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Useful Tips to support decision making to achieve individualised HbA1c targets with Oral hypoglycaemic agents

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Declaration of interests

- Presentations on behalf of
Becton Dickinson, Boehringer Ingelhiem, Johnson and Johnson, Lilly and Novo Nordisk
- Participated in education advisory work with
Becton Dickinson, Boehringer Ingelhiem, Johnson and Johnson and Lilly.
- Funded to attend educational events by Lilly, NovoNordisk, Johnson and Johnson, Takeda, Boehringer Ingelhiem

Diabetes Decision Making Tree

Type 2 Diabetes

Insulin Resistance

Body does not respond to insulin normally

Metformin

Pioglitazone

Beta cell failure

Pancreas unable to produce enough insulin

Gliptins

SU

**GLP1
Injection**

**Insulins
Injection**

Kidney

Encouraged to excrete glucose

Flozin

SGLT2i

Treatment Algorithm for the Management of Type 2 diabetes with Oral Therapy

Lifestyle advice focusing on Healthy eating and increased physical activity to be explored at diagnosis
Referral to structured education programme and Dietitian to be discussed

First line	Metformin If BMI >25 or 23 if South Asian (SA) , eGFR >45 and If HbA1c >48mmol/mol 3 months post diagnosis 500mg once daily post main meal titrating to maximum tolerated dose or 2 grams daily over 4 weeks. Modified release to be used if concordance or side effects an issue		SU (Glimepiride) If Symptomatic (no ketonuria) Or BMI< 25 (23 if south asian) Or Metformin Contraindicated SBGM to be commenced to facilitate dose titration and detect hypoglycaemia			
Second line HbA1c >48mmol/mol after 3 months treatment	Glimepiride or Metformin		Gliptin eGFR related dose	Pioglitazone 15mg once daily to be increased to 30mg after 3 months if no impact on HbA1c	SGLT2 Inhibitor	Insulin
Indications	NICE guidance recommends Which ever not commenced first line SBGM with glimepiride for drivers		Hypoglycaemia avoidance Driver	Insulin resistance South Asian Driver	Facilitates Weight loss Hypoglycaemia avoidance	Persistent Symptoms or minimal response to SU
Contraindications Cautions	Glimepiride Hypoglycaemia	Metformin eGFR<45 max dose 1gram eGFR < 30 Contraindicated	Pancreatitis	Congestive cardiac failure History of Ca Bladder Osteoporosis or Osteomalacia	eGFR<60 History of thrush/UTI Over 75 Postural Hypotension Fluid depletion	
<p>Review HbA1c 3months after commencing a new treatment If no change or rise in HbA1c Stop Gliptin or SGLT2 inhibitor. Increase dose of Pioglitazone to 30mg. Increase Glimepiride dose and commence SBGM to facilitate further dose titration. Review HbA1c at 6 months if HbA1c has not reduced by > 6mmol/mol STOP GLIPTIN, SGLT2 INHIBITOR and PIOGLITAZONE(45mg not indicated if no response to 30mg)</p>						
Third line HbA1c>59mmol/mol or individualised target	Glimepiride if not previously tried Commence SBGM	Pioglitazone Add to Metformin and Cana/ Empa Metformin and Gliptin	Gliptin Add to Metformin and Glimepiride Metformin and pioglitazone	Canagliflozin or Empaglifozin Add to Metformin and pioglitazone Metformin and glimepiride	Insulin Refer Commence Blood Glucose Monitoring	GLP1 Refer Commence Blood Glucose Monitoring

If HbA1c >59mmol /mol or above individualised target after 6 months on triple therapy refer for injectable therapy

Ref: Speaker's own interpretation of BNF and NICE 2009 guidelines

Group work

- For each case study given please identify a treatment pathway.
- Use the treatment template to ask yourself questions to narrow options
- Use prescribing guidance to help answer the questions
- Complete all 3 steps
- Once agreed record option son a flip chart

Case study

Preferred Treatment plan

First line incl. target
Hba1c

Type 2 diabetes due to?

Second line incl. target
Hba1c

Can't have

Third line incl. target
Hba1c

Could use

Case study 1

- Age 68
- Diagnosed 4/12 – referred to XPERT
- Has seen dietitian in the surgery
- BMI 31
- Caucasian
- eGFR 64 (ml/min/1.73m²)
- HbA1c 61mmol/mol

Case 2

- Age 48 Diagnosed 4/12 – declined to XPERT
- Has seen dietitian in the surgery
- BMI 31
- South Asian
- eGFR 64(Ml/min/1.73m²)
- HbA1c 61mmol/mol

Case study 3

- Age 38
- Diagnosed 4/12 –declined XPERT
- Has seen dietitian in the surgery
- BMI 38
- Caucasian
- eGFR 90(Ml/min/1.73m²)
- HbA1c 70mmol/mol

Case study 4

- Age 44
- Diagnosed 4/12 – referred to XPERT
- Has seen dietitian in the surgery
- BMI 31
- South Asian
- eGFR 90(Ml/min/1.73m²)
- HbA1c 70mmol/mol

Case study 5

- Age 80
- Diagnosed 4/12 – referred to XPERT
- Has seen dietitian in the surgery
- BMI 27
- Caucasian
- eGFR 55(Ml/min/1.73m²)
- HbA1c 62mmol/mol

Case study 6

- Age 60
- Diagnosed 4/12 – declined XPERT
- Has seen dietitian in the surgery
- BMI 35
- South Asian
- eGFR 90(Ml/min/1.73m²)
- HbA1c 75 mmol/mol

Equipment needed

- Flip chart stand and flipchart paper
- Marker pens
- 10 copies of slide 6
- Copies of slide 7 – 18 plus 1 for each delegate
- Copies of slides 4 and 5 for each delegate