Response from The UK Kidney Association (UKKA) on behalf of the kidney community

The UKKA is the leading professional body of all medical and MPT professionals involved in the care of kidney patients throughout the UK. It serves the community through:

- Education, including web-based learning and annual conferences.
- Supporting clinical excellence through quality improvement, guidelines and clinically based special interest groups.
- Hosting the UK renal databases for common (UK Renal Registry) and rare diseases (RaDaR), allowing audit and research.
- Providing leadership and advocacy for kidney care in the UK.

Planning a workforce able to care for the 21st century kidney population requires consideration of the key aspects of kidney disease, including prevention, detection and treatment of early kidney disease and the care of complex immunologically and genetically mediated disease. It requires professionals who can support those reaching late-stage kidney disease and those who care for patients on dialysis and with transplants. Finally, it requires workforce skills that can care for an increasingly aged kidney care population, including dialysis and transplant patients as they reach increasing frailty and end of life. Key to all these phases of care is adequate resources for patient education - this is a speciality that relies heavily on co-management from the patient, so its workforce must be able to provide the support to make this possible.

The UKKA welcomes a coordinated approach to future workforce planning. It supports an opportunity to redesign care focusing on:

<u>Digital transformation: especially relevant to</u>

- Patient education and self-management
- Preventing kidney disease through production of virtual kidney plans delivered in primary care but supported by secondary care
- Provision of networked, highly specialist care, such as that for rare kidney diseases, to allow patients to receive world-class care through digital support regardless of geography.

<u>It values a hospital-to-community approach, seeing opportunities to</u>

- Optimise home dialysis therapies
- Keep chronic kidney disease within primary care for all but the most specialist cases
- Ensure that our frailest and oldest kidney patients, whether receiving dialysis or not, receive the wrap-around holistic care that would be standard for equivalent cancer patients, thus preventing unnecessary hospital admissions.

<u>The kidney community supports a move from disease treatment to prevention through</u>

- Optimisation of early CKD detection in primary care (including innovative approaches to reach new hard-to-reach groups via faith leaders or trusted peer supporters)

- Utilisation of CKD (chronic kidney disease) prevention medications (such as RAS inhibition, SGLT2 inhibitors (themselves shown to delay the need for dialysis treatment by up to 26 years, and non-steroidal aldosterone antagonists). This work will overlap with similar benefits seen for patients with diabetes and heart disease, offering an opportunity to train generic primary and community care vascular prevention clinicians who can work across the cardio-renal metabolic diseases.
- Utilisation of multiple preventative opportunities in new treatments for rare kidney diseases (themselves responsible for 25% of patients reaching end-stage kidney disease).

The UKKA also welcomes the opportunity to redesign a workforce for today's kidney patients, acknowledging the disproportionate effect of kidney disease on more deprived communities, our ethnic minority populations and on our older population. Any workforce plan needs to recognise the increasingly complex and comorbid nature of many of our patients, with skills required that cover not just kidney care but cardiology and metabolic medicine. Workforce planning will need to build adequate psychosocial support, culturally aligned care for ethnic minorities currently hard to reach and frailty and care of the elderly skills for an increasingly aged population.

We will need to extend primary care workforce skills to include CKD management for nurses, pharmacists and GPs. We will need community pharmacists who are confident in hypertension management and attuned to risk factors suggesting the need for kidney health checks. We will need kidney care-trained secondary care physicians and pharmacists able to support primary care.
In secondary care, we will need to offer real specialist training for all kidney nurses to ensure they can work to their full potential with advanced assessment and prescribing skills. We will need to optimise the roles of pharmacists, dieticians and therapists to provide their own full cycles of care to patients. We will need to allow sufficient training time in the roles of the doctors and other health care professionals who train and supervise such extended roles.

Whilst the redesign of the workforce is welcome, it must be partnered with supportive investment in the NHS. We will need not just the appointment of such a workforce, but time to design, scale and train new roles, recognising that high productivity and optimal clinical outcomes require well-informed and up-to-date staff.

Digital innovation will only work if we invest in the most basic of IT infrastructure and accept that resources released may be required just to maintain the status quo with an increasingly complex and comorbid population.

Disease-to-prevention and hospital-to-community will only succeed if we recognise that our increasingly older population and our disadvantaged communities may require alternative approaches.

Section 1: The Three Shifts

The three shifts – analogue to digital; sickness to prevention; hospital to community

- Seeking evidence on where the 3 shifts are being implemented locally

- where you have delivered or observed new digital initiatives that improved patient care
- where you have already seen or begun to deliver a shift from hospital-based care to community care
- where you have already seen or begun to deliver preventative care services
- which professions, roles and skills were critical to successful implementation for each example
- any barriers to ensuring the right professions, roles and skills were involved, and how you overcame these barriers

Description of innovation /project

Analogue to Digital

Patient Education
Multiple projects are now supporting patient education and co-management in the kidney space. Which include:

KIDNEY BEAM
Evidence-based and built by experts with 20 years' experience, Kidney Beam is the world's first scientifically proven exercise, education, diet and coaching app tailored for people with kidney disease, that also lowers the cost of care by £580 per patient.

Proven to improve mental health-related quality-of-life, patient self-management behaviour, fatigue, anxiety and depression, and physical function in a clinical trial published in the Lancet Digital Health, Kidney Beam is 88% cheaper than face-to-face services and provides a return-on-investment of £6 for every £1 spent. Recent guidance from Health Technology Wales recommends the routine adoption of Kidney Beam for all patients with kidney disease in Wales. It has delivered 30,000+ classes to 6,000+ patients, achieving a 4.7/5 patient satisfaction rating.
Utilising the skills of Patients, Computer Scientists, Physiotherapists, Exercise Physiologists, Dietitians, Psychologists, Transplant surgeons and Nephrologists, it was co-developed to deliver care right from prevention to end-stage kidney care. This digital health intervention provides preventative care in the community (at home) and exemplifies a successful implementation project for the three shifts.
https://healthtechnology.wales/reports-guidance/digital-interventions-for-chronic-kidney-disease/
https://www.thelancet.com/journals/landig/article/PIIS2589-7500(23)00204-2/fulltext
https://www.kireports.org/article/S2468-0249(24)01915-6/fulltext

Other examples of kidney health tools include:
My Kidneys and Me
My Renal Care

A number of other tools have been developed to educate patients about early CKD

These include:
For Kidneys Sake podcast

The London Kidney Network & Kidney Care UK interactive educational webinar series

Intervention:

Multiple 70-minute live webinar focused on CKD stages 1-3 with virtual patient education to enhance understanding, help identify CKD, prevent/delay progression, and optimise management. Half the time dedicated to answering participants' questions via a diverse multi-professional panel (nephrologist, dietitian, pharmacist, nurse) from across London. The team engaged with six ICSs to advertise the webinars and to encourage primary and secondary care to ask patients to register online.

