



## Supplementary Material

**Table i.** Missingness of data at each follow up time point by trial group.

Health status	Brace (n = 335), n (missing)	Cast (n = 334), n (missing)	Total (n = 669), n (missing)
EQ-5D baseline	5 (1.5)	2 (0.6)	7 (1.1)
EQ-5D 0-6 weeks	77 (23)	93 (27.8)	170 (25.4)
EQ-5D 7-10 weeks	96 (28.7)	106 (31.7)	202 (30.2)
EQ-5D 11-16 weeks	76 (22.7)	93 (27.8)	169 (25.3)
EQ-5D-5L 17-24 weeks	108 (32.2)	114 (34.1)	222 (33.2)
EQ-5D-5L 25-52 weeks	100 (29.9)	106 (31.7)	206 (30.8)
<b>Resource use category</b>			
<b>Medication</b>			
0-6 weeks	91 (27.2)	114 (34.1)	205 (30.6)
7-10 weeks	109 (32.5)	115 (34.4)	224 (33.5)
11-16 weeks	100 (29.6)	123 (36.8)	223 (33.3)
17-24 weeks	122 (36.4)	128 (38.3)	250 (37.4)
<b>Inpatient admission</b>			
0-6 weeks	92 (27.5)	114 (34.1)	206 (30.8)
7-10 weeks	107 (31.9)	117 (35)	224 (33.5)
11-16 weeks	102 (30.5)	119 (35.6)	221 (33)
17-24 weeks	122 (36.4)	127 (38)	249 (37.2)
25-52 weeks	104 (31)	107 (32)	211 (31.5)
<b>Outpatient visits</b>			
0-6 weeks	87 (26)	111 (33.2)	198 (29.6)
7-10 weeks	105 (31.3)	115 (34.4)	220 (32.9)
11-16 weeks	98 (29.3)	115 (34.4)	213 (31.8)
17-24 weeks	123 (36.7)	125 (37.4)	248 (37.1)
25-52 weeks	101 (30.2)	106 (31.7)	207 (30.9)
<b>Community care visits</b>			
0-6 weeks	91 (27.2)	113 (33.8)	204 (30.5)
7-10 weeks	106 (31.6)	113 (33.8)	219 (32.7)
11-16 weeks	98 (29.2)	117 (35)	215 (32.1)
17-24 weeks	122 (36.4)	125 (37.4)	247 (36.9)
25-52 weeks	101 (30.2)	109 (32.6)	210 (31.4)
<b>Personal Social Services</b>			
0-6 weeks	90 (26.9)	111 (33.2)	201 (30)
7-10 weeks	105 (31.3)	114(34.1)	219 (32.7)
11-16 weeks	98 (29.3)	118 (35.3)	216 (32.3)
17-24 weeks	122 (36.4)	124 (37.1)	246 (36.8)
25-52 weeks	102 (30.5)	106 (31.7)	208 (31.1)
<b>Aids and adaptation</b>			
0-6 weeks	88 (26.3)	113 (33.8)	201 (30)
7-10 weeks	109(32.5)	115 (34.4)	224 (33.5)
11-16 weeks	99 (29.6)	116 (34.7)	215 (32.1)
17-24 weeks	122 (36.4)	125 (37.4)	247 (36.9)

<b>Work absence</b>			
0-6 weeks	79 (23.6)	95 (28.4)	174 (26)
7-10 weeks	100 (29.9)	106 (31.7)	206 (30.8)
11-16 weeks	78 (23.3)	93 (27.8)	171 (25.6)
17-24 weeks	109 (32.5)	114 (34.1)	223 (33.3)
25-52 weeks	99(29.6)	106 (31.7)	205 (30.6)
<b>Aggregate resource use</b>			
0-6 weeks	102 (30.5)	126 (37.7)	228 (34.1)
7-10 weeks	117 (34.9)	123 (36.8)	240 (35.9)
11-16 weeks	105 (31.3)	129 (38.6)	234 (35)
17-24 weeks	131 (39.1)	134 (40.1)	265 (39.6)
25-52 weeks	138 (41.2)	147 (44)	285 (42.6)

EQ-5D-5L, EuroQol five-dimension five-level.

