

Partial Solution

Last compiled: May 25, 2020

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Exercise 1.

```
# 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.

```
# 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.

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

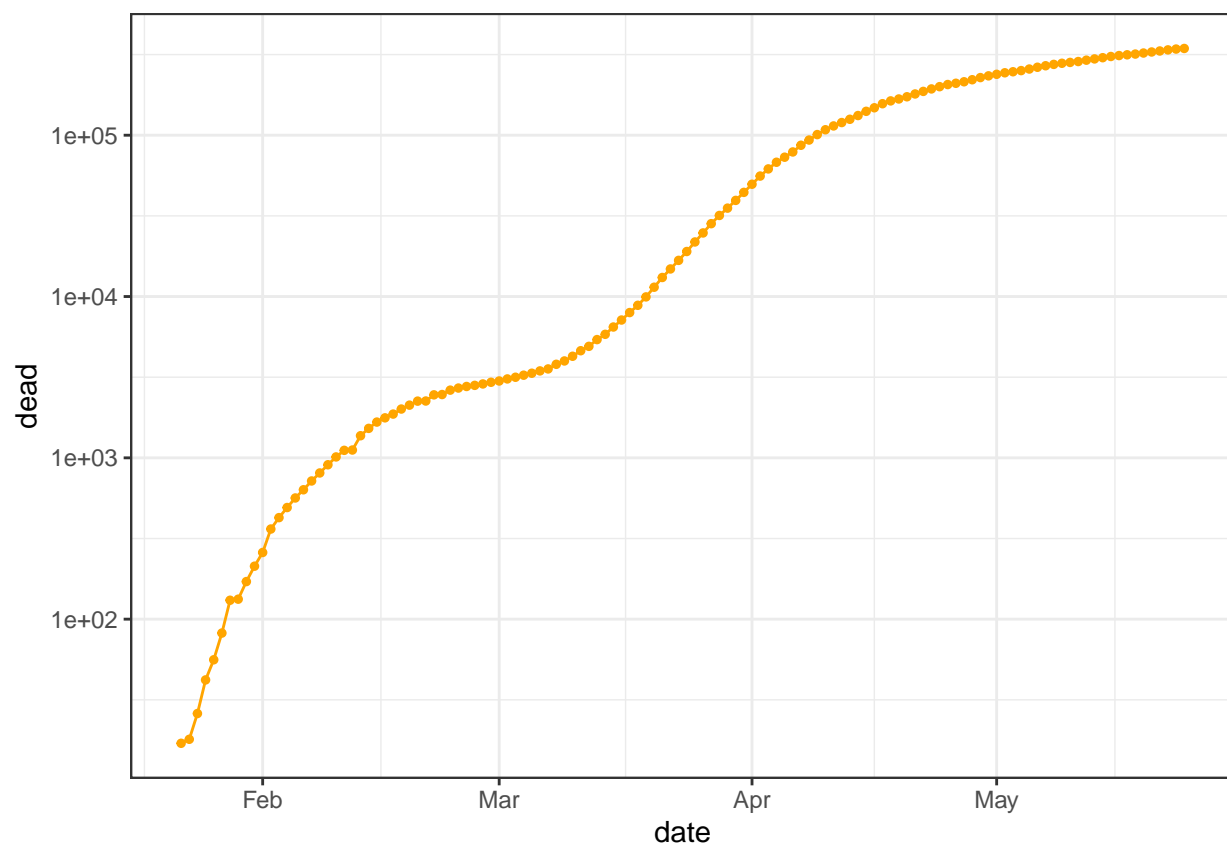
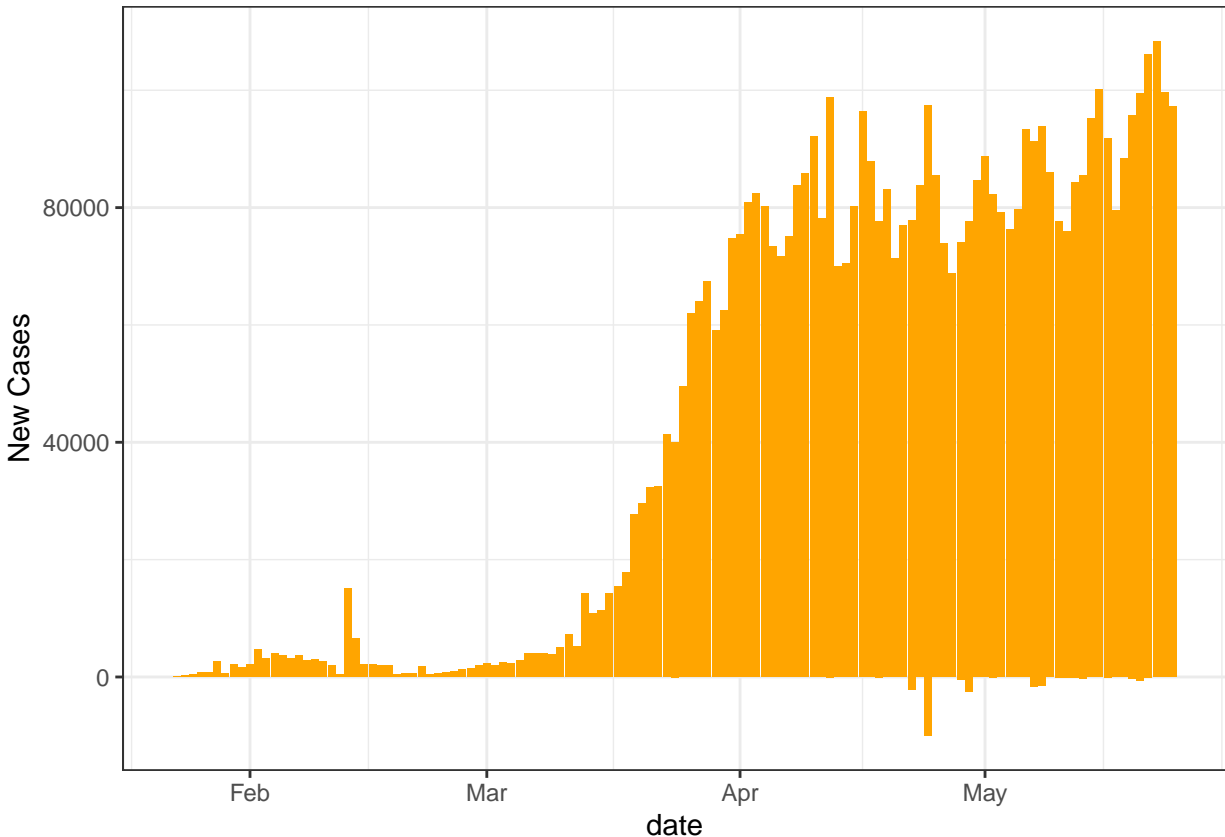


