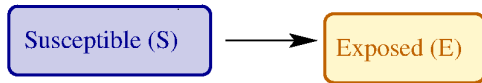
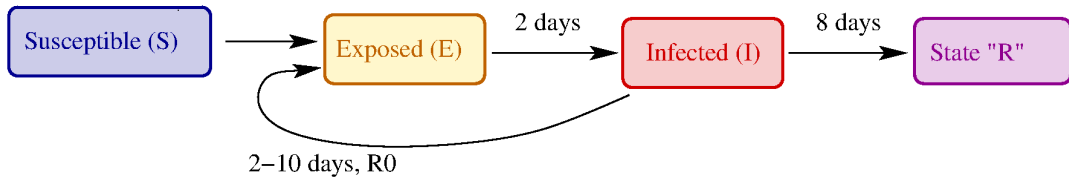
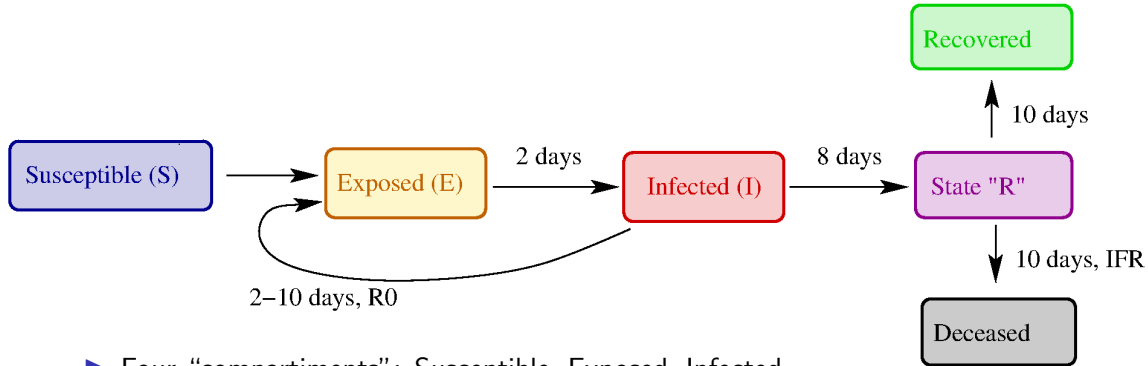


Susceptible (S)

