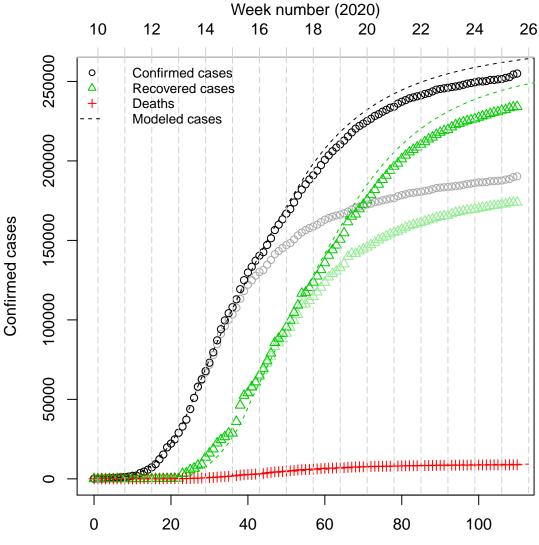
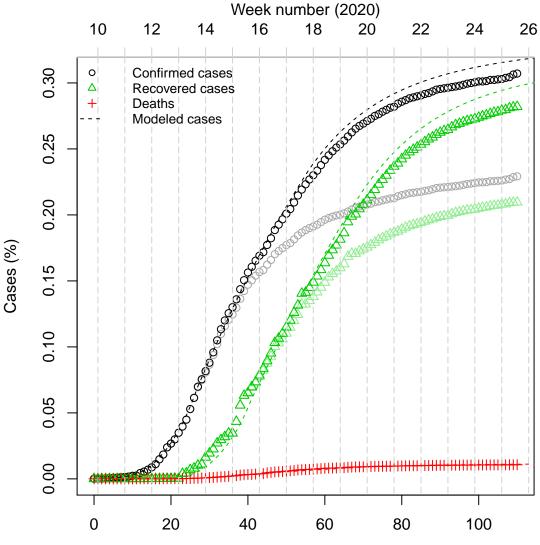
Situation vs Model COVID-19 in Germany



Days after 3/1/20

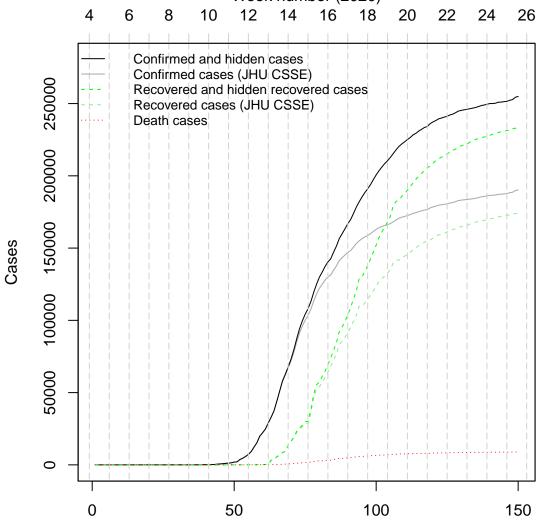
Created by Sören Thiering (06/20/2020). Email: soeren.thiering@hs-anhalt.de

Situation vs Model COVID-19 in Germany



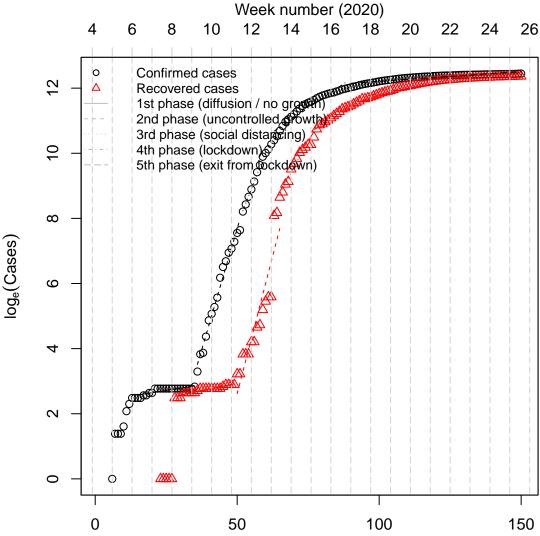
Days after 3/1/20 Created by Sören Thiering (06/20/2020). Email: soeren.thiering@hs-anhalt.de

