Germany

Data

New Cases

Vertical dotted lines represent the first seeding day and the epidemic start date.

New Deaths

Vertical dotted lines represent the first seeding day and the epidemic start date.

Mobility Data

Vertical dotted lines represent the first seeding day and the epidemic start date.
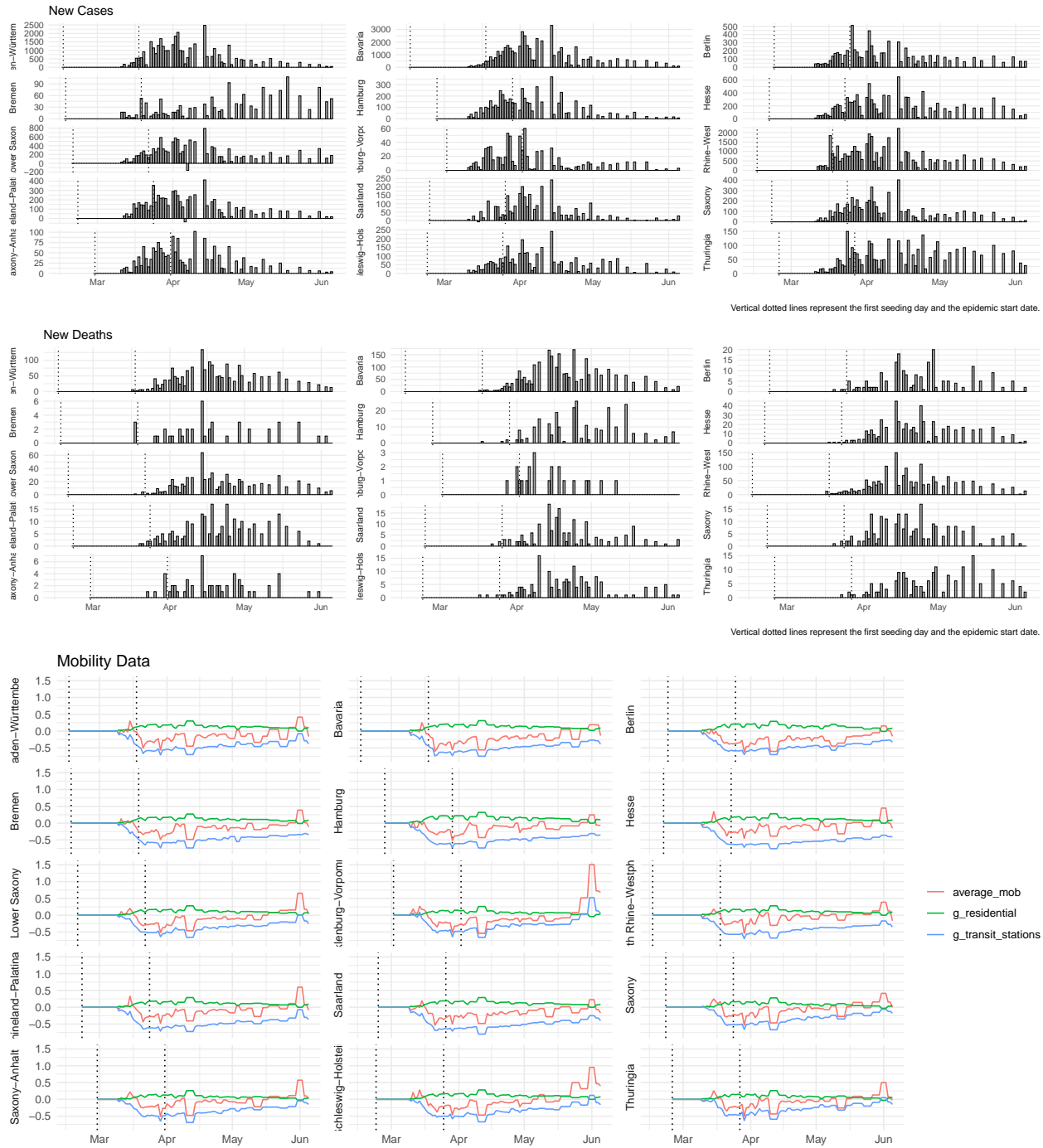
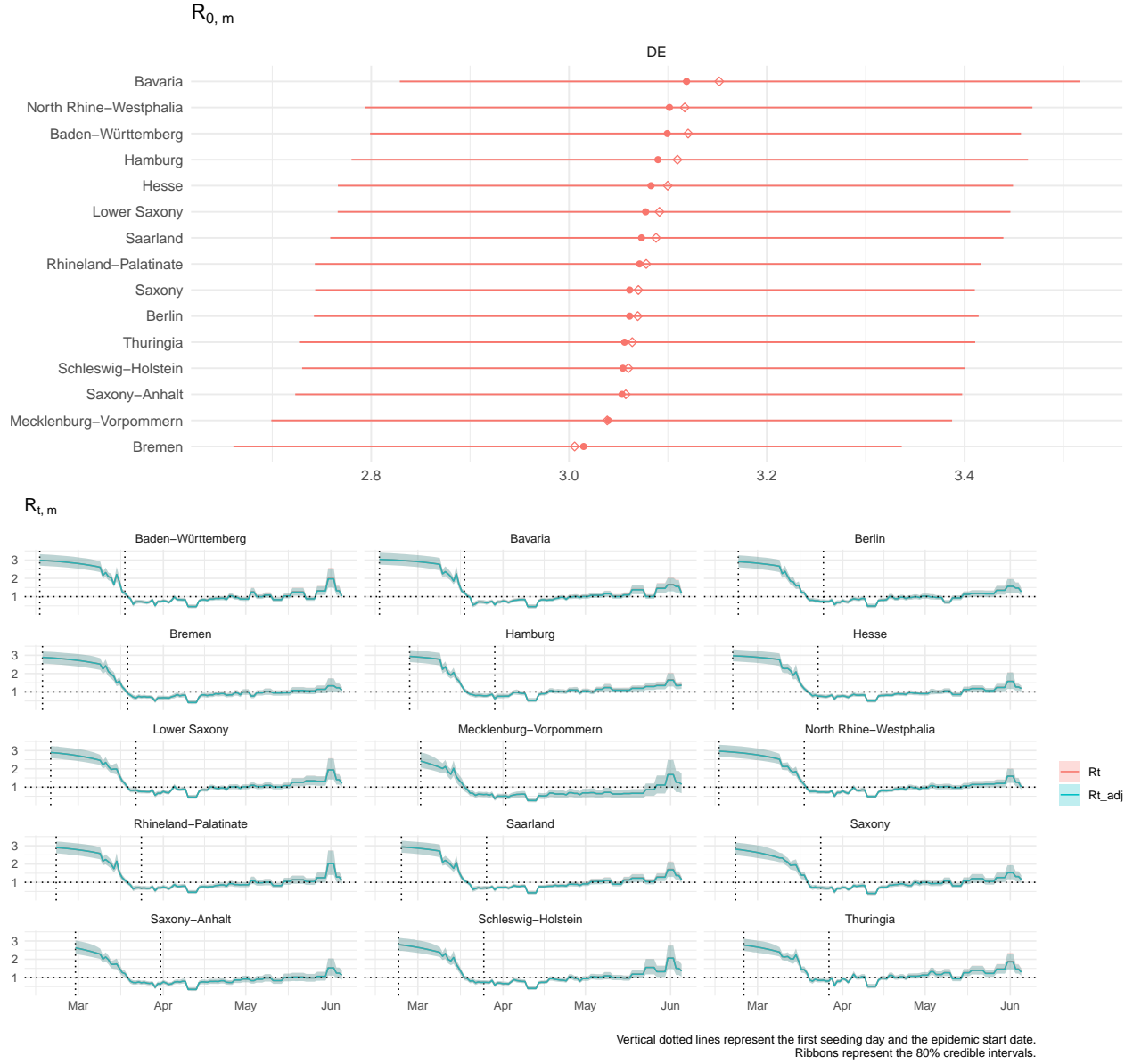## Analysis

