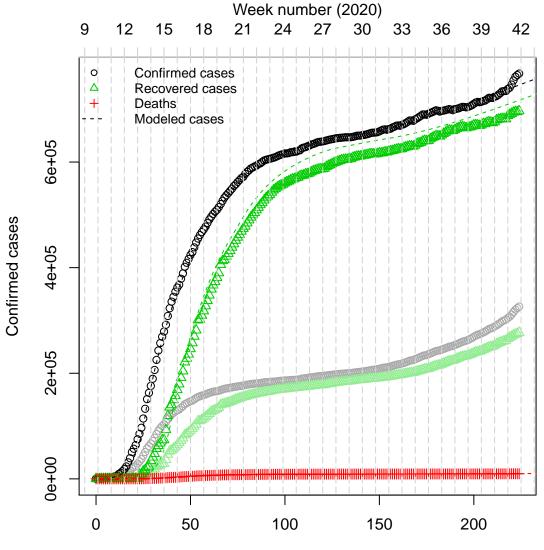
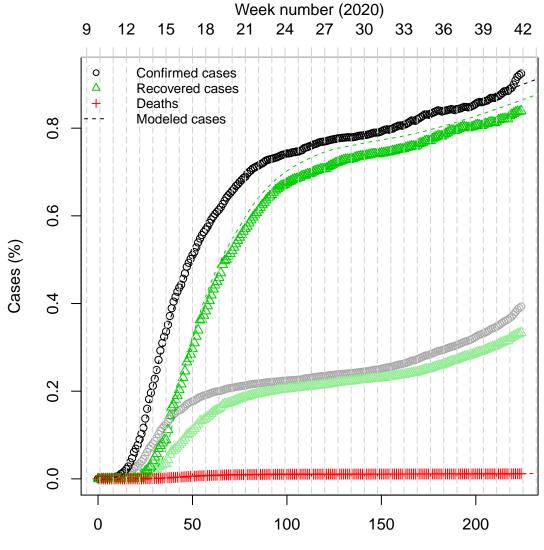
Situation vs Model COVID-19 in Germany



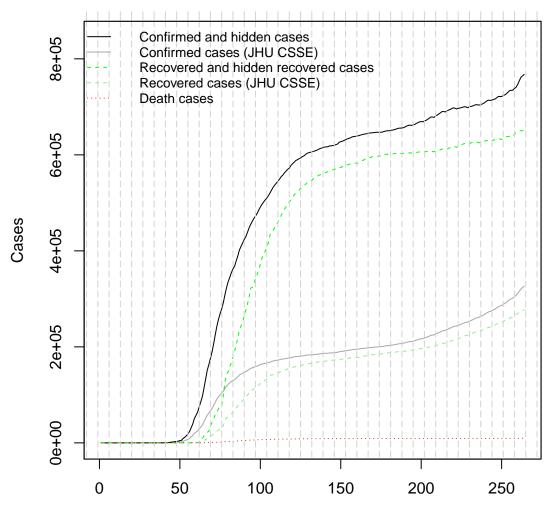
Days after 3/1/20 Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de

Situation vs Model COVID-19 in Germany



Days after 3/1/20 Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de

Week number (2020) 3 5 7 9 12 15 18 21 24 27 30 33 36 39 42



Days after 1/22/20

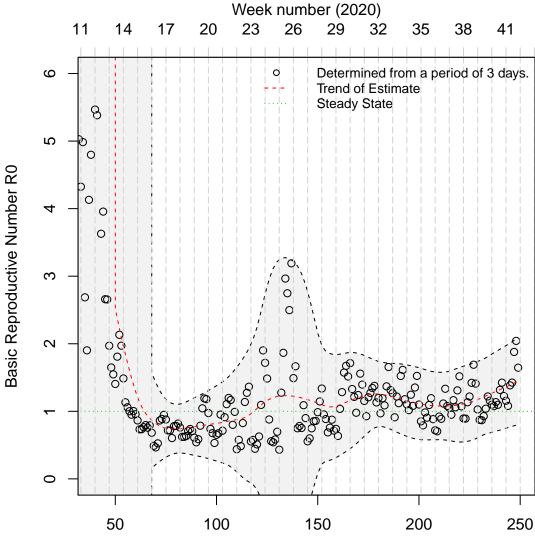
Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de