Evaluation included a post-webinar questionnaire completed by attendees. There were 489 attendees, with 64% living in London or Surrey Heartlands. Most respondents were living with CKD 1-3, aged 55+, and of Black or White ethnicity.

Key findings below are averages across all the webinars:

- 91% rated the webinar excellent or good.
- 97% rated their CKD knowledge good or very good post-webinar and would recommend it to others.
- 90% rated their confidence good or very good post-webinar.
- More than 75% found it easy to register and join online.
- Free text feedback was also positive, e.g. "Speaking to a human GP is impossible, so asking questions was helpful."

Plans to repeat this in 2026. Webinars tailored to specific underserved populations or those living with cardio-renal metabolic conditions may be considered.

There are currently underutilised opportunities to use digital solutions to bridge specific gaps in the workforce.

Kidney medicine is dependent on interpretation of kidney pathology by a small group of highly specialised histopathologists. We are currently entering a shortage of trained histopathology consultants, with increasing numbers of Trusts unable to access cover. Investment in digital infrastructure could allow reporting of histopathology specimens via a networked model of a small number of highly specialist histopathologists who have developed excellent expertise in this field. This will not be possible without investment in the digital infrastructure to support this.

Remote monitoring of home dialysis patients through digital links

Nurses deliver time efficiencies and improved patient experience by using remote monitoring of people having dialysis at home. Share source (Vantive) for peritoneal dialysis patients' treatment outcomes, exit sites, frequency of dialysis, video calls and photos of exit/needling sites can all be monitored remotely and messages about care be sent. This can save lengthy travel times for both the patient and nurse and give more frequent and or prompt contact when required. This is also available and being further developed for home haemodialysis. Barriers are local funding arrangements and budget setting to enable access to enough of these machines, and staff ability to use all features.

Effect on workforce nurse may be able to have a slightly bigger caseload, but more realistically, they will offset this against being able to manage more complex patients.

Hospital to Community
Increasing delivery of kidney care within the primary care setting

LUCID (Leicester, Leicestershire and Rutland Chronic Kidney Disease Integrated Care Delivery) is transforming kidney and CVD care by shifting from an analogue, sickness-based model to a digital, prevention-focused system. It connects hospital and community teams through shared data, risk prediction, and medicines optimisation, enabling earlier identification and proactive management of chronic kidney disease and the associated CVD risk.
By embedding the Kidney Failure Risk Equation and other digital tools within primary care, LUCID empowers non-specialist clinicians and pharmacists to deliver specialist-level interventions close to home, reducing unnecessary referrals and admissions. This integrated approach strengthens the workforce by upskilling community teams, freeing hospital specialists to focus on complex cases, and fostering collaboration across organisational boundaries.
LUCID exemplifies the NHS transition from reactive to preventative care—harnessing digital platforms, real-world data, and shared decision-making to deliver better outcomes, reduce health inequalities, and improve system efficiency across the hospital–community interface.

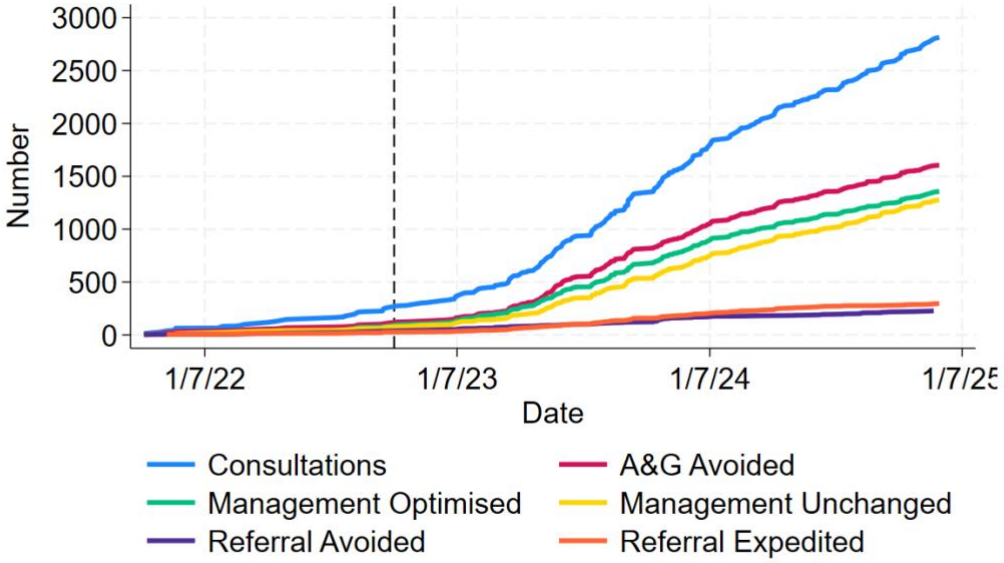
https://academic.oup.com/ckj/article/18/4/sfaf049/8010843
https://academic.oup.com/ckj/advance-article/doi/10.1093/ckj/sfaf312/8275740

It particularly supports the three shifts by:

- Hospital to community - reduction in general referrals, provision of specialist input in community, use of KFRE estimated by NICE to reduce referrals by ~10%
- Analogue to digital - use of virtual meetings, ICB-wide prescribing data (Eclipse) and the KFRE
- Sickness to prevention - earlier referral for those at high risk, faster rollout of NICE TA approved medications.

The project can be summarised in the linked publications
https://academic.oup.com/ckj/article/18/4/sfaf049/8010843
https://academic.oup.com/ckj/advance-article/doi/10.1093/ckj/sfaf312/8275740

Improvements in efficiency seen in the LUCID project are exemplified by the following figure demonstrating outcomes measures within the programme over time.



The Lucid model has now been commissioned by the local ICB following a successful financial assessment. The community now requires support to spread and scale this and other similar projects. This will require investment in primary care staff training, flexible contracts that allow cross sector working, accessible IT solutions and inclusion of community care experience in junior doctors training.

