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Improving patient safety: implementing the Chiulli, Thompson, & Reguin-Hartman Acuity Tool (CTRAT) on a neuroscience unit.

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Improving patient safety: implementing the Chiulli, Thompson, & Reguin-Hartman Acuity Tool (CTRAT) on a neuroscience unit

by

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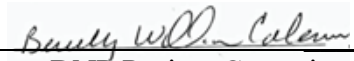
Signature DNP Project Chair — Date: 7/30/2020



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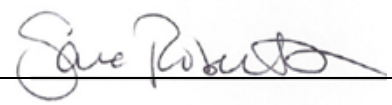

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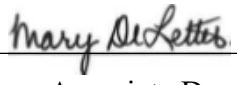

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Acknowledgments

To my family especially my mother and sister Nikko, I would like to thank you for your continued love and support throughout this journey. To my motivation, Anyah Nikko, thank you for allowing me to pursue my goals and understanding that mommy is working hard to provide a better life for us. To my forever boss lady Karen Ross, thank you for believing me and pushing me to reach for the stars. Ebony Kelly, thank you for introducing me to literature & the world as a kid, I am forever grateful for you keeping me under your wing. I hope these words give you strength to continue fighting. Dr. Meyer, Dr. Abusalem, & Dr. Williams Coleman thank you for your guidance and support through this journey.

Dedication

I would like to dedicate this work to my guardian angels Aunt Mary, Uncle Bryant, Uncle Dwight, and my brother Willie Totty III. May you all rest in peace and continue to watch over our family.

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Manuscript Overview/Introduction

The purpose of this project is to implement the Chiulli, Thompson, & Reguin-Hartman Acuity Tool (CTRAT) on a neuroscience unit. A systematic review of literature on use of acuity tools in the hospital setting was completed to gain evidence of how acuity tools affect practice. The project seeks to answer the following question, would using an acuity tool on a neuroscience unit improve nurse satisfaction with patient assignments? Implementation of an acuity tool will change nurse's patient-assignments to be based on acuity instead of geographic location of patient's room. A short-term outcome of this project includes improved scores on the Satisfaction of Employees in Health Care Survey (SEHC), and improved scores on the NDNQI Employee satisfaction score as a long-term outcome. Data was analyzed using a paired t-test in SPSS. Further statistical analysis will include the institution's yearly NDNQI data.

Literature Review Abstract

A systematic review of literature pertaining to use of an acuity tool was completed before initiation of the project. A search was conducted in PubMed, Google Scholar, CINAHL, and the Cochrane Library using the keywords “neuro acuity tool”, “acuity-based staffing”, and “acuity tool”. Articles were selected based on relevance to the proposed project. Articles specific to acuity tools used on neuroscience units were limited. Articles found during this review showed positive implications of acuity tool use in practice.

Review of Literature

Articles pertaining to implementation of an acuity tool were initially provided by the unit manager. A search was conducted in PubMed, Google Scholar, CINAHL, and the Cochrane Library using the keywords “neuro acuity tool”, “acuity-based staffing”, and “acuity tool”. Articles were selected based on relevance to the proposed project. Articles specific to acuity tools used on neuroscience units were limited. Many available acuity tools were used in the oncology patient setting.

A metanalysis of quantitative studies identified key factors that impact job satisfaction among nurses included task requirements, empowerment, job autonomy, and level of job stress (Saber, 2014). Addressing these factors will help establish, retain, and maintain the health care workforce (Saber, 2014).

Nadolski, Britt, & Ramos (2017) found it would be more financially beneficial for institutions to create ways to decrease turnover and improve nurse job satisfaction instead of constantly training new employees and paying for injuries that can result from units being understaffed. The researchers found that it cost $58,400 to train a new nurse and fall injuries can cost upwards of $13316. While there was no acuity tool used in the study, investigators also found that acuity-based staffing lead to increased staffing satisfaction and increased scores in nine of eleven questions on the Press Ganey Employee Engagement Survey (Nadolski et al., 2017). The researchers stated that neuroscience nurses experience unique challenges due to their patient population that requires frequent neuro evaluations and high numbers of confused patients (Nadolski et al., 2017).