Situation COVID-19 in Germany Week number (2020) 8 10 12 14 16 18 20 20



Days after 1/22/20

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Days after 1/22/20 Created by Sören Thiering (06/20/2020). Email: soeren.thiering@hs-anhalt.de

9

2

3

2

0

40

60

Basic Reproductive Number R0

Week number (2020) 17 18 19 20 21 13 14 15 16 22 23 24 25 Determined from a period of 3 days. 0 Trend of Estimate Steady State യ്യ്യ d

Days after 2/5/20

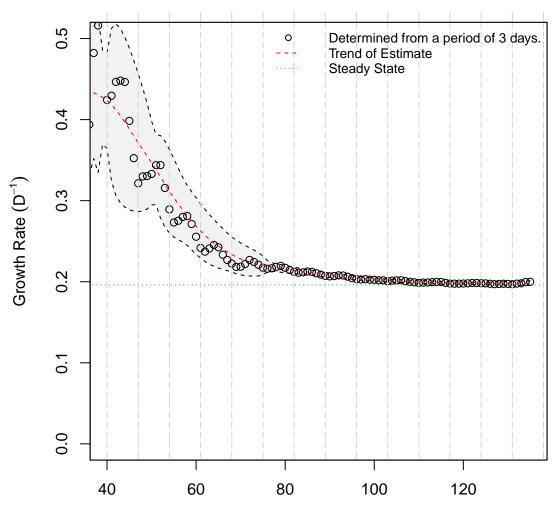
100

120

80

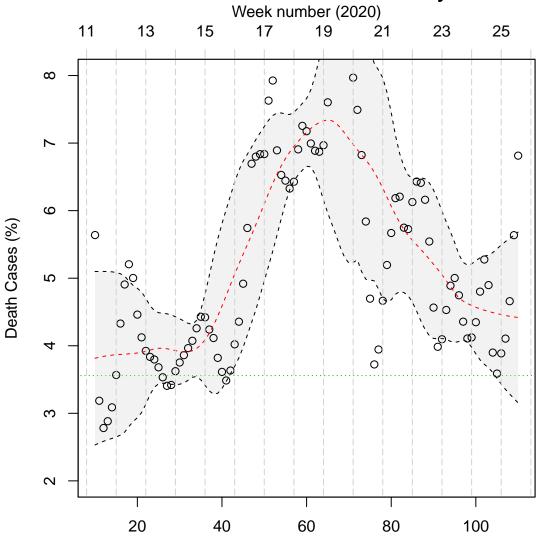
Created by Sören Thiering (06/20/2020). Email: soeren.thiering@hs-anhalt.de

Week number (2020) 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26

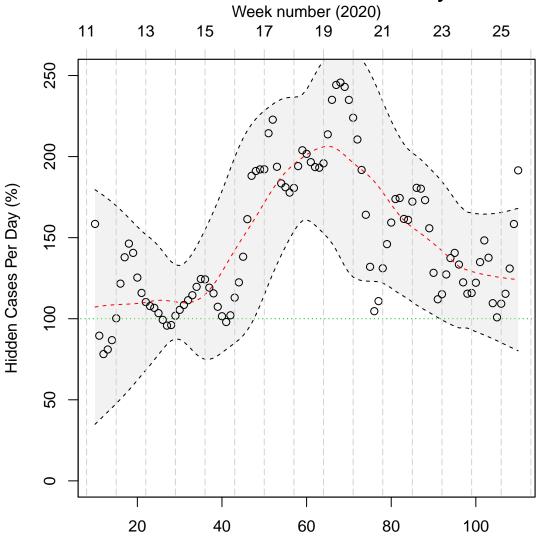


Days after 2/5/20

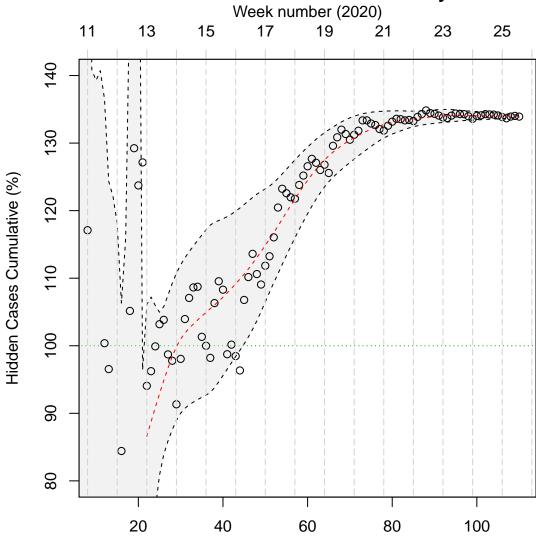
Created by Sören Thiering (06/20/2020). Email: soeren.thiering@hs-anhalt.de



