

Quality Improvement Project Using Daily Mobility Goals to Increase Mobility in Hospitalized Hematologic Malignancies Patients

**Kaitlyn Smith MSN Candidate,
Tracy Douglas RN MSN BMT-CN, &
Kathy Mooney RN MSN BMT-CN**
Johns Hopkins School of Nursing
The Armstrong Institute
Johns Hopkins Hospital: the Sidney
Kimmel Comprehensive Cancer
Center



1 Background

- Mobility plays an important role in a patient's overall health and healing. Recent studies have shown that mobility and exercise can be particularly beneficial to BMT and Hematological malignancy patients during recovery. A study performed in 2014 found that aerobic exercise and strength training resulted in better physical functioning and symptom management along with an overall decrease in depression (Bergenthal). Dr. Tsuda looked at using a Wii Fit in an elderly population undergoing chemo therapy and found that depression levels were lower and it was a safe and effective way to mobilize patients (2016).
- Finally, a study conducted at the Anderson Cancer Center used a point based system to reward their patients for performing different types of physical activity. They found that the patients ranked their overall quality of life better and had better recovery time and symptom management (Brassil, 2014).
- Our study planned to look at the currently level of mobility in our patients at both admission and discharge and increase it by 20%, at discharge after the implementation of new methods to increase mobility.

2 Methods

Our study was split into three phases

Pre-Implementation

During this phase a process map developed (figure 1). Pre-data on the mobility and AM-PAC Scores for the patients on Weinberg 5C and 5D were collected from their medical charts. These scores were collected for patients at both admission and discharge and averages for each unit were calculated. 5 sets of rounds were then timed on both units and a baseline average time for how long was spent on each patient, the average time of rounds, and the amount of time spent discussing mobility. An intervention was developed in the form of an RN mobility presentation during rounds, educating staff, and standardizing mobility assessment.

Implementation

We educated the staff on the current mobility status and where we want to go. The nurses were told to document mobility at 5am and 5 pm to coincide with the delirium screening. AM-PAC scores are to be documented Monday, Wednesday, Friday. This was to insure the standardization of documentation. The RN's were educated to use the mobility presentation during rounds including:

- the patient recent mobility score
- mobility plan for the day
- barriers to the patient's mobility.

Post Implementation

Post data on the mobility and AM-PAC scores for the units at both admission and discharge. The averages were recalculated and compared to the originals. Rounds were timed again and compared to the original data. Nurses were interviewed on how they felt the new presentation fit into their workflow.

