Ireland

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

- average_mob
- g_residential
- g_transit_stations

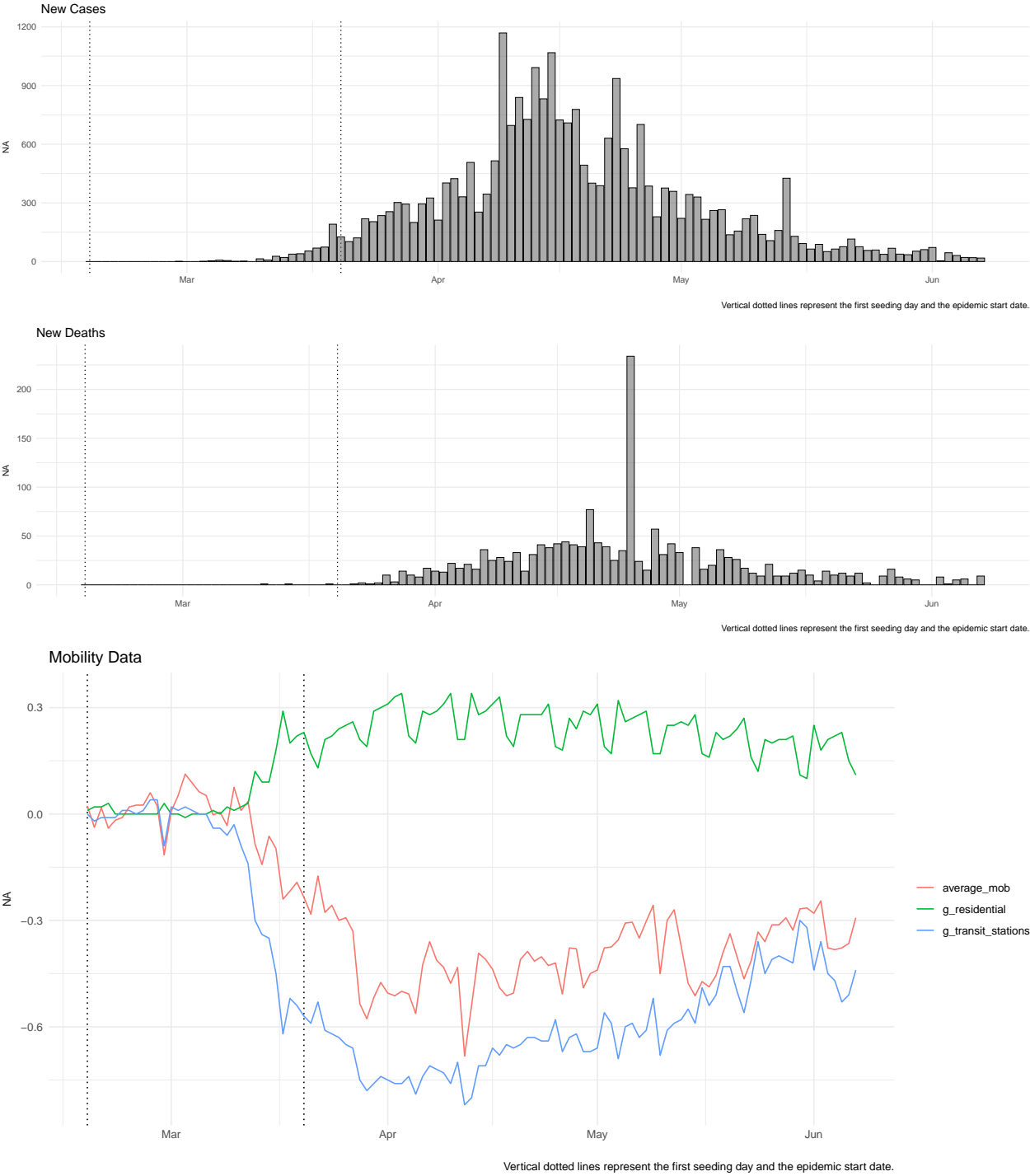