**Table ii.** Use of health and social care resources at each follow-up period by trial group.

Variable	Brace n=335, Mean (SD) <sup>b</sup>	Cast n=334, mean (SD) <sup>b</sup>	Mean difference (95% CI) <sup>b</sup>	p-value <sup>b</sup>
<b>In-patient care (days)<sup>a</sup></b>				
0-6 weeks	0.012 (0.110)	0.05 (0.515)	-0.038 (-0.107 to 0.032)	0.29
7-10 weeks	0.022 (0.237)	0 (0)	0.022 (-0.009 to 0.052)	0.17
11-16 weeks	0 (0)	0.023 (0.0.280)	-0.023 (-0.060 to 0.014)	0.23
17-24 weeks	0.066 (0.959)	0.034 (0.422)	0.032 (-0.110 to 0.174)	0.66
25-52 weeks	0.09 (1.376)	0.018 (0.265)	0.073 (-0.108 to 0.253)	0.43
<b>Medication (no of tablets taken)<sup>a</sup></b>				
0-6 weeks	105.53 (124.27)	115.43 (165.67)	-9.90 (-45.91 to 26.11)	0.71
7-10 weeks	64.77 (95.73)	84.56 (153.95)	-19.79 (-68.12 to 28.54)	0.42
11-16 weeks	54.12 (101.24)	78.05 (85.62)	-23.93 (-63.39 to 15.52)	0.23
17-24 weeks	73.30 (25.42)	72.89 (23.37)	0.41 (-69.04 to 69.86)	0.99
<b>Community health services (no of contacts)<sup>a</sup></b>				
<b>0-6 weeks</b>				
GP surgery visits	1.42 (0.78)	1.29(0.46)	0.13 (-0.25 to 0.51)	0.49
GP home visits	1	1	0	.
GP telephone contacts	1.72 (0.98)	1.75 (1.14)	-0.03 (-0.83 to 0.77)	0.94
Practice nurse contacts	1.33 (0.65)	2.67 (1.15)	-1.33 (-3.95 to 1.28)	0.18
District nurse contacts	2.25 (1.89)	1	1.25	.
Physiotherapy (community)	2 (1.55)	1.56 (0.73)	0.44 (-1.18 to 2.07)	0.53
Calls to NHS Direct	1.2 (0.45)	1.33 (0.58)	-0.13 (-1.28 to 1.01)	0.75
Calls for ambulance	1.33 (0.58)	1 (0)	0.33 (-1.10 to 1.77)	0.42
Occupational therapy	1 (0)	3.2 (3.83)	-2.2 (-6.96 to 1.56)	0.27
Other	0.33 (0.57)	3.5 (2.08)	-3.16 (-6.34 to 0.01)	0.05
<b>7-10 weeks</b>				
GP surgery visits	1.353 (0.79)	1.3 (0.73)	0.05 (-0.46 to 0.56)	0.83
GP home visits	1	1	0	.
GP telephone contacts	1.1 (0.57)	1.5 (1)	-0.4 (-1.91 to 1.11)	0.50
Practice nurse contacts	2.71 (2.21)	1 (0)	1.71 (-0.33 to 3.76)	0.09
District nurse contacts	4 (4.24)	1	3	.
Physiotherapy (community)	2.1 (0.99)	1.5 (0.53)	0.6 (-0.19 to 1.39)	0.12
Calls to NHS Direct	2 (1.41)	1 (0)	1 (-11.71 to 13.71)	0.50
Calls for ambulance	.	0.67 (0.58)	.	.
Occupational therapy	1 (0)	1.4 (0.55)	-0.4 (-1.08 to 0.28)	0.18
Other	0.33 (0.58)	0.5 (0.71)	-0.17 (-2.89 to 2.56)	0.81
<b>11-16 weeks</b>				
GP surgery visits	1.24 (0.44)	1.59 (0.62)	-0.71 to 0.01	0.06
GP home visits	0	0	0	.
GP telephone contacts	1.13 (0.35)	1.83 (0.75)	-0.71 (-1.50 to 0.08)	0.07

