

Chronic kidney disease and prevention:

Harnessing the potential
of early intervention and
disease management

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About Kidney Research UK

Kidney Research UK is the leading charity in the UK focused on funding research into the prevention, treatment and management of kidney disease. For more than 60 years, the research we fund has been making an impact. Our vision is the day when everyone lives free from kidney disease.

But kidney disease is increasing, as are the factors contributing to it, such as diabetes, cardiovascular disease and obesity, making our work more essential than ever.

Over the last ten years we have invested more than £58 million into research and we work with clinicians and scientists across the UK, facilitating research into all areas of kidney disease. We collaborate with partners across the public, private and third sectors to prevent kidney disease and drive innovation to transform treatments.

We want Government and decision makers to change policy and practice, to ensure that the more than three million people living with the most severe stages of kidney disease in the UK have access to the most effective care and treatment and to make kidney disease a priority.

Most importantly, we also work closely with patients, ensuring their voice is heard and is at the centre of everything we do.

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Chronic kidney disease should be a key condition in the Government's prevention agenda

Foreword by Professor Smeeta Sinha

National Clinical Director for Renal Services
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Chronic kidney disease (CKD) affects approximately 10% of the UK population.^[1] Yet, despite the personal, economic, and health system impact the condition has, it has historically had limited direct prioritisation.

Collaborative initiatives such as the Renal Service Transformation Programme (RSTP) and Renal Medicine Getting It Right First Time (GIRFT), have raised the profile of kidney disease nationally but this needs to be sustained into the future. Moreover, translating policy into improvements for patients also requires prioritisation at regional and local levels.

The framework for the **Major Conditions Strategy** strongly emphasises the importance of prevention and the early diagnosis of major conditions including of cardiovascular disease (CVD), which can result from having CKD.^[2] NHS England's **Priorities and Operational Planning Guidance for 2023/24** directs the NHS to place greater focus on the primary and secondary prevention of related conditions, such as diabetes which is a risk factor for CKD.^[3]

This is a welcome focus on prevention, which reduces the subsequent need for treatment, and I hope to see the continuation of this focus to delivery of change in local services.

A greater focus in the strategy on the early detection of CKD and subsequent effective disease management to slow progression (also known as "secondary prevention") has the potential to significantly reduce burden on the individual and the health system. An estimated 6 million people in England are living with all stages of CKD.^[4]

Kidney Research UK's 2023 health economics report '**Kidney disease: A UK public health emergency**' estimated that 10,000 lives could be saved between 2023 and 2033 through effective interventions across the patient pathway, including early diagnosis and improved management.^[5]

With that significant potential in mind, not only for reducing the burden of kidney disease but also reducing the burden of related conditions, this report highlights the importance of identifying CKD as a key priority for health care systems across the nation.

Executive summary

There is a strong case for the prevention and early diagnosis of CKD to be prioritised by both Government and NHS England. Not only will preventing CKD support work on related conditions such as diabetes and CVD, but there are significant benefits to the individual, the economy, and the healthcare system.

This report was developed based on insights from the kidney community. We convened multi-disciplinary healthcare professionals, policymakers, and charity representatives at a roundtable in November 2023 to discuss the policy reform needed to improve the early detection and management of CKD in England. This was supplemented with additional interviews with primary care professionals and people affected by kidney disease.

We are very grateful to everyone who contributed for their input, time, and commitment.

Based on these insights, we have developed recommendations for changes to clinical practice and health system policy reform, to improve the prevention and early diagnosis of CKD in England. These can be found on page 17.

In particular, **we are calling for:**

- The introduction of a primary care indicator to financially incentivise targeted testing for CKD in 'at-risk' patients, with the criteria for this developed in consultation with the kidney community and based on evidence.
- The implementation of targeted education programmes on CKD, its diagnosis and treatment to upskill multi-disciplinary healthcare professionals. This includes building awareness of CKD with all primary care practitioners involved in annual reviews of related conditions such as diabetes and cardiovascular disease.
- Increased uptake of appropriate treatment to optimise the management of CKD, including sodium-glucose co-transporter-2 (SGLT2) inhibitors which delay disease progression and reduce the risk of cardiovascular events.
- An increased investment in CKD research. This will ensure maximum value and impact of research, with the kidney community engaged to ensure the prioritisation of initiatives and evidence that will have the greatest effect.

What is chronic kidney disease (CKD)?

The kidneys are vital organs, whose primary function is to filter the blood to remove waste, toxins, and excess fluid from the body. They also control blood chemistry and blood pressure.

Kidneys are as essential as the heart. When the kidneys are not working properly, harmful substances build up in the body, which may lead to kidney failure and increase the risk of heart attack or stroke.

CKD is an incurable and progressive worsening of kidney function. Comorbid conditions, such as diabetes and cardiovascular disease, often cause damage to the kidneys, which can lead to the development of CKD.

The early stages of CKD are often asymptomatic, but as the disease progresses and the kidneys become increasingly damaged, burdensome symptoms such as fatigue, weakness, difficulty concentrating, and loss of appetite are common.

