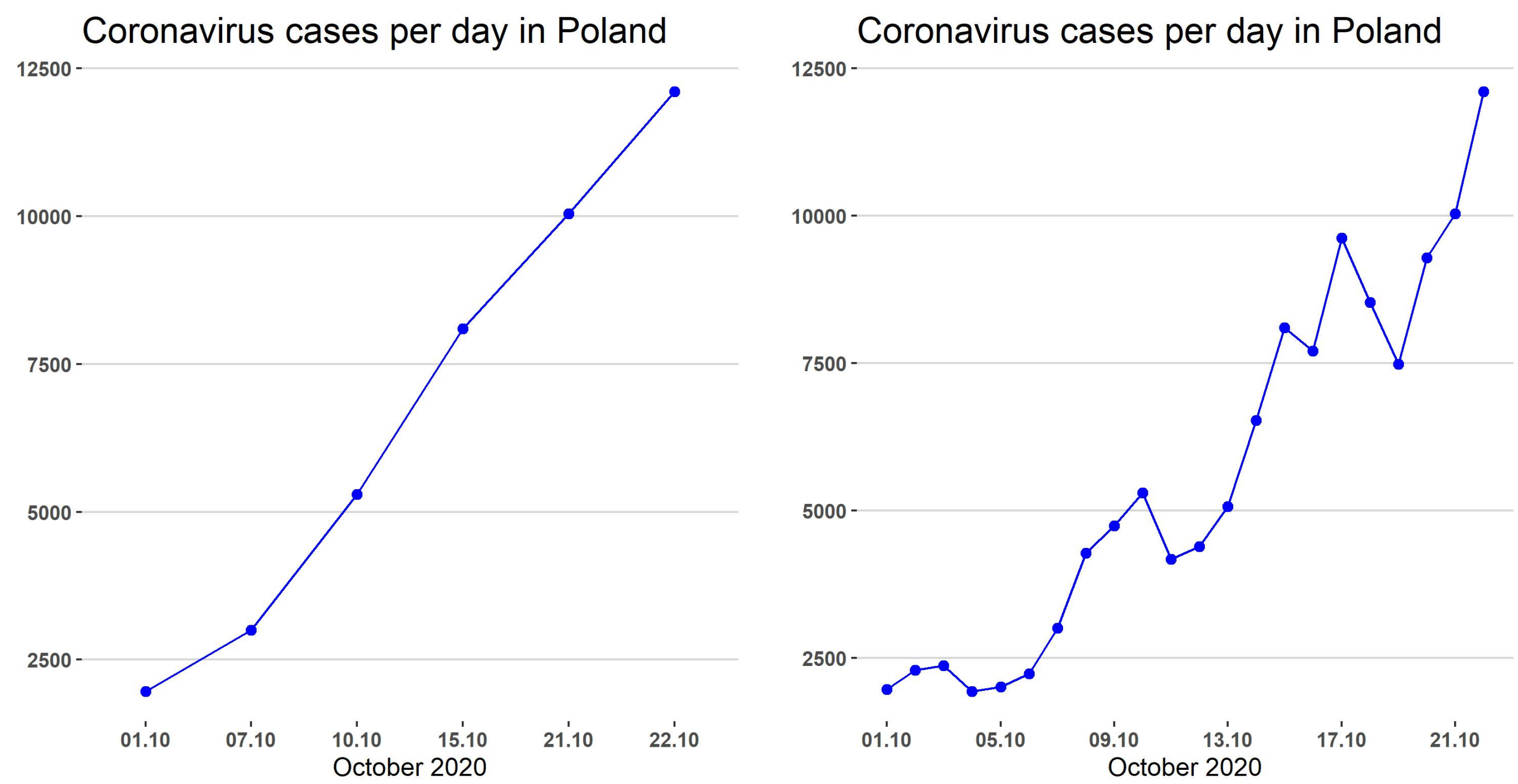


Diagrams with timeline

Adrian Kaminski Konstanty Kraszewski Jakub Lis

Axis scale

Appropriate scales on the timeline axis.

