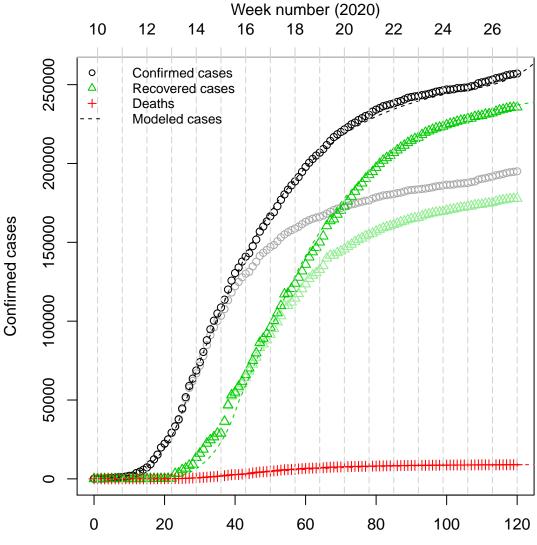
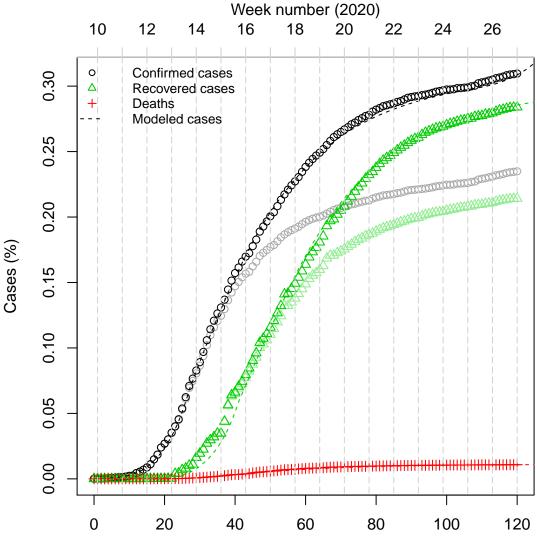
Situation vs Model COVID-19 in Germany

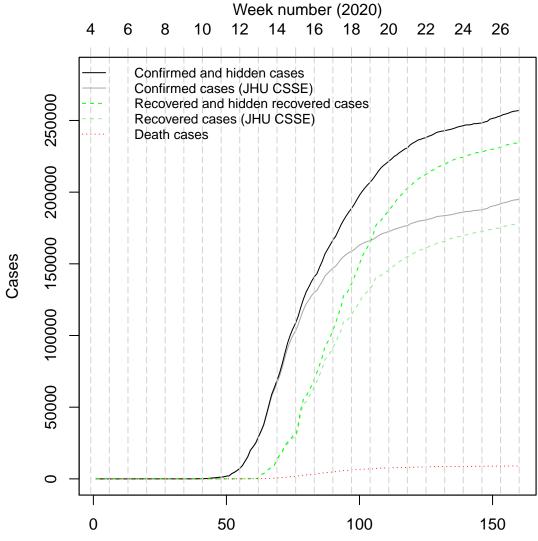


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Situation vs Model COVID-19 in Germany



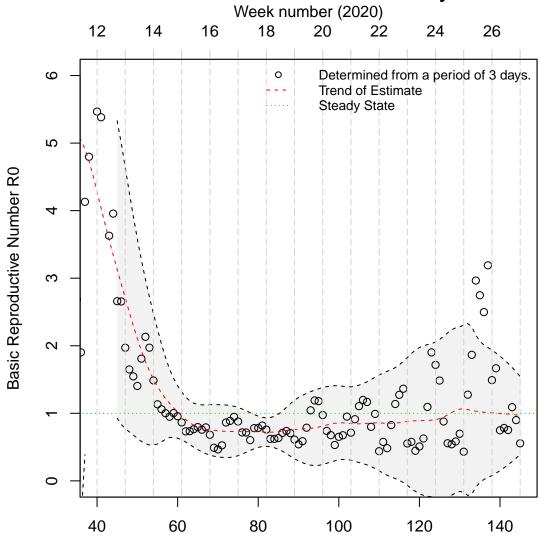
Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de



