

# Nurse-driven Early Mobility Protocol

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## Background & Introduction

- Early mobility protocol was originally implemented in 2019 in the medical ICU, but SARS-CoV 2 pandemic was a barrier for successful implementation.
- Early mobility has many beneficial outcomes for patients within the ICU including reduction in muscle atrophy and delirium, shorter length of stay, and improvement in quality of life (Alaparthi et al., 2020).
- Utilizing an early mobility protocol can positively impact the functional mobility of a critically ill patient (Schallom et al., 2020).
- Algorithms are an efficient way for nurses to determine if a critically ill patient can be mobilized (Drolet et al., 2013).

## Objectives

- Educate staff on benefits and importance of initiating early mobility in non-intubated, critical care patients.
- Implement nursing-driven protocol and exclusion criteria to guide nurses in mobilizing critically ill patients.
- Evaluate the effectiveness of an early mobility protocol by analyzing the Surgical ICU Optimal Mobilization Score (SOMS).

## PICOT

- Among critical care nurses, does education on a nurse-driven early mobility protocol impact the Surgical ICU Optimal Mobilization Score (SOMS) during a patient's length of stay within the intensive care unit (ICU)?

## Methods & Implementation

- Early Mobility Exclusion criteria (Drolet, 2013) revised by the intensivist was evaluated before mobilizing patients.
- Nurse-driven Mobility Algorithm (Drolet, 2013) was utilized as a guideline for progressively mobilizing patients.
- SOMS-numerical scale was used to quantify mobility of the patient to guide goal-directed therapy.

### Education

- Unit Based education during pre-shift huddle using Learning and Engagement board (LENS) for PowerPoint Presentation
- June 15, 2023 – June 21, 2023

### Implementation

- Laminated nurse-driven mobility protocol and exclusion criteria at all nursing stations
- Protocol placed on LENS information board in break room and addressed during all huddles
- Incentivizing nursing staff with candy

### Evaluation

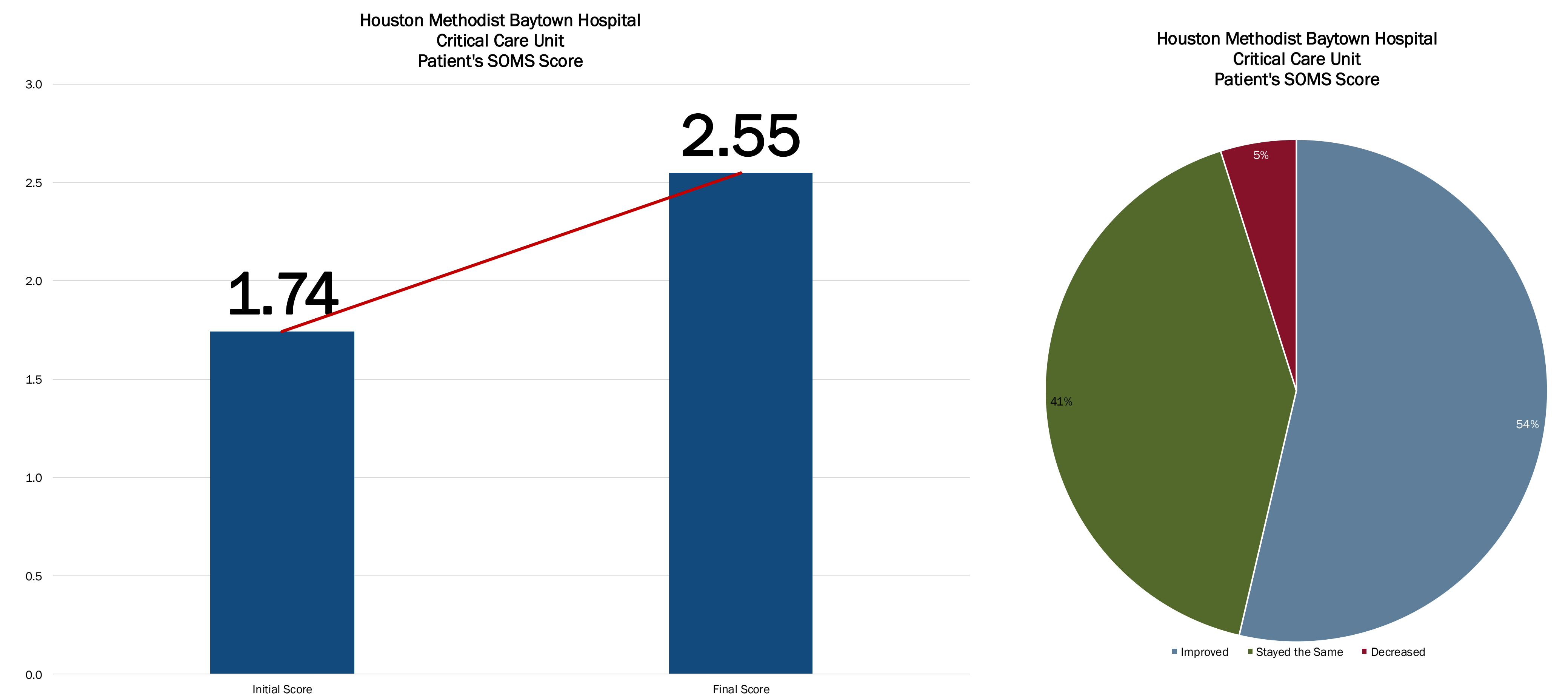
- 204 patients assessed, 108 included in the data analysis
- ICU admission and discharge dates, initial and final SOMS, ICU length of stay, and disposition
- June 22, 2023 – August 4, 2023

## SOMS Algorithm

	No mobilisation (0)	PROM (1)	Sitting (2)	Standing (3)	Ambulation (4)
Safety criteria for advancing mobilisation	1) Stable spine 2) No excessive predicted mortality in next 24 hours 3) ICP < 20 cm H2O				
		1) Follows 1-step commands 2) Volitional movement 3) No SCI, open lumbar drains, open EVD, femoral vein access for CVVH			
			1) ≥3/5 bilateral quadriceps strength 2) Sits with no support 3) No WB restrictions		
				1) Stands twice with minimal assist 2) Steps-in-place with minimal assist	
Attempt to maintain blood pressure and heart rate in clinically appropriate range during mobilisation: consider vasopressors, fluid volume, vasodilators, pain medication and other interventions as indicated. If unsuccessful in achieving hemodynamic stabilization, do not advance.					

Meyer et al., 2013; Schaller et al., 2016

## Results



The average initial SOMS was 1.74 at ICU admission, and the average final SOMS was 2.55 at ICU discharge. Also, 54% of critically ill patients had an improvement of at least 1 point in their SOMS during their length of stay in the ICU while 41% of patients had no change in the initial and final SOMS. Only 5% of patients had a decrease in their SOMS during their ICU length of stay. Educating critical care nurses on the protocol has led to improved patient outcomes and is impactful to a patient's overall clinical progression.

## Future Action

Continuing nursing education on the nurse-driven mobility protocol and exclusion criteria could improve patient SOMS and effectively progress patients along the mobility continuum. The goal is to continue to promote early mobility within the unit by encouraging nursing personnel to collaborate in engaging patients in goal setting. More support will be provided to nurses seeking to mobilize their patients. The ICU will acquire more recliners for patient use to encourage progressive mobility by providing a more comfortable sitting option. Education on the nurse-driven progressive mobility algorithm and exclusion criteria will be included in onboarding of new staff members. We will continue engagement of nursing personnel to sustain early mobilization for better patient outcomes.

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