Programming Considerations: Discussion Activity

Version: January 2025

# Overview

As epidemiologists, it’s important for us to consider the software tools we have available to us and the approaches they allow when making decisions on the best way forward in a given situation. Context is critical in making such decisions, and it includes considering things such as the skill level of other epis and analysts in the organization, the purpose of the analysis, and what happens to the analysis or any processes you develop upon handover to others.

## Instructions

In this activity we want you to discuss, in the context of your work, when the use of R is appropriate, programming do’s and don’ts, and when automating your analysis in R is appropriate (or not).

Each group will be given 30 minutes for discussion followed by debrief in the virtual classroom. Remember to select a person to take notes and another to report back on the key takeaways from your discussion.

Note that this activity included the use of generative AI in the initial brainstorming phase.

## Questions

1. When is it appropriate to program your analysis in R, and when might it be better to use a different approach (e.g., Excel)?
2. What do you think should be best practices for creating headers in R scripts? Why is it important to include details such as the date, author, and purpose of the code?
3. Do you think it’s important to chunk the code into separate scripts by various stages of the project (e.g., loading data, processing data)? Or do you think it’s better to keep everything together in one script? Why do you think this way?
4. What is appropriate vs. inappropriate information to include as comments in your script? Can you think of an example or have you experienced a situation where the comments included in a script saved you time and effort?
5. Markdown is an excellent tool to have in your toolbox. What might be some of the drawback for using Markdown in your reporting?

Reminder: Be sure to nominate a notetaker and reporter in your group. Before wrapping up your discussion, take a moment to collectively identify the key take aways from your discussion to share back with the large group.