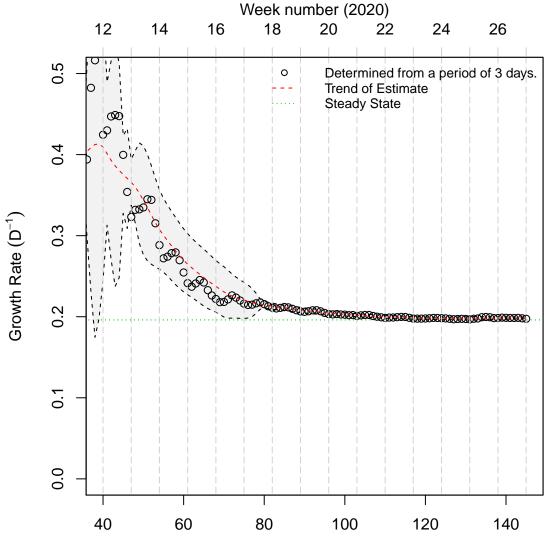
Days after 1/22/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

Situation COVID-19 in Germany Week number (2020) Confirmed cases Recovered cases 1st phase (diffusion / no with 2nd phase (uncontrolled growth) 3rd phase (social distancing) 4th phase (lockdows) 4th phase (lockdows) 5th phase (exit from lockdown) ∞

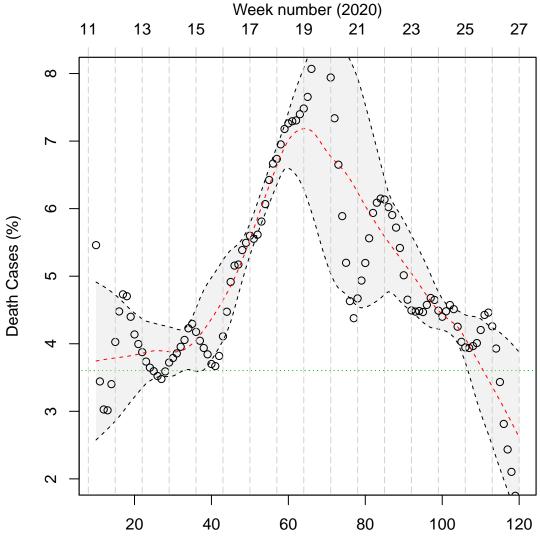
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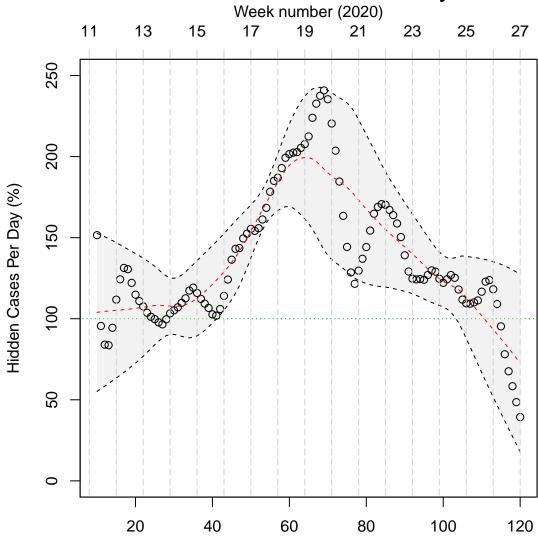
Days after 2/5/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de



