

# EVALUATION AND UTILITY OF A NOVEL GLUCOSE MONITORING SYSTEM IN INDIAN ADULTS WITH DIABETES (EASE)



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Discipline Yet Ease

## Background

- Flash glucose monitoring is a novel glucose sensing technique that estimates interstitial glucose levels for up to 14 days and does not require any calibration
- The FreeStyle Libre Pro (TM) flash glucose monitoring (FGM) system was introduced in India in 2015 with a unique communication and storage facility
- Disposable sensor measures and stores glucose data only available when the reader held by the physician is flashed over the sensor

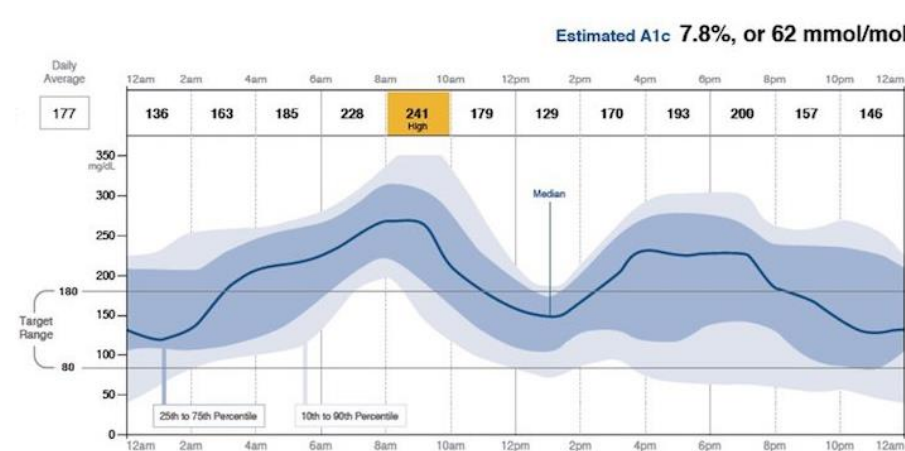
## Methods

- The FreeStyle Libre Pro (TM) sensor was utilised in 112 patients for 14 days
- We did a real world evaluation from the registry database from July 2015 till October 2016
- Statistical analysis was done using Wilcoxon signed rank test and Mann-Whitney test
- 26 non evaluable data sets and patients were excluded from the analysis

## Results

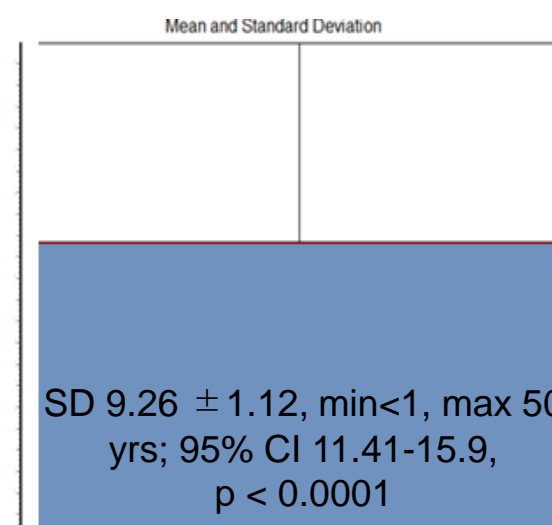
- The glycemic variability was evaluated in 86 patients.
- Mean duration of diabetes 13.66 years (Fig 2), Mean age was 57.61 years (Fig 3)
- HbA1c reductions before (mean  $8.5 \pm 2.2$ , min 5.1, max 15; 95% CI 7.96-9.07) and after 3 months (mean  $7.8 \pm 1.7$ , min 5, max 16; 95% CI 7.41-8.25) were numerically important (-0.68), but did not achieve statistical significance ( $p=0.1365$ , NS) (Fig 4)
- Comparative reductions in HbA1c in patient group  $<60$  &  $>60$  yrs did not achieve statistical significance ( $p=0.7898$ , NS)
- 16 patients had all four components of change with drug time changes, drug choice changes, dose changes, diet modification

