India

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

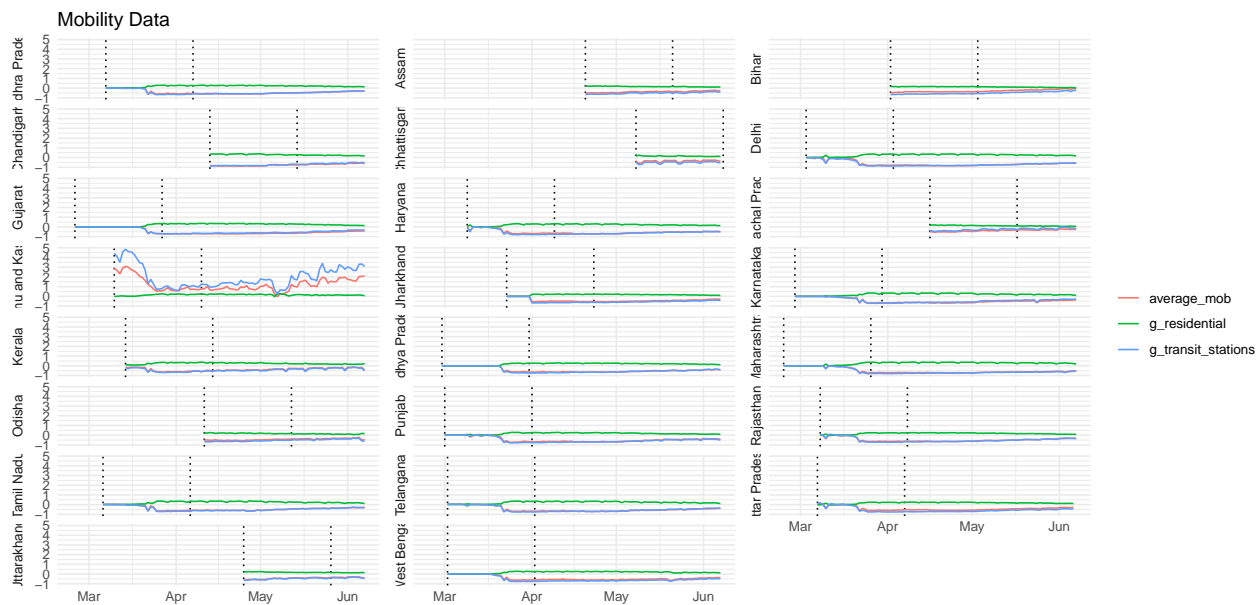Vertical dotted lines represent the first seeding day and the epidemic start date.