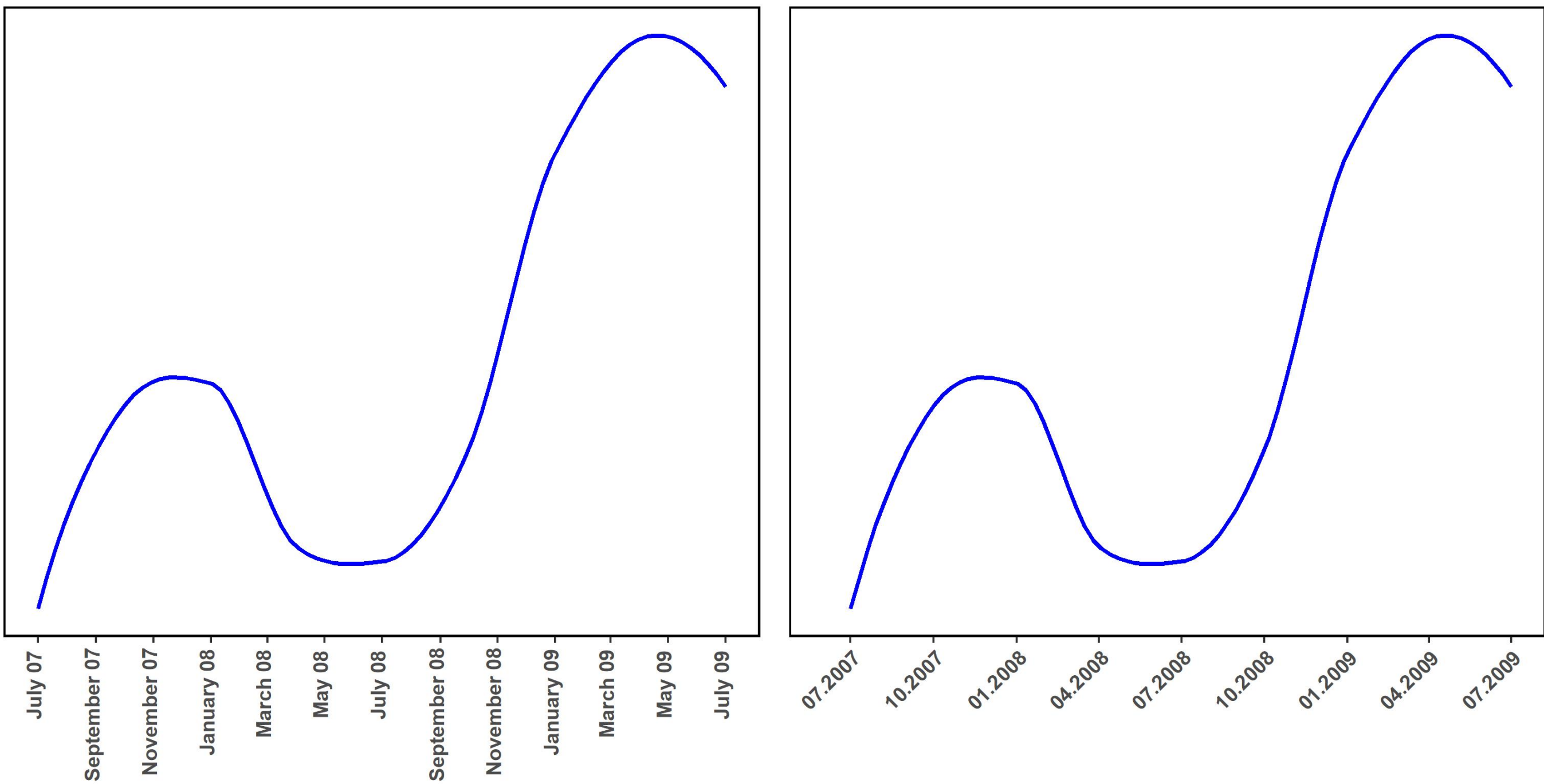


[1]

The scale on the plot should be always detailed. The plot on the left may look OK at first, but when compared to the second one it becomes clearly visible that it misrepresents the data. There are so few values marked that all the smaller trends are hidden which might cause the viewer to draw false conclusions.

Axis naming

Common mistakes during the process of naming timeline axis.

