Partial Solution

Contents

Exercise 1.

```r
# Exercise 1.
# read in data
covid_data_pop <- read_csv("./data/covid_data_pop.csv")
covid_data <- read_csv("./data/covid_data.csv")
```

Exercise 2.

```r
# Exercise 2.
covid_data %>%
  group_by(date) %>%
  summarise(dead = sum(dead)) %>%
  ggplot(aes(x = date, y = dead)) +
    geom_line(color = 'orange') +
    geom_point(color = "orange", size = 1) +
    theme_bw() +
    scale_y_log10()
```

Exercise 3.

```r
# Exercise 3.
covid_data %>%
  ggplot(aes(x = date, y = new_cases)) +
    geom_bar(stat="identity", fill = "orange") +
    labs(y = "New Cases") +
    theme_bw()
```
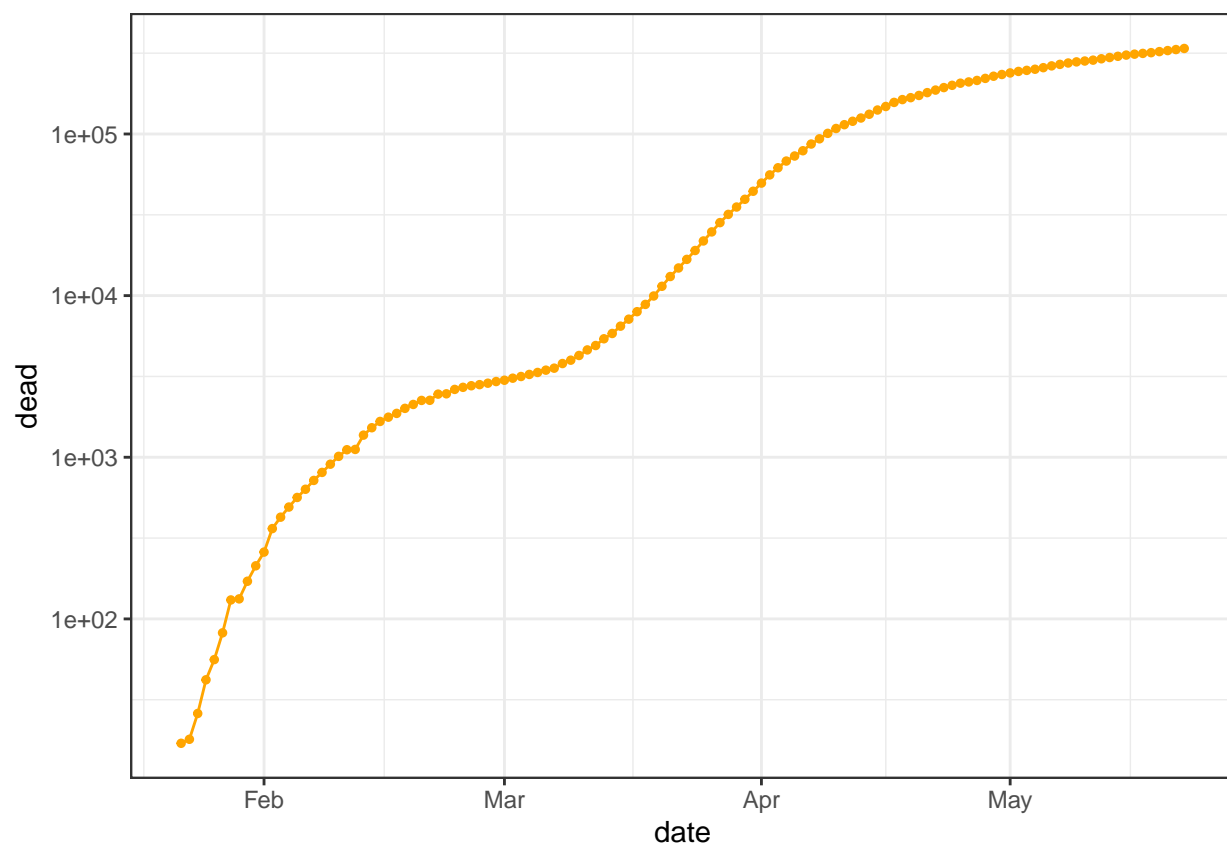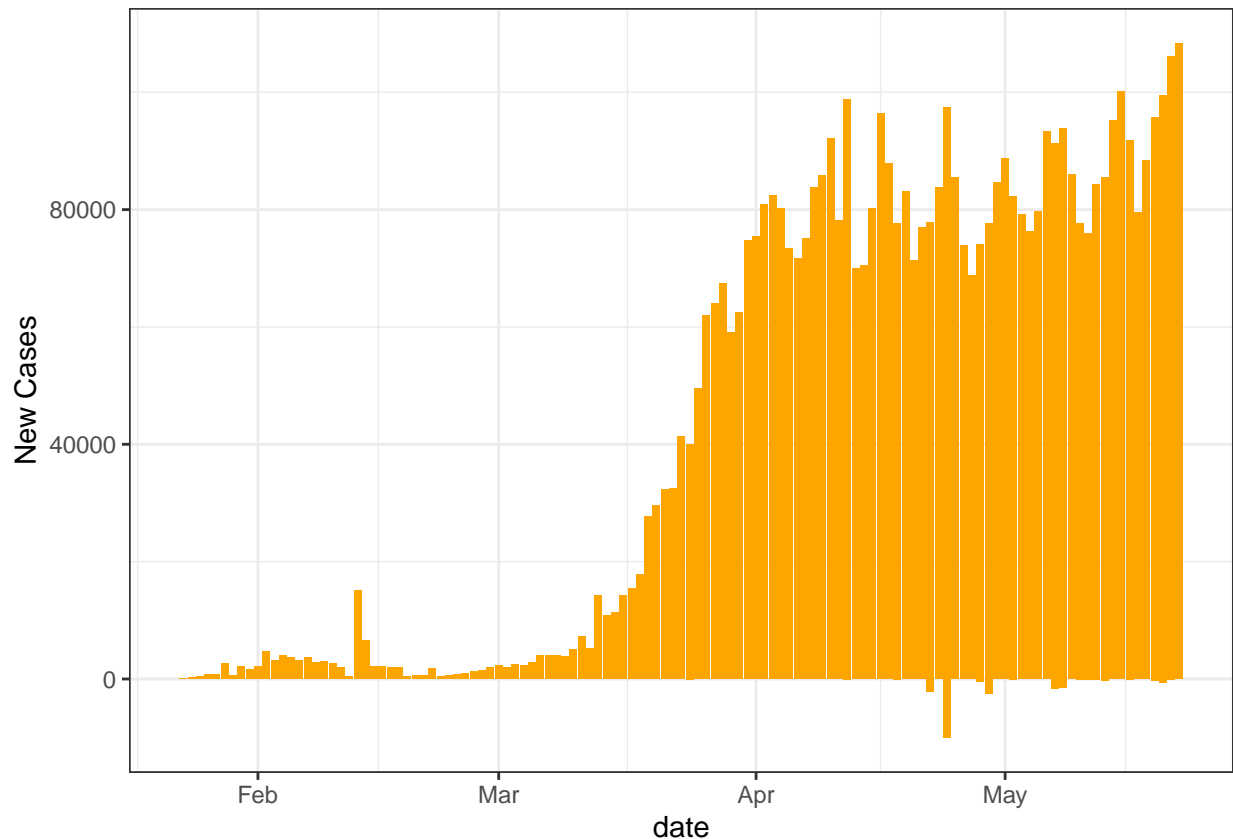
Figure 1: World wide reported COVID-19 deaths (logarithmic base 10 scale) by date

