FreeStyle Libre Improves HbA1c in People Receiving GLP-1 Therapy for Type 2 Diabetes

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Background

Both Glucagon-Like Peptide-1 Receptor Agonists (GLP-1)[1] and continuous glucose monitors (CGM)[2] provide glycemic benefits for type 2 diabetes (T2D). However, it is unknown if adding CGM to GLP-1 therapy further improves HbA1c.

Objective

In a real-world analysis, evaluate changes in HbA1c after acquisition of FreeStyle Libre (FSL) in adults with T2D on prior GLP-1 therapy.

Methods

Data Source: Optum's de-identified Market Clarity Data, a linked electronic health records-claims database (2017-2022) based in the United States.

Inclusion Criteria:

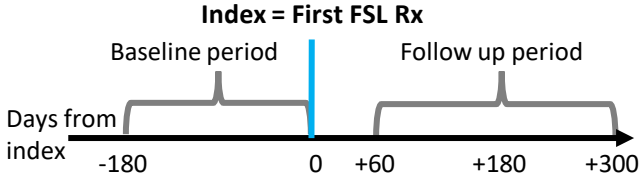
- FSL CGM acquisition
- T2D diagnosis and baseline HbA1c ≥ 8%
- 18+ years of age
- 180 days of continuous Rx and medical coverage prior to FSL acquisition
- At least one GLP-1 acquisition within 180 days before FSL

Exclusion Criteria:

- History of non-FSL CGM
- Gestational or type 1 diabetes

[1]Sibony RW, et al. Drug Therapies for Diabetes. Int J Mol Sci. 2023;24(24):17147. [2]Seidu S, et al. Efficacy and Safety of Continuous Glucose Monitoring and Intermittently Scanned Continuous Glucose Monitoring in Patients With Type 2 Diabetes: A Systematic Review and Meta-analysis of Interventional Evidence. Diabetes Care. 2024;47(1):169-179.

HbA1c Measurements:



Baseline HbA1c: value within baseline period closest to and including day 0

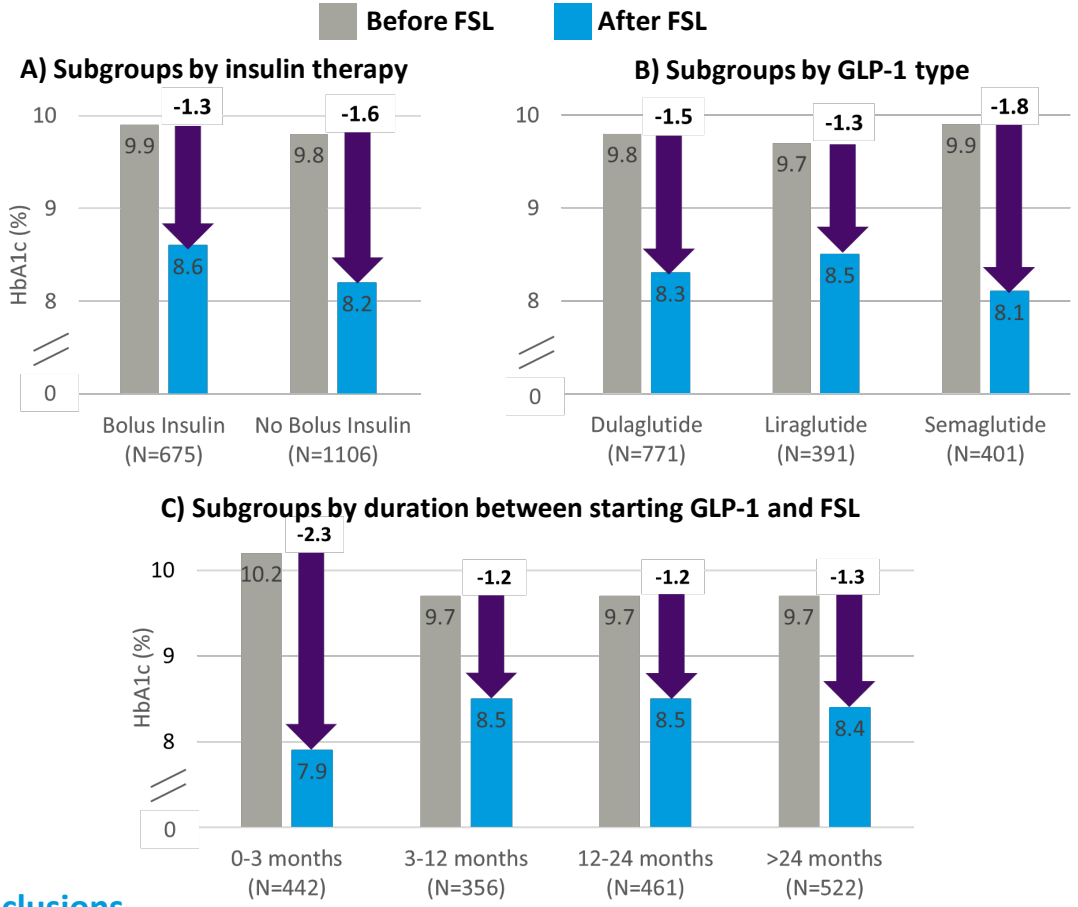
Follow up HbA1c: value within follow up period closest to +180 days

Results

Study Cohort: 1781 adults in the United States

Baseline Characteristics	
Age (years)	55 ± 10
Male	930 (52%)
Race	
African American	286 (16%)
Asian	35 (2%)
Caucasian	1279 (72%)
Other/unknown	181 (10%)
Insulin use	
Bolus insulin (with or without basal insulin)	675 (38%)
Basal insulin only	563 (32%)
No insulin	543 (30%)
GLP-1 use	
Dulaglutide	771 (43%)
Liraglutide	391 (22%)
Semaglutide	401 (23%)
Other GLP-1	218 (12%)
Baseline HbA1c (%)	9.8 ± 1.5
Median time from 1st GLP-1 to FreeStyle Libre (days)	422 Inter-quartile range: 91-786

Change in HbA1c: After FSL acquisition, average HbA1c decreased from 9.8 ± 1.5% to 8.3 ± 1.6% (**paired change of -1.5 ± 2.0%**, P<0.001). Significant improvements in HbA1c (P<0.001) were also observed in subgroups based on (A) insulin therapy, (B) GLP-1 type, and (C) duration between starting GLP-1 and FSL.



Conclusions

In a large, real-world study of adults with T2D, those on prior GLP-1 therapy experienced significant, additional HbA1c improvements after acquiring FSL, irrespective of GLP-1 duration, GLP-1 type, or insulin therapy type. These findings support use of FSL in adults with T2D treated with GLP-1.

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