Project Title

Value-based Care for Hip Fracture Patients in SACH

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Organisation(s) Involved

St. Andrew’s Community Hospital

Healthcare Family Group(s) Involved in this Project

Medical, Nursing, Allied Health, Administrators

Aim(s)

To Improve % of patients (discharged home) with LOS <= 26 days from 53% to >= 64% by 31 Mar 2023.

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Conclusion

See poster appended/ below

Project Category

Care & Process Redesign

Value-Based Care, Length of Stay, Productivity, Cost Saving, Quality Improvement, Workflow Redesign

Keywords

Hip Fracture, Enhanced Care Pathway, Rehabilitation, Continuity of Care

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VALUE-BASED CARE FOR HIP FRACTURE PATIENTS IN SACH

ST ANDREW'S COMMUNITY HOSPITAL (SACH) & CHANGI GENERAL HOSPITAL (CGH)

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1. INTRODUCTION

- Hip fracture is a prevalent condition among older adults in Singapore, and it is becoming more so as the population is aging.
- In 2021, SACH embarked on a Value-based Care (VBC) journey by benchmarking perfect patient care against health outcomes that matter to the patients while rationalizing cost of delivering those outcomes for this group of patients.
- An average of 20 hip fracture patients were admitted to SACH on a monthly basis between Jan and June 2022. The Clinical Quality Index# (CQI) was at 47%, and LOS was the key contributor to the low CQI. A typical journey for hip fracture patients with ALOS of 33 days is shown in Figure 1. The ALOS at Community Hospitals was 30 days based on 2018 national data.

