Posterior Predictive Check
Model−predicted lines should resemble observed data line
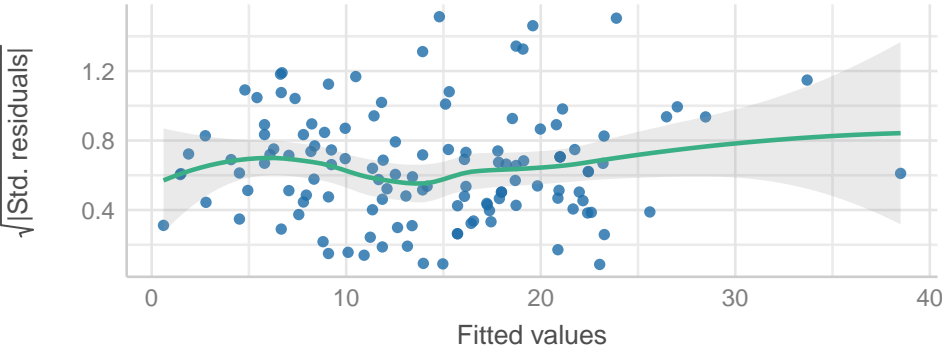
Density

ecap_score

— Observed data — Model−predicted data
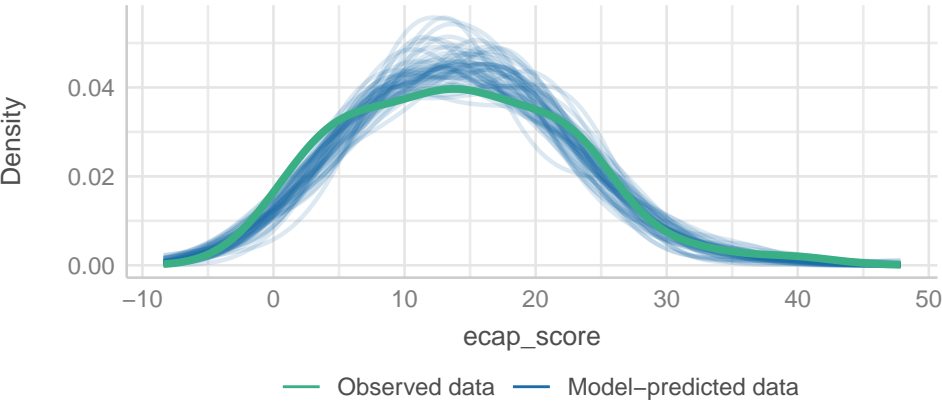
Linearity
Reference line should be flat and horizontal

Residuals

Fitted values
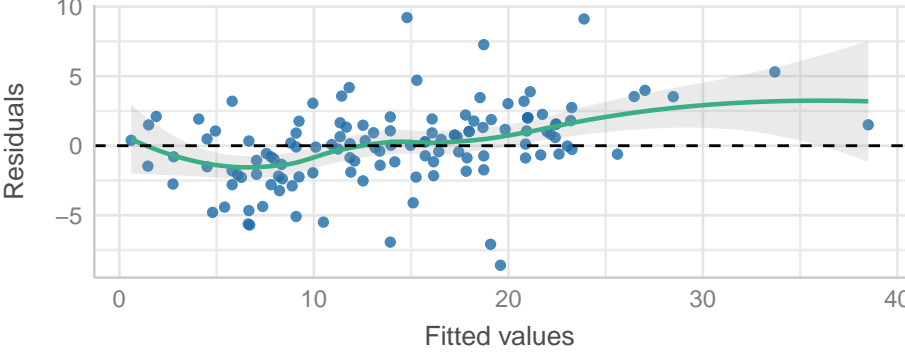
Homogeneity of Variance
Reference line should be flat and horizontal

$\sqrt{|\text{Std. residuals}|}$

Fitted values

Influential Observations
Points should be inside the contour lines

Std. Residuals

Leverage (h_{ii})