**Fig 1. Representative Glucose Pattern Insights with Breakfast Glycemic Spikes**



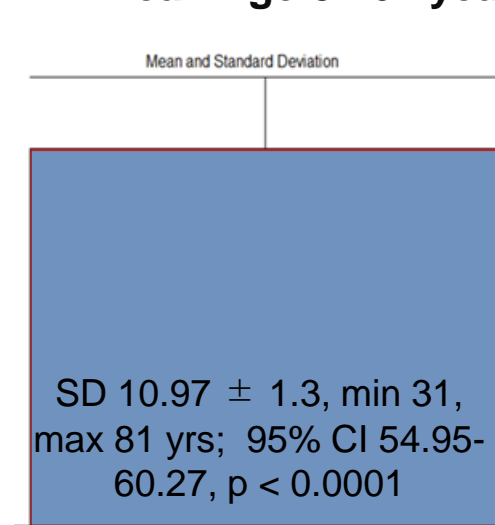
**Fig 2.**

Mean Duration of Diabetes 13.66 years

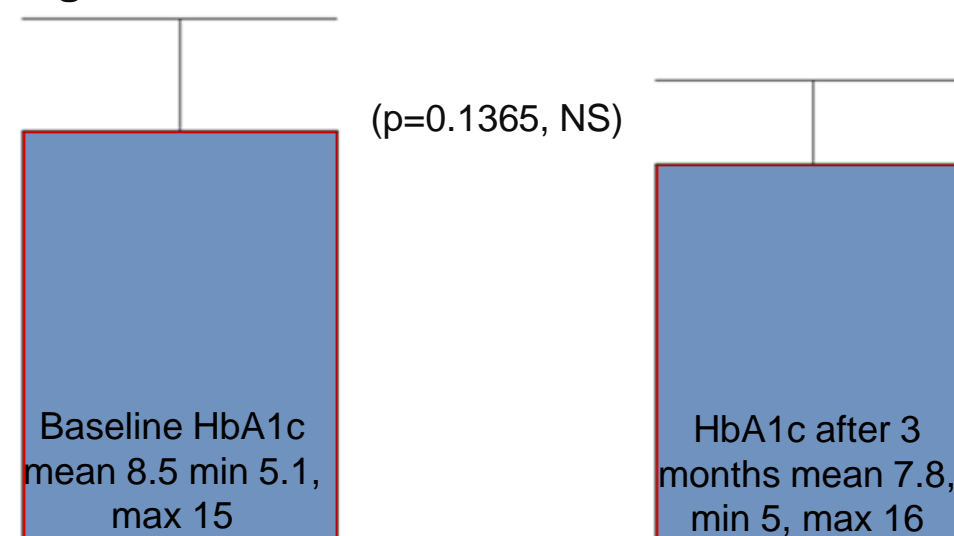


**Fig 3.**

Mean Age 57.61 years



**Fig 4. Reduction in HbA1c after 3 months was -0.68**



**Table 1.**

**Therapeutic Modulation in Patients with FreeStyle Libre Pro(TM)**

No. of patients with the corresponding therapeutic modulation	No of pts. For 'drug time' changes exclusively (n=25)	No of pts. For 'drug choice' changes exclusively (n=39)	No of pts. For 'dose changes' exclusively (n=51)	No of pts. With 'diet modifications' exclusively (n=71)
16	✓	✓	✓	✓
23	✓	✓	✓	-
37	✓	✓	-	-

## Conclusions

- High glycemic load was commonly observed even after 2 hours of the first meal which reflects the typical Indian pattern of glycemic overload
- FreeStyle Libre Pro (TM) is a unique tool to achieve a better glycemic control with more accurate real time assessment of the glycemic variability which has enabled a better therapeutic decision making
- The appropriate intervention to modulate the post breakfast glycemic spikes has been an important contributor for the effective management of the glycemic spikes
- The utility of the novel FreeStyle Libre Pro (TM) translates into a physician led and patient enabled empowerment tool through the visual snapshots
- This helps physicians customise the therapy for the patients, to sensitively adapt to the prescribed regimen

## Bibliography

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