key points

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Chronic kidney disease (CKD) is a potentially progressive condition resulting in a decline in renal function secondary to a range of causes. An individual is considered to have CKD if abnormalities of kidney function or structure have been present for more than three months. Despite being common, CKD often remains undiagnosed partly because of lack of symptoms until late in the disease process. Late detection of CKD, and hence lack of effective management, increases the risk of progression to end-stage renal disease (ESRD) which often requires renal replacement therapy such as dialysis or transplantation. Furthermore, delayed diagnosis of CKD is associated with increased morbidity and mortality.

Derangement in serum creatinine and eGFR will alert a clinician to a patient with potential CKD. However, creatinine and eGFR are imperfect measurements of kidney function and should be interpreted in the context of the individual patient. For example, eGFR is not a reliable measurement of renal function during an episode of AKI or during pregnancy. As serum creatinine is a breakdown product of creatinine and phosphocreatine in muscle, caution is needed interpreting results in patients at the extremes of muscle mass. For example, individuals with significant muscle wasting or limb amputees may have their eGFR overestimated, while body builders with high muscle mass may have their eGFR underestimated.

All patients identified as having CKD should have the following parameters checked at the earliest opportunity: blood pressure; full blood profile, glucose and lipid profile; dipstick urinalysis; and urinary albumin:creatinine ratio (ACR).

CKD is classified based on GFR and ACR with the GFR categories G1-G5 similar to previous GFR thresholds for CKD stages 1-5. ACR is categorised as A1-A3 according to the levels of proteinuria. A1-A3 are added to CKD classification to highlight the risks that proteinuria is associated with progression to ESRD and CVD.

Patients with CKD should be provided with information and education tailored to the severity of their CKD and personal risk of progression. Patients should be given appropriate support and have access to their own data (test results, correspondence regarding their diagnosis and management plan) to enable them to self-manage aspects of their condition. Maintaining a healthy weight, smoking cessation, dietary salt reduction, good glycaemic control and exercise all help to minimise CKD progression and also help reduce morbidity and mortality associated with comorbid conditions e.g. CVD.

Timely referral for specialist nephrology input when required is key. The decision to refer to nephrology should take account of the patient's wishes and their comorbidities. Often patients do not require regular hospital review and agreement on management can be reached through liaison between primary care and nephrology.