

Project Title

Building a Future Ready Workforce to Maximise Productivity and Enhance Patient Experience

Project Lead and Members

Project Lead(s): Ng Kian Swan, COO

Project Members:

- Sim Siew Ngoh, Deputy Director, Specialty Operations
- Tan Huishan Adeline, Senior Manager, Specialty Operations
- Yeo Shu Qi, Senior Manager, Specialty Operations
- Lynn Chen, Manager, Specialty Operations
- Chay Yu Xuan, Manager, Specialty Operations
- Hayley Khng, Associate Executive, Specialty Operations

Organisation(s) Involved

Ng Teng Fong General Hospital

Healthcare Family Group(s) Involved in this Project

Healthcare Administration

Applicable Specialty or Discipline

Operations

Project Period

Start date: 01 January 2016

Completed date: 31 March 2022

Aim(s)

To transform our frontline service to mitigate manpower capacity crunch

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Lessons Learnt

- In this digital economy, we need to make change happen at scale and at speed. To get the buy-in, there is a real need to engage and co-design the change experience around them.
- We need to be transparent and to build trust with stakeholders early through regular feedback and pow-wow sessions
- The benefits of solving problems through disruption and innovations. It's always better to disrupt than be disrupted.

Conclusion

We will need to find opportunities amidst challenges of technological disruption and slowing workforce growth to improve service provision, achieving efficiencies and improving human capital of the workforce through enhanced training and fostering a culture of continuous improvement.

- Use technology as an enabler to streamline processes and to ensure tight integration of care and services between services departments to enable our patients to receive care which is efficient, seamless, comfortable and accessible, increased staff and patient satisfaction, and increased operational efficiencies and productivity.
- The disruption in frontline services has allow us to build a future-ready workforce which is flexible, nimble and equipped with both broad-based learnings and cross-

sector skill sets and created more career opportunities for staff and allows them to take on higher valued-added roles in the healthcare system.

Additional Information

This project has been on-going since 2013, combining both digital transformation and PSA roles and career path development.

Digital Transformation (since Yr2018):

- Enable new patients (First visit) to self-register and obtain e-queue ticket
- Cashless payment at counter i.e. credit & NETS, QR code
- Further enhanced to enable registration, payment & appointment booking via OneNUHS apps (since Yr2021)

Enhanced PSA roles for Future Ready Workforce & Career progression (since Yr2018)

- Financial Counselling and expanded in Jan 2022 to include OT listing for procedures
- PSA cross trained to perform basic clinical duties i.e. eye drop instillation, VA test
- 30% of the PSA pool progressed on to Patient Service Coordinators (PSC) with ground leadership roles.
- 2 PSA successfully grow and developed to manage clinic operations (from Yr2021)

Project Category

Workforce Transformation

Job Redesign, Upskilling

Keywords

Future Ready, Workforce, Productivity, Patient Experience

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BUILDING A FUTURE READY WORKFORCE TO MAXIMISE PRODUCTIVITY AND ENHANCE PATIENT EXPERIENCE

MEMBERS:

NG KIAN SWAN (LEAD), SIM SIEW NGOH, ADELIN TAN, YEO SHU QI, LYNN CHEN, HAYLEY KHNG

Background

Opportunity for Improvement

By the year 2030, those aged 65 and above in Singapore will have doubled in number to be a quarter of the Singapore population. Singapore also face nursing manpower capacity crunch due to shrinking workforce for years. Frontline services delivery is provided via physical counters and dependent on PSAs to complete the administrative tasks (i.e. registration, billing, etc.).

There is a need to transform our frontline service to mitigate the existing situation. Creating a future-ready workforce becomes important in this context and we aim to prepare our team through:

- Use of digitalisation and technology advancement to shift bulk of administrative work towards contactless and automation and empower patients to self-help.
- Upskilling and enhance PSA roles through competency training and job redesign to create more career progression opportunities for PSA.
- Assign PSA to support new services such as to coordinate & support doctor in tele-consult.

During COVID-19 peak period, the fruits from this project has been a booster for the team as outpatient nurses and PSAs could be deployed to other critical areas to help out while managing our clinic operations at the same time.

