Implementing a multi-centre quality improvement project to improve access to and experience of home dialysis

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Introduction
Despite national professional guidance and patient groups stating more people wish to dialyse at home there has been little consistent progress in the last 10 years. Only a handful of renal centres have more than 30% of patients dialysing at home. The UK Renal Registry reported that at the end of 2017 in the UK, 4.6% of dialysis patients undertook home haemodialysis (HHD) and 12.2% peritoneal dialysis (PD). This varied between centres from 0 to 16.2% for HHD and 0 to 24.4% for PD. Launched in January 2019, the DAYLife project aims to increase the number of people dialysing at home and reduce variation between centres, leading to better experience of care for patients and families, and better value of care due to reduced transport costs, improved self-management and an increase in patient quality of life.

Method
The quality improvement (QI) methodology used is taken in three steps. Step one - research and discovery, step two - ideas, step three - testing. During step three, centres agree which ideas to try, plan the testing of these solutions and monitor success using agreed metrics. Using the Kidney Quality Improvement Partnership (KQuIP) framework, two multi-professional QI leads are recruited from each unit to lead the QI project locally. Units are encouraged to hold monthly local meetings to review data and QI leads are offered support from a KQuIP programme manager. Quarterly regional events are held to present and discuss outcomes and share successes and challenges.

Ten units across the East and West Midlands took part in the first phase of the project, supported by KQuIP. The project was delivered alongside practical training in leadership and QI techniques including process mapping, driver diagrams, PDSA cycles and measurement for improvement. A national project data-set was developed including monthly home dialysis population numbers and numbers starting or dropping off home dialysis. This was collected centrally from all participating centres. Centres utilised the online quality improvement platform Life QI to track their project, input measurement and log PDSA cycles and learning. Data was backdated to January 2018 to give an accurate centreline.

Results
From the data collected thus far, six out of ten centres have seen either a positive shift (run of six points above the centreline) or increasing trend (five consecutive points increasing) in numbers of patients on a home therapy, PD or HHD since the launch of the project. One unit has seen a negative shift due to falling PD numbers and two have not yet seen a shift or trend in their data. Successful change ideas implemented include an audit of peritonitis rates, staff and patient education, introduction of an unplanned starter - PD pathway, pathway redesign for advanced kidney care and peer assist from expert patients. Whilst a regional trend cannot yet be shown, emphasis on local successes and the narrative behind positive trends and shifts in data as well as better understanding of the root cause of negative trends will provide the basis for sustaining and growing this improvement project.