In advanced stages of CKD, patients may experience serious complications, such as anaemia, high blood pressure, cardiovascular disease, and bone disease. The impact on patients' mental health can be significant and exacerbated by the physical and emotional toll of undergoing dialysis or a kidney transplant.

In the UK:

An estimated 10% of the population have CKD

By 2033, an estimated 7.6 million could have CKD stages 1 – 5

30,000 adults and children are on dialysis at present

This could rise to 143,000 by 2033

CKD and the prevention agenda

More effective early diagnosis and management of CKD would play a key role in achieving ambitions on the prevention of long-term conditions. However, without explicit focus on this in Government, NHS England and local health system policy, there is a risk this will continue to be deprioritised.

There is a significant case to make for the inclusion of CKD

CKD is strongly linked with other health conditions

CKD is associated with a range of comorbidities including diabetes, high blood pressure, cardiovascular disease (CVD), and obesity.^[1] Diabetes and high blood pressure are the leading risk factors – a third of people living with diabetes have CKD stages 1 – 5, which is estimated to increase to 40%.^{[6],[7],[8]} Additionally, CKD increases the risk of having high blood pressure, heart disease, and a stroke.^[9] Comorbidities with CKD can complicate its management, meaning that it is harder to stem disease progression.^[10]

Chronic kidney disease should be considered as fundamentally linked with other conditions, rather than separate. Its prevention would significantly contribute to a reduction in the prevalence of cardiovascular disease – a Government priority in the Major Conditions Strategy. Similarly, monitoring patients with diabetes for CKD should be included as part of an early intervention strategy.

The prevention or early detection of CKD would provide significant economic benefits

Early detection of CKD increases opportunities to intervene and prevent progression to kidney failure. New treatments recommended by the National Institute for Health and Care Excellence (NICE) – sodium-glucose co-transporter-2 (SGLT2) inhibitors – have been shown to significantly reduce CKD progression and reduce the risk of cardiovascular events. However, access to these therapies remains low.

There should be a systematic programme to ensure optimisation of existing treatments and to increase uptake of new therapies such as SGLT2 inhibitors. This should be particularly targeted at people from ethnic minority and deprived communities who are more likely to develop CKD but engage less frequently with the healthcare system.

Reducing the number of people who reach more costly later stages through early diagnosis and improved management, will reap benefits for the economy, the NHS, and most importantly for individuals affected.

“I know what’s coming and I can’t stop it, I can only try to slow it down”

Patient with early-stage CKD

Impact on the economy

CKD costs the UK approximately **£7 billion per year**

An estimated **£372 million of productivity is lost** each year from missed work due to **dialysis alone**

Financial impact on the NHS

£6.4 billion is spent by the NHS on CKD annually, around 3.2% of the total NHS budget

Dialysis accounts for **£1.05 billion of annual NHS spend**

This could **increase to as much as £4.91 billion** by 2033

Economic modelling projects the growth in demand for dialysis as the most significant driver of the increasing cost of kidney disease.^[1]

Financial and personal impact

CKD also places a significant financial burden on an individual and their livelihood. This is especially concerning given the ongoing cost-of-living crisis.

Balancing employment with caring for my son is a constant battle

Mother of a child with CKD

An **average 20 days of work are lost per year** for people living with CKD and the people who support them

The **productivity loss** for an employed person on dialysis (CKD stage 5) is **£12,600 per year** – with some people on dialysis unable to work at all

Adults and children who are on dialysis **spend at least 12 hours per week anchored to machines**, losing even more of their work and leisure time and freedom

The disease can be very unpredictable which can affect my work

Patient with kidney disease

There are worrying trends which risk further entrenching health inequalities

Kidney Research UK has been addressing health inequalities for over 20 years. In 2018, we commissioned our health inequalities report – ‘Kidney Health Inequalities in the UK: An agenda for change’.^[11] This report found that people from lower socio-economic groups are more likely to:^[11]

Develop CKD

Progress faster towards kidney failure

Die earlier with CKD

This report is currently being updated to include the impact of the COVID-19 pandemic.

People from Black, Asian and minority ethnic populations are:

More likely to progress faster towards kidney failure

Less likely to receive a kidney transplant

More likely to have diabetes and high blood pressure, the main conditions that increase the risk of CKD

Earlier CKD stages are less complex and less costly for the NHS

Management of people living with CKD stages 1 – 3a is primarily led by primary care services, although in some cases kidney specialists (nephrologists) will be involved. Conversely, stages 3 – 5 require specialist renal services and higher workforce focus from secondary care.^{[12],[13],[14]}

CKD stages 3 – 5 require monitoring between **two and four times a year**, determined by the rate of disease progression

Renal Replacement Therapy (RRT) – dialysis and transplantation – **requires monitoring every 2 – 3 months** by a specialist

There is an urgent case for the greater prioritisation of the prevention and earlier diagnosis of CKD. As part of the Government and NHS England’s activities to support this, improvements to clinical practice and health system policy reform are essential.