Increasing use of home dialysis therapies

DAYLife is a national quality improvement programme to increase the uptake of home dialysis in the UK to meet the renal GIRFT target of 20%. This fits in with 10-year plan of moving care from hospital to community and patient's home. The programme is co-designed with patients and health care professionals, and four key priority areas have been identified: shared haemodialysis care, patient peer support, psychosocial support and shared decision making.

How it will it affect the workforce required and their training /support or mentoring requirements:

1. Current patient: staff ratio for home dialysis varies between 1: 15 to 1: 20 in the UK. The number of home dialysis nursing staff needs to increase by at least minimum 100 nationally to meet up the growth in home dialysis rates to achieve 20%.
2. There needs to be an emphasis on including home dialysis training within the kidney medicine curriculum to help develop future generation of home dialysis doctors who can support and lead the growth
3. There needs to be increase in investment towards home dialysis infrastructure, newer dialysis machines and training spaces within hospitals to increase the number of patients who can be trained to do home dialysis
4. Appropriate counselling in the pre-dialysis stage in advanced kidney care clinic to promote home dialysis requires skilled personnel who can utilise shared decision-making aids appropriately to help patients choose the right dialysis modality. Currently there is no

structured training provided for staff to deliver shared decision-making aids leading to poorly informed patient choice of dialysis modality. A nationally accredited shared decision-making training course needs to be developed and mandated for all professionals working in advanced care clinic settings

5. Centres with low rates of home dialysis needed to be supported by experienced PD centres to grow their programme through collaboration and mentorship support. This needs to be facilitated at renal network level and supported by appropriate commissioning and financial incentives

More information on the programme and the resources developed can be accessed at Dialysis at Yours (DAYLife): https://education.ukkidney.org/course/daylife

Sickness to prevention

The kidney community has created multiple models of care working across primary and secondary care to optimise kidney disease prevention

Using pharmacist-led models to support and deliver CKD prevention and optimisation work in both primary and secondary care

The Multimorbidity Model of Care (MMMoC) project

This was developed with the aim of improving outcomes for patients with CKD in South East London (SEL). Recognising the multi-morbidity nature of CKD, SEL agreed a holistic, person-centred, cardiovascular-renal-metabolic (CRM) approach, integrated across the care pathway to improve outcomes for patients. There were 3 main pillars of care which included:

1. Prevention and targeted testing in the community – case finding of people with CKD, remote testing of uACR (a marker of early kidney damage) to those without an ACR recorded in the last 5 years (HealthyIO), proactive medicines optimisation including POCT clinics in the community.
2. Complex case management in the community – holistic care led by AHPs and care co-ordinators to manage patients with complex health and social needs, integrated MPTs to support case management
3. Integrated acute care – renal, diabetes, cardiology and geriatrician consultant input. Two full time multispecialist pharmacists employed to enable horizontal and vertical integration across the whole pathway

Early outcomes/Phase 1 evaluation from this pilot model of care has demonstrated:

1. 3.9% increase in CKD prevalence in participating MMMoC sites vs 3.3% in non-participating sites
2. Increase in prescribing of evidence-based treatments: 13.9% increase in SGLT2i prescribing in patients with diabetes and CKD in participating sites vs 8.3% non-participating sites (statistically significant). Increase in statin prescribing also demonstrated
3. 6-fold improvement in the number of patients with CKD without diabetes achieving blood pressure targets (increase of 2.4%)

4. Over 200 patients with early disease seen in point-of-care testing clinics in primary care and in a community pharmacy with appointment offered outside of normal working hours to improve access to treatment. Further evaluation of this piece of work is pending
5. Over 2700 remote home testing urine ACR testing kits completed for patients who had no recorded urine ACR for the last 5 years with a diagnosis of hypertension
6. Impact on planned and unplanned hospital activity: Reduction in non-elective hospital admissions of 20 to 7 per 100 patients (statistically significant), as well as a reduction in diabetes, cardiology and nephrology outpatient appointments from 36 to 22 per 100 patients (statistically significant)
7. Positive staff and patient feedback with staff feeling this model is delivering a more holistic, sustainable model of care and patients being very likely to recommend this service to friends and family

Integrated pharmacy/multi-specialist pharmacist roles:

1 . Education & training: 8 targeted CRM education sessions delivered to primary care teams across SEL (reaching over 800 attendees). Development of monthly CRM E&T for secondary care pharmacists in SEL to support integration and cross-fertilisation between specialties. Discussion of over 150 patient cases at multidisciplinary team meetings.

2 . Educational/competency framework: Collaborating with ICBs across London to produce a CRM educational/competency framework for managing patients with cardiorenal metabolic disorders in primary care as well as a pan-London educational programme to support upskilling of healthcare professionals.

3 . Clinical interventions: Over 250 patients seen in patient-facing clinics in intermediate and secondary care settings over 9 months with 290 pharmacological interventions and 238 non-pharmacological interventions to optimise cardiorenal metabolic risk factors. Data collection is ongoing to assess improvements in patient outcomes.

Piloting a Pharmacist-Led Virtual Clinic to Optimise CKD Medicines: Improving Outcomes, Reducing Delays, and Enhancing Patient Experience

An audit of 100 CKD patients at Liverpool University Hospitals NHS Foundation Trust (LUHFT) in January 2023 found suboptimal use of evidence-based therapies. Only 13% were prescribed maximum-dose ACEi/ARB; among the remainder, 47% had suboptimal BP control, with no documented reason for under-dosing in 71% of patients. SGLT2i use was 11%, although 60% of untreated patients met NICE criteria. No patients received finerenone despite 19 being eligible. These findings highlighted an unmet need for medicines optimisation in CKD.

Clinic letter recommendations for medication initiation or adjustments were not consistently implemented in primary care. Around half of patients experienced waits ≥30 days or no action at all, underscoring the need for timely prescribing, improved communication, and better coordination across the secondary-primary care interface.

Project Aims:

1. Increase the uptake of guideline-directed therapies.

2. Reduce prescribing delays across care sectors.

3. Evaluate patient experience, adherence, and satisfaction.

4. Explore wider benefits, including collaboration and environmental impact.

Methods:

A pharmacist-led, protocol-driven virtual CKD medicines optimisation clinic was piloted at LUHFT in collaboration with community services, delivered via clinical telehealth systems. Optimisation focused on the initiation/titration of ACEi/ARBs, SGLT2i, and finerenone; BP optimisation; and post-AKI medication re-initiation. Patients were referred at any stage of care and remained until fully optimised before discharge.