Practice nurse contacts	8 (4.24)	4 (4.36)	4 (-10.77 to 18.77)	0.40
District nurse contacts	3.33 (2.52)	.	.	.
Physiotherapy (community)	2.08 (1.44)	2.18 (1.47)	-0.98 (-1.36 to 1.17)	0.87
Calls to NHS Direct	.	11	.	.
Calls for ambulance	.	.	.	.
Occupational therapy	1.6 (0.89)	2 (1.73)	-0.4 (-4.09 to 3.29)	0.74
Other	1.33 (1.53)	0	1.33 (-2.46 to 5.13)	0.27
<b>17-24 weeks</b>				
GP surgery visits	1.64 (0.93)	1.67 (0.89)	-0.02 (-0.76 to 0.71)	0.95
GP home visits	0	0	0	.
GP telephone contacts	1.25 (0.5)	2.5 (0.71)	-1.25 (-4.52 to 2.02)	0.19
Practice nurse contacts	1.86 (0.69)	3 (2)	-1.14 (-5.80 to 3.52)	0.43
District nurse contacts	9	1	8	.
Physiotherapy (community)	17.4 (25.63)	3 (1.85)	14.4 (-17.39 to 46.19)	0.28
Calls to NHS Direct	.	1	.	.
Calls for ambulance	.	1	.	.
Occupational therapy	1	1	.	.
Other	0.33 (0.58)	0	0.33	.
<b>25-52 weeks</b>				
GP surgery visits	2.36 (2.53)	2 (1.58)	0.36 (-1.31 to 2.03)	0.66
GP home visits	0	0	0	.
GP telephone contacts	2	1.5 (0.71)	0.5	.
Practice nurse contacts	2.5 (2.38)	1	1.5	.
District nurse contacts	1	.	.	.
Physiotherapy (community)	4.29 (4.89)	1	3.29	.
Calls to NHS Direct	.	.	.	.
Calls for ambulance	.	.	.	.
Occupational therapy	.	.	.	.
Other	12	5.33 (7.51)	6.67	.
<b>Out-patient visits (no of contacts)<sup>a</sup></b>				
<b>0-6 weeks</b>				
Orthopaedics	1.53 (0.79)	1.66 (0.93)	-0.14 (-0.34 to 0.06)	0.17
Pathology	1.5 (0.55)	1.83 (1.60)	-0.33 (-2.01 to 1.35)	0.65
Radiology	1.42 (0.68)	1.52 (0.77)	-0.09 (-0.30 to 0.12)	0.38
Physiotherapy (NHS)	1.23 (0.50)	1.15 (0.37)	0.07 (-0.16 to 0.30)	0.53
Physiotherapy (private)	1.3 (0.82)	1.29 (0.49)	0.01 (-0.67 to 0.70)	0.96
Emergency department	1.11 (0.33)	1.33 (0.77)	-0.22 (-0.66 to 0.22)	0.31
Other	1.6 (0.89)	1.83 (1.17)	-0.23 (-1.64 to 1.18)	0.72

