NHS
South Yorkshire
Integrated Care Board

Sheffield Chronic Kidney Disease Management in Adults
a Guideline for Primary Care

Version 1.4

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Version history

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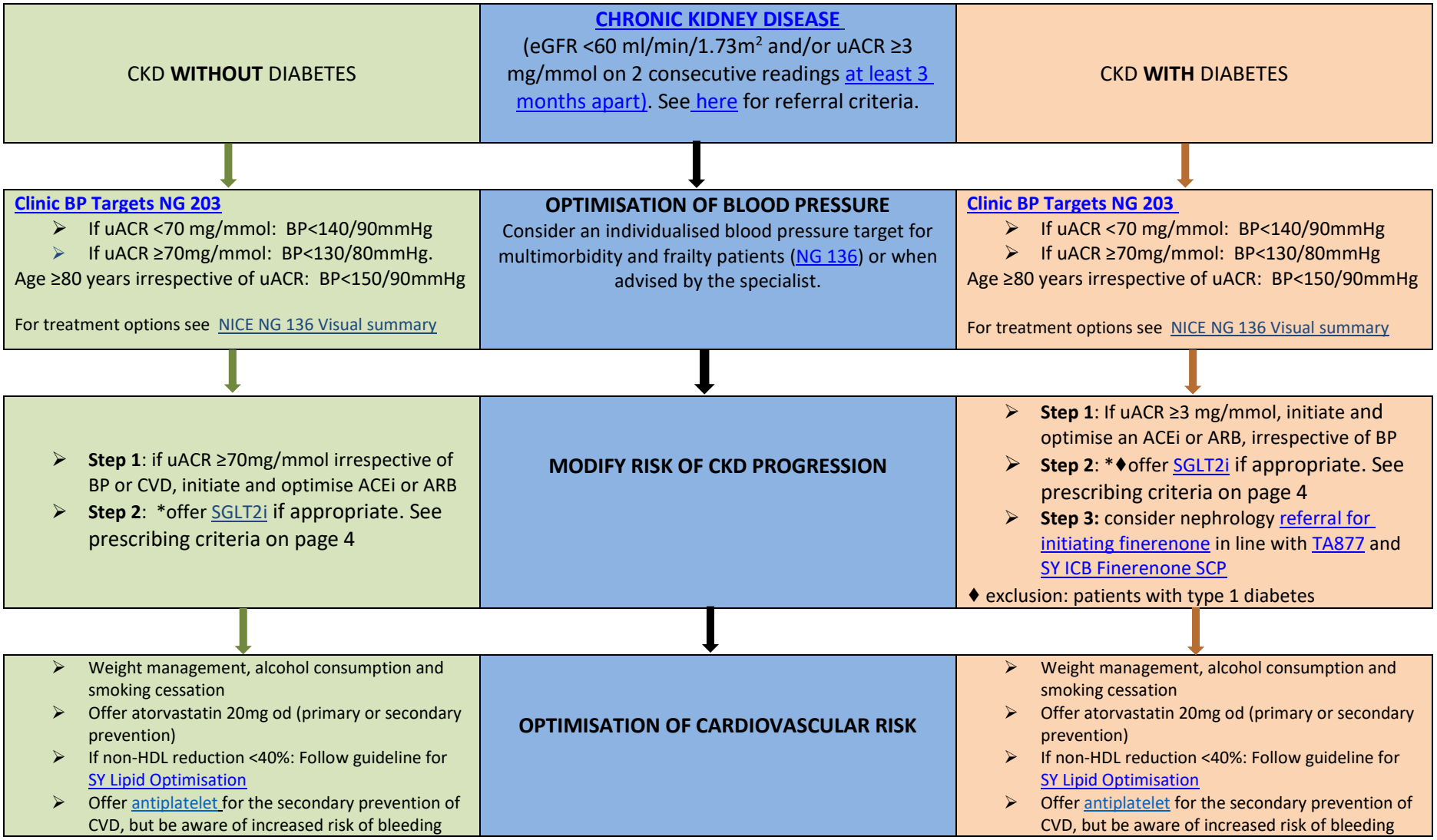


eGFR = estimated glomerular filtration rate; **uACR** = urine albumin creatinine ratio; **ACEi** = angiotensin -converting enzyme inhibitor eg ramipril; **ARB**= angiotensin receptor blocker eg. Losartan; **SGLT2**i=Sodium-glucose transport protein 2 inhibitors, *currently only dapagliflozin and empagliflozin are licensed for CKD