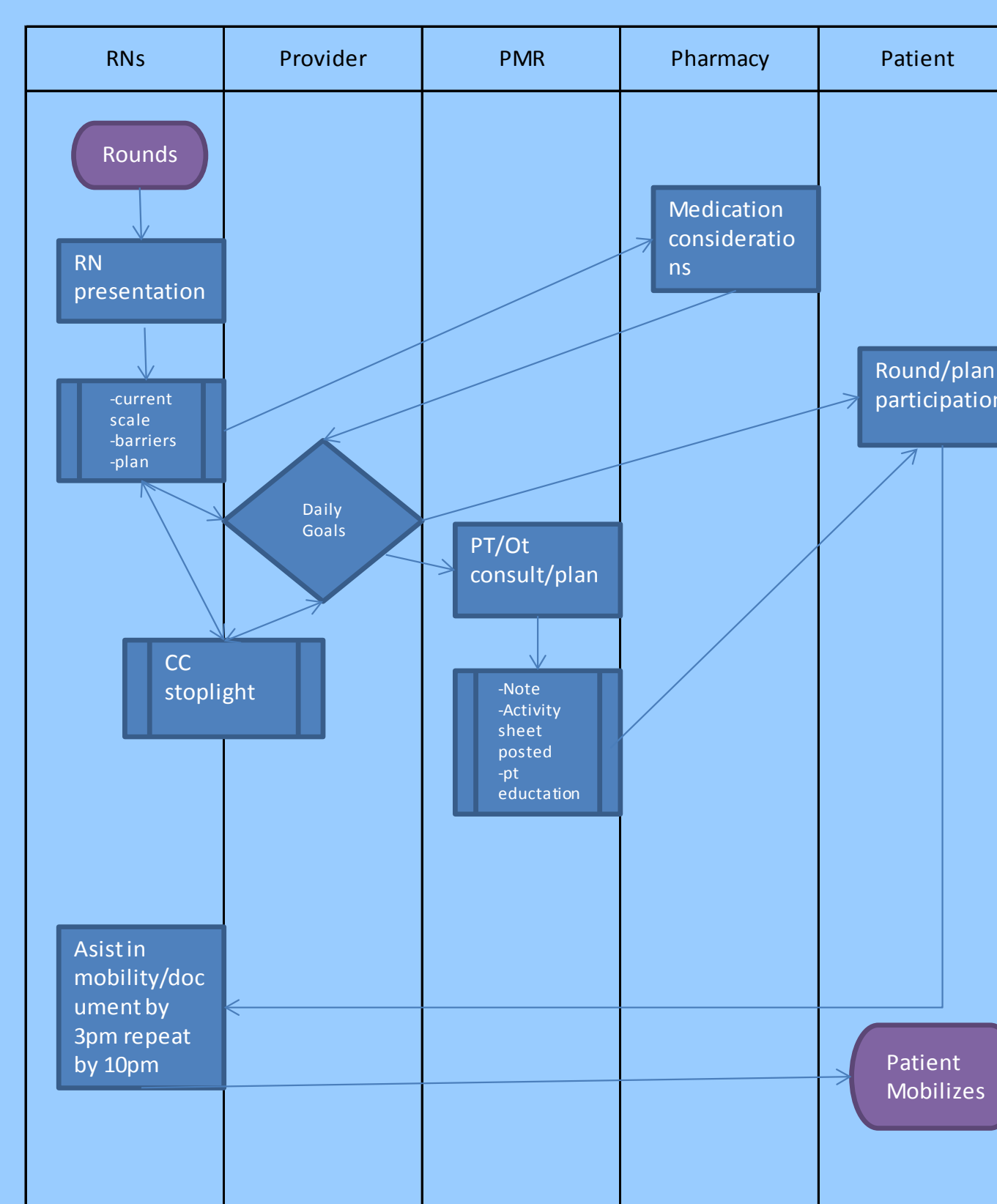


Figure 1. Process map for our study created by Tracy Douglas (2016).

3 Results

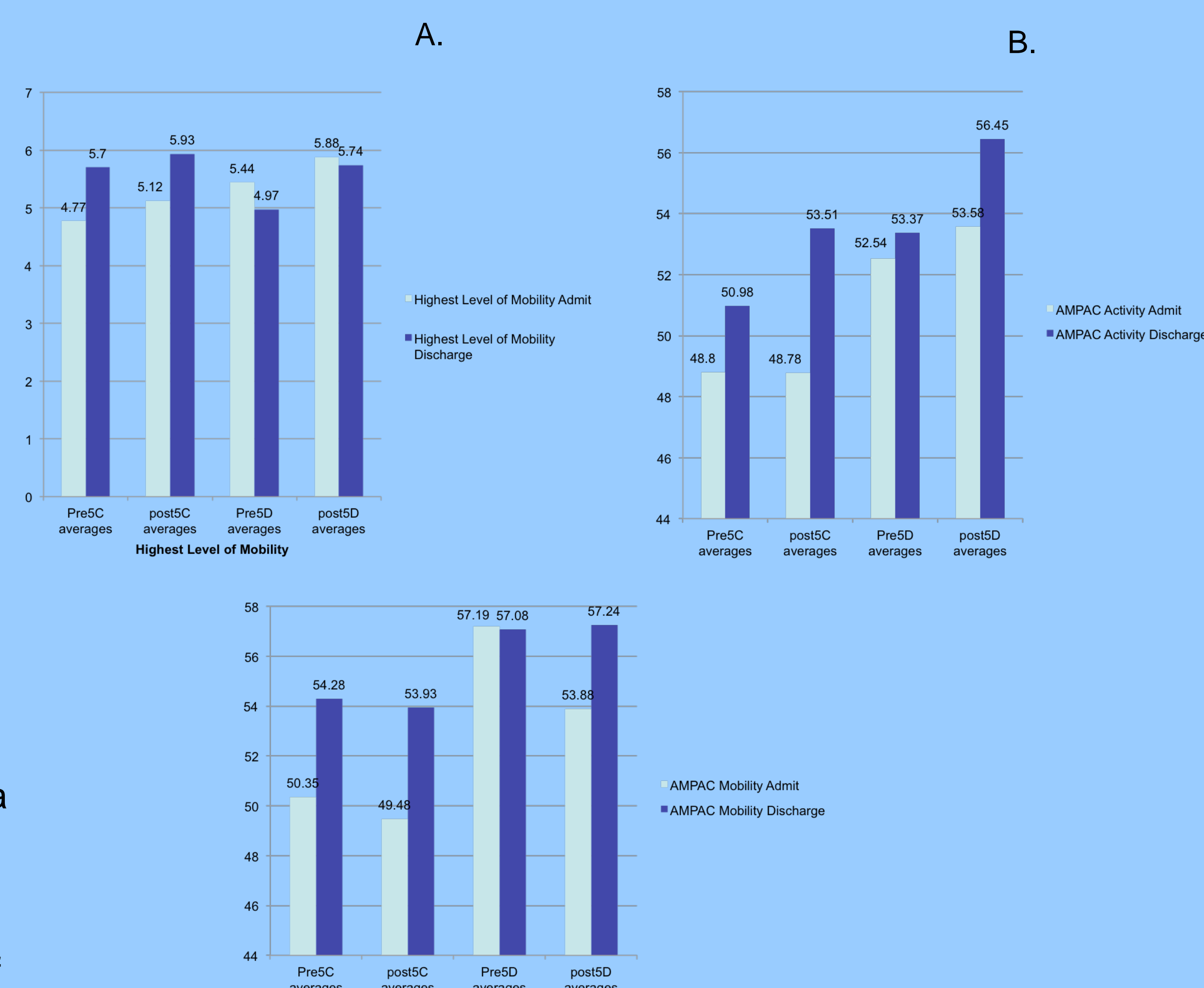


Figure 2. Graphs of Pre and Post Implementation Data. A) Mobility Scores, B) AM-PAC Activity, and C) AM-PAC Mobility

Weinberg 5C

- Mobility scores increased 5.7 to 5.93.
- AM-PAC Activity Score increased at discharge from 50.98 to 53.51
- AM-PAC Mobility Scores increased at discharge 49.48 to 53.93

Weinberg 5D

- Mobility scores increased at discharge 4.97 to 5.74.
- AM-PAC Activity increased at discharge from 53.37 to 56.45.
- AM-PAC Mobility score remained relatively the same at discharge around 57.

Orange Team

Pre Implementation

- N=14
- Average Round Time: 6 minutes 12 seconds
- Mobility discussed: 10 seconds

Post Implementation

- N=10
- Average Round Time: 6 Minutes 27 seconds
- Mobility discussed: 4 seconds

Blue Team

Pre Implementation

- N=10
- Average Round Time: 8 minutes 52 seconds
- Mobility discussed: 3 seconds

Post Implementation

- N=10
- Average Round Time: 9 minutes 51 seconds
- Mobility discussed: 1 minute

4 Conclusions

It is not new information that mobility plays a role in the recovery of patients, but only recently did its effects on patients with hematologic malignancies become a topic of interests. Increased mobility has been seen to improve symptom management and overall recovery time. Other show lower rates of depression amongst long-term inpatients and patient reports of overall quality of life. With all these benefits in mind we began our own study in order to improve the mobility of our patients. While the time spent discussing mobility at rounds did not increase. The data showed an increase in mobility amongst both of our units after implementation. Overall, the project was successful, but after speaking to the nurses we found that there are improvements to be made in our methods in order to have the project fit more seamlessly into their workflow.

5 Future Directions

Data is still being collected on the compliance of documentation in this study. We plan to also perform audits to observe whether or not the nurses are still using the mobility presentation during rounds and if not interview them on what they feel will work better. The Armstrong Institute suggested looking into how falls compare to and interact with a patient mobility score and if these scores can be used to assess a patient's fall risk. Research will also need to be continued on how to increase the mobility of the ICU and IMC patients treated on these units. These interventions were not effective enough due to their extreme deconditioning.

6 References

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- Bergenthal, N., Will, A., Streckmann, F., Wolkewitz, K., Monsef, I., & Engert, A. (2014). Aerobic physical exercise for adult patients with haematological malignancies. *Cochrane Haematologic Malignancies Group*.
- Tsuda, K. (2016). A Feasibility Study of Virtual Reality Exercise in Elderly Patients with Hematologic Malignancies Receiving Chemotherapy. *Internal Medicine: the Japanese Society of Internal Medicine*, 55(4), 347-352.

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