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. 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;

"*The outbreak ran from **date** to **date***"

☐ Replace the placeholder text in bold with the automated calculation of the number of cases, 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 outcome 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 individuals 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

☐ Assign a label to the table summarizing the odds ratios from the logistic regression model;
☐ 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.*"

☐ 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;

☐ Assign a label to the code chunk;

☐ Replace the placeholder text in bold with a cross-reference to the code chunk.

> 💡 Tip
>
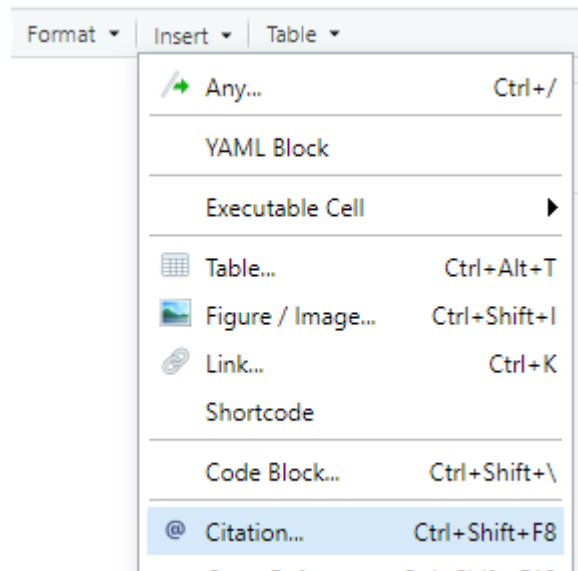> - See [Quarto documentation about code chunk cross-references](#)

7 Add references

☐ Create a bibliography file `my_biblio.bib` in the same folder as your Quarto notebook;

☐ Link the bibliography file by adding it to the YAML header of your Quarto document;

- [] Add a reference for [10.1016/S0140-6736(23)01249-7](#) in the `.bib` file;

☐ Insert the following sentence into your Quarto notebook and replace the placeholder text in bold with the correct citation key from your `.bib` file.

"***citation*** *discusses the past, present and future of Swiss TPH.*"

> **💡 Tip**
>
> - 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 proficient with the source editor, Quarto's visual mode provides user-friendly tools for managing citations.

8 Finalise your MS Word report

> **💡 Tip**
>
> See Quarto documentation about Word templates

☐ Apply the Swiss TPH template `swisstph_template.docx` to your MS Word rendered report;

☐ Create your own template and apply it to your MS Word rendered report.

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