NICE CKD Referral Criteria:

Taking into account individual's preferences and other health conditions refer to a nephrologist as per NICE NG 203:

- with a 5-year Kidney Failure Risk Equation KFRE predicted risk over 5%.
- an ACR of 70 mg/mmol or more, unless known to be caused by diabetes and already appropriately treated
- an ACR of more than 30 mg/mmol (ACR category A3), together with haematuria
- a sustained decrease in eGFR of 25% or more and a change in eGFR category within 12 months
- a sustained decrease in eGFR of 15 ml/min/1.73 m^2 or more per year
- hypertension that remains poorly controlled (above the person's individual target) despite the use of at least 4 antihypertensive medicines at therapeutic doses
- known or suspected rare or genetic causes of CKD
- suspected renal artery stenosis (local recommendation >25% reduction in eGFR within 3 months of starting or increasing the dose of ACEi/ARB, refractory hypertension, pulmonary oedema and/or renal artery bruit).

Referral criteria for finerenone initiation by secondary care in line with TA877 and prescribing guidance from the SY ICB Finerenone Shared Care Protocol : adults with stage 3 and 4 chronic kidney disease (with an eGFR between 25 and 60 ml/min/1.73 m^2) with albuminuria (uACR > 3 mg/mmol) associated with type 2 diabetes that are already on an ACEi/ ARBs and SGLT2 inhibitors at the highest tolerated licensed doses, unless unsuitable. Patients requiring spironolactone for heart failure are not suitable. (**STH Management of Chronic Kidney Disease guidance**)

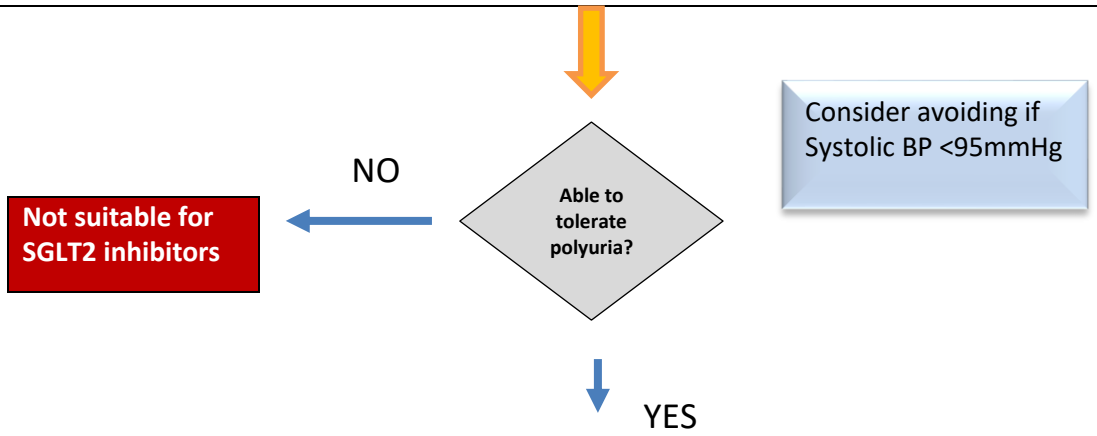
Self-management advice for patients with CKD:

- Provide sources of information, advice, and support. For more details see NICE CKS for Management of chronic kidney disease .
  - Kidney Care UK (website available at www.kidneycareuk.org) a national kidney charity which has a telephone support helpline (telephone 01420 541424) and several Patient information booklets on CKD and associated conditions
  - The NHS patient information leaflet Chronic kidney disease
  - Patient information for Chronic Kidney Disease (CKD): Causes, Symptoms, and Treatment
- Advise on healthy lifestyle measures such as stop smoking ; drinking alcohol in moderation; maintaining a healthy body weight; eating a healthy diet and taking regular exercise
- Advise the person to avoid the use of over-the-counter nonsteroidal anti-inflammatory drugs (NSAIDs) where possible and avoid herbal remedies, and use protein supplements with caution.

