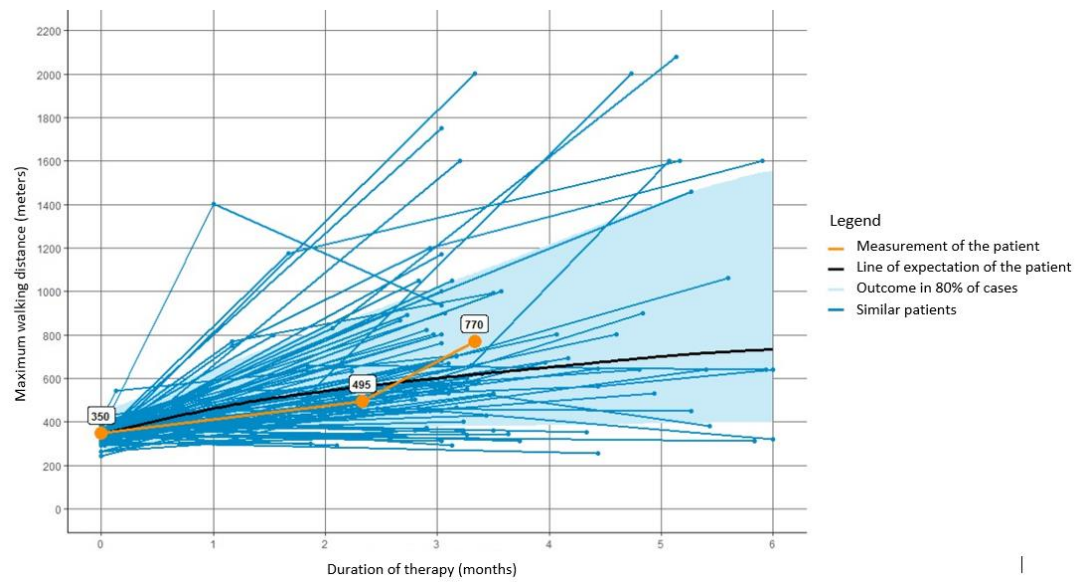


Supplementary materials

Supplementary appendix 1. Exemplary image of POFs._____	2
Supplementary appendix 2. Details of primary analysis for primary objective (RO1)._____	3
Supplementary appendix 3. Details of sensitivity analysis for primary objective (RO1)._____	9
Supplementary appendix 4. Details of analyses for secondary objective (RO2)._____	11

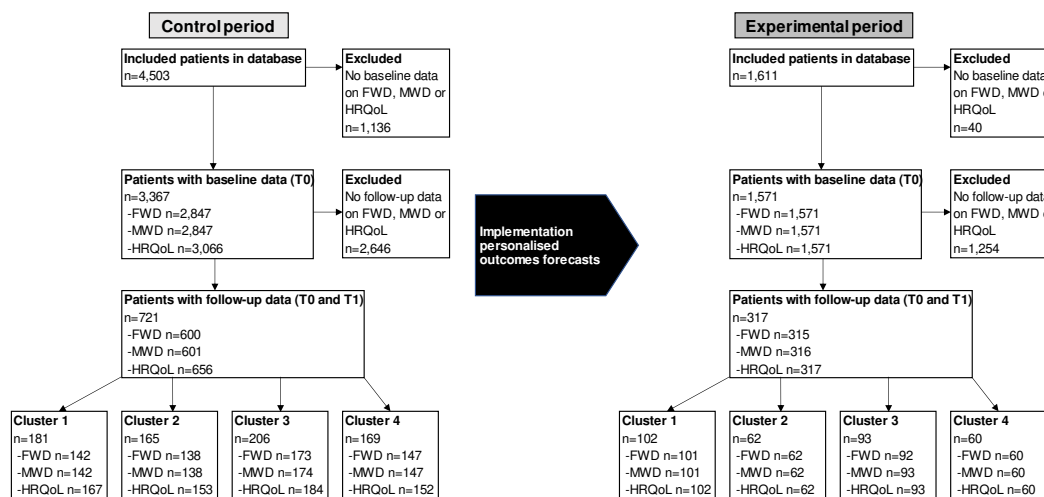
Supplementary appendix 1: Exemplary image of the personalised outcomes forecasts.