Acuity-based staffing was found to reduce patient complications and mortality, have significant financial benefits, and improve patient satisfaction and decrease nurse burnout

(Nguyen, 2015). An acuity tool using the Plan, Do, Study, Act Model on an oncology unit showed that there was an increase in job satisfaction related to daily workload (DiClemente, 2018). Evaluation of the Oncology Acuity tool (OAT) showed interrater reliability of the tool across evaluators of the same patient to be high, but the tool lacked external validity due to study being done on specific hematology/oncology patients (Brennan et. al, 2012).

The Harper and McCully patient acuity tool was used on a pulmonary unit and showed an increase in perception of equity of assignments, and improved nurse satisfaction by 20% (Firestone-Howard, Zedreck Gonzalez, Dudjak, & Rader, 2017). Use of an acuity tool on a med-surg unit showed a reduction in sitter use along with an increase in nurse job satisfaction and perceived assignment equity (Ingram, & Powell, 2018). Implementation of an acuity tool on a progressive care unit showed an increase in nurse job satisfaction, and perception of equity in patient assignments with use of the Iowa Model (Kidd et. al, 2014).

Paisley, Wallace, & Durant (2011) found that the use of the Obstetric Triage tool was successful in improving quality of care (Paisley, Wallace, & Durant, 2011). Acuity based staffing was found to allow staff to be leaders on nurse staffing issues, minimizes variation in nursing resource deployment, ensures staff equity, develops staff that is responsive to patient needs, and allows accurate budgets for nursing staff (Trepanier, Lee, & Kerfoot, 2017). Based upon above literature findings, the use of an acuity tool will improve patient outcomes and nurses job satisfaction (Trepanier, Lee, & Kerfoot, 2017).

Previous studies found use of the CTRAT to be clinically significant and demonstrated ways to equalize nurses' patient-assignments (Sobaski, Allen, & Abraham, 2019). Implications for further practice for using the CTRAT is to continue studying its' long-term effects on nursing staff and patient outcomes (Sobaski, Allen, & Abraham, 2019).

Abstract

Background: Nurse satisfaction is important to maintain in healthcare facilities across to the nation to ensure quality patient care is provided. The aim of this study was to implement the use of the CTRAT acuity tool for nurses' patient-assignment to improve satisfaction with patient assignments, decrease turnover, and improve quality of patient care. This project was set in a 24-bed neuroscience unit in an urban hospital. Participants included registered nurses.

Methods: Spradley's theory of change was used to guide implementation of this project. Baseline data was obtained prior to implementation of the CTRAT tool and post implementation of CTRAT.

Intervention: Staff nurses completed a 20-question satisfaction tool pre and post implementation of the CTRAT.

Results: Data was obtained from 12 participants that fully completed pre and post satisfaction surveys and demographic information. There was a significance of 0.275 in overall rating of the facility from pre to post implementation of the acuity tool. There was a decrease in falls by 80% with implementation of the CTRAT.

Conclusions: While there was no statistical significance in rating of nurse satisfaction with use an acuity tool, the study did have clinical significance. Acuity tools can be used in practice to decrease falls. Further studies should be done for a longer length of time and covariables affecting satisfaction should be identified.

Keywords: acuity tool, neuroscience unit, nurse job satisfaction

Increasing nurse satisfaction: an improvement project on a neuroscience unit in metropolitan Kentucky

Nursing is one of the most respected occupations and is a major portion of healthcare workers in the United States. As healthcare demands rise, so do demands on nursing job roles. Nursing shortages, unequal patient assignments, constant policy changes, increased complexity of patients, and increased workloads often leave nurses dissatisfied with their role (Brennan et al., 2012). Improving nurse workload can lead to equality in patient assignments that help improve job satisfaction (Brennan et al., 2012). Implementation of the Chiulli, Thompson, & Reguin-Hartman Actuity Tool (CTRAT, see Appendix A) can help provide equal assignments thus improving job satisfaction.

