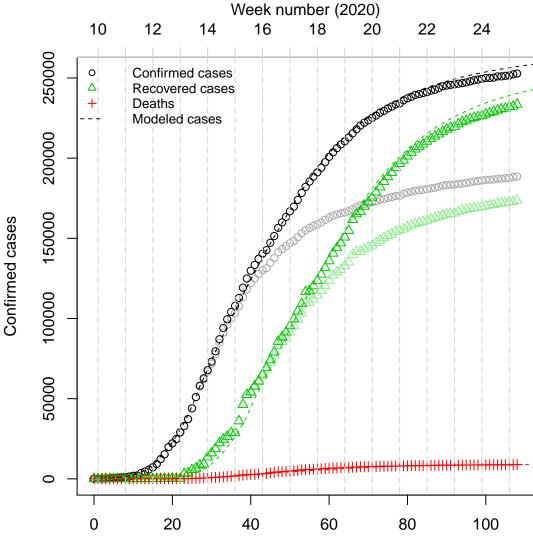
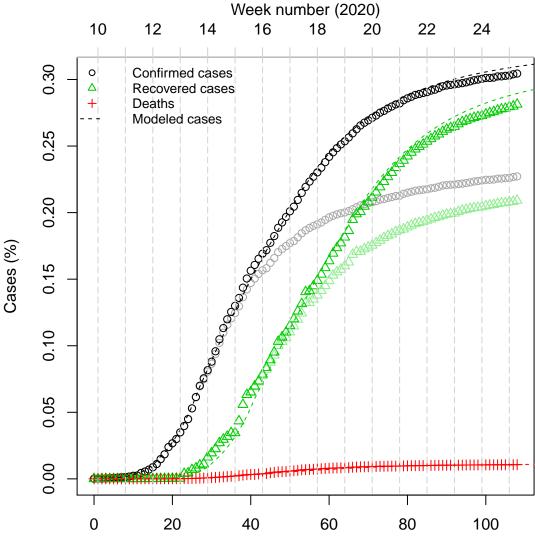
Situation vs Model COVID-19 in Germany



Days after 3/1/20 Created by Sören Thiering (06/19/2020). Email: soeren.thiering@hs-anhalt.de

Situation vs Model COVID-19 in Germany

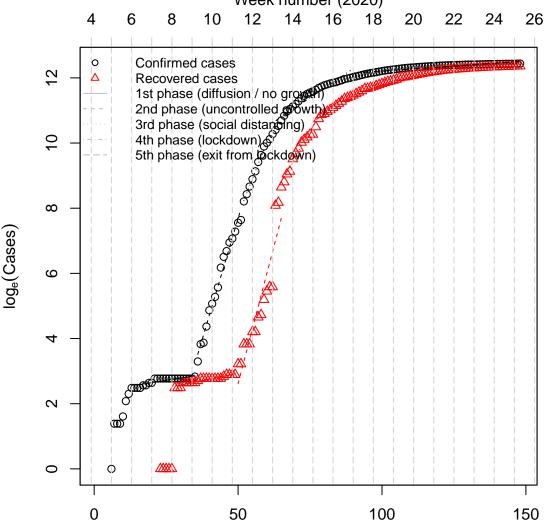


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Situation COVID-19 in Germany Week number (2020) Confirmed and hidden cases Confirmed cases (JHU CSSE) Recovered and hidden recovered cases Recovered cases (JHU CSSE) Death cases 100000 150000 Cases

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Situation COVID-19 in Germany Week number (2020)



