GPA Chronic Kidney Disease Pathway for Primary Care

Written in collaboration between:

Primary care & UHN Consulant Nephrologists.

Introduction

Chronic Kidney Disease (CKD) is a progressive condition characterized by a decline in kidney function over time, affecting millions of people worldwide. Early identification and appropriate management in primary care play a crucial role in slowing disease progression, reducing complications, and improving patient outcomes.

This CKD pathway provides a structured approach for primary care clinicians to manage CKD effectively. It includes guidance on risk stratification based on kidney function (eGFR) and proteinuria (uACR), and evidence-based interventions to mitigate cardiovascular and renal risks.

By following this pathway, primary care providers can play a pivotal role in the early detection and effective management of CKD, ultimately reducing the burden of kidney disease and associated complications.

Please consider utilising information from GP Evidence: Chronic Kidney DiseaseGP Evidence when considering and offering medication to patients as part of shared decision making.

[Adapted from: LLR CKD Pathway & CKD Heatmap with permission]

Aim

This pathways aims to standardise CKD Classification and risk stratification and improve disease management. Optimisation of CKD management will reduce disease progression and complications, such as cardiovascular disease.

Definitions

eGFR = Estimated Glomerular Filtration Rate.
KFRE= Kidney Failure Risk Equation.
ABPM = Ambulatory blood pressure monitoring.
uACR = Urine Albumin Creatinine Ratio.
ACEi = Angiotensin - Converting Enzyme inhibitor.
ARB = Angiotensin Receptor Blocker.
CCB = Calcium Channel Blocker.
HBPM = Home blood pressure monitoring.
K^+ = Potassium.
MRA = Mineralocorticoid Receptor Antagonist.
NICE = National Institute for Health and Care Excellence.
SGLT2i = Sodium - GLucose co-Transporter-2 inhibitors
SPC = Summary of Product Characteristics.

