Spain

Data

New Cases

New Deaths

Mobility Data
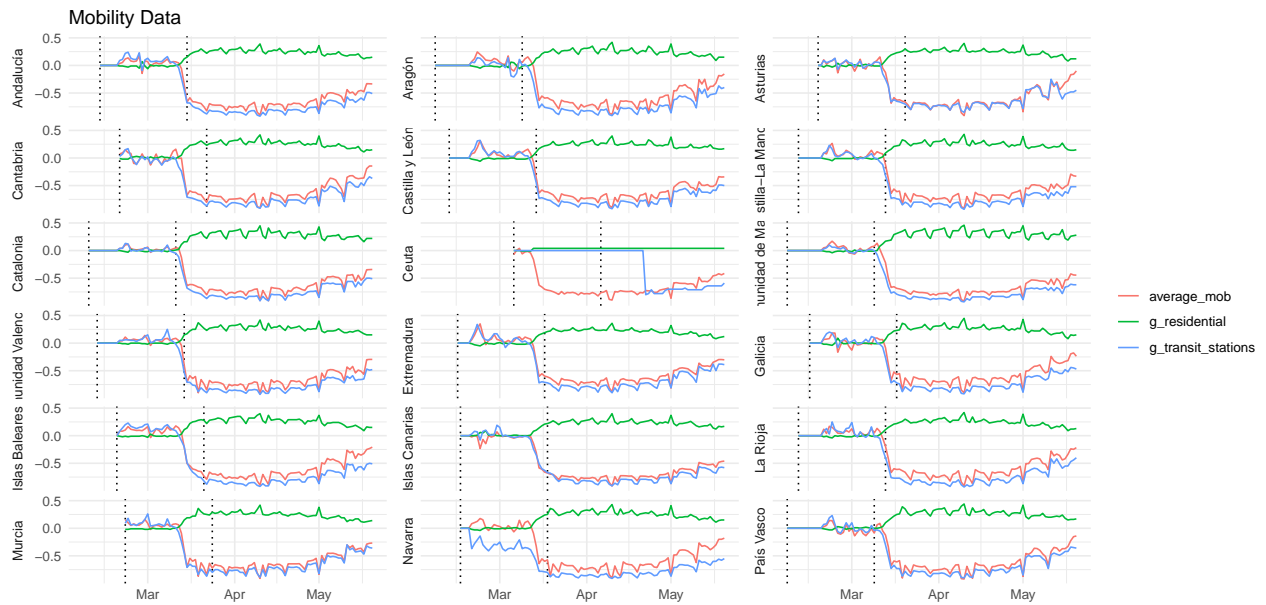