Algorithm for the management of glucose lowering therapy in patients with type 2 diabetes (version 2)

On diagnosis and at each stage reinforce advice on adherence to medication regimen, lifestyle and diet modification. Agree an individualised HbA1c based on comorbidities, patient’s personal needs, preferences, risk of hypoglycaemia and age.

**MONOTHERAPY**
Commence at diagnosis or if HbA1c ≥ 48mmol/mol (6.5%) with lifestyle interventions

**DUAL THERAPY**
Commence if HbA1c ≥ 58mmol/mol (7.5%)

**TRIPLE THERAPY**
Commence if HbA1c ≥ 58mmol/mol (7.5%)

**FAILURES OF TRIPLE THERAPY OR SYMPTOMATIC HYPERGLYCAEMIA**
(Patients must be referred for specialist care)

### MONOTHERAPY
Commence at diagnosis or if HbA1c ≥ 48mmol/mol (6.5%) with lifestyle interventions

**COMMENCE WITH:**
- Generic standard-release metformin (Initial starting dose of 500mg OD for at least 1 week, followed by at least weekly dosage titration to a maintenance dose of 1g BD unless limited by side effects).

(If not tolerated consider switching to Glucopephane SR®)

**IF METFORMIN IS NOT TOLERATED OR CONTRAINDICATED CONSIDER USING ONE OF THE FOLLOWING:**
- Gliclazide OR
- Pioglitazone OR
- Linagliptin OR
- SGLT-2 inhibitor (empagliflozin, canagliflozin or dapagliflozin) - initiation by a specialist only

**CONSIDER INSULIN RESCUE THERAPY WITH SYMPTOMATIC HYPERGLYCAEMIA**

**Patients on metformin, linagliptin, pioglitazone or SGLT-2 inhibitor target HbA1c level of 48mmol/mol (6.5%)**

**Patients on a sulfonylurea aim for HbA1c level of 53mmol/mol (7.0%)**

If target HbA1c is not reached within 3-6 months and adherence to the medication regimen has been confirmed, intensify treatment and proceed to dual therapy

**IF METFORMIN IS TOLERATED CONSIDER THE FOLLOWING COMBINATIONS:**
- Metformin plus gliclazide OR
- Metformin plus pioglitazone OR
- Metformin plus alogliptin/linagliptin OR
- Metformin plus an SGLT-2 inhibitor (empagliflozin, canagliflozin or dapagliflozin) - initiation by a specialist only

**IF METFORMIN IS CONTRAINDICATED OR NOT TOLERATED CONSIDER USING ONE OF THE FOLLOWING:**
- Alogliptin plus pioglitazone OR
- Alogliptin plus gliclazide OR
- Pioglitazone plus gliclazide

**CONSIDER INSULIN RESCUE THERAPY WITH SYMPTOMATIC HYPERGLYCAEMIA**

Aim for an HbA1c level of 53mmol/mol (7.0%)

If target HbA1c is not reached within 3-6 months and adherence to the medication regimen has been confirmed intensify treatment and proceed to triple therapy.

**IF METFORMIN IS TOLERATED CONSIDER THE FOLLOWING COMBINATIONS FOR TRIPLE THERAPY:**
- Metformin plus gliclazide plus alogliptin* OR
- Metformin plus gliclazide plus linagliptin OR
- Metformin plus pioglitazone plus gliclazide OR
- Metformin plus pioglitazone plus alogliptin OR
- Metformin plus pioglitazone plus an SGLT-2 inhibitor (empagliflozin or canagliflozin) - initiation by a specialist only OR
- Metformin plus gliclazide plus an SGLT-2 inhibitor (empagliflozin, canagliflozin or dapagliflozin) - initiation by a specialist only

**OR considering commencing:**

**Insulin-based treatment** (to augment or substitute oral antidiabetic therapy. Insulin must be started by an appropriately trained healthcare professional in insulin initiation and dose adjustment).

**IF METFORMIN IS CONTRAINDICATED OR NOT EFFECTIVE CONSIDER:**

- Oral antidiabetic medication plus a GLP-1 agonist (dulaglutide or liraglutide)

**FOR GLP-1 AGONIST THERAPY PATIENTS MUST MEET SPECIFIC CRITERIA (i.e. BMI and weight-related co-morbidities). REFER TO SHARED CARE GUIDELINES FOR INSTRUCTIONS ON INITIATION BY EITHER SPECIALIST MULTIDISCIPLINARY TEAM, SPECIALIST OR BY PRIMARY CARE PRACTITIONER FOLLOWING CONSULTATION WITH SPECIALIST**

- **Insulin-based treatment** (Insulin must be started by an appropriately trained healthcare professional competent in insulin initiation and dose adjustment).

**IF A PERSON HAS SYMPTOMATIC HYPERGLYCAEMIA (AT ANY PHASE OF TREATMENT) CONSIDER:**

- Insulin rescue therapy (to be initiated by an appropriately trained healthcare professional)

**Aim for an HbA1c level of 53mmol/mol (7.0%)**

* Limited data but not contra-indicated

At every stage base the drug choice on patient/disease-specific factors, safety, effectiveness, cost and local formulary.

Red font indicates that these therapies should only be initiated by a ‘specialist’ (an appropriately trained healthcare professional) or in secondary care.
The following information is provided to support prescribers in the decision making process of treating type 2 diabetes based on the algorithm. This information is not exhaustive therefore please refer to the British National Formulary (BNF) or the Summary of Product Characteristics (SPC) for further detailed information on adverse effect, interactions, precautions and contraindications.

3. PrescQipp information on DPP-4 inhibitors and alogliptin via https://www.prescqipp.info/alogliptin/category/125-alogliptin