

FreeStyle Libre use associated with faster time to glycemic target in people with diabetes not treated with insulin

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Disclosures

JS: Advisor/Consultant-Abbott, Bayer, Boehringer Ingelheim, Insulet, NovoNordisk, Sanofi. Research Support: Abbott, Breakthrough TiD

NV: Employee of Abbott Diabetes Care

SM: Employee of Abbott Diabetes Care

EW: Advisor, Consultant, Speaker Abbott Diabetes Care, Bayer, Boehringer Ingelheim, Lilly, Sanofi

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Background/Objective

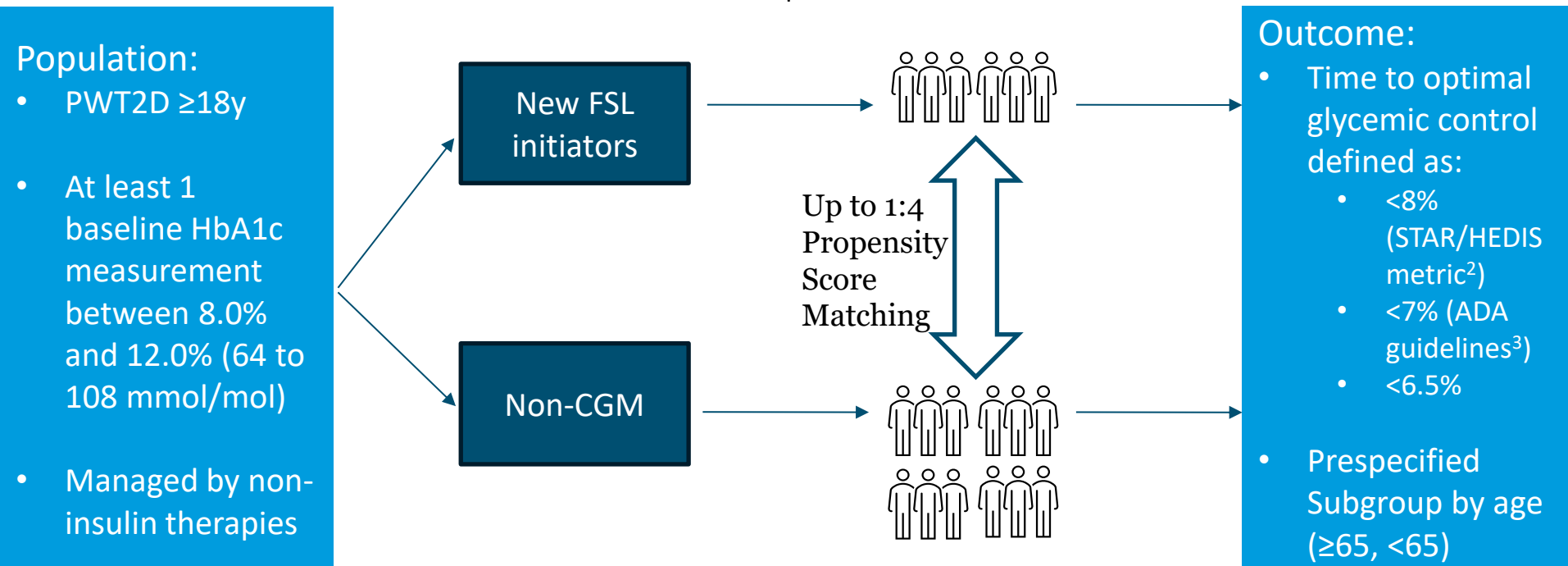
- Many people with type 2 diabetes (T2D) not treated with insulin do not achieve adequate glycemic control.¹
- Timely glycemic control reduces the risk of diabetes complications.²
- This study evaluated whether initiating FreeStyle Libre (FSL) was associated with faster achievement of A1C targets (6.5%, 7%, and 8%) than no continuous glucose monitoring (CGM) in NIT2D using Truveta EHR data.

