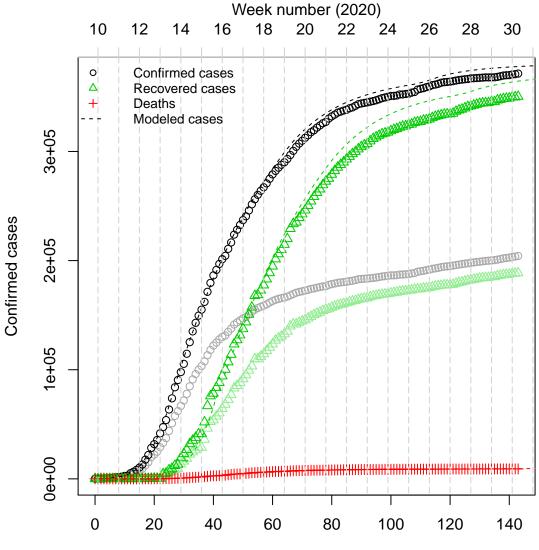
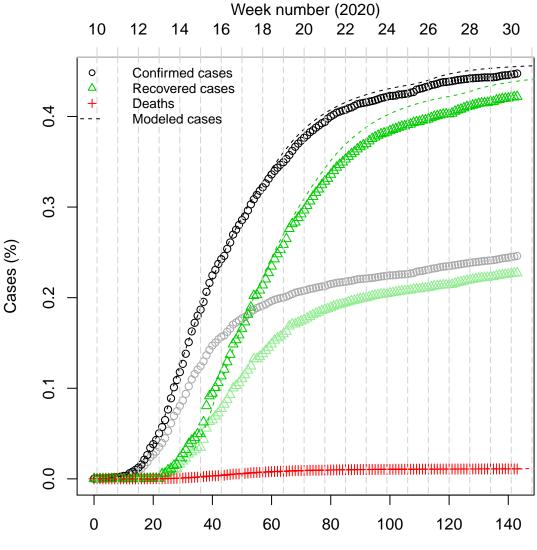
#### Situation vs Model COVID-19 in Germany



Days after 3/1/20

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



Days after 3/1/20 Created by Sören Thiering (07/24/2020). Email: soeren.thiering@hs-anhalt.de

Week number (2020) 18 20 22 14 16 24 26 30 10 12 28 6 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+<del>0</del>0 0 50 100 150

Cases

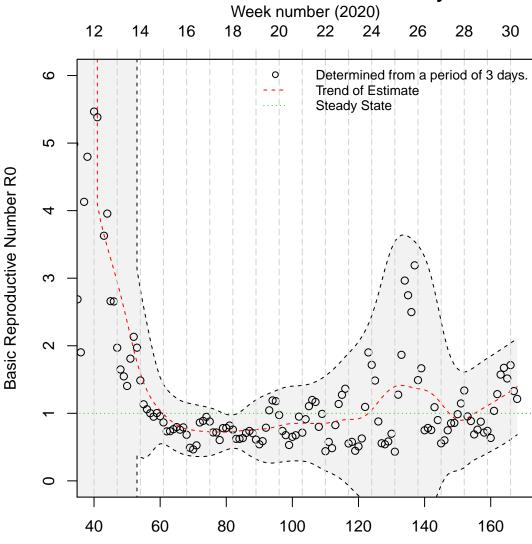
Days after 1/22/20

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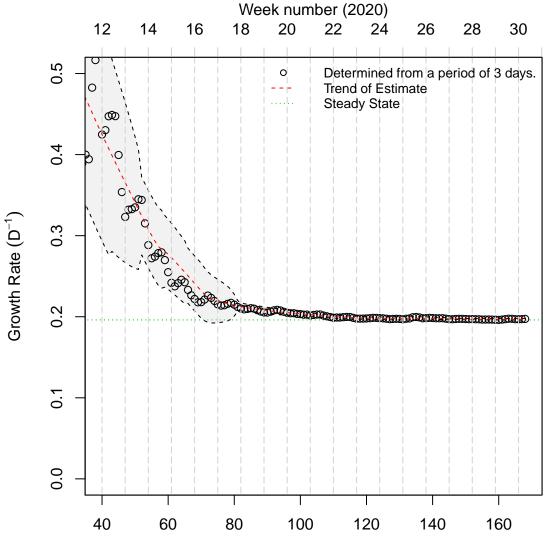
Week number (2020) 14 16 12 24 26 28 30 Confirmed cases Recovered cases 12 1st phase (diffusion / gravin) 2nd phase (uncontented growth) 3rd phase (social sistancing) 4th phase (lockaswn) 19 5th phase (exit@om/fockdown)  $\infty$ 9  $\alpha$ 0 50 100 150

Days after 1/22/20

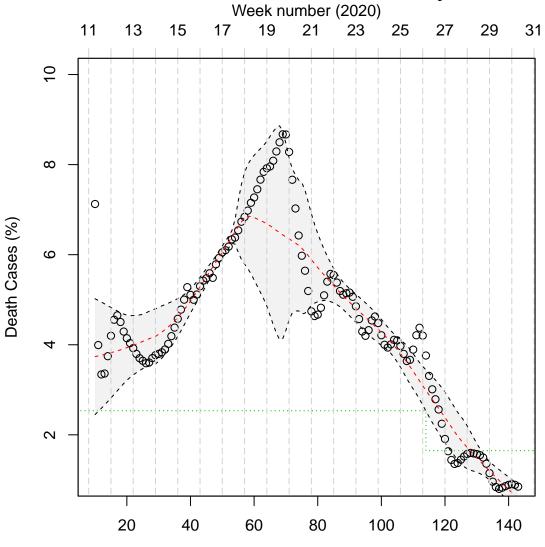
Created by Sören Thiering (07/24/2020). Email: soeren.thiering@hs-anhalt.de



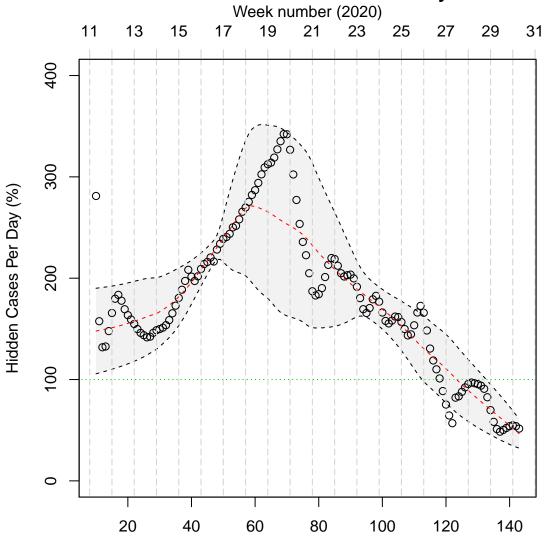
Days after 2/5/20 Created by Sören Thiering (07/24/2020). Email: soeren.thiering@hs-anhalt.de



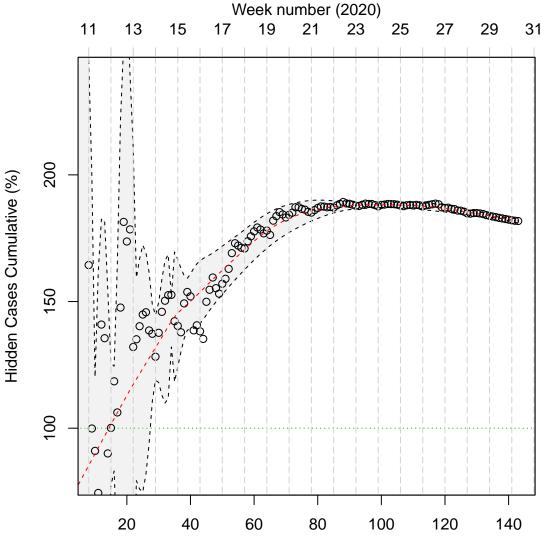
Days after 2/5/20 Created by Sören Thiering (07/24/2020). Email: soeren.thiering@hs-anhalt.de