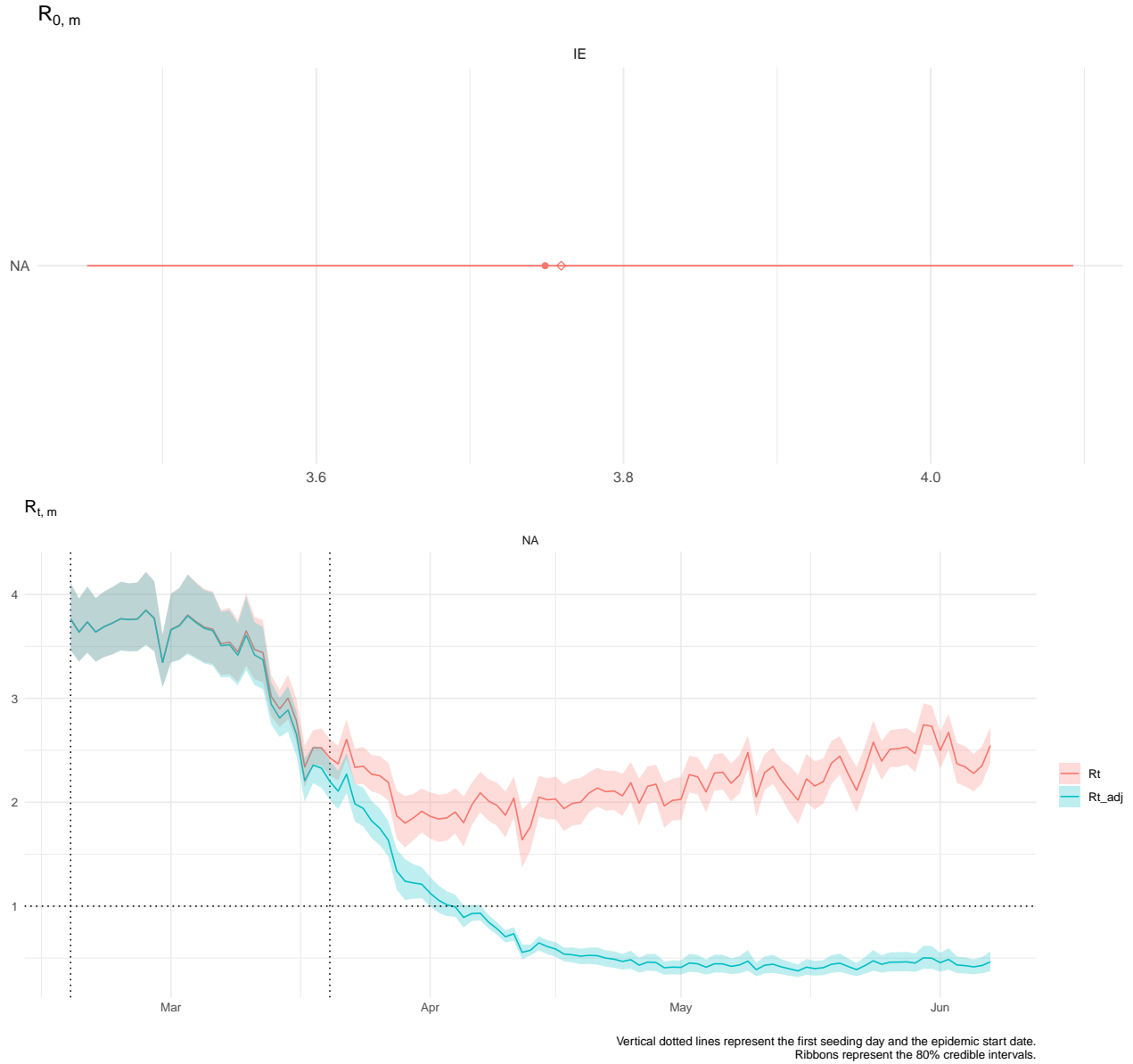Vertical dotted lines represent the first seeding day and the epidemic start date.