Figure 1: An exemplary image of the personalised outcomes forecasts showing the estimated walking distance for an individual patient (black line). The orange dots indicate the baseline measurement and two follow-up measurements.



Supplementary appendix 2: Details of primary analysis for primary objective (RO1).

Figure 1: Flowchart of the inclusion process of data on patient outcomes gathered from electronic health records.



Abbreviations: FWD=functional walking distance; HRQoL=health-related quality of life;

MWD=maximal walking distance; n=number.

Table 1: Baseline characteristics of patients in cluster 1 with baseline and follow-up data.

Cluster 1	Control period	Experimental period
	n=181	n=102
Age in years	n=181	n=101
Mean (SD)	69 (8.88)*	73 (7.79)*
Sex	n=181	n=102
Male, n(%)	94 (52)	59 (58)
Female, n(%)	87 (48)	43 (42)
Body mass index (kg/m ²)	n=145	n=102
Mean (SD)	26 (4.50)	26 (4.02)
Smoking status	n=166	n=102
Current, n(%)	67 (40)**	32 (31)**
Former, n(%)	89 (54)**	38 (37)**
Never, n(%)	10 (6)**	32 (31)**
FWD (metres)	n=165	n=102
Median (IQR)	240 (138 – 420)	230 (138 – 344)

MWD (metres)	<i>n</i> =165	<i>n</i> =102
Median (IQR)	376 (210 – 610)	330 (200 – 508)
HRQoL (6 – 24)	<i>n</i> =175	<i>n</i> =102
Median (IQR)	16 (13 – 19)	15 (12 – 18)

Abbreviations: BMI = body mass index; FWD = functional walking distance; HRQoL = health-related quality of life; IQR = interquartile range; MWD = maximal walking distance; *n* = number; SD = standard deviation.

*. Significant difference ($p < 0.05$) between control- and experimental group (Independent samples t-test).

**. Significant difference ($p < 0.05$) between control- and experimental group (Chi-Square Test).

Table 2: Baseline characteristics of patients in cluster 2 with baseline and follow-up data.

Cluster 2		
	Control period <i>n</i> =165	Experimental period <i>n</i> =62
Age in years	<i>n</i> =164	<i>n</i> =60
Mean (SD)	68 (9.36)	69 (8.12)
Sex	<i>n</i> =165	<i>n</i> =62
Male, <i>n</i> (%)	103 (62.4)	39 (62.9)
Female, <i>n</i> (%)	62 (37.6)	23 (37.1)
Body mass index (kg/m ²)	<i>n</i> =141	<i>n</i> =62
Mean (SD)	27 (4.93)	27 (4.63)
Smoking status	<i>n</i> =156	<i>n</i> =62
Current, <i>n</i> (%)	54 (35)*	16 (26)*
Former, <i>n</i> (%)	94 (60)*	25 (40)*
Never, <i>n</i> (%)	8 (5)*	21 (34)*
FWD (metres)	<i>n</i> =155	<i>n</i> =62
Median (IQR)	266 (150 – 410)	254 (140 – 371)
MWD (metres)	<i>n</i> =155	<i>n</i> =62
Median (IQR)	363 (240 – 580)	360 (217 – 582)
HRQoL (6 – 24)	<i>n</i> =158	<i>n</i> =62
Median (IQR)	16 (13 – 19)	15 (12 – 18)

Abbreviations: BMI = body mass index; FWD = functional walking distance; HRQoL = health-related quality of life; IQR = interquartile range; MWD = maximal walking distance; *n* = number; SD = standard deviation.

*. Significant difference ($p < 0.05$) between control- and experimental group (Chi-Square Test).

Table 3: Baseline characteristics of patients in cluster 3 with baseline and follow-up data.

