This is the supplemental version of the paper.

This version of the publication may differ from the final published version.

Supplemental Materials

Demographics of post-stroke aphasia recovery: a systematic review-informed individual participant data (IPD) meta-analysis

Supplement 1) Table I: Standardised measures for each language domain

| Language domain	Standardised Measurement	Range
Overall Language Ability	Western Aphasia Battery (Aphasia Quotient)	0-100
Auditory Comprehension	Aachen Aphasia Test Token Test	0-50 (reflecting positive scoring)
Naming	Boston Naming Test	0-60
Reading	Reading subtest of the Comprehensive Aphasia Test	0-74
Writing	Writing subtest of the Comprehensive Aphasia Test	0-76
Other Spoken Language	Porch Index of Communicative Ability	0-16
Functional Communication	Aachen Aphasia Test Spontaneous Communication domain	0-5

Supplement 2) Table II: Participant Demography

Parameter		Language Domain			
		Overall language ability N=943	**Auditory comprehension N=1056**	**Naming N=791**	**Functional Communication N=974**
Age, years (median, IQR)		63 (53-73), n=914	61 (51-69), n=1046	61 (52-69)	67 (57-77)
By age group	≤55 years	281 (31%)	360 (34%)	269 (34%)	208 (21
	56-65 years	248 (27%)	322 (31%)	245 (31%)	228 (23
	66-75 years	195 (21%)	231 (22%)	190 (24%)	267 (27
	>75 years	190 (21%)	133 (13%)	87 (11%)	271 (28
	Missing	29	10	0	0
Time since stroke, days (median, IQR)		36 (7-548), n=940	116 (18-883), n=1046	131 (30-883)	28 (6-244), n=962
By Time group	0-28 days	442 (47%)	339 (32%)	194 (25%)	501 (52
	4 weeks-3 months	107 (11%)	151 (14%)	143 (18%)	129 (13
	3-6 months	59 (6%)	97 (9%)	106 (13%)	69 (7
	>6 months	332 (35%)	459 (44%)	348 (44%)	263 (27
	Missing	3	10	0	12
Sex	Female	360 (40%)	385 (37%)	278 (36%)	417 (43
	Male	544 (60%)	660 (63%)	502 (64%)	557 (57
	Missing	39	11	11	0
Ethnicity	Asian	24 (2.5%)	22 (2%)	0	0
	Black	0	4 (0.4%)	5 (0.6%)	5 (0.5
	White	25 (2.5%)	71 (7%)	72 (9%)	80 (8
	Not specified	894 (95%)	959 (91%)	714 (90%)	889 (91
Handed	Right	616 (95%)	852 (95%)	586 (94%)	536 (94
	Left	25 (5%)	37 (4%)	29 (5%)	24 (4
	Ambidextrous	7 (1%)	12 (1%)	8 (1%)	10 (2
	Missing	295	155	168	404
Hemisphere	Left	627 (90%)	725 (90%)	618 (89%)	645 (98
	Right	55 (8%)	61 (8%)	59 (9%)	11 (2
	Bilateral		20 (2%)		5 (0.7

	Missing	18 (3%) 243	250	16 (2%) 98	313
Type	ICH	90 (10%)	128 (12%)	76 (10%)	70 (7
	Ischaemic	628 (68%)	671 (64%)	502 (64%)	704 (74
	Mixed	29 (3%)	0	0	0
	SAH	14 (1.5%)	15 (1%)	0	9 (1
	Unclassified	162 (18%)	227 (22%)	8 (1%)	164 (17
	Missing	20	15	201 (26%) 4	19
Living context	Alone	55 (34%)	19 (18%)	23 (21%)	86 (34
	Formal care	7 (4%)	30 (29%)	30 (21%)	30 (12
	Living with others	102 (62%)	55 (53%)	30 (27%)	136 (54
	Missing	776	952	58 (52%) 680	721
Language	Arabic	29 (3%)	0	0	0
	Danish	19 (2%)	0	0	19 (2%)
	Dutch	0	292 (28%)	172 (22%)	171 (18%)
	English	329 (35%)	278 (26%)	309 (39%)	357 (37%)
	Finnish	36 (4%)	31 (3%)	36 (5%)	23 (2%)
	French	99 (11%)	0	0	0
	German	128 (14%)	175 (17%)	42 (5%)	112 (12%)
	Greek	0	0	38 (5%)	38 (4%)
	Italian	0	115 (11%)	50 (6%)	0
	Japanese	24 (3%)	58 (5%)	36 (5%)	0
	Korean	21 (2%)	21 (2%)	21 (3%)	0
	Norwegian	39 (4%)	39 (4%)	39 (5%)	0
	Portuguese	25 (3%)	25 (2%)	25 (3%)	23 (2%)
	Spanish	0	0	10 (1%)	0
	Swedish	194 (21%)	22 (2%)	13 (2%)	231 (24%)

