

SUPPLEMENTARY DATA

**Supplementary Table 1. Sensor Wear**

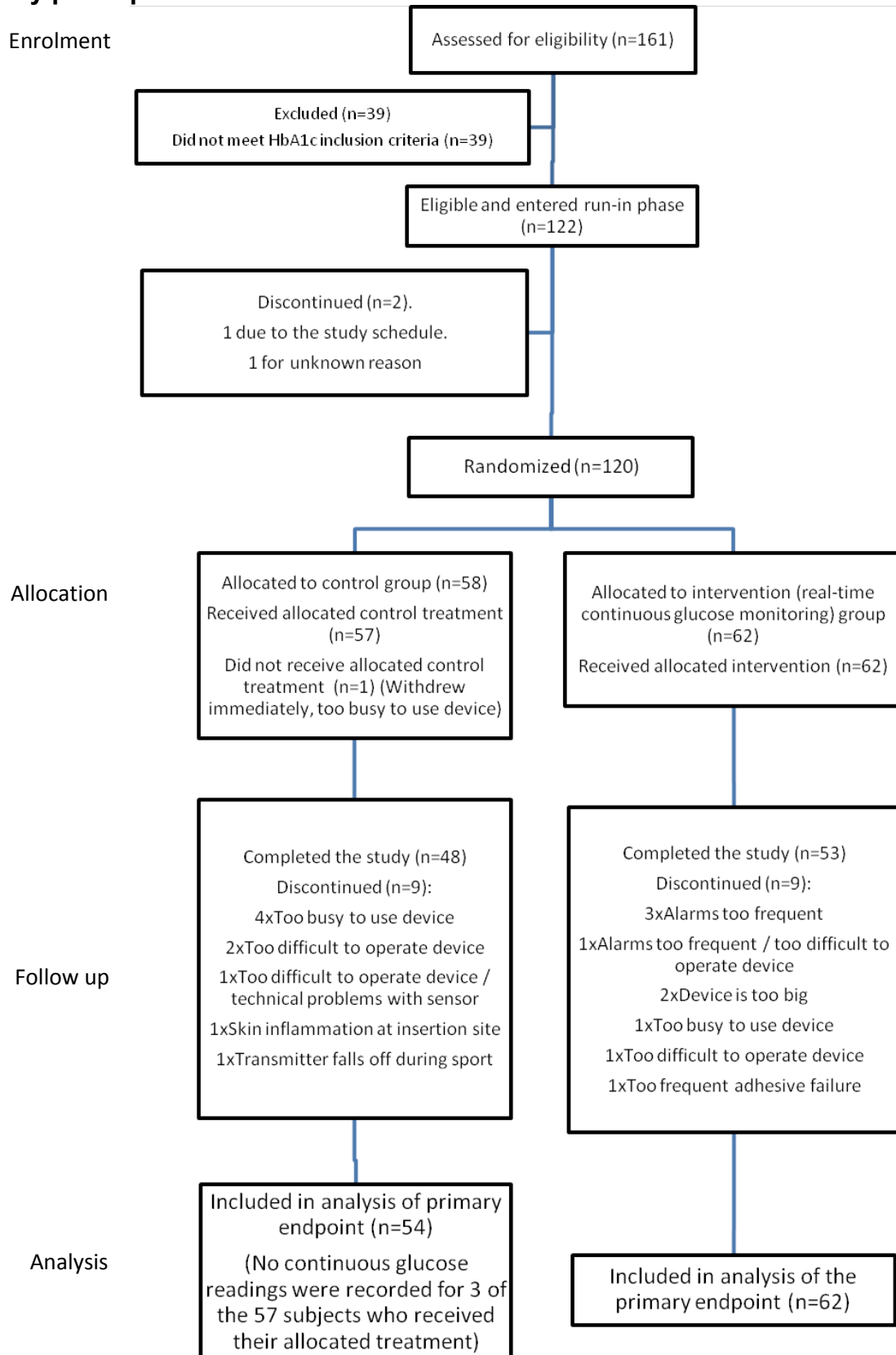
	Total Sensor Wear (Days)		Sensor Wear (Days / Week)	
	Control Group	Continuous Monitoring Group	Control Group	Continuous Monitoring Group
Mean	40	136	4.7	5.6
SD	23	52	2.2	1.4
Minimum	0	3	0.0	0.6
10 <sup>th</sup> Percentile	1	45	1.4	3.6
25 <sup>th</sup> Percentile	21	126	3.0	5.1
Median	47	157	5.6	6.1
75 <sup>th</sup> Percentile	61	172	6.6	6.6
90 <sup>th</sup> Percentile	66	179	7.1	6.8
Maximum	71	187	7.4	6.9
Number of subjects	58	62	57	62

Distributions of subject s total sensor wear and days per week of instructed sensor wear during the 6 month study period.