Project Scope

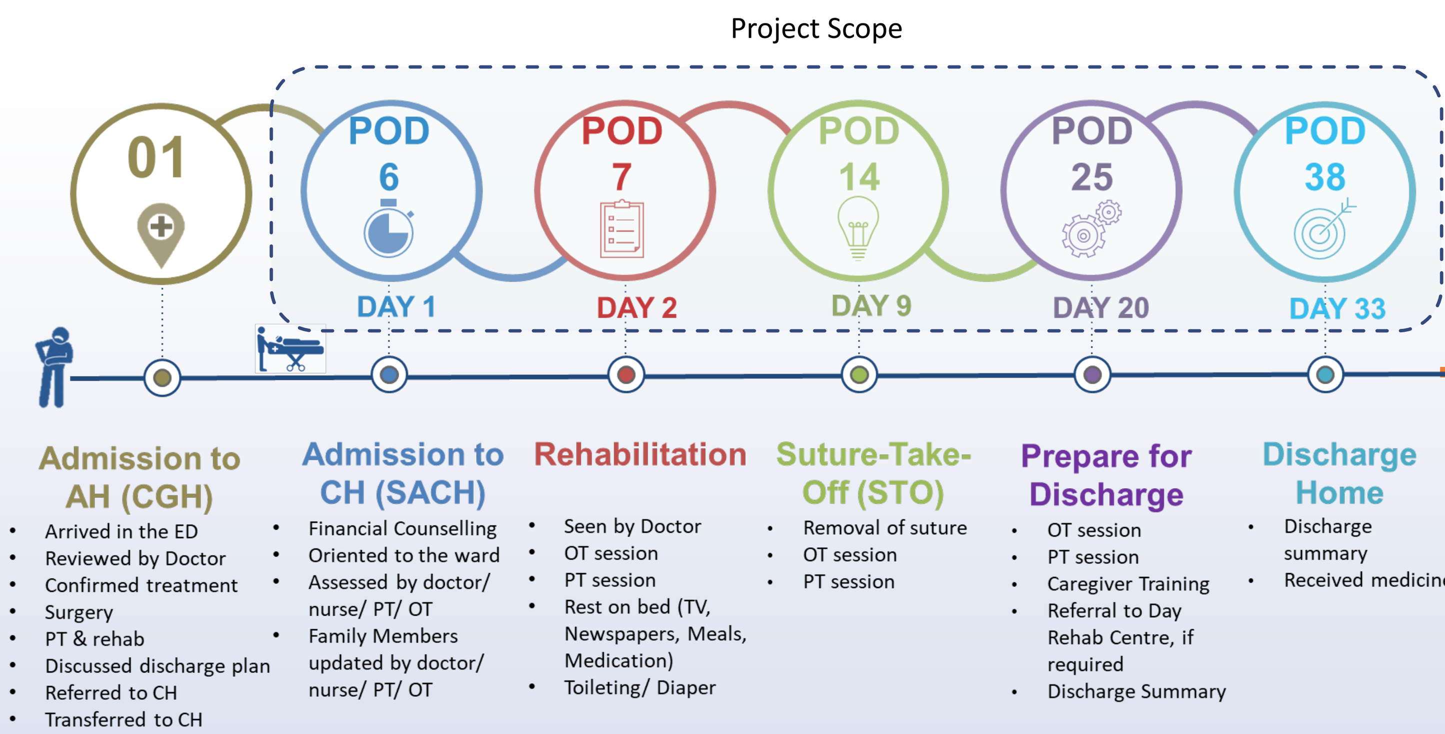

Figure 1. Overview of typical journey for hip fracture patient

PROJECT GOAL
Improve % of patients (discharged home) with LOS <= 26 days from 53% to >= 64% by 31 Mar 2023

Figure 2. Process mapping and discussion at the RIE

2. METHOD

- A multidisciplinary team (MDT) of doctors, nurses, allied health professionals and administrators from SACH collaborated with Case Management Team from CGH during a 3 days Rapid Improvement Event (RIE) to understand the end-to-end process, identify wastes and engaged in paradigm breaking exercise to challenge the members to think out-of-the box when brainstorming for solutions (Figure 2).
- Adopting the Plan – Do – Check - Act cycle, the team established ways to overcome the interim delays in discharge plan, further tweaks were made to the new workflow and the enhanced care pathway after a 3-months' pilot was conducted in 2 rehabilitation wards before hospital-wide implementation.

3. PROBLEM ANALYSIS

SACH tracked 4 quality indicators that measure values from a patient's perspective, and the LOS ≤ 26 days indicator was the key contributor to the poor CQI's performance (Figure 3).

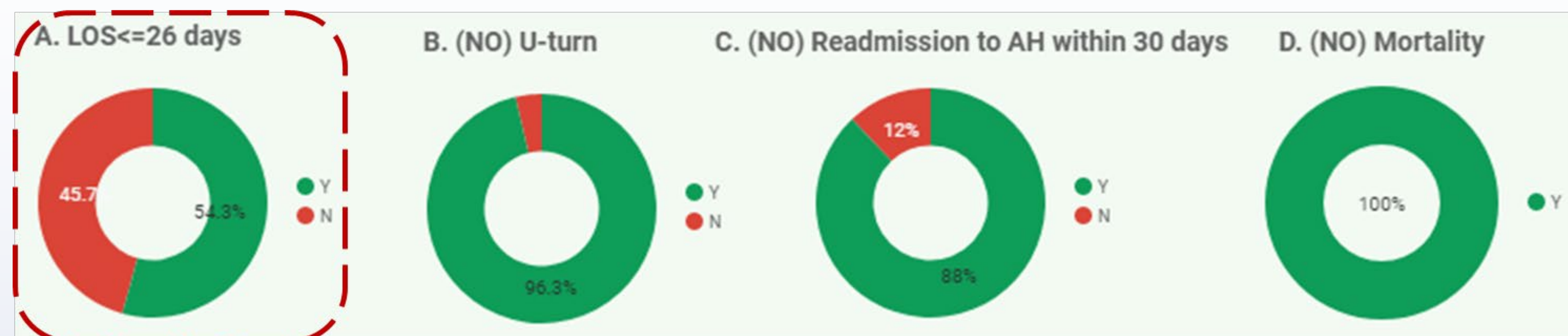

Figure 3. VBC Dashboard for Hip Fracture Patients

The team identified gaps in processes and issues that lengthen the patients' LOS (Figure 4).

1. Variations in care plan
2. Delay in decision making & discharge planning
3. Poor communication among the MDT members
4. Patient not independent or confident to self-ambulate after discharge
5. Patient / Caregiver had no clear understanding of end to end journey

