

Project Title

Enhance Patient Experience with self-service Mobile registration for SOC Visit

Project Lead and Members

Project lead: Lynn Chen

Project members: Sim Siew Ngoh, James Yong, Tan Suat Boon, Jeffrey Ng

Organisation(s) Involved

Ng Teng Fong General Hospital

Healthcare Family Group Involved in this Project

Healthcare Administration

Aims

Our aim is to improve patient experience, empower patients to manage their outpatient visits and achieve 20% of appointment actualization via self-service Apps.

Background

See poster appended/below

Methods

See poster appended/below

Results

See poster appended/below

Lessons Learnt

Due to Covid-19, more and more services are moving towards contactless to reduce risk of exposure to infection. In line with this, we will continue to leverage on technology to implement digital services. The self-service solutions will allow hospital to improve operations efficiency, increase productivity and better patient experience.

Conclusion

See poster appended/below

Project Category

Technology

Digital Health, Mobile Health, Digital Apps

Keywords

Self-service mobile registration, HealthHub

Name and Email of Project Contact Person(s)

Name: Lynn Chen

Email: lynn_chen@nuhs.edu.sg

ENHANCE PATIENT EXPERIENCE WITH SELF-SERVICE MOBILE REGISTRATION FOR SOC VISIT

MEMBERS: SIM SIEW NGOH, LYNN CHEN, IHIS TEAM, EPIC, HPB, EQMS VENDOR
PROJECT SPONSOR: NG KIAN SWAN (CHIEF OPERATING OFFICER)

- SAFETY
- QUALITY
- PATIENT EXPERIENCE
- PRODUCTIVITY
- COST
- TEAMWORK
- COMMUNICATION

Define Problem, Set Aim

Opportunity for Improvement

In current hospital setting, all patients have to physically queue to register for their SOC appointments at clinic counter or through use of kiosks. Typically, a patient has to queue and wait for about 5 - 10 minutes to complete the registration. With mobile registration, patients can skip the queue and wait time, register for their appointment anywhere and receive an electronic queue ticket. Registration on mobile provides patient & caregiver greater convenience.

Aim

Our aim is to improve patient experience, empower patients to manage their outpatient visits and achieve 20% of appointment actualization via self-service Apps.