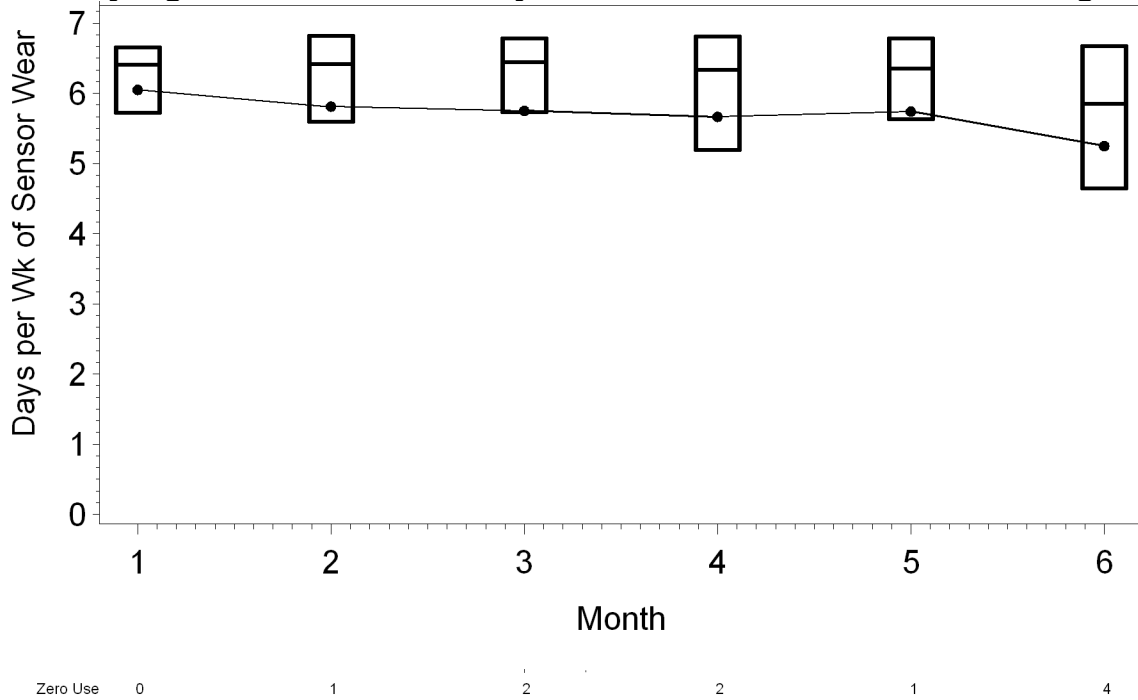
**Supplementary Table 2. Adverse Events**

Study Group	Is this a Serious Adverse Event?	Related to study device	Related to participation in the study	Description
Continuous monitoring	Yes	Not related	Not related	Mild diabetic ketoacidosis (DKA)
Continuous monitoring	Yes	Not related	Not related	Myasthenia gravis
Control	Yes	Not related	Not related	Prolonged cephalaea
Continuous monitoring	Yes	Not related	Not related	Laparoscopic repair of the spermatic vein