The CKD pathway

Diagnosis and testing

As there is no national routine screening programme for CKD, an adult with suspected kidney disease – either because they are presenting with symptoms, and/or have associated risk factors – should be tested through primary care.^[15]

There are two tests for kidney disease:







- A blood test which measures the levels of creatinine (a waste product) in a person’s blood and is used to calculate estimated glomerular filtration rate (eGFR).^[16]

- A urine test to check the albumin:creatinine ratio (ACR), and to check for blood or protein in urine.^[16]

The eGFR test is repeated for patients after three months to determine a CKD diagnosis and stage.

CKD stages

There are five stages of CKD which determine the extent of damage to the kidneys, and therefore the required treatment:

Stages of CKD	% of kidney function	Symptom
Stage 1 Kidney damage with normal kidney function	 100% – 90%	<ul style="list-style-type: none"> • People living with early stage CKD may not know they have CKD as they may feel well or show no symptoms
Stage 2 Kidney damage with mild loss of kidney function	 89% – 60%	
Stage 3a Mild to moderate loss of kidney function	 59% – 45%	<ul style="list-style-type: none"> • People are often diagnosed with kidney diseases in these stages. • Many people remain asymptomatic as waste in the body builds up and blood pressure rises.
Stage 3b Moderate to severe loss of kidney function	 44% – 30%	
Stage 4 Severe loss of kidney function	 29% – 15%	
Stage 5 Kidney failure	 Less than 15%	<ul style="list-style-type: none"> • Patients with kidney failure require dialysis or a kidney transplant to stay alive. • A proportion of people with kidney failure choose not to receive dialysis or a transplant. Instead, they will undergo conservative care.

An individual with CKD should be monitored regularly through blood and urine tests to check kidney function and protect from the development of further illness which could increase the risk of further deterioration and developing acute kidney injury (AKI).^[17]

Treatment and condition management

There is no cure for CKD. Interventions that slow disease progression and reduce symptoms are available but require additional management. The options are dependent on the stage of CKD and may have side effects:

- Lifestyle – Personalised advice about staying healthy through regular exercise, eating a healthy diet, and controlling blood pressure.^[17]
- Medicines – Some medicines can help to control disease complications such as high blood pressure and high cholesterol.^[18] SGLT-2 inhibitors can help protect the kidneys and have been shown to reduce the risk of cardiovascular disease in CKD patients.^[19]
- Dialysis – Removal of waste products and excess fluids from a patient's blood. This is used for patients with end stage CKD stages 4 – 5. There are two types of dialysis:
 - Haemodialysis – diverting blood into an external machine to filter before returning to the body.^[18] This is usually done three times a week, either in a clinic or at home.^[18]
 - Peritoneal dialysis – the peritoneal membrane in the abdomen is used as a filter where special dialysis fluid draws waste products and excess fluid out from the blood.^[18] This is done at home several times a day or overnight.^[18]
- Kidney transplant – The average kidney transplant lasts around 20 years, so many patients will need more than one in their lifetime.^[20]

Based on expert insights from multi-disciplinary healthcare professionals, policymakers, and charity representatives, we have identified the following areas of clinical practice or health system policy that urgently need attention.

Improving the early identification and ongoing management of CKD patients

Based on expert insights from multi-disciplinary healthcare professionals, policymakers, and representatives of charities, we have identified the following areas of clinical practice or health system policy that urgently need attention.

The early diagnosis of CKD

The prevention and early diagnosis of CKD would bring significant benefits for patients, the economy and the wider health and social care system. A number of changes are needed to achieve this:

More detailed and consistent data collection to identify patients at risk

Detailed and accurate data is central to identifying at-risk patients. However, data collection on ethnicity and socioeconomic status is inconsistent across the country, making identifying patients in these at-risk groups more difficult.^[17] **There should be more consistent data collection on ethnicity and socioeconomic status across England. This will enable earlier identification and intervention to prevent or slow down deterioration.**

Reform coding technology for better identification of at-risk patients

People who may be at risk of CKD are not being automatically flagged in the system owing to differences between database coding thresholds for risk assessment. **It is important that the coding of primary care databases is reformed to support the automatic flagging of patients at risk of CKD, which is considered the gold standard.**

Data, technology, and coding are some of the biggest barriers to ensuring earlier diagnosis of kidney disease

Healthcare professional

Include primary care indicators that incentivise earlier testing for CKD

The Quality and Outcomes Framework (QOF) is a voluntary reward and incentive programme that provides general practice with incentivised indicators to standardise improvements in the delivery of primary care as part of the General Medical Services (GMS) contract. There is currently only one QOF indicator directly related to CKD:

CKD005 – The contractor establishes and maintains a register of patients aged 18 or over with CKD classification categories G3a to G5 (previously stage 3 to 5).^[21]

This QOF indicator provides a useful data register of patients with the later stages of CKD. However, it does not incentivise primary care practitioners to actively monitor these patients for disease progression and identify opportunities for intervention.

