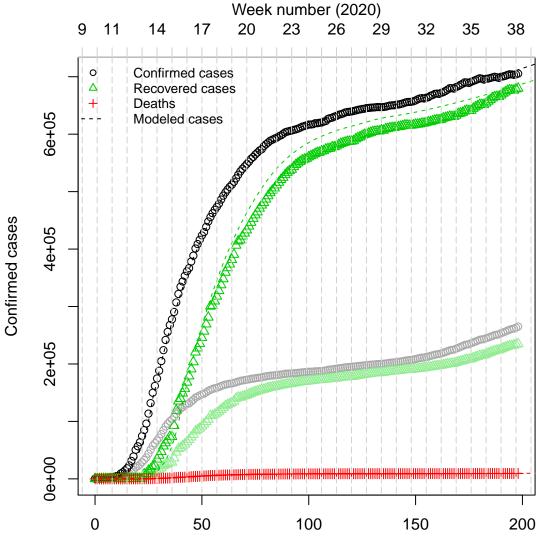
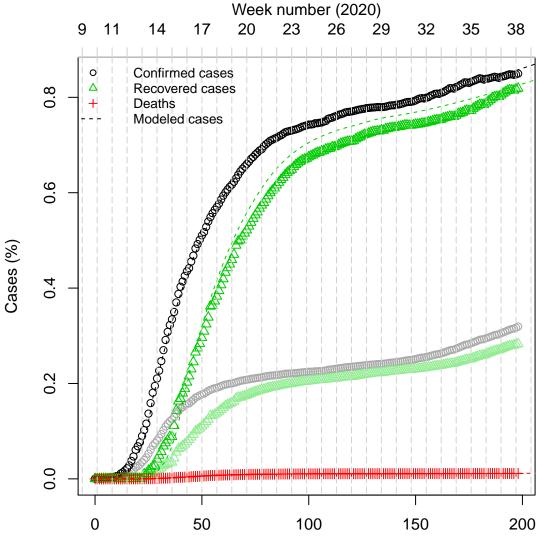
Situation vs Model COVID-19 in Germany

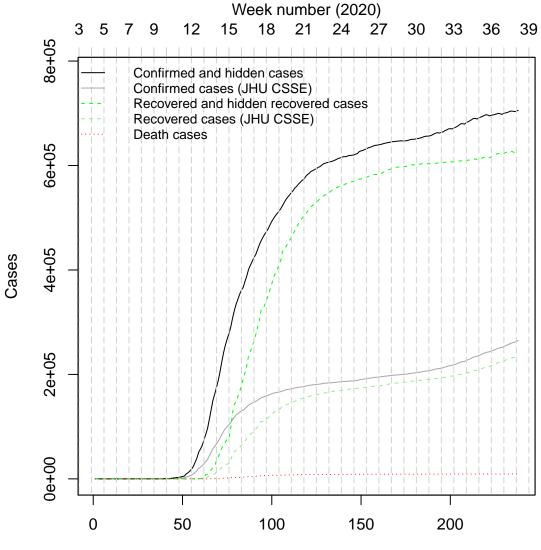


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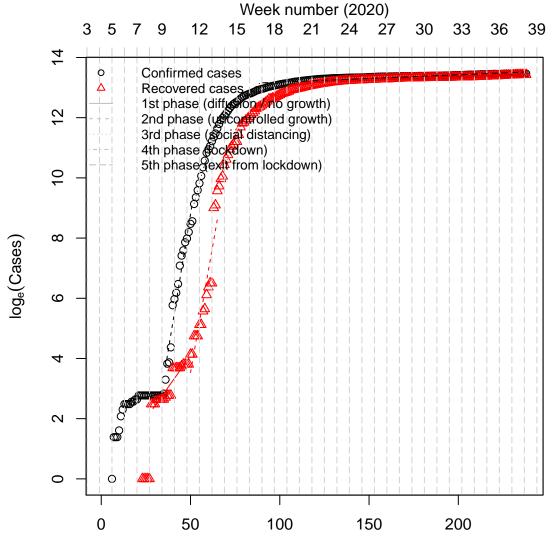
Situation vs Model COVID-19 in Germany



