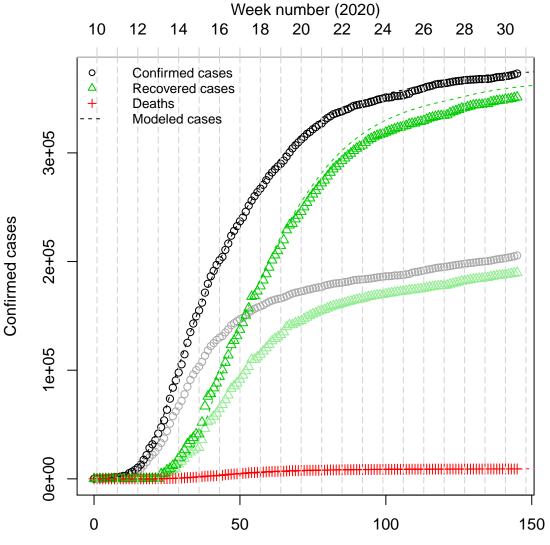
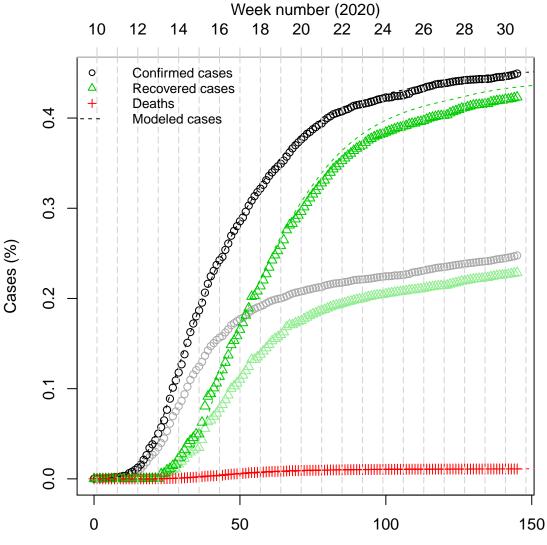
Situation vs Model COVID-19 in Germany



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Situation vs Model COVID-19 in Germany



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Week number (2020) 14 16 18 20 22 24 26 28 30 10 12 4e+05 Confirmed and hidden cases Confirmed cases (JHU CSSE) Recovered and hidden recovered cases Recovered cases (JHU CSSE) Death cases 3e+05 2e+05 1e+05 00+00

