Create a simple Word report

Instructions

Hélène Langet

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1 Objectives

- You are tasked with generating a simple analytically reproducible report on a fictitious outbreak.
- Download the files `df1.RData` and `exercise3.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.
- The final output should be a Microsoft (MS) Word report named `exercise3.docx`, containing all required tables, figures and corresponding captions.

2 Setup basic elements of the Quarto notebook

☐ Update the title of the Quarto notebook ;

☐ Put your name as author of the Quarto notebook ;
☐ Add the date `2023-12-31` to the Quarto notebook ;
☐ Change the output format to generate a MS Word document ;
☐ Configure the Quarto notebook to hide code in the rendered document ;
☐ Configure the Quarto notebook to hide warnings in the rendered document.

> **Tip**
>
> - See Quarto documentation about MS Word options
> - See Quarto documentation about execution options

3 Create publication-ready summary statistics tables

Table 1

☐ Create a table summarising the demographic characteristics and outcome frequency of all cases ;
☐ Add a caption to the table.

````
```{r}
#Table 1
#Generate a summary table displaying population characteristics
```
````

Table 2

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

````
```{r}
#Table 2
#Generate a summary table comparing the demographic characteristics of
 ↪  individuals who died versus those who are still alive
```
````

Tip

- See `gtsummary` documentation for creating formatted summary tables
- See `tbl-cap` option to add a caption to a table generated by an executable code chunk

Other R packages for working with and customising tables include flextable and gt

4 Create publication-ready figures

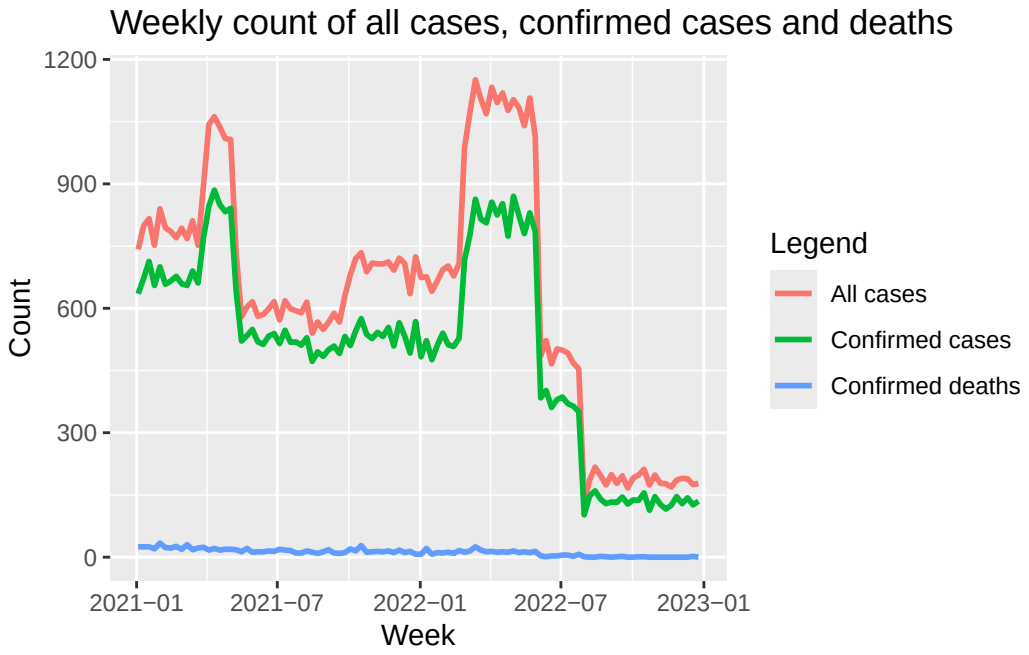
Figure 1

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

```
```{r}
#Figure 1
#Aggregate the data to get the weekly count of all cases, confirmed
 ↪  cases and deaths
weekly_data <- subdf |>
  dplyr::group_by(week) |>
  dplyr::summarise(count = dplyr::n(),
                   confirmed_count = sum(confirmed == "1"),
                   death_count = sum(death == "1"))

#Plot the weekly count of all cases, confirmed cases and deaths
weekly_data |>
  ggplot2::ggplot(ggplot2::aes(x = week)) +
  ggplot2::geom_line(ggplot2::aes(y = count,
                                  color = "All cases"),
                     size = 1) +
  ggplot2::geom_line(ggplot2::aes(y = confirmed_count,
                                  color = "Confirmed cases"),
                     size = 1) +
  ggplot2::geom_line(ggplot2::aes(y = death_count,
                                  color = "Confirmed deaths"),
                     size = 1) +
  ggplot2::labs(title = "Weekly count of all cases, confirmed cases and
 ↪  deaths",
                x     = "Week",
```
```

```
                y     = "Count",
                color = "Legend")
```



> **Tip**
>
> - see `fig-cap` option to add a caption to a figure generated by an executable code chunk;

5 Present statistical models and results

- ☐ Implement a logistic regression model based on the description provided in the Quarto notebook;
- ☐ Display the code chunk with your R implementation of the logistic regression (and only display this code chunk) in the rendered MS Word document.

```
```{r}
#Logistic regression model
```
```

Table 3

- ☐ Create a table summarizing the odds ratios from the logistic regression model;
- ☐ Add a caption to the table.

````
```{r}
#Table 3
```
````

> **Tip**
>
> - See `gtsummary` documentation for creating formatted tables of regression model results

Ready to take it further? Once you have completed this exercise, you can add dynamic elements to your report .