Additionally, there is no indicator to incentivise the testing of at-risk patients for early stages of CKD. Without financial incentivisation, early identification is not routine and patients are diagnosed late, missing opportunities to intervene early and slow or prevent disease progression. The graph below outlines the impact of the removal of the QOF indicator CKD004 in 2014/15 on albumin:creatinine ratio testing in England (%).^[22]

Screening every patient for CKD would be unnecessary and resource intensive. However, a targeted testing programme for 'at-risk' groups would benefit the health system. **In the next update to primary care indicators, a financial incentive should be introduced on targeted testing for CKD in at-risk patients. The criteria for 'at-risk' should be developed in consultation with the renal community and based on established evidence.**

One criteria for 'at-risk' could be patients with related conditions such as diabetes. However, the indicator on ACR testing of diabetes patients was also removed from QOF, the impact of which can be seen in the graph.^[22]

If it's not in QOF, it becomes a 'nice to have', not a 'must do'. Without incentives for primary care to test at-risk patients and monitor existing ones, CKD becomes less prioritised

GP

Figure 1: England level analysis 2013/14 to 2018/19^[22]

Albumin: creatinine ratio testing indicator removed from QOF (CKD004):
% of patients on the CKD register whose notes have ACR test

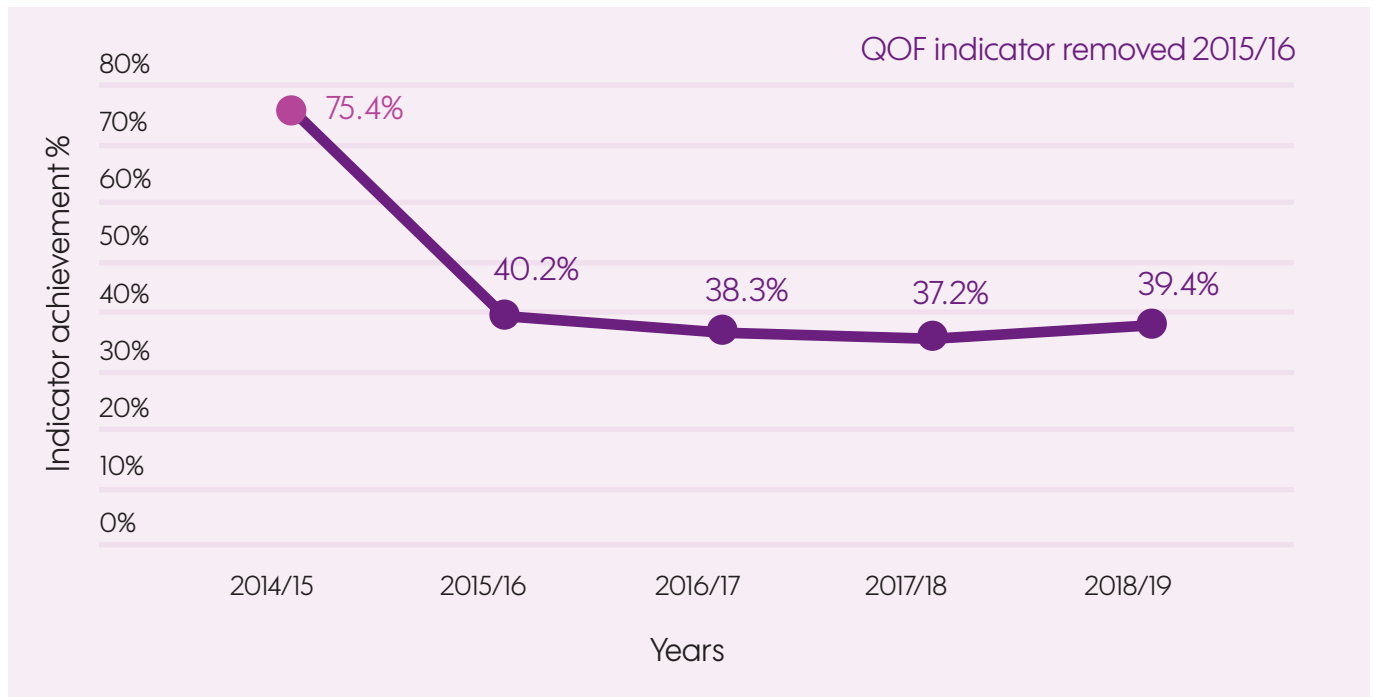
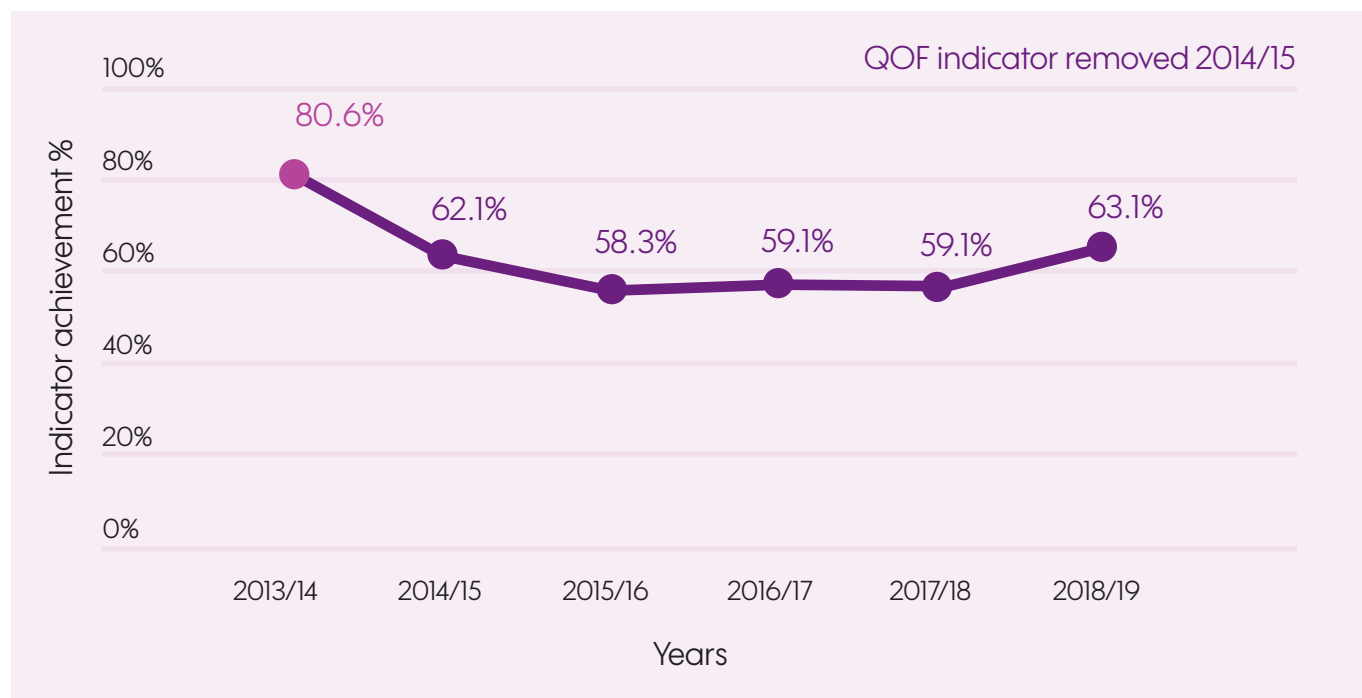


