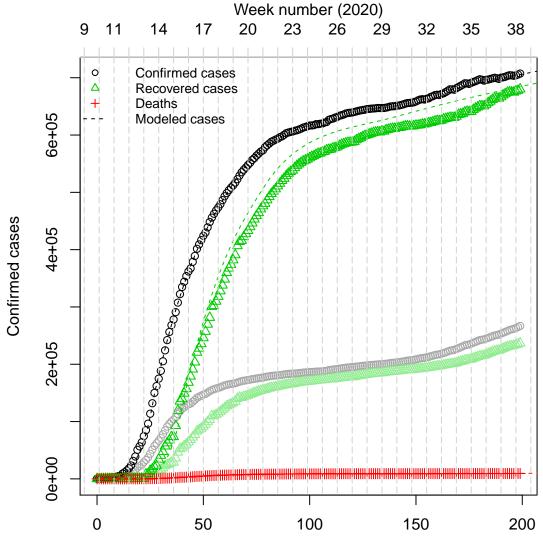
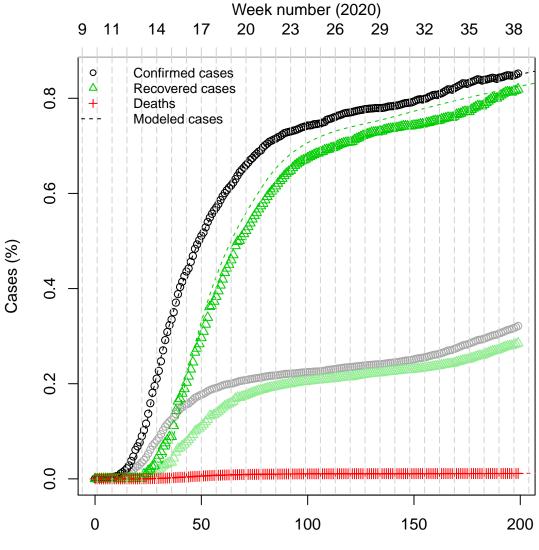
Situation vs Model COVID-19 in Germany

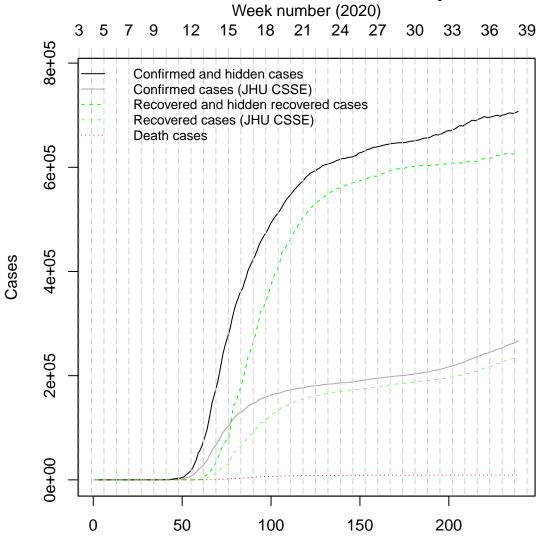


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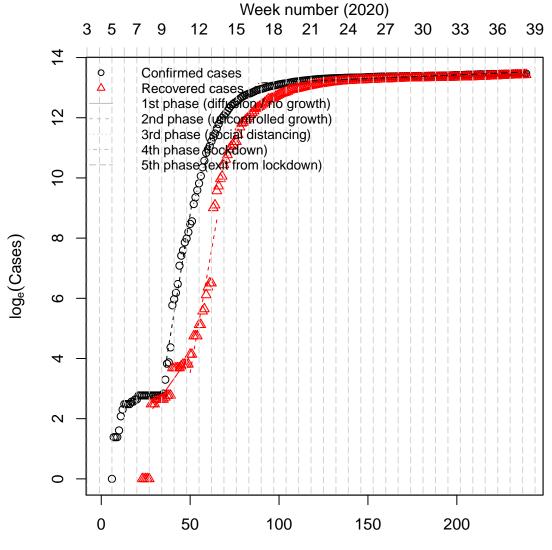
Situation vs Model COVID-19 in Germany



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Days after 1/22/20 Created by Sören Thiering (09/17/2020). Email: soeren.thiering@hs-anhalt.de



Days after 1/22/20 Created by Sören Thiering (09/17/2020). Email: soeren.thiering@hs-anhalt.de

Week number (2020) 21 23 25 15 19 31 33 35 37 9 Determined from a period of 3 days. Trend of Estimate Steady State 2 Basic Reproductive Number R0 α 100 50 150 200

