

Project Title

STARK – Self Triage And Registration Kiosk

Project Lead and Members

Project lead: Goh Siang Hiong

Project members: Elaine Leong Yin Leng, Linda Bte Ismail, Noor Hidayah Bte. Selamat, Sarah-lynn Teo Hui Yun, Priscilla Kah Huimin, Vernon Chen Yi Liang

Organisation(s) Involved

Changi General Hospital

Healthcare Family Group(s) Involved in this Project

Medical, Allied Health

Applicable Specialor Discipline

Patient Service Associate, Emergency Medicine, Medical & Laboratory Technology

Project Period

Start date: 1st April 2023

Completed date: 15th June 2023

Aims

This processes can be automated without compromising patient safety and confidentiality with STARK. STARK consists of both self-registration and self-triage functions and can be utilized by patients for certain minor conditions (P3).

Background

Patient Registration and Triaging in the Emergency Department (ED) is manpower intensive, mentally taxing and time consuming. This process can be limited by manpower that's available each shift.

Methods

See poster appended/below

Results

See poster appended/below

Conclusion

STARK is a feasible, cost efficient and safe alternative to the usual manual registration and triage process.

Project Category

Care & Process Redesign

Access to Care, Quality Improvement, Turnaround time, Waiting Time, Design Thinking

Technology

Digitalisation, Assistive Technology, Automation, Machine Learning

Keywords

Emergency Department, Self Triage, Ambulatory, Fall risk assessment, Vita signs measurement, Registration,

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STARK

Self Triage And Registration Kiosk

Team Member: Goh Siang Hiong; Elaine Leong Yin Leng; Linda Bte Ismail; Noor Hidayah Bte. Selamat; Sarah-lynn Teo Hui Yun; Priscilla Kah Huimin; Vernon Chen Yi Liang

BACKGROUND

Patient Registration and Triaging in the Emergency Department (ED) is manpower intensive, mentally taxing and time consuming. This process can be limited by manpower that's available each shift.

