

# CKD in Primary Care: new approaches to reduce inequalities and save lives

## LKN CKD Early Identification and Optimisation Pathways (3 in 3)

### Contents of this information pack:

1. **Rationale:** The case for change on how we identify and manage Chronic Kidney Disease (CKD) is outlined
2. **Early identification pathway:** The Kidney Health Check in adults living with diabetes or hypertension – how to identify CKD early
3. **Optimisation pathway** in adults living with CKD and diabetes outlines “3 key interventions within 3 months to save lives”
4. **Optimisation pathway** in adults living with CKD (without diabetes) outlines “3 key interventions within 3 months to save lives”
5. **Acknowledgements & References**

# Optimising Identification & Management of Chronic Kidney Disease: A Rationale

## What is Chronic Kidney Disease?

- CKD is “a reduction in kidney function or damage to structure over a period of 3 months with associated health implications.”
- **Albuminuria** based on a uACR result is the most common first marker of kidney damage.

## Kidney disease: A UK public health emergency

- More than 1 in 10 of the UK population live with CKD.
- CKD is a high-risk condition for cardiovascular disease.
- The total annual economic burden of kidney disease in the UK is £7.0 billion, with £6.4 billion being direct costs to the NHS— about 3.2% of NHS budgets.
- Failure to identify and treat CKD doubles mortality, meaning it is important to ensure people are on optimal therapies as soon as possible.

## What does the evidence tell us?

- Diagnosing and coding CKD **early** enables people to access interventions such as lifestyle advice and pharmacotherapy to reduce the risk of CKD progressing and of significant cardiovascular complications.
- **Albuminuria** is an independent risk factor for progression to end stage kidney disease and cardiovascular mortality, at any eGFR.
- uACR is therefore **essential** in combination with eGFR to diagnose CKD in high-risk patients.

## The challenge for London

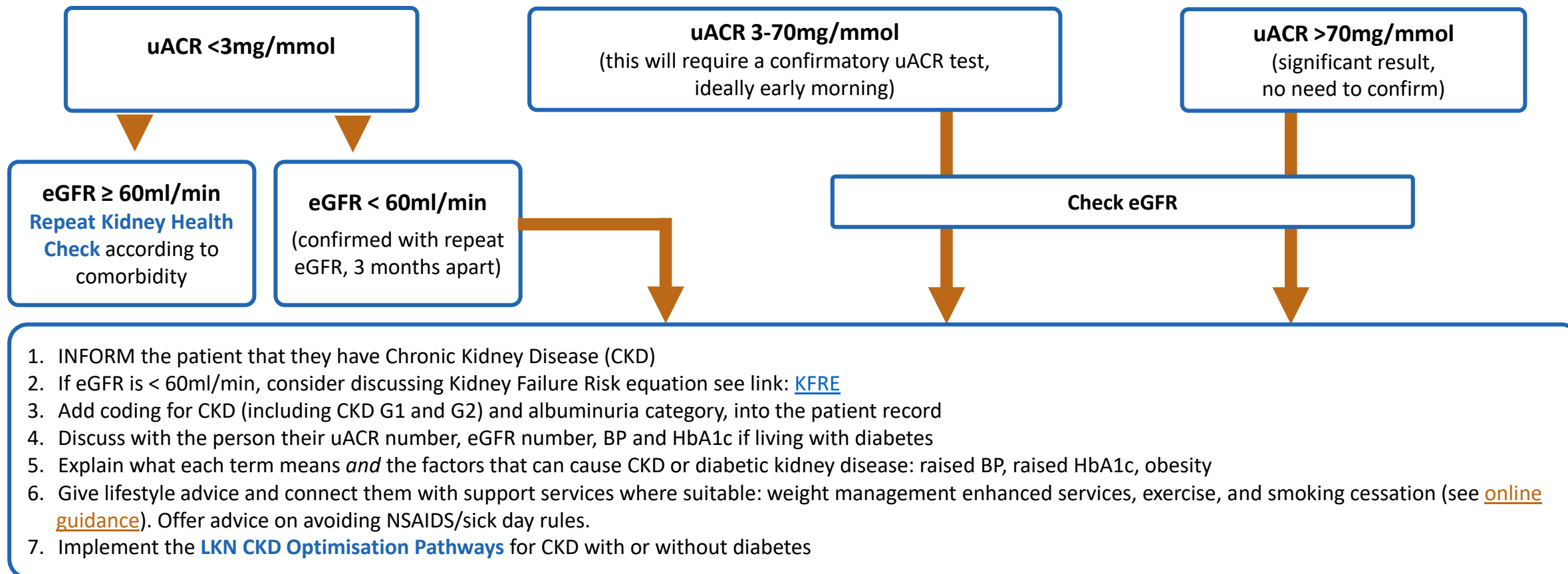
- High levels of social deprivation
- Ethnically diverse populations
- Poor outcomes due to high rates of undiagnosed and uncoded CKD
- Unwarranted variation in clinical practice