Cluster 3		
	Control period n=206	Experimental period n=93
Age in years	n=206	n=92
Mean (SD)	71 (8.66)	70 (8.63)
Sex	n=206	n=93
Male, n(%)	118 (57)	58 (62)
Female, n(%)	88 (43)	35 (38)
Body mass index (kg/m ²)	n=175	n=93
Mean (SD)	27 (4.45)	27 (4.34)
Smoking status	n=195	n=93
Current, n(%)	71 (36)*	37 (40)*
Former, n(%)	108 (55)*	36 (39)*
Never, n(%)	16 (8)*	20 (22)*
FWD (metres)	n=193	n=93
Median (IQR)	300 (180 – 529)	310 (175 – 476)
MWD (metres)	n=193	n=93
Median (IQR)	440 (260 – 720)	400 (235 – 618)
HRQoL (6 – 24)	n=194	n=93
Median (IQR)	16 (13 – 20)	16 (12 – 18)

Abbreviations: BMI = body mass index; FWD = functional walking distance; HRQoL = health-related

quality of life; IQR = interquartile range; MWD = maximal walking distance; n = number; SD = standard deviation.

*. Significant difference ($p < 0.05$) between control- and experimental group (Chi-Square Test).

Table 4: Baseline characteristics of patients in cluster 4 with baseline and follow-up data.

Cluster 4		
	Control period n=169	Experimental period n=60
Age in years	n=169	n=60
Mean (SD)	70 (8.72)	69 (9.50)
Sex	n=169	n=60
Male, n(%)	115 (68)	39 (63)
Female, n(%)	54 (32)	23 (37)
Body mass index (kg/m ²)	n=151	n=59
Mean (SD)	27 (4.91)	26 (3.38)
Smoking status	n=161	n=60
Current, n(%)	62 (39)*	27 (45)*
Former, n(%)	84 (52)*	19 (32)*

Never, n(%)	15 (9)*	14 (32)*
FWD (metres)	<i>n</i> =161	<i>n</i> =60
Median (IQR)	240 (140 – 400)	190 (130 – 398)
MWD (metres)	<i>n</i> =161	<i>n</i> =60
Median (IQR)	350 (230 – 570)	324 (201 – 568)
HRQoL (6 – 24)	<i>n</i> =164	<i>n</i> =60
Median (IQR)	15 (12 – 18)	15 (12 – 18)

Abbreviations: BMI = body mass index; FWD = functional walking distance; HRQoL = health-related

quality of life; IQR = interquartile range; MWD = maximal walking distance; n = number; SD = standard deviation.

*. Significant difference ($p < 0.05$) between control- and experimental group (Chi-Square Test).

Table 5: Overview of the median relative changes per time point for cluster 1.

Cluster 1							
Period	Timepoint (month)	FWD		MWD		HRQoL	
		Patients (n)	Median change (%)	Patients (n)	Median change (%)	Patients (n)	Median change (%)
Control	M0	97	89	97	64	112	20
Control	M1	88	96	88	88	105	24
Control	M2	90	307	90	256	97	23
Control	M3	121	123	122	111	128	17
Control	M4	111	112	111	76	110	17
Control	M5	93	133	93	101	104	19
Experimental	M6	72	115	73	111	73	29
Experimental	M7	57	124	57	106	57	33
Experimental	M8	51	147	51	93	51	18
Experimental	M9	39	180	39	150	40	20
Experimental	M10	52	151	52	125	52	27
Experimental	M11	44	94	44	96	44	29

Abbreviations: FWD = functional walking distance; HRQoL = health-related quality of life; MWD =

maximal walking distance; M = month; n = number.

Table 6: Overview of the median relative changes per time point for cluster 2.

Cluster 2							
Period	Timepoint (month)	FWD		MWD		HRQoL	
		Patients (n)	Median change (%)	Patients (n)	Median change (%)	Patients (n)	Median change (%)
Control	M0	97	150	97	119	112	14
Control	M1	88	101	88	94	105	38
Control	M2	90	97	90	72	97	17
Control	M3	121	70	122	37	128	11
Control	M4	111	99	111	58	110	11
Control	M5	93	54	93	64	104	18
Experimental	M6	72	198	73	118	73	11
Experimental	M7	57	149	57	103	57	43
Experimental	M8	51	58	51	45	51	11
Experimental	M9	39	77	39	20	40	5
Experimental	M10	52	80	52	62	52	31
Experimental	M11	44	180	44	217	44	70

Abbreviations: FWD = functional walking distance; HRQoL = health-related quality of life; MWD = maximal walking distance; M = month; n = number.