The clinic, developed within secondary care, was supported by simplified prescribing pathways and direct communication between pharmacists and community MPTs. To reduce implementation delays, templated EMIS clinic letters enabled rapid GP correspondence. Outcomes were captured in real time through dedicated templates, with prescribing data extracted from pharmacy IT systems.

Results:

From December 2024 to July 2025, 172 patients generated 486 clinic appointments. 69% of patients required follow-up with a median of 2 appointments per patient.

99% of patients reported good adherence and 100% rated satisfaction as 5/5. The virtual, telehealth-supported model avoided an estimated 2,739 miles of patient travel for first appointments alone. Median time from referral to first appointment and prescription was 26.5 days. Prescriptions were primarily issued at LUHFT outpatient sites, with 24% directed to GPs without additional delay.

By July 2025, 79 patients had been discharged; 66 (84%) were fully optimised on maximum-tolerated, guideline-directed therapy. Reasons for non-optimisation at discharge included non-engagement, patient choice, prolonged admission. Median time to discharge was 55.5 days.

Discussion:

The pharmacist-led virtual CKD clinic improved access to evidence-based therapies, reduced prescribing delays, and achieved excellent patient outcomes and satisfaction. Templated EMIS letters strengthened GP communication, reducing delays in implementing recommendations and ensuring continuity of care.

The virtual model also supported the NHS Green Plan by reducing patient travel and associated carbon emissions. Telehealth delivery provided efficient, patient-centred care with greater accessibility and convenience, reduced hospital exposure, and increased emphasis on patient satisfaction. Integration with EMIS to issue prescriptions directly to community pharmacies is expected to enhance patient experience and local access.

Simplified prescribing pathways and collaborative working promoted consistent adoption of evidence-based therapies, resource efficiency, and long-term sustainability. The model has been shared with primary care, and through the North-West Kidney Network and CORE Kidney Initiative, work is underway to scale this approach regionally.

Community CKD Clinics in North Central London:

Full-time renal pharmacist integrated within Community CKD clinics. The aim of this service is to assist primary care in early detection, coding, and initiation of evidence-based treatments to delay progression and reduce cardiovascular risks; to ensure those at high risk of progressing to kidney failure are referred to secondary care in a timely manner to reduce acute admissions, manage complex patients in specialist clinics and provide educational lifestyle information to those who are at risk of CKD.

Agreement within NCL is for all patients referred to nephrology will undergo a consultant-led virtual triage service. The virtual triage service enables the nephrologist to access patient's GP records (patient consent to be obtained at time of referral) and the patients are then either continued to be seen by their GP with advice and guidance provided by the consultant or triaged into a community or secondary care kidney clinic.

At the point of triage, targeted education is provided to GPs to increase their awareness and confidence in the management of CKD by including what has already been done, inclusion patient's risk scores (KFRE) and what the next steps should be in the management of CKD. Any common trends of questions are identified and renal pharmacist informed to ensure it is covered in teaching sessions.

The community Clinics are nurse or pharmacist-led clinics with support from OT and dietitian to provide holistic care to patients living with CKD; educate them about their diagnosis of CKD, including how to look after themselves to prevent/ slow down progression of their disease with pharmacological and non-pharmacological therapy. There is a strong emphasis on the use of the right language to ensure patients understand information provided and are therefore able to make informed decisions about their care (using MECC model and checking health literacy).

CKD pathway

It is recognised that majority of reviews of long-term conditions (LTC) within primary care are completed by pharmacists within primary care. The CKD pathway was updated by pharmacist and nurse tailored with enough detail, knowledge and links to both local formulary and further resources to support these LTC reviews by non-medical professionals.

Training sessions

Tailored training sessions led at practice or PCN level to education health care professionals on the diagnosis and management of CKD. Big emphasis on pharmacological options used to manage CKD and debunking myths about the nephrotoxic effects of ACEi/ARBs; when to suitably start therapies such as SGLT2i and MRA.

SGLT2i project

12 month funded project to increase the update in the prescribing of SGLT2i in NCL for patients with CKD. Relevant training and MPT support provided alongside case finding searches to identify patients who are eligible but not yet prescribed SGLT2i.

- All above has led to an increase in coding of CKD within local dashboard: 2.89% (September 2024) – 3.03% (July 2025)
- Increase in proportion of uACR checked: 56.8% (September 2024) to 64% (July 2025)

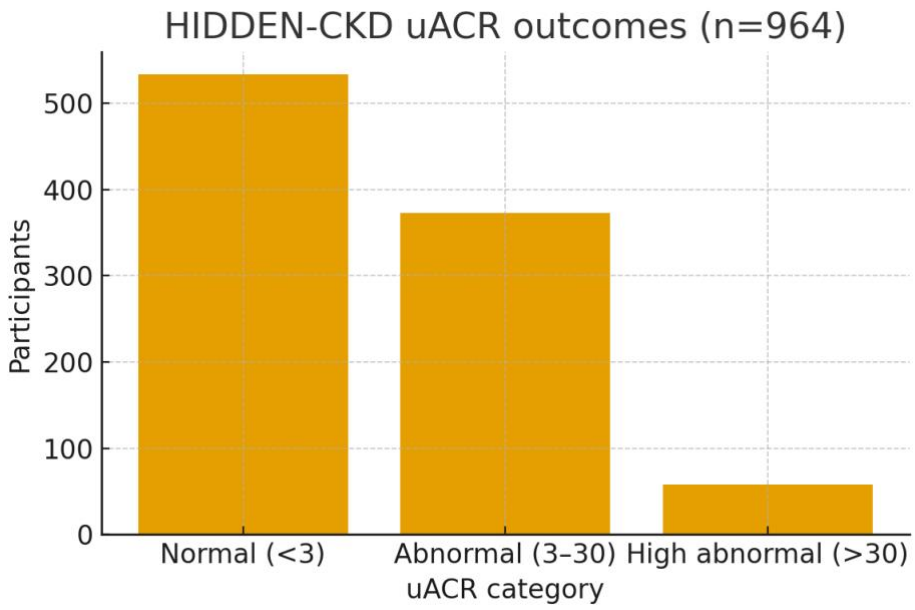
- Increase in recognition and prescription of ACEi/ARB in patients with CKD without DM: 59% (September 2024) to 65% (July 2025)
- Increase in prescription of SGLT2i in patients with diabetic and non-diabetic CKD: 21.2% (September 2024) to 28% (July 2025).

