

Queensland Community Pharmacy Chronic Conditions Management Pilot

Cardiovascular Disease (CVD) Risk Reduction Program – Blood Glucose Management

Pilot Clinical Protocol – V2

Eligibility for the Program

Eligibility for participation in the CVD Risk Reduction Program: Blood Glucose Management (the Program) must be assessed at each consultation, as eligibility may change due to changes in health status or demographic factors. i.e. patients who were previously eligible may become ineligible and patients who were ineligible may become eligible.

Refer the patient to their usual healthcare provider (or emergency services, if required) with a comprehensive clinical handover if the patient is, or becomes, ineligible for management under the Program. Ineligibility for treatment as part of a Pilot service does not preclude a patient from accessing services provided as part of usual pharmacy care.



Patients who are ineligible for the Program:

Patients who:

- are aged <18 years or >79 years
- are planning a pregnancy or are pregnant
- have an existing diagnosis of:
 - stage 3-5 chronic kidney disease (CKD)
 - familial hypercholesterolaemia
 - type 1 diabetes
 - type 2 diabetes managed with insulin
 - retinopathy, neuropathy or nephropathy (persistent albuminuria: urinary albumin-creatinine ratio (uACR) ≥ 3 mg/mmol or eGFR <60 mL/min/1.73m²)

- complex cardiovascular disease (CVD):
 - severe (Grade 3) hypertension (≥ 180 mmHg systolic and/or ≥ 110 mmHg diastolic)
 - congenital heart disease
 - rheumatic heart disease
 - heart failure
 - arrhythmias
 - atrial fibrillation
 - other conditions including peripheral arterial disease, heart block, pericarditis, valvular disease, pulmonary hypertension, angina, cardiomyopathy and cardiomegaly, aortic aneurysm
- have poorly controlled asthma, moderate or severe chronic obstructive pulmonary disease (COPD), severe obstructive sleep apnoea (OSA) or another serious respiratory illness.
- have a history of:
 - cardiothoracic surgery
 - acute coronary syndrome (e.g., myocardial infarction)
 - stroke or other cerebrovascular disease
 - hypertensive urgency or emergency.
- have a current deep vein thrombosis (diagnosed by a medical practitioner)
- have a current pulmonary embolism (diagnosed by a medical practitioner) or a history of pulmonary embolism
 - are currently prescribed anticoagulant therapy
- are currently receiving, or have received within the past 12 months, specialist treatment from a cardiologist, endocrinologist or nephrologist, unless they have a written referral from their treating specialist or general practitioner to participate in the Program
- are suspected to have hyperglycaemia with a secondary cause (e.g., pancreatic disorder, drug-induced, endocrine disorder)
- have type 2 diabetes and are experiencing acute illness
- have:
 - unexplained fluctuations in blood pressure (BP)
 - total cholesterol ≥ 7.5 mmol/L, LDL-C ≥ 5.0 mmol/L or triglycerides ≥ 6 mmol/L
 - severe hyperglycaemia (glycated haemoglobin (HbA1c) $\geq 10\%$ or blood glucose level (BGL) ≥ 20.0 mmol/L), or hypoglycaemia (BGL < 4.0 mmol/L)
 - another high risk or abnormal pathology result.
- do not reach their clinical targets within appropriate timeframe for treatment with 2 anti-hyperglycaemic medicines that can be prescribed under this protocol at optimal dose.



Treat (if clinically indicated) and concurrently refer

Provide treatment (if clinically indicated) and concurrently refer the patient to an appropriate healthcare provider for further review if they:

- have a history of deep vein thrombosis but are not currently on any antithrombotic therapy.

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When applying the information contained within this clinical protocol, pharmacists should exercise professional discretion and judgement. The protocol supports, but does not replace, the pharmacist’s responsibility to make decisions appropriate to the circumstances of the individual, in consultation with the patient and/or their caregiver.

How to use this document

The purpose of the CVD Risk Reduction Program (the Program) is to provide an accessible, community-based healthcare service to identify and improve outcomes for patients at high risk of CVD. This clinical protocol details how patients in the CVD Risk Reduction Program should be managed, including referral to other health services and medical practitioners, pharmacological and non-pharmacological measures, and protocol-based/structured prescribing of medicines for the **management of hyperglycaemia**.

This clinical protocol forms part of the CVD Risk Reduction Program and should be considered in conjunction with the [Clinical Protocol: Hypertension](#) and/or the [Clinical Protocol: Lipid Modification](#) and/or the as required by the patient presentation.

Overview of the CVD Risk Reduction Program: Blood glucose management

Assess the CVD risk of patients entering the CVD Risk Reduction Program (see [Clinical Protocol: Hypertension](#) for detail on CVD risk assessment).

Reassess CVD risk every 5 years for patients at low CVD risk, or every 2 years for patients at intermediate CVD risk (or sooner where there is a significant change to risk factors) ⁽¹⁾.

For patients already receiving pharmacological therapy to reduce their cardiovascular risk, or who have previously been assessed as high-risk, review individual risk factors. Formal reassessment of overall CVD risk is not recommended for these patients ⁽¹⁾.

After the patient's CVD risk has been assessed, there are two entry points for patients who are appropriate for enrolment in the Program:

Entry point 1:

- Patients **without a previous diagnosis** of type 2 diabetes, who do not meet any ineligibility criteria, may be enrolled in the Program and **commence management** (with non-pharmacological measures and pharmacotherapy, if indicated) **concurrent to referral** to an appropriate healthcare provider for further review and collaborative care.