<b>7-10 weeks</b>				
Orthopaedics	1.27 (1.01)	1.18 (0.52)	0.09 (-0.17 to 0.36)	0.48
Pathology	1	1.33 (0.58)	-0.33	.
Radiology	1.03 (0.16)	1.03 (0.17)	-0.00 (-0.08 to 0.08)	0.94
Physiotherapy (NHS)	1.66 (0.87)	1.63 (0.85)	0.03 (-0.26 to 0.32)	0.85
Physiotherapy (private)	5 (9.38)	2.75 (1.69)	2.25 (-3.46 to 7.96)	0.41
Emergency department	1(0)	1 (0)	0	.
Other	1.29 (0.76)	1.4 (0.55)	-0.11 (-0.95 to 0.72)	0.77
<b>11-16 weeks</b>				
Orthopaedics	1.18 (0.52)	1.19 (0.54)	-0.01 (-0.25 to 0.23)	0.95
Pathology	1.17 (0.41)	1.5 (0.71)	-0.33 (-4.68 to 4.01)	0.62
Radiology	1.29 (0.55)	1.06 (0.24)	0.24 (-0.02 to 0.49)	0.07
Physiotherapy (NHS)	2.14 (1.41)	2.29 (1.57)	-0.15(-0.64 to 0.34)	0.55
Physiotherapy (private)	3.5 (2.28)	3.17 (1.59)	0.33 (-1.17 to 1.84)	0.65
Emergency department	1.25 (0.5)	1.33 (0.58)	-0.08 (-1.24 to 1.07)	0.85
Other	1 (0)	1.5 (1.22)	-0.5 (-1.79 to 0.79)	0.36
<b>17-24 weeks</b>				
Orthopaedics	1.29 (0.59)	1.47 (0.74)	-0.17 (-0.66 to 0.32)	0.48
Pathology	1.67 (1.15)	1.6 (1.34)	0.07 (-2.25 to 2.38)	0.94
Radiology	1.24 (0.56)	1.27 (0.65)	-0.04 (-0.53 to 0.46)	0.88
Physiotherapy (NHS)	2.7 (1.86)	2.62 (1.94)	0.07 (-0.76 to 0.91)	0.86
Physiotherapy (private)	5.3 (8.81)	4.13 (2.36)	1.18 (-5.25 to 7.60)	0.69
Emergency department	1.5 (0.71)	1	0.5	.
Other	2.29 (1.98)	1.75 (1.5)	0.54 (-1.91 to 2.98)	0.63
<b>25-52 weeks</b>				
Orthopaedics	2 (1.71)	2.86 (3.25)	-0.86 (-2.89 to 1.17)	0.39
Pathology	4 (5.20)	1	3	.
Radiology	1.67 (0.65)	2 (2.29)	-0.33 (-2.11 to 1.45)	0.68
Physiotherapy (NHS)	2.85 (3.16)	4.9 (4.82)	-2.05 (-4.89 to 0.78)	0.15
Physiotherapy (private)	3 (1)	7.4 (7.27)	-4.4 (-13.36 to 4.56)	0.25
Emergency department	2 (1)	1 (0)	1 (-1.48 to 3.48)	0.22
Other	1 (0)	2.17 (1.83)	-1.17 (-3.09 to 0.78)	0.18
<b>Aids and adaptation (no of items received)<sup>a</sup></b>				
<b>0-6 weeks</b>				
Crutches	1.80 (0.75)	1.82 (0.59)	-0.01 (-0.19 to 0.17)	0.90
Walking stick	1.33 (0.50)	1.36 (0.50)	-0.03 (-0.51 to 0.45)	0.89
Zimmer frame	1.15 (0.36)	1.07 (0.47)	0.07 (-0.12 to 0.26)	0.44
Grab rail	1.29 (0.49)	1 (0)	0.29 (-0.17 to 0.74)	0.17
Dressing aids	3.14 (4.22)	1.17 (0.75)	1.98 (-1.93 to 5.89)	0.27
Long-handle shoehorn	1 (0)	0.6 (0.55)	0.4 (-0.28 to 1.08)	0.18
Other	0.88 (0.47)	0.93 (0.49)	-0.05 (-0.16 to 0.06)	0.38
<b>7-10 weeks</b>				
Crutches	1.75 (0.46)	1.89 (0.32)	-0.14 (-0.54 to 0.26)	0.46
Walking stick	1 (0)	.	.	.
Zimmer frame	1(0)	1(0)	0	.
Grab rail	2	.	.	.

