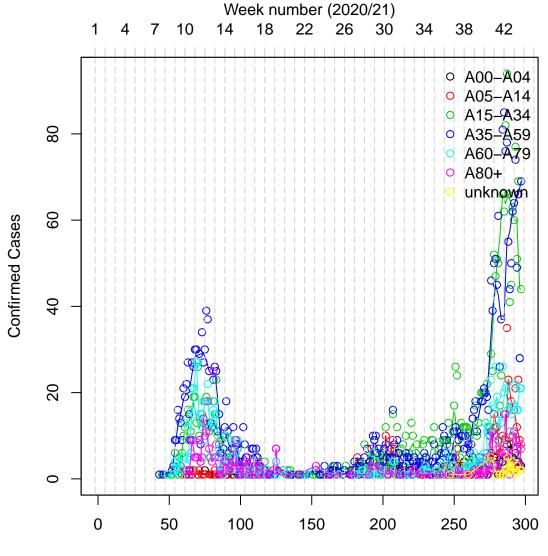
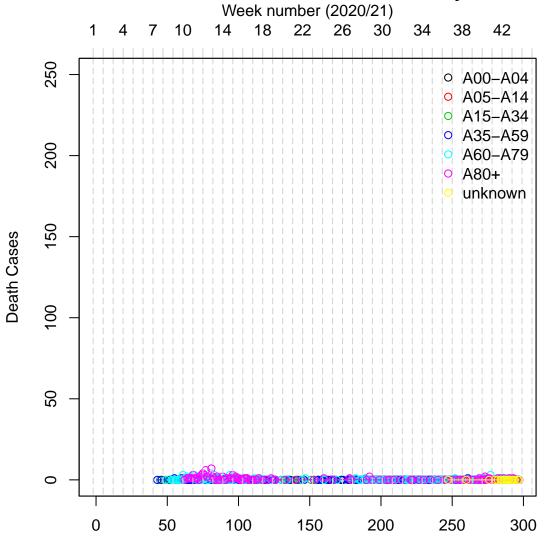


Confirmed Cases COVID-19 in Germany



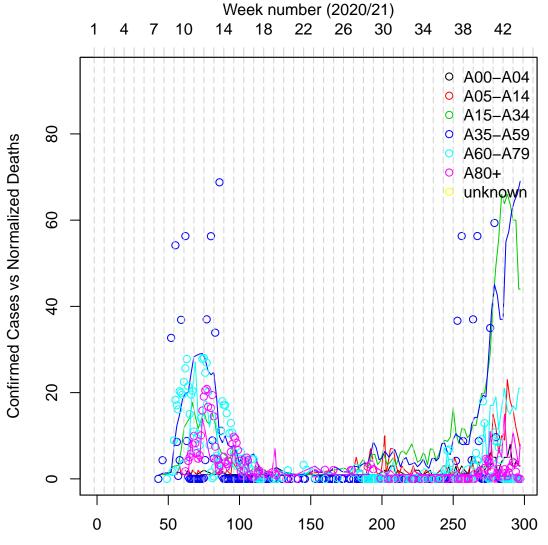
Days after (01/17/2020)
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Death Cases COVID-19 in Germany



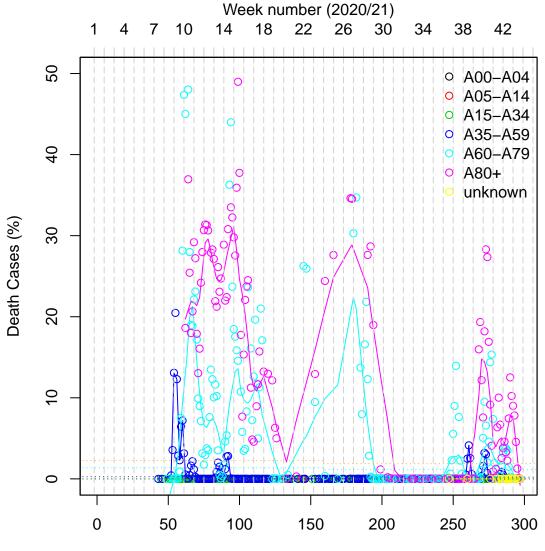
Days after (01/17/2020)

Time from Confirmed to Death COVID-19 in Germany

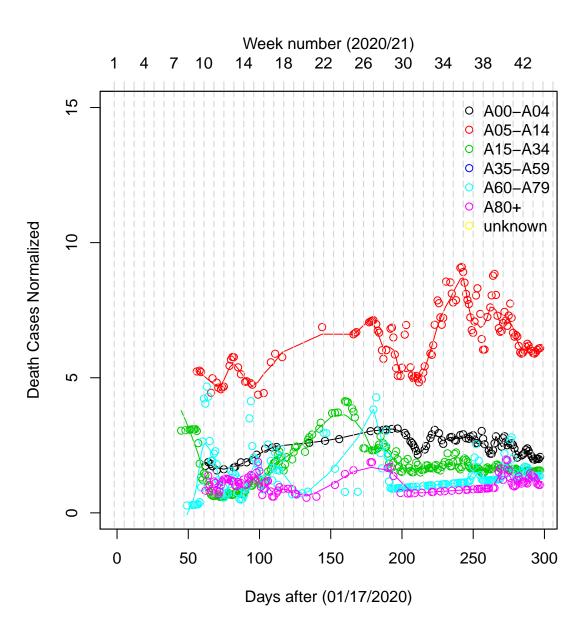


Days after (01/17/2020). Deaths Cases are shifted Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de

