Add dynamic elements to reports

Instructions

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This exercise builds on the previous exercise where you learnt to build a simple MS Word report .

1 Objectives

• You are tasked with generating a simple analytically reproducible report on a fictitious outbreak;

- If you have generated the simple MS Word report as in Exercise 3, continue working on the same Quarto notebook you already modified. Otherwise, download the files df1.RData and exercise4.qmd using the links provided on the right-hand side of this page. For simplicity, please put these two files under the same folder and open the Quarto notebook in RStudio.
- Complete each of the following tasks and render the document after each task or set of tasks to track your progress;
- All text formatted in bold is a placeholder and should be replaced with appropriate automated calculations or cross-references;
- The final output should be a Microsoft (MS) Word report, containing all required tables, figures, corresponding captions and cross-references, and formatted with the Swiss TPH template.

2 Improve navigation and readability

 □ Insert a table of contents to the rendered MS Word document; □ Automatically number the different sections of the rendered MS Word document; □ Configure the table of contents to only display two levels of section headings.
• Tip
• See Quarto documentation about table of contents

3 Implement dynamic calculations

- □ Change the date 2023-12-31 to the date at which the MS Word document was last rendered;
 □ Format the date at which the MS Word document was last rendered to display it with the format December 31, 2023;
- **?** Tip
 - See Quarto documentation about date formatting
 - See Quarto documentation about dynamic dates
- □ Replace the placeholder text in bold with the automated calculation of the outbreak start and end dates;

[&]quot;The outbreak ran from date to date"

\Box Replace the placeholder text in bold with the automated calculation of the numbers, confirmed cases and deaths.	
"Over the studied period, there were N cases, including N confirmed cases and N confirmed deaths."	
• Tip	
• See Quarto documentation about inline code	
4 Reference tables	
Table 1	
 □ Assign a label to the table summarising the demographic characteristics and outcomes frequency of all cases; □ Replace the placeholder text in bold with a cross-reference to the table. 	
"cross-reference provides a summary of the demographic characteristics and the outcome proportion for the overall population"	
Table 2	
 □ Assign a label to the table summarising the demographic characteristics of individua who died versus those who are still alive; □ Replace the placeholder text in bold with a cross-reference to the table. 	
"while cross-reference compares the demographic characteristics of individuals who died versus those who are still alive"	
Table 3	
\Box Assign a label to the table summarizing the odds ratios from the logistic regression mode \Box Replace the placeholder text in bold with a cross-reference to the table	
"The results of the logistic regression model are summarized in the formatted regression table, which is presented in cross-reference ."	
• Tip	
• See Quarto documentation about table cross-references	

5 Reference figures

Figure 1

- □ Assign a label to the figure;
 □ Replace the placeholder text in bold with a cross-reference to the figure;
 "cross-reference illustrates the outbreak's progression, which can be divided into distinct phases."
- \square Adjust the dimensions of the figure until you are happy with them.
- **?** Tip
 - See Quarto documentation about figure cross-references
 - See fig-width and fig-height options to adjust figure dimensions

6 Reference code chunks

- ☐ Add a caption to the code chunk for your R implementation of the logistic regression;
- \square Assign a label to the code chunk;
- □ Replace the placeholder text in bold with a cross-reference to the code chunk.
- Tip
 - See Quarto documentation about code chunk cross-references

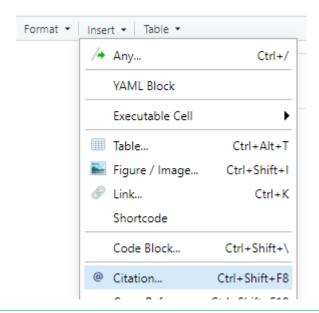
7 Add references

- ☐ Create a bibliography (BibTeX) file my_biblio.bib in the same folder as your Quarto notebook;
- ☐ Link the BibTeX file by adding it to the YAML header of your Quarto notebook;
- \square Add a new reference for 10.1016/S0140-6736(24)02669-2 in the BibTeX file;
- ☐ Create a new section named Background in your Quarto notebook, after the Overview section and before the Population section;
- ☐ Insert the following sentence into the Background section, and replace the placeholder text in bold with the correct citation key from your BibTeX file.

"citation describes trends in suspected and confirmed monkeypox virus cases in the Democratic Republic of Congo using epidemiological and laboratory surveillance data collected from 2010 to 2023."



- You can generate the BibTeX entry from the DOI using citation management tools;
- See Quarto documentation about citations for guidance on formatting references;
- If you are not familiar with BibTeX files or the source editor, Quarto's visual mode offers user-friendly tools for managing citations, allowing you to handle most of these steps automatically.



8 Format MS Word reports with styles

- □ Apply the Swiss TPH template swisstph_template.docx to your rendered MS Word report;
- □ To go further, try creating your own custom Word template and apply it to your report to explore how MS Word styles can be personalized.



- See Quarto documentation about Word templates;
- To create a template with customized MS Word styles, you will need to start with a Quarto-rendered MS Word report. This is because not all MS Word styles are

supported by Quarto, and starting from a rendered report ensures better compatibility.