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Case for change

The Royal North Shore Hospital (RNSH) Eye Clinic serves the Northern Sydney Local Health District (NSLHD), seeing over 8200 patients every year.

Despite delivering excellent ophthalmic care, both staff and patients gave poor feedback regarding the way the clinic operated. The Eyes Open project was undertaken to identify and address the key issues underlying this underperformance.

Methods

Eyes Open used techniques based on Lean Six Sigma, to identify and address issues facing the Eye Clinic. Originally developed for improving manufacturing processes, Lean Six Sigma aims to minimise waste, improve workflows and create value without additional resources.

Lean Six Sigma training was provided by the Centre of Healthcare Redesign (CHR) of the Agency for Clinical Innovation (ACI).

The project had 5 stages:

- Define the issue**
Identify issues driving dissatisfaction through multidisciplinary engagement of all Eye Clinic stakeholders
- Measure & analyse**
Determine the root causes of the issues through patient and staff interviews, surveys, and operational data audits
- Design solutions**
Create effective, tailored solutions through core stakeholder workshops and interviews, including a focus on patients
- Implement solutions**
Change existing clinical processes and staff mindsets to improve the service and support continuous improvement
- Sustain change**
Sustain change by training staff and formally documenting new processes
Establish a continuous improvement culture by using a feedback cycle (the Plan-Do-Study-Act (PDSA) cycle) to identify and address issues proactively

Define, measure and analyse

Through:

- 2 **stakeholder workshops**
- 20 patient and staff **interviews**
- 110 patient and staff **surveys**
- 4 years of eMR operations **data audits**
- 150 **time-motion studies**

The following were identified as key drivers of poor patient and staff experience:

- Long wait times while in clinic** (average appointment duration 2 hours 56 minutes)
- Frequent service initiated appointment reschedules**

The root causes of these issues were found to be:

- Long patient waits**
 - Clinic schedule not fit for purpose
 - No emergency/urgent appointment slots
 - No consideration of likely appointment length when booking time e.g. short post-operative visits
 - Poor planning of inpatient and post-operative appointments
 - No defined emergency patient booking process
 - Poor communication between doctors and patient screening staff regarding required investigations

Frequent service initiated reschedules

- Clinic schedule not fit for purpose
- Poor staff leave planning
- Confusing administrative process
- Poor communication between doctors and admin staff regarding patient follow up requirements

Goals and objectives

Objectives for April 2019 were:

- Reduce average appointment duration from 2 hours 56 minutes to 1 hour 30 minutes
- Reduce service initiated reschedules from 54% of patients to 30% of patients

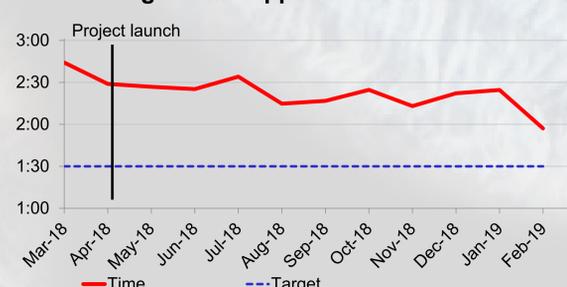
Solution design and implementation

To ensure appropriateness, viability and sustainability of all solutions, all Eye Clinic stakeholders including patients, administration, nursing, medical and executive staff were engaged in solution design. The following were designed and implemented:

- New clinic schedule** tailored for local service
- Formalised and streamlined appointment booking process** for emergency, inpatient and post-operative patients
- Documentation template for follow up appointment and investigation planning** to facilitate staff communication
- 6 weeks notice requirement for planned leave** for all staff. Managers to seek leave requests 12 weeks in advance

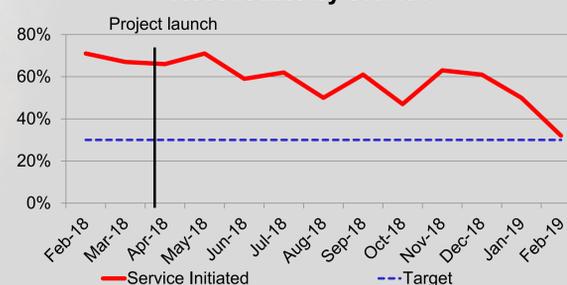
Results

Average Clinic Appointment Duration



From project launch average clinic appointment duration has fallen from 2:56 to 1:57 (Feb 2019).

Reschedule by service



From project launch rescheduled appointments by service have fallen from 66% to 32% (Feb 2019).

Sustain change

To sustain change:

- All staff received **formal training** in using the new solutions
- **New processes were documented** in orientation and operations manuals
- The **PDSA cycle was introduced** to the clinic. Based on the principle of constantly gathering feedback and modifying processes accordingly, it allows early identification and mitigation of issues affecting clinic efficiency.



The Eyes Open project has helped to change the staff mindset in the RNSH Eye Clinic to that of one focused on continuous improvement.

Further applications

Lean Six Sigma methodologies can be used in other clinical settings to drive improvements.

The techniques learnt in Eyes Open are being used to redesign of other RNSH outpatient services (ENT, Orthopaedics, Gastroenterology and Neurosurgery).

Applying Lean Six Sigma in healthcare requires:

- Training staff in Lean Six Sigma techniques
- Dedicating staff to projects
- Changing workplace cultures so continuous improvement is part of business as normal

In NSW Health, Lean Six Sigma training is currently provided by the CHR of the ACI.

Conclusion

The RNSH Eye Clinic was able to identify and address root causes of poor patient and staff experience using Lean Six Sigma techniques.

Average clinic appointment duration was reduced over 30% and service rescheduled appointment reduced by 49%.

Lean Six Sigma techniques can drive sustainable quality improvements in healthcare.