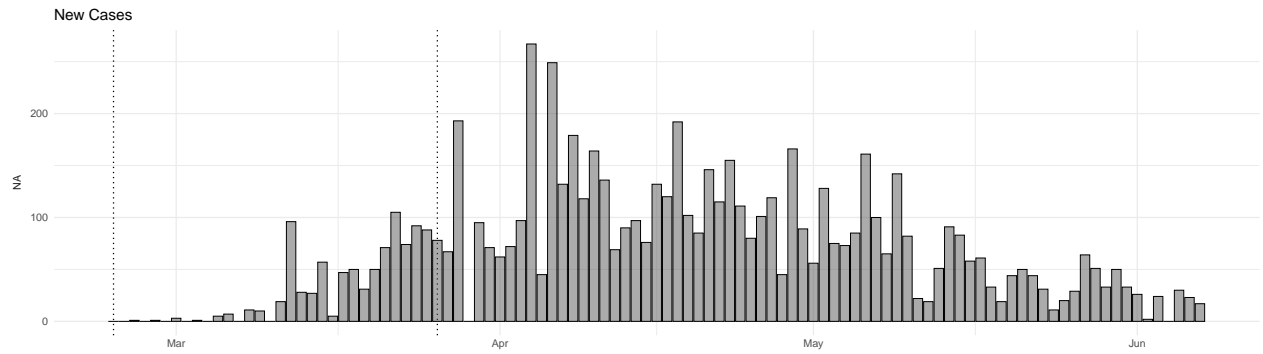
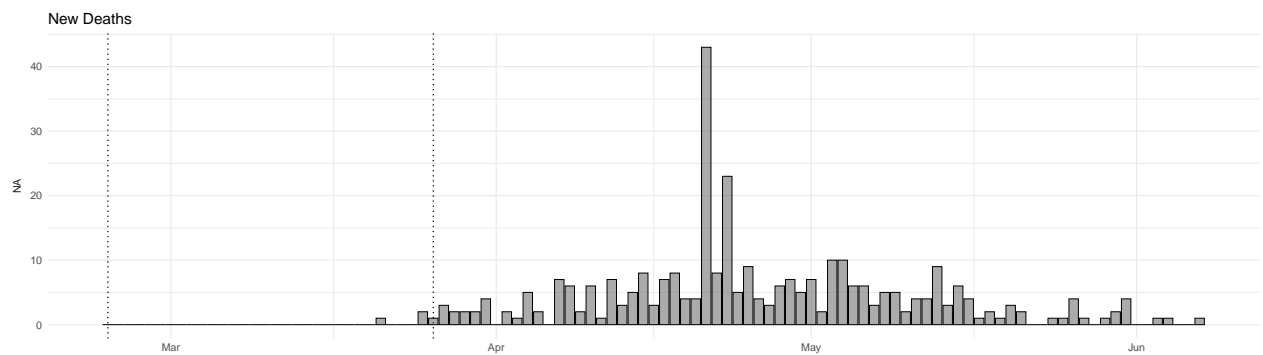