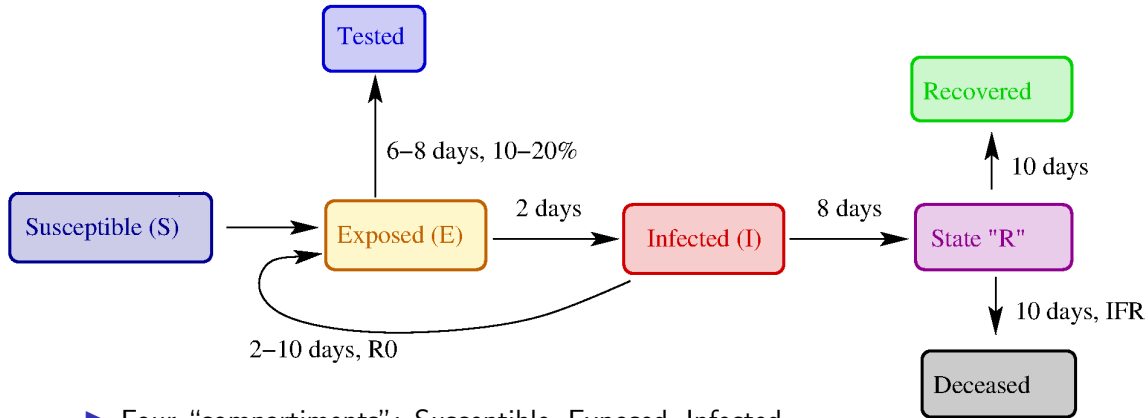




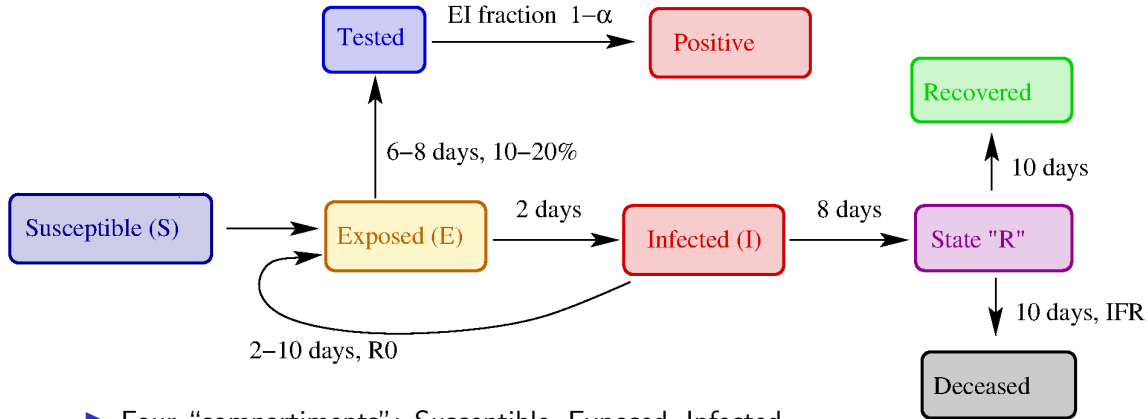




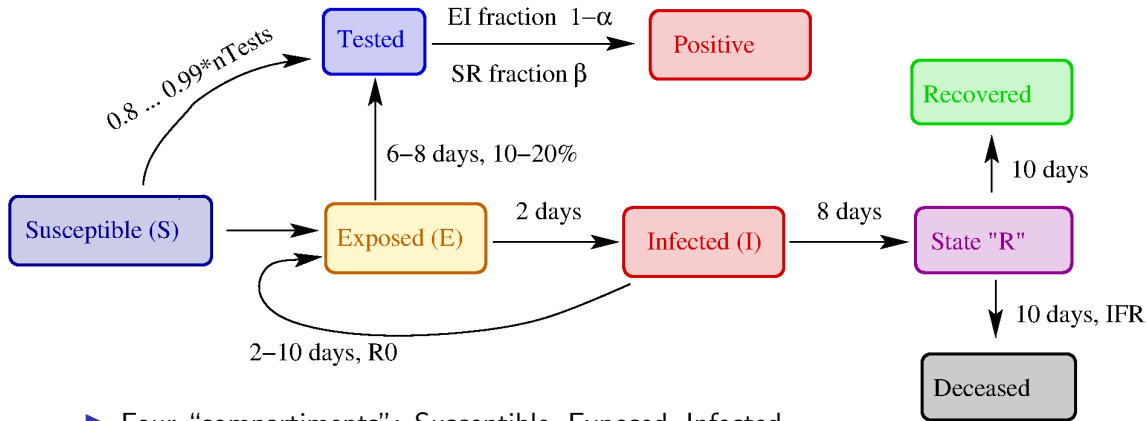
- Four "compartments": Susceptible, Exposed, Infected, Controlled/Recovered/Dead



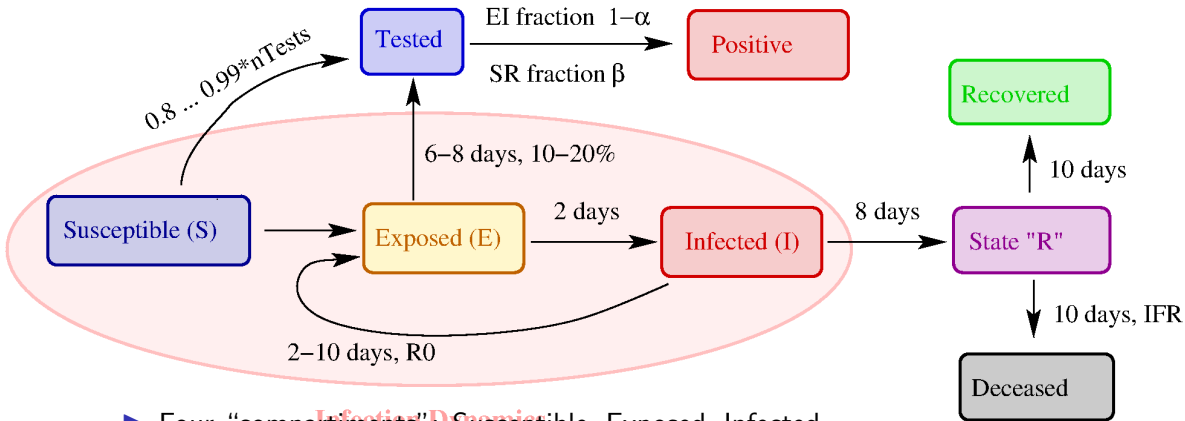
- Four “compartments”: Susceptible, Exposed, Infected, Controlled/Recovered/Dead