Week number (2020) 12 15 18 24 30 33 36 39 Confirmed cases Recovered cases 1st phase (dission 7 no growth) 12 2nd phase social distancing) 4th phase (lackdown) 5th phas (Sit from lockdown) 10 ∞ 9 α 0 50 100 150 200 250

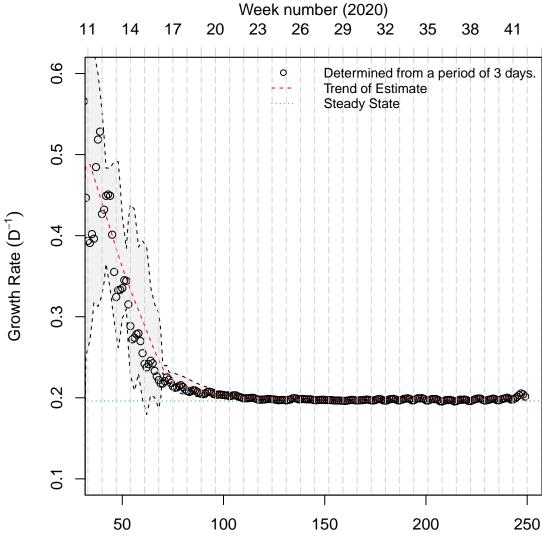
 $\log_{
m e}({\sf Cases})$

Days after 1/22/20

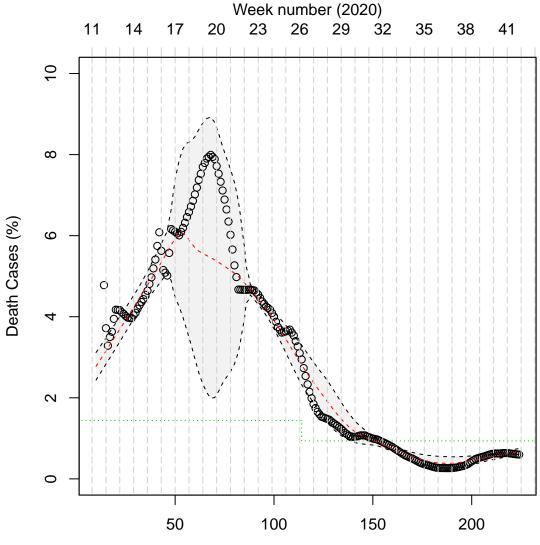
Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de



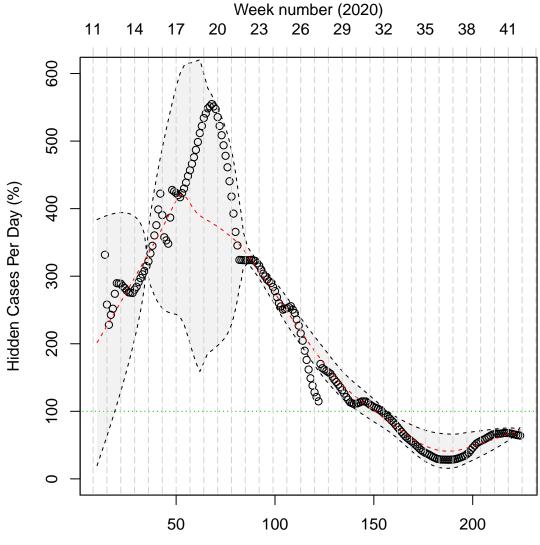
Days after 2/5/20 Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de



