Figure 1. Australian type 2 diabetes management algorithm

- All patients should receive education regarding lifestyle measures: healthy diet, physical activity and weight management.
- Determine the individual’s HbA1c target – commonly 7.0% (≤53 mmol/mol), but review regularly.
- Review effect of any therapy changes in three months.

Consider intensive weight management. Weight loss of ≥10% may allow a reduction or cessation of glucose-lowering medication.

Options include:
- low-energy or very low-energy diets with meal replacements
- pharmacotherapy
- bariatric surgery.

Refer to the Australian Obesity Management Algorithm.

Move down the algorithm if not at target HbA1c:
- Check and review current therapies.
- Review adherence to medications.
- Check for side effects.
- Exclude other comorbidities/therapies impacting on glycaemic control.
- Check patient understanding of treatment and self-management.

Refer to the Australian Obesity Management Algorithm.

First line: Metformin is usual first-line therapy unless contraindicated or not tolerated

<table>
<thead>
<tr>
<th>Metformin</th>
<th>SU</th>
<th>Insulin</th>
<th>Less commonly used are PBS-approved acarbose or TGA-approved DPP-4i, SGLT2i, TZD, or GLP-1 RA</th>
</tr>
</thead>
</table>

Check HbA1c target in three months – if not achieved, move down

Second line: Choice of treatment – add on an oral agent or injectable therapy

Choice of second-line agent should be guided by clinical considerations (presence of, or high risk of, CVD, heart failure, chronic kidney disease, hypoglycaemia), side-effect profile, contraindications and cost.

<table>
<thead>
<tr>
<th>SGLT2i</th>
<th>DPP-4i</th>
<th>SU</th>
<th>GLP-1 RA</th>
<th>Insulin</th>
<th>Less commonly used are PBS-approved acarbose or TZD</th>
</tr>
</thead>
</table>

Third line: Choice of treatment – include additional oral agent or GLP-1 RA or insulin

Choice of third-line agent should be guided by clinical considerations as above. Note: combinations not approved by PBS include GLP-1 RA with SGLT2i or GLP-1 RA with insulin. Consider stopping any second-line medication that has not reduced HbA1c by ≥0.5% after three months, unless indicated for non-glycaemic benefits.

<table>
<thead>
<tr>
<th>SGLT2i</th>
<th>DPP-4i</th>
<th>SU</th>
<th>GLP-1 RA</th>
<th>Insulin</th>
<th>Less commonly used are PBS-approved acarbose or TZD</th>
</tr>
</thead>
</table>

Then

- If on metformin+SU+DPP-4i, consider adding SGLT2i, or switching DPP-4i to a GLP-1 RA, or an SGLT2i.
- If on metformin+DPP-4i+SGLT2i, consider adding SU or insulin.
- If on GLP-1 RA, consider adding basal or premixed/co-formulated insulin.
- If on basal insulin, consider adding SGLT2i or GLP-1 RA or bolus insulin with meals, or change to premixed/co-formulated insulin.
- Consider stopping third-line medication that has not reduced HbA1c by ≥0.5% after three months, unless indicated for non-glycaemic benefits.

With increasing clinical complexity, consider specialist endocrinology consultation

Dark blue boxes indicate usual therapeutic strategy (order is not meant to denote any specific preference); usually refers to commonly available, evidence-based, cost-effective therapy.

Light blue boxes denote alternative approaches.

White boxes indicate less commonly used approaches.

CKD, chronic kidney disease; CVD, cardiovascular disease; DPP-4i, dipeptidyl peptidase-4 inhibitor; GLP-1 RA, glucagon-like peptide-1 receptor agonist; PBS, Pharmaceutical Benefits Scheme; SGLT2i, sodium glucose co-transporter 2 inhibitor; SU, sulfonylurea; TZD, thiazolidinedione

Source: Developed in conjunction with, and reproduced with the permission of, the Australian Diabetes Society.