Days after 1/22/20

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9

2

3

2

40

60

Basic Reproductive Number R0

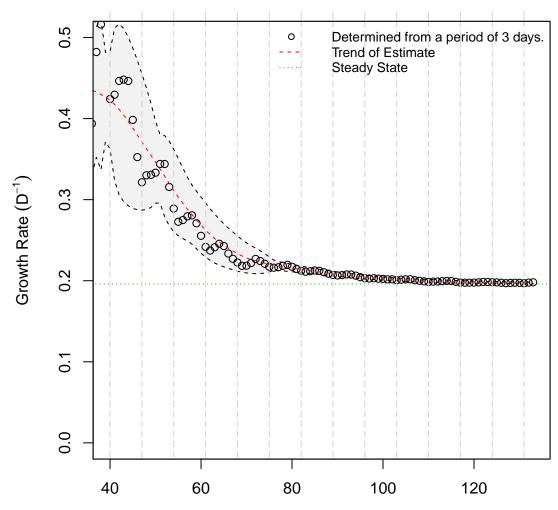
Week number (2020) 18 19 20 21 13 14 15 16 22 23 24 25 Determined from a period of 3 days. 0 Trend of Estimate Steady State Soor March as a second 00

Days after 2/5/20 Created by Sören Thiering (06/19/2020). Email: soeren.thiering@hs-anhalt.de

