

Appendix 4. Evolution of outcome measures during follow-up (by age group and baseline HbA1c control)

	Baseline	3 months	6 months	12 months	Differences 12 months-Baseline (95%CI)
HbA1c, mean (SD)					
Total	7.86 (1.36)	7.58 (1.27)	7.59 (1.16)	7.73 (1.06)	-0.13 (-0.42; 0.16)
HbA1c <7.5%	6.82 (0.36)	6.86 (0.55)	6.96 (0.6)	7.14 (0.57)	0.32 (0.15; 0.49)
HbA1c ≥7.5%	8.65 (1.31)	8.18 (1.38)	8.14 (1.25)	8.2 (1.12)	-0.45 (-0.84; -0.06)
<12 years	7.83 (1.17)	7.42 (0.93)	7.53 (0.96)	7.57 (0.8)	-0.26 (-0.59; 0.07)
≥12 years	7.87 (1.45)	7.66 (1.41)	7.63 (1.26)	7.82 (1.19)	-0.05 (-0.45; 0.35)
With self-reported severe hypoglycaemia, n (%)					
Total	49 (31.4)	-	-	55 (36.9)	5.5% (-12.7; 23.7)
HbA1c <7.5%	26 (38.2)	-	-	24 (35.3)	-2.9% (-29.6; 23.8)
HbA1c ≥7.5%	23 (26.1)	-	-	31 (38.3)	12.2% (-12.6; 37.0)
<12 years	22 (41.5)	-	-	19 (37.3)	-4.2% (-34.1; 25.7)
≥12 years	27 (26.2)	-	-	36 (36.7)	10.5% (-12.4; 33.4)
Nº. Self-reported severe hypoglycaemia, mean (SD)					
Total	1.72 (3.65)	-	-	1.77 (5.08)	0.05 (-0.98; 1.1)
HbA1c <7.5%	2.34 (4.13)	-	-	1.95 (5.69)	-0.39 (-2.2; 1.4)
HbA1c ≥7.5%	1.26 (3.19)	-	-	1.63 (4.58)	0.37 (-0.86; 1.6)
<12 years	2.12 (4.04)	-	-	1.06 (3.65)	-1.06 (-2.6; 0.48)
≥12 years	1.52 (3.43)	-	-	2.20 (5.76)	0.68 (-0.69; 2.1)
With severe hypoglycaemia in the electronic clinical record, n (%)					
Total	19 (12.2)	-	-	23 (15.4)	3.2% (-17.6; 24.0)
HbA1c <7.5%	6 (8.8)	-	-	6 (8.8)	0% (-32.0; 32.0)
HbA1c ≥7.5%	13 (14.8)	-	-	17 (21.0)	6.2% (-21.1; 33.5)
<12 years	9 (17.0)	-	-	6 (11.8)	-5.2% (-40.8; 30.4)
≥12 years	10 (9.7)	-	-	17 (17.4)	7.7% (-0.18; 0.33)
N.º Hypoglycaemia in the electronic clinical record prior to the study, mean (SD)					
Total	0.39 (1.68)	-	-	0.54 (1.58)	0.15 (-0.23; 0.53)
HbA1c <7.5%	0.13 (0.45)	-	-	0.25 (1.06)	0.12 (-0.16; 0.40)
HbA1c ≥7.5%	0.59 (2.18)	-	-	0.78 (1.88)	0.19 (-0.43; 0.81)
<12 years	0.34 (1.02)	-	-	0.61 (1.89)	0.27 (-0.32; 0.86)
≥12 years	0.42 (1.94)	-	-	0.5 (1.40)	0.08 (-0.39; 0.55)
Health-related quality of life (EQ-5D-Y)					
Mobility (no problems), n (%)					
Total	156 (100)	-	-	124 (100)	-
HbA1c <7.5%	68 (100)	-	-	54 (100)	-
HbA1c ≥7.5%	88 (100)	-	-	70 (100)	-
<12 years	53 (100)	-	-	47 (100)	-
≥12 years	103 (100)	-	-	77 (100)	-
