Nowcasting the official Death Counts by COVID19 in Brazil
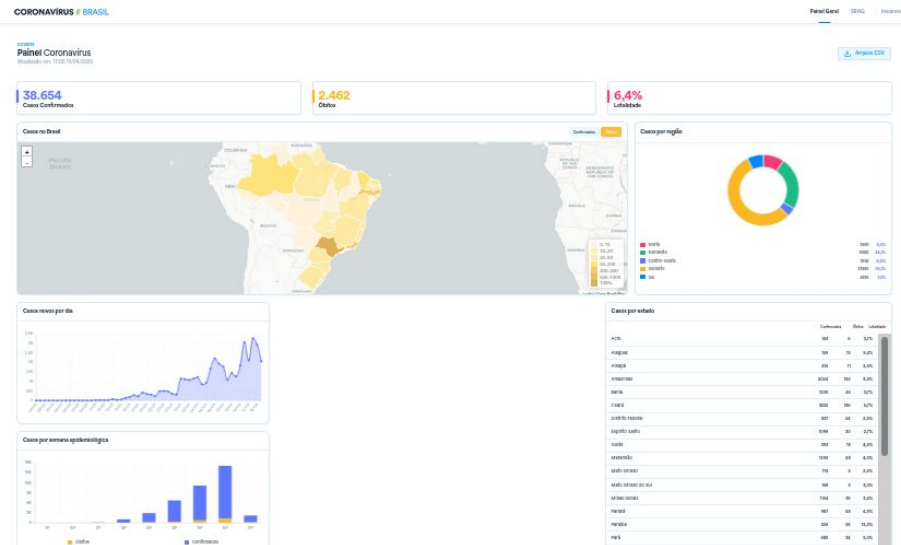
Observatório 19 BR:

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Context: paucity of official public data

Brazilian Health ministry does not report cases or deaths that are waiting for test results.

Access to official databases have been halted to researchers by the beginning of the pandemics in Brazil.

BUT the press realized that part of the official reports have some information about delays.

