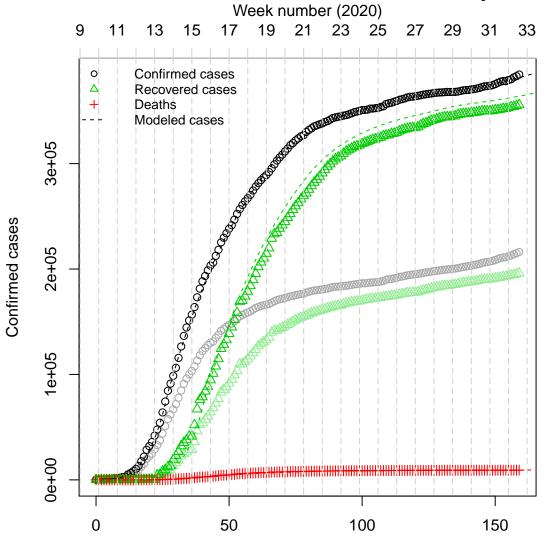
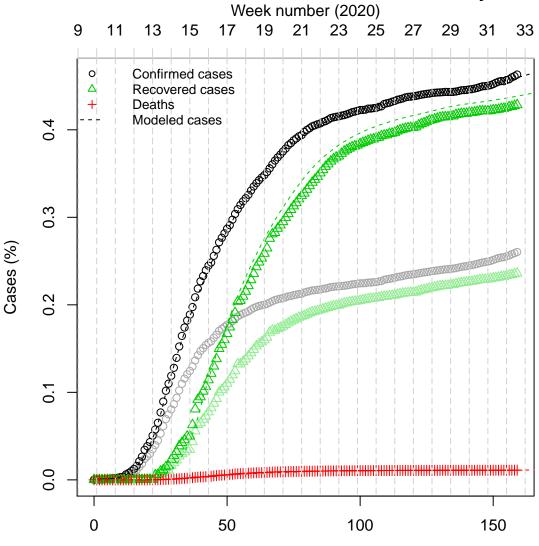
#### Situation vs Model COVID-19 in Germany

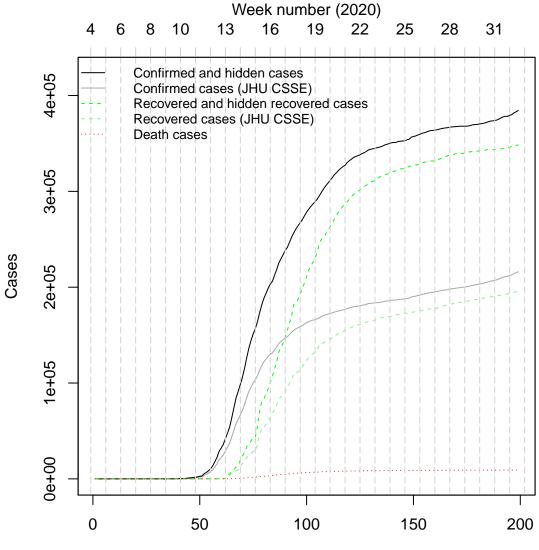


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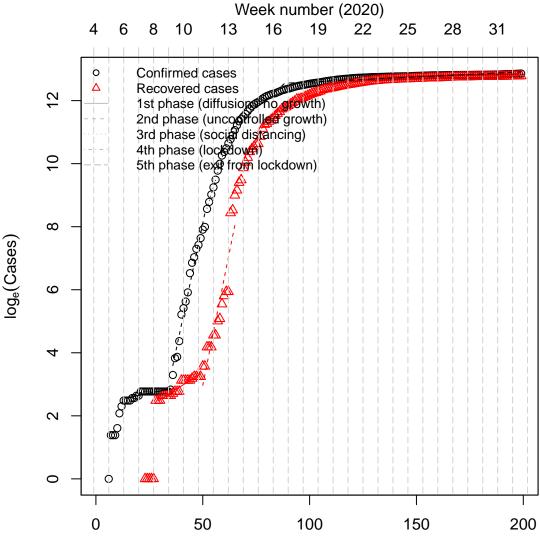
#### Situation vs Model COVID-19 in Germany