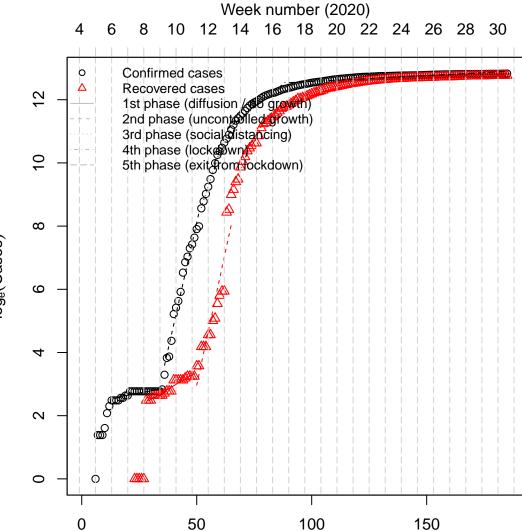
100

Cases

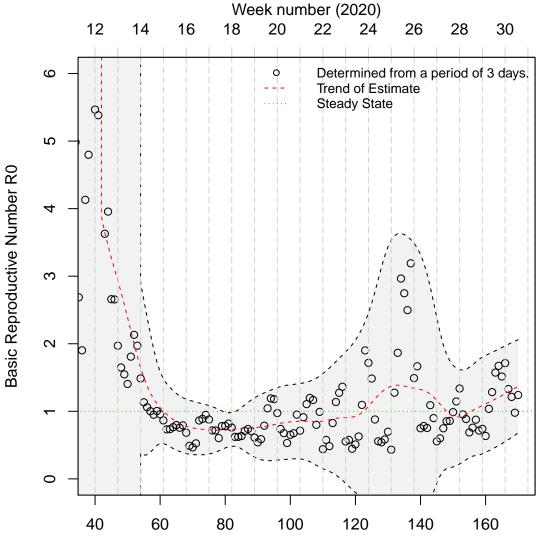
0

50

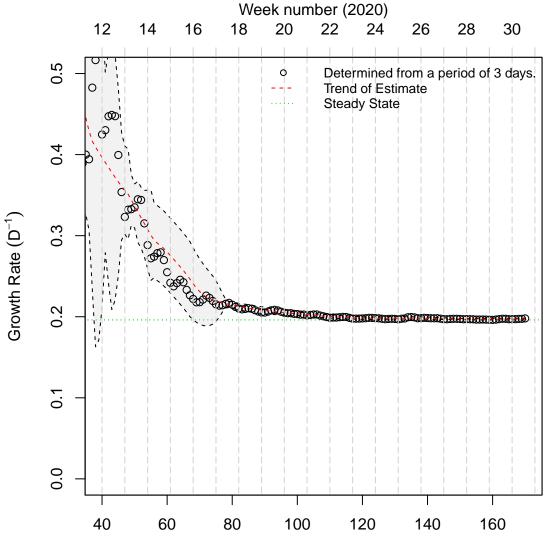
Days after 1/22/20 Created by Sören Thiering (07/25/2020). Email: soeren.thiering@hs-anhalt.de



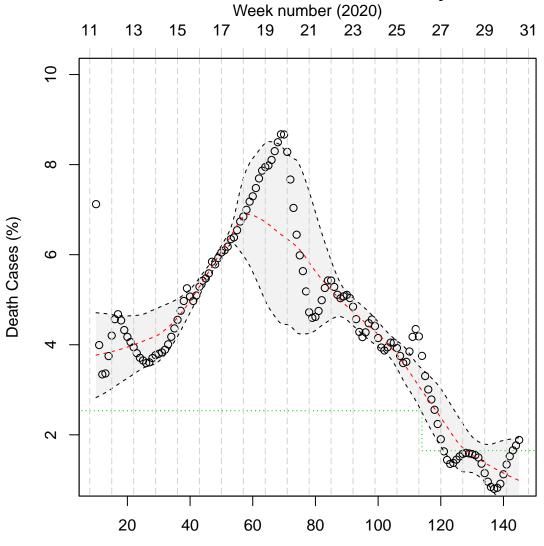
Days after 1/22/20 Created by Sören Thiering (07/25/2020). Email: soeren.thiering@hs-anhalt.de



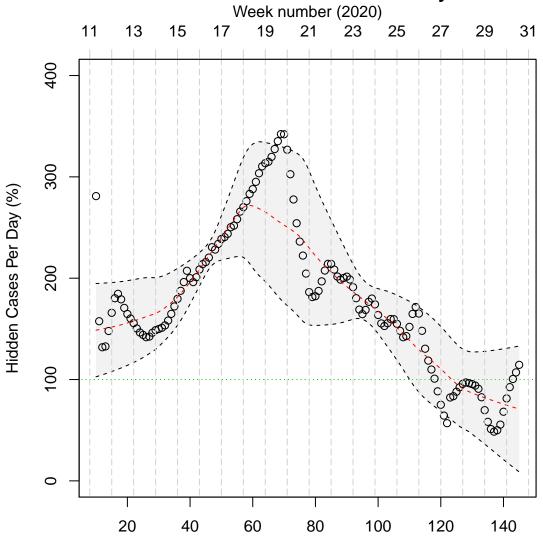
Days after 2/5/20 Created by Sören Thiering (07/25/2020). Email: soeren.thiering@hs-anhalt.de



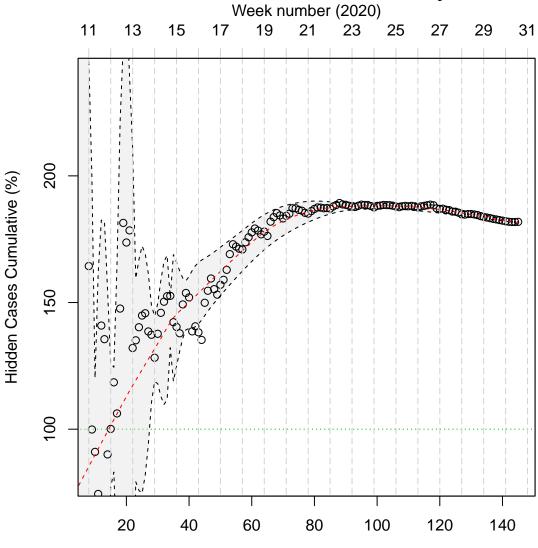
Days after 2/5/20 Created by Sören Thiering (07/25/2020). Email: soeren.thiering@hs-anhalt.de