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			Protein measurement		
		Category	A1	A2	A3
		ACR	< 3.0	3.0-30	>30 >300 Urgent Clinician Consultation within 48 hours
				Repeat early morning sample if >3.0 within 3 months	
		PCR	<15	15-50	>50-100 >300 Urgent Clinician Consultation within 48 hours
		Urinalysis	Negative to trace	Trace to 1+	2+ or higher
		Clinic BP targets	<140/90 (or <130/80 if T2DM)		<130/80
GFR categories (mL/min/1.73 m2) description and range	G1	≥90	Does NOT meet criteria for CKD, unless structural abnormalities present. ≤1	CKD G1A2 / Xac9z / 1Z1N 1 ▪ Offer statin [1] ▪ Offer or titrate ACEi/ARB first line for BP [2,4] ▪ If T2DM consider SGLT2i (according to license and NICE) [3,5]	CKD G1A3 / XacA2 / 1Z1P ≥1 ▪ Offer statin [1] ▪ Offer or titrate ACEi/ARB for BP OR if uACR>70 [2,4] ▪ If T2DM consider SGLT2i (according to license and NICE) [5]
	G2	60-89	Does NOT meet criteria for CKD, unless structural abnormalities present. ≤1 ▪ Offer SGLT2i if T2DM for glycaemic control	CKD G2A2/ XacA6 /1Z1R 1 ▪ Offer statin [1] ▪ Offer or titrate ACEi/ARB first line for BP [2,4] ▪ If T2DM consider SGLT2i (according to license and NICE) [3,5]	CKD G2A3/ XacA9 / 1Z1S ≥1 ▪ Offer Statin [1] ▪ Offer or titrate ACEi/ARB for BP OR if uACR>70 [2,4] ▪ If T2DM consider SGLT2i (according to license and NICE) [5]
	G3a	45-59	CKD G3aA1/ XacAM / 1Z1T 1 ▪ Offer Statin [1] ▪ Offer or titrate ACEi/ARB first line for BP [2, 4] ▪ Offer SGLT2i if T2DM [5]	CKD G3aA2/ XacAN / 1Z1V 1 ▪ Offer Statin [1] ▪ Offer or titrate ACEi/ARB first line for BP [2,4] ▪ Offer SGLT2i if T2DM or uACR>22.5mmol/L [3,5]	CKD G3aA3/ XacA0 / 1Z1W 2 ▪ Offer Statin [1] ▪ Offer or titrate ACEi/ARB for BP OR regardless of BP if uACR>70mmol/L or T2DM and uACR>3mmol/L[2,4] ▪ Offer SGLT2i [3,5]
	G3b	30-44	CKD G3bA1 / XacAV / 1Z1X 2 ▪ Offer Statin [1] ▪ Offer or titrate ACEi/ARB first line for BP [2,4] ▪ Offer SGLT2i [3,5] ▪ Review regular medications	CKD G3bA2/ XacAW / 1Z1Y 2 ▪ Offer Statin [1] ▪ Offer or titrate ACEi/ARB first line for BP [2,4] ▪ Offer SGLT2i [3,5] ▪ Consider Finerenone if T2DM (according to license and NICE) [5] ▪ Review regular medications	CKD G3bA3/ XacAX / 1Z1Z ≥2 ▪ Offer Statin [1] ▪ Offer or titrate ACEi/ARB for BP OR regardless of BP if uACR>70mmol/L or T2DM and uACR>3mmol/L[2,4] ▪ Offer SGLT2i [3,5] ▪ Consider Finerenone if T2DM (according to license and NICE) [5] ▪ Review regular medications
	G4	15-29	CKD G4A1 / XacAb /1Z1A 2 ▪ Offer Statin [1] ▪ Offer or titrate ACEi/ARB first line for BP [2,4] ▪ Offer SGLT2i (note limits of eGFR initiation for individual SGLT2i) [3,5] ▪ Review regular medication	CKD G4A2 / XacAd / 1Z1B 2 ▪ Offer Statin [1] ▪ Offer or titrate ACEi/ARB first line for BP ▪ Offer SGLT2i (note limits of eGFR initiation for individual SGLT2i*) [3,5] ▪ Consider Finerenone if T2DM (according to license and NICE) [5] ▪ Review regular medications	CKD G4A3 / XacAe / 1Z1C 3 ▪ Offer Statin [1] ▪ Offer or titrate ACEi/ARB for BP OR regardless of BP if uACR>70mmol/L or T2DM and uACR>3mmol/L[2,4] ▪ Offer SGLT2i (note limits of eGFR initiation for individual SGLT2i*) [3,5] ▪ Consider Finerenone if T2DM (according to license and NICE) [5] ▪ Review regular medication
	G5	<15	CKD G5A1 / XacAf / 1Z1D 4 ▪ Offer Statin [1] ▪ Offer or titrate ACEi/ARB first line for BP [2,4] ▪ Review regular medications	CKD G5A2 / XacAh / 1Z1E ≥4 ▪ Offer Statin [1] ▪ Offer or titrate ACEi/ARB first line for BP [2,4] ▪ Review regular medications	CKD G4A3 / XacAi / 1Z1F ≥4 ▪ Offer Statin [1] ▪ Offer or titrate ACEi/ARB for BP OR regardless of BP if uACR>70mmol/L or T2DM and uACR>3mmol/L[2,4] ▪ Review regular medications

KEY
CKD GxAx / SystmOne Code / Emis Code
1 Monitoring frequency per year [NICE]
Does not meet criteria for CKD, unless structural abnormalities present
Mild CKD
Moderate CKD
Severe kidney disease
[n] refer to box 'n' on following page for additional guidance

*Minimum eGFR for starting SGLT2i
Dapagliflozin = 15ml/min
Empagliflozin = 20ml/min
Canagliflozin = 30ml/min

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Chronic Kidney Disease

eGFR <60ml/min2 or uACR >3mg/mmol

Refer to NICE secondary care referral criteria

Patient EDUCATION for CKD: Click here to access

WITHOUT Type 2 Diabetes

WITH Type 2 Diabetes

1 OPTMISATION OF CARDIOVASCULAR RISK

Weight management, excess alcohol consumption and smoking cessation – consider referral to PCN Health and Wellbeing Coach, STAR, weight management services (NORTH, WEST), smoking cessation services (NORTH, WEST), as appropriate.

·Consider low dose antiplatelet (secondary prevention only)

Lipid management:

·Initiate **atorvastatin 20mg od** (primary & secondary prevention) REGARDLESS of QRISK score.

·If lipid target not met titrate atorvastatin or add ezetimibe, see lipid management guidelines

2 NON T2DM BP Management

Targets:

·If uACR <70 mg/mmol: BP <140/90mmHg

·If uACR ≥70 mg/mmol or increased CV risk:

BP <130/80mmHg and refer for nephrology assessment

Medication:

1st. **ACEi** / **ARB** , titrate and then add;

2nd. **CCB** or **indapamide**

3rd. Then all 3.

