

Mission Statement

Empowering patients to self-announce their arrival at pharmacy through the use of patient arrival kiosk(s), which

1. Improves overall patient experience,
2. Reduces patients' time in reception queue by 50%, and
3. Leverages on technology for self-help with potential manpower savings of 0.5 Pharmacy Technician FTE per branch

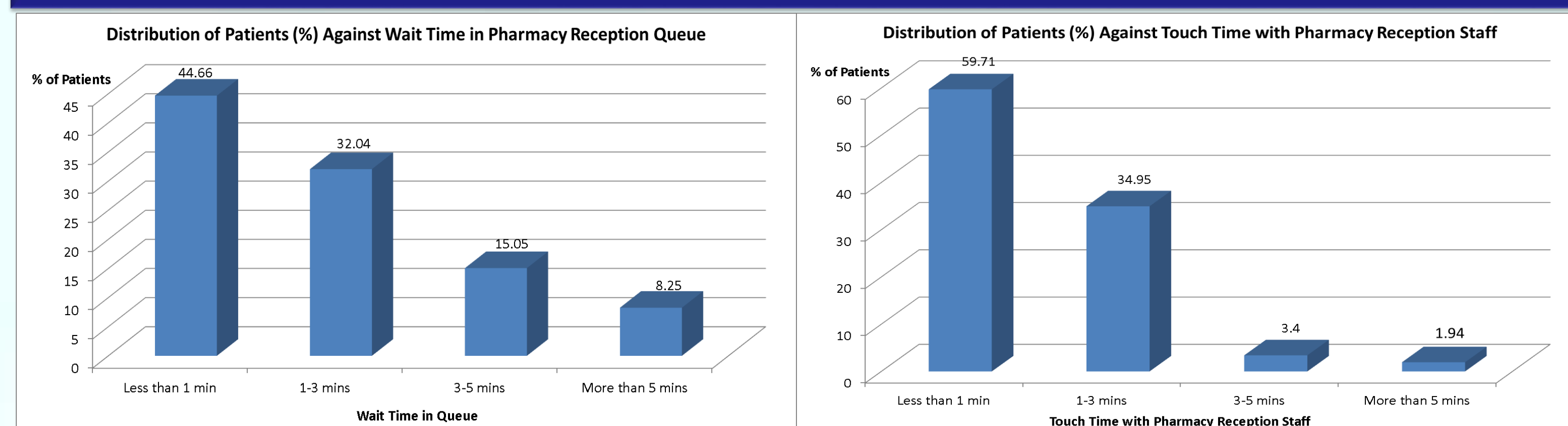
Team Members

	Name	Designation	Department
Team Leader	Tan Lay Khim	Manager, Operations	NHG Pharmacy, HQ
Team Leader	Tan Li Ling	Senior Executive, Informatics	NHG Pharmacy, HQ
Member	Thng Hwee Ling	Senior Pharmacist	NHG Pharmacy, CCK
Member	May Lim Shi Min	Pharmacist	NHG Pharmacy, CCK
Member	Mah Choon Siong	Senior Pharmacist	NHG Pharmacy, PIO
Member	Anna Liew	Principal Pharmacist	NHG Pharmacy, AMK
Sponsor	Ng Mok Shiang	Deputy Director, Operations	NHG Pharmacy, HQ

Evidence for a Problem Worth Solving

- A 2-week pilot study was conducted at CCK Polyclinic pharmacy in August 2016 to identify the problems encountered in the pharmacy reception workflow.
- It was observed that there could be up to **20** patients in queue waiting for pharmacy reception services and patients had to stand in queue for up to **10** minutes before they are served.
- At peak hours, rostering 3 reception staff to clear the influx of patients was insufficient and a bottleneck was often observed.
- Feedback was received on 4 occasions in FY16 regarding unacceptable waiting times at pharmacy reception and 1 incident report was made stemming from a fight between patients due to long reception queues.
- It was noted that 70% of patients did not require assistance from reception staff to obtain a queue number (straight-forward cases)