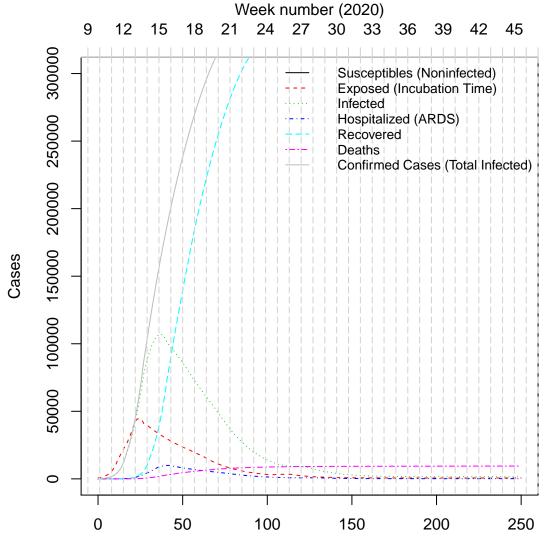
Days after 3/1/20 Created by Sören Thiering (07/25/2020). Email: soeren.thiering@hs-anhalt.de



Days after 3/1/20 Created by Sören Thiering (07/25/2020). Email: soeren.thiering@hs-anhalt.de

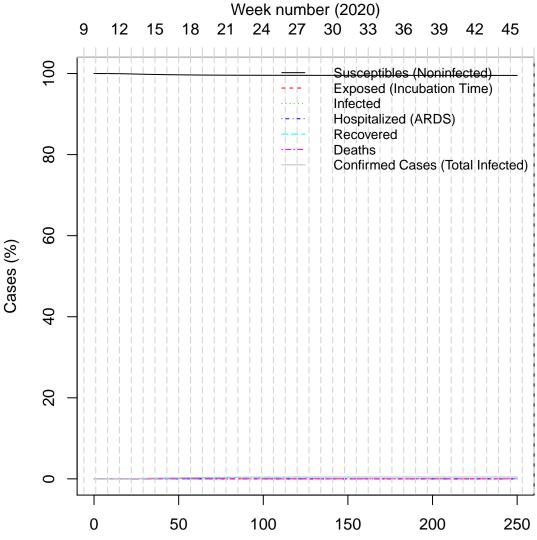


Days after 3/1/20 Created by Sören Thiering (07/25/2020). Email: soeren.thiering@hs-anhalt.de

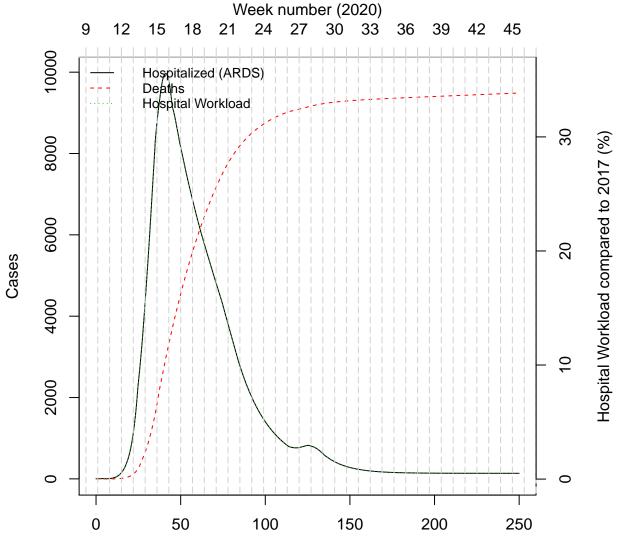


Days after 3/1/20

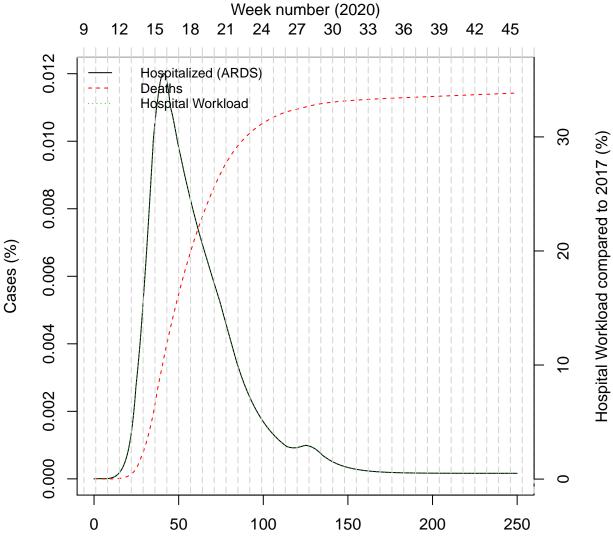
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Scenario 1 no social distancing and no lockdown Week number (2020) 24 45 12 15 18 21 36 39 8e+07 Susceptibles (Noninfected) Exposed (Incubation Time) Infected Hospitalized (ARDS) Recovered Deaths Confirmed Cases (Total Infected) 6e+07 Cases 4e+07 2e+07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

