

## Project Title

Falls Prevention in Rehabilitation Wards

## Project Lead and Members

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- Dr Angel Lee
- Alison Sim
- Law Yen Hoon
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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

## Applicable Specialty or Discipline

Patient safety

## Aim(s)

- Aim for 50% reduction in patient falls between 9 pm 7:59 am from 5 cases/ quarter to < 2 cases/ quarter for the pilot rehabilitation wards 6 and 8 by the end of Apr' 2022
- To spread interventions to other non pilot rehabilitation wards by Feb' 2022
- Balancing Indicator: To maintain the restraint rate at 12%

## Background

See poster appended/ below

## Methods

See poster appended/ below

## Results

See poster appended/ below

## Lessons Learnt

- The FMEA process involved cross departmental stakeholders e.g. Nurses, Therapist, Medical Doctor, Facilities member, etc. It is a review of the end to end processes in the wards for falls prevention. It is proven to be more effective and efficient as compared to incidental-level RCA.
- The team had also incorporated Lean and Plan-Do-Study-Act (PDCA) methodology on the interventions implemented to the piloting wards during the monthly review meeting after the FMEA workshop. All ward's nursing team united to work towards a common goal. We managed to leverage Agency of Integrated Care (AIC) funding to keep up with current technology support.
- Our biggest challenge is to get 'buy-in' and have all nurses practiced the same consistently. Initial part of the project, there were instances that guidelines were not followed – i.e. night duty showered >50% of the patients, non-compliance to 'Floater Watcher' role; 'FW' went ahead to engage showering task instead of patrolling to closely monitor extreme high fall risk patient (especially patients with HFR signage). However, via monthly review of progress and data monitoring, we visit all the proposed fall prevention measures during each review session and adjust it accordingly.
- To ensure that the implemented interventions are congruent with the proposed, our members took turns to observe/ monitor on a monthly 'Go-and-See'. Only when our members believe and walk the talk, new implementations can be hardwired into routines without reminders.

- The initiatives/ interventions we introduced could be as simple as minor adjustments to existing work routines but we achieved amazing results. Our team was encouraged and energised by the achievement to continue the good work – to add value for our organization, staff & patients!

## **Conclusion**

See poster appended/ below

## **Additional Information**

Community Care Excellence Awards 2022: Clinical Quality Gold Award

## **Project Category**

Care & Process Redesign

Lean Methodology, Workflow Redesign, Design Thinking, Preventive Approach, International Patient Safety Goal (IPSG) in Long Term Care Facility, Risk Management, Adverse Outcome Reduction, , Adherence Rate, Safe Care

Organisational Leadership

Change Management

## **Keywords**

Fall Prevention, Rehabilitation Ward

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## St Andrew's Community Hospital

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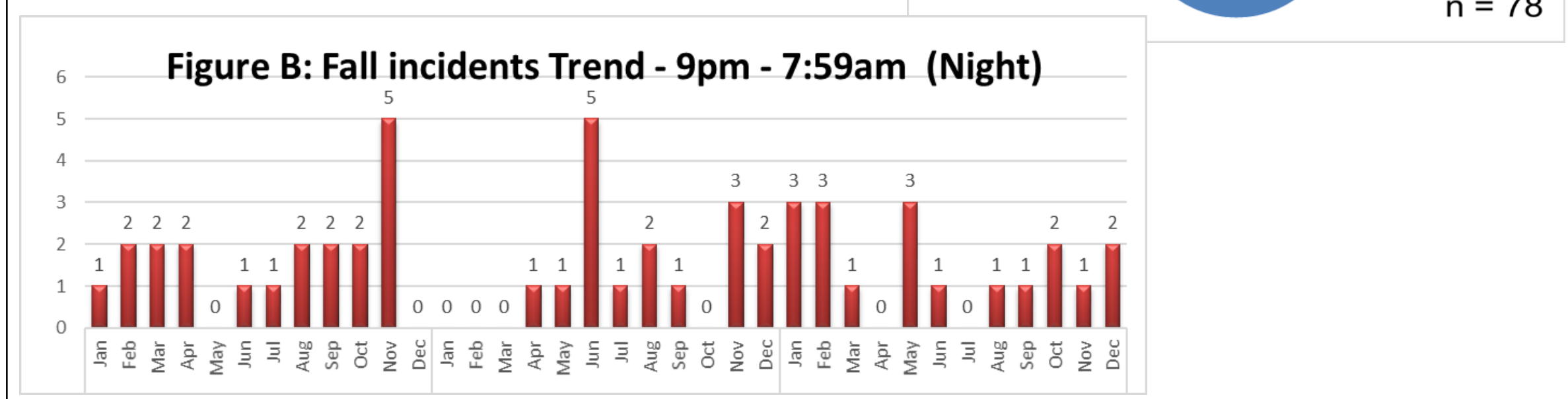
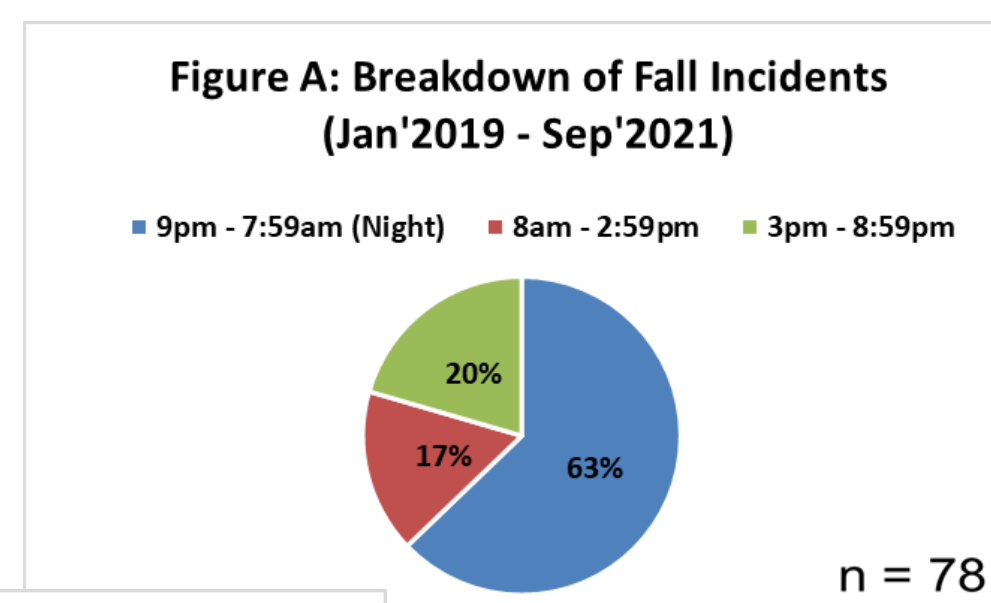
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### Introduction/Background

SACH provides rehabilitation services for frail and elderly patients, often cognitively impaired with poor safety awareness, gait imbalance, muscle weakness and impaired mobility status.

Patients' desire for independent living compels them to get out of bed and walk, often not calling for assistance, thus resulting in falls.

Figure A shows 63% of the fall cases happened (between 2019 and 2021 (YTD - Jan to Sep)) during the night shift (9pm – 7:59am), Figure B. The fall incidents were reported at the bedside. Therefore, we need to understand the nursing activities at night and brainstorm possible interventions to avoid patient falls.



### Goal/Objective

To aim for 50% reduction in patient falls between 9pm-7:59am from 5 cases/ quarter to < 2 cases/ quarter for the pilot rehabilitation wards 6 and 8 by the end of Apr'2022.

To spread interventions to other non-pilot rehabilitation wards by Feb'2022.

Balancing Indicator:

To maintain the restraint rate at 12%.

### Problem Analysis

Root Cause Analysis (RCA) was conducted for all the fall incidents reported individually. Various fall preventive measures, such as frequent night rounds conducted by the nurses, lower bed positioning for the patients, hiring support care staff were implemented but there was no significant reduction in the fall incidents in the wards.


Based on statistics, most fall incidents happened at night or early morning at patient's bedside, henceforth, the project team decided to do a comprehensive review by adopting the Failure Mode and Effect Analysis (FMEA) methodology, a prevention tool used to identify possible failures for the end to end process.

All possible failure modes without effective control measures in place, and with a Risk Priority Number (RPN) score of >200, were identified and prioritized for interventions. They were as follow:

- 1) Fail to know high fall risk patient well due to lack of communication between the teams.
- 2) Fail to attend to patients timely due to showering of other patients.
- 3) Fail to watch over patients at night due to inadequate lighting in the cubicles.

### Implementation Plan

#### Failure Mode 1: Fail to know high fall risk patient well due to lack of communication between the teams.

- 1.1) Introduce 'Bedside Nursing Handovers' (Quick Rounding) without patient's confidential information.
- 1.2) Introduce a visual cue , to identify patients with extreme high fall risk.
- 1.3) Include briefing on fall risk assessment tool in new staff orientation package.