AIM

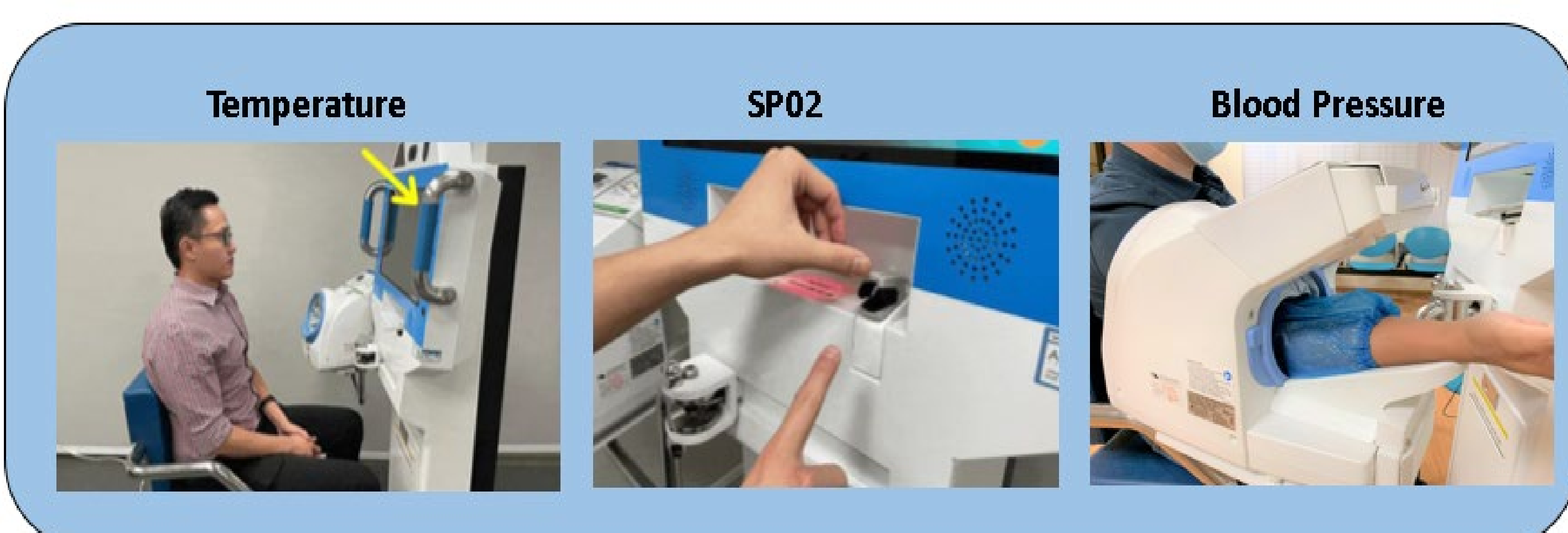
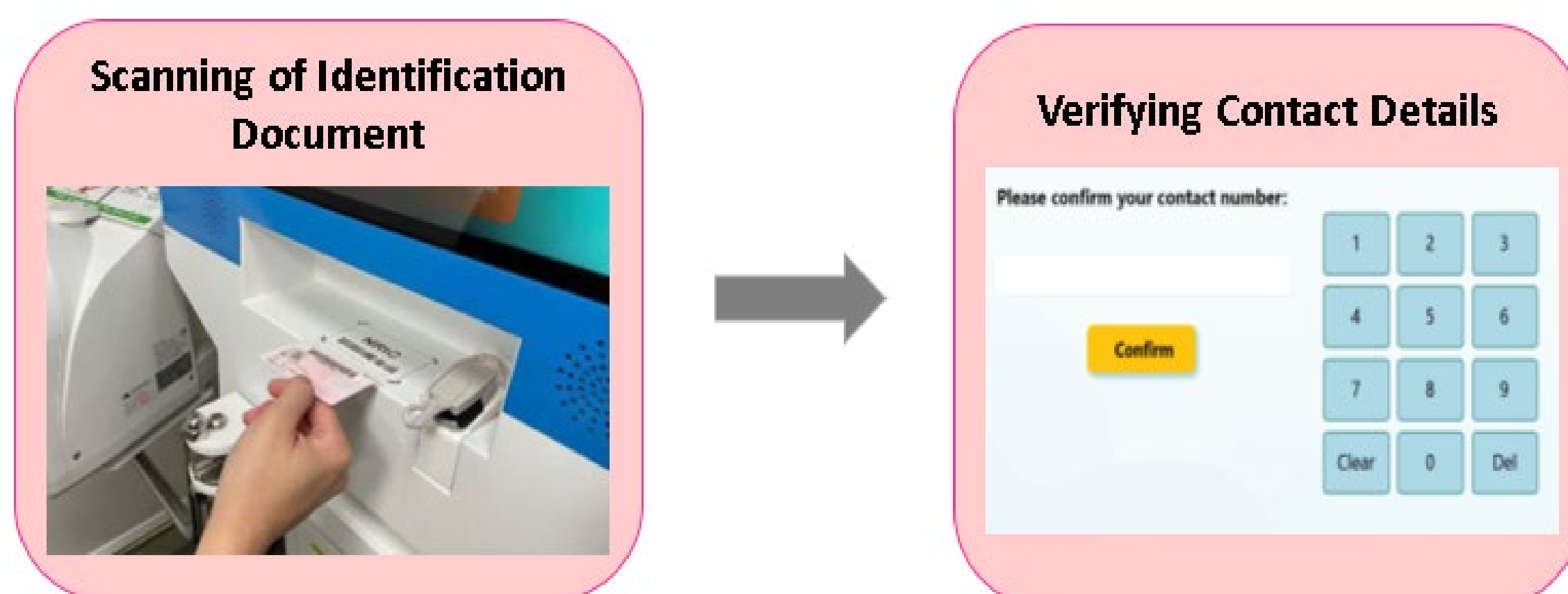
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METHODOLOGY