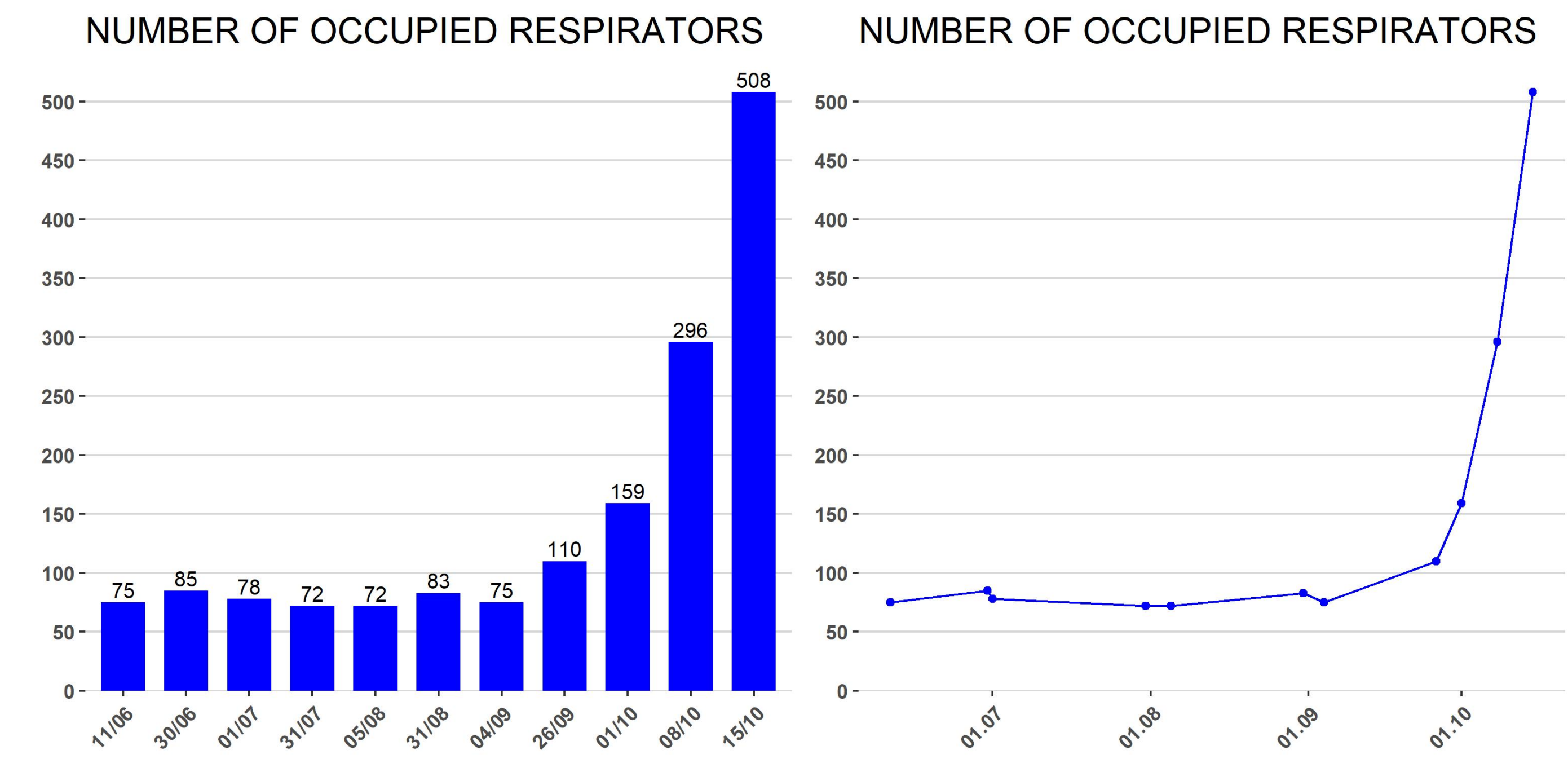


[1]

- ✗ Vertical position of labels - very inconvenient for the reader
- ✗ Months given as words - unreadable to people who don't know the language
- ✓ Angled position of labels - no need to tilt your head to the left to read the plot
- ✓ Months given as numbers - it takes less place and is universal