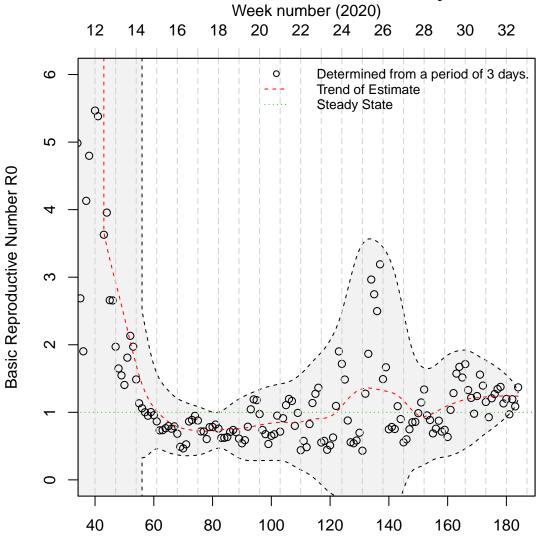
Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de



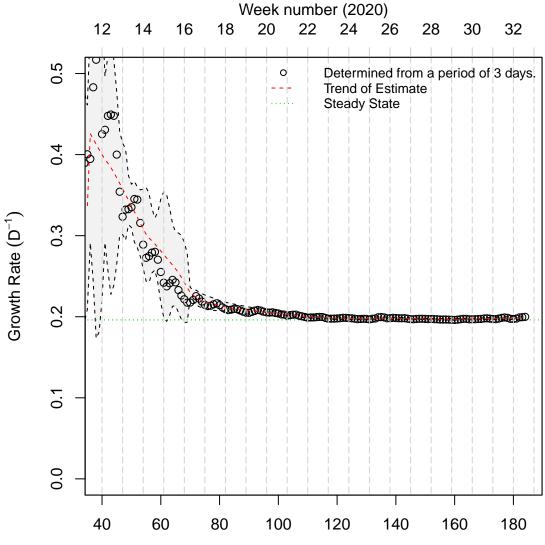
Days after 1/22/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de



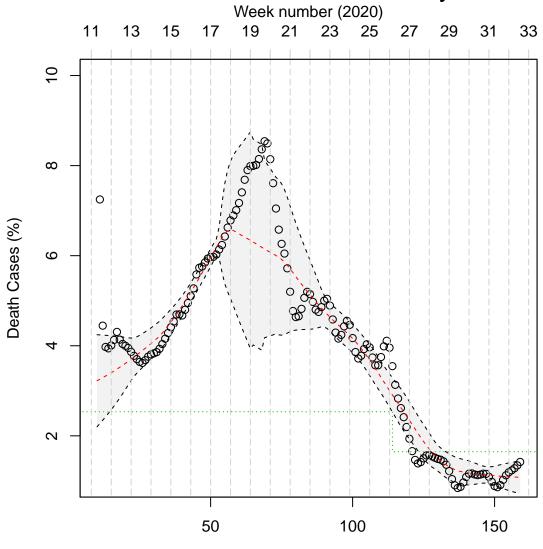
Days after 1/22/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de



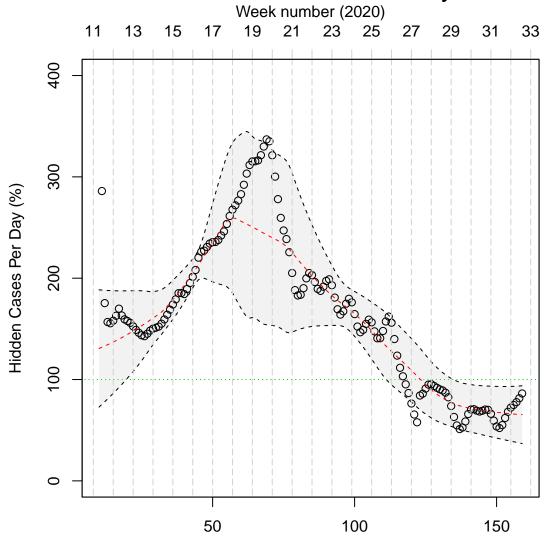
Days after 2/5/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de



