Lab 5 Checklist

- A **clear statement of your research question** (just state it, no need for a paragraph of prose)
  Your research question should be tailored in some way to the explanatory variables (i.e. race/ethnicity, practice type, urban/suburban setting).

- A **methods section** to explain what statistical tests you performed and why
  Just writing here, **do not show code**. At least 3 paragraphs - i.e.

  1) Variable selection.
  2) Model design.
  3) Model workflow.
     -As with Lab 4, you should **perform at least two model iterations** before arriving at your final model. Describe what steps were taken to arrive at your final model.

  - Your **model workflow (*behind the scenes, in your .Rmd)** should include:
    Set .Rmd chunk options to {r echo=F, eval=F} for **figures/code you do not plan to submit.**

    (or, if working in an R script (.R), #' +echo=F,eval=F)
    - First look at univariate relationships
      - Use plots, summaries, models, etc.
    - Fit simple regression models
      - Use them to try to "explain" the relationships you find by adding variables to the model
    - Fit a multiple regression model (build it up).
      - Examine the fit statistics (AIC, LRT, etc.) and compare them to the simple regression models.
      - Is a multiple regression necessary?
    - Include interactions
      - Are they good/necessary additions to the model? How do you know?

- A **results section** that includes the **relevant R code, tables, and plots that best summarize your output** and **your interpretation of these**
  This section should be a combination of **prose (~4-5 paras) and code/figures**.

  Do not show your entire model workflow, only your final results (think: research paper).

- A **discussion of your results** (really no more than a few paragraphs (~2 - 3)).
  - Keep in mind that the discussion section interprets your results, it doesn't just restate them!
    As with Lab 4, make sure to spend time on:

1) What can be inferred from your model (relate back to your research question!)

2) What its shortcomings are/what it leaves unexplained.

- <u>**Deliverables**</u>**:**
  - Rendered HTML or PDF.

    Remember: final code and figures **only**!
  - Code appendix (.Rmd)

    Everything can go in here