

Multidisciplinary Approach to Physical Mobility in Intensive Care.

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Multidisciplinary Approach to Physical Mobility in Intensive Care

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Background / Introduction

- **Prolonged immobility related to critical illness requiring bedrest can delay ventilator weaning, and increase length of stay (LOS) in the Intensive Care Unit (ICU)**
 - After 1 week of bedrest, muscle strength can decrease up to 20%, with an additional 20% occurring each week after.
 - EBP supports progressive mobilization in ICU patients may result in shorter LOS, shorter duration of mechanical ventilation, prevent pressure ulcers, and decrease risk of delirium, and other adverse effects.
- **Current Practice** – MICU/SICU and 2KSouth contain 44 beds. There are PT consults on 70% of these patients which is approximately 30.8 patients. PT will then observe each of the 30.8 patients, and discuss with the RN if the patient is appropriate for PT. However, only approximately 15-18 of the 30.8 patients are appropriate and medically stable for physical mobility. Thus, this leaves a considerable amount of patients who are unseen by PT and PT time may not be spent with the patients who are ready for mobility.
- **Plan-** Utilize a multidisciplinary team of the PT and the RN to determine patients who are ready for mobility by implementing a mobility assessment specific to patients in the ICU. Objective is to implement two mobility scales specific to the ICU, teach RN's how to use each scale and gather data regarding the RNs response to each scale to determine which scale to use in the future.

Methods

- A search of the literature was performed to identify validated functional assessment tools
 - The search resulted in identifying six tools specific to patients in the Intensive Care setting
 - The project team chose two tools to evaluate
- 10 night shift nurses on MICU/SICU and 2KSouth (44 beds), used the (FSS-ICU), and the (Perme) for one patients.
- Each nurse completed a seven question response survey, using a 5 point Likert scale from strongly disagree to strongly agree. The survey discussed the following topics:
 - ease of use
 - time spent completing the survey
 - is the nurse able to use the scale in a daily routine
 - is the nurse willing to use the scale in a daily routine
 - clearness of the scales directions
 - if any data can be used from the nurses Epic flowsheets
 - RN felt the scale was helpful in identifying patients ready for mobility.

PICO Question

Do Registered Nurses in the Intensive Care Unit, determine the Functional Status Score for the Intensive Care Unit (FSS-ICU) compared to the Perme Intensive Care Unit Mobility Score, is useful to identify patients who are appropriate for physical mobility?

Evidence

- **Perme Intensive Care Unity Mobility Score** –Score range from 0 to 32, from 15 items in 7 categories.
 - higher score indicates fewer barriers to mobility
 - lower scale indicates more barriers to mobility
 - Preliminary data suggests validity of the tool, and reliability is high agreement between raters for all items median IQR percentage 94.29%
- **Functional Status Score for the Intensive Care Unit (FSS-ICU)-**
 - Score range from 0 (indicates dependent) to 35 (indicates independence)
 - Cumulative score improved from a median IQR from 9 on admission, to 14 at discharge
- **Nurse driven education on the risks of immobilization may increase awareness, and increase the nurses motivation to mobilize patients in the ICU setting**
 - After an educational intervention for nurses using a pre- and post-test survey, on a 14 bed Medical Surgical Intensive Care Unit, regarding the importance of early mobilization, saw a significant increase in early mobilization (P=0.04), and dangling (P=0.01)

Survey Results:

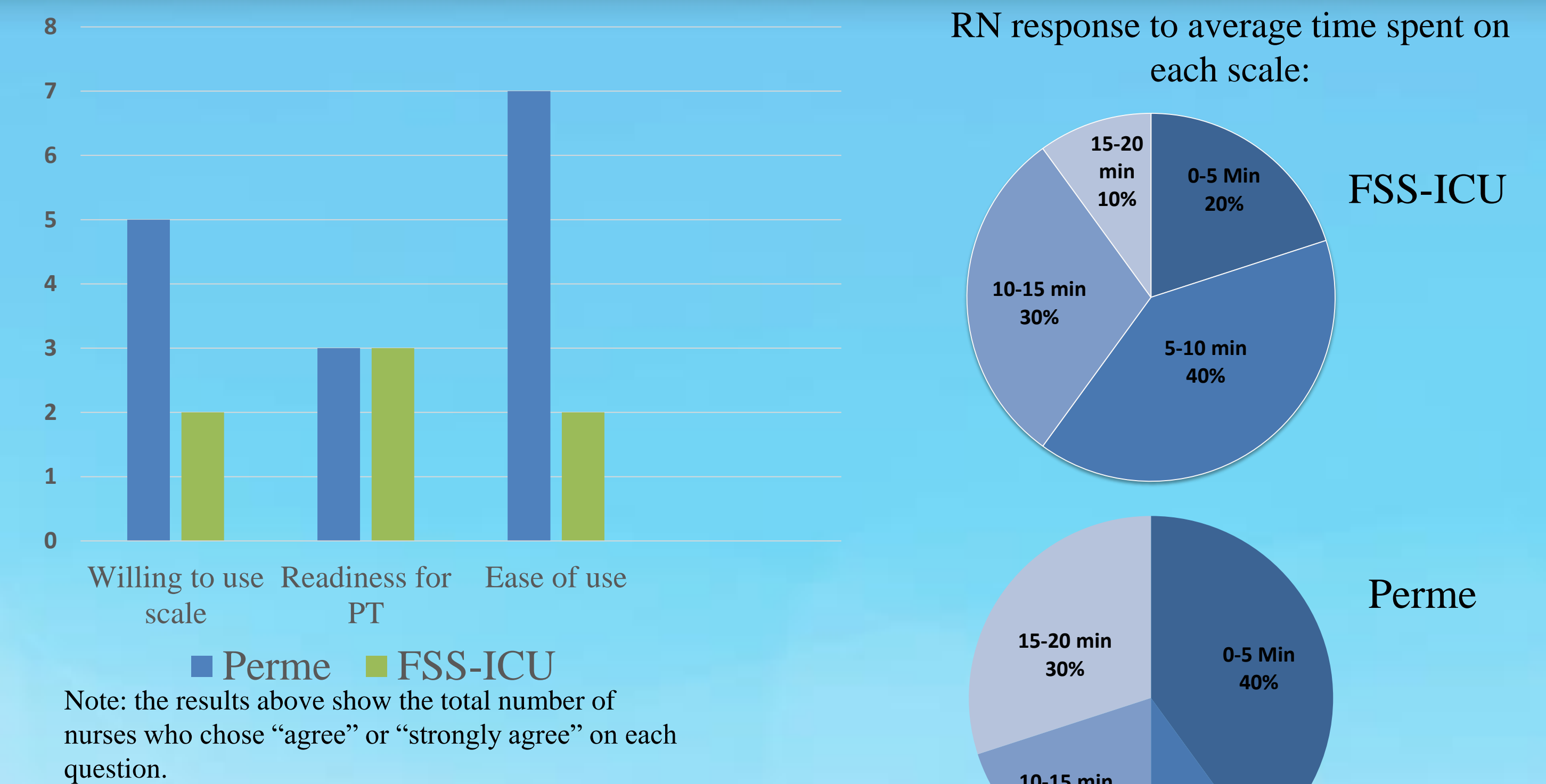
Survey results for the Perme:

| | Strongly disagree | Disagree | Neutral | Agree | Strongly Agree |
|---------------------------------------------------------|-------------------|----------|---------|-------|----------------|
| Directions clear and easy to understand? | | 2 | | 8 | |
| Scale easy to use? | | 1 | 1 | 7 | 1 |
| Pull data from flowsheet? | | | 2 | 8 | |
| Feel scale help identify a patient who is ready for PT? | | 2 | 5 | 3 | |
| Be able Fit into daily routine? | | 1 | 3 | 6 | |
| Be willing to fit into routine? | | | 5 | 5 | |

Survey results for the FSS-ICU:

| | Strongly disagree | Disagree | Neutral | Agree | Strongly Agree |
|---------------------------------------------------------|-------------------|----------|---------|-------|----------------|
| Directions clear and easy to understand? | | 3 | 3 | 4 | |
| Scale easy to use? | | 3 | 5 | 2 | |
| Pull data from flowsheet? | | 2 | 2 | 6 | |
| Feel scale help identify a patient who is ready for PT? | | 5 | 2 | 3 | |
| Be able Fit into daily routine? | 1 | 4 | 2 | 3 | |
| Be willing to fit into routine? | 1 | 4 | 3 | 2 | |

Note: Each response is out of 10 nurses



Outcome

Based on the survey results, the Registered Nurses participating determined the Perme Intensive Care Unity Mobility Score was easier to use, quicker to use, were more willing to use, and found it more helpful in identifying patients appropriate for physical therapy.

Conclusions

- Suggested next steps
 - Study reflects a small sample size, consider repeating study with a larger sample size
 - Additional study to determine if the use of the mobility scale initiated by the RN does use PT time effectively
 - Determine at what frequency the Perme score should be used by the RN (on admission or daily)
 - Implement education for all Registered Nurses on MICU/SICU and 2KS on the use of the Perme Intensive Care Unit Mobility Score

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