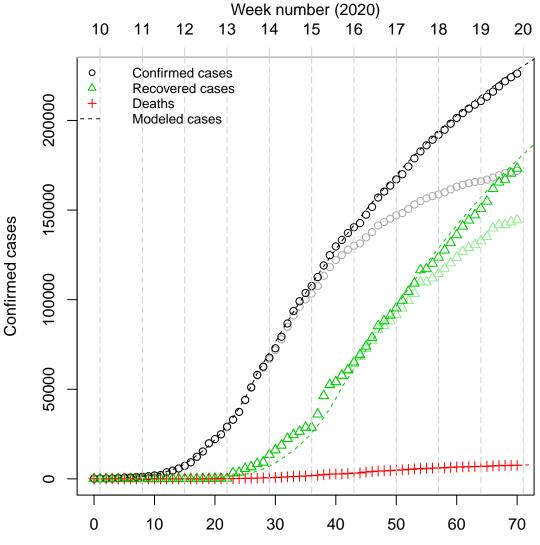
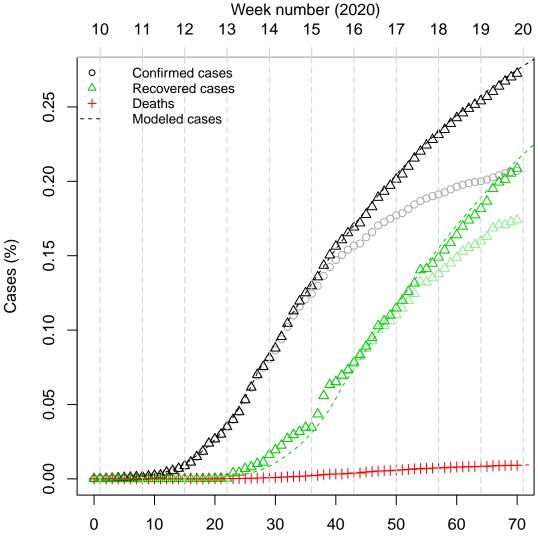
# Situation vs Model COVID-19 in Germany

