

# Chronic Kidney Disease Project Supporting Document

## Background

Chronic Kidney Disease (CKD) is defined by NICE as a reduction in kidney function or structural damage (or both) present for 3 months or more with associated health implications<sup>1</sup>. It is estimated that 1 in 10 of the UK population have CKD with a third of those thought to be undiagnosed. CKD is a major risk factor for cardiovascular disease. Early identification of patients with CKD along with appropriate / consistent coding can help to optimise patient care and prevent the risk of cardiovascular disease, hospital admissions and progression to end stage kidney failure<sup>2</sup>. This document describes the project and collates the relevant clinical guidance. Clinicians remain professionally responsible and accountable for their actions when using this guidance.

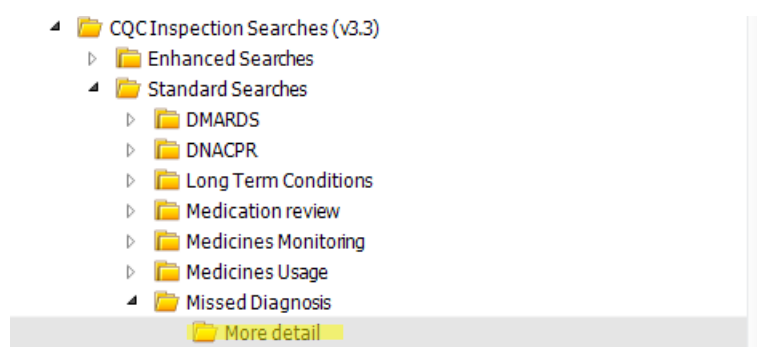
## Recommendation

### Part 1

Practices are asked to run the missed diagnosis search on their clinical system. This search will identify patients who have had 2 or more eGFRs readings < 60 ml/min/1.73m<sup>2</sup> in the last 2 years. Its location is detailed below in both clinical systems.

#### EMIS Web

Enter the “population reporting” module. Open the Ardens folder and select the folder highlighted on the picture below.

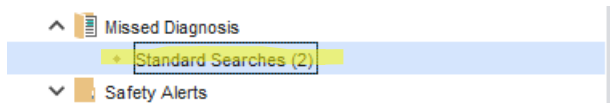


Then select and run the report highlighted in the screenshot below

Name	Population Count	%	Last Run	Search Type	Scheduled	Code System
More detail						
Possible CKD 3-5 - 2 or more eGFR under 60 in the last 2y (including lat...				Patient		SNOMED CT
Possible DM - 2 or more HBA1c 48+ (exc. GDM & steroid-DM in last 1y o...				Patient		SNOMED CT

## **SystemOne**

Enter the clinical reporting module, then open the Ardens folder. Scroll down and select the folder highlighted below