Entry point 2:

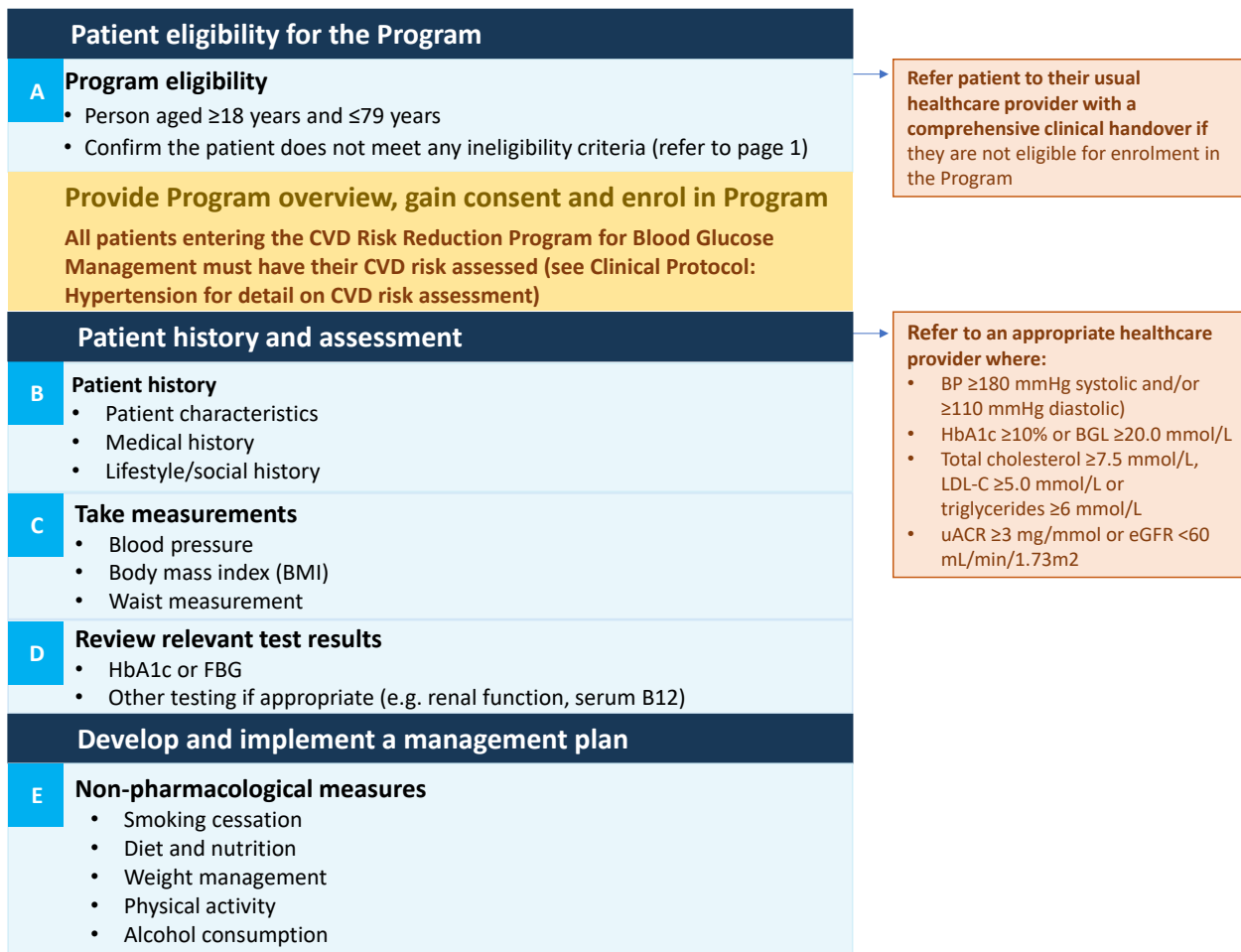
- Patients **with an existing diagnosis** of type 2 diabetes, who do not meet any ineligibility criteria, may be enrolled in the Program and **commence ongoing monitoring and management** (with non-pharmacological measures and pharmacotherapy, if indicated). **An update must be provided** to the patient's usual healthcare provider following each occasion of care.

When a patient enters the Program:

- Provide an overview of the Program (see [Figure 1](#)), including the aims, expected outcomes, and what the Program may involve (which will vary between patients), including:
 - timeframes for management of the condition, such as the number of appointments and testing required, and the costs involved

- how the patient's medicines may be managed and how medicine costs may differ when prescribed by a pharmacist
 - other interventions that may be recommended as part of the Program e.g., smoking cessation and weight management
 - that the patient may leave the Program, including by opting out or becoming ineligible, at any time, and be referred to an appropriate healthcare provider.
- Document informed consent from the patient for participation, as per the [Pilot Handbook](#).

Figure 1: Overview of the CVD Risk Reduction Program: Blood glucose management



See page over

F	Pharmacotherapy <ul style="list-style-type: none"> Pharmacotherapy treatment options <ul style="list-style-type: none"> Biguanide (metformin) Glucagon-like peptide-1 (GLP-1) receptor agonists Sodium-glucose co-transporter 2 (SGLT2) inhibitors Dipeptidyl peptidase-4 (DPP-4) inhibitors Modifying existing pharmacotherapy regimen for blood glucose
G	Monitoring and clinical targets <ul style="list-style-type: none"> Monitor response to new or changed pharmacotherapy after 3 months Annual cycle of care monitoring
H	Patient self-management <ul style="list-style-type: none"> Self-monitoring Hypoglycaemia Sick day management
I	Confirm management plan is appropriate
J	Communicate agreed management plan
K	Collaborative care
Ongoing management and monitoring	
L	Clinical review and ongoing collaboration <ul style="list-style-type: none"> Prior to appointment, request laboratory testing (if applicable) <p>Review:</p> <ul style="list-style-type: none"> Patient history BP measurements Pathology testing Annual cycle of care Changes to CVD risk factors Lifestyle modification. Update the CVD Risk Management Plan Consider the patient's ongoing eligibility
<p>The patient's eligibility for the Program may change at any point. Refer the patient to their usual healthcare provider with a comprehensive clinical handover should the patient become ineligible for management under the Program or choose to exit the Program.</p>	

Refer patient to their usual healthcare provider with a comprehensive clinical handover if their clinical targets have not been reached within appropriate timeframes for treatment with 2 medicines at optimal doses.