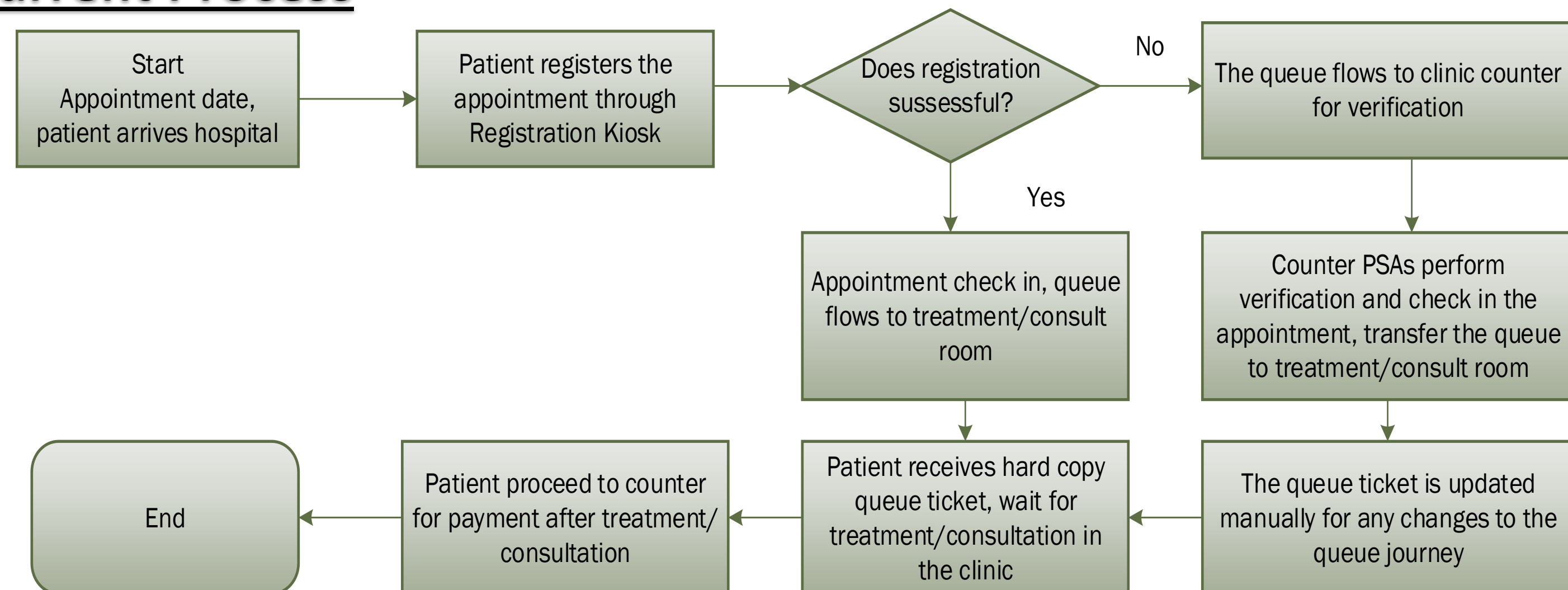
Establish Measures

Current performance (Before implementation)

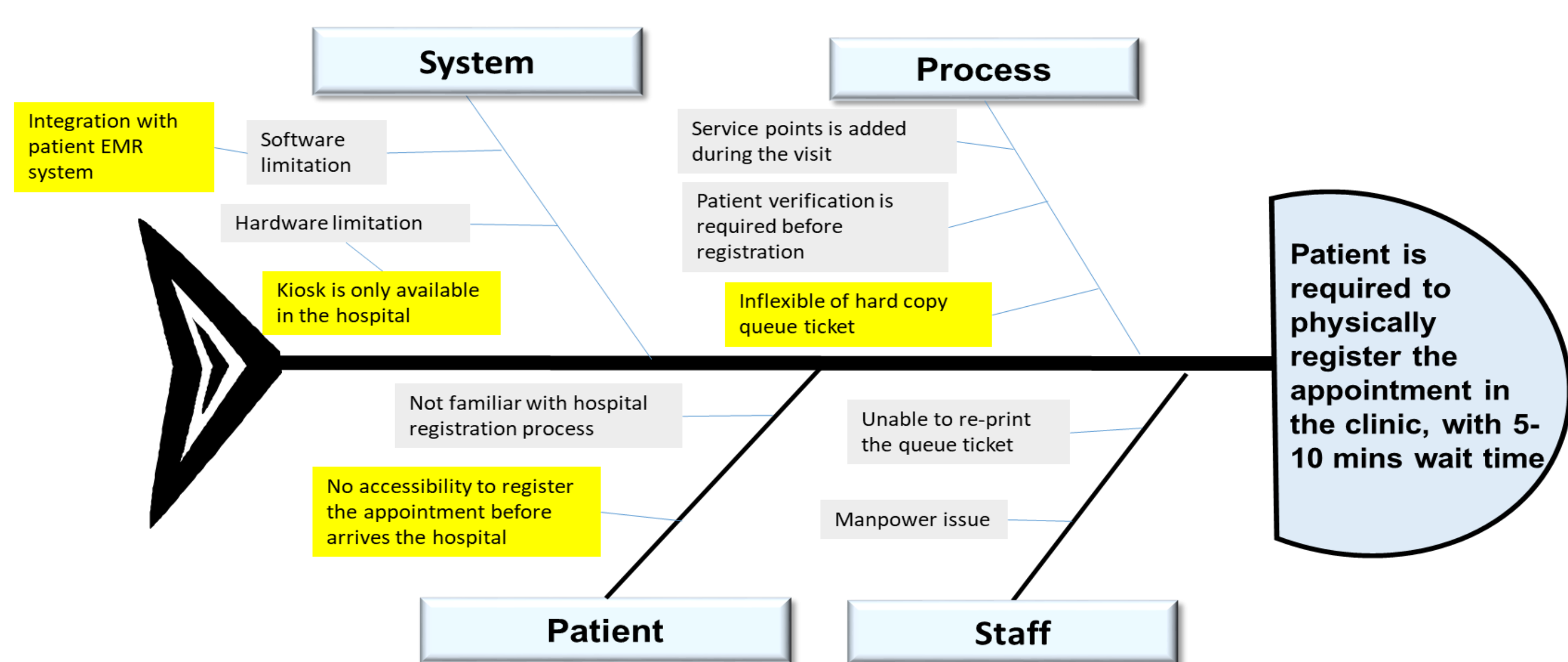
- 100% of patient register physically on site
- Average of 82% patient self-register through Kiosk in the hospital, and rely on physical queue ticket.
- Average wait time of 5 – 10 minutes to queue for registration
- Queue ticket is updated manually during the visit

