

## APPENDICES

The following appendices reflect additional analyses performed on the data with different ways of accounting for dropout.

### Appendix A. ITT Analysis in Which Dropouts Are Considered Complete Nonresponders

This analysis is most relevant for informing treatment policy on large groups of patients, as it provides a conservative estimate of the impact of trying to treat a group of individuals, some of whom drop out of treatment. However, it is not ideal for informing individuals' care, as the relative effectiveness of treatments amongst those who *continue* in treatment is a more relevant comparison to inform decision-making at the point of care.

This analysis uses the last observation carried forward method to impute data lost to voluntary attrition, which essentially treats dropouts as complete non-responders. Random Forests Imputation (RFI) was still used to impute data for individuals who had to withdraw for medical reasons and for those lost to follow-up. The difference between this analysis and that presented in the main paper is that this analysis uses different methods of imputation depending on a person's reason for dropping out of the study, whereas the main analysis uses RFI imputation for all missing data. This analysis will underestimate treatment gains given that it conservatively assigns no treatment change to voluntary dropouts, even though these individuals may have benefitted from the portion of the intervention that they had received. Results from this analysis were similar to the intent-to-treat analysis reported in the main text.

**Table A1.** Means and standard deviations of each treatment group at each time-point and the comparative treatment effects. MAL scores are expressed as mean MAL ratings. WMFT and Touch Test scores are expressed as the mean of the natural log of performance times for each item. Negative changes on the WMFT and Touch Test reflect improvement. Primary outcomes are designated with a <sup>P</sup>. Secondary outcomes are designated with a <sup>S</sup>.

		CIMT	Gaming	Gaming+	Standard Care
MAL <sup>P</sup> n=166	Pre-treatment	1.5 ± 1.0	1.5 ± 0.8	1.5 ± 0.9	1.2 ± 0.8
	Post-treatment	3.2 ± 1.0	2.6 ± 0.9	3.1 ± 0.9	1.7 ± 1.1
	Follow-up	2.7 ± 1.2	2.0 ± 1.0	2.4 ± 1.2	1.6 ± 1.1
	Treatment change	1.7 ± 0.7	1.1 ± 0.8	1.5 ± 0.7	0.5 ± 0.6
	Pre-tx to f/u change	1.1 ± 0.8	0.5 ± 0.8	0.9 ± 0.8	0.4 ± 0.9
WMFT <sup>P</sup>	Pre-treatment	1.82 ± 1.07	1.64 ± 1.05	1.60 ± 0.91	1.81 ± 0.92
	Post-treatment	1.44 ± 0.97	1.45 ± 1.00	1.32 ± 0.79	1.64 ± 0.95
	Follow-up	1.50 ± 0.98	1.48 ± 0.95	1.38 ± 0.80	1.58 ± 0.93

<i>n</i> =167	Treatment change	-0.39 ± 0.35	-0.19 ± 0.30	-0.28 ± 0.33	-0.17 ± 0.33
	Pre-tx to f/u change	-0.32 ± 0.52	-0.17 ± 0.43	-0.25 ± 0.44	-0.19 ± 0.59

**Table A2:** Comparative treatment effects. Effect sizes reflect between-group pairwise comparisons adjusted for covariates in the final mixed effects general linear model (95% confidence interval). Rows labeled “treatment” and “6-month” show the post-treatment and follow-up scores relative to pre-treatment scores, respectively. A positive between-group difference for the MAL means that the group listed first in the comparison showed greater gains in arm use. A negative between-group difference for the WMFT means that the group listed first in the comparison showed greater gains. Statistically significant contrasts are indicated with an \*. Clinically meaningful differences between groups are italicized.

	Gaming+ vs CIMT	Gaming vs CIMT	Gaming+ vs Standard Care	Gaming vs Standard Care	Gaming+ vs Gaming	CIMT vs Standard Care
<b>MAL treatment</b>	-0.2 (-0.4, 0.1)	-0.5 (-0.8, -0.3)*	0.9 (0.6, 1.2)	0.5 (0.2, 0.8)*	0.4 (0.1, 0.7)*	1.2 (0.8, 1.5)*
<b>MAL 6-month</b>	-0.3 (-0.6, 0.0)	-0.6 (-0.8, -0.3)*	0.4 (0.1, 0.8)*	0.1 (-0.3, 0.4)	0.3 (0.0, 0.7)	0.7 (0.4, 1.1)*
<b>WMFT treatment</b>	0.11 (-0.03, 0.24)	<i>0.20</i> <i>(0.06, 0.33)*</i>	-0.10 (-0.24, 0.04)	-0.01 (-0.15, 0.13)	-0.09 (-0.22, 0.04)	<i>-0.21 (-0.35, -0.07)*</i>
<b>WMFT 6-month</b>	0.10 (-0.10, 0.30)	0.16 (-0.04, 0.36)	0.01 (-0.19, 0.21)	0.07 (-0.13, 0.27)	-0.06 (-0.25, 0.14)	-0.09 (-0.30, 0.12)