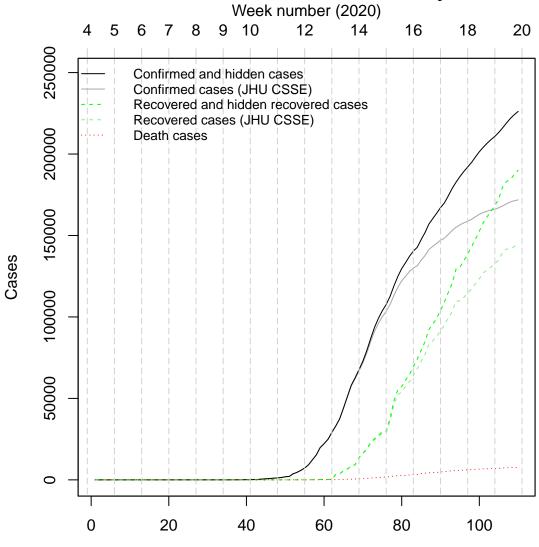


Days after 3/1/20 Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de

# Situation vs Model COVID-19 in Germany

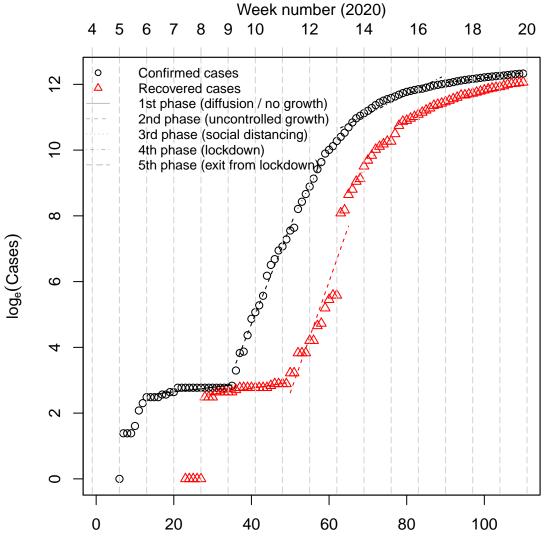


Days after 3/1/20 Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de

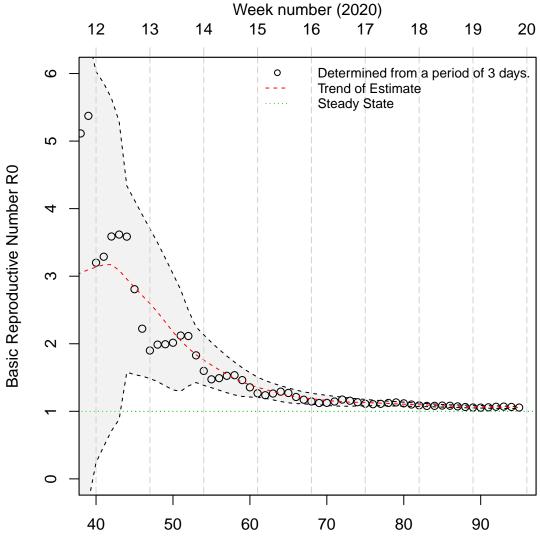


Days after 1/22/20

Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de

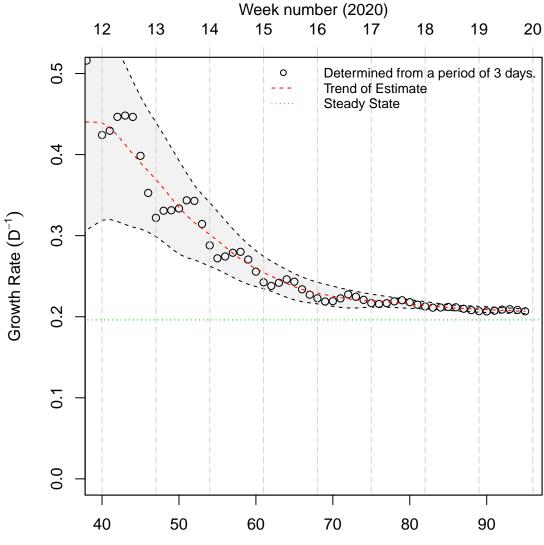


Days after 1/22/20 Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de

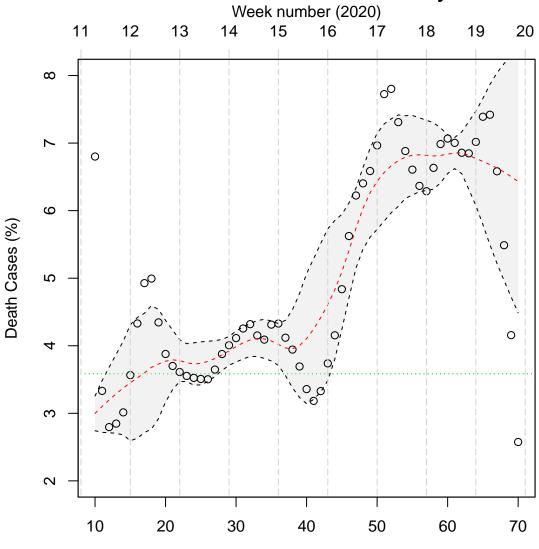


Days after 2/5/20

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Days after 2/5/20 Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de



Days after 3/1/20 Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de

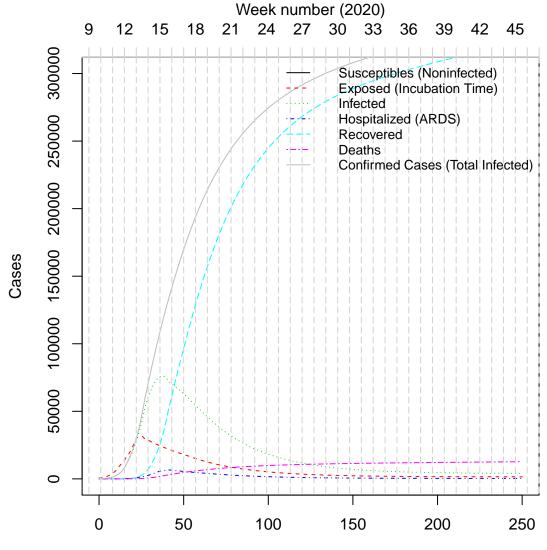
#### **Situation COVID-19 in Germany** Week number (2020) $\infty$ Hidden Cases Per Day (%) φ