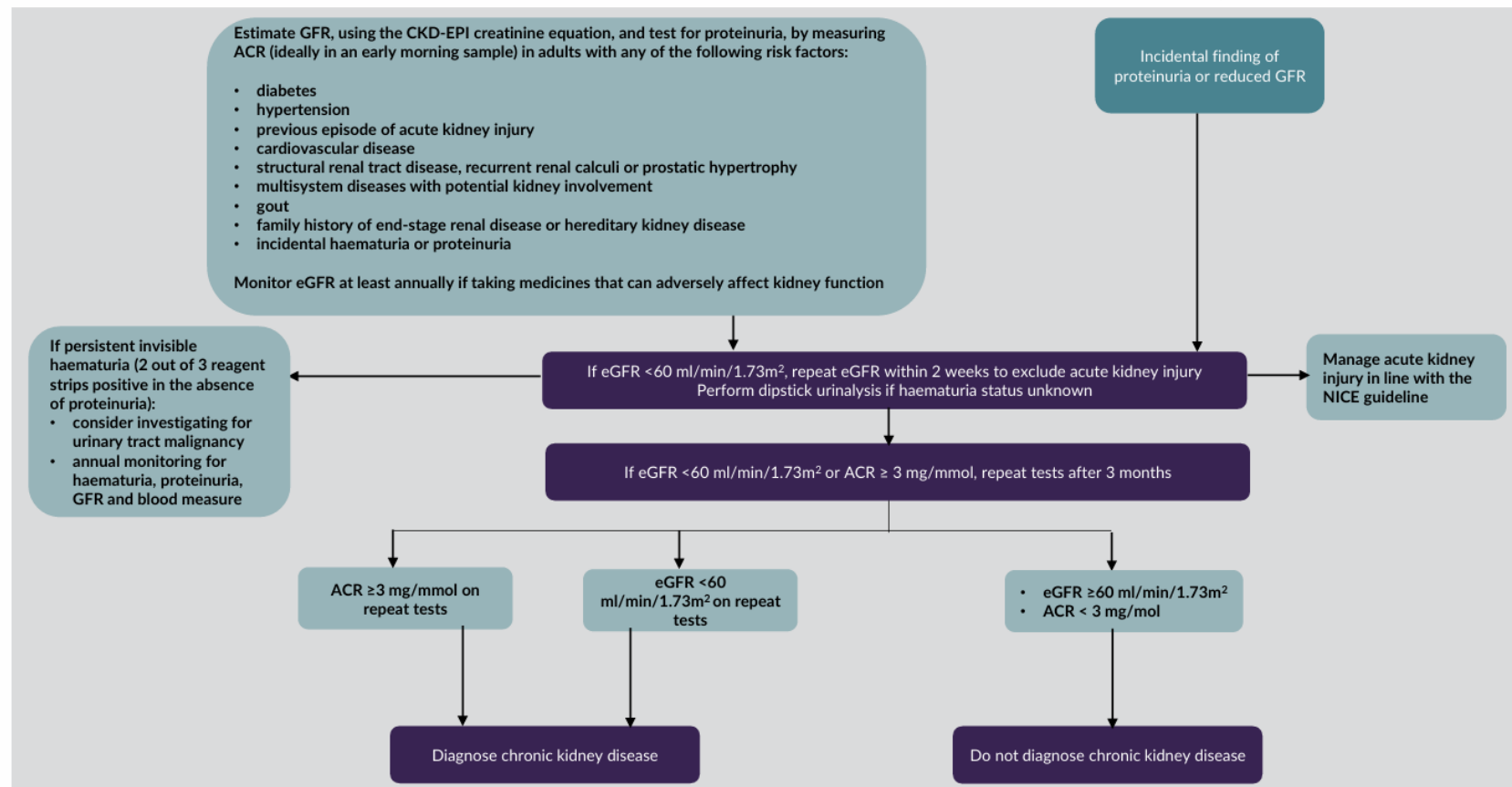
Select and run the report highlighted in the screenshot below

Name
Possible CKD 3-5 - 2 or more eGFR <60 in the last 2y (including latest)
Possible DM - 2 or more HBA1c >=48 (exc. GDM & steroid-DM in last 1y or HbRx)

The next step is to review the patients identified in the search. To aid diagnosis of CKD in adults please see diagram below. Further monitoring/investigations may need to be carried out to determine if the patient has CKD. Urinalysis should be performed alongside measurement of creatinine and eGFR in anyone being evaluated for CKD. The Ardens “Possible CKD” template is a useful reference source here to identify factors that should be considered. Paediatric patients may appear in the search results. If this is the case, please review urgently and refer for specialist advice.

## Identifying chronic kidney disease in adults

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If a diagnosis of CKD is confirmed, then the appropriate code will need to be added to the patient's record following the coding recommendations in Appendix 2. The patient will also need to be included in the practice's process to ensure ongoing monitoring using the table below as a guide as per [NICE recommendations](#). It is recommended that patients are informed of a diagnosis at this point, as the coding information is visible to them on the NHS App.

