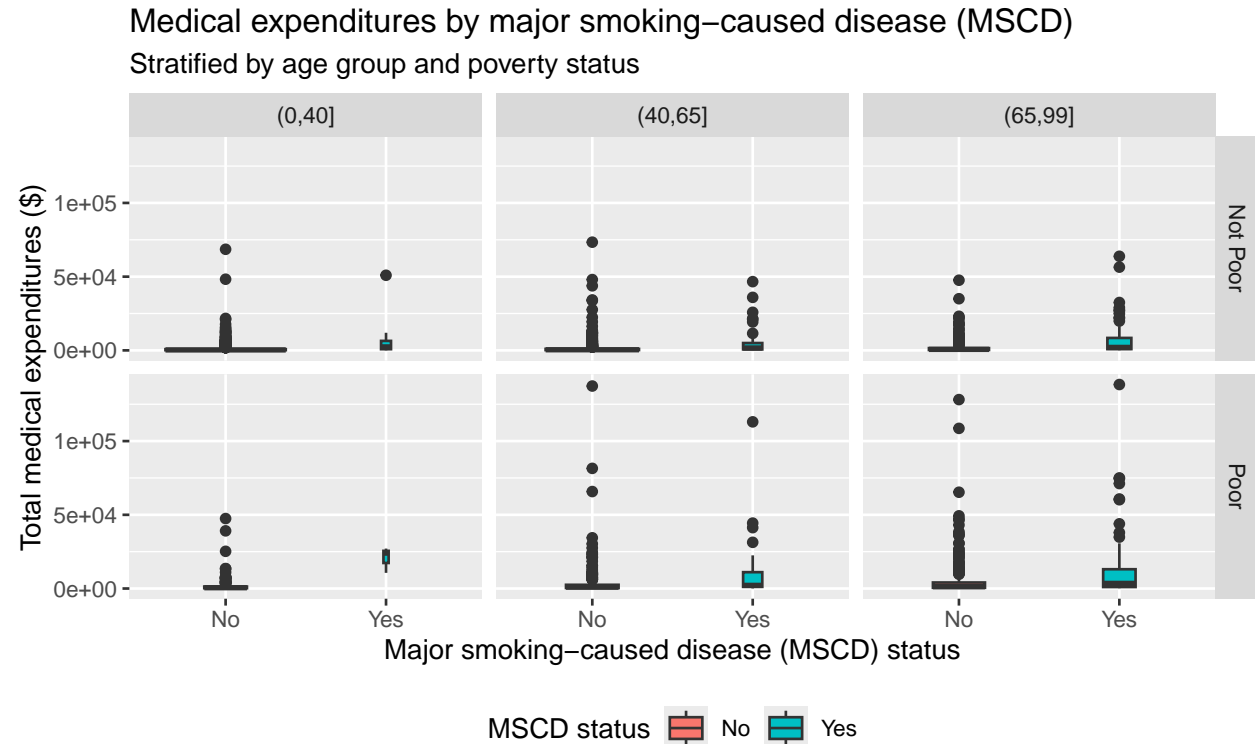


## Assignment 1: Data visualization

Due Sunday, September 22, 2024 @ 11:59pm

**Public Health 280.346, Fall 2024** Your assignment for this module is to create graphs using the full National Medical Expenditures Survey dataset, rather than just the small subset of data we used in class. Your assignment has two parts:

- (1) The boxplot below shows the relationship between total medical expenditures (`totalexp`) and presence of a major smoking-caused disease (`mscd`) within different categories defined by age (`ageCat`) and poverty (`poor`). The first part of your assignment is to reproduce this graphic **exactly** using the `ggplot2` package in R.



Note: This isn't the **best** plot to look at this relationship, as you will see/may have seen in Public Health Biostatistics. We will improve this plot in the next homework assignment once we learn how to transform variables in R.

- (2) Choose three variables from the NMES data set and make a graph that you think shows an interesting relationship between the variables. Write a couple of sentences describing what your graph shows and why you think it's interesting.