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# Barriers to Early Patient Mobilization Among Acute Care Nurses, Occupational Therapists, and Physical Therapists



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## Background and Purpose

- Early mobilization of patients in hospital settings is associated with shorter recovery time and improved independence<sup>1-3</sup>
- Despite important benefits, many barriers to patient mobilization may prevent consistent early mobilization<sup>3-5</sup>
- Interventions to support early mobilization require an in-depth understanding of perceived barriers from the perspective of members of the interdisciplinary hospital team; to date, no multi-site studies have described barriers to early patient mobilization among acute care therapy and nursing staff
- This multi-site study aimed to describe and compare perceived barriers to early patient mobilization among acute care registered nurses (RNs), nurse assistants (NAs), occupational therapists (OTs), and physical therapists (PTs)

## Methods

- A total of 568 participants from 8 hospitals of varying sizes in the Inland Northwest completed a survey: 387 RNs, 110 NAs, 40 OTs, and 31 PTs
- RNs and NAs indicated their primary specialty as float pool, medical, surgical, or telemetry
- Participants completed the Patient Mobilization: Attitudes and Beliefs Survey (PMABS),<sup>6</sup> which consists of 25 scored items with a maximum total score of 100 points possible
- Each item belongs to 1 of 3 subscales: Knowledge, Attitude, or Behaviors related to patient mobilization; each subscale contains 3, 9, and 13 scored items, respectively<sup>6</sup> (Figure 1)
- Higher PMABS scores represent greater perceived mobility barriers

|   | Strongly Agree        | Agree                 | Neutral               | Disagree              | Strongly Disagree     |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| My inpatients are too sick to be mobilized.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have received training on how to safely mobilize my inpatients.                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Increasing mobilization of my inpatients will be harmful to them (i.e. falls, IV line removal, etc.). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**Figure 1. The first three PMABS questions are shown: the first and third questions belong to the attitude subscale and the second question belongs to the knowledge subscale.**

- Descriptive statistics and Kruskal-Wallis tests with pairwise comparisons and Bonferroni correction were calculated using SPSS v27