Days after 3/1/20 Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de

#### **Situation COVID-19 in Germany** Week number (2020) Hidden Cases Cumulative (%) O.

Days after 3/1/20 Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de

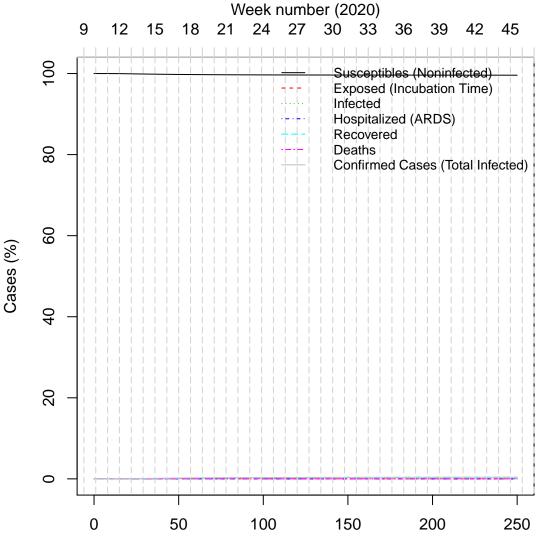
# Forecast COVID-19 in Germany



Days after 3/1/20

Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de

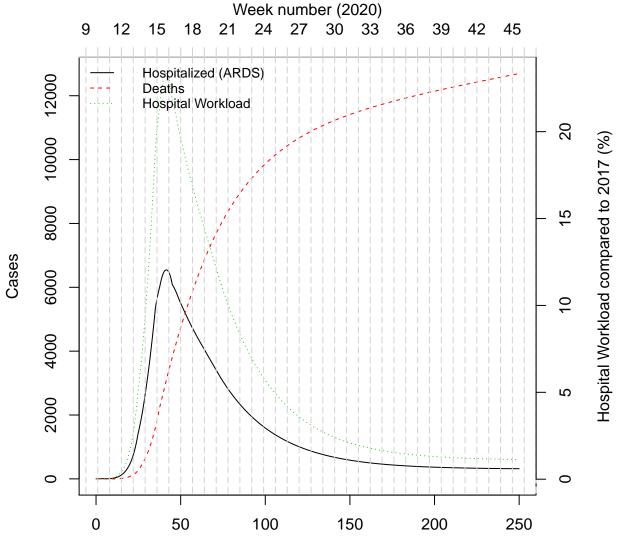
# Forecast COVID-19 in Germany



Days after 3/1/20

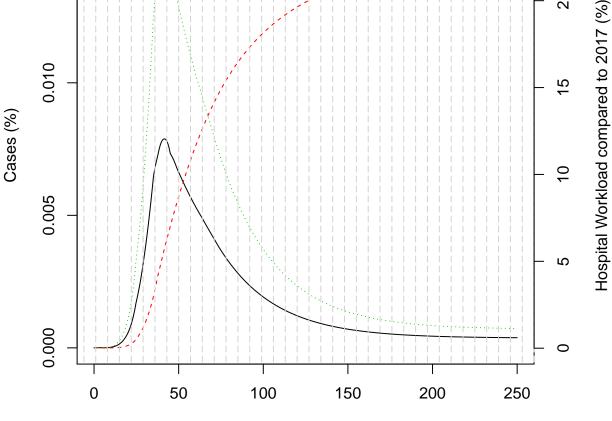
Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de

# Forecast COVID-19 in Germany



Days after 3/1/20 Created by Sören Thiering (05/11/2020). 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 20



12

0.015

Days after 3/1/20 Created by Sören Thiering (05/11/2020). 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 (05/11/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