Increasing chronic kidney disease prevention opportunities by finding previously unrecognised cases in traditionally underserved communities - the Hidden CKD programme

Programme summary: A community-based kidney health initiative demonstrating real-world delivery of digital transformation, preventative care, and a shift to community-based care pathways, improving early detection and enabling faster access to treatment and prevention support for patients with chronic kidney disease.

1) Analogue → Digital

HIDDEN-CKD implemented point-of-care uACR (protein leak as a marker of kidney damage) testing supported by digital data capture and structured clinical follow-up. The pathway evolved from smartphone home-testing to onsite Siemens Point of care devices to maximise reliability and completion. Peer educators were trained in digital consent, biometric capture, cultural communication, and structured follow-up protocols.

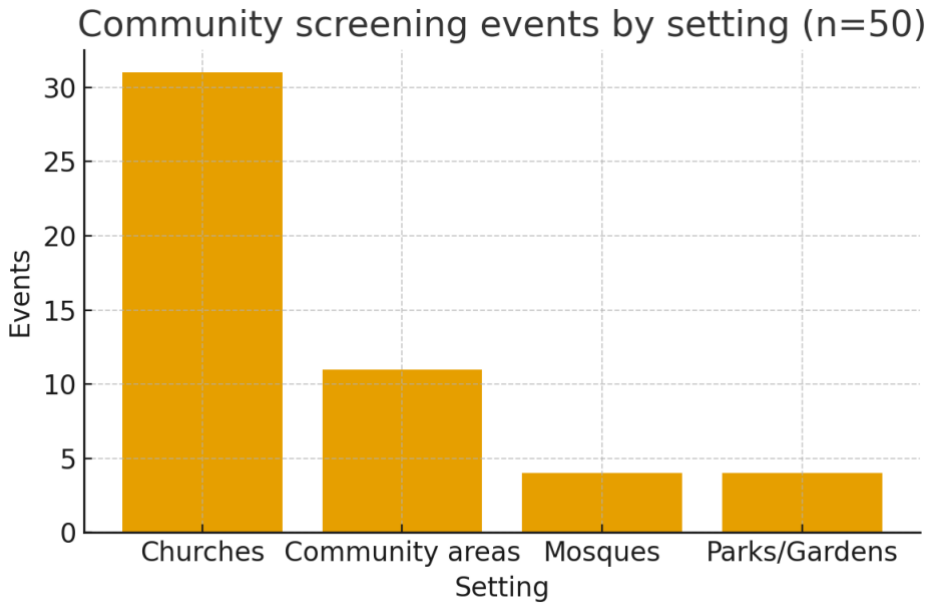


2) Sickness → Prevention

The programme delivered proactive case-finding in high-risk communities, identifying previously undiagnosed albuminuria and hypertension. Co-designed culturally congruent materials and community partnerships supported engagement, improved awareness, and encouraged proactive GP attendance. Nearly all participants with positive uACR had follow-up with their GP. Importantly significant % of people were unaware of having chronic kidney disease risk factors prior to testing, and therefore, current screening approaches used in traditional primary care (e.g. those with hypertension, diabetes or family history) may not be appropriate for these high-risk communities.

3) Hospital → Community

Testing and health education were delivered in community spaces including churches, mosques, libraries, and parks. Faith leaders and chaplaincy partners provided local trust and psychological support. Nurse-led triage ensured rapid referral and safety-netting outside hospital settings.



Workforce & Training

- 31 trained peer educators (healthcare + community)
- Cultural competence, safeguarding, device competency, behaviour support
- Clinical oversight by nurse consultant & nephrologists
- Faith leader integration for trust, reach, and emotional support

Barriers & Solutions

- Low smartphone completion → onsite Siemens PoC
- GP referral lag → templated letters + nurse-led clinics
- Privacy needs in venues → calm zones + faith support

"What you don't know, can hurt you." — HIDDEN-CKD
https://www.hiddenckd.co.uk/resources

How it will affect the workforce required and their training /support or mentoring requirements

Education of workforce in movement from sickness to prevention: Centralised education resources to increase accessibility of education and avoid duplication:

Due to the significant work to support chronic kidney disease case finding in the community and primary care, the wider workforce involved in this change (primary care receptionists, nurses, GPs, pharmacists, peer educators etc) will require different levels of training in CKD management.
The UKKA education hub is currently developing and collating unified resources for training of multiple different professional groups in CKD management through online learning resource.

Partnership with expert primary care staff together with partnership with the British and Irish Hypertension Society, The Primary Care Cardiovascular Society and the Primary Care Diabetes and Obesity Society offer optimal opportunities for spread of such resource to all relevant professionals https://education.ukkidney.org/

Section 2: Modelling Assumptions

Modelling assumptions based on changing work, AI, genomics, ageing population

- specific assumptions you use in workforce modelling - for example, how service redesign such as new community services or digital models of care might affect the numbers, deployment and/or skill mix of staff
- how that impacts on workforce supply and demand, including career and training pathways
- IT solutions implemented to improve patient pathway/service continuity
- Please provide clear examples and, where possible, support them with data.

Description of innovation /project

Increased UK Renal Registry data availability helping to guide service planning by highlighting key demographic changes in the current end-stage kidney failure population
https://www.ukkidney.org/audit-research/disparities-report

Changes in population
The UKRR disparities reports highlight three factors important in workforce planning for future kidney care.

- Poor outcomes for those living in deprivation
- Poor outcomes for those patients from ethnic minority groups
- An increasingly elderly and frailer end-stage kidney failure population (between 35 – 65% of those reaching end-stage kidney failure between 2014-20 were 65 years or over, depending on the kidney care units studied).