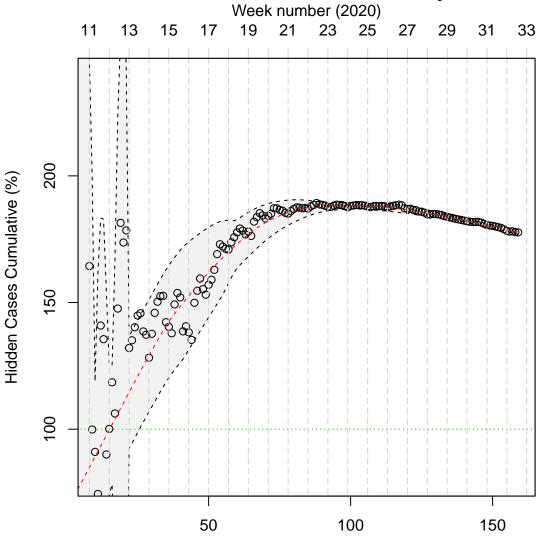
Days after 2/5/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de



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

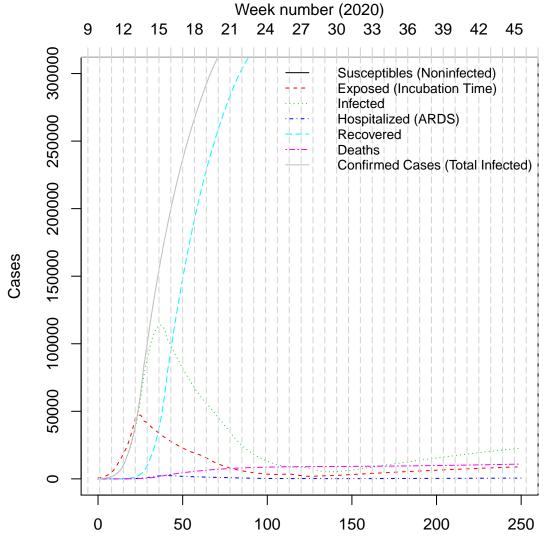


Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de



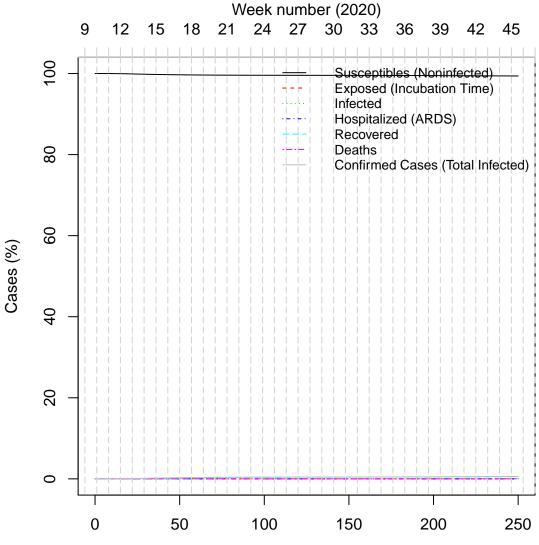
Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

#### Forecast COVID-19 in Germany



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#### Forecast COVID-19 in Germany



Days after 3/1/20

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

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

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

#### Forecast COVID-19 in Germany Week number (2020) 45 12 15 18 36 39 42 Hospitalized (ARDS) Deaths 0.012 $\infty$ Hospital Workload Hospital Workload compared to 2017 (%) 0.010 9 0.008 Cases (%) 900.0 0.004 0.002 0.000 0

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

150

200

100

0

50

#### 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+<del>0</del>0

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

# Scenario 1 no social distancing and no lockdown Week number (2020) 24 45 12 15 18 36 Hospitalized (ARDS) 1500 Deaths Hospital Workload 2.5 Hospital Workload compared to 2017 (%) Cases (%) 1.5 0.5 0.0

