



# IMPACT OF THE FLASH GLUCOSE MONITORING SYSTEM ON CHILDREN WITH TYPE 1 DIABETES AFTER THE FIRST YEAR OF USING IN SYSTEMATIC WAY

C Freijo Martin, M L Bertholt Zuber, C Naranjo González  
Endocrinology Unit. University Hospital Marques de Valdecilla. Santander Spain

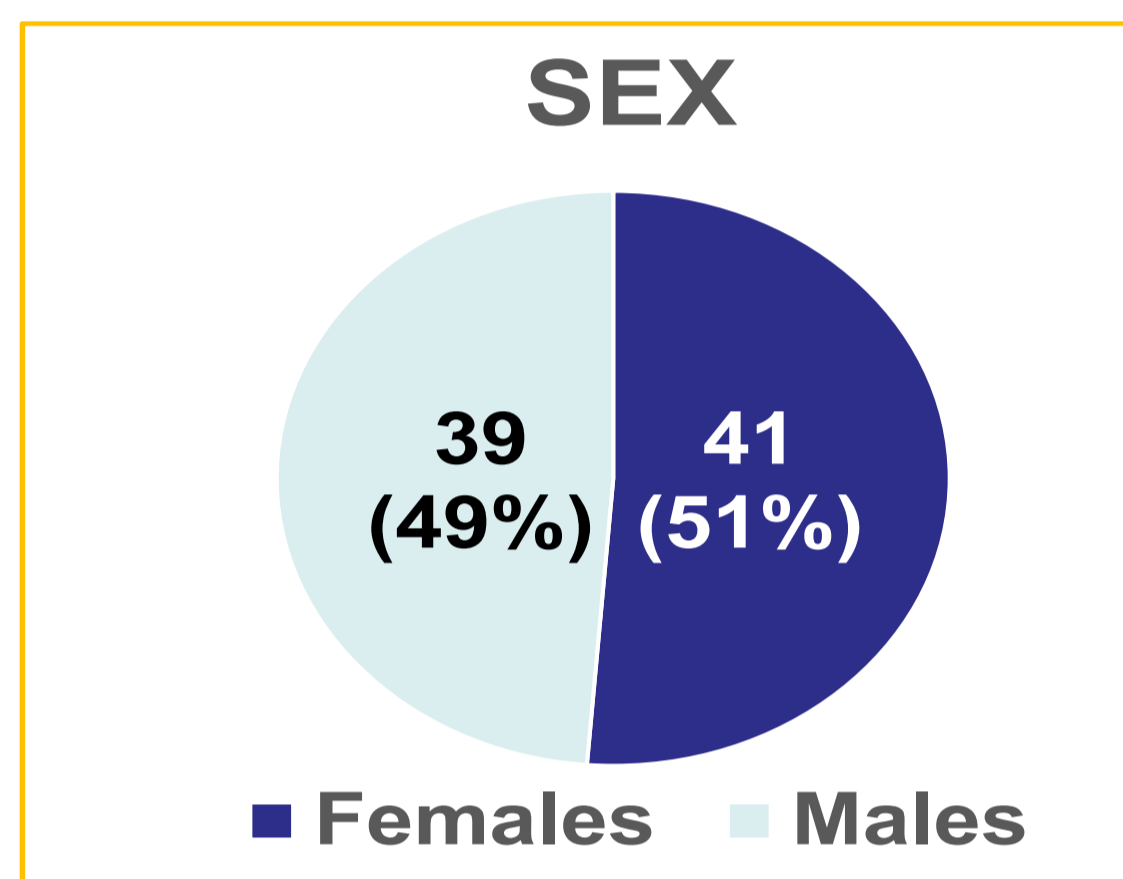
**INTRODUCCIÓN:** The Flash glucose monitoring System(FGMS) is a system of measurement of the interstitial glucose levels in real time, safe, effective and doesn't require calibration. Its low cost has allowed to be approved for all children under 18 years old by our Regional Health Service.

**OBJETIVE:** To assess the impact during this first year of use of the system in all children diagnosed with type 1 diabetes who previously used the classic method of capillary blood glucose. Everybody was trained in the use of this system..