Population modelling that supports workforce planning will need to take into account

1. data on current need for dialysis provision
2. modelling tools on possible future need for dialysis provision
3. Demographic changes in the population requiring dialysis to ensure workforce skills matched patient needs particularly taking into account the ageing and frailer population now reaching end stage kidney failure

a. Predicting numbers of patients affected by kidney disease

a. Current tools are being used to model current and future provision of dialysis need, which will enable workforce planning for this area - tools include the Dialysis Occupancy Measure, which demonstrates current dialysis and by connection workforce need
https://londonkidneynetwork.nhs.uk/data/

4. b. Work from the Midlands modelling the future effect of different levels of medication utilisation in CKD together with different levels of home therapies and transplantation to

allow correlated prediction of workforce needs. This modelling represents a clear financial case for investment in preventative medications in this group of patients. The Midlands Kidney Network, in collaboration with the Strategy Unit, have built a simulation model of the renal pathway, encompassing changes in the general population through primary care and CKD to dialysis and transplantation. It has been developed to facilitate predictions of likely future service demand nationally, regionally and locally, but also allowing exploration of different scenarios that reflect current priorities in renal service development to facilitate optimal resource allocation.

This model will provide realistic predictions of service demand under a range of different assumptions and likely future service changes. This will allow provision of dialysis units when and where they are required in a controlled process, but also direct efforts to the most effective interventions to minimise both disease progression and growth in healthcare expenditure. The workforce required is directly informed by the number of patients, a key output from the model, but some of the interventions included, such as changes in transplantation or home dialysis, would also affect the planned workforce and training requirements. The model is now open source, and will shortly be available nationally, but has already supported the adoption of CKD as a priority for ICB discussions within the Midlands and to incorporate this into population health planning.

DEVELOPING HYBRID KIDNEY CARE MODELS WITH FACILITATED MODELLING Croft, Tako, He, Thompson, Morgan and Lambie in Proceedings of the Operational Research Society Simulation Workshop 2025 (SW25) M. Luis, A. Harper, T. Monks, N. Mustafee, eds.

Part of the model is already publicly available at: https://exchange.iseesystems.com/public/strategy-unit/chronic-kidney-disease-progression/index.html

b. Planning for the demographics of patients affected by kidney disease

1. Planning for a future workforce: Demographics show a larger population of older frailer patients with wider holistic needs now reaching end-stage kidney care. This necessitates new models of care to include not just dialysis but alternative medically based pathways (enhanced supportive care) and additional frailty care added to existing dialysis models. Published data https://pubmed.ncbi.nlm.nih.gov/39081736 suggests that at least 25% of UK kidney centres do not have any such dedicated supportive care service, resulting in poor models of care and increased hospital admissions. Where supportive care services exist, they are often as additional roles for the late-stage kidney disease clinicians with neither additional funding nor training to support this. Links are underdeveloped between kidney and care of elderly or palliative care services. The recognised shortage of geriatricians necessitates solutions within kidney care, so future workforce planning requires medical, nursing and MPT staff to receive training in this area and funding support for this aspect of care. Expansion of palliative care resource to provide more support for long-term conditions beyond cancer could also offer solutions. Early data from both Leeds and London suggest financial efficiency where such services are supported.

Workforce planning will need to support identified poor health literacy

Ongoing quality improvement work in London has identified that 42% of patients in the advanced kidney care population planning for future dialysis and transplantation have low levels of health

literacy with further data demonstrating that those attending currently available group patient education sessions were largely drawn from the more health literate patients. This suggests future workforce models will need to allow for more intensive educational support (perhaps with culturally aligned peer educators) to support education of such vulnerable patients.

Use of AI offers possible support to a future workforce

Innovative advances such as the use of AI tools to generate standardised and automated prescription of kidney anaemia management medications could reduce clinician time required to support prescribing. Lim LM, et al. Computer-assisted prescription of erythropoiesis-stimulating agents in patients undergoing maintenance hemodialysis: a randomized control trial for artificial intelligence model selection. JAMIA Open. 2025 Mar 27;8(2):ooaf020.

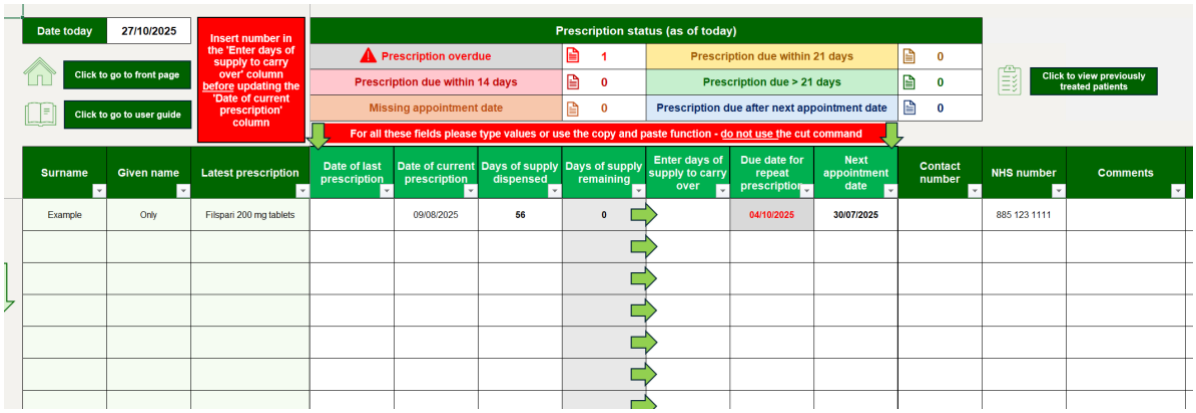
An AI generated tool is being piloted at a UK NHS Trust and if successful could be rolled out to other Trusts.

AI tools to dose tacrolimus in transplant recipients has also been studied to predict dosing and reduce clinician time.. Huo M, Perez S, Awdishu L, Kerr JS, Xie P, Khan A, Mekeel K, Nemati S. AI-Driven Tacrolimus Dosing in Transplant Care: Cohort Study. JMIR AI. 2025 Sep 2;4:e67302. doi: 10.2196/67302

These approaches require further study in wider patient populations.

Use of technology

Use of digital tracking software to alert prescribers to requirements for repeat prescriptions prior to loss of therapeutics continuity by patients, for example:



Section 3: productivity gains from wider 10 Year Health Plan implementation

Productivity gains

- In this section, please provide evidence of:
- the top digital initiatives you have delivered - in the NHS, other sectors or internationally - that have successfully increased workforce productivity or reduced demand
- actions taken to identify and address gaps in training (pre or post-registration) that support delivery of the 3 shifts
- policies or initiatives that have enabled the NHS to play a bigger role in local communities (for example, widening access, creating opportunities or supporting underserved groups)
- where you have managed changing expectations and increased patient participation in their care through digital tools and, where applicable, you have adjusted workforce planning to reflect this (for example, increased training to deliver new approaches to diabetes management to reflect new digital tools)
- Please provide specific examples, supported by data where available.