Stepwise Approach to Prescribing SGLT2 inhibitors

Chronic Kidney Disease

SGLT2i (Dapagliflozin OR Empagliflozin)
eGFR 20-44 mL/min/1.73m^2 (irrespective of uACR levels)
OR
eGFR 45-90 mL/min/1.73m^2 **and**
uACR ≥22.6mg/mmol **or** T2DM



Cautions and Contraindications for SGLT2 inhibitors (High Risk)

Diabetes contraindications	Non-diabetes contraindications/ cautions
• History of DKA • Rapid progression to insulin (<1 year from diagnosis) • Latent autoimmune diabetes of adulthood • Ketosis-prone T2DM • T1DM (diagnosed or suspected) • Genetic diabetes • Diabetes due to pancreatic disease • Previous lower limb amputation • Existing diabetes foot ulcers • eGFR<15 mL/min/1.73m^2	• Cognitive impairment • Alcoholism likely to increase the risk of falls and metabolic disturbance • Severe hepatic impairment • Acute illness • Recent major surgery • Pregnancy, planning pregnancy or breastfeeding • History of Fournier's gangrene • Recurrent genitourinary infections requiring hospitalisation • Eating disorder • eGFR<15 mL/min/1.73m^2

Caution required for those who are frail and/or >75 years

SGLT2is initiation and monitoring

Dapagliflozin 10mg OD Empagliflozin 10mg OD **Document CKD as indication**	If **patient is on insulin +/or sulfonylureas** (SU eg gliclazide) referral can be made to DSNs for support with glycaemic control For T2DM with: eGFR>45mL/min/1.73m^2&HbA1c<58mmol/mol Consider dose titration: **SGLT2i + insulin**: ↓ insulin dose 20% **SGLT2i + Sulfonylureas**: ↓ SU dose 50%

Patient counselling on:

Genital thrush or UTI
Diabetic ketoacidosis (DKA) and symptoms to look out for: nausea (feeling sick) or vomiting, new sudden worsening of shortness of breath, new sudden stomach pain
Necrotising fasciitis of the perineum (Fournier's gangrene) and symptoms to look out for: pain and redness of the genitals or the area around the genitals and the buttocks; a fever or high temperature
Patient information letter: Getting the most from your SGLT2 inhibitors
Sick day rules

Considerations and monitoring in CKD

SGLT2 inhibitors

1. Prior to initiation, assess the patient's renal function, BP, volume status and blood glucose control. Consider avoiding initiation if systolic blood pressure is persistently below 95 mm Hg
2. Anticipate an acute drop in eGFR of up to 30% in the first 3-4 weeks of treatment (reversible on cessation), likely due to reduction in intra-glomerular pressure. The acute decline will reflect in sustained renovascular benefits over time with reduction to progression to end-stage CKD. In the absence of haemodynamic instability, SGLT2is do not increase risk of AKI.
3. Conduct regular electrolyte and renal function measurements, as appropriate for individual circumstances, comorbidities and concomitant medications which will be determined by clinical judgement on a case-by-case basis (see NG203). For those on additional agents including angiotensin converting enzyme inhibitors (ACEi eg ramipril), angiotensin receptor blockers (ARB eg losartan), mineralocorticoid receptor antagonists (MRAs eg spironolactone) and sacubitril/valsartan (Entresto), renal function and electrolytes need to be assessed on a 3-monthly interval.
4. Stop SGLT2is when patient starts renal replacement therapy (dialysis or transplantation).
5. There is an increased risk of hypoglycaemia when SGLT2i is used alongside sulfonylureas (SU eg gliclazide) and/or insulin, monitor glycaemic control and adjust doses of SU and/or insulin as per below or a referral can be made to the community diabetes team to advise on any dose adjustments;
    - For patients with T2DM and eGFR >45 ml/min/1.73m² + HbA1c<58 mmol/mol on SGLT2i and insulin consider reducing the insulin dose by 20%;
    - For patients with T2DM and eGFR >45 ml/min/1.73m² + HbA1c<58 mmol/mol on SGLT2i and SU consider reducing the SU dose by 50%.
6. Due to its mechanism of action, patients on SGLT2is will test positive for glucose in their urine.
7. All patients should be counselled appropriately and provided with the STH Patient Information Leaflet: Sodium Glucose Co-transporter 2 inhibitors (SGLT2is), Getting the most from your medication

Documentation: It must be clearly documented on the patient's medical record that the primary indication for SGLT2i is CKD and not T2DM or HF to ensure follow up and monitoring is appropriate. Though it should be noted some patients may have multiple conditions for which SGLT2is will be of benefit.