If aged ≥55 or Black African / African-Caribbean family origin, start with CCB

If >3 agents; confirm HTN with ABPM or HBPM, seek advice and / or consider α-blocker / MRA

3

If uACR >70 mg/mmol:

Initiate/optimise an **ACEi** or **ARB**, irrespective of BP.

If eGFR 20-45ml/min regardless of uACR

OR

If eGFR 45-90ml/min and uACR >22.5mg/mmol

Initiate an **SGLT2i*** (dapagliflozin 10mg OD)

OPTIMISATION OF BLOOD PRESSURE

For additional guidance on prescribing ACEI/ARB/diuretics in CKD click here.

For complete information on dosing SGLT2i in different circumstances, refer to individual SPCs.

Minimum eGFR for starting SGLT2i

Dapagliflozin 15 ml/min

(Patients can continue, with nephrology advice, if already on SGLT2i)

Ensure education is given when initiating an SGLT2i, video link, written information link including side effects.

SGLT2i can be considered in people with an eGFR <20mL/min on specialist advice.

SGLT2i should not be used in people with type 1 diabetes.

MODIFY RISK OF CKD PROGRESSION

4 T2DM BP Management

DM BP target <130/80mmHg

Medication:

1st. **ACEi** / **ARB** then add;

2nd. **CCB** or **indapamide**

3rd. Then all 3.

>3 agents; confirm HTN with ABPM or HBPM, seek advice and / or consider α-blocker / MRA

5

If uACR >3 mg/mmol:

Initiate/optimise an **ACEi** or **ARB**, irrespective of BP

Initiate an **SGLT2i*** (dapagliflozin 10mg OD).

If eGFR >25ml/min, uACR >3 mg/mmol:

Consider adding in **finerenone**† on specialist recommendation for patients at high risk of progression ().

†Finerenone should not be used concomitantly with other MRAs e.g. spironolactone, eplerenone.

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*NICE Referral Criteria

Taking into account the individual's wishes and other health conditions, considering referral to a hospital kidney doctor if:

- 5-year KFRE predicted risk over 5% (see right for more details)
- Other NICE referral criteria include:
- an uACR of 70 mg/mmol or more, unless known to be caused by diabetes and already appropriately treated,
- uACR of more than 30 mg/mmol (uACR 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 15ml/min/1.73 m2 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.

If there is any uncertainty, please contact the Renal team, via advice and guidance.

*Notes on starting SGLT2i

Provide patient education on:

- Sick day guidance
- Urinary tract infection
- Normoglycaemic ketoacidosis

Information for health professionals and patients at https://guidelines.ukkidney.org/

Kidney Failure Risk Equation (KFRE)

Using the patient's Urine, Sex, Age and eGFR, the kidney failure risk equation provides the 2 and 5 year probability of treated kidney failure for a potential patient with CKD stage 3a to 5.

Notes on starting Finerenone

Identifying patients

Finerenone is recommended for treating high risk CKD (eGFR≥25ml/min & uACR≥3mmol/L) in people **with type 2 diabetes** who are already on an ACEi /ARB and an SGLT2i (standard care)
Start following a discussion with the renal team.

Dosing (refer here for prescribing information)

Finerenone can be offered if serum K+<4.8mmol/L. If the eGFR is between 25-60mL/min, a starting dose of 10mg once daily is recommended.
This can be increased if; the potassium remains below 4.8mmol/L and the eGFR has not decreased more than 30% from baseline.
The recommended target dose is 20mg once daily.

Monitoring

In line with monitoring for other therapies in this area
(MRAs), serum potassium should be measured 4-weeks after starting and dose changes.

Notes on Managing Hyperkalaemia

- Disease modifying therapies (ACEi/ARB/MRA) should not routinely be discontinued or down-titrated.
- Patients can be advised about dietary changes to reduce potassium, see Kidney Kitchen for patient resources.
- Review other medication,
  -can other K^+ sparing medicines be stopped/reduced?
  -are other K^+ reducing medicines indicated?
- Novel potassium binders (Lokelma)

are recommended for people with stage 3b-5 CKD not on dialysis if they:

-Have a serum potassium >6.0mmol/L and;
-Are on a sub-maximal dose of ACEi/ARB because of hyperkalaemia

Further information of the management of hyperkalaemia in the community, can be found on the **UKKA website** and from **here** from Edinburgh Renal Unit. **Lokelma can be started following discussion with renal team.**
If there is any uncertainty about when to restart disease modifying therapies after hospital discharge (e.g. ACEi / ARB / SGLT2i / MRA) or prescribing of Lokelma, please contact the Renal team via advice and guidence.

References

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Document History

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