



Singapore Healthcare Management 2024

Enhancing Hand hygiene Compliance in an Isolation Ward



Amanda Teo, Irene Thum
Zhang Qiuxiang, Zhuo Bingxin
Arinah Basyirah Binte Mohamad Muliyadi
Omayao Kriezel Mae Baluyot
Changi General Hospital



INTRODUCTION

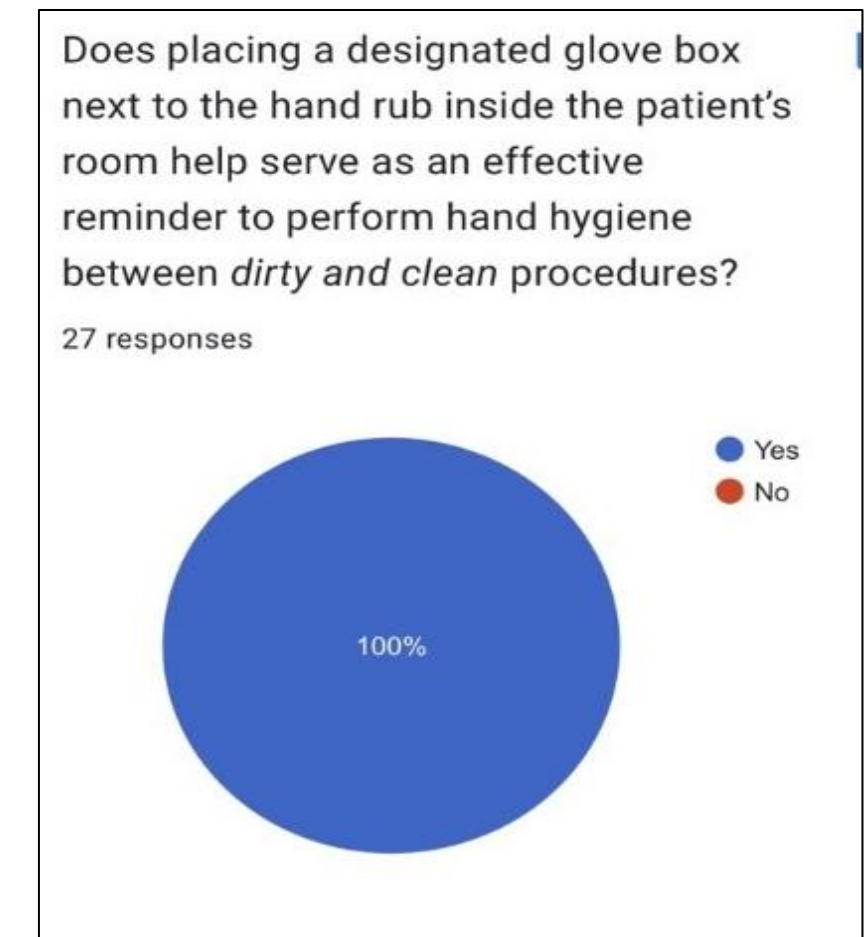
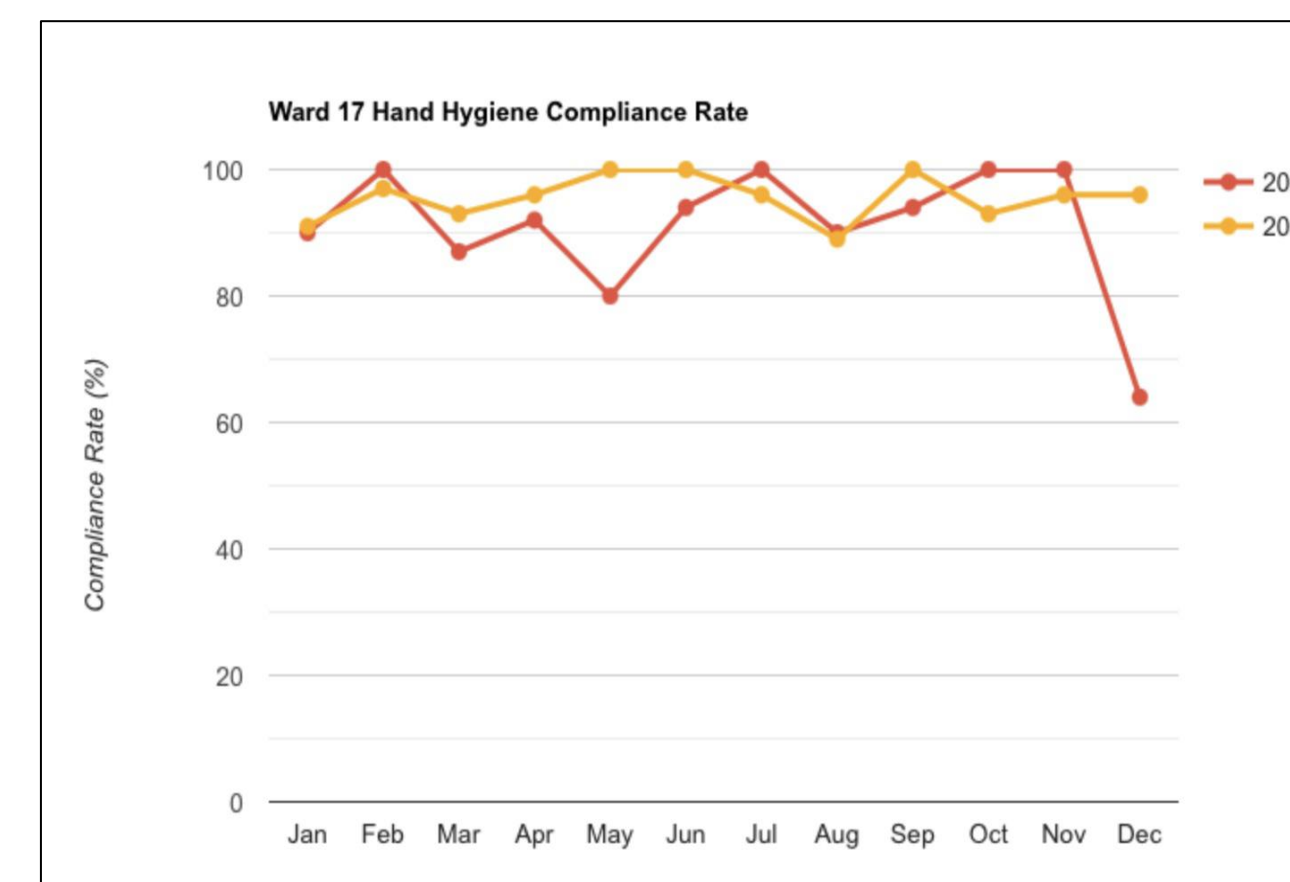
Isolation wards houses patients with highly infectious diseases; hence, **hand hygiene** is paramount in isolation wards to prevent hospital-acquired infections in patients and to protect healthcare workers. In December 2022, the **hand hygiene compliance rate in an isolation ward in Changi General Hospital was a concerning 64%**. Therefore, there was a need to identify the factors contributing to this poor compliance and intervene as required to ensure hand hygiene is adhered to strictly.