Days after 3/1/20 Created by Sören Thiering (07/25/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

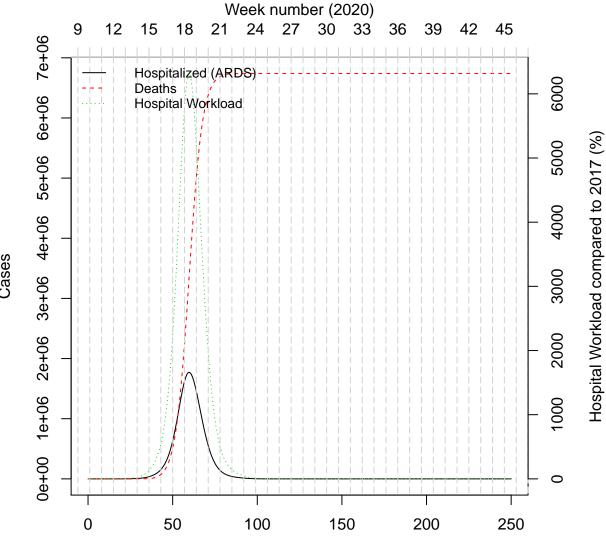
100

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 (07/25/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 1 no social distancing and no lockdown

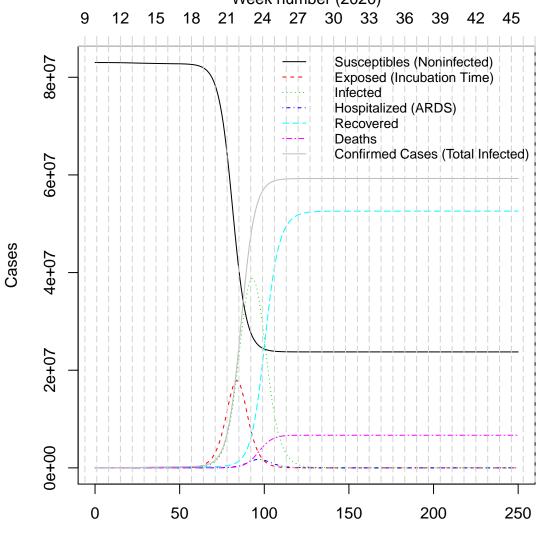


Days after 3/1/20 Created by Sören Thiering (07/25/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 1 no social distancing and no lockdown Week number (2020) 12 15 18 36 45 Hospitalized (ARDS) ∞ 0009 Deaths Hospital Workload Hospital Workload compared to 2017 (%) 9 Cases (%) α 50 100 150 200 250 0

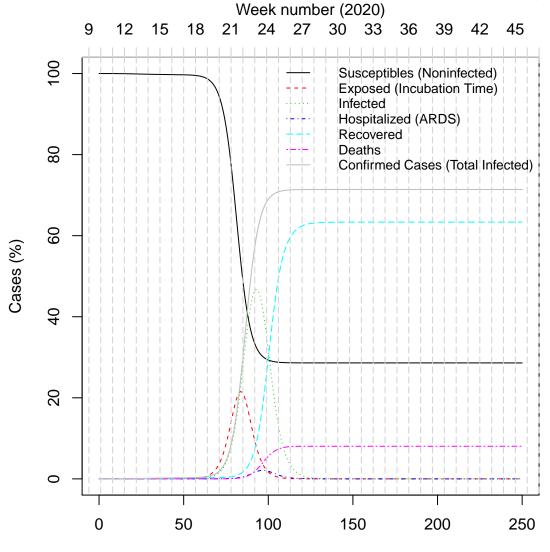
Days after 3/1/20 Created by Sören Thiering (07/25/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 2 exit after day 50 without social distancing Week number (2020)