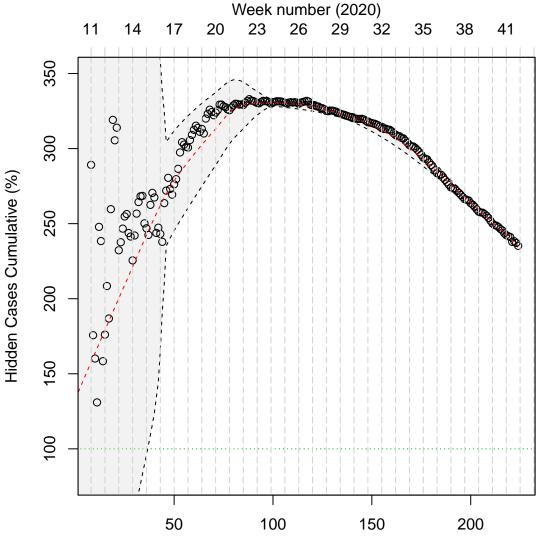
Days after 2/5/20 Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de



Days after 3/1/20 Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de

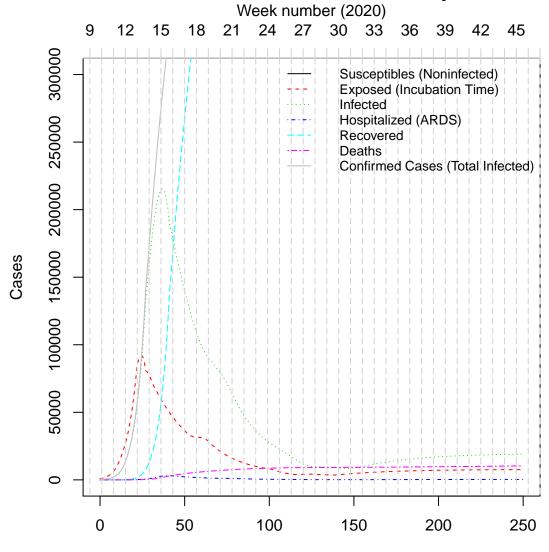


Days after 3/1/20 Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de



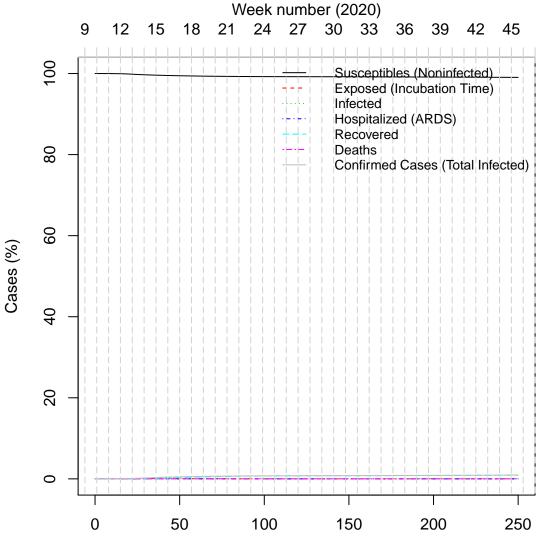
Days after 3/1/20 Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de