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

150

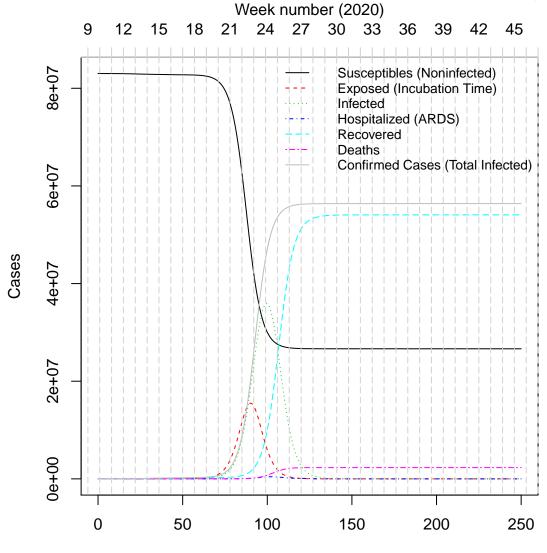
200

100

0

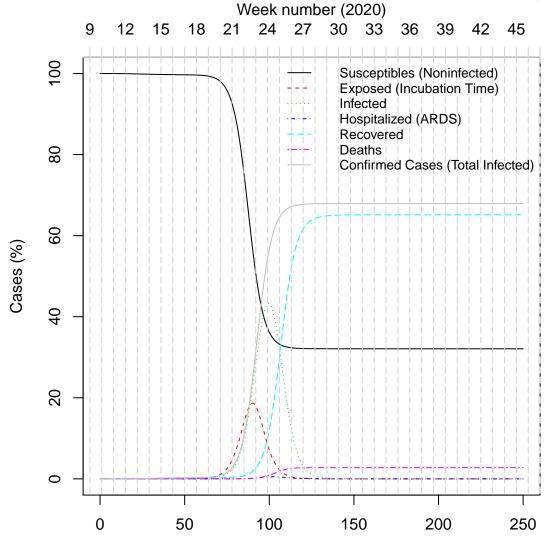
50

## Scenario 2 exit after day 50 without social distancing



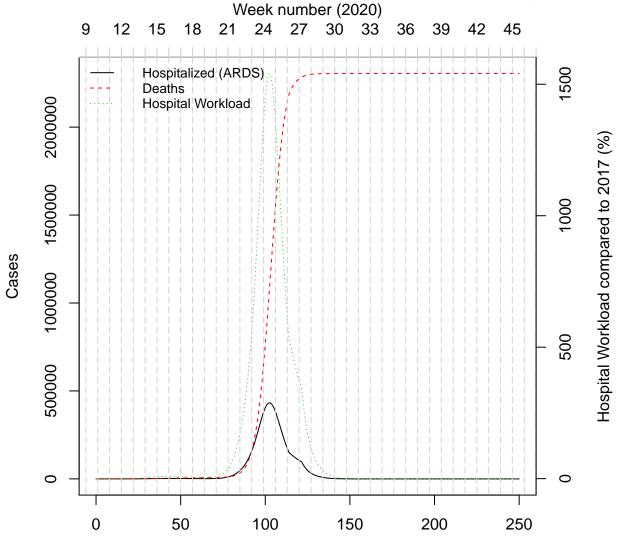
Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

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



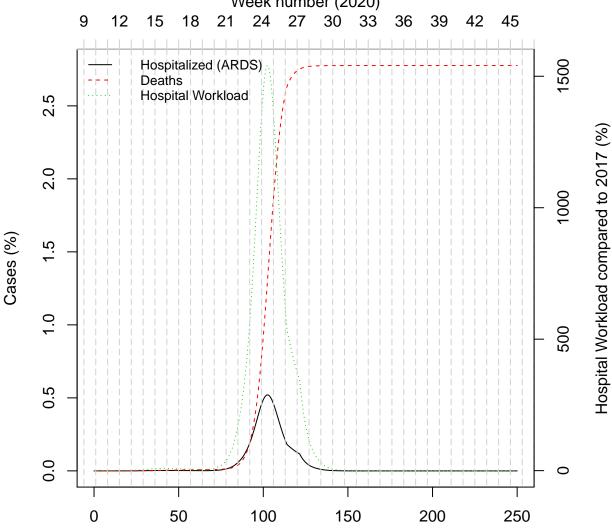
Days after 3/1/20 Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