# The **Kidney Health Check** for Adults Living with Diabetes or Hypertension: How to identify Chronic Kidney Disease **early** *LKN CKD Early Identification Pathway*

What is a **Kidney Health Check**? It is the combination of both an **eGFR** *and* a **uACR** test

## Who should have a **Kidney Health Check**?

1. People living with **diabetes** should have a yearly kidney health check
2. People living with **hypertension** should have a kidney health check every 1-5 years (annually for poorly controlled hypertension)
3. See [NICE CKD Assessment and Management](#) for uACR testing in other health conditions



# 3 key actions within 3 months to save lives (3 in 3)

## LKN CKD Optimisation Pathway

### In adults with Type 2 diabetes and CKD

(eGFR 20–90ml/min/1.73m<sup>2</sup>)



#### **ACTION 1 (Month 1)**

##### **Maximum intensity RAS / RAAS blockade**

Start ACE-inhibitor or ARB and titrate to maximum tolerated licensed dose (*NICE, NG203*) within one month. Ensure the patient is on a high intensity statin, unless contraindicated.



#### **ACTION 2 (Month 2)**

##### **Initiate SGLT-2 inhibitor according to NICE guidance (see next page)**

Consider/counsel on risks of diabetic ketoacidosis (which may be euglycaemic), sick day rules, risk of UTI/fungal infections. Consider adjusting sulfonylureas/insulin where eGFR > 45ml/min and HbA1c < 58mmol/mol to mitigate risk of hypoglycaemia.



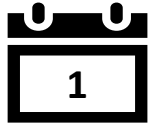
#### **ACTION 3 (Month 3)**

##### **Initiate further blood pressure agent to target < 140/90mmHg, unless uACR >70mg/mmol (then 120-129/80mmHg)**

If BP remains above target, initiate 2<sup>nd</sup> line BP agents as per NICE guidance (*NG203 / NG136*)  
Consider Finerenone as an add on therapy in patients with eGFR 25-60ml/min, uACR > 3mg/mmol and potassium < 5mmol/l

# 3 key actions within 3 months to save lives (3 in 3)

## LKN CKD Optimisation pathway for adults with Type 2 Diabetes and CKD (eGFR 20–90ml/min/1.73m<sup>2</sup>) (excluding people with polycystic kidney disease or on immunological therapy for renal disease, and renal transplant patients)

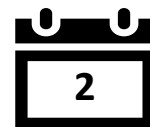


### Month 1, Visit 1: RAS/ RAAS blockade

- ✓ Initiate Atorvastatin 20mg OD unless contra-indicated  
*or*  
Increase dose up to 80mg OD (40mg OD in GFR<30ml/min) to achieve target cholesterol level (target: 40% reduction in non-HD cholesterol)
- ✓ Initiate treatment with ACEi (Ramipril 5mg once daily) or ARB (Irbesartan 150mg once daily).  
Increase to maximum licenced dose tolerated to achieve BP <140/90mmHg. If uACR is >70mg/mmol, target 120-129/80mmHg. Other BP agents may need to be reduced to optimise ACEi/ARB dosing.
- ✓ In people with significant frailty, consider individualised BP targets as appropriate.
- ✓ Recheck creatinine and potassium within 2 weeks; accept 30% increase in creatinine or 25% decrease in eGFR with initiation/dose change in ACEi/ARB. If over 25% change in eGFR or K ≥6mmol/l, consult local renal team.

