Chronic Kidney Disease (CKD) in Primary Care

CKD Optimisation Pathway: in adults with diabetes and CKD

Contents of this information pack:

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 is the most common marker of kidney damage.

Why does CKD matter?

A high-risk condition for cardiovascular disease.
£1.45 billion in annual costs to NHS.

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?

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.

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.

- ✓ RAS/RAAS blockade is recommended by NICE (CG203, 2021) for those with an uACR >70mg/mmol, or with an uACR >30mg/mmol if hypertensive.
- ✓ Significant clinical benefit demonstrated with combined RAS/RAAS blockade and SGLT-2 inhibition, even at uACR as low as 22.6mg/mmol in people living with CKD (1, 2).
- ✓ An SGLT-2 inhibitor in combination with maximum tolerated RAS/RAAS blockade therapy is **therefore now recommended** by NICE (TA775, March 2022) for:

  Adults living with Type 2 diabetes and chronic kidney disease *and*
  Adults living with chronic kidney disease without diabetes, if their uACR is >22.6mg/mmol.

London Kidney Network:
The challenge for London & Surrey Heartlands

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

The London Kidney Network’s vision is to support primary care to identify CKD **early**, reduce variability in detection and management, and optimise interventions such as RAS/RAAS blockade and SGLT-2 inhibitors to **save lives**.

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In Adults with Chronic Kidney Disease

Be aware of these 3 triggers to start
‘3 key actions within 3 months to save lives’

1. Albuminuria (uACR ≥ 22.6mg/mmol)
2. Type 2 Diabetes
3. Heart Failure

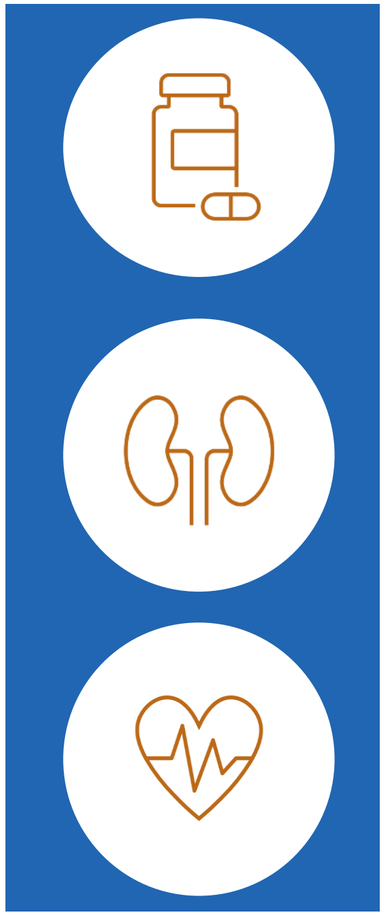
‘3 within 3’

3 key actions within 3 months to save lives

LKN CKD Optimisation Pathway

In adults with Type 2 diabetes and CKD

(eGFR 25 – 75ml/min/1.73m^2)



ACTION 1 (Month 1)
Maximum intensity RAS/ RAAS blockade

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

ACTION 2 (Month 2)
Initiate SGLT-2 inhibitor according to license

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 2nd line BP agents as per NICE guidance (*NG203/ NG136)*

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3 key actions within 3 months to save lives

LKN CKD Optimisation pathway for adults with Type 2 Diabetes and CKD (eGFR 25 – 75ml/min/1.73m^2)

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

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Month 1, Visit 1: RAS/ RAAS blockade

- ✓ Initiate Atorvastatin 20mg OD unless contra-indicated *or* Increase dose up to 80mg OD to achieve target cholesterol level
- ✓ Initiate treatment with ACEi (e.g. Ramipril 5mg once daily) or ARB (e.g. 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

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Month 2, Visit 2: SGLT2 inhibitor treatment

- ✓ Initiate treatment with SGLT2 inhibitor (as per license)
- ⚠ Counsel patient on sick day rules, 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).

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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 chronic kidney disease (NICE TA775, 2022)

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, BP

Reiterate the meaning of each marker

Discuss progress with each target

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

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

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

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References & Acknowledgements

References

1. Heerspink HJL, Stefánsson, BV, Correa-Rotter R, et al. Dapagliflozin in patients with chronic kidney disease. *N Engl J Med.* (2020) 383:1436-1446. doi:10.1056/NEJMoa2024816
2. Perkovic V, Jardine MJ, Neal B, Bompoint S, Heerspink HJL, Charytan DM, et al. Canagliflozin and renal outcomes in type 2 diabetes and nephropathy. *New Engl J Med.* (2019) 380:2295–306. doi: 10.1056/NEJMoa1811744

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. Chronic Kidney Disease: Assessment and Management (NICE guideline NG203, updated November 2021)
3. UK Kidney Association Clinical Practice Guideline: Sodium-Glucose Co-Transporter-2 (SGLT-2) Inhibition in Adults with Kidney Disease (published October 2021)
4. 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)
5. Hypertension in adults: diagnosis and management (NICE guideline NG136, updated March 2022)

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

Dr Neel Basudev
Dr Stephen Thomas
Dr Sally Hull
Professor Hugh Gallagher
Professor Nicola Thomas
Catherine Croucher
Linda Tarm
Sinead Burke
Stephen Cass

Dr Catriona Shaw
Dr Kieran McCafferty
Dr Andrew Frankel
Dr Kate Bramham
Dr Amrit Lamba
Professor David Wheeler
Dr Mark Cohen
Dr Eltham Asgari
Dr Richard Hull
Dr Robert Elias

For enquiries or support with local implementation of these pathways, email lkn.londonkidneynetwork@nhs.net with the subject “CKD Pathways”.