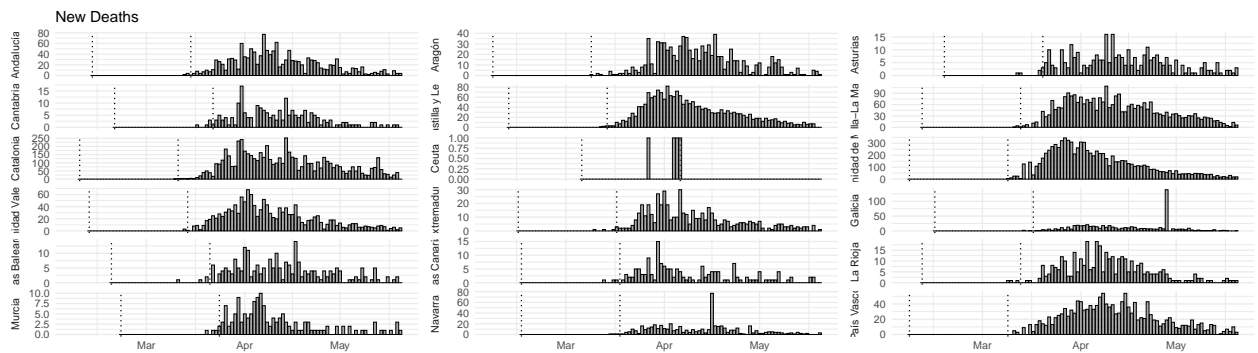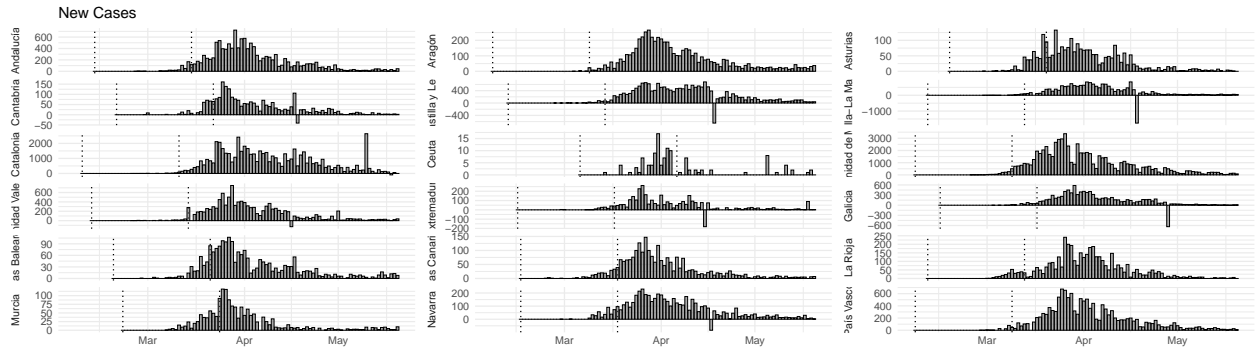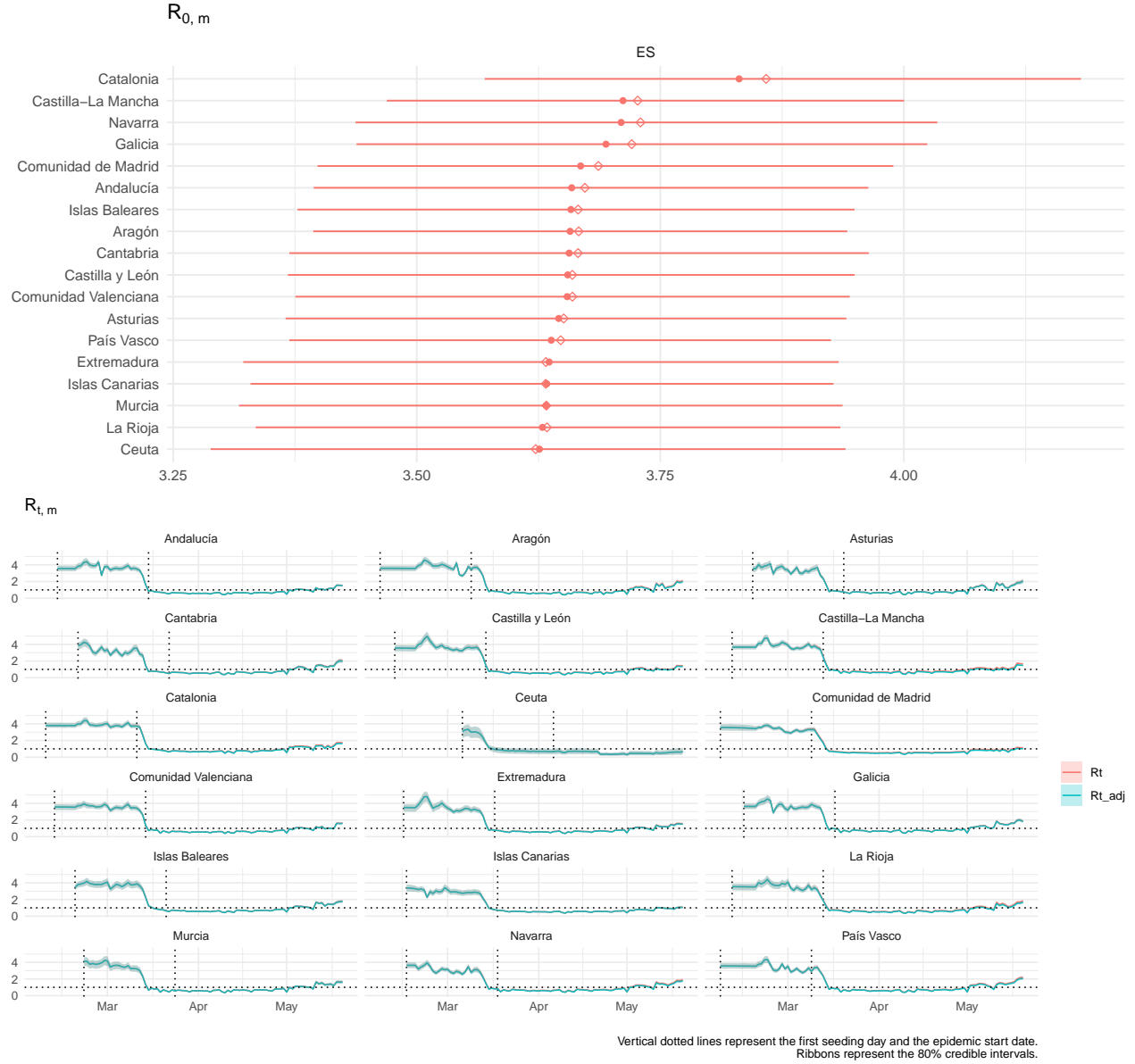