1. Data on file

2. King P. *Br J Clin Pharmacol*. 1999;48(5):643-648. doi:10.1046/j.1365-2125.1999.00092.x

Study design -- Target trial emulation¹ (ITT framework)

PATIENTS INDEXED JANUARY 2017 – JUNE 2024 | 12-MONTH FOLLOW-UP THROUGH JUNE 2025



1. Hernán MA. JAMA.2022;328(24):2446–2447. doi:10.1001/jama.2022.21383

2. NCQA HEDIS MY 2024 Volume 2 Technical Specifications

3. American Diabetes Association Professional Practice Committee. Diabetes Care 2025;48(1 Suppl 1):S181-S206. doi:10.2337/dc25-S009

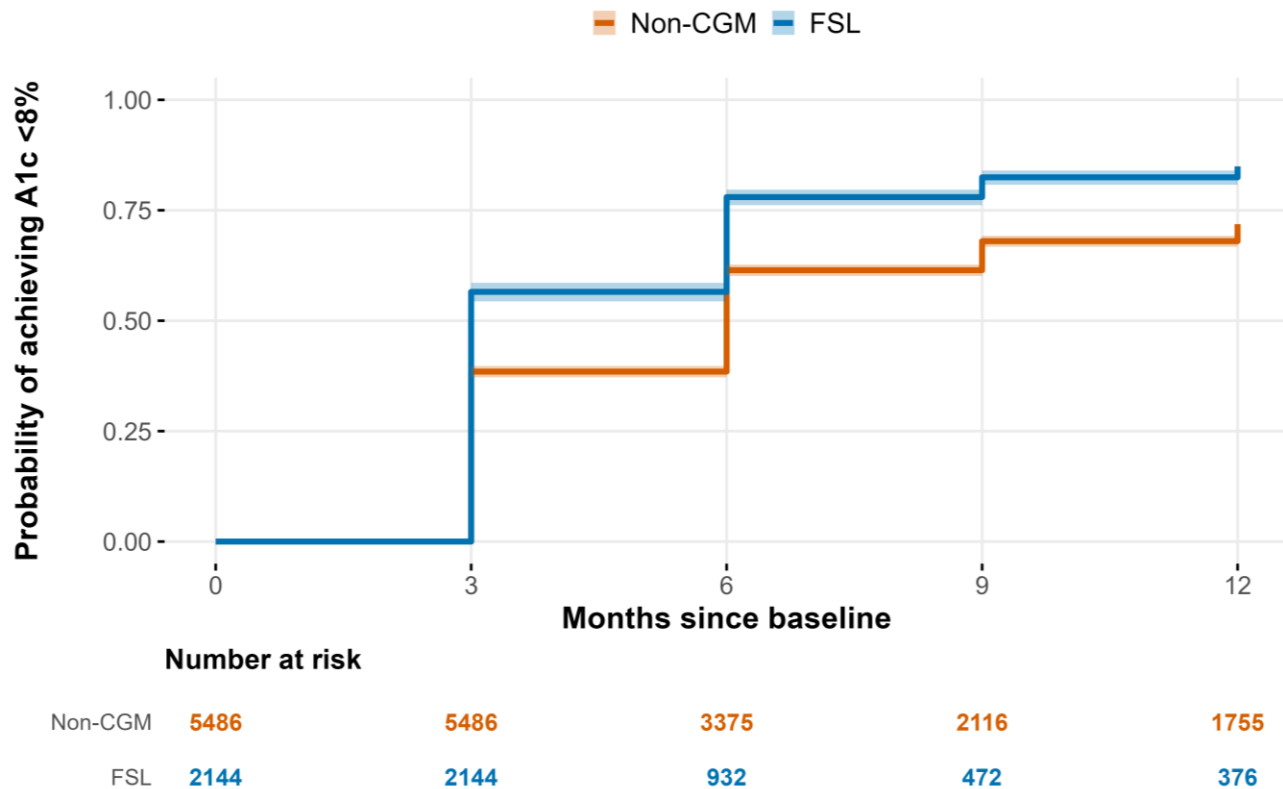
Results: Groups well matched after PSM*

	Before PSM			After PSM		
	Non-CGM (N=6,693)	FSL (N=2,165)	SMD	Non-CGM (N=5,486)	FSL (N=2,144)	SMD
Age, mean (SD)	60.0 (12.6)	55.8 (12.2)	0.4	56.0 (12.6)	56.0 (12.1)	<0.1
Baseline A1c, mean (SD)	9.0 (1.0)	9.5 (1.1)	0.4	9.4 (1.13)	9.4 (1.1)	<0.1
Hypertension (%)	4,817 (72.0)	1,388 (64.1)	0.1	3,542 (64.6)	1,384 (64.6)	<0.1
CVD (%)	2,035 (30.4)	673 (31.1)	<0.1	1,684 (30.7)	664 (31.0)	<0.1
CKD (%)	639 (9.5)	163 (7.5)	<0.1	417 (7.6)	163 (7.6)	<0.1
Obesity/Overweight BMI ≥30 (%)	2,727 (40.7)	980 (45.3)	<0.1	2,473 (45.1)	968 (45.1)	<0.1
GLP-1 (%)	1,989 (29.7)	965 (44.6)	0.1	2,417 (44.1)	948 (44.2)	<0.1
Sulfonylurea (%)	3,012 (45.0)	817 (37.7)	0.1	2,086 (38.0)	812 (37.9)	<0.1
SGLT2 (%)	2,126 (31.8)	729 (33.7)	<0.1	1,858 (33.9)	721 (33.6)	<0.1

