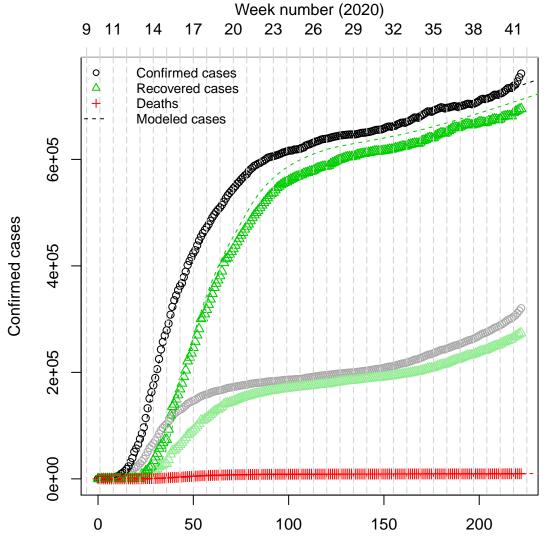
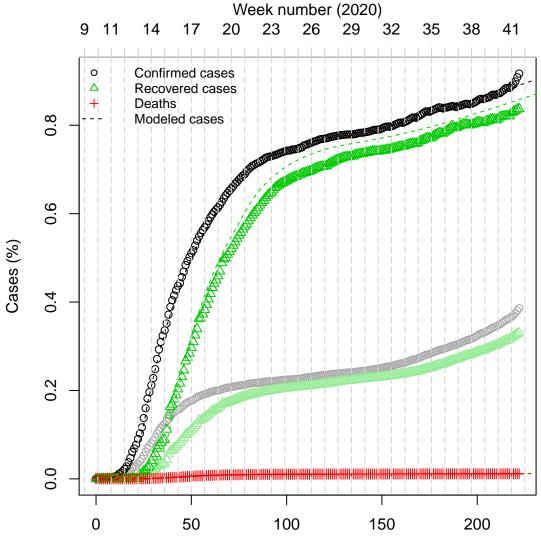
#### Situation vs Model COVID-19 in Germany



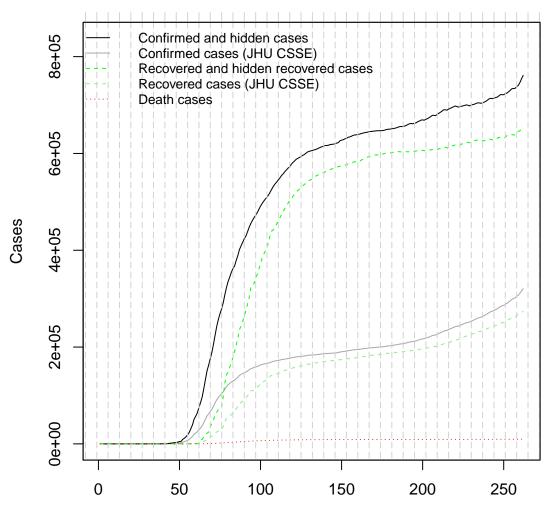
Days after 3/1/20 Created by Sören Thiering (10/10/2020). Email: soeren.thiering@hs-anhalt.de

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



Days after 3/1/20 Created by Sören Thiering (10/10/2020). Email: soeren.thiering@hs-anhalt.de

Week number (2020) 3 5 7 9 12 15 18 21 24 27 30 33 36 39 42



Days after 1/22/20

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Week number (2020) 12 15 24 30 33 36 39 42 Confirmed cases Recovered cases 1st phase (dissign / no growth) 2nd phase (magnitrolled growth) 3rd phase(social distancing) 12 4th phase (lækdown) 5th phas@ (Ait from lockdown) 10  $\infty$ 9  $\alpha$ 

