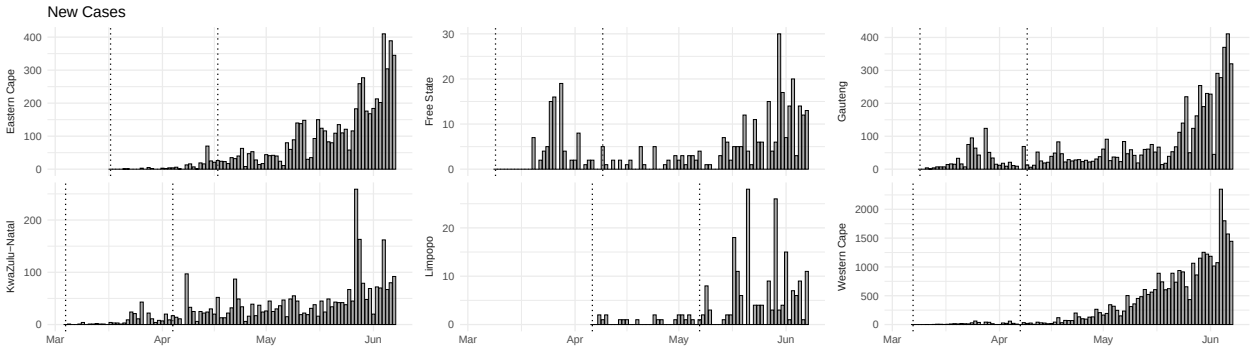
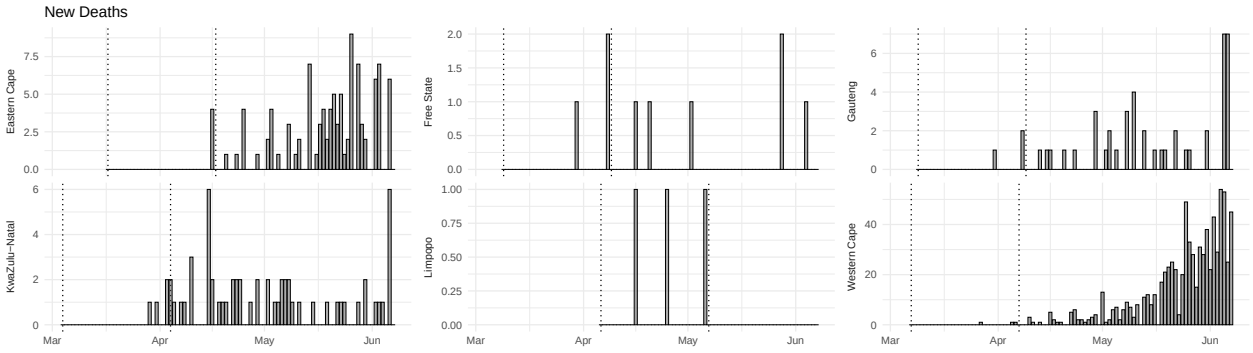
South Africa