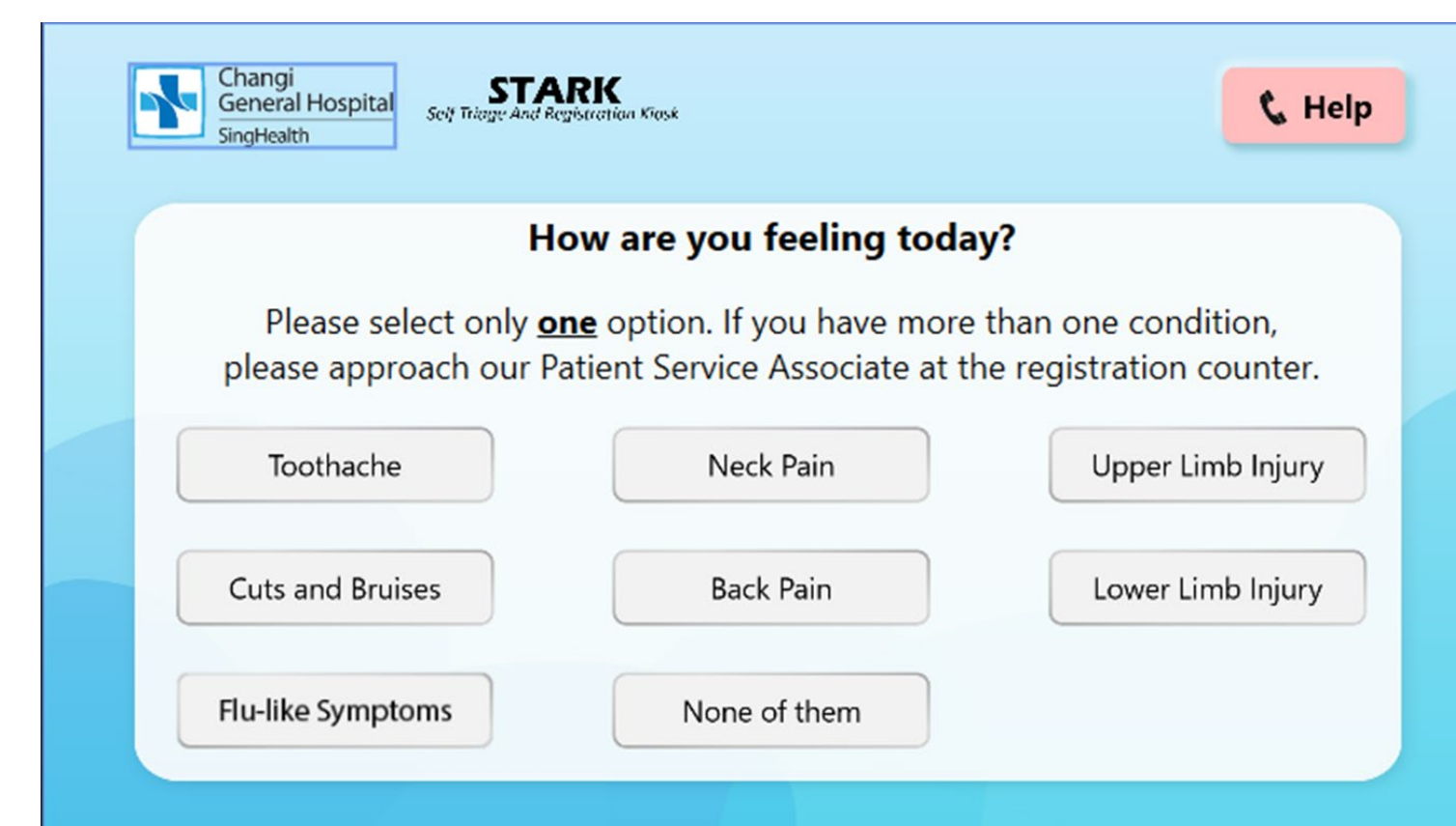
STARK was placed at the Triage waiting area in ED with support from Patient Service Associate and now operates 24 hours daily. Patients who are ambulatory are directed to this kiosk .



Patients are required to complete questionnaires related to their conditions which includes Fall Risk Assessment and the following vital signs measurement



The minor P3 conditions which a patient can self triage into P3 queue are shown:



Should the patient complete the self triage successfully, they will be issued a Queue Ticket and will proceed to the P3 consultation area. Otherwise, they will then proceed to undergo usual triage by the triage nurses.

RESULTS

We gathered data for STARK utilization from 1st April 2023 to 15th June 2023 (excluding weekends and public holidays) and summarized them as follows

Number of Days Studied	Total Numbers directed to STARK	Successful Registration	Failed Registration (not in database)	Numbers With Successful Vital Signs Taken And Sent To Triage Nurse	Numbers Triaged to P3 Area
52	950	887	63	731	210

Time motion study was conducted in June 2023 during a typical Monday crowd.

