ASSIST-CKD

Kidney Research UK
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Wirral University Teaching Hospital
NHS Foundation Trust

A QI (Quality Improvement) programme to spread eGFR graph surveillance for the early identification and treatment of people with progressive chronic kidney disease

The effect of the ASSIST-CKD programme on referrals and management of CKD patients on the Wirral

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Introduction

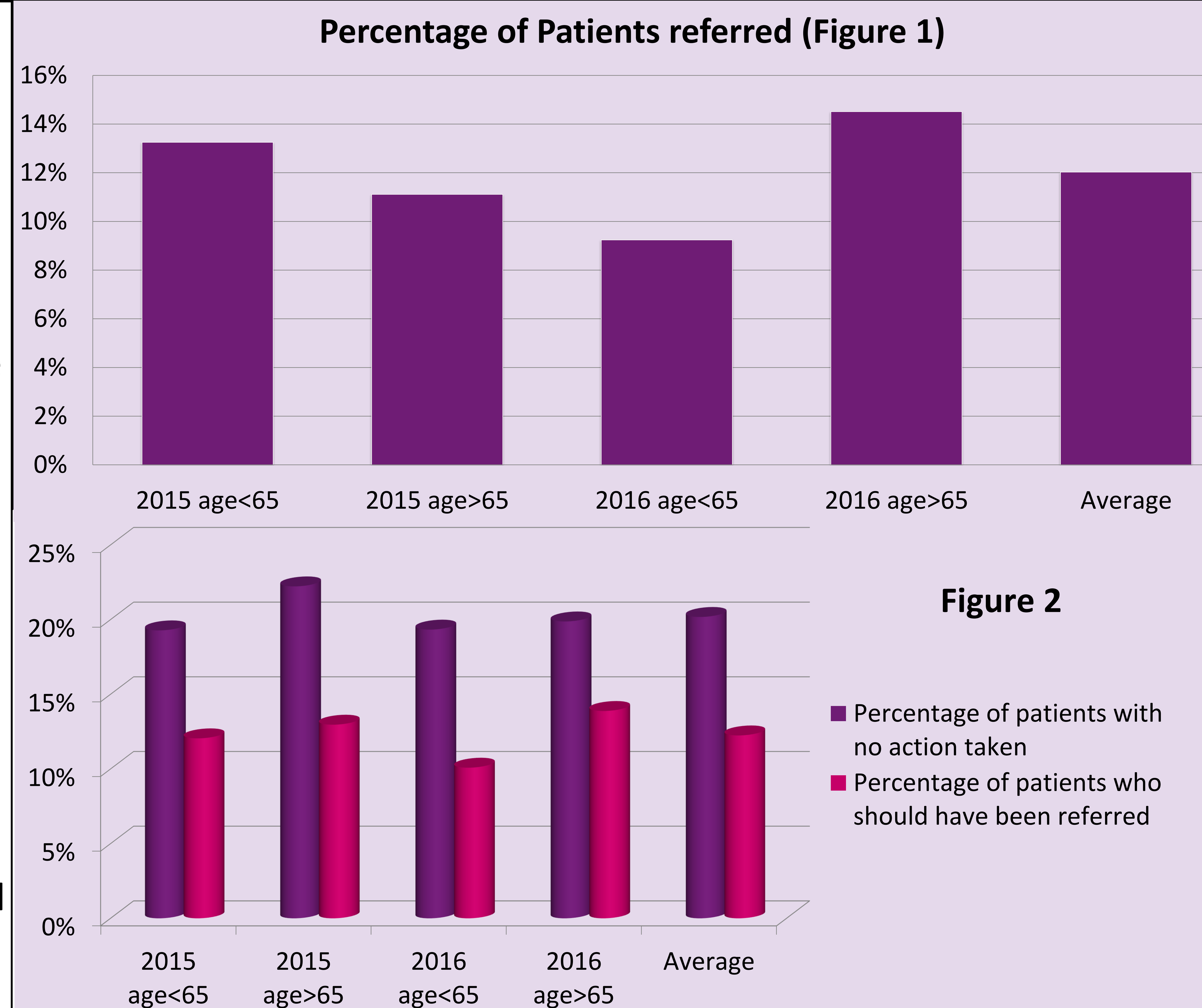
- It has long been known that patients who present late to medical services with end stage renal failure have a worse prognosis, suffering double the mortality and require a much longer hospital stay compared to those commencing dialysis post work-up by a nephrologist[1].
- The ASSIST-CKD project is based on a community wide alert system that has been in operation in Heart of England Foundation Trust for the past 10 years aimed at improving outcomes in patients with deteriorating CKD [2].
- ASSIST-CKD uses software to analyse the blood tests of patients with CKD, specifically their eGFR. This generates a report trending their eGFR over time.
- Patients GPs are alerted that their patients eGFR is persistently or rapidly dropping and may need specialist intervention.
- Data suggests that while using the alert system the number of new starters on dialysis per year has fallen by 16% compared to a national rise of 8%[1]
- Our trust is one of 19 units to have been involved in a nationwide quality improvement project commissioned by Kidney Research UK, attempting to determine if the positive results of the Birmingham group could be replicated nationwide.

Methods

- Data was collected from our local laboratory for individual patients triggering alerts, detailing patient, date of alert, DOB and location of GP.
- We collected all of the details of patients who received an alert over a twelve month period - July 2015 to June 2016.
- For each patient, we looked at their electronic records determining further background medical history including diabetes etc, if they were referred to a speciality following the report being sent, and which speciality they were sent to.
- There were two databases - 65 and over, and under 65 based on different eGFR triggers based on age.
- In addition to this we looked at overall average GP referral rates pre and post implementation taken from our own complied internal records.

Results

- Overall referral rates to Nephrology have increased from an average of 37 referrals per month pre study to an average of 47 per month during the 12 months of the study.
- The groups analysed had a significant number known already to either nephrology or urology (ranging from 3-7% of patients who triggered an alert.)
- The percentage of patients referred following an alert was on average around 12% across all groups (Figure 1).
- Most of the referrals in all age and time specific groups were made to Nephrology (66%).
- Over half the patients who triggered an alert had their blood tests repeated and things had improved and therefore did not trigger a referral.
- Worryingly there were about 20% of cases in every group where no evidence of the alert being actioned could be found (Figure 2).
- In these cases, no bloods had been repeated and no referrals made.
- After looking through these patients' notes, subsequent letters and results, over half on average were judged to have warranted a referral (Figure 2).



Conclusions

- There are some positive statistics to suggest that the ASSIST-CKD is exerting a beneficial effect when implemented in our region and should be continued.
- A significant proportion of patients for whom alerts are being generated are being referred (average of 12%), with the potential to have positive effects on their care in the form of slowing the progression of their disease and need for RRT (Renal Replacement Therapy). They will commence RRT if needed having been prepared appropriately.
- It is too soon to say if crash lander rate will improve as a result of the alert system. This will require a more long term study of our dialysis population looking at the numbers starting and of those who commenced RRT within 90 days of presentation.
- There is still more work to be done as there was no evidence of a reaction to the alert in 20% of patients, improving GP awareness is one suggestion. There may however have been action outside of our trust with patients potentially being seen at other centres that we were not aware of based on our data collection methods. While we think it is highly unlikely that 20% of patients were all dealt with outside the trust, however this is a limitation to the work.

References

1. Chan MR et al, *Outcomes in patients with chronic kidney disease referred late to nephrologists: a meta-analysis*, Am J Med. 2007 Dec;120(12):1063-70
2. www.kidneyresearchuk.org/research/assist-ckd