Finerenone

Contraindicatons	Cautions
• Hypersensitivity to the active substance or to any of the excipients • Addison's disease • Severe hepatic impairment • Concomitant treatment with strong inhibitors of CYP3A4 (e.g., clarithromycin, itraconazole, ketoconazole, ritonavir).	• Risk of hyperkalaemia • Moderate hepatic impairment; • Pregnancy: women of childbearing potential should use effective contraception during finerenone treatment

For more details on contraindications and cautions please consult finerenone (Karendia®) SmPC and the SY ICB Finerenone SCP

Monitoring: eGFR and serum potassium levels

For frequency of monitoring in primary care, please refer to section 9 of the SY ICB Finerenone SCP; for dose adjustments depending on K levels, see section 5 of the SY ICB Finerenone SCP.

Advice to patients and carers

The specialist will counsel the patient about the benefits and risks of treatment and will provide the patient with any relevant information and advice, including patient information leaflets on individual medicines.

The patient should be advised to report any of the following signs or symptoms to their GP without delay:

- Palpitations
- Shortness of breath
- Chest pain
- Nausea and/or vomiting

Table 1. Classification of CKD using eGFR and urinary ACR categories and frequency of monitoring/year in line with NG203 and as suggested in the STH Management of Chronic Kidney Disease guidance

GFR categories (ml/min/1.73 m2) Description and range	ACR < 3 mg/mmol A1 (Normal to mildly increased)	ACR 3–30 mg/mmol A2 (Moderately increased)	ACR > 30 mg/mmol A3 (Severely increased)
	Frequency of monitoring/year in line with NG203 and the STH Management of Chronic Kidney Disease guidance		
CKD Stage G1: normal or high (eGFR > 90)	1	1	2
CKD Stage G2: mildly decreased (eGFR 60 to 89)	1	1	2
CKD Stage G3a: mildly to moderately decreased (eGFR 45 to 59)	1	2	3
CKD Stage G3b: moderately to severely decreased (eGFR 30 to 44)	2	3	3
CKD Stage G4:severely decreased (eGFR 15 to 29)	3	3	4
CKD Stage G5: kidney failure (eGFR < 15)	4	4	4

Sick day rules: Always offer advice on sick day rules and reiterate this at every opportunity.

- Always offer counselling on signs and symptoms of DKA.
- Stop SGLT2is if unwell or restricted food intake or dehydration.
- Stop SGLT2is in patients who are hospitalised for major surgery or acute medical illnesses and measure blood ketones.
- Stop taking the following medicines, until you are feeling well again and are eating and drinking normally: diuretics/"water pills"; ACEi medicines ending in "pril" eg ramipril, lisinopril, perindopril; ARBs - names ending in 'sartan' eg losartan, candesartan, irbesartan; NSAIDs - anti-inflammatory pain killers eg ibuprofen, naproxen, diclofenac
- Never stop insulin; adjust the dose as advised, then change the dose gradually back to normal when recovered.
- Omit finerenone during periods of acute illness, such as when experiencing vomiting, diarrhoea, or severe dehydration
- Drink regularly, to avoid dehydration - half a glass (150ml) of milk or fruit juice, or calorie rich soup or yoghurt every hour.
- Restart medication when the patient is well and eating and drinking normally. If a patient remains unwell 48h after re-initiation, advise them to seek immediate medical help.

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Version history

Version 1: approved by APG 20/07/2023 with minor amendment 20/02/2024.

Version 1.1: addition of empagliflozin approved by FSG under delegated authority of APG 03/09/24

Version 1.2: addition of finerenone approved by APG 20/03/2025

Version 1.3: updated in line with NICE TA 1075 and approved by APG: 18/09/2025

Version 1.4: minor update, virtually approved by APG 11/12/2025