# COVID-19 Scenarios

Printable report

Generated from covid19-scenarios.org on May 09 2020, 06:33 PM

## Important information

COVID-19 Scenarios is a tool that allows to explore the dynamics of a COVID-19 outbreak in a given community and to assess the associated burden on the healthcare system. COVID-19 Scenarios, as every other model, it has parameters whose values are not known with certainty, which might differ between places and change with time. The values of some of these of these parameters have a major effect on the results.

The results are particularly sensitive to parameters that determine how rapidly the disease spreads or how effective counter-measures are: some values will result in a small limited outbreak, others in a massive outbreak with many fatalities. Furthermore, when extrapolating the outbreak into the future, the results will critically depend on assumptions of **future** policy and the degree to which infection control measures are adhered to. It is therefore important to interpret the model output with care and to assess the plausibility of the parameter values and model assumptions.

COVID-19 Scenarios uses an age-structured generalized SEIR model. For details, please consult the documentation on covid19-scenarios.org/about. Default parameter choices are informed by the available evidence at the time, but might need adjustment for a particular community or as more information on the outbreak is available.

**This tool is not a medical predictor, and should be used for informational and research purposes only. Please carefully consider the parameters you choose. Interpret and use the simulated results responsibly. Authors are not liable for any direct or indirect consequences of this usage.**

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# Scenario: Panama (edited)

# Parameters

## Population

| Parameter | Value |
|---|---|
| ageDistributionName | Panama |
| caseCountsName | Panama |
| Number of hospital beds | 6450 |
| icuBeds | 396 |
| Cases imported into community per day | 0 |
| Number of cases at the start of the simulation | 218 |
| Population size | 4176873 |