Coronavírus pode já ter matado entre 3.800 e 15,6 mil no Brasil, diz estudo

- Nowcasting estimates for the data gathered by the press: data from 13 official reports of day of death .
- Huge impact: the online news article ha in a single day 400k readings. Twice the number of subscribers of the printed version
- We think that such impact is because a large part of public is not aware about the delay in officially confirmed deaths by COVID-19 .
- Important opportunity to bring this issue to the public debate. And to push the Brazilian Ministry to report also cases and deaths that are being checked for confirmation ("casos suspeitos").
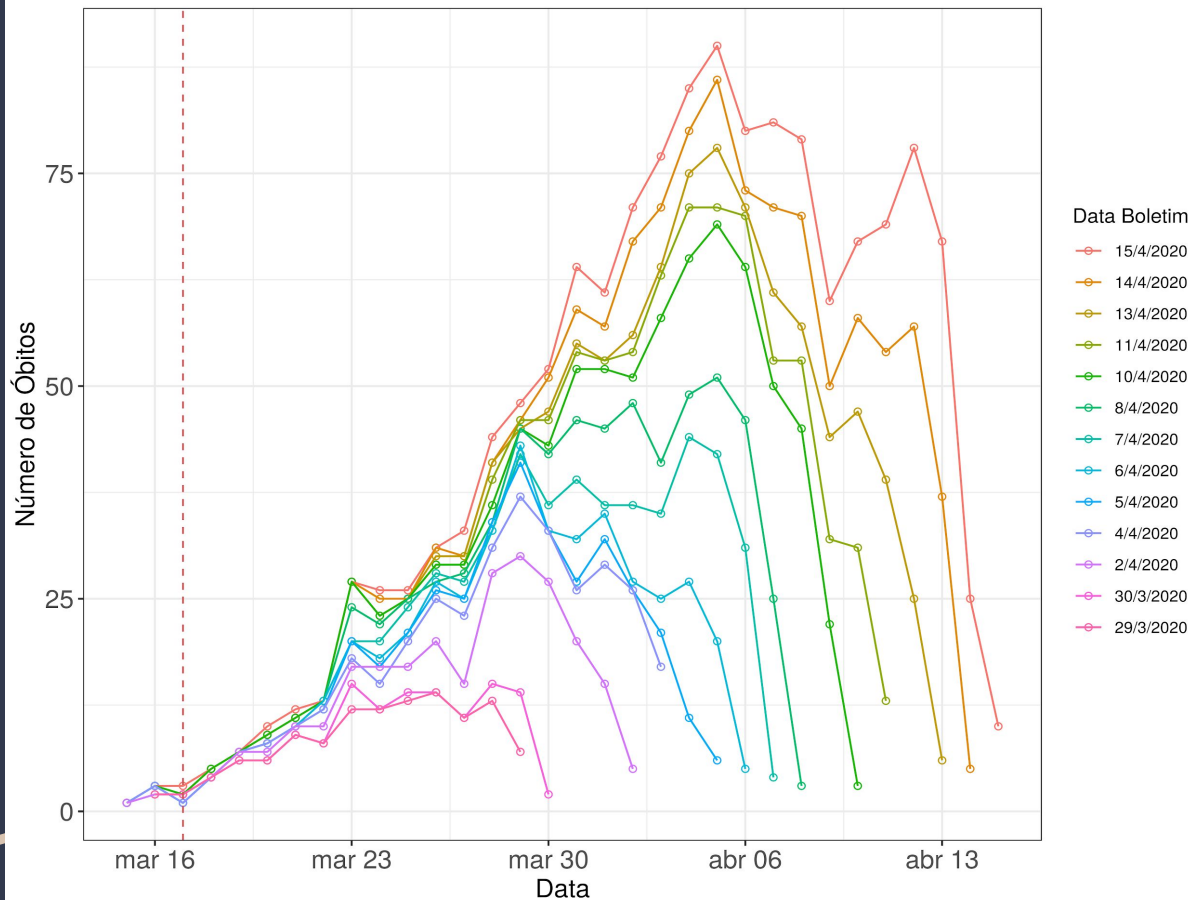
https://noticias.uol.com.br/saude/ultimas-noticias/redacao/2020/04/18/projecao-mortes-coronavirus-brasil-observatorio.htm
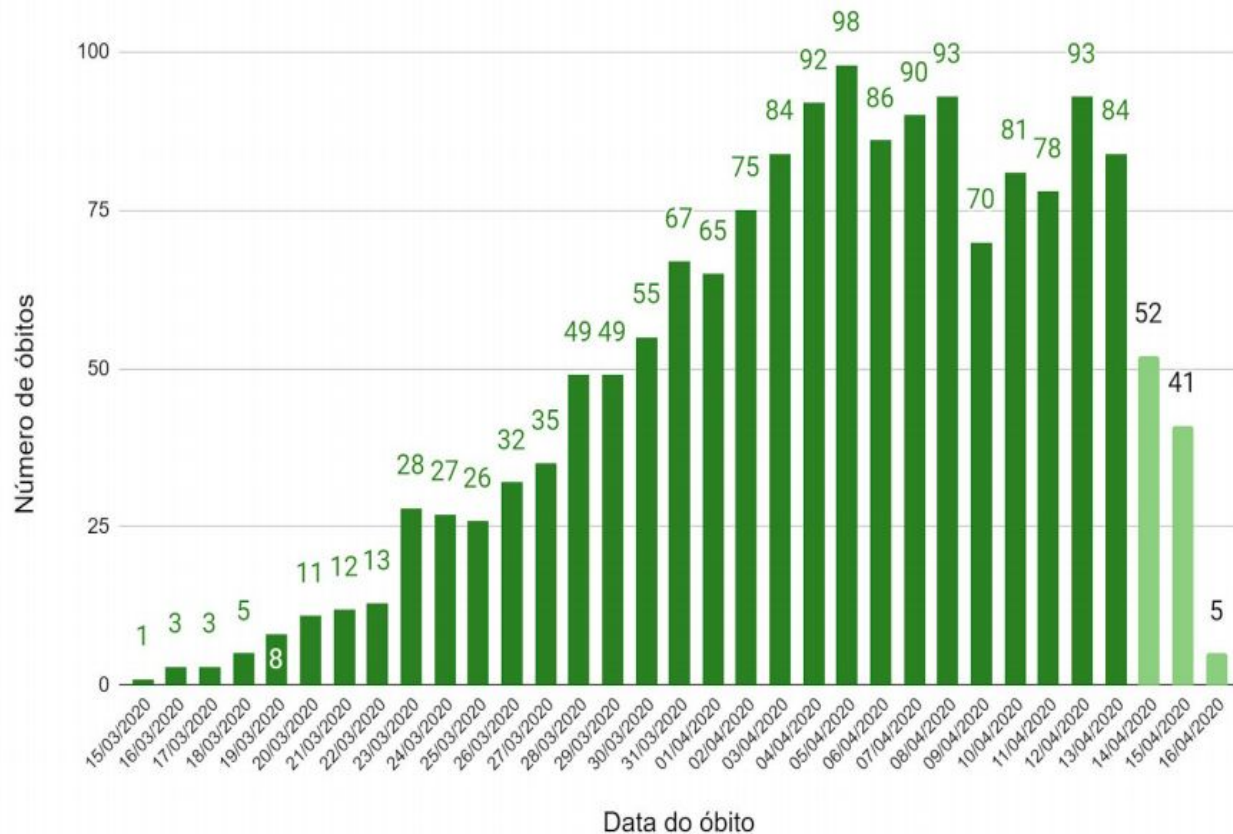
The data: time series of deaths by the date.