Key points

- CVD is mostly preventable. Most patients who experience a cardiovascular event or develop a cardiovascular disease have at least one identifiable CVD risk factor. These risk factors can often be minimised through lifestyle modification and pharmacological interventions ^(2, 3).
- Decisions regarding the management approach for individual CVD risk factors, including non-pharmacological and pharmacological interventions should be made in the context of the individual's overall CVD risk as well as other comorbidities, personal preferences and psychosocial circumstances ⁽²⁾.
- Having diabetes increases the risk of CVD. Heart attack and stroke are the main cause of death in people who have diabetes ^(4, 5). The rate of type 2 diabetes in Aboriginal and/or Torres Strait Islander people is almost three times that of non-Aboriginal and Torres Strait Islander people, with an earlier age of onset ⁽⁶⁾.
- Lifestyle modifications, such as physical activity and eating well help to manage blood glucose and diabetes ⁽⁷⁾. A sustained healthy weight in a newly diagnosed type 2 diabetes patient (within 1-2 years) can also lead to remission ^(8, 9).

Program eligibility

A: Program eligibility

- Confirm eligibility to participate in the Program (see [Eligibility](#)).
- Consider program eligibility at every consultation, as eligibility can change at any time.
- Refer the patient to their usual healthcare provider with comprehensive clinical handover if the patient is, or becomes, ineligible for management under the Program.

Patient history and assessment

B: Patient history

Obtain sufficient information to assess the patient's condition, and the safety and appropriateness of any recommendations and medicines for the patient.

Consider:

- age
- ethnic or cultural background, including Aboriginal and/or Torres Strait Islander status
- lactation status
- previous and current medical conditions
- clinical signs and symptoms of insulin resistance or polycystic ovarian syndrome (PCOS) (e.g., acanthosis nigricans, skin tags, central obesity, hirsutism)
- alarm signs and symptoms that require further investigation e.g., unexplained weight loss or gain, frequent headache and dizziness, chronic nausea and vomiting
- symptoms that may indicate poorly controlled diabetes or a complication that requires specialised management (e.g., lethargy, polyuria, polydipsia, frequent fungal or bacterial infections, blurred vision, poor wound healing)
- family history of diabetes or CVD
- current type 2 diabetes management, including monitoring of blood glucose (HbA1c and self-monitoring), sick day management plan (if available) and/or consultations with a diabetes educator
- last eye health and foot care check and/or consultation with an optometrist or podiatrist
- history of gestational diabetes
- all current and recently ceased treatments (including prescribed medicines, vitamins, herbs, other supplements and over-the-counter medicines)
- immunisation history (review the Australian Immunisation Register)
- drug allergies/adverse drug reactions
- recent pathology results, including eGFR, lipids, urinalysis, HbA1c, FBG
- diet/nutrition status (e.g., fruit and vegetable consumption, volume of processed carbohydrates and saturated fat) and weight
- levels of physical activity
- recreational or illicit drug use, and alcohol use

- smoking status and history (consider tobacco, cannabis, vaping, passive smoking, or other exposure to smoke)
- specialist involvement in care.



Reminder

Pharmacists can access a range of clinical information in a patient's My Health Record, including details about current and past medication history, allergies and current medical conditions.

C: Take measurements

1) BP

- Conduct BP measurements in accordance with the [National Heart Foundation of Australia Guidelines for the diagnosis and management of hypertension in adults 2016](#) ⁽¹⁰⁾.
- Take three measurements and average the last two. Where there is variation >10 mmHg systolic or >6 mmHg diastolic, have the patient rest quietly for 5 minutes then remeasure.

2) Weight and height

- Take weight and height measurements to calculate the person's body mass index (BMI) (See BMI calculator: [Heart Foundation - What's your body mass index \(BMI\)?](#)) ⁽¹¹⁾.
- Refer to the [Department of Health and Aging - BMI and waist measurement](#) ⁽¹²⁾ for information about BMI ranges and exceptions.

3) Waist measurement

- Measure waist (see [Heart Foundation – What waist measurements mean for your heart](#) ⁽¹³⁾) and interpret in accordance with the [Department of Health and Aging - BMI and waist measurement](#) ⁽¹²⁾.

D: Review test results

Where recent test results are unavailable, undertake appropriate testing (point of care testing (PoCT) and/or laboratory testing). Refer to the [Pilot Handbook](#) for further information regarding options for requesting laboratory testing.

Glycated haemoglobin (HbA1c) or fasting blood glucose (FBG)

- Patients with a current diagnosis of type 2 diabetes should have FBG results no older than 1 month and HbA1c results no older than 3 months.
- Patients without a current diagnosis of type 2 diabetes with HbA1c $\geq 6.5\%$ (48 mmol/mol) or FBG ≥ 7 mmol/L or random blood glucose ≥ 11.1 mmol/L identified during type 2 diabetes screening should have a repeat (laboratory confirmed) HbA1c or FBG to confirm the result and inform management ⁽⁶⁾.

Other testing

- Consider if any other PoCT or laboratory testing (e.g., biochemistry profile, renal function) is needed to inform patient management. See [G: Monitoring and clinical targets](#) for more information.

Develop and implement management plan

Patients with type 2 diabetes have an elevated risk of CVD ⁽⁵⁾. A holistic approach to managing overall CVD risk is more effective than managing individual clinical risk factors (i.e., hypertension, dyslipidaemia and hyperglycaemia) in isolation ^(1,2).

The objectives of blood glucose management in patients with type 2 diabetes are to improve quality of life, relieve symptoms, avoid acute complications (e.g., diabetic ketoacidosis, hyperosmolar hyperglycaemia, hypoglycaemia) and reduce the incidence of complications ⁽⁸⁾.

A diabetes annual cycle of care assists in reviewing a patient's diabetes management and general health each year. The annual cycle of care is used to identify health problems early so they can be managed before they lead to further complications ⁽¹⁴⁾. The annual cycle of care involves checks of blood glucose levels, HbA1c, BP, lipids, eye health, foot care and kidney health ⁽¹⁵⁾.

