

Remote consultation | Remote monitoring | Service delivery

Improving identification,  
early management and  
progression of chronic  
kidney disease





**We used a patient and clinician designed, data-driven process to support primary care teams to implement a series of small changes to their chronic kidney disease (CKD) pathways, which, when coordinated across the whole patient pathway, have a significant overall impact on treatment and management of the disease.**

## Project summary

Chronic Kidney Disease is estimated to cost the NHS £1.45 billion each year. Fifteen percent of people over 35 in England live with CKD, with this figure expected to double in the next ten years. CKD does not have symptoms at an early stage and, as a result eight in ten people remain undiagnosed. This results in large numbers of patients presenting with serious and costly complications that could have been delayed or avoided with earlier intervention.

The project had four phases: discovery, co-design, testing and evaluation.

In the discovery phase, data was collected from interviews with patients at risk of CKD, patients diagnosed with CKD, primary, secondary care and public health clinicians as well as population health data analysis and an academic literature review to understand the biggest challenges and opportunities in the existing pathways.

Clinicians and patients co-designed pathway improvements together in workshops and these solutions were then tested in GP practices and with patients to gather feedback.

The resulting pathway recommendations include:

- Pathology results CKD guidance for primary care
- Early-stage CKD education options for primary care and patients to access
- CKD screening support for patients
- Enhanced primary care templates in diabetes, hypertension and CKD
- CKD search and recall process for primary care
- Training and implementation package for primary care

The solutions are now ready to be rolled out across North West London and evaluated with support from the Discover-NOW CKD data study. This is a retrospective study of patients at risk of developing CKD. One of its largest longitudinal studies looked at the follow-up for over one million patients in North West London over 10 years.

## | Addressing health inequalities

In the UK, people from South Asian and Black backgrounds are more at risk of developing CKD earlier. They are three to five times more likely to require dialysis treatment and typically wait between 168 and 262 days longer than people from Caucasian backgrounds to receive a kidney transplant. All aspects of our project included a health inequalities lens, specifically:

- Including a public health consultant as part of the core project team to provide objective population health and population health management research expertise.
- Recruiting participants from known areas of CKD inequalities.
- Used real-world data on health inequalities within North West London and populations at risk of CKD to inform each of our project phases.

Our pathway improvements included:

- Changing guidance to make diagnosis, coding and management more objective. This included removal of outdated adjustments of test results for ethnic minorities.
- Making education more accessible, with increased access options (language, mode and time of delivery) and personalised care.
- Creating searches and recall, which identify those with unmet needs.

The real-world evidence from the Discover-NOW retrospective study will highlight the impact of public risk factor inequalities, such as the education status, occupational status, housing status, socio-economic differences, and deprivation among patients in North West London.



**‘It was great being involved with the workshops. I felt genuinely heard. It felt like a genuine partnership and that I was an equally valued member. We were all able to work together to find a solution.’**

Patient co-design participant

## | Outcomes

The project found that a majority of patients meeting the criteria for annual screening for CKD are not being fully screened. A majority of those with test results indicative of CKD are not being coded for CKD and are therefore unlikely to be receiving optimised treatment for their condition.

We were then able to discover the key drivers for the above:

- Primary care knowledge, capacity, and confidence.
- Patient knowledge and empowerment.

We co-designed, tested and evaluated solutions to these:

- Automated CKD clinical guidance and alerts on relevant primary care pathology results.
- Direct primary care referral to existing and accessible CKD education options.
- Patient record (EMIS and S1) searches for higher risk CKD patients already known in existing primary care pathways (e.g. type 2 diabetes, hypertension).
- Including a CKD protocol in templates for type 2 diabetes, annual blood pressure, medication review, and urine collection.

## | Implications for service improvement

Missed or delayed screenings and coding for CKD may introduce additional health and cost burdens to patients and the healthcare system. The project team is currently analysing the impact of population health risk factors, health inequalities and associative cost burdens to quantify the impact of current CKD care pathways.

The Discover-NOW final report will include recommendations to the Integrated Care System (ICS) for gaps in care and targeting potential improvements. The team is confident that the report will highlight numerous areas in need of greater adherence, as well as gaps that will need careful change control management to improve care for people with CKD.

## I Next steps

The study is currently highlighting the areas most in need of consideration for change, and the results from this study will be shared with the ICS for consideration.

The project results have been lauded by the London Kidney Network and renal experts across primary and secondary care in London, who are now looking to share the findings and solutions across London and with the National Renal Transformation Programme.

### Resources

- [CKD project overview video](#)
- [CKD project resource page](#)
- [Project summary story](#)

Further project resources are available on request

### Key partners

- London Kidney Network (LKN)
- Discover-NOW London Secure Data Environment
- AstraZeneca
- Imperial College Healthcare Trust
- North West London Integrated Care Board

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The views expressed in this report are those of the authors and not necessarily those of NHS England, the National Institute for Health and Care Research, or the Department of Health and Social Care.



## More information

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### Care settings

- ✓ Acute trusts – outpatients
- ✓ Primary care

### Clinical areas

- ✓ Cardiovascular disease
- ✓ Diabetes
- ✓ Metabolic and endocrine disorders
- ✓ Renal disorders

### Cross-cutting themes

- ✓ Digital transformation
- ✓ Patient safety
- ✓ Quality improvement and culture
- ✓ Health inequalities
- ✓ Patient and public involvement and co-design
- ✓ Workforce

### Solution themes

- ✓ Prevention
- ✓ Prediction
- ✓ Diagnosis
- ✓ Monitoring
- ✓ Treatment
- ✓ Management
- ✓ Communication and consultation
- ✓ Operations or logistics

### Innovation types

- ✓ Medicine
- ✓ Digital
- ✓ Service
- ✓ Complex intervention

### Innovation status

- ✓ Roll-out