50

0

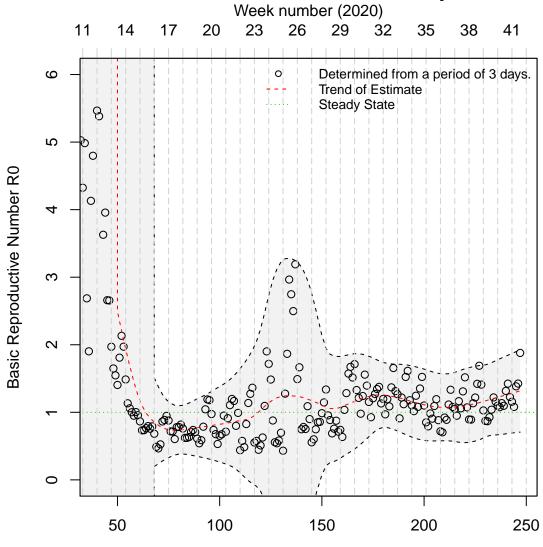
100

 $\log_{
m e}({\sf Cases})$ 

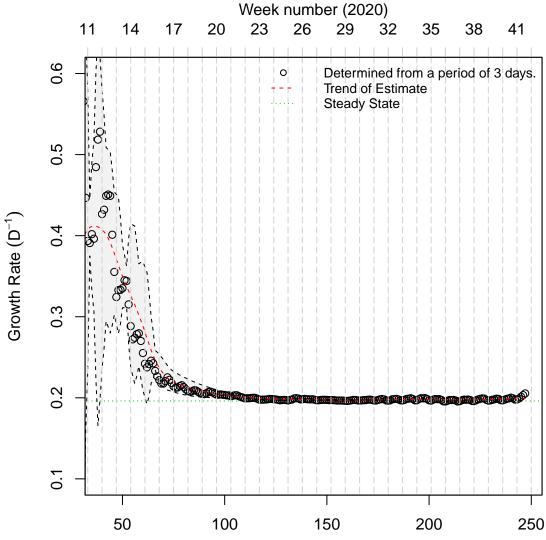
Days after 1/22/20 Created by Sören Thiering (10/10/2020). Email: soeren.thiering@hs-anhalt.de

200

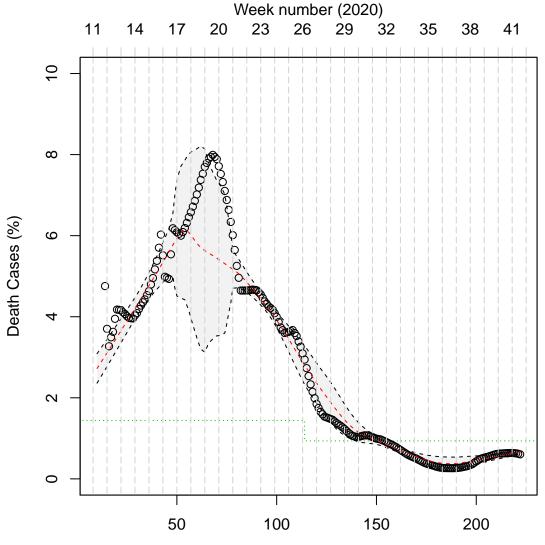
250



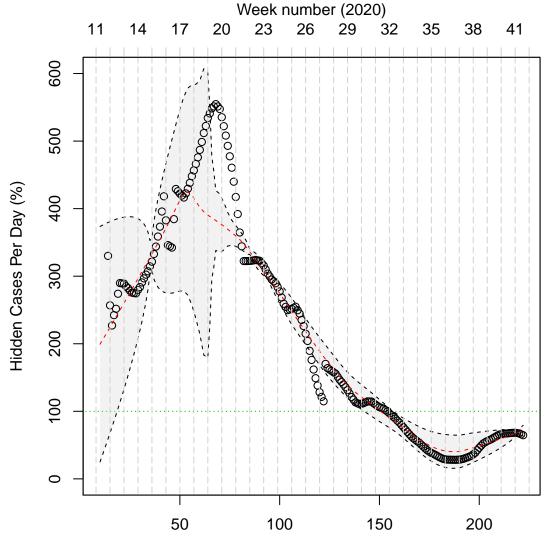
Days after 2/5/20 Created by Sören Thiering (10/10/2020). Email: soeren.thiering@hs-anhalt.de



