Refills

Your dose of drug information in between sessions

How achievable is an HbA1c < 7% in people with type 2 diabetes when a second medication is added to metformin?

Conclusion: Approximately 70% of patients with type 2 diabetes did not achieve an HbA1c < 7% after a second medication was added to metformin, even though their HbA1c was ≤ 8.5% at baseline.

The BC Provincial Academic Detailing (PAD) service continues to deliver the 2021-2023 topic Type 2 Diabetes Focused Update: SGLT2 Inhibitors and GLP1 agonists.[1] This topic looks at evidence and clinical practice guidelines that inform medication choices beyond their effects on HbA1c lowering.

In PAD's 2019 diabetes topic, we described that guidelines reach discordant conclusions on the value of intensifying medications to achieve HbA1c targets ≤ 7%.[2] Another important clinical question remains: how achievable is an HbA1c of ≤ 7%? The 2022 trial from the GRADE Study Research Group reported the proportion of people who achieved or maintained an HbA1c 7% target when a second medication was added to metformin.[3] The trial enrolled people with type 2 diabetes diagnosed within the previous 10 years who had an HbA1c ≤ 8.5% at baseline. One of four medications was added to metformin (1000 to 2000 mg per day): a basal insulin, a GLP1 agonist, a sulfonylurea, or a DPP4 inhibitor. Medications were provided at no expense to participants, and they were followed for an average of five years.

GRADE Study Research Group Glycemia Reduction Trial in Type 2 Diabetes – Glycemic Outcomes[3]			
Trial participants	Second medication added to metformin	Proportion achieving HbA1c < 7%	Proportion not achieving HbA1c < 7%
▪ 5047 participants ▪ type 2 diabetes ▪ diagnosis < 10 years ▪ HbA1c 6.8%–8.5% ▪ mean age 57 ▪ 64% male, 66% White	basal insulin: glargine U100	33%	67%
	GLP1 agonist: liraglutide	32%	68%
	sulfonylurea: glimepiride	28%	72%
	DPP4 inhibitor: sitagliptin	23%	77%

The authors note: "The major implication of the current trial is that maintenance of target glycated hemoglobin levels is challenging, even in a clinical trial in which all care is provided free of charge".[3]

[1]BC Provincial Academic Detailing Service 2021 Type 2 Diabetes Focused Update: SGLT2 Inhibitors and GLP1 Agonists; [2]BC Provincial Academic Detailing Service 2019 Basal Insulins for Type 2 Diabetes; [3]GRADE Study Research Group N Engl J Med 2022;387:1063-74 (PMID: 36129996)

BC Provincial Academic Detailing Service
Email: PAD@gov.bc.ca
Web: www.bcpad.ca