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Defining Patient Acuity for Nursing Assistants and its Correlation to Patient and Staff Satisfaction

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This project introduced a Lead Nursing Assistant (NA) role and use of an NA Acuity Tool (I-SCORE) to equalize workload. Positive trends were demonstrated in patient satisfaction, call light wait times, and sense of autonomy within the NA role.

To achieve the best outcomes for patients, healthcare leaders need a continued focus on having nurses work to the best of their abilities and knowledge. The Institute of Medicine (IOM) (2001) recommended continuous organizational improvement through optimizing operations by working on ways to streamline care delivery and eliminate waste. Research findings suggest patients' needs are met best by using planned skill mixes and acknowledging registered nurses (RNs) are knowledge workers (Rudisill, Callis, & Hardin, 2014).

To support the clinical nurse in providing high-quality care, healthcare leaders need to consider the appropriate care delivery model. Nursing assistants (NAs) are fundamental in assisting the RN with providing appropriate care to patients. Rudisill and coauthors (2014) found assigning RNs and NAs to fit patient acuity for a group of patients wasted less time than patient allocation assignments. Excessive workloads may be attributed to nurse burnout, with similar findings likely the same for NAs (Thomasos et al., 2015).

While several studies have been conducted about the use of an acuity-based staffing model for the RN, Thomasos and colleagues (2015) suggested literature related to the use of a standardized measurement tool for NA workload is lacking. These authors found NA assignments most often were based only on patients' geographical location rather than patient acuity. They developed the TEAMS Acuity Rating System, which enabled assignments to be made according to patient acuity rather than location. Following implementation of this system, a survey of clinical partners (n=26) found 92% agreed patients benefited from assignment by acuity and 88% agreed patients received better care when assigned by acuity. Using an acuity rating tool rather than patient room location to determine NA assignment would provide a more equitable assignment (Thomasos et al., 2015). By improving efficiency among NAs, RNs then may be used more effectively in completing tasks NAs cannot perform.

Project Site and Reason for Change

Ten surgical services are housed on the project unit. An opportunity was observed by unit leaders regarding patients' perception of call light response as identified in the Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey. Further investigation by members of the unit leadership team found many call lights were on for an extended time (call lights on >10 minutes) before a physical response in the room. These concerns relative to patient satisfaction and safety were discussed by the Unit Governance Council (UGC), which comprises unit staff from all

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Literature Summary

- Evidence suggests patients' needs are best met by using planned staff skill mixes (Rudisill, Callis, & Hardin, 2014).
- Assigning registered nurses and nursing assistants (NAs) to fit patient acuity wasted less time than patient allocation assignments (Rudisill et al., 2014).
- Little literature is available regarding use of a standardized measurement tool related to workload for the NA (Thomasos et al., 2015).
- Use of an acuity rating tool to determine patient assignments would provide a more equitable assignment for NAs and improve efficiency (Thomasos et al., 2015).

CQI Model

Plan, Do, Study, Act (PDSA) (Henshall, 2017)

Quality Indicator with Operational Definitions & Data Collection Methods

- Audit of unit metrics related to call light response time
- Patient satisfaction data from Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey
- Post-implementation survey of unit staff

Clinical Setting/Patient Population

32-bed surgical general practice unit; 8-bed surgical progressive care unit in an urban 877-bed quaternary care hospital in the midwestern United States

Program Objectives

- Improve unit CAHPS score in Overall Response Time category by 10%.
- Increase staff satisfaction with workload distribution by 25% as evidenced by staff satisfaction survey.

shifts (RNs, NAs, unit secretary, unit leaders).

Pre-data included results on the CAHPS "Responsiveness of Hospital Staff" question equal to 56.65 with a ranking of 20th percentile nationally when compared to like settings, an average of 156.5 extended call lights (call lights on >10 minutes) weekly, and an average call light response time of 3 minutes, 42 seconds. After reviewing these data, members of the UGC discussed areas in which staff may be able to impact change. These included the following:

- RN assignments often were adjusted according to patient acuity, but NA assignments were determined by geographical location and divided by number of patients. NAs had little input to their assignments.
- Many patient call lights are related to needs NAs can address for the patient. However, if patient acuity was not considered, NAs often received assignments in which they were unable to meet patients' needs adequately.
- An area of opportunity related to making patient assignments according to census and geography only was noted by multiple RNs and NAs. They suggested making assignments based on NA workload may increase the quality of patient care.
- Many NAs perceived assignments were not considered adequately by the charge RN due to competing priorities within that individual's role and lack of understanding of factors that increase the NA workload.