100

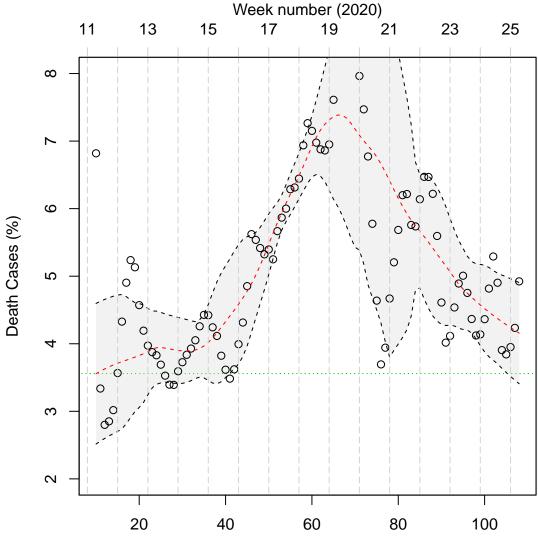
120

Week number (2020)
2 13 14 15 16 17 18 19 20 21 22 23 24 25

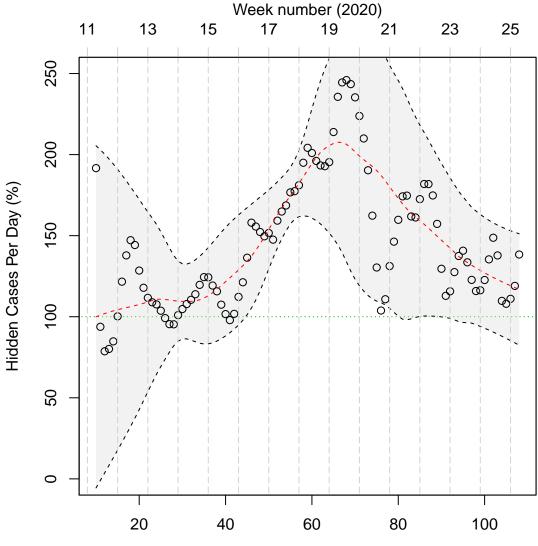


Days after 2/5/20

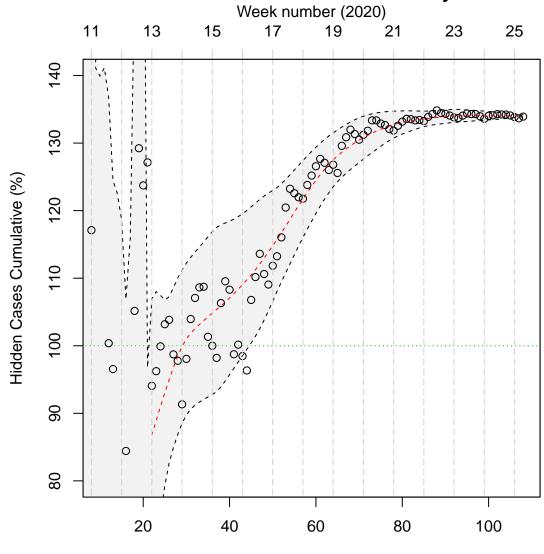
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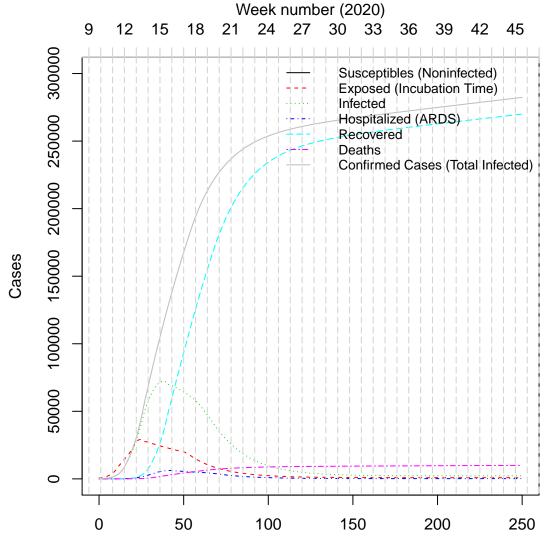
Days after 3/1/20 Created by Sören Thiering (06/19/2020). Email: soeren.thiering@hs-anhalt.de



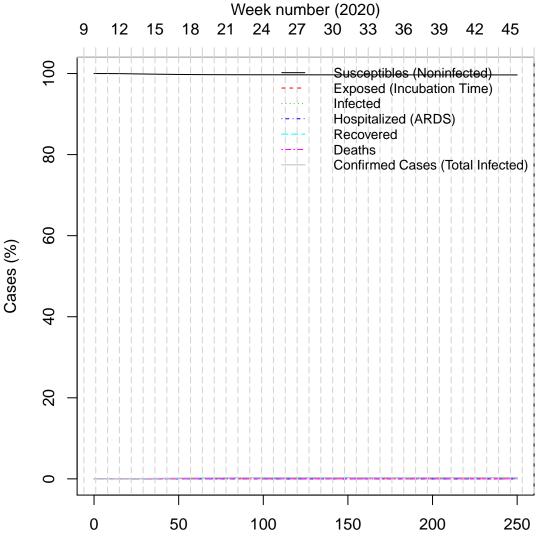
Days after 3/1/20 Created by Sören Thiering (06/19/2020). Email: soeren.thiering@hs-anhalt.de



Days after 3/1/20 Created by Sören Thiering (06/19/2020). Email: soeren.thiering@hs-anhalt.de

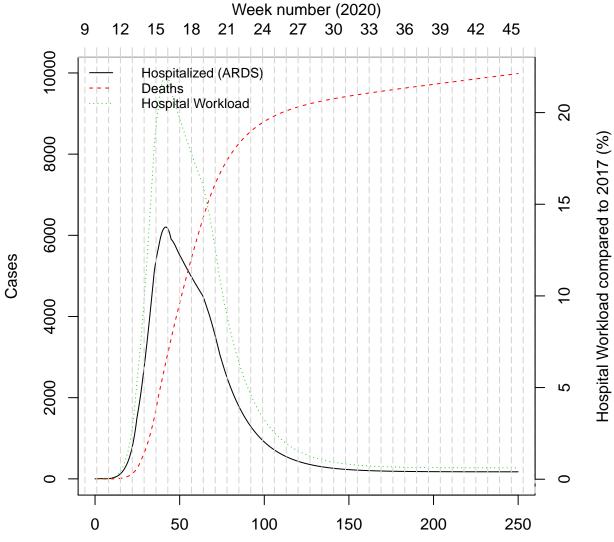


Days after 3/1/20 Created by Sören Thiering (06/19/2020). Email: soeren.thiering@hs-anhalt.de

