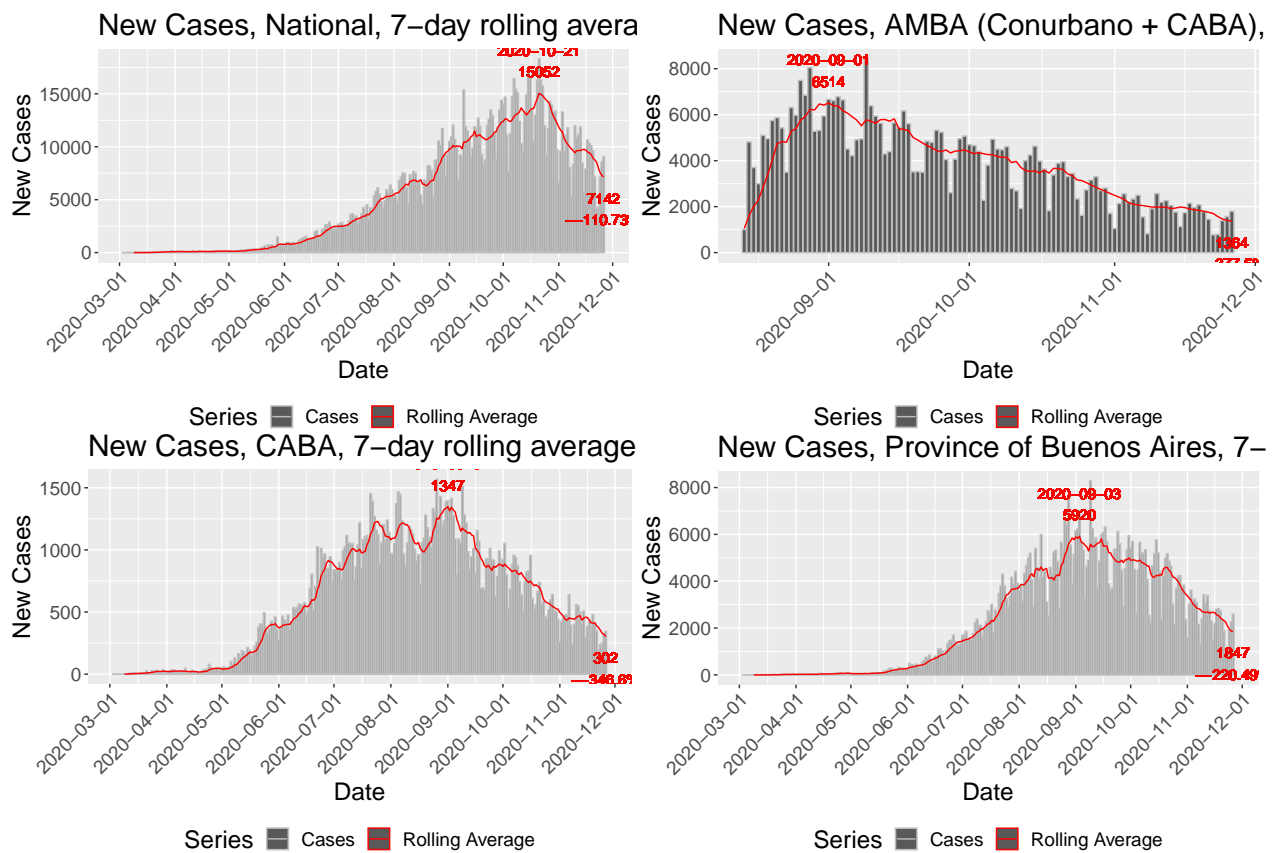# DS Flags Report

andino

11/15/2020
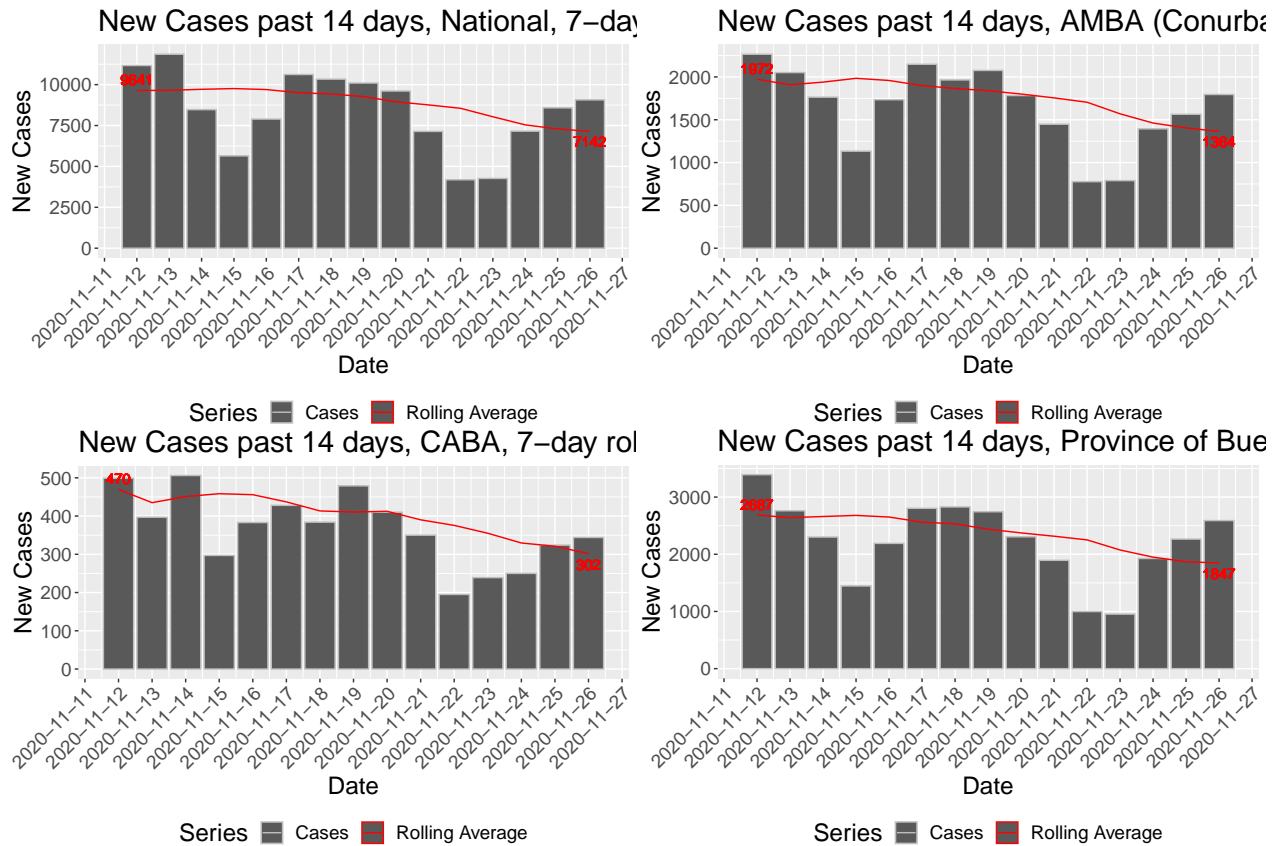
New Cases

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:
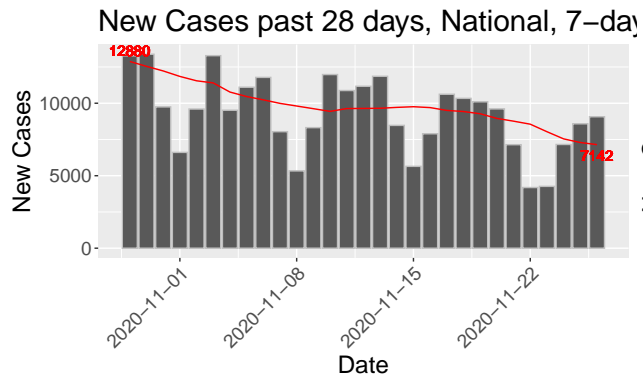
14-day trend

Phase 1: 14-day trend lines

New Cases past 14 days, National, 7–day...

Series ▬ Cases ▬ Rolling Average

New Cases past 14 days, AMBA (Conurba...