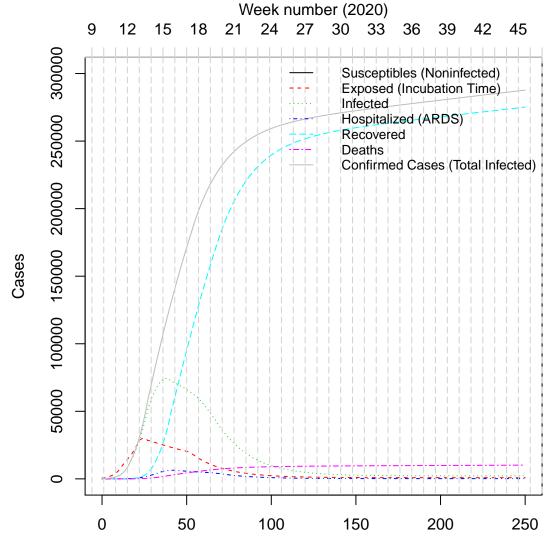
Days after 3/1/20 Created by Sören Thiering (06/20/2020). Email: soeren.thiering@hs-anhalt.de



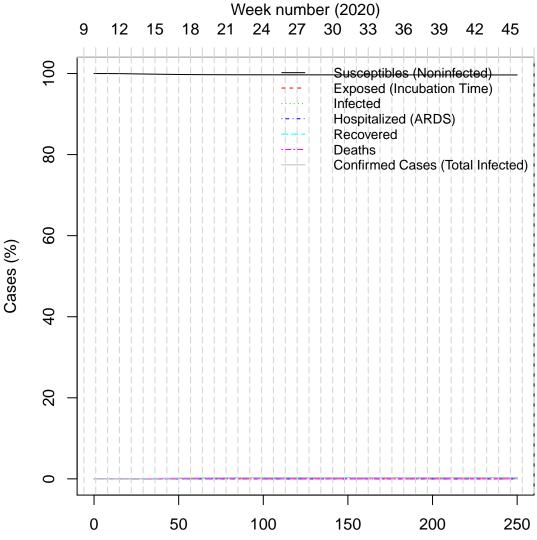
Days after 3/1/20 Created by Sören Thiering (06/20/2020). Email: soeren.thiering@hs-anhalt.de



Days after 3/1/20 Created by Sören Thiering (06/20/2020). Email: soeren.thiering@hs-anhalt.de

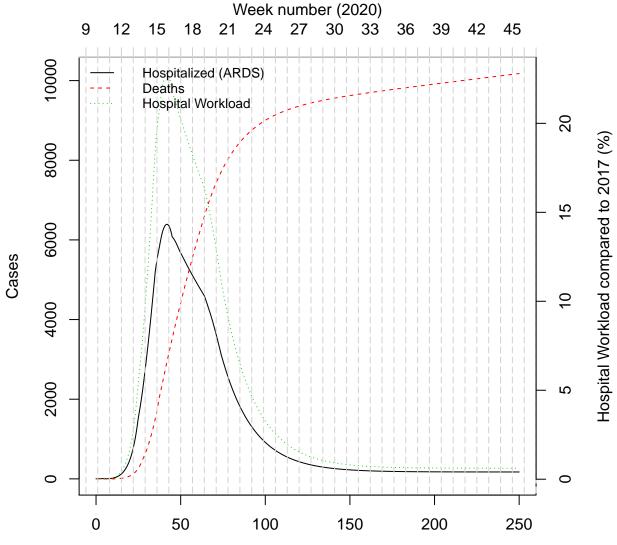


Days after 3/1/20 Created by Sören Thiering (06/20/2020). Email: soeren.thiering@hs-anhalt.de