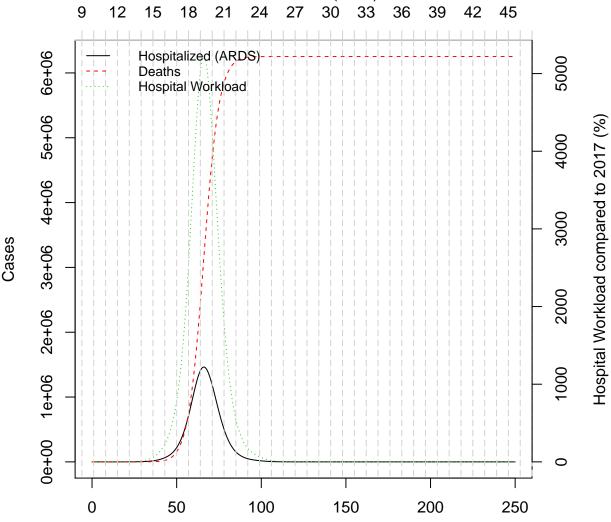
100

0

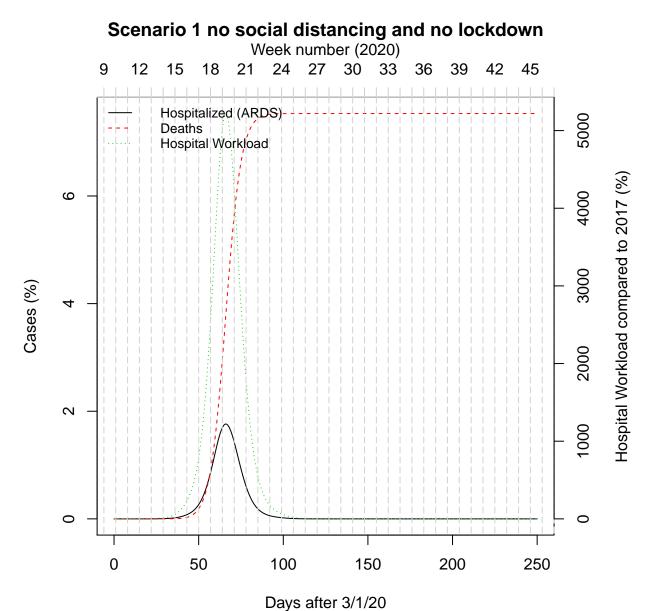
# Scenario 1 no social distancing / no lockdown Week number (2020) Susceptibles (Noninfected) Exposed (Incubation Time) Infected Hospitalized (ARDS) Recovered Deaths Confirmed Cases (Total Infected) Cases (%)

Days after 3/1/20 Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de

# Scenario 1 no social distancing and no lockdown Week number (2020)

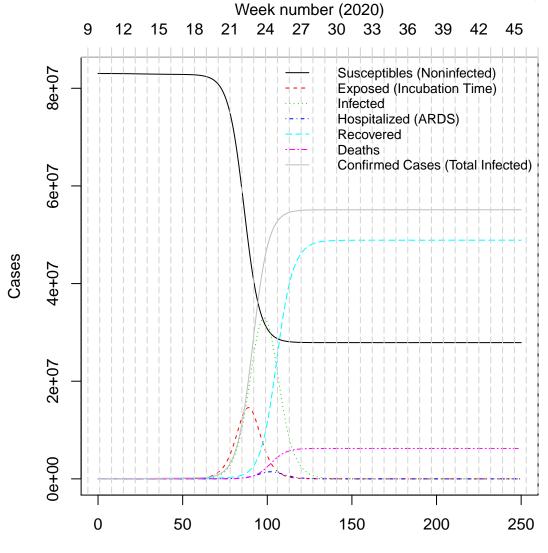


Days after 3/1/20 Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de



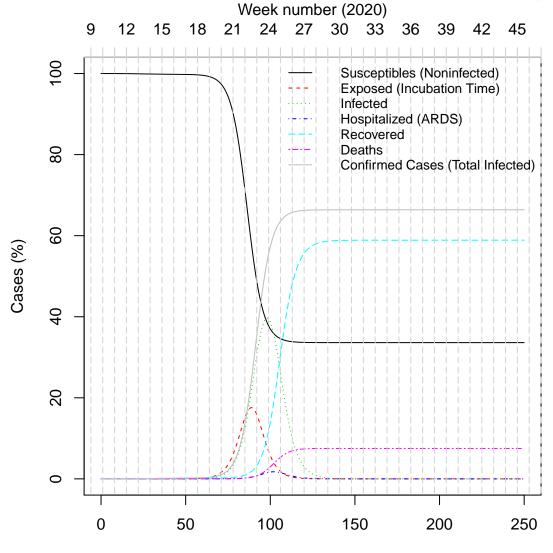
Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de

# Scenario 2 exit after day 50 without social distancing



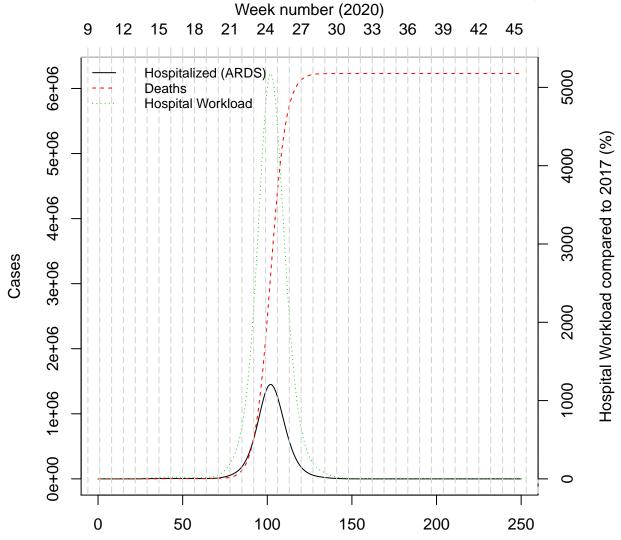
Days after 3/1/20 Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de