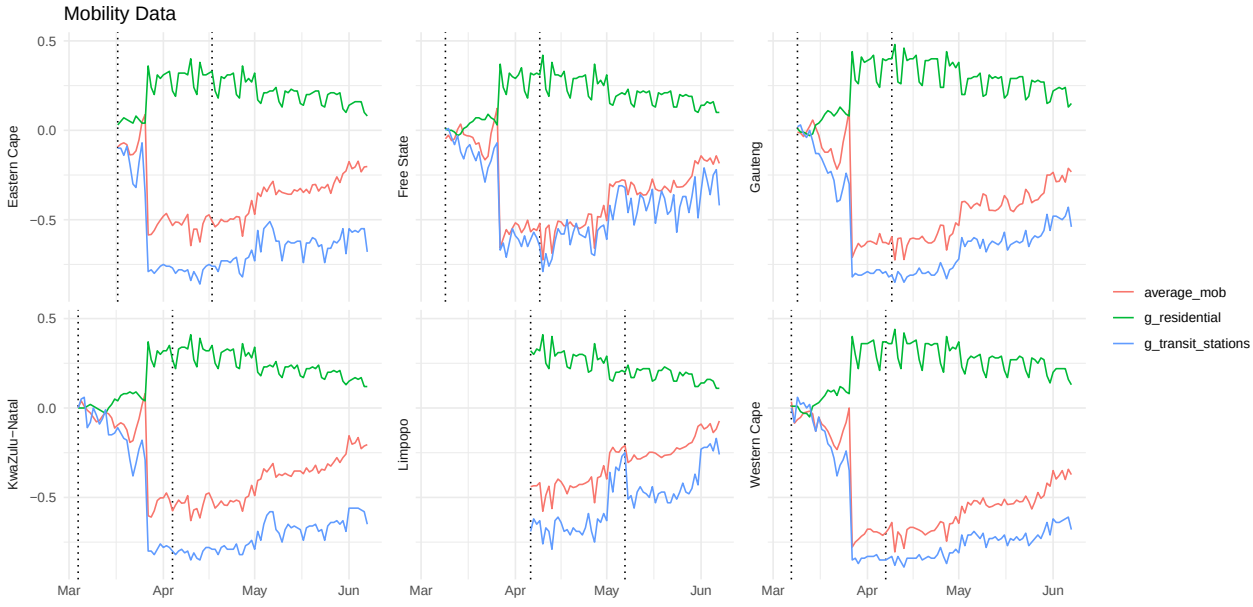
Data



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.