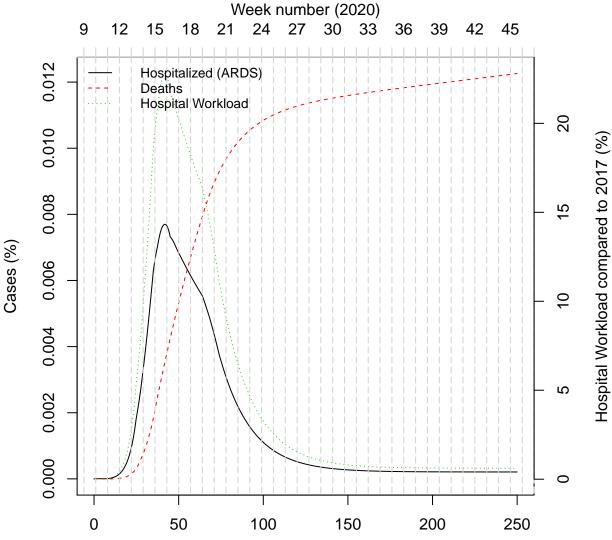


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Scenario 1 no social distancing and no lockdown Week number (2020) 24 45 12 15 18 21 36 39 42 8e+07 Susceptibles (Noninfected) Exposed (Incubation Time) Infected Hospitalized (ARDS) Recovered Deaths Confirmed Cases (Total Infected) 6e+07 Cases 4e+07 2e+07 00+00

Days after 3/1/20 Created by Sören Thiering (06/20/2020). 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 (06/20/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 1 no social distancing and no lockdown Week number (2020) 45 12 15 18 36 Hospitalized (ARDS) 90+99 Deaths 5000 Hospital Workload 5e+06 Hospital Workload compared to 2017 (%) 4e+06 3e+06 2000 2e+06 1e+06 0e+00

Days after 3/1/20 Created by Sören Thiering (06/20/2020). Email: soeren.thiering@hs-anhalt.de

150

200

100

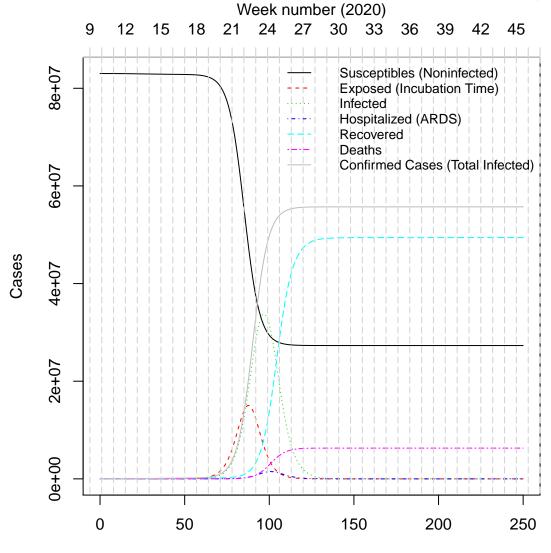
0

50

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

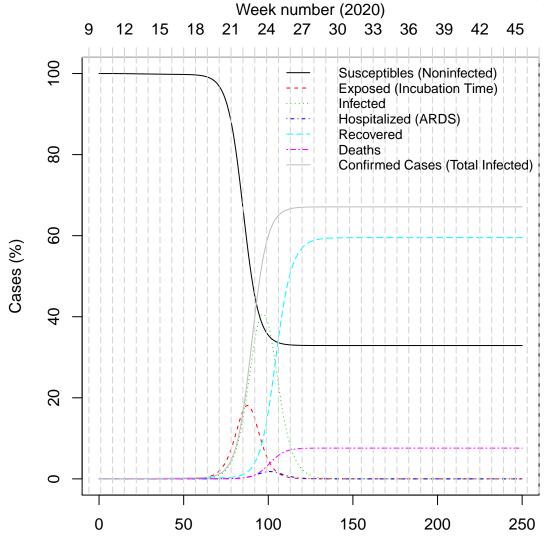
Days after 3/1/20 Created by Sören Thiering (06/20/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 2 exit after day 50 without social distancing