The aim of this project was to improve patient satisfaction and patient safety by more timely response to patient needs and to increase overall CAHPS scores in "Responsiveness of Hospital Staff" category. An additional aim was to encourage more autonomy in the NA role and increase NA and RN satisfaction. To achieve these aims, NA assignments and role were reviewed and adjusted. Per the IOM (2001), six quality aims (care should be safe, effective, patient-centered, timely, efficient, equitable) should serve as an analytical framework for possible improvements in quality in health care. This project directly impacted four of the criteria: safe care, timely care, efficient care, and patient-centered care.

Program

Phase 1

The *I-SCORE* tool, the implementation of the Lead NA role, and a call light response monitoring system were implemented during phase 1 of this project.

I-SCORE tool. The UGC conducted a literature review to determine current standards for NA assignments, finding little information about use of NA acuity tools. The TEAMS acuity rating tool by Thomasos and coauthors (2015) was reviewed. The UGC then polled NA staff members regarding patient care tasks that cause increased workload. The tasks were divided into categories and a scoring mechanism was developed whereby a higher score indicated higher NA acuity. This work resulted in the development of the *I-SCORE* (**I**ndividualized **A**ssistive **S**core f**o**r **R**equired N**e**eds) tool. The goal of the tool was to help determine NA workload based on acuity (see Figure 1). Items on the tool represented standard NA tasks that could vary in intensity based on the needs of the patient (e.g., bathing, mobility, toileting). Some patients require additional assistance and take more time to accomplish the same tasks, causing an increase in NA workload. Standard care that could not be predicted to cause an increase in

FIGURE 1.
I-SCORE

(**I**ndividualized A**s**sistive S**c**ore f**o**r **R**equired **N**eeds)
The off-going NA must complete the acuity tool on the assignment within 2 hours of the shift end time and submit to the Lead NA.

Room Number											
Isolation **0** = No **1** = Yes											
Behavior (High call light, confusion, CIWA, family or patient behavioral issues) **0** = No **1** = Yes											
Hygiene/Toileting **0** = Minimal assistance in bed/chair (back, feet, gown, shampoo cap) **1** = Min assist per above in bathroom/shower **2** = Complete assist/diaper/frequent bathroom needs											
Feeding **0** = Independent **1** = Partial assist (tray set up) **2** = Complete feed											
Mobility **0** = Independent/minimal assist (e.g., unplug SCD, IV) **1** = Standby assist **2** = Two-person assist, assistive equipment, turn Q2 hour											
Vitals **0** = QS **1** = Q4 **2** = Trach capping or > Q4											
Drains/Foley **0** = None or patient emptying **1** = One to two drains **2** = Greater than 2 drains											
Chemsticks **0** = None **1** = AC/HS or Q6											
Totals:											

CIWA = Clinical Institute Withdrawal Assessment for Alcohol, IV = intravenous, SCD = sequential compression device

workload was not included (e.g., blood draws, EKGs that might be needed throughout the shift). Determining NA acuity specific to essential tasks performed every shift was expected to allow their assignments to have a more equitable distribution of workload and theoretically improve response time (see Figure 1).

Lead NA role. The Lead NA role was conceived by the UGC during the development of the *I-SCORE* tool. Feedback solicited from NA staff indicated the perception among NAs that the charge RN often considered acuity only from an RN perspective. The Lead NA role was based loosely on the charge RN role. The Lead NA was responsible for serving as a resource to other NA staff, helping to resolve conflict between NA staff, ensuring each NA turned in the *I-SCORE* tool 2 hours

before shift change, and using the *I-SCORE* data to divide the patient assignment based on workload for the next shift. The charge RN remained as a resource for the Lead NA.