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Week number (2020) 21 23 25 15 19 31 33 35 37 Determined from a period of 3 days. Trend of Estimate Steady State 0.2

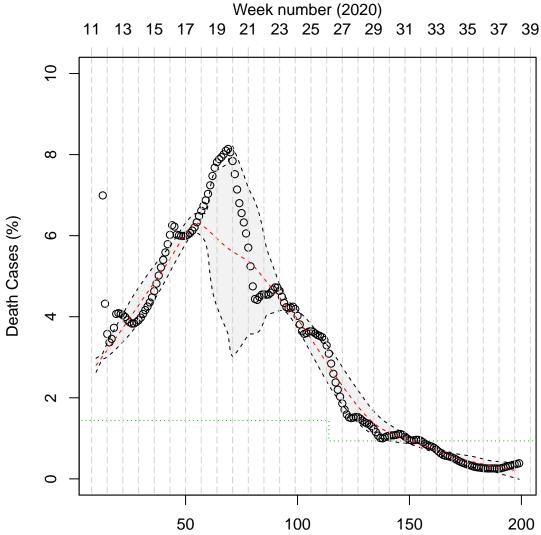
Growth Rate (D⁻¹)

50

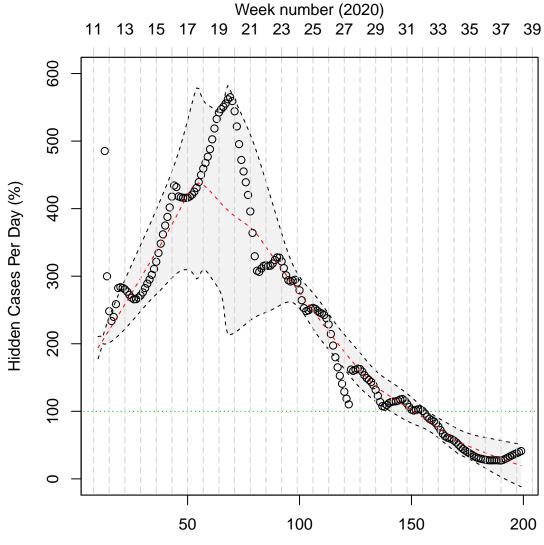
100

Days after 2/5/20 Created by Sören Thiering (09/17/2020). Email: soeren.thiering@hs-anhalt.de

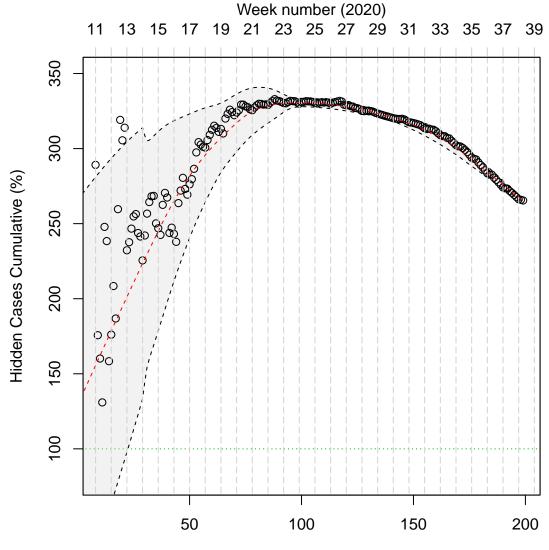
150



Days after 3/1/20 Created by Sören Thiering (09/17/2020). Email: soeren.thiering@hs-anhalt.de

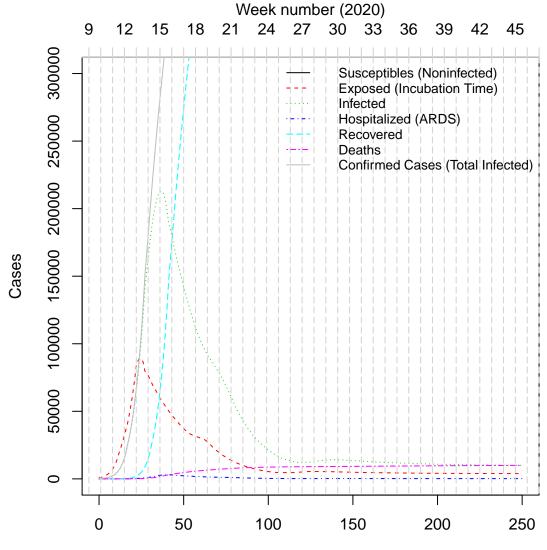


Days after 3/1/20 Created by Sören Thiering (09/17/2020). Email: soeren.thiering@hs-anhalt.de