Figure 4. Identified Issues for Hip Fracture Patients

4. IMPLEMENTATION STRATEGY

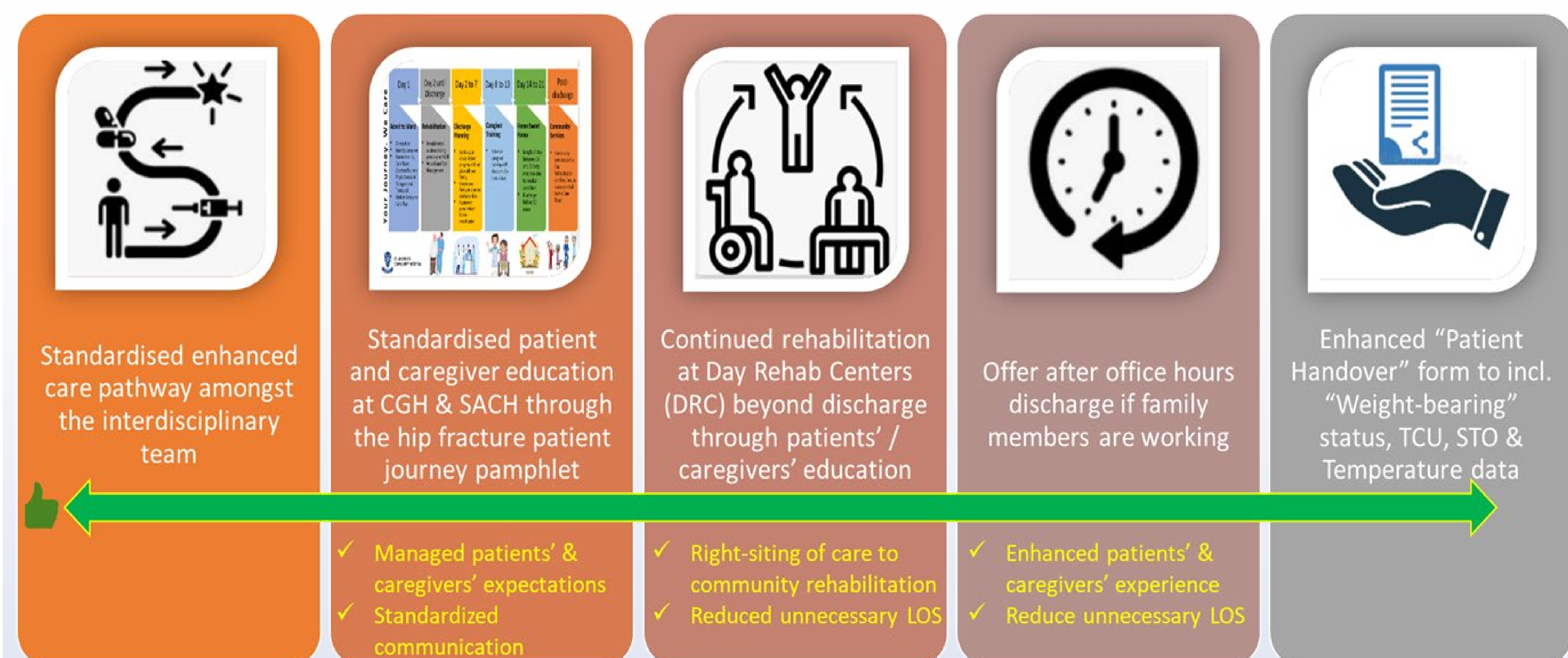

Figure 5. Improvement Interventions and Benefits

Adopting the Plan – Do – Check - Act cycle, further adjustment were made to the new workflow during a 3-months' pilot before the final enhanced workflow was rollout hospital-wide in Dec 2022 (Figure 5). Monthly project review meetings were carried out post-RIE to track implementation progress and review results to ensure sustainability of the new workflow.