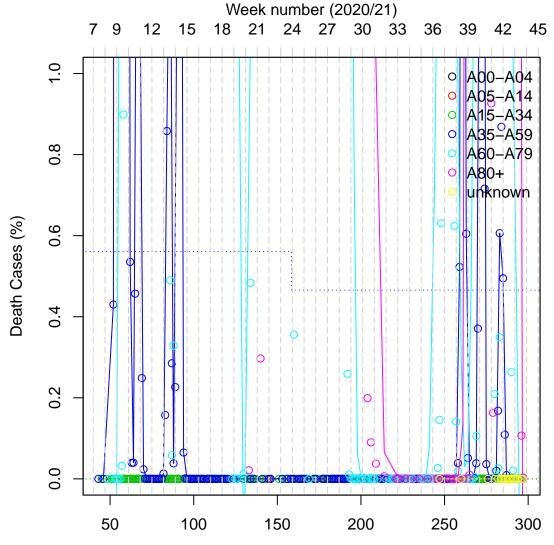
Death Cases per Day COVID-19 in Germany



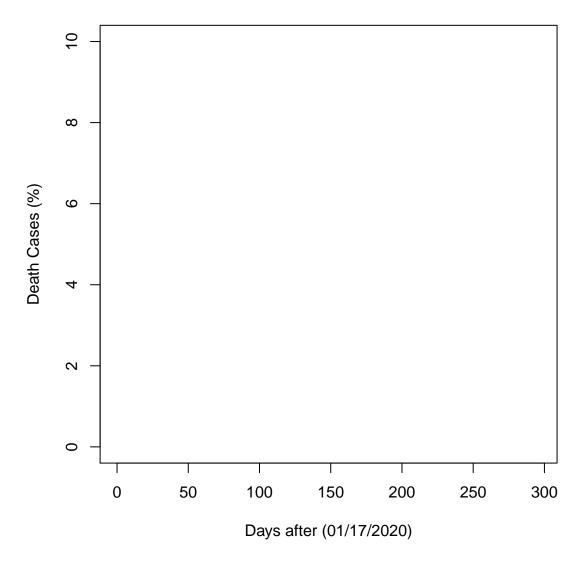
Days after (01/17/2020)
Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de



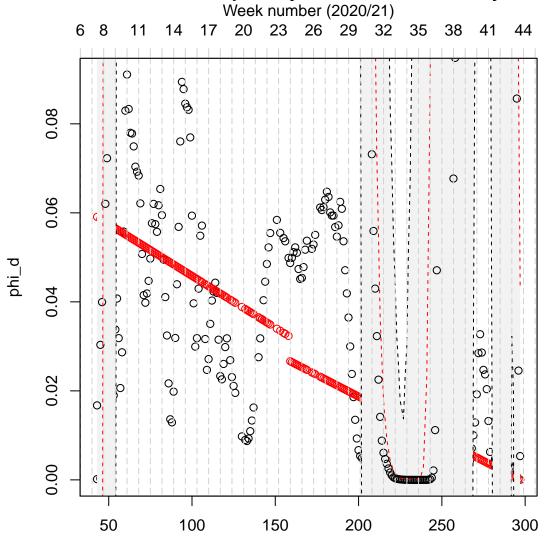
Death Cases per Day COVID-19 in Germany



Days after (01/17/2020)

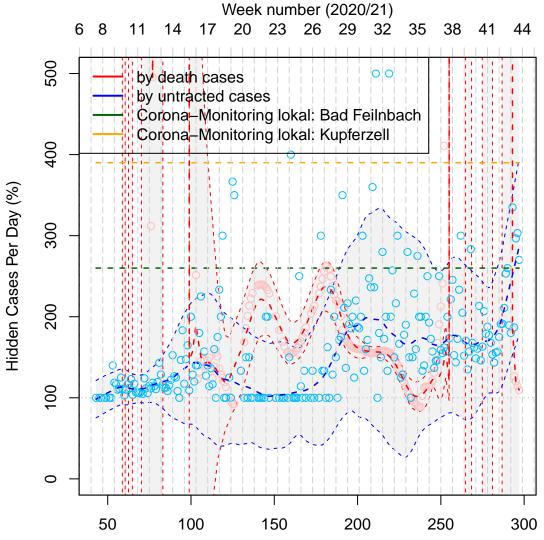


Death Cases per Day COVID-19 in Germany



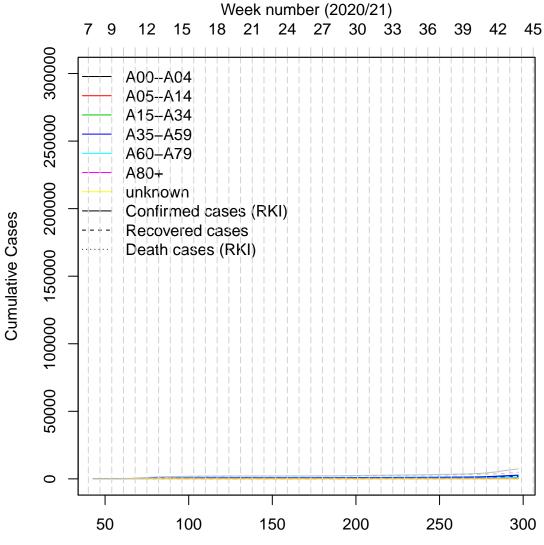
days
Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de

Hidden Cases per Day COVID-19 in Germany



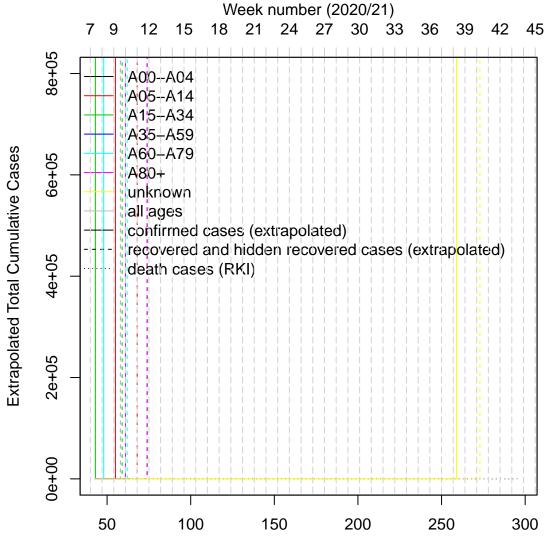
Days after (01/17/2020)

Cases Cumulative COVID-19 in Germany



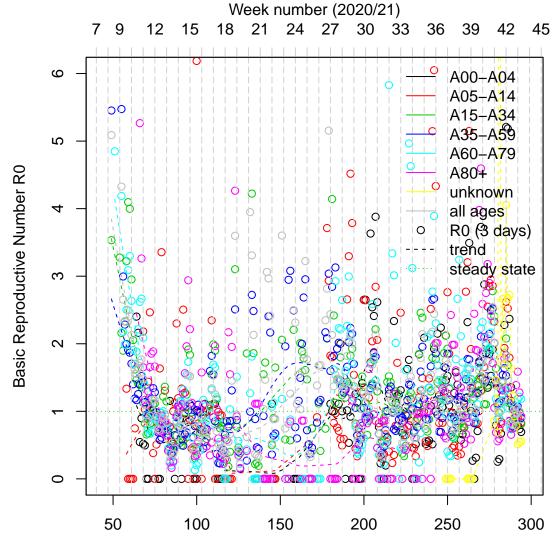
Days after (01/17/2020)