Aims:

- 1) To identify the specific factors contributing to the poor hand hygiene compliance.
- 2) To increase hand hygiene rate in an isolation ward to meet the Singhealth's compliance target rate of **98%**.

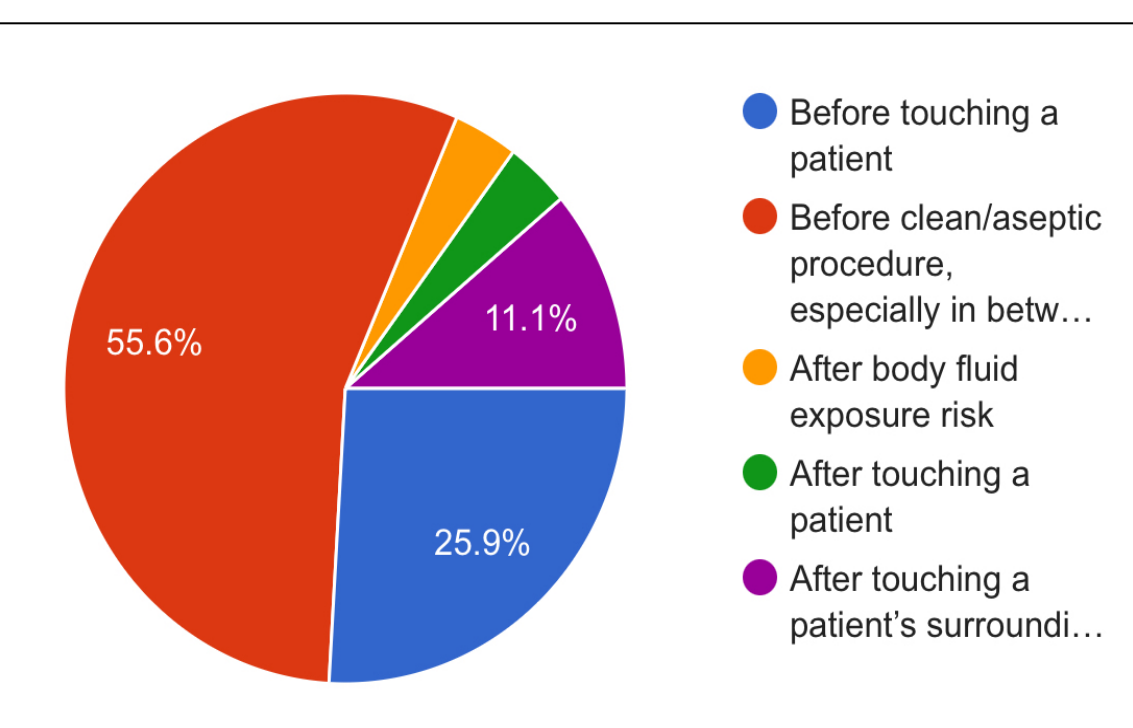
RESULTS

Overall hand hygiene compliance rate increased from **64% pre-intervention** to an **average of 93% post-intervention** as reported by auditors consisting of infection control nurses. In addition, **post survey results showed 100% of responses agreed** that the designated glove box placed next to the hand sanitizers serves as an **effective visual reminder** to perform hand hygiene between dirty and clean procedures.