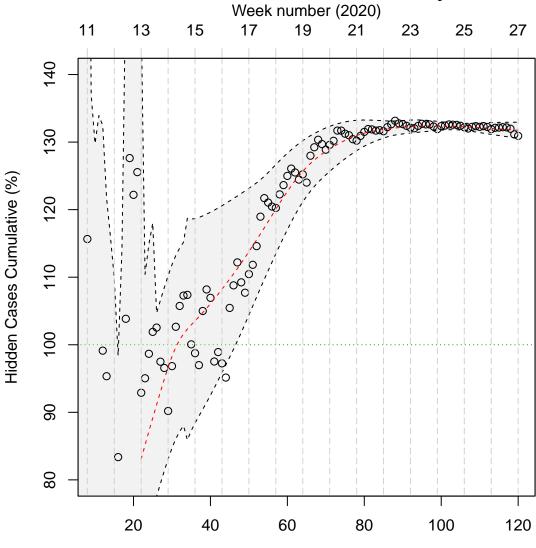
Days after 2/5/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de



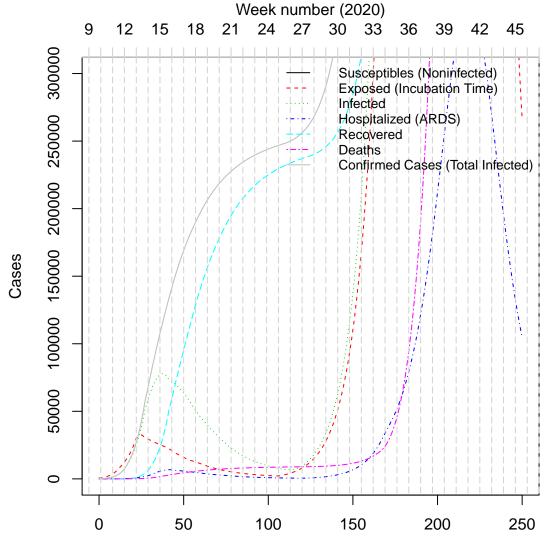
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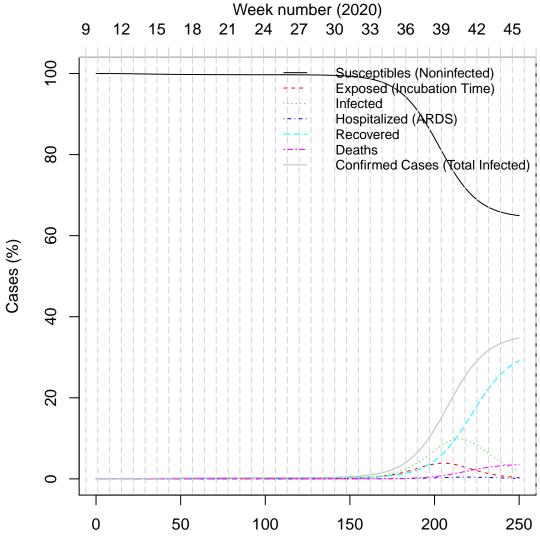
Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de



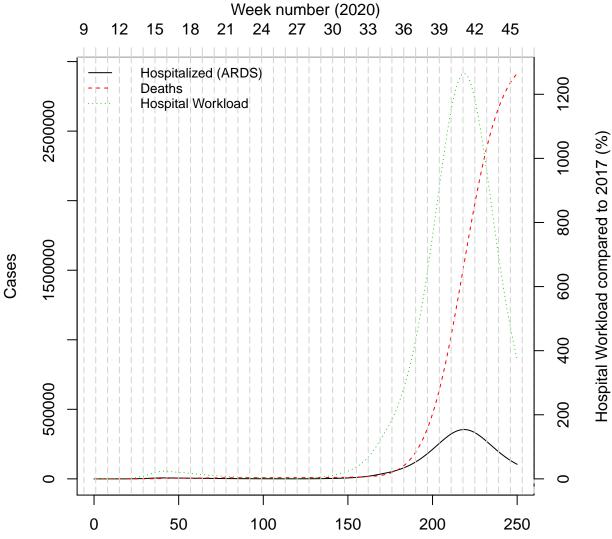
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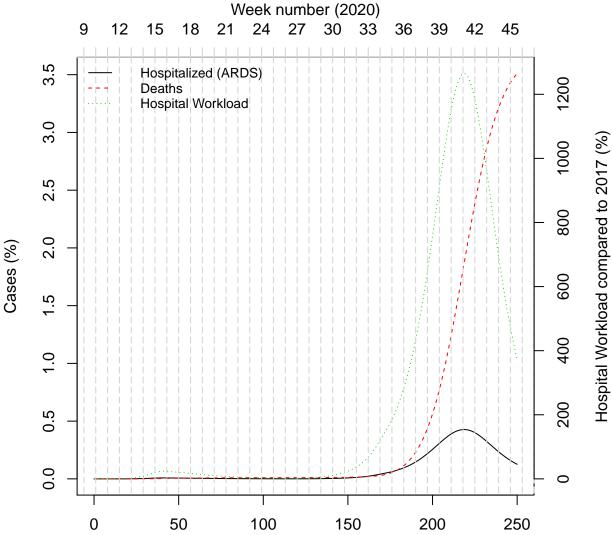
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Scenario 1 no social distancing and no lockdown Week number (2020) 24 45 12 15 18 21 36 39 8e+07 Susceptibles (Noninfected) Exposed (Incubation Time) Infected Hospitalized (ARDS) Recovered Deaths Confirmed Cases (Total Infected) 6e+07 Cases 4e+07 2e+07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