## Recommended frequency of monitoring (number of times per year)

			Albuminuria categories (mg/mmol)			Risk (AKI, renal failure, CV event, mortality)
			A1	A2	A3	
			<3	3-30	>30	
GFR categories (ml/min/1.73m <sup>2</sup> )	G1	>90	(≤1)	(1)	(≥1)	Risk (AKI, renal failure, CV event, mortality)
	G2	60-89	(≤1)	(1)	(≥1)	
	G3a	45-59	(1)	(1)	(2)	
	G3b	30-44	(≤2)	(2)	(≥2)	
	G4	15-29	(2)	(2)	(3)	
	G5	<15	(4)	(≥4)	(≥4)	
Risk (AKI, renal failure, CV event, mortality)						

Colours added to table from NG203<sup>1</sup>

Practices are asked to re-audit at least 6 months later to check how effective their processes are and return the form in Appendix 1. We strongly recommend that the first search is completed within quarter 1 (by 30 June 2026) to allow enough time to review the results, implement any changes, and then re-run the search.

## Part 2

Practices are asked to carry out holistic reviews of adult patients with a new or existing CKD 3 – 5 diagnosis.

Practices will prioritise the newly diagnosed CKD patients identified in Part 1 (particularly high-risk patients including those with hypertension and diabetes) but

may additionally review patients already coded with CKD who may benefit from medicine optimisation. It is anticipated that practices will identify enough patients from Part 1 but if practices need support finding additional patients, please contact the medicines optimisation team as there are several searches already available to practices.

The review should cover as a minimum:

- Inform the patient they have CKD and explain the diagnosis.
- Add appropriate CKD coding and albuminuria category to the patient's record
- [KFRE calculation](#).
- Lifestyle advice.
- Review of lipid lowering therapy.
- Review of blood pressure (including setting an individualised target).
- Review of renoprotective medication (including ACEi/ARB and SGLT2i).
- Sick day medication guidance given and patient counselled as appropriate.
- Review of current medication to identify [nephrotoxic medicines](#) and counselling.

## **When to refer to secondary care**

Please also check current [RMS guidance](#) for Cornwall practices and [referral guidance](#) for Devon facing practices.

				ACR categories (mg/mmol)		
				Description and range		
				A1	A2	A3
				Normal to mildly increased	Moderately increased	Severely increased
				<3	3–30	>30
GFR categories (ml/min/1.73m <sup>2</sup> ) Description and range	G1	Normal and high	≥90	No CKD in the absence of markers of kidney damage	Manage in primary care according to recommendations (see algorithm C)	
	G2	Mild reduction related to normal range for a young adult	60–89			
	G3a	Mild–moderate reduction	45–59	Refer for specialist assessment if the person has: - a sustained decrease in GFR of 25% or more and a change in GFR category or sustained decrease in GFR of 15 ml/min/1.73 m <sup>2</sup> or more within 12 months - hypertension that remains poorly controlled despite the use of at least 4 antihypertensive drugs at therapeutic doses (see also 'Hypertension' NICE clinical guideline 127) - known or suspected rare or genetic causes of CKD - suspected renal artery stenosis		
	G3b	Moderate–severe reduction	30–44			
	G4	Severe reduction	15–29	Refer for specialist assessment		
	G5	Kidney failure	<15			

For guidance on frequency of GFR monitoring, see recommendation 1.3.2 in the NICE guideline. For guidance on referral, see also recommendations 1.5.1 to 1.5.5

Abbreviations: ACR, albumin creatinine ratio; CKD, chronic kidney disease; GFR, glomerular filtration rate.

Chronic Kidney disease: early identification and management of chronic kidney disease in adults in primary and secondary care NICE clinical guideline 182 (July 2014).  
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Patients with a 5-year risk of needing renal replacement therapy of greater than 5% (measured using the 4-variable Kidney Failure Risk Equation) will also need to be referred.