Current Performance of a Process

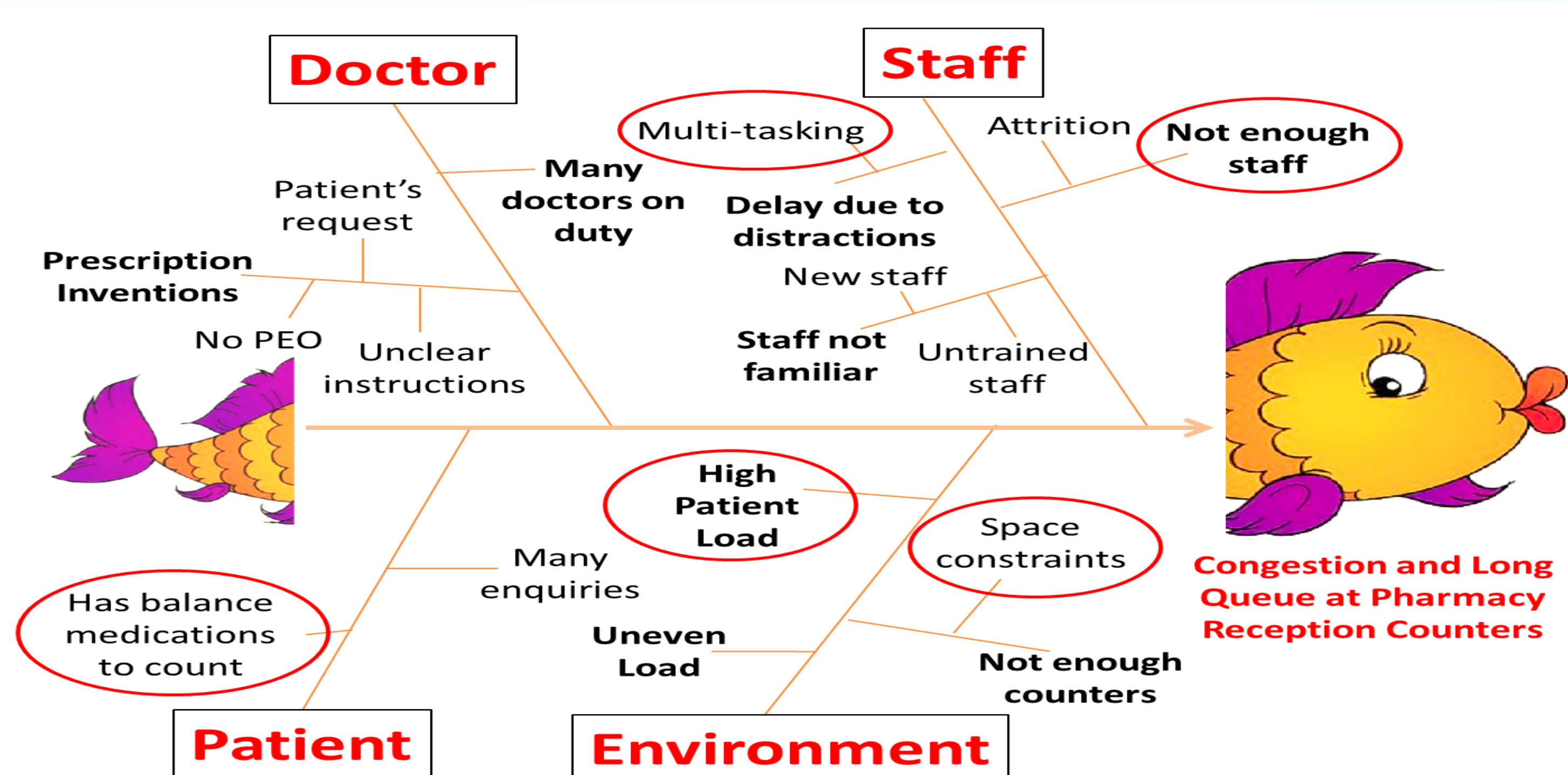


- **100%** of patients have to wait in queue to obtain a pharmacy queue number; **23%** of these patients having to wait for **more than 3 mins**. Max wait time in queue = 10.31mins (mean = 2.87 mins).
- **59.71%** of patients have a touch time of less than 1 min with pharmacy staff; these are likely to be straight-forward cases that do not require assistance upon arrival at the pharmacy.