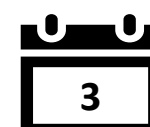
⚠ Stop nephrotoxic medications: Advise against use of NSAID's and discuss alternatives

Refer or re-refer to local specialist services at any stage if required



### Month 2, Visit 2: SGLT2 inhibitor treatment

- ✓ Initiate treatment with SGLT2 inhibitor (as per NICE)
  - Empagliflozin GFR 20-90ml/min
  - Dapagliflozin GFR 25-75ml/min
  - Canagliflozin GFR >30ml/min and uACR>30mmol/l
- ⚠ Counsel patient on sick day rules, and the risk of UTI/fungal infections. (Suspend SGLT-2i if vomiting, in severe sepsis and peri-operatively)
- ⚠ Counsel on signs and symptoms of diabetic ketoacidosis (DKA). Advise that DKA may be in the context of euglycaemia.  
  
Consider adjusting sulfonylureas/insulin in those with eGFR > 45ml/min and glycated Hb < 58mmol/mol to mitigate the complication of hypoglycaemia.  
  
Counsel patient regarding avoidance of foot complications. (Suspend SGLT-2i if acute foot ulceration/ischaemia develops)



### Month 3, Visit 3: Continue RAS/RAAS blockade, and optimise blood pressure

- ✓ Initiate further blood pressure agent to target to <140/90mmHg, or 120-129/80mmHg if uACR >70mg/mmol.

Consider Finerenone as add on therapy in those on maximal tolerated/indicated dose of ACE/ARB and SGLT2i in patients with GFR25-60ml/min, residual albuminuria and potassium <5mmol/l.

#### For more information:

[NICE NG203 Chronic Kidney Disease: Assessment and Management](#)

[Hypertension in Adults: Diagnosis and Management \(NG136\)](#)

[UK Kidney Association Clinical Practice Guideline: SGLT-2 Inhibition in adults with kidney disease \(October 2021\)](#)

[NICE TA877 Finerenone for treating chronic kidney disease in type 2 diabetes](#)

#### At each review:

Inform your patient of their eGFR, uACR and BP



Assess adherence with medications and discuss any reasons for non-adherence

Reiterate the meaning of each marker



Give detailed advice on a 'no added salt' diet and/or refer to local specialist services

Discuss progress with each target



# 3 key actions within 3 months to save lives (3 in 3)

## *LKN CKD Optimisation Pathway*

### In adults without Type 2 diabetes, with CKD

(eGFR 20–45ml/min/1.73m<sup>2</sup> irrespective of the presence of albuminuria or eGFR 45–90ml/min/1.73m<sup>2</sup> and uACR>22.6mg/mmol)

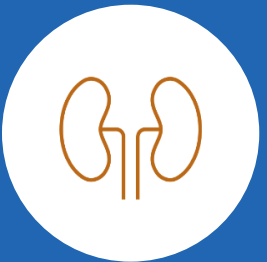


#### **ACTION 1 (Month 1)**

##### **Maximum intensity RAS / RAAS blockade**

First, ensure the patient is on a statin, unless contraindicated.

Start ACE-inhibitor or ARB if indicated, and titrate to maximum tolerated licensed dose (*NICE, NG203*) within one month.



#### **ACTION 2 (Month 2)**

##### **Initiate SGLT-2 inhibitor according to NICE guidance (see next page)**

Counsel patient on sick day rules and the risk of UTI/fungal infection.



#### **ACTION 3 (Month 3)**

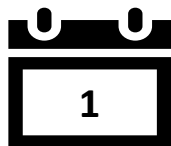
##### **Initiate further blood pressure agent to target < 140/90mmHg unless uACR >70mg/mmol (then <130/80mmHg)**

If BP remains above target, initiate 2<sup>nd</sup> line BP agents as per NICE guidance (*NG203 / NG136*).

