Improving Identification and Coding of Chronic Kidney Disease (CKD) in Patients with eGFR <60 in General Practice

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SaTH Improvement Hub

NHS The Shrewsbury and Telford Hospital NHS Trust

REASON WHY?

Chronic kidney disease (CKD) is frequently underdiagnosed and undertreated, making accurate clinical coding in primary care essential for appropriate management, monitoring and risk stratification. Early identification and effective management in primary care can improve patient outcomes and reduce the risk of complications. According to NICE guidance, the risk of adverse outcomes increases with CKD severity, meaning patients at higher risk require more frequent monitoring and follow-up. According to the NHS health survey in England 2022, over half of people aged 75 and over have CKD stage 1 to 5. As much of their ongoing care takes place in the community, accurate coding on the EMIS system is vital to ensure appropriate follow-up and continuity of care. This quality improvement project aimed to assess whether patients with an eGFR below 60 mL/min/1.73 m² on two separate occasions were appropriately coded as having CKD on EMIS and to implement changes to improve coding accuracy, supporting safer, more effective monitoring and management.

SMART AIM

S SPECIFIC | M MEASUREABLE | A ACHIEVABLE | R RELEVANT | T TIME-BOUND

To improve the accurate coding of eligible patients with chronic kidney disease (CKD) on EMIS from a baseline of 71% within 5 weeks by implementing targeted interventions in primary care.

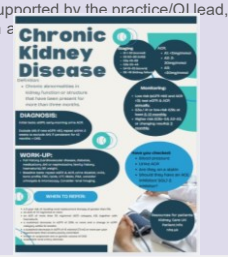
PLAN

1. Baseline measure: An initial EMIS search was conducted to identify patients aged 18 and over with two or more eGFR readings below 60 mL/min/1.73 m², taken at least three months apart. Patients without an appropriate CKD code were identified to establish baseline coding accuracy. The search also assessed whether patients had undergone urine albumin-to-creatinine ratio (ACR) testing and/or ultrasound of the kidneys, ureters and bladder (US KUB).

2. Interventions: A teaching session was delivered to clinical staff covering CKD pathophysiology, NICE guidance, diagnostic and coding criteria, monitoring and follow-up. In addition, an educational poster summarising the criteria for CKD coding was displayed in all clinical rooms to support staff awareness and consistent clinical practice.

3. Repeat measure: The EMIS search was repeated following the interventions to assess changes in CKD coding accuracy and identify any improvement compared with baseline.

Stakeholder engagement: GPs, practice nurses/ANPs and clinical staff were engaged through discussion of baseline findings and barriers to accurate CKD coding. Their feedback informed the teaching session and educational poster. The project was supported by the practice/QI lead, facilitating implementation a



DO

1. Baseline audit (November 2025)

- An initial EMIS search identified 1,070 patients with two eGFR readings below 60 mL/min/1.73 m² on separate occasions. Of these, 762 (71%) were correctly coded as having CKD, leaving 308 (29%) without a recorded CKD code. Urine ACR testing and US KUB investigations were also reviewed with **29%** of uncoded patients had not had a urine ACR in the last year

2. Interventions (December 2025)

- **Staff education:** A teaching session was delivered to clinical staff (a total of 8 staff including pharmacist, GPs, resident doctors, physician associates were present) covering CKD pathophysiology, complications, management, diagnostic criteria and referral guidance. This helped raise awareness, although attendance was challenging due to differing clinical rotas.
- **Educational poster:** A poster summarising CKD diagnostic and referral criteria was displayed in clinical rooms to support consistent identification and coding of eligible patients.

3. Repeat audit (April 2026)

- Six months after the initial audit, the EMIS search was repeated. Of 1,109 eligible patients, 802 (73%) were correctly coded as having CKD, compared with 762 (71%) at baseline.
- This represented an improvement in coding accuracy of approximately 2.0 **percentage points**, with the number of correctly coded patients increasing by 40 and the eligible patient population increasing by 39.

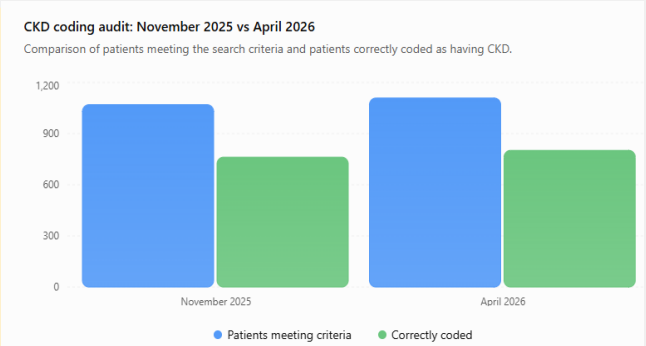
STUDY

Baseline audit – November 2025

- 1,070 patients met the search criteria.
- 762 (71%) were correctly coded as having CKD.
- Of the 308 uncoded patients, 29% (approximately 89 patients) had not undergone urine ACR testing in the preceding 12 months.

Re-audit – April 2026

- 1,109 patients met the search criteria, an increase of 39 patients.
- 802 (73%) were correctly coded as having CKD, representing an increase of 40 correctly coded patients.



Correct coding improved from 71% to 73%.

Interpretation

Coding accuracy improved by 2.0 percentage points over six months. Although the number of correctly coded patients increased, the overall improvement was modest and below expectations.

The findings suggest that newly identified patients may be added to the CKD register, while some patients with previously documented reduced eGFR remain uncoded. This may indicate that the interventions were more effective in raising awareness of new cases than in identifying and retrospectively coding existing cases.

The findings highlight the need for further interventions targeting previously uncoded patients, alongside improvements in appropriate ACR testing, monitoring and follow-up.

Feedback was sought informally from clinical staff following the teaching session. **GPs and the practice pharmacist reported that the session was useful and improved their understanding of CKD diagnostic criteria, coding and management.**

"An excellent set of slides on CKD and audit data. Clear, relevant and precise."

— **GP partner**

Impact:

The intervention was associated with a modest improvement in CKD coding accuracy with **40 additional patients** appropriately coded at re-audit Positive feedback from GPs and the practice pharmacist suggested that the educational intervention was relevant, clear and useful in supporting staff awareness of CKD.

ACT

I will **Adopt** the CKD teaching session as part of ongoing staff education, as this improved clinicians' understanding and confidence in CKD coding and management.

I will **Adapt** the approach by delivering the teaching session **every 4 months**, reflecting the average duration of rotational staff placements. This will provide regular opportunities for rotational and newly appointed staff to attend.

I will also **Adopt** the CKD educational poster as an ongoing visual reminder to support clinicians with CKD coding and management. The poster will remain displayed in clinical rooms and will be reviewed **every 6 months** to ensure the information remains relevant and visible.

Within the **next 3 months**, clinicians will be encouraged to review previous patient results and identify patients who meet the criteria for CKD coding. Where possible, **dedicated time for retrospective coding** should be allocated to address patients who may have been missed previously.

A **repeat EMIS audit should be undertaken in 6-9 months** to assess whether improvements in CKD coding have been sustained and to identify any further areas for improvement.

ACKNOWLEDGEMENTS & REFERENCES | With thanks to Dr Titus Ganesh at Market Drayton Medical Practice