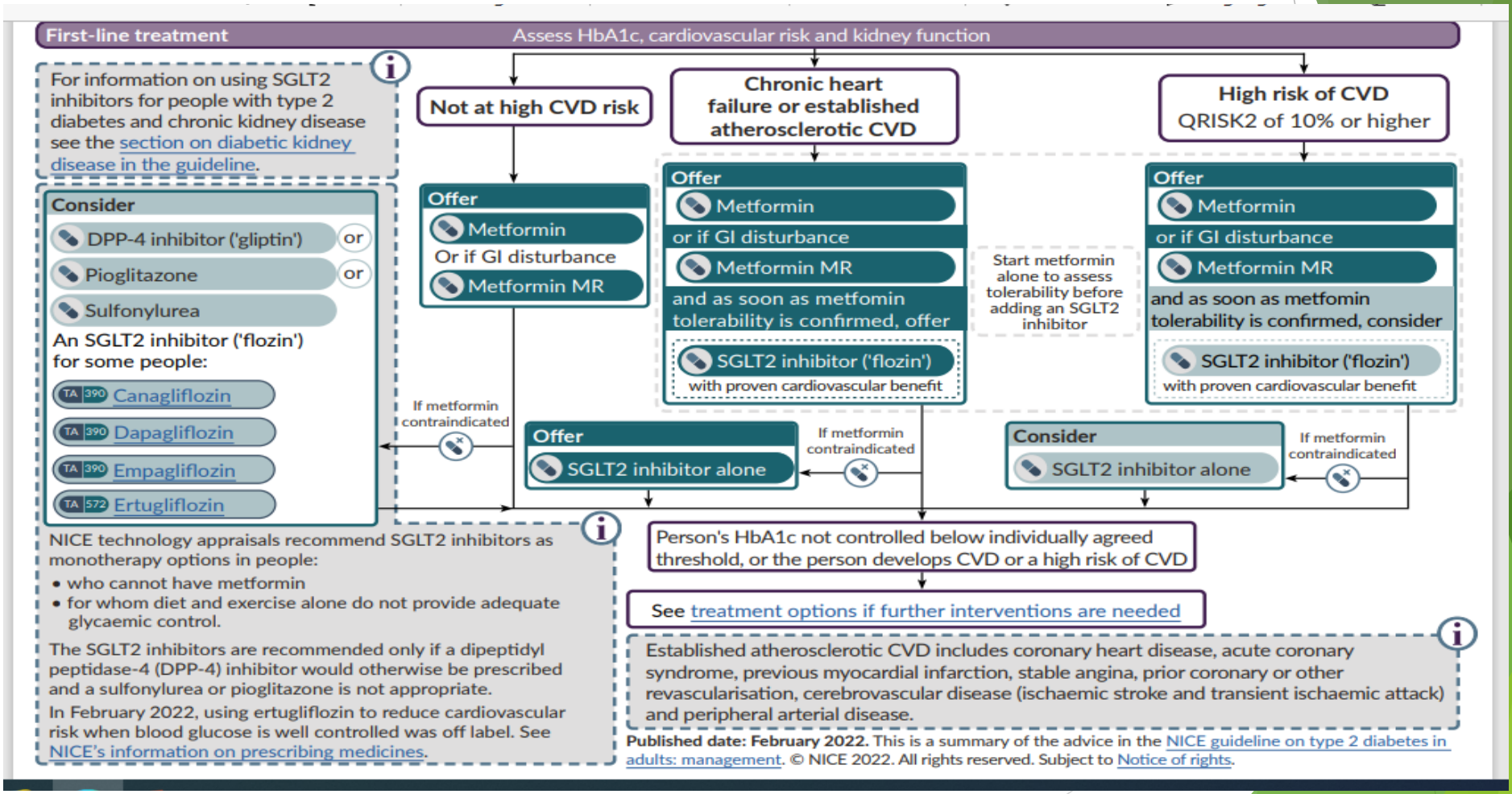
Update to Prescribing in Type 2 Diabetes

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Updated NICE Guidelines March 2022

