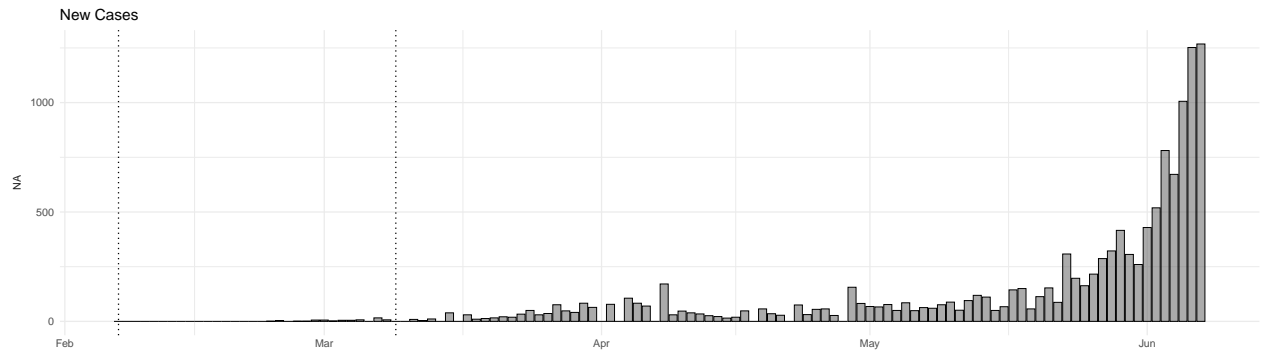
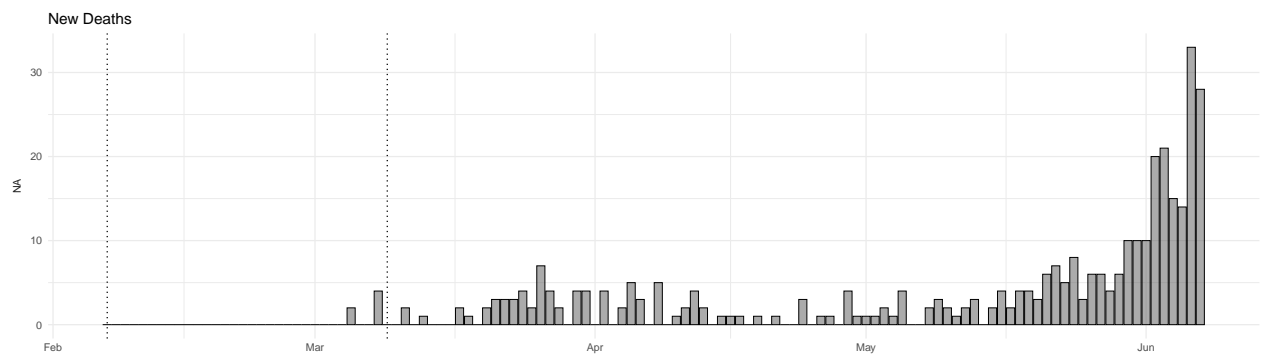