#### Failure Mode 2: Fail to attend to patients timely due to showering of other patients.

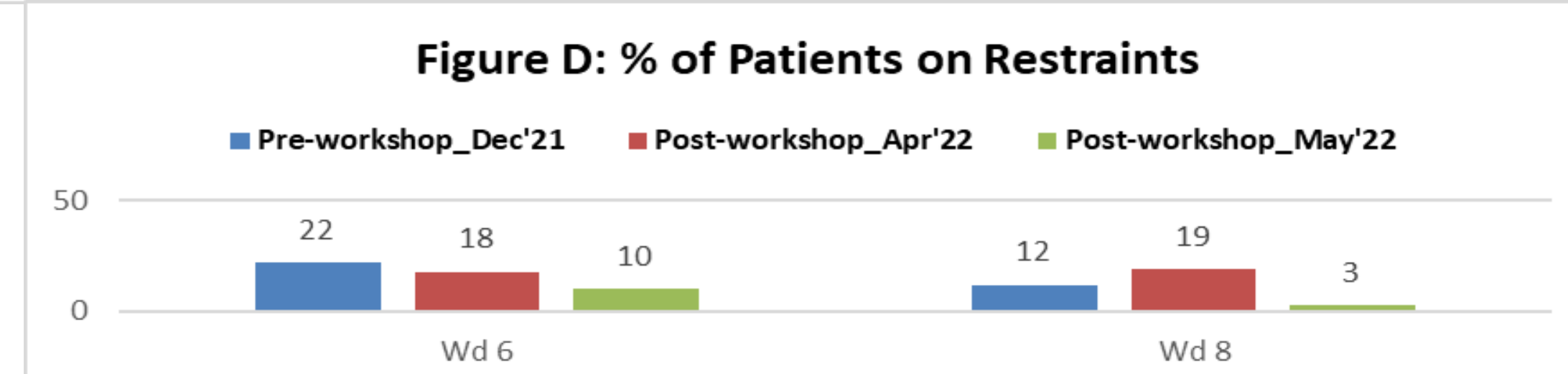
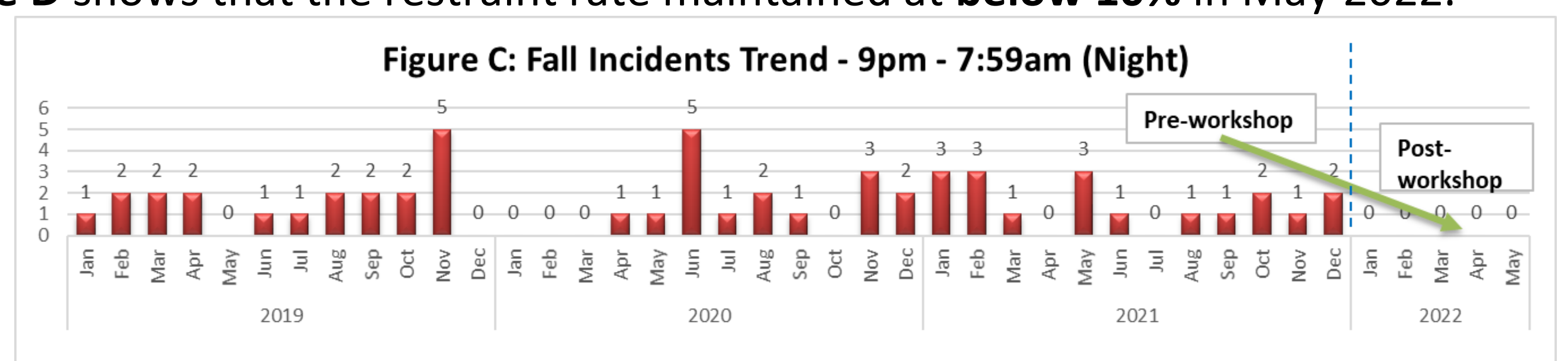
- 2.1) Introduce "Shower timetable" to spread showering activities throughout the day so that night shift staff will not be showering more than 50% of the patients.
- 2.2) Introduce one 'Floater & Watcher' (FW) to round the ward at staggered timing during night shift; FW who will be identified from existing nursing staff, will be given standard work with clearly defined roles & responsibilities.
- 2.3) Introduce Sensor Exit Monitoring system to high fall risk patients.

#### Failure Mode 3: Fail to watch over patients at night due to inadequate lighting in the cubicles.

- 3) Cubicle was pitch dark when lights out during night. Facilities adjusted the toileting lightings to be dimer; Improve cubicle lighting infrastructure e.g. Dimmer wall, corridor & nurses' station lights.

### Benefits/Results

- Figure C shows zero (0) fall incident between 9pm-7:59am in 2022 Q1 as compared to baseline of five (5) fall incidents for all the rehabilitation wards.
- Figure D shows that the restraint rate maintained at below 10% in May'2022.



### Sustainability & Reflections

#### Ensure Sustainability & Continuous Improvement

Create awareness and evaluate the relevance of implemented measures continuously as patients' profile may change.

- Plan to conduct roadshow annually (by Fall Quality Assurance Committee and Nursing Education Team)
- Keep new staff aligned of the latest measures via standardization and on-going preceptorship
- Twice a year (once every 6 months) refresher of the fall risk assessment tool for existing staff

### Summary

The FMEA process involved cross departmental stakeholders such as Nurses, Therapist, Medical Doctor, Facilities Members, etc to review the end to end processes in the wards for falls prevention. It is proven to be more effective and efficient as compared to incidental-level RCA. The team had also incorporated Lean and Plan-Do-Check-Act (PDCA) methodology on the interventions implemented in the piloting wards during the monthly review meeting after the FMEA workshop. The project team evaluated the effectiveness of every intervention and fine-tuned them prior to spreading them to other rehabilitation wards. Henceforth, optimizing the resources, efforts, and energy of our organization towards creating value for our staff & patients.