Empowerment of our PSA has also evolve to creating a Sustainable Workplace. PSA team leaders are able to drive workplace sustainability and transform the hospitals into energy efficient facilities.

Overall, this project has generated positive yields for SOC, especially in increasing productivity and operational efficiency, creating new job opportunities to enhance career development for our frontline staff and empowering our patients to take control of their appointments and thus enhance patient experience. In addition, we achieved energy efficiencies and utility cost saving.

Establish Baseline Measures

Use of Technology

About 60% of Patients Self-register
About 63% of patients settle their payment using cashless mode

PSA Manpower

Counter PSA FTE required - 61 FTE (target 25% saving)

Measurements	Yr2016	Yr2017	Yr2018
PSA Productivity ratio			
Overall Total Workload (FV/RV/TT/Allied health)	373,147	441,171	478,508
Nos of Frontline PSA	61	61	61
Productivity per PSA per day	26	30	33

Analyse Problem

Probable Root Cause

a) Frontline services (i.e. registration, payment, etc.) are done via physical counters and dependent on PSA availability to man the service stations

- We can do better in leveraging on technology to improve processes. Only 60% of patients for follow-up visits are using the self-registration kiosks for clinic registrations. All First Visit patients have to queue and wait to be registered with the assistance of clinic staff, which is time consuming for patients plus resource intensive for SOC.
- Patients generally settle payment by cash. These mean patients had to queue and wait again. Our cashiers (PSA billers) also requires time to count the cash collection at end of the day.

b) Tight nursing workforce in SOC and performing basic tasks

- Basic clinical tasks are generally done by nurses (i.e. vital signs, height & weight). For eye clinic, most patients require eye test done before consult. Selected patients also require eye dilation. These are routine and basic, however have high load on daily basis.
- Patients who requires surgery/ procedure will see the nurse for financial counselling and listing for surgery/ procedure. The financial counselling comprises estimation of bills & booking of surgery/ procedure in system which are generally administrative. On average, this process takes about 30mins per patient and may result in long wait time in clinic due to limited nursing resources.

c) Environment issue related to sustainable workplace

- Equipment such as Computer on Wheels (COWs), desktop computers, laptops, weighing machines, etc in the clinics were left to charge overnight but clinics are not operating after clinic hours, weekend and Public Holidays.

Select Changes

Probable Solutions

(1) Leverage on Technology to to shift bulk of administrative work towards contactless and automation

- Enhance the Self Registration system to allow First Visit patient to also perform self-registration.
- Create a Centralized self-registration kiosk (similar to Changi Airport Terminal 4)
- Single queue number for all service points in the entire patient journey for the day, and patient will only need to make payment once at the last service point.

(2) Promote cashless payment to reduce waiting time

(3) Leverage of OneNUHS mobile apps – empower patients to self-serve and take greater ownership of their health matters.

- Encourage patients to perform mobile registration and obtain e-queue ticket
- Enable patients to view/ reschedule their appointments via the apps
- Enable patients to made payment via apps as one of the payment options

(4) Enhance PSA Roles to increase productivity in clinic and build future ready workforce

- Cross train PSA to do basic clinical duties
- Assign PSA to support new services – coordinate & support doctor in tele-consult.
- Develop PSA leadership - provide opportunities to manage clinic operations, intensify competencies and take on additional tasks meant for leadership development and growth.

