mi set mlong`
- `mi register imputed`
- `mi impute chained`
- `mi estimate`

Exercises: In this lab, we will only analyze the physicians who were randomized to the severe depression vignette scenario. Consider a logistic regression model with assistance with exemption as the outcome and self-reported political affiliation, state, gender, age, and self-reported approval of Medicaid Work Requirements as predictors. Below is a set of exercises that we will go through individually, in small groups, and/or together as appropriate and as time permits.

Exercise 1: Load the MWR data set into Stata. Conduct a complete-case analysis to estimate the parameters of the model described above, using a restricted cubic spline with four knots (at the default quantiles) for age.

Exercise 2: Tell Stata that you would like to mark the analysis variables for imputation. Conduct the imputation with three iterations, setting a seed of 6312 for reproducibility.

Exercise 3: Fit the model and summarize your conclusions. Store your results and then re-run the imputation with a seed of 6313; comment on the degree of agreement from one iteration to the other.

Exercise 4: Repeat Exercises 3 and 4 with 100 imputations.