Forecast COVID-19 in Germany



Days after 3/1/20 Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de

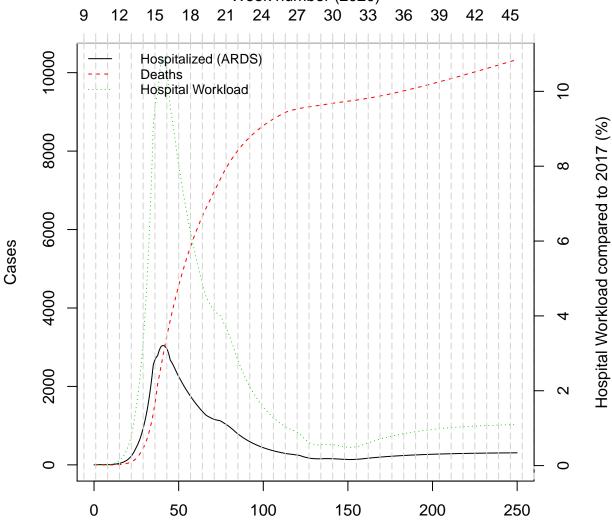
Forecast COVID-19 in Germany



Days after 3/1/20

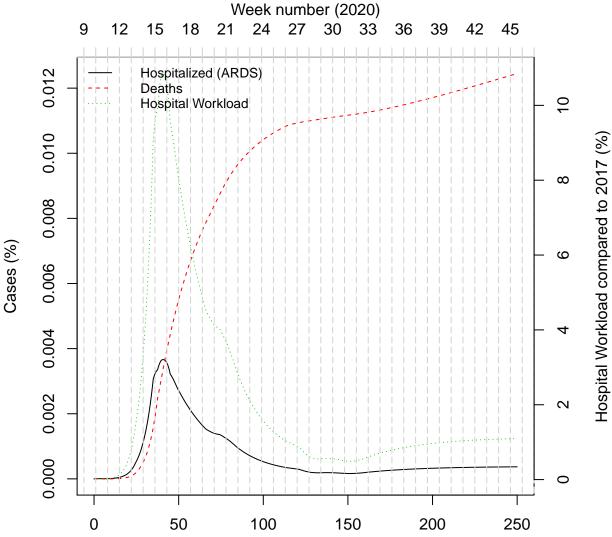
Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de

Forecast COVID-19 in Germany Week number (2020) 5 18 21 24 27 30 33 36 39



Days after 3/1/20 Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de

Forecast COVID-19 in Germany



Days after 3/1/20 Created by Sören Thiering (10/12/2020). 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 (10/12/2020). 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 (10/12/2020). Email: soeren.thiering@hs-anhalt.de

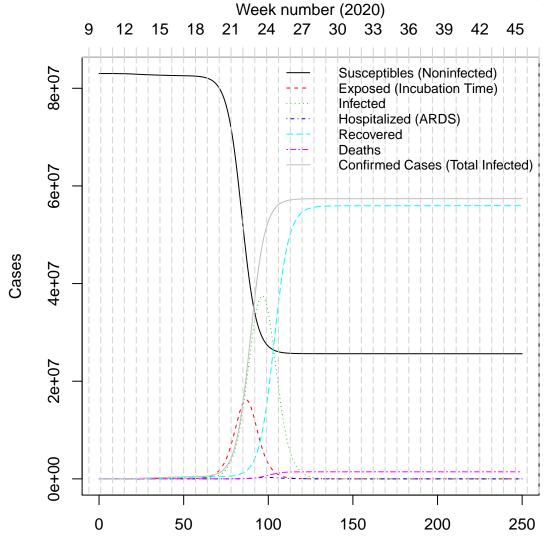
Scenario 1 no social distancing and no lockdown Week number (2020) Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%) Cases

Days after 3/1/20 Created by Sören Thiering (10/12/2020). 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 1000 Hospital Workload Hospital Workload compared to 2017 (%) Cases (%) 0.5 0.0 0 50 100 150 200 250

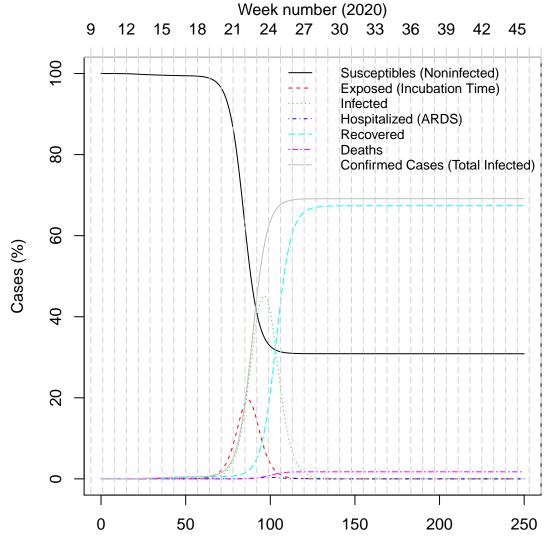
Days after 3/1/20 Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 2 exit after day 50 without social distancing