Series ▬ Cases ▬ Rolling Average

New Cases past 14 days, CABA, 7–day rol...

Series ▬ Cases ▬ Rolling Average

New Cases past 14 days, Province of Bue...

Series ▬ Cases ▬ Rolling Average

28-day trend

Phase 2: 28-day trend lines

New Cases past 28 days, National, 7-day

New Cases past 28 days, AMBA (Conurba

New Cases past 28 days, CABA, 7-day rol

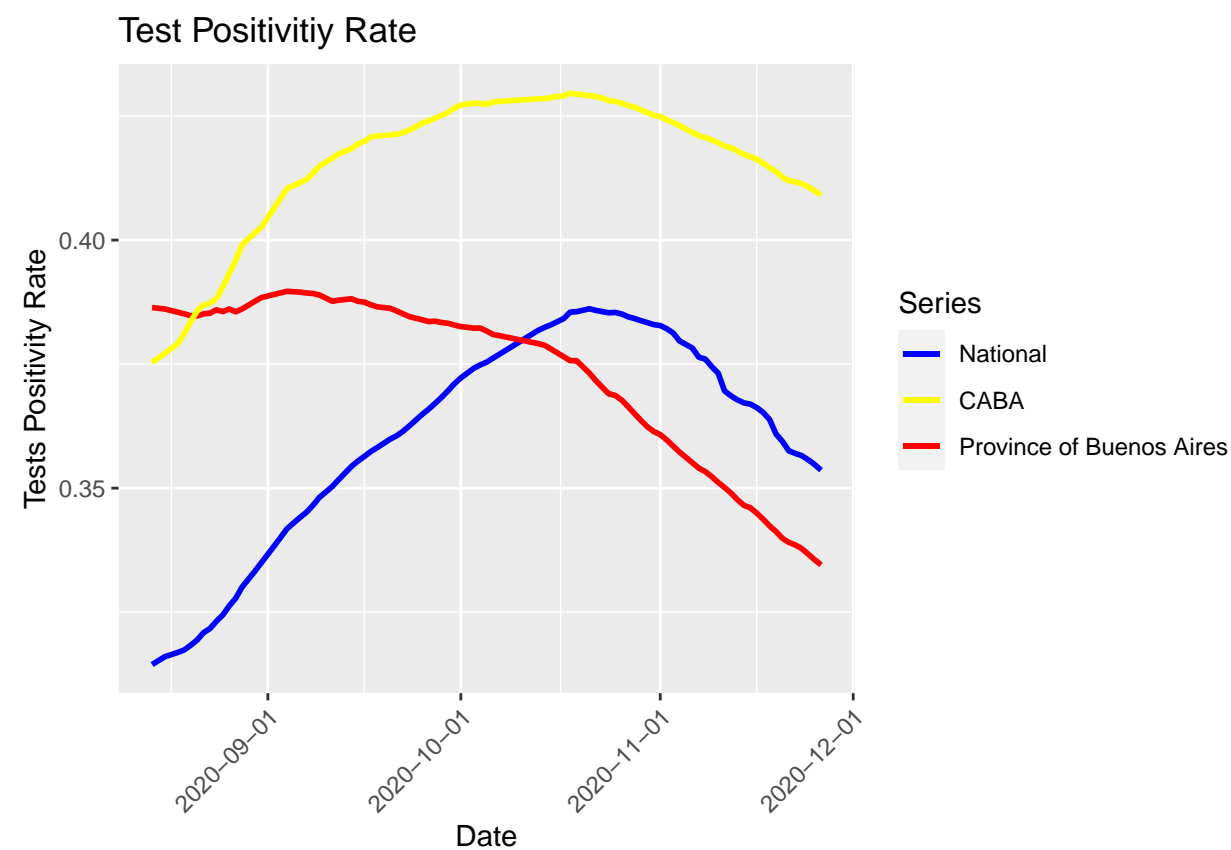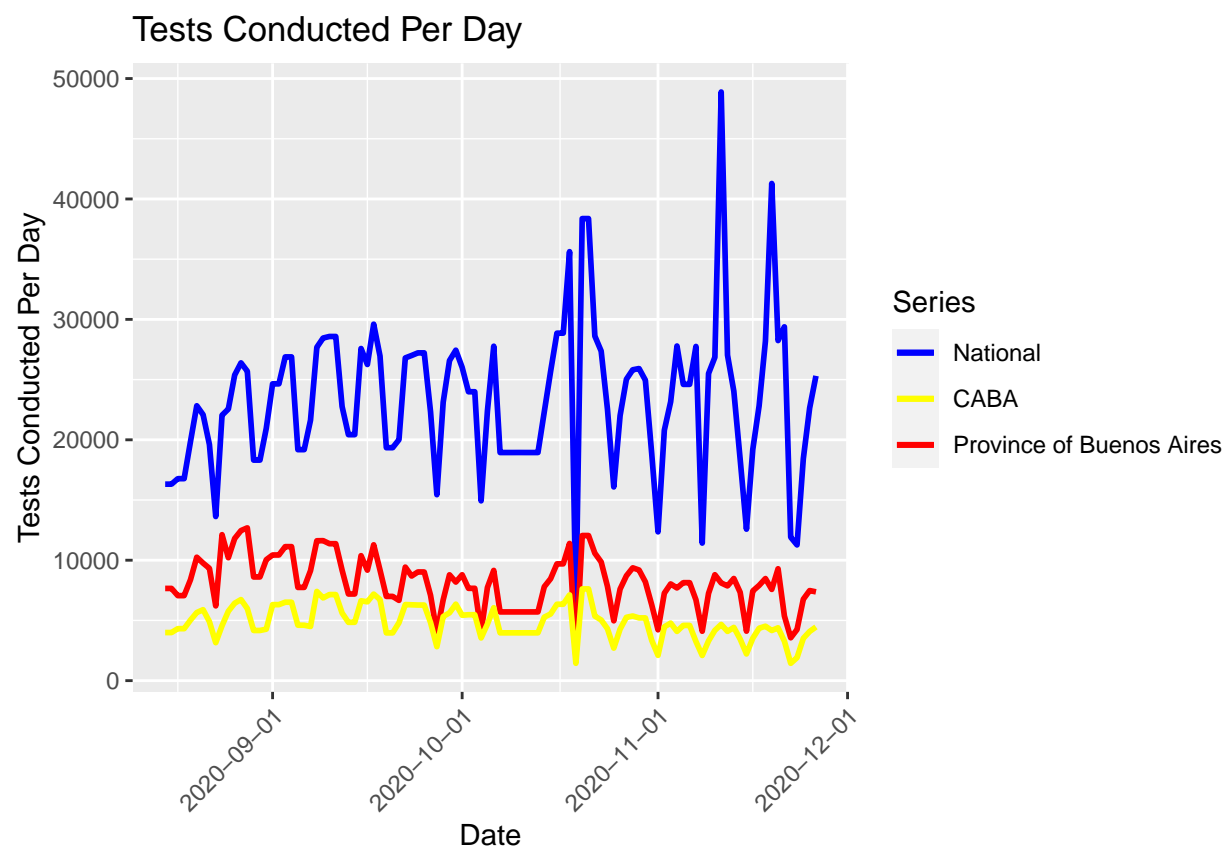New Cases past 28 days, Province of Bue