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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) Determined from a period of 3 days. Trend of Estimate Steady State Basic Reproductive Number R0 α

Days after 2/5/20 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 39 Determined from a period of 3 days. Trend of Estimate Steady State

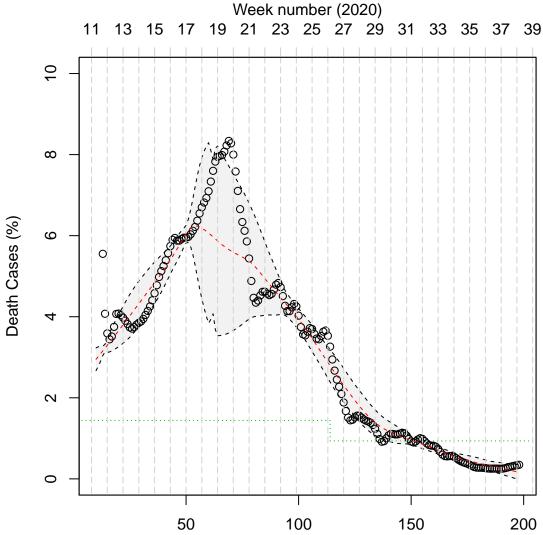
Growth Rate (D⁻¹)

50

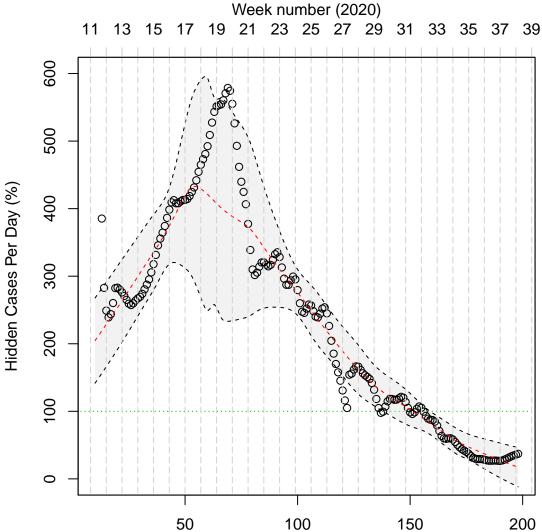
Days after 2/5/20 Created by Sören Thiering (09/17/2020). Email: soeren.thiering@hs-anhalt.de

150

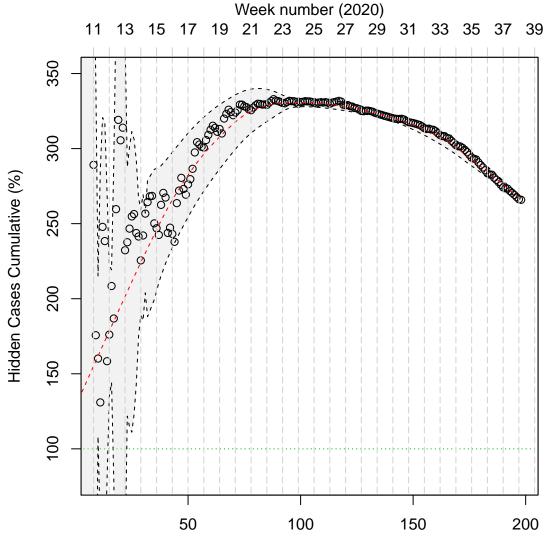
200



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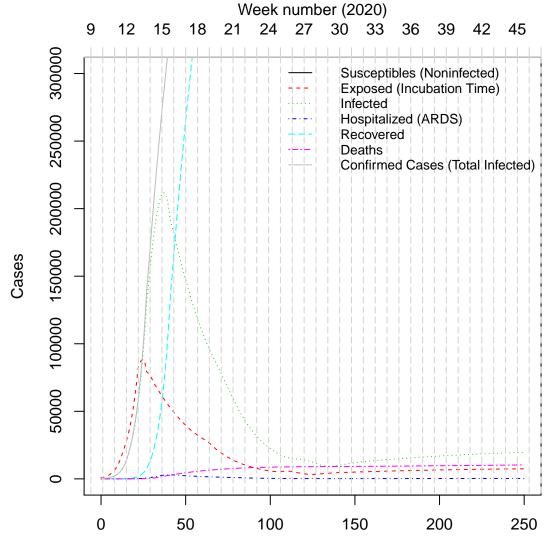


