What information is collected (additional information)

Data will be extracted from GP's clinical systems using BMJ Informatica's CKD Audit Solution. The following information is collected for analysis:

Age, sex, ethnicity, post-code

Case-mix adjusted analyses will be used to audit the equity of care by gender, age-groups, ethnicity, and patient indices of multiple deprivation derived from the patient postcode to calculate the Index of Multiple Deprivation (IMD) and to explore whether there are differences by age-group, gender, ethnicity and/or IMD score in terms of testing for creatinine, and/or albuminuria.
We also explore whether there are differences by age-group, gender, ethnicity and/or IMD score in terms of blood pressure drug management and cardiovascular disease prevention than men, and/or whether there are differences in referral rates.

Risk factors for CKD

In those who should be tested.

Relevant co-morbidities

CVD, smoking, BP, DM, AF, obesity, gout, underlying kidney disease, osteoporosis, anaemia, cancer, systemic disease, dementia and mental health problems.

Medications

Anti-hypertensive drugs in different drug classes, statins, nephrotoxic drugs, aspirin, warfarin and diabetes medication with prescription dates from GP records.

Laboratory tests and results

For example: eGFR, creatinine, ACR, PCR results, haematuria, haemoglobin, and phosphate, as well as UTI read codes, and whether patients refused laboratory tests.
We also will compare numbers tested for kidney function and urinary albumin-creatinine-ratios (UACR) as in the NDA with the local laboratory data.

Presence on existing registers

Registers such as for Diabetes Mellitus, Hypertension, Cardiovascular Disease and Atrial Fibrillation.

Time from referral

We also calculate the time of referral by GP to being seen in specialist clinic (HES outpatient data) and compare the percentages of missing GP data on follow-up assessments, anaemia and phosphate- measurements, and Hep B vaccinations between those seen in specialist out-patient clinics and those only seen by GPs.

Compared to CKD domains within QOF indicators

The extracted data from the local GP systems will be compared with CKD domains within QOF (e.g. renin-angiotensin blocking drugs in patients with proteinuria, annual measurement of proteinuria, annual measurement and control of blood pressure to an audit standard of 140/85 mmHg) and kappa values will be calculated.

Social indicators

A wide range of social indicators will also be used to audit the equity of care. Most data will be routinely available data (HES/PEDW, ONS, NDA) and/or extracted from GP practice clinical systems.

Follow-up data

For follow-up data we compare HES stroke and MI codes with the codes entered by the GP, as well as for mortality with ONS data and use public data from NHS kidney care and the UKRR on local renal service structures to cross-validate our snapshot of the primary-secondary care interface.