Cases Cumulative Extrapolated COVID-19 in Germany



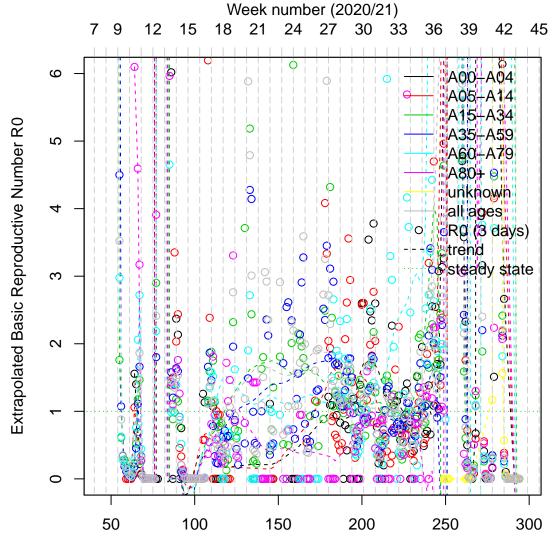
Days after (01/17/2020)

Basic Reproductive Number R0 COVID-19 in Germany

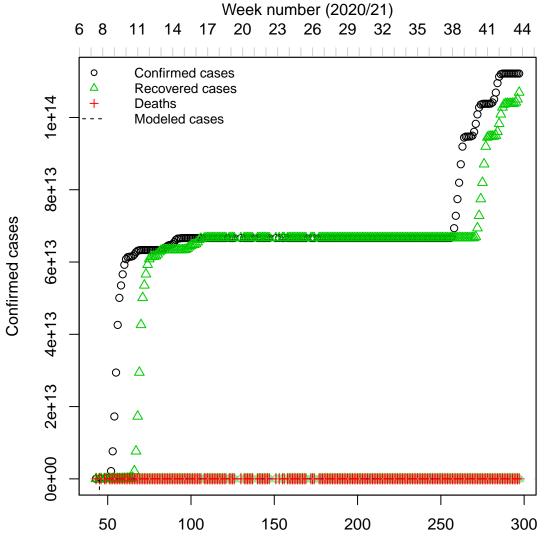


Days after (01/17/2020)

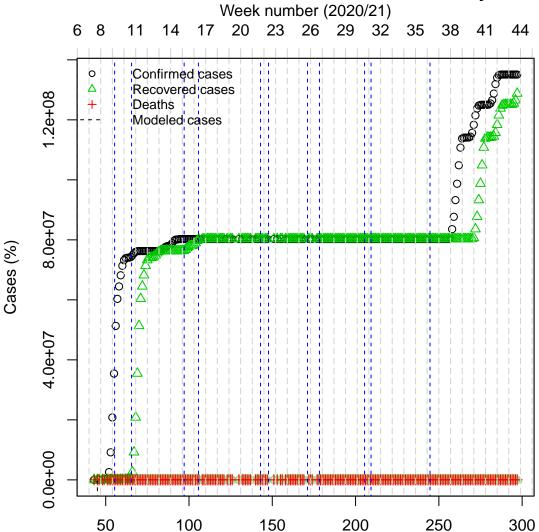
Extrapolated Basic Reproductive Number R0 COVID-19 in Germany



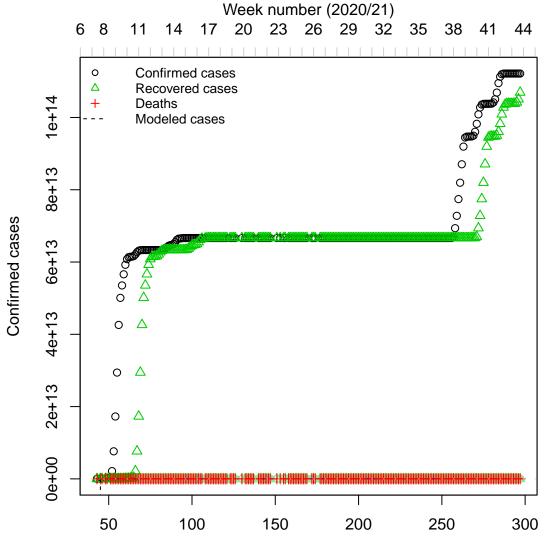
Days after (01/17/2020)



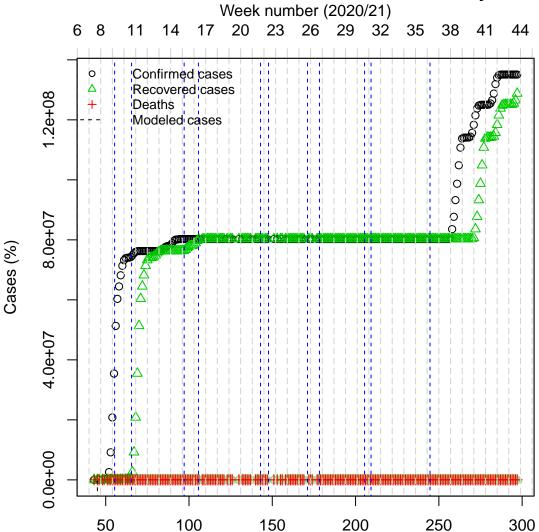
Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de