Official reports are issued more or less daily to the press, but some of the reports miss the death data.

Current

As expected, reports add new deaths for previous days, as the PCR tests are released.

- Still, there is a huge delay between day of the death and the day of the official announcement.
- The red line, marks the first announcement
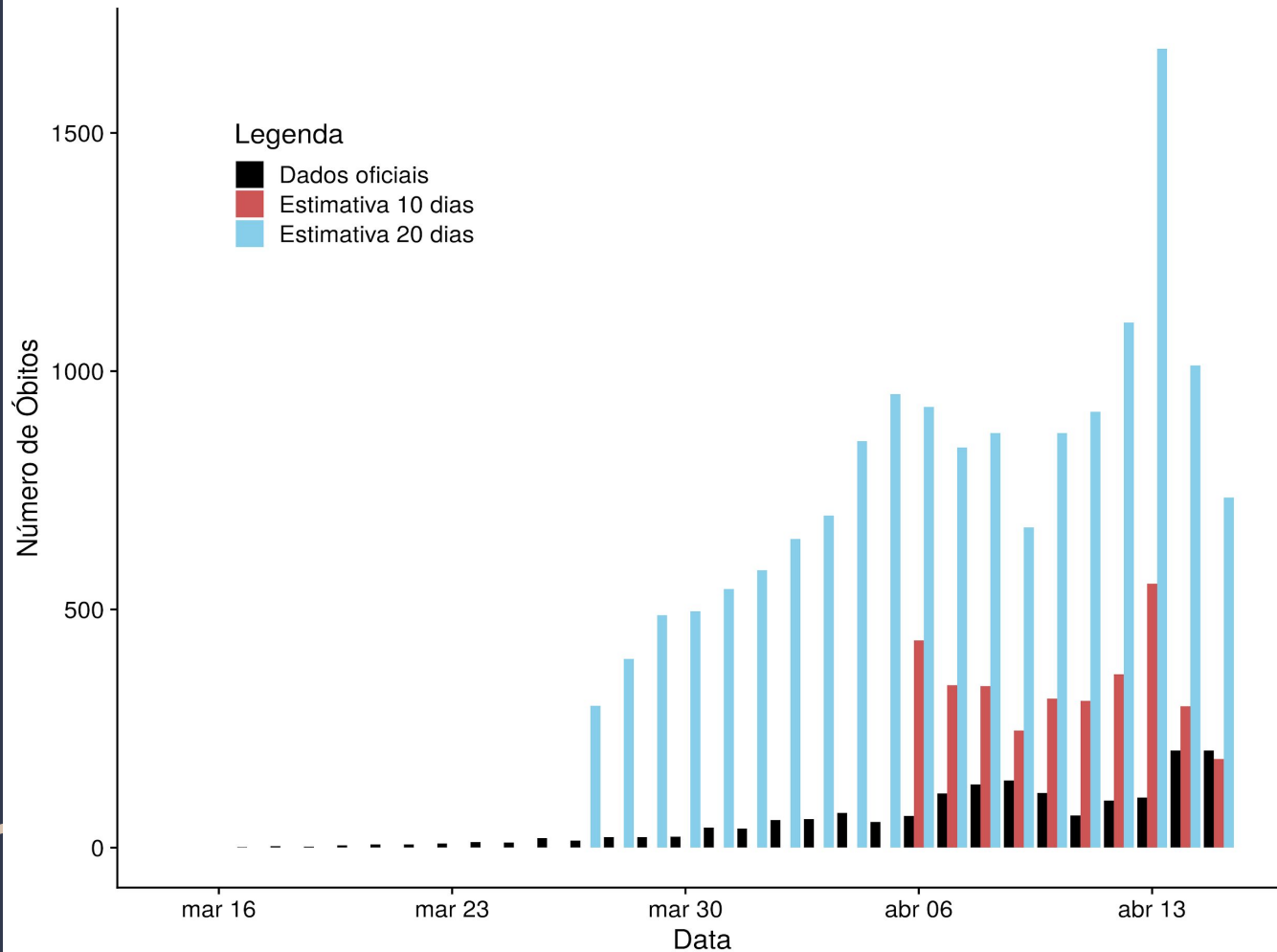
Nowcasting with 2 different windows showed huge differences.

