Spain

Data

New Deaths

Mobility Data

Legend:
- average_mob
- g_residential
- g_transit_stations
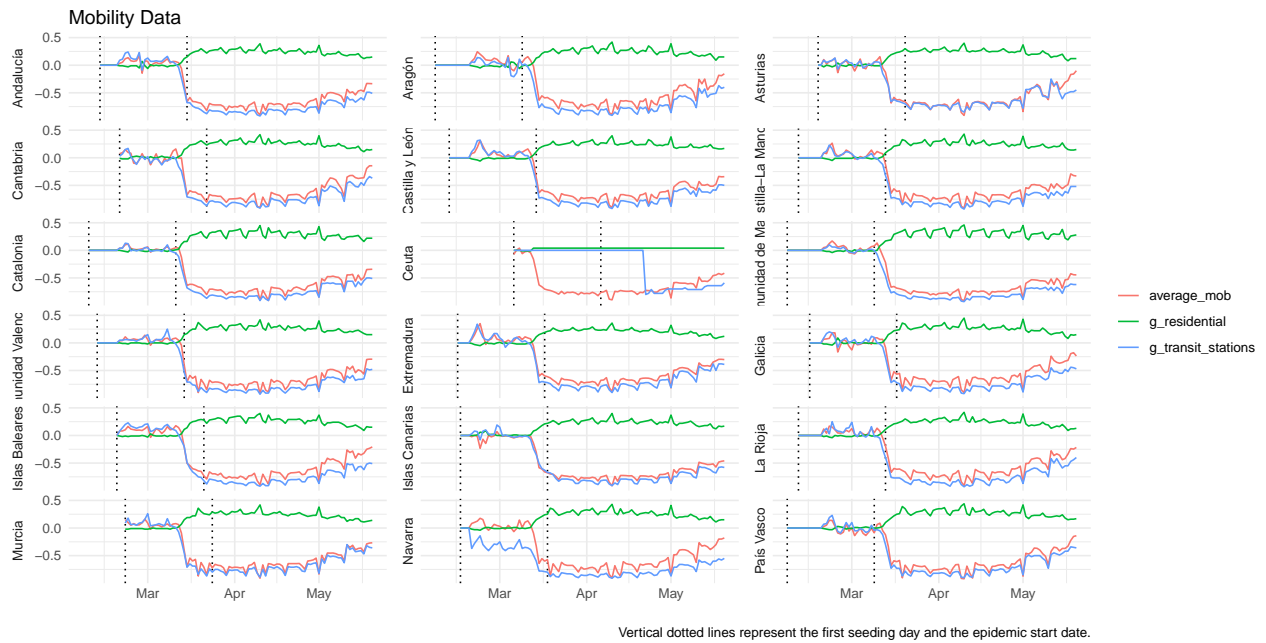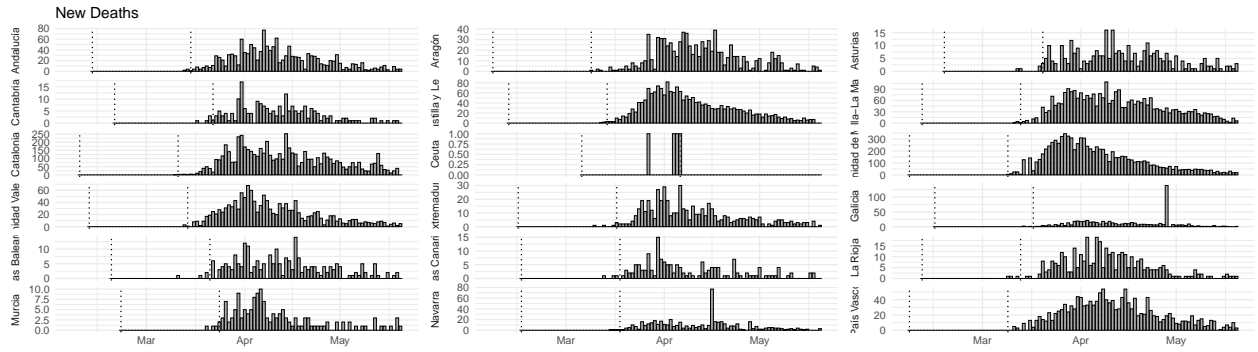
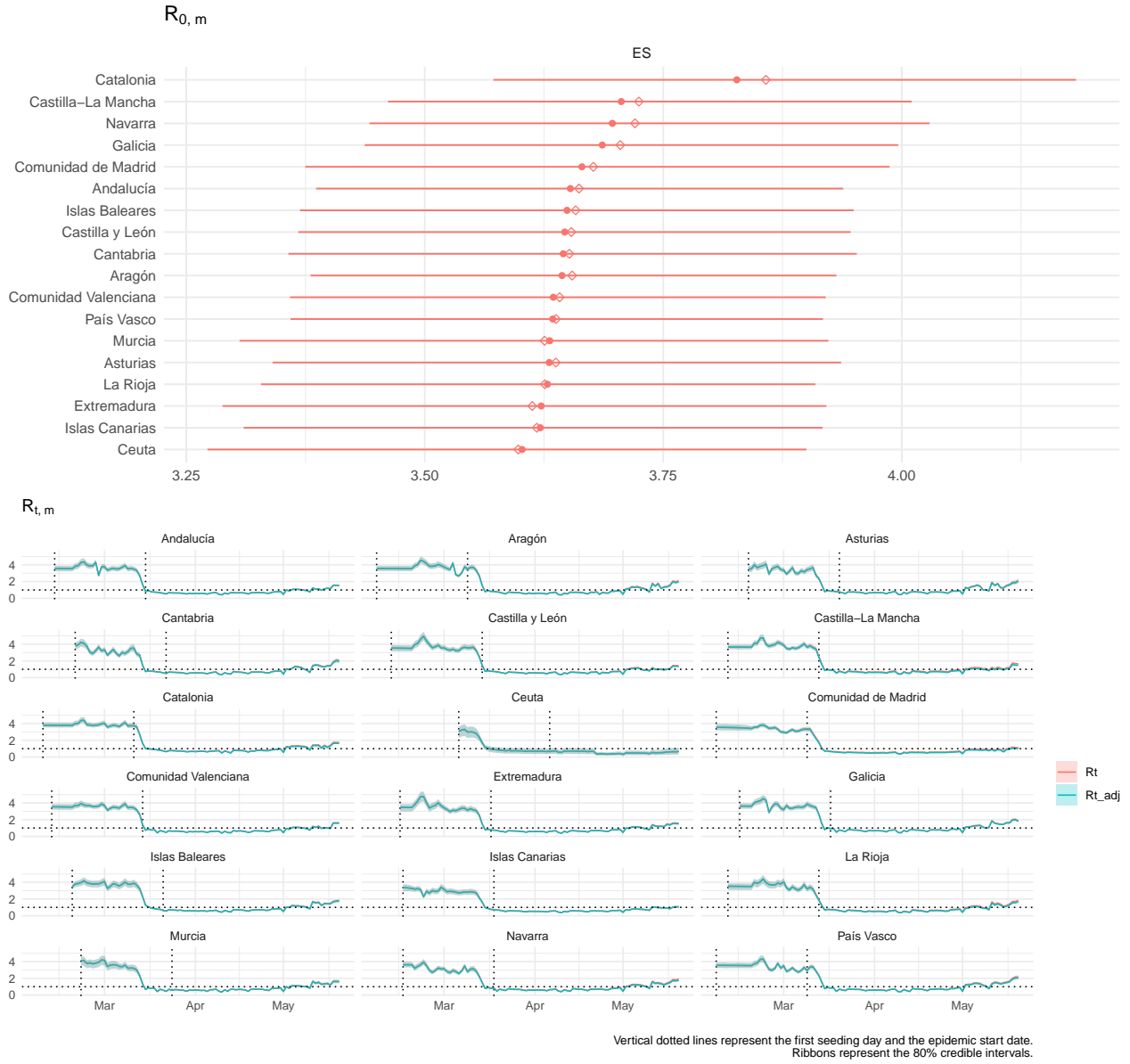## Analysis