# Finland

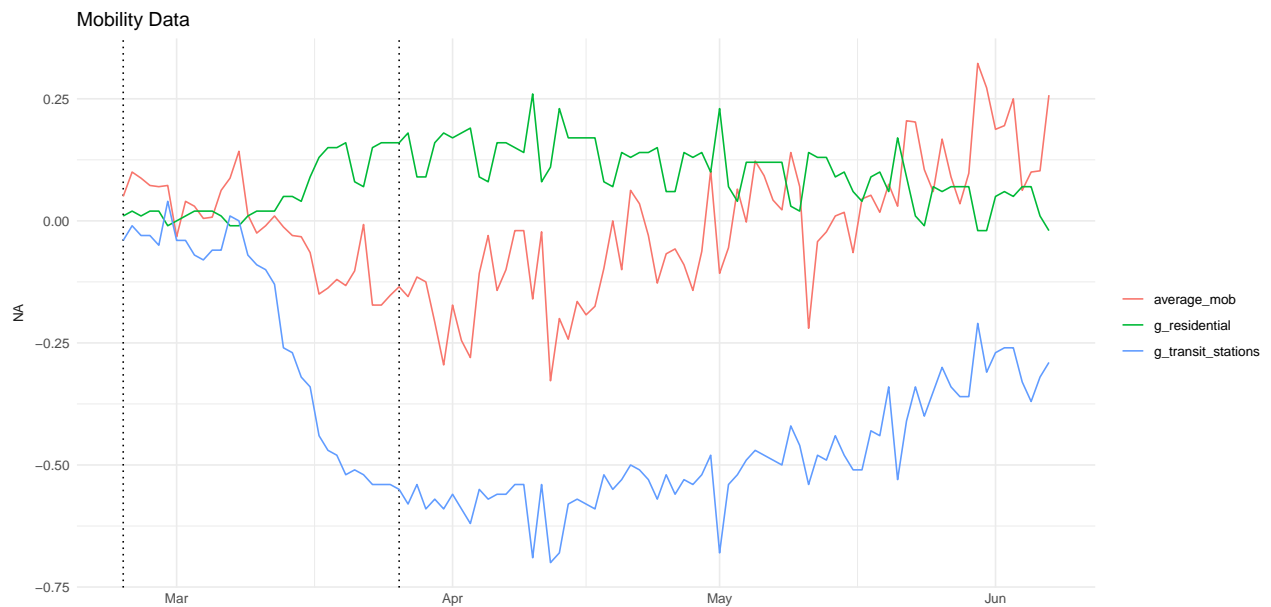
## Data



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



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



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

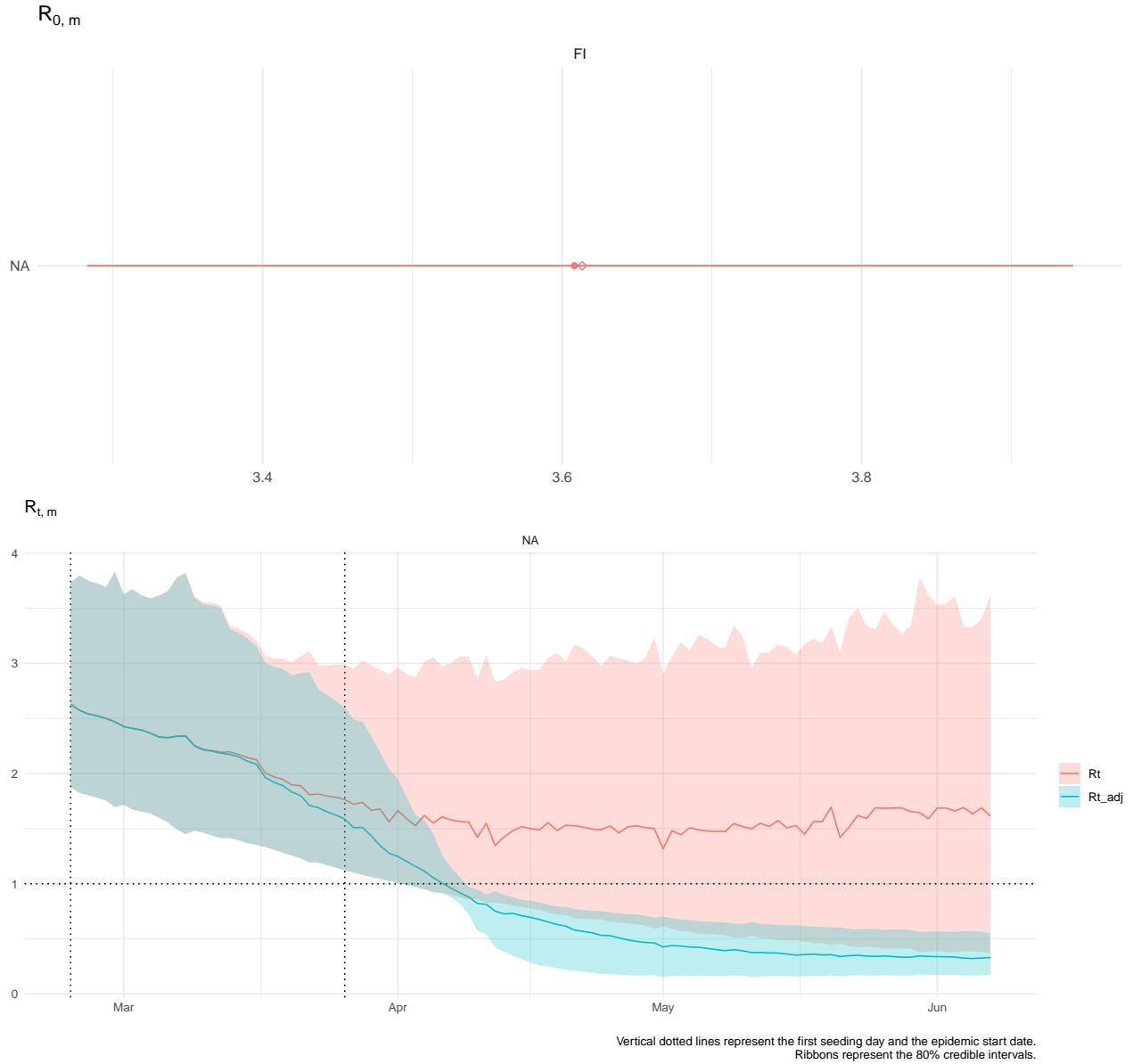
