

Appendix 5. Multivariate Mixed Regression Model for Effectiveness Measures and Adherence

Variable	Self-reported severe hypoglycaemia events				Severe hypoglycaemic events in the clinical history				Visual analogue scale (EQ-5D-Y)						Knowledge of diabetes treatment		Diabetes Treatment Satisfaction Questionnaire						
	Patients with hypoglycaemia (Yes/No) Total sample (n=156)		Number of self-reported events Total sample (n=156)		Patients with hypoglycaemia (Yes/No) Total sample (n=156)		Number of self-reported events Total sample (n=156)		Total sample (n=156)		HbA1c <7.5% (n=68)		HbA1c ≥7.5% (n=88)		Total sample (n=156)		Perceived hyperglycaemia Total sample (n=156)		Perceived hypoglycaemia Total sample (n=156)		Satisfaction with treatment Total sample (n=156)		
	OR (95%CI)	P	β (95%CI)	P	OR (95%CI)	P	β (95%CI)	P	B (95%CI)	P	B (95%CI)	P	B (95%CI)	P	B (95%CI)	P	B (95%CI)	P	B (95%CI)	P	B (95%CI)	P	
Time																							
M12 (ref: M0)	0.82 (0.35; 1.96)	.659	-0.37 (-0.62; -0.11)	.004	1.47 (0.32; 6.77)	.617	0.77 (-0.06; 1.60)	.069	-1.40 (-4.97; 2.16)	.440	-1.33 (-4.17; 1.51)	.359	-6.03 (-9.66; -2.41)	.001	0.45 (-0.17; 1.08)	.154	-0.08 (-0.50; 0.34)	.721	-0.23 (-0.70; 0.24)	.331	3.11 (0.99; 5.23)	.004	
Duration of T1DM	1.01 (0.89; 1.15)	.850	-0.01 (-0.14; 0.12)	.922	0.97 (0.81; 1.18)	.806	-0.05 (-0.24; 0.14)	.587	-0.74 (-1.29; -0.19)	.008	-0.32 (-0.99; 0.35)	.348	-1.05 (-1.86; -0.24)	.011	0.01 (-0.08; 0.09)	.851	-0.003 (-0.06; 0.05)	.915	-0.005 (-0.07; 0.06)	.870	0.05 (-0.18; 0.29)	.650	
Presence of comorbidities	0.81 (0.33; 1.98)	.641	0.26 (-0.60; 1.12)	.556	0.81 (0.26; 2.50)	.710	0.27 (-0.83; 1.38)	.624	0.87 (-2.91; 4.64)	.652	2.42 (-1.78; 6.63)	.259	-1.04 (-6.98; 4.89)	.731	0.02 (-0.52; 0.57)	.930	-0.005 (-0.43; 0.42)	.980	0.02 (-0.36; 0.41)	.91	-0.52 (-2.15; 1.11)	.534	
Age group: ≥12 years (ref: <12 years)	0.56 (0.22; 1.42)	.221	-0.15 (-1.04; 0.75)	.745	1.32 (0.39; 4.44)	.651	0.32 (-0.87; 1.50)	.599	-3.11 (-6.99; 0.78)	.117	-3.84 (-8.61; 0.94)	.115	-2.82 (-8.49; 2.83)	.327	-0.09 (-0.67; 0.48)	.705	-0.05 (0.48; 0.38)	.819	-0.002 (-0.38; 0.37)	.99	-0.02 (-3.24; 0.76)	.980	
Baseline HbA1c group: ≥7.5% (ref: HbA1c <7.5%)	0.41 (0.15; 1.17)	.097	-0.57 (-1.40; 0.26)	.176	2.17 (0.53; 8.88)	.280	1.54 (0.31; 2.77)	.014	-1.93 (-5.98; 2.11)	.349					-1.27 (-1.89; -0.65)	<.001	1.06 (0.60; 1.52)	<.001	-0.12 (-0.57; 0.33)	.593	-1.24 (-1.34; 4.22)	.225	
Time*Baseline HbA1c Group (ref: M0 & HbA1c <7.5%)																							
M12 & HbA1c ≥7.5%	2.69 (0.81; 8.96)	.108	0.30 (-0.08; 0.68)	.117	2.01 (0.34; 11.68)	.437	-0.44 (-1.33; 0.45)	.333	-4.61 (-9.44; 0.21)	.061					-0.06 (-0.90; 0.78)	.892	-0.11 (-0.70; 0.48)	.703	0.16 (-0.46; 0.78)	.615	1.44 (-1.34; 4.22)	.310	
Intercept	0.78 (0.27; 2.23)	.641	-0.78 (-1.74; 0.17)	.107	0.03 (0.004; 0.19)	<.001	-4.32 (-5.97; -2.67)	<.001	90.50 (86.13; 94.87)	<.001	90.44 (85.92; 94.96)	<.001	88.92 (83.96; 93.88)	<.001	12.43 (11.78; 13.07)	<.001	2.98 (2.49; 3.46)	<.001	2.29 (1.84; 2.74)	<.001	26.80 (24.80; 28.81)	<.001	