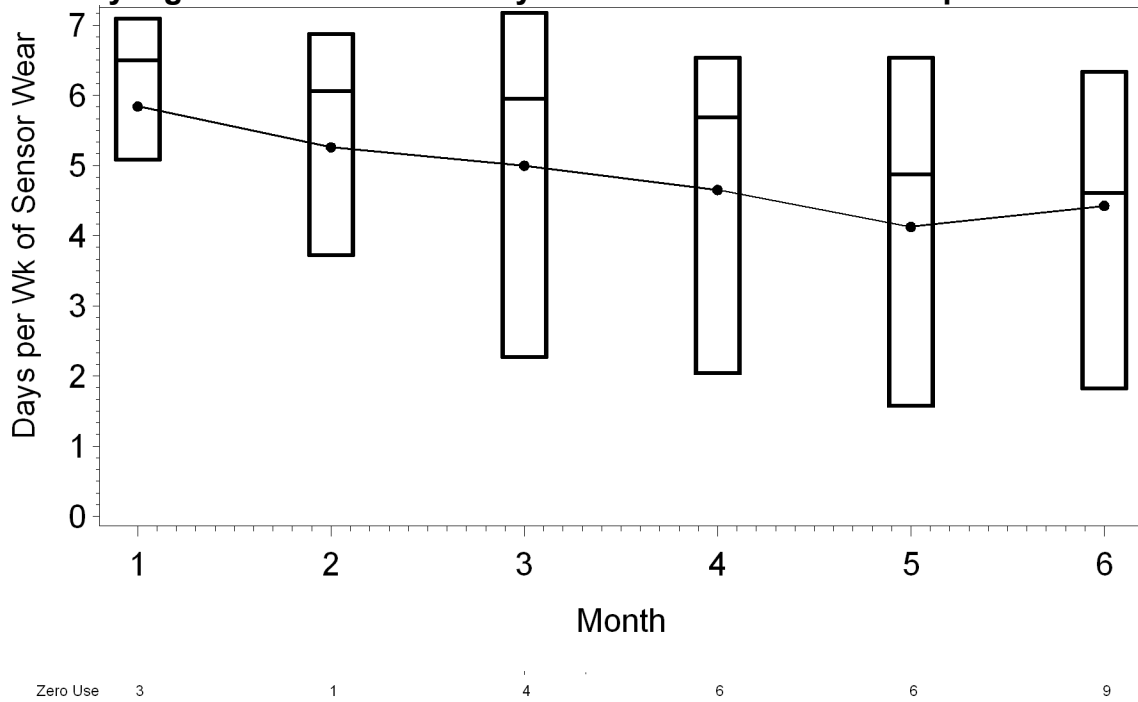
**Supplementary Figure 1. Screening, enrolment, random assignment and follow up of the study participants**



**Supplementary Figure 2a. Sensor wear by month in the Continuous monitoring Group**



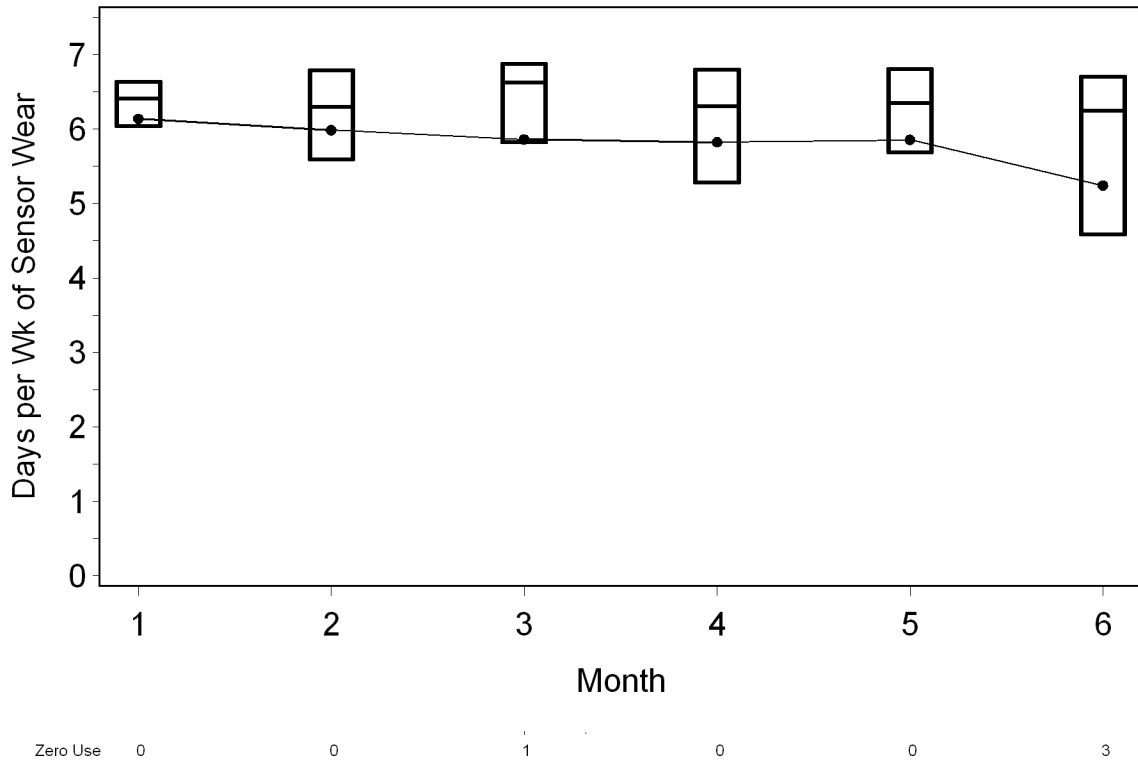
**Supplementary Figure 2b. Sensor wear by month in the Control Group**