Description of innovation

- policies or initiatives that have enabled the NHS to play a bigger role in local communities (for example, widening access, creating opportunities or supporting underserved groups)
- the top digital initiatives you have delivered - in the NHS, other sectors or internationally - that have successfully increased workforce productivity or reduced demand

Multiple examples of productivity gains from digital and other initiatives together with initiatives which have reduced demand have already been given in section 1 of this response and are therefore not repeated here. Projects include LUCID, KIDNEY BEAM and HIDDEN CKD

Actions taken to identify and address gaps in training include:

Education of workforce in movement from sickness to prevention: Centralised education resources to increase accessibility of education and avoid duplication:

Due to the significant work to support chronic kidney disease case finding in the community and primary care, the wider workforce involved in this change (primary care receptionists, nurses, GPs, pharmacists, peer educators etc) will require different levels of training in CKD management.
The UKKA education hub is currently developing and collating unified resources for training of multiple different professional groups in CKD management through online learning resource. Partnership with expert primary care staff together with partnership with the British and Irish Hypertension Society, The Primary Care Cardiovascular Society and the Primary Care Diabetes and Obesity Society offer optimal opportunities for spread of such resource to all relevant professionals https://education.ukkidney.org/

Increased training for kidney professionals in the care of older frailer kidney care patients supports hospital to community care.

In response to the aging kidney population, the London Kidney Network has developed a suite of resources to support kidney professionals in learning about the care of older frailer patients - resource includes patients education leaflets (with a short webinar film version in development), on line learning modules for clinicians in frailty and advanced care planning and online teaching for primary care in managing older frailer chronic kidney disease patients.

The OSCAR programme provides specific training to kidney care professionals in talking to late stage kidney patients about treatment options including those that might be optimal for older frailer patients.

Initiative to improve kidney speciality training for nurses

Modelling assumptions:
Nurses working in kidney care will always require investment in specialist training. Whilst digital monitoring can assist with patient management, an extensive knowledge base and training is still required for problem-solving/treatment delivery across all areas of kidney care.

Career and training Pathways
The dissolution of nationally recognised training for specialist nurses e.g ENB courses has led to a disparity in the training available for nurses working in kidney care. Postgraduate courses in the form of a university based 'renal module' are available at a smattering of universities and there is no nationally recognised advance practice training specifically for renal nurses.
To address the gap, The Association of Nephrology Nurses UK have created an online 'Enhancing Practice in Kidney care' renal course comprising of 12modules covering all aspects of kidney care. https://kidneycarelearning.ocbmedia.com/enhancing-practice-in-kidney-care/
The course is cost-effective at £150 per nurse with a discount for units that bulk buy licenses. The course can be added to a degree or MSc as a negotiated workplace module via the APEL system.

How it will affect the workforce required and their training/support or mentoring requirements
Accessing the online course enables staff to complete foundation training over a 6-month period, giving them a basis on which to build their skill set. Ideally, this should be a must-do for all nurses new to working in kidney care.

Training for paediatric nurses: Competencies have been developed to upskill nurses working in paediatric kidney units to a national standard enabling movement of nurses from one unit to another if required. This is especially beneficial during period of staff shortages or relocation of staff.

https://education.ukkidney.org/course/paediatric-renal-nursing

Initiatives to increase efficiency

Patients known to kidney care teams are often admitted under other general medical teams resulting in delayed specialist expertise and extended length of stay. Automated alert systems such as that delivered Aintree University Hospital resulted in a year in saving of 250 inpatient bed days and a reduced 30 day mortality by 5.5%.

The Sheffield shared care model for haemodialysis patients
The vision of Shared Haemodialysis Care is for all people who receive dialysis at centres to have the opportunity, choice and information to participate in aspects of their treatment and thereby improve their experience and their outcomes. This requires a collaborative approach between healthcare professionals and patients; "Without patient involvement at every level, it would be misdirected and irrelevant"

Resources are available via the Kidney Care UK website to enable units to develop their own shared care program. Shared haemodialysis care allows patients to choose which aspects of care they undertake, from small tasks such as taking their own blood pressure and weight, to any (or all) of the other dialysis tasks. The emphasis is on taking part and engaging at a level that suits the individual. In some cases, this will facilitate a patient moving to home haemodialysis thus contributing to the closer to home agenda.
https://www.kidneyresearchuk.org/2021/11/05/study-paves-the-way-for-more-personalised-haemodialysis-care/

Initiatives to enable NHS to play a greater role in its local community

The Gift of Living Donations Programme has been working with the London Kidney Network to increase awareness and progression of living donor transplantation options in the Black community : https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiljZL5-NqQAxVqV0EAHfJHHgUQFnoECBsQAQ&url=https%3A%2F%2Fwww.giftoflivingdonation.co.uk%2F&usg=AOvVaw2bTbuFaJ-iKThgSNHwJ2Rv&opi=89978449

Hidden CKD – detecting chronic kidney disease in ethnic minority populations - please see entry under section 1.

Section 4: culture and values

Improving culture and values

- In this section, please provide evidence of:
- policy interventions that have directly improved workforce outcomes and patient outcomes (for example, retention, staff wellbeing, reducing sickness absence, as well as better quality care)
- approaches that have successfully embedded strong core values into everyday leadership, decision-making and service delivery
- systems or practices that ensure leaders at all levels actively listen to staff feedback - particularly from underrepresented groups - and act on it
- Please provide specific examples, supported by data where available.

Description of innovation /project - improvement in nursing support and quality of care
Description of innovation /project
A shift from hospital-based care to community care: Home dialysis and the nursing workforce

Introducing a nationally recognised patient acuity assessment for home-based dialysis services to ensure the right skills and nursing roles are in place to support an increase in delivery of these services. Association of Nephrology Nurses UK (ANNUK) workforce planning group have developed a suggested framework as no validated tools currently available.