CI = Confidence Interval; HbA1c = Glycosylated Haemoglobin; M = Months; OR = Odds Ratio; ref = reference.

Variable	Sensor usage time, %		Number of scans per day		Number of sensors used					
	Total sample (n=156)		Total sample (n=156)		Total sample (n=156)		HbA1c basal <7.5% (n=68)		HbA1c basal ≥7.5% (n=88)	
	B (95%CI)	P	B (95%CI)	P	B (95%CI)	P	B (95%CI)	P	B (95%CI)	P
Time										
M6 (ref: M3)	1.82 (-3.31; 6.98)	.487	-0.25 (-1.41; 0.92)	.678	0.49 (-0.58; 1.56)	.367	0.51 (-0.37; 1.39)	.255	1.59 (0.48; 2.70)	.005
M12 (ref: M3)	6.42 (1.12; 11.72)	.018	0.30 (-0.91; 1.51)	.625	6.96 (5.85; 8.06)	<.001	6.97 (6.06; 7.87)	<.001	9.37 (8.25; 10.50)	<.001
Duration of T1DM	-1.02 (-1.77; -0.27)	.008	-0.08 (-0.29; 0.13)	.468	-0.06 (-0.20; 0.07)	.363	-0.11 (-0.25; 0.04)	.152	-0.03 (-0.24; 0.18)	.804
Presence of comorbidities	0.53 (-4.61; 5.66)	.840	-0.69 (-2.14; 0.75)	.348	-0.35 (-1.27; 0.56)	.453	-0.25 (-1.16; 0.66)	.585	-0.39 (-1.92; 1.14)	.617
Age group: ≥12 years (ref: <12 years)	-7.93 (-13.19; -2.66)	.003	-3.92 (-5.40; -2.43)	<.001	0.39 (-0.55; 1.33)	.417	0.03 (-0.98; 1.05)	.952	0.69 (-0.77; 2.14)	.354
Baseline HbA1c group: ≥7.5% (ref: HbA1c <7.5%)	-4.59 (-10.71; 1.53)	.142	-1.92 (-3.52; -0.31)	.019	0.12 (-1.04; 1.29)	.836				
Time*Baseline HbA1c Group (ref: M3 & HbA1c <7.5%)										
M6 & HbA1c ≥7.5%	0.38 (-6.58; 7.33)	.915	0.43 (-1.14; 2.01)	.590	1.09 (-0.36; 2.54)	.141				
M12 & HbA1c ≥7.5%	-1.35 (-8.48; 5.77)	.710	0.35 (-1.28; 1.97)	.676	2.41 (0.93; 3.90)	.001				
Intercept	89.10 (82.9; 95.3)	<.001	13.0 (11.32; 14.68)	<.001	6.19 (5.04; 7.33)	<.001	6.39 (5.34; 7.44)	<.001	6.13 (4.77; 7.49)	<.001

CI = Confidence Interval; HbA1c = Glycosylated Haemoglobin; M = Months; ref = reference.