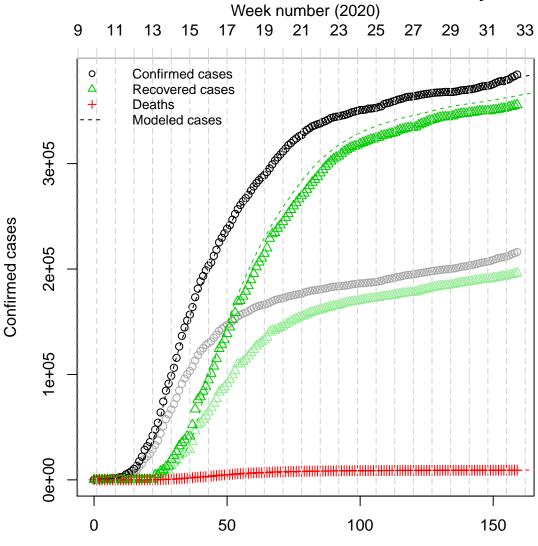
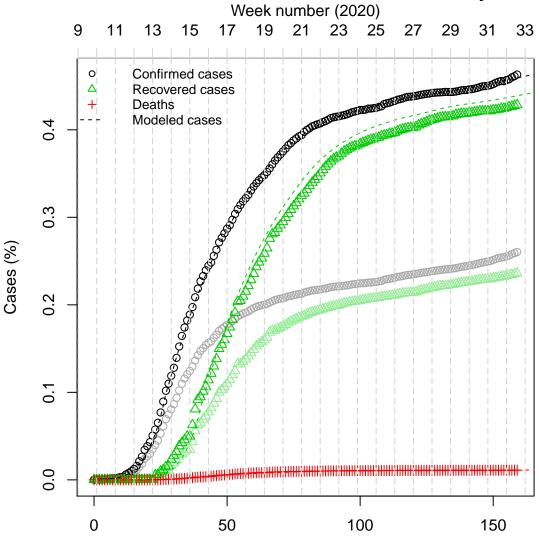
Situation vs Model COVID-19 in Germany

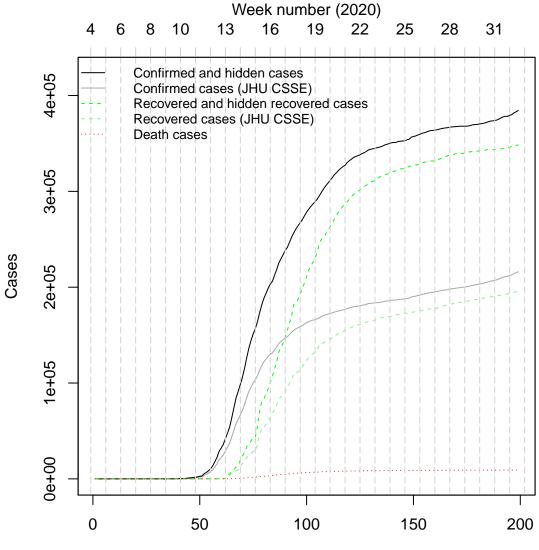


Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

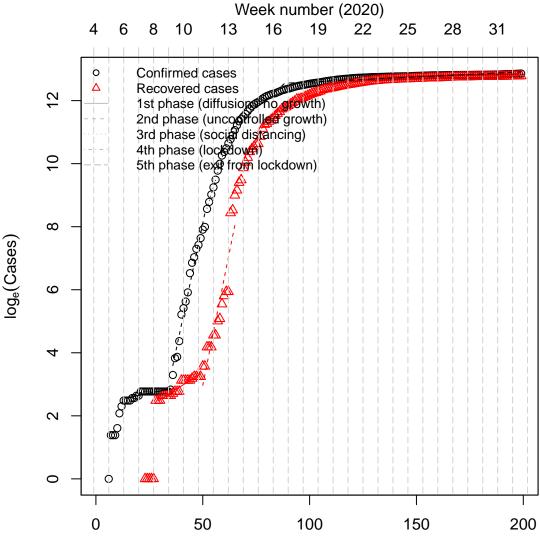
Situation vs Model COVID-19 in Germany



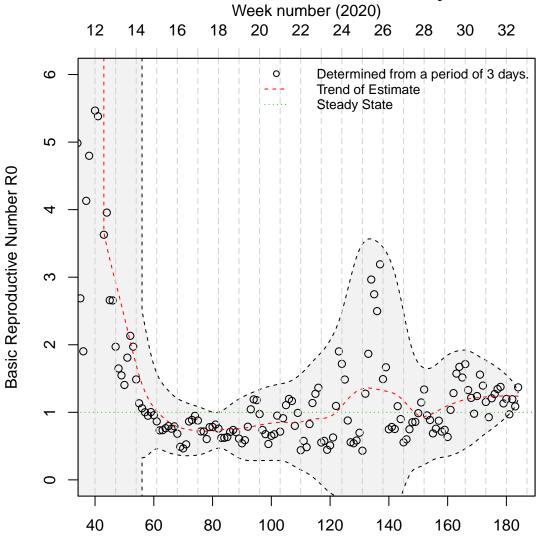
Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de