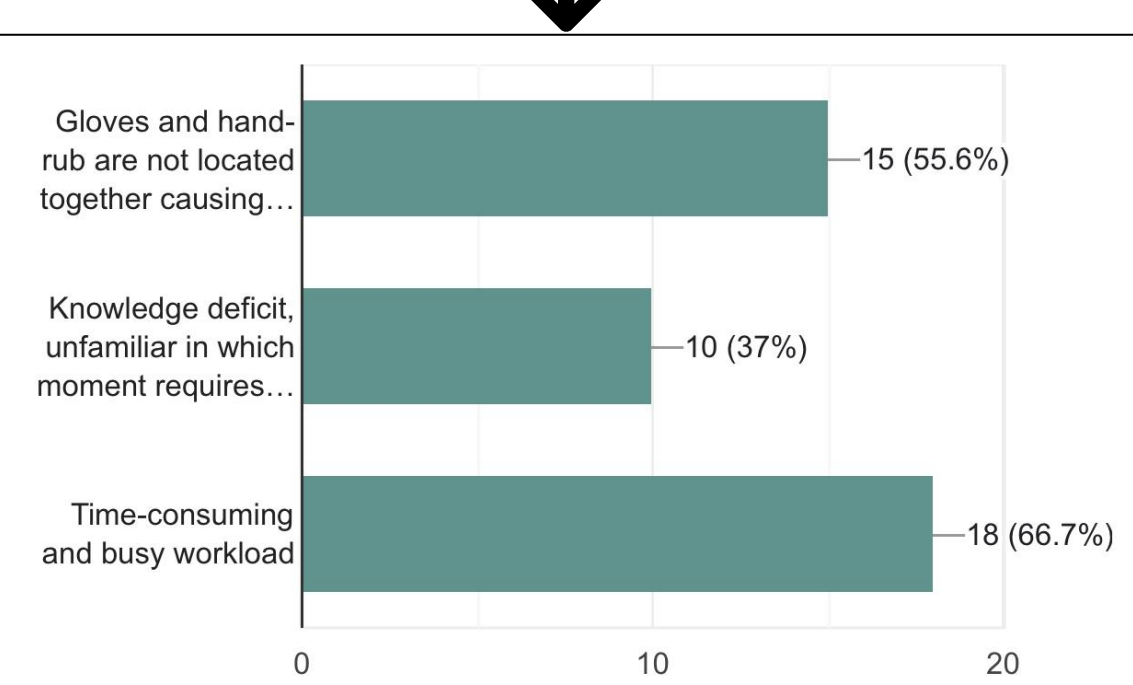


METHODOLOGY

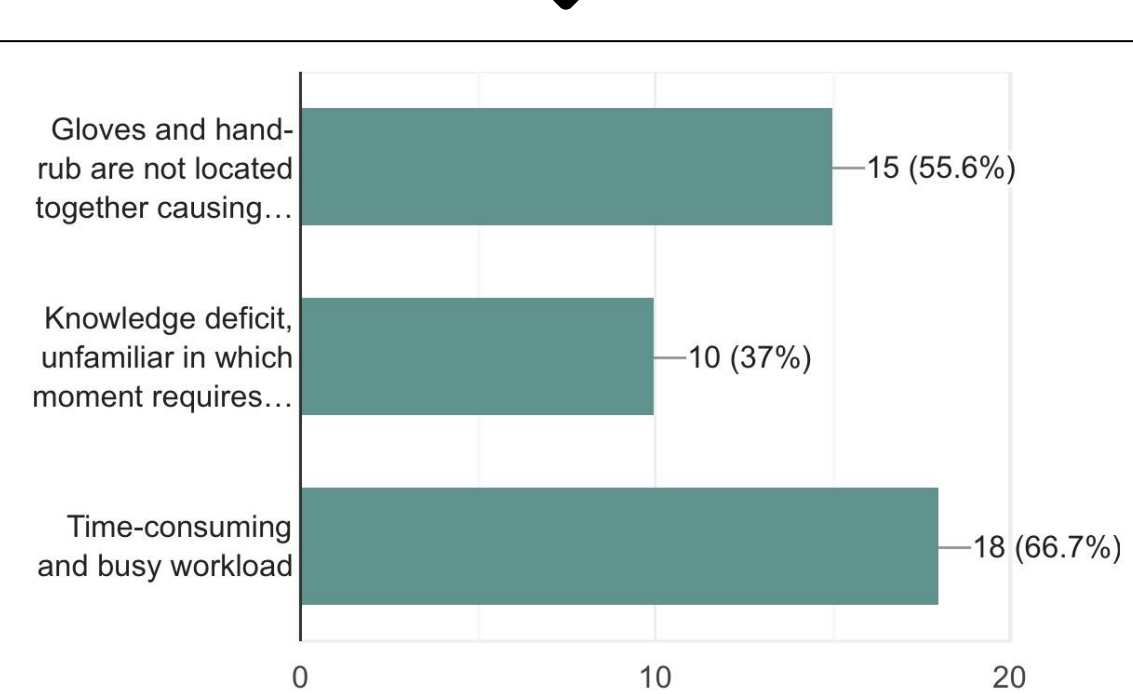
Using a **quasi-experimental study**, and a **pre and post intervention phase**, the team was able to identify the gaps in hand hygiene compliance among 27 healthcare workers in the isolation ward through a pre-survey.