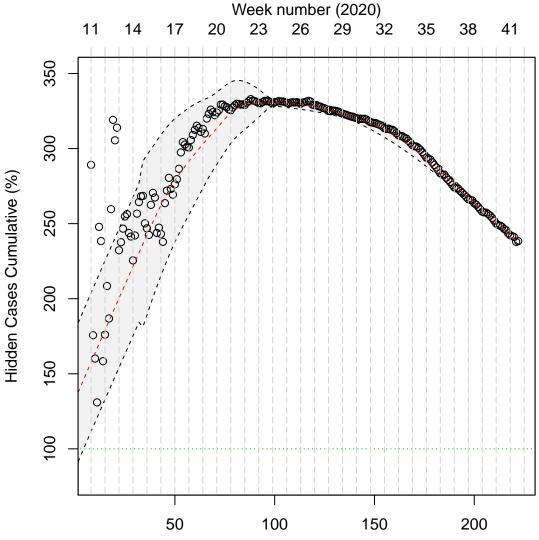
Days after 2/5/20 Created by Sören Thiering (10/10/2020). Email: soeren.thiering@hs-anhalt.de



Days after 3/1/20 Created by Sören Thiering (10/10/2020). Email: soeren.thiering@hs-anhalt.de

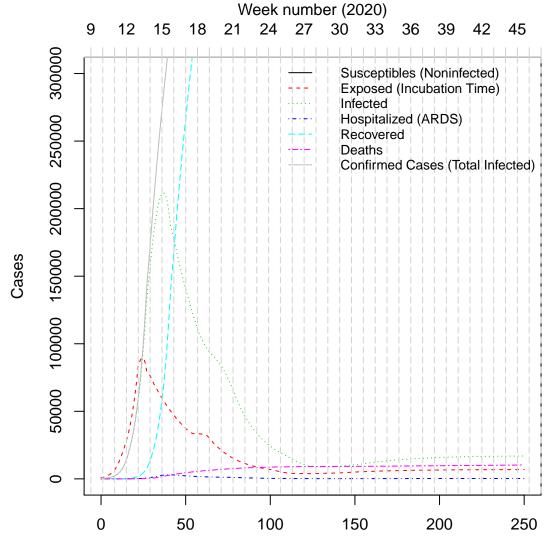


Days after 3/1/20 Created by Sören Thiering (10/10/2020). Email: soeren.thiering@hs-anhalt.de



Days after 3/1/20 Created by Sören Thiering (10/10/2020). Email: soeren.thiering@hs-anhalt.de

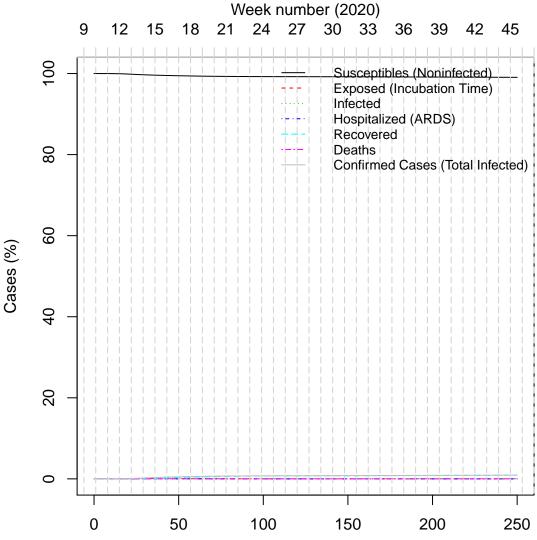
#### Forecast COVID-19 in Germany



Days after 3/1/20

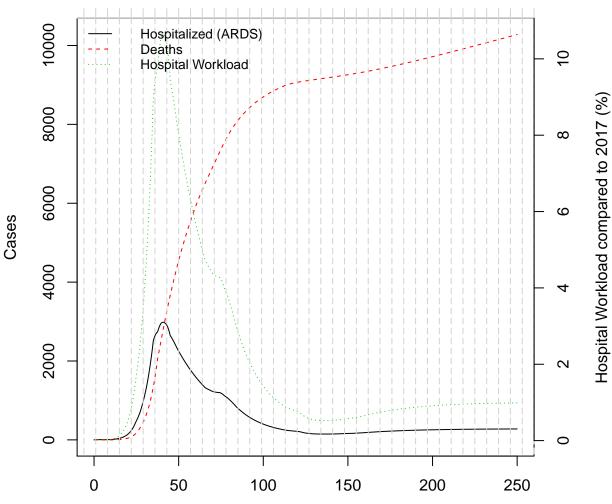
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#### Forecast COVID-19 in Germany