Supplement 3) Figure I: Transformed language domain scores, stratified by contributing assessment tool

a) Overall-language-ability

Overall Language Ability: Standardised scores stratified by assessment tools used
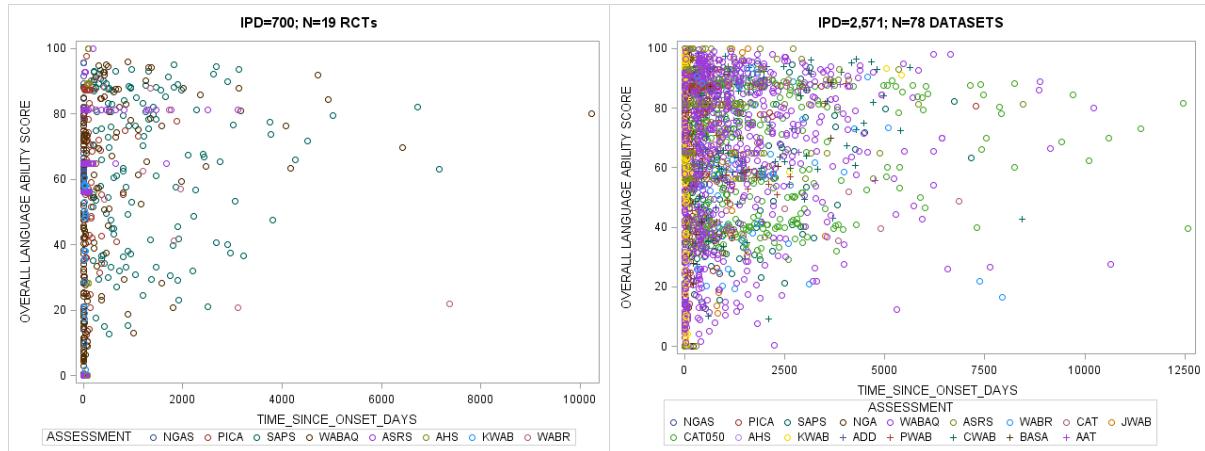
b) Auditory comprehension

Auditory comprehension: Standardised scores stratified by assessment tools used
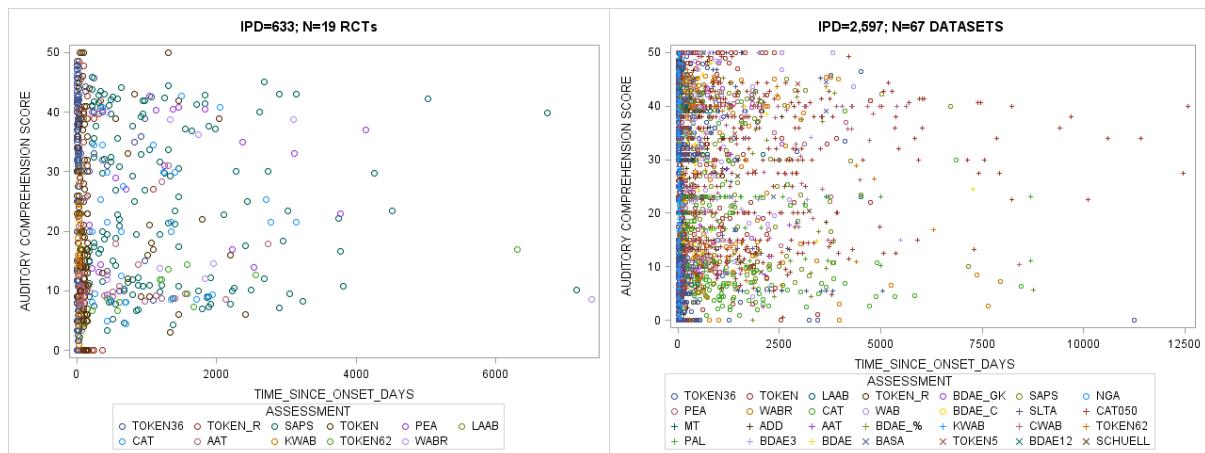
c) Naming

