

## Implementing Nurse-Driven Mobility Protocol for Hospitalized Older Adults

Li F\*, Goh KS, Png GK, Yu X, Ang GC, Chew TH, Varman SD, Koh XH, Mohamed Jamil JB, Jismy J, Mohamed Ali RB, Zainal NAB, Mamalio MF, Nolos JY, Tresmanio MSP, Hamid Hamraoui FZB, Wang M, Mohamed Rafi RB, Slamet R, Stevenson E

\*fuyin\_li@cgh.com.sg



### Problem Statement

Functional decline in hospitalized older adults is a significant clinical problem. Despite its adverse outcomes, the problem of not mobilizing the older adult patients in clinical setting remains apparent. We have found that more than 50% of the older patients spent more than 10 hours lying in bed during daytime. The practice of promoting physical mobility is lacking and inconsistent among nurses working with older adults. The possible contributing factors to the problem are shown (Figure 1).

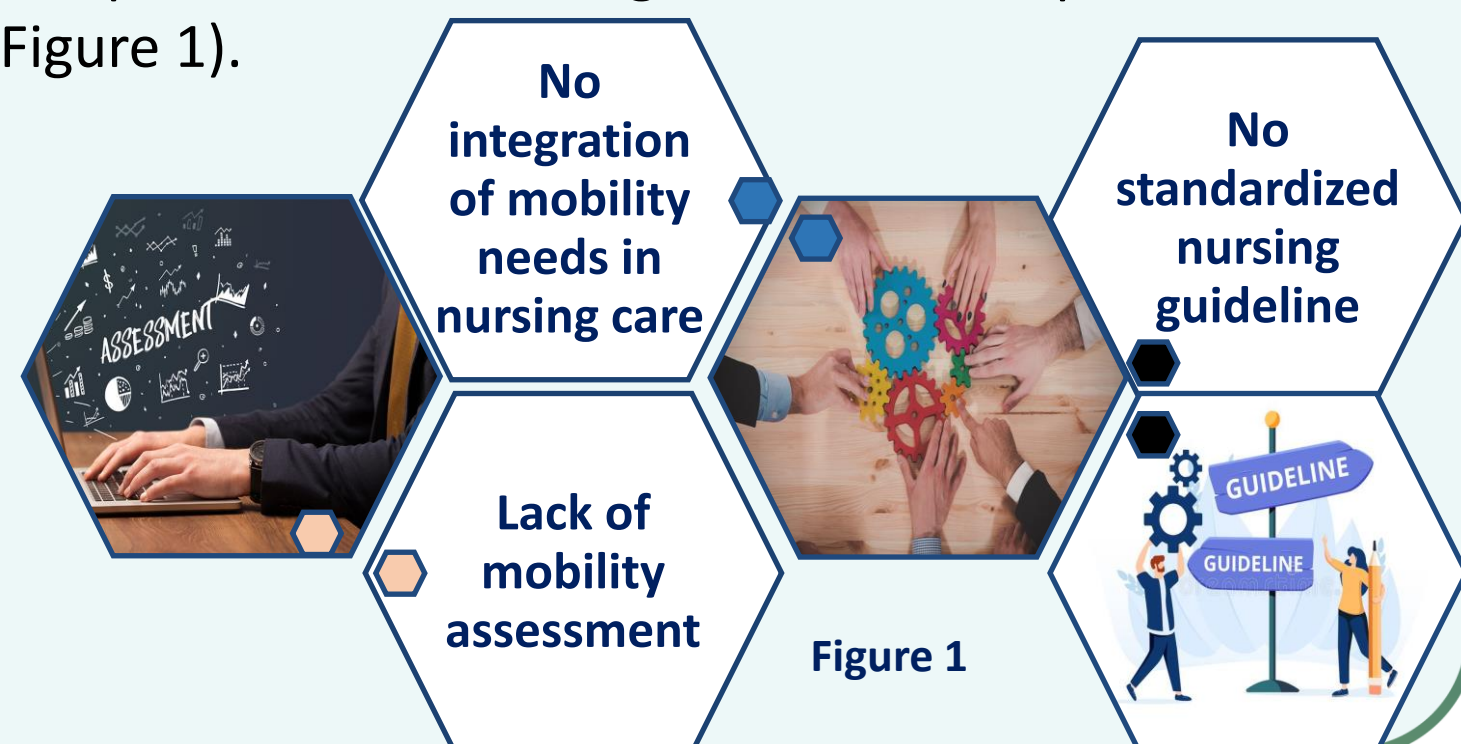


Figure 1

### Potential Solutions

Plan-Do-Study-Act (PDSA) methodology was used. There are several new solutions were tested and implemented. The mobility protocol included the following solutions:

#### The nurse-driven mobility protocol comprising the following five components

1	2	3	4	5
Introduction of JH-HLM scale (Figure 2) for patient's mobility assessment daily	Mobility goal setting at daily huddle aligned with mobility level	Documentation of JH-HLM score on the mobility chart twice daily	Implementation of out-of-bed activities thrice daily based on the identified JH-HLM mobility level	Indication of JH-HLM score and goal on the board at the head of patient's bed

#### Training Modules for End Users

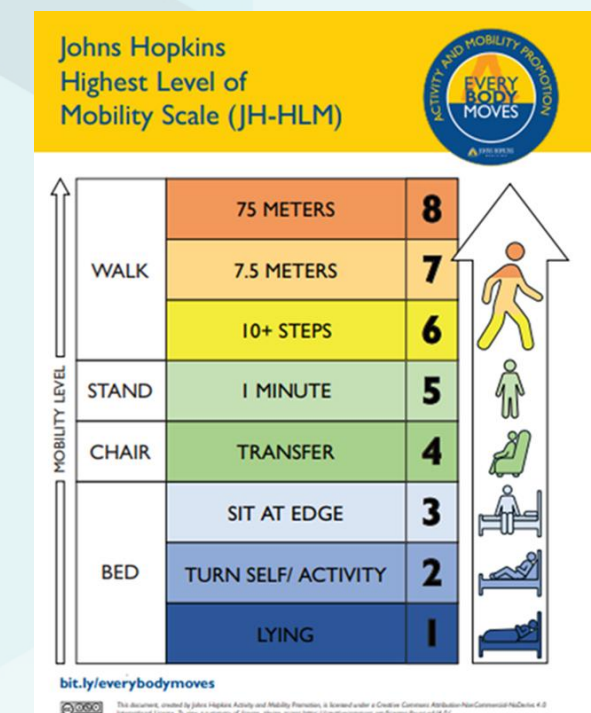
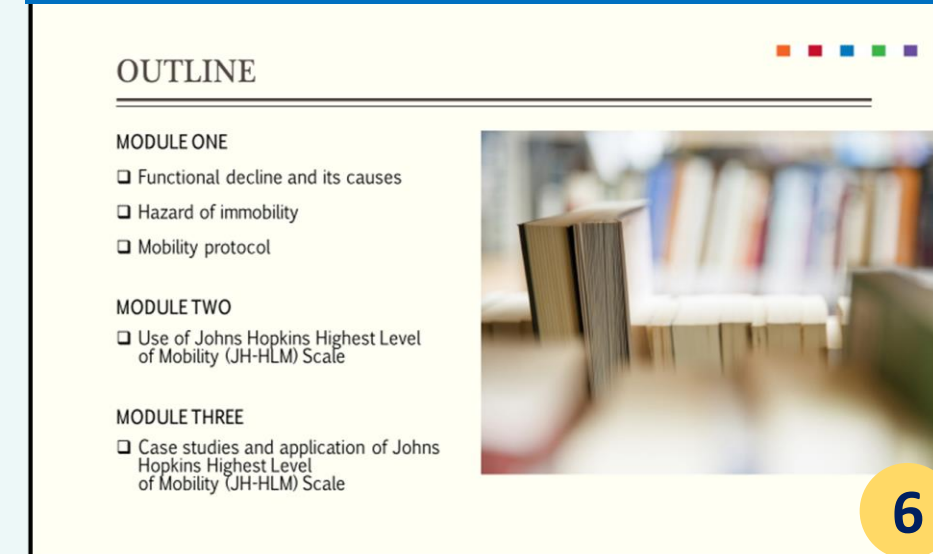


Figure 2: Johns Hopkins Highest Level of Mobility (JH-HLM) Scale

### Project Aim

The purpose of this project was to reduce immobility and prevent functional decline in hospitalized older adults with implementation of a nurse-driven mobility protocol in a geriatric unit. The project aims are to:

- 1 Increase the daily out of bed episodes to at least 3 times a day
- 2 Improve or maintain the mobility level for the hospitalized older adults
- 3 Reduce hospital length of stay (LOS)