Daily huddle board meetings were recently implemented to improve communication among unit workers. The huddle boards are a great tool that provide visualization of unit goals, tasks, and allow for staff participation in making clinical practice changes. Staff members meet twice daily to go over the huddle board. One staff member on the 24-bed Neuroscience unit recommended the use of an acuity tool to make patient assignments fairer and improve quality of care. The unit's high turnover rate lead to inadequate staffing that caused the unit to be one of the few allowed to have travel agency nurses. At a unit based shared governance meeting, six of the seven nurses in attendance felt acuity was not considered in patient assignments.

In March 2019, the unit based shared governance chair distributed an acuity questionnaire. This questionnaire was distributed to staff mailboxes to receive feedback about how acuity is divided for patient assignments. Eight of ten respondents felt acuity was not used to determine patient assignments. Two of ten respondents felt acuity was considered sometimes when patient assignments were made. Eight of ten respondents stated they would be willing to

walk a bit more to have patient assignments based on acuity. Respondents identified important aspects when determining patient acuity including: mobility, drains, recent surgery, medication, falls risk, restraint use, mental status, hemodynamic monitoring, trach care, need for the National Institute of Health Stroke Scale (NIH) assessment, and need for frequent repositioning. All respondents were willing to try a new method of assigning patients and to test the effectiveness of acuity-based assignments.

Positive working environments and balanced workloads influence job satisfaction. Job satisfaction in nursing affect patient safety and the quality of care (Llies, Wilson, & Wagner, 2009). Increasing nursing satisfaction positively increases staff retention leading to higher quality care and decreases the financial burden of constantly training new employees. The cost of training a new nurse is around $58,400 (Nadolski, Britt, & Ramos, 2017). Improved staffing assignments can prevent patient falls with injury that can cost a hospital over $39,000 (Nadolski, et al.).

Patient outcome indicators are greatly affected by effective nursing care and by the nurse ability to respond to a patient's changing condition (Kidd, Grove, Kaiser, Swoboda, & Taylor, 2015). Some of these indicators include pressure ulcers, falls, medication errors, nosocomial infections, and pain management. Workloads directly influence nurse's ability to assess their patient's thoroughly and promote good patient outcomes. Unequitable patient assignments create dissatisfaction and frustration among staff (Kidd et al., 2015).

In 2015 legislation was passed in Massachusetts requiring acuity-based staffing to optimize patient care (O'Keeffe, 2016). This led to a roundtable discussion with nurse leaders that presented research and examples on how acuity-based staffing. Acuity was defined as the individual patients' need for care by Lilee Gelinas, MSN, RN, FAAN (O'Keeffe, 2016). Nursing

job satisfaction can be improved by equitable workloads and healthy work environment. Implementing an acuity tool that encompasses patient complexity promotes equitable patient assignments and increases job satisfaction (Firestone-Howard, Zedreck Gonzalez, Dudjak, & Rader, 2017). Providing fair patient assignments is important to ensure quality nursing care is provided. As baby boomers age and life expectancy increases, health care needs will become more complex requiring more labor intense care.

Higher nurse job satisfaction scores increase staff retention, commitment, patient safety, and cost savings at health care facilities. Job satisfaction is defined as the degree of affect toward a job and can be a positive concept in work settings (Saber, 2014). Nursing job satisfaction is related to organizational variables and influenced by work environment (Saber, 2014). Staff nurses should be included in change that occurs the healthcare system. Change in work structure can produce healthier work environments, increased job satisfaction, and improve patient and unit outcomes (Saber, 2014). Therefore, efforts to improve nurse workloads, work environment, and job satisfaction can affect many areas of healthcare. Support of healthy nursing work environments have positive effects on patients, healthcare organizations, nurses, and the overall healthcare system (Saber, 2014).