Each patient should have a [CVD Risk Management Plan](#) developed (see [Appendix 1](#)) that supports the management of type 2 diabetes and addresses each modifiable risk factor in accordance with the Therapeutic Guidelines ⁽⁸⁾ and other relevant Australian guidelines.

The CVD Risk Management plan may include:

- appropriate clinical targets
- lifestyle modification and non-pharmacological measures
- pharmacotherapy
- plan for review.

Patients should be involved in shared decision-making and the development of their [CVD Risk Management Plan](#), including setting of appropriate targets.

E: Non-pharmacological measures

Provide all patients with information about non-pharmacological measures regardless of whether pharmacotherapy is prescribed.

The 5As Framework for behavioural risk modification may be used as the basis for identifying modifiable lifestyle risk factors and implementing lifestyle interventions in accordance with the [Royal Australian College of General Practitioners - Smoking, nutrition, alcohol and physical activity \(SNAP\) guide](#) ⁽¹⁶⁾.

Lifestyle modification on its own can markedly improve HbA1c. A sustained healthy weight in a newly diagnosed patient (within 1-2 years) can also lead to remission ^(8, 9)

Smoking and vaping cessation

Detailed guidance for pharmacists supporting smoking cessation is contained in the [Smoking Cessation - Clinical Practice Guideline](#) ⁽¹⁷⁾ and supporting vaping cessation is contained in the [E-cigarette and Vaping Cessation Guide](#) ⁽¹⁸⁾.

Weight management

When initiating any interventions for weight management in patients with type 2 diabetes, consider the impact of the weight management intervention on the patient's antihyperglycaemic pharmacotherapy, including risk of euglycemic ketoacidosis (for patient's taking SGLT-2 inhibitors) and/or hypoglycaemia ⁽⁶⁾.

Detailed guidance for pharmacists supporting weight management is contained in the [Management for Overweight and Obesity – Clinical Practice Guideline](#) ⁽¹⁷⁾.

Diet and nutrition

Nutritional management should focus on a balanced diet, with foods from each of the five food groups in appropriate portions to maintain a healthy weight. Foods that are high in saturated and trans fats, sugar and sodium (e.g., highly processed foods) should be limited ⁽¹⁹⁻²¹⁾. Nutritional recommendations and advice should be sourced from the [Australian Dietary Guidelines](#) ⁽²¹⁾.

Encourage all patients with type 2 diabetes to see a dietitian for individualised nutritional advice including for a nutritionally balanced, energy-reduced diet, glycaemic management and meal planning ⁽⁶⁾.

Physical activity

Encourage all patients to undertake regular physical activity in line with recommendations for their age group in the [Physical activity and exercise guidelines for all Australians](#) ⁽²²⁾.

Patients with diabetes or prediabetes should aim for at least 150 minutes of moderate- to vigorous-intensity activity per week, including two resistance training sessions for a total of at least 60 minutes ⁽⁶⁾.

Consider the patient's ability to safely exercise, including current mobility, flexibility and glycaemic control. Referral to an exercise physiologist and/or physiotherapist to develop an exercise plan may be required.

Alcohol consumption

Alcohol can impact type 2 diabetes management by influencing diet and disrupting blood glucose control. Consider the impact of the patient's alcohol consumption on their blood glucose management, including pharmacotherapy ⁽⁶⁾. Recommendations and advice regarding alcohol consumption should be sourced from the [Australian guidelines to reduce health risk from drinking alcohol](#) ⁽²³⁾.



Pharmacist resources

- Royal Australian College of General Practitioners - [The Handbook of Non-Drug Interventions \(HANDI\)](#) ⁽²⁴⁾
- Royal Australian College of General Practitioners and Diabetes Australia - [Management of type 2 diabetes – A handbook for general practice](#) ⁽⁶⁾
- Diabetes Australia - [Health professional resources](#) ⁽²⁵⁾
- National Diabetes Services Scheme: [Resources to support health professionals](#) ⁽²⁶⁾.

F: Pharmacotherapy

Pharmacotherapy for the Program involves the following components, where appropriate:

- initial management of type 2 diabetes
- maintenance management of type 2 diabetes (including adjusting pharmacotherapy as needed).

See [Overview of the CVD Risk Reduction Program: Blood glucose management](#) for entry points to the Program.

Where pharmacotherapy is prescribed, the patient's prescription(s) (including repeats) should provide enough medicine for the period until the patient's next scheduled review.

Anti-hyperglycaemic pharmacotherapy must be in accordance with the current online versions of [Therapeutic Guidelines: Diabetes \(Type 2 diabetes in adults – Approach to anti-hyperglycaemic treatment for adults with type 2 diabetes\)](#), the [Australian Medicines Handbook - Type 2 diabetes](#), and other relevant resources^(8, 9, 27, 28).

To determine whether pharmacotherapy for blood glucose management should be initiated (or modified), consider the patient's:

- age
- renal function
- CVD risk
- glycaemic profile, including symptoms and episodes of hyperglycaemia and hypoglycaemia
- HbA1c treatment targets (see [Table 1](#))
- related comorbidities
- self-management capability, including adherence to lifestyle interventions and health literacy
- contraindications, adverse reactions and drug interactions
- response to previous interventions to reduce blood glucose (non-pharmacological and pharmacological)
- patient preference (including cost).

Pharmacotherapy treatment options under the Program

Pharmacists may prescribe up to two agents (dual-therapy) from the following list in line with the current online version of [Therapeutic Guidelines: Diabetes \(Type 2 diabetes in adults – Algorithm for anti-hyperglycaemic treatment of adults with type 2 diabetes\)](#)⁽⁸⁾:

- metformin (first line therapy unless contraindicated or not tolerated)
- sodium-glucose co-transporter 2 (SGLT2) inhibitors
- glucagon-like peptide-1 (GLP-1) receptor agonists
- dipeptidyl peptidase-4 (DPP-4) inhibitors.

Combination products can be prescribed if appropriate, however they must only include medicines able to be prescribed under the Program.

The pathology testing that is required before pharmacotherapy is initiated or modified, and during treatment is summarised in [Table 2](#).