## Analysis

Number of divergent transitions = 0

Maximum  $\hat{R} = 1.924275$

Minimum Bulk ESS = 5.579053

Minimum Tail ESS = 5.250852



Contact rate function:

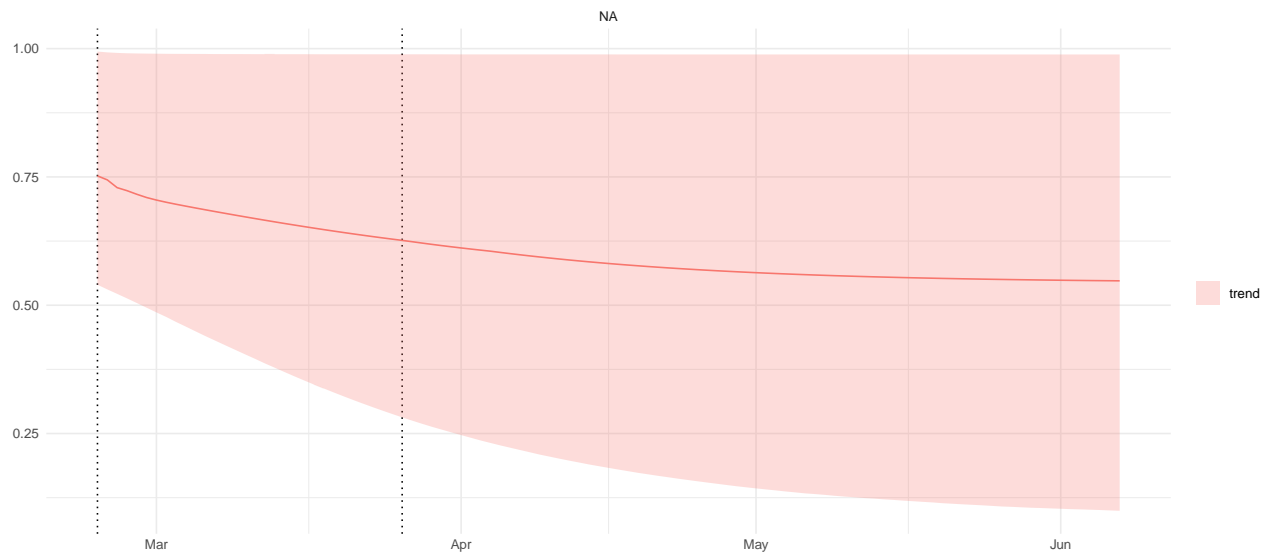
$$cr(t; t^*, \lambda_j, \kappa) = \lambda_j + \frac{1 - \lambda_j}{1 + \exp(\kappa(t - t^*))}$$

