England

ASSIST-CKD: A Quality Improvement Programme for the UK

Identifying people with chronic kidney disease (CKD) at greatest risk of progression

The problem

- Dialysis and transplantation are linked to poor survival and quality of life and have a big impact on NHS resources
- Late referral for dialysis (less than 90 days) increases mortality, morbidity and healthcare costs
- The risk of dying from cardiovascular disease is on average 10-20 times higher in a patient on dialysis than in the general population

Dialysis treatment costs
per person per year

£25,000
Dialysis treatment
(paid for by NHS England)

£5,000 to £10,000
Additional costs (transport, EPO & other drugs, admission costs)
(paid for by CCG)

+4% increase year on year in patients on renal replacement therapy (RRT) in the UK

4% increase

180 new RRT patients every 5 years per CCG
(based on 300,000 population and UK incidence 120 per million population)

Our solution

A person-centred system that highlights patients at greatest risk of end stage kidney disease (ESKD)

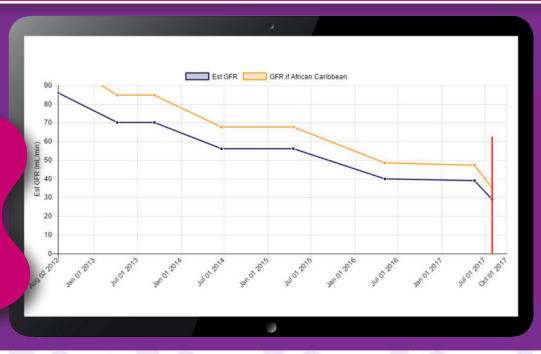
Uses surveillance graphs of kidney function (eGFR) over time (up to 5 years)

Dedicated software package automatically generates graphs in the laboratory if patient meets pre-set age and low eGFR criteria

Interpreted by trained staff in the laboratory

Graphs showing disease progression are sent to GP practice for review – highlights high risk patients to primary care

Early detection Improved care



Saving money Saving lives

Timely identification of at-risk groups creates opportunities to:

- reduce unplanned and emergency admissions
- avoid or delay the need for dialysis
- improve access to home dialysis and transplantation

The benefits:
A case study

Since eGFR graph surveillance was implemented at the Heart of England Foundation Trust (HEFT) UK Renal Registry data (2012-2015) has shown:

5.2% Late presentation for dialysis (lowest in UK and improved from 9.9%)

Delaying dialysis for just one patient for one year will fund eGFR surveillance for at least 5 years

(figures based on 300,000 population, cost of eGFR surveillance c£5,000/year vs cost of dialysis:£25,000 (plus additional costs met by CCG) per patient, per year

Our local perspective

Population	No. of NEW patients requiring RRT (120 per million per year)	Estimated cost of providing dialysis per year for NEW PATIENTS (£25,000pppa, £5-10,000 additional costs)	Late presentation rate for Renal Replacement Therapy (RRT) - percentage	Cost of eGFR surveillance programme per year	Impact required for eGFR surveillance to be cost-saving
				Lab Costs: Trust IT Costs: ASSIST-CKD IT Costs: TOTAL:	

"Mark's renal failure was diagnosed the day after he was admitted to hospital. "I had been tired and unwell and tests showed my creatinine was rising, but I was assured everything was ok. 4 years later I had classic symptoms of end stage kidney disease - itchy, restless and dark urine. My creatinine was now over 1,000, I was rushed into hospital and started dialysis immediately". Mark had haemodialysis for 3 years, three times a week before receiving a kidney transplant from his partner Claire. He feels very strongly that he didn't need to 'crash-land' into treatment and speaks of the shock of how everything happened. "I am very supportive of the ASSIST-CKD project and feel if I had been diagnosed earlier I could have made some lifestyle changes and taken blood pressure medication which could have slowed my progression into kidney failure, giving me more time to come to terms with it. By seeing blood results on a graph, the difference is more obvious and it should be easier to detect a problem and therefore be diagnosed sooner."

Mark Davis, patient at HEFT

Benefits to patients:

- eGFR graph helps patients understand a decline in kidney function promoting patient activation and empowerment in managing their disease
- Reduced morbidity and mortality and increased quality of life through:
  - earlier intervention to slow progression of kidney disease and possibly delay/prevent end stage kidney failure including its physical, psychological and social consequences
  - a reduction in (higher risk) emergency dialysis
  - better access to pre-emptive transplantation and home therapies for dialysis

Benefits to GPs:

- Increased efficiency
  - directs attention at small number of high risk cases (not the majority with milder, stable disease)
  - prompts an earlier review of patient
- Report signposts to CKD guidelines, email or telephone and referral options, and offers specialist interpretation of long term trends of kidney function
- Prompts earlier review of patient treatment but but also prevents inappropriate referral and reduces need for on-going hospital follow up of patients with stable kidney function

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