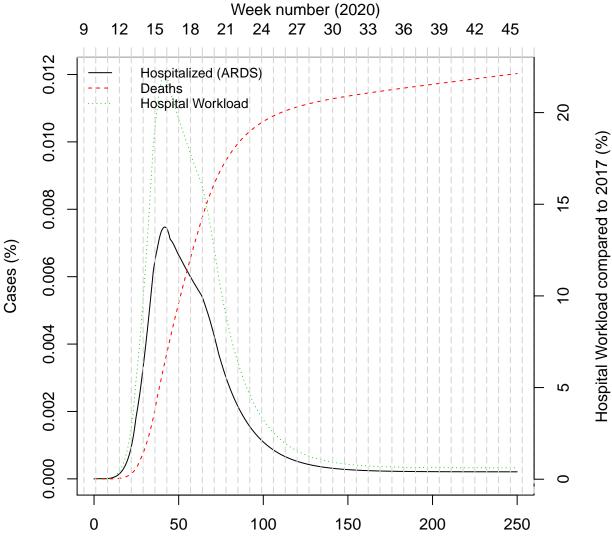


Days after 3/1/20

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Days after 3/1/20 Created by Sören Thiering (06/19/2020). Email: soeren.thiering@hs-anhalt.de

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 (06/19/2020). 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 (06/19/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 1 no social distancing and no lockdown Week number (2020) 45 12 15 18 36 Hospitalized (ARDS) Deaths 5000 Hospital Workload Hospital Workload compared to 2017 (%) 2000

90+99

5e+06

4e+06

3e+06

2e+06

1e+06

0e+00

0

50

100

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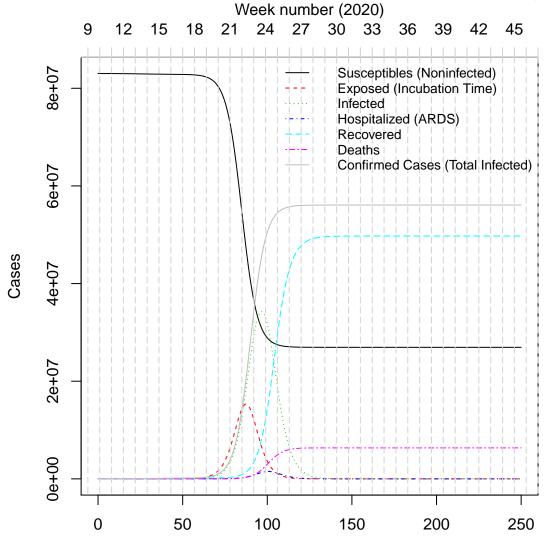
200

150

Scenario 1 no social distancing and no lockdown Week number (2020) 45 12 15 18 36 Hospitalized (ARDS) Deaths 5000 Hospital Workload Hospital Workload compared to 2017 (%) 9 Cases (%) α 50 100 150 200 250 0

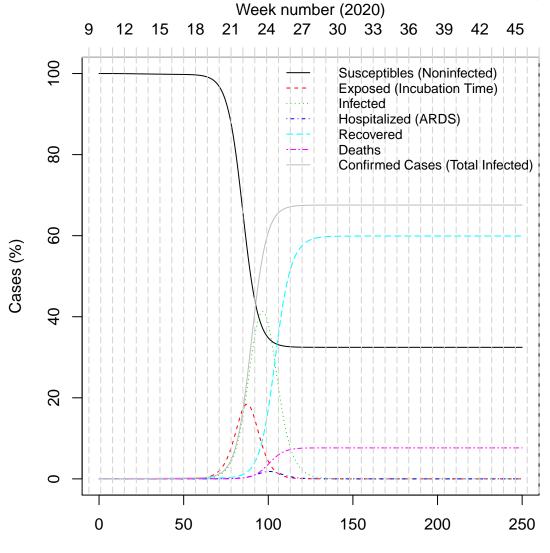
Days after 3/1/20 Created by Sören Thiering (06/19/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 2 exit after day 50 without social distancing



