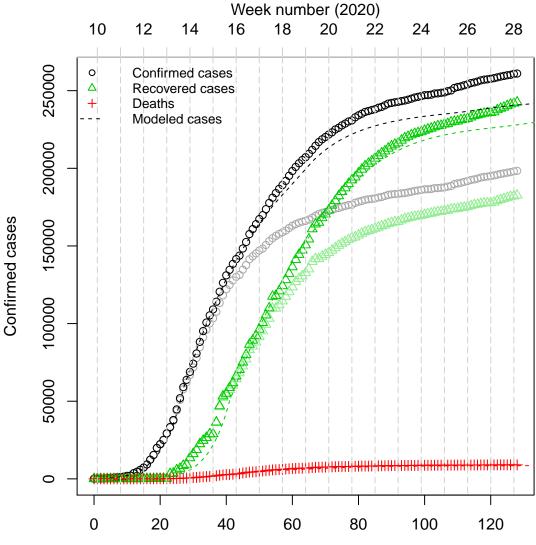
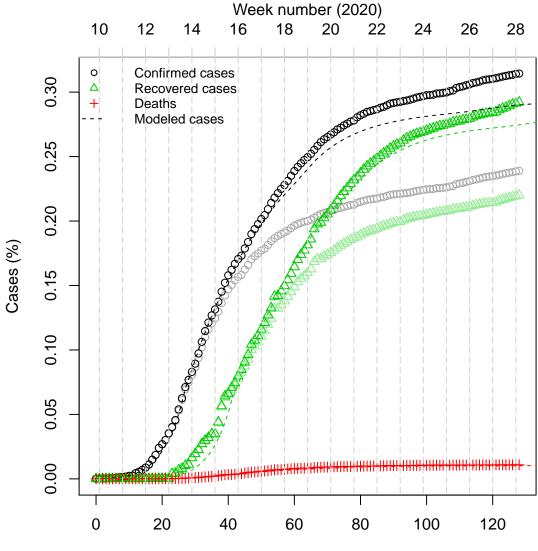
#### Situation vs Model COVID-19 in Germany

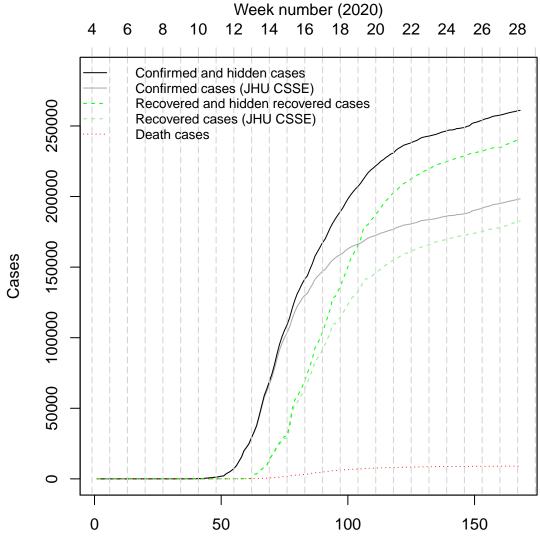


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#### Situation vs Model COVID-19 in Germany

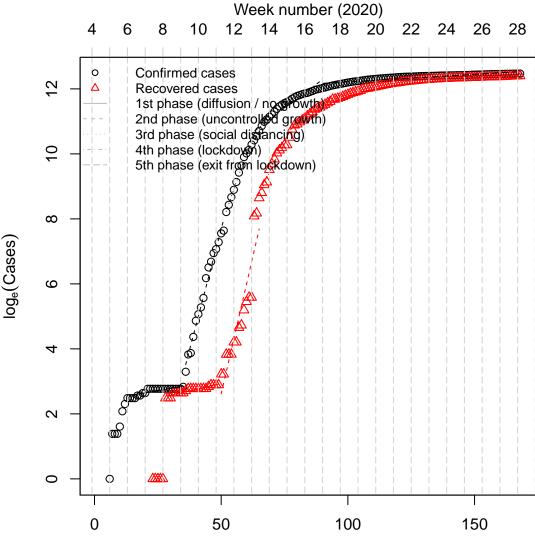


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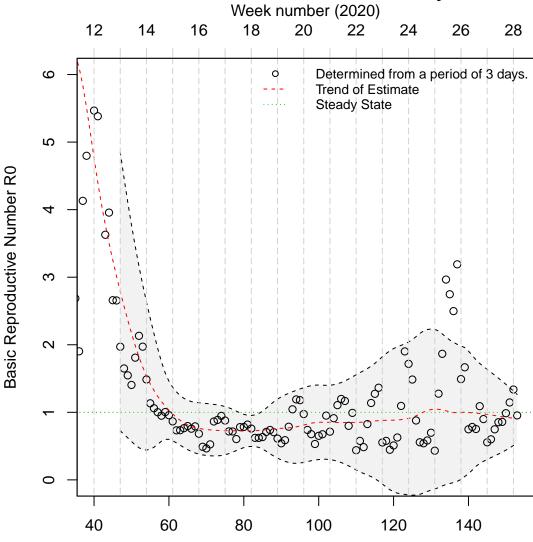
Days after 1/22/20

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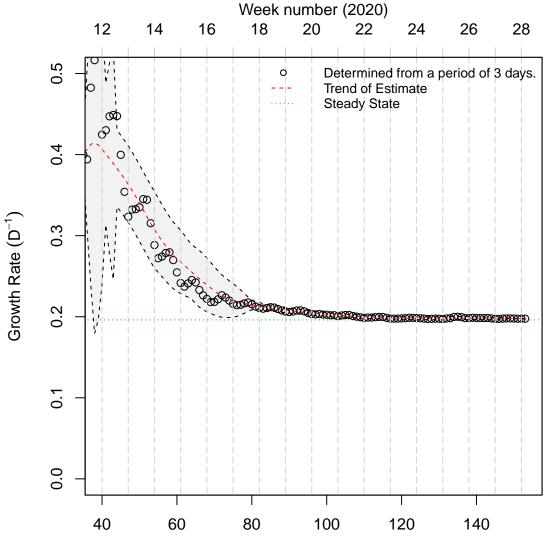


Days after 1/22/20

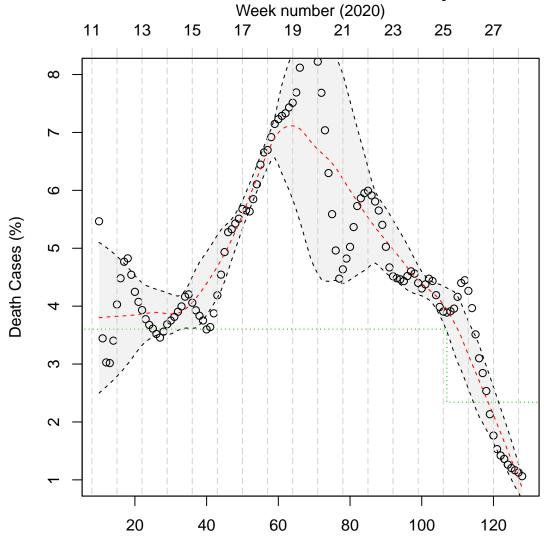
Created by Sören Thiering (07/08/2020). Email: soeren.thiering@hs-anhalt.de



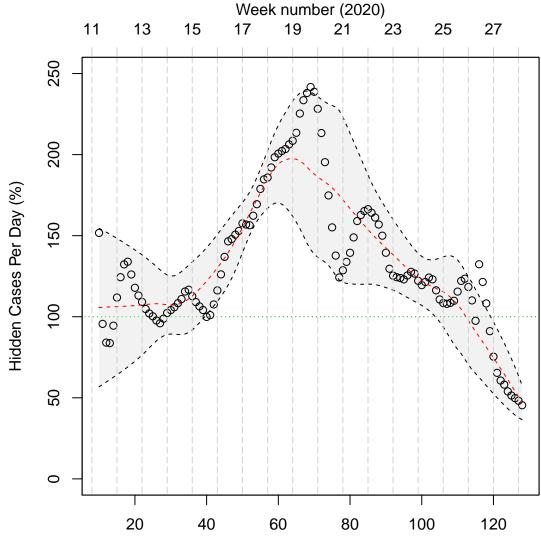
Days after 2/5/20 Created by Sören Thiering (07/08/2020). Email: soeren.thiering@hs-anhalt.de