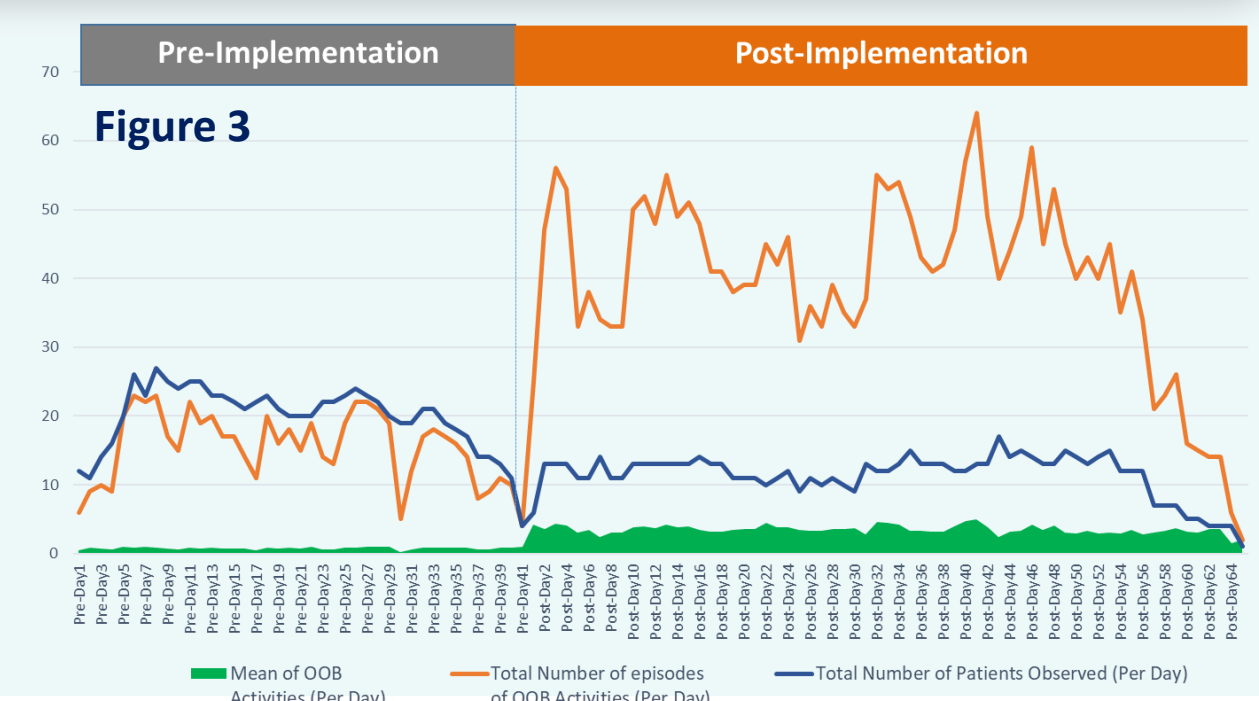
### Lessons Learnt

The project team was able to effectively implement mobility protocol with interdisciplinary collaboration by improving the out-of-bed episodes frequency, increasing mobility level and reducing LOS. Also, it has been proven that mobility protocol can be delivered within the daily work process. The use of mobility tool to standardize the quantification of mobility is important, which provides not only a common language among the healthcare team, but also to accurately track individual patient mobility level and its improvement during hospital stay.

Having 3 engagement sessions with the nurses to address the barriers to the project implementation were vital for the subsequent implementation. Conducting engagement session with healthcare team members was important to establish interdisciplinary collaboration and make the process of getting patients out of bed less during ward round or mealtime.

### Outcomes & Impacts

The mean out-of-bed episodes per patient day (Figure 3) was increased from 0.80 pre-implementation to 3.59 post implementation



There are statistical difference between the pre- and post-implementation group in term of mean out of bed episodes, JH-HLM score at discharge and ambulating level at discharge (Figure 4). The mean Hospital LOS was reduced from 15.67 days to 13.07 days.

Outcome	Pre-implementation (n=72)	Post-implementation (n=70)	B coefficient or odds ratio or incidence rate ratio (95% CI)	P value
Mean out-of-bed episodes per patient day, mean $\pm$ SD	0.80 $\pm$ 0.24	3.59 $\pm$ 1.34	2.80 (2.48 to 3.12)	<0.001
JH-HLM scale (1-8)				
Score at discharge, median (IQR)	6 (4-7)	7 (5-7)	2.00 (1.35 to 2.65)	<0.001
Ambulating ( $\geq 6$ ) at discharge, n (%)	37 (51.4)	50 (71.4)	19.97 (7.19 to 55.50)	<0.001
Hospital LOS in days, mean $\pm$ SD	15.67 $\pm$ 11.30	13.07 $\pm$ 7.18	0.83 (0.69 to 1.01)	0.069

Figure 4