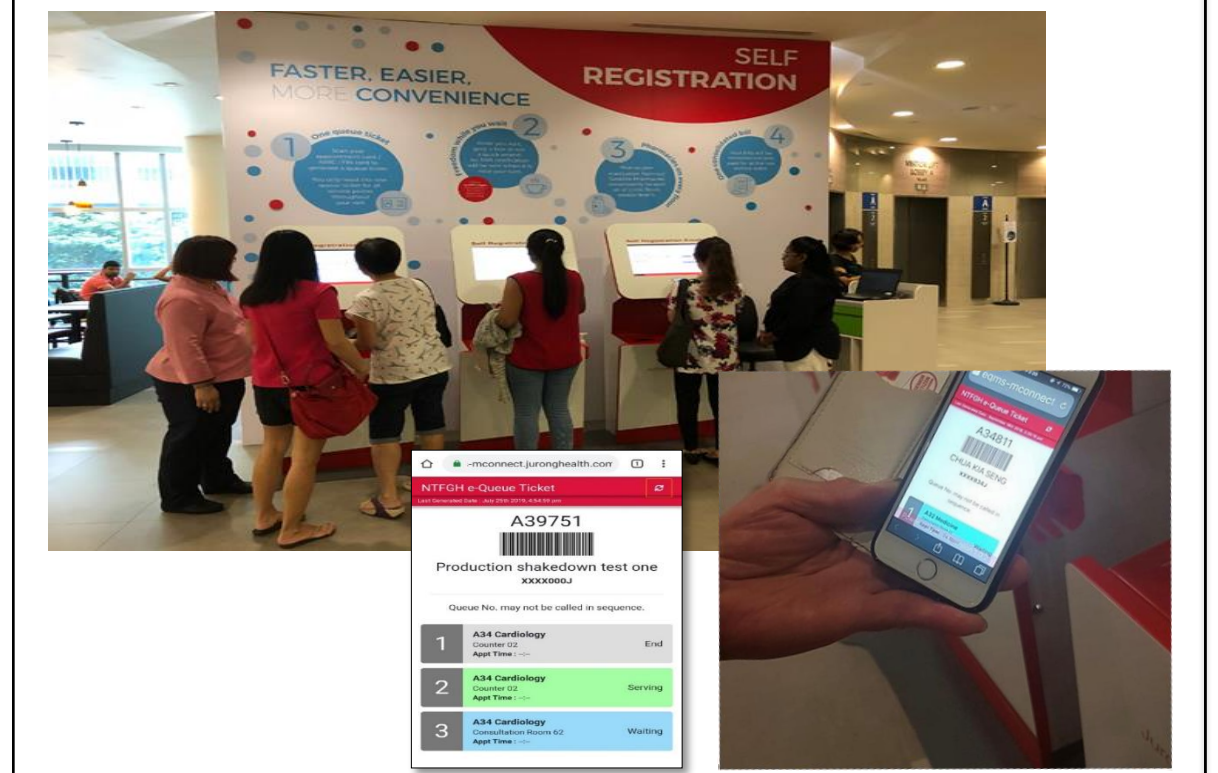
✓ SAFETY
✓ QUALITY
✓ PATIENT EXPERIENCE

✓ PRODUCTIVITY
✓ COST EFFECTIVENESS

Test and Implement Changes

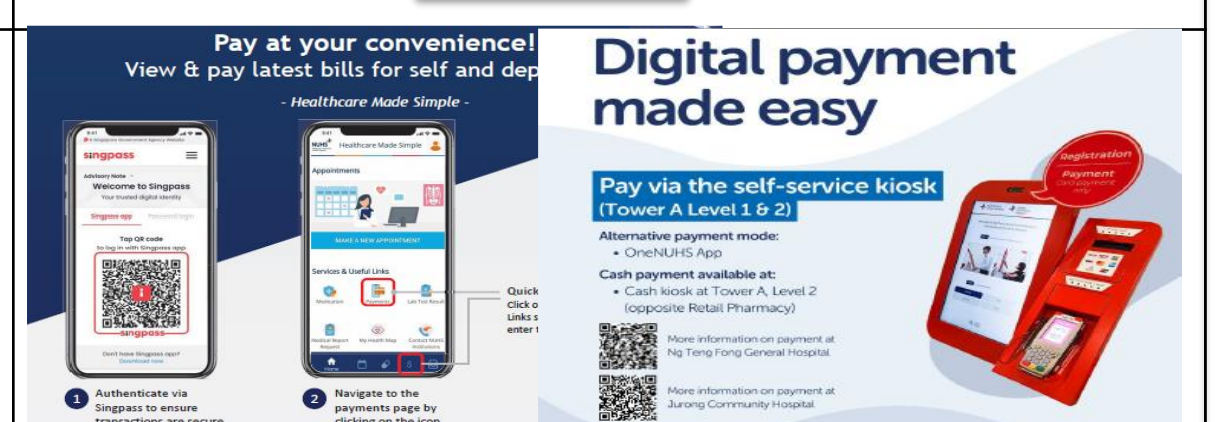
Leverage on Technology - Creating a one-queue and one-bill experience and One patient experience