Patients entering the program with an existing medicine regimen for hypertension

Consider whether the most recently prescribed treatment is:

- appropriate for the patient's symptoms and medical history
- optimised for the patient, including the therapeutic response and progression towards clinical targets
- tolerable, with minimal, or appropriate management of, adverse effects.

Pharmacists may modify or adjust existing type 2 diabetes pharmacotherapy, including if the:

- patient's response is inadequate within appropriate clinical timeframes (a general target for HbA1c is $\leq 7\%$ (53 mmol/mol)). However, an individualised target may be considered based on the patient's risks, benefits and preferences (see [Table 1](#))
- patient is experiencing intolerable or unmanageable adverse effects.

When considering modification or adjustment to medicines prescribed, consider if the medicine is **also** used for the treatment of another condition (e.g., SGLT-2 inhibitors used for the treatment heart failure or CKD).

When modifying pharmacotherapy regimens for blood glucose management that have been prescribed by another healthcare provider, attempt to notify and make changes in collaboration with the original prescriber or the patient's usual healthcare provider (whichever is most appropriate).

G: Monitoring and clinical targets

Monitor response to new or changed pharmacotherapy by measuring **HbA1c after 3 months** ⁽⁸⁾ (refer to [Table 1](#)).

If the response to new or changed pharmacotherapy is inadequate or the medicine is not tolerated ⁽⁸⁾:

- modify the treatment regimen
 - increase dose of metformin (to the maximum tolerated dose appropriate for the patient)
 - consider adding a second medicine (and/or incrementally increase the dose of the second medicine up to the maximum tolerated dose appropriate for the patient, if applicable).
- consider stopping the second anti-hyperglycaemic medicine (i.e., not metformin) if a reduction of HbA1c of $\geq 0.5\%$ has not been achieved after 3 months and trial another medicine (after balancing glycaemic and non-glycaemic benefits)
- if the patient has not reached their clinical targets within appropriate timeframes of the treatment with two medicines that may be prescribed under this protocol (at optimal doses), refer the patient to an appropriate healthcare provider.

If the HbA1c is stable at target, continue to monitor response to therapy. If response to treatment changes, consider ongoing eligibility for the Program.

Patient/disease characteristics		HbA1c treatment target
Recently diagnosed type 2 diabetes without CVD	Using lifestyle modification and metformin	$\leq 6\%$ (42 mmol/mol)*
	Using metformin plus another non-insulin anti-hyperglycaemic medicine for diabetes	$\leq 6.5\%$ (48 mmol/mol)*
	Using insulin	$\leq 7\%$ (53 mmol/mol)
<ul style="list-style-type: none"> • Type 2 diabetes of longer duration or with CVD 		$\leq 7\%$ (53 mmol/mol)
<ul style="list-style-type: none"> • Younger patients with a longer life expectancy • Patients with no (or few) comorbidities or vascular complications • Newly diagnosed patients • Highly motivated patients with good capability for self-care 		$\leq 6.5\%$ (48 mmol/mol)*
<ul style="list-style-type: none"> • Patients at risk of hypoglycaemia i.e. older people or renal impairment and/or taking multiple glucose-lowering medicines or insulin 		A less stringent target closer towards 8%

*if there are no adverse effects of treatment, and the target can be safely achieved without causing hypoglycaemia.

Table 2. Testing and monitoring required for patients with type 2 diabetes (8, 28, 29)	
Drug class	Test
Metformin	Check renal function (eGFR) before starting treatment and then every 4–6 months. Normal eGFR is considered to be ≥ 60 mL/min/1.73m ² . Check serum B12 level at least every 12 months.
SGLT-2 inhibitors	Check renal function (eGFR and serum creatinine) before commencing, then periodically as clinically indicated (at least annually). Normal eGFR is considered to be ≥ 60 mL/min/1.73m ² . Initially, serum creatinine may increase and eGFR decrease (by 3–5 mL/minute/1.73 m ²), but this is usually followed by stabilisation of kidney function (23).
GLP-1 receptor agonists	Check renal function (eGFR and serum creatinine) before commencing, then periodically as clinically indicated. Normal eGFR is considered to be ≥ 60 mL/min/1.73m ² .
DPP-4 inhibitors	Alogliptin, saxagliptin, sitagliptin, vildagliptin: Check renal function (eGFR and serum creatinine) before commencing, then periodically as clinically indicated. Normal eGFR is considered to be ≥ 60 mL/min/1.73m ² .

[Table 3](#) outlines the monitoring requirements for the annual cycle of care. Assess each of the requirements mentioned in [Table 3](#) according to the review timeframes or arrange assessment with an appropriate healthcare provider.

Table 3. Annual cycle of care monitoring requirements for patients with type 2 diabetes (6, 8, 14)	
Monitoring requirement	Review timeframe
HbA1c	Every 3 months in people who are newly diagnosed, undergoing therapeutic changes or whose HbA1c is not within their individualised target range. Every 6 months in people with stable blood glucose levels whose HbA1c has reached their individualised target range.
Blood pressure	At every periodic review
Foot assessment	At least 12 months (very low and low-risk feet) At least every 3–6 months (moderate-risk feet) At least every 1–3 months (high-risk feet)

Table 3. Annual cycle of care monitoring requirements for patients with type 2 diabetes ^(6, 8, 14)

Eye examination	At least every 2 years
Dental examination	At least every 12 months
Urine albumin	At least every 12 months
Kidney function	At least every 12 months
Lipid profile	At least every 12 months
Weight	At least every 6 months
Waist circumference	At least every 6 months
Nutrition and diet	At least every 12 months
Physical activity	At least every 12 months
Medication review	At least every 12 months
Smoking status	At least every 12 months
Patient self-management of diabetes	At least every 12 months
Emotional and psychological health	As needed

H: Patient self-management

Advise patients about ways to self-manage and self-monitor between periodic review.