Analyse Problem

Current Process

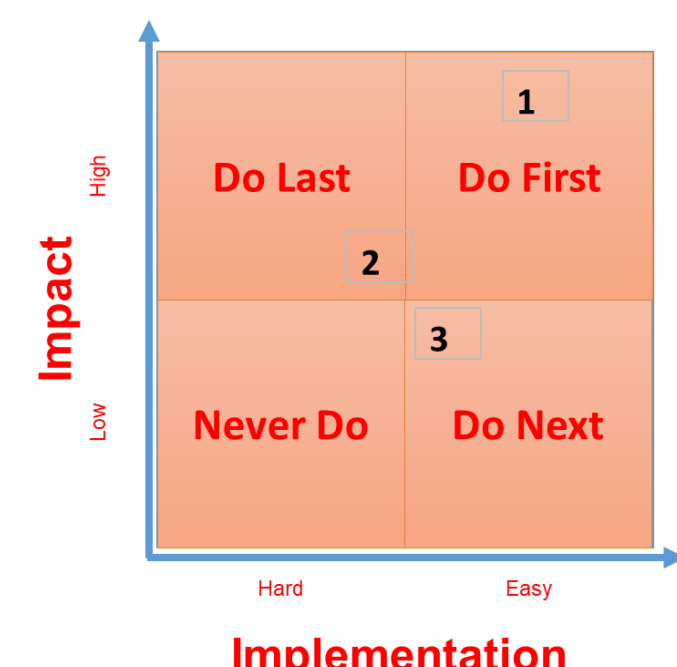


Probable Root Causes & Solutions



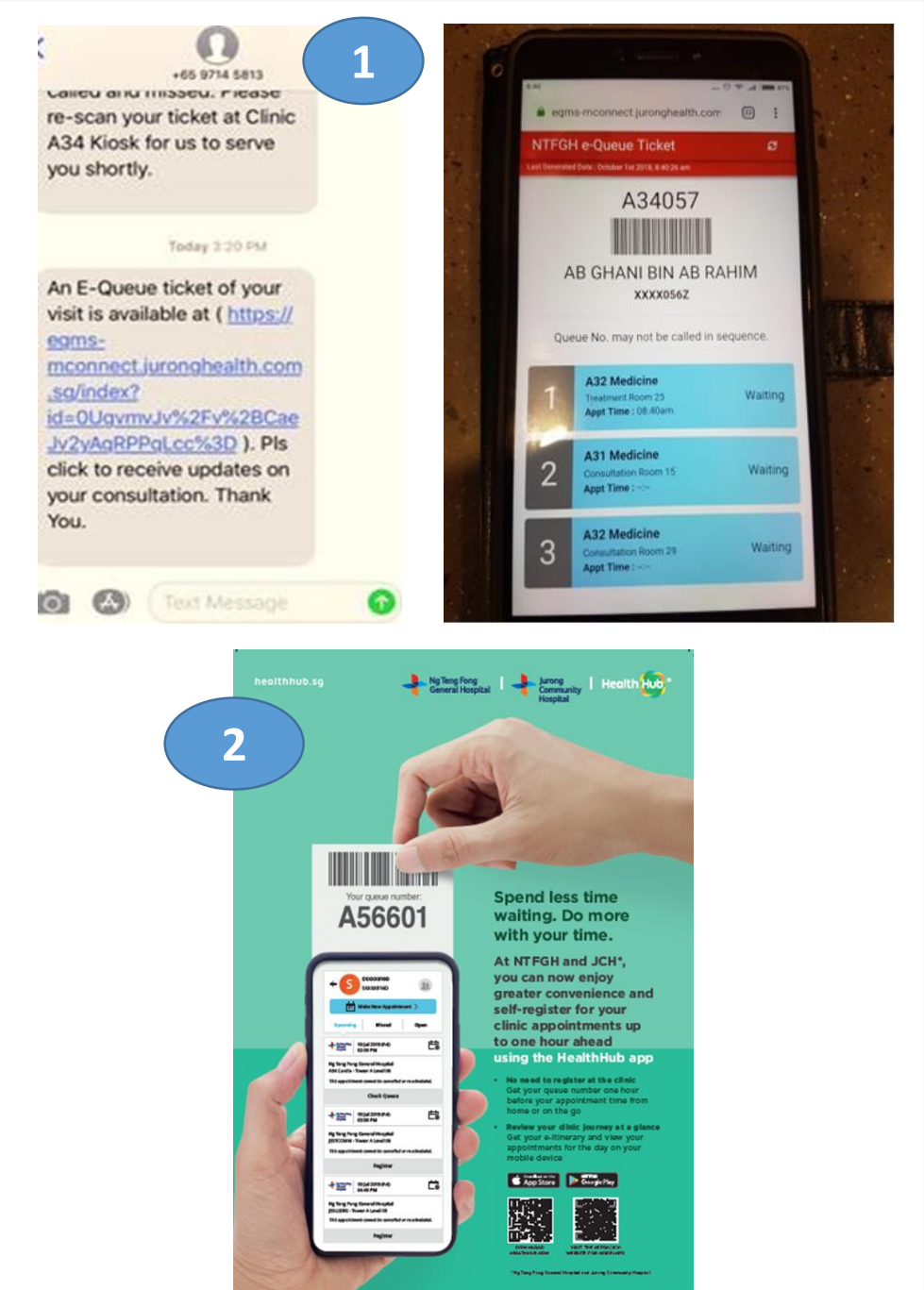
Category	Total
A Integration with EMR system	3
B No accessibility of patient	6
C Kiosk is only available in the hospital	2
D Inflexible of hard copy queue ticket	1