- Enhance the Self Registration system to allow First Visit patient to perform self-registration.
- Create a Centralized self-registration kiosk at Level 2 (similar to Changi Airport Terminal 4)
- Single queue number for all service points in the entire patient journey for the day, and patient will only need to make a single payment at the last point of service.
- Promote the use of mobile registration via One NUHS apps



Promote cashless payment to reduce waiting time for patients

- Promote cashless transaction which is more convenient for our patients and there is zero waiting for payment

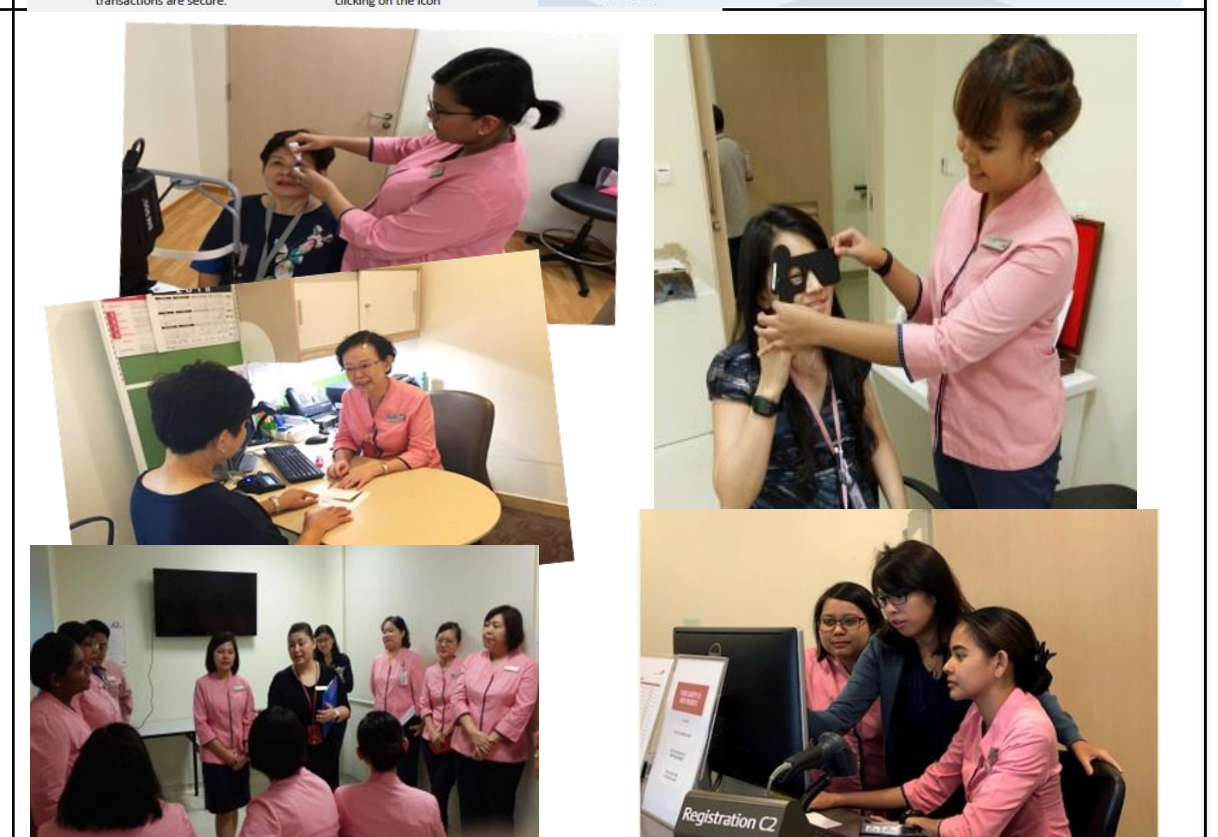


Enhanced roles for PSA & Job Redesign

Empowerment and Expand job scope for PSA to upgrade their skills, increase job motivation and satisfaction, and increase the overall employee productivity within our organization

