Build a MS Word report

Step-by-step correction

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1 Overall objective

This page shows a step-by-step correction of Exercise 3.

2 Setup basic elements of the Quarto document

All these basic elements are part of the YAML header.

```yaml
---
title: My outbreak report                    ①
author: Helene Langet                        ②
date: "2023-12-31"                           ③

format: docx                                 ④
echo: false                                  ⑤
warning: false                               ⑥
---
```

① Update the title of the Quarto document.
② Put your name as author of the Quarto document.
③ Add the date `2023-12-31` to the Quarto document.
④ Change the output format to generate a MS Word document.
⑤ Configure the Quarto document to hide code in the rendered MS Word document.
⑥ Configure the Quarto document to hide warnings in the rendered MS Word document.

3 Improve navigation and readability

☒ Insert a table of contents to the Quarto document ;

```yaml
---
title: "My outbreak report"
author: Helene Langet
date: "2023-12-31"
editor: visual

format:
  docx:
    toc: true
---
```

☒ Automatically number the different sections of the Quarto document ;

```yaml
---
format:
  docx:
    toc: true
    number-sections: true
---
```

☒ Configure the table of contents to only display two levels of section headings.

```yaml
---
format:
  docx:
    toc: true
    number-sections: true
    toc-depth: 2
---
```

4 Implement dynamic calculations

☐ Change the date `2023-12-31` to the date at which the Quarto document was last modified, and format this date to display it with the format `December 31, 2023` ;

```yaml
---
title: "My outbreak report"
author: Helene Langet
date: last-modified
date-format: long
---
```

☐ 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.*"

5 Create and reference publication-ready tables

☒ Create a table summarising the demographic characteristics and outcome frequency of all cases

````
```{r}
subdf |>
  dplyr::select(age,
                sex,
                bmi,
                confirmed,
                death) |>
  gtsummary::tbl_summary()
```
````

Characteristic	**N = 65,669**
age	50 (35, 65)
sex	
1	33,114 (50%)
2	32,555 (50%)
bmi	29 (21, 38)
confirmed	
0	13,235 (20%)
1	52,434 (80%)
death	
0	64,455 (98%)
1	1,214 (1.8%)

☒ Add a caption to the table

````
```{r}
#| tbl-cap: Population characteristics

subdf |>
  dplyr::select(age,
                sex,
                bmi,
                confirmed,
                death) |>
  gtsummary::tbl_summary()
```
````

Table 2: Population characteristics

Characteristic	**N = 65,669**
age	50 (35, 65)
sex	
1	33,114 (50%)
2	32,555 (50%)
bmi	29 (21, 38)
confirmed	
0	13,235 (20%)
1	52,434 (80%)
death	
0	64,455 (98%)
1	1,214 (1.8%)

☒ Assign a label to the table ;

````
```{r}
#| label: tbl-1
#| tbl-cap: Population characteristics

subdf |>
  dplyr::select(age,
                sex,
                bmi,
                confirmed,
                death) |>
  gtsummary::tbl_summary()
```
````

Table 3: Population characteristics

Characteristic	**N = 65,669**
age	50 (35, 65)
sex	
1	33,114 (50%)
2	32,555 (50%)
bmi	29 (21, 38)
confirmed	
0	13,235 (20%)
1	52,434 (80%)

Table 3: Population characteristics

Characteristic	**N = 65,669**
death	
0	64,455 (98%)
1	1,214 (1.8%)

☒ Replace the placeholder text in bold with a cross-reference to the table ;

`@tbl-1` provides a summary of the demographic characteristics and the outcome proportion for the overall population.

> "*Table 3 provides a summary of the demographic characteristics and the outcome proportion for the overall population*"

☐ Create a table summarising the demographic characteristics of individuals who died versus those who are still alive ;
☐ Add a caption to the table ;
☐ Assign a label to the table ;
☐ 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*"

6 Customise figures

> Tip
>
> - See Quarto documentation about figure cross-references
> - See Quarto documentation about figure options

☐ Add a caption to the figure ;
☐ 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 it
☐ Beautify the plot using ggplot options

7 Code

> **Tip**
>
> - See gtsummary documentation about formatted table of regression model results
> - See Quarto documentation about code chunk cross-references

- ☐ Implement a logistic regression model based on description in the Quarto document ;
- ☐ Create a table summarizing the odds ratios from the logistic regression model ;
- ☐ Add a caption to the table ;
- ☐ Assign a label to the table ;
- ☐ 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**."

- ☐ Display the code chunk for your R implementation of the logistic regression (and only this code chunk) in the rendered MS Word document ;
- ☐ Add a caption to the code chunk ;
- ☐ Assign a label to the code chunk ;
- ☐ Replace the placeholder text in bold with a cross-reference to the code chunk.

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.