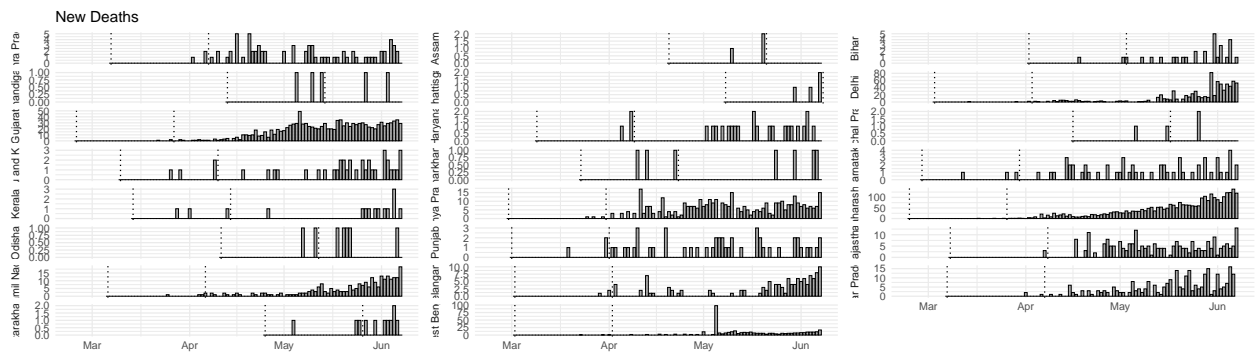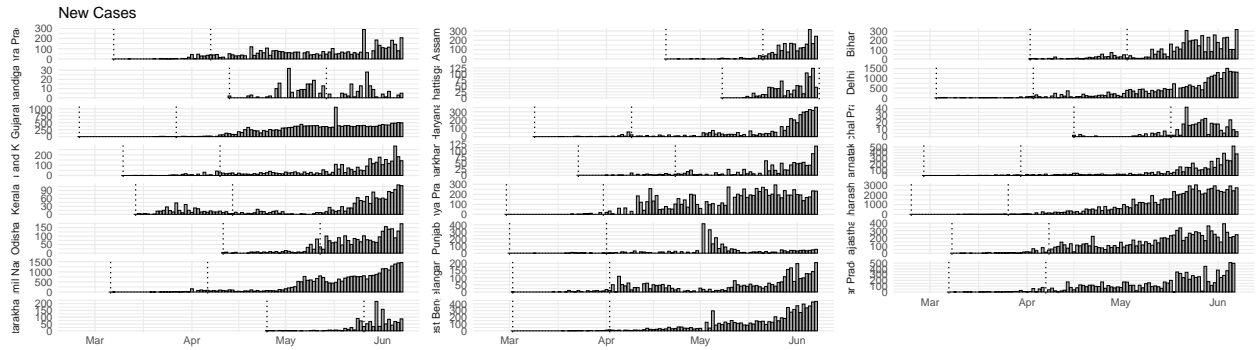