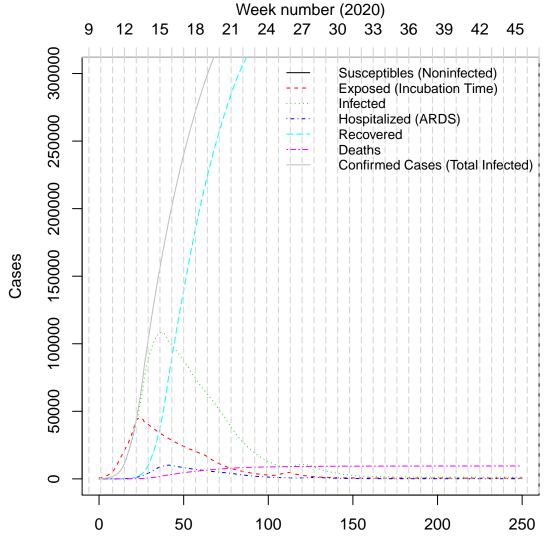
Days after 3/1/20 Created by Sören Thiering (07/24/2020). Email: soeren.thiering@hs-anhalt.de



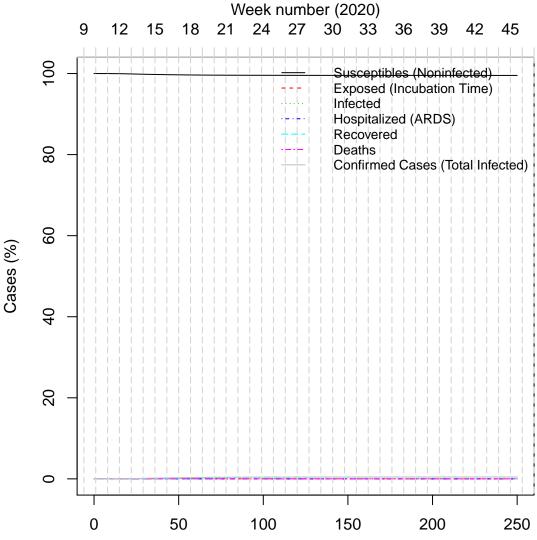
Days after 3/1/20 Created by Sören Thiering (07/24/2020). Email: soeren.thiering@hs-anhalt.de



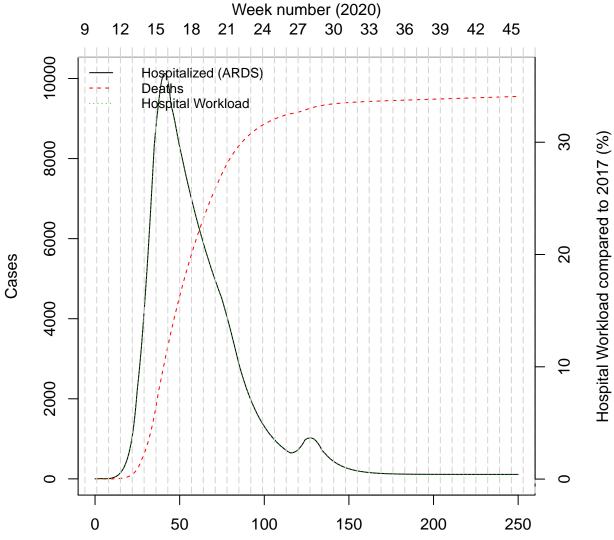
Days after 3/1/20 Created by Sören Thiering (07/24/2020). Email: soeren.thiering@hs-anhalt.de