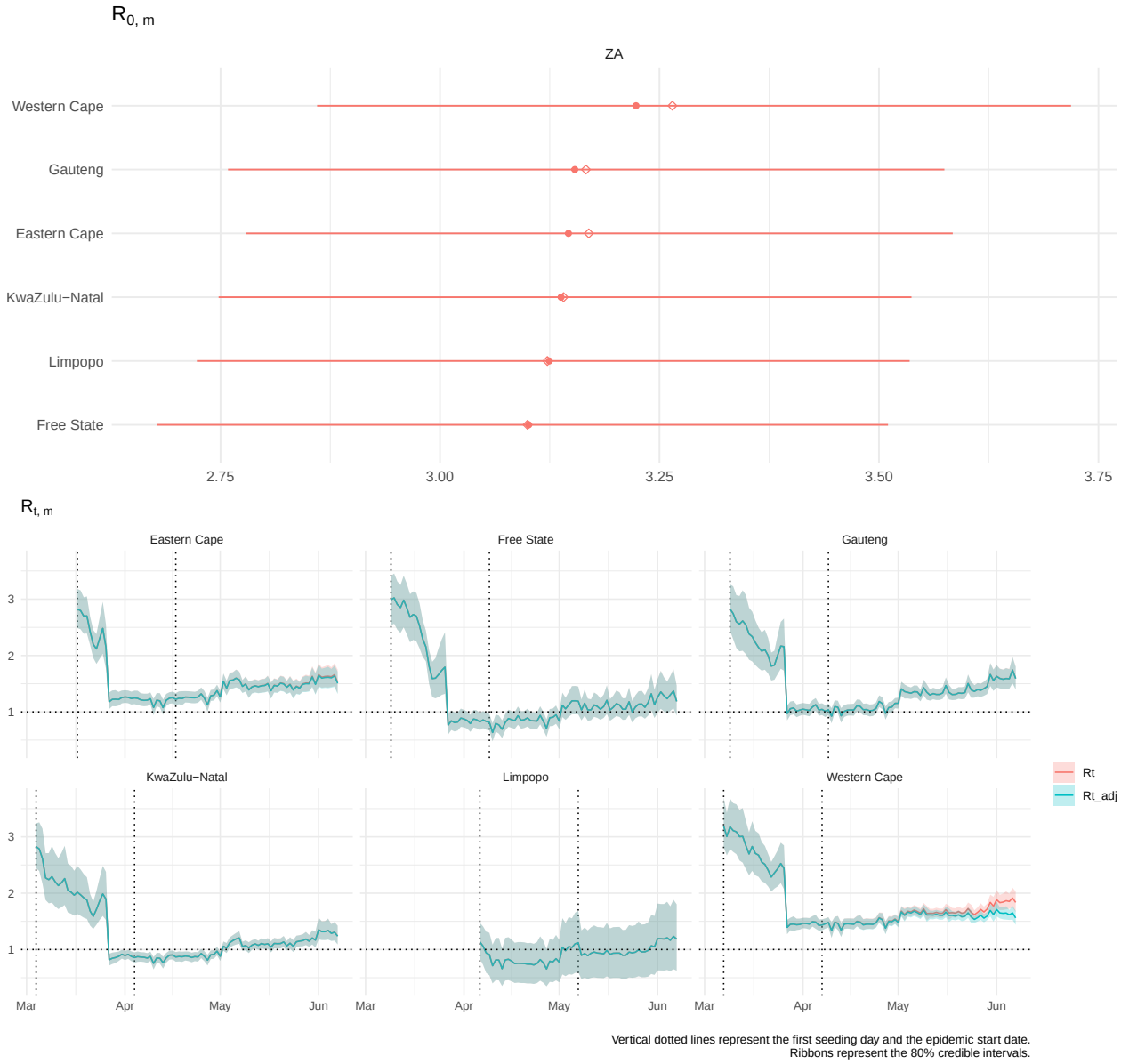
Analysis

Number of divergent transitions = 0

Maximum $\hat{R}$ = 1.005848

Minimum Bulk ESS = 1446.096

Minimum Tail ESS = 1097.473



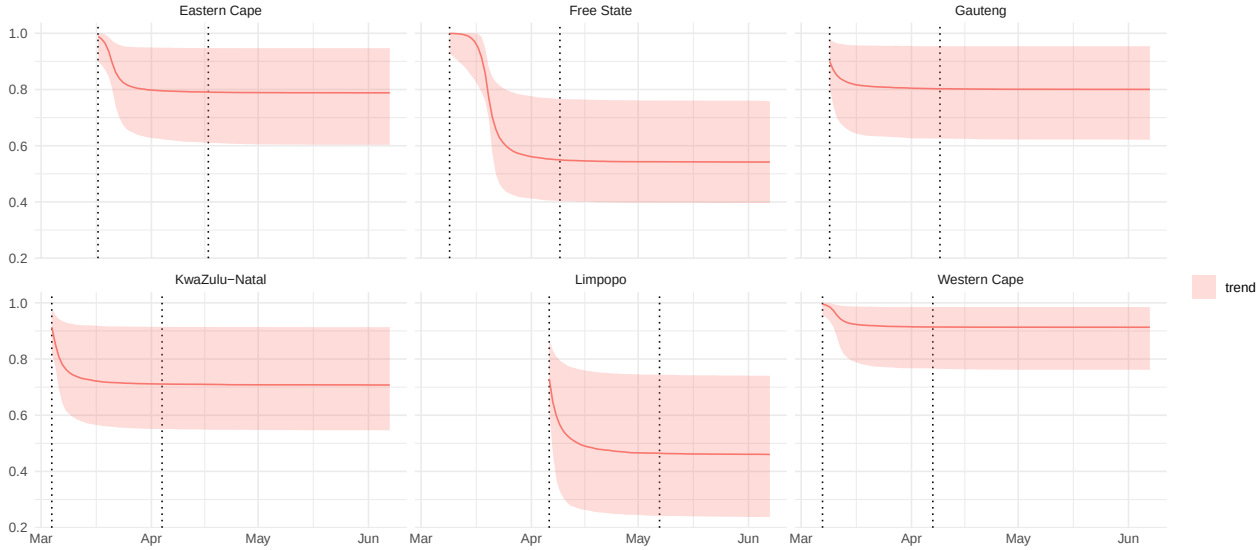
Contact rate function:

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

where

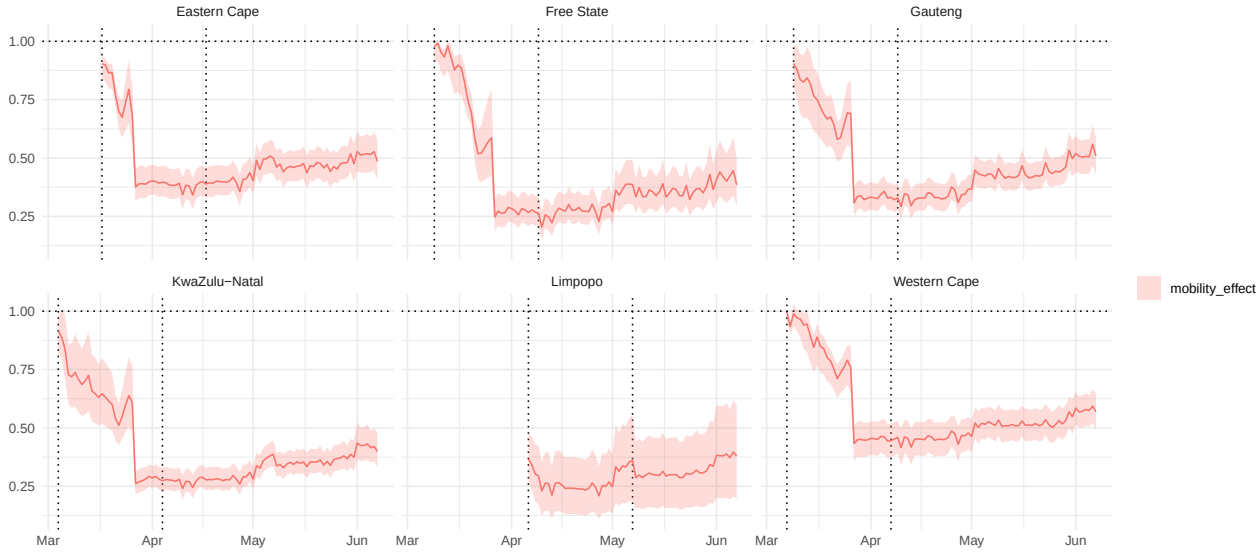
$$\lambda_j \sim \texttt{Beta}(3, 1)$$
$$\kappa \sim \texttt{NegHalfNormal}(0, 1).$$