Figure 2: England level analysis 2013/14 to 2018/19 ^[22]

Albumin: creatinine ratio testing indicator removed from QOF (DM005):

% of patients with diabetes who have ACR test



Whilst the kidney community continues to call for the reintroduction of targeted financial incentives, improving education and awareness is critical. **Making all primary care professionals, including GPs, practice nurses, pharmacists and healthcare assistants, aware of the benefits of testing patients with associated conditions is vital.**

The London Kidney Network (LKN) recommends a Kidney Health Check for people with diabetes or high blood pressure to screen for and identify CKD. ^[23] This involves both an eGFR and a urine ACR test.

LKN recommends that people with diabetes should have a yearly kidney health check and people with high blood pressure should have a kidney health check every 1 – 5 years.

The LKN sets out criteria and next steps following a diagnosis, including adding coding for CKD into the patient's record, discussing the patient's Health Check results with them and providing lifestyle advice.

Conduct targeted education programmes to upskill healthcare professionals and the public on CKD

Healthcare professionals are not consistently talking to their patients who have related conditions about CKD. Opportunities for early identification may be missed. Limited time in appointments to discuss CKD is no doubt contributing to this. **It is vital that healthcare professionals are upskilled on CKD to support their patients and build recognition of the need for testing. There must also be consistent understanding of how CKD is diagnosed.**

There is insufficient focus on CKD throughout medical training. Particularly, there isn't emphasis on the long-term value of focusing on CKD, nor on kidney disease as a risk factor for CVD

GP

There is a lack of awareness amongst the public about CKD, its risk factors, and the day-to-day realities of the disease. Therefore, people at risk of CKD are not aware of the need to come forward for screening. **Targeted education initiatives for people with conditions related to CKD – such as diabetes or CVD – would raise awareness of the disease and its early signs. This would empower patients to ask for regular testing from their GP practice.**

I underwent lots of tests before I was diagnosed with CKD. None of my primary care team suggested it could be CKD and then relied on the internet to get information about the disease

Patient with kidney disease

Utilise community pharmacy to support testing and monitoring of CKD

It is vital that tests for CKD, namely blood and urine testing, are accessible and convenient. However, at present, convenience to the system rather than convenience to the person is the norm.

Community pharmacists could play a greater role in the testing and monitoring of CKD. For example, enabling pharmacies to conduct simple urine tests or providing at-home testing kits. Monitoring checks could be integrated with people collecting their repeat prescriptions, which also offer opportunities for disease information sharing.

To support community and primary care to work as one, there needs to be a joined-up approach facilitated by a shared patient record.

The ongoing pressure on primary care gives even more urgency to better utilising community pharmacy in CKD. They not only have the knowledge, but their regular touch points with at-risk patients means they are well placed to offer information and monitor.