Iraq

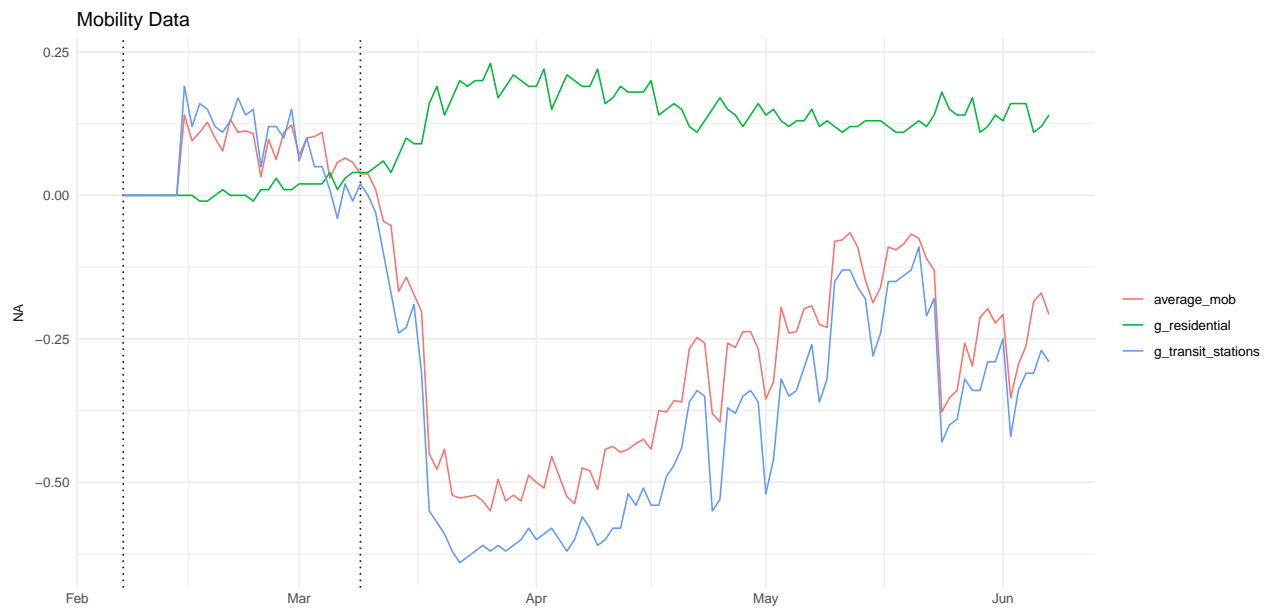
Data



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.