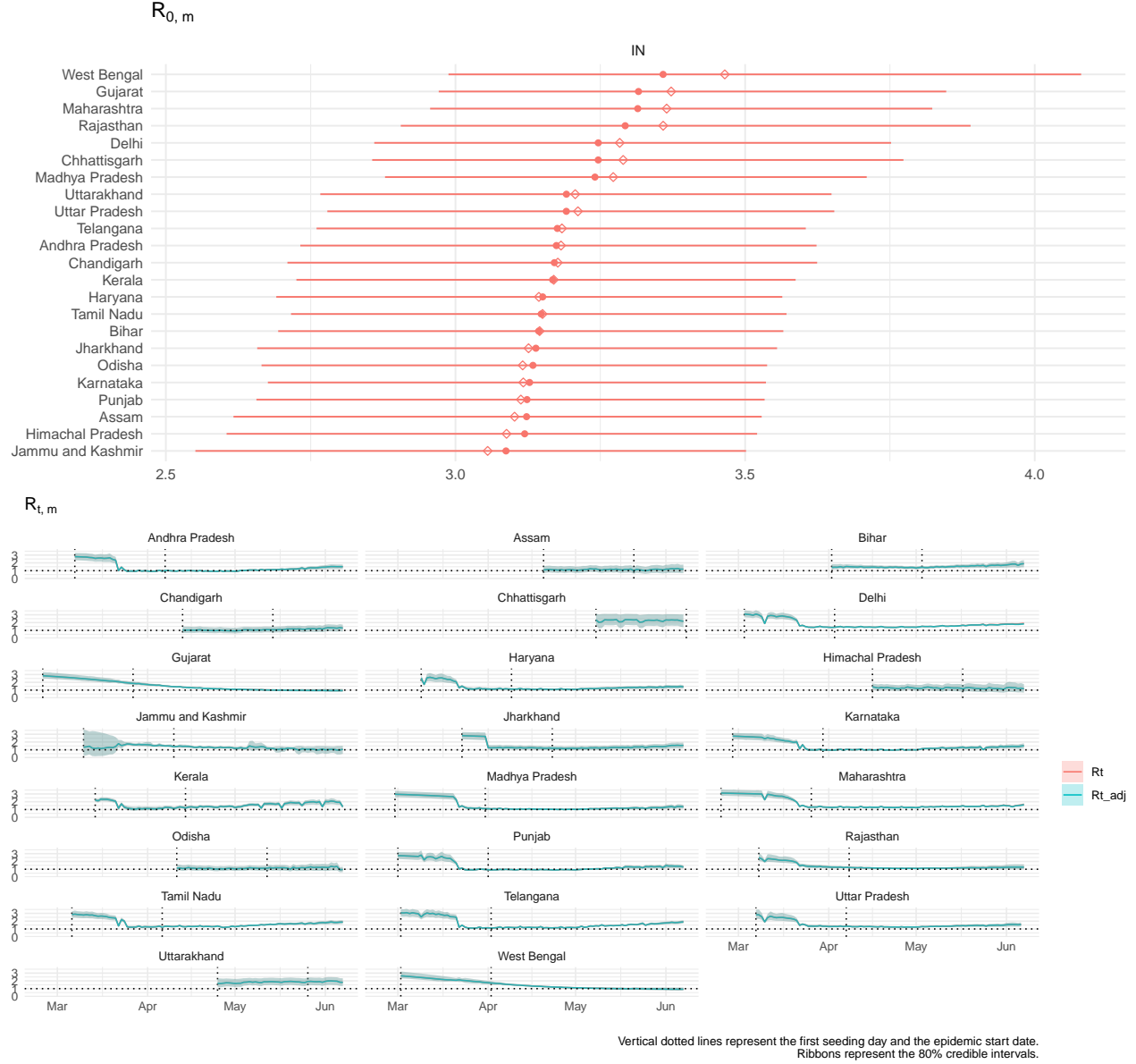## Analysis