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



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

#### Scenario 3 exit after day 50 with social distancing Week number (2020) 9 24 45 12 15 18 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 (08/08/2020). 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 (08/08/2020). 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 1000 Hospital Workload 1e+06 Hospital Workload compared to 2017 (%) 8e+05 6e+05 009 Cases 4e+05 2e+05 0e+00

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

150

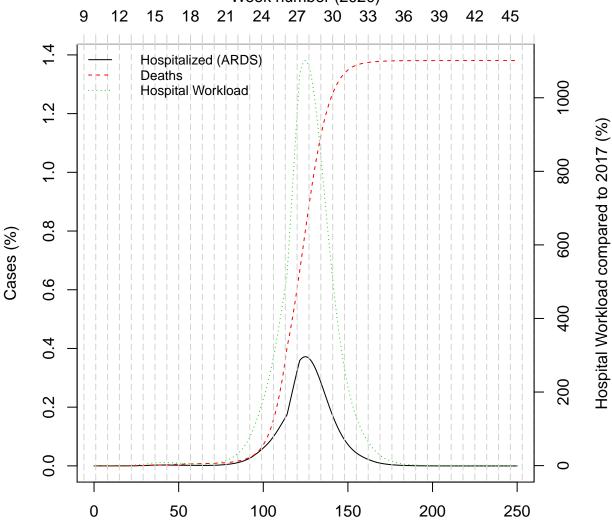
200

100

0

50

# Scenario 3 exit after day 50 with social distancing Week number (2020)



Days after 3/1/20

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

#### Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 2400000 Hospitalized (ARDS) Deaths 2200000 R0 = 0.4R0 = 0.62000000 R0 = 0.8R0 = 11800000 R0 = 1.21600000 R0 = 1.4R0 = 1.61400000 R0 = 1.8Growth Rate $(\mathsf{D}^{-1})$ R0 = 21200000 R0 = 2.2R0 = 2.4Cases 1000000 800000 600000 400000 200000 0 0.32 0 50 100 150

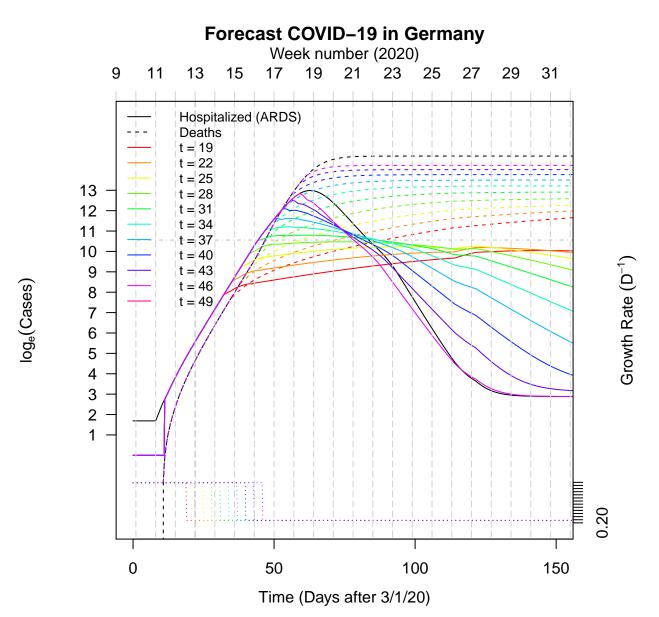
Created by Sören Thiering (08/08/2020). Email: soeren.thiering@hs-anhalt.de

Time (Days after 3/1/20)

#### Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 19 25 27 29 31 2400000 Hospitalized (ARDS) Deaths 2200000 t = 19t = 222000000 t = 25t = 281800000 t = 31 1600000 t = 34t = 371400000 t = 40Growth Rate $(\mathsf{D}^{-1})$ t = 431200000 t = 46Cases t = 491000000 000008 600000 400000 200000 0 0.20 0 50 100 150

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Time (Days after 3/1/20)



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