Days after 3/1/20 Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 2 exit after day 50 without social distancing



Days after 3/1/20 Created by Sören Thiering (10/12/2020). 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 (10/12/2020). 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 Hospitalized (ARDS) 1000 Deaths Hospital Workload 1.5 Hospital Workload compared to 2017 (%) Cases (%) 0.5 200 0.0

Days after 3/1/20 Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

100

0

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 (10/12/2020). 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 (10/12/2020). 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) Deaths Hospital Workload 9 Hospital Workload compared to 2017 (%) 500 400 300 200 100

1e+06

8e+05

6e+05

4e+05

2e+05

00+00

0

50

Cases

Days after 3/1/20 Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

Scenario 3 exit after day 50 with social distancing Week number (2020) 45 12 15 18 36 39 Hospitalized (ARDS) Deaths Hospital Workload 9 Hospital Workload compared to 2017 (%) 0.8 Cases (%) 9.0 300 200 0.0

Days after 3/1/20 Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

100

0

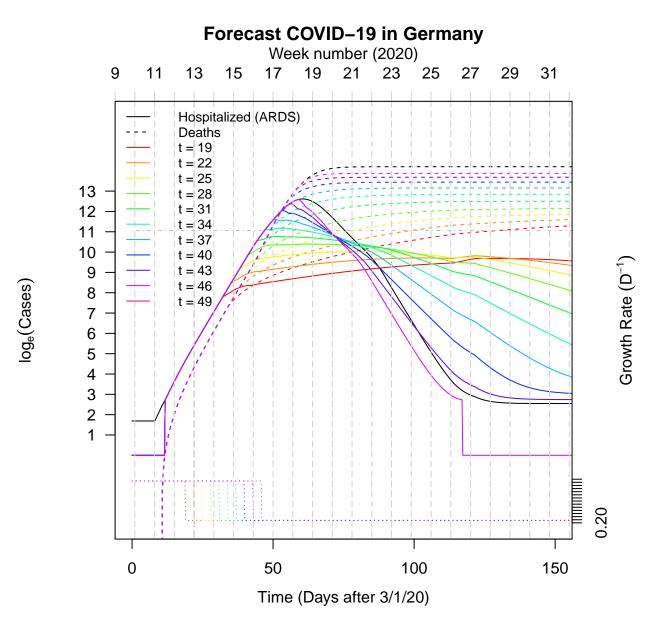
Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 Hospitalized (ARDS) 1400000 Deaths R0 = 0.4R0 = 0.61200000 R0 = 0.8R0 = 1R0 = 1.21000000 R0 = 1.4R0 = 1.6R0 = 1.8Growth Rate (D⁻¹) 800000 R0 = 2R0 = 2.2Cases R0 = 2.4600000 400000 200000 0 0.32 0 50 100 150 Time (Days after 3/1/20)

Created by Sören Thiering (10/12/2020). Email: soeren.thiering@hs-anhalt.de

Forecast COVID-19 in Germany Week number (2020) 9 15 19 31 11 13 17 25 27 29 Hospitalized (ARDS) 1400000 Deaths t = 19 t = 22 1200000 t = 25t = 28t = 31 1000000 t = 34t = 37t = 40Growth Rate (D^{-1}) 800000 t = 43t = 46Cases t = 49600000 400000 200000 0 0.20 150 0 50 100

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Time (Days after 3/1/20)



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