Legend:
- average_mob
- g_residential
- g_transit_stations

Analysis

Number of divergent transitions = 0

Maximum $\hat{R}$ = 1.005525

Minimum Bulk ESS = 863.9991

Minimum Tail ESS = 1425.632

$R_{0,m}$

$R_{t,m}$

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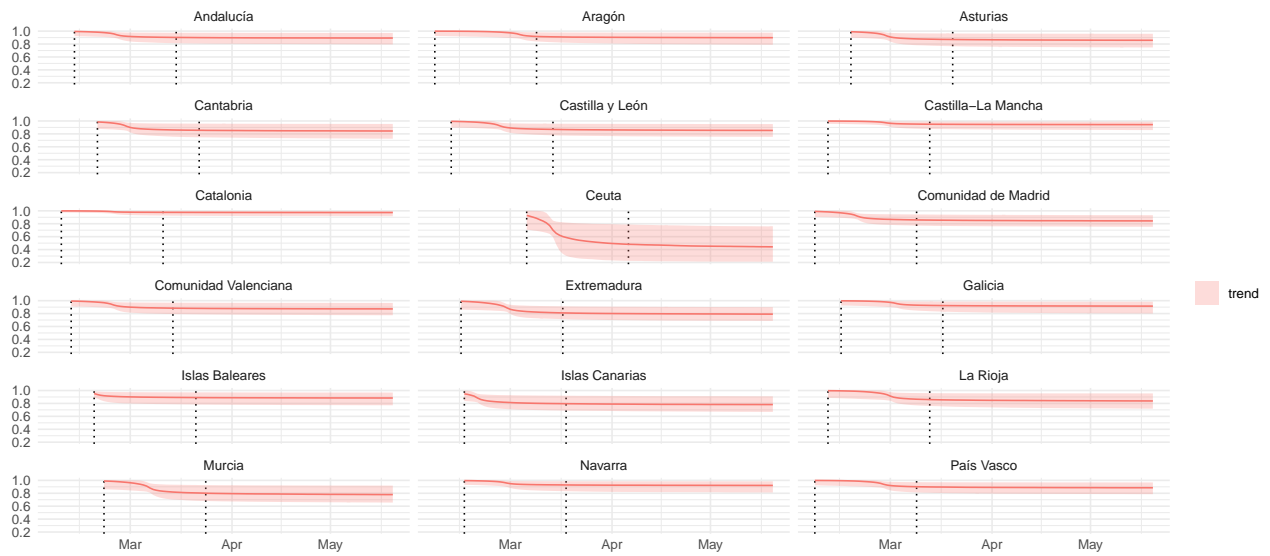
Contact rate function:

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

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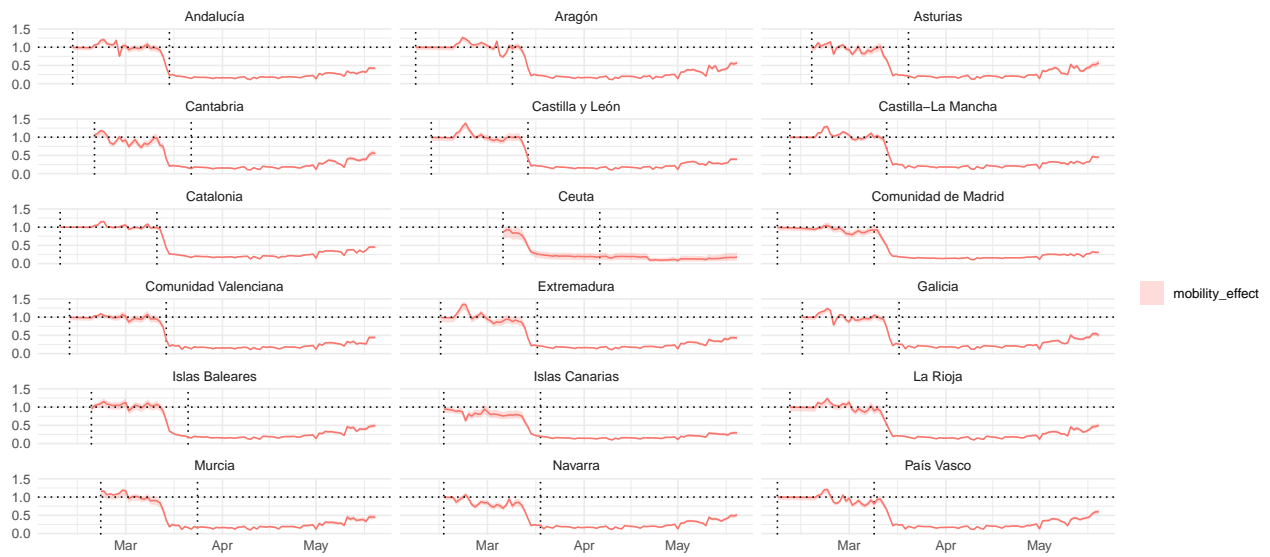
$$\lambda_j \sim \text{Beta}(3, 1)$$
$$\kappa \sim \text{NegHalfNormal}(0, 1).$$

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.

