Clinical indicator

Increasing the proportion of eligible patients with diabetes who are taking SGLT2 inhibitors / GLP1 receptor agonists.

Why is this important?

Sodium-glucose cotransporter-2 inhibitors (SGLT2 inhibitors) and glucagon-like peptide-1 receptor agonists (GLP1 receptor agonists) reduce the risk of cardiovascular and renal complications in people with type 2 diabetes.[1] Empagliflozin (SGLT2 inhibitor), in particular, reduces hospital admissions with heart failure. Both classes of medicine also promote weight loss, especially dulaglutide (GLP1 receptor agonist).[2]

When added to metformin, SGLT2 inhibitors and GLP1 receptor agonists may reduce HbA1c levels by a further 7 to 15 mmol/L. Evidence suggests good glycaemic control benefits microvascular outcomes of diabetes.

SGLT2 inhibitors lower blood glucose levels by inhibiting glucose reabsorption in the renal tubule. Empagliflozin (Jardiance^{R} and Jardiamet^{R}) is the only funded SGLT2 inhibitor in Aotearoa New Zealand. This class of medication is a preferred second line agent in cardiovascular disease, especially heart failure and renal disease progression independent of effects on glycaemic control. They lead to weight loss and blood pressure reduction.

GLP1 receptor agonists lower blood glucose levels by stimulating insulin secretion after meals. Dulaglutide (Trulicity^{R}) and Liraglutide (Victoza^{R}) are the only funded GLP1 receptor agonists in Aotearoa New Zealand. This class of medication is preferred second line for people with type 2 diabetes and cardiovascular and renal disease as they reduce mortality from cardiovascular events and renal disease progression independent of effects on glycaemic control. They lead to the most weight loss of all of the glucose lowering agents available and also cause blood pressure reduction. [1]

Note, funding criteria[3] (special authority) is different to clinical criteria. Māori and Pacific peoples have been prioritised (they do not need underlying CVD or renal disease) due to increased incidence and poorer outcomes for Māori. It is hoped that by improved access to this group of people will reduce the inequities in diabetes health outcomes in these populations.

- Patient has type 2 diabetes with an HbA1c > 53 mmol/mol despite at least 3 months of regular use of metformin and/or an alternative glucose lowering therapy, AND any of the following:
    - diabetic renal disease (urinary albumin: creatinine ratio > 3 mg/mmol and/or eGFR < 60 mL/min) **OR**

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[1] NZSSD 2023 Management of Type 2 diabetes. Available from https://t2dm.nzssd.org.nz/Section-81-SGLT2-inhibitors.

[2] BPAC 2022 Diabetes toolbox. New diabetes medicines funded: empagliflozin and dulaglutide.

[3] PHARMAC Community schedule Available from https://schedule.pharmac.govt.nz/ScheduleOnline.php. Note: GLP1 receptor agonists are not available for new patients from 1st May. This is likely to be temporary.

- known cardiovascular disease (any ischaemic heart disease, cerebrovascular event, peripheral vascular disease, congestive heart failure or familial hypercholesterolaemia) **OR**
- five (5) year cardiovascular disease risk > 15 per cent **OR**
- a high lifetime cardiovascular risk due to onset of diabetes in childhood or as a young adult **OR**
- Māori or Pacific ethnicity.

What is the gap locally?[4]

14.5 per cent of eligible patients with diabetes are on GLP1 receptor agonists (20.4 per cent Māori, 12.2 per cent non-Māori).

District	Māori	Non-Māori
Lakes	18.6%	9.8%
Tairawhiti	24.4%	10.6%
Taranaki	14.5%	11.4%
Waikato	21.4%	13.1%

46.3 per cent of eligible patients with diabetes are on SGLT 2 inhibitors (56.1 per cent Māori ,42.5 per cent non-Māori).

District	Māori	Non-Māori
Lakes	52.5%	41.4%
Tairawhiti	62.4%	40.5%
Taranaki	52.6%	40.7%
Waikato	55.6%	43.8%

What are we measuring?[5]

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Source: Diabetes Clinical Dashboard [Quality Improvement Dashboard].

[4] Pinnacle power BI diabetes clinical dashboard accessed 9/2/2024.
[5] Data dictionary clinical indicators.

Numerator: Eligible patients who have ever been prescribed SGLT 2 inhibitors/GLP1 receptor agonists.

Denominator: Eligible patients.

Definition of eligibility: Patients with type two diabetes who have a recorded diagnosis of renal disease, myocardial infarction, stroke, or heart failure; or whose most recent CVD risk assessment result in the past five years is a risk of greater than 15 per cent.

Definition of taking SGLT 2 inhibitors/ GLP1 receptor agonists: Patients have ever been prescribed dulaglutide, exenatide, liraglutide, dapagliflozin, or empagliflozin.

Further reading

- NZSSD Type 2 diabetes guidelines. Available from: t2dm.nzssd.org.nz/Home.html#subjects-list.
- Healthpathways Management of type 2 diabetes. Available from: www.waikatodhb.health.nz/for-health-professionals/for-gps/midland-region-community-healthpathways/.
- He Ako Hiringa (2021) HAH bulletin Inequities in type 2 diabetes. Available from: www.akohiringa.co.nz/sites/default/files/public/2021-04/HAH%20Bulletin_%231.pdf.
- He Ako Hiringa (2023) Initiating treatment with dulaglutide or liraglutide for type 2 diabetes. Available from: www.akohiringa.co.nz/education/initiating-treatment-with-dulaglutide-or-liraglutide-for-type-2-diabetes.

Examples of other indicators practices may use to support their quality improvement project

Type 2 diabetes presents earlier in Māori, Pacific and Indo Asian peoples than in Europeans so:

- ‘proportion of Māori, Pacific and Indo Asian people who have had a CVRA (30 – 40 years males and 40 – 50 years females) in the last 5 years’.

Patients with renal disease and/or heart failure also should be taking an ACEi/ARB unless contraindicated so:

- ‘proportion of patients with diabetes with renal disease and/or heart failure who are not on an ACEi/ARB’.

Despite higher rates of diabetes amongst Māori, they are less likely to be prescribed metformin and other medications so:

- ‘Proportion of Maori with diabetes prescribed metformin’.

Māori and Pacific peoples may be less likely to have their HbA1c checked at the recommended intervals, and rates of monitoring for renal failure (albumin creatinine ratio – ACR) may be lower in Māori compared with non-Māori. Māori have higher rates of retinopathy, limb amputation and mortality, compared with non-Māori so:

- ‘Proportion of Maori and pacific peoples with an HbA1c within the last 12 months’
- ‘Proportion of Maori and pacific peoples with an HbA1c > 53mmol/mol’.

The guidelines for these meds are metformin, then if diabetic renal disease or heart failure or known CVD or CVRA >15 per cent add GLP1 receptor agonist or SGLT 2 inhibitor. For all others if HbA1c >53mmol/mol add second line so:

- ‘Proportion of patients with type 2 diabetes with HbA1c >53mmol/mol on SGLT 2 inhibitor or GLP1 receptor agonist’.