# Scenario 2 exit after day 50 without social distancing



Days after 3/1/20 Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de

# Scenario 2 exit after day 50 without social distancing



Days after 3/1/20 Created by Sören Thiering (05/11/2020). 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) 5000 Deaths Hospital Workload Hospital Workload compared to 2017 (%) 9 Cases (%) $\alpha$

Days after 3/1/20 Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

100

50

# 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 (05/11/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

100

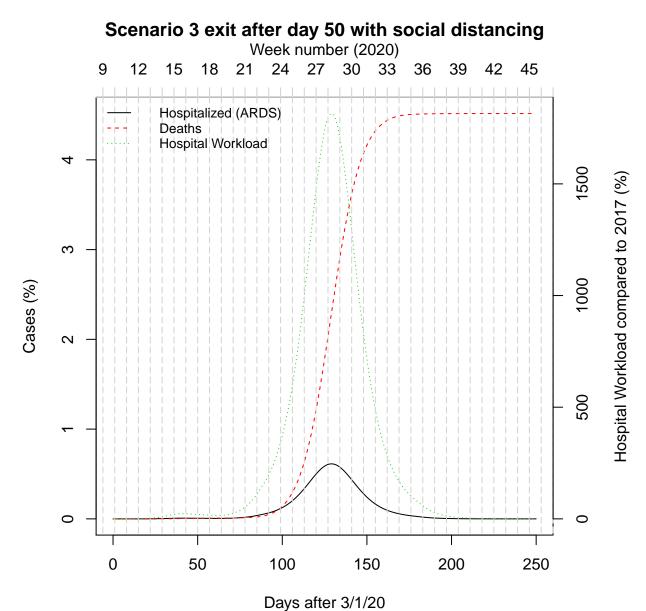
0

# 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 (05/11/2020). 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 3e+06 Hospital Workload compared to 2017 (%) 2e+06 Cases 1e+06 00+<del>0</del>0 250 0 50 100 150 200

Days after 3/1/20 Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de



Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de

#### Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 6500000 Hospitalized (ARDS) 6000000 Deaths R0 = 0.45500000 R0 = 0.6R0 = 0.85000000 R0 = 1R0 = 1.24500000 R0 = 1.44000000 R0 = 1.6R0 = 1.83500000 Growth Rate $(\mathsf{D}^{-1})$ R0 = 2R0 = 2.23000000 Cases R0 = 2.42500000 2000000 1500000 1000000 500000 0 0.32 0 50 100 150

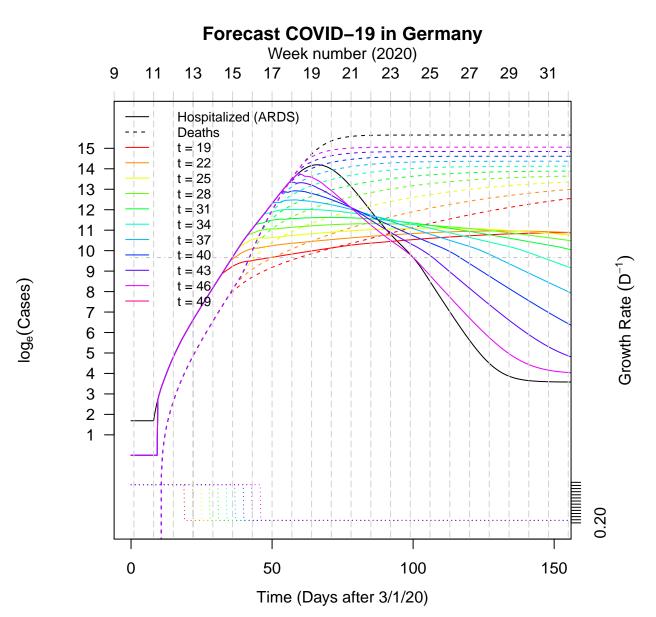
Created by Sören Thiering (05/11/2020). Email: soeren.thiering@hs-anhalt.de

Time (Days after 3/1/20)

#### Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 19 25 27 29 31 6500000 Hospitalized (ARDS) 6000000 Deaths t = 195500000 t = 22 t = 255000000 t = 284500000 t = 31 t = 344000000 t = 37t = 403500000 Growth Rate $(\mathsf{D}^{-1})$ t = 43t = 463000000 Cases 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 (05/11/2020). Email: soeren.thiering@hs-anhalt.de