Number of divergent transitions = 0

Maximum $\hat{R}$ = 1.004552

Minimum Bulk ESS = 904.5047

Minimum Tail ESS = 1172.592

$R_{0,m}$

$R_{t,m}$

Vertical dotted lines represent the first seeding day and the epidemic start date.
Ribbons represent the 80% credible intervals.
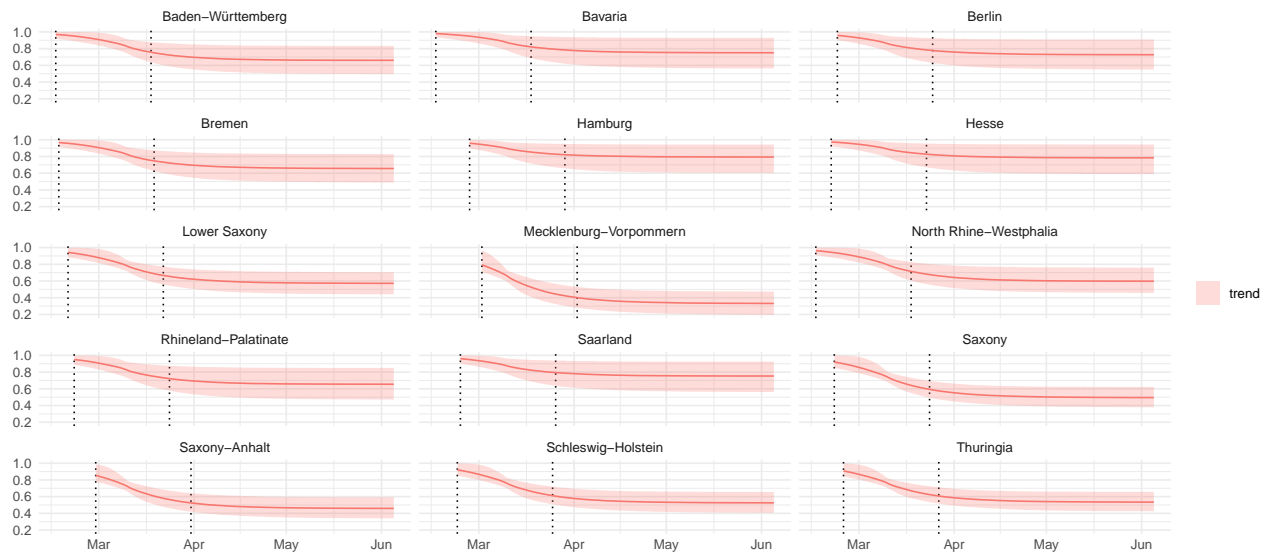
Contact rate function:

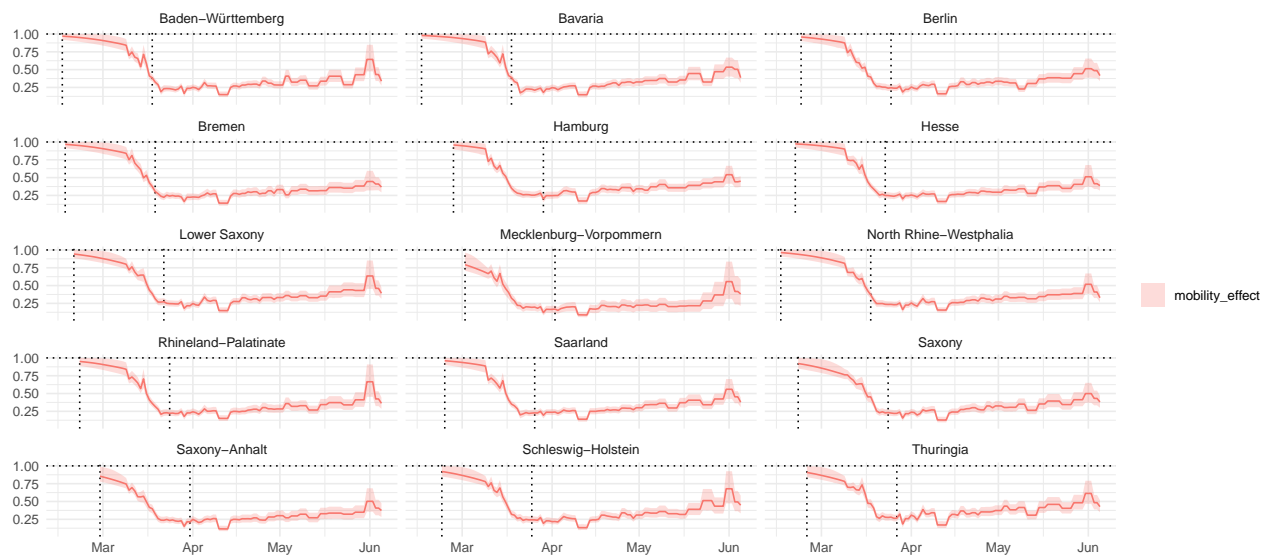$$cr(t; t^*, \lambda_j, \kappa) = \lambda_j + \frac{1 - \lambda_j}{1 + \exp(\kappa(t - t^*))}$$
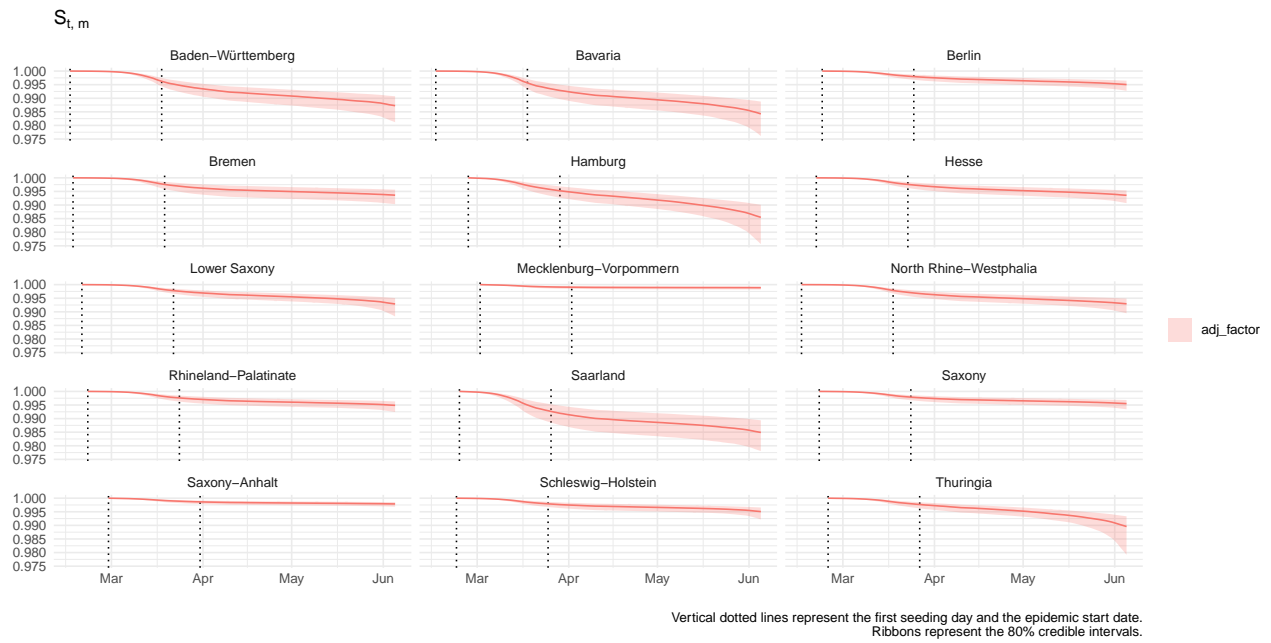
where

$$\lambda_j \sim \texttt{Beta}(3, 1)$$
$$\kappa \sim \texttt{NegHalfNormal}(0, 1).$$

Contact Rate

Vertical dotted lines represent the first seeding day and the epidemic start date.
Ribbons represent the 80% credible intervals.

Mobility effect

Vertical dotted lines represent the first seeding day and the epidemic start date.
Ribbons represent the 80% credible intervals.