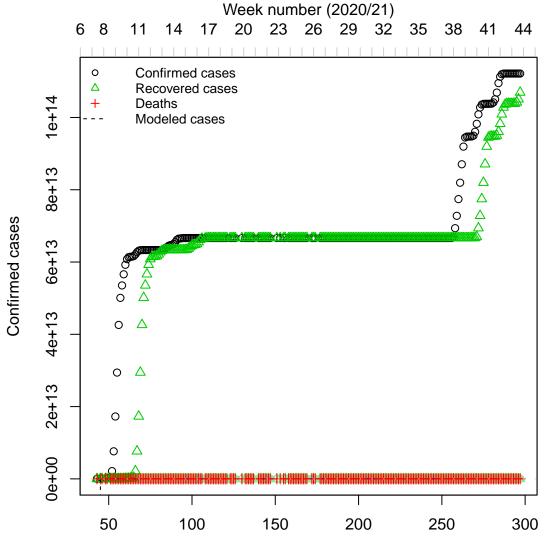
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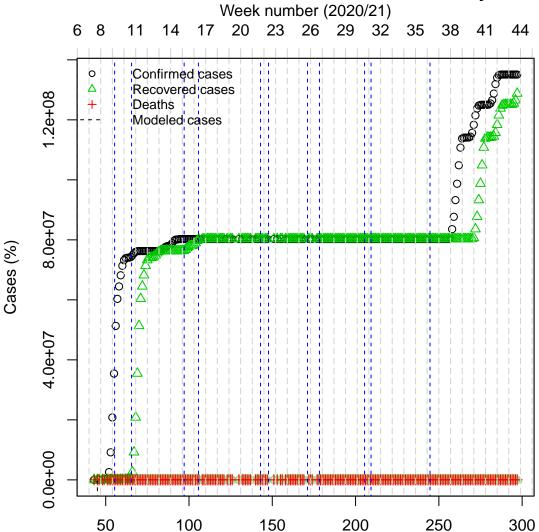
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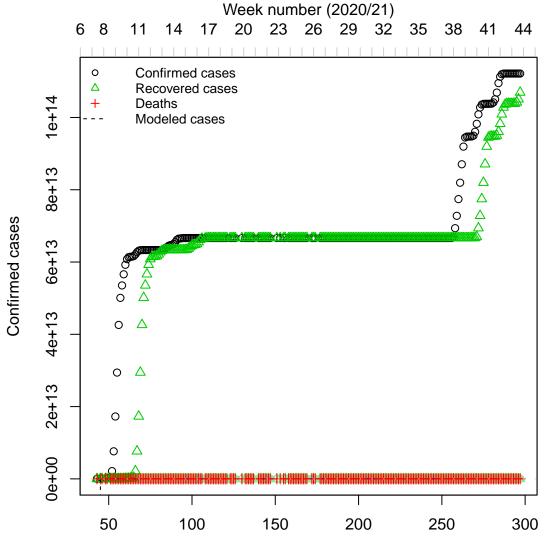
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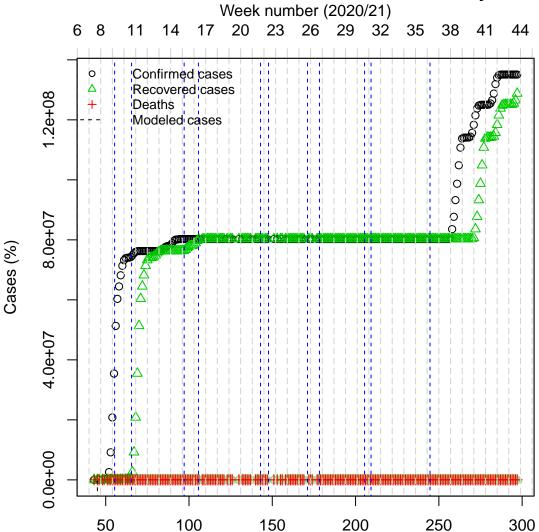
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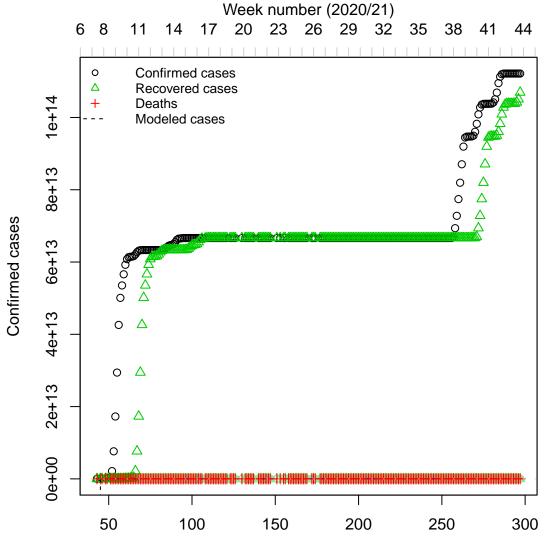
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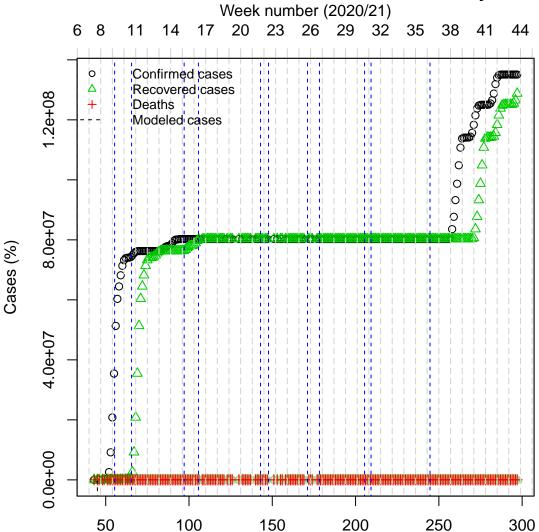
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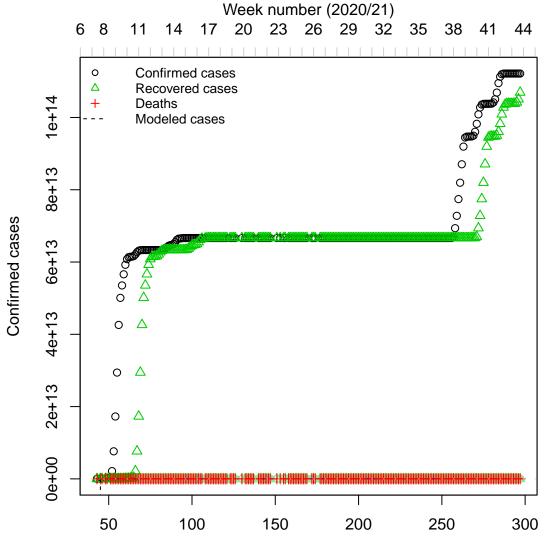
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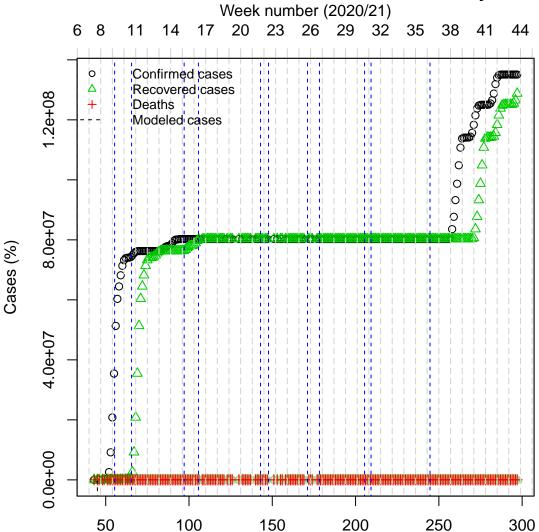