ICU Capacity

ICU Occupancy Rates
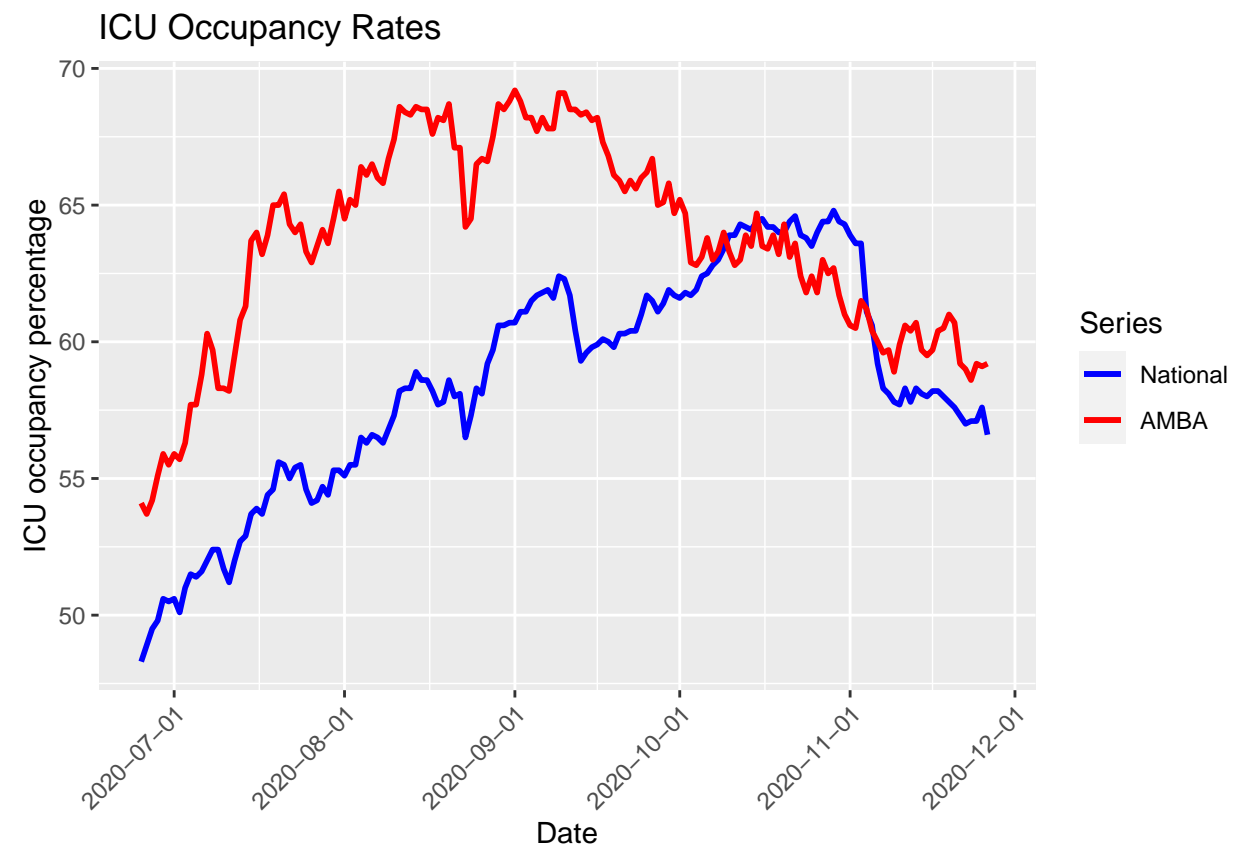
Testing status

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.