Number of divergent transitions = 0

Maximum $\hat{R}$ = 1.004973

Minimum Bulk ESS = 1331.702

Minimum Tail ESS = 899.0728

$R_{0,m}$

$R_{t,m}$

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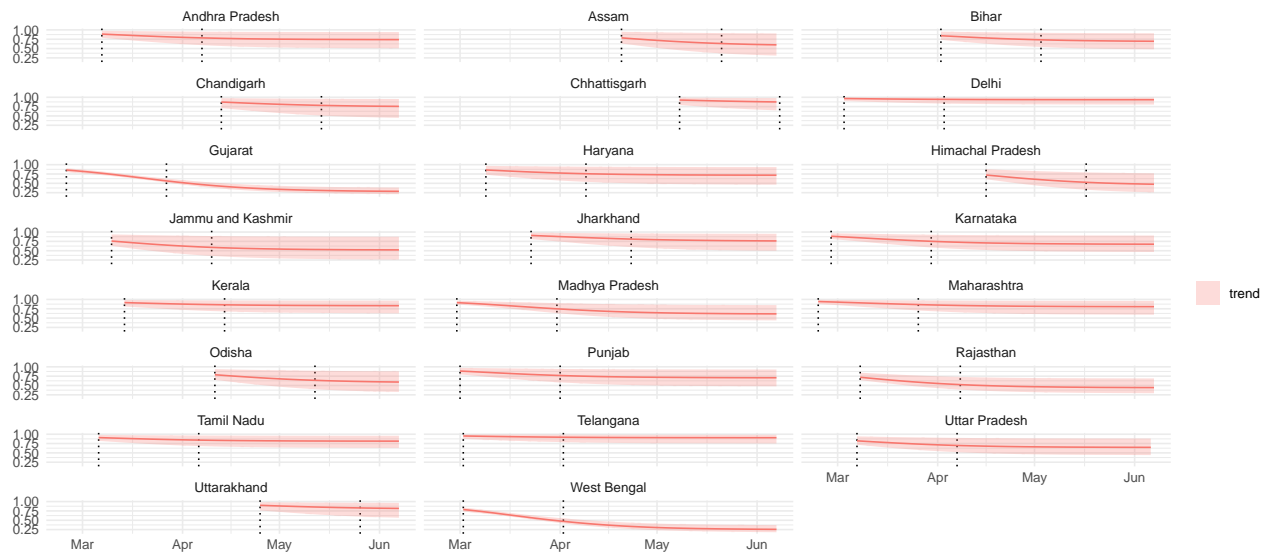
Contact rate function:

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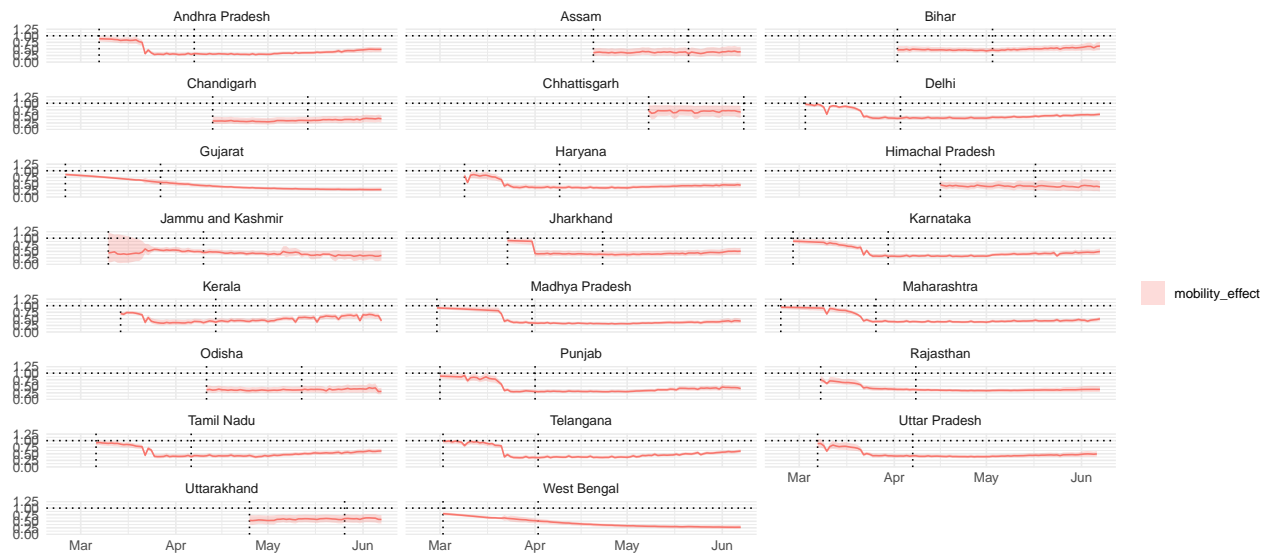
where