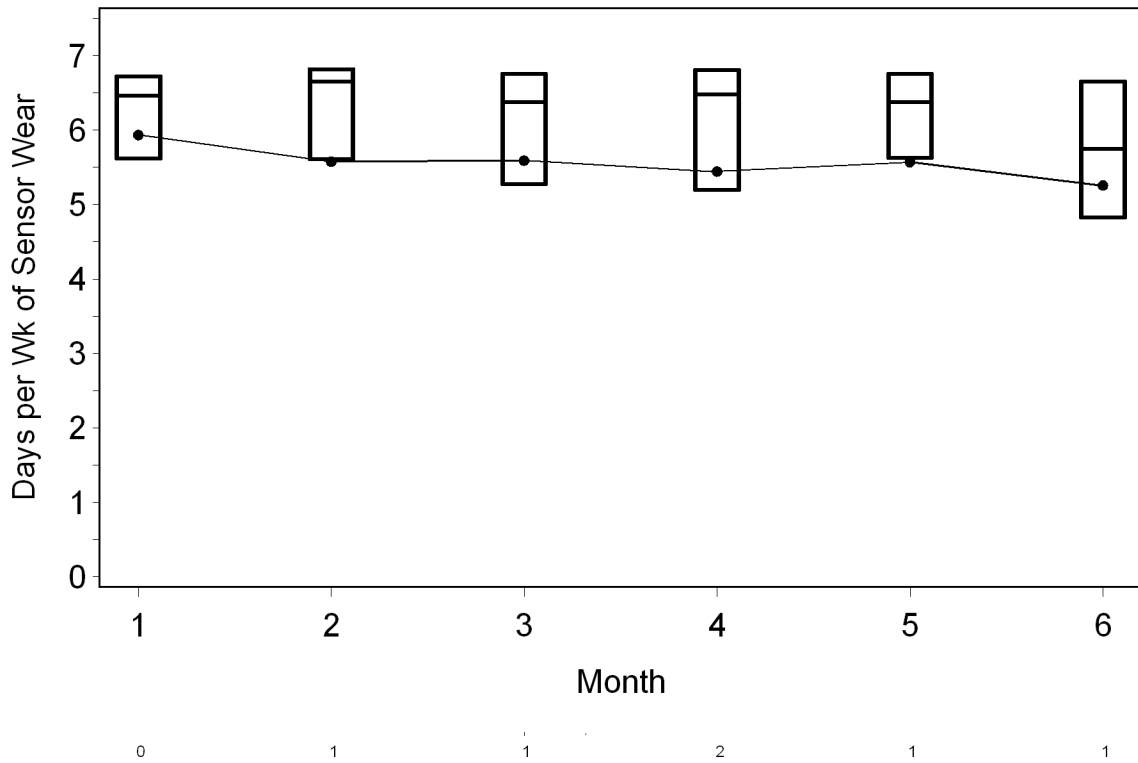
Hours per week of instructed sensor wear during the 6 month study period. Each box represents the inter-quartile range, with the horizontal line in the box representing the median and the dot representing the mean. Patients who withdrew from the study are included up to the month in which they withdrew.