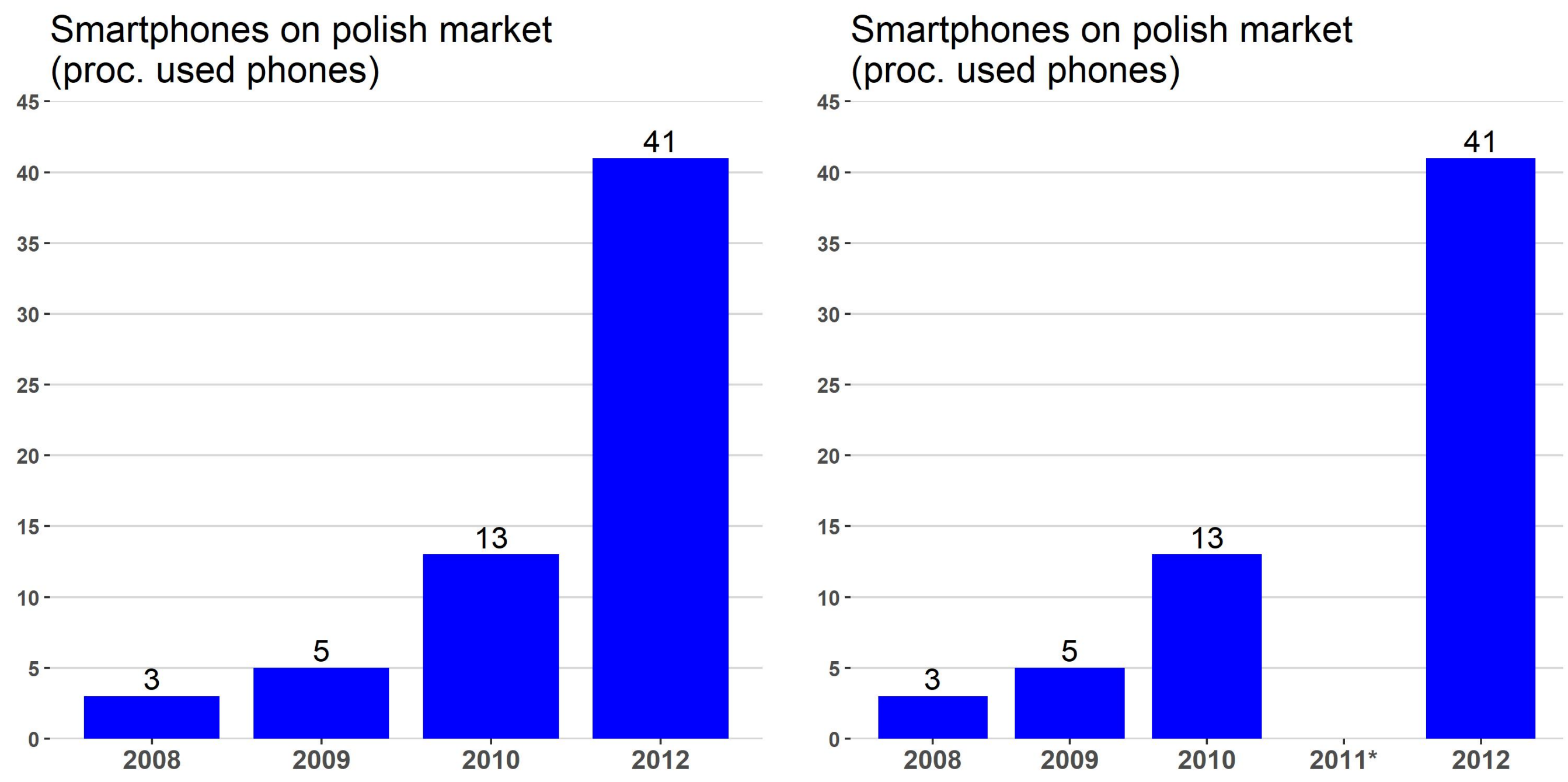
Bar plot or line chart?

While using timeline in diagrams one should consider what type of chart is better to use. It depends on what the values represent.