Dressing aids	2.75 (4.86)	0.67 (0.58)	2.08 (-5.56 to 9.73)	0.45
Long-handle shoehorn	1 (0)	1 (0)	0 (0)	.
Other	1.3 (1.03)	1.25 (0.80)	0.05 (-0.51 to 0.61)	0.86
<b>11-16 weeks</b>				
Crutches	2	1.71 (0.49)	0.29	.
Walking stick	1 (0.47)	1 (0)	0.15 (-0.34 to 0.34)	1.00
Zimmer frame	1 (0)	1	0	.
Grab rail	1.5 (0.71)	1	0.5	.
Dressing aids	1 (0)	1.5 (0.71)	-0.5 (-6.85 to 5.85)	0.5
Long-handle shoehorn	.	1	.	.
Other	1.44 (1.79)	1 (1)	0.44 (-0.52 to 1.41)	0.35
<b>17-24 weeks</b>				
Crutches	1.5 (0.71)	1.8 (0.45)	-0.3 (-4.16 to 3.56)	0.66
Walking stick	1.4 (0.55)	1 (0)	0.4 (-0.28 to 1.08)	0.18
Zimmer frame	.	.	.	.
Grab rail	.	.	.	.
Dressing aids	.	.	.	.
Long-handle shoehorn	1	.	.	.
Other	1.11 (0.78)	1.83 (1.47)	-0.72 (-2.28 to 0.83)	0.31
<b>Personnel social services (no of contacts)<sup>a</sup></b>				
<b>0-6 weeks</b>				
Meals on wheels	28	.	.	.
Laundry services	.	.	.	.
Social worker contacts	3	5	-2	.
Care worker contacts	49	.	.	.
Other	10.55 (24.03)	0	10.55	.
<b>7-10 weeks</b>				
Meals on wheels	.	.	.	.
Laundry services	.	10	.	.
Social worker contacts	.	.	.	.
Care worker contacts	56	15	41	.
Other	10.5 (19.54)	2	8.5	.
<b>11-16 weeks</b>				
Meals on wheels	.	.	.	.
Laundry services	5	.	.	.
Social worker contacts	.	.	.	.
Care worker contacts	13	.	.	.
Other	.	1	.	.
<b>17-24 weeks</b>				
Meals on wheels	.	.	.	.
Laundry services	.	.	.	.
Social worker contacts	1	.	.	.
Care worker contacts	.	.	.	.
Other	4 (5.66)	.	.	.

<b>25-52 weeks</b>				
Meals on wheels	.	.	.	.
Laundry services	.	.	.	.
Social worker contacts	.	.	.	.
Care worker contacts	.	.	.	.
Other	.	.	.	.
<b>Time off work (days)</b>				
0-6 weeks	24.00 (10.02)	22.96 (10.80)	1.04 (-1.24 to 3.33)	0.37
7-10 weeks	16.79 (6.60)	15.71 (7.28)	1.08 (-0.51 to 2.68)	0.18
11-16 weeks	23.22 (11.05)	22.76 (11.40)	0.46 (-2.08 to 3.01)	0.72
17-24 weeks	30.67 (14.15)	28.88 (15.43)	1.79 (-1.75 to 5.32)	0.32
25-52 weeks	43.50 (36.48)	45.86 (36.66)	-2.36 (-10.64 to 5.92)	0.58

**Table iii.** Mean NHS and social services costs in GBP (£) for cases with complete data by trial group in 2019/2020 prices.