Root Cause	Potential Solutions
Root Cause A	1 Enable e-queue ticket
Root Cause B	2 Option of e/hard copy ticket
Root Cause C	3 Online registration



Select Changes

- Phase 1:** E-Itinerary on mobile, enable patient to receive the E-queue ticket through SMS.
- Phase 2A:** HealthHub Mobile Registration. To provide greater convenience to patients and reduce waiting time in the clinic – the mobile registration function, hosted on the HealthHub app, allows patients to self-register in advance and view their appointments for the day on their mobile device.
- Phase 2B:** Option for patient to choose for physical queue ticket or E-queue ticket.

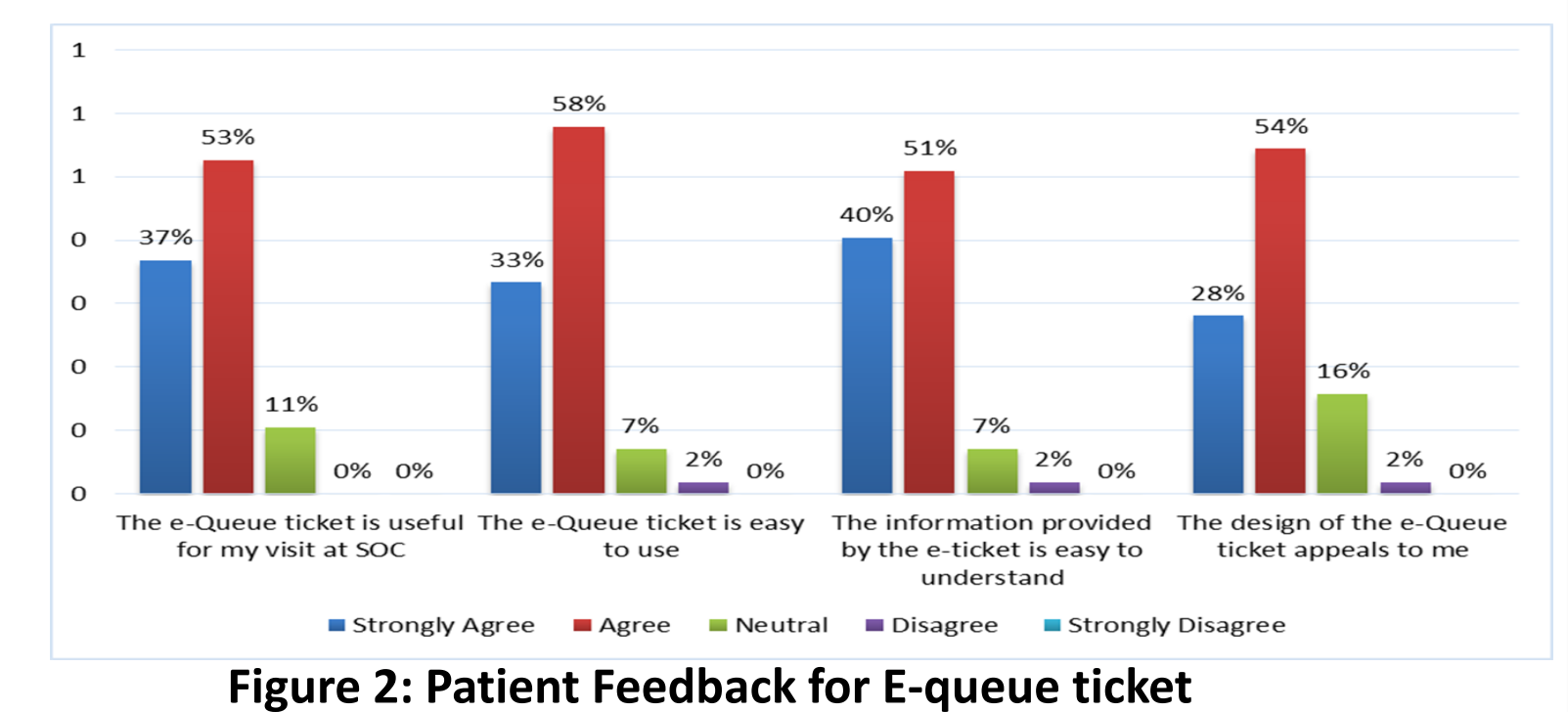
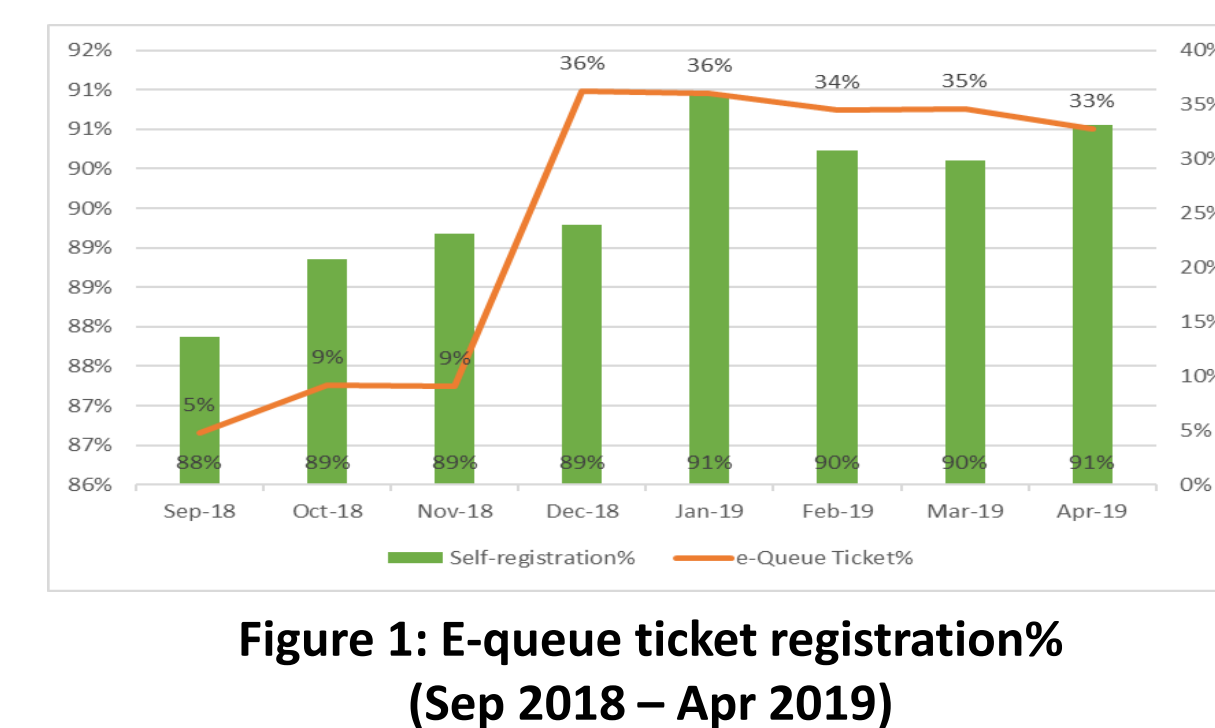