Naming: Standardised scores stratified by assessment tools used
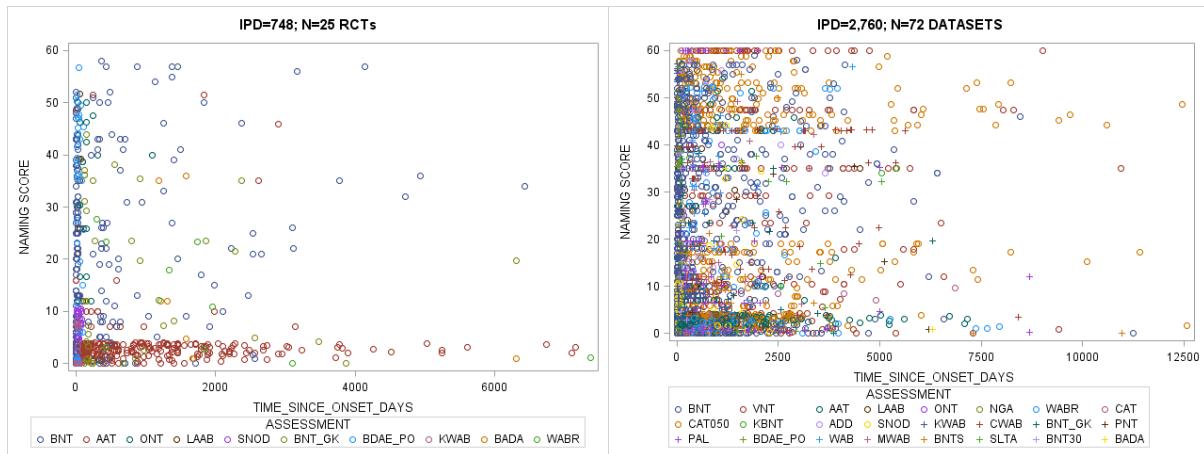
d) Functional communication: observer-rated activity

Functional Communication: Standardised scores stratified by assessment tools used
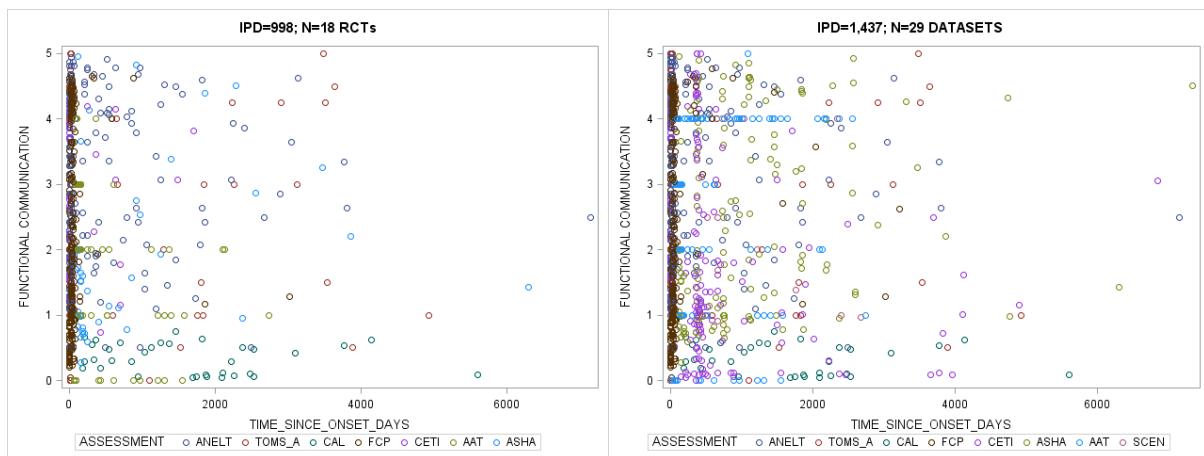
The spread of data points overlapped, with no clustering of transformed scores from contributing assessment tools. The transformed values generated by each of the assessment tools were therefore considered to be valid and fell within an expected range.