Days after 3/1/20 Created by Sören Thiering (10/10/2020). Email: soeren.thiering@hs-anhalt.de

## Forecast COVID-19 in Germany Week number (2020)



Days after 3/1/20 Created by Sören Thiering (10/10/2020). Email: soeren.thiering@hs-anhalt.de

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

12

0.012

0.010

0.008

900.0

0.004

0.002

0.000

0

50

100

Cases (%)

Days after 3/1/20 Created by Sören Thiering (10/10/2020). Email: soeren.thiering@hs-anhalt.de

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+<del>0</del>0

Days after 3/1/20 Created by Sören Thiering (10/10/2020). 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 (10/10/2020). 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 (%)

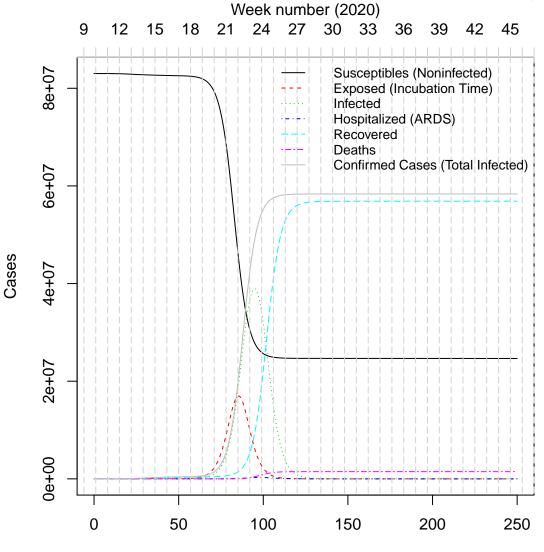
Cases

Days after 3/1/20 Created by Sören Thiering (10/10/2020). 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 Hospital Workload 1000 1.5 Hospital Workload compared to 2017 (%) Cases (%) 1.0 0.5 0.0 0 50 100 150 200 250

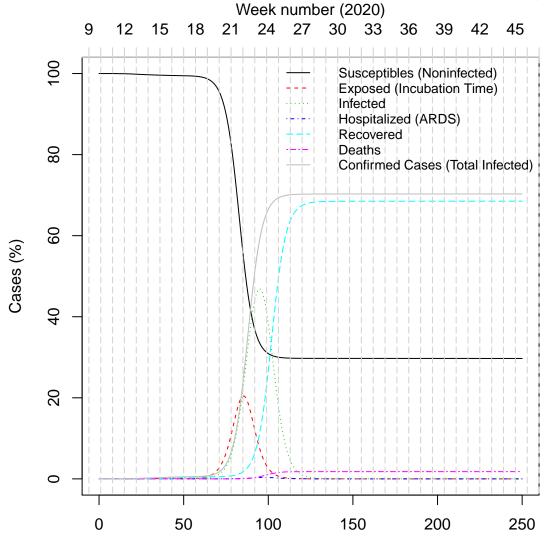
Days after 3/1/20 Created by Sören Thiering (10/10/2020). Email: soeren.thiering@hs-anhalt.de