CYCLE	PLAN	DO	STUDY	ACT
Phase 1 (Sep'18)	Implement E-Itinerary on mobile, enable patient to register their appointments conveniently at Central Kiosk or Clinic Kiosk and receive an E-ticket with the day itinerary send to their mobile phones.	<ul style="list-style-type: none"> Enhance the EQMS system to enable patient to receive the E-queue ticket through SMS. Pilot at SOC Level 3 	Received positive feedback from patients/caregivers.	In Oct, roll out to all clinics after the pilot at Level 3.
Phase 2A (Sep'19)	To enable the patient to self-register on mobile anywhere and receive the E-ticket. Patient can also view appointment on HealthHub.	Work with IHIS, EQMS vendor & HPB to enhance the EQMS system to enable mobile registration via HealthHub.	Received positive feedback from patients. However, low adoption rate due to lack of awareness from patients	Worked with Comms Dept and HPB for the promotion: <ul style="list-style-type: none"> Display brochures at all clinics Display banners at L1 & L2 lobby Engage HealthHub promoters to enroll patients
Phase 2B (Oct'19)	Implement option for patient to choose for physical queue ticket or E-queue ticket.	Enhance EQMS to enable patient to choose physical or E-ticket during registration at kiosk.	Average of 35% of patient use E-Queue ticket during the visit	