Nephrologist

Increase research spend and initiatives on CKD to improve early diagnosis

There is limited research funding for CKD, with only 1.4% – £17.7 million – of relevant public healthcare research funding dedicated to it in 2021/2022.^[1] With a limited number of research initiatives focused on establishing an evidence – base on early diagnosis initiatives, innovative solutions take longer to implement.

Given the potential of CKD prevention to reduce the burden on the health system and patients, there should be increased Government investment in CKD research. To ensure maximum value and impact from research, the kidney community should be consulted to determine what initiatives and evidence would be of most benefit.

The ongoing management of CKD

Once a patient has been diagnosed with CKD, effective management can slow disease progression, also known as “secondary prevention”.

Implement streamlined and co-ordinated care between services

Multi-disciplinary partnerships such as the Renal Services Transformation Programme (RSTP) have set an intention to deliver holistic care through collaboration between specialisms. This approach, however, has not yet been implemented fully.

The common existence of co-morbidities for CKD patients means they are often under the care of more than one specialist service. For many CKD patients, there is limited collaboration between their specialists, meaning frequent hospital visits for different reasons and an uncoordinated approach to their treatment and management.

Patients with CKD and other conditions should have one lead clinician assigned to them to coordinate their care, rather than several separate specialists. This approach would support a streamlined and consistent approach to their care.

Ensure integrated mental health and social support is readily available for all CKD patients

The physical and treatment burden of kidney disease can significantly impact patients’ mental health. Conversely, poor mental health can impact patients’ ability to manage often gruelling treatment regimes.

Unfortunately, there are issues with staff capacity and training, a lack of specialised professionals, problems with coordination between healthcare teams and regional discrepancies. These challenges and recommendations were detailed in our report ‘Addressing the mental health challenges of life with kidney disease: the case for change’.^[24]

Some patients with CKD are being prescribed different courses of medications by different specialists, without alignment between them

Nephrologist

As one of the five priority areas in the upcoming Major Conditions Strategy, kidney patients deserve better integrated mental and physical support. **Specialist mental health support must be provided to kidney disease patients, alongside training for staff to support them in assessing and referring patients for further mental health help. This should include referral to Kidney BEAM – a specialist online resource for kidney patients, which has been shown to support the mental and physical health of people living with CKD.**^[25] **Digital health interventions like Kidney BEAM and other specialist services should be resourced appropriately by Integrated Care Boards.**

Leverage data and digital developments to monitor patients

Without a data system that offers feedback and flags, over-stretched primary healthcare professionals are not supported to regularly review their CKD patients for signs of disease progression. This risks patients with early-stage CKD “slipping through the net”, meaning they are not appropriately managed either with pharmaceutical interventions or lifestyle changes.

NICE guidelines stipulate that patients with CKD should be seen by a primary healthcare professional once per year at a minimum. This increases to up to four times per year for late-stage CKD patients. **GPs and primary care practitioners should be supported to conduct these checks as per the guidelines through system flags.** Through more consistent and effective early management, fewer patients will progress to later stages of CKD.^[26]

We were thrown into the process with very little support

Mother of a child with CKD

Improved education of multi-disciplinary healthcare professionals is needed to ensure effective annual reviews

A variety of healthcare professionals have responsibility for conducting annual reviews for people with long term conditions, including GPs, practice nurses, and healthcare assistants. This overlapping responsibility and increasingly common workforce demands mean it is rare for a patient's GP to do their annual review themselves.

Given the importance of these reviews in detecting disease progression and taking an appropriate course of action, all healthcare professionals who conduct these should have appropriate education on CKD, its diagnosis and treatment. This should be considered as important as upskilling GPs.

The role of Advanced Nurse Practitioners

The patients we spoke to were positive about the impact of their Advanced Nurse Practitioners on their care. They noted how important Advanced Nurse Practitioners are for providing information and for spending time listening to their concerns. **As important healthcare professionals, they should be key in a patient's healthcare support.**

The access to them and response is great. They play a really important role in my care, and I find they really listen to me

Patient with kidney disease

Integrated Care Systems should implement targeted initiatives for at-risk communities and maintain funding for Regional Renal Networks

The move to Integrated Care Systems (ICS), with Integrated Care Boards (ICB) taking on responsibility for healthcare provision, is a significant moment for the provision of healthcare in England. Their aim is to deliver better, more integrated care for patients. ICSs have a specific aim of "acting sooner to help those with preventable conditions", and "supporting those with long-term conditions".

Integrated care has the real potential to transform the diagnosis and management of CKD. It is hoped that ICBs responsibility to commission dialysis will prompt a review of the entire pathway, ultimately preventing many patients requiring costly and invasive dialysis treatment.

Experts we spoke to highlighted the value and importance of Regional Renal Networks. ICBs should maintain their funding.

The kidney community is keen that the move to ICSs does not exacerbate health inequalities between more, and less, mature and innovative ICSs. **The locally led nature of ICSs should support the identification of groups that are not receiving the optimal care, and targeted initiatives to address this.**

The change in specialised commissioning is a welcome opportunity for ICBs to deliver locally targeted, good standards of kidney care regionally

Nephrologist

Conclusion and recommendations

There is a strong case for the prevention and early diagnosis of CKD to be prioritised by the Government and NHS England. Not only will preventing CKD support work on related conditions such as diabetes and CVD, but there are significant benefits to the individual, the economy, and the healthcare system.