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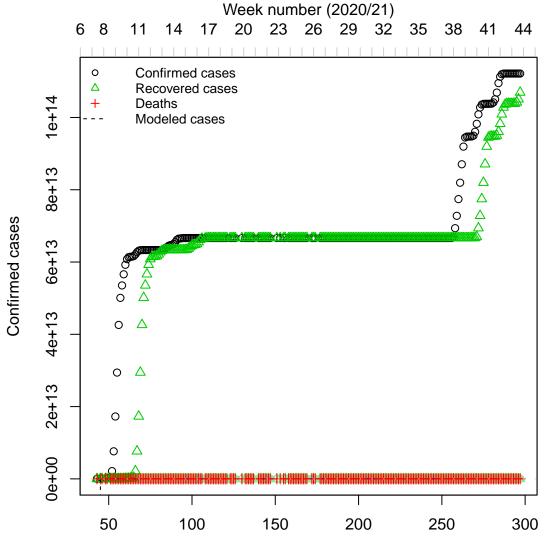
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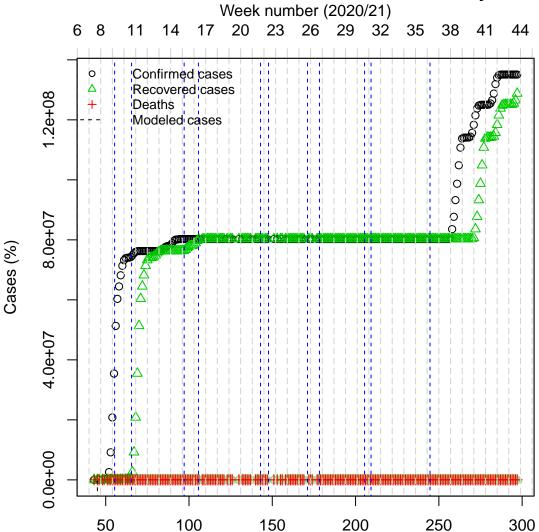
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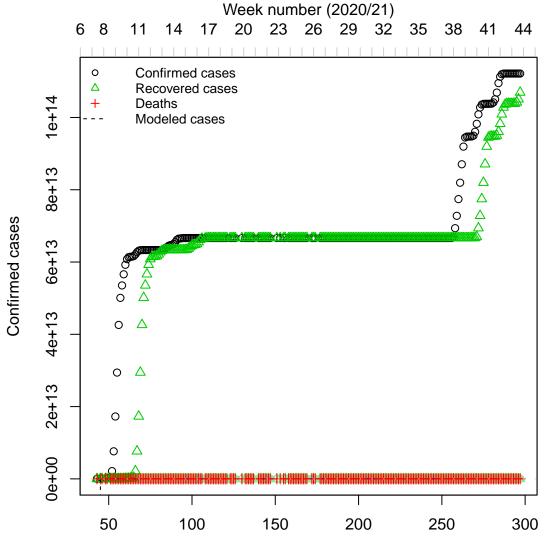
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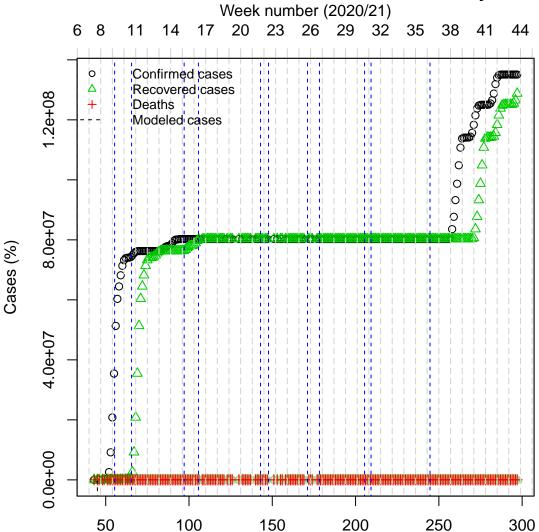
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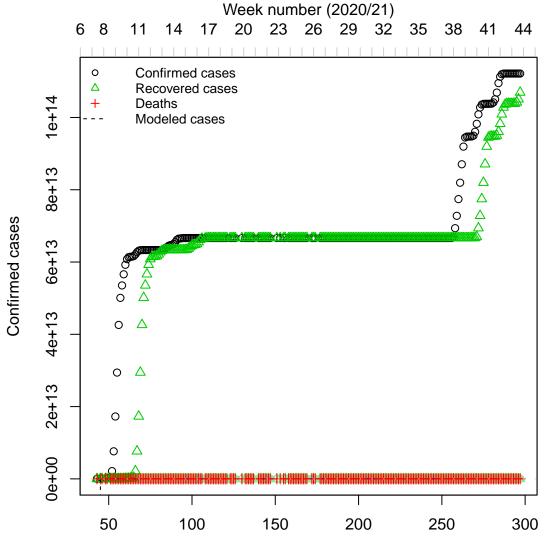
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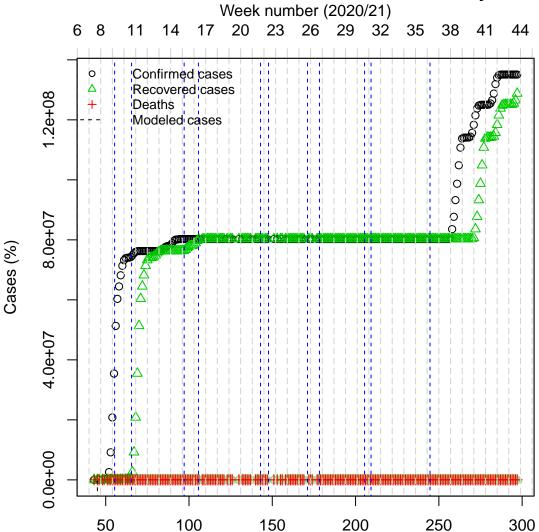
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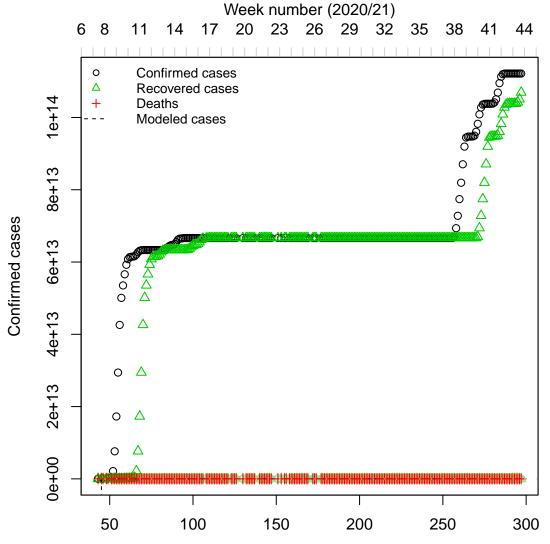
Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de