Test Positivitiy Rate

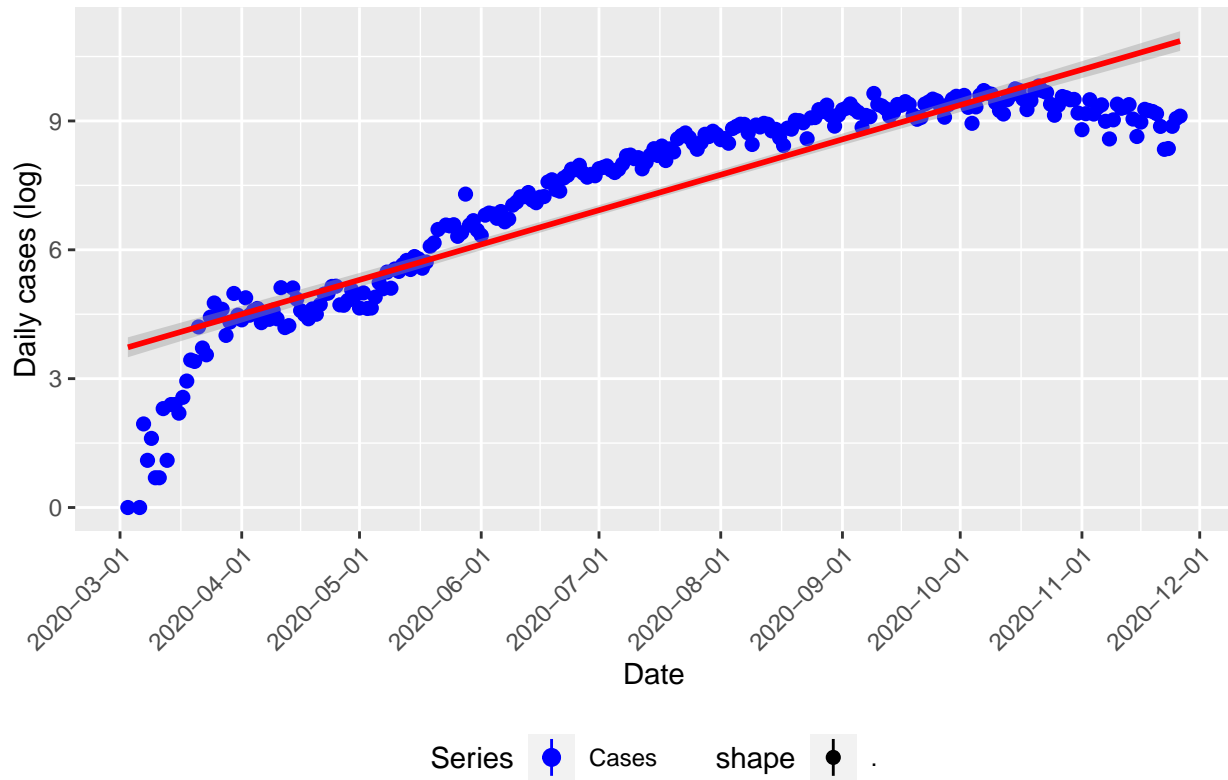Tests Conducted Per Day

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