Days after 3/1/20 Created by Sören Thiering (06/30/2020). 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 (06/30/2020). 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 Hospital Workload Hospital Workload compared to 2017 (%)

90+99

5e+06

4e+06

3e+06

2e+06

1e+06

0e+00

0

50

100

Cases

Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

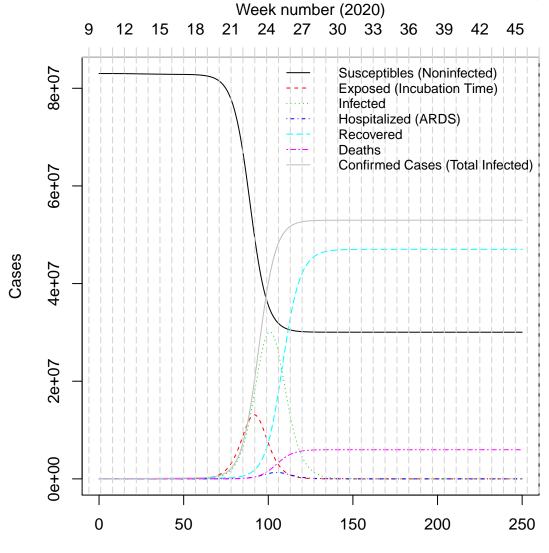
200

150

Scenario 1 no social distancing and no lockdown Week number (2020) 24 45 12 15 18 36 Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%) 9 Cases (%) α 0 50 100 150 200 250

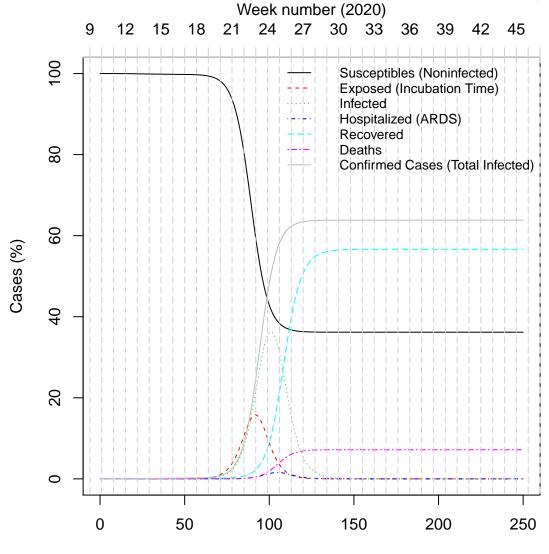
Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 2 exit after day 50 without social distancing