Analysis

Number of divergent transitions = 0

Maximum $\hat{R}$ = 1.004318

Minimum Bulk ESS = 1587.294

Minimum Tail ESS = 1489.578

$R_{0, m}$

$R_{t, m}$

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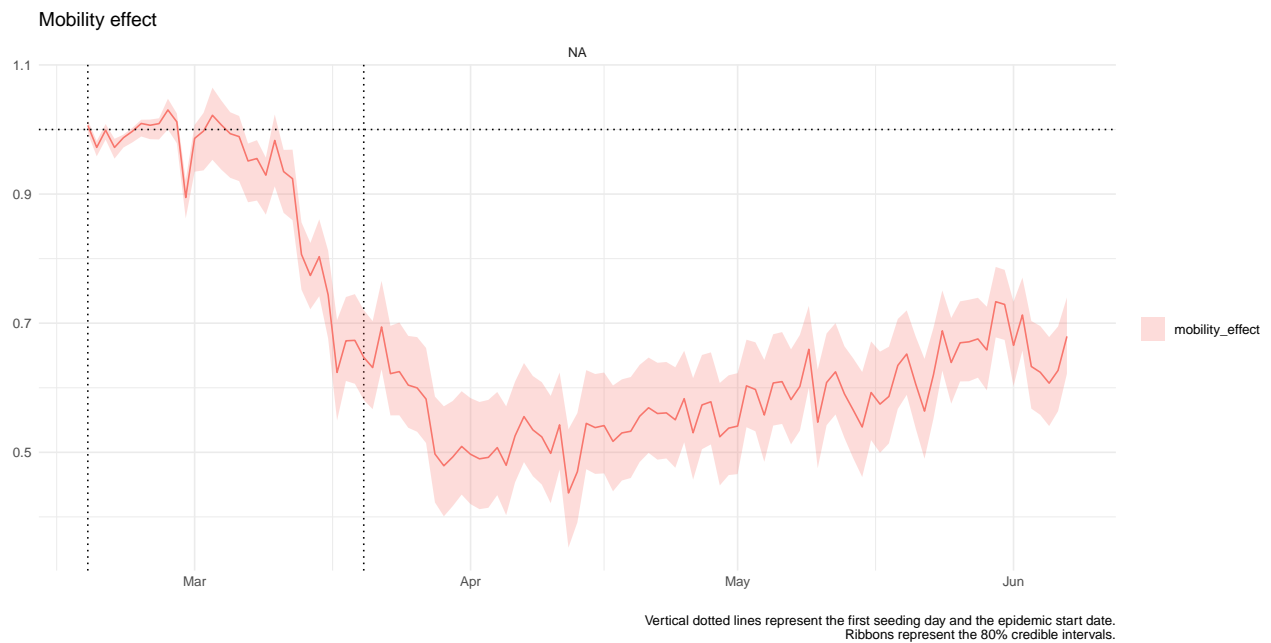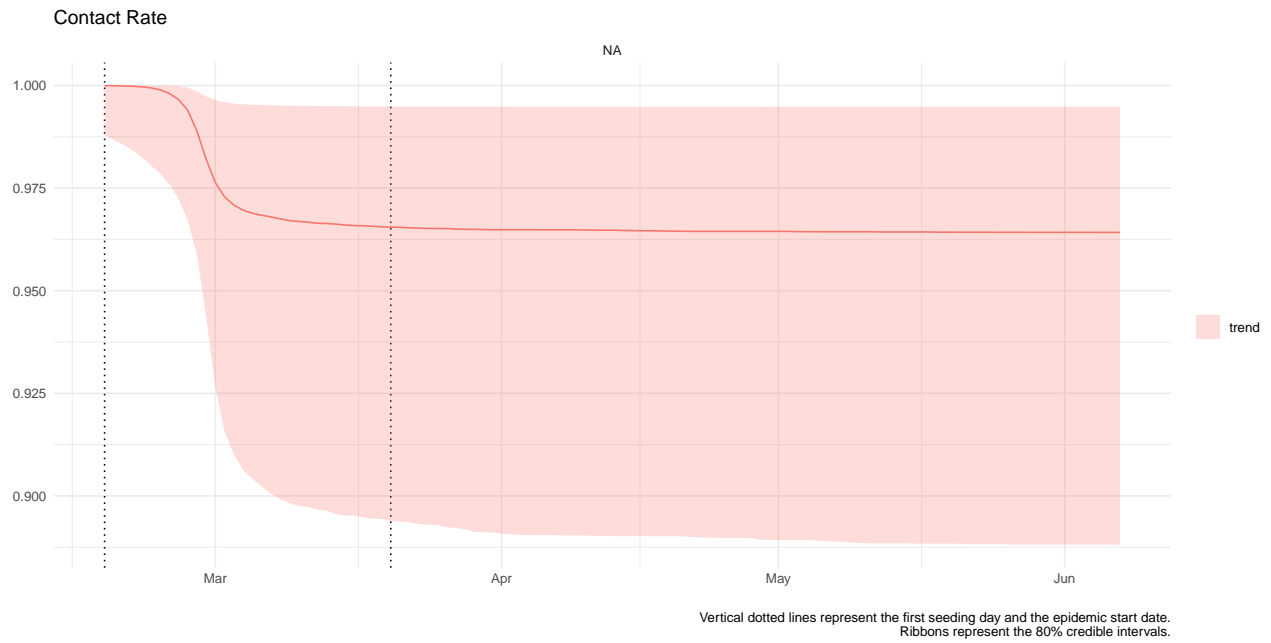Ribbons represent the 80% credible intervals.
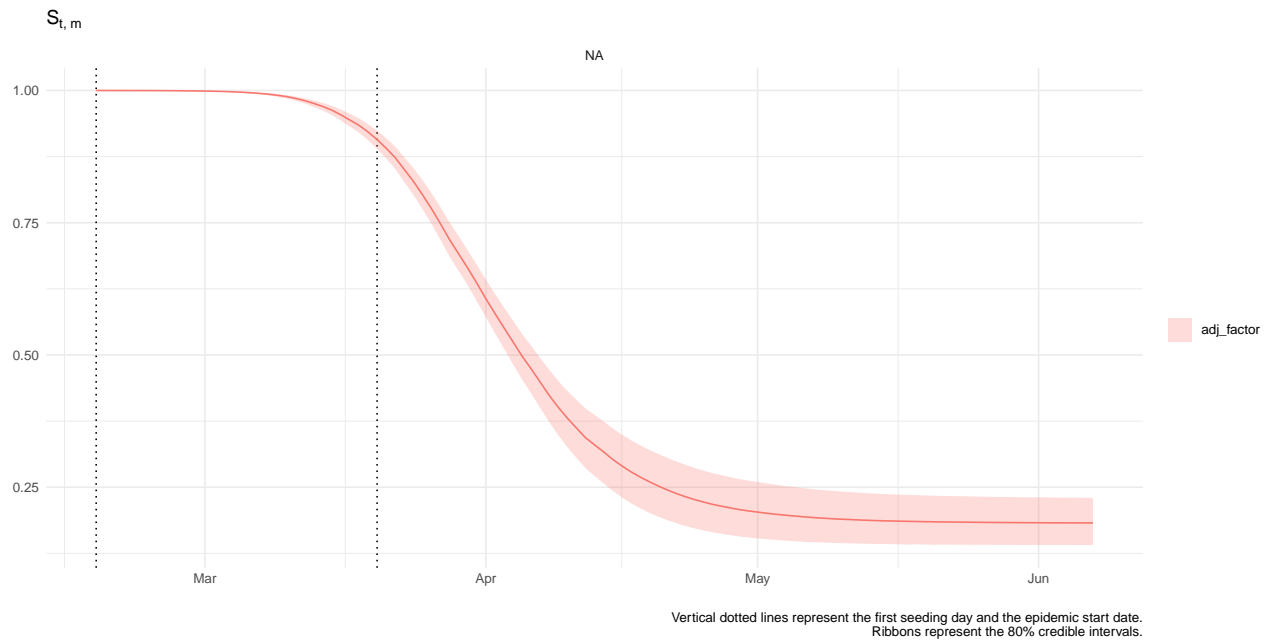
Contact rate function:

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

where

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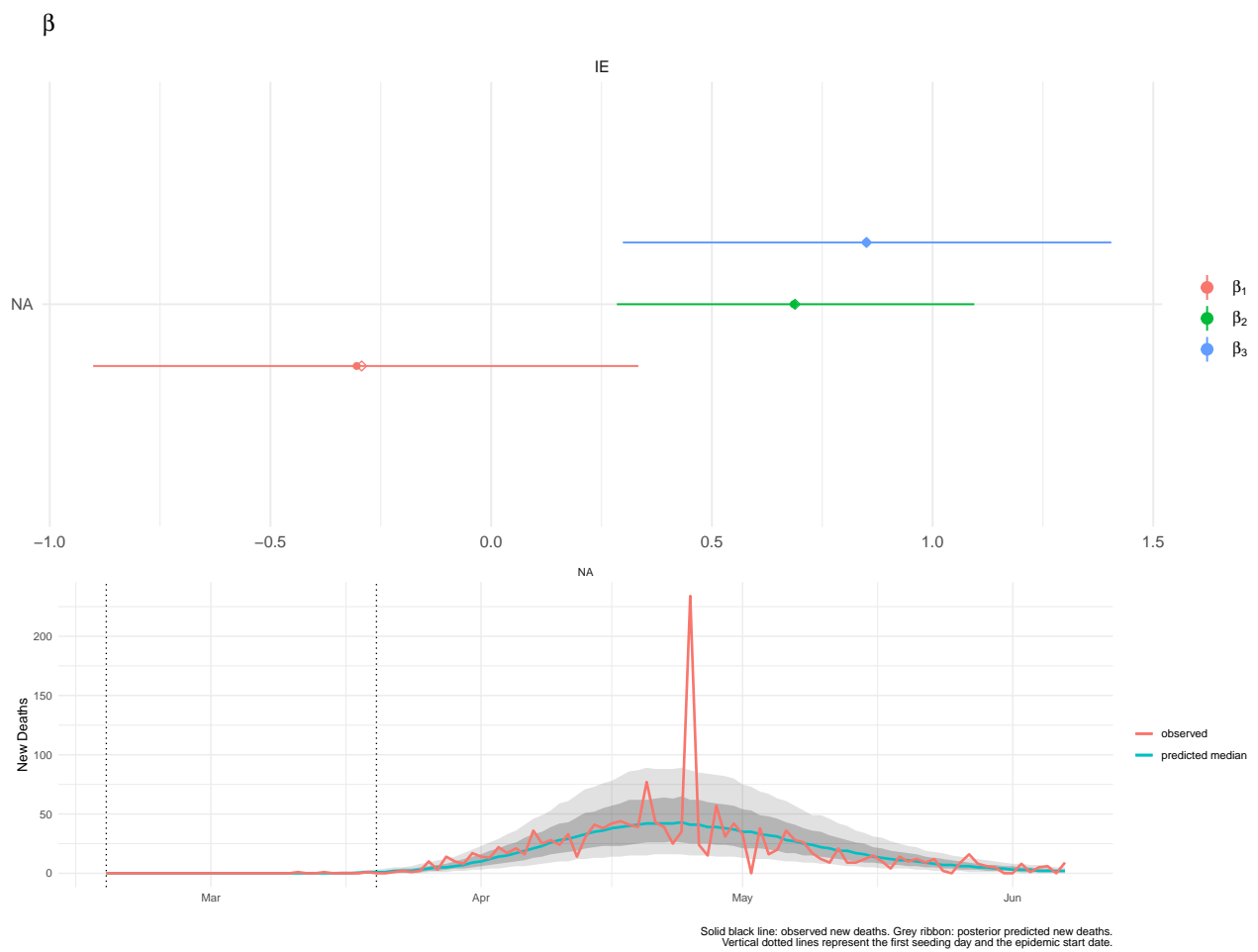$$\kappa \sim \texttt{NegHalfNormal}(0, 1).$$