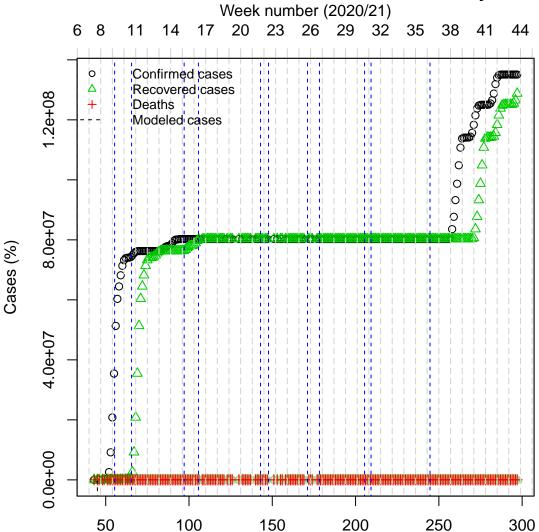
Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de



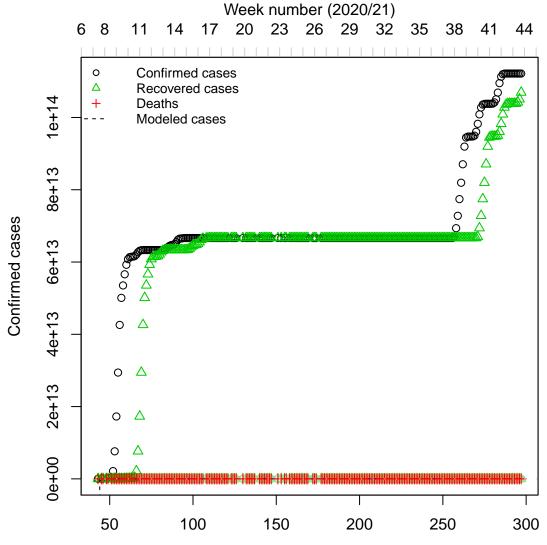
Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de



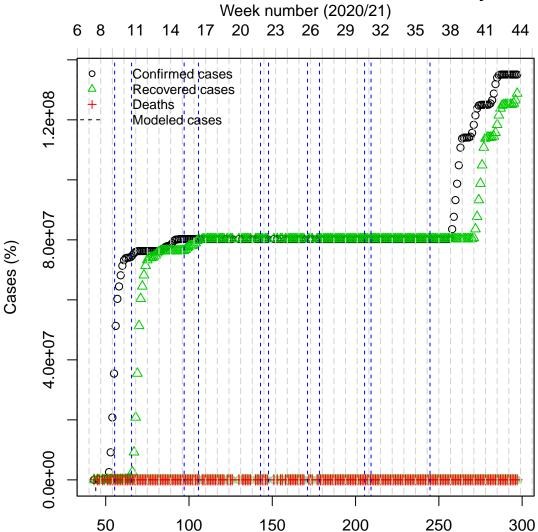
Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de



Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de

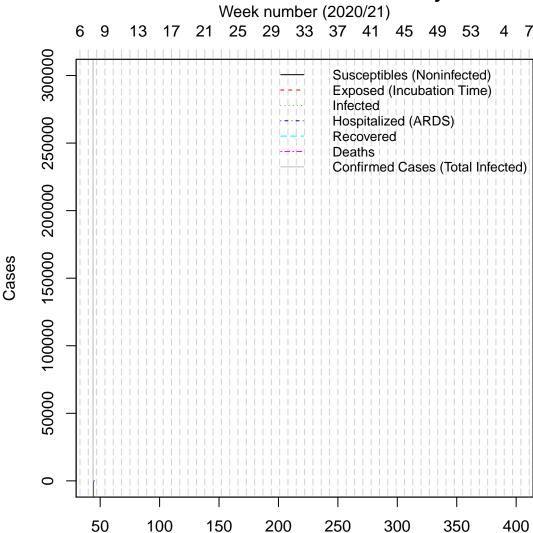


Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de



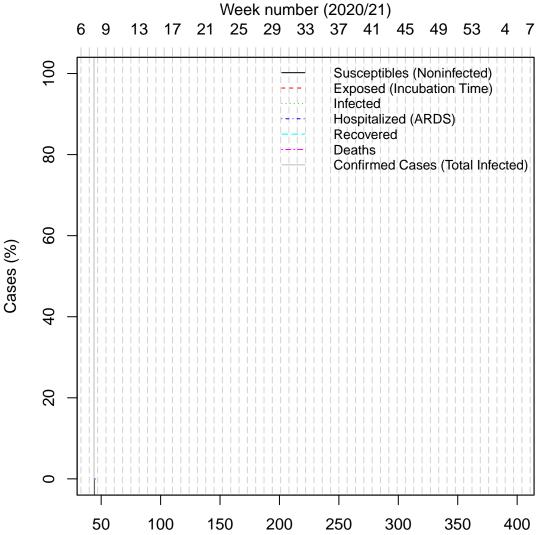
Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de

Forecast COVID-19 in Germany



Days after 01/17/2020

Forecast COVID-19 in Germany



Days after 01/17/2020

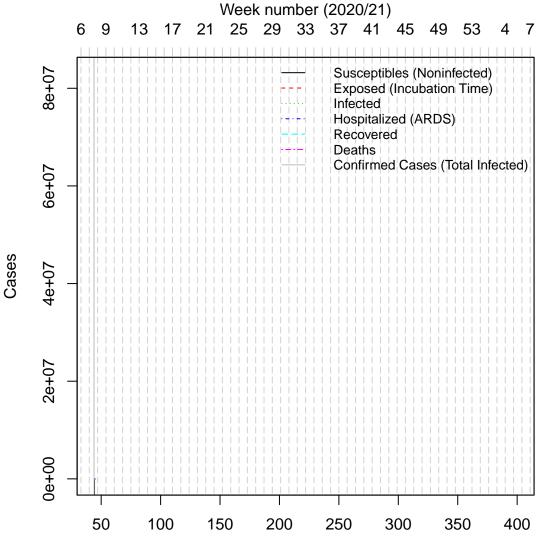
Forecast COVID-19 in Germany Week number (2020/21) 33 6 13 21 45 53 Hospitalized (ARDS) Deaths 2.0e+09Hospital Workload Hospital Workload compared to 2017 (%) 1.5e+09Cases 8000000 1.0e + 095.0e+08 0.0e+0050 100 150 200 250 300 350 400

Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de

Forecast COVID-19 in Germany Week number (2020/21) Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%) Cases (%)

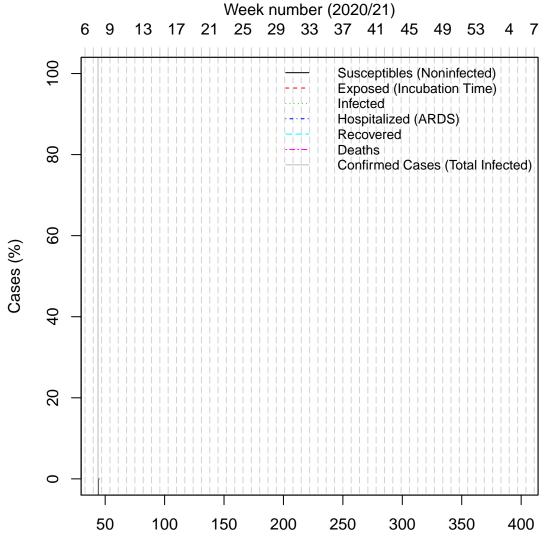
Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 1 no social distancing and no lockdown



Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de

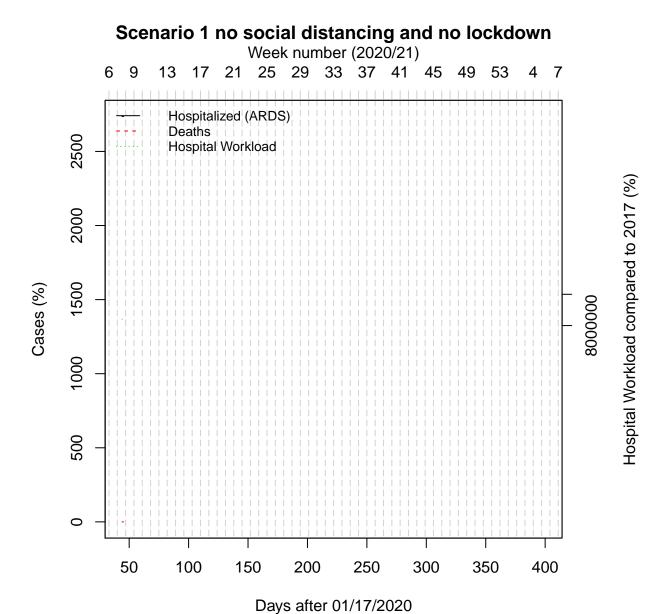
Scenario 1 no social distancing / no lockdown



Days after 01/17/2020

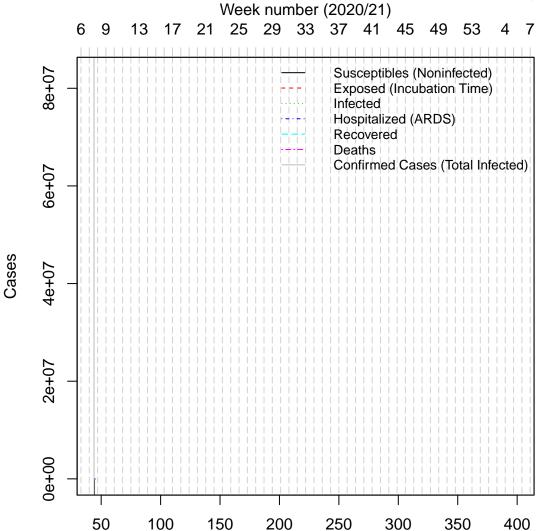
Scenario 1 no social distancing and no lockdown Week number (2020/21) 33 45 Hospitalized (ARDS) Deaths 2.0e+09Hospital Workload Hospital Workload compared to 2017 (%) 1.5e+09Cases 8000000 1.0e + 095.0e+08 0.0e+0050 100 150 200 250 300 350 400

Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de



Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 2 exit after day 50 without social distancing



Days after 01/17/2020

Scenario 2 exit after day 50 without social distancing Week number (2020/21) 33 45 100 Susceptibles (Noninfected) **Exposed (Incubation Time)** Infected Hospitalized (ARDS Recovered Deaths 80 Confirmed Cases (Total Infected) 9 40 20

Cases (%)

50

100

150

200

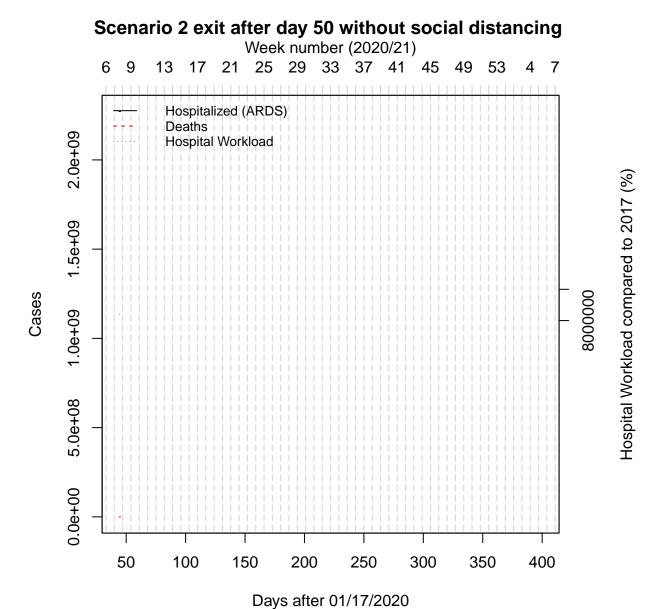
Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de