Number of divergent transitions = 0

Maximum $\hat{R}$ = 1.005391

Minimum Bulk ESS = 1010.8

Minimum Tail ESS = 1270.78

$R_{0, m}$

ES

$R_{t, m}$

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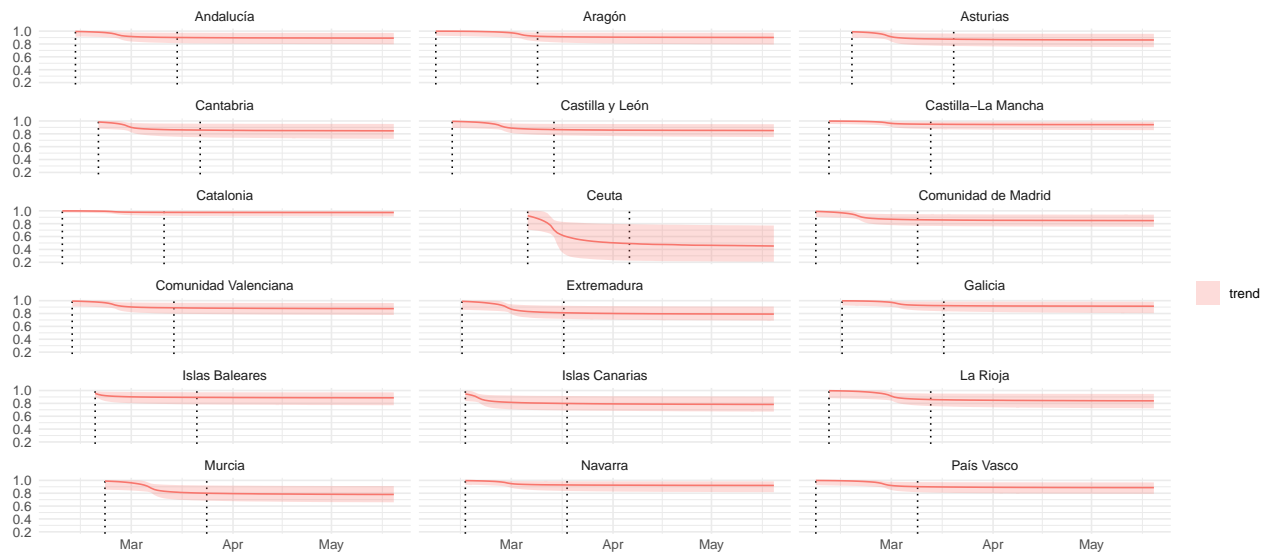
Contact rate function:

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

where

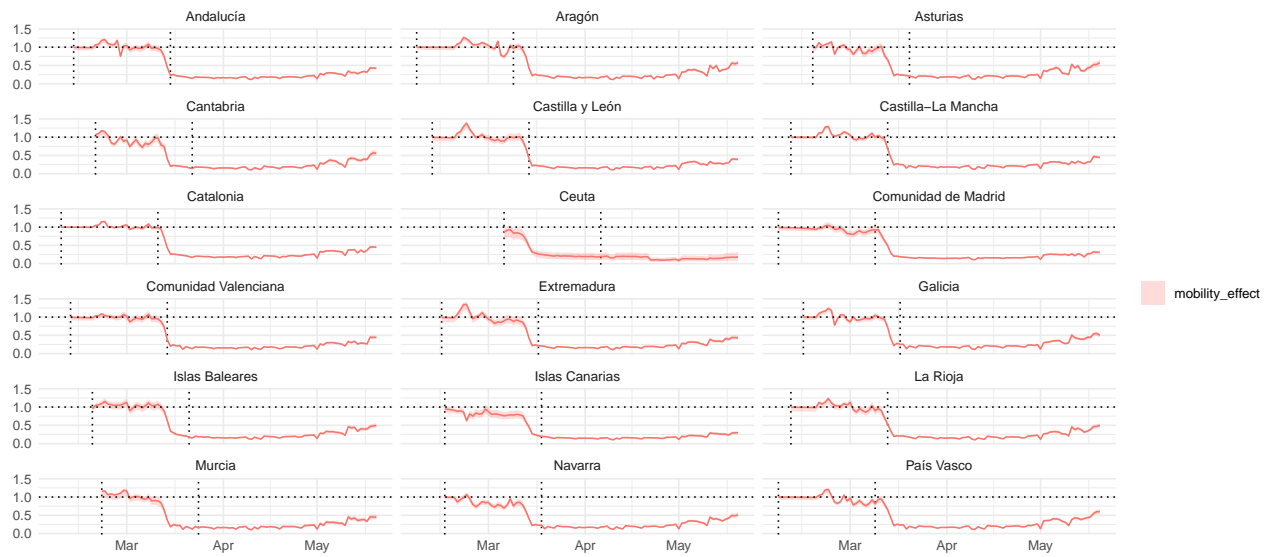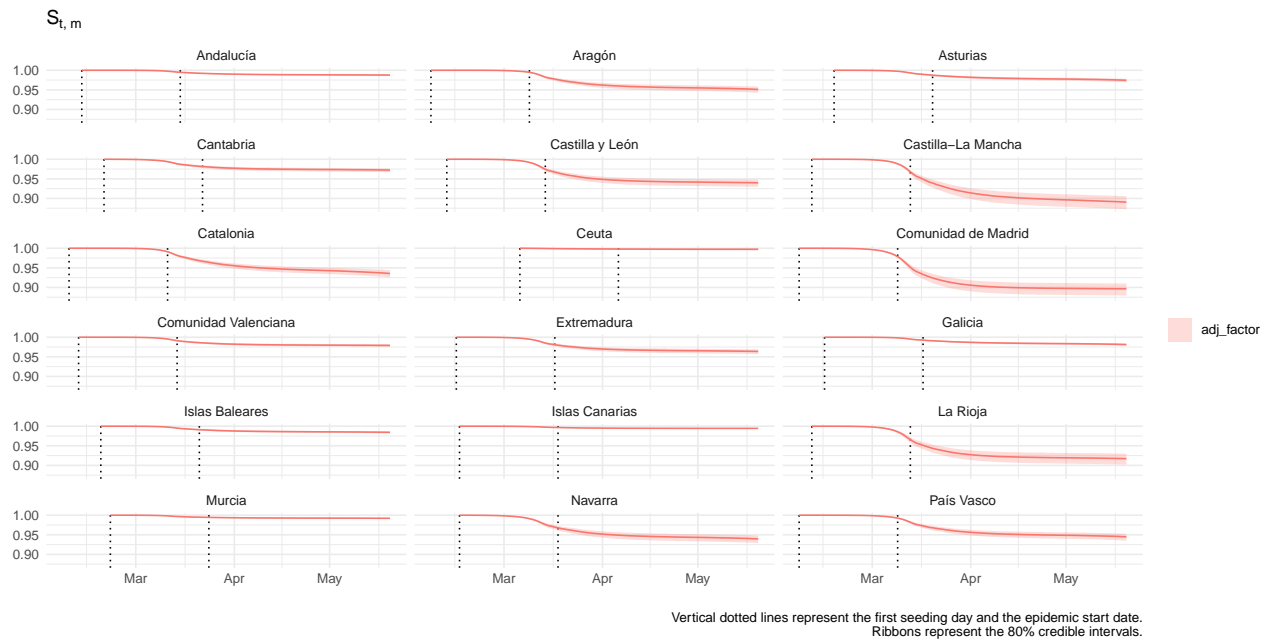$$\lambda_j \sim \texttt{Beta}(3, 1)$$
$$\kappa \sim \texttt{NegHalfNormal}(0, 1).$$

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.

