

Project Title

New Queue System To Solve Old Problems – ED P3 Consult Wait Time & Doctor's Productivity

Project Lead and Members

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Project members: NC Lim Siew Lian, Ms Joyce Loke, Ms Stephanie Teo, Ms Christine Wu, Mr Ng Wei Han

Organisation(s) Involved

Ng Teng Fong General Hospital

Aims

To implement a new queue system aimed at reducing ED P3 consult wait time & increasing doctors' overall productivity during a 1 month pilot project

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Lessons Learnt

A change in process can contribute to improvements in multiple areas. Changing the ED queue system led to improvements in consultation wait time and doctors' productivity.

Stakeholder engagement is key to success. The incorporation of their ideas & suggestions enabled the project team to implement practical solutions that would work on the ground

Conclusion

See poster appended/ below

Project Category

Care & Process Redesign

Keywords

Ng Teng Fong General Hospital, Care & Process Redesign, Quality Improvement, Improvement Tools, Plan Do Check Act, Emergency Department

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NEW QUEUE SYSTEM TO SOLVE OLD PROBLEMS – ED P3 CONSULT WAIT TIME & DR'S PRODUCTIVITY

MEMBERS: DR GOH EE LING, NC LIM SIEW LIAN, MS JOYCE LOKE, MS STEPHANIE TEO, MS CHRISTINE WU, MR NG WEI HAN

- SAFETY
- PRODUCTIVITY
- PATIENT EXPERIENCE
- QUALITY
- VALUE

Define Problem/ Set Aim

Opportunity for Improvement

Emergency Department (ED) P3 median consult wait time was much longer than the target of 30 minutes. Doctors' productivity was also found to be low with most doctors not achieving the target of 2.5 patients/hour.

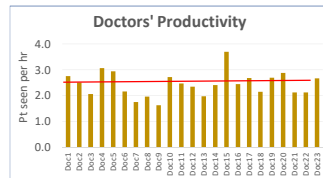
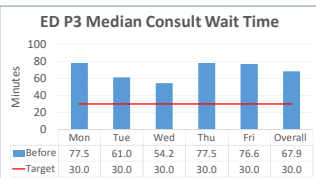
Aim

To implement a new queue system aimed at reducing ED P3 consult wait time & increasing doctors' overall productivity during a 1 month pilot project.

Establish Measure

Current Performance

- ED P3 median consult wait times
Ranged from 55 minutes to 78 minutes which was much longer than the target of 30 minutes.
- Doctors' productivity
Only 43% of ED P3 doctors (10/23) were seeing more than the target of 2.5 patients/hour.



Baseline data was collected from 1 Feb 2019 – 10 March 2019 and the data collected excludes the night shifts, weekend shifts, doctors who worked ≤3 shifts during the period, and doctors who had resigned. It was assumed that workload and manpower would be similar during the baseline data collection period and the 1 month pilot.

Analyse Problem

Current Process

All P3 patients are placed in a common queue and each doctor picks a patient card from this queue once he has finished consultation with the previous patient.

Problems with Current Process

- Selection of cases: Simpler cases were usually selected first, resulting in increased wait times for more complicated cases. Additionally, doctors were inclined to reduce their pace towards the end of their shift.
- Lack of ownership: As patients were not assigned to a doctor, nurses encountered difficulties in getting doctors' authorisation for analgesics & X-rays at the triaging stage.
- No directions for patients: Patients were asked to wait at a common area which resulted in time wasted when they travelled from the waiting area to the consultation room.

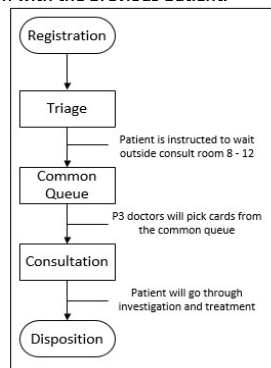


Figure 1: Existing ED P3 consultation process

Select Changes

Plan

The team brainstormed on the changes required & mapped a new process. P3 patients would be assigned to a specific doctor by the triage nurse and asked to wait outside the doctor's consultation room. The triage nurse could also approach the assigned doctor to pre-order required tests and medication.

Check

Stakeholders (ED doctors & nurses) were engaged during the planning & implementation phase. Their feedback formed the "check" step of the PDCA cycle. Solution implementation was also fine-tuned based on their feedback.

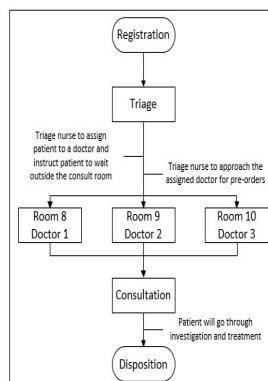


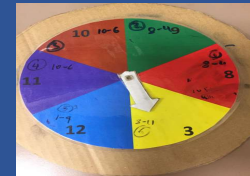
Figure 2: Proposed new ED P3 consultation process

Test & Implement Changes

1. Colour-stickers were pasted on consultation room doors.



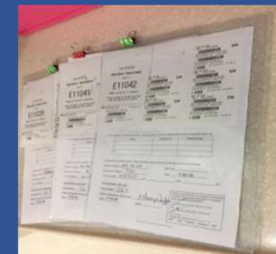
2. Using the "wheel of fortune", nurses assigned patients sequentially to doctors. Patients were directed to wait at the corresponding consultation room.



3. Binder clips of corresponding colors were attached to the patients' case notes which were arranged in a common queue.

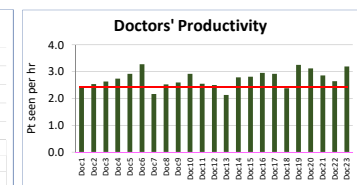
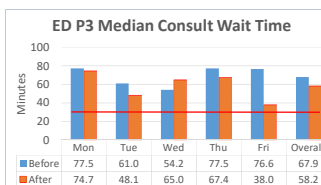


4. Doctors collect the case notes of their patients from the common queue.



During the 1 month pilot

- ED P3 median consult wait time:
Reduced by 14% from 68 minutes to 58 minutes
- Doctors' productivity
83% of ED P3 doctors (19/23) saw more than the target of 2.5 patients/hour



Spread Changes/ Learning Points

Spread

- The pilot project successfully demonstrated that the new queue system improves ED P3 consult wait time and doctors' productivity.
- Feedback obtained by the project team during the course of this project and an evaluation of the impact of the pilot by staff and patients can be used to further guide the full fledged implementation of this process.
- We recommend that a workgroup consisting of relevant stakeholders (ED doctors & nurses) be formed to identify issues, propose suggestions and formalise the process.

Key Learnings

- A change in process can contribute to improvements in multiple areas. Changing the ED queue system led to improvements in consultation wait time and doctors' productivity.
- Stakeholder engagement is key to success. The incorporation of their ideas & suggestions enabled the project team to implement practical solutions that would work on the ground.