**MATERIAL AND MÉTHODS:** 80 children and adolescents participated in the study, assessing age, sex, age at diagnosis, duration of diabetes, insulin treatment they received, age at the onset of FGMS, pre-onset average HbA1c, HbA1c at onset and 3-6-12 months, number of blood glucose for verifying pathological values(Hypo-Hyper), registration of insulin doses and problems they could have with FGMS. Statistical analysis was carried out by the SPSS v24system.

**RESULTS :**80 patients

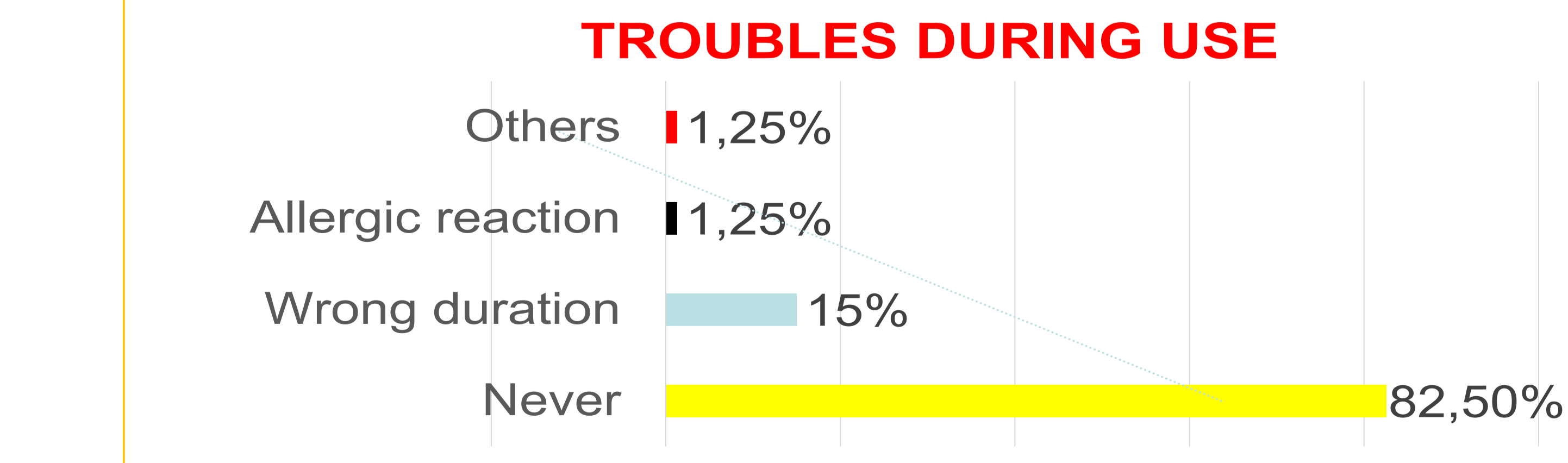
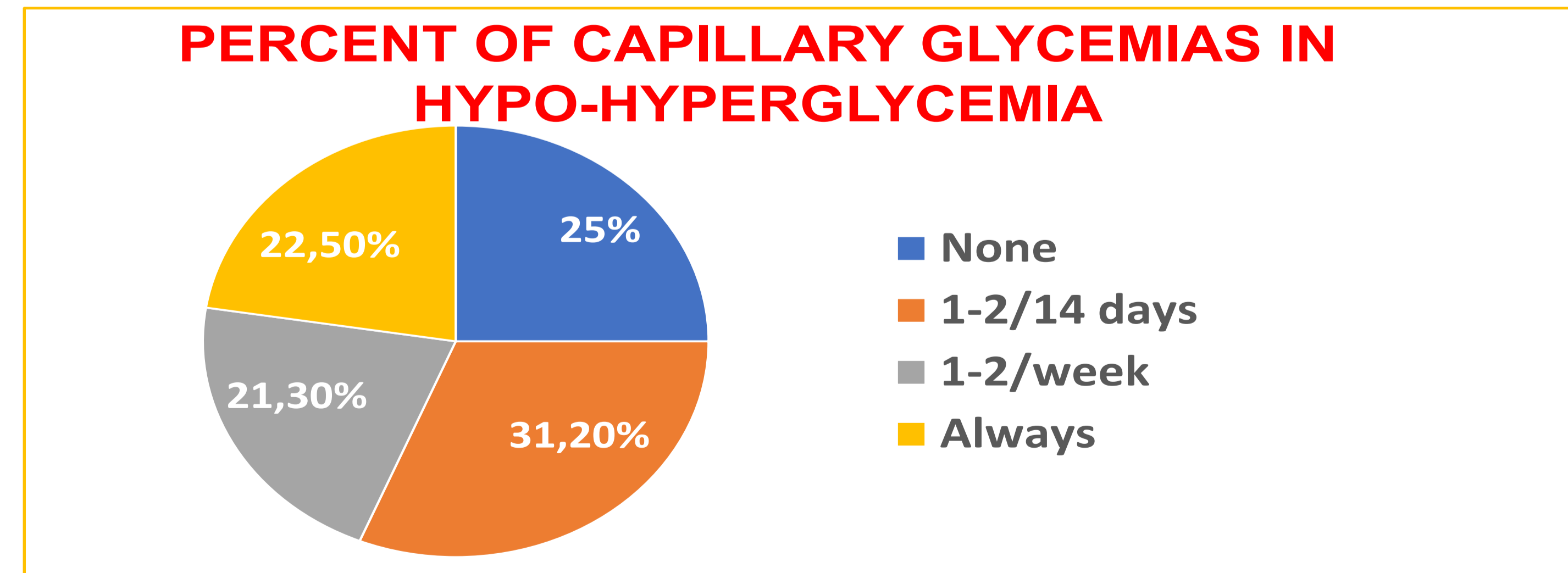
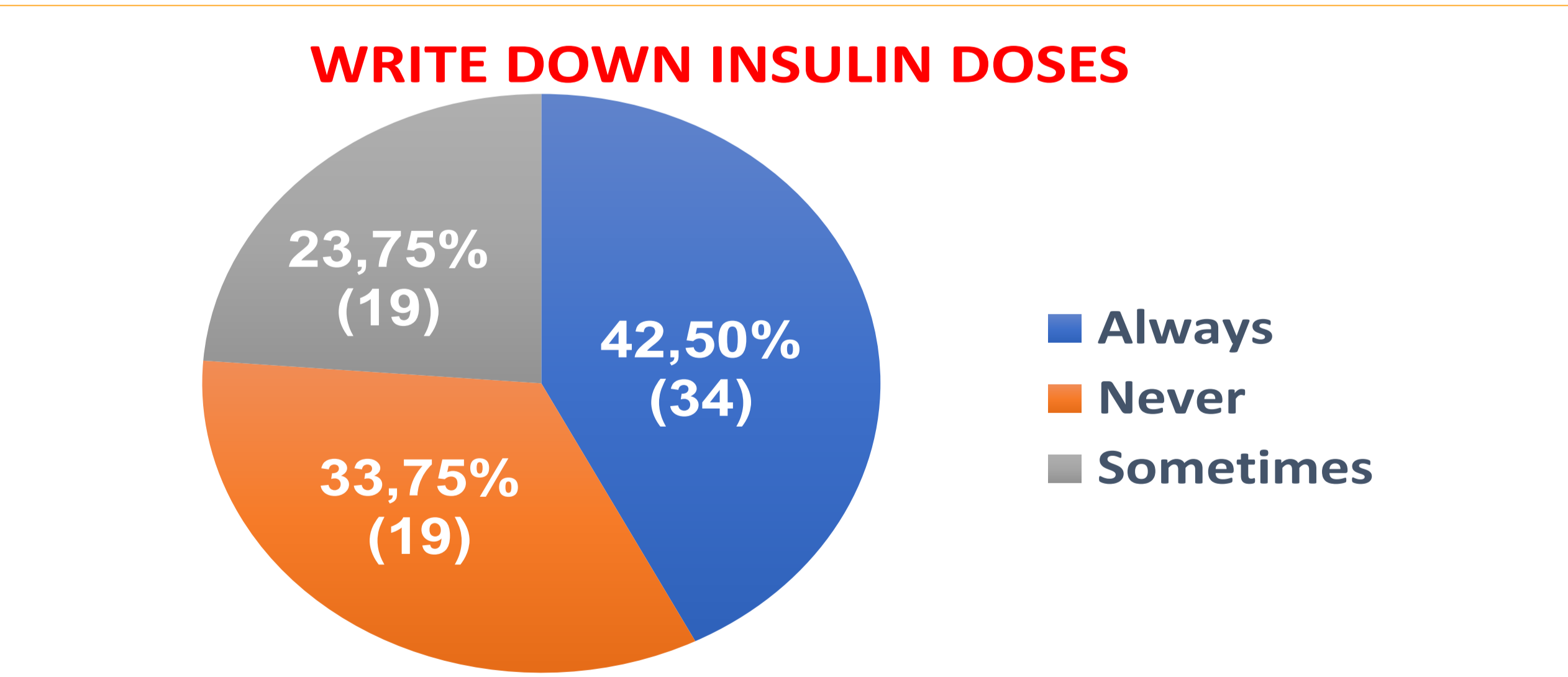
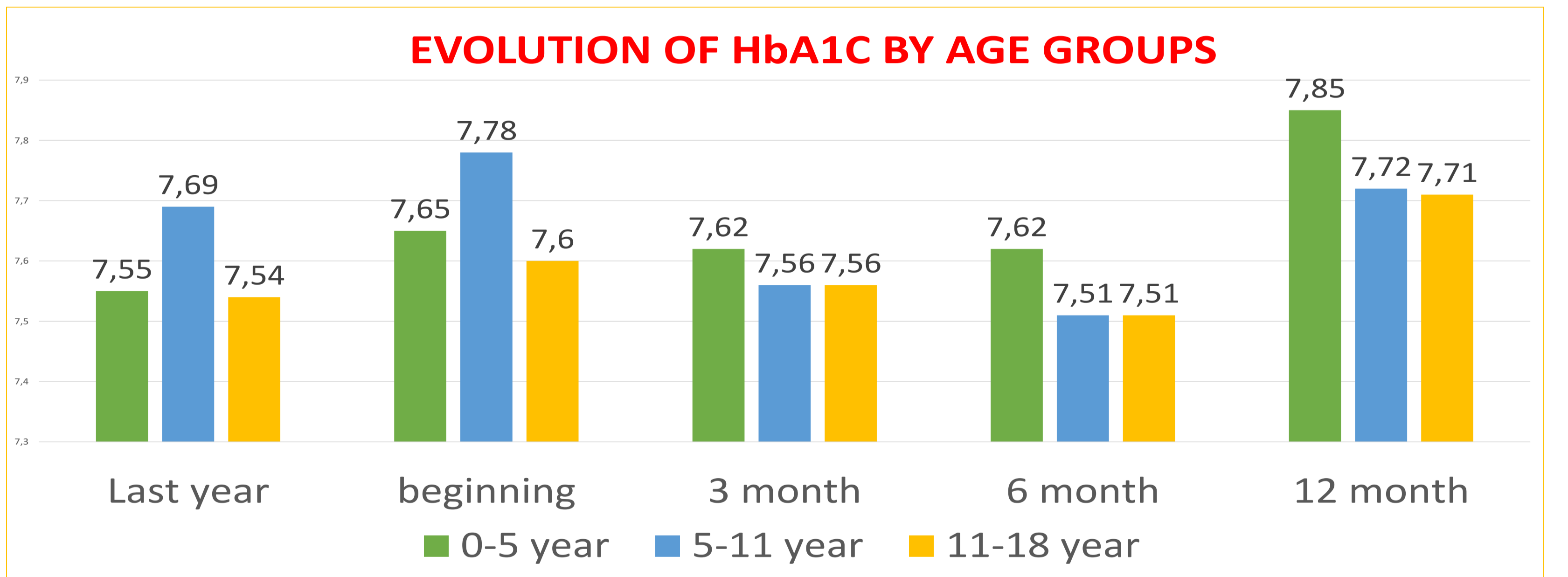
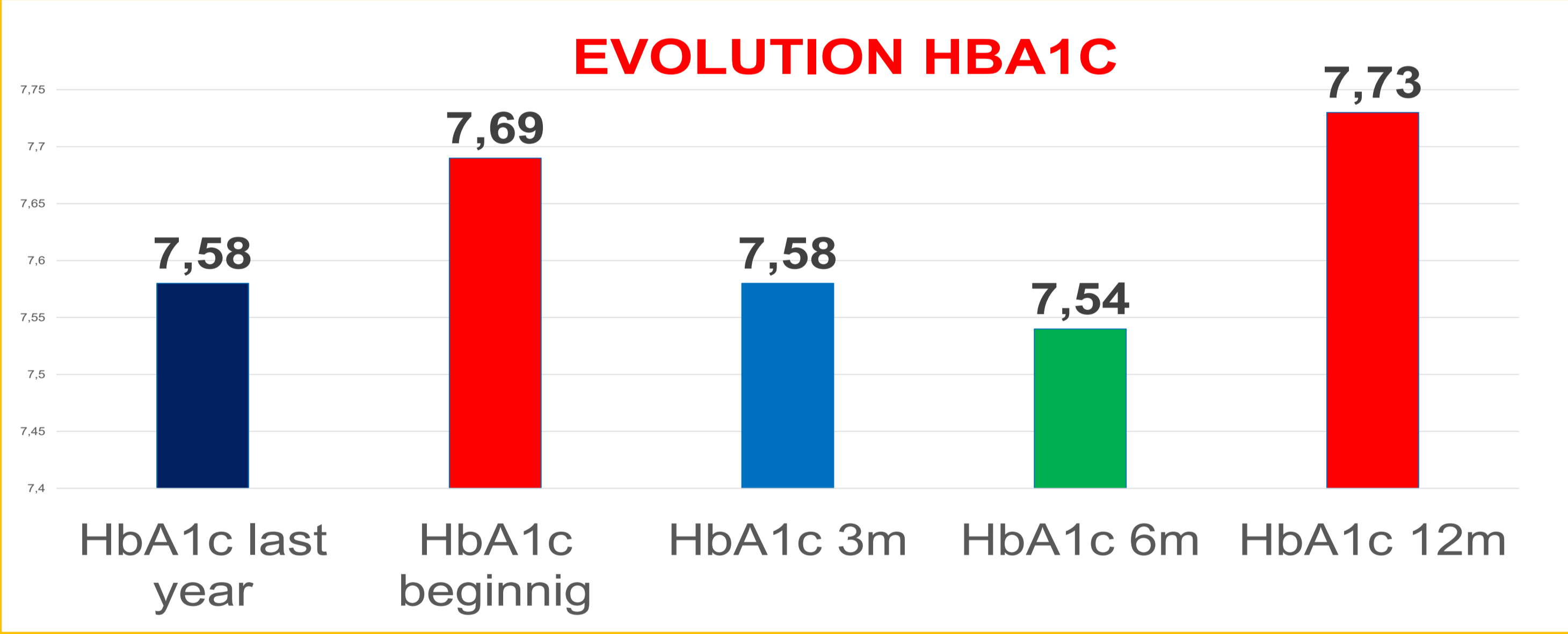
- Mean age 13,55±3,16 years (5.2-19)
- Duration of diabetes 6±3,99 years (1,4-13,9)
- Average age at debut 7,5±3,63 years (0,8-16)



Method	Count	Percentage
IMD	56	70%
INSUFLON* I-PORT*	13	16%
SCII	11	14%

Time Point	HbA1c (%)
LAST YEAR	7,58±0,75
THE BEGINNING	7,66±1
3 MONTHS	7,57±0,9
6 MONTHS	7,54±0,8
12 MONTHS	7,73±0,8

Age Group	Last Year	Beginning	3 months	6 months	12 months
0-5 YEARS (18)	7,55±0,7	7,65±0,7	7,62±0,6	7,62±0,6	7,85±0,8
5-11 YEARS (22)	7,69±0,7	7,78±0,9	7,56±0,6	7,51±0,6	7,72±0,5
11-18 YEARS (40)	7,54±0,7	7,6±1,1	7,56±1,2	7,51±0,9	7,71±1



**SATISFACCIÓN STATUS**  
Right 86,3% (69)  
Acceptable 13,7% (11)

**Conclusions:**The FGMS is a safe, effective and well-accepted method for the diabetic patient and the family, improving the quality of life of both, however the impact on the improvement of HbA1c levels was only observed in the first months because they got used to the comfort of the method and forgot blood glucose control highly recommended in extreme situations and therefore the results did not improve as we expected.