55.6% of healthcare workers surveyed felt that they were **least compliant to hand hygiene before clean/aseptic procedure in between different nursing activities** over the same period transiting from dirty to clean procedures



66.7% of the responses cited that the biggest obstacle faced when performing hand hygiene was because it is **time consuming**



55.6% of responses felt they were further inconvenienced due to the **gloves and hand sanitizers not being located together**

PLAN-DO-STUDY-ACT (PDSA CYCLE)

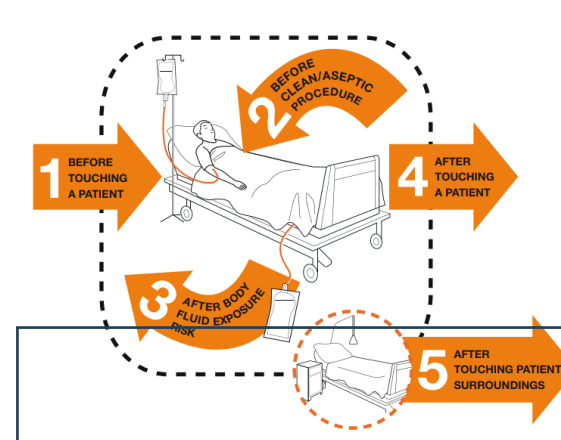
PDSA 1:

- ✓ Education training and briefing were conducted by IFC during roll call. Internal audits were carried out to monitor staff hand hygiene compliance and direct feedback was provided
- ✓ Survey was also conducted among 27 healthcare workers in the isolation ward



PDSA 2:

- ✓ With the survey results collected from PDSA 1, there were 55.6% of healthcare workers felt that they were least compliant to hand hygiene before clean/aseptic procedure in between different nursing activities over the same period transiting from dirty to clean procedures
- ✓ A visual reminder was pasted on the hand-rub dispenser in patient's room to remind nurses to perform hand hygiene. The team continue to monitor staffs' hand hygiene compliance through internal audits



PDSA 3:

- ✓ Through internal audit, the team also discovered that some nurses did not wash their hands between pairs of gloves and that some **believed their hands were still clean** after switching to a new pair.
- ✓ A study shows that **wearing of gloves reduces transmission of organisms by healthcare workers' hands but is not a substitute for hand hygiene (1)**
- ✓ In order to comprehend the limitations of neglecting hand hygiene in between glove changes, a survey was further conducted: **The fact that the gloves and hand sanitiser were not in the same place caused additional inconvenience to 66.7% of nurses**

CONCLUSION

This study showed that a **simple intervention improving accessibility to resources appears to have had a positive impact on hand hygiene behavior**, which could also be implemented in other clinical areas. The team will continuously work on improving hand hygiene compliance among healthcare workers.

WHAT ARE THE LEARNING LESSONS (SUCCESS & CHALLENGES) FROM THIS PROJECT?