Call light response monitoring. Team and individual call light response times were monitored by nurse leaders weekly using the unit call light response system. Weekly individual call light times were posted by employee identification number in the unit breakroom for increased visibility. Call times outside the goal were discussed with the responsible team member to discover the cause of the extended call time. Remediation occurred as needed with team members not meeting unit goals. Posting of call light data helped staff to embrace the changes as they compared performance with their colleagues by role and shift. Posting individual scores increased a desire to adhere to new practices.

Phase II

Implementation of the *I-SCORE* tool was accomplished by in-classroom education for NAs and charge RNs. Education included reviewing the goals of *I-SCORE,* defining the Lead NA role, using the *I-SCORE* assignment tool, and determining NA assignments. These sessions were presented at the start of each shift by the nurse manager and were mandatory for all NAs and charge RN staff to attend. Other RN staff received education through written materials. Education occurred through a 2-week period before implementation of the *I-SCORE* tool and Lead NA role.

Evaluation and Action Plan

Phase III

After implementation, NAs were required to submit their competed *I-SCORE* tools at the end of shift to the unit leadership team for verification of completion and validation of scoring. The Lead NA tool was collected by the unit leadership team weekly to ensure completion. Unit leaders worked individually with NA staff through the first few weeks of implementation to ensure accurate tool completion. Charge RNs and unit leaders worked with the Lead NA as well to help with distribution of assignments. After the first few weeks, any areas of concern were addressed with individual Lead NAs and the charge RN for that shift. Patient satisfaction data and call light response data were monitored weekly by the nurse manager throughout the implementation period.

Phase IV

I-SCORE went through some reiterations over the initial several months using staff feedback to make changes to capture the best possible scoring of patients' acuity. Ongoing education on the appropriate use of *I-SCORE* was completed with the NAs, including examples and scenarios to address interrater reliability with the *I-SCORE* tool.

Results and Limitations

A multifaceted approach was used in this quality improvement initiative. This included the development and use of the *I-SCORE* tool, definition and implementation of the Lead NA role, and posting of weekly call light response data per shift. Call light response data reflected a marked improvement in three different areas, with pre-implementation data collected April-May 21, 2016, and post-implementation data May 22-August 31, 2016:

1. *Decreased average call response time.* Pre-implementation average was 3 minutes, 42 seconds (3:42), and post-implementation average was 2 minutes, 38 seconds (2:38). The decrease in average response time was 1 minute, 4 seconds (1:04), representing 28.8% improvement.
2. *Decreased average number of extended call lights* (call lights on ≥10 minutes). The weekly pre-implementation average of 156.5 lights decreased to a post-implementation average of 88.8 (43.3% improvement).
3. *Increased Section Score on the CAHPS survey "Responsiveness of Hospital Staff."* Pre-implementation average top box trend (January-April 2016) of 56.65 improved to post-implementation (May-August 2016) average of 72.25. This represented an increase of 15.6 points (22% improvement) (see Figure 2).

Interpretation of results using only CAHPS scores was limited due to implementation of different initiatives during the same time (Lead NA role, *I-SCORE*, increased monitoring of individual call light performance). It is difficult to isolate which initiative specifically caused improvements in call response data or if it was a combination of all initiatives. To explore perceived effectiveness of the Lead NA role and *I-SCORE* tool only, a post-implementation survey was completed by RNs and NAs. Of 65 staff surveyed, 58% (*n*=38) responded. Staff survey results were positive, with greater than 65% agreement in six of seven categories (see Figure 3).

Ongoing monitoring of patient satisfaction results in relation to responsiveness demonstrated continued improvement. The overall top box score for CAHPS section score "Responsiveness of Hospital Staff" for 2016 was 64.4. By the end of 2017, this score climbed to 69.0, demonstrating a 4.6 point year-over-year increase.

Lessons Learned/ Nursing Implications

The key to the success of this initiative was the involvement of unit staff at each step in the process. The UGC was key in developing the *I-SCORE* tool and the Lead NA role. Participation of clinical staff in the planning and implementation of the practice change was invaluable in the adoption of the program and its success. Soliciting feedback from NAs as primary stakeholders was invaluable. This provided a sense of ownership for the success of the initiative in those directly involved.