Figure 1: World wide reported COVID-19 deaths (logarithmic base 10 scale) by date



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

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>.

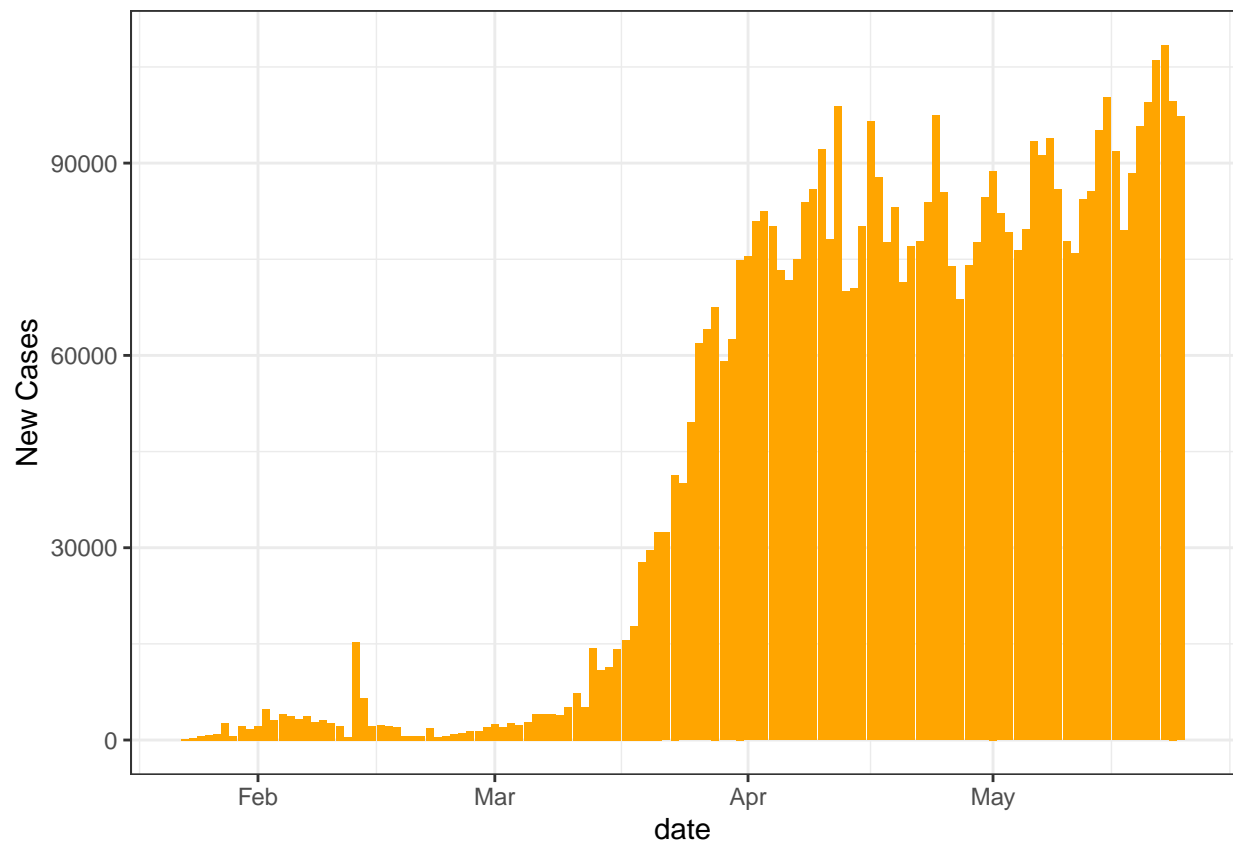


Figure 2: New Cases by date