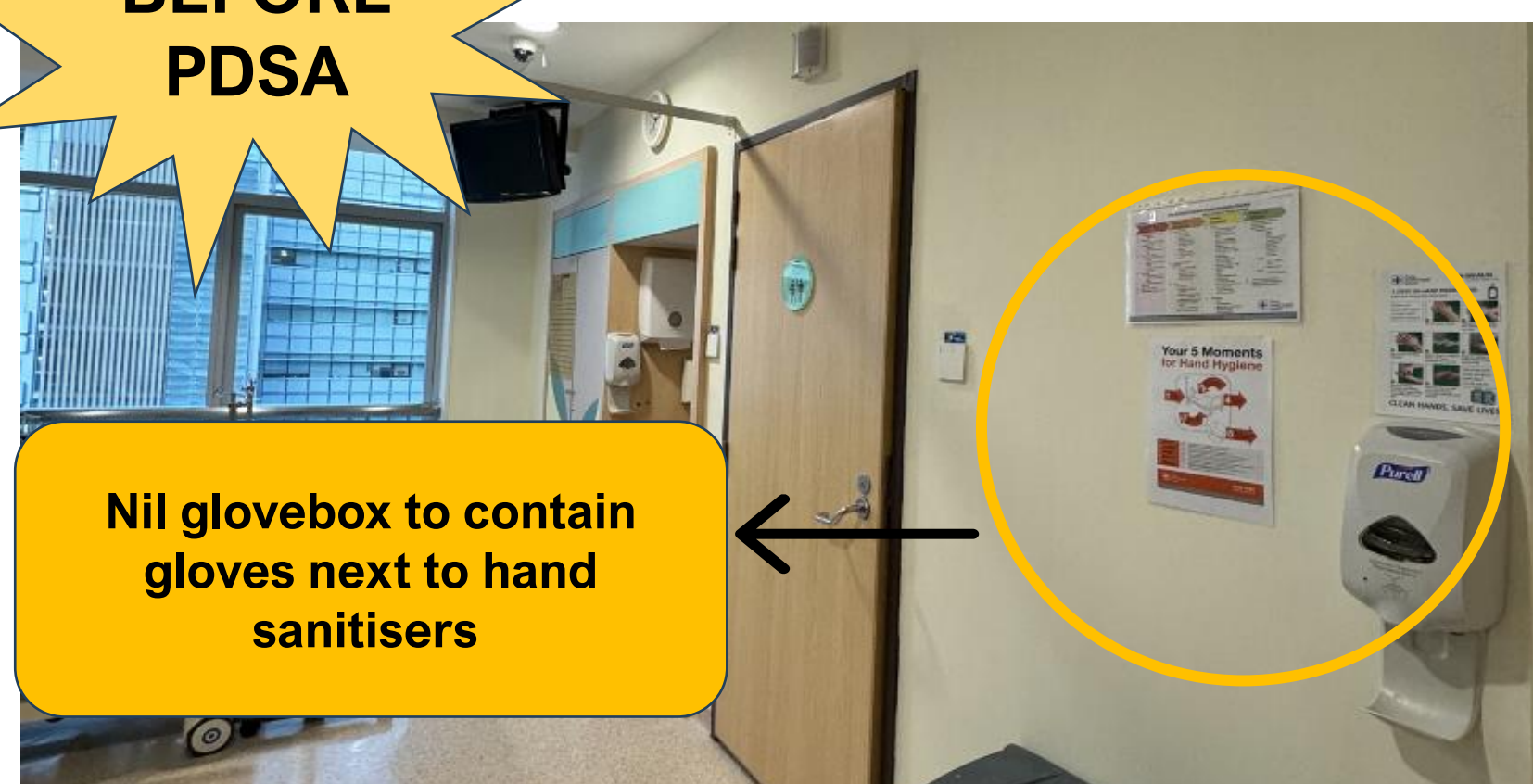
- ✓ The project's **major achievement** was raising awareness among healthcare workers about the issue, **gaining their support & successfully improving hand hygiene compliance to enhance patient's safety**
- ✓ The **challenge** of implementing the hand hygiene improvement project involves overcoming various obstacles such as **changing entrenched habits, addressing misconceptions, ensuring compliance & sustaining long-term behaviour change among healthcare workers**

WHAT ARE THE NEXT MILESTONES FOR THE TEAM?

- ✓ To expand the initial pilot project to single isolation rooms in other general wards.
- ✓ To continue monitoring the impact of designated glove box next to hand sanitiser dispensers on hand hygiene compliance rate

