

Rapid improvements in pre-emptive transplant listing and living donor transplant by a multidisciplinary team on the KQuIP Transplant First QI project.

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Pre-emptive kidney transplant from a living donor is the gold standard treatment for CKD stage 5. In 2017 at our centre, 9% of patients started renal replacement therapy with a pre-emptive transplant (national average 9%) while the best UK centre achieved 28% (ref 1). At our local transplanting centre, 65% of patients entered the transplant list pre-emptively (ref 2) but our centre (non-transplanting) lacked reliable data on its individual pre-emptive listing performance. There were noticeably fewer living donor transplants during 2017 and increasing delays with transplant workup tests. We commenced the KQuIP Transplant First project in mid-2018, aiming to use quality improvement methods within a multidisciplinary team to improve living donor and pre-emptive transplant rates.

Methods

A multidisciplinary team of nurses, doctors, patients, managers and an IT analyst studied baseline performance utilising lean and QI methods including process mapping and root cause analysis. We attended three regional KQuIP training days to learn QI skills. We created a project driver diagram and designed plan, do, study, act (PDSA) cycles to test improvements in the primary drivers of engagement (donors, recipients and staff) and workup pathways (donor and recipient). Data was collected from the electronic patient record, anonymised and entered into the KQuIP Transplant First measurement tool. Charts were created via the LifeQI web platform.

Results

The number of living kidney donations increased by 82% from 17 (2018) to 31 (2019). The number of patients listed for deceased donor transplant increased by 68% from 94 (2018) to 158 (2019) with 60% of patients listed pre-emptively. A one-stop recipient workup clinic was created which included dobutamine stress echo and halved the waiting time from 8 weeks to 4. Extra live donor assessment clinics are now held on Saturdays.

Root causes of problems with recipient transplant workup included late referral for workup, multiple cardiology tests spread over 3-8 weeks, administrative delays and knowledge gaps. Analysis of the living donor pathway revealed problems relating to donor engagement, radiology tests and inadequate live donor nurse hours per week.

PDSA cycles included creation of one-stop recipient workup protocol; extra workup clinic appointments; weekend live donor assessment clinics; appropriate early discussion of pre-emptive living donor transplant when eGFR \leq 25 ml/min; staff teaching sessions; engagement posters; BAME engagement events and enhanced MDTs including cardiologists.

Conclusions

Our multidisciplinary team has successfully achieved improvements in living donor transplant and transplant listing, supported by the KQuIP Transplant First project team. Additional improvements are expected during 2020 and beyond. The project has raised the profile of pre-emptive and living donor transplant in our centre as well as providing support and QI training to a diverse team which will facilitate future improvement work. Patient involvement including from the BAME community was crucial to our success and will continue to drive ongoing improvements.

1. UK Renal Registry 21st Annual Report (2019) - data to 31/12/2017
2. NHS Blood and Transplant Annual report on Kidney Transplantation (2019)