



Improving the efficiency of evaluation period for living kidney donor transplant process using Lean methodologies

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Introduction

People who suffer from kidney failure face a future of regular dialysis. A kidney transplant may offer a dialysis-free life. Living donors are the best source for kidneys for transplantation.

However in SGH, the median evaluation period leading up to surgery was 15 months. Longer evaluation period affects patients' outcome and experience.

Mission statement

The mission statement is to reduce the SGH Renal Transplant for living donor evaluation period between the Date of transplant counseling to the Date of Transplant Ethics Committee (TEC) interview by **50% within 12 months**.

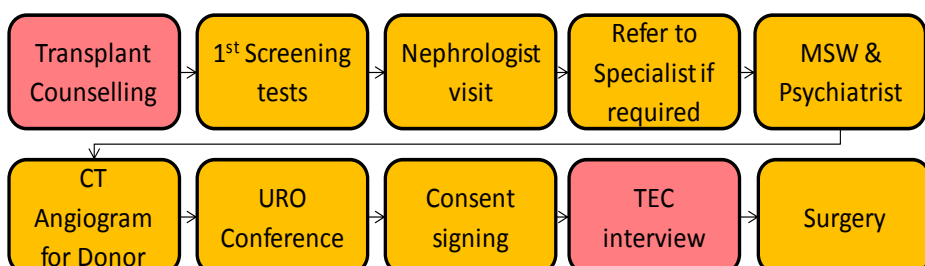


Fig 1: Renal transplant process

Methodology

Lean concepts and tools were applied during the analysis phase. Value Stream Mapping (VSM) was conducted to identify the gaps and bottlenecks in the evaluation process.

Using the 4 streamlining concepts (parallel processing, making internal activities external, improving existing steps and eliminating steps), a few kaizen initiatives were derived.

The 7 types of wastes in Lean were also explored when studying the VSM. The streamlined workflow managed to reduce waiting waste and intellect waste.

Problems	Kaizen Initiatives
Recipients are screened first before donors are, hence lengthening the evaluation period	Parallel process of screening and assessment for recipients and donors Parallel Processing
Patients are only referred to other specialists after visiting Nephrologist	Pre-arrange cardiology and gynaecology appointments in advance Making internal activities external
Patients need to visit other specialists at least twice just for specialists – 1 st time to order investigations, 2 nd time to review results	Pre-order standard tests for Gastroenterology to cut one consult visit Streamline test review process by Cardiologist to cut one consult visit Making internal activities external
Hard for TCs to meet Dr Kee to decide on donor suitability due to his busy schedule.	Create a donor suitability guidelines to empower TCs to make decision easily for straightforward cases Eliminating steps
The report is an essay-type format. It takes time to think and type.	Simplified counselling report Improving existing steps

Table 1: Problems and solutions

Results

The evaluation period has decreased by 60% from an median of 15 months to 6 months. This is more than the target of 50% reduction.

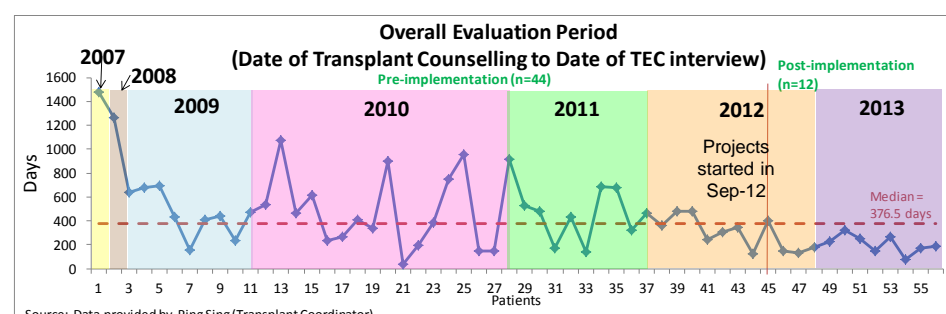


Fig 2: Overall evaluation

As a result of shorter evaluation period, more patients can be transplanted faster and the number of transplanted cases has increased from 7 cases in 2012 to 20 cases in 2013.

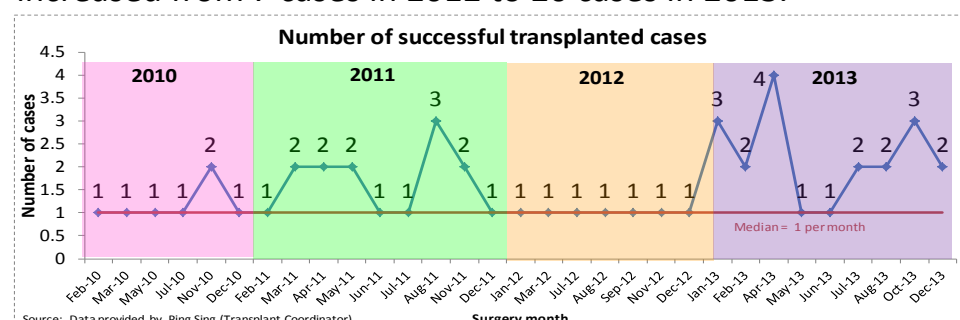


Fig 3: Number of successful transplanted cases

Conclusion

The shorter evaluation period enables patients to have their surgery quicker, resulting in better care outcomes. Transplant coordinators are more satisfied with the streamlined workflow as more time can be spent on patient care activities.