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

Contact Rate

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.
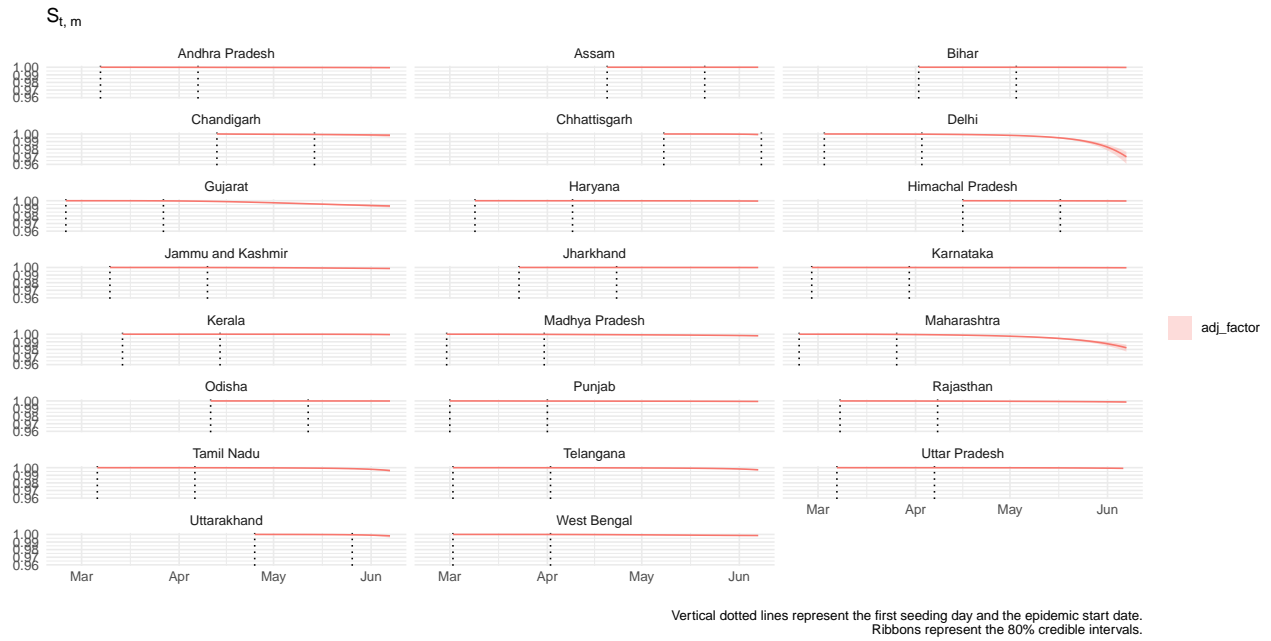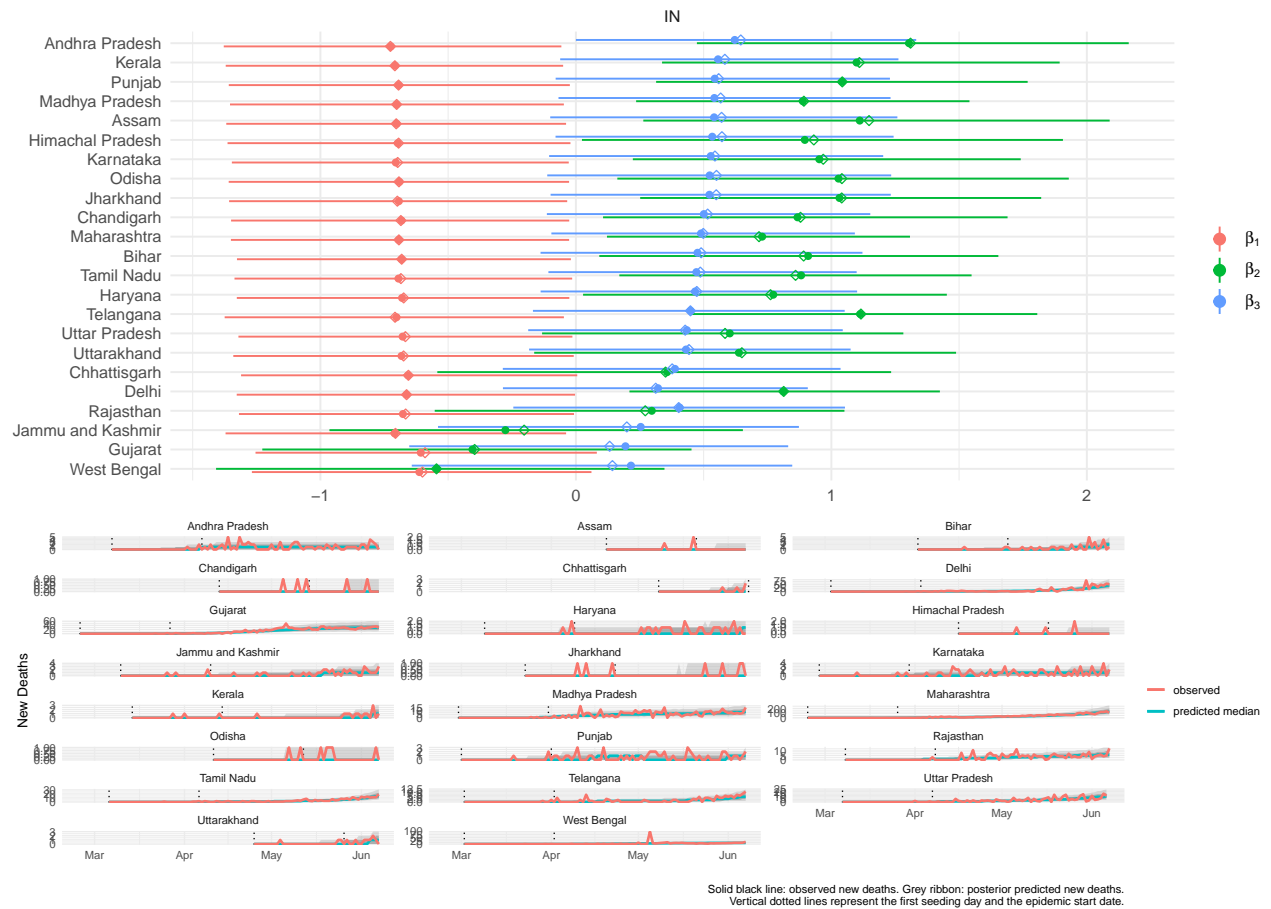Ribbons represent the 80% credible intervals.