250

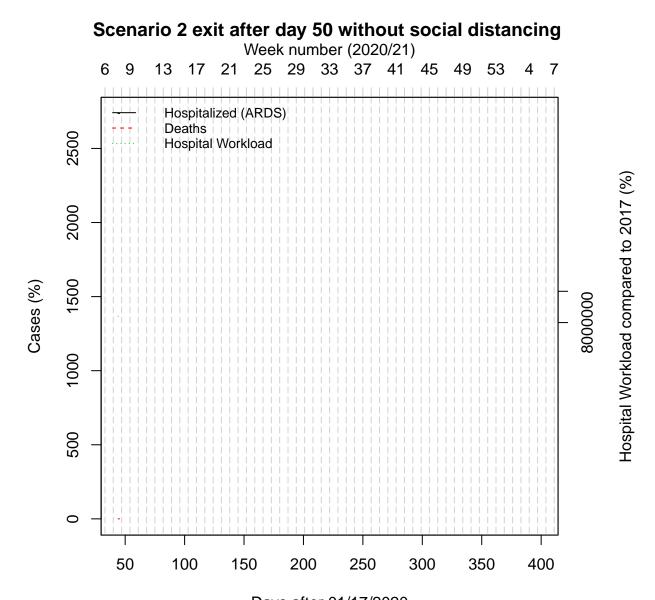
300

350

400

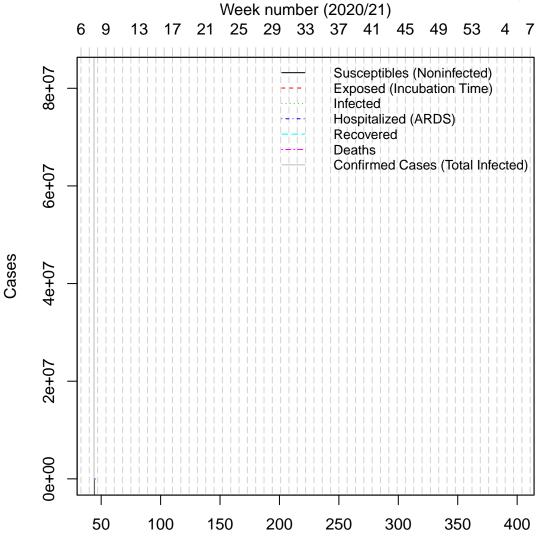


Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de



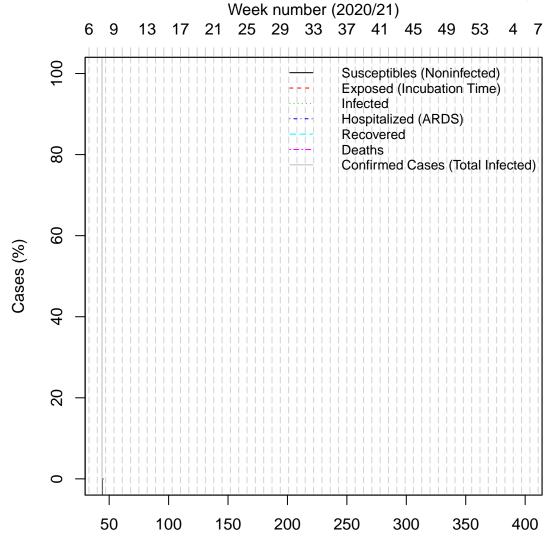
Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 3 exit after day 50 with social distancing

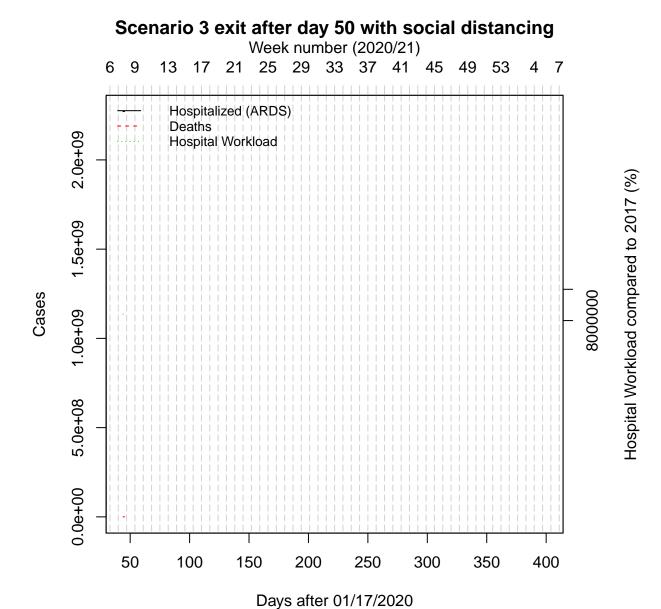


Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de

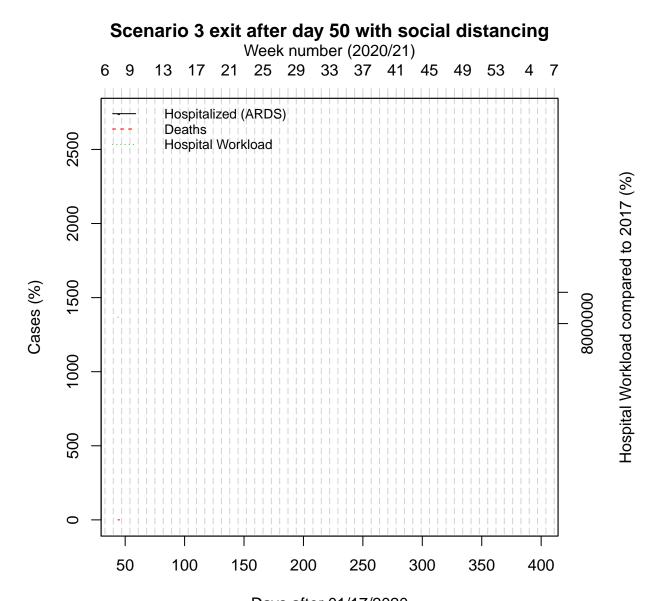
Scenario 3 exit after day 50 with social distancing



Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de



Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de



Days after 01/17/2020 Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de

Forecast COVID-19 in Germany Week number (2020/21) 13 15 29 25 27 Hospitalized (ARDS) Deaths R0 = 0.42.5e-32 R0 = 0.6R0 = 0.8R0 = 1R0 = 1.22.0e-32 R0 = 1.4R0 = 1.6R0 = 1.8R0 = 2R0 = 2.250 100 150 200 Days after 01/17/2020

Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de

Forecast COVID-19 in Germany Week number (2020/21) 13 15 29 25 27 Hospitalized (ARDS) Deaths t = 19 2.5e-32 t = 22t = 25 t = 282.0e-32 t = 34t = 37t = 40t = 43t = 46t = 49200 50 100 150 Days after 01/17/2020

Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de

Forecast COVID-19 in Germany Week number (2020/21) 13 15 29 11 25 27 Hospitalized (ARDS) Deaths t = 19 t = 22t = 25t = 28 t = 31t = 34t = 37t = 40t = 430.2 log_e(Cases) t = 46t = 490.0 -0.2 -0.4 0.2 0.4 Growth Rate (D^{-1}) 50 100 150 200

Created by Sören Thiering (11/10/2020). Email: soeren.thiering@hs-anhalt.de

Days after 01/17/2020