An area for improvement to allow earlier success may have been to test the tool before implementa-

FIGURE 2.
P6 Top Box Trends – CHAPS – Responsiveness of Hospital Staff

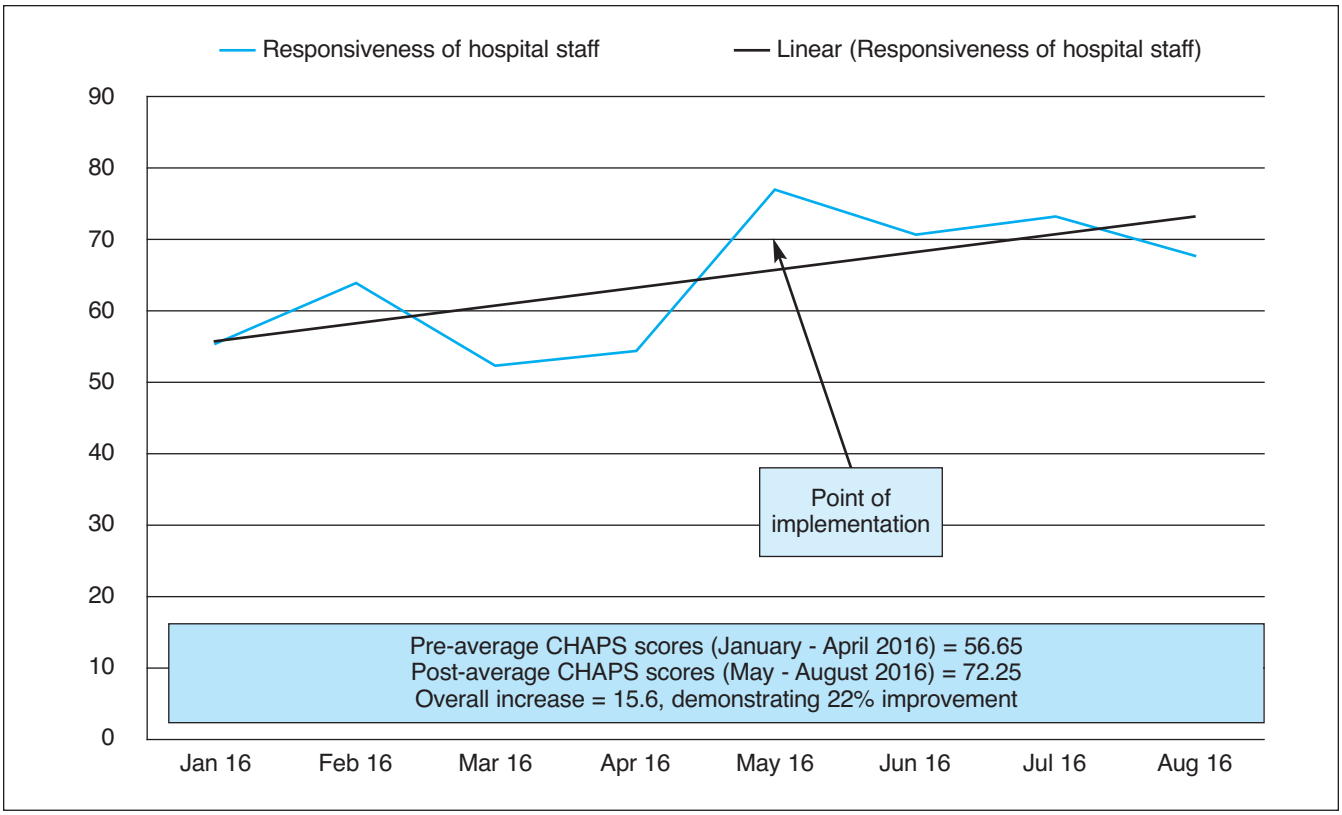
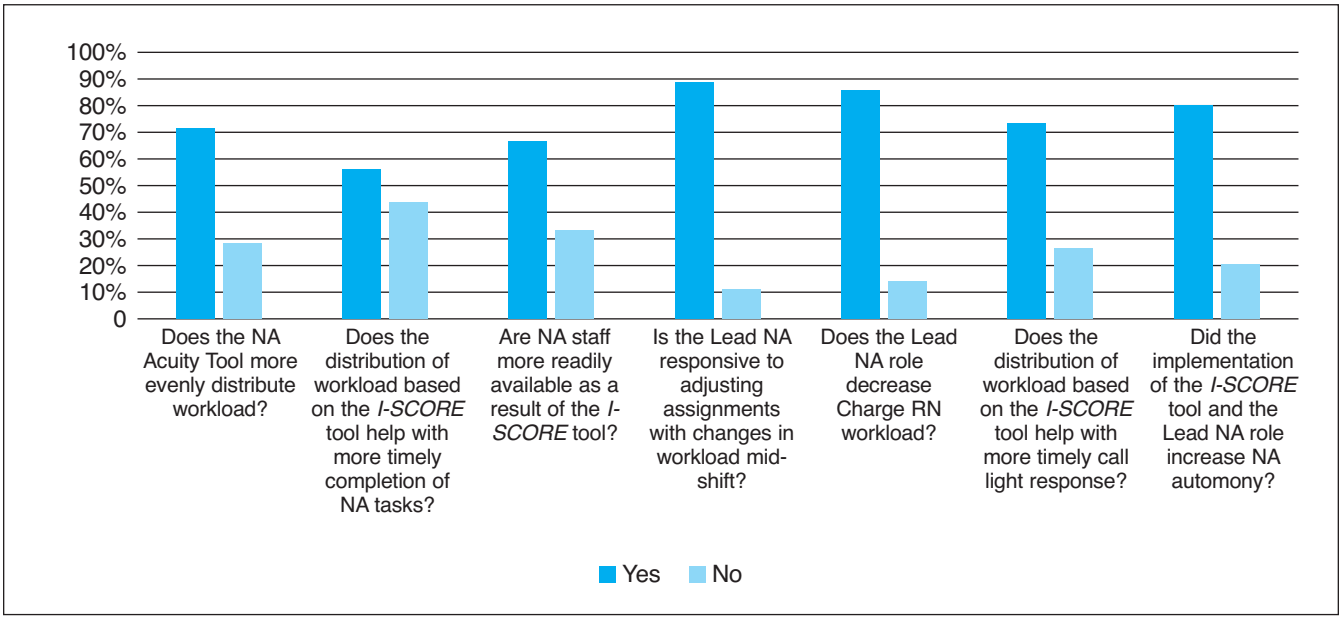