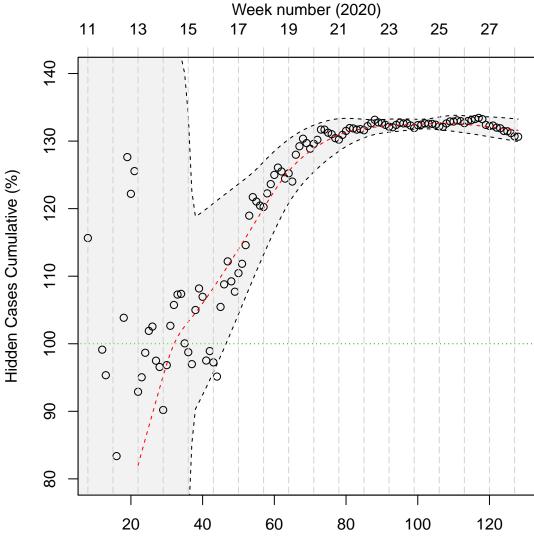
Days after 2/5/20 Created by Sören Thiering (07/08/2020). Email: soeren.thiering@hs-anhalt.de



Days after 3/1/20 Created by Sören Thiering (07/08/2020). Email: soeren.thiering@hs-anhalt.de



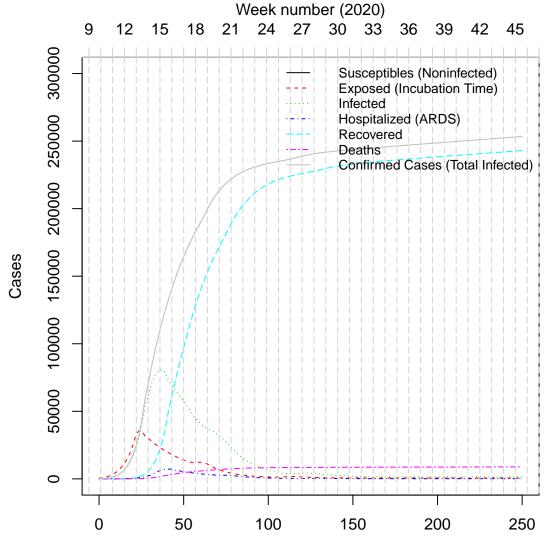
Days after 3/1/20 Created by Sören Thiering (07/08/2020). Email: soeren.thiering@hs-anhalt.de



Days after 3/1/20

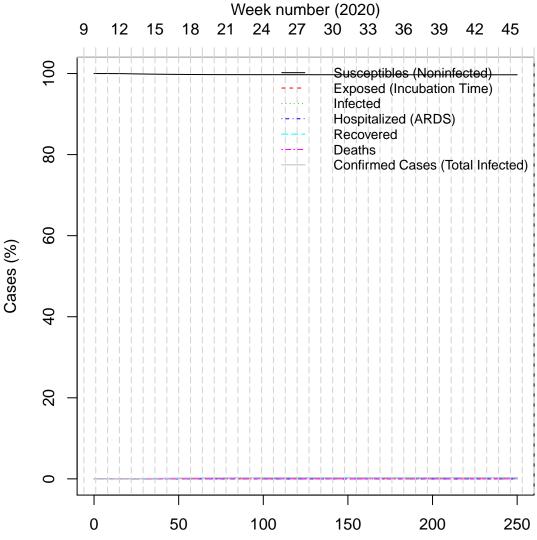
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#### Forecast COVID-19 in Germany



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#### Forecast COVID-19 in Germany