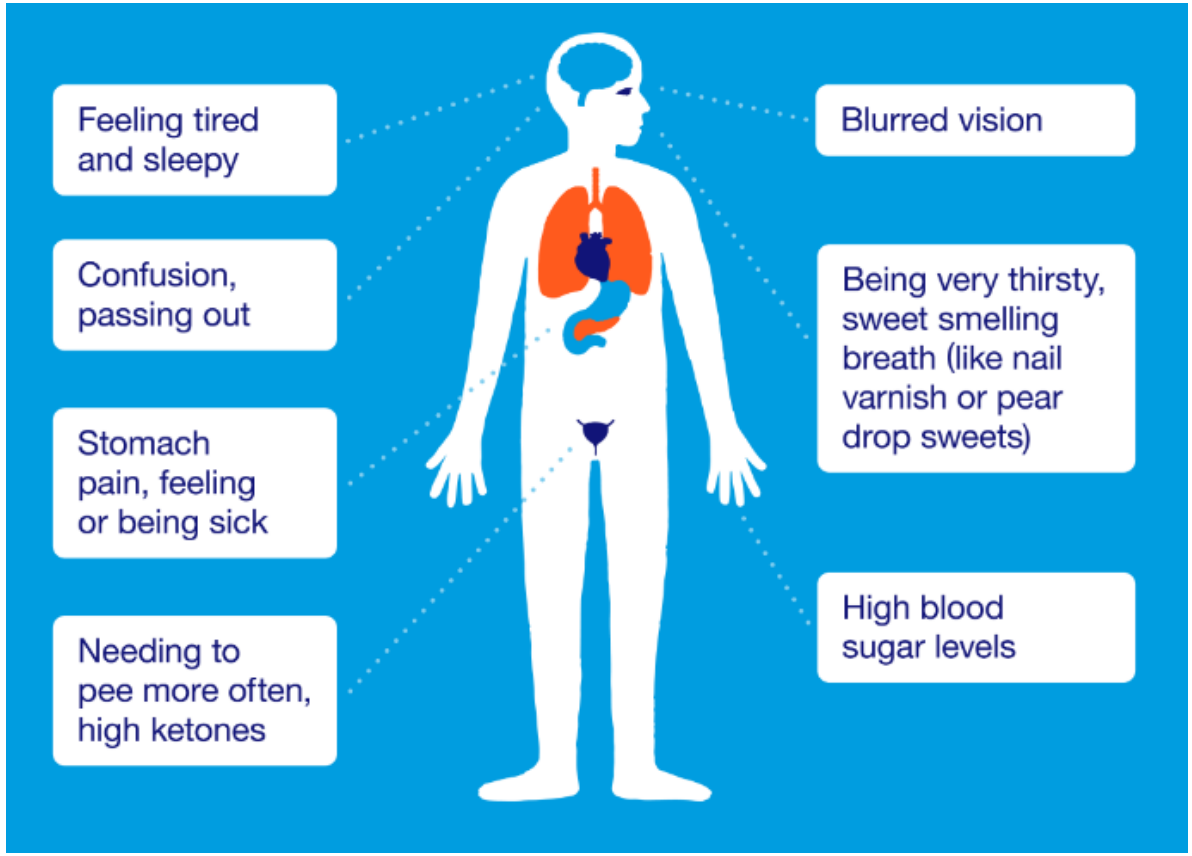


SLT2-inhibitors

- Hypoglycaemia
  - generally do not increase risk of hypo. If adding to insulin or SU therapy reduce dose of insulin or SU.
- Genital and urinary infections
  - thrush type infections are common in early treatment. No need to stop treatment.
  - UTIs relatively rare, treat with standard Abx. If recurrent stop treatment.
- Sick day rules
  - Reinforce at each consultation
  - Temporarily stop if unable to eat or drink, or persistent vomiting or diarrhoea.
  - Encourage patients to contact HCP if unsure how to self-manage.

DKA – diabetic ketoacidosis

- Important to discuss signs and symptoms with patient on initiation



- Rare/very rare side effect.
- Atypical presentation in patients on SGLT2-i – can present with only moderately elevated BG <14mmol/L.
- Important to assess for DKA and check ketones regardless of BG
- Stop treatment immediately if DKA suspected or diagnosed.
- Do not restart unless another cause for DKA has been identified and resolved.

SGLT2-inhibitors

Reduced renal function:

- Dapagliflozin – avoid if eGFR <15ml/min
- Empagliflozin – avoid if eGFR <30ml/min (max dose 10mg if <60ml/min)
- Canagliflozin – avoid if eGFR <30ml/min (max dose 100mg if <60ml/min)

Glucose lowering effect is reduced if eGFR <45ml/min and likely absent in those with severe renal impairment.

- modest reductions in eGFR may occur on initiation – extra monitoring not required.

GLP-1 in primary care

GLP-1 mimetic treatments

If triple therapy with metformin and 2 other oral drugs is not effective, not tolerated or contraindicated, consider triple therapy by switching one drug for a GLP-1 mimetic for adults with type 2 diabetes who:

- have a body mass index (BMI) of 35 kg/m^2 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 kg/m^2 **and**:
  - for whom insulin therapy would have significant occupational implications **or**
  - weight loss would benefit other significant obesity related comorbidities.