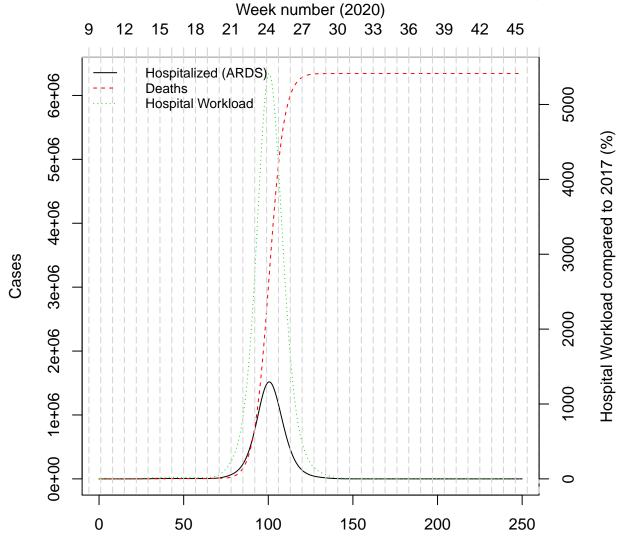
Days after 3/1/20 Created by Sören Thiering (06/19/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 2 exit after day 50 without social distancing



Days after 3/1/20 Created by Sören Thiering (06/19/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 2 exit after day 50 without social distancing



Days after 3/1/20 Created by Sören Thiering (06/19/2020). 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 (%)

 α

Cases (%)

Days after 3/1/20 Created by Sören Thiering (06/19/2020). 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 (06/19/2020). 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 (06/19/2020). 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 (%)

Days after 3/1/20 Created by Sören Thiering (06/19/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 3 exit after day 50 with social distancing Week number (2020) 12 15 18 36 45 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 (06/19/2020). 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) Deaths 6000000 R0 = 0.45500000 R0 = 0.6R0 = 0.85000000 R0 = 1R0 = 1.24500000 R0 = 1.4R0 = 1.64000000 R0 = 1.8Growth Rate (D^{-1}) 3500000 R0 = 2R0 = 2.23000000 R0 = 2.42500000 2000000 1500000 1000000 500000 0 0.32 0 50 100 150

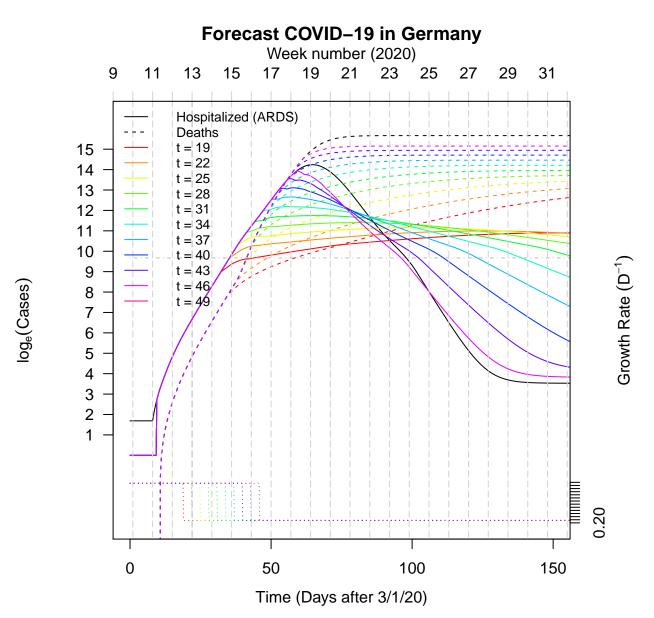
Created by Sören Thiering (06/19/2020). Email: soeren.thiering@hs-anhalt.de

Time (Days after 3/1/20)

Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 6500000 Hospitalized (ARDS) Deaths 6000000 t = 195500000 t = 22 t = 255000000 t = 28t = 314500000 t = 34t = 374000000 t = 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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