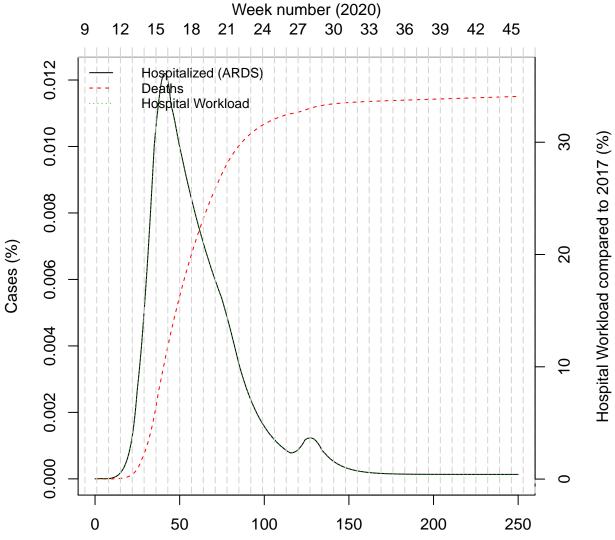
Days after 3/1/20 Created by Sören Thiering (07/24/2020). Email: soeren.thiering@hs-anhalt.de



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Days after 3/1/20 Created by Sören Thiering (07/24/2020). Email: soeren.thiering@hs-anhalt.de

#### 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 (07/24/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

100

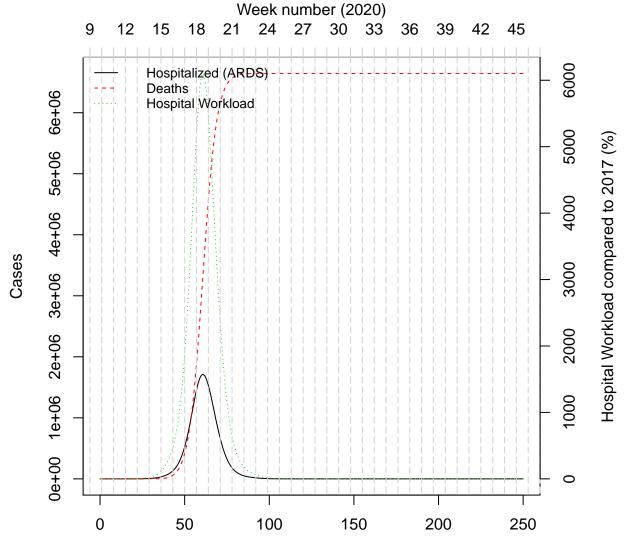
0

50

#### 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 (07/24/2020). Email: soeren.thiering@hs-anhalt.de

## Scenario 1 no social distancing and no lockdown



Days after 3/1/20 Created by Sören Thiering (07/24/2020). Email: soeren.thiering@hs-anhalt.de

# Scenario 1 no social distancing and no lockdown Week number (2020) 12 15 18 36 45 0009 $\infty$ Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%) 9 Cases (%) $\alpha$

Days after 3/1/20 Created by Sören Thiering (07/24/2020). Email: soeren.thiering@hs-anhalt.de