This report has outlined a number of urgent recommendations across the diagnosis and management of CKD to improve clinical practice or reform healthcare policy. All of these would bring significant value if enacted.

Incentivise testing and earlier diagnosis of CKD

- 1. In the next update to indicators, introduce a financial incentive on targeted testing for CKD in at-risk patients.** The criteria for 'at-risk' should be developed in consultation with the kidney community and based on established evidence.
- 2. Enable community pharmacists to play a greater role in the testing and monitoring of CKD, which is resourced appropriately.** For example, through information sharing or facilitating urine sample testing.

Implement targeted education initiatives and raise disease awareness

- 3. Education of community and primary care healthcare professionals on the benefits of testing those with associated conditions, how CKD is diagnosed and its early signs.**
- 4. Targeted education initiatives for people with related conditions, such as diabetes or CVD, on the disease and its early signs.** This will ensure they are enabled to actively participate in shared decision-making and empowered to ask for testing and appropriate or supportive interventions.
- 5. Upskill all healthcare professionals who conduct annual reviews so they understand CKD, its prevention and treatment options.**

Ensure optimal condition management across CKD

- 6. Assign one lead clinician for patients with CKD and other conditions to coordinate their care.** This approach would support a streamlined and consistent approach to patient care.
- 7. Provide specialist mental health support to kidney patients, alongside training for staff to support them in assessing and referring patients for further mental health help.**

- 8. ICSs support the identification of groups that are not receiving the best possible care, and roll out targeted initiatives to address this.**

- 9. ICBs maintain funding of Regional Renal Networks.**

- 10. Optimise the management of CKD, including sodium-glucose co-transporter-2 (SGLT2) inhibitors to delay or prevent disease progression and reduce the risk of cardiovascular events.**

Increase CKD research investment

- 11. Increase Government investment in CKD research.** Recognising the impact of CKD on the population and the health service, increased investment in understanding the underlying causes of CKD is warranted.

Embed more consistent data collection, coding, and technology

- 12. More consistent data collection on ethnicity and socioeconomic status across England.** This will support healthcare providers to identify at-risk patients sooner and begin addressing entrenched health inequalities.
- 13. Reform of coding technology and practice in primary care to support the automatic flagging of patients at risk of CKD.**
- 14. Establish consistent shared patient records between community and primary care.** To support joined-up care.
- 15. Embed IT system flags for GPs and primary care practitioners to conduct annual checks as per the NICE guidelines.**