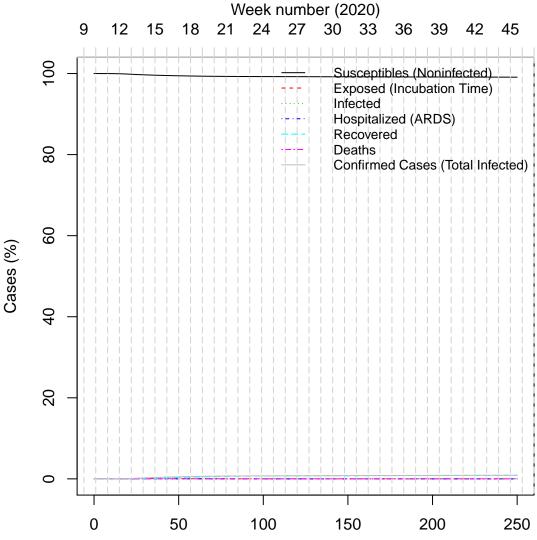
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Forecast COVID-19 in Germany



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Forecast COVID-19 in Germany



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

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Forecast COVID-19 in Germany Week number (2020) 45 12 15 18 36 39 42 Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%) 9

0.012

0.010

0.008

900.0

0.004

0.002

0.000

0

50

100

Cases (%)

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200

150

0

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 (09/17/2020). 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 (%)

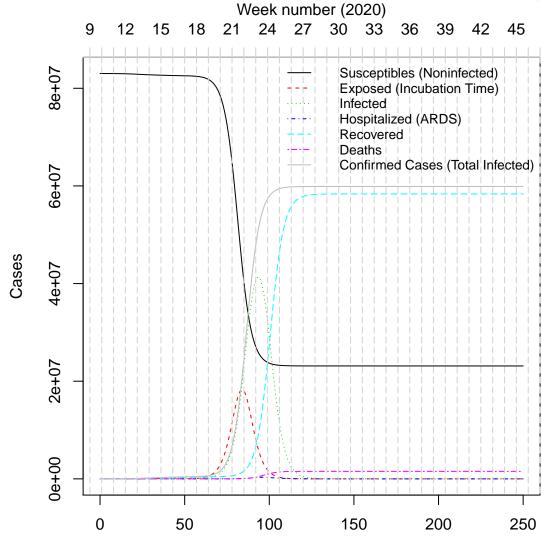
Days after 3/1/20 Created by Sören Thiering (09/17/2020). Email: soeren.thiering@hs-anhalt.de

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 (09/17/2020). Email: soeren.thiering@hs-anhalt.de

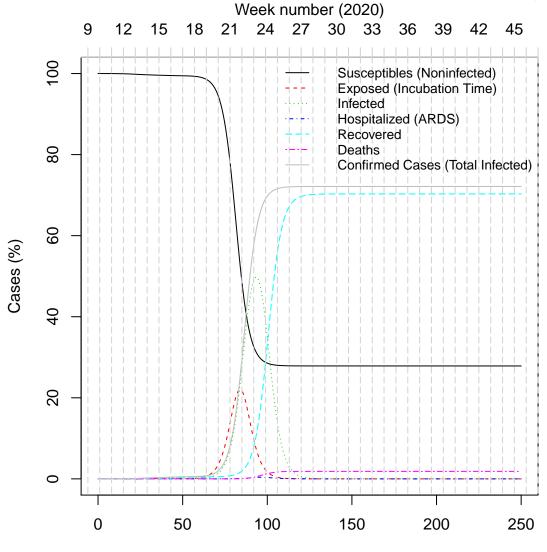
Scenario 1 no social distancing and no lockdown Week number (2020) 45 12 15 18 36 1200 Hospitalized (ARDS) Deaths Hospital Workload 1000 Hospital Workload compared to 2017 (%) 1.5 Cases (%) 9 0.5 200 0.0 0 50 100 150 200 250

Days after 3/1/20 Created by Sören Thiering (09/17/2020). Email: soeren.thiering@hs-anhalt.de