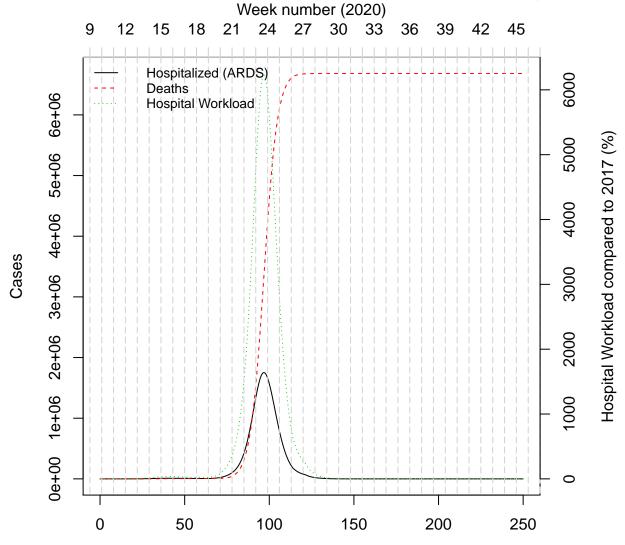
Days after 3/1/20 Created by Sören Thiering (07/25/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 2 exit after day 50 without social distancing



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Scenario 2 exit after day 50 without social distancing



Days after 3/1/20 Created by Sören Thiering (07/25/2020). Email: soeren.thiering@hs-anhalt.de

Scenario 2 exit after day 50 without social distancing Week number (2020) 12 15 18 36 45 Hospitalized (ARDS) 0009 Deaths Hospital Workload Hospital Workload compared to 2017 (%) 4000 2000

 ∞

9

 α

0

Cases (%)

Days after 3/1/20 Created by Sören Thiering (07/25/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

100

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 (07/25/2020). 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 (07/25/2020). 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 (%) Cases

Days after 3/1/20 Created by Sören Thiering (07/25/2020). 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) Deaths Hospital Workload 2000 2.5 Hospital Workload compared to 2017 (%) Cases (%) 1.5 0.5 0.0

Days after 3/1/20 Created by Sören Thiering (07/25/2020). Email: soeren.thiering@hs-anhalt.de

150

200

100

0

50

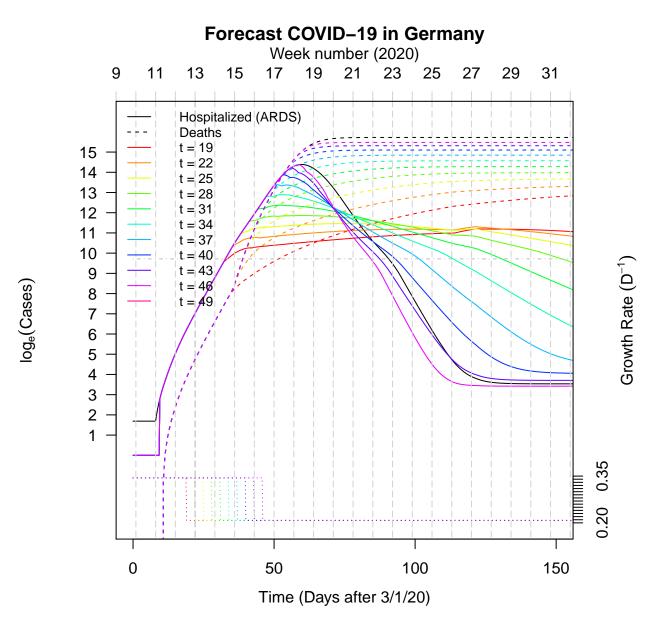
Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 7000000 Hospitalized (ARDS) 6500000 Deaths R0 = 0.46000000 R0 = 0.65500000 R0 = 0.8R0 = 15000000 R0 = 1.2R0 = 1.44500000 R0 = 1.64000000 R0 = 1.8Growth Rate (D^{-1}) R0 = 23500000 R0 = 2.2R0 = 2.43000000 2500000 2000000 1500000 1000000 500000 0 0.32 0 50 100 150 Time (Days after 3/1/20)

Created by Sören Thiering (07/25/2020). Email: soeren.thiering@hs-anhalt.de

Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 19 25 27 29 31 7000000 Hospitalized (ARDS) 6500000 Deaths t = 196000000 t = 22 5500000 t = 25t = 285000000 t = 31 t = 344500000 t = 374000000 t = 40Growth Rate (D^{-1}) t = 433500000 t = 46Cases t = 493000000 2500000 2000000 1500000 1000000 500000 0 0.35 0.20 0 50 100 150

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Time (Days after 3/1/20)



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