Self-monitoring

- Encourage patients undergoing changes to their treatment regimen or intensive lifestyle modification to self-monitor blood glucose concentrations ^(8, 30).
- Detailed information on self-monitoring blood glucose levels is available in [Diabetes Australia's position statement - Glucose self-monitoring in adults with type 1 diabetes or type 2 diabetes](#) ⁽³⁰⁾.

Hypoglycaemia

- Educate patients on how to recognise and manage hypoglycaemia (BGL <4 mmol/L), particularly patients previously prescribed drugs that can cause hypoglycaemia (e.g., insulin or sulfonylureas).
- Provide patients with appropriate supporting resources, such as the [National Diabetes Services Scheme - Managing hypoglycaemia fact sheet](#) from the ⁽³¹⁾.

Sick day management

- Educate patients about the impact of acute illness on blood glucose concentrations, and provide them with the [National Diabetes Services Scheme - Sick day management factsheet](#) ^(8, 32).

- Patients should have a sick day plan developed by an appropriate healthcare provider. Promptly advise the patient's usual healthcare provider of changes to pharmacotherapy in the Program to enable update of the sick day management plan.
- Advise patients taking SGLT-2 inhibitors to withhold their medication during acute serious illness, prolonged fasting, bowel preparation, low carbohydrate intake, excessive alcohol intake or other risk factors for ketoacidosis as these may increase the risk of ketoacidosis ⁽²⁸⁾.
- Advise patients taking metformin or GLP-1 receptor agonists to withhold their medication if they have vomiting, diarrhoea or are not eating much ^(8, 33).

I: Confirm management plan is appropriate

Consult the *Therapeutic Guidelines* ⁽⁸⁾, the *Australian Medicines Handbook* ⁽²⁸⁾ and other relevant resources to confirm that management is appropriate, including:

- contraindications and precautions
- drug and disease interactions
- lactation status.

J: Communicate agreed management plan

Provide comprehensive advice (including supporting written information) to the patient regarding:

- individual product and medicine use
- non-pharmacological measures
- how to manage adverse effects
- when to seek further care and/or treatment
- when to return for clinical review.

Document the agreed management plan and individualised clinical targets within the patient's [CVD Risk Management Plan](#).

It is the pharmacist's responsibility to ensure the suitability and accuracy of any resources provided to patients (and/or caregiver if applicable) and that they comply with all copyright conditions.

K: Collaborative care

Provide a copy of the patient's [CVD Risk Management Plan](#) to the patient's usual healthcare provider (and any other relevant health professionals involved in the patients care). The communication should also include (if relevant):

- relevant medical history and pathology/PoCT results
- changes to existing pharmacotherapy or new pharmacotherapy prescribed
- a summary of advice provided to the patient including recommendations for multidisciplinary care and referrals
- the next scheduled review appointment.

Ongoing management and monitoring

L: Clinical review and ongoing collaboration

All patients should undergo regular clinical review to participate in the Program.

Review patients **every** ^(6, 8, 14):

- 3 months or sooner, if they are newly diagnosed, undergoing therapeutic changes, their HbA1c is not within their individualised target range or they are experiencing complications of diabetes
- 6 months or sooner in people with stable blood glucose levels whose HbA1c has reached their individualised target range.

Prior to each periodic review, arrange any relevant laboratory tests (that are not performed by PoCT) required for monitoring.

At each appointment (scheduled or unscheduled), review:

- the patient's ongoing eligibility for the Program
- patient history to reflect changes in the preceding period
- BP measurements
- pathology or undertake any required PoCT (as applicable)
- changes to CVD risk factors
- patient's response to current management and adherence to lifestyle modification
- patient's progress with their annual cycle of care
- prescribed pharmacotherapy and modify the treatment regimen in line with the *Therapeutic Guidelines* ⁽⁸⁾ or consider other medicine-related issues (e.g., adherence)
- [CVD Risk Management Plan](#), document and update clinical targets, if required.

Provide an update to the patient's usual healthcare provider following each occasion of care including when any changes are made to the patient's management plan. Proactive, planned and/or unplanned review may also occur with the patient's usual healthcare provider at any time while the patient is enrolled in the Program.

Patients may continue to participate in the Program providing:

- their condition remains eligible to be managed in the Program
- they wish to remain in the Program and continue to consent
- they attend scheduled reviews.

Patients are not eligible for participation in the Program if they have not reached their clinical targets within appropriate timeframes of the treatment of 2 anti-hyperglycaemic medicines that can be prescribed under this protocol at optimal doses.

Refer all patients (with their consent) who are no longer eligible for management within the Program, or who do not wish to continue in the Program, to an appropriate healthcare provider.

Appendices

Appendix 1 – CVD Risk Management Plan

For an editable version, see [CVD Risk Management Plan - editable](#).

Page 1			
Queensland Community Pharmacy Chronic Conditions Management Pilot Cardiovascular Disease (CVD) Risk Management Plan Plan date:			
Name:		Date of birth:	
Date of enrolment in the CVD Risk Reduction Program:			
Patient support person and/or caregiver:			
Program pharmacy details			
Pharmacist name		Phone number	
Pharmacy name and address		Opening hours	
My CVD Risk			
Estimated CVD risk (AusCVDRisk):		Low (%), Intermediate (%), High (%)	
My CVD risk factors		Insert applicable risk factors e.g., <ul style="list-style-type: none"> • high blood pressure • type 2 diabetes (hyperglycaemia) • above healthy weight range • smoking • waist circumference • dyslipidaemia, specifically high levels of 'bad' cholesterol and/or low levels of 'good' cholesterol • family history of premature CVD etc. 	
My test results and clinical targets			
Blood pressure			
Current blood pressure		Blood pressure target ⁽¹⁴⁾	
Systolic blood pressure (SBP):	mmHg	SBP:	130–140 mmHg (or less)
Diastolic blood pressure (DBP):	mmHg	DBP:	80–90 mmHg (or less)
Blood glucose			
Current HbA1c	% (X mmol/mol)	HbA1c target	% (X mmol/mol)
Current fasting/preprandial blood glucose	mmol/L	Target ⁽⁵⁾	4.0–7.0 mmol/L (fasting)
Current postprandial (2 hours after food) blood glucose	mmol/L	Target ⁽⁵⁾	5.0–10 mmol/L
Blood lipids (cholesterol) – review at least every 12 months			
Total cholesterol	mmol/L	Total cholesterol:	Less than 5.5/ 4.0 mmol/L
LDL-C	mmol/L	LDL-C:	Less than 2.0 mmol/L
HDL-C	mmol/L	HDL-C:	Higher than 1.0 mmol/L
Triglycerides	mmol/L	Triglycerides:	Less than 2.0 mmol/L