Table 7: Overview of the median relative changes per time point for cluster 3.

Cluster 3							
Period	Timepoint (month)	FWD		MWD		HRQoL	
		Patients (n)	Median change (%)	Patients (n)	Median change (%)	Patients (n)	Median change (%)
Control	M0	97	75	97	60	112	25
Control	M1	88	100	88	90	105	10
Control	M2	90	61	90	47	97	13
Control	M3	121	93	122	54	128	17
Control	M4	111	133	111	109	110	16
Control	M5	93	100	93	100	104	25
Experimental	M6	72	89	73	78	73	11
Experimental	M7	57	83	57	65	57	25
Experimental	M8	51	74	51	91	51	16
Experimental	M9	39	201	39	164	40	22
Experimental	M10	52	115	52	106	52	33
Experimental	M11	44	150	44	106	44	15

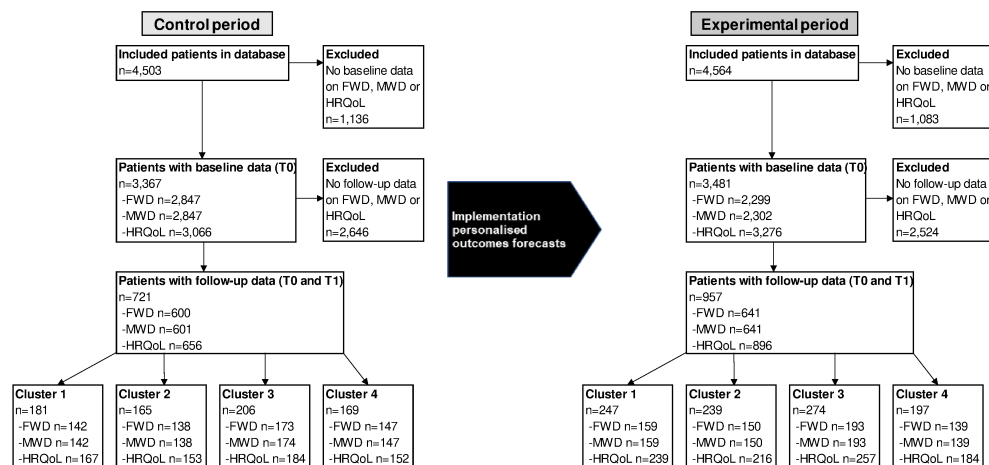
Abbreviations: FWD = functional walking distance; HRQoL = health-related quality of life; MWD = maximal walking distance; M = month; n = number.

Table 8: Overview of the median relative changes per time point for cluster 4.

Cluster 4							
Period	Timepoint (month)	FWD		MWD		HRQoL	
		Patients (n)	Median change (%)	Patients (n)	Median change (%)	Patients (n)	Median change (%)
Control	M0	97	98	97	71	112	16
Control	M1	88	128	88	109	105	39
Control	M2	90	65	90	79	97	36
Control	M3	121	81	122	51	128	24
Control	M4	111	69	111	67	110	29
Control	M5	93	167	93	121	104	21
Experimental	M6	72	99	73	64	73	8
Experimental	M7	57	156	57	152	57	10
Experimental	M8	51	70	51	57	51	20
Experimental	M9	39	148	39	125	40	22
Experimental	M10	52	79	52	89	52	31
Experimental	M11	44	270	44	127	44	29

Abbreviations: FWD = functional walking distance; HRQoL = health-related quality of life; MWD =

maximal walking distance; M = month; n = number.

Supplementary appendix 3: Details of sensitivity analysis for primary objective (RO1).*Figure 1: Flowchart of the inclusion process of data on patient outcomes gathered from electronic health records.*

Abbreviations: FWD=functional walking distance; HRQoL=health-related quality of life; MWD=maximal walking distance; n=number.