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



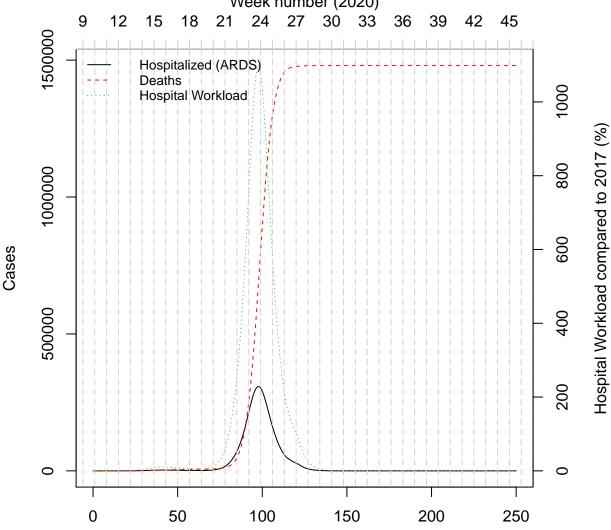
Days after 3/1/20 Created by Sören Thiering (10/10/2020). Email: soeren.thiering@hs-anhalt.de

## Scenario 2 exit after day 50 without social distancing



Days after 3/1/20 Created by Sören Thiering (10/10/2020). 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 (10/10/2020). Email: soeren.thiering@hs-anhalt.de

## Scenario 2 exit after day 50 without social distancing Week number (2020) 9 45 12 15 18 36 39 Hospitalized (ARDS) Deaths 1000 Hospital Workload 1.5 Hospital Workload compared to 2017 (%) Cases (%) 009 0.5

Days after 3/1/20 Created by Sören Thiering (10/10/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

100

0

#### 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 (10/10/2020). 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 (10/10/2020). Email: soeren.thiering@hs-anhalt.de

#### Scenario 3 exit after day 50 with social distancing Week number (2020) 45 12 15 18 36 700 Hospitalized (ARDS) Deaths Hospital Workload 8e+05 009 Hospital Workload compared to 2017 (%) 500 6e+05 400 Cases 4e+05 300 200 2e+05 100 00+<del>0</del>0

Days after 3/1/20 Created by Sören Thiering (10/10/2020). Email: soeren.thiering@hs-anhalt.de

150

200

100

0

50

#### Scenario 3 exit after day 50 with social distancing Week number (2020) Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%) 0.8 Cases (%) 9.0 0.0

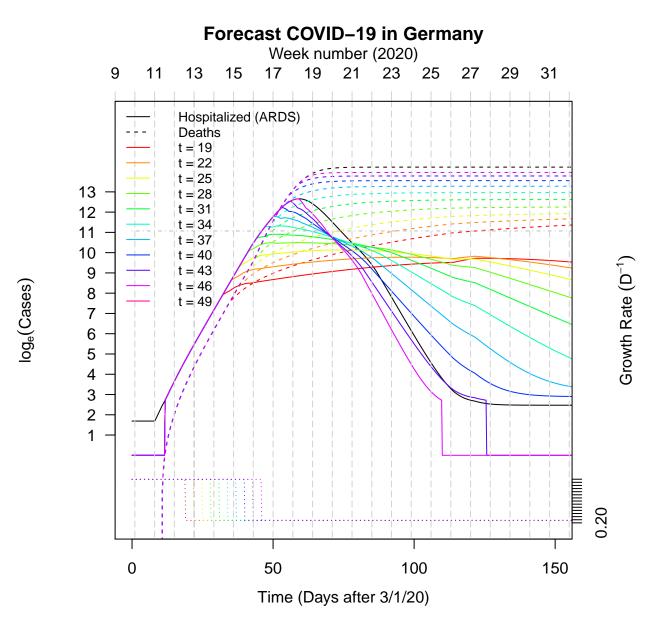
Days after 3/1/20 Created by Sören Thiering (10/10/2020). Email: soeren.thiering@hs-anhalt.de

#### Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 Hospitalized (ARDS) Deaths 1400000 R0 = 0.4R0 = 0.6R0 = 0.81200000 R0 = 1R0 = 1.2R0 = 1.41000000 R0 = 1.6R0 = 1.8Growth Rate $(\mathsf{D}^{-1})$ 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 (10/10/2020). Email: soeren.thiering@hs-anhalt.de

#### 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 t = 341000000 t = 37t = 40Growth Rate $(\mathsf{D}^{-1})$ 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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