

An Oncology Acuity Tool to Promote Equitable Nurse-Patient Assignments on an Inpatient Leukemia Unit

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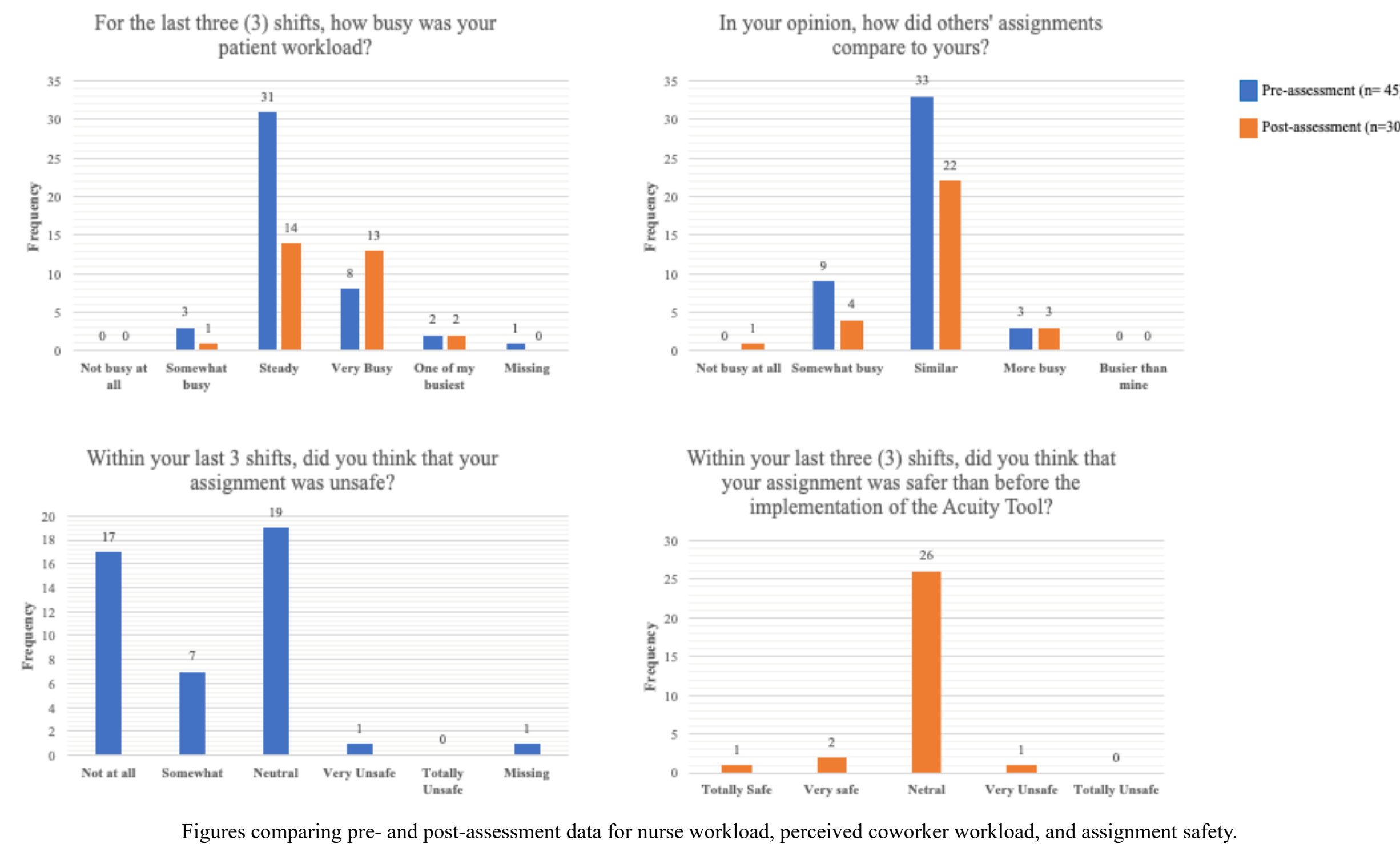
Introduction

The daily workload of a leukemia nurse is highly task oriented and includes multiple mandatory double-checks resulting in a perceived imbalance in the nursing assignments among team members. Current assignments do not reflect the acuity of the patient or the skill set of the team which may lead to patient harm and lack of staff satisfaction. The Oncology Acuity Tool (OAT) has demonstrated high reliability and validity for measuring prospective acuity in the adult oncology inpatient population allowing nurses to predict the acuity for the following shift (Brennan et al., 2012). Using patient acuity to guide nursing assignments has critical implications for providing safe, effective, and efficient care (Brennan et al., 2012).

The goal of this project is to develop an acuity tool specific to leukemia patients in order to improve patient outcomes, patient safety, and staff satisfaction. This phase of the project was focused on the development and implementation of a standardized leukemia acuity tool.

Methods

Previously, time and motion studies were used to quantify nursing workload for leukemia specific nursing tasks. Nurses completed a pre-assessment survey to measure their perceptions on their most recent nursing assignments based on safety and perceived workload. Nurses identified tasks that made one nursing assignment busier than another. Charge nurses gave feedback on factors taken into account when making an assignment and the importance of continuity of care and proximity of rooms when making an assignment. A leukemia acuity tool was designed based on this feedback and the information gained from the time and motion studies. Nurses used the acuity tool to score tasks that were completed for their patients. Charge nurses utilized this data to make nursing assignments. Nurses and charge nurses took a post-assessment survey to measure their perceptions on their most recent nursing assignments based on safety and perceived workload with use of the acuity tool.



Results

A t-test for differences between pre- and post-assessments of nurse workload showed a significant increase ($p = .036$) in workload after implementation of the nursing acuity tool (mean pre-assessment = 3.20, mean post-assessment = 3.52). No difference was found in perceived coworker workload after the implementation of the nursing acuity tool. To further evaluate the nursing acuity tool, we could compute the inter-rater reliability.

In the future, we would alter the study design so we could link the nurses pre- and post-assessment scores to improve the power of the study. Additionally, we would use a gold standard acuity measure to establish the criterion validity of the acuity tool. This would allow us to determine which factors are most predictive of higher acuity patients.

Conclusions

Further modifications must be made to streamline the acuity tool. Currently the acuity tool includes 78 items. Data from the time and motion studies, staff input, and completed acuity tools should be analyzed to determine the most important items that affect nurse workload. The updated acuity tool should include a maximum of 20 items determined to be the most predictive of nurse workload.

After finalizing the leukemia acuity tool, the team will advocate for its electronic development. Finally, the acuity tool should be re-evaluated for use across all inpatient oncology units.

Acknowledgements

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References

Brennan, C. W., Daly, B. J., Dawson, N. V., Higgins, P. A., Jones, K. R., Madigan, E. & Van Der Meulen, J. (2012). The oncology acuity tool: A reliable, valid method for measuring patient acuity for nurse assignment decisions. *Journal of Nursing Measurement*, 20(3), 155-85. doi:10.1891/1061-3749.20.3.155



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