150

200

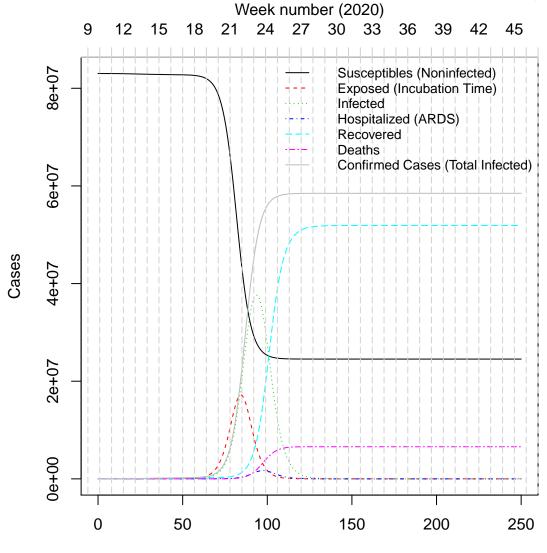
250

100

50

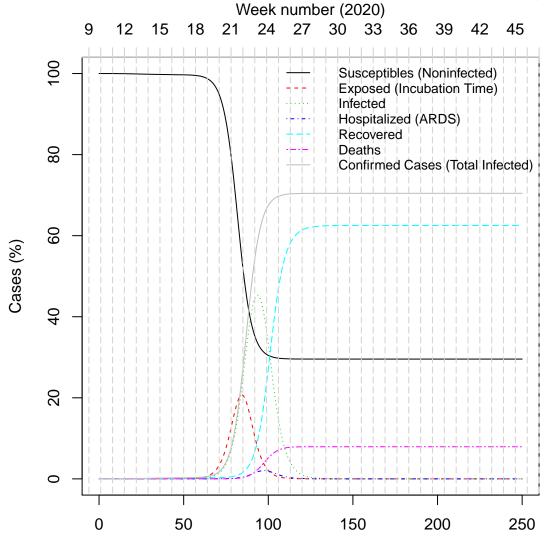
0

## Scenario 2 exit after day 50 without social distancing



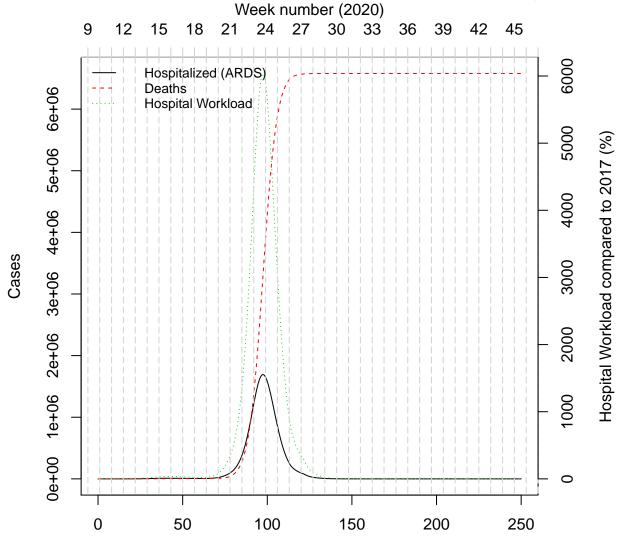
Days after 3/1/20 Created by Sören Thiering (07/24/2020). Email: soeren.thiering@hs-anhalt.de

## Scenario 2 exit after day 50 without social distancing



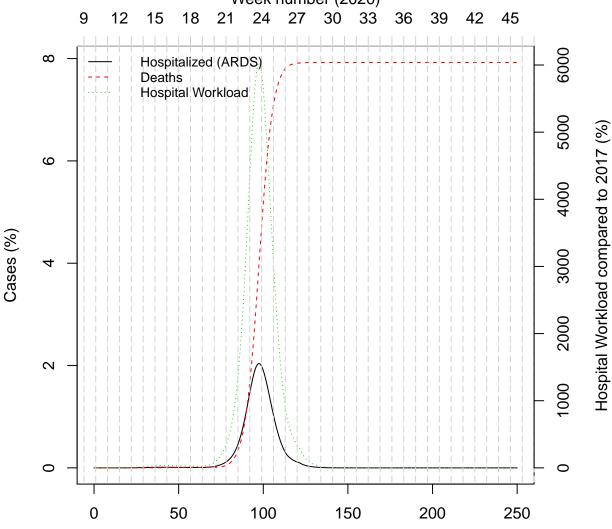
Days after 3/1/20 Created by Sören Thiering (07/24/2020). Email: soeren.thiering@hs-anhalt.de

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



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



Days after 3/1/20 Created by Sören Thiering (07/24/2020). 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 (07/24/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