- Total time spent for traditional registration, waiting, taking of vital signs & to triage by a nurse = 47 mins
- Time for triage nurse to take history from patient = 5 minutes

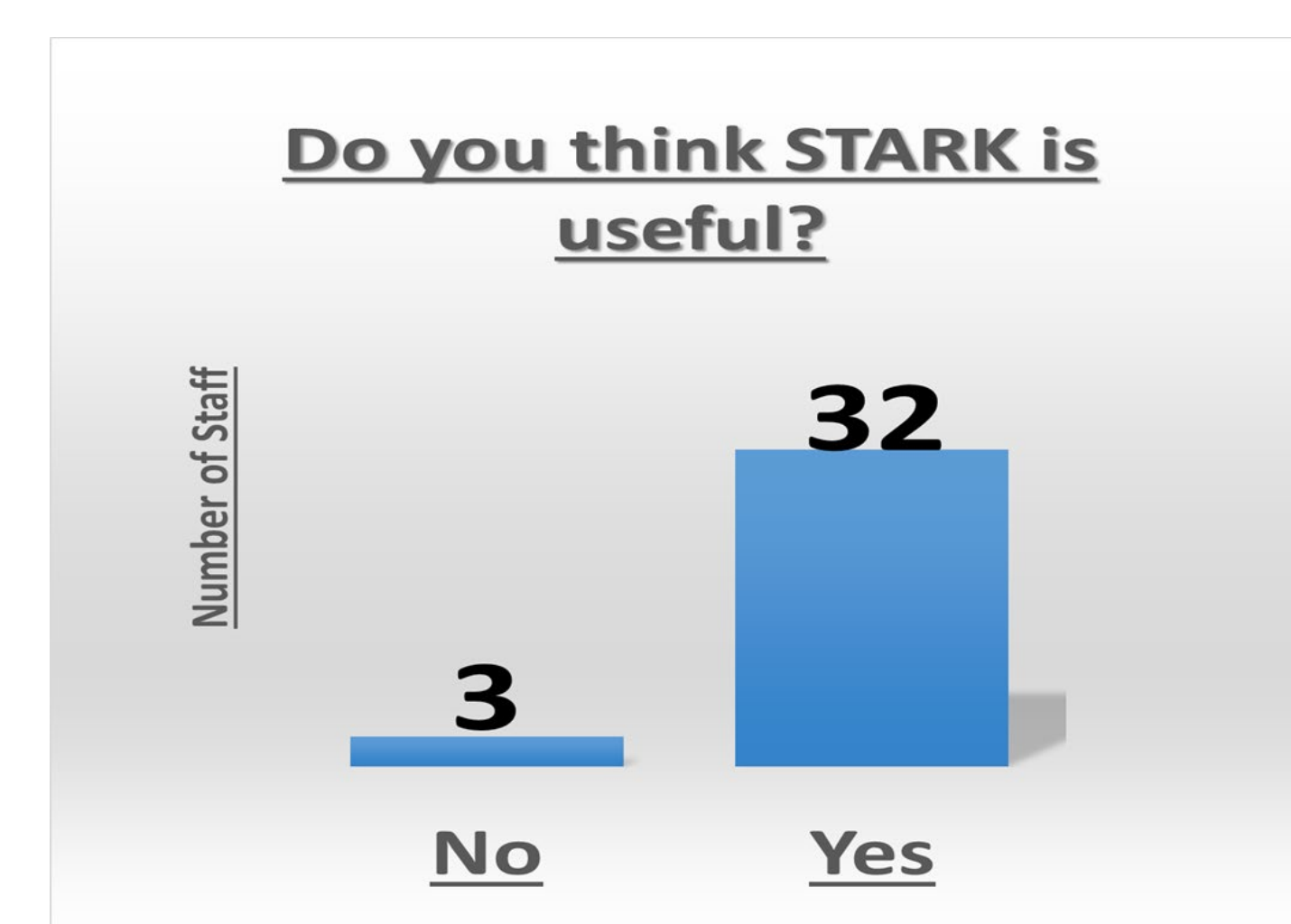
With STARK

- Total time spent for using STARK (registration and vital signs) = 3 mins
- Time spent answering P3 questions and issued P3 room number = 2 mins

We saved 42-44 minutes for patient who utilized STARK

At steady state, we collected data from Registration to Triage time from 29th September to 5th October 2023 for 100 patients and the Mean process time was 32mins

35 nurses were surveyed



CONCLUSION

STARK is a feasible, cost efficient and safe alternative to the usual manual registration and triage process.