References

1. **Kidney Research UK (2023) 'Kidney disease: A UK public health emergency'**. Available at: https://www.kidneyresearchuk.org/wp-content/uploads/2023/06/Economics-of-Kidney-Disease-summary-report_accessible.pdf [Accessed January 2024].
2. **UK Government (2023) 'Major conditions strategy: case for change and our strategic framework'**. Available at: <https://www.gov.uk/government/publications/major-conditions-strategy-case-for-change-and-our-strategic-framework> [Accessed January 2024].
3. **NHS England (2023) '2023/24 priorities and operational planning guidance'**. Available at: <https://www.england.nhs.uk/wp-content/uploads/2022/12/PRN00021-23-24-priorities-and-operational-planning-guidance-v1.1.pdf> [Accessed January 2024].
4. **Kidney Research UK (2018) 'Kidney Health Inequalities in the UK: An agenda for change'**. Available at: https://www.kidneyresearchuk.org/wp-content/uploads/2019/09/Health_Inequalities_lay_report_FINAL_WEB_20190311.pdf [Accessed January 2024].
5. **Kidney Research UK (2023) 'Kidney disease: A UK public health emergency'**. Available at: https://www.kidneyresearchuk.org/wp-content/uploads/2023/06/Economics-of-Kidney-Disease-summary-report_accessible.pdf [Accessed January 2024].
6. **MacRae C, Mercer SW, Guthrie B, et al (2021) 'Comorbidity in chronic kidney disease: a large cross-sectional study of prevalence in Scottish primary care'**, British Journal of General Practice, 71(704): e243-e249. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7888754/pdf/bjgpmar-2021-71-704-e243-0a.pdf> [Accessed January 2024].
7. **Diabetes UK (no date) 'Shared professional practice on kidney care and diabetes'**. Available at: <https://www.diabetes.org.uk/professionals/resources/shared-practice/kidney-care> [Accessed January 2024].
8. **Diabetes Research & Wellness Foundation (2023) 'New treatment for people living with type 2 diabetes and chronic kidney disease'**. Available at: <https://www.drwf.org.uk/news-and-events/news/new-treatment-for-people-living-with-type-2-diabetes-and-chronic-kidney-disease/> [Accessed January 2024].
9. **Kidney Care UK (no date) 'Chronic kidney disease (CKD)'**. Available at: <https://www.kidneycareuk.org/about-kidney-health/conditions/ckd/> [Accessed January 2024].
10. **Hirst JA, Ordonez Mena JM, O'Callaghan CA, et al (2021). 'Prevalence and factors associated with multimorbidity among primary care patients with decreased renal function'**, PLOS ONE, 16(1): e0245131. Available at: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0245131> [Accessed January 2024].
11. **Kidney Research UK (2018) 'Kidney Health Inequalities in the UK: An agenda for change'**. Available at: https://www.kidneyresearchuk.org/wp-content/uploads/2019/09/Health_Inequalities_lay_report_FINAL_WEB_20190311.pdf [Accessed January 2024].
12. **UK Kidney Association (no date) 'CKD Stages G4 and G5'**. Available at: <https://ukkidney.org/health-professionals/information-resources/uk-ekcd-guide/ckd-stages-g4-and-g5> [Accessed January 2024].
13. **Imperial College Healthcare NHS Trust (2018) 'Chronic kidney disease – diagnosis'**. Available at: <https://www.imperial.nhs.uk/-/media/website/gps-and-referrers/gp-documents/gp-professional-development/renal-april-2018/ckd-guidelines-v6-mar.pdf> [Accessed January 2024].
14. **British Renal Society (2020) 'A multi-professional renal workforce plan for adults and children with kidney disease'**. Available at: https://ukkidney.org/sites/renal.org/files/FINAL-WFP-OCT-2020_compressed.pdf [Accessed January 2024].
15. **National Institute for Health and Care Excellence, NICE (2021) 'Identifying chronic kidney disease in adults'**. Available at: <https://www.nice.org.uk/guidance/ng203/resources/visual-summary-identifying-chronic-kidney-disease-in-adults-pdf-9206256493> [Accessed January 2024].
16. **NHS England (no date) 'Diagnosis – Chronic kidney disease'**. Available at: <https://www.nhs.uk/conditions/kidney-disease/diagnosis/> [Accessed January 2024].
17. **Kidney Research UK (no date) 'What is chronic kidney disease?'**. Available at: <https://www.kidneyresearchuk.org/conditions-symptoms/chronic-kidney-disease/> [Accessed January 2024].
18. **NHS England (no date) 'Treatment – Chronic kidney disease'**. Available at: <https://www.nhs.uk/conditions/kidney-disease/treatment/> [Accessed January 2024].
19. **Anoushka Krishnan, Mythri Shankar et al (2023) 'Sodium Glucose Cotransporter 2 (SGLT2) Inhibitors and CKD: Are You a #Flozinator?'**, Kidney Medicines, 5(4): 100608. Available at: <https://www.kidneymedicinejournal.org/action/showPdf?pii=S2590-0595%2823%2900012-2> [Accessed January 2024].
20. **NHS Blood and Transplant (no date) 'Kidney transplant FAQs'**. Available at: <https://www.nhsbt.nhs.uk/organ-transplantation/kidney/is-a-kidney-transplant-right-for-you/kidney-transplant-faqs/#:-:text=On%20average%2C%20a%20kidney%20transplant,team%20for%20more%20personalised%20information> [Accessed January 2024].
21. **NHS England (2023) 'Quality and Outcomes Framework guidance for 2023/24'**. Available at: <https://www.england.nhs.uk/wp-content/uploads/2023/03/PRN00289-quality-and-outcomes-framework-guidance-for-2023-24.pdf> [Accessed January 2024].
22. **NHS Digital (2022) 'INLIQ (Indicators No Longer in QOF) v46'**. Available at: <https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-collections/quality-and-outcomes-framework-qof/quality-and-outcome-framework-qof-business-rules/inliq-indicators-no-longer-in-qof-v46> [Accessed January 2024].
23. **London Kidney Network, LKN (2022) 'CKD in Primary Care: new approaches to reduce inequalities and save lives'**. Available at: https://swilmo.southwestlondon.icb.nhs.uk/wp-content/uploads/LKN-CKD-Early-Identification-and-Optimisation-Pathways-v1.5-02_02.23.pdf [Accessed January 2024].
24. **Kidney Research UK (2023) 'Addressing the mental health challenges of life with kidney disease: The case for change'**. Available at: https://www.kidneyresearchuk.org/wp-content/uploads/2023/05/CentreforMHKRUK_TheCaseForChange.pdf [Accessed January 2024].
25. **Sharlene Greenwood, Hannah Young et al (2023) 'Evaluating the effect of a digital health intervention to enhance physical activity in people with chronic kidney disease (Kidney BEAM): a multicentre, randomised controlled trial in the UK'**, Lancet Digit Health 2024; 6: e23-32. Available at: <https://www.thelancet.com/action/showPdf?pii=S2589-7500%2823%2900204-2> [Accessed January 2024].
26. **NHS England (2018) 'NHS RightCare scenario: The variation between sub-optimal and optimal pathways'**. Available at: <https://www.england.nhs.uk/rightcare/wp-content/uploads/sites/40/2018/02/abduls-story-progressive-chronic-kidney-disease-full-narrative-1.pdf> [Accessed January 2024].



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