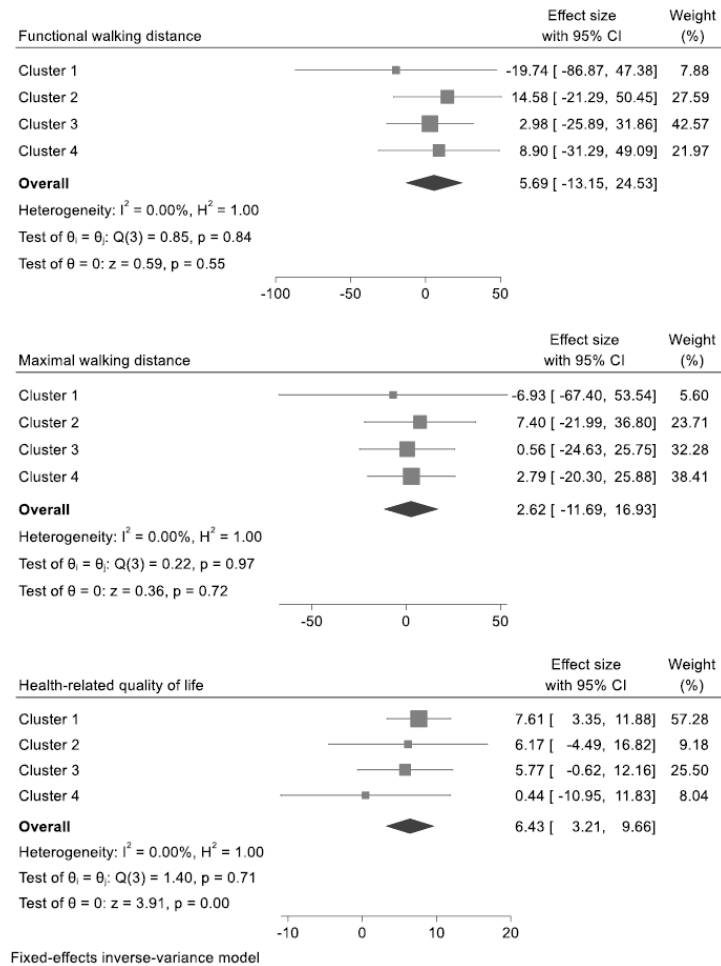
Table 1: Baseline characteristics of patients with baseline and follow-up data.

	Control period n=721	Experimental period n=957
Age in years	n=720	n=955
Mean (SD)	70 (8.93)	70 (9.19)
Sex	n=721	n=957
Male, n(%)	430 (60)	590 (62)
Female, n(%)	291 (40)	367 (38)
BMI (kg/m ²)	n=612	n=705
Mean (SD)	27 (4.69)	26 (4.45)
Smoking status	n=678	n=774
Current, n(%)	254 (38)*	268 (35)*
Former, n(%)	375 (55)*	421 (54)*
Never, n(%)	49 (7)*	85 (11)*
FWD (metres)	n=674	n=761
Median (IQR)	260 (157 – 432)	250 (150 – 420)
MWD (metres)	n=674	n=762
Median (IQR)	380 (235 – 620)	350 (218 – 563)
HRQoL (6 – 24)	n=691	n=927
Median (IQR)	16 (13 – 19)*	15 (12 – 18)*

Abbreviations: BMI = body mass index; FWD = functional walking distance; HRQoL = health-related quality of life; IQR = interquartile range; MWD = maximal walking distance; n = number; SD = standard deviation.

*. Significant difference (p < 0.05) between control- and experimental group.

Figure 2: Forest plots of differences before and after the implementation of the POFs on patient outcomes. Results are based on pooled meta-analyses of mean differences per cluster.



Supplementary appendix 4: Details of analyses for secondary objective (RO2).

Figure 1: Flowchart of the inclusion process of participants and observations.