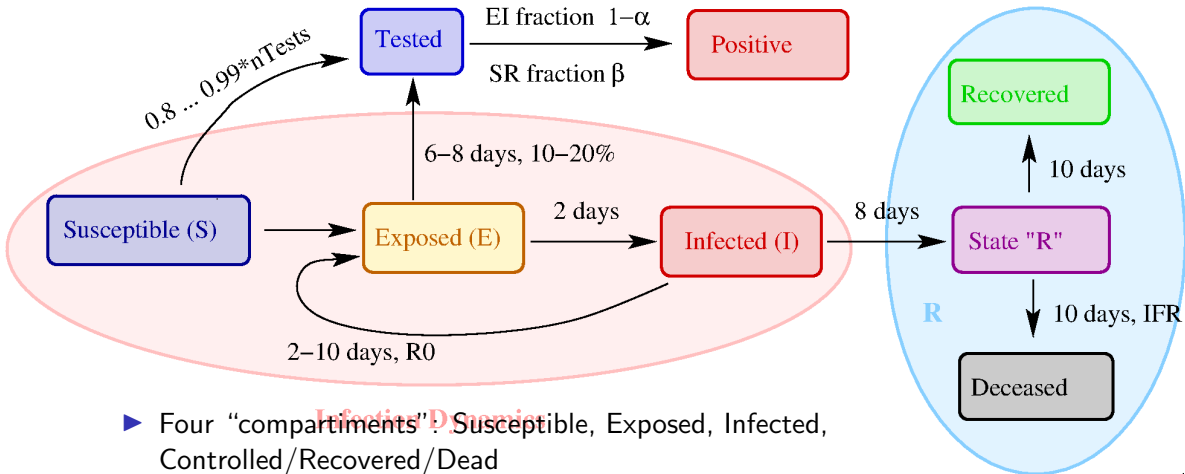
- Four “compartments”: Susceptible, Exposed, Infected, Controlled/Recovered/Dead
- Sensitivity $1 - \alpha = \text{Prob}(\text{positive} \mid \text{infected})$



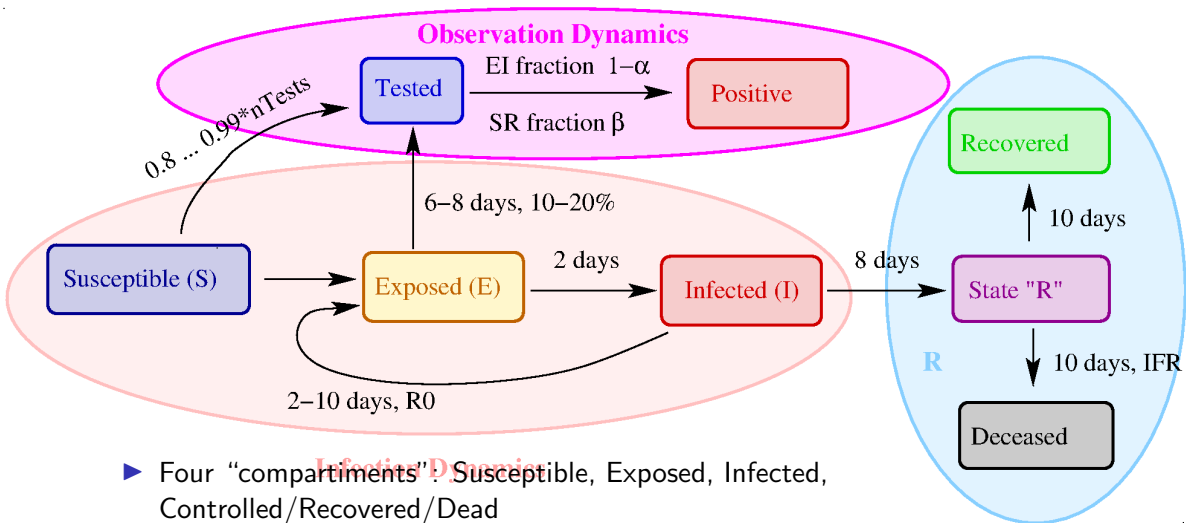
- ▶ Four “compartments”: Susceptible, Exposed, Infected, Controlled/Recovered/Dead
- ▶ Sensitivity $1 - \alpha = \text{Prob}(\text{positive} \mid \text{infected})$
- ▶ Specificity $1 - \beta = \text{Prob}(\text{negative} \mid \text{not infected})$



- ▶ Four “compartments”: Susceptible, Exposed, Infected, Controlled/Recovered/Dead
- ▶ Sensitivity $1 - \alpha = \text{Prob}(\text{positive} \mid \text{infected})$
- ▶ Specificity $1 - \beta = \text{Prob}(\text{negative} \mid \text{not infected})$



