Improving the Nurse Staffing Experience and Resource Allocation in Practice

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INTRODUCTION

A literature review identified an evidence-based approach to use existing department-specific nurse-to-patient ratios and a nurse intensity (workload) measure can improve transparency and resource allocation (Al-Dweik et al., 2020; Griffiths et al., 2020; Ivziku et al., 2022; & Meyer et al., 2020). Restoration of health and patient experience during hospitalization can be suboptimal when nurse staffing levels don't meet the workload.

Problem
During focused rounds with the UCHealth team, the opportunity to improve the nurse voice in their shift assignments was identified.

Team Members
- Kennedy Garcia, RN, BSN, Clinical Nurse Lead
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- Katelynn (Katie) Ringenberg, RN, BSN, Assistant Nurse Manager
- Kari Johansen, MHA, BSN, RN CEN, Manager Acute Care/MSPCU
- Noreen Bernard, EdD, RN, NEA-BC, FAAN, CNO, Longs Peak Hospital and Broomfield Hospital and Executive Sponsor

Aim
Leverage existing department-specific nurse-to-patient ratios in conjunction with a nursing intensity (workload) measure to improve both the experience nurses have relative to staffing resources and target resource allocation based on patient complexity.

Specifically;
To improve nurse perception of adequacy of staffing resources from a mean score of 3.30 to a mean score of 4.0, by 10/30/2022 among nurses practicing on the general medical unit, in a rural hospital.

METHODS

The Plan-Do-Study Act (PDSA) cycle is a tool to guide tests of change in practice. It is organized into four points of the improvement cycle:
- **Plan**: develop a plan to test a change
- **Do**: carry out the test
- **Study**: observe and capture learnings
- **Act**: determine next steps, typically described as adopt (as is), adapt, or abandon the test based on the outcomes observed.

Plan: Test the unit-based acuity tool in conjunction with unit standard ratios to inform shift assignments by the unit charge nurse.

Do: Nurses involved in the PDSA, will be asked to complete a short survey; reflecting on their overall experience of their prior three shifts worked.

Study: Nurses practicing on MSPCU, were asked to complete a short survey; reflecting on their overall experience of their prior three shifts worked pre and post implementation of a unit-based acuity tool. These data were unpaired and anonymous to ensure integrity of observed outcomes.

Department work environment characteristics were also collected, to include mid-night census, admissions, discharges, ill calls and emergency department visit volume to provide context in data interpretation.

Act: After review of data, team recommended adapting the tool to integrate additional information to be more inclusive. No further testing was indicated.

RESULTS

Q: Think about the last three shifts that you worked. Please indicate the degree to which you agree or disagree that the following situation occurred.
'My patient care assignment was appropriate, considering both the number of patients and the care they required'

Baseline
N = 23
Median = 4.00
Mean = 3.30
SD = 1.36

Post Implementation
N = 15
Median = 3.00
Mean = 3.13
SD = 1.06

Survey Response – Likert Scale 1 to 6

Table 1:
Demographic Characteristics of Participants, N = 33

Note1. Survey participants are registered nurses (RN) who work at least 50% of their time providing direct patient care; contract labor, including internal agency nurses were excluded.

Note2. Participants that responded to both pre/post surveys; only pre survey responses are included in the demographic analysis.

Demographic Characteristics	n	%
Primary Shift Worked		
Day Shift (7a)	25	75.76%
Night Shift (7p)	8	24.24%
National Certification		
Certified	6	18.18%
Not Certified	27	81.82%
Tenure as a Registered Nurse		
0 to 4 years	13	39.39%
5 to 9 years	4	12.12%
10 to 14 years	11	33.33%
15+ years	5	15.15%
Tenure as an RN in Department		
<1-year	8	24%
1-year	16	48%
2-years	5	15%
3-years	1	3%
4-years	2	6%
5-years	1	3%

There was not a statistical difference in the mean score before and after the implementation of the unit-based acuity tool. A limitation to these results in the relatively small sample size.

IMPLICATIONS FOR PRACTICE

The degree to which a nurse experiences a level of workload through the course of their shift is impacted by the care delivery model for a given hospital, unit type, and individual shift.