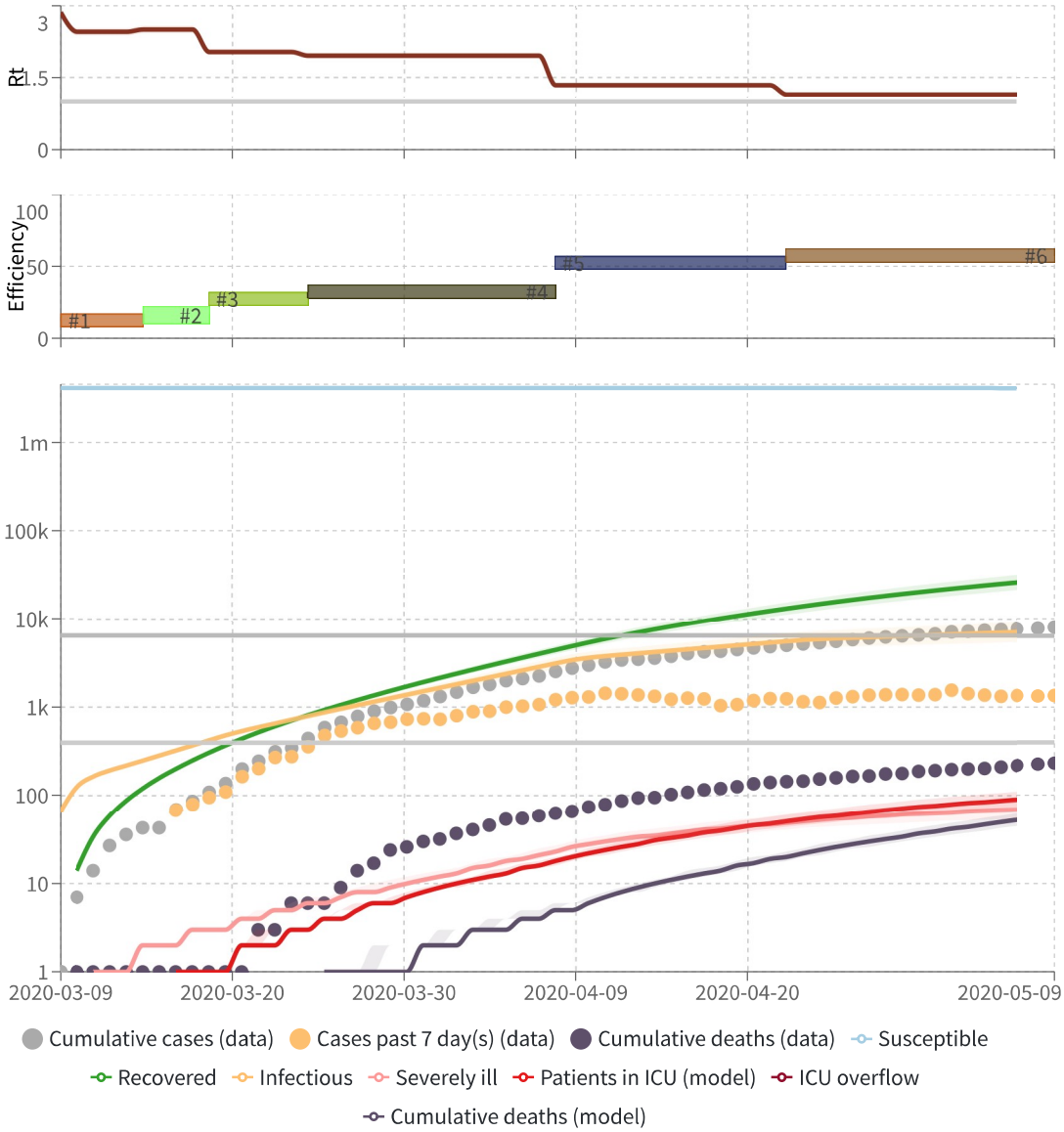
## Epidemiology

| Parameter | Value |
|---|---|
| hospitalStayDays | 3 |
| icuStayDays | 14 |
| infectiousPeriodDays | 7 |
| latencyDays | 2 |
| Increase in death rate when ICUs are overcrowded | 2 |
| Seasonal peak in transmissibility | January |
| R0 at the beginning of the outbreak | 2.7 - 3 |
| Seasonal variation in transmissibility | 0 |

## Mitigation

| Intervention name | From | To | Reduction of transmission |
|---|---|---|---|
| #1 | Mar 09 2020 | Mar 14 2020 | 10% - 15% |
| #2 | Mar 14 2020 | Mar 18 2020 | 12% - 20% |
| #3 | Mar 18 2020 | Mar 24 2020 | 25% - 30% |
| #4 | Mar 24 2020 | Apr 08 2020 | 30% - 35% |
| #5 | Apr 08 2020 | Apr 22 2020 | 50% - 55% |
| #6 | Apr 22 2020 | Jul 31 2020 | 55% - 60% |

# Results




# Results summary

| date | hospitalized | ICU | overflow | deaths | recovered |
|---|---|---|---|---|---|
| Mar 09 2020 | 0 | 0 | 0 | 0 | 0 |
| Mar 16 2020 | 2 - 2 | 1 - 1 | 0 | 0 - 0 | 198 - 204 |
| Mar 23 2020 | 5 - 5 | 3 - 3 | 0 | 0 - 0 | 678 - 736 |
| Mar 30 2020 | 9 - 11 | 7 - 7 | 0 | 1 - 1 | 1602 - 1837 |
| Apr 06 2020 | 17 - 22 | 13 - 16 | 0 | 4 - 4 | 3287 - 3995 |
| Apr 13 2020 | 29 - 39 | 25 - 32 | 0 | 8 - 9 | 6184 - 7962 |
| Apr 20 2020 | 38 - 55 | 39 - 53 | 0 | 15 - 19 | 9955 - 13434 |
| Apr 27 2020 | 47 - 71 | 54 - 78 | 0 | 26 - 34 | 14554 - 20491 |
| May 04 2020 | 53 - 84 | 69 - 103 | 0 | 40 - 55 | 19627 - 28684 |

## Proportions

| Outcome | Population average |
|---|---|
| Mild [%]: | 96.92 |
| Severe [%]: | 2.08 |
| Critical [%]: | 0.79 |
| Fatal [%]: | 0.20 |

## Totals/Peak

| Quantity | Peak/total value |
|---|---|
| Total death: | (44.55, **52.59**, 62.07) |
| Total severe: | (440.83, **535.63**, 650.53) |
| Peak severe: | (54, **69**, 88) |
| Peak critical: | (72, **90**, 110) |