Contact Rate

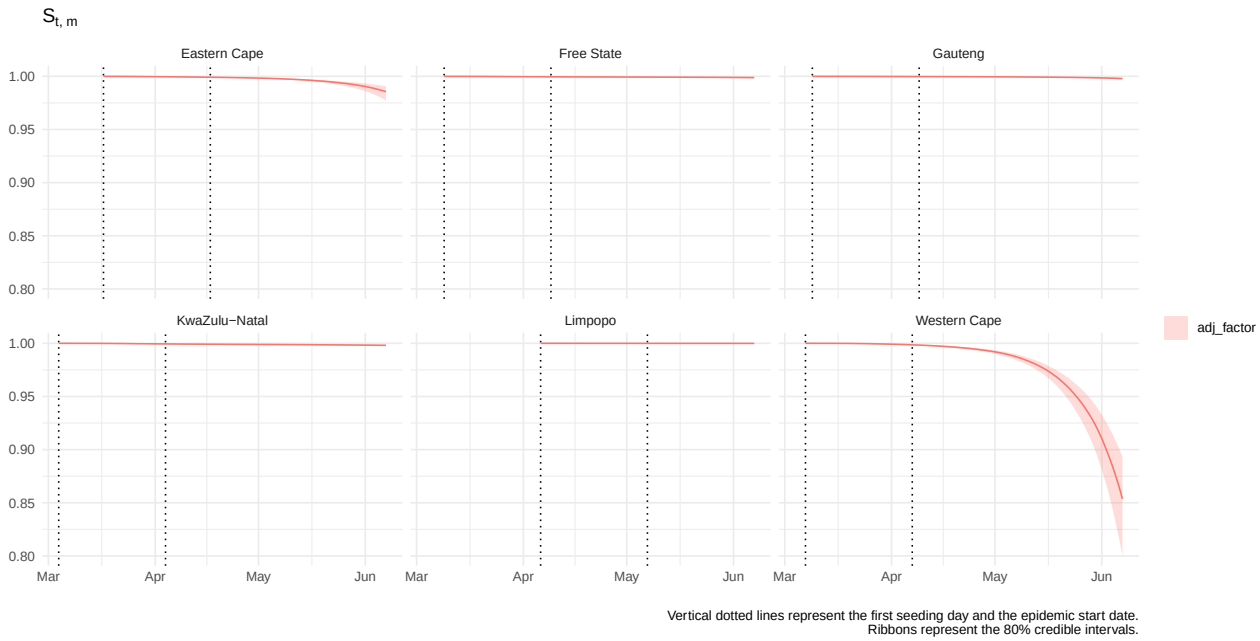


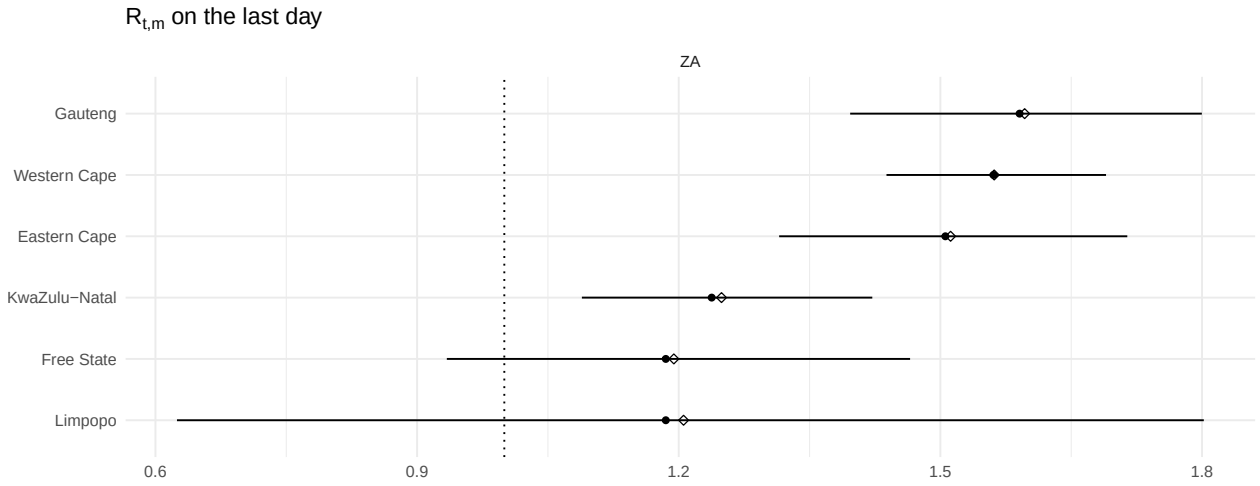
Vertical dotted lines represent the first seeding day and the epidemic start date.
Ribbons represent the 80% credible intervals.

Mobility effect



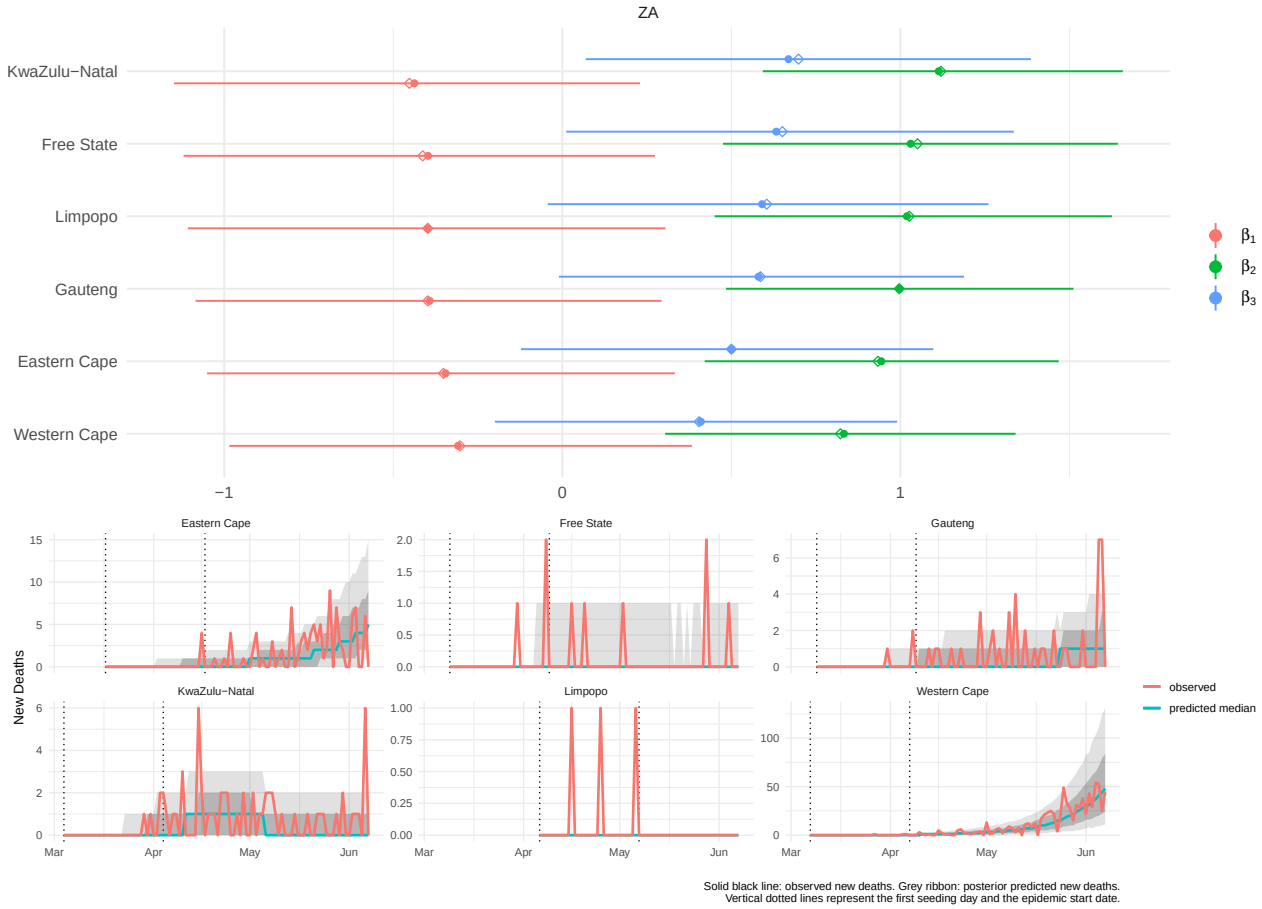
Vertical dotted lines represent the first seeding day and the epidemic start date.
Ribbons represent the 80% credible intervals.



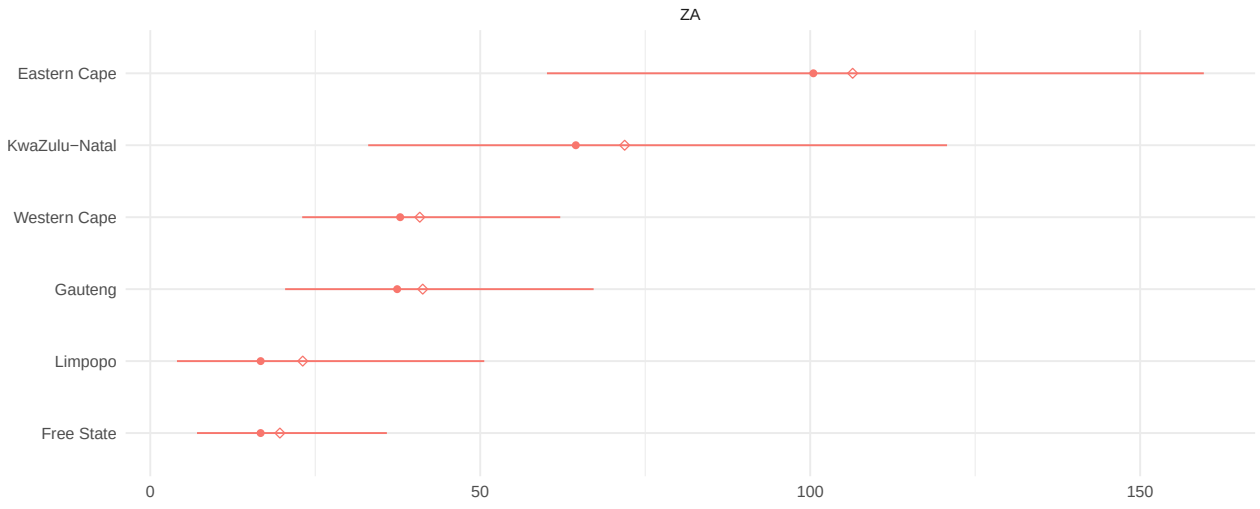


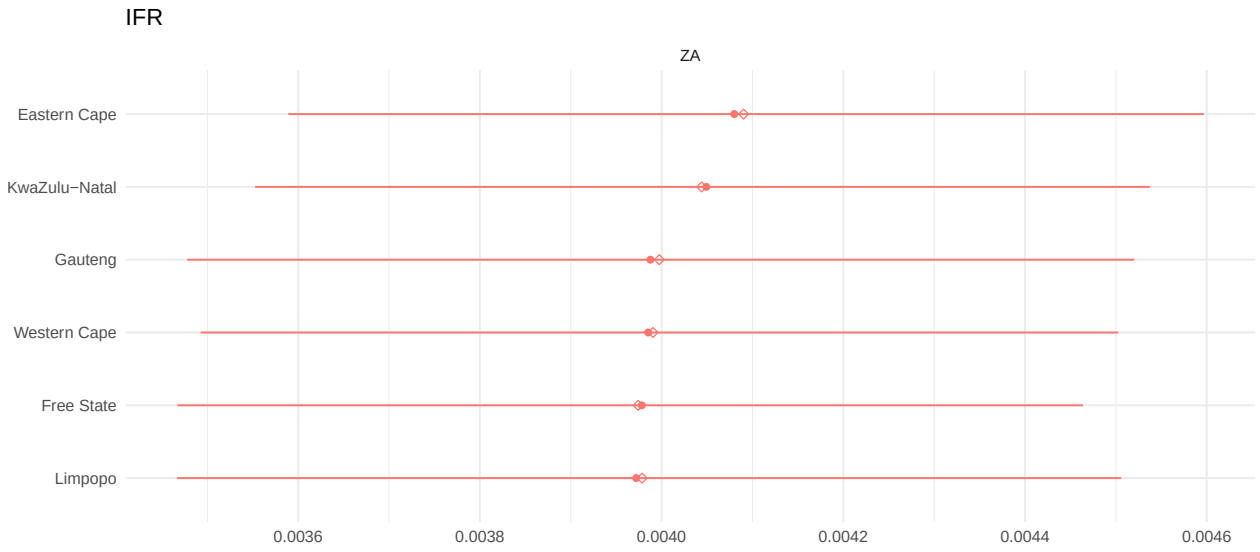
Mobility linear model: $\beta_1 \cdot X_{\text{residential}} + \beta_2 \cdot X_{\text{transit}} + \beta_3 \cdot X_{\text{average}}$.

β



Imputed Cases




IFR
ZA
Eastern Cape
KwaZulu−Natal
Gauteng
Western Cape
Free State
Limpopo
0.0036
0.0038
0.0040
0.0042
0.0044
0.0046