where

$$\lambda_j \sim \text{Beta}(3, 1)$$

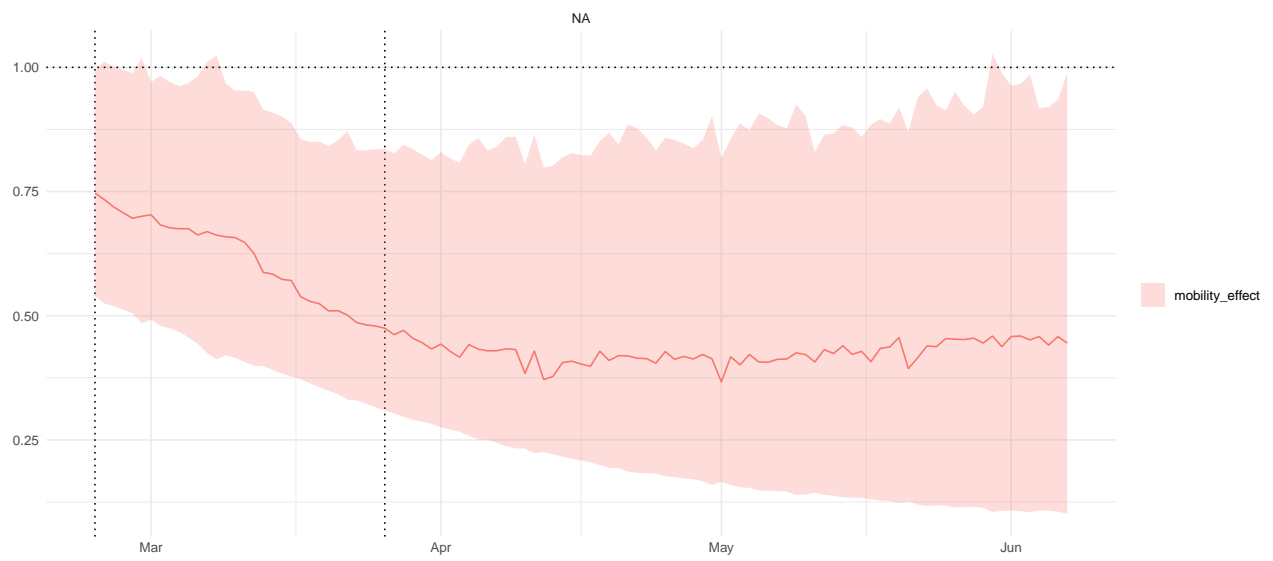
$$\kappa \sim \text{NegHalfNormal}(0, 1).$$

### Contact Rate

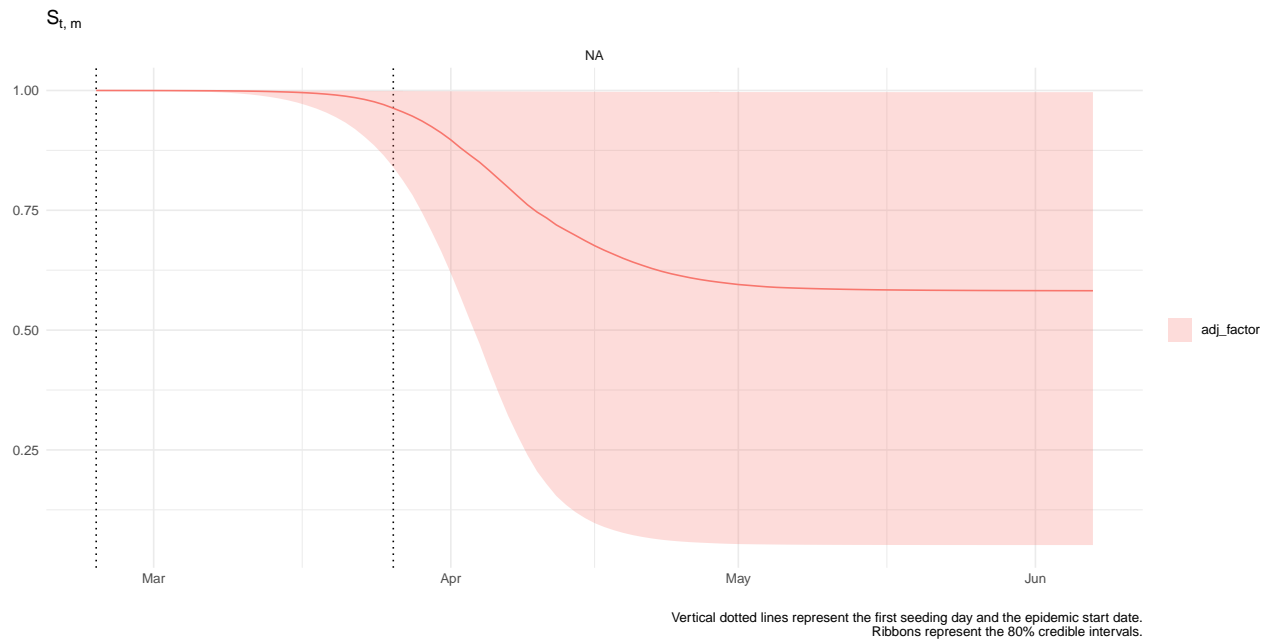


Vertical dotted lines represent the first seeding day and the epidemic start date.  
Ribbons represent the 80% credible intervals.