## Lipid Lowering Therapy

Offer atorvastatin 20mg for the primary or secondary prevention of CVD to people with CKD (eGFR less than 60 mL/min/1.73m<sup>2</sup> and/or albuminuria). Increase the dose if target is not achieved after 2 to 3 months and eGFR is > 30 mL/min/1.73m<sup>2</sup>. Agree the use of higher doses with a renal specialist if eGFR is less than 30 mL/min/1.73m<sup>2</sup>

TITRATION THRESHOLD / TARGETS		
	NICE titration threshold / QOF	JBS3**
Primary prevention	Escalate lipid lowering therapy if non-HDL-C reduction from baseline $\leq 40\%$	non-HDL-C <2.5mmol/L (LDL-C <1.8mmol/L)
Secondary Prevention	Aim for an LDL-C of $\leq 2.0$ mmol/L, or non-HDL-C of $\leq 2.6$ mmol/L at least*	
FH	Optimise lipid lowering therapy to achieve at least 50% reduction in LDL-C (or non-HDL-C.)	

Source: [Summary of national guidance for lipid management](#)

## Blood Pressure Management <sup>1</sup>

For people with an ACR of 30 mg/mmol or less, manage as for adults without CKD as per the recommendations in [NICE's guideline on hypertension for adults](#).

People with CKD who have hypertension and an ACR > 30 mg/mmol offer an angiotensin-receptor blocker (ARB) or an angiotensin-converting enzyme (ACE) inhibitor (titrated to the highest licensed dose that the person can tolerate).

For adults with CKD and Type 2 diabetes and uACR > 3mg/mmol offer ACEi or ARB and increase to maximum licensed tolerated dose to achieve BP < **140/90 mmHg** if ACR < 70 mg/mmol or **BP < 130/80 mmHg** if ACR  $\geq 70$  mg/mmol

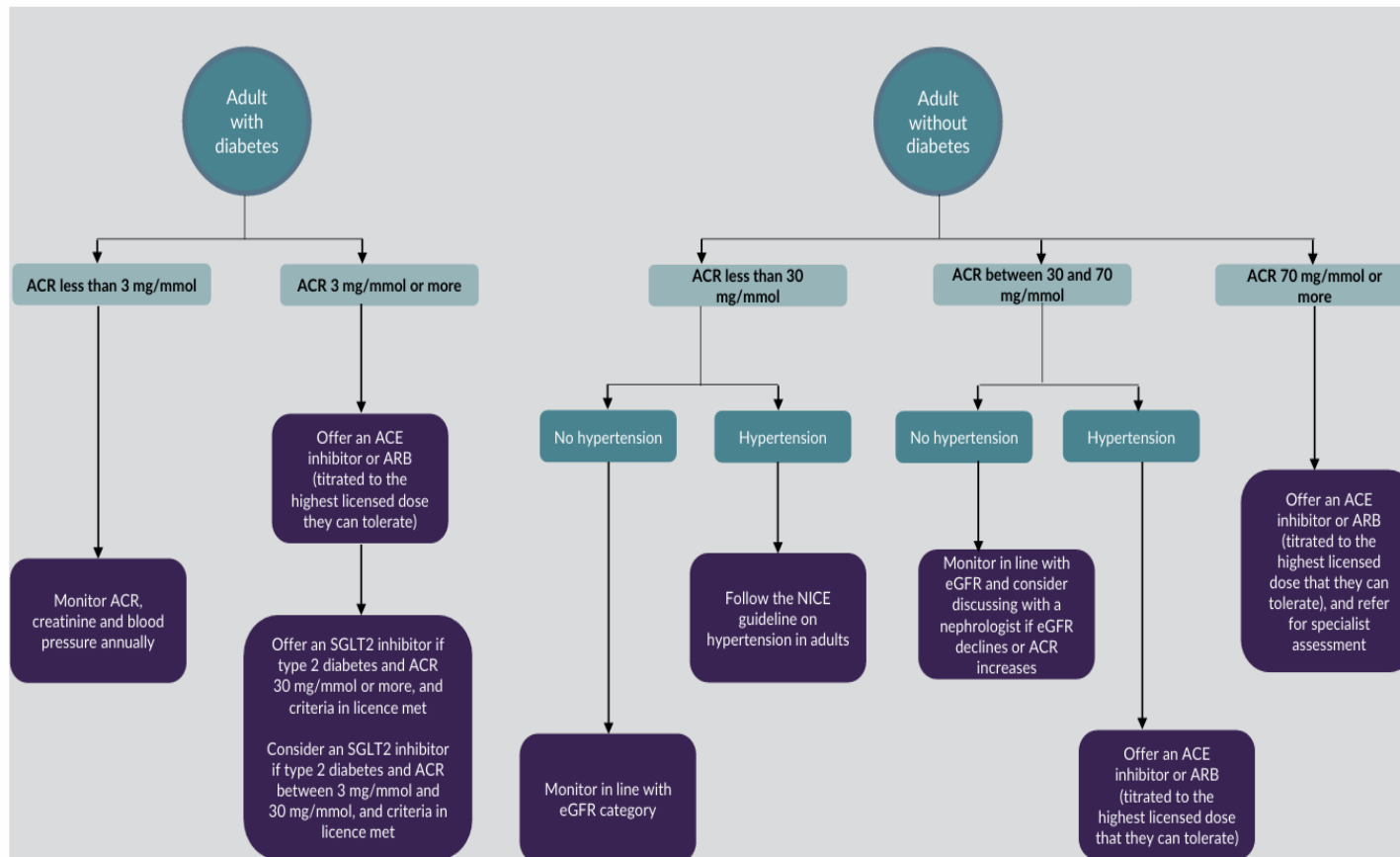
Other BP agents may need to be reduced to optimise ACEi/ARB dosing. In people with significant frailty, consider individualised BP targets as appropriate.