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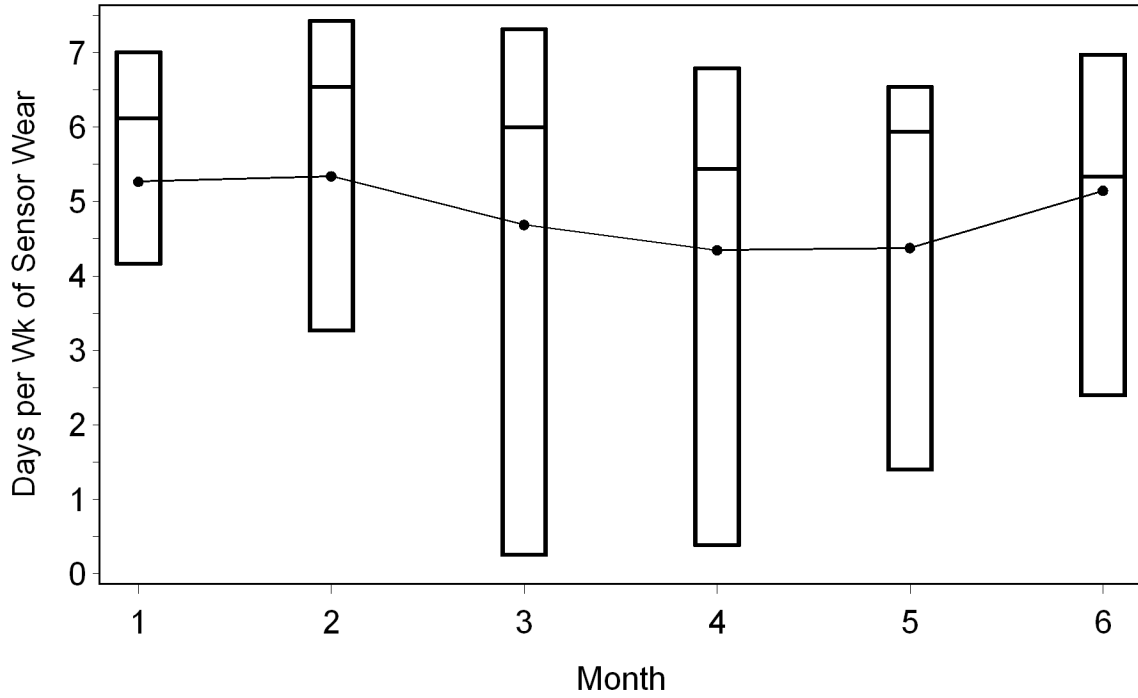
**Supplementary Figure 3a. Sensor wear by month in the Continuous monitoring Group - Adult**



