THE TREATMENT AND MANAGEMENT OF TYPE 2 DIABETES

If the person is symptomatically hyperglycaemic, consider insulin or a sulfonylurea
Review treatment when blood glucose control has been achieved

- Reinforce advice on diet, lifestyle and adherence to drug treatment (**one of the major causes of failure to respond is non-adherence of medication)**
- Agree an individualised HbA1c target based on the person's needs and circumstances including preferences, comorbidities, risks from polypharmacy and tight blood glucose control and ability to achieve longer term risk reduction benefits. Where appropriate, support the person to aim for the HbA1c levels in the algorithm. Measure HbA1c levels at 3/6 monthly intervals, as appropriate. If the person achieves an HbA1c target lower than target with no hypoglycaemia, encourage them to maintain it. Be aware that there are other possible reasons for a low HbA1c level
- Base choice of drug treatment on: effectiveness, safety (see MHRA guidance), tolerability, the person's individual clinical circumstances, preferences and needs, available licensed indications or combinations, and cost (if 2 drugs in the same class are appropriate, choose the option with the lowest acquisition cost)
- Do not routinely offer self-monitoring of blood glucose levels unless the person is on insulin, on oral medication that may increase their risk of hypoglycaemia while driving or operating machinery, is pregnant or planning to become pregnant or if there is evidence of hypoglycaemic episodes

If HbA1c ≥ 48mmol/mol

Add metformin ensuring correct timing of dosage to reduce side effects and active titration. If standard release metformin is not tolerated, consider a trial of modified release metformin

Check adherence of medication — **If HbA1c rises ≥ 58 mmol/mol**

FIRST INTENSIFICATION

Consider dual therapy with:
- Metformin and a DPP-4
- Metformin and pioglitazone
- Metformin and a sulfonylurea
- Metformin and a SLGT-2
- Support the person to aim for a HbA1c level of 53mmol/mol

Check adherence of medication — **If HbA1c rises ≥ 58 mmol/mol**

SECOND INTENSIFICATION

Consider triple therapy with:
- Metformin, a DPP-4 and a sulfonylurea
- Metformin, a pioglitazone and sulfonylurea
- Metformin, pioglitazone or a sulfonylurea, and an SGLT-2
- Insulin based treatment
- Support the person to aim for an HbA1c level of 53 mmol/mol

If triple therapy is not effective, not tolerated or contraindicated consider combination therapy with metformin, sulfonylurea and a GLP-1 for adults who have a BMI of 35 or higher (adjust accordingly for people from black, Asian and other minority ethnic groups) and specific psychological or other medical problems associated with obesity or have a BMI lower than 35 and for whom insulin therapy would have significant occupational implications or weight loss would benefit other significant obesity related comorbidities.

Metformin contraindicated or not tolerated

If HbA1c rises to 48 mmol/mol on lifestyle interventions, consider one of the following:
- DPP-4, pioglitazone or a sulfonylurea
- Support the person to aim for a HbA1c level of 48 mmol/mol for people on a DPP-4 or pioglitazone or 53mmol/mol for people on a sulfonylurea

FIRST INTENSIFICATION

If HbA1c rises to 58 mmol/mol consider dual therapy with:
- DPP-4 and pioglitazone
- DPP-4 and sulfonylurea
- Pioglitazone and a sulfonylurea
- Support the person to aim for a HbA1c level of 53mmol/mol

SECOND INTENSIFICATION

If HbA1c rises to 58 mmol/mol:
- Consider insulin based treatment
- Support the person to aim for a HbA1c level of 53mmol/mol

Insulin Based Treatment
- When starting insulin use a structured programme and continue metformin for people without contraindications or intolerance. Review the continued need for other blood glucose lowering therapies.
- Offer NPH insulin once or twice daily according to need
- Consider starting both NPH and short acting insulin either separately or as a premixed (biphasic) human insulin (particularly in HbA1c is 75mmol/mol or higher)
- Monitor people on insulin for the need to change the regimen
- An SGLT-2 in combination with insulin with or without other antidiabetic drugs is an option
- Consider, as an alternative to NPH insulin, using insulin detemir or glargine if the person: needs assistance to inject insulin, lifestyle is restricted by recurrent symptomatic hypoglycaemia episodes or would otherwise need twice daily NPH insulin in combination with oral blood glucose lowering drugs
- Consider pre-mixed (biphasic) preparations that include short-acting insulin analogues, rather than pre-mixed (biphasic) preparations that include short-acting human insulin preparations, if the person prefers injecting insulin immediately before a meal, hypoglycaemia is a problem or blood glucose levels rise markedly after meals