My lifestyle prescription

Physical activity	<ul style="list-style-type: none"> • Enter recommendations for physical activity for the patient’s age and capability based on the national guidelines: <ul style="list-style-type: none"> ○ Informal activity e.g., everyday activities i.e. housework, gardening ○ Formal activity e.g., walking (moderate intensity) for 30 minutes 5 days of the week, strength building 2 days per week ○ Individualised guidance based on patient preference and affordability ○ Incorporate pacing by building up to recommendations • If required: Refer to a GP, exercise physiologist, physiotherapist or other supports for safe exercise
Weight management and diet and nutrition	<ul style="list-style-type: none"> • Recommendation for weight loss (if applicable) • Recommendations for eating for health • Summary of nutritional advice for a balanced diet <ul style="list-style-type: none"> ○ more of/ increase... ○ less of/ limit... • Specific advice and food recommendations tailored for individual’s risk factors • If required: Refer to Management for Overweight and Obesity - Clinical Practice Guideline and/or other supports e.g., dietitian
Self-management	<ul style="list-style-type: none"> • Enter individualised recommendations for self-management: <ul style="list-style-type: none"> ○ Blood glucose testing ○ Blood pressure testing ○ Sick day management ○ Hypoglycaemia management
Other lifestyle modification strategies	<ul style="list-style-type: none"> • If required: Smoking (or vaping) cessation <ul style="list-style-type: none"> ○ Refer to Smoking Cessation - Clinical Practice Guideline, E-cigarette and Vaping Cessation Guideline and/or other supports e.g. Quitline or GP • If required: Refer to a GP, psychologist or other clinician for mental health support • If required: Summary of advice regarding alcohol consumption • If required: Sleep health education

My medicines for blood glucose management

- include medicines prescribed by another health practitioner (if applicable)
- delete rows/sections not required

Type 2 diabetes (delete if not applicable)	
Medicine name	Instructions
	<ul style="list-style-type: none"> • dose, formulation, frequency, time of day, duration • other instructions e.g., take with food • serious adverse effects that require immediate medical review
Other medicines for CVD Risk Reduction	
Medicine name	Instructions

Advise your pharmacists if you are experiencing side effects from medication or if you have any concerns.

Your next review appointment with your pharmacist in the Program is:	
You need to get the following tests done (using the pathology request provided) before your next appointment:	

Healthcare team

General practitioner and clinic:	Name, address and phone number	Closest 24-hour emergency services:	Name, address and phone number
Diabetes educator	Name, address and phone number	Exercise physiologist	Name, address and phone number
Dietitian	Name, address and phone number	Other health practitioner	Name, address and phone number
Other health practitioner	e.g. optometrist, podiatrist Name, address and phone number	Other health practitioner	Name, address and phone number

Document version number	Date	Comments
Version 1.0	01.02.2024	
Version 1.1	11.11.2024	Administrative update.
Version 1.2	01.07.2025	Administrative updates across sections to improve useability of the CVD protocols.
Version 2.0	07.04.2026	Updates across sections to reflect contemporary guidance and improve usability.