- Four “compartments”: Susceptible, Exposed, Infected, Controlled/Recovered/Dead
- Sensitivity $1 - \alpha = \text{Prob}(\text{positive} \mid \text{infected})$
- Specificity $1 - \beta = \text{Prob}(\text{negative} \mid \text{not infected})$



- Four “compartments”: Susceptible, Exposed, Infected, Controlled/Recovered/Dead
- Sensitivity $1 - \alpha = \text{Prob}(\text{positive} \mid \text{infected})$
- Specificity $1 - \beta = \text{Prob}(\text{negative} \mid \text{not infected})$

Take-Home Messages

- ▶ Separation between **infection** and **data dynamics**

Take-Home Messages

- ▶ Separation between **infection** and **data dynamics**
- ▶ Data used to **calibrate** the base reproduction numbers and IFRs

Take-Home Messages

- ▶ Separation between **infection** and **data dynamics**
- ▶ Data used to **calibrate** the base reproduction numbers and IFRs
- ▶ **Wave peak** if contamination $\approx 20\%$: No herd immunity but sufficient for mild measures to be effective

Take-Home Messages

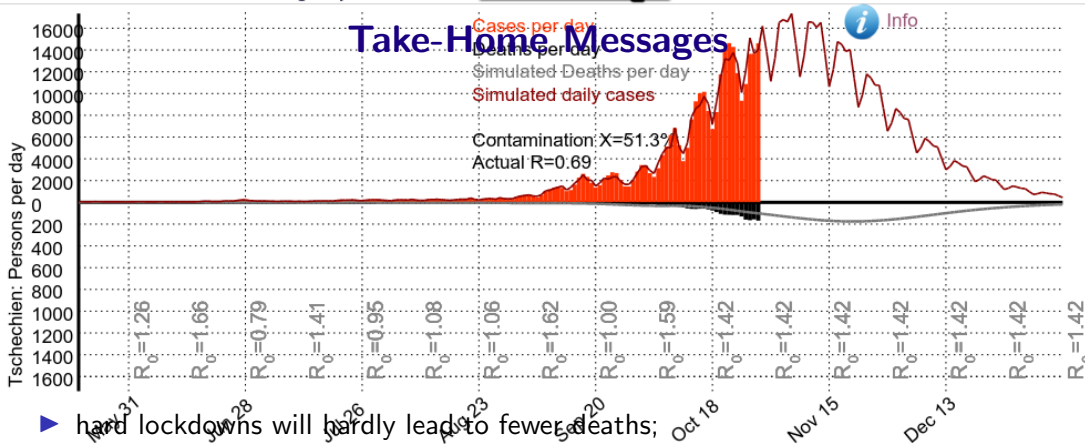
- ▶ Separation between **infection** and **data dynamics**
- ▶ Data used to **calibrate** the base reproduction numbers and IFRs
- ▶ **Wave peak** if contamination $\approx 20\%$: No herd immunity but sufficient for mild measures to be effective
- ▶ As flu, there is a strong **season dependence** (Peru, Australia)

Take-Home Messages

- ▶ Separation between **infection** and **data dynamics**
- ▶ Data used to **calibrate** the base reproduction numbers and IFRs
- ▶ **Wave peak** if contamination $\approx 20\%$: No herd immunity but sufficient for mild measures to be effective
- ▶ As flu, there is a strong **season dependence** (Peru, Australia)
- ▶ hard lockdowns will hardly lead to fewer deaths;
 \approx **30 000 Covid/flu deaths** this winter season in Germany anyway

Take-Home Messages

- ▶ Separation between **infection** and **data dynamics**
- ▶ Data used to **calibrate** the base reproduction numbers and IFRs
- ▶ **Wave peak** if contamination $\approx 20\%$: No herd immunity but sufficient for mild measures to be effective
- ▶ As flu, there is a strong **season dependence** (Peru, Australia)
- ▶ hard lockdowns will hardly lead to fewer deaths;
 $\approx 30\,000$ **Covid/flu deaths** this winter season in Germany anyway
- ▶ Pandemic **is over** in March/April 2021; in Czechia already now



- ▶ hard lockdowns will hardly lead to fewer deaths;
 $\approx 30\,000$ Covid/flu deaths this winter season in Germany anyway
- ▶ Pandemic **is over** in March/April 2021; in Czechia already now
- ▶ **Let's see if these projections stand the test of time!**