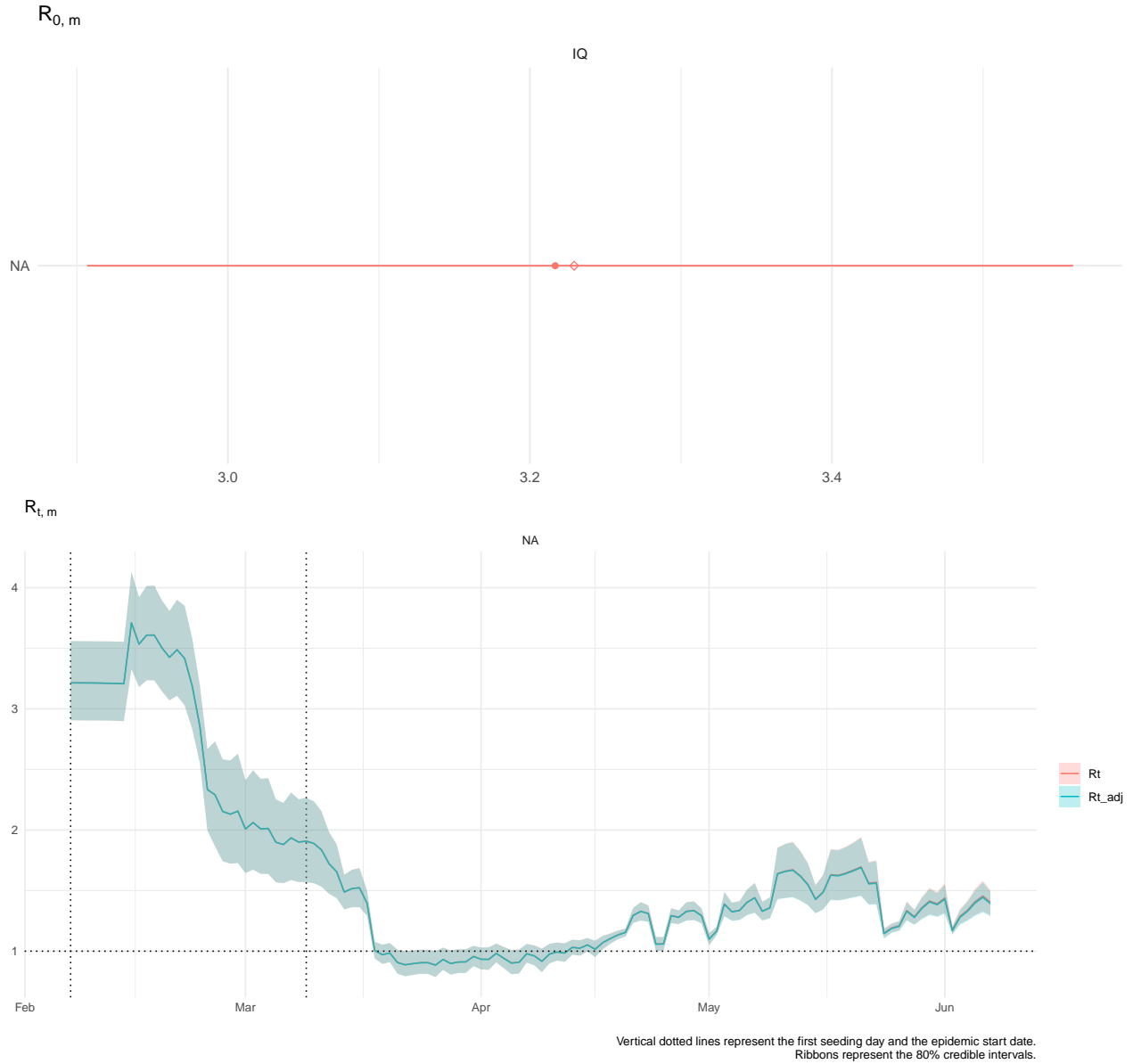
Analysis

Number of divergent transitions = 0

Maximum $\hat{R} = 1.002853$

Minimum Bulk ESS = 1533.151

Minimum Tail ESS = 1371.043



Contact rate function:

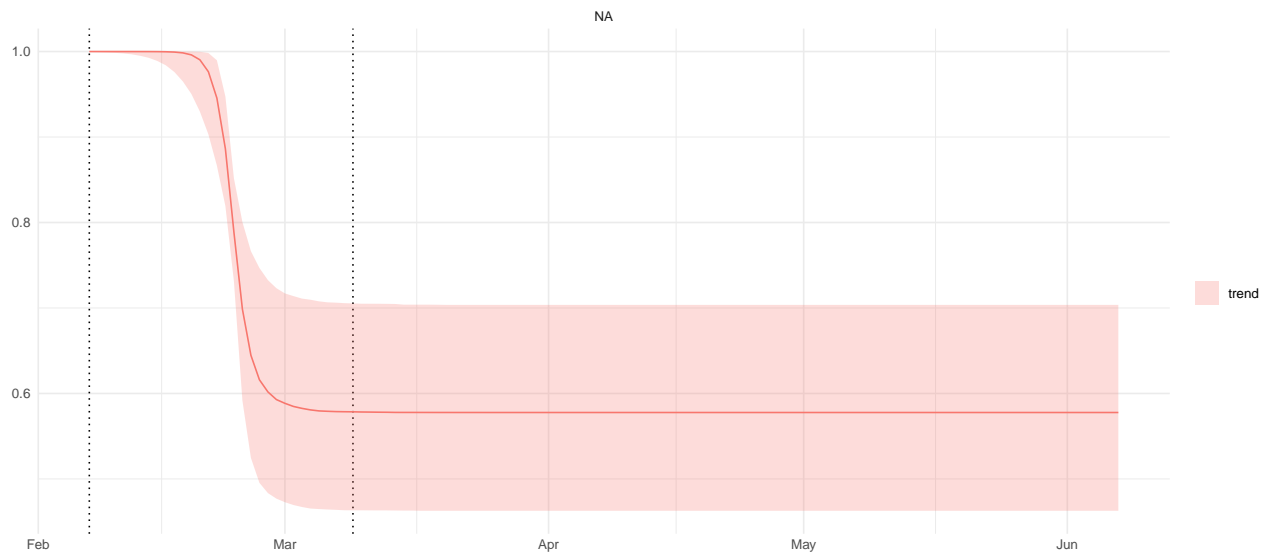
$$cr(t; t^*, \lambda_j, \kappa) = \lambda_j + \frac{1 - \lambda_j}{1 + \exp(\kappa(t - t^*))}$$