Conceptual Framework

Spradley's theory of change was used as the framework for the project. The model has eight steps including recognizing the symptoms, diagnosing the problem, plan the change, analyze solutions, select change, plan the change, implement the change, evaluate the change, and stabilize the change (Spradley, 1980). The first few steps were incorporated by discussing issues on the unit with manager and staff. As a group it was decided implementing an acuity tool on the unit was the best way to divide patient assignment. The CTRAT acuity tool was chosen due to its prior implementation on an orthopedic-neuro unit and easy adaptability to the

neuroscience population served on this unit. Planning for the change happened by submission of the project proposal to the hospital and the Institutional Review Board (IRB). The change was implemented once approved by the hospital's research committee and the University of Louisville IRB. Educational sessions on use of the acuity tool took place during the February unit meeting and daily huddle meetings. Change was evaluated using measures of central tendency to compare outcomes before and after implementation. Implications for future practice will provide information for stabilizing the change.

Setting and Organizational Assessment

The project was implemented on a 24-bed unit at a metropolitan Primary Stroke Center in Louisville, Kentucky. Stakeholders for the project include the unit manager, unit director, research council, and two faculty advisors from the University of Louisville. Facilitators for the project include the unit manager and unit director. The unit manager and director view implementation of the project as a tool to involve staff in decision making and shared governance on the unit. Barriers to the project include staff participation, nurses' turnover rate, and limited evaluation time. Permission to complete the project was obtained from the institution's research committee (see Appendix B).

Purpose

The purpose of this project is to implement the Chiulli, Thompson, & Reguin-Hartman Acuity Tool (CTRAT) on a neuroscience unit. Use of the CTRAT will allow assignments to made based on acuity instead of geographic location. Using CTRAT will allow staff to have input on patient assignments and will provide more equitable patient assignments. The aim of this project is to effectively implement CTRAT on the Neuroscience unit. Secondary aims as a result of using CTRAT are to increase job satisfaction, decrease turnover, and decrease falls on the unit. The three aims of this project will ultimately improve patients'quality of care. The

project seeks to answer the following question, would using an acuity tool on a neuroscience unit improve nurse satisfaction with patient assignments?

The institution strives to keep its commitment to patient safety by reducing and eliminating preventable harm. Having equitable patient assignments will ensure that each patient is receiving needed care in a timely manner. The institution has received three Magnet designations and uses evidence-based practice to guide policy changes and improve care processes.

Intervention

The study used a descriptive design to explore how implementation of an acuity tool affected nurse satisfaction on a neuroscience unit. It used process and impact evaluation to determine if the acuity tool was implemented correctly and had expected outcomes. Acuity scores for each patient were reviewed by project leaders and nurses were observed filling out the tools. The impact evaluation will identify changes in nurses job satisfaction, knowledge, and communication among staff due to implementation of the acuity tool. Pre/post surveys were compared to determine if there is an increase in nurses job satisfaction after implementation of the acuity tool.

The intervention team included the project developer and charge nurses on the unit. Charge nurses received completed acuity tools from staff at the end of the shift and used it to complete assignments for the next shift. Education sessions about the acuity tool took place during the February staff meetings and daily huddle meetings. Dayshift and nightshift huddle meetings were attended by project developers from February 16th to February 29th. During the meetings staff were educated on how to use the acuity tool and were given patient examples and asked to score acuity of the patients (see Appendix C). Information on the project was posted

under the project tab on the huddle board in the unit. Prior to initiation of the use of the acuity tool, the Satisfaction of employees in healthcare survey (SEHC, see appendix D) was administered to staff nurses mailbox to be completed and turned in to the project developer or charge nurses. Use of the CTRAT (see Appendix A) started on February 24th and was used until the unit closed on April 6th. Demographic information and the SEHC was again distributed via email and telephone. The project was submitted and approved by the University of Louisville's Institutional Review Board (IRB).

Participants

Participants in this project were staff nurses on the Neuroscience unit the project was completed. Age of the nurses on the unit range from 24 to 48 with degrees ranging from ADN to MSN. Years of nursing experience range from 1 year to 21 years. Inclusion criteria included full time and part time staff nurses on the Neuroscience Unit. Exclusion criteria were staff nurses in orientation during implementation of project, prn staff nurses, or staff nurses floated to the unit. Participants that do not submit pre/post SEHC surveys and demographic data will be excluded for analytic purposes. Proposal to the hospital's research council was submitted and approved (see Appendix B).