$S_{t,m}$

Baden–Württemberg Bavaria Berlin

Bremen Hamburg Hesse

Lower Saxony Mecklenburg–Vorpommern North Rhine–Westphalia

adj_factor

Rhineland–Palatinate Saarland Saxony

Saxony–Anhalt Schleswig–Holstein Thuringia

Vertical dotted lines represent the first seeding day and the epidemic start date.
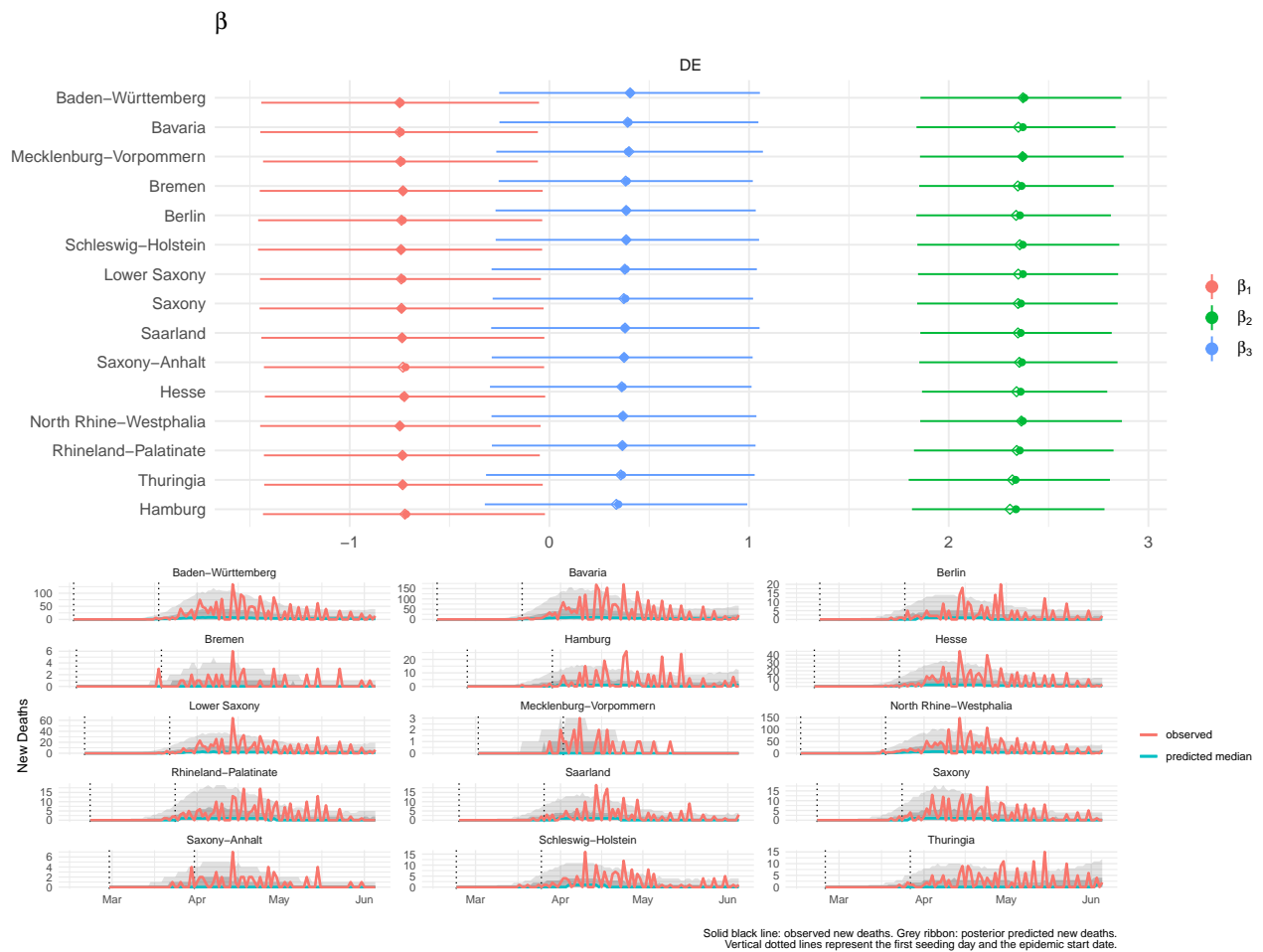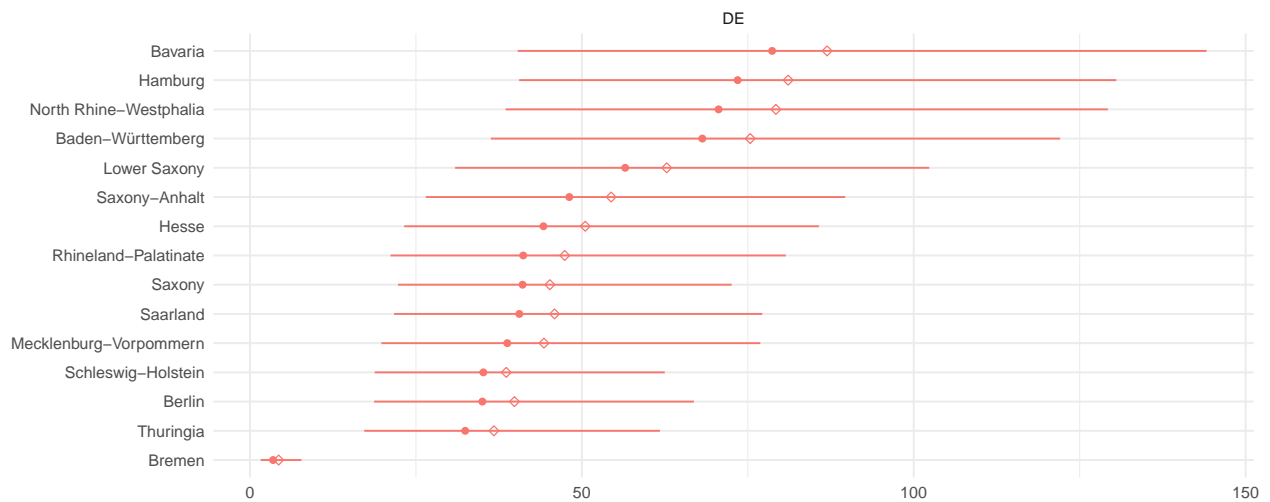Ribbons represent the 80% credible intervals.