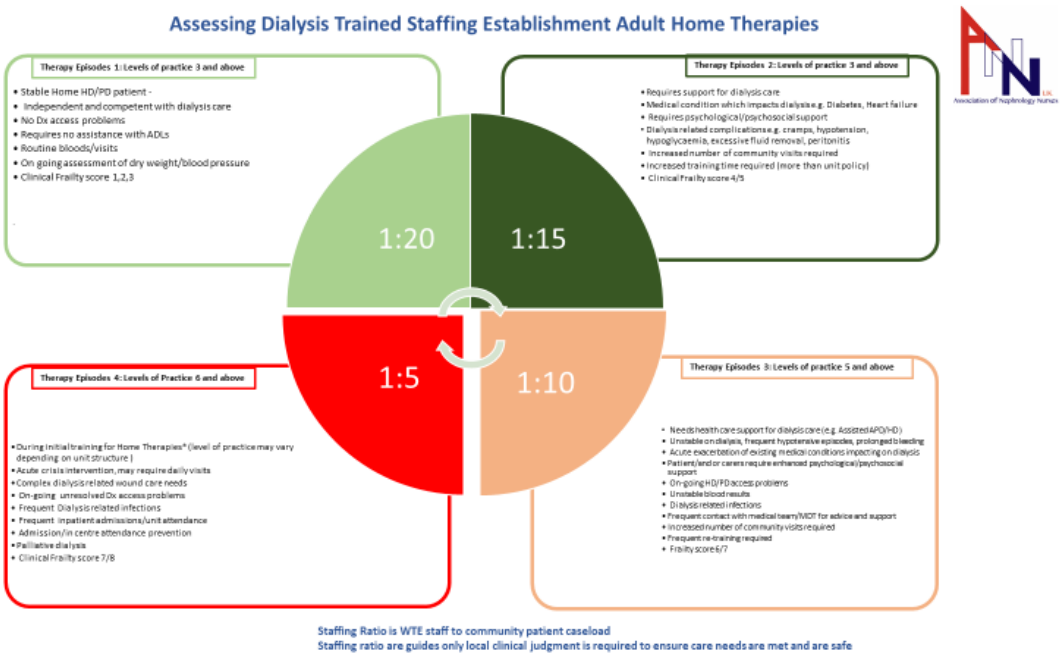
The Safer Nursing Care Tools (SNCT)[1]and the Mental Health Optimal Staffing Tool (MHOST) calculate clinical staffing requirements based on patients' needs (acuity and dependency) which, together with professional judgement, guide safe staffing decisions for inpatient services, but not out-patient or specialist community services.

ANN UK with advice from NHS England have developed professional consensus guidance which focuses on the level and amount of care with appropriate skill set that can be provided by different members of staff,[2,3,4] alongside the care required by the patient (acuity).
A significant implication for kidney care is the emphasis placed on home dialysis (peritoneal and haemodialysis).
The benefits of home dialysis are numerous with both types linked to increased patient autonomy and empowerment of managing their own therapy

How it will affect the workforce required and their training /support or mentoring requirements

It is well recognised that training a renal nurse takes years of learning, advanced education and clinical practice. One US study reported only24% of renal nurses stated they had the right amount of staff and skill mix all of the time and lack of staff was a significant health and safety issue[5]. Such increased workload often leads to burnout which, in turn, decreases staff levels further.[6]
Within home therapies, the skill set involves further specialised clinical and technical Competencies[7]. Recruiting nurses to home therapies with the required skills is difficult and the lack of appropriate staff can limit home dialysis provision
A survey undertaken in 2021 reported a varied approach to staffing home dialysis services with no reoccurring theme or consistent staffing levels.
ANNUK recommend using an acuity assessment for patients receiving all types of home dialysis. Patient needs can be assessed as therapy episodes. Assessing patient therapy episodes in relation to staff/levels of practice may be used to predict the appropriate number and group of patients which can be managed in the community.
The greater the needs of the patient the higher the level of practice needed to care for them.
We recognise there is a variation in the provision of assisted automated PD (AAPD) across the UK with some being provided in house and some with external providers.
Basic care can be provided by external services but the complexity of some of the patients means input from the hospital- based team is required. Patients are likely to need 3 Therapy episodes of care or more delivered by a practitioner at a higher level of practice.
Therapy episodes are based on the number of community visits or interventions required each month but also include MPT reviews, clinics, documentation and administrative tasks, training and in-centre cover in many units. Travel time, mileage and geographical location of visits also need to be factored in. Staff: patient ratios serve as guidance only and professional judgement should be applied to increase or reduce them accordingly where there are regional variations such as complex demographics, geographical challenges or digital models of care in place which enable remote monitoring.

Graphics and references relating to your innovation/project



References
1 The Shelford Group. Safer Nursing care tool [internet]. 2013 [cited 2020 July 21]. Available from: https://shelfordgroup.org/safer-nursing-care-tool/
2. Health Education England NHS Career Framework Levels: https://learning-disability.hee.nhs.uk/nhs-career-framework-level/ Accessed May 2023
3.Health Education England Multi-professional framework for advanced clinical practice in England available at: https://www.hee.nhs.uk/sites/default/files/documents/multi-professionalframeworkforadvancedclinicalpracticeinengland.pdf
4. NHS Health Education England: The Centre for Advancing Practice https://advanced-practice.hee.nhs.uk/
5. Gaietto K., Williams M. 2020. ATTENTION: Workforce shortages as barrier to optimal dialysis. Seminars in Dialysis 33:505-512
6.Ulrich B., Kear T. 2018. the health and safety of nephrology nurses and the environments in which they work: Important for nurses, patients and organizations. Nephrology Nursing Journal 45(2): 117-140
7. Karkar A, Dammang ML, Bouhaha BM. Stress and burnout among hemodialysis nurses: a single-center, prospective survey study. Saudi J Kidney Dis Transp

Additional box

The UK kidney community faces significant future workforce challenges with a disease which is predicted to grow in prevalence from the world's 10th biggest killer to the fifth leading cause of premature mortality by 2040. The specialty faces significant demographic challenges in an ageing population, high rates of deprivation, and disproportionate representation in ethnic minority populations. We welcome this opportunity to work with the government using the 3 shifts from analogue to digital, hospital to community, and disease to prevention. In this document, we offer multiple examples of innovations and projects already - to retraining and enhancing our workforce and to utilising the power of modern technologies to optimise working patterns. With adequate investment and support, we are ready to meet the challenges of the modern kidney care workforce.