FIGURE 3.
Staff Perception of I-SCORE Tool and Lead NA Role Post-Implementation

A post-implementation survey of staff was completed in October 2016. Survey sent to 65 staff with 38 staff responding (58% response rate).



tion with a smaller patient group. This would have allowed an earlier opportunity to determine scoring reliability and identify areas of opportunity for the tool in regard to correct scoring of patient acuity. Subsequently a specific definition sheet was developed for NAs to reference when scoring their patients. Changes were made to the scoring criteria at this point and again at 3 months following implementation. Understanding the need to re-evaluate the tool and the process often was important.

Celebrating victories throughout the journey was also important to keep the team motivated. This included individual and shift recognition. One very successful initiative was raffle drawings for staff meeting individual and unit metrics. Staff received rewards from the raffle drawings such as a dream schedule, gift cards to local establishments, and food coupons to be used in the hospital. Drawings were held monthly. Rewarding staff frequently allowed continuing momentum. Engagement in improvement initiatives help every team member feel accountable for unit results and improvements.

Conclusion

Use of the *I-SCORE* acuity tool for the NA role in the project site was effective in improving the distribution of workload, increasing NA satisfaction, and improving patient perception of clinical staff caring and response times. NAs were more effective in meeting patient needs when they had an assignment that considered level of patient acuity. This also helped RNs spend less time on tasks that can be accomplished by NAs. Survey results indicated use of the *I-SCORE* tool and the Lead NA role led to increased NA autonomy and decreased charge RN workload. Outcomes demonstrated marked improvement in patients' perceptions of care related to responsiveness of staff. The *I-SCORE* tool now is being implemented by other inpatient units with modifications related to their patient needs. MSN

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