Note that some of the `New Cases` are negative! We will fix that next.

```r
# Exercise 3.  Final Solution
covid_data %>%
  mutate(new_cases = ifelse(new_cases < 0, 0, new_cases)) %>%
  ggplot(aes(x = date, y = new_cases)) +
    geom_bar(stat="identity", fill = "orange") +
    labs(y = "New Cases") +
    theme_bw()
```

Exercise 4.

Here we practice citing the work of [1] and discuss how [2,3] wax eloquently.

References

[1] B.B. Lahey, Public health significance of neuroticism, The American Psychologist. (2009). https://login.proxy006.nclive.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edsbig&AN=edsbig.A201211471&site=eds-live&scope=site (accessed May 10, 2020).

[2] W.J. Gehring, R.T. Knight, Prefrontal-cingulate interactions in action monitoring, Nature Neuroscience. (2000) 516. https://login.proxy006.nclive.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edsgsc&AN=edsgcl.185568919&site=eds-live&scope=site (accessed May 10, 2020).

[3] J.B. Savitz, R.S. Ramesar, Personality: Is it a viable endophenotype for genetic studies of bipolar affective disorder?, Bipolar Disorders. 8 (2006) 322–337. https://doi.org/10.1111/j.1399-5618.2006.00309.x.
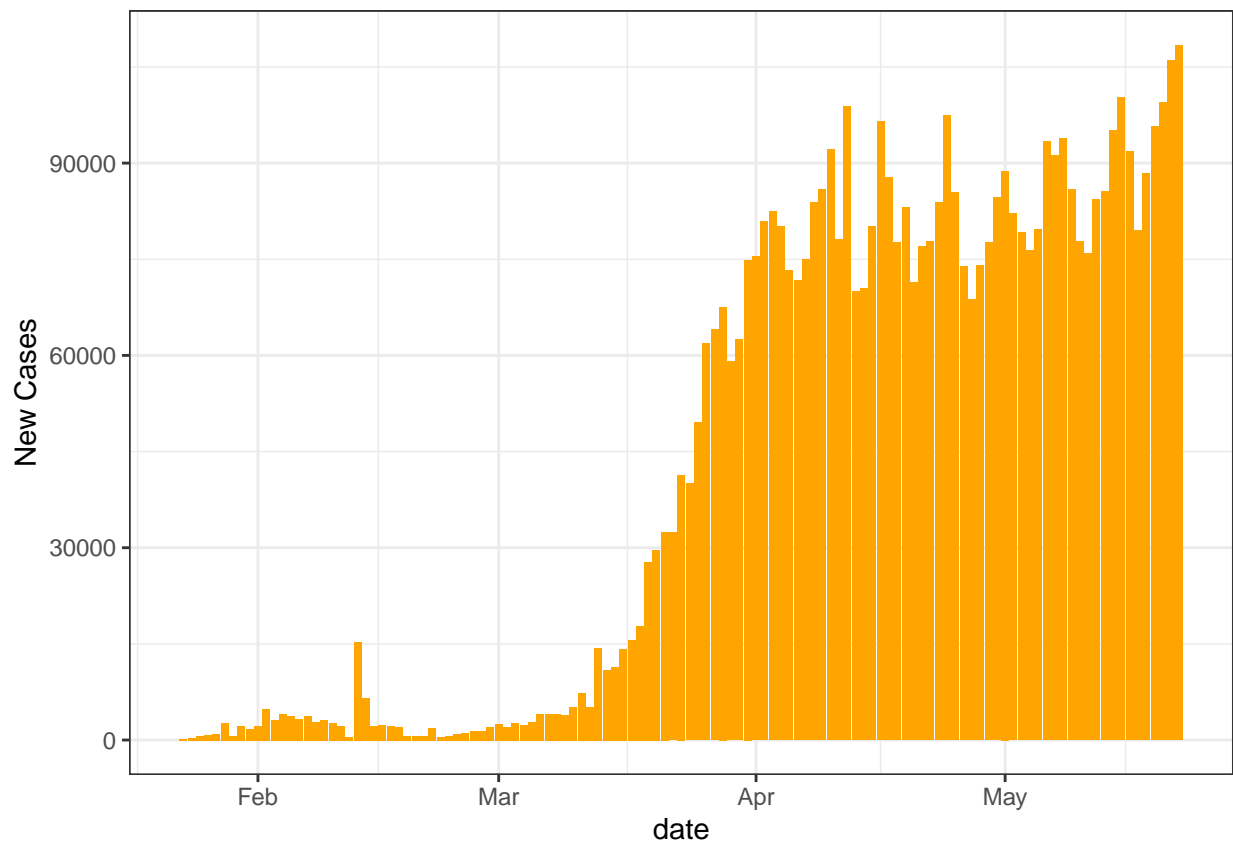
Figure 2: New Cases by date