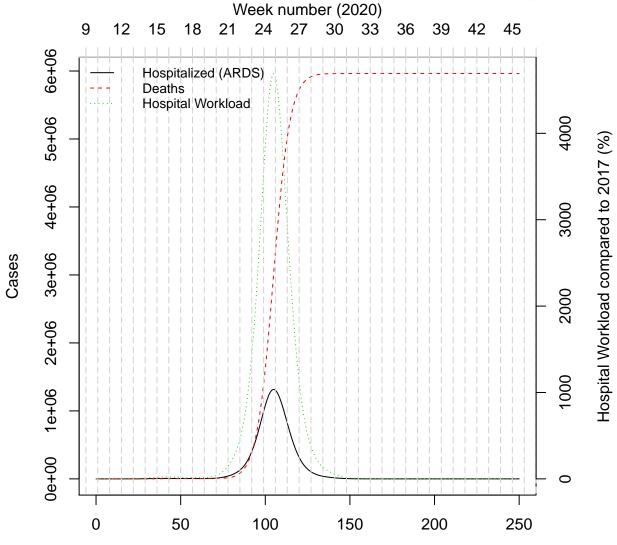
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Scenario 2 exit after day 50 without social distancing



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Scenario 2 exit after day 50 without social distancing



Days after 3/1/20 Created by Sören Thiering (06/30/2020). 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 (06/30/2020). Email: soeren.thiering@hs-anhalt.de

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

Days after 3/1/20 Created by Sören Thiering (06/30/2020). 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 (06/30/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 3 exit after day 50 with social distancing Week number (2020) 45 12 15 18 36 39 Hospitalized (ARDS) 4e+06 Deaths Hospital Workload 2000 Hospital Workload compared to 2017 (%) 3e+06 Cases 2e+06 1000 1e+06 00+00

Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

150

200

100

0

50

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 (06/30/2020). Email: soeren.thiering@hs-anhalt.de

Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 6000000 Hospitalized (ARDS) Deaths 5500000 R0 = 0.4R0 = 0.65000000 R0 = 0.8R0 = 14500000 R0 = 1.2R0 = 1.44000000 R0 = 1.6R0 = 1.83500000 Growth Rate (D^{-1}) R0 = 23000000 R0 = 2.2R0 = 2.42500000 2000000 1500000 1000000 500000 0 0.32 0 50 100 150

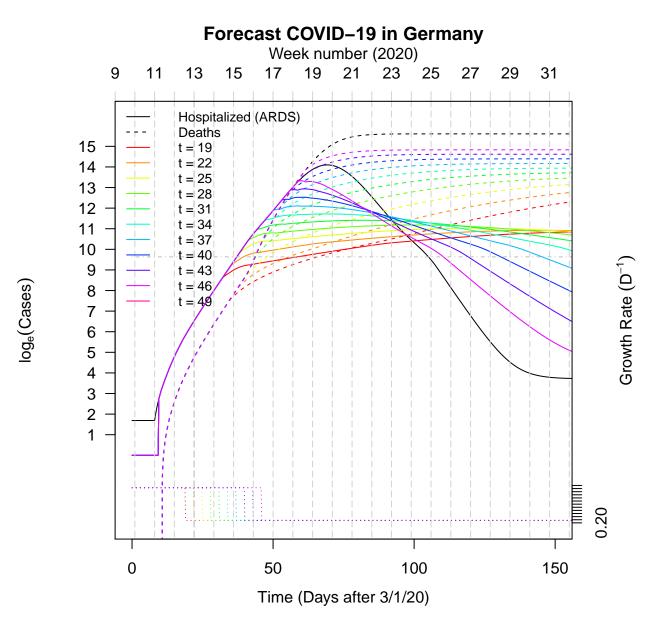
Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

Time (Days after 3/1/20)

Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 19 25 27 29 31 6000000 Hospitalized (ARDS) Deaths 5500000 t = 19t = 225000000 t = 25t = 284500000 t = 31 t = 344000000 t = 37t = 403500000 Growth Rate (D^{-1}) t = 433000000 t = 46Cases t = 492500000 2000000 1500000 1000000 500000 0 0.20 150 0 50 100

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Time (Days after 3/1/20)



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