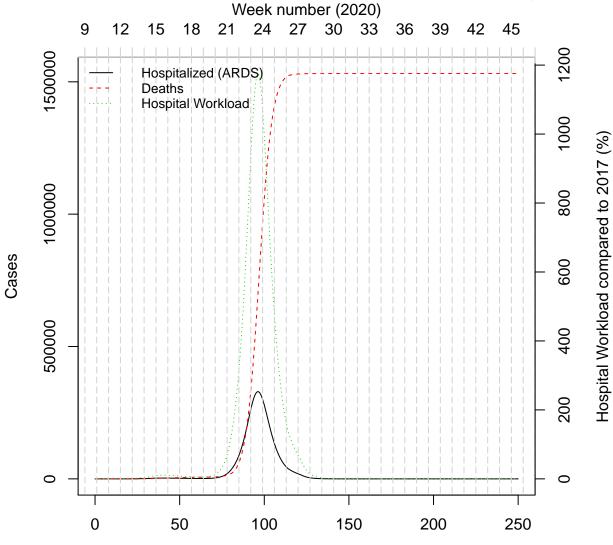


Days after 3/1/20

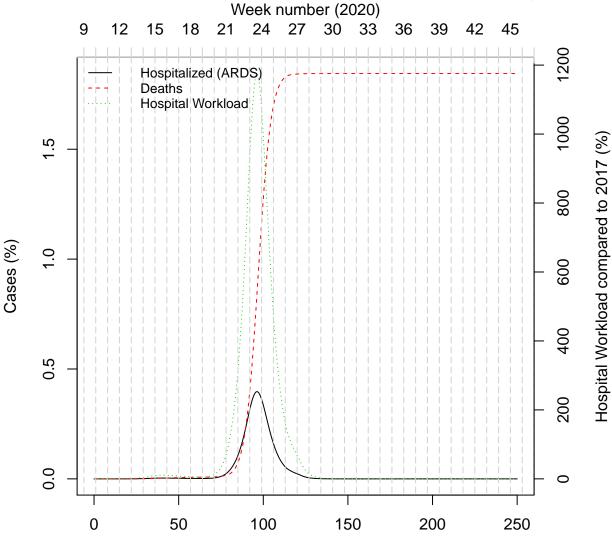
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Days after 3/1/20 Created by Sören Thiering (09/17/2020). Email: soeren.thiering@hs-anhalt.de

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 (09/17/2020). 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 (09/17/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 3 exit after day 50 with social distancing Week number (2020) 12 24 45 15 18 36 39 8e+05 Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%) 6e+05 4e+05 2e+05 00+00

Days after 3/1/20 Created by Sören Thiering (09/17/2020). Email: soeren.thiering@hs-anhalt.de

150

200

100

0

50

Scenario 3 exit after day 50 with social distancing Week number (2020) 24 45 12 15 18 36 39 Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%) 9.0 Cases (%) 0.4 0.0 250 0 50 100 150 200

Days after 3/1/20 Created by Sören Thiering (09/17/2020). Email: soeren.thiering@hs-anhalt.de

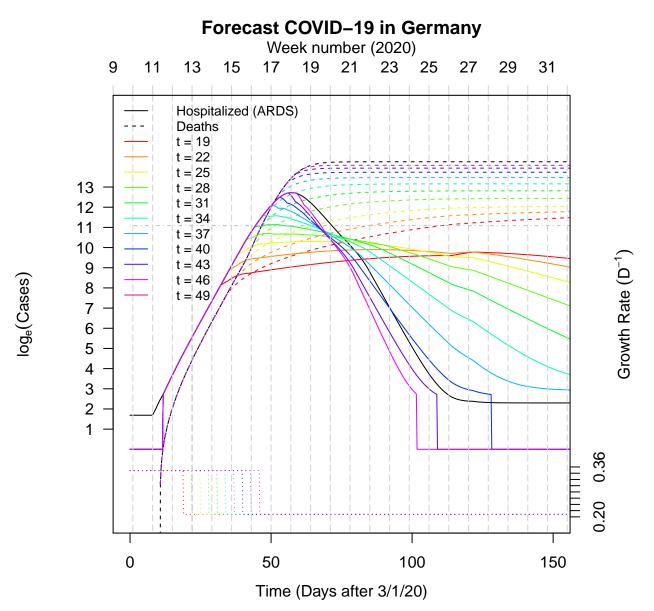
Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 1600000 Hospitalized (ARDS) Deaths R0 = 0.41400000 R0 = 0.6R0 = 0.81200000 R0 = 1R0 = 1.2R0 = 1.41000000 R0 = 1.6R0 = 1.8Growth Rate (D^{-1}) R0 = 2800000 R0 = 2.2Cases R0 = 2.4600000 400000 200000 0 0.32 0 50 100 150 Time (Days after 3/1/20)

Created by Sören Thiering (09/17/2020). Email: soeren.thiering@hs-anhalt.de

Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 19 25 27 29 31 1600000 Hospitalized (ARDS) Deaths 1400000 t = 19t = 22 t = 251200000 t = 28t = 31 t = 341000000 t = 37t = 40Growth Rate (D^{-1}) t = 43000008 t = 46Cases t = 49600000 400000 200000 0 0.36 0.20 150 0 50 100

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Time (Days after 3/1/20)



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