:
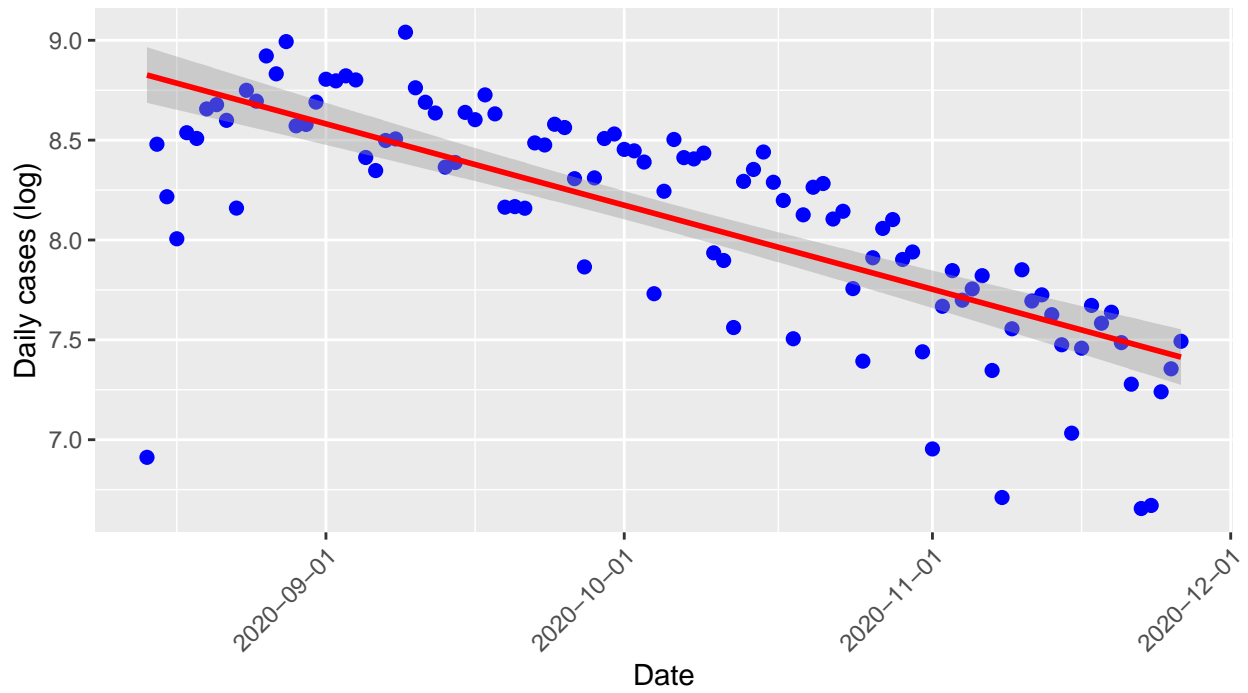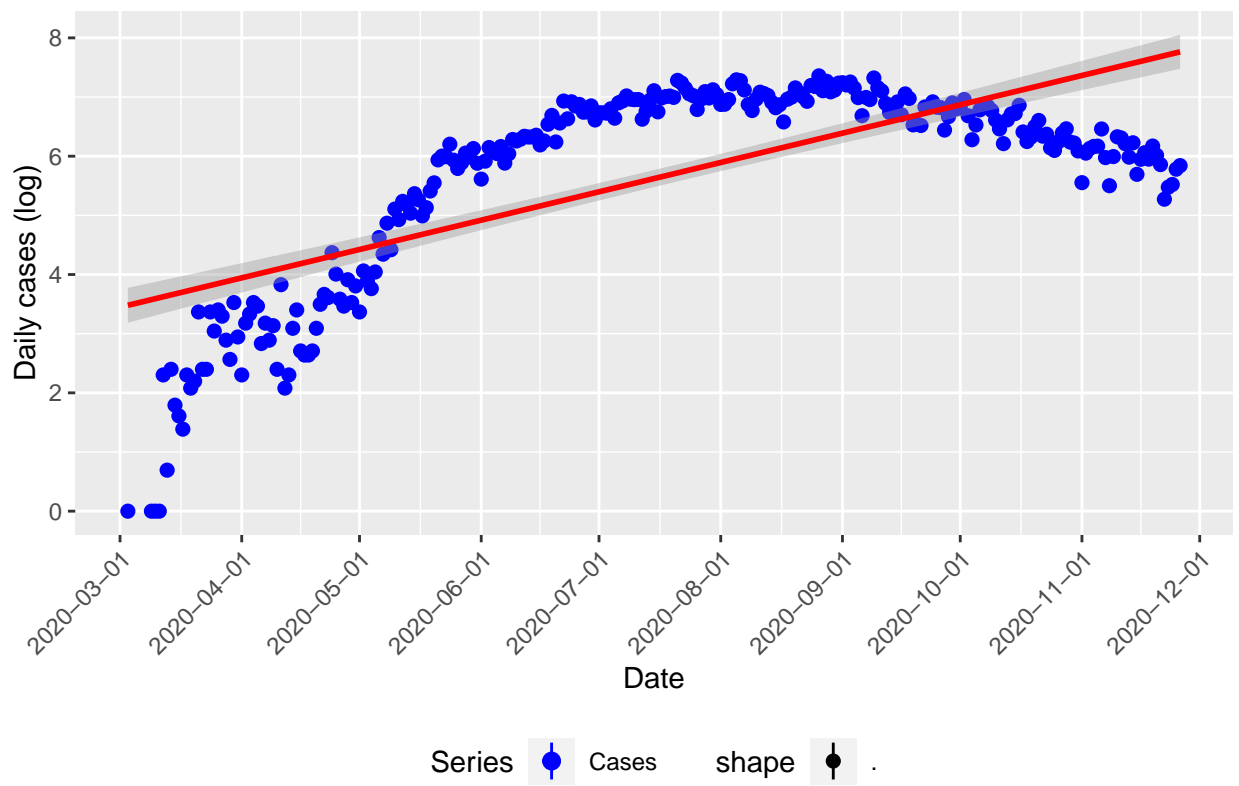
$$y = a + bx$$