Data Collection

Pre-Implementation SEHC surveys were turned into the charge nurse and stored in a locked file cabinet. Nurses filled out acuity tools for each patient and the tool was given to the charge nurse to make equal patient assignments. These tools were also collected and stored in a locked file cabinet in the charge nurse office. Data regarding patient falls was collected from fall huddles that were completed any time a patient fell on the unit. Turnover data was collected from the falls metric on the huddle board on the unit.

Measurement

The SEHC survey (see Appendix D) was used to evaluate nurses' job satisfaction. The tool's content validity testing included exploratory factor analysis and yields scoring in three domains which are relationship with management, job content, and relationships with coworkers (Alpern et al., 2013). The tool had a high Cronbach's Alpha which showed it is a stable and reliable measure (Alpern et al., 2013). Permission for use of this tool was obtained (see Appendix E).

The Chiulli, Thompson, and Reguin-Hartman Acuity Tool (CTRAT, see Appendix A) was used as a basis for developing an acuity tool for the neuroscience unit. The tool was chosen because it is simple, has low cost to duplicate, and can be adapted to different populations. Content validity was verified for the tool using input from staff during original implementation (Chiulli, Thompson, & Reguin-Hartman, 2014). The tool was validated for usability and feasibility on all shifts at varying times (Chiulli, Thompson, & Reguin-Thompson, 2014). Permission for use of this tool was obtained (see Appendix F).

Demographic data was obtained from staff via email, phone, and in person once the unit was reopened May 21st. Demographic data included age, gender, ethnicity, education level, years of experience as a nurse, and years working on unit. Completeness and accuracy of data will be checked two to three times weekly by the project developer.

Results

Staff turnover in pre and post implementation months of the acuity was the same (see Figure 1). Falls post implementation of the acuity tool unit decreased by 80% from pre implementation falls. There was a total of 12 respondents that completed pre/post surveys and demographic information. Facilitation to this evaluation process include the fact that staff requested this change and it was requested to be completed as a project by the unit manager. A

major barrier to this evaluation was staff unwillingness to participate and not having time to allow for all staff participation.

Data was analyzed using IBM SPSS Statistics 26. A paired-samples t-test was conducted to compare overall satisfaction rating of the facility pre and post implementation of the CTRAT. There was not a significant difference in scores for pre CTRAT implementation (M= 6.667, SD= 1.614) and post CTRAT implementation (M=6.917, SD=1.379) conditions; t (11)= -1.149, p = 0.275 (see Figure 3). These results suggest that nurse satisfaction is not increased with use an acuity tool. Specifically, our results suggest that nurse satisfaction may stay the same when acuity tools are used to make patient assignments.

Discussion

Interpretation

There was no statistical significance of satisfaction score change with implementation of the CTRAT. The study shows that implementation of an acuity tool does not increase nurse satisfaction on a neuroscience unit. This could mean covariables attributing to satisfaction should be examined. While there was no change in staff turnover on the unit, patient falls decreased with use of the CTRAT. This shows there is clinical significance for use of an acuity tool. Use of an acuity can decrease falls, thus improving quality of care provided.

Limitations

Limitations of the study include staff participation, staff turnover, dissatisfaction with the tool and limited evaluation time. This project was completed amid COVID-19, a global pandemic that restricted the provision of healthcare as many hospital units were closed as a response to the pandemic. This caused the unit the study was completed on to transition into an intensive care overflow and then closing. Participants faced being furloughed, having their hours

cut and being pulled to other units in the hospital. Theses are all issues that could have contributed to satisfaction scores during this time.

While this project addresses nurse satisfaction related to patient assignments, it does not address or identify other factors that contribute to nurse satisfaction. As healthcare restrictions are being lifted due to COVID-19, there are participants still facing cuts to their hours and resulted in a low sample size available to complete surveys and demographic information for the project.