- Blue: running window = 20. Estimates an 800% increase
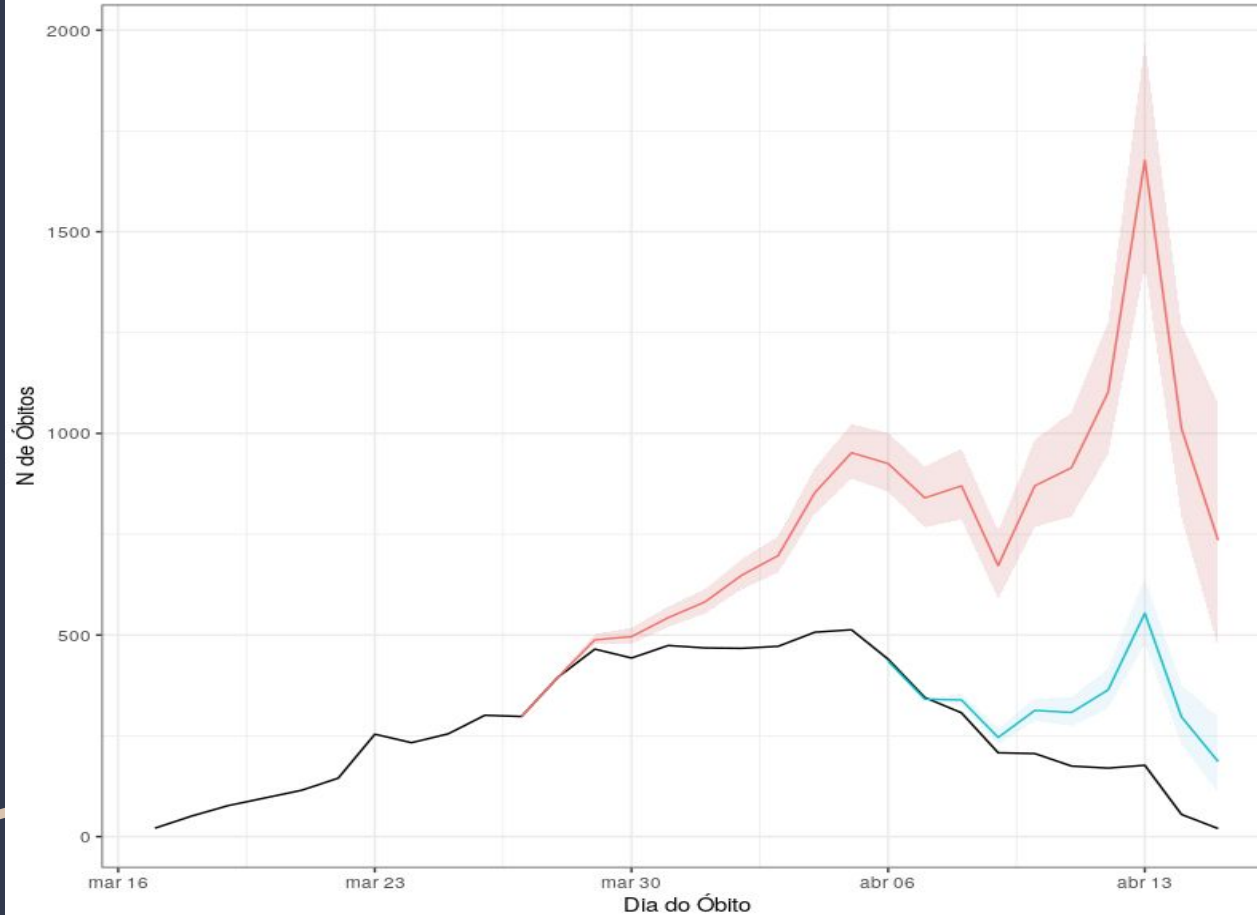- Red: running window =10. Estimates an 122% increase
- Black: reported cases
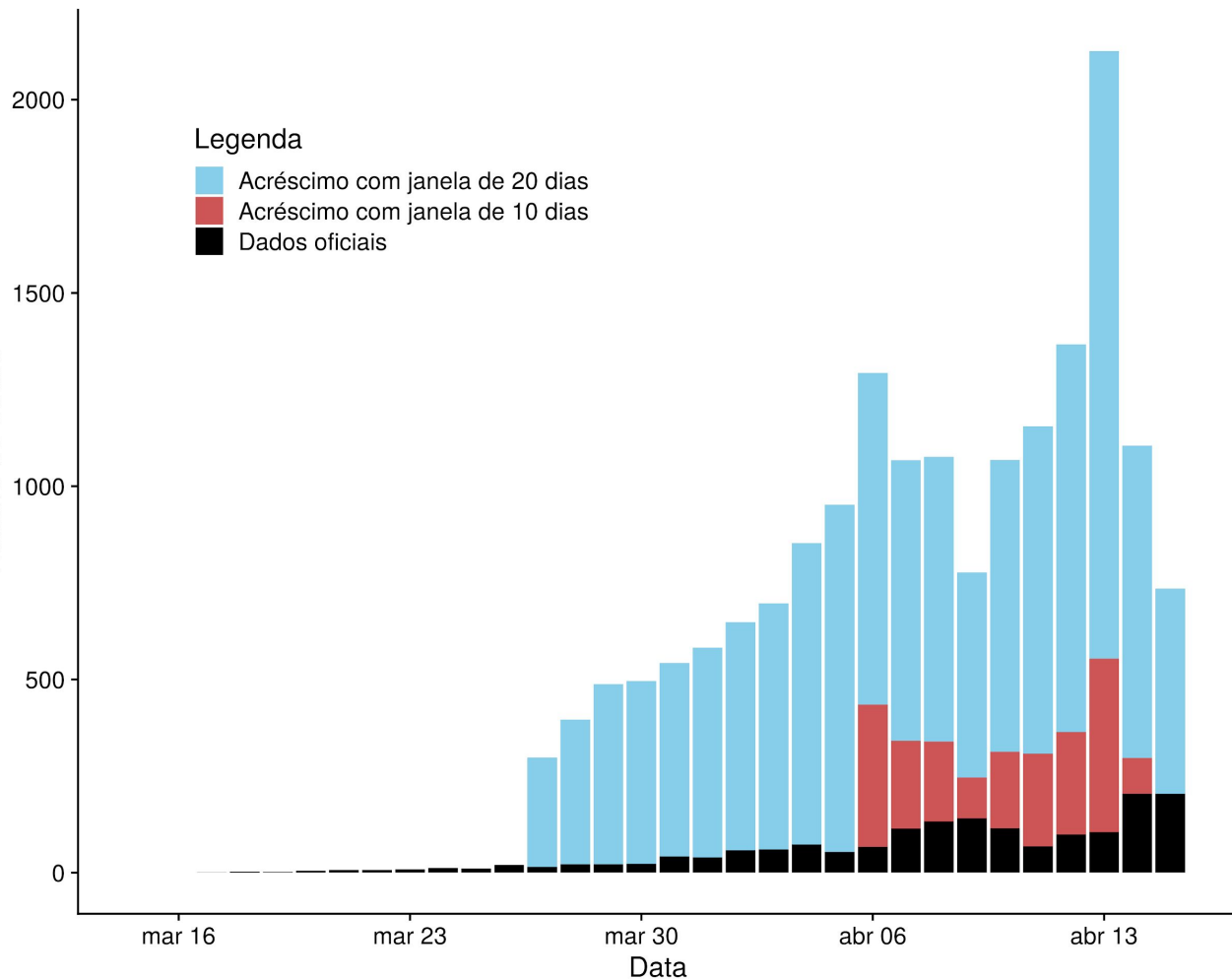
The same plot but with stacked bars for number of deaths added by each nowcasting

- Blue: 20 days of running window
- Red:10 days of running window
- Black: official data

Nowcasting de óbitos de COVID-19, Janelas de 20 e 10 dias

Nowcasting with its confidence intervals, for the 2 different windows of 20 and 10 days.

- Blue: 20 days of running window
- Red:10 days of running window
- Black: Reported data from the estimates

References:

Thanks for the attention!

- McGough, Sarah F., et al. "Nowcasting by Bayesian Smoothing: A flexible, generalizable model for real-time epidemic tracking." *PLOS Computational Biology* 16.4 (2020): e1007735.
- https://coronavirus.saude.gov.br/profissional-gestor#boletins
- https://covid19br.github.io