*Covariates in the propensity score model included age, sociodemographic factors, comorbidities, non-insulin medications, HbA1c, and other prespecified baseline characteristics. Covariate balance was evaluated using SMD, with SMD <0.10 considered well balanced. A caliper of 0.10 was applied during matching.

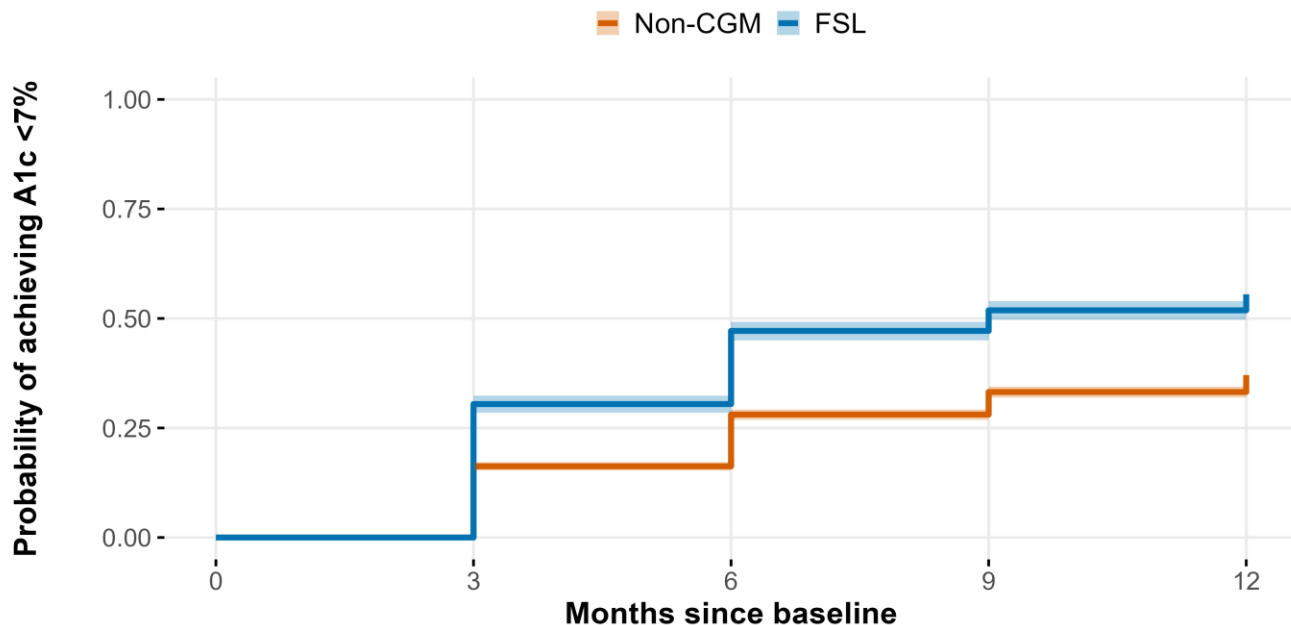
Results: Faster Achievement of Glycemic Goal with FSL