Conclusion

The CTRAT tool was adapted to the neuroscience population and used to make equitable patient assignments to decrease nurses having multiple high acuity patients on their team. In conclusion use of the Neuroscience adapted CTRAT has clinical significance in practice and can be used to improve the quality of care patients receive by decreasing falls.

Implications for future practice include use of the tool on other neuroscience units in the hospital and evaluation of long-term outcomes. There should also be other projects that address other reasons for high turnover and nurse dissatisfaction with job roles. The Neuroscience Acuity Tool can be completed simply in less than 1minute and should be evaluated for necessary changes at future unit based shared governance meetings. Findings from this project will be disseminated through presentations and posters at the institution and at the University of Louisville. These findings will also be submitted to the Journal of Neuroscience Nurses for publication.

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Appendix A

Neuroscience Adapted CTRAT

Indicator	2 √ Stable Patient Typical Workload		3 √ Complex Patient Increased Workload		4 √ High Risk Highest Workload	
Clinical Severity Indicators						
Neuro	Q4h Neuro Check Alert & Oriented CIWA <= 7		Q2h Neuro Check Confused CIWA > 7 NIH 0-10		Deteriorating LOC Impulsive Combative NIH >10 Sitter or Restraints	
Respiratory	Stable Room Air NC <= 2L O_2		NC > 2L O_2 Continuous Pulse Ox Trach Care		Face Mask Airway suctioning <=q2h	
Cardiac	Stable HR & BP Medical pt w/monitor		Changes BP/HR/Rhythm Post-op monitoring AICD/Pacemaker		Unstable Rhythm New AFib or ectopy	
Medications	PO/IVPB		Crushed Meds for tube/mix with thickened liquids Heparin/Cardizem/Cardene drip		>=2 transfusions >=2 drips Fluid Bolus for BP	
Drainage Devices	JP, Hemovac, NGT		NG/J-tube with feeding		Lumbar drain	
Pain Management	PO, q4h IV, PCA		Epidural, q2h IV		Uncontrolled pain resulting in screaming/frequent request from staff	
Nurse Workload Indicators						
Admit/DC/Transfer	Inpatient-staying		Post-op 1st 24hours Complex DC Admit/Transfer In		Complicated Post-op Need to transfer to higher level of care Rapid Response	
Wound/Continence	QD Dressing Δ, Wound Vac, Purewick/Condom Cath, X1 assist to BRP		TID Dressing Δ Enema/Bowel Prep		Q1h toilet	
ADLs and Isolation	Independent Standard Precautions		X2 assist OOB Isolation		Total Care	
	All 2s makes a "2"		**Any 3 makes patient a "3"**		**Any 4 makes patient a "4"**	

Appendix B

Approval from Research Council

Good afternoon:
On behalf of the Nursing Research Oversight team, I am writing to inform you the QI project, "Implementation of an Acuity Tool on a Neuroscience Unit", has been approved. Laura Mitchell has agreed to serve as your liaison for this project. The purpose of the liaison is to serve as your contact with the Oversight Team, and to be a resource regarding services, contacts, and processes here at [redacted] Good luck with your work.

Anna [redacted]

Appendix C

Practice Acuity Questions

1. Your patient has q4h neuro checks after having a posterior laminectomy & fusion L2-L5. The patient is on room air, has one j/p (Jackson pratt) drain and is up with 1 assist to the BRP. What is their acuity level?
2. You patient has a lumbar drain but is able to get up to the BRP with 1 assist. They are alert & oriented & receiving PO analgesics. What is their acuity level?
3. Your patient has q4h neuro checks and has a NIH of 6. They are currently on a heparin drip & is up to the BSC with assist x2. What is their acuity level?
4. Your patient is restraints for safety and to prevent removal of their PICC line & nasogastric tube. They are alert to self and has one daily dressing change to their coccyx. What is their acuity level?
5. Your patient is alert and oriented x4. They require IV pain medications q2h and frequently calls out to staff q30min for uncontrolled pain and repositioning. What is their acuity level?
6. Your patient is up with assist x1 and you noticed a facial droop and slurred speech when getting them up. You call a CODE STROKE for the changes above. What is the patient's acuity level?