Expanded roles include:

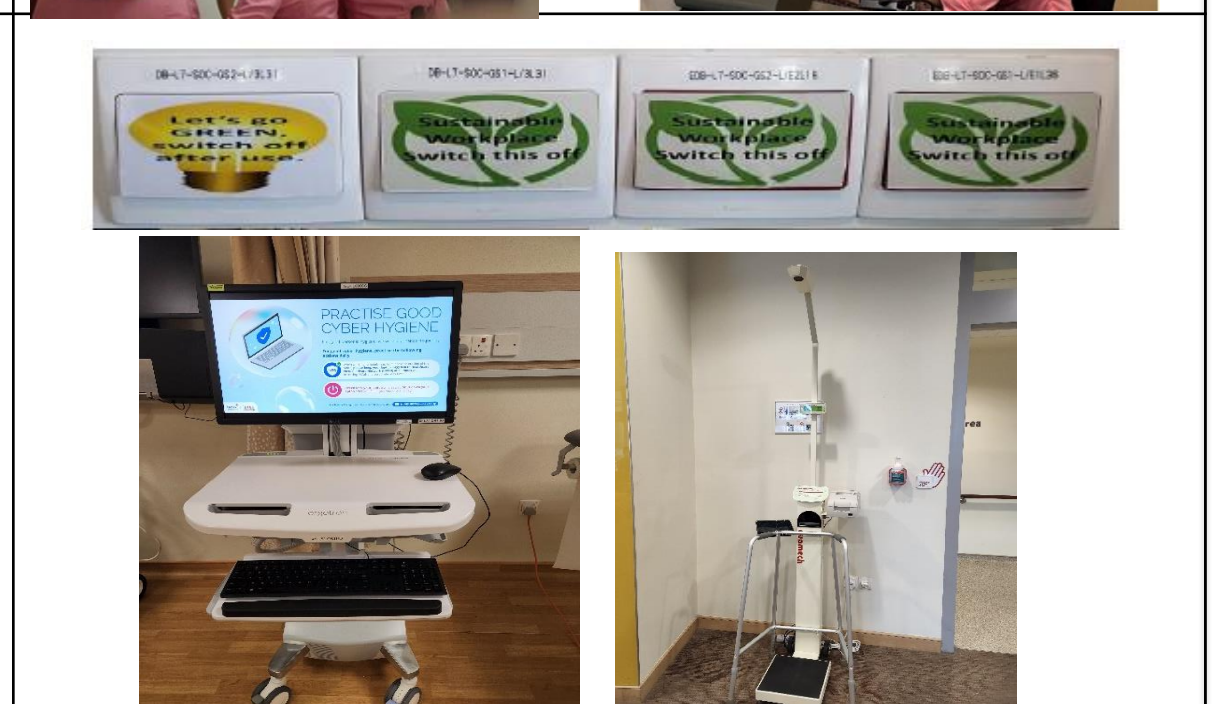
- Financial counselling for medical & surgical and dental procedures
- Clinical procedures - Eye drops instillation, take Height & Weight measurements, visual acuity test, industrial eye screening and running and managing clinics



Go Green with PSA Empowerment

Going green has always been an important feature and more so in the current world context. Our team works very closely to develop ways to save electricity and PSAs have been empowered to take charge in SOC on this project.

- Equipment are switched off at night and on weekends including Public Holidays.



Key Outcomes and Results



Increased Productivity and Improve Efficiency

Self-Registration: adoption rate increased from 60% to 90%.

Time saved in registration per day: 4800 minutes (80 man-hours)

Cashless Payment transactions increased from 63% (Yr2017) to 80%.