Self-Care (no problems), n (%)					
Total	154 (98.7)	-	-	123 (99.2)	-
HbA1c <7.5%	67 (98.5)	-	-	54 (100)	-
HbA1c ≥7.5%	87 (98.9)	-	-	69 (98.6)	-
<12 years	51 (96.2)	-	-	47 (100)	-
≥12 years	103 (100)	-	-	76 (98.7)	-
Usual Activities (no problems), n (%)					
Total	154 (98.7)	-	-	122 (98.4)	-
HbA1c <7.5%	67 (98.5)	-	-	53 (98.1)	-
HbA1c ≥7.5%	87 (98.9)	-	-	69 (98.6)	-
<12 years	53 (100)	-	-	47 (100)	-
≥12 years	101 (98.1)	-	-	75 (97.4)	-
Pain or Discomfort (no pain), n (%)					

Total	144 (92.3)	-	-	118 (95.2)	-
HbA1c <7.5%	62 (91.2)	-	-	53 (98.1)	-
HbA1c ≥7.5%	82 (93.2)	-	-	65 (92.9)	-
<12 years	50 (94.3)	-	-	45 (95.7)	-
≥12 years	94 (91.3)	-	-	73 (94.8)	-
Pain or Discomfort (some pain), n (%)					
Total	12 (7.7)	-	-	6 (4.8)	-
HbA1c <7.5%	6 (8.8)	-	-	1 (1.9)	-
HbA1c ≥7.5%	6 (6.8)	-	-	5 (7.1)	-
<12 years	3 (5.7)	-	-	2 (4.3)	-
≥12 years	9 (8.7)	-	-	4 (5.2)	-
Anxiety/Depression (no problems), n (%)					
Total	137 (87.8)	-	-	112 (90.3)	-
HbA1c <7.5%	62 (91.2)	-	-	50 (92.6)	-
HbA1c ≥7.5%	75 (85.2)	-	-	62 (88.6)	-
<12 years	49 (92.5)	-	-	44 (93.6)	-
≥12 years	88 (85.4)	-	-	68 (88.3)	-
Anxiety/Depression (some problems), n (%)					
Total	16 (10.3)	-	-	10 (8.1)	-
HbA1c <7.5%	5 (7.4)	-	-	4 (7.4)	-
HbA1c ≥7.5%	11 (12.5)	-	-	6 (8.6)	-
<12 years	3 (5.7)	-	-	2 (4.3)	-
≥12 years	13 (12.6)	-	-	8 (10.4)	-
VAS, mean (SD)					
Total	87.63 (12.46)	-	-	84.17 (12.28)	-3.5 (-6.4; -0.53)
HbA1c <7.5%	88.79 (10.05)	-	-	87.92 (10.08)	0.29 (-3.9; 4.5)
HbA1c ≥7.5%	86.74 (14.04)	-	-	81.29 (16.29)	-7.5 (-11.7; -3.3)
<12 years	91.66 (9.72)	-	-	85.61 (14.97)	-6.1 (-11.0; -1.1)
≥12 years	85.56 (13.23)	-	-	83.27 (13.86)	-2.3 (-6.3; 1.7)
Knowledge of diabetes treatment (modified version of Mitchell questionnaire), mean (SD)					
Total	11.68 (2.13)	-	-	12.09 (1.94)	0.41 (-0.11; 0.93)
HbA1c <7.5%	12.38 (1.98)	-	-	12.92 (1.35)	0.54 (-0.11; 1.2)
HbA1c ≥7.5%	11.12 (2.08)	-	-	11.38 (2.08)	0.26 (-0.45; 0.97)
<12 years	11.87 (2.07)	-	-	11.9 (2.31)	0.03 (-0.90; 0.96)
≥12 years	11.59 (2.16)	-	-	12.21 (1.67)	0.62 (-0.001; 1.2)
Diabetes Treatment Satisfaction Questionnaire (DTSQ)					
Perceived hyperglycaemia, mean (SD)					
Total	3.53 (1.51)	-	-	3.32 (1.44)	-0.21 (-0.58; 0.16)
