Fall-less

Singapore Healthcare Management 2021

Singapore General Hospital

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Introduction & Background

Falls are a serious threat to patient safety. They may result in associated injuries which require increased diagnostic and therapeutic procedures and the need for institutionalisation, rehabilitation, and home care. The need for further treatment and longer hospital stays will in turn lead to increased patient care costs and healthcare professional workload. Apart from patient safety, fall incidents can also affect staff safety. Physiotherapists and therapy assistants may sustain injuries while attempting to catch falling patients.

From annual review, the number of fall incidents occurred during physiotherapy sessions has been observed to be on an upward trend and majority of them were preventable. To mitigate this safety risk, we embarked on an improvement project to reduce the number of preventable fall incidents during inpatient physiotherapy sessions.

Mission Statement

To reduce the number of preventable fall incidents during inpatient physiotherapy sessions from median of 0.103 per 1000 inpatient attendances to 0 per 1000 inpatient attendances in SGH within 15 months.

Methodology

1) Analysis of problem

Cause-and-effect diagram (Fig 1), multi-voting and pareto chart (Fig 2) were used to identify the main root causes of preventable fall incidents during inpatient physiotherapy sessions

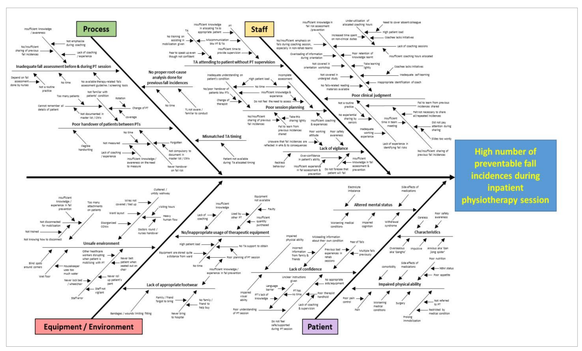


Fig 1: Cause-and-effect diagram

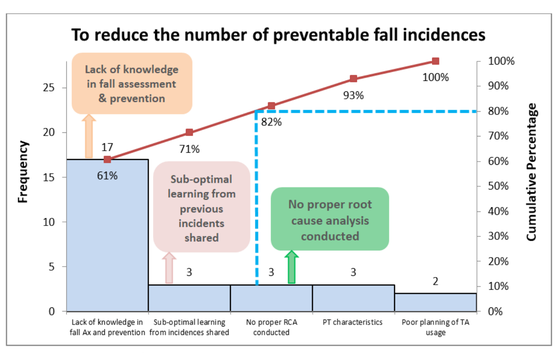


Fig 2: Pareto Chart

Three final root causes were identified:

1. Lack of knowledge in fall assessment and prevention
2. Sub-optimal learning from previous incidents shared
3. No proper root cause analysis conducted

(PT characteristics was not identified as a final root cause to be addressed as it was mostly uncontrollable)

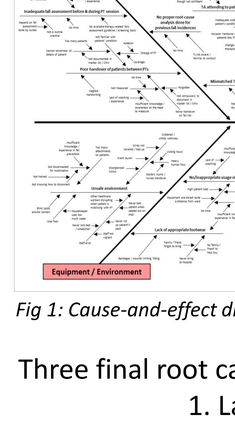
2) Implementation of interventions

The driver-diagram and prioritisation matrix (Fig 3) were used to shortlist interventions (PDSA 1 to 4) for the identified root causes. The 4 PDSAs were implemented in phases over a period of 15 months.

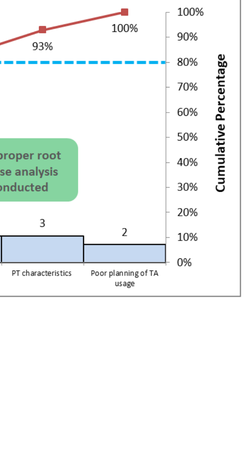
Key: ● meets criteria most ◉ meets criteria moderately △ meets criteria least

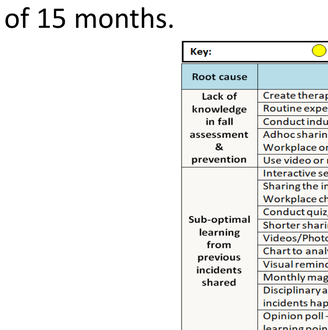
Root cause	Possible solution	Effectiveness	Cost saving	Feasible	Sustainability	Solution selected	
Lack of knowledge in fall assessment & prevention	Create therapy-related fall assessment & prevention guideline	●	◉	●	●	√	PDSA 3
	Routine experiential sharing by coach	◉	◉	◉	△		
	Conduct induction workshop or e-learning	●	◉	●	◉	√	PDSA 4
	Adhoc sharing of knowledge and prevention strategies on Workplace or email	◉	◉	●	◉		
	Use video or real patient or simulation in teaching	◉	◉	◉	△		
Sub-optimal learning from previous incidents shared	Interactive session/Re-enactment	●	◉	◉	◉		
	Sharing the incident, consequences and learning points in Workplace chat group	●	●	●	●	√	PDSA 2
	Conduct quiz/mini game and reward accordingly	◉	◉	◉	◉		
	Shorter sharing sessions	◉	●	●	◉		
	Videos/Photos to present the incident	●	◉	◉	◉		
	Chart to analyse fall statistic and reason	●	●	●	●	√	
	Visual reminders. i.e. posters	△	△	△	◉		
	Monthly magazine/emails	◉	△	△	△		
	Disciplinary actions for physiotherapist if repeated avoidable fall incidents happen	●	●	●	●		
	Opinion poll -> share incident report & get staff to contribute learning points	◉	●	●	◉		
No proper root cause analysis conducted	Create a department template for root cause analysis	●	●	●	●	√	PDSA 1
	Incident followed up and reviewed by Clinical chief/EHS officer	●	◉	●	●	√	
	Conduct training for team leads/supervisor on root cause analysis	●	◉	●	◉		
	Ensure complete and accurate description of incident	●	●	●	●	√	
	Mandatory to conduct after every fall incident	●	◉	●	●	√	