Time saved for handling cash per day = 960 minutes (16 man hours)



Enhanced roles of PSA

PSA has expanded roles to do Financial Counselling and clinical procedures i.e. Visual Acuity, Financial counselling, etc

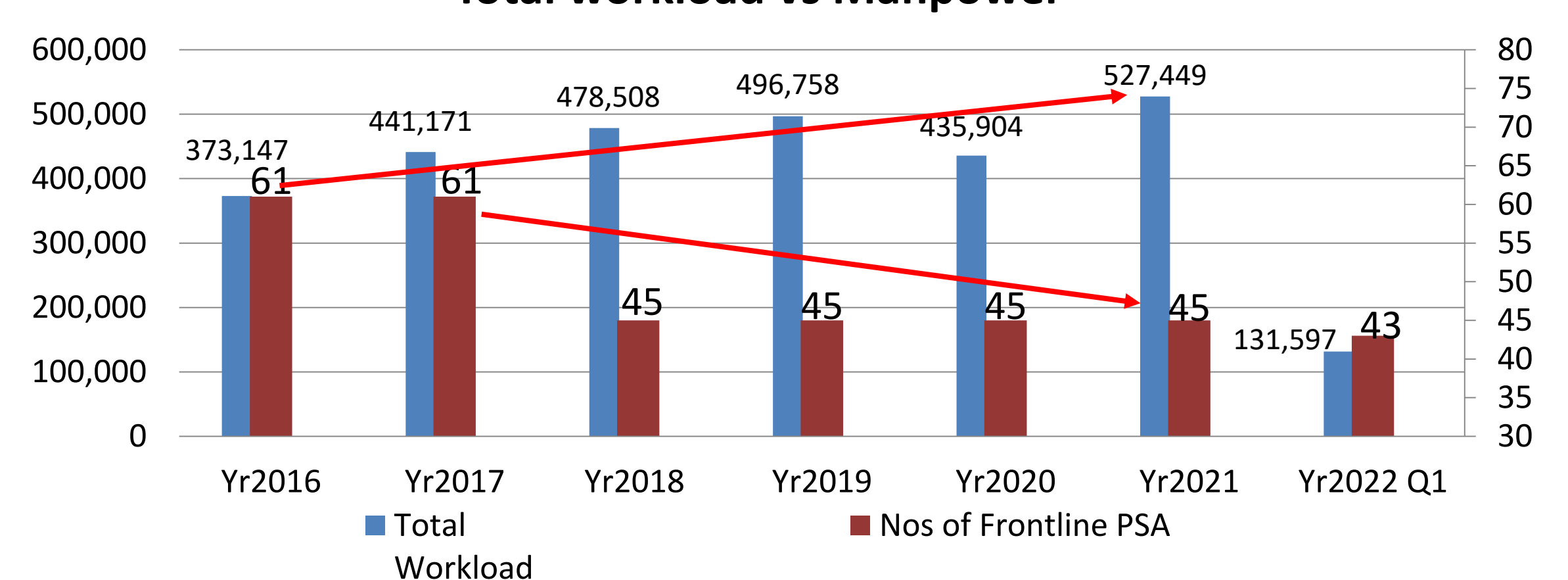
Total Nursing manpower saving 10

New opportunities for Career Progression

30% of existing pool of PSAs have progressed on to PSC with ground leadership roles. 2 of the PSAs have also successfully grow and developed to manage clinic operations as clinic executives.

Overall Productivity Gained

Total workload vs Manpower



Sustainable Workplace – Go Green Saving

Achievements!

\$191,000 saved per Year

954,707 kWh saved per Year

389,520 kg CO₂ reduction per Year

1. The total savings can supply electricity for about **224** units of 4-Room HDB flat for one year!
2. The CO₂ reduction is equivalent to support GreenGov. SG effort in planting **6,441** tree seedlings grown for 10 years to be sequestered!
3. Heighten awareness on creating a sustainable environment by all staff.

End Users Experience

Patients on their experience at clinic (based on Patient Experience survey conducted in May 2022):

- 85.9% of respondents expressed that they had a good experience in their SOC visit.
- 97% Patients are able to easily self-help for their registration.

PSA on the enhanced roles

Below is some feedback from our colleagues:

- **Financial Counselling training:** "I have learnt new knowledge about MCAF and admission prices. I never knew prices could be so complicated to a patient."
- **Visual Acuity training:** "It is fun and I am able to communicate with patients like a friend. I learnt something I never thought I can."