

Project Title

Improving Patient Care Experience with Nurse-Led Service @the Eye Clinic

Project Lead and Members

- Dr E-Shawn Goh (Leader), Ophthalmology
- Ms Zhao Yinqiu, Eye Clinic
- Ms Chiang Mui Leng, Eye Clinic
- Dr Philemon Huang, Ophthalmology
- Ms Ong Wan Qiu, Eye Clinic

Organisation(s) Involved

Tan Tock Seng Hosospital

Project Period

Start date: 02-2014

Project Category

Workforce Redesign, Process Improvement, Workforce Transformation, Quality Improvement, Productivity

Keywords

Tan Tock Seng Hospital, Ophthalmology, Diagnostic Radiology, Workforce Transformation, Formal Workforce, Professional Development, Up-skilling, Process Improvement, Quality Improvement, Productivity, Patient Satisfaction Survey, Wait Time, Turnaround Time, PDSA Methodology

Name and Email of Project Contact Person(s)

Name: Ms Zhao Yinqiu, Eye Clinic

Email: yinqiu_zhao@ttsh.com.sg



CLINICAL SERVICE IMPROVEMENT CATEGORY

A clinical improvement project that was successfully completed in any of the specialized (technical) areas of hospital management, such as Nursing, Laboratory, Radiology or in specialty clinics such as Eye center, Kidney center, etc. The project should show measurable results of having improved the service in such areas as reduction in medication errors, reduced waiting times, prevention of service defects, or faster results with little or no capital outlay.

INSTRUCTIONS

- a. Please fill out all the sections below and abide strictly by the word count. Words exceeding the maximum word count will be cut off automatically/truncated.
- b. **IMPORTANT:** It is necessary that the CEO certifies that all information you provide is true and correct by signing the form indicated in the last page.
- c. By submitting an entry, you agree that HMA will share relevant aspects of the Entry submitted on the HMA or related Resource Center website.

Background Information

Project Title Improving Patient Care Experience with Nurse-Led Service
 @ the Eye Clinic

Date Project Started 02 Jan 2014

Enhancements made (for projects that did not start operations between Jan 2013 to May 2014)

Key staff involved in the project

1. Name Dr E-Shawn Goh (Leader)

Department/Function Ophthalmology

2. Name Ms Zhao Yingiu

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|---------------------|--------------------|
| Department/Function | Eye Clinic |
| 3. Name | Ms Chiang Mui Leng |
| Department/Function | Eye Clinic |
| 4. Name | Dr Philemon Huang |
| Department/Function | Ophthalmology |
| 5. Name | Ms Ong Wan Qiu |
| Department/Function | Eye Clinic |

PLEASE ANSWER THE FOLLOWING QUESTIONS USING THE MAXIMUM WORD ALLOCATIONS INDICATED

1. Please give some background to the project or program including how it originated. Give details of what clinical improvements were achieved and how the project improved quality of care as a result of these improvements. **MAX 350 WORDS.**

Fundus Fluorescein (FFA)/ Indocyanine Green Angiography Services (ICG) are tests performed to diagnose retinal pathology. As these tests involve intravenous administration of dye by Medical Officers (MOs), patients often experience delay up to 45mins while waiting for the MO's arrival. The obtaining of sequential images requires another 30mins. All these prolong the total turn-around time (TAT) for FFA/ICG procedures to 141.3mins (n=207) per patient.

Over the last 20 years, from the U K and New Zealand publications have showcased the success of Nurse-led services and emphasized the expanded role of nurses that has contributed to greater efficiency, service quality and provision within the healthcare setting.

The increasing demand for such a service, the lack of manpower and the slow TAT motivated TTSH Eye Clinic to design and initiate a Nurse-Led service model.

The perceived gap between demand and ability to meet similar expectation also provides an opportunity to expand nurses' role in care delivery. Hence, the Nurse-Led service began in Jan 2014, after TTSH's Medical Board's approval. It aims to augment the MO's role with trained nurses who are capable of delivering similar quality care and standards so that patients can be treated within the shortest time and physicians can focus on treating patients. Selected nurses are required to attend inhouse training jointly conducted by trained nurses and an Ophthalmologist. To ensure competency and independence, they undergo the supervision of an Ophthalmologist on the first 10 procedures. A standard workflow and random audits were in place to ensure safety checks, quality standards and best practices.

Results

Patient Satisfaction Survey results (below) showed that satisfaction level was similarly high when compared to MOs administering the FFA/ICG.

Overall experience-98.9%

Staff knowledge & attentiveness-96%

Preference for a nurse-led service-84%

Since this implementation, physician satisfaction has increased due to reduced non-clinical workload. **822.5 hrs** have been well spent on treating patients and the clinic saved **\$22,732** in annual manpower cost.

This collaboration between physicians and nurses has demonstrated that a Nurse-led service is safe, efficient, and a sustainable evidence-based practice.

Word count: 343 / 350

2. Please describe how the project was beneficial from the patient's perspective and experience, and how it improved patient care, patient safety or service. Preferably please present quantifiable information such as "before and after" measurements if any. **MAX 200 WORDS.**

Before this project was implemented, the patient journey involved multiple sequential steps which require contact with multiple staff at disparate locations. It was not cost effective and efficient as only the MOs were able to administer the IFG/ICG and they were always delayed by other commitments. Extra time was required to obtain images of the retina pathology test results. As a result, patients experienced long waiting time whenever the MOs were delayed by their clinical duties.

Patients had to travel a distance between the clinic and the centralised Ophthalmology investigation department. All these contributed to the delayed TAT which average around 141.3 mins. (n=207)

After implementing this Nurse-Led service the total TAT has reduced by 68.2mins in waiting time for each patient (n=207). Patients remain in a single location, which is the Eye Diagnostic Centre during the investigation. In addition to the streamlined work process, nurses are also at the advantage to develop rapport with patients and enhance their experience.

Word count: 160 / 200

3. Please explain how the project reduced costs of or what other benefits were derived? Is it simple yet effective, something other departments can also adopt or adapt? Were appropriate analysis tools used or was it only a matter of throwing money at the problem? **MAX 200 WORDS.**

The team utilised the PDSA methodology and root cause analysis to examine the problem and arrive at our proposed solution.

No additional costs were incurred and neither were there additional nurses recruited. On the contrary, there was a \$22,732 in manpower savings owing

to the equal no. of trained nurses performing similar role. Additionally, an approximate of 4935 appointment slots was created each year. MOs are now able to focus on seeing patients and 822.5 hrs have been saved for MOs to treat patients yearly. This expanded role for nursing staff has clearly demonstrated nurses' competency in assuming more challenging role. Essentially, it has reduced the total TAT for FFA/ICG procedure by 68.2mins per patient. This has demonstrated our nurses' ability in adding value to the team and positively impact on patient care and clinic resources. Moreover, these nurses at the Eye clinic are already aware of the needs of their patients.

With training and supervision, nurses have proven their ability in taking on more complex responsibilities. Similarly, nurses from other disciplines may also relieve physicians in conducting relevant procedures with proper amount of training, supervision and monitoring.

Word count: 188 / 200

4. Please explain how significant were the results or outcomes? Are these measurable? Are there testimonials, awards or other support to show impact on improvement of the department or unit's service? **MAX 150 WORDS.**

Nurse-led FFA/ICG service is safe, accountable and sustainable. Patients have benefited from shorter waiting time (*From 141.3 to 73.1 mins per patient, n=414, P<0.001*). While our nurses have greater autonomy and better job satisfaction, physicians are happier with less non-clinical duties and more time to treat patients. Based on 10 mins per patient, it has generated 4935 appointments annually, of which, majority were new appointments.

PSS result for nurse-led FFA/ICG service has shown that it is as good as physician-led service. It has received 98.9% in overall experience, 96% satisfaction with staff knowledge in providing comprehensive information and attentiveness as well as 84% preferred to have nurses leading this service. Patients also feel assured by nurses whom they often interact with.

It has also garnered compliments from staff and patients.

"Nurses are knowledgeable, attentive and competent. Very good!"

"Nurse-led FFA/ICG service is efficient and effective as it allows better utilisation of resources."

Word count: 150 / 150

5. Please give some background to the project team that originated, studied and developed the project or program. **MAX 200 WORDS.**

The team comprises a facilitator, doctors, nurses and nursing managers selected based on competence, knowledge, ownership of work-process, and their interest in improving patient outcomes. The expanded role of nurses in the outpatient setting at the Eye Clinic is relatively recent in Singapore. The team utilised international literature and best-practices as a model to

determine the expanded role of nurses to narrow the gap between the increasing demand and short supply for such eye diagnostic test.

The nurse-led FFA/ICG service has proven to be a sustainable evidence-based model that is process and performance driven in TTSH. It can be applied in settings where various tests and procedure need to be carried out.

Word count: 112 / 200

6. Please give any other information, including third party testimonial regarding your project which you think would help convince the judges that this project (or program) should win this category. **MAX 200 WORDS.**

(Please see attached files on testimonials from Senior Consultant Dr Vernon Yong and Clinic Manager Chiang Mui Leng)

Word count: 0 / 200