**Supplementary Figure 3b. Sensor wear by month in the Continuous monitoring Group - Pediatric**

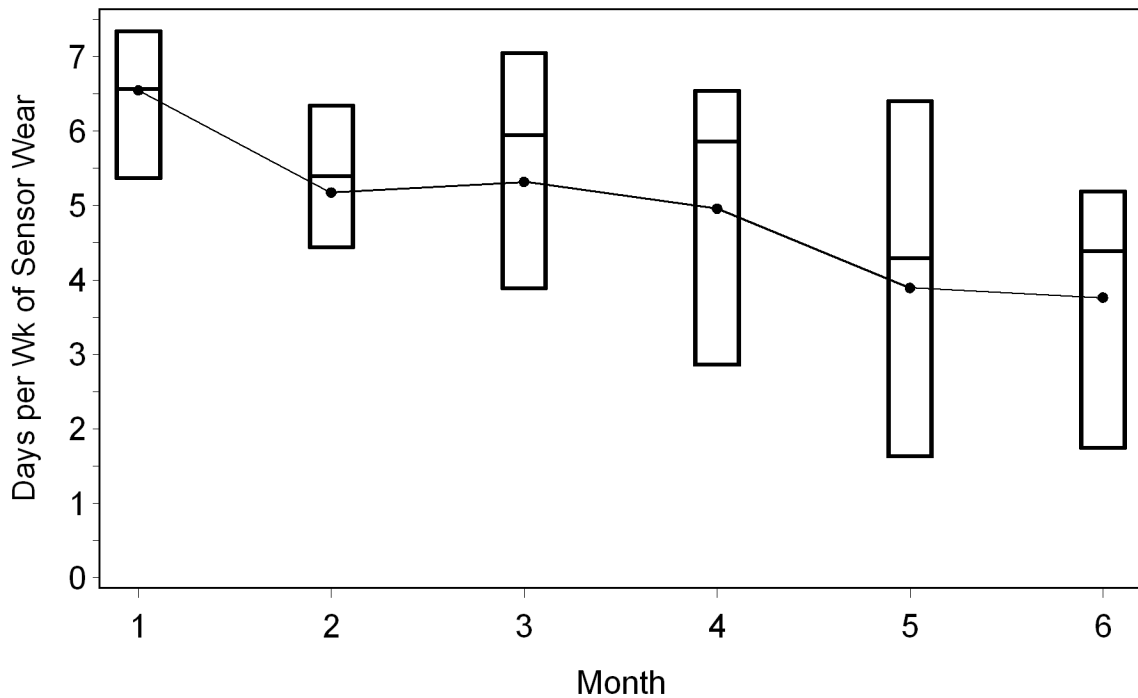


**Supplementary Figure 3c. Sensor wear by month in the Control Group - Adult**



Zero Use 3 1 4 5 3 5

**Supplementary Figure 3d. Sensor wear by month in the Control Group - Pediatric**



0 0 0 1 3 4

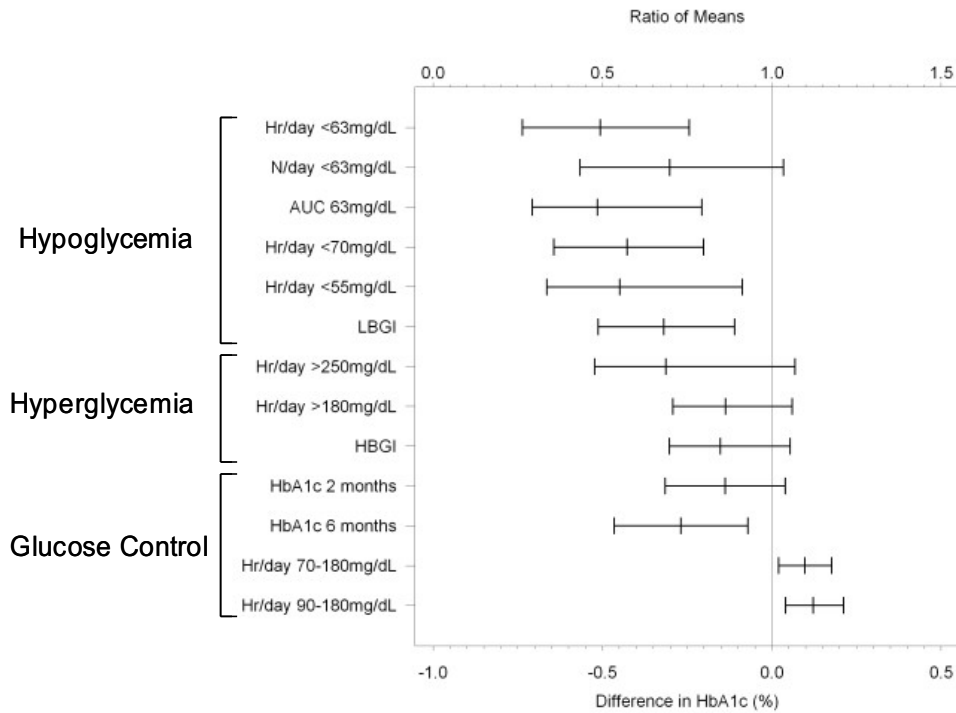
Hours per week of instructed sensor wear during the 6 month study period. Each box represents the inter-quartile range, with the horizontal line in the box representing the median

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and the dot representing the mean. Patients who withdrew from the study are included up to the month in which they withdrew.

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**Supplementary Figure 4. Confidence intervals for ratio of study group means (continuous monitoring / control) and difference in means for glycated hemoglobin A1c (HbA1c).**



95% confidence intervals for the ratio of the means (continuous monitoring / control) for glycemic outcomes. If the ratio of means is less than 1 then the glycemic outcome is reduced in the continuous monitoring group compared to the control group. For HbA1c the 95% confidence interval for the difference in adjusted mean in continuous monitoring group from control group is shown.