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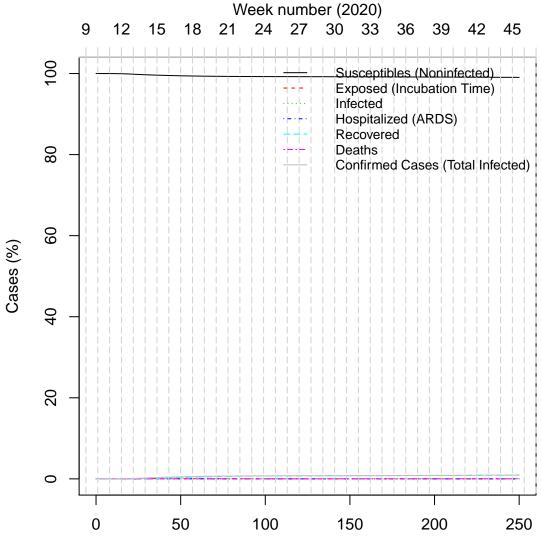
Forecast COVID-19 in Germany



Days after 3/1/20

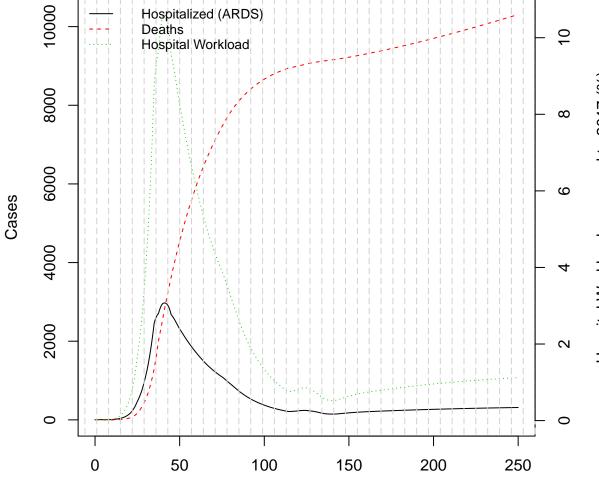
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Forecast COVID-19 in Germany



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) 45 15 18 36 39 42 Hospitalized (ARDS) Deaths 10 Hospital Workload compared to 2017 (%) 9



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Forecast COVID-19 in Germany Week number (2020) 45 12 15 18 36 39 42 0.012 Hospitalized (ARDS) Deaths 10 Hospital Workload 0.010 Hospital Workload compared to 2017 (%) 0.008 Cases (%) 9 900.0 0.004 0.002

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

150

200

100

0

250

0.000

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 (%)

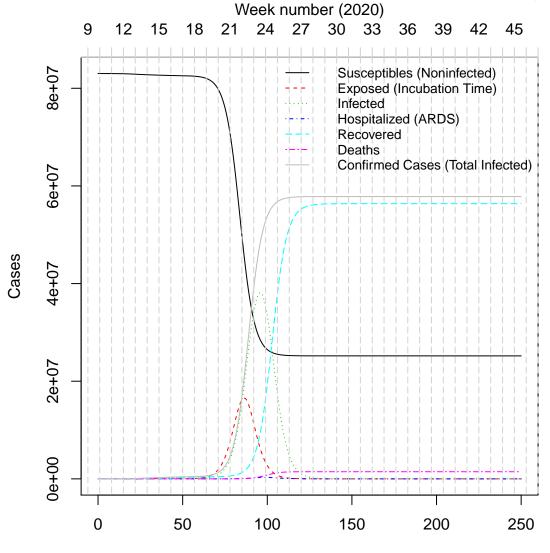
Cases

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 Hospitalized (ARDS) Deaths 1000 Hospital Workload 1.5 Hospital Workload compared to 2017 (%) Cases (%) 0.5 0.0 0 50 100 150 200 250

