

# 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 Wales)

**£5,000 to £10,000**

Additional costs (transport, EPO & other drugs, admission costs)  
(paid for by LHB)

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

4%  
increase



**255 new RRT patients every 5 years per LHB**

(based on 425,000 average LHB population and UK incidence 120 per million population)

## Our solution

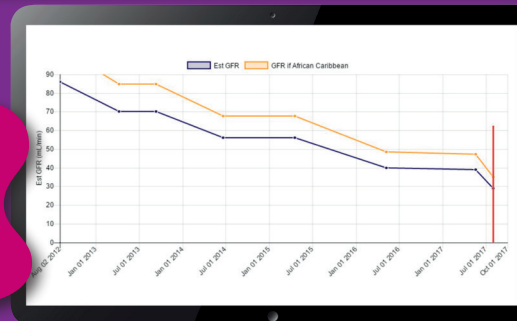
Uses surveillance graphs of kidney function (eGFR) over time (up to 5 years)

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:

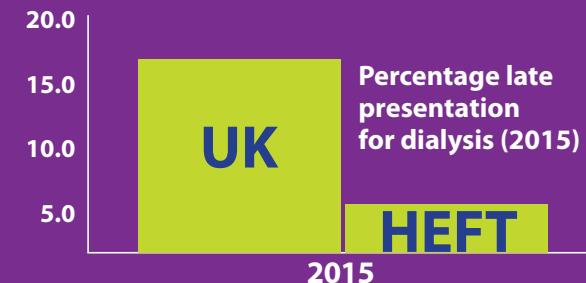
- reduce unplanned and emergency admissions
- avoid or delay the need for dialysis
- improve access to home dialysis and transplantation

## 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 425,000 population, cost of eGFR surveillance c£5,000/year vs cost of dialysis:£25,000 (plus additional costs met by LHB) 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:<br>Trust IT Costs:<br>ASSIST-CKD IT Costs:<br>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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Project led by:

September 2017 (Wales)

Project supported by:

