

## To increase awareness level of ESTHERs in fall management at home from 22% to 50% within 6 months

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### Background

Falls and fall-related injuries are common among the seniors. One in five seniors aged ≥ 65 years old reported to have fallen at least once each year (HPB, 2016). Many of them experienced recurring falls, resulting in greater morbidity and mortality and contributing to early admission to long-term nursing facilities.

Many falls happen at home due to home hazards e.g. slippery flooring, loose mats and cluttered environment, and such incidents are preventable. It was found that 17.8% (N=190) of seniors had high fall risk and required further screening and follow-up during the Community Falls Prevention programme conducted by SGH Community Nursing team over a period of 10 months. Among them, 33.2% (n=63) of seniors had at least one fall in the past 12 months (Figure 1).

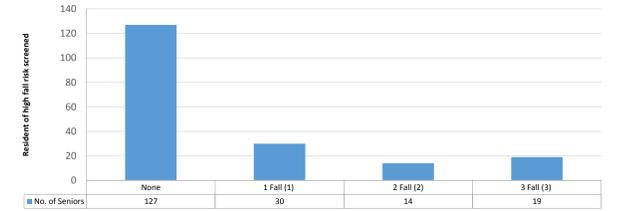


Figure 1: Residents screened with high risk of falls (Aug 2018 - Jul 2019)

Most of the elderly had misconceptions on what warrants a hospital admission post-fall. Many expressed fear of falling, unsure of fall management at home and have difficulties managing their activities of daily living after the falls (e.g. moving around, showering).

**Mission Statement:** To increase awareness level of ESTHERs in fall management at home from 22% to 50% within 6 months.

### Methodology

The team recruited 10 ESTHERs with a) high fall risk, b) no caregivers, c) at least one fall incident (include near miss) reported within the past 12 months and d) expressed fear of falling. Focused discussions (via ESTHER café) were conducted at the participants' home to understand the factors that contributed to their falls, their knowledge in post-fall management and their confidence in performing instrumental daily activities (IADL). Self-rated modified efficacy scale (from 0 to 10) was used. Figure 2 indicated the flow of data collection.

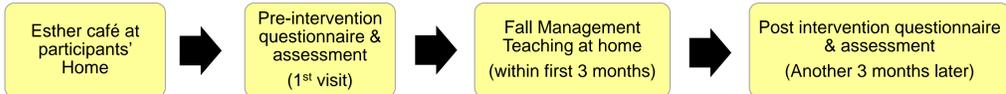


Figure 2: Data Collection

A Cause & Effect diagram (Figure 3) followed by a Pareto chart enabled the team to identify the top 3 root causes for lack of awareness in managing post fall:

- 1) lack of awareness on getting up from falls,
- 2) no ready emergency contact after fall and
- 3) lack of understanding on prevention of next fall.

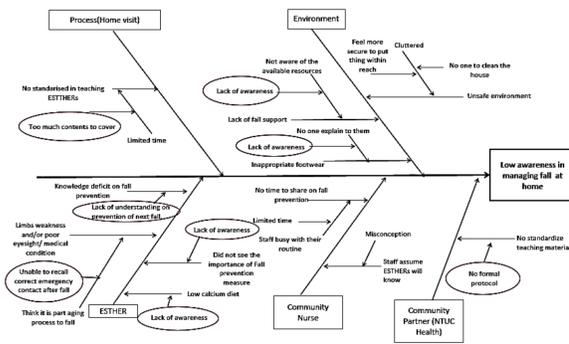


Figure 3: Cause and effect diagram

### Proposed Solutions

Three interventions were identified.

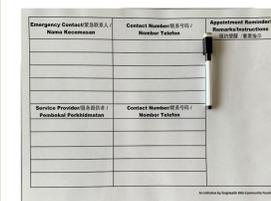
#### PDSA 1 – How to Get up from a Fall

- Coaches to demonstrate with pictorial guide on how to get up after a fall and managing Instrumental ADL
- ESTHERs to re-demonstrate (or verbalize the 5 steps) on how to get up from fall



#### PDSA 2– Get Help

- To display wall decal at ESTHERs' homes with emergency contact numbers to call after a fall.



#### PDSA 3 – How to Prevent Next Fall

- To increase awareness & knowledge
- Diet advice for strong bone, proper foot wear and home safety;
- Education on managing fall with injury: primary care vs. emergency visit.



### Outcome

ESTHERs had an overall 51% (23% vs. 74%) increase in their knowledge of fall management (Figure 4) and greater confidence of 14% (58% vs. 72%) in managing their IADL post fall (Figure 5) ( $p < 0.05$ ).

Nine ESTHERs felt that the wall decal was useful especially in contacting their next of kin during emergency.

The number of ESTHERs with emergency visits were reduced from 5 to 1 over the period of 6 months. Most of the falls pre-intervention were due to home hazards such as tripped off from loose mat and improper footwear. One of the fall incidents post intervention was due to the ESTHER's unsteady gait.

There was a total of \$484 cost avoidance to Emergency Department visits based on the 4 fall incidents prevented. (Figure 6)

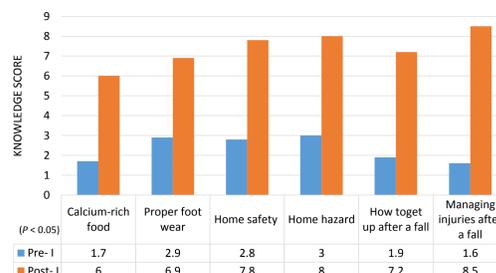


Figure 4: Knowledge on post fall management

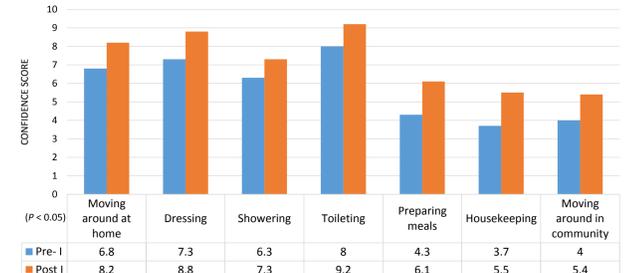


Figure 5: Confidence level in managing IADL

Figure 6: Cost avoidance for Emergency Department visits

	No. of Emergency Visits	No. of Hospital Admission
Pre- I	5	1
Post- I	1	1
<b>Saved</b>	<b>4</b>	<b>0</b>
<b>Cost Saved</b>	<b>\$484 (\$121 per visit)</b>	<i>This cost excludes hospitalization charges</i>
	<b>Projected \$7,623 savings per year</b> (ref data in Figure 1)	

### Learning Points & Future plan

The experience gained from engaging ESTHERs highlighted the importance of inculcating fall management awareness and preventive measures to seniors. Engaging ESTHERs and their caregivers in fall management, and increasing their autonomy can significantly reduce healthcare costs and hospitalizations. The project team will advocate these enhanced interventions to a larger community including community partners and community nursing teams for a more successful falls prevention initiative in the community.