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Ribbons represent the 80% credible intervals.
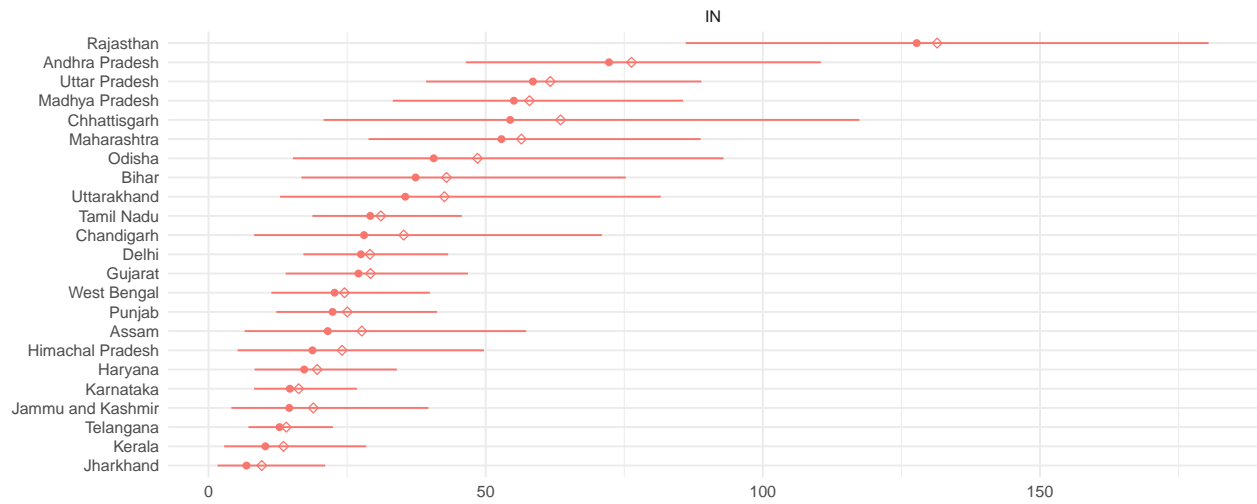
Mobility linear model: $\beta_1 \cdot X_{\text{residential}} + \beta_2 \cdot X_{\text{transit}} + \beta_3 \cdot X_{\text{average}}$.
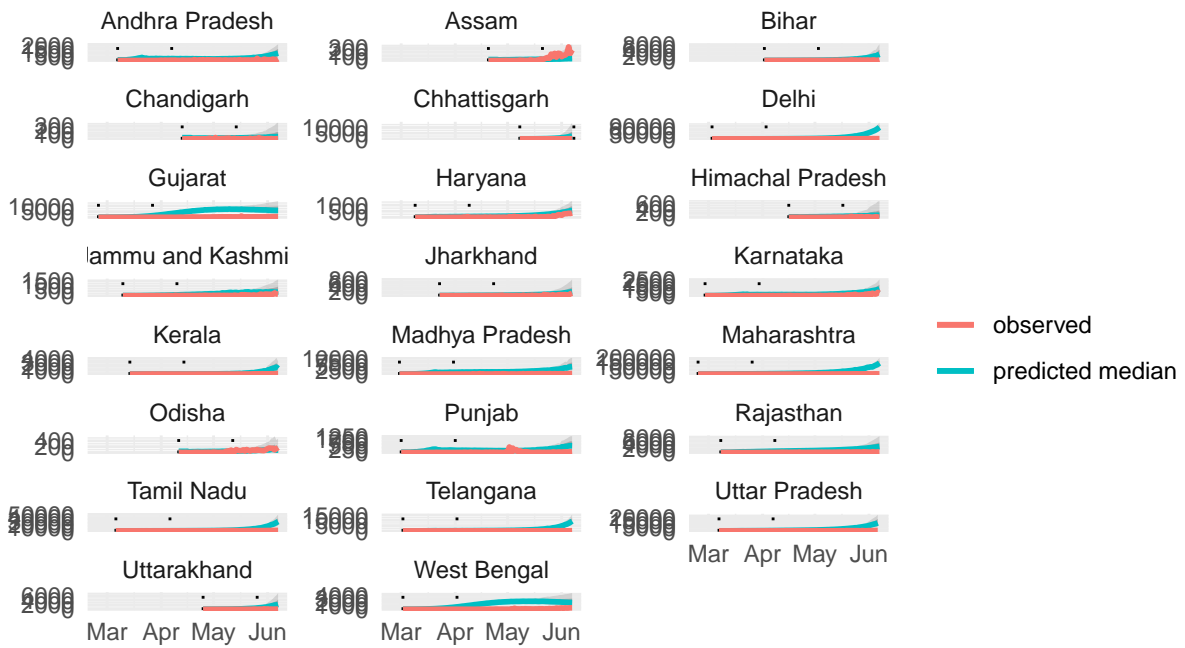
β

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

IN

Rajasthan
Andhra Pradesh
Uttar Pradesh
Madhya Pradesh
Chhattisgarh
Maharashtra
Odisha
Bihar
Uttarakhand
Tamil Nadu
Chandigarh
Delhi
Gujarat
West Bengal
Punjab
Assam
Himachal Pradesh
Haryana
Karnataka
Jammu and Kashmir
Telangana
Kerala
Jharkhand

0   50   100   150

New Cases

predicted vs observed

Andhra Pradesh   Assam   Bihar

Chandigarh   Chhattisgarh   Delhi

Gujarat   Haryana   Himachal Pradesh

Jammu and Kashmi   Jharkhand   Karnataka

Kerala   Madhya Pradesh   Maharashtra

Odisha   Punjab   Rajasthan

Tamil Nadu   Telangana   Uttar Pradesh

Uttarakhand   West Bengal

Mar Apr May Jun

—— observed

—— predicted median

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IFR