Appendix D

Satisfaction of Employees in Health Care (SEHC) Survey

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. The management of this organization is supportive of me.	1☐	2☐	3☐	4☐
2. I receive the right amount of support and guidance from my direct supervisor.	1☐	2☐	3☐	4☐
3. I am provided with all trainings necessary for me to perform my job.	1☐	2☐	3☐	4☐
4. I have learned many new job skills in this position.	1☐	2☐	3☐	4☐
5. I feel encouraged by my supervisor to offer suggestions and improvements.	1☐	2☐	3☐	4☐
6. The management makes changes based on my suggestions and feedback.	1☐	2☐	3☐	4☐
7. I am appropriately recognized when I perform well at my regular work duties	1☐	2☐	3☐	4☐
8. The organization rules make it easy for me to do a good job.	1☐	2☐	3☐	4☐
9. I am satisfied with my chances for promotion.	1☐	2☐	3☐	4☐
10. I have adequate opportunities to develop my professional skills.	1☐	2☐	3☐	4☐
11. I have an accurate written job description.	1☐	2☐	3☐	4☐
12. The amount of work I am expected to finish each week is reasonable.	1☐	2☐	3☐	4☐
13. My work assignments are always clearly explained to me.	1☐	2☐	3☐	4☐
14. My work is evaluated based on a fair system of performance standards.	1☐	2☐	3☐	4☐
15. My department provides all the equipment, supplies, and resources necessary for me to perform my duties	1☐	2☐	3☐	4☐
16. The buildings, grounds and layout of this facility are adequate for me to perform my work duties.	1☐	2☐	3☐	4☐
17. My coworkers and I work well together.	1☐	2☐	3☐	4☐
18. I feel I can easily communicate with members from all levels of this organization.	1☐	2☐	3☐	4☐
19. I would recommend this health facility to other workers as a good place to work.	Definitely No 1☐	Probably No 2☐	Probably Yes 3☐	Definitely Yes 4☐
20. How would you rate this health facility as a place to work on a scale of 1 (the worst) to 10 (the best)?	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 Worst.....Best			

Appendix E

Approval for use of the Satisfaction of Employees in Health Care (SEHC) survey

Hi Niah,

Nice to meet you! We'd be happy for you to use the SEHC survey in your project. We just request that you please cite our work in any subsequent presentations, publications, etc.

Thank you,
Rachelle

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From: Gilmore,Niah Ann <niah.gilmore@louisville.edu>
Sent: Friday, November 08, 2019 3:32 PM
To: Alpern, Rachelle <Rachelle.Alpern@unchealth.unc.edu>
Subject: SEHC Survey
Importance: High
Sensitivity: Personal

Ext Mail: open links/attachments w/caution

My name is Niah Gilmore and I am in the BSN to DNP program at the University of Louisville in Louisville, KY in the United States. For my DNP project I would like to use the Chiulli, Thompson & Reguin-Hartman Acuity tool to implement an acuity on the Neuroscience unit I work. Right now my short term outcomes include decreasing turnover, increasing nurse satisfaction with use of the SEHC survey (I plan to administer it before implementation & at 1 & 2 months post implementation of the project), and decreasing falls. I am writing you to ask for permission to use the Satisfaction of Employees in Health Care (SEHC) survey in my project.

Thanks,

Niah Gilmore, BSN, CNRN

Appendix F

Approval for use of the Chiulli, Thompson, & Reguin-Hartman Acuity Tool (CTRAT)

Hi Niah,

You are welcome to use the tool. Myself and Kathy Chiulli worked for Duke Raleigh at the time, and Kristi Reguin-Hartman was an MSN student.

- The reason there is no copyright is that it is not expected any unit would use the tool verbatim.
- Instead you will go through the iterative design process as described, with focus groups of your team of nurses.
- The specific items, and the 1,2,3 ranking assigned will be unique to your unit.
- Just be sure that you clarify that in the publication.