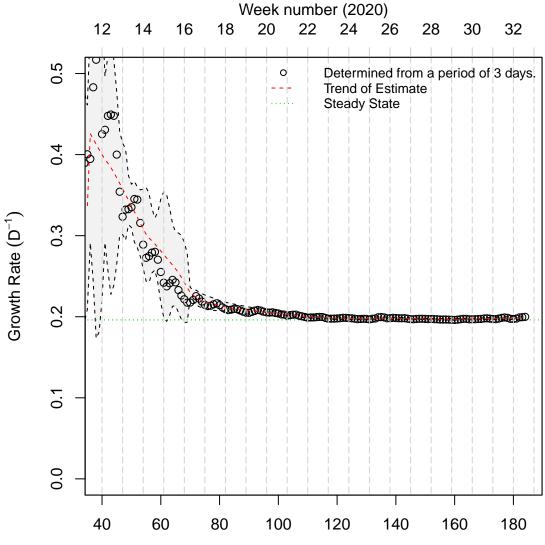
Days after 1/22/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de



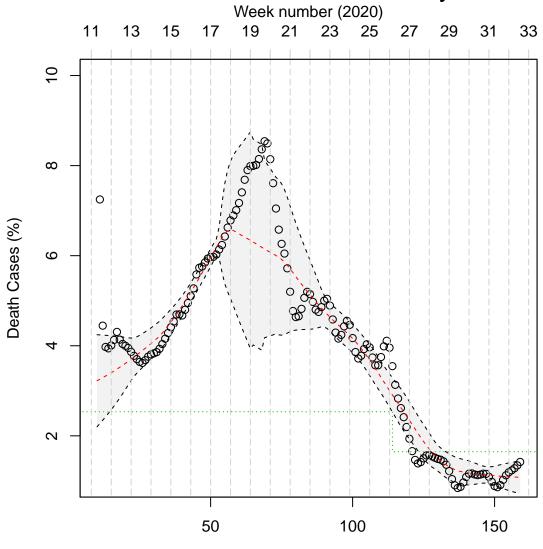
Days after 1/22/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de



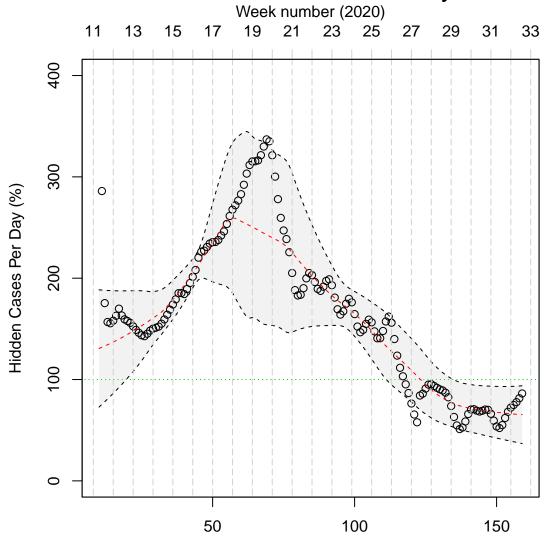
Days after 2/5/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de



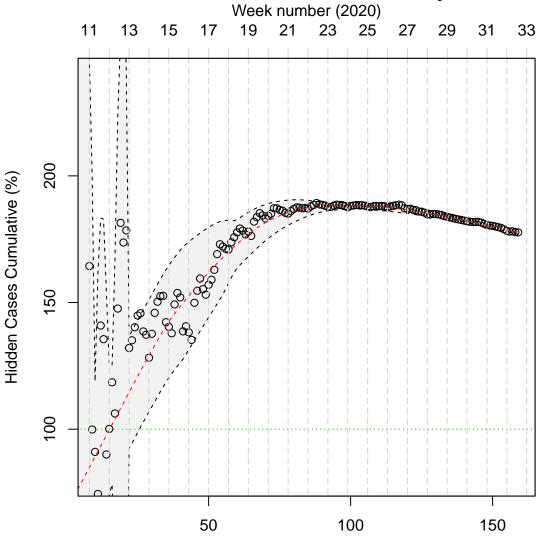
Days after 2/5/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de



Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

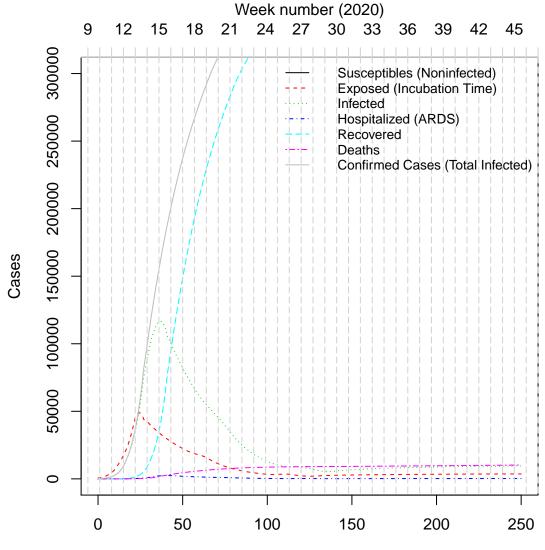


Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de



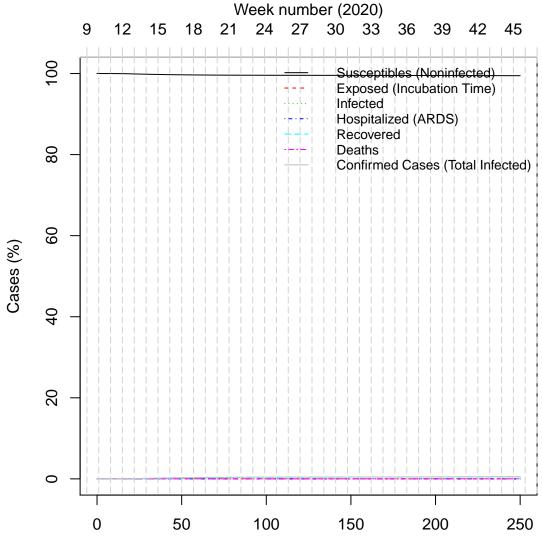
Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

Forecast COVID-19 in Germany



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Forecast COVID-19 in Germany



Days after 3/1/20

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

Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

Forecast COVID-19 in Germany Week number (2020) 45 12 15 18 36 39 42 0.012 Hospitalized (ARDS) Deaths Hospital Workload ∞ 0.010 Hospital Workload compared to 2017 (%) 0.008 9 Cases (%) 900.0 0.004 0.002 0.000

Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

150

200

100

0

50

Scenario 1 no social distancing and no lockdown Week number (2020) 24 45 12 15 18 21 36 39 8e+07 Susceptibles (Noninfected) Exposed (Incubation Time) Infected Hospitalized (ARDS) Recovered Deaths Confirmed Cases (Total Infected) 6e+07 Cases 4e+07 2e+07 00+00

Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

100

0

Scenario 1 no social distancing / no lockdown Week number (2020) Susceptibles (Noninfected) Exposed (Incubation Time) Infected Hospitalized (ARDS) Recovered Deaths Confirmed Cases (Total Infected) Cases (%)

Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 1 no social distancing and no lockdown Week number (2020) Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%) Cases

Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 1 no social distancing and no lockdown Week number (2020) 24 45 12 15 18 36 1500 Hospitalized (ARDS) Deaths Hospital Workload 2.5 Hospital Workload compared to 2017 (%) 2.0 Cases (%) 1.5 0.5 0.0 250

Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

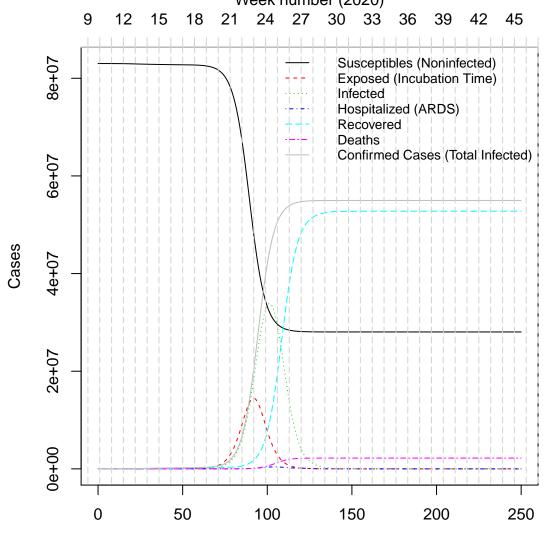
150

200

100

0

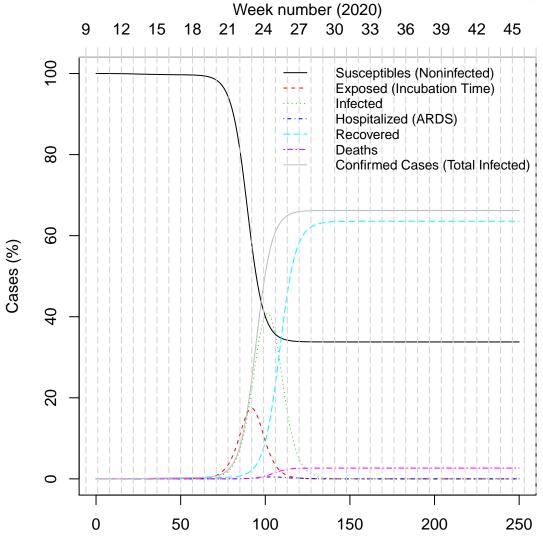
Scenario 2 exit after day 50 without social distancing Week number (2020)



Days after 3/1/20

Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 2 exit after day 50 without social distancing



Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 2 exit after day 50 without social distancing Week number (2020) Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%)

Cases

Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 2 exit after day 50 without social distancing Week number (2020) 9 45 12 15 18 36 39 1500 Hospitalized (ARDS) Deaths 2.5 Hospital Workload Hospital Workload compared to 2017 (%) 2.0 1.5 Cases (%) 0.5 0.0

Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

150

200

100

0

50

Scenario 3 exit after day 50 with social distancing Week number (2020) 9 24 45 12 15 18 36 39 42 8e+07 Susceptibles (Noninfected) Exposed (Incubation Time) Infected Hospitalized (ARDS) Recovered Deaths Confirmed Cases (Total Infected) 6e+07 Cases 4e+07 2e+07 00+00 0 50 100 150 200 250

Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 3 exit after day 50 with social distancing Week number (2020) Susceptibles (Noninfected) Exposed (Incubation Time) Infected Hospitalized (ARDS) Recovered Deaths Confirmed Cases (Total Infected) Cases (%)

Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 3 exit after day 50 with social distancing Week number (2020) Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%) Cases

Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 3 exit after day 50 with social distancing Week number (2020) 45 12 15 18 36 Hospitalized (ARDS) 1.5 Deaths 1200 Hospital Workload Hospital Workload compared to 2017 (%) 800 Cases (%) 009 0.5 400 200 0.0 0 50 100 150 200 250

Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

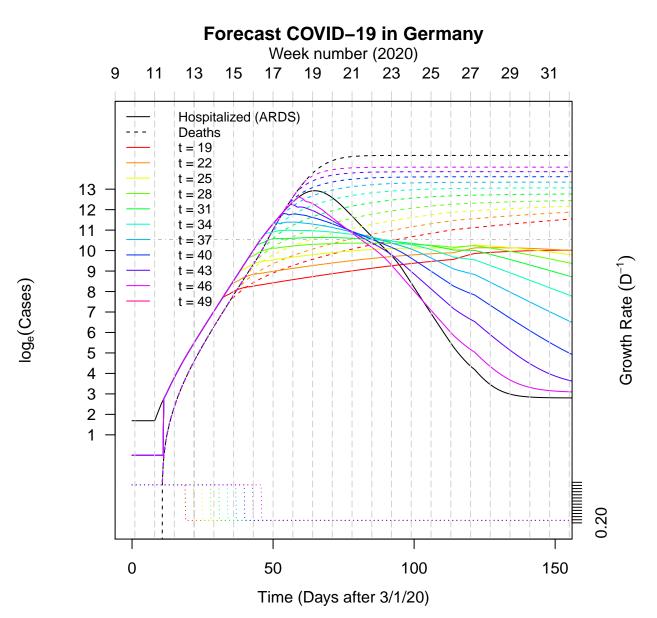
Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 2400000 Hospitalized (ARDS) 2200000 Deaths R0 = 0.42000000 R0 = 0.6R0 = 0.81800000 R0 = 1R0 = 1.21600000 R0 = 1.4R0 = 1.61400000 R0 = 1.8Growth Rate (D^{-1}) R0 = 21200000 R0 = 2.2R0 = 2.4Cases 1000000 800000 600000 400000 200000 0 0.32 0 50 100 150 Time (Days after 3/1/20)

Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 19 25 27 29 31 2400000 Hospitalized (ARDS) 2200000 Deaths t = 192000000 t = 22t = 251800000 t = 28t = 311600000 t = 34t = 371400000 t = 40Growth Rate (D^{-1}) t = 431200000 t = 46Cases t = 491000000 000008 600000 400000 200000 0 0.20 0 50 100 150

Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

Time (Days after 3/1/20)



Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de