Days after 3/1/20

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

Days after 3/1/20 Created by Sören Thiering (07/08/2020). Email: soeren.thiering@hs-anhalt.de

## Forecast COVID-19 in Germany Week number (2020) 45 12 15 18 36 39 42 Hospitalized (ARDS) 0.010 25 Deaths Hospital Workload Hospital Workload compared to 2017 (%) 0.008 0.006 15 Cases (%) 0.004 0.002 0.000

Days after 3/1/20 Created by Sören Thiering (07/08/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

100

0

### Scenario 1 no social distancing and no lockdown Week number (2020) 24 45 12 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+<del>0</del>0

Days after 3/1/20 Created by Sören Thiering (07/08/2020). 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 (07/08/2020). Email: soeren.thiering@hs-anhalt.de

# Scenario 1 no social distancing and no lockdown Week number (2020) 45 12 15 18 36 Hospitalized (ARDS) 4000 Deaths 5e+06 Hospital Workload Hospital Workload compared to 2017 (%) 4e+06 3e+06 Cases 2e+06 1e+06 0e+00

Days after 3/1/20 Created by Sören Thiering (07/08/2020). Email: soeren.thiering@hs-anhalt.de

150

200

100

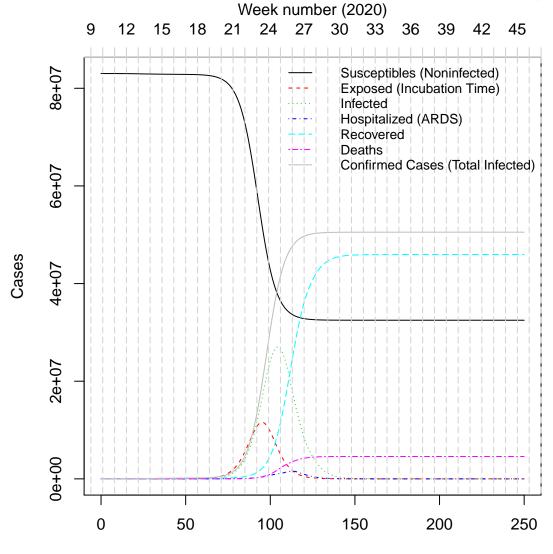
0

50

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

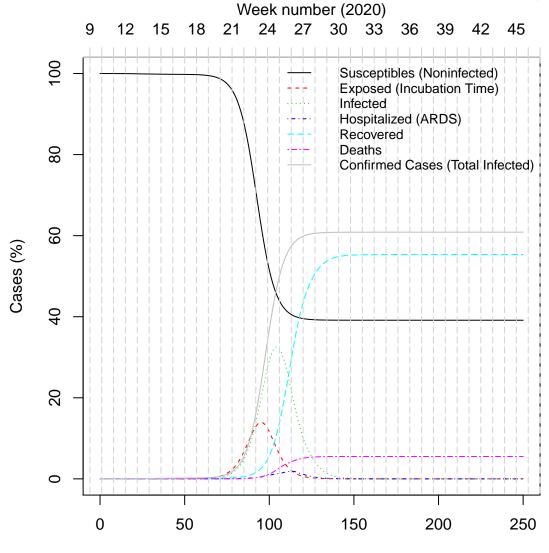
Days after 3/1/20 Created by Sören Thiering (07/08/2020). Email: soeren.thiering@hs-anhalt.de