HbA1c <7.5%	2.94 (1.28)	-	-	2.88 (1.44)	-0.06 (-0.57; 0.45)
HbA1c ≥7.5%	4.01 (1.51)	-	-	3.71 (1.34)	-0.3 (-0.79; 0.19)
<12 years	3.62 (1.38)	-	-	3.44 (1.48)	-0.18 (-0.79; 0.43)
≥12 years	3.48 (1.57)	-	-	3.25 (1.42)	-0.23 (-0.71; 0.25)
Perceived hypoglycaemia, mean (SD)					
Total	2.22 (1.35)	-	-	2.04 (1.32)	-0.18 (-0.52; 0.16)
HbA1c <7.5%	2.3 (1.36)	-	-	2 (1.31)	-0.3 (-0.80; 0.20)
HbA1c ≥7.5%	2.15 (1.35)	-	-	2.07 (1.34)	-0.08 (-0.54; 0.38)
<12 years	2.19 (1.17)	-	-	2.05 (1.26)	-0.14 (-0.66; 0.38)
≥12 years	2.23 (1.44)	-	-	2.03 (1.36)	-0.2 (-0.64; 0.24)
Satisfaction with treatment, mean (SD)					
Total	25.89 (6.7)	-	-	29.82 (5.44)	3.93 (2.4; 5.5)
HbA1c <7.5%	26.58 (7.04)	-	-	29.78 (5.1)	3.2 (0.86; 5.5)
HbA1c ≥7.5%	25.33 (6.41)	-	-	29.86 (5.77)	4.53 (2.4; 6.6)
<12 years	25.79 (6.71)	-	-	29.61 (5.87)	3.82 (1.1; 6.5)
≥12 years	25.95 (6.73)	-	-	29.96 (5.21)	4.01 (2.1; 5.9)

	Baseline	3 months	6 months	12 months	Differences 12-3 months (95%CI)
Sensor usage time (%), mean (SD)					
Total	-	81.60 (20.78)	84.42 (19.47)	88.55 (18.48)	6.95 (2.3; 11.6)
HbA1c <7.5%	-	83.99 (21.93)	86.60 (17.2)	91.70 (15.09)	7.71 (0.90; 14.5)
HbA1c ≥7.5%	-	79.63 (19.69)	82.57 (21.16)	86.01 (20.57)	6.38 (-0.8; 12.8)
<12 years	-	87.59 (15.06)	90.60 (14.34)	94.51 (11.81)	6.92 (1.5; 12.3)
≥12 years	-	78.45 (22.67)	81.09 (21.07)	84.85 (20.84)	6.4 (-0.14; 12.9)
Number of scans per day, mean (SD)					
Total	-	9.16 (5.06)	9.33 (4.97)	9.84 (6.02)	0.68 (-0.64; 2.0)
HbA1c <7.5%	-	10.06 (5.11)	9.89 (5.07)	10.39 (5.45)	0.33 (-1.6; 2.2)
HbA1c ≥7.5%	-	8.41 (4.92)	8.85 (4.86)	9.39 (6.46)	0.98 (-0.87; 2.8)
<12 years	-	11.67 (5.64)	11.27 (4.5)	12.96 (6.45)	1.29 (-1.1; 3.7)
≥12 years	-	7.83 (4.17)	8.27 (4.91)	7.90 (4.85)	0.07 (-1.3; 1.4)
Number of sensors used, mean (SD)					
Total	-	6.40 (1.36)	7.50 (2.86)	14.74 (5.81)	8.34 (7.4; 9.3)
HbA1c <7.5%	-	6.32 (1.37)	6.86 (1.76)	13.35 (4.47)	7.03 (5.9; 8.2)
HbA1c ≥7.5%	-	6.46 (1.36)	8.05 (3.46)	15.86 (6.51)	9.4 (7.9; 10.9)
<12 years	-	6.63 (1.17)	6.90 (2.15)	14.73 (5.83)	8.1 (6.5; 7.8)
≥12 years	-	6.28 (1.44)	7.83 (3.15)	14.75 (5.83)	8.47 (7.3; 9.7)
SD = standard deviation; VAS = Visual Analogue Scale; HbA1c = Glycosylated Haemoglobin; CI = Confidence Interval.					