Mobility linear model: $\beta_1 \cdot X_{\text{residential}} + \beta_2 \cdot X_{\text{transit}} + \beta_3 \cdot X_{\text{average}}$.

β

DE

β_1
β_2
β_3

New Deaths

observed
predicted median

Solid black line: observed new deaths. Grey ribbon: posterior predicted new deaths.
Vertical dotted lines represent the first seeding day and the epidemic start date.
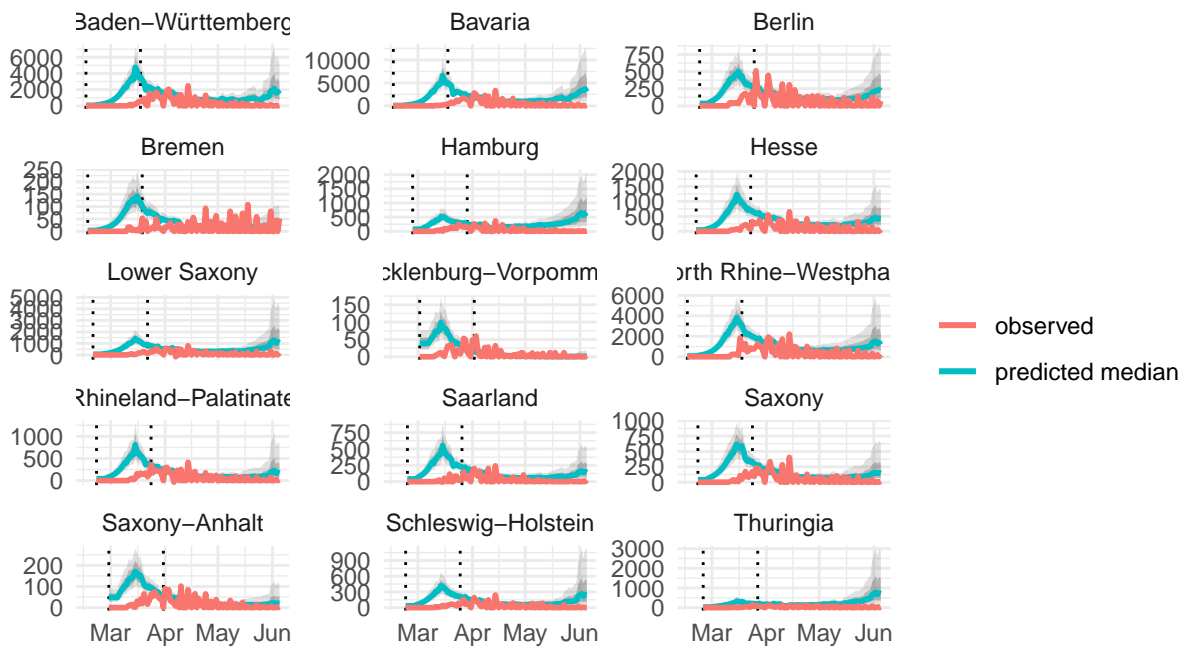
4

Imputed Cases

DE

New Cases

predicted vs observed

Solid black line: observed new deaths. Grey ribbon: posterior predicted new deaths.
Vertical dotted lines represent the first seeding day and the epidemic start date.

IFR