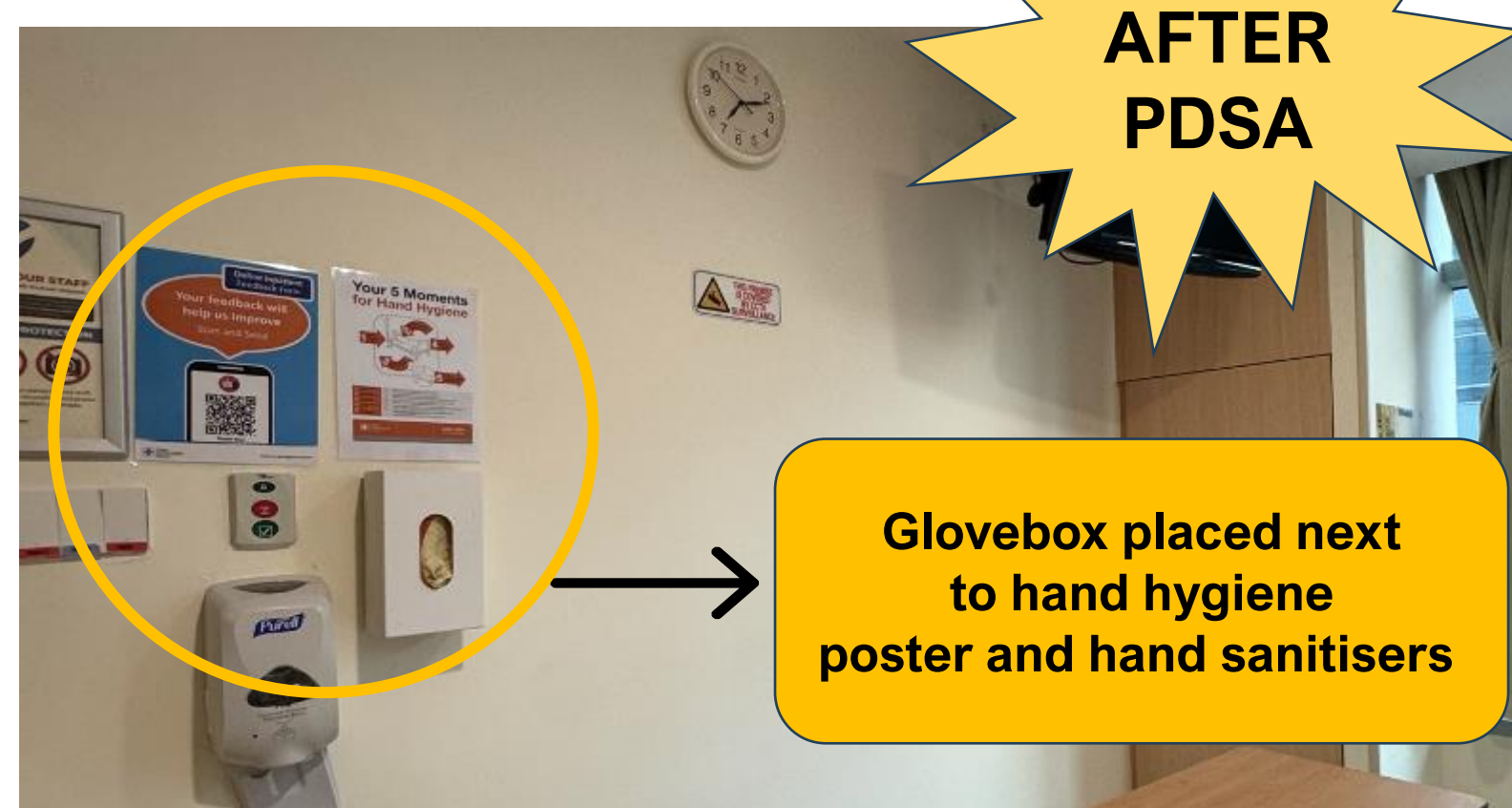
Considering these findings, a **designated glove box** was placed inside patient's room, next to hand sanitizers **facilitating a seamless workflow when performing hand hygiene between nursing tasks**. Thereafter, improvements in hand hygiene compliance were evaluated using post-survey and direct observations through audit.

BEFORE PDSA



Nil glovebox to contain gloves next to hand sanitizers

AFTER PDSA



Glovebox placed next to hand hygiene poster and hand sanitizers