### Scenario 2 exit after day 50 without social distancing



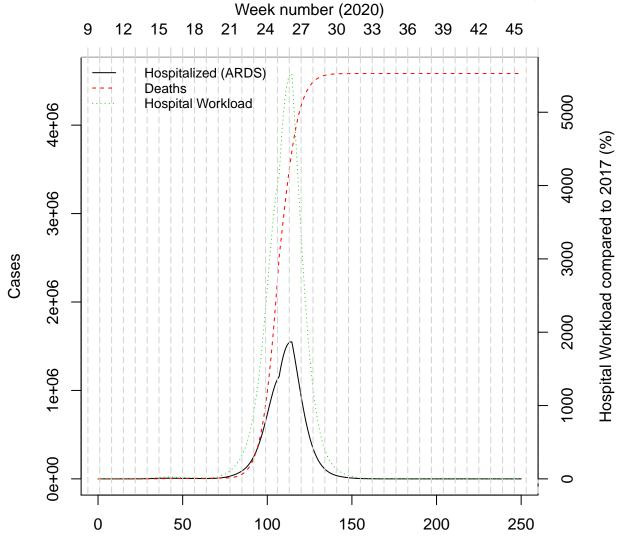
Days after 3/1/20 Created by Sören Thiering (07/08/2020). Email: soeren.thiering@hs-anhalt.de

## Scenario 2 exit after day 50 without social distancing



Days after 3/1/20 Created by Sören Thiering (07/08/2020). Email: soeren.thiering@hs-anhalt.de

#### Scenario 2 exit after day 50 without social distancing



Days after 3/1/20 Created by Sören Thiering (07/08/2020). 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 (%) $\alpha$

Cases (%)

Days after 3/1/20 Created by Sören Thiering (07/08/2020). Email: soeren.thiering@hs-anhalt.de

#### Scenario 3 exit after day 50 with social distancing Week number (2020) 9 24 45 12 15 18 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+<del>0</del>0

Days after 3/1/20 Created by Sören Thiering (07/08/2020). 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 (07/08/2020). 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 (07/08/2020). Email: soeren.thiering@hs-anhalt.de

# Scenario 3 exit after day 50 with social distancing Week number (2020) 12 15 18 36 45 Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%) 3 Cases (%) $\alpha$ 2000 50 100 150 200 250 0

Days after 3/1/20 Created by Sören Thiering (07/08/2020). Email: soeren.thiering@hs-anhalt.de

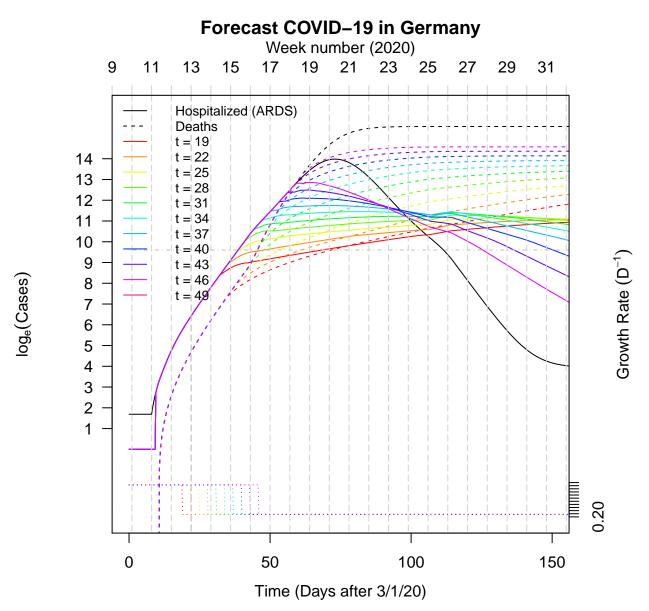
#### Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 Hospitalized (ARDS) 5500000 Deaths R0 = 0.45000000 R0 = 0.6R0 = 0.84500000 R0 = 1R0 = 1.24000000 R0 = 1.4R0 = 1.63500000 R0 = 1.8Growth Rate $(\mathsf{D}^{-1})$ R0 = 23000000 R0 = 2.2R0 = 2.42500000 2000000 1500000 1000000 500000 0 0.32 0 50 100 150 Time (Days after 3/1/20)

Created by Sören Thiering (07/08/2020). Email: soeren.thiering@hs-anhalt.de

#### Forecast COVID-19 in Germany Week number (2020) 9 31 11 13 15 17 19 25 27 29 Hospitalized (ARDS) 5500000 Deaths t = 195000000 t = 22t = 254500000 t = 28t = 314000000 t = 34t = 373500000 t = 40Growth Rate (D<sup>-1</sup>) t = 433000000 t = 46t = 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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