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Reference List

1. Commonwealth of Australia: Department of Health. Australian Guideline for assessing and managing cardiovascular disease risk. Department of Health and Aged Care; 2023. [cited 2025 Nov 3]. Available from: <https://www.cvdcheck.org.au/overview>.
2. Therapeutic Guidelines: Cardiovascular. Melbourne: Therapeutic Guidelines Limited; 2021 [cited 2025 Nov 3]. Available from: <https://tgldcdp.tg.org.au/topicTeaser?guidelinePage=Cardiovascular&etgAccess=true>.
3. National Heart Foundation of Australia. Key Statistics: Cardiovascular Disease: National Heart Foundation of Australia; 2025 [cited 2026 Mar 2]. Available from: <https://www.heartfoundation.org.au/your-heart/evidence-and-statistics/key-stats-cardiovascular-disease>.
4. Commonwealth of Australia: Australian Bureau of Statistics. Diabetes. Canberra: Commonwealth of Australia: Australian Bureau of Statistics; 2023 [cited 2025 Nov 3]. Available from: <https://www.abs.gov.au/statistics/health/health-conditions-and-risks/diabetes/2022>.
5. National Heart Foundation of Australia. Diabetes and heart disease. National Heart Foundation of Australia; 2024 [cited 2025 Nov 3]. Available from: <https://www.heartfoundation.org.au/your-heart/diabetes-and-heart-disease>.
6. The Royal Australian College of General Practitioners (RACGP). Management of type 2 diabetes: a handbook for general practice. East Melbourne: RACGP; 2024 [cited 2025 Nov 3]. Available from: <https://www.racgp.org.au/clinical-resources/clinical-guidelines/key-racgp-guidelines/view-all-racgp-guidelines/management-of-type-2-diabetes/defining-and-diagnosing-type-2-diabetes>.
7. Diabetes Australia. Managing type 2 diabetes. Diabetes Australia; 2025 [cited 2025 Nov 3]. Available from: <https://www.diabetesaustralia.com.au/managing-diabetes/type-2/>.
8. Therapeutic Guidelines: Diabetes. Melbourne: Therapeutic Guidelines Limited; 2021 [cited 2025 Nov 3]. Available from: <https://tgldcdp.tg.org.au/topicTeaser?guidelinePage=Diabetes&etgAccess=true>.
9. Living Evidence for Diabetes Consortium. Australian Evidence-Based Clinical Guidelines for Diabetes 2020 [cited 2025 Nov 3]. Available from: <https://diabetessociety.com.au/living-guidelines.asp>.
10. National Heart Foundation of Australia. Guideline for the diagnosis and management of hypertension in adults. Melbourne: National Heart Foundation of Australia; 2016.
11. National Heart Foundation of Australia. What's your body mass index (BMI)?; 2024. [cited 2025 Nov 3]. Available from: <https://www.heartfoundation.org.au/bmi-calculator>.
12. Commonwealth of Australia: Department of Health. Body mass index (BMI) and waist measurement Canberra: Commonwealth of Australia: Department of Health; 2021 [cited 2025 Nov 3]. Available from: <https://www.health.gov.au/health-topics/overweight-and-obesity/bmi-and-waist>.
13. National Heart Foundation of Australia. What waist measurements mean for your heart. Melbourne: National Heart Foundation of Australia; 2024. [cited 2025 Nov 3]. Available from: <https://www.heartfoundation.org.au/your-heart/waist-measurement>.
14. National Diabetes Services Scheme. Your diabetes annual cycle of care fact sheet. National Diabetes Services Scheme; 2025 [cited 2025 Nov 3]. Available from: <https://www.ndss.com.au/about-diabetes/resources/find-a-resource/your-diabetes-annual-cycle-of-care-fact-sheet/>.
15. Diabetes Australia. Annual cycle of care. Diabetes Australia; 2025 [cited 2025 Nov 3]. Available from: <https://www.diabetesaustralia.com.au/managing-diabetes/annual-cycle-of-care/>.
16. The Royal Australian College of General Practitioners (RACGP). Smoking, nutrition, alcohol, physical activity (SNAP): A population health guide to behavioural risk factors in general practice. East Melbourne: RACGP; 2015 [cited 2025 Nov 3]. Available from: <https://www.racgp.org.au/clinical-resources/clinical-guidelines/key-racgp-guidelines/view-all-racgp-guidelines/snap>.
17. Queensland Health. Guidelines for acute common conditions and health and wellbeing services. Queensland Health; 2025. Available from: <https://www.health.qld.gov.au/clinical-practice/guidelines-procedures/community-pharmacy-pilots/resources/acute-common-conditions>.
18. Clinical Excellence Queensland. E-cigarette and vaping cessation guide: Queensland respiratory and sleep clinical network. Queensland Health; 2024 [cited 2026 February 24]. Available from: https://www.health.qld.gov.au/data/assets/pdf_file/0030/1427763/vaping-cessation-guide.pdf.
19. The Royal Australian College of General Practitioners (RACGP). Guidelines for preventive activities in general practice (10th edition). East Melbourne: RACGP; 2024.
20. Casas R, Castro-Barquero S, Estruch R, Sacanella E. Nutrition and Cardiovascular Health. *Int J Mol Sci.* 2018;19(12).
21. National Health and Medical Research Council. Australian Dietary Guidelines. Canberra: National Health and Medical Research Council; 2013.
22. Australian Government Department of Health and Aged Care. Physical activity and exercise guidelines for all Australians. Canberra: Australian Government Department of Health and Aged Care; 2022 [cited 2025 Nov 3]. Available from:

https://www.health.gov.au/health-topics/physical-activity-and-exercise/physical-activity-and-exercise-guidelines-for-all-australians?utm_source=health.gov.au&utm_medium=callout-auto-custom&utm_campaign=digital_transformation.

23. National Health and Medical Research Council: Australian Research Council and Universities Australia. Australian Guidelines to Reduce Health Risks from Drinking Alcohol. Canberra: Commonwealth of Australia; 2020.
24. The Royal Australian College of General Practitioners (RACGP). Handbook of Non-Drug Interventions (HANDI). East Melbourne: RACGP; 2023
25. Diabetes Australia. Health professional resources. Diabetes Australia; 2026. Available from: <https://www.diabetesaustralia.com.au/health-professional-resources/>.
26. National Diabetes Services Scheme. Resources to support health professionals; 2026. Available from: <https://www.ndss.com.au/health-professionals/resources/>.
27. Australian Diabetes Society. Australian Type 2 diabetes glycaemic management algorithm. Australian Diabetes Society; 2025 [cited 2025 Nov 3]. Available from: <https://treatment.diabetessociety.com.au/plan/>.
28. Australian Medicines Handbook: Drugs for diabetes. Adelaide: Australian Medicines Handbook Pty Ltd; 2025 [cited 2025 Nov 3]. Available from: <https://amhonline.amh.net.au/chapters/endocrine-drugs/drugs-diabetes?menu=vertical>.
29. Medicines information. eMIMs cloud; 2025. At: www.emims.com.au/Australia/drug/search.
30. Diabetes Australia. Glucose self-monitoring in adults with type 1 diabetes or type 2 diabetes [website]. Diabetes Australia; 2017 [cited 2025 Nov 3]. Available from: <https://www.diabetesaustralia.com.au/wp-content/uploads/Glucose-position-statement-2017.pdf>.
31. National Diabetes Services Scheme. Managing hypoglycaemia fact sheet. National Diabetes Services Scheme; 2022 [cited 2025 Nov 3]. Available from: <https://www.ndss.com.au/about-diabetes/resources/find-a-resource/managing-hypoglycaemia-fact-sheet/>.
32. National Diabetes Services Scheme. Living well with type 2 diabetes – what to do when you are sick fact sheet. National Diabetes Services Scheme; 2022 [cited 2025 Nov 3]. Available from: <https://www.ndss.com.au/wp-content/uploads/fact-sheets/fact-sheet-managing-sick-days-for-type2.pdf>.
33. National Diabetes Services Scheme. My sick day action plan. Type 2 diabetes not using insulin fact sheet. National Diabetes Services Scheme; 2025 [cited 2025 Nov 3]. Available from: <https://www.ndss.com.au/wp-content/uploads/ADEA-Sick-Day-Action-Plan-Type-2-not-using-insulin-fillable.pdf>.