100

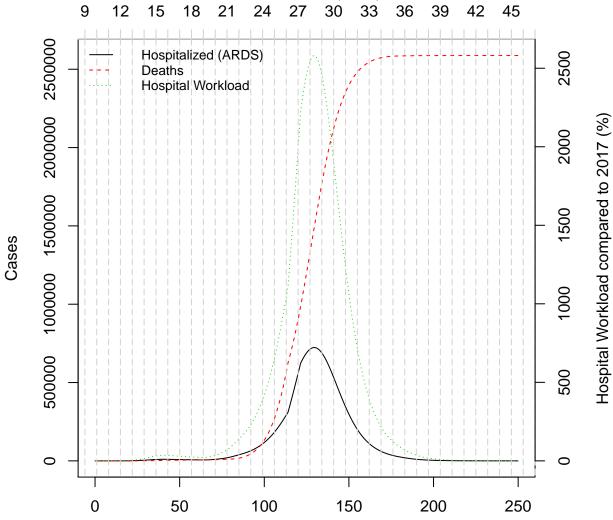
0

50

#### 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 (07/24/2020). Email: soeren.thiering@hs-anhalt.de

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



Days after 3/1/20 Created by Sören Thiering (07/24/2020). 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) 2500 Deaths Hospital Workload Hospital Workload compared to 2017 (%) 2.5 2.0 1500 1.5 0.5

Cases (%)

0.0

0

50

Days after 3/1/20 Created by Sören Thiering (07/24/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

100

#### Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 Hospitalized (ARDS) 6500000 Deaths R0 = 0.46000000 R0 = 0.65500000 R0 = 0.8R0 = 15000000 R0 = 1.24500000 R0 = 1.4R0 = 1.64000000 R0 = 1.8Growth Rate $(\mathsf{D}^{-1})$ R0 = 23500000 R0 = 2.2R0 = 2.43000000 2500000 2000000 1500000 1000000 500000 0 0.32 0 50 100 150

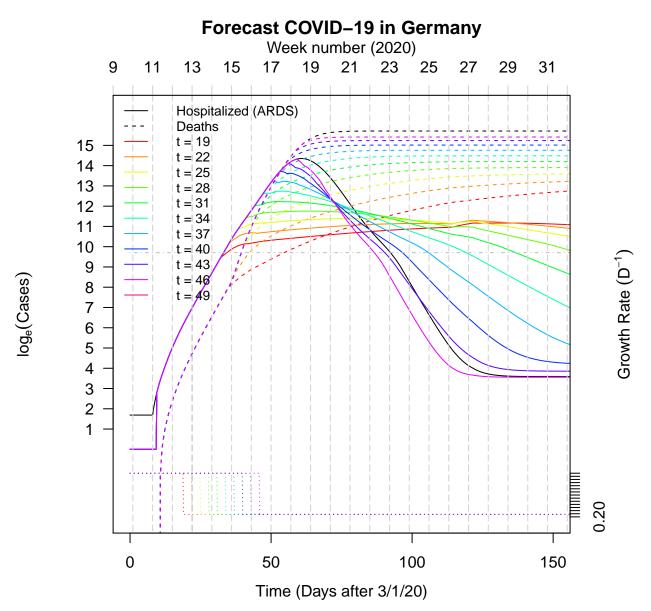
Created by Sören Thiering (07/24/2020). Email: soeren.thiering@hs-anhalt.de

Time (Days after 3/1/20)

#### Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 Hospitalized (ARDS) 6500000 Deaths t = 196000000 t = 225500000 t = 25t = 285000000 t = 314500000 t = 34t = 374000000 t = 40Growth Rate $(\mathsf{D}^{-1})$ t = 433500000 t = 463000000 t = 492500000 2000000 1500000 1000000 500000 0 0.20 0 50 100 150

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Time (Days after 3/1/20)



Created by Sören Thiering (07/24/2020). Email: soeren.thiering@hs-anhalt.de