$S_{t, m}$

Vertical dotted lines represent the first seeding day and the epidemic start date.
Ribbons represent the 80% credible intervals.
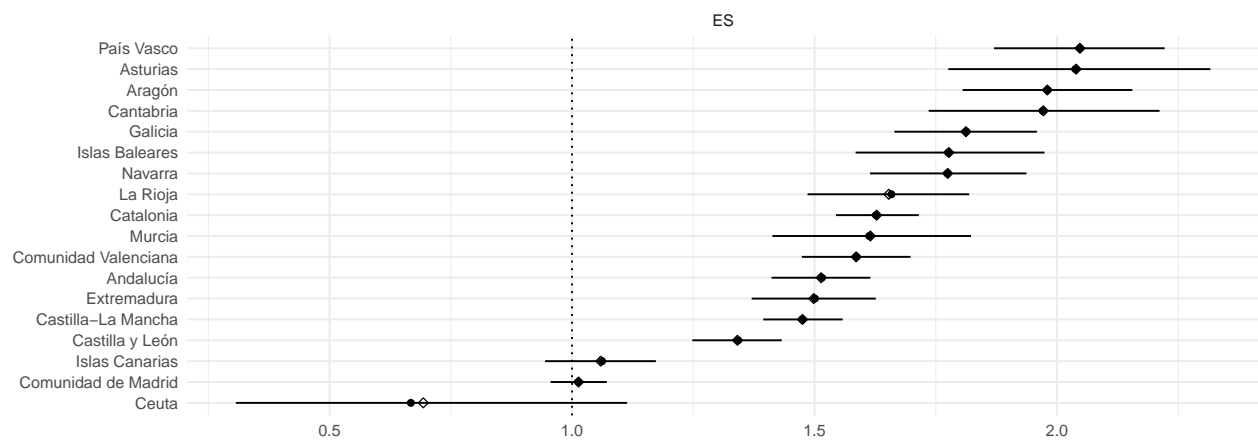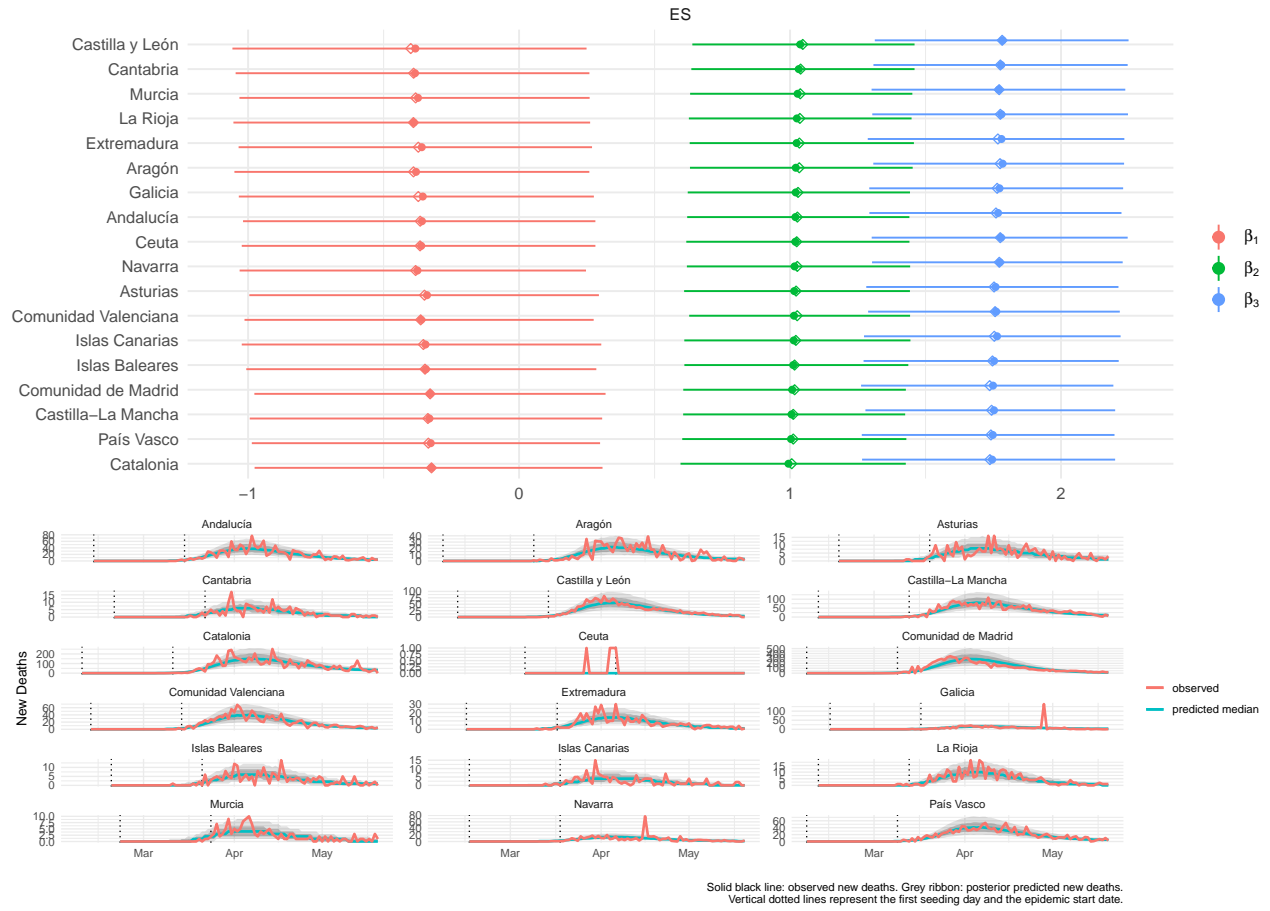