Benefits:
Principal advantage over insulin is to facilitate weight loss, reduce appetite and increase satiety.

- **Low risk of hypos**
- **Promote weight loss**
- **Effective HbA1c reduction (>1%/11mmol/mol)**
- **Can be combined with insulin**
- **CV benefits with some agents**
- **No BM monitoring required**

GLP-1 in primary care

- Start at low dose and uptitrate – minimises risk of GI side effects.
- Counsel patients that abdominal symptoms may occur during first weeks of treatment but disappear with time.
- Counsel patients to seek advice if they develop severe abdominal pain that doesn't subside (acute pancreatitis is rare side effect).
- Stop DPP4-inhibitors when initiating.
- Only continue if reduction in HbA1c >11mmol/mol and 3% weight loss after 6/12.
- Review quantities prescribed – pack size is sufficient for one month supply

Renal Function

GLP-1

- Semaglutide (Ozempic), dulaglutide (Trulicity), liraglutide (Victoza) – can be initiated and used up to eGFR >15ml/min
- Exenatide (Bydureon/Byetta) - avoid if eGFR <30ml/min. Caution with immediate release prep if eGFR<50ml/min

Metformin

- **eGFR 30-44ml/min – max dose 1g daily**
- **eGFR < 30ml/min – STOP treatment**

Sulphonylurea

- **Avoid if eGFR <30ml/min**
- **Increased risk of hypo if <60ml/min. Consider dose reduction.**

DPP-4 inhibitors

- **As per BNF guidelines**
- **Linagliptin does not require any dose adjustment (5mg once daily)**

Prescribing for People Living with Type 2 Diabetes & Renal Impairment

GP notebook shortcuts

CKD Stage (ml/min/1.73m2)	Stages G1 & G2 eGFR>60	Stage G3a eGFR 45-59	Stage G3b eGFR 30-44	Stage G4 eGFR 15-30	Stage G5 eGFR<15
Metformin			Reduce dose to 500mg twice daily		
Sulfonylureas		Increased risk of hypoglycaemia if eGFR<60. Consider reducing SU dose. Gliclazide & glipizide preferred as metabolised in the liver			
Repaglinide					
Acarbose				Avoid if eGFR<25	
Pioglitazone					Avoid in those on dialysis
Alogliptin		Reduce to 12.5mg daily if eGFR <50		Reduce to 6.25mg daily	
Linagliptin					
Saxagliptin		Reduce to 2.5mg daily			Avoid in those on dialysis
Sitagliptin			Reduce to 50mg daily	Reduce to 25mg od	
Vildagliptin		Reduce to 50mg once daily if eGFR<50			
Canagliflozin (if albuminuria <30 mg/mmol) at initiation)	Initiate 100mg; titrate to 300 mg if required	Initiate or continue 100mg only and stop if eGFR <45			
Canagliflozin (if albuminuria ≥30 mg/mmol) at initiation)		Initiate or continue 100 mg only		Stay on 100mg if already taking but do not initiate. Stop if renal replacement therapy	
Dapagliflozin – Type 2 Diabetes	Initiate 10mg and stop if eGFR<45. Do not initiate if eGFR<60				
Dapagliflozin – Heart Failure with Reduced Ejection Fraction (HFrEF)	Initiate 10mg in those with HFrEF with or without T2D			No dose adjustment required based on renal function. Limited experience in HFrEF in patients with eGFR <30. Consider discussion with secondary care	
Empagliflozin	Initiate 10mg and titrate to 25mg if required. Do not initiate if eGFR<60	If eGFR later falls <60, reduce dose to 10mg & stop if eGFR<45			
Ertugliflozin	Initiate 5mg and titrate to 15mg if required. Do not initiate if eGFR <60 and stop if eGFR<45				
Dulaglutide qw					
Exenatide bid		Dose escalation should proceed conservatively if CrCl 30-50ml/min			
Exenatide qw					
Liraglutide od					
Lixisenatide od					
Semaglutide s/c qw			Limited experience in patients with severe renal impairment eGFR<30		
Semaglutide oral od			Limited experience in patients with severe renal impairment eGFR<30		
Degludec + Liraglutide (Xultophy)		Intensify glucose monitoring & dose adjust on an individual basis			
Glargine + Lixisenatide (Suliqua)		Intensify glucose monitoring & dose adjust on an individual basis			
Insulins		Intensify glucose monitoring & dose adjust on an individual basis as increased risk of hypoglycaemia			

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No dose adjustment required · Dose adjustment recommended · Not recommended

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