I am happy you are using it on a neuro-science floor. At the time, I was a med-surg nurse, but now I work with stroke patients and the neuroscience unit. For instance, post-tPA and post-thrombectomy patients with frequent VS and neurochecks in the 1st 24-hours are probably going to be in your high "acuity" group, based on the workload.

I think the perception of "equity" is a good outcome. If you use NDNQI or a similar nurse satisfaction tool, there are questions about workload, or staffing, etc. That could be your baseline. Or you could have a one to two question baseline survey about staffing equity.

Good luck on your project and your DNP! Please let me know how it turns out, or if I can clarify anything during the project,

Jackie

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Appendix E

Demographic Data

1. What is your age?

2. What is your gender?

3. What is your education level?

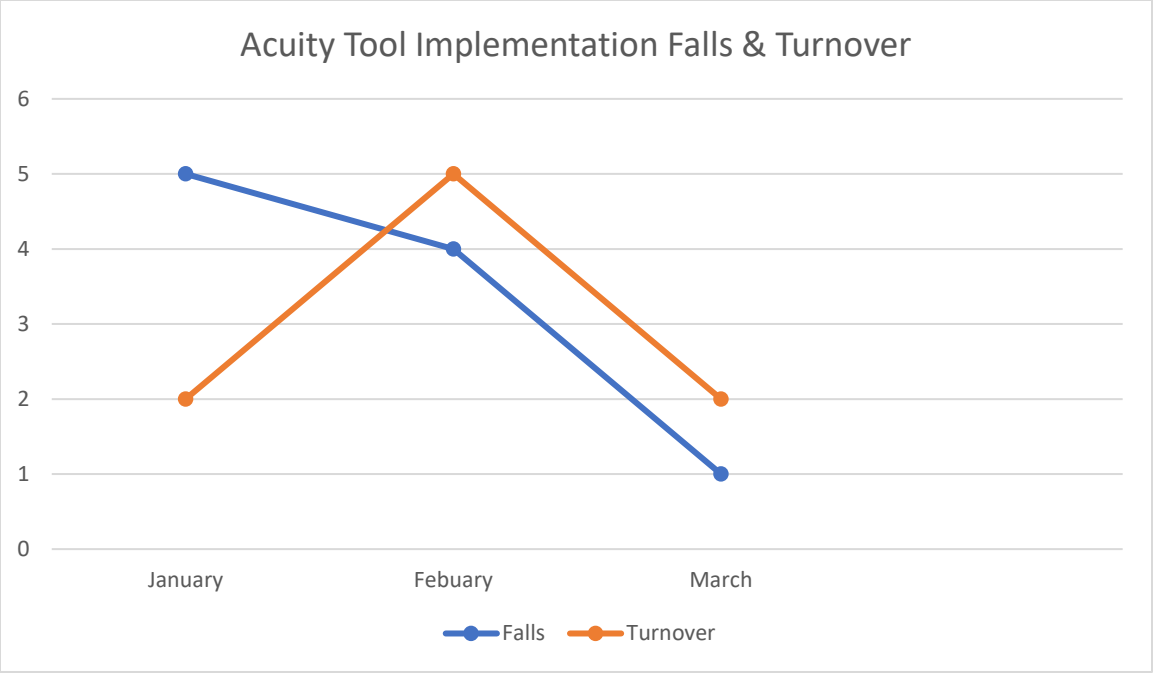
4. What is your ethnicity?

5. How many years of experience do you have as a RN?

6. How many years/months have you been employed on this unit?

7. How many years/month in experience do you have with neuroscience patients?

Figure 1



Acuity Tool Implementation Pre/Post Falls & Turnover

Month	Falls	Turnover
January (Pre Implementation)	5	2
February (Implementation month)	4	5
March (Post Implementation)	1	2

Figure 2

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Rating of facility	6.6667	12	1.61433	.46602
	rating of facility	6.9167	12	1.37895	.39807

Figure 3

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Rating of facility - rating of facility	-.25000	.75378	.21760	-.72893	.22893	-1.149	11	.275