

A nurse led mobility project for in patients on a hematological malignancies unit

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1 Background

Exercise is helpful and low risk before, during, and after cancer treatments across all cancer types and is beneficial to manage treatment side effects and improve functional outcomes (Stout et al., 2013). Data from multiple randomized controlled clinical trials with a mobility or exercise intervention on inpatient hematologic malignancies units have demonstrated decreased fatigue, improved quality of life, and decreased length of stay, all in the absence of adverse outcomes (Hacker et al., 2017; Furzer et al., 2016; Kuehl et al., 2015; Schuler et al., 2016; Jacobsen et al., 2014).

2 Methods

This inpatient mobility quality improvement program seeks to improve patients' mobility and functional status outcomes by changing the unit's environment, educating the nursing staff about mobility and self-efficacy, and improving patient education about mobility. Environmental changes to the unit include the addition of a motivational lap board, walkers provided in every patient room, the addition of therabands and pedometers to the unit gym, and visual promotion of walking and exercise activities. To gauge staff knowledge and attitude regarding patient mobility, surveys were administered both pre-and post-intervention. Further, weekly audits were performed to assess the use of the environmental changes, documentation of patient education, documentation of mobility using JH-HLM and AM-PAC ISMF, documentation of mobility goals, and percentage of mobility goal achievement using the Johns Hopkins Mobility Goal Calculator.

3 Results

The final analysis demonstrated that the mean age pre and post implementation averaged 54 years, with an approximately equal distribution among sex of about 60% males and 40% females. The mean LOS of stay decreased from pre to post implementation of the intervention from 9.25 days to 7.63 days, a difference of 1.62 days. However, a t-test analysis shows that despite the decrease in the length of stay between the two study periods, the findings were not considered statistically significant ($p > 0.05$, 0.515).

Johns Hopkins Activity and Mobility Promotion (AMP)	
DAILY MOBILITY SCORE (GROSS HOPKINS HIGHEST LEVEL OF MOBILITY)	
8	WALK 250 FEET OR MORE
7	WALK 25 FEET OR MORE
6	WALK 30 STEPS OR MORE
5	STANDING (1 OR MORE MINUTES)
4	M MOVE TO CHAIR/COMMUNE
3	SIT AT EDGE OF BED
2	BED ACTIVITIES / DEPENDENT TRANSFER
1	LYING IN BED

Verbal Encouragement, Goal Setting, Role Modeling, Feedback after Mobility



4 Conclusions

In line with existing literature, the mobility intervention was associated with a decrease in hospital length of stay, although the findings were not considered statistically significant. However, the goal of increasing the participants' AMPAC/HLM goal upon discharge was achieved, suggesting that continued efforts to support utilization of mobility equipment, encouragement to use visual lap boards, and otherwise promote mobility may lead to more statistically significant outcomes.

5 Future Directions

To strengthen future outcomes, the number of data points and/or number of patients assessed may need to be increased to better capture the impact of the interventions. Further, the researchers propose that strengthening end-user compliance with the intervention tools may also help the outcomes trend in a more positive direction. Finally, because this project took place over the winter holidays, it may be pertinent to repeat the intervention so that the effect can be assessed independently of any potential push to return patients home for the holiday.

6 References

- Furzer, B. J., Ackland, T. R., Wallman, K. E., Petterson, A. S., Gordon, S. M., Wright, K. E., et al. (2016). A randomised controlled trial comparing the effects of a 12-week supervised exercise versus usual care on outcomes in haematological cancer patients. *Supportive Care in Cancer: Official Journal of the Multinational Association of Supportive Care in Cancer*, 24(4), 1697-1707.
- Hacker E., Collins E., Park C., Peters T., Patel P., Rondelli D. (2017). Strength Training to Enhance Early Recovery after Hematopoietic Stem Cell Transplantation. *Biology of Blood and Marrow Transplant*. 23(4):659-69. doi: 10.1016/j.bbmt.2016.12.637.
- Jacobsen, P. B., Le-Rademacher, J., Jim, H., Syrjala, K., Wingard, J. R., Logan, B., et al. (2014). Exercise and stress management training prior to hematopoietic cell transplantation: Blood and marrow transplant clinical trials network (bmt cttn) 0902. *Biology of Blood and Marrow Transplantation: Journal of the American Society for Blood and Marrow Transplantation*, 20(10), 1530-1536.
- Kuehl, R., Scharhag-Rosenberger, F., Schommer, K., Schmidt, M. E., Dreger, P., Huber, G., et al. (2015). Exercise intensity classification in cancer patients undergoing allogeneic HCT. *Medicine and Science in Sports and Exercise*, 47(5), 889-895.
- Schuler, M. K., Hornemann, B., Pawandenat, C., Kramer, M., Hentschel, L., Beck, H., et al. (2016). Feasibility of an exercise programme in elderly patients undergoing allogeneic stem cell transplantation - a pilot study. *European Journal of Cancer Care*, 25(5), 839-848.

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