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

Doubling Time, National: 26.05 days

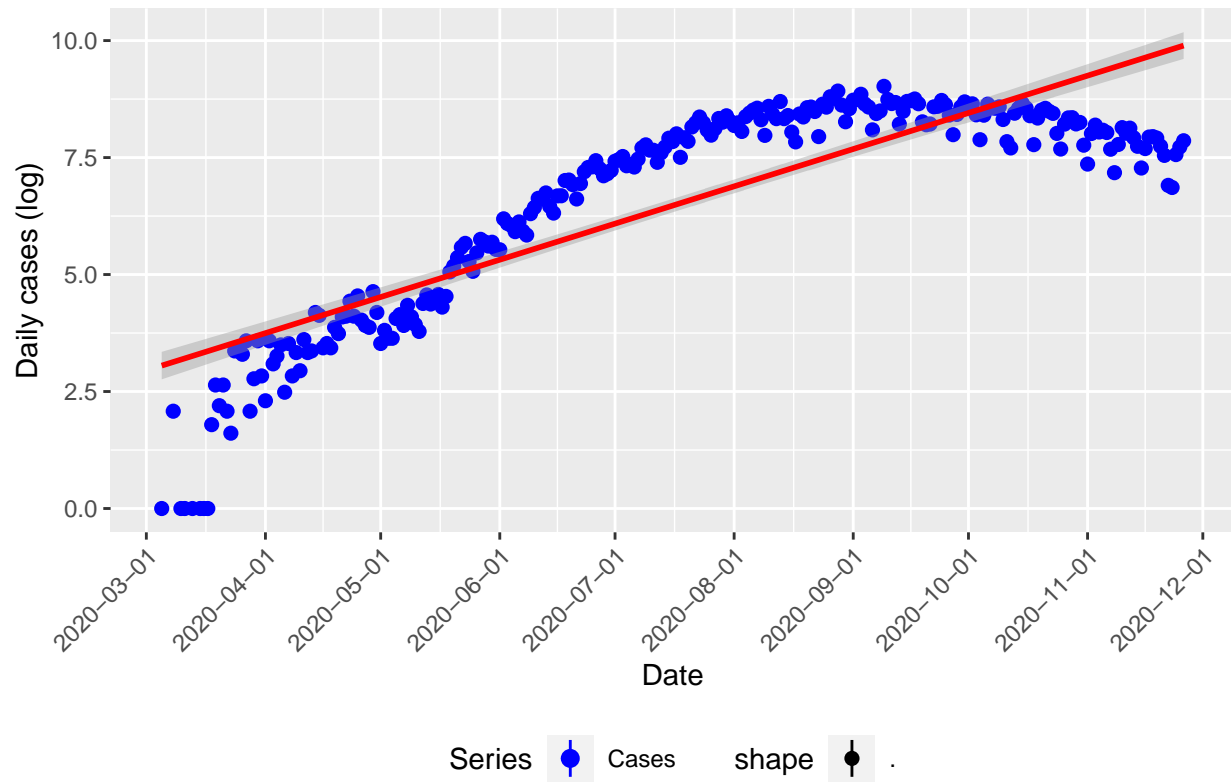## Doubling Time, AMBA (Conurbano + CABA): −51.04 days

Doubling Time, CABA: 43.36 days

Doubling Time, Province of Buenos Aires: 26.96 days

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, AMBA past 60 days

Rate of Transmission, Conurbano

Rate of Transmission, Conurbano past 60 days

New Cases (per 100k)

National : 12 daily cases per 100k

CABA : 10 daily cases per 100k

Province of Buenos Aires : 11 daily cases per 100k

AMBA (Conurbano + CABA) : 8 daily cases per 100k

Catamarca : 5 daily cases per 100k

Chaco : 15 daily cases per 100k

Chubut : 37 daily cases per 100k

Córdoba : 19 daily cases per 100k

Corrientes : 10 daily cases per 100k

Entre Ríos : 13 daily cases per 100k

Formosa : 0 daily cases per 100k

Jujuy : 2 daily cases per 100k

La Pampa : 20 daily cases per 100k

La Rioja : 9 daily cases per 100k

Mendoza : 11 daily cases per 100k

Misiones : 1 daily cases per 100k

Neuquén : 50 daily cases per 100k

Río Negro : 29 daily cases per 100k

Salta : 5 daily cases per 100k

San Juan : 34 daily cases per 100k

San Luis : 40 daily cases per 100k

Santa Cruz : 58 daily cases per 100k

Santa Fe : 36 daily cases per 100k

Santiago del Estero : 18 daily cases per 100k

Tierra del Fuego : 84 daily cases per 100k

Tucumán : 20 daily cases per 100k