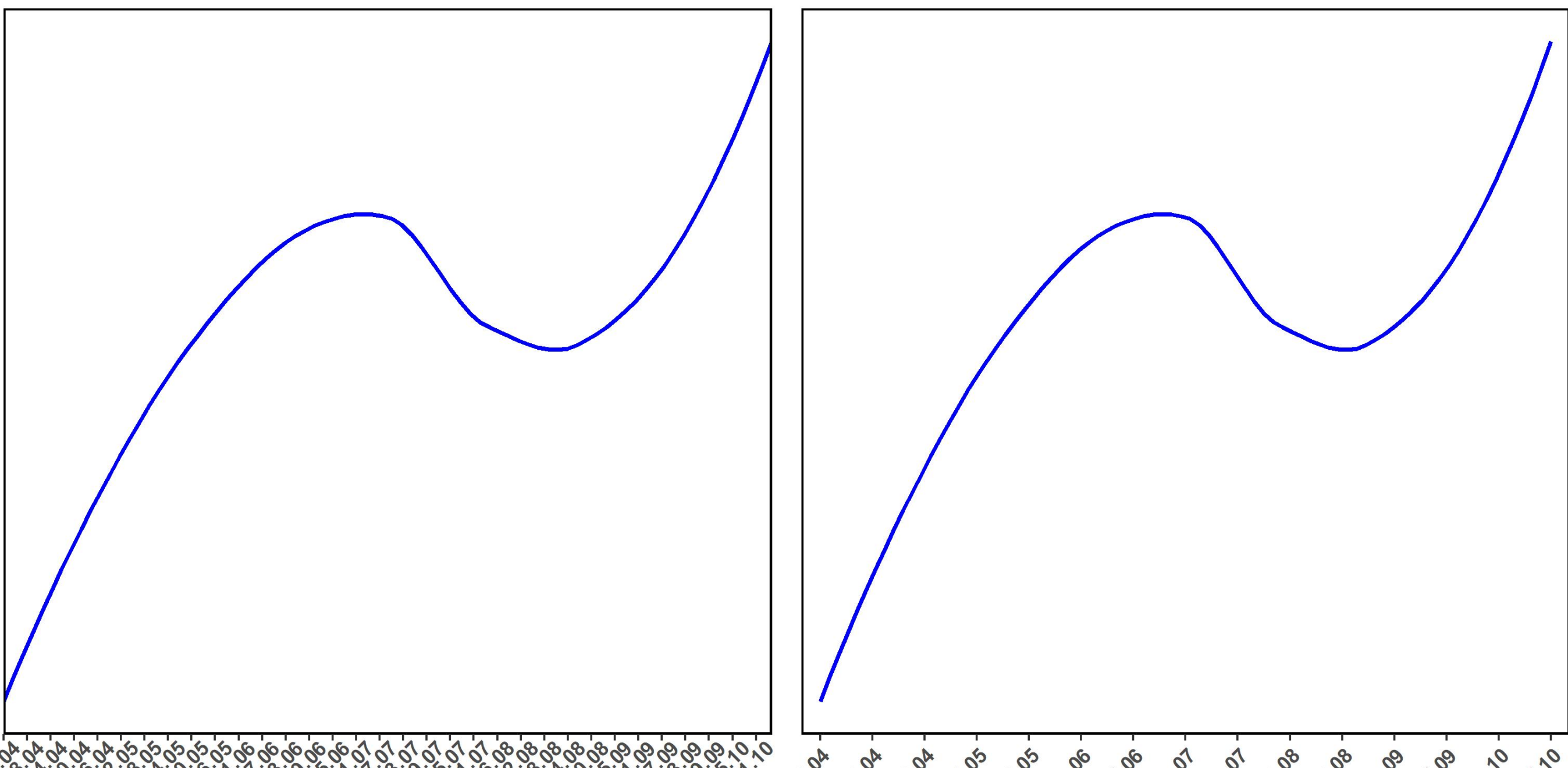
[1]

The diagrams above represent numbers of occupied respirators. Left bar plot suggests that every day this number increases by the given value. It also has a non-standard x-axis. On the right there is a corrected version of the same diagram. When every value is affected by the previous one and the plot shows how something changes, a line chart should be used.



