

Pharmacist Quick Reference Guide

Managing CVD and CKD risk in Type 2 Diabetes



Coronary heart disease is the **number one** cause of death for people with type 2 diabetes.¹



An estimated **280,000** Australians with diabetes are also living with kidney disease.²



SGLT2i and **GLP-1A** have proven CV and renal benefits **independent** of their glycaemic effects.³

Comprehensive Australian guidelines for diabetes management.

Australian Type 2 Diabetes Glycaemic Management Algorithm (see QR) and Living Evidence Guidelines in Diabetes

SCAN ME



Metformin + SGLT2i + GLP-1A

Triple therapy is PBS-subsidised when:

- SGLT2i is prescribed for an indication other than T2DM (e.g. CKD or HF) **and**
- the patient has T2DM **and**
- the patient did not achieve a clinically meaningful glycaemic response to the SGLT2i.

Scan for full PBS criteria.

SCAN ME



Medicines management approach to risk reduction in T2DM

1

Metformin

first line in *all* adults with type 2 diabetes.

2

SGLT2 inhibitors

add to metformin in those with high CV risk,ⁱ established ASCVD, HF and/or CKD.ⁱⁱ

3

GLP-1 analogues

add to metformin in those with high CV risk, ASCVD and/or CKD and are unable to tolerate an SGLT2i.

(in some clinical circumstances a GLP-1A may be used preferentially to a SGLT2i)

4

Sulfonylureas, insulins & DPP-4 inhibitors

exert *no additional* CV or renal benefits independent of their glycaemic effects.

i: Use the **Australian CVD risk calculator** to determine risk in those without known ASCVD.

ii: CKD is defined as an eGFR <60 mL/min/1.73 m² or established albuminuria. See: **CKD Management in Primary Care handbook**.

SGLT2 inhibitor practice points

Renal function	Glycaemic efficacy declines when eGFR <45 mL/minute/1.73 m ² for dapagliflozin and is likely absent when eGFR <30 mL/minute/1.73 m ² for empagliflozin, however CV and kidney benefits remain. eGFR may decrease by 3–5 mL/minute/1.73 m ² on initiation, which is usually followed by stabilisation of kidney function. Starting treatment if eGFR <25 mL/minute/1.73 m ² (dapagliflozin) or eGFR <20 mL/minute/1.73 m ² (empagliflozin) is not recommended due to a lack of evidence, not evidence of harm. Treatment can be continued if eGFR falls below these levels (unless dialysis is commenced).
Diabetic ketoacidosis (DKA)	Small increase in absolute risk of DKA. Euglycaemic ketoacidosis has been associated with the use of SGLT2i in T2DM. Withhold SGLT2i if other risk factors present including acute serious illness, prolonged fasting, bowel preparation, low carbohydrate intake and excessive alcohol intake. Clear written and verbal education regarding sick day guidance and the signs of DKA are recommended.
Genitourinary symptoms	Genital infections (e.g. vulvovaginal candidiasis, balanitis) can occur. Severe bacterial UTIs are rare and available evidence does not support a causal link. Standard topical or oral antifungal, or antibiotic treatments are generally sufficient to manage minor genital infections, and most people can continue taking their SGLT2i medication. ⁴ Fournier gangrene (or perineal necrotising fasciitis) is a rare but serious infection that may occur. Glucosuria from these agents cause urinary symptoms, including more frequent voiding. The importance of post-micturition genital hygiene and hydration should be discussed with the patient. Prompt review by a health professional is advised if the patient believes they have an infection, especially if they have fever and pain, tenderness or swelling in the genital area.
Resources	SGLT2i Consumer Information Leaflets - NSW TAG / Queensland Health / SALHN Diabetes Services or other relevant local resources. Guidance on how to manage sick days and sick day action plans - Australian Diabetes Educators Association (ADEA) Clinical Guidelines .

eTG², AMH²

Abbreviations:

CVD - cardiovascular disease; ASCVD - atherosclerotic cardiovascular disease; CKD - chronic kidney disease; SGLT2i - sodium glucose cotransporter 2 inhibitors; GLP-1A - glucagon-like peptide-1 analogues; T2DM - type 2 diabetes mellitus; HF - heart failure; DPP-4 - dipeptidyl peptidase-4; eGFR - estimated glomerular filtration rate; UTI - urinary tract infection

References:

1. Australian Institute of Health and Welfare. Diabetes: Australian facts. 2024. At: <https://www.aihw.gov.au/reports/diabetes/diabetes/contents/how-common-is-diabetes/all-diabetes>
2. Diabetes Australia. Diabetes in Australia. 2024. At: www.diabetesaustralia.com.au/about-diabetes/diabetes-in-australia/
3. Approach to antihyperglycaemic treatment for adults with type 2 diabetes [revised June 2023]. In: eTG complete. Melbourne: Therapeutic Guidelines; 2024.
4. Seidu S, Alabraba V, Davies S, et al. SGLT2 Inhibitors – The New Standard of Care for Cardiovascular, Renal and Metabolic Protection in Type 2 Diabetes: A Narrative Review. *Diabetes Ther* (2024) 15:1099–1124.
5. Rossi S, ed. Drugs for diabetes [updated July 2024]. Australian medicines handbook; 2024. At: <https://amhonline.amh.net.au/chapters/endocrine-drugs/drugs-diabetes>.