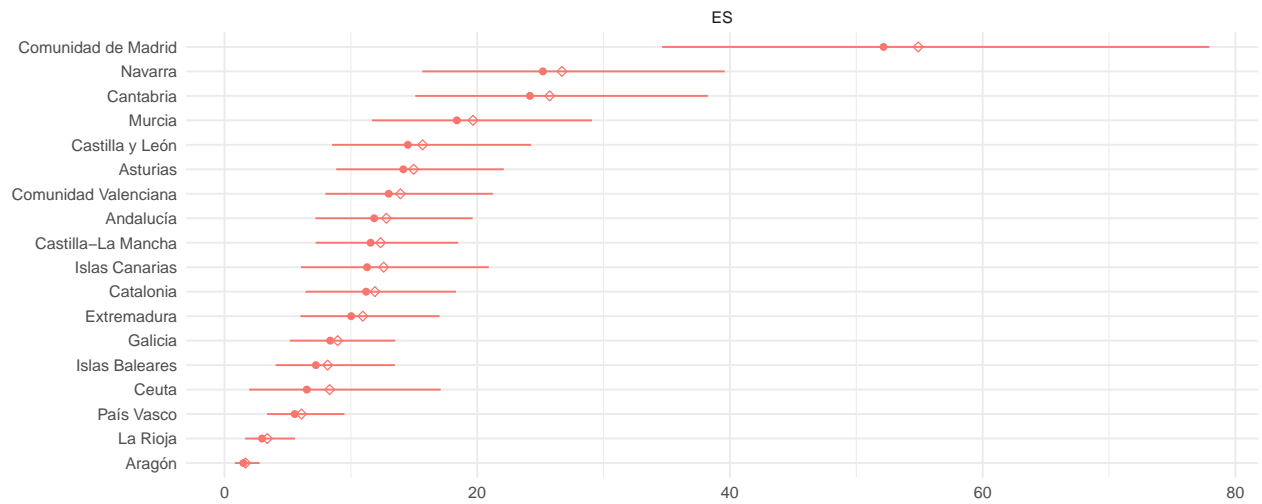
$R_{t,m}$ on the last day

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

β

Imputed Cases

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

ES