

Appendix C. Statistical Models: ITT Analysis With All Missing Data Interpolated

The resultant general linear mixed effects model for the WMFT outcome was as follows:

$$\text{wmft} = 1 + \text{group}*\text{time} + \text{wmftpre}:\text{time} + (1+\text{time}|\text{subjs}) + (1|\text{site})$$

Term	Explanation
wmft	Outcome measure
1	intercept
group*time	main effects of group and time and their interaction
wmftpre:time	fixed effects of baseline motor function on change over time
(1+time subjs)	random intercepts and random slopes attributed to each participant
(1 site)	random intercepts attributed to the 5 sites

Two general linear mixed effects models for the MAL outcome explained the data about equally well. The first had a slightly lower Bayesian Information Criterion, but a slightly higher Akaike Information Criterion. Comparative treatment effects were similar for both models. There is multicollinearity between the effect of baseline WMFT and the effect of baseline MAL on MAL gains over time (second model). The comparative treatment effects tables within in the main report were based on the first, more parsimonious, model.

$$\text{First model: mal} = 1 + \text{group}*\text{time} + \text{wmftpre}:\text{time} + (1+\text{time}|\text{subjs}) + (1|\text{site})$$

$$\text{Second model: mal} = 1 + \text{group}*\text{time} + \text{wmftpre}:\text{time} + \text{malpre}:\text{time} + (1+\text{time}|\text{subjs}) + (1|\text{site})$$

Term	Explanation
mal	Outcome measure
1	intercept
group*time	main effects of group and time and their interaction
wmftpre:time	fixed effect of baseline motor function on change over time
malpre:time	fixed effect of baseline arm use on change over time
(1+time subjs)	random intercepts and random slopes attributed to each participant
(1 site)	random intercepts attributed to the 5 sites