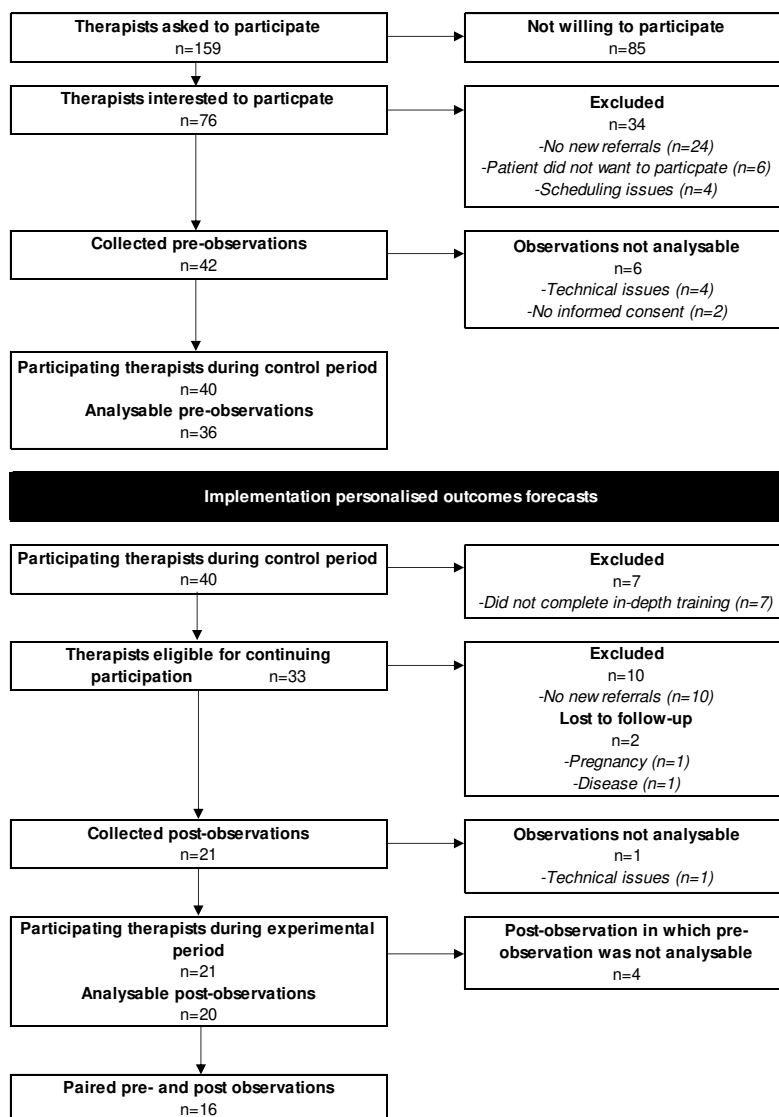


Figure 2: Visualisation of OPTION-5 total scores.

