ASSIST – CKD

A programme to spread eGFR graph surveillance for the early identification, support and treatment of people with progressive chronic kidney disease

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WHAT HAVE WE LEARNT, WHAT ARE WE DOING NEXT?

1. PROCESS OF IMPLEMENTATION

1.1 We have implemented eGFR graphical surveillance in 20 laboratories across the four Home Nations, serving an estimated 11-12 million people.

1.2 We have seen evidence of **genuine local ownership** of the intervention:

- Sites have developed their own models for reporting
- A number of sites have contributed to updated versions of the eGFR graphing software
- One site has developed its own software, based on the ASSIST-CKD model, but with an entirely different IT architecture and uniquely linked to Trust electronic systems for communicating with local GPs
- Sites have produced their own peer-reviewed publications and conference abstracts describing their local experiences

1.3 We have seen **clear evidence of sustainability.** The ASSIST-CKD Health Foundation award included one year's funding to participating laboratories to support the staff time and administration costs. However, many sites have continued to implement beyond this period. As at 31/12/18 a total of 12 sites have been implementing the ASSIST-CKD intervention for more than one year (this number may rise further as several sites only commenced reporting in 2018). 11 of these sites are still "live" as at 31/12/2018. Of the 12 sites:

- eGFR reporting has been embedded (no additional funding sought) in seven sites
- Additional local funding has been found (or the Project Award spread over more than one year) in four sites
- Only one site has stopped reporting
- Eight sites have been running for more than two years
- Two sites have been reporting for more than three years

2. EXPERIENCE OF IMPLEMENTATION

2.1 Intervention is **attractive to Commissioners** and acceptable to both Primary and Secondary care.

2.2 **Low burden of reporting for laboratory** (or other) staff, with reporting times typically one hour/week.

2.3 An average of 18% of graphs reported to GP with the proportion of graphs falling over time.

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2.4 **Low impact on GP workload** (attention directed towards high-risk cases – typically 1-5 graphs per month received by an individual GP Practice).

2.5 Receipt of graphs **generally perceived as useful by GPs.** In Surgeries where there is already a focus on kidney disease the graphs may be perceived as less useful as GPs are more likely to use the functionality of existing software (for example EMIS) to produce eGFR graphs in-house. However many GPs reported that although they had the functionality many did not have systems in place to prompt them to produce/review a graph, so the default was to review one eGFR reading in isolation.

2.6 A perception of increased referral to kidney services from some Renal Centres was generally not borne out by data on referral numbers.

3. IMPACT OF IMPLEMENTATION

3.1 May reduce late referral for RRT (suggestive but provisional data from longest running site).

3.2 Quantitative results looking at primary endpoint (referral to secondary care <90 days from commencement of RRT) available in Summer 2020. In the meantime three sites (Newry, Hull, Swansea) are continuing to conduct in-depth local evaluations.

3.3 The qualitative evaluation showed the ASSIST-CKD intervention might impact on other outcomes not solely late presentation rates: improved awareness of kidney disease in primary care, understanding of GPs as to the importance of eGFR progression over time, improved management of medicines that affect kidney function and involvement of patients in understanding their condition (where patients have been shown the graph).

3.4 Local evaluation has suggested **additional benefits** that are not captured by limiting consideration to rare events (note that late referral is only experienced by approx. 20 pmp, and many of these are unavoidable). From one site (population 375,000):

- 230 graphs sent in 6/12
- 18 new referrals, 9 seen in clinic (9 virtually). Of those seen in clinic, renal function improved in 78%
- 91% of those not seen had action taken (eg repeat U&E) in Primary Care (but note no comparator so causality uncertain)

4. POSSIBLE AIMS FOR FUTURE RESEARCH

4.1 To use machine learning to replicate human interpretation of progression. This work is underway in Wales.

4.2 To predict need for and timing of renal replacement using dynamic changes in eGFR. This would aid timely referral to renal services more than one year from expected time of ESRD, giving time for dialysis/transplant preparation or conservative management.

4.3 Patient involvement study. It would be interesting to evaluate how people with CKD might perceive the graph, if the graph was shared with them during a consultation.