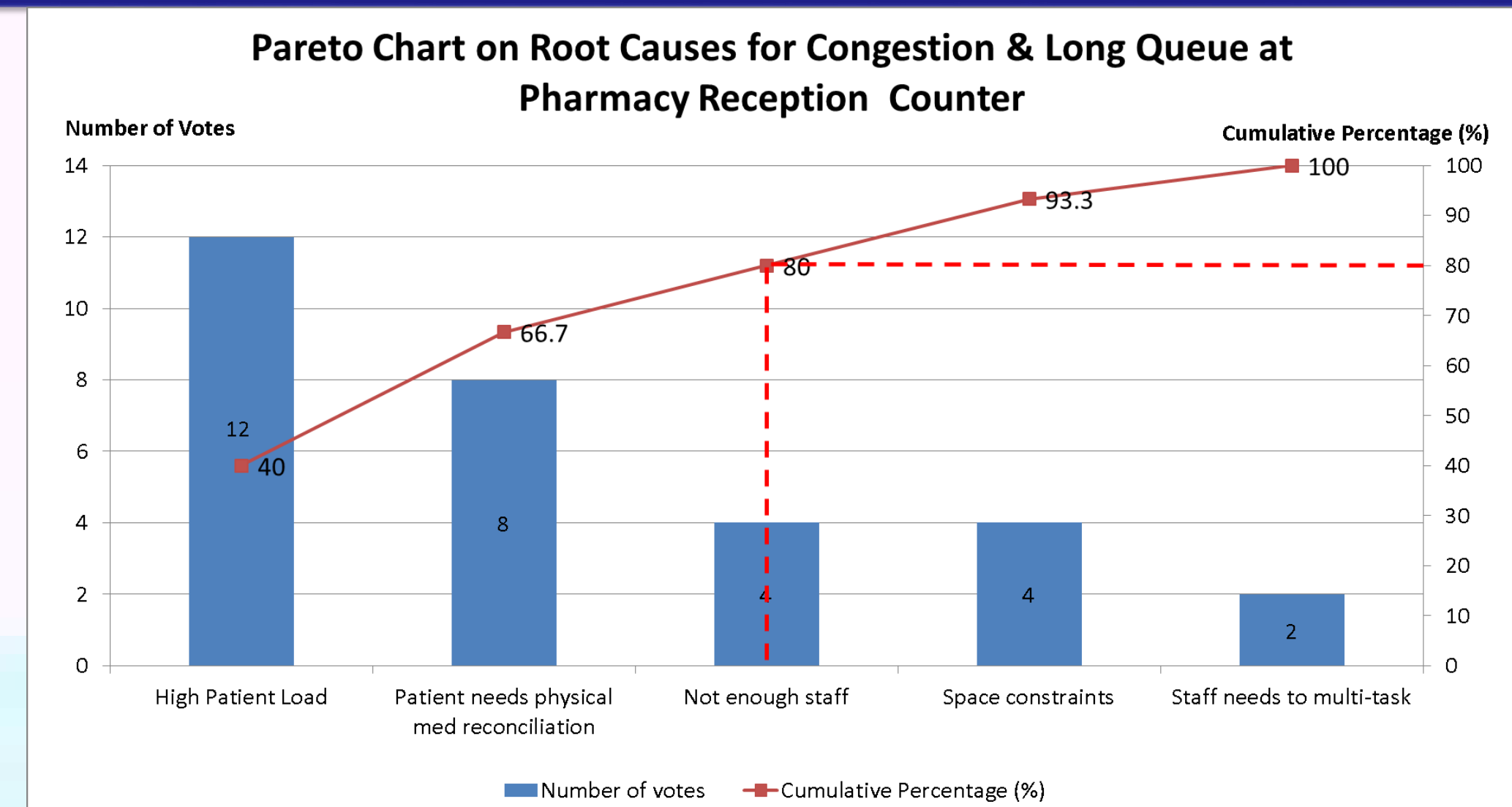
Flow Chart of Process



Cause and Effect Diagram

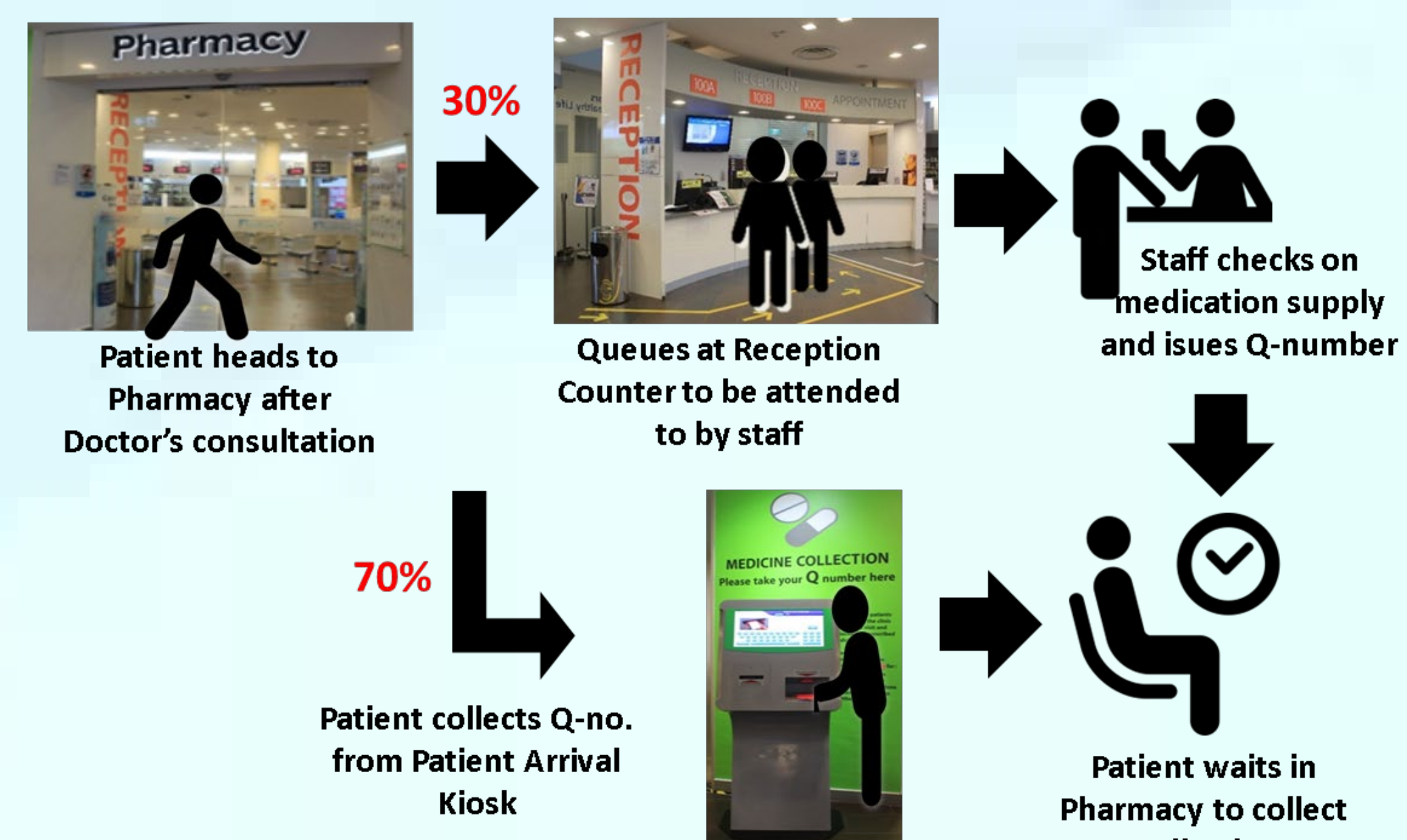


Pareto Chart



Implementation

- Implementation of patient arrival kiosks for patients to self-announce their arrival at pharmacy. Only patients who require assistance from reception staff (e.g. physical medication reconciliation, refills) will be directed to the counters.



- The first version of standing kiosk was deployed in Choa Chu Kang (CCK) Polyclinic Pharmacy in March 2017.
- The aesthetics of the kiosk was enhanced to a more compact, wall-mount version and was deployed to Pioneer (PIO) Polyclinic Pharmacy and Ang Mo Kio (AMK) Polyclinic Pharmacy in July 2017 and January 2018 respectively.



Results

- A post-implementation survey showed that **95.4%** of patients (n=109) who used the kiosks were happy with this new workflow.
- Verbatim from patients:
 - Fast and queue number is issued within seconds! – Mrs Tan, CCK
 - Easy to use and saves patient's time from queuing in line at pharmacy reception – Mr Ngiam, PIO
- The average time spent queuing to announce arrival using the kiosk has dropped to **10 seconds (94% improvement)**. About 50-70% of patients are able to self-announce their arrival, allowing reception staff to focus on patients who require assistance. This brings about improved productivity and manpower savings.

	AMK	CCK	PIO
Average Kiosk Utilization (%)	67% of total workload (7349 Rx/month)	25% of total workload (5469 Rx per month)	52% of total workload (5200 Rx per month)
Time Savings (Hrs)/month	122	91.15	86.7
PT FTE Savings	0.76	0.56	0.54
Cost Savings/ Annum	\$43,263	\$31,878	\$30,740

Problems Encountered

- Patients were not familiar with the new workflow, as a result some patients did not announce their arrival at the pharmacy resulting in delays in the processing of their prescriptions.
- Electronic prescriptions were not received in iPharm, resulting in unsuccessful registration at the kiosk.

Strategies to Sustain

- Patient education on the workflow is paramount to ensure sustainability
- Pharmacy teams have been working closely with the clinic doctors and healthcare providers upstream to ensure proper hand-off.
- Posters have been displayed at various locations within the pharmacy to remind patients to register upon arrival.