$S_{t, m}$

Andalucía Aragón Asturias

Cantabria Castilla y León Castilla–La Mancha

Catalonia Ceuta Comunidad de Madrid

adj_factor

Comunidad Valenciana Extremadura Galicia

Islas Baleares Islas Canarias La Rioja

Murcia Navarra País Vasco

Mar Apr May

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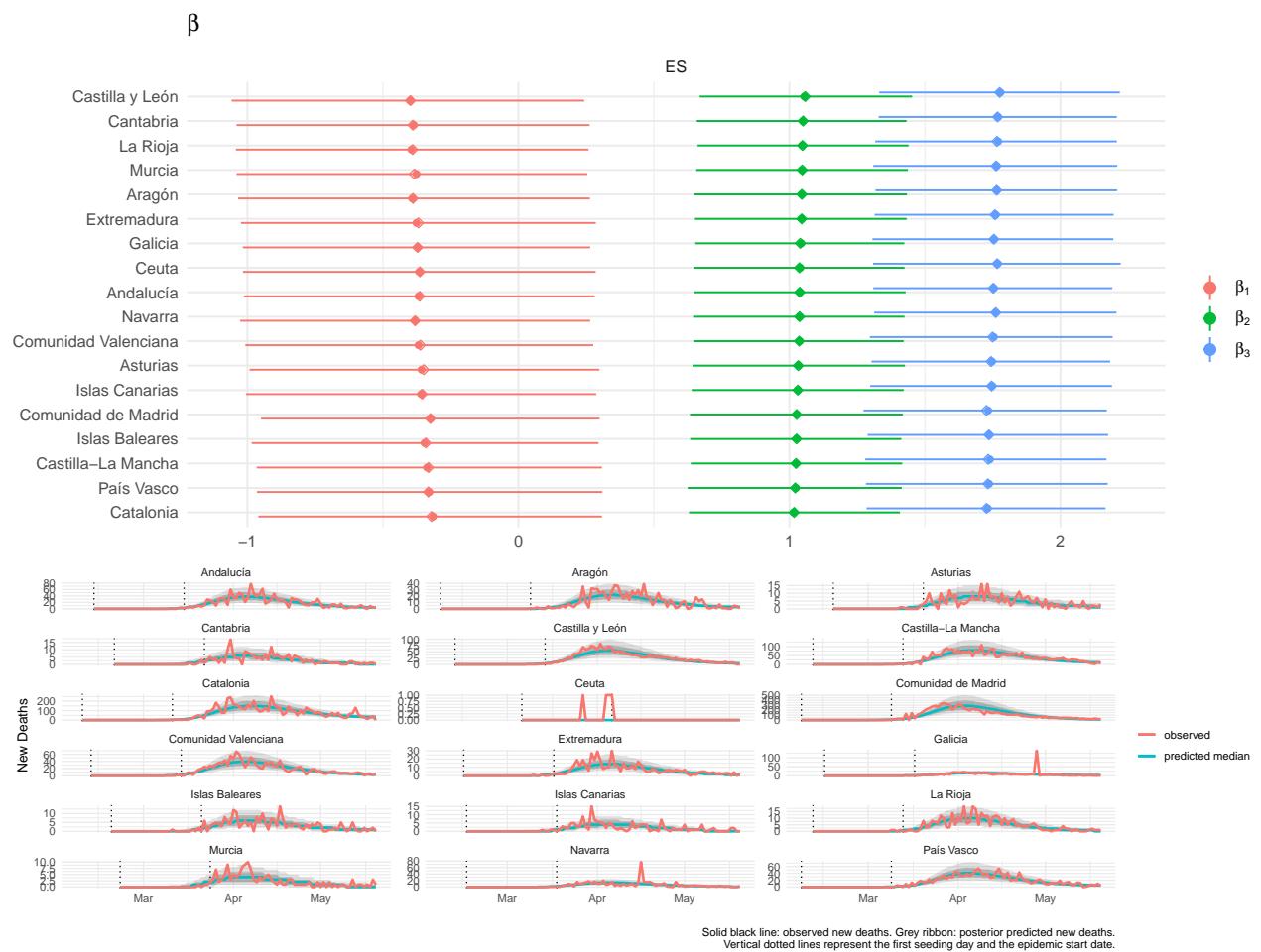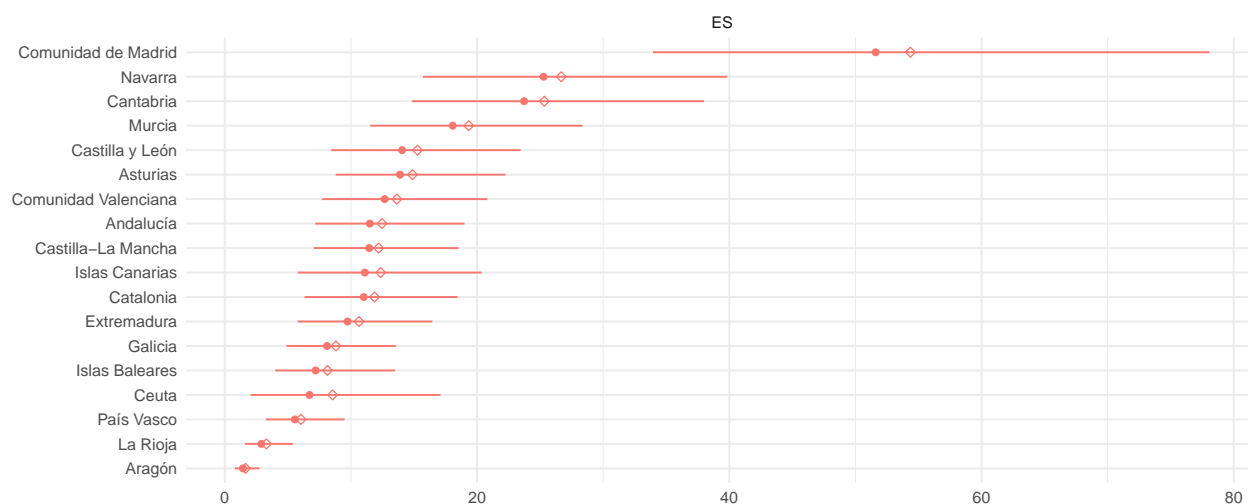
Mobility linear model: $\beta_1 \cdot X_{\text{residential}} + \beta_2 \cdot X_{\text{transit}} + \beta_3 \cdot X_{\text{average}}$.
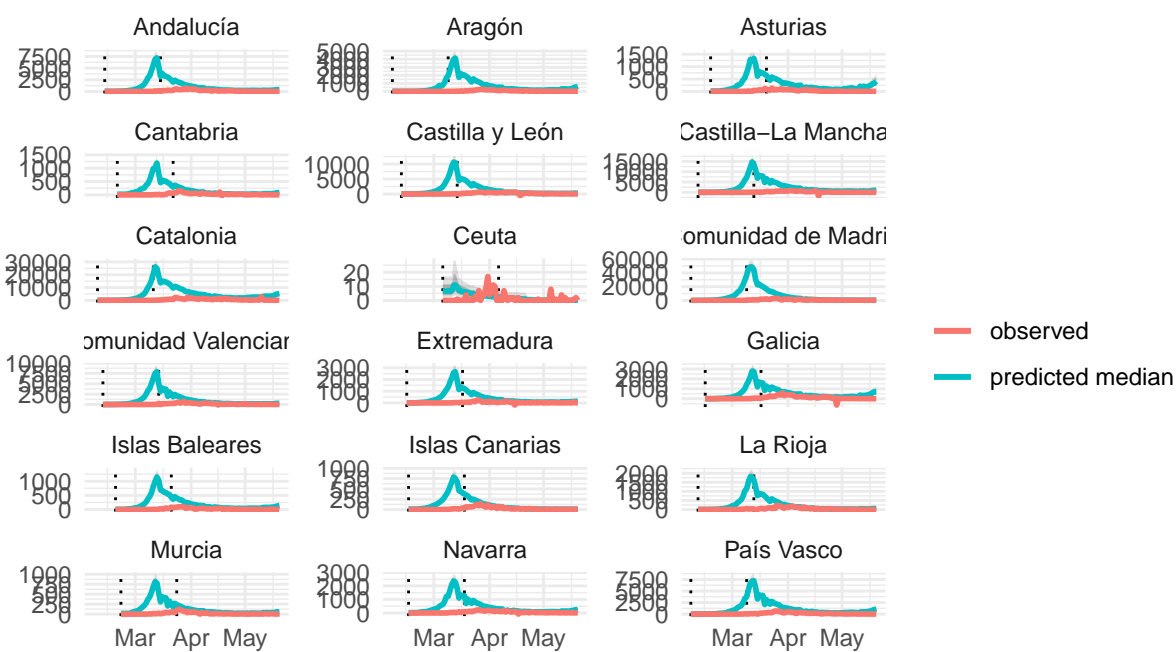
β

ES

Castilla y León
Cantabria
La Rioja
Murcia
Aragón
Extremadura
Galicia
Ceuta
Andalucía
Navarra
Comunidad Valenciana
Asturias
Islas Canarias
Comunidad de Madrid
Islas Baleares
Castilla–La Mancha
País Vasco
Catalonia

β_1
β_2
β_3

−1 0 1 2

Andalucía Aragón Asturias

Cantabria Castilla y León Castilla–La Mancha

Catalonia Ceuta Comunidad de Madrid

New Deaths

Comunidad Valenciana Extremadura Galicia

observed
predicted median

Islas Baleares Islas Canarias La Rioja

Murcia Navarra País Vasco

Mar Apr May

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

ES

New Cases

predicted vs observed

- 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.

IFR