Fig 3: Prioritisation Matrix



Incident Investigation Form → **Monthly Snippet** → **Fall Assessment & Prevention Guide – F.A.C.T.S!** → **Fall Induction Workshop**



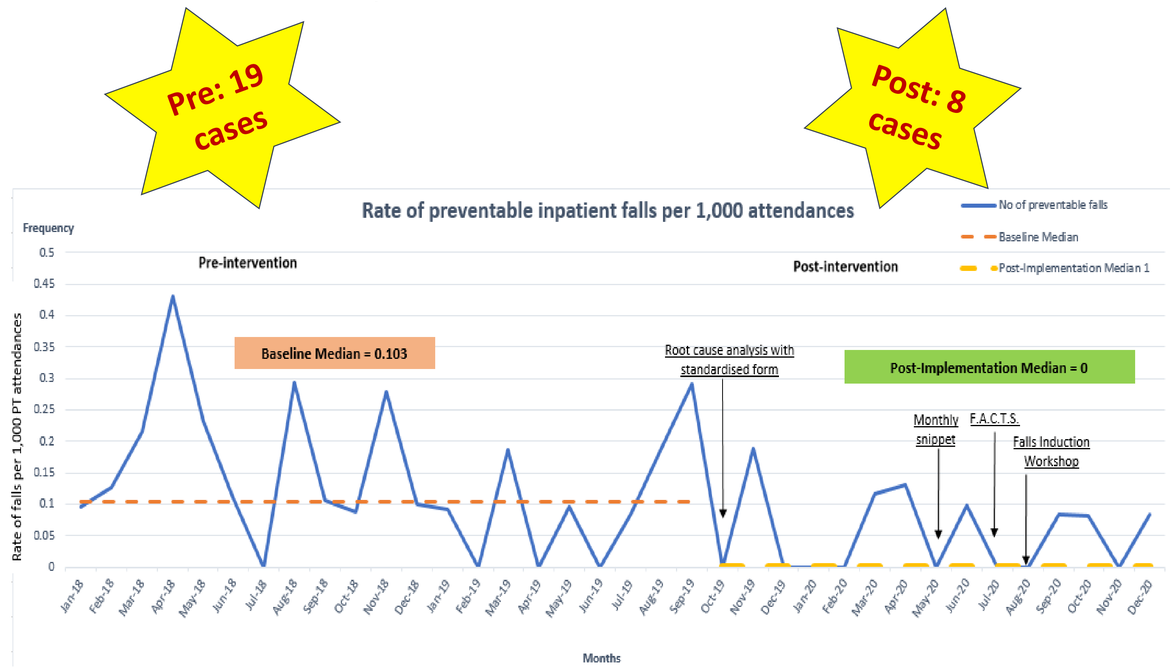


Be ready with your F.A.C.T.S.

- **F**: full **F**alls assessment
- **A**: walking **A**ids and/or gait belt
- **C**: **C**hair/Wheelchair
- **T**: **T**herapy assistant
- **S**: assess for **S**uitability

Results

The project achieved its target in reducing preventable falls (Pre: 19 falls to Post: 8 falls) during physiotherapy session from a median of 0.103 to 0. Cost savings was $10,007.12.
The shift is detected from May to December 2020 in the run chart as shown.



Prevented 11 fall incidents in 15 months = **$10,007.12**

Singapore General Hospital "Best Outcome, Best Experience"

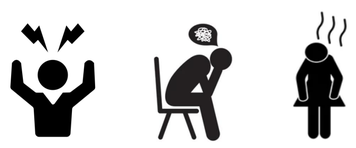
TARGET ZERO HARM

Achieve organisation aims and priorities of "Best Outcome, Best Experience" and Target Zero Harm.

Increase therapist's self-confidence and morale

Better patient's experience and outcome

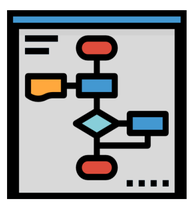
Less caregiver stress and burden



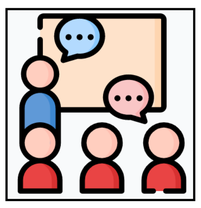
Conclusion

Preventable falls during inpatient physiotherapy sessions can be reduced with an increase in fall assessment and prevention knowledge, favourable learning from previous incidents and proper root cause analysis conducted.

Sustainability Plans



Conduct annual orientation on incident investigation workflow & form



Conduct fall induction workshop for every rotation

Fall risk factor assessment and F.A.C.T.S. are incorporated in clinical audit form

Continual reviewing & refining of fall prevention guide and induction workshop