Contact Rate

NA

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

Mobility effect

NA

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

$S_{t,m}$

Vertical dotted lines represent the first seeding day and the epidemic start date.
Ribbons represent the 80% credible intervals.
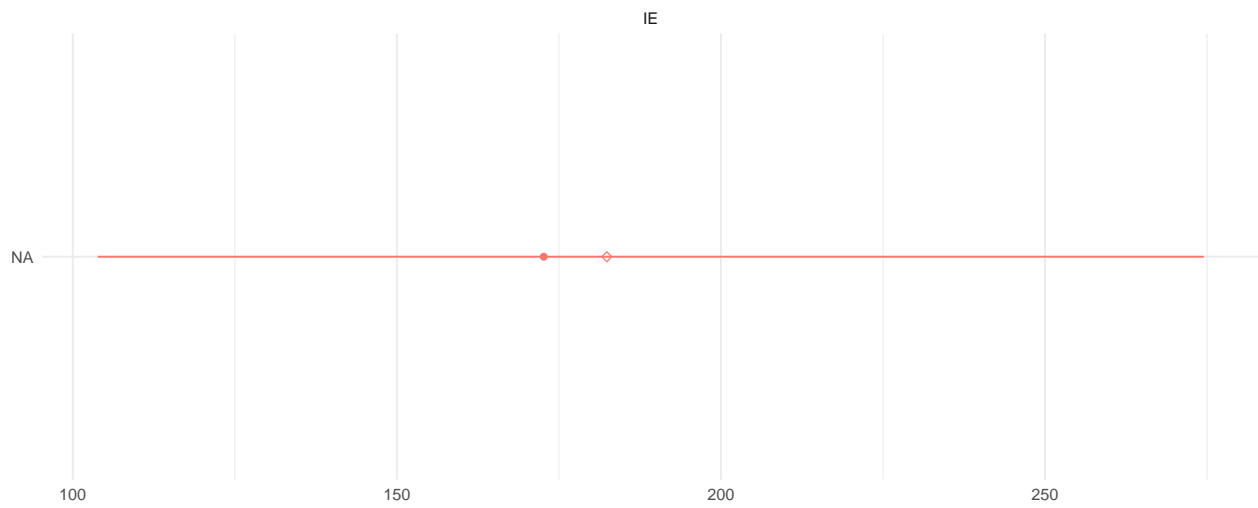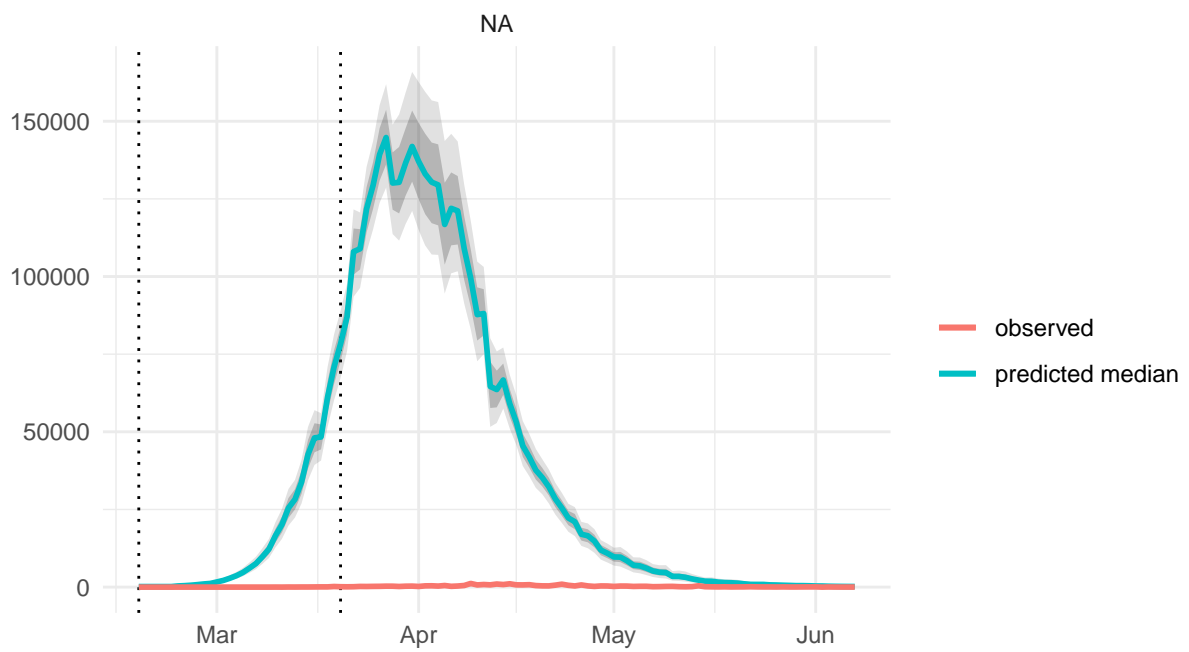
Mobility linear model: $\beta_1 \cdot X_{\text{residential}} + \beta_2 \cdot X_{\text{transit}} + \beta_3 \cdot X_{\text{average}}$.

β

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.

Imputed Cases

IE

New Cases

predicted vs observed

NA

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

IE

NA

0.000425   0.000450   0.000475   0.000500