where

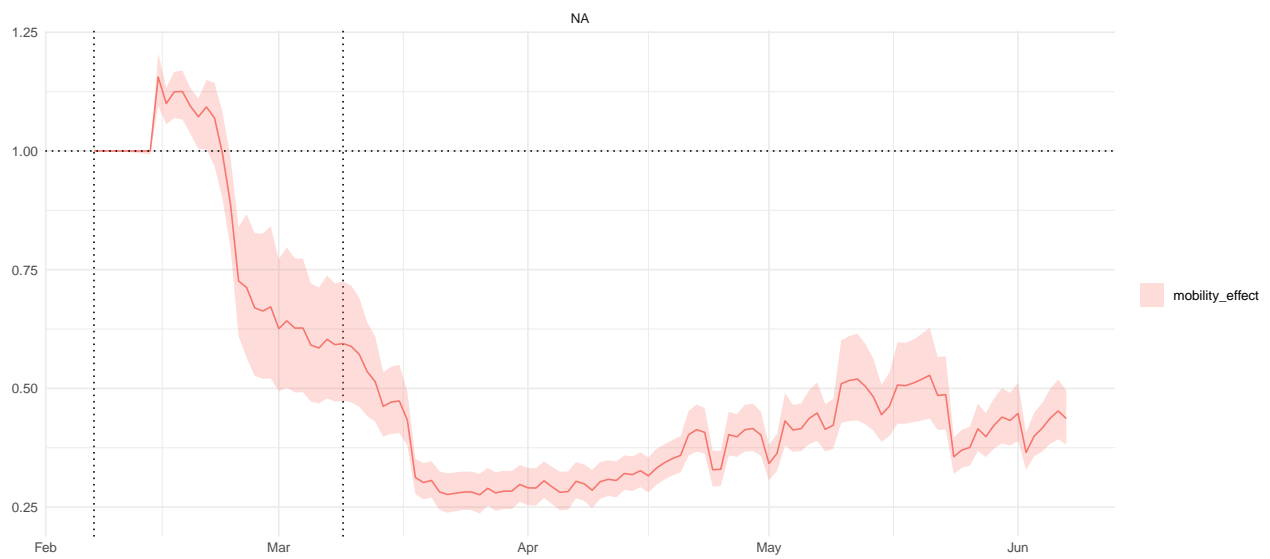
$$\lambda_j \sim \text{Beta}(3, 1)$$

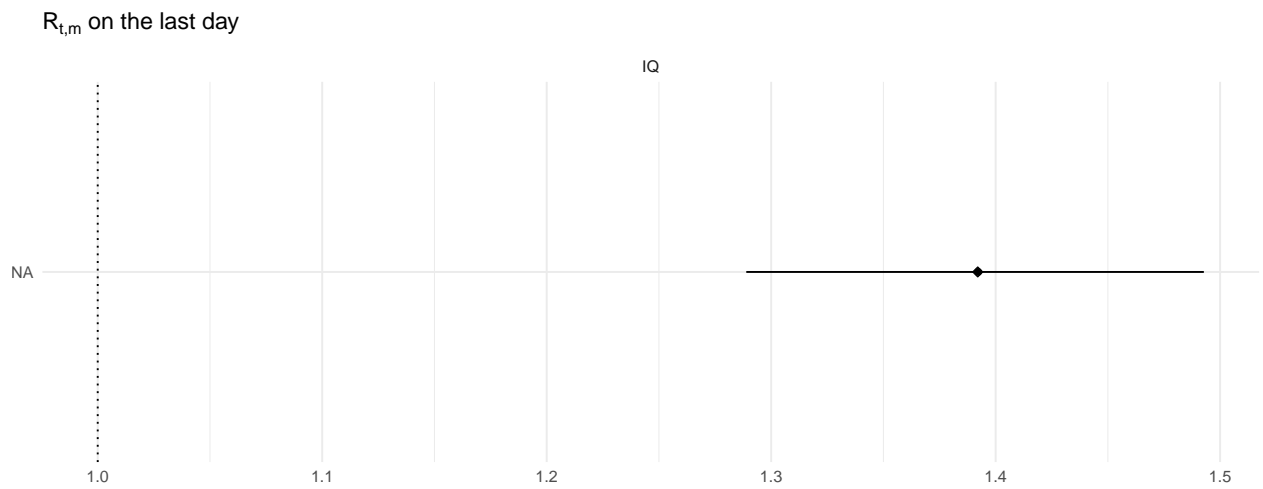
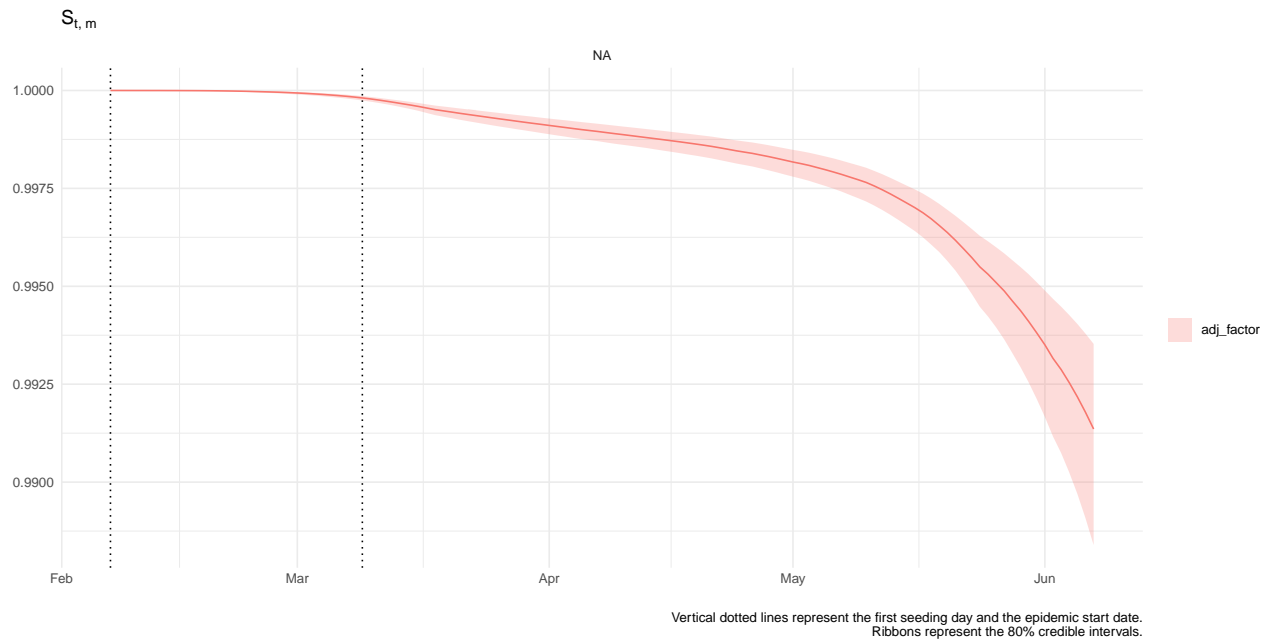
$$\kappa \sim \text{NegHalfNormal}(0, 1).$$

Contact Rate



Mobility effect





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