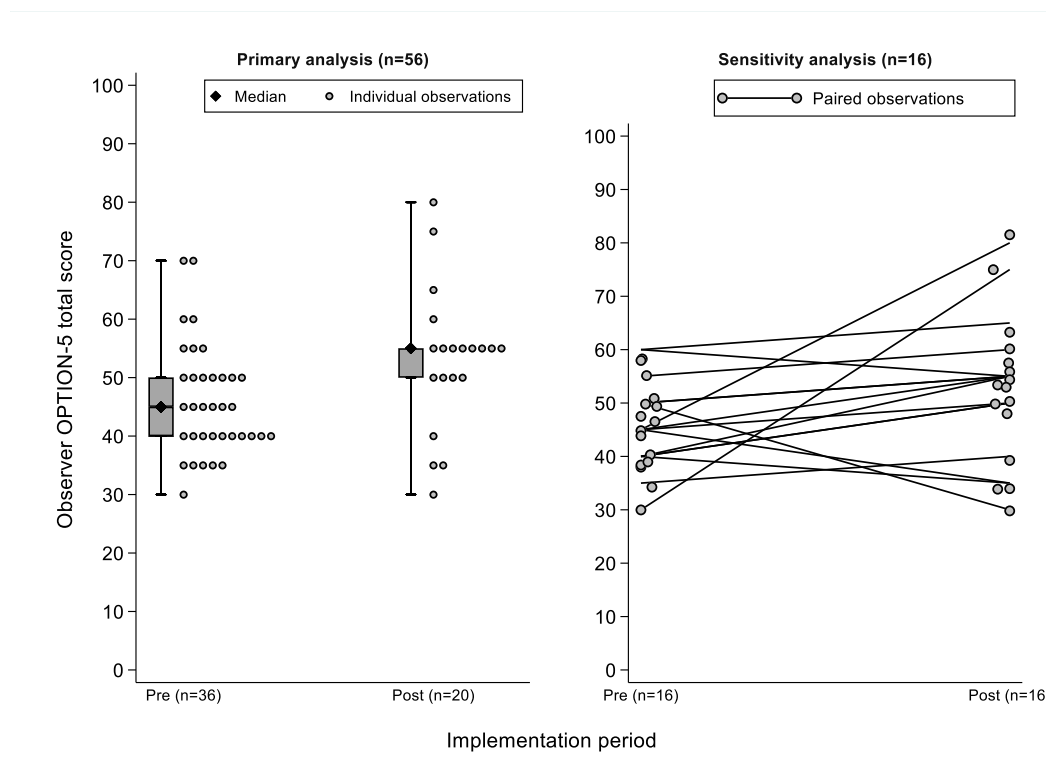


Table 1: Overview of OPTION-5 item scores for primary analysis.

	Score 0 (n (%))	Score 1 (n (%))	Score 2 (n (%))	Score 3 (n (%))	Score 4 (n (%))
Pre-observations					
(n=36)					
Item 1: Presenting options	0 (0)	4 (11)	26 (72)	5 (14)	1 (3)
Item 2: Forming partnership	0 (0)	31 (86)	3 (8)	2 (6)	0 (0)
Item 3: Informing about options	0 (0)	21 (58)	15 (42)	0 (0)	0 (0)
Item 4: Eliciting preferences	0 (0)	2 (6)	20 (55)	11 (31)	3 (8)
Item 5: Integrating preferences	0 (0)	13 (36)	9 (25)	13 (36)	1 (3)
Post-observations					
(n=20)					
Item 1: Presenting options	0 (0)	2 (10)	11 (55)	7 (35)	0 (0)
Item 2: Forming partnership	0 (0)	15 (75)	5 (25)	0 (0)	0 (0)
Item 3: Informing about options	1 (5)	12 (60)	4 (20)	2 (10)	1 (5)
Item 4: Eliciting preferences	0 (0)	3 (15)	3 (15)	11 (55)	3 (15)
Item 5: Integrating preferences	0 (0)	1 (5)	3 (15)	13 (65)	3 (15)

Table 2: Overview of OPTION-5 item scores for sensitivity analysis.

	Score 0 (n (%))	Score 1 (n (%))	Score 2 (n (%))	Score 3 (n (%))	Score 4 (n (%))
Pre-observations					
(n=16)					
Item 1: Presenting options	0 (0)	3 (19)	10 (63)	2 (13)	1 (6)
Item 2: Forming partnership	0 (0)	14 (88)	1 (6)	1 (6)	0 (0)
Item 3: Informing about options	0 (0)	7 (44)	9 (56)	0 (0)	0 (0)
Item 4: Eliciting preferences	0 (0)	1 (6)	11 (69)	4 (25)	0 (0)
Item 5: Integrating preferences	0 (0)	5 (31)	4 (25)	7 (44)	0 (0)
Post-observations					
(n=16)					
Item 1: Presenting options	0 (0)	1 (6)	8 (50)	7 (44)	0 (0)
Item 2: Forming partnership	0 (0)	12 (75)	4 (25)	0 (0)	0 (0)
Item 3: Informing about options	0 (0)	9 (56)	3 (19)	2 (13)	1 (6)
Item 4: Eliciting preferences	0 (0)	3 (19)	3 (19)	8 (50)	2 (13)
Item 5: Integrating preferences	0 (0)	1 (6)	3 (19)	10 (63)	2 (13)