# 3 key actions within 3 months to save lives (3 in 3)

## LKN CKD Optimisation pathway for adults without Type 2 Diabetes, with CKD

(excluding people with polycystic kidney disease or on immunological therapy for renal disease, and renal transplant patients)



### Month 1, Visit 1: RAS/ RAAS blockade

- ✓ Initiate Atorvastatin 20mg OD unless contra-indicated or  
Increase dose up to 80mg OD (40mg OD in GFR<30ml/min) to achieve target cholesterol level (target: 40% reduction in non-HD cholesterol)

Indications for ACEi or ARB therapy:  
uACR>70mg/mmol or >30mg/mmol if hypertensive

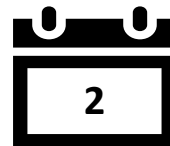
- ✓ Initiate treatment ACEi (Ramipril 5mg once daily) or ARB (Irbesartan 150mg once daily) unless contraindicated. Increase to maximum licenced dose tolerated to achieve BP <140/90mmHg. If uACR is >70mg/mmol, target 120-129/80mmHg. Other BP agents may need to be reduced to optimise ACEi/ARB dosing.

- ✓ In people with significant frailty, consider individualised BP targets as appropriate.

- ✓ Recheck creatinine and potassium within 2 weeks; accept 30% increase in creatinine or 25% decrease in eGFR with initiation/dose change in ACEi/ARB. If over 25% change in eGFR or K ≥6mmol/l, consult local renal team.

- ⚠ Stop nephrotoxic medications: Advise against use of NSAID's and discuss alternatives.

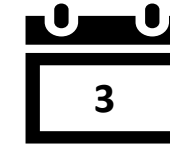
Refer or re-refer to local specialist services at any stage if required



### Month 2, Visit 2: SGLT2 inhibitor treatment

- ✓ Initiate treatment with SGLT2 inhibitor (as per NICE)
  - Empagliflozin: GFR 20-45ml/min, irrespective of proteinuria or GFR 45-90ml/min AND uACR > 22.6mmol/l
  - Dapagliflozin: GFR 25-75ml/min and uACR > 22.6mmol/l

- ⚠ Counsel patient on sick day rules, the risk of UTI/fungal infections. Suspend SGLT-2i if vomiting, in severe sepsis and peri-operatively.



### Month 3, Visit 3: Continue RAS/RAAS blockade, and optimise blood pressure

- ✓ Initiate further blood pressure agent to target to < 140/90mmHg, or 120-129/80mmHg if uACR >70mg/mmol.

For more information:

[NICE NG203 Chronic Kidney Disease: Assessment and Management Hypertension in Adults: Diagnosis and Management \(NG136\)](#)

[Dapagliflozin for treating CKD NICE TA775](#)

[UK Kidney Association Clinical Practice Guideline: SGLT-2 Inhibition in adults with kidney disease \(October 2021\)](#)

#### At each review:

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Reiterate the meaning of each marker



Give detailed advice on a 'no added salt' diet and/or refer to local specialist services

Discuss progress with each target



# 3 key actions within 3 months to save lives (3 in 3)

## LKN CKD Early Identification and Optimisation Pathways



### References & Acknowledgements

The London Kidney Network reviewed the following guidelines in producing these pathways:

1. [Dapagliflozin for treating chronic kidney disease \(NICE TA775, published March 2022\)](#)
2. [Empagliflozin for treating chronic kidney disease \(TA942 Published: 20 December 2023\)](#)
3. [Chronic Kidney Disease: Assessment and Management \(NICE guideline NG203, updated November 2021\)](#)
4. [UK Kidney Association Clinical Practice Guideline: Sodium-Glucose Co-Transporter-2 \(SGLT-2\) Inhibition in Adults with Kidney Disease \(published October 2021\)](#)
5. [Clinical Practice Guidelines for management of hypertension and renin-angiotensin-aldosterone system blockade in adults with diabetic kidney disease: 2021 update \(UK Kidney Association and Association of British Clinical Diabetologists\)](#)
6. [Hypertension in adults: diagnosis and management \(NICE guideline NG136, updated March 2022\)](#)
7. [Kidney disease a UK public health emergency \(UKKA\)](#)

#### Acknowledgments

The London Kidney Network gratefully acknowledges the stakeholder feedback during the development of these pathways, including feedback from CKD nurses, GP's, nephrologists, pharmacists, and diabetologists.





## Thank you to those who were involved in producing the LKN CKD Early Identification & Optimisation Pathways (3 in 3)

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