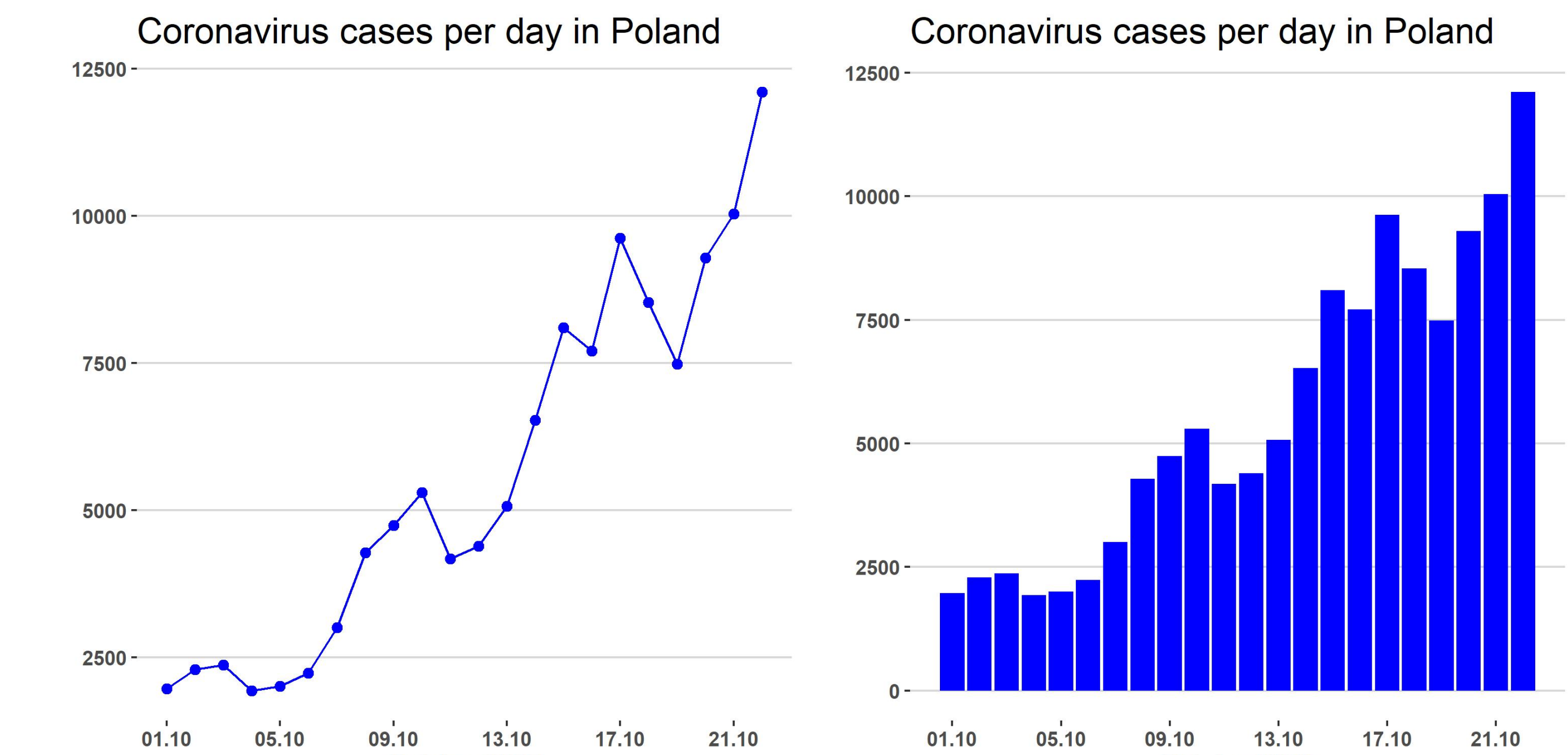
[2]

This is a case of not having all the data and trying to hide it on the plot. One can see right away that there is one year missing on the left. It makes the difference between the adjacent years seem more sudden. On the right however the absent data is marked with empty space so that it wouldn't be misunderstood by the viewer.



[2]

- ✗ Position of labels is good, but there are too many of them
- ✓ Less is more



[2]

The diagrams represent coronavirus cases per day in Poland. Every value means the number of new recorded cases so using a line chart here may lead to confusion. In this case a better way to show the data is to use a bar plot. Sometimes there is a lot of data to show and a bar plot may merge making it unsightly. In such cases using a line chart could be considered, provided it appropriately emphasizes that every value relates only to a given date.

[1] Chart from Polish TV station
[2] skuteczneraporty.pl

[1] blogi.bossa.pl
[2] www.money.pl

[1] wiadomosci.onet.pl
[2] Chart from Polish TV station