A1c <8% — HR: 1.18 (1.12–1.25), p<0.001



Results: Faster Achievement of Glycemic Goal with FSL

A1c <7% — HR: 1.14 (1.06–1.22), p<0.001

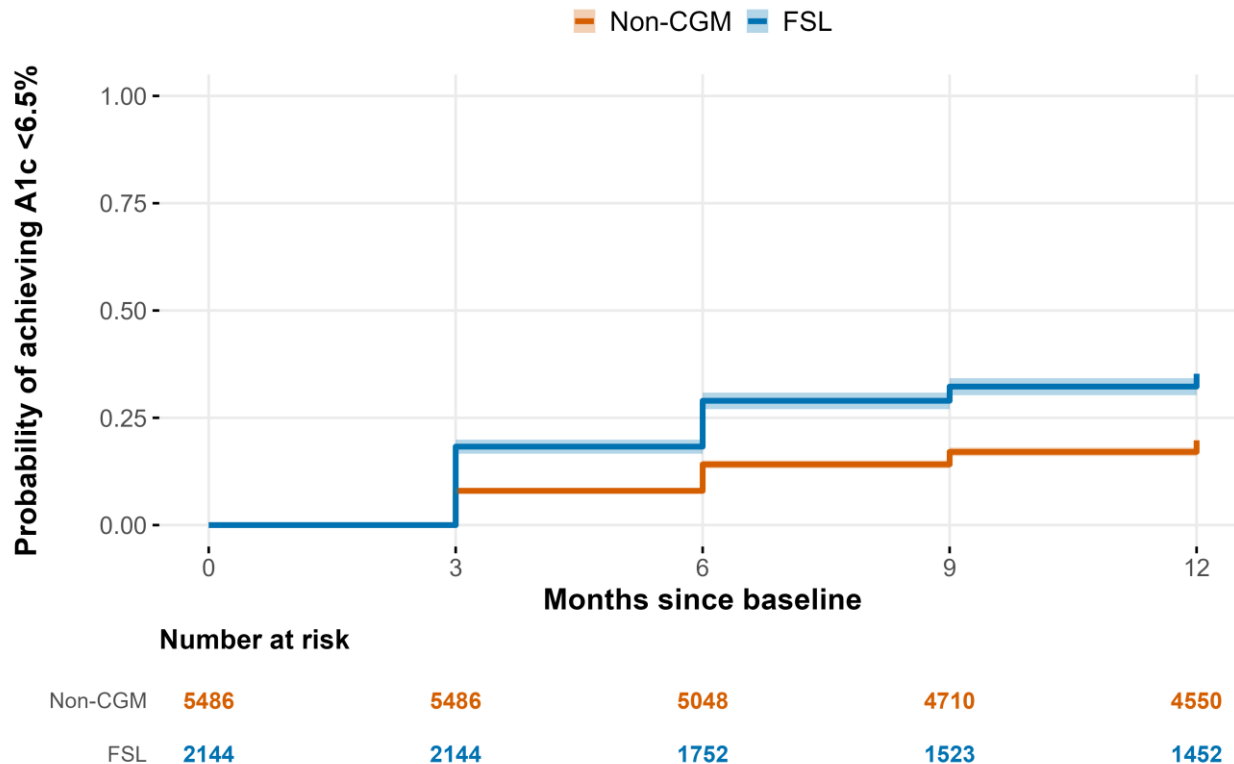


Number at risk

Non-CGM	5486	5486	4594	3947	3664
FSL	2144	2144	1491	1133	1032

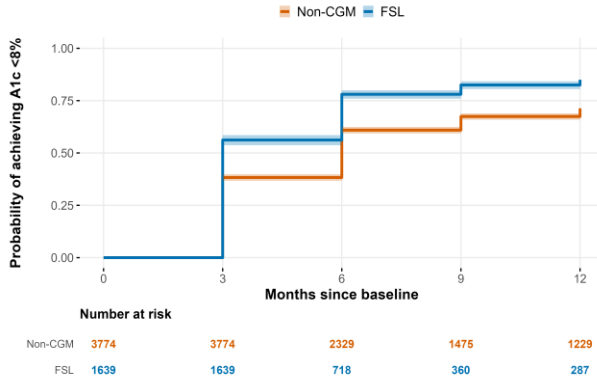
Results: Faster Achievement of Glycemic Goal with FSL