## Managing proteinuria

Follow the [NICE visual summary](#) below.

## Chronic kidney disease (G1-5, A1-3): managing proteinuria

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Health and Care Excellence





## SGLT2i<sup>4</sup>

SGLT2i initiation in eligible patients to treat CKD as an add-on to ACEi or ARBs, unless [contraindicated](#).

Offer treatment with an SGLT2i if the patient has:

- Type 2 diabetes or
- uACR > 22.6mmol/l AND eGFR > 20ml/min/1.73m<sup>2</sup>

[NHSE recommendations](#) for SGLT2 inhibitor therapy (October 2025): **generic dapagliflozin** is recommended as the first-line SGLT2 inhibitor for indications other than chronic kidney disease in patients *without* type 2 diabetes, considering clinical appropriateness (NHSE states that for the time being, treatment of CKD in patients *without* T2DM should be considered a patent protected indication for AstraZeneca [Forxiga brand]).

A reminder that SGLT2i are contraindicated in Type 1 diabetes and there are MHRA safety alerts associated with this class of medicines which prescribers should make patients aware of.

- MHRA/CHM advice [April 2016](#): Risk of diabetic ketoacidosis with SGLT2i
- MHRA/CHM advice [February 2019](#): SGLT2 inhibitors: reports of Fournier's gangrene (necrotising fasciitis of the genitalia or perineum)

## Sick Day Guidance

Ensure patients are aware of the [sick day guidance](#), as appropriate.

## KFRE Calculation

Give adults with CKD and their family members or carers (as appropriate) information about their 5-year risk of needing renal replacement therapy<sup>1</sup>.

[The Kidney Failure Risk Equation](#) (KFRE) is a well-validated risk prediction tool for a kidney replacement therapy (KRT) in the next two or five years in individuals with chronic kidney disease (CKD) stages 3a – 5.

To estimate the risk of KRT, the four-variable KFRE uses:

Age

Sex

Estimated glomerular filtration rate (eGFR)

Urine albumin:creatinine ratio (ACR)

The KFRE should be calculated and added to the patient record when an individual with CKD Stage 3a – 5 has an eGFR and ACR measured. This should be at least on an annual basis, but more frequently with more advanced disease. Both eGFR and ACR should be within six months of each other, and ideally within a month<sup>6</sup>.