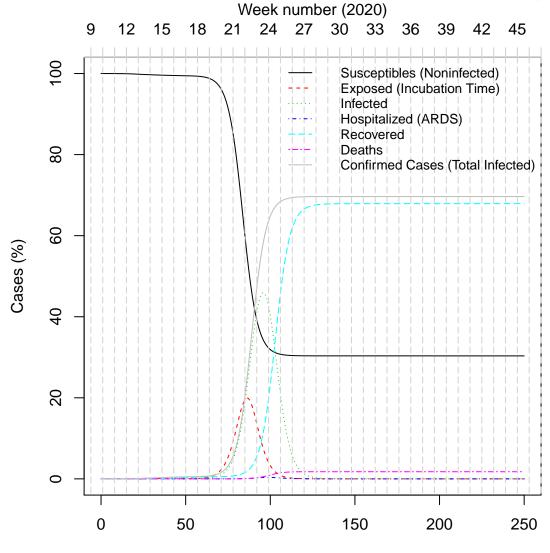
Days after 3/1/20 Created by Sören Thiering (09/17/2020). Email: soeren.thiering@hs-anhalt.de

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 (%)

Cases

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

Scenario 2 exit after day 50 without social distancing Week number (2020) Hospitalized (ARDS) Deaths Hospital Workload 1.5 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 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) 45 12 15 18 36 Hospitalized (ARDS) Deaths Hospital Workload 8e+05 009 Hospital Workload compared to 2017 (%) 6e+05 Cases 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

250

100

0

Scenario 3 exit after day 50 with social distancing Week number (2020) 12 24 45 15 18 36 39 Hospitalized (ARDS) Deaths Hospital Workload 009 Hospital Workload compared to 2017 (%) 0.8 Cases (%) 9.0 0.2 0.0

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

150

200

100

0

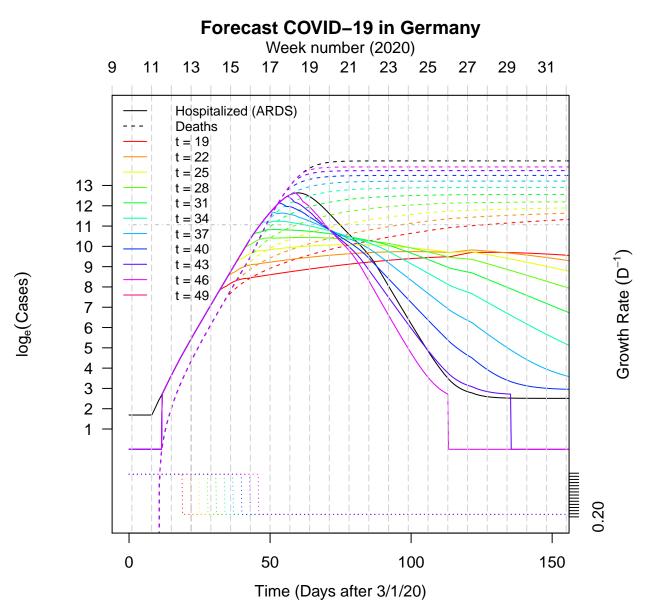
50

Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 Hospitalized (ARDS) Deaths 1400000 R0 = 0.4R0 = 0.6R0 = 0.81200000 R0 = 1R0 = 1.21000000 R0 = 1.4R0 = 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)

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Forecast COVID-19 in Germany Week number (2020) 9 15 19 31 11 13 17 25 27 29 Hospitalized (ARDS) Deaths 1400000 t = 19 t = 22 t = 251200000 t = 28t = 31 1000000 t = 34t = 37t = 40Growth Rate (D⁻¹) t = 43800000 t = 46Cases t = 49600000 400000 200000 0 0.20 150 0 50 100 Time (Days after 3/1/20)

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