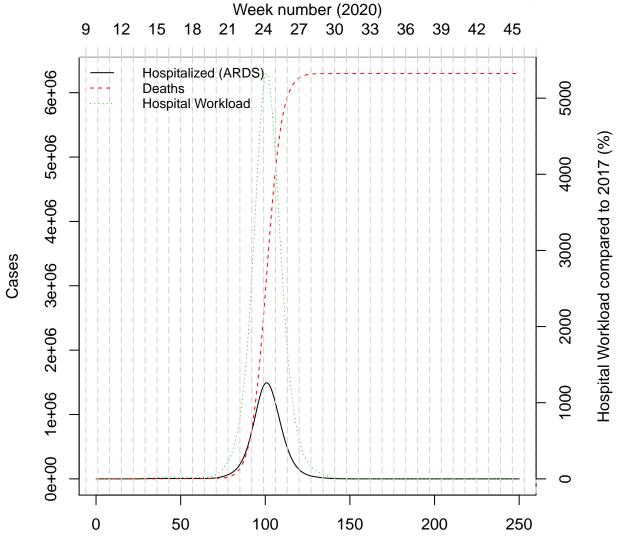
Days after 3/1/20 Created by Sören Thiering (06/20/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 2 exit after day 50 without social distancing



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Scenario 2 exit after day 50 without social distancing



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

Cases (%)

Days after 3/1/20 Created by Sören Thiering (06/20/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 3 exit after day 50 with social distancing Week number (2020) 9 12 24 45 15 18 21 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

Days after 3/1/20 Created by Sören Thiering (06/20/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

100

0

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 (06/20/2020). 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 (06/20/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 3 exit after day 50 with social distancing Week number (2020) 12 15 18 36 45 1500 Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%) 3 Cases (%) α 50 100 150 200 250 0

Days after 3/1/20 Created by Sören Thiering (06/20/2020). Email: soeren.thiering@hs-anhalt.de

Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 6500000 Hospitalized (ARDS) 6000000 Deaths R0 = 0.45500000 R0 = 0.6R0 = 0.85000000 R0 = 1R0 = 1.24500000 R0 = 1.44000000 R0 = 1.6R0 = 1.8Growth Rate (D^{-1}) 3500000 R0 = 2R0 = 2.23000000 R0 = 2.42500000 2000000 1500000 1000000 500000 0 0.32 0 50 100 150

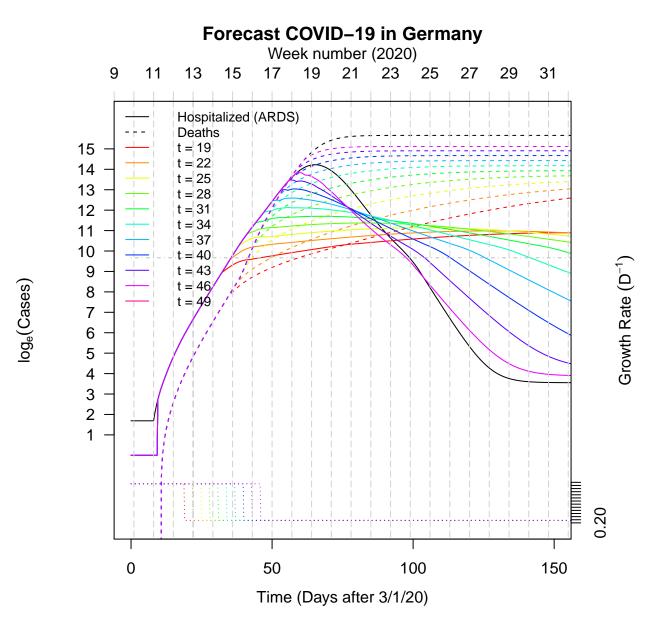
Created by Sören Thiering (06/20/2020). Email: soeren.thiering@hs-anhalt.de

Time (Days after 3/1/20)

Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 19 25 27 29 31 6500000 Hospitalized (ARDS) Deaths 6000000 t = 195500000 t = 22 t = 255000000 t = 28t = 314500000 t = 344000000 t = 37t = 40Growth Rate (D^{-1}) 3500000 t = 43t = 463000000 t = 492500000 2000000 1500000 1000000 500000 0 0.20 0 50 100 150

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Time (Days after 3/1/20)



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