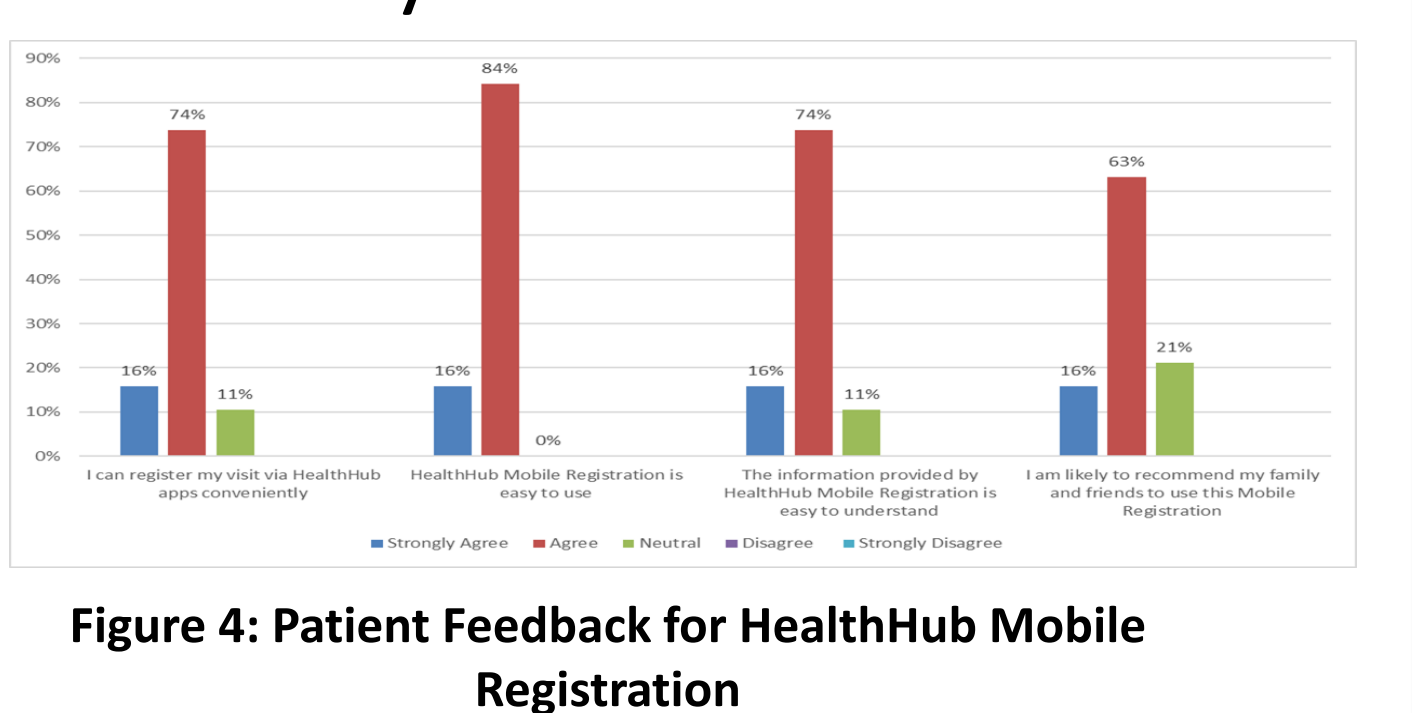
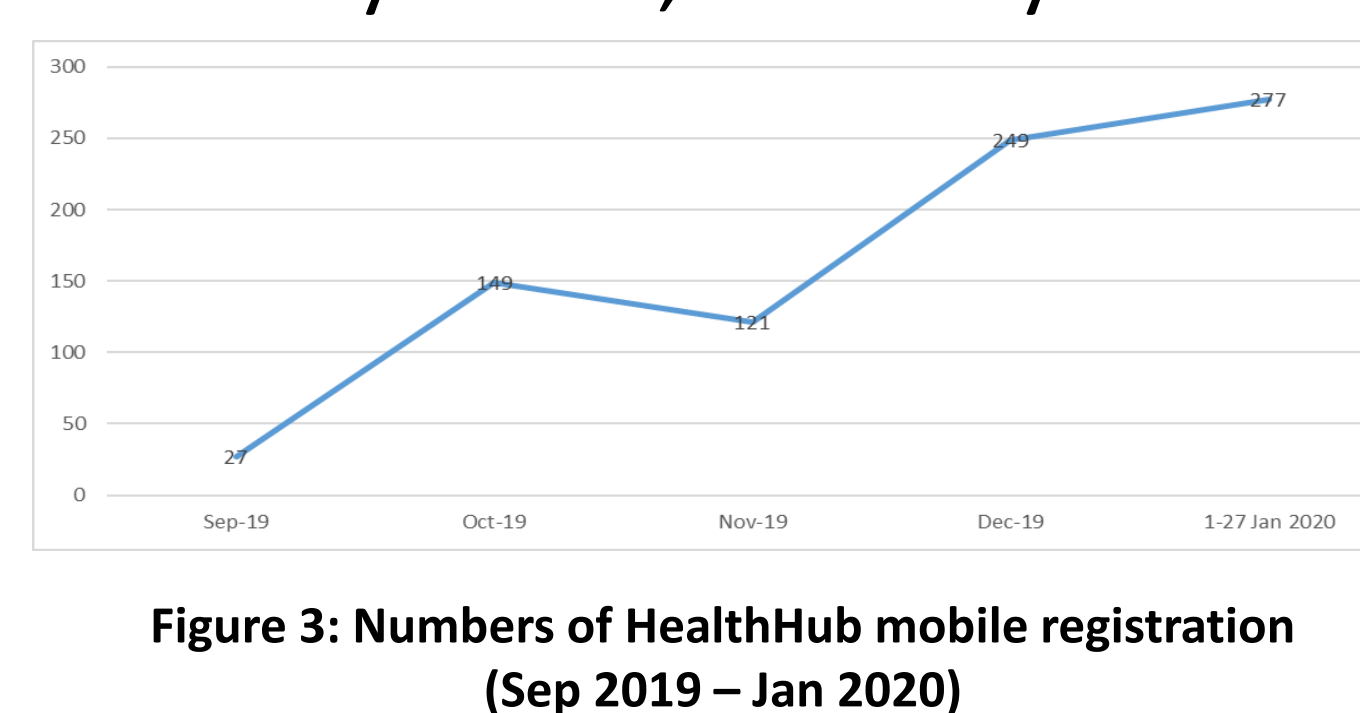
Test & Implement Changes

E-Queue Ticket: Patient Feedback

- Average of 35% of patient use E-Queue ticket during the visit.
- 90% patients find the e-Queue ticket is useful, easy to use and understand.



- Numbers of patient registered through HealthHub mobile increased to 277 in Jan 2020.
- 89.5% patients find the HealthHub mobile registration is convenient and easy to use, will likely to recommend family and friends to use.



Spread Changes, Learning Points

Key learnings

Due to Covid-19, more and more services are moving towards contactless to reduce risk of exposure to infection. In line with this, we will continue to leverage on technology to implement digital services. The self-service solutions will allow hospital to improve operations efficiency, increase productivity and better patient experience. For FY2021, we are embarking on the following projects:

- Mobile appointment booking
- Self-payment kiosk