A1c <6.5% — HR: 1.16 (1.05–1.27), p=0.002

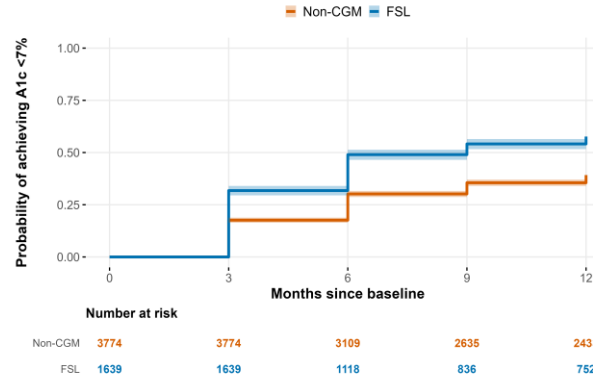


Subgroup results: <65 years

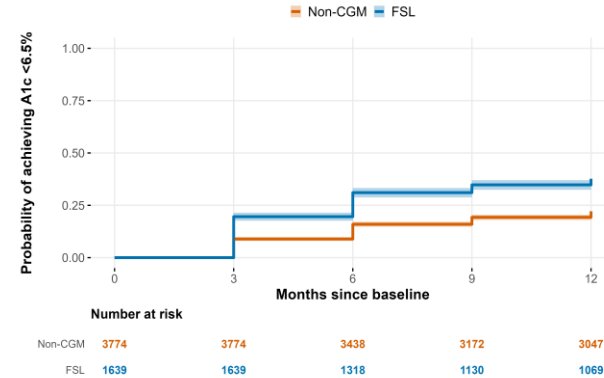
A1c <8% — HR: 1.19 (1.11–1.27), p<0.001



A1c <7% — HR: 1.16 (1.07–1.27), p<0.001



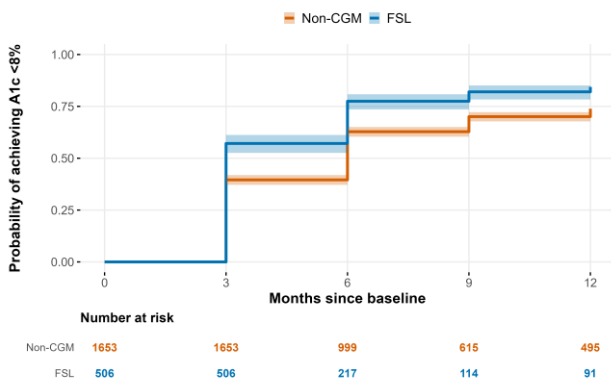
A1c <6.5% — HR: 1.15 (1.03–1.28), p=0.014



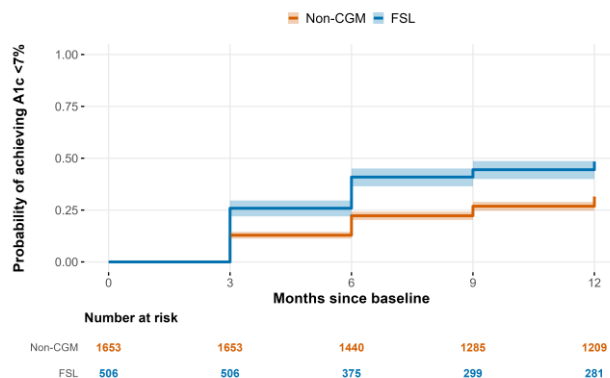
Among patients under 65, FSL was associated significantly faster achievement of glycemic targets across all three thresholds.

Subgroup results: ≥ 65 years

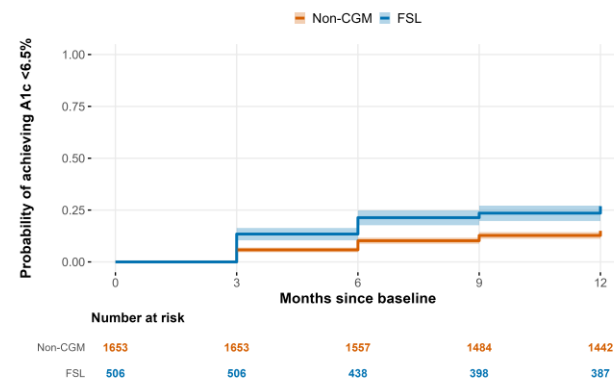
A1c <8% — HR: 1.19 (1.06–1.33), p=0.002



A1c <7% — HR: 1.11 (0.95–1.30), p=0.197



A1c <6.5% — HR: 1.13 (0.91–1.41), p=0.265



- Among patients 65 and older, FSL was associated with significantly faster achievement of A1c <8%.
- Similar trends were observed for <7% and <6.5%, but did not reach statistical significance

Limitations

- Residual and unmeasured confounding.
- Pseudo-index date for unexposed patients may not capture the same clinical decision point as a true FSL prescription.
- Patients lost to follow-up may differ systematically from those who remain.
- This study did not address adherence, discontinuation, or switches between the FSL and non-CGM group.

Conclusion

- Sensitivity analysis using doubly-robust estimators achieved similar results.
- FSL was associated with faster A1C target achievement overall and among adults <65 years.
- In adults ≥ 65 years, faster target achievement was seen only for A1C <8%, likely aligning with glycemic goals in older adults. Trends similar to those seen in the younger cohort were observed for A1C <7% and <6.5%.
- **Implications:** The real-world findings support earlier CGM adoption to accelerate glycemic control in non-insulin patients with diabetes. This is aligned with the recently updated ADA standards.