0.5

0.5
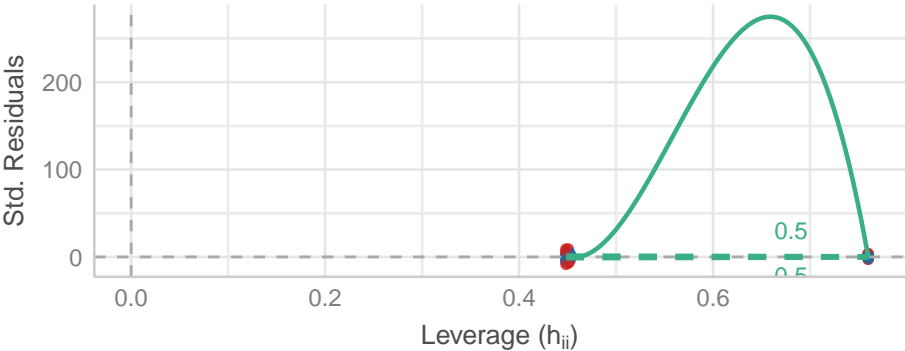
Collinearity
High collinearity (VIF) may inflate parameter uncertainty

Variance Inflation Factor (VIF, log−scaled)

allocation_group   allocation_group:visit   visit

● Low (< 5)
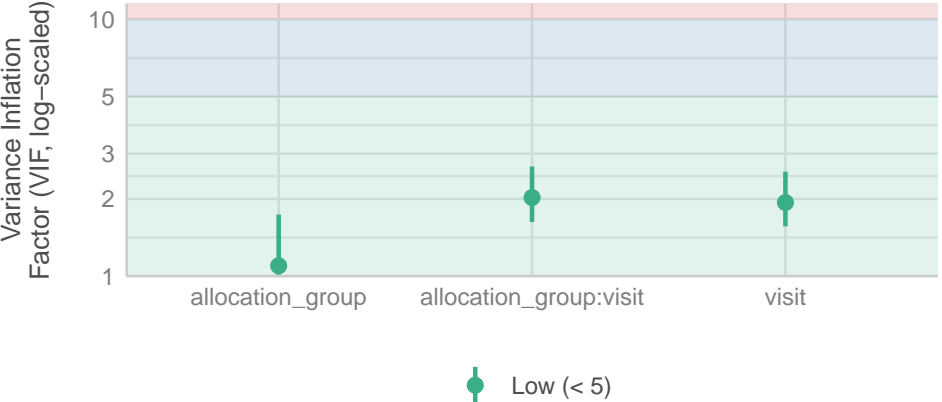
Normality of Residuals
Dots should fall along the line

Sample Quantile Deviations

Standard Normal Distribution Quantiles
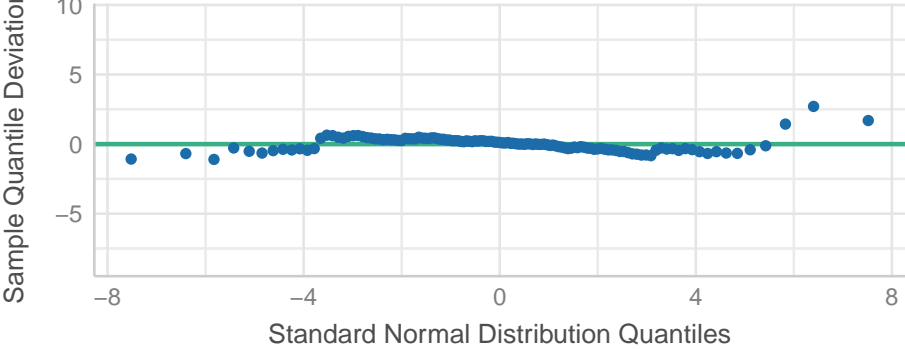
Normality of Random Effects (record_id)
Dots should be plotted along the line

RE Quantiles

Theoretical Quantiles