Supplement 4a) Table III: Associations between demographic factors and overall language ability (WAB-AQ)

Variable	RCTs	IPD*	Estimate of means	Lower Quartile	Upper Quartile	All Studies Designs	IPD	Estimate of means	Lower Quartile	Upper Quartile
Female	11	206	14.25	9.01	19.50	16	250	14.15	9.66	18.65
Male	11	276	12.30	7.16	17.44	17	378	12.17	7.89	16.46
<55 years	11	136	15.43	9.95	20.91	17	192	16.51	10.03	22.99
56-65 years	11	141	12.36	6.90	17.82	16	178	12.88	6.38	19.38
66-75	10	96	11.49	5.73	17.25	14	123	13.22	6.69	19.75
>75	7	109	13.81	7.82	19.81	9	135	13.83	6.94	20.73
0-28 days	8	260	19.14	13.89	24.39	9	335	20.99	13.78	28.20
1-3 months	6	64	16.17	10.20	22.13	8	71	16.44	9.02	23.86
3-6 months	3	16	9.60	0.07	19.14	5	19	9.58	-0.07	19.22
>6 months	4	142	8.19	-0.12	16.50	8	203	9.44	2.81	16.07
						Random (no) 6	146	14.17	7.36	20.99
						Random (yes) 11	482	12.37	7.70	17.04

*Individual participant data

Supplement 4b) Table IV: Associations between demographic factors and auditory comprehension (AAT-TT)

Variable	RCTs	IPD*	Estimate of means	Lower Quartile	Upper Quartile	All Study Designs	IPD	Estimate of means	Lower Quartile	Upper Quartile
Female	16	211	3.82	0.98	6.66	22	239	4.92	2.15	7.70
Male	16	329	3.10	0.35	5.85	21	402	4.35	1.65	7.04
<55 years	16	178	6.05	3.16	8.94	22	232	7.05	4.32	9.77
56-65 years	16	182	2.83	-0.04	5.71	22	212	4.31	1.52	7.09
66-75	15	116	3.50	0.46	6.53	19	131	4.61	1.65	7.58
>75	12	64	1.46	-1.90	4.82	14	66	2.57	-0.74	5.88
0-28 days	6	139	5.25	1.69	8.82	6	139	6.33	2.57	10.08
1-3 months	9	97	4.27	1.07	7.47	10	106	5.16	1.99	8.34
3-6 months	6	61	2.88	-1.81	7.56	8	65	4.32	0.04	8.60
>6 months	9	243	1.44	-1.85	4.72	15	331	2.73	0.12	5.34
						Random (no) 5	101	6.11	1.65	10.57
						Random (yes) 16	540	3.16	0.67	5.65

*Individual participant data

Supplement 4c) Table V: Associations between demographic factors and naming (BNT)

| Variable	RCTs	IPD*	Estimate of means	Lower Quartile	Upper Quartile	All Study Designs	IPD	Estimate of means	Lower Quartile	Upper Quartile
Female	13	165	6.92	2.47	11.36	21	219	7.54	3.84	11.23
Male	13	220	6.70	2.33	11.07	21	333	7.73	4.10	11.36
<55 years	13	103	9.31	4.71	13.90	21	181	9.72	6.00	13.44
56-65 years	13	124	7.34	2.79	11.90	21	169	8.08	4.30	11.87
66-75	12	97	6.16	1.48	10.84	18	134	7.35	3.48	11.22
>75	11	61	4.42	-0.56	9.40	15	68	5.38	1.11	9.66
0-28 days	5	129	11.12	5.71	16.54	6	138	11.35	6.62	16.09
1-3 months	8	93	7.74	2.89	12.59	10	116	8.70	4.56	12.84
3-6 months	6	70	4.26	-1.58	10.10	9	92	5.70	1.17	10.23
>6 months	7	93	4.11	-1.08	9.29	15	206	4.78	1.08	8.48
						Random (no)	8	167	8.56	2.88	14.24
						Random (yes)	13	385	6.71	2.57	10.85

*Individual participant data

Supplement 4d) Table VI: Associations between demographic factors and functional communication (AAT-SC)