Variable	Brace n = 335, mean (£) (SD) <sup>c</sup>	Cast n = 334 Mean (£) (SD) <sup>c</sup>	Mean difference (£), (95% CI) <sup>c</sup>	p-value <sup>c</sup>
<b>In-patient care</b>				
0-6 weeks	25.76 (207.08)	34.35 (269.29)	-8.59 (-52.82 to 35.63)	0.70
7-10 weeks	20.73 (205.27)	10.07 (148.27)	10.66 (-22.59 to 43.91)	0.53
11-16 weeks	18.75 (201.92)	18.49(6.66)	0.26 (-44.44 to 44.95)	0.99
17-24 weeks	65.26 (685.12)	40.54 (353.02)	24.72 (-79.49 to 128.93)	0.64
25-52 weeks	77.34 (909.84)	78.44 (467.14)	-1.09 (-133.68 to 131.51)	0.99
<b>Medication</b>				
0-6 weeks	13.92 (42.65)	20.13 (50.92)	-6.21 (-14.83 to 2.41)	0.54
7-10 weeks	0.81 (4.60)	1.18 (8.23)	-0.37 (-1.62 to 0.88)	0.56
11-16 weeks	0.76 (3.92)	1.63 (11.64)	-0.87 (-2.52 to 0.79)	0.30
17-24 weeks	1.52 (12.69)	1.19 (13.42)	0.33 (-2.18 to 2.83)	0.80
<b>Community Health Service</b>				
0-6 weeks	15.76 (50.51)	20.73 (7.42)	-4.96 (-20.88 to 10.96)	0.61
7-10 weeks	10.28 (32.11)	10.87 (43.14)	-0.59 (-7.66 to 6.47)	0.87
11-16 weeks	11.64 (33.90)	11.91 (39.37)	-0.27 (-7.08 to 6.54)	0.94
17-24 weeks	20.08 (151.94)	9.87 (37.08)	10.21 (-10.91 to 31.33)	0.34
25-52 weeks	10.45 (49.19)	5.07 (24.26)	5.38 (-1.70 to 12.46)	0.14
<b>Out-patient visits</b>				
0-6 weeks	168.91 (161.68)	201.36 (206.62)	-32.45 (-66.32 to 1.42)	0.06
7-10 weeks	90.99 (130.79)	92.13 (111.45)	-1.14 (-23.65 to 21.36)	0.92
11-16 weeks	78.22 (128.39)	80.25 (123.47)	-2.03 (-25.21 to 21.15)	0.86
17-24 weeks	54.63 (133.30)	60.62 (135.40)	-5.99 (-31.74 to 19.75)	0.65
25-52 weeks	42.71 (182.37)	57.18 (219.97)	-14.47 (-51.47 to 22.53)	0.44
<b>Aids and adaptation</b>				
0-6 weeks	16.36 (36.45)	15.39 (25.13)	0.96 (-4.68 to 6.60)	0.36
7-10 weeks	0.95 (5.00)	2.09 (8.84)	-1.14 (-2.48 to 0.21)	0.10
11-16 weeks	0.29 (1.96)	0.77 (4.09)	-0.47 (-1.07 to 0.13)	0.12
17-24 weeks	0.06 (0.94)	3.02 (40.70)	-2.95 (-8.50 to 2.60)	0.30
<b>Personnel social services</b>				
0-6 weeks	7.91 (98.16)	0.74 (11.05)	7.17 (-5.27 to 19.61)	0.25
7-10 weeks	10.08 (114.41)	2.72 (32.36)	7.36 (-8.10 to 22.82)	0.35
11-16 weeks	0 (0)	1.80 (26.43)	-1.80 (-5.34 to 1.75)	0.31
17-24 weeks	0 (0)	0.16 (2.28)	-0.16 (-0.47 to 0.15)	0.32
25-52 weeks	0 (0)	0 (0)	0	.
<b>Productivity losses</b>				
0-6 weeks	2,057.85 (2,062.78)	1,831.28 (1936.74)	226.56 (-126.64 to 579.77)	0.21
7-10 weeks	571.75 (1,134.50)	436.84 (952.30)	134.91 (-56.18 to 326.00)	0.17
11-16 weeks	209.42 (935.05)	291.62 (962.52)	-82.19 (-249.44 to 85.06)	0.33
17-24 weeks	219.10 (1057.82)	170.29 (863.44)	48.81 (-130.68 to 228.30)	0.59
25-52 weeks	203.77 (1,604.43)	281.36 (1685.63)	-77.59 (-378.01 to 222.82)	0.61



Total costs				
0-6 weeks	251.71 (322.80)	284.03 (404.52)	-32.31 (-101.37 to 36.75)	0.36
7-10 weeks	134.15 (339.82)	117.06 (215.23)	17.09 (-36.73 to 70.92)	0.53
11-16 weeks	108.96 (271.46)	113.51 (335.46)	-4.56 (-62.52 to 53.41)	0.88
17-24 weeks	136.15 (761.65)	113.53 (466.18)	22.62 (-100.70 to 145.94)	0.72
25-52 weeks	174.03 (1049.83)	168.27 (534.64)	5.76 (-160.34 to 171.86)	0.95
0-12 months	995.54 (2391.74)	717.47 (871.77)	278.08 (-153.80 to 709.95)	0.21
0-12 months (with productivity losses)	4,106.89 (5401.89)	3,619.74 (3514.36)	487.15 (-617.13 to 1591.43)	0.39

SD, standard deviation.