5. RESULT

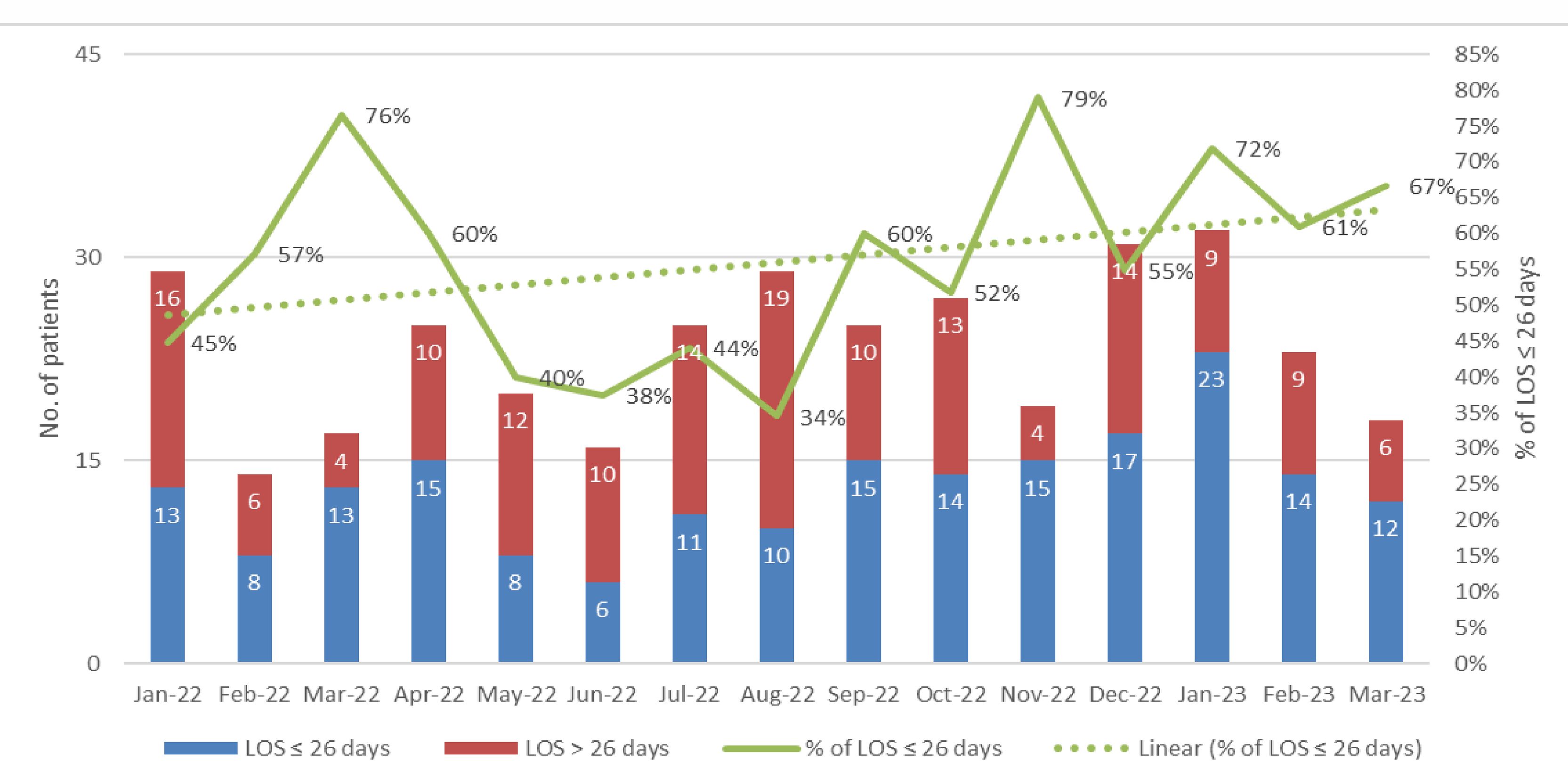

Figure 6. Percentage of patients discharged in ≤ 26 days

52% ➜ 64%
More patients discharged home ≤ 26 days (Figure 6)

33 days ➜ 25 days
Reduction in ALOS per patient

$553,000
Cost avoided p.a. due to bed days saved

- ✓ **Patients are assured that there is continuity of rehabilitation post discharge and unnecessary LOS are avoided.**
- ✓ **Improved staff satisfaction due to reduced rework between SACH and CGH, and improved communication amongst MDTs.**

6. CONCLUSION

- A multipronged approach by a cross institutional multidisciplinary team to improve every step of the care process yields promising results and improved value of care for our patients. The project team analyzed the processes and identified risks, operational wastage, and other issues that resulted in unnecessary hospital stay.
- Data analytics from VBC dashboard plays a vital role in enhancing quality control and the development of improvement initiatives towards reducing healthcare costs while maintaining standards of healthcare services.
- To continue to sustain the good results, it is crucial that the stakeholders continue to monitor monthly CQI and periodically come together to align their work processes. The next phase is to look into better integration of care downstream and clinical efficiency e.g. use of robotic technology for rehab

CQI is the number of patients who met all quality indicators (i.e. received "perfect care") as determined by the clinicians, divided by total number of patients.

ST. ANDREW'S COMMUNITY HOSPITAL

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