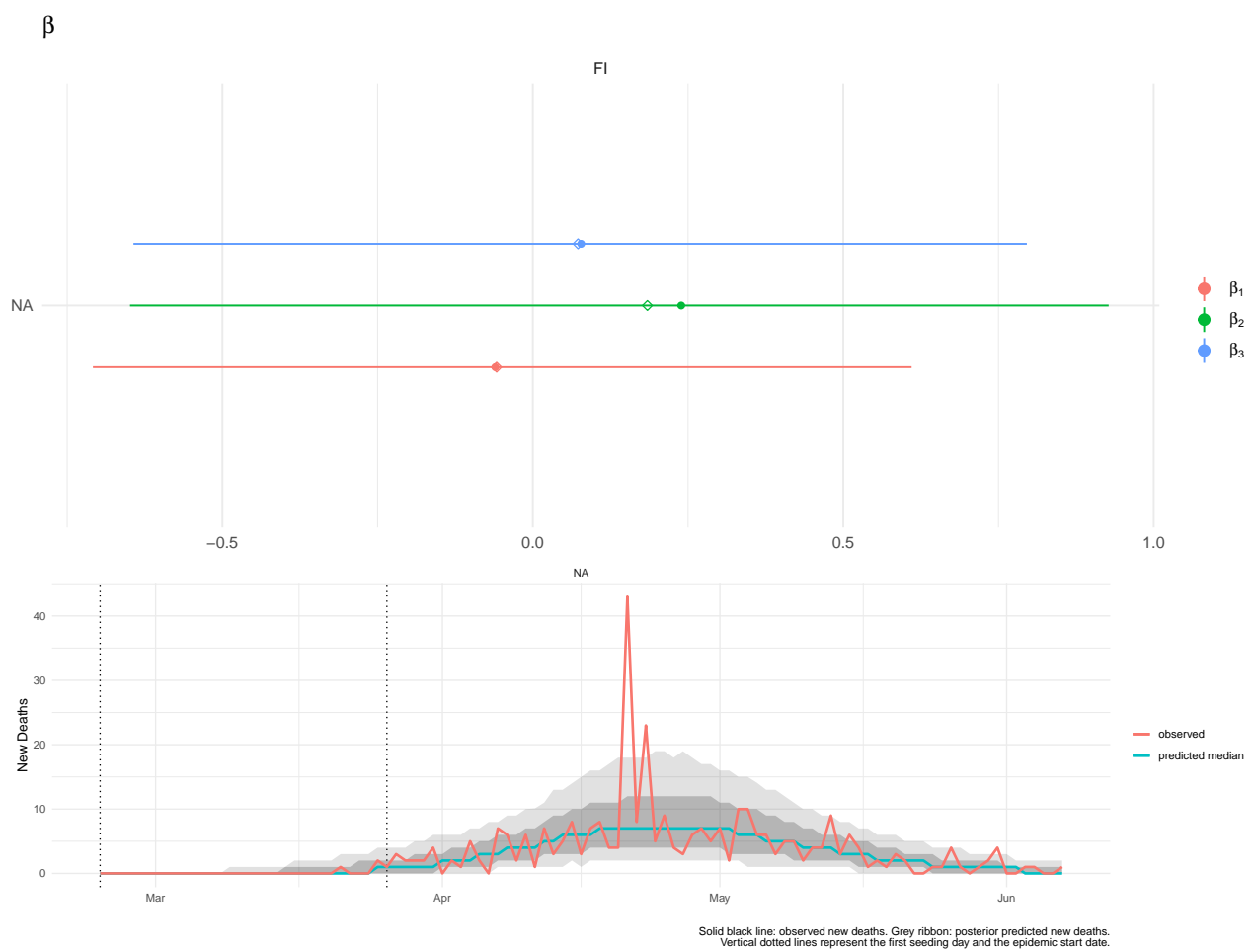
### Mobility effect



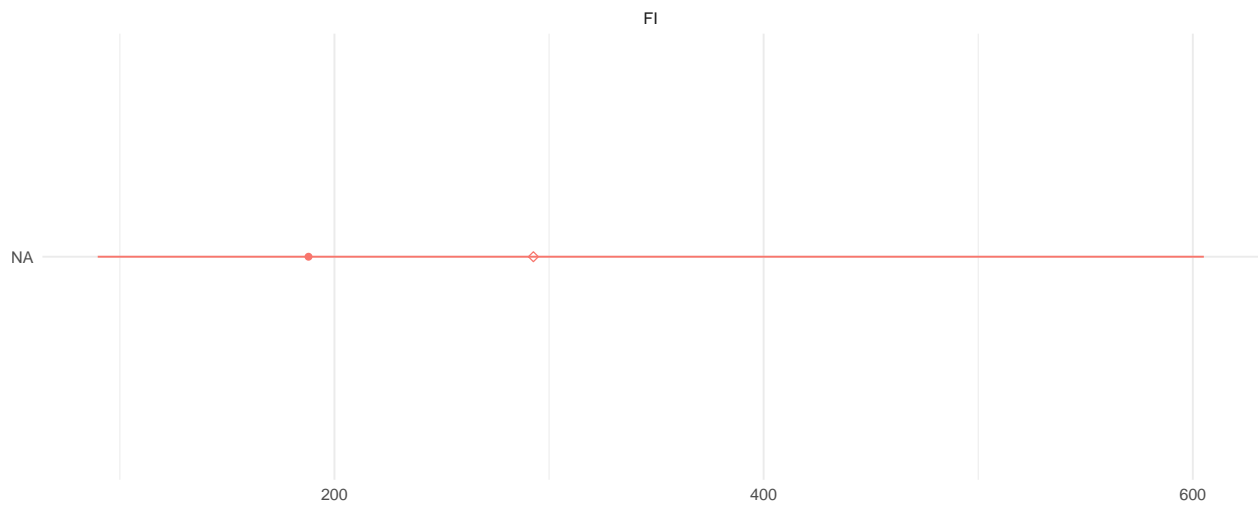
Vertical dotted lines represent the first seeding day and the epidemic start date.  
Ribbons represent the 80% credible intervals.