Consistent variables include consideration for patient acuity, staffing adequacy (CNA support) and department throughput (e.g., admissions, discharges, procedures, and unscheduled activities) which is consistent with the literature review completed.
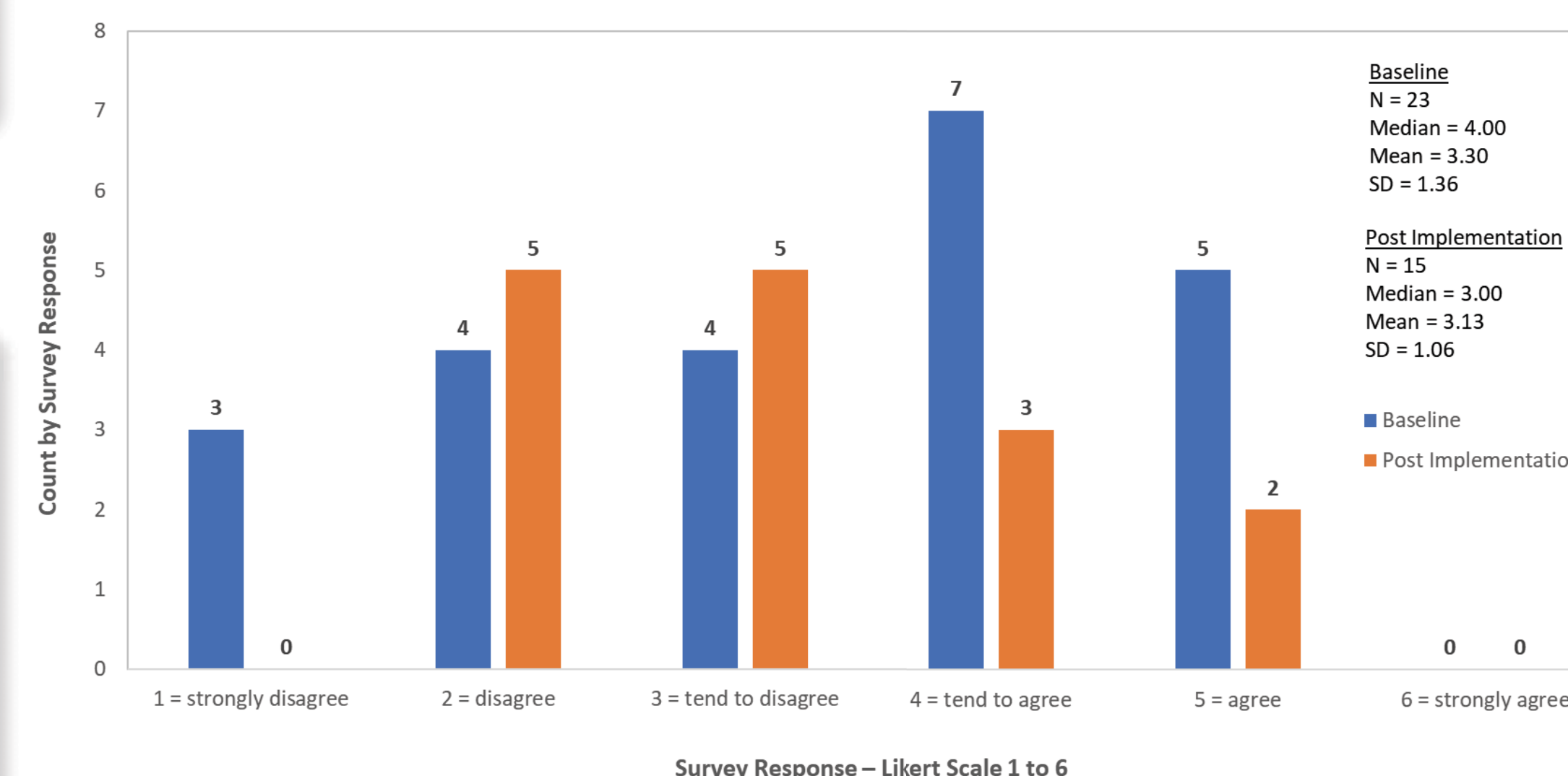
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