## Helpful Patient Resources

A [leaflet](#) for patients to explain [Chronic Kidney Disease](#) and [Stage 3 CKD](#).

A [leaflet](#) to explain SGLT2i medication.

[UKKA SGLT2i Patient Leaflet for people with diabetes](#) .

[UKKA SGLT2i Patient Leaflet for people without diabetes](#) .

National Kidney Federation (NKF): [Patient Resources and Helpline](#) .

Kernow Kidney Patient Association – [Facebook Group](#) affiliated with NKF with good links with the renal unit at RCHT.

## References

1. [Chronic kidney disease: assessment and management](#) (2021) NICE guideline NG203
2. [Chronic Kidney Disease Case Finding and Management \(2025\) PrescQIPP Project](#)
3. [London Kidney Network CKD Prevention and CRM](#)
4. [Dapagliflozin for treating chronic kidney disease](#) (2025) NICE TAG TA1075
5. [Empagliflozin for treating chronic kidney disease](#) (2023) NICE TAG TA942
6. UK Kidney Association: [CKD Staging](#)

## Appendices

1. CKD Quality Improvement Project Return
2. Coding Guidance

## Appendix 1: CKD Quality Improvement Project Return

<b>Practice name and ODS code</b>	
<b>First Audit Date:</b>	
<b>Second Audit Date:</b>	
<b>1. Number of adult patients identified by search as “Possible CKD”</b>	
<b>1<sup>st</sup> Audit</b>	<b>2<sup>nd</sup> Audit</b>
<b>2. How many adult patients were coded with CKD following review?</b>	
<b>1<sup>st</sup> Audit</b>	<b>2<sup>nd</sup> Audit</b>
<b>5. What themes were identified by the practice following the 1<sup>st</sup> audit and what steps were taken to improve the earlier detection/management of these patients?</b>	
<b>6. Were any further areas of improvement identified following the 2<sup>nd</sup> review and any other comments?</b>	

Please return completed report forms to [ciosicb.prescribing@nhs.net](mailto:ciosicb.prescribing@nhs.net) by 31<sup>st</sup> March 2027

## Appendix 2: Coding Guidance



### APPENDIX:

**Table 1: eGFR/uACR combination SNOMED codes**

eGFR/uACR	SNOMED code	Description ID
eGFR $\geq$ 90ml/min/1.73m <sup>2</sup>  and uACR<3mg/mmol 3 $\leq$ uACR $\leq$ 30mg/mmol uACR>30mg/mmol	CKD G1A1 (if non-proteinuric markers of CKD) CKD G1A2 CKD G1A3	2426331000000114 2426381000000113 2426511000000114
60 $\leq$ eGFR<90ml/min/1.73m <sup>2</sup>  and uACR<3mg/mmol 3 $\leq$ uACR $\leq$ 30mg/mmol uACR>30mg/mmol	CKD G2A1 (if non-proteinuric markers of CKD) CKD G2A2 CKD G2A3	2426601000000111 2426691000000116 2426821000000118
45 $\leq$ eGFR<60ml/min/1.73m <sup>2</sup>  and uACR<3mg/mmol 3 $\leq$ uACR $\leq$ 30mg/mmol uACR>30mg/mmol	CKD G3aA1 CKD G3aA2 CKD G3aA3	2427381000000110 2427401000000110 2427451000000111
30 $\leq$ eGFR<45ml/min/1.73m <sup>2</sup>  and uACR<3mg/mmol 3 $\leq$ uACR $\leq$ 30mg/mmol uACR>30mg/mmol	CKD G3bA1 CKD G3bA2 CKD G3bA3	2427751000000117 2427801000000112 2427851000000113
15 $\leq$ eGFR<30ml/min/1.73m <sup>2</sup>  and uACR<3mg/mmol 3 $\leq$ uACR $\leq$ 30mg/mmol uACR>30mg/mmol	CKD G4A1 CKD G4A2 CKD G4A3	2428021000000111 2428091000000114 2428141000000115
eGFR<15ml/min/1.73m <sup>2</sup>  and uACR<3mg/mmol 3 $\leq$ uACR $\leq$ 30mg/mmol uACR>30mg/mmol	CKD G5A1 CKD G5A2 CKD G5A3	2428191000000113 2428281000000117 2428331000000110



# CKD Resources for Primary Care Clinicians



### London Kidney Network Published Pathways, Guidelines & Leaflets

1. **LKN CKD Early Identification Pathway**: The Kidney Health Check for Adults Living with Diabetes or Hypertension – How to identify Chronic Kidney Disease early!
2. **LKN CKD Optimisation Pathway** for adults with Type 2 diabetes and CKD (eGFR 20-90ml/minute/1.73m<sup>2</sup>)
3. **LKN CKD Optimisation Pathway** for 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)
4. **Guidelines on Coding CKD in Primary Care**: London Kidney Network Expert Consensus
5. **For clinicians – Interpreting uACR & eGFR** leaflet/poster
6. **For clinicians – Sick day medication rules**

### What to discuss with patients about CKD

1. LKN: What is CKD & Information for people living with CKD
2. Kidney Care UK: Explaining CKD by stages

### Information for patients

1. LKN: What is CKD & Information for people living with CKD
2. UKKA: SGLT-2i Patient Information Leaflet for people with diabetes
3. UKKA: SGLT-2i Patient Information Leaflet for people without diabetes

The LKN has created this directory of links for all those interested in kidney healthcare.  
LKN does not take responsibility for the content of other sites.

### Websites

1. The Kidney Failure Risk Equation
2. UK Kidney Association: Kidney Failure Risk Equation Overview
3. UK Kidney Association: Kidney Failure Risk Equation Teaching Slides
4. NHSE CVDPrevent report & data and improvement tool

### Clinical Practice Guidelines

1. NICE NG203 CKD: assessment and management
2. UKKA: SGLT2i-2 inhibition in adults with kidney disease
3. NICE TA775: Dapagliflozin for treating CKD
4. MHRA Drug Safety Update: Dapagliflozin no longer for type 1 DM
5. NICE Prescribing Information: Statins

### London ICS CKD Management Guidelines

1. NWL CKD Guidelines
2. Clinical Effectiveness SEL: CKD Guide for Primary Care (Adult)
3. SWL: Investigation and management of CKD in adults in primary care
4. NCL CKD Primary Care Clinical Pathway

### Videos on identifying and optimising CKD management

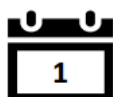
London Kidney Network YouTube Channel

## Type 2 Diabetes and CKD



### 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)



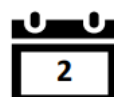
#### Month 1, Visit 1: RAS/ RAAS blockade

- ✓ 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

London Kidney Network, Aug 2025, Final v2.4



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

- ✓ Initiate treatment with SGLT2 inhibitor (as per NICE)
  - Empagliflozin or Dapagliflozin: GFR 20-90ml/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





## With CKD But Without Type 2 Diabetes

### 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.

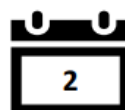
- ✓ In people with significant frailty, consider individualised BP targets as appropriate.

- ✓ 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  $\geq 6$ mmol/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

London Kidney Network, Aug 2025, Final v2.4



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

- ✓ Initiate treatment with SGLT2 inhibitor (as per NICE)
  - Empagliflozin or Dapagliflozin: GFR 20-45ml/min, irrespective of proteinuria or GFR 45-90ml/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 \(NG136\)](#)
- [NICE TA1075: Dapagliflozin for treating CKD](#)
- [UK Kidney Association Clinical Practice Guideline: SGLT-2 Inhibition in adults with kidney disease \(October 2021\)](#)

#### 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