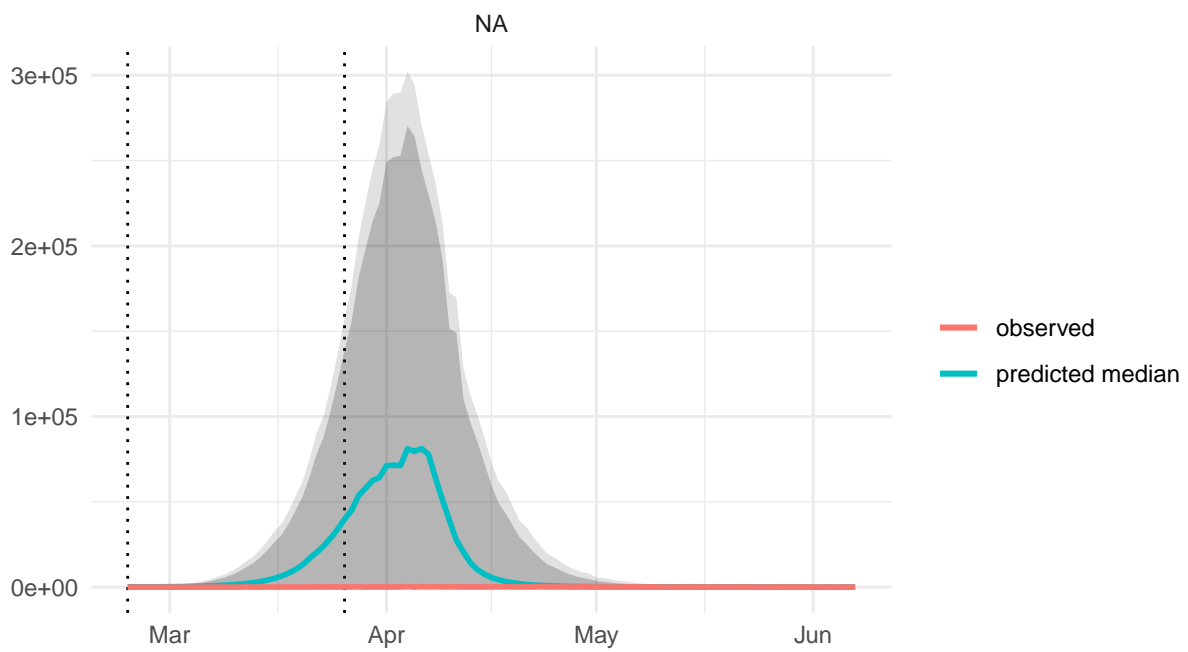
Mobility linear model:  $\beta_1 \cdot X_{\text{residential}} + \beta_2 \cdot X_{\text{transit}} + \beta_3 \cdot X_{\text{average}}$ .



## Imputed Cases



## 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.