Variable	RCTs	IPD*	Estimate of means	Lower Quartile	Upper Quartile	All Study Designs	IPD	Estimate of means	Lower Quartile	Upper Quartile
Female	14	236	0.76	0.48	1.03	18	275	0.69	0.40	0.98
Male	14	296	0.57	0.30	0.84	19	372	0.54	0.26	0.83
<55 years	14	147	0.75	0.46	1.04	19	181	0.69	0.39	0.99
56-65 years	13	145	0.70	0.41	1.00	18	170	0.66	0.36	0.96
66-75	14	121	0.55	0.25	0.85	18	148	0.52	0.21	0.82
>75	12	119	0.65	0.34	0.96	15	148	0.61	0.30	0.92
0-28 days	6	232	1.05	0.70	1.40	7	277	0.97	0.61	1.34
1-3 months	5	68	0.87	0.51	1.23	6	70	0.83	0.46	1.21
3-6 months	4	62	0.40	-0.06	0.87	5	63	0.37	-0.10	0.83
>6 months	7	170	0.33	0.00	0.66	11	237	0.30	0.01	0.60
						Random (no)	5	115	0.57	0.11	1.03
						Random (yes)	14	532	0.67	0.41	0.94

*Individual participant data

Supplement 5) Figure II: Absolute and Relative Proportion of Change from Baseline in Language Domain Scores across All Study Designs
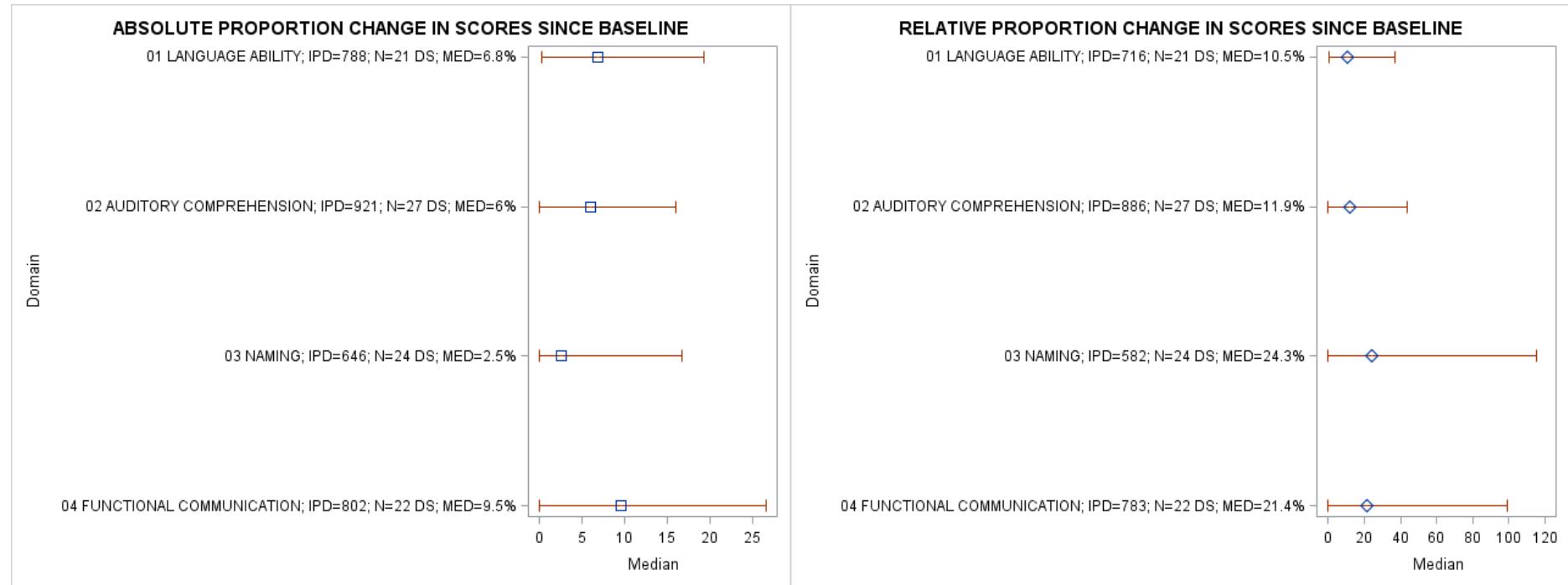
Key: IPD= Individual Participant Data; N=number of datasets; MED=median proportion of recovery