Posterior Predictive Check Linearity Model-predicted lines should resemble observed data line Reference line should be flat and horizontal 0.015 25 Residuals 0.010 Density 0.005 -25 -500.000 200 100 150 200 250 125 150 175 225 250 labs_cholesterol Fitted values Observed data — Model-predicted data Homogeneity of Variance Influential Observations Reference line should be flat and horizontal Points should be inside the contour lines 88 25 √|Std. residuals 1.5 Residuals 0.5 132 0 1.0 Std. -25 0.5 89 🏿 43 -50 0.0 0.2 0.4 0.6 125 150 175 200 225 250 0.0 Fitted values Leverage (hii) Collinearity Normality of Residuals Dots should fall along the line 25 Output O High collinearity (VIF) may inflate parameter uncertainty Variance Inflation Factor (VIF, log-scaled) 10 0 20 allocation_group allocation_group:visit visit Standard Normal Distribution Quantiles Low (< 5) Normality of Random Effects (record_id) Dots should be plotted along the line 40 RE Quantiles

2

0

-40

-80

-2

0

Theoretical Quantiles