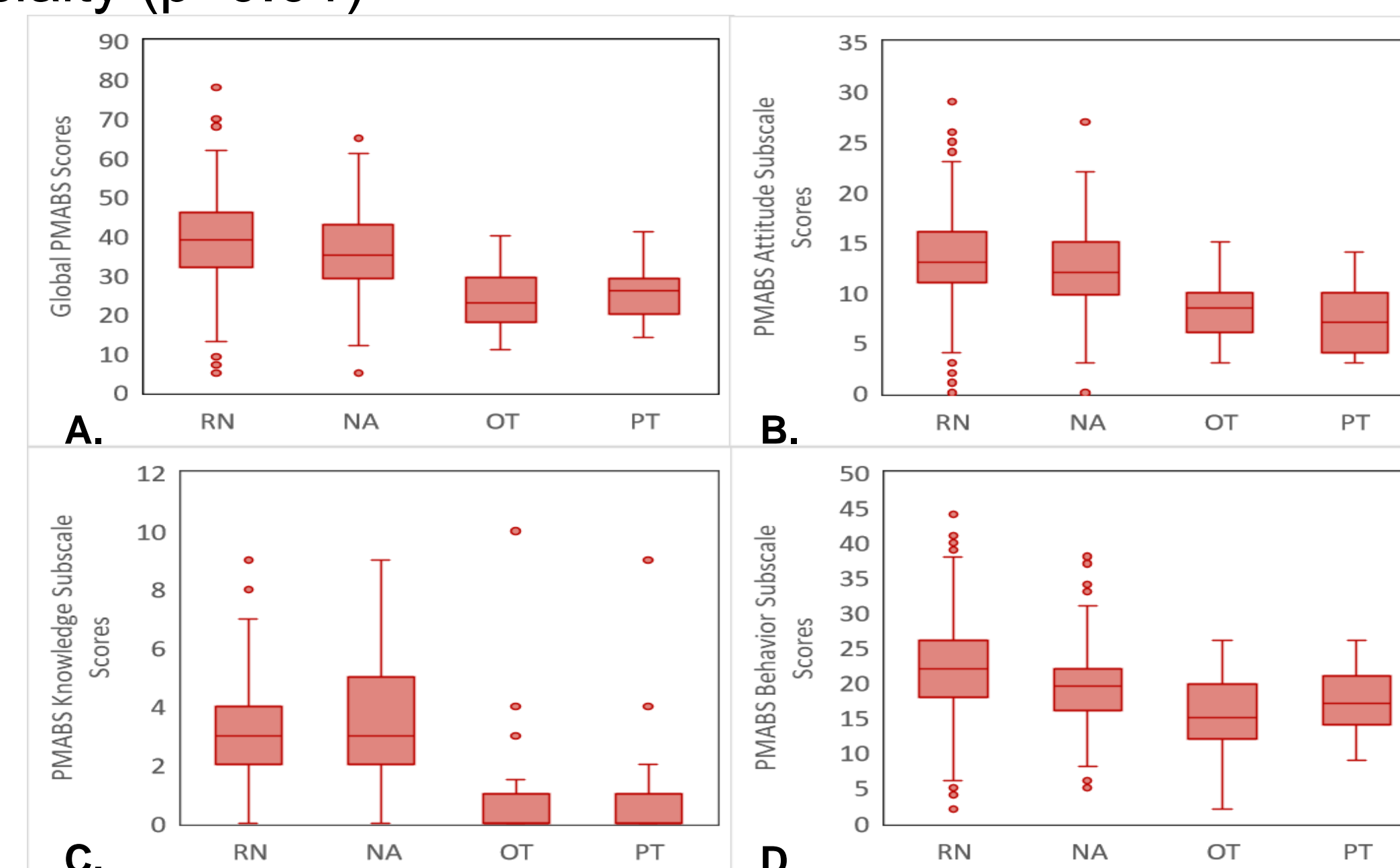
## Results

**Table: Mean PMABS Scores Between Clinicians**

| Score Category      | PMABS Scores (Mean ± SD) |              |              |              |
|---------------------|--------------------------|--------------|--------------|--------------|
|                     | RNs (n=387)              | NAs (n=110)  | OTs (n=40)   | PTs (n=31)   |
| Global Score*       | 38.74 ± 0.55             | 35.93 ± 1.05 | 24.15 ± 1.10 | 25.26 ± 1.34 |
| Attitude Subscale*  | 13.29 ± 0.23             | 12.50 ± 0.42 | 8.00 ± 0.47  | 7.26 ± 0.56  |
| Knowledge Subscale* | 3.09 ± 0.84              | 3.42 ± 0.20  | 0.73 ± 0.28  | 0.90 ± 0.33  |
| Behavior Subscale*  | 22.36 ± 0.32             | 20.01 ± 0.63 | 15.43 ± 0.89 | 17.10 ± 0.77 |

\* Indicates overall significant difference between clinicians ( $p < 0.01$ ) after Bonferroni correction

- There were significant differences between clinicians in PMABS global scores and all three subscales (Table)
- Scores differed significantly between clinicians for 24 of the 25 PMABS scored items ( $p < 0.05$  for all), with greatest response differences on items assessing perspectives on mobilizing patients at least once per shift, understanding which patients are appropriate to refer to PT and OT, and documenting patient functional status
- There were no significant differences in global or subscale scores between PTs and OTs ( $p > 0.99$  for all; Figure 2)
- RNs and NAs had significantly higher global, attitude, and behavior scores than PTs and OTs ( $p < 0.01$  for all; Table, Figure 2)
- Pairwise comparisons revealed a trend toward significant differences in global scores ( $p = 0.07$ ), and significant differences in behavior subscale scores ( $p < 0.01$ ) between RNs and NAs (Figure 2)
- There were significant differences in global and all three PMABS subscale scores between nursing specialties ( $p < 0.01$ ); pairwise comparisons revealed that the surgical specialty reported lower global, attitude, and behavior PMABS scores than every other specialty ( $p \leq 0.01$ )



**Figure 2. Global (A), attitude subscale (B), knowledge subscale (C), and behavior subscale (D) PMABS score distribution for each clinician role. Median, range, quartiles, and outliers are given by the central line, vertical bars, box, and dots, respectively.**

## Discussion

- Findings suggest that perceived barriers to early patient mobilization exist among both nursing and therapy acute care clinicians, consistent with previous studies<sup>5</sup>
- Results indicate greater perceived mobility barriers among RNs and NAs than OTs and PTs
- There were no differences in perceived barriers between OTs and PTs; however, NAs perceived less barriers than RNs, in-line with the common practice of NAs, whose primary role often entails assisting patients with bed mobility and mobilization for toileting management tasks and other activities of daily living
- Additionally, perceived mobility barriers among nurses differed between nursing specialties; of the 4 specialties, the surgical specialty had the least amount of mobility barriers, consistent with the complex patient management and early mobilization physician orders within surgical departments
- Acute care nurses spend the greatest relative time with patients; as such, nurses are integral to early patient mobility<sup>7</sup>
- Our findings suggest a need for barrier reduction, particularly amongst nurses, to optimize patient outcomes<sup>1-3</sup>
- Importantly, findings support collaboration between acute care therapists and nurses, which may increase patient mobilization efforts employed by acute care clinicians involved in direct patient care, and may reduce inappropriate physical therapy consult<sup>4,8</sup>
- Further studies are needed to identify and evaluate appropriate interventions to reduce clinicians' perceived mobility barriers to early patient mobilization in the acute care setting, and assess their impact on patient outcomes

## References

1. Miranda Rocha AR, Martinez BP, Maldaner da Silva VZ, Forgiarini Junior LA. Early mobilization: why, what for and how? *Med Intensiva*. 2017;41(7):429-436.
2. Raurell-Torredà M, Regaira-Martínez E, Planas-Pascual B, et al. Early mobilisation algorithm for the critical patient. Expert recommendations. *Enferm Intensiva*. 2021;32(3):153-163.
3. Hashem MD, Nelliot A, Needham DM. Early mobilization and rehabilitation in the ICU: moving back to the future. *Respir Care*. 2016;61(7):971-979.
4. Jones RA, Merkle S, Ruvalcaba L, Ashton P, Bailey C, Lopez M. Nurse-led mobility program: driving a culture of early mobilization in medical-surgical nursing. *J Nurs Care Qual*. 2020;35(1):20-26.
5. Alaparthy GK, Gatty A, Samuel SR, Amaravadi SK. Effectiveness, safety, and barriers to early mobilization in the intensive care unit. *Crit Care Res Pract*. 2020;26:2020.
6. Goodson CM, Friedman LA, Manthey E, et al. Perceived barriers to mobility in a medical ICU: the patient mobilization attitudes & beliefs survey for the ICU. *J Intensive Care Med*. 2020;35(10):1026-1031.
7. Butler R, Monsalve M, Thomas GW, et al. Estimating time physicians and other health care workers spend with patients in an intensive care unit using a sensor network. *Am J Med*. 2018;131(8):972.
8. Harris CL, Shahid S. Physical therapy-driven quality improvement to promote early mobility in the intensive care unit. *Baylor Scott & White Health*. 2017;27(3):203-207.