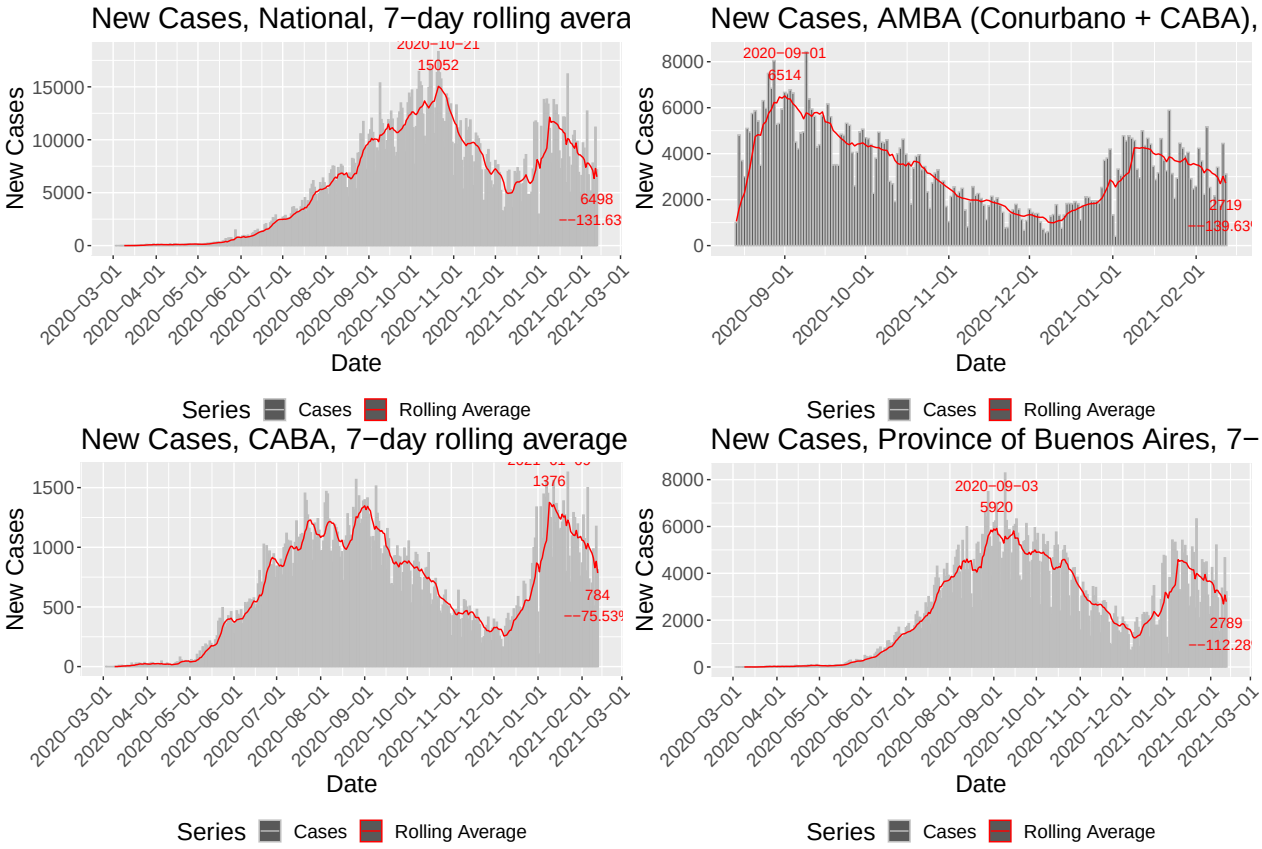
DS Flags Report

andino

01/30/2021

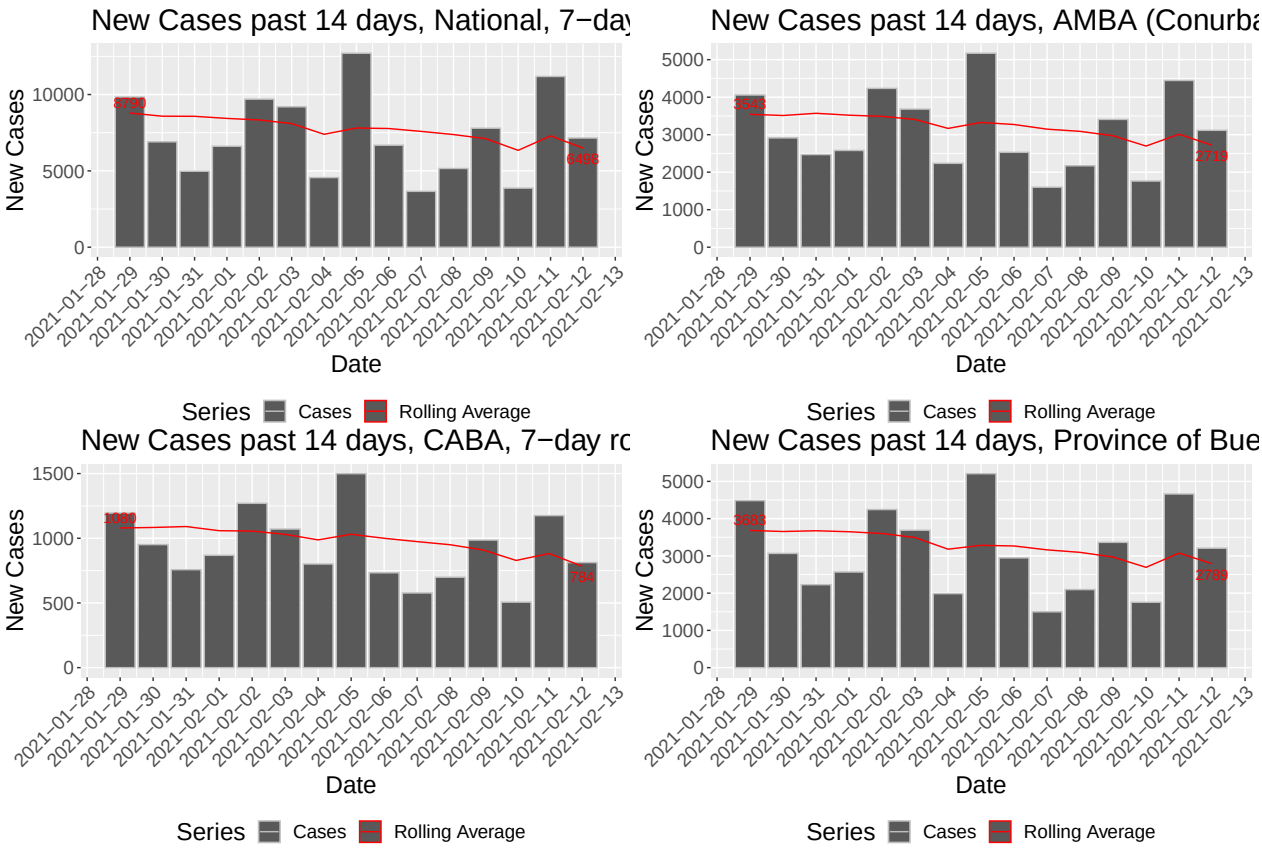
New Cases

The following graphs show the overall epidemiological curves in the localities based on simple "new cases per day" as reported. Note that date of case report DOES NOT equal date of first symptoms or diagnosis, necessarily, as there are frequently reporting delays. Rather, this data is the change in cases from the previous day's Ministry of Health report:



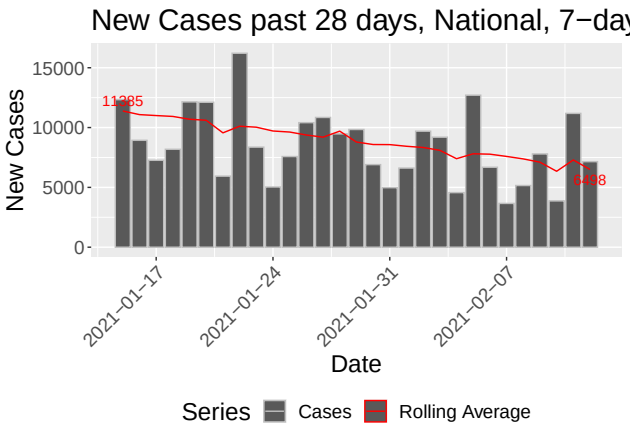
14-day trend

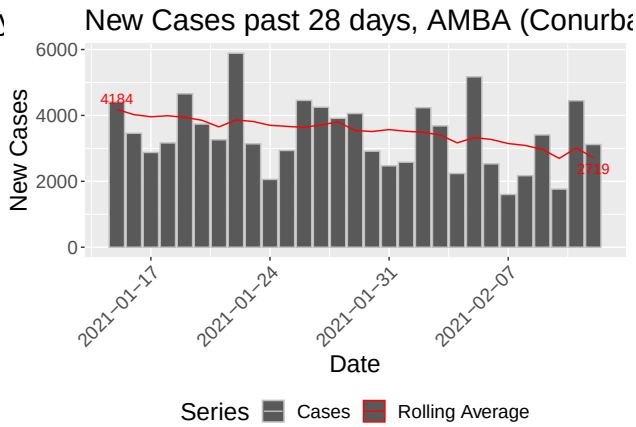
Phase 1: 14-day trend lines

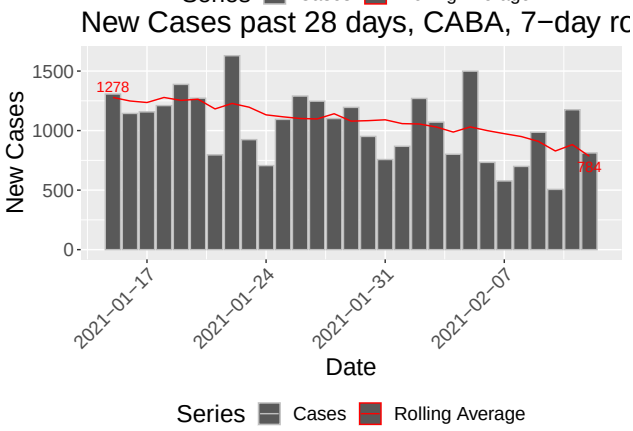


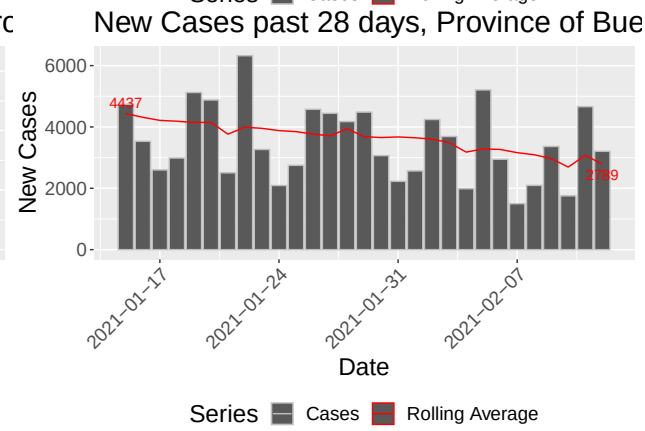
28-day trend

Phase 2: 28-day trend lines

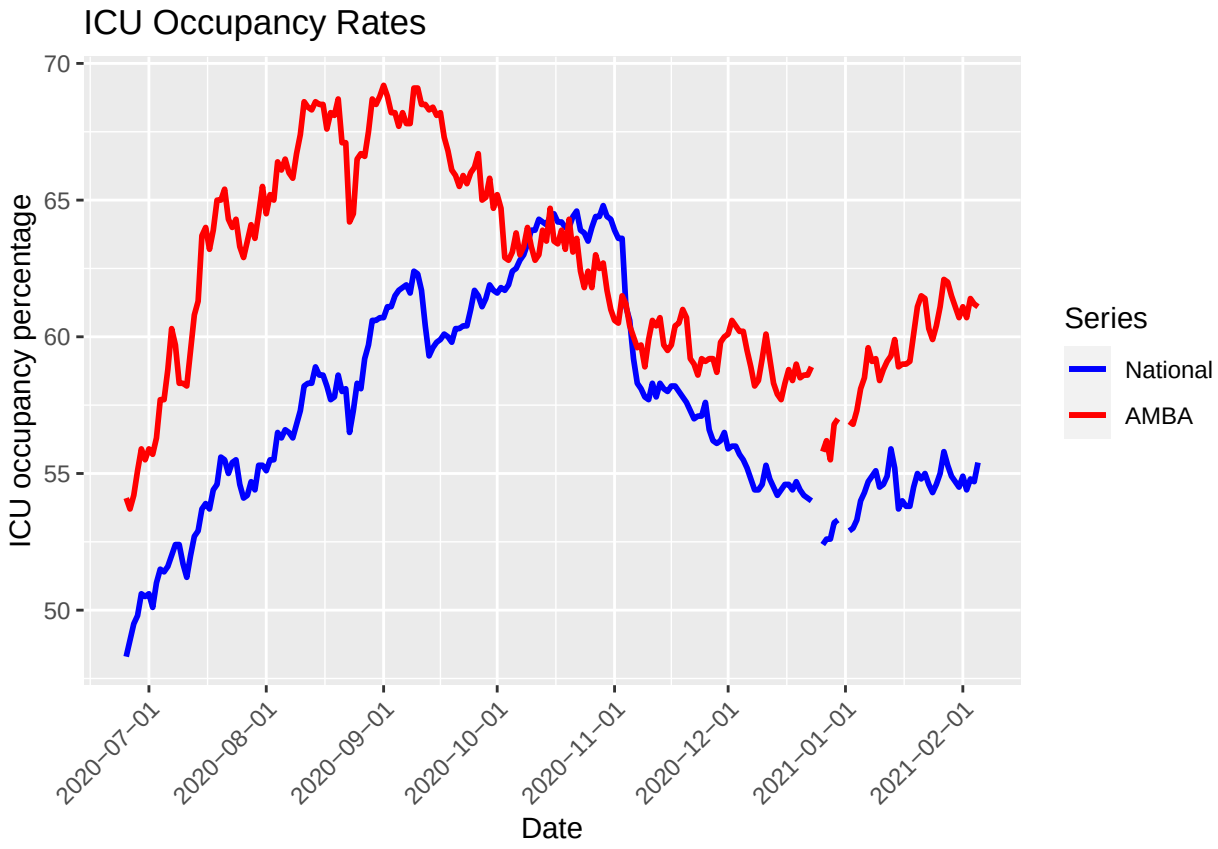






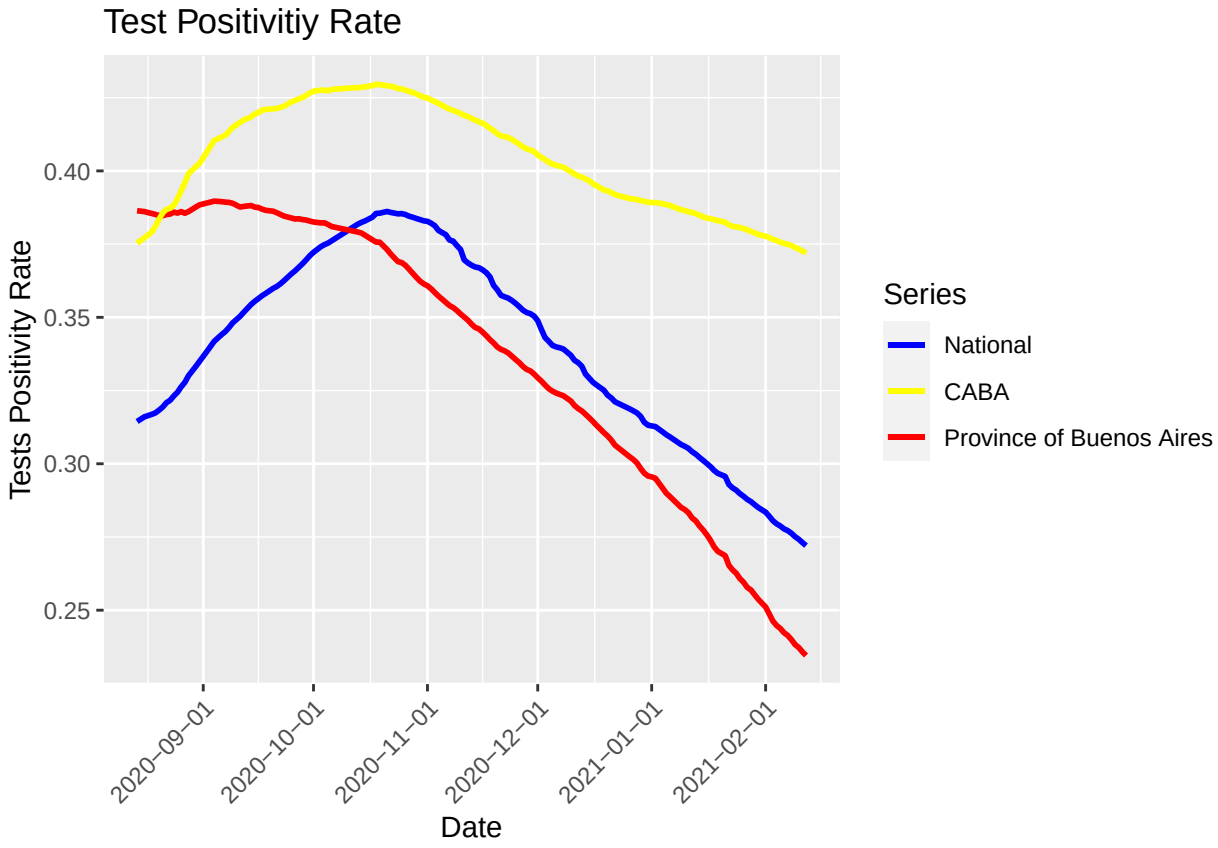


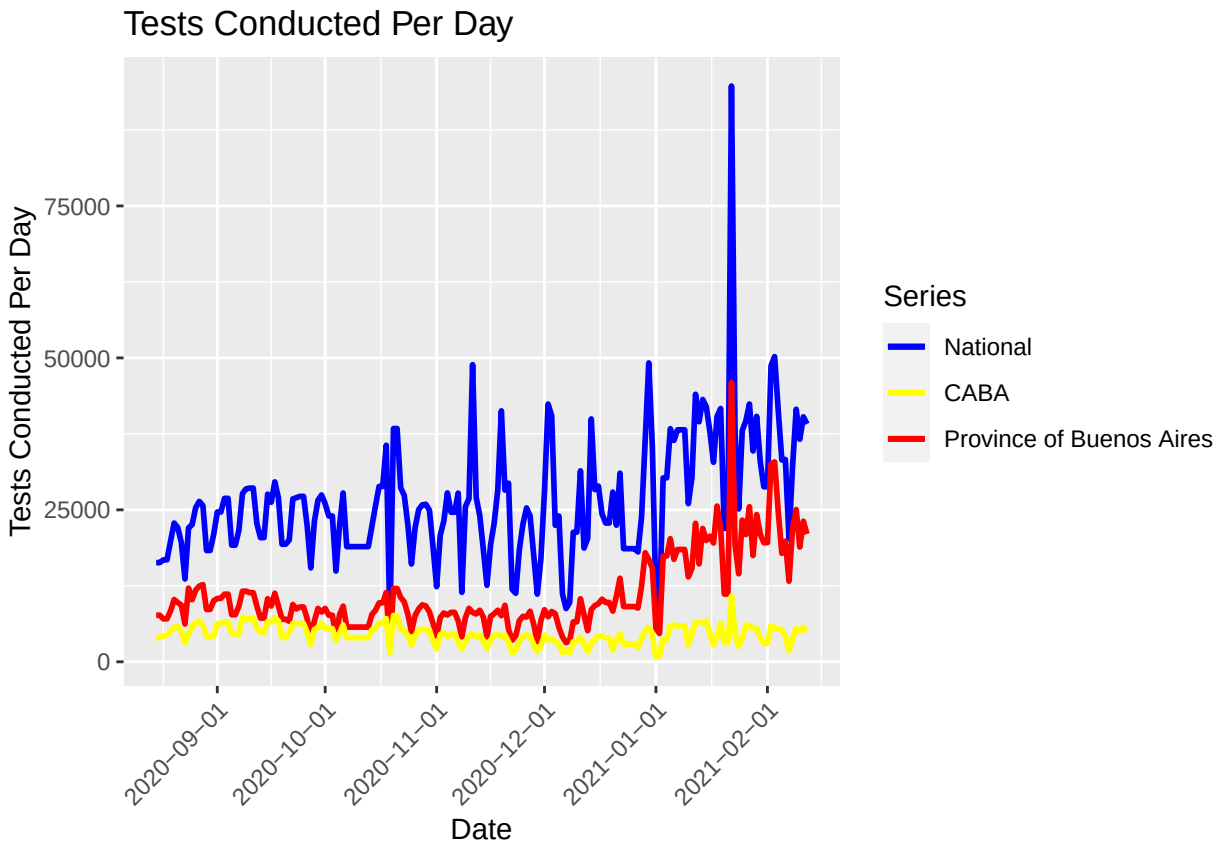
ICU Capacity



Testing status

Note: This data is drawn from the Ministry of Health's determinaciones.csv file. There are discrepancies in this data and the daily reports that MOH issues.




Tests Conducted Per Day
Tests Conducted Per Day
75000
50000
25000
0
2020−09−01
2020−10−01
2020−11−01
2020−12−01
2021−01−01
2021−02−01
Date
Series
National
CABA
Province of Buenos Aires

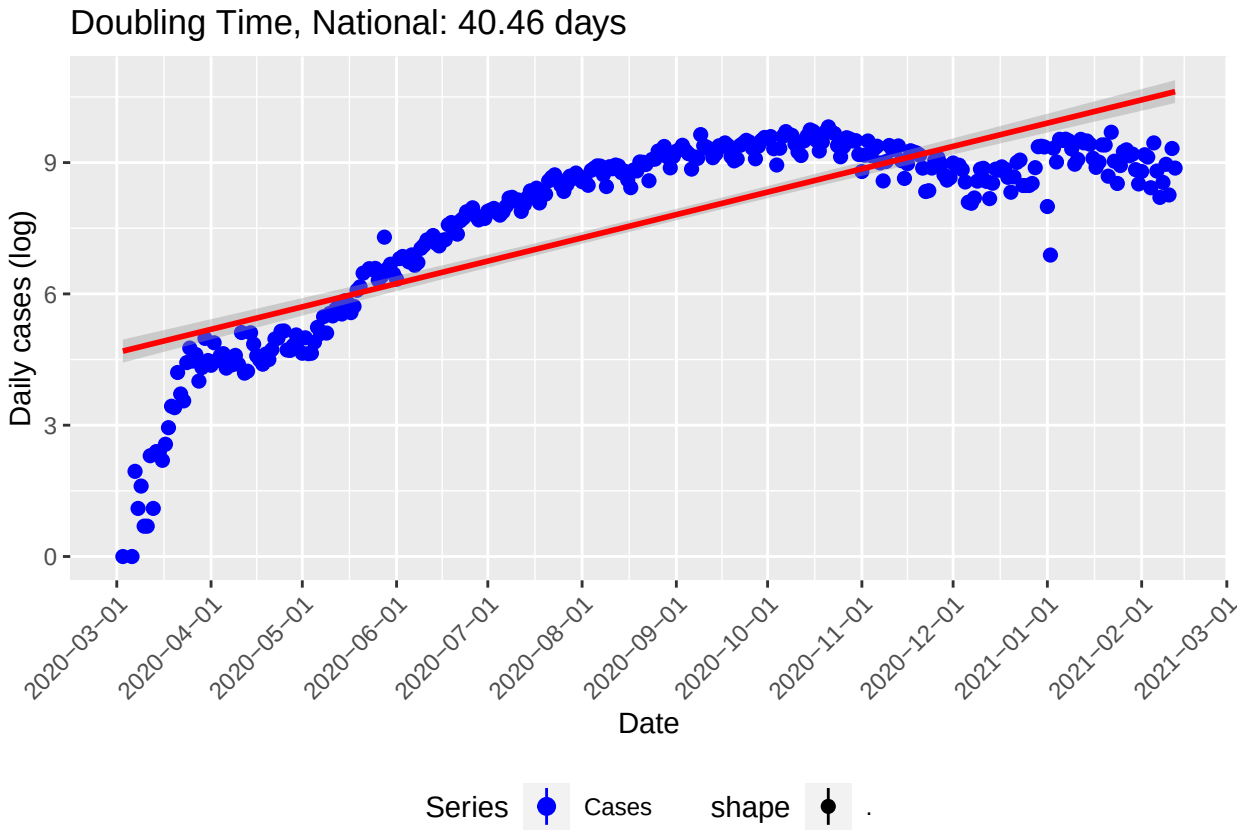
Doubling times

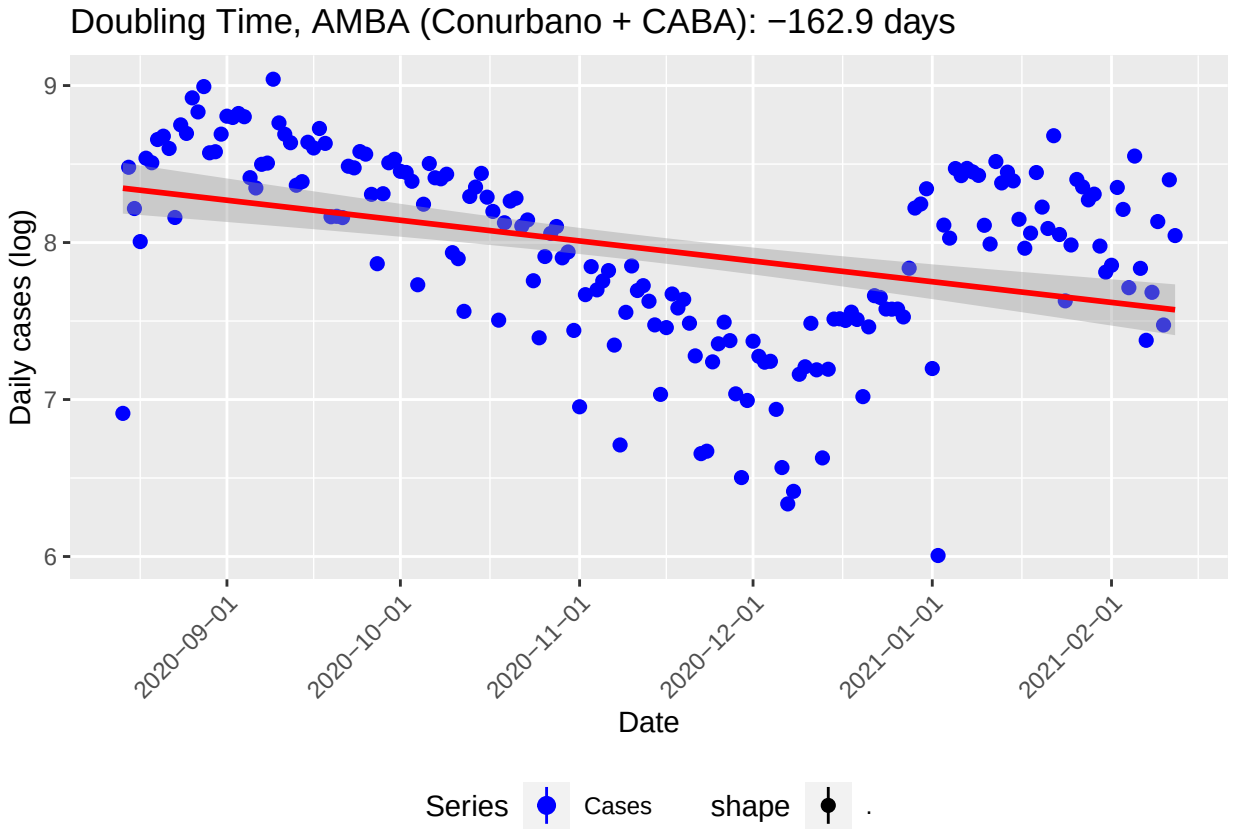
The regression line is drawn using the R "lm()" function over the x values.

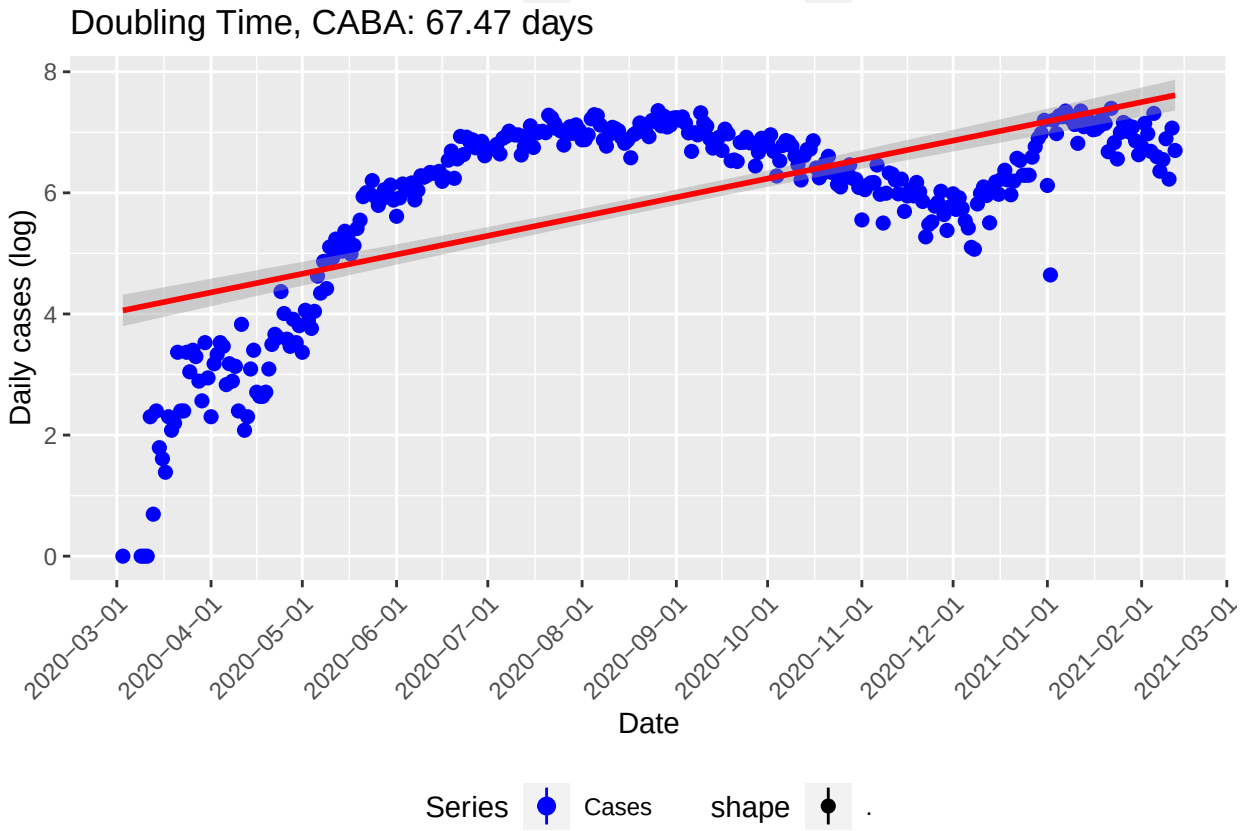
R0 is estimated from the slope of the regression line:

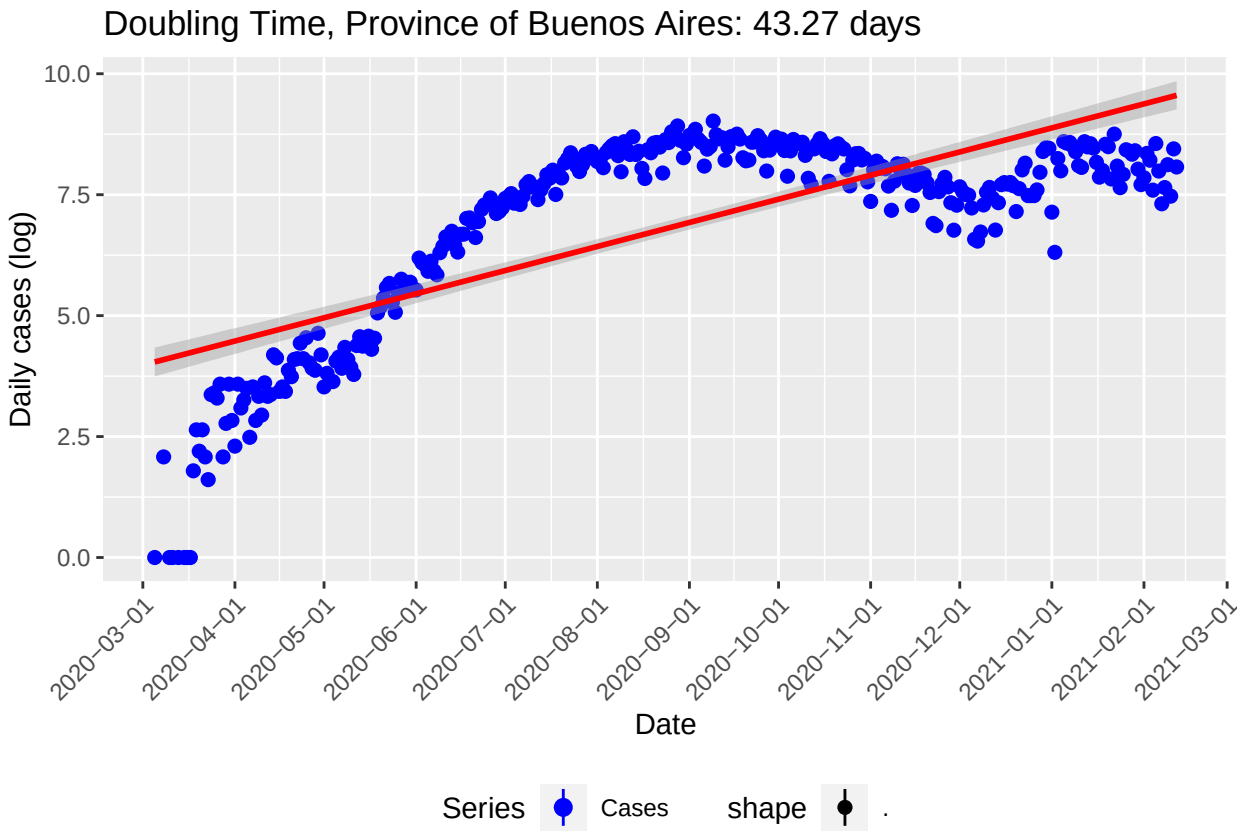
$$y = a + bx$$

$$dt = log(2)/b$$




Doubling Time, AMBA (Conurbano + CABA): −162.9 days
Daily cases (log)
9
8
7
6
2020−09−01
2020−10−01
2020−11−01
2020−12−01
2021−01−01
2021−02−01
Date
Series
Cases
shape
.


Doubling Time, CABA: 67.47 days
Daily cases (log)
8
6
4
2
0
2020−03−01
2020−04−01
2020−05−01
2020−06−01
2020−07−01
2020−08−01
2020−09−01
2020−10−01
2020−11−01
2020−12−01
2021−01−01
2021−02−01
2021−03−01
Date
Series
Cases
shape
.


Doubling Time, Province of Buenos Aires: 43.27 days
Daily cases (log)
10.0
7.5
5.0
2.5
0.0
2020−03−01
2020−04−01
2020−05−01
2020−06−01
2020−07−01
2020−08−01
2020−09−01
2020−10−01
2020−11−01
2020−12−01
2021−01−01
2021−02−01
2021−03−01
Date
Series
Cases
shape
.

Better R Estimate

This data is drawn from over 1 million epidemiological records, indexed by the date the case was registered with the Ministry of Health. Cases are often registered prior to a confirmed diagnosis; therefore, this data "lags". The dates are taken based on the date a case was "opened," rather than "confirmed" or "reported".

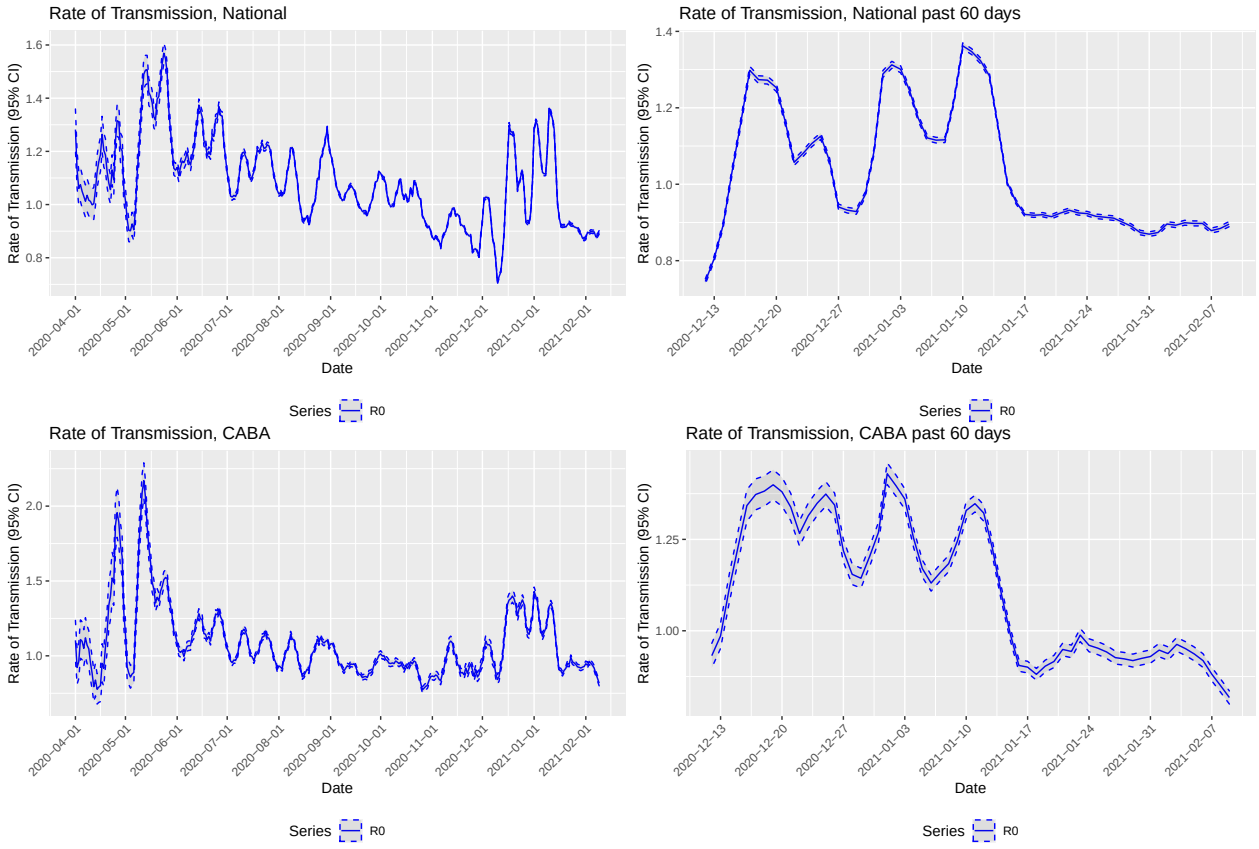
An incidence object is created using all confirmed cases in Argentina. The estimate_R() function from the EpiEstim package is used with the serial interval described below. While the estimate_R() function uses a rolling 7-day window, we also cut off the final five days of data due to reduce the confirmation lag.

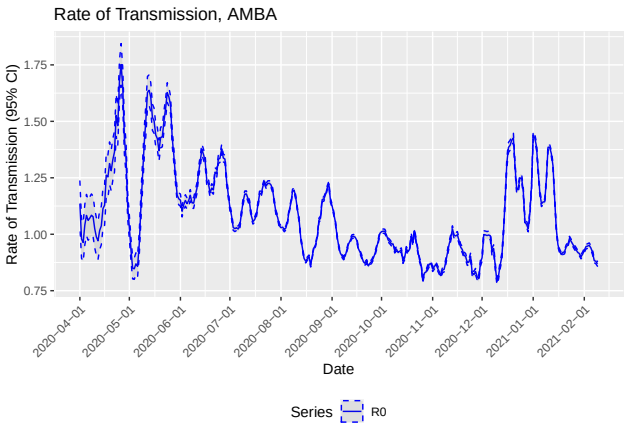
The following data on serial incidence are drawn from a meta analysis of COVID-19: https://doi.org/10.1002/jmv.26041

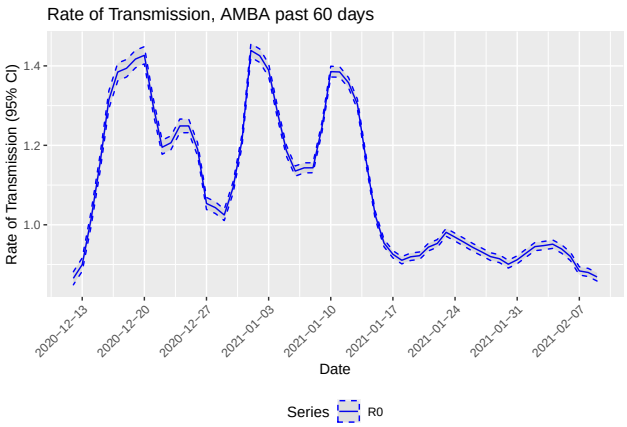
$$\mu = 5.08 \; days$$

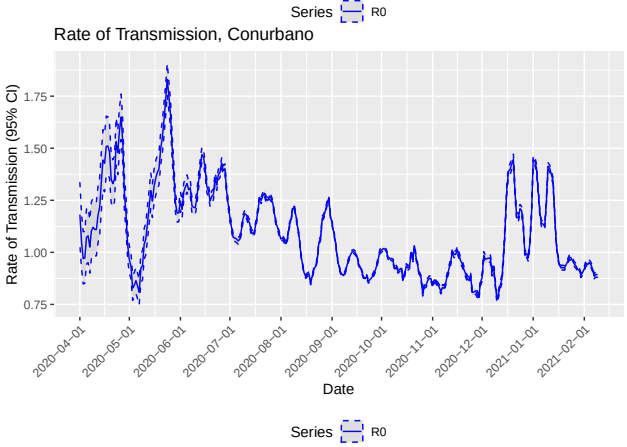
$$\sigma = .18$$

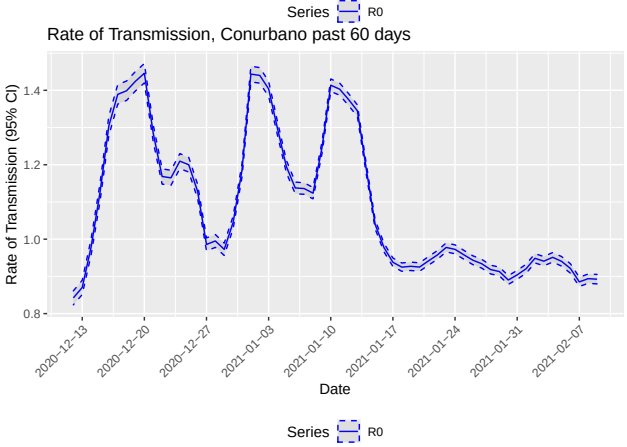
A gamma distribution is created programatically, and the estimate_R function is run against incidence objects containing the new cases reported each day.



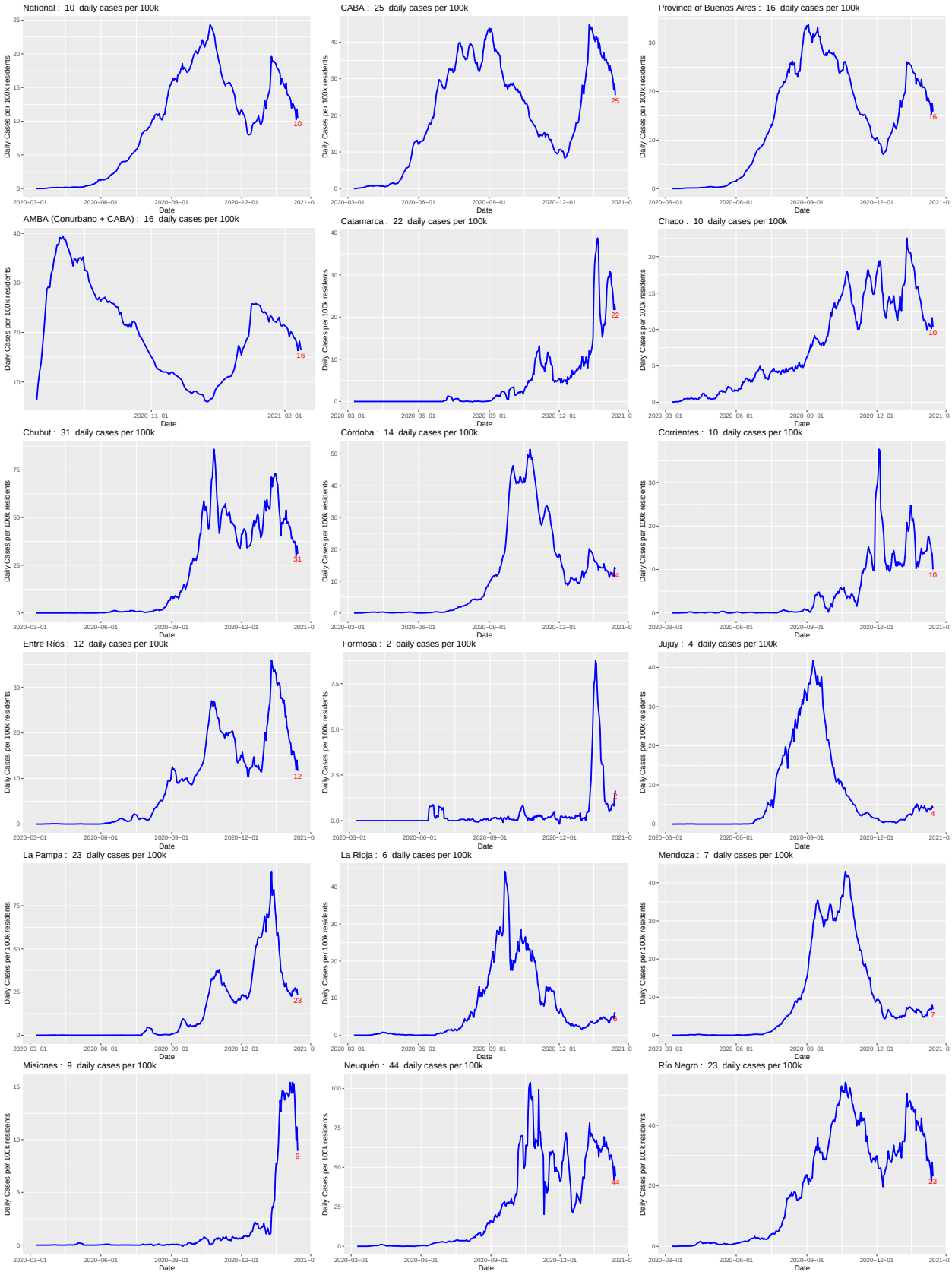

Rate of Transmission, AMBA
Rate of Transmission (95% CI)
1.75
1.50
1.25
1.00
0.75
2020-04-01
2020-05-01
2020-06-01
2020-07-01
2020-08-01
2020-09-01
2020-10-01
2020-11-01
2020-12-01
2021-01-01
2021-02-01
Date
Series
R0

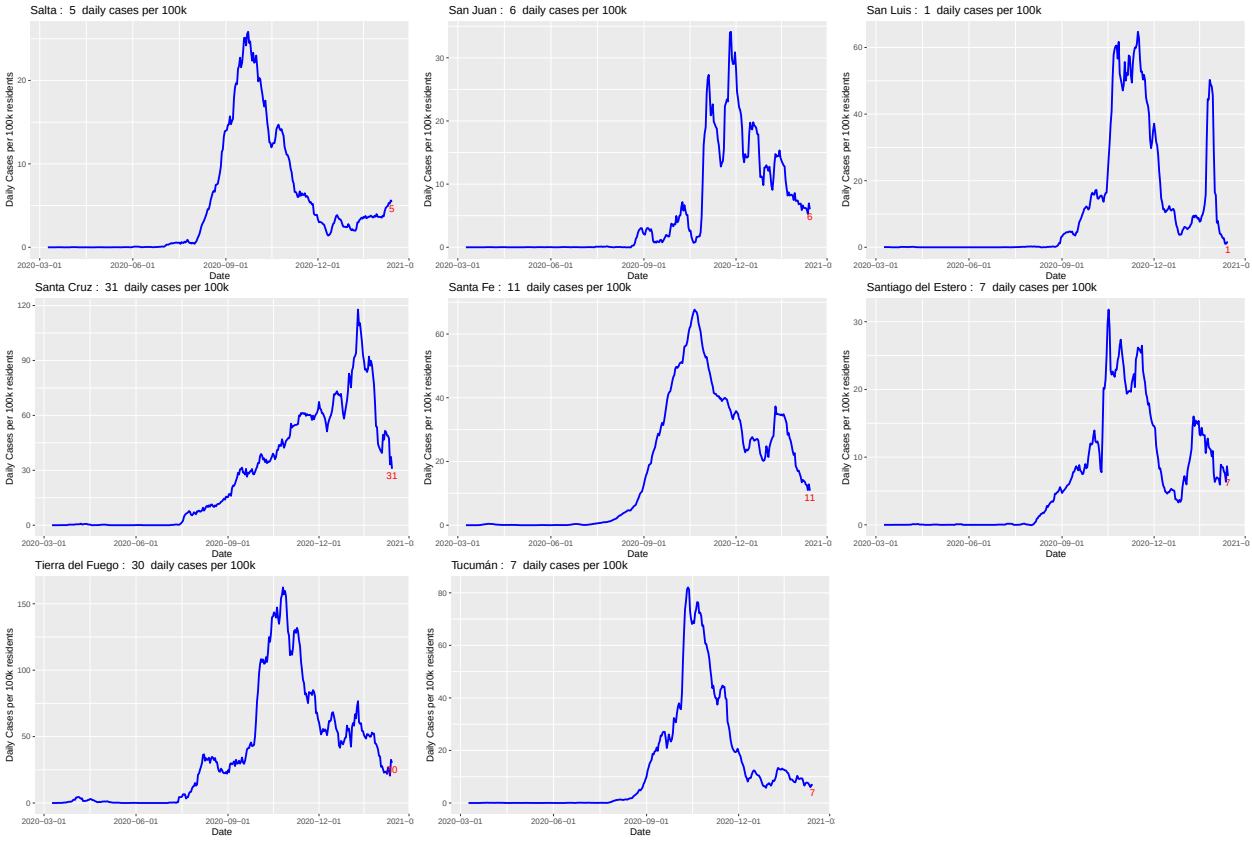

Rate of Transmission, AMBA past 60 days
Rate of Transmission (95% CI)
1.4
1.2
1.0
2020-12-13
2020-12-20
2020-12-27
2021-01-03
2021-01-10
2021-01-17
2021-01-24
2021-01-31
2021-02-07
Date
Series
R0


Rate of Transmission, Conurbano
Rate of Transmission (95% CI)
1.75
1.50
1.25
1.00
0.75
2020-04-01
2020-05-01
2020-06-01
2020-07-01
2020-08-01
2020-09-01
2020-10-01
2020-11-01
2020-12-01
2021-01-01
2021-02-01
Date
Series
R0


Rate of Transmission, Conurbano past 60 days
Rate of Transmission (95% CI)
1.4
1.2
1.0
0.8
2020-12-13
2020-12-20
2020-12-27
2021-01-03
2021-01-10
2021-01-17
2021-01-24
2021-01-31
2021-02-07
Date
Series
R0

New Cases (per 100k)




Salta : 5 daily cases per 100k
San Juan : 6 daily cases per 100k
San Luis : 1 daily cases per 100k
Santa Cruz : 31 daily cases per 100k
Santa Fe : 11 daily cases per 100k
Santiago del Estero : 7 daily cases per 100k
Tierra del Fuego : 30 daily cases per 100k
Tucumán : 7 daily cases per 100k
Daily Cases per 100k residents
Date

Deaths

Note: On